

July 23, 2012

Office of Environmental Information
Environmental Protection Agency
Mailcode 28221T
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460
(filed online using <http://www.regulations.gov>)

Re: **Docket ID No. EPA-HQ-OA-2012-0033**

The undersigned organizations are pleased to file comments on the Environmental Protection Agency's (EPA's) proposed Information Collection Request (ICR) for a survey on "Valuing Improved Water Quality in the Chesapeake Bay Using Stated Preference Methods."

The undersigned organizations represent the nation's business, construction, manufacturing, housing, agriculture, forestry and energy sectors, all of which are vital to a thriving national economy, including providing much-needed jobs.. All of these important economic interests operate within the 64,000 square mile Chesapeake Bay watershed. These sectors and their employees and customers will be greatly impacted by the Total Maximum Daily Load issued by EPA in December 2010 for the Chesapeake Bay. However, the scope of these impacts are not fully known because EPA has not conducted an analysis of the costs that the TMDL. According to the Federal Register notice seeking comment on this ICR, "EPA has begun a new study to estimate costs of compliance with the TMDLs." 77 Fed. Reg. 31006, 31008 (May 24, 2012).

According to EPA: "It is important to put cost estimates in perspective by estimating corresponding benefits." *Id.* Therefore, the purpose of this ICR is to provide "benefits analysis of improvements in Bay water quality under the TMDLs, as well as of ancillary benefits that might arise from terrestrial measure taken to improve water quality." *Id.* The undersigned do not believe that the proposed ICR can meet this objective.

As the Agency knows, the Paperwork Reduction Act sets forth certain standards that EPA must satisfy in order to obtain ICR approval from OMB. *See* 44 U.S.C. 3506(c)(3)(A) (Agency certification) and 44 U.S.C. 3508 (OMB determination). Among other things, EPA must demonstrate that any proposed ICR:

- Is of "practical utility;"
- Is written in plain, coherent and unambiguous terminology, and is understandable to those who are to respond; and
- Sets forth an effective and efficient statistical survey methodology appropriate to the purpose for which the information is to be collected.

As discussed below, the four surveys that EPA is proposing do not meet these criteria.¹ First, a stated preference survey cannot provide rigorous, reliable information that accurately reflects the benefits of the Bay TMDL in a meaningful way. As EPA knows, a stated preference survey relies on data drawn from people's responses to hypothetical questions. As such, this method of estimating benefits is subject to systematic biases, which are difficult to test for and correct.² *See* EPA, National Center for Environmental Economics, Guidelines for Preparing Economic Analyses, Dec. 17, 2010, at 7-35. These biases include "hypothetical bias" resulting from the fact that people are not actually asked to make the investments they claim to be willing to make. These surveys also suffer from non-response biases, where persons who have little or no interest in the subject matter simply fail to respond, while persons with a higher willingness to pay are more willing to respond to a survey. Finally, it is difficult to draft a valid survey that accurately captures the concept being evaluated. *See generally id*, section 7.3.2. For these reasons, "a non-trivial fraction of economists are skeptical of the results elicited from stated preference surveys." *Id.* at 7-36.

No stated preference survey can overcome these fundamental methodological faults. Even if a hypothetical survey could do so, the survey that EPA is proposing to use to estimate the benefits of the Bay TMDL fall far short of the level of confidence that would meet the requirement of the Paperwork Reduction Act that a survey have practical utility. The proposed survey also falls far short of the requirements of OMB's information quality guidelines for utility, integrity and objectivity. In fact, we do not believe EPA can demonstrate that the proposed surveys will "result in information that will be collected, maintained and used in a way consistent with the OMB and agency information quality guidelines." *See* "Questions and Answers When Designing Surveys for Information Collection," OMB, Jan. 2006, at 9. As noted by OMB: "A stated preference study may be the only way to obtain quantitative information about non-use values, though a number based on a poor quality study is not necessarily superior to no number at all." OMB 2006, at 75.

