



PATUXENT RIVER COMMISSION

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Councilman Michael Leszcz, *Co-Chairman*
Frederick I. Tutman, **CEO, Patuxent Riverkeeper**, *Co-Chairman*
Christopher Perry, **Bourn Environmental**, *Vice-Chairman*

We, the Patuxent River Commission, envision a Patuxent River ecosystem as vital and productive in 2050 as it was in the 1950s. We therefore commit to be stewards and advocates for the Patuxent River and to lead and inspire actions to protect, enhance, and restore living resources and the natural, cultural, economic, and recreational values of the Patuxent River and its watershed.

December 13, 2017

Gary Setzer, Senior Advisor
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230

Dear Mr. Setzer:

At its September 13, 2017 meeting, the Patuxent River Commission (Commission) received a briefing from Matthew Rowe, Assistant Director, Water and Science Administration, Maryland Department of the Environment (MDE) regarding MDE's proposed nutrient trading regulations (regulations), which include the Patuxent River watershed as one of three trading regions in Maryland.

After receiving the draft regulations for review, the Commission created a separate Patuxent Trading Workgroup (Workgroup) to identify the advantages and disadvantages of the regulations. The Workgroup met on November 3, 2017 to develop draft findings, which were then discussed with the Commission at its November 8, 2017 meeting.

Commission members provided additional feedback on the Workgroup's draft findings after the meeting. The Workgroup met again on December 1, 2017 to discuss the Commission's additional feedback and to reach consensus on the advantages and disadvantages of the regulations.

At its December 13, 2017 meeting, the Commission voted to approve sending the Workgroup's findings as the Commission's official comments (see below) on the draft regulations. The Commission asks MDE to consider revising the regulations to address the disadvantages identified by the Commission.

The Commission notes that its membership has a wide range of opinions from fully supporting the regulations to considering that nutrient trading is immoral. Given this range, our comments on the draft regulations should not be seen as an endorsement of the regulations or of nutrient trading as a policy, but our best efforts to make the regulations better.

Gary Setzer, Senior Advisor
Maryland Department of the Environment
December 13, 2017

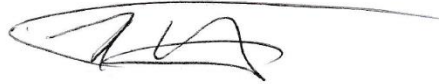
Please note that the state agencies that serve on the Patuxent River Commission abstained from voting on the letter.

If you have any questions, please contact Jason Dubow at 410.767.3370.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael R. Leszcz". The signature is fluid and cursive, with a long, sweeping tail that extends to the right.

Michael R. Leszcz, Councilman
City of Laurel
Co-Chair, Patuxent River Commission

A handwritten signature in black ink, appearing to read "Frederick L. Tutman". The signature is very stylized and cursive, with a long, horizontal line extending from the end of the name.

Frederick L. Tutman, CEO
Patuxent Riverkeeper
Co-Chair, Patuxent River Commission

Patuxent River Commission
Nutrient Trading Workgroup Findings
December 13, 2017

The Patuxent River Commission's Nutrient Trading Workgroup presented its initial findings at the 11.8.17 Patuxent River Commission meeting. All Commissioners were asked to provide comments on the findings and those comments have been incorporated into this document. The workgroup discussed both the regulations specifically as well as nutrient trading generally. A follow up workgroup meeting was held on 12.1.17 during which the group discussed all submitted comments and development of the review/comment document to be presented to the Commission for submission to MDE.

The workgroup expressed a range of opinions on the value of nutrient trading in general, as well as what the main objective of the regulations should be: (a) ensure water quality improvement each year (beyond regulatory requirements); (b) focus on facilitating achievement of regulatory requirements in a cost-effective manner; or (c) ensuring actual water quality improvement (beyond regulatory requirements) each year but in a cost-effective manner. The purpose section of the regulations notes that the regulations are to restore and improve water quality, which is true but is limited to water quality improvements due to meeting regulatory requirements or within particular years when a portion of the reserve pool [under Section .08C (3)] can be retired.

