



Poultry Industry Comments on Chesapeake Bay TMDL

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VIA ELECTRONIC MAIL

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Region III
1650 Arch Street
Philadelphia, PA 19103-2029

**RE: Notice and Initial Request for Public Input
Clean Water Act Section 303(d):
Preliminary Notice of Total Maximum Daily Load (TMDL) for
the Chesapeake Bay**

Dear Ms. Sincock:

These comments are submitted by the US Poultry & Egg Association (USPOULTRY), the National Turkey Federation (NTF) and the National Chicken Council (NCC) in response to EPA's solicitation for preliminary input on the Chesapeake Bay Total Maximum Daily Load (TMDL) for nutrients and sediments. 74 Fed. Reg. 47792 (2009)

I. INDUSTRY OVERVIEW

The **U.S. Poultry & Egg Association** is the world's largest poultry organization, whose membership includes producers of broilers, turkeys, ducks, eggs and breeding stock, as well as allied companies. The Association focuses on research, education and

technical services, as well as communications to keep members of the poultry industry current on important issues.

The **National Turkey Federation** is the national advocate for all segments of the turkey industry. NTF provides services and conducts activities which increase demand for its members' products by protecting and enhancing their ability to profitably provide wholesome, high-quality, nutritious products.

The **National Chicken Council** is a nonprofit member organization representing companies that produce and process over 95 percent of the broiler/fryer chickens marketed in the United States. NCC promotes the production, marketing and consumption of safe, wholesome and nutritious chicken products both domestically and internationally. NCC serves as an advocate on behalf of its members with regard to the development and implementation of federal and state programs and regulations that affect the chicken industry.

The associations together have affiliations in the majority of U.S. states and member companies worldwide, and include many members within the Chesapeake Bay Watershed in Virginia, Maryland, Delaware, West Virginia and Pennsylvania. Of the approximately 1,700 poultry growers and 5,000 poultry houses in the Delmarva region, it is estimated that 1,300 are within the Bay watershed. The average family-run broiler farm has 2-3 houses with 25,000 birds per house. The average turkey farm has two houses with 12,000 birds per house. There is some variability in the size and number of broiler and turkey houses on these farms.

II. EPA INFORMATION REQUEST ON CHESAPEAKE BAY TMDL

EPA announced its intention in the September 17, 2009 Federal Register to establish a Chesapeake Bay-wide Total Maximum Daily Load (TMDL) for nutrients and sediment for all impaired segments in the tidal portion of the Chesapeake Bay watershed. As part of the notice, EPA requested any "additional information and comment regarding the design and establishment of the Chesapeake Bay TMDL and accompanying implementation plans." The comments submitted here have been developed in response to EPA's Federal Register Notice on behalf of the members of the three associations.

While representatives of our member associations have attended meetings and have spoken with certain EPA officials regarding the TMDL process, the agency has not to date formally contacted the associations (unlike municipal dischargers via an

information collection request letter dated September 21, 2009) with a request to gather information or data to inform federal and state decision making on the TMDL. Public meetings that provide the Associations, our representatives, and our members an opportunity to comment and question the assumptions and the TMDL development process have been a good start. Ample time, however, is needed for EPA to tailor discussions to key stakeholder groups such as the poultry industry. These tailored discussions are needed so that the agency can more thoroughly explain modeling assumptions, the conclusions EPA is reaching about the industry and how these conclusions were derived, and to assure that the industry, as well as EPA, are all on the same page regarding the data being used in the TMDL.

The Association is still evaluating the potential impacts of the TMDL. This is a highly complex undertaking, and will require additional time to fully assess what additional data EPA may need to ensure that the agency and the states in the Chesapeake Bay watershed properly represent what is taking place with the poultry industry today. As on other matters, we have a strong interest in assuring an open line of communication between EPA and the poultry industry.

At the December 11th Chesapeake Bay public meeting in Wye Mills, Maryland, EPA acknowledged that some initial loading numbers generated for agriculture were based on early “mis-information” related to fertilizer application rates. As EPA officials clearly stated, there may be more errors in the assumptions in the model and EPA is interested in obtaining additional information to assure any other “bugs” can be ironed out. EPA has identified animal agriculture and associated manure impacts as having some of the greatest relative responsibility for pollution loads to the Bay. The industry is therefore committed to full involvement in providing better data to inform these assumptions and participating in the development of the TMDL. We look forward to communicating more closely with EPA to assure that the data the agency is using are complete and accurate. Moreover, we are interested in ensuring that any future nutrient allocations that our members receive are accurate, equitable, and economically feasible.