In support of our conclusion that EPA's proposed surveys are of no practical utility, are ambiguous, and are not based on an appropriate statistical methodology, we offer the following specific comments:

1. The scope of the benefits to be evaluated by the surveys exceeds the scope of the TMDL.

According to EPA, "[t]he findings from this study will be used by EPA to estimate the total value of economic benefits of the nutrient and sediment TMDLs designed to meet the requirements of Executive Order 13508." Supporting Statement for Information Collection Request for Willingness to Pay for Chesapeake Bay Total Maximum Daily Load: Instrument, Pre-Test, and Implementation,

¹ The four surveys proposed by EPA are as follows: (1) a survey that asks questions based on a willingness to pay for reduced inputs to the Bay, such as dissolved oxygen levels, water clarity and acres of aquatic grasses, with a constant baseline that assumes no change in the Bay by 2025 if additional action is not taken, (2) the same "input" survey but with a declining baseline that assumes that the Bay gets worse by 2025 if additional action is not taken, (3) a survey that asks questions based on a willingness to pay for reduced outputs in the Bay, such as tons of blue crabs or oysters with a constant baseline that assumes no change if additional action is not taken, and (4) the same "output" survey but with a declining baseline that assumes that the Bay gets worse if additional action is not taken,

² Indeed, this methodology is the same as the contingent valuation methodology that has been roundly criticized in the context of monetizing damages to natural resources under the Superfund statute.

Part A, at 5. However, the proposed surveys cannot be used for such a purpose because they fail to identify what actions are attributable to the Bay TMDL. Thus, even if the survey results provide some information on how persons value water quality, the survey results cannot be used to estimate the use and nonuse benefits of the Bay TMDL.

- a. The surveys fail to identify the baseline of reductions that would occur without the TMDL.

When conducting an economic evaluation of an action, it is important to first identify the baseline that would occur absent the action. For example, when the Army Corps of Engineers evaluates the benefits of a water resources project, it first identifies the “without project condition.” Only benefits that would not accrue absent the project can be attributable to the project.

In the context of its proposed benefits study, EPA has not identified the “without project condition” or even what actions will occur as a result of the Bay TMDL. Instead, EPA proposes to simply ask respondents to state their willingness to pay for generic improvements in water quality, expressed as inputs or outputs. The surveys do not differentiate between water quality improvements that would occur absent the Bay TMDL from water quality improvements that would occur as a result of it. In fact, the baselines are identified as conditions that would occur “if no further action is taken to reduce nutrients and sediment.” *See, e.g., Chesapeake Bay Stated Preference Survey, Input Version, Constant Baseline, May 22, 2012, at 10.*³ That is very different from a baseline that would occur if the Bay TMDL was not implemented.

For example, the generic water quality improvements described in the surveys could occur due to reductions in the deposition of nitrogen resulting from planned Clean Air Act regulations⁴, from reductions in nutrients resulting from controls on combined sewer overflows, from reductions in nutrients as a result of prolonged drought in the crop and pasture production areas of the region, from pre-existing agreements to upgrade wastewater treatment plants, or from pre-existing programs to address non-point source pollution.

Most significantly, EPA’s surveys do not acknowledge the reductions that were already planned by watershed states as part of their Chesapeake Bay Tributary Strategies. In 2003, each state in the Chesapeake Bay Watershed agreed to nitrogen, phosphorus and sediment caps and, between 2004 and 2006, developed specific strategies to reduce loadings to achieve those caps.

All of these previously planned reductions in nitrogen, phosphorus and sediment must be considered part of the “without project” or baseline conditions, that would occur without the TMDL. An

³ Other than the differences in whether the assumed benefits are based on inputs or outputs and the different future baselines discussed in footnote 1, the surveys are almost identical so the issues identified in these comments apply to all 4 surveys.

⁴ The TMDL acknowledges that nitrogen loading to the Bay will be reduced as a result of the Clean Air Interstate Rule and the Clean Air Mercury Rule, the Regional Haze Rule and guidelines for Best Available Retrofit Technology, the On-Road Light Duty Tier 2 Rule; the Clean Heavy Duty Truck and Bus Rule, the Clean Air Non-Road Diesel Tier 4 Rule, the Locomotive and Marine Diesel Rule, the Non-road Large and Small Spark-Ignition Engines Programs, and the Hospital/Medical Waste Incinerator Regulations. *See Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus, and Sediment, Dec. 29, 2010, at 6-28.* These reductions are the result of the Clean Air Act, not the TMDL.

analysis of the benefits of the TMDL should be based only on any further reductions beyond this baseline.