It is also noted that the regulations are not for a traditional cap-and-trade program (instead they are for a baseline and credit program), which can make comparisons to existing trading programs (many of which are cap-and-trade programs) more difficult, and therefore can make more difficult an assessment of whether the regulations will succeed in achieving the stated objectives.

The Patuxent River Commission Nutrient Trading Workgroup, and other members of the Patuxent River Commission, identified a number of advantages and disadvantages of the proposed regulations, and are summarized in the following:

Trading Program Credits

Pros:

1. Allows BMP practices that provide increased nutrient removal for a given cost to generate a credit that can be purchased by stormwater MS4 permittees (towards a pollution reduction goal) or wastewater NPDES discharge permittees.
2. Credits can be used to address MS4 permit requirements – providing a greater opportunity for a permittee to achieve compliance with the lowering permit limits. Note: the regulations by themselves are not meant to replace the fact that permittees must meet their MS4 obligations even without trading; however, given the challenge faced by permittees of being able to meet their MS4 obligations within the required timeframes, the regulations should be able to facilitate success in meeting MS4 obligations versus no trading.
3. Credits are traded in a regional market (no set dollar values by regulations) – prices will emerge based on market demand. One intention is to facilitate achievement of regulatory requirements in a more cost-effective manner.

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Cons:

1. Overall, to encourage additional BMP implementation for the purpose of generating credits, the amount of time before those credits would become eligible to be placed in the market should be as soon as the BMP is proven successful. Specifically, under Sections .04 and .07 some clarification is needed on when credits become available on the market after cost-share or grant funding is provided.
2. For a trading program to be successful and realize its stated objectives, there must be clarity in determining the level of mitigation and credit that is being generated by the BMP. The regulations do not provide clarity on how to calculate the amount of mitigation or credit that a purchaser would buy.

Water Quality Protection/Improvements

Pros:

1. Trades will not result in a change in classification of a water body from “not impaired” to “impaired”.
2. Overall, the regulations should lead to no net increase in pollutants to the mouth of the Patuxent River or to the mouths of particular segments (within segmentsheds, as defined by the regulations).
3. The regulations provide for the possibility of an improvement to water quality (because the reserve pool of credits collected through the reserve ratio can be retired) but the regulations do not mandate such an improvement. Ideally the regulations would be set up to ensure an improvement to water quality for every year when trading occurs, but at this time the regulations do not provide for that.
4. “Edge of Tide” numeric adjustment factor provides an incentive to trade within the same segmentshed – i.e. credit is generated in the same segmentshed in which the buyer uses it without any reduction by the “Edge of Tide” numeric adjustment factor. Using the credit outside of the segmentshed where it is generated results in less credit due to application of the “Edge of Tide” numeric adjustment factor. This provides an incentive for trades to occur within the same segmentshed, which is more protective of water quality than trades between segmentsheds.

Cons:

1. Allows water quality improvements (i.e., credit generation) to occur at great distances from the source of the nutrient inputs, which may result in seeing slower improvements to water quality in specific segments (e.g., within an MS4 stormwater system area) or potential worsening of water quality in specific segments; however, the regulations indicate that trades must not result in a change in classification of receiving waters from “not impaired” to “impaired”.
2. The regulations should ensure that trades involving WWTPs only be used to mitigate existing conditions and not to encourage additional development.

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3. Although the regulations indicate that local water quality impairments will not occur as a result of a trade, the regulations do not describe the method that will be used to prevent local water quality impairment from occurring in waters that do not yet have a local TMDL.
4. While the regulations include an “uncertainty ratio”, no “retirement ratio” is included which would “retire” a specific percentage of credits generated (included in the draft trading manual). By “retiring” credits, there would be actual net improvements to water quality (beyond those achieved by meeting regulatory requirements).
5. Section .08F (2) appears to discourage the connection of septic systems to WWTPs in cases where the septic systems are downstream of the WWTP discharge. For all other types of trades, however, the requirement for credit generation should always be upstream. The regulation should clarify this point.
6. Regional trading doesn’t result in focused attention on subregions with the worst water quality or public health issues.
7. Some of the Commission members did not support the 1:1 uncertainty ratio under .08C(1)(a) because it does not appear adequate to account for the uncertainty associated with nonpoint source BMPs.