Based on our preliminary review of current information and documentation that EPA has made available thus far on the development of the Chesapeake Bay TMDL, as well as our understanding of the material, we are submitting our initial comments. It is evident that EPA is still developing the process on how the TMDL will actually be accomplished. For example, the agency is still calibrating the watershed model, the agency is starting to obtain stakeholder review of the scenario builder, and the agency is continuing to collect and refine data. In light of this, we fully expect to provide more detailed comments based on our ongoing assessment of the process, which will include

information the industry has not been provided yet, information that has not been explained, and new information that has yet to be generated.

Our comments below are organized in brief sections of five components associated with the development of the Chesapeake Bay TMDL and include:

1. TMDL Schedule
2. Bay Watershed Model
3. Scenario Builder
4. Watershed Implementation Plan Process
5. Other Points for Discussion

We look forward to the opportunity to work more closely with the agency to ensure that the data and assumptions used in the TMDL for our industry and its members in the Chesapeake Bay Watershed is accurate, equitable, and complete.

III. TMDL SCHEDULE

The associations are concerned that the current schedule does not provide the time to accurately reflect actual conditions in the watershed or compile the necessary data. The poultry industry is a very good example. EPA has already finished calibration of the model and we have no information that suggests that any effort was made to gather data from this industry, or if effort was made, we have not been given an opportunity to comment as to whether the data were accurate or not.

The Agency must take the time to assure that all sectors, including the poultry industry (which will be significantly impacted by the TMDL), have been formally contacted. We believe that EPA needs more time to coordinate with our member associations so that we can work with our members to obtain data that are complete and verified by industry experts.

Additionally, in the Federal Register notice, EPA indicates its intent to provide 90 days for public comment. The register reads: "EPA intends to collect public comments on the draft TMDL between June and September 2010. EPA will undertake its best efforts to establish the final TMDL by December 31, 2010 and no later than May 1, 2011."

Subsequent to the Federal Register notice, EPA has stated in a number of public meetings and in the November 4, 2009 letter to Preston Bryant concerning Watershed Implementation Plans its intention to shorten the public notice period to 60 days. This revised public notice period is referenced in the table below, which was presented to the

Principal Staff Committee in October, 2009. A 60-day public notice period is unreasonable for a TMDL effort of this magnitude.

The draft publication will include 92 individual TMDLs and information for a 64,000 square mile watershed. We do not believe that our members or the public can adequately assess 92 TMDLs in 60 days. Given the size of this effort, the public notice period should be no less than 120 days. EPA must provide justification for the length of the public notice period and how it is consistent with similar, highly complex and consequential actions by EPA.

Schedule for 2010¹	
February 15	Lock down the Phase 5.3 watershed and Bay WQ/sediment transport models
April 30	PSC review/agreement on the draft watershed and tidal sediment target loads; potential changes to basin/jurisdiction nutrient target loads
June 1	States, DC submit preliminary watershed implementation plans by source sector and 303(d) segment drainage area
June 2-July 1	EPA works with jurisdictions to document draft wasteload and load allocations (from target loads) to meet states' Bay WQ standards and revise preliminary watershed implementation plans, as necessary
July 15	PSC reviews initial draft Bay TMDL and supporting documentation; provides EPA with requested changes
August 1	States, DC submit revised draft watershed implementation plans
August 15-October 15	EPA publishes draft Bay TMDL and supporting documentation for public review and comment; hosts 2 nd round of public meetings with jurisdictions
November 1	States submit final watershed implementation plans; EPA confirms these allocations meet states' Bay WQ standards
November 15-30	PSC and WQGIT opportunity to review and provide specific comments to EPA on the Bay TMDL
December 1-15	EPA prepares final Bay TMDL and supporting documentation for publication
December 21	EPA publication of final Bay TMDL and supporting documentation

(Batiuk 2009)

References

Batiuk, R. 2009. *Proposed Bay TMDL Schedule* [Power Point slides] (October 23, 2009).

IV. BAY WATERSHED MODEL

The Chesapeake Bay Watershed Model is the primary tool that EPA is using to establish loads from different land uses and land use practices across the 64,000 square mile Bay watershed and to determine how those loads, and point source loads within the watershed, get delivered to the Bay and its tidal tributaries.