- b. The surveys inappropriately include benefits associated with hypothetical lake improvements that cannot be attributed to the TMDL.

Another significant example of benefits unrelated to the Bay TMDL is EPA's proposal to ask respondents to include improvements to lake conditions, as well as improvements to the Chesapeake Bay and its tidal waters when considering their willingness to pay.

The Chesapeake Bay TMDL allocates total loadings of nitrogen, phosphorus, and sediment that reach the Chesapeake Bay to upstream sources based by subdividing loads reaching the Bay into the loads coming from the major rivers that feed the Bay. Those loads are then further divided into sub-basins, associated with smaller tributaries. The plans for implementing those allocations are based on modeled loadings of nitrogen, phosphorus, and sediment from rivers and streams with at least 100 cubic feet per second (cfs) mean annual flow (or 50 cfs if the subwatershed is gauged). *See* Feb. 20, 2008, Scientific and Technical Advisory Committee, Chesapeake Bay Watershed Model Phase V Review, at 2. Thus, the implementation plans are designed to reduce the amount nitrogen, phosphorus, and sediment that reach the rivers and streams that feed the Bay. Unless a lake is part of the tributary system of the Chesapeake Bay, nothing in the TMDL or in the TMDL implementation plans address nitrogen, phosphorus or sediment loadings to that lake.

This means that hypothetical benefits to lakes do not belong in a survey of hypothetical benefits of the Chesapeake Bay TMDL unless those benefits are limited to lakes that are part of the tributary system of the Bay. However, the proposed surveys fail to make that distinction. In fact, the survey questions do not even distinguish between lakes in the watershed and lakes outside of it.

The narrative part of the surveys (before the questions are asked) inform the respondents that the Chesapeake Bay Watershed includes thousands of lakes. Further, the surveys inform respondents that “[m]eeting the goals for water quality in the Chesapeake Bay would also affect freshwater bodies of the watershed.” *See, e.g.*, Chesapeake Bay Stated Preference Survey, Input Version, Constant Baseline, May 22, 2012, at 12. In addition, each survey states: “[r]educing the amount of nutrients entering lakes will improve the appearance of the water and change the ecological conditions,” and a table in each survey “shows the current condition and conditions in 2025 that scientists predict for lakes in the part of the watershed in your state if no further actions are taken to reduce nutrient and sediment pollution.” *Id.* These statements imply that there is a relationship between the conditions of all lakes in the watershed and the TMDL, but that is a false assumption. EPA cannot count a person's willingness to pay for lake improvements as benefits resulting from the TMDL unless the survey questions clearly limit lake benefits to the very small subset of lakes that are part of the Bay's tributary system.⁵

⁵ EPA reference the “Northeast Lakes Model” developed by the EPA Office of Research and Development (ORD) as the basis for assumptions about lake conditions. However, no citation or link is provided and we were unable to find what lakes are included in that model. We do note, however, that the October 2011 report issued by ORD on “An Optimization Approach to Evaluate the Role of Ecosystem Services in Chesapeake Restoration Strategies,”

2. The surveys fail to distinguish between respondents who live in the Chesapeake Bay Watershed and respondents who live outside of it.

EPA proposes to send the survey to a random sample of persons living in states that directly border the Chesapeake Bay, states that include portions of the Chesapeake Bay Watershed and other East Coast States. However, neither the surveys nor the proposed letters in attachments 6-12 of Part B of the Supporting Statement inform respondents whether or not they are residents of the watershed. This failure will introduce significant bias into the surveys. Direct costs associated with increased utility rates and storm water fees will be borne by persons living in the watershed. To reduce the “hypothetical bias” the surveys should inform people if these costs will actually fall on them.

3. The policy scenarios posed by EPA are misleading and unrealistic.

EPA states that its surveys “were designed by EPA based on the goal of illustrating realistic policy scenarios.” Part B of the Supporting Statement, at 23. However, EPA’s surveys are both misleading and unrealistic.