Compatible Programs/Partnerships – Supports Existing Efforts

Pros:

1. The regulations are compatible with and support the Maryland Department of Agriculture’s nutrient trading effort.
2. The regulations would support the draft “Building Bay Friendly Communities” approach for redevelopment only (see attached), developed by the Maryland Building Industry Association, by allowing for the generation of nutrient credits by developers.

Cons:

1. The Commissioners that support trading recommended that the state should provide flexibility on how baselines are set to maximize the incentives to trade.

Citizen Oversight of Trading and Verification/Enforcement Challenges

Cons:

1. The regulations should ensure that every trade, including any trade involving WWTPs or WWTP capacity, is registered and made easily and quickly accessible to the public. If not, the regulations would hamper citizen ability to ensure enforcement of discharge requirements. Without a comprehensive and close to real-time registry, there is uncertainty as to whether discharge amounts are within allowed limits or not. Also, a comprehensive and close to real-time registry would allow citizens to facilitate state/local government inspections of BMPs/credits if a BMP failure is suspected. Related to this, under Section .10C, the registry

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should be required to be updated more quickly in instances when the intended use of a credit changes.

2. To protect water quality, under Section .11, credits should be verified more frequently than every 3 years and under Section .13C, the time to notify and make public (through the registry) the revocation or suspension of a credit should be less than 30 days. Although there should be flexibility in setting compliance deadlines for restoring a credit, depending on extenuating circumstances (e.g., weather, availability of contractors), compliance should still occur as quickly as possible (ideally no more than 30 days after the notification). The regulations should also indicate the process for obtaining additional credits in situations when the reserve pool is not sufficient to account for the revocation or suspension of credits, or for other unanticipated situations, such as inaccurate assessments of pollution prevented by credits, or fraud.
3. The regulations require complicated tracking/oversight, which could result in increased costs that reduce the benefits of trading and more questions from concerned citizens. Not clear whether MDE has the capacity to respond to this additional set of burdens. Due to the increased costs associated with verifying and tracking the use of credits, consider a mechanism within the credit program that would generate revenue to offset the costs associated with the program.

Other comments:

1. An aggregator (defined by the regulations as a person that funds, generates, owns, or assembles credits resulting from a number of point or nonpoint sources to resell them) of credits could use the regulations to profit through arbitrage¹.
2. The definition of "sector" defines forests as people. Is this meant instead to refer to timber companies or landowners with forest land? Please clarify.
3. Under .04D, are office parks, shopping malls, car dealerships, etc. covered under General Permit No. 12SW?
4. Under the Purpose section of the regulations, replace "and has" with "by offering" in the following sentence: "Trading may supplement the more traditional governmental approaches for improving water quality and has ["and has" seems technically wrong, and should be substituted by "by offering"] the potential to achieve results faster and at a lower cost, accelerating efforts to restore and improve water quality"
5. MDE should clarify why the regulations don't cover trading between wastewater point sources (as noted in .04D)
6. .05E should clarify whether the non-regulated source first needs to ensure that existing loads from the site are not unacceptably high due to an existing malfunctioning stormwater control measure or other reason

¹ "Arbitrage is the process of exploiting differences in the price of an asset by simultaneously buying and selling it. In the process, the arbitrageur pockets a risk-free return. Differences in prices usually occur because of imperfect dissemination of information." <http://www.investinganswers.com/financial-dictionary/world-markets/arbitrage-2171>

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7. To steadily discourage trading and instead encourage environmental improvements onsite, the regulations should apply a ratio, to be increased over time, to all trades. To accomplish this, the regulations could provide a schedule of ratios in the regulations and provide a timetable that over time increases the ratio needed to meet the requirement (i.e. 5 years – 2:1, 10 years 2.5:1, 15 years – 3:1). This will encourage the use of BMPs within a particular watershed and provide improved water quality closer to the generated input.