¹ Acronyms:

WQ – water quality

PSC – Principal Staff Committee

DC – District of Columbia

WQGIT – Water Quality Goal Implementation Team

This tool is based on an EPA-approved computer model, which is the Hydrologic Simulation Program Fortran (HSPF). The following comments regarding the Bay Watershed Model are based primarily on a preliminary review of the Chesapeake Bay Program (CBP) document entitled “Estimates of County-Level Nitrogen and Phosphorus Data for Use in Modeling Pollutant Reduction” (Devereux, 2009) and other supporting model documentation:

Comment #1: Poultry Manure Loss Rate

Devereux (2009) indicates that 15% of all poultry manure generated is assumed to be lost during storage:

“For all poultry and swine, 15% of manure is lost during storage.” (excerpt from page 4-28).

Appendix H of the Watershed Model-HSPF Phase 4.3 documentation is cited for support (CBP, 1998), and the relevant excerpt from that document is as follows:

“Throughout the Watershed Model Scenarios, it is assumed that all poultry (including poultry layers, poultry boilers, and turkeys) are found in confined areas 100 percent of the time. Poultry are further divided into the three confined groups as follows: 1 percent in confined/susceptible to runoff, 14 percent confined/susceptible to runoff with BMPs able to be implemented, and 85 percent confined/never susceptible to runoff. The amount of total nitrogen in pounds per year for each of these animal groups are presented in Tables H.2.8-H.2.11.”

Neither of these documents provides any specific support or rationale for the selection of the 15% loss factor. Even if the assumption of 15% loss factor is correct, it appears the model incorrectly assumes that all manure lost during storage is applied to the Animal Feeding Operation (AFO) land surface, and is subsequently made available for runoff and transport to receiving streams.

Comment #2: Application of “Lost” Poultry Manure

It is unclear from the available documentation whether AFO land surfaces that receive “lost” poultry manure (i.e., 15% of total generated) are represented by pervious or impervious land types within the HSPF model. Model files available for Phase 4.3 of the HSPF model suggest that AFOs may have been solely represented by impervious land surfaces in that version of the model. However, the most recent documentation suggests that manure storage loss should be integrated into surface soils, which suggests that pervious land segments should be used to represent at least a fraction of the AFO areas:

“However, storage loss is most common when manure is absorbed or incorporated into the soil in animal concentration areas (Doug Goodlander, PA DEP, personal communication, 2008).” (excerpt from page 4-28 of Devereux, 2009)

Comment #3: Manure Transport Assumptions

The documentation (Devereux, 2009) indicates that manure will only be “transported” to adjacent counties within the same state where the manure was generated. In the current framework, the transport of manure to adjacent counties only occurs if the available manure storage in a given county exceeds application rates for cropland in the county for a given year. Once excess manure has been distributed to adjacent counties at the appropriate application rates, any remaining manure is treated as “disposal load” and is applied to a series of other cropland land use areas *at 10 times the application rate* (see page 6-57).

The approach described in the documentation does not consider the potential for transport of poultry manure across state lines or outside of the Chesapeake Bay watershed. This approach is generally inconsistent with present-day practices within the Delmarva region, which includes the transport of a majority of poultry litter to locations outside the Bay watershed. As a result, the current model design has the potential to significantly overestimate the amount of poultry manure applied to cropland areas within the Bay watershed. It appears that transport of poultry manure beyond the watershed boundaries is being considered as a potential best management practice (BMP); however, the model calibration and “baseline” simulations should also provide a realistic representation of present-day manure transport practices. Furthermore the approach described in the documentation is unrealistic and faulty given these practices are required by state nutrient management guidelines and regulatory permits. The approach ignores the mandated practice of applying manure at a rate consistent with the level required by the crop or forage planted on the application area.

Comment #4: Data Sources for Animal Density Estimates

The available documentation (Devereux, 2009) states that populations of layers, pullets, broilers and turkeys were estimated based on data available from the USDA National Agricultural Statistics Service (NASS), which is available for the following years: 1982, 1987, 1992, 1997, and 2002. This information was combined with Natural Resources Conservation Services (NRCS) manure rates (pounds per day per animal unit) and American Society of Agricultural Engineers (ASAE) nutrient content estimates (pounds of total nitrogen or pounds of total phosphorus per pound of manure) to calculate nutrient loads generated in production by county. More accurate and refined

estimates of poultry populations could likely be developed based on data that could be provided by the poultry industry.