First, in the background information of all the survey versions, EPA fails to inform respondents that air deposition from power plants and automobiles are additional sources of nutrients in the Chesapeake Bay, but are not addressed by the Bay TMDL. EPA fails to inform respondents that sediments already in streams are a significant source of both sediment and nutrients to the bay, but are not addressed by the Bay TMDL. Finally, EPA fails to inform respondents that factors such as hurricanes and ocean currents also will greatly affect water quality in the Chesapeake Bay, irrespective of the Bay TMDL, *See, e.g., Chesapeake Bay Stated Preference Survey, Input Version, Constant Baseline, May 22, 2012, at 6-7.*

In all survey versions, EPA also tells the respondents that: “All forecasts for the year 2025 are based on monitoring data from the Chesapeake Bay Watershed and Estuary Models Developed by the Chesapeake Bay Program Office of the EPA in conjunction with state and federal partners.” *See, e.g., id.* at 10. This statement may have some validity for current conditions, but cannot apply to future conditions in 2025. First, as EPA well knows, 2025 is the target date for full Bay TMDL implementation, but EPA’s models cannot estimate the water quality at that time because the sequence of implementation actions is not known. Second, this statement is contradicted by the surveys themselves, which propose different outcomes in 2025 in the constant baseline and declining baseline surveys. It cannot be a true statement that both sets of outcomes are predicted by EPA’s models. EPA should replace this assertion with the admission that EPA does not, in reality, know what the water quality outcomes of the Bay TMDL will be, and should the agency let respondents know that improvements will be realized only over the long term.

It is particularly important to inform respondents of the potential length of time before water quality improvements will be realized. Failure to do so will increase the hypothetical bias in the surveys. EPA is aware of this issue. Question 16 (or 17, depending on the version) of the survey includes a response: “The changes offered by the programs happen too far in the future for me to really care

(EPA/600/R-11/001) does not even mention lakes and no ecosystem services provided by lakes are considered to be services provided by Chesapeake Bay restoration. Thus, the draft surveys also appear to be inconsistent with ORD’s view of the scope of TMDL benefits.

about.” If respondents knew that changes will take decades, more respondents may agree with that statement.

Finally, EPA’s hypothetical costs have no basis in reality. As EPA admits, it has not developed an estimate of the costs of implementing the Bay TMDL. However, the costs are likely to be very high. High costs are relevant to the survey answers. Question 16 (or 17) of the surveys includes an answer: “I am concerned that the programs would hurt the economy.” That concern would be increased and could affect survey responses if the full costs of the Bay TMDL were known.

4. EPA should include a survey with an increasing baseline.

As EPA knows, water quality improvements would continue under a variety of programs absent the Bay TMDL. Given this fact, the surveys also should include a version with a baseline that shows water quality improvements absent the Bay TMDL.

5. EPA cannot double-count benefits.

EPA acknowledges that its proposed surveys are designed to capture both use (economic) and non-use values. In fact, EPA proposes to send more surveys to persons who live in the Chesapeake Bay Watershed to capture use value, and to send the surveys to some persons who live outside of the watershed in an attempt to capture non-use values. Part B of the Supporting Statement, at 4. EPA cannot add any benefits resulting from these flawed surveys to benefits derived from economic studies to come up with a total value of the benefits of the Bay TMDL. To do so would double count use benefits because the same use benefits could be captured by both the surveys and by economic studies.

6. The questions contain errors.

The “conditions in 2025” in several of the questions contain errors regarding whether the change to the input or output is an increase or no change.

7. EPA does not adequately explain its sampling methodology.

EPA fails to explain which surveys it plans to use and whether a statistically relevant sample of households will receive each survey.

Conclusion

For all of the foregoing reasons, EPA’s request for approval of an ICR for a survey on “Valuing Improved Water Quality in the Chesapeake Bay Using Stated Preference Methods” should be abandoned. The flaws in the survey design are too significant to correct. The data from such a survey will have no practical utility and will not meet the requirements of OMB’s information quality guidelines for utility, integrity and objectivity. This is a case where “a number based on a poor quality study is not necessarily superior to no number at all.”

Sincerely,

American Farm Bureau Federation
American Forest & Paper Association

Associated General Contractors of America
Delaware Maryland Agribusiness Association
The Fertilizer Institute
International Council of Shopping Centers
National Association of Home Builders
National Cattlemen's Beef Association
National Chicken Council
National Council of Farmer Cooperatives
National Pork Producers Council
National Turkey Federation
Oregon Women In Timber
Treated Wood Council
United Egg Producers
Virginia Poultry Federation
The Western Business Roundtable
West Virginia Forestry Association