References:

Chesapeake Bay Program (CBP). 1998. "Chesapeake Bay Watershed Model Application and Calculation of Nutrient and Sediment Loadings: Appendix H: Tracking Best Management Practice Nutrient Reductions in the Chesapeake Bay Program." August.

Devereux, O.H. 2009. "Estimates of County-Level Nitrogen and Phosphorus Data for Use in Modeling Pollutant Reduction." Documentation submitted to the University of Maryland and the Chesapeake Bay Program. June.

V. SCENARIO BUILDER

"Scenario Builder" (Devereux, 2009) is a standalone pre-processor that is used to quantify nutrient loads and allocate them spatially and temporally across the Chesapeake Bay watershed. The information organized and developed by the Scenario Builder can be fed into the HSPF Watershed Model (discussed in Enclosure 2) to provide a comprehensive simulation of water, sediment, and nutrient transport throughout the Bay watershed, culminating in the calculation of sediment and nutrient loadings to the Chesapeake Bay system.

Comment #1: General Testing and Verification

It is unclear what the process and schedule will be for detailed testing and verification of the nutrient loads generated by the "Scenario Builder". Given that this tool will play a prominent role in developing loading estimates for input to the HSPF Watershed Model, it is critical that a comprehensive review and verification process be instituted to ensure that the tool generates sensible loading estimates over the range of possible inputs.

Comment #2: Integration with HSPF Model

Section 7 of the document "Estimates of County-Level Nitrogen and Phosphorus Data for Use in Modeling Pollutant Reduction" (Devereux, 2009) briefly describes the protocols for converting outputs from the "Scenario Builder" tool to inputs for the HSPF watershed model. This is a very detailed conversion process, and, based on an initial review of this section; it appears that not all of the relevant details are documented to the necessary extent. Discussion between EPA and the Associations is needed before we can provide additional input and comment.

Comment #3: Best Management Practices (BMPs)

Only two approved BMPs related to poultry manure have been listed in available documentation: (1) use of phytase feed additive (Devereux, 2009); and (2) transport of poultry manure (slide 8 in Sweeney, 2005). Based on the industry's preliminary review, it is not clear if there are any other BMPs relevant to poultry manure management that are currently approved or under consideration for approval. The most recent documentation should be updated to explicitly discuss the availability of manure-related BMPs.

Comment #4: Tracking of Specific Manure Applications

It is unclear from the documentation whether the contributions from individual manure types (e.g., poultry, swine, beef cattle) will be tracked through the application of manure loads to cropland.

References:

- Devereux, O.H. 2009. "Estimates of County-Level Nitrogen and Phosphorus Data for Use in Modeling Pollutant Reduction." Documentation submitted to the University of Maryland and the Chesapeake Bay Program. June.
- Sweeney, J. 2005. "Best Management Practices and the Chesapeake Bay Program Watershed Model." Presentation given at the Potomac Watershed Forum IV. August 12, 2005.

VI. WATERSHED IMPLEMENTATION PLAN PROCESS

Reasonable Assurance and Watershed Implementation Plans

During a number of conference calls and public meetings, EPA has indicated that it has regulatory authority to require states to include "reasonable assurance" in TMDLs and to require states to develop "watershed implementation plans." In none of these venues has EPA produced the specific regulatory citations for this authority.

In the September 11, 2008 letter to John Griffin, Secretary of Maryland Department of Natural Resources, EPA provided a definition of "reasonable assurance" and indicated again it had authority to require this. In the letter to Secretary Griffin, EPA acknowledges that neither the Clean Water Act nor the federal regulations provide a definition for "reasonable assurance." The letter then goes on to state, "The regulations do provide that less stringent wasteload allocations for point sources must be based on practicable load allocations for nonpoint sources and that EPA must find that TMDLs will implement water quality standards in order to approve them." If this

is the case, why did the letter cite EPA guidance rather than the federal regulations? The letter states the “regulations do provide”, but the letter did not include a regulatory citation.

The same issue applies to the requirement that the states must develop watershed implementation plans. There is no regulatory requirement for this. However, EPA is threatening states with “consequences” if the plans are not developed and implemented to EPA’s satisfaction.

In 2000, EPA issued regulations modifying the regulations at 40 CFR part 130 and 40 CFR part 122 related to the TMDL program. Those regulations never went into effect and were subsequently revoked. In the 2000 regulatory changes included requirements for reasonable assurance and implementation plans. If EPA already had this regulatory authority, why did it attempt this regulation change in 2000?

EPA must clearly articulate its authority before proceeding with this TMDL – this is important to our members (which are both point and nonpoint sources). If EPA does not have this authority, EPA must cease threatening states with consequences related to “reasonable assurance” and “watershed implementation plans.” It should be noted that EPA has indicated it will apply consequences to states for not achieving goals in watershed implementation plans or for not developing adequate plans. Many of the consequences cited by EPA will, however, hurt permittees rather than the state. For instance, EPA has indicated it may lower wasteload allocations (WLAs), take over permits, object to permits, or take other actions. These are ultimately consequences against permittees, not states, and in the case of our industry, family farms, consumers and communities.

VII. ADDITIONAL POINTS FOR DISCUSSION

There are several concerns regarding the Chesapeake Bay TMDL development process in general including the following topics.

Use Attainability Analysis (UAA)

Early in 2009, EPA made it clear there was the intent to conduct a use attainability analysis (UAA) because the water quality standards were not attainable. In a discussion paper prepared for a March 9, 2009 conference call, EPA stated,

While it will be admittedly difficult to separate the financial achievability from the rest of this analysis, the MEF analysis underway is to only address the first 2 levels of do-ability. Recognizing that the cost component of this issue is important it will be addressed as part of the Use Attainability Assessment at a later date.

Because EPA recognized that the water quality standards for the Bay were not able to be achieved, the Agency began a process to determine what might be achievable given current resource constraints. This process was designed to assess the maximum levels of control that could be achieved and this level would determine what was the “maximum extent feasible” (MEF) for load reductions.

During conference calls designed to discuss the process that would be used to determine what constituted the MEF for controlling point and nonpoint source loads, Rich Batiuk and Bob Koroncai of EPA both indicated that EPA recognized the current water quality standards could not be attained and a UAA would be necessary. The data collected during the MEF process would be used to conduct the UAA. Given the status of development in the watershed, it is unlikely the reductions can be achieved. This is particularly true because urban and suburban loads of nutrients and sediments are increasing even though total loads from agriculture and wastewater treatment plants are decreasing. At a minimum, EPA should clearly explain why it stated that a UAA was needed but then abandoned the UAA with no explanation for the change.

303(d) authority for EPA to perform the TMDL

In the September 17, 2009 Federal Register Notice, EPA states, “This action is being taken pursuant to section 303(d) of the Clean Water Act (CWA).” The Federal Register does not explain “how” section 303(d) of the Act actually provides the necessary authority for EPA to develop the TMDL. Instead, in the Federal Register notice, EPA clearly explains it is the responsibility of the states, not EPA, to conduct the TMDL:

“Section 303(d) of the CWA requires that each State identify those waters within its boundaries for which existing technology-based pollution controls required by the CWA are not stringent enough to attain or maintain State water quality standards. States are required to establish TMDLs for those ‘impaired’ waters.”

Later in the notice, EPA explains, “Under the Virginia TMDL Consent Decree, EPA is obligated to establish a TMDL for the Bay’s waters identified on the 1998 Virginia list...” This provides information about an obligation EPA assumed via a legal settlement; however, it does not provide any information about whether EPA has statutory authority to conduct the TMDL.

The statutory requirement to develop TMDLs is found in section 303(d) of the Act. It states,

*(d) IDENTIFICATION OF AREAS WITH INSUFFICIENT CONTROLS;
MAXIMUM DAILY LOAD; CERTAIN EFFLUENT LIMITATIONS REVISION*

(1)(A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

(C) Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

(2) Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 1314(a)(2)(D) of this title, for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan under subsection (e) of this section. If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

The Act is very clear; it is the responsibility of the state to establish TMDLs. EPA's role is to review and approve the TMDLs developed by the state. If the EPA disapproves the TMDL, then EPA must establish the TMDL. The statute does not provide authority for EPA to conduct a TMDL at the request of the state. Nor does it provide the authority for EPA to do part of the TMDL while forcing the state via threats of "consequences" to develop wasteload allocations.

EPA must clearly explain how the Act provides authority for the current process EPA is following. If EPA cannot clearly explain the statutory authority, it must cease the process and return to the process identified in the Act.

Thank you for the opportunity to submit these preliminary comments. If you have questions or comments, please contact Paul Bredwell (pbredwell@poultryegg.org) or Christian Richter (crichter@thepolicygroup.com).