DRAFT

Building Bay Friendly Communities in Maryland

Draft MBIA White Paper

Presented to the Patuxent River Commission, March 11, 2015

(updated November 2017)

Purpose: To develop and build environmentally state-of-the-art residential subdivisions that do not contribute any nutrient loading to the bay watershed (nutrient neutral) – or provide a net water quality improvement under re-development conditions.

Intent: Position the development industry to successfully develop land in Maryland given the constraints of local and state planning and zoning requirements as well as the bay-wide TMDL (total maximum daily load) pollution caps. Implementation of low impact stormwater designs (ESD to the MEP), more rigorous and redundant compliance with erosion and sediment controls and appropriate application of lawn fertilizers are both technically and financially viable for many residential parcels throughout the state. The program is intended to go beyond the current regulations, ordinances and as such, if chosen will afford the participant the implementation below.

Implementation: Obtain EPA approval/Delegated Maryland approval for implementation of this program. The program will be implemented through legislative, watershed implementation plans and regulatory changes and will allow for the avoidance of offset requirements for the new construction industry, [allowance of cluster zoning, density maximization, and utilization of the open space and/or nitrogen credits that could be traded or sold for the benefit of the Homeowner/Condominium Association.](#)

Components of a Bay Friendly Community:

Development/Re-development Phase:

- Full compliance/minimized discharge of sediments, minimization of grading and accelerated site stabilization during construction phase

- Maximum infiltration through use of environmental site design stormwater facilities
- Maximization of density allowable and clustering where possible
- Net water quality improvement when re-development of pre-SWM land use

Construction Phase:

- Installation of green building materials and components
 - Consider application of certification of ANSI/Green Building Standard or comparable certified program
- Installation of energy efficient building materials and appliances
- Installation of water efficient systems (gray water) and appliances
- Nutrient reducing septic system (if applicable)
- Preservation of trees/natural cover in accordance with local forest conservation ordinances and regulations
 - Tree plantings are to be required along with natural vegetation while limiting the use of turf grass. (EPA is seeking to limit turf grass around the Bay and replace it with natural vegetation.)
 - Achieve a minimum percentage (to be determined) of tree cover
 - Maintenance and restoration of streams and their buffers – Require stream and wetland buffers in accordance with state and local regulations and ordinances.
- Installation of bay friendly/indigenous plantings
 - Plants and grass types should be native species.
 - Use of plant species, rain barrels and gray water systems to minimize need for watering and for fertilizers.

Ownership Phase:

- HOA governing documents, when applicable, will control grass cover, plant types, use of fertilizer, septic system maintenance (if septic tanks are installed), and homeowner protection of stormwater controls (and, if required, stormwater maintenance requirements).
- HOA governing documents will provide authority to expand and keep pace with the science of protecting the local water quality without having to get a majority vote of the Member constituency.
- Fertilizer Application –
 - Limits phosphorus to first year only
 - Fertilizer application to be limited to a window period in the fall only (is that time right?).
 - Limits use of fertilizer in terms of pounds per 1,000 sf
 - Limits number of applications per annum
 - Requires only certain type
 - Fertilizer to be applied to lawn surfaces only, avoiding application to any paved surfaces
- Define a not-to-exceed grass cover
- Specify grasses, bushes, trees, plants that are eco-friendly and require minimum use of water
- HOA/Homeowner provided information on
 - Proper lawn mowing (height of cut when mowing) and maintaining grass clippings on lawn.
 - Maintenance requirements of LID and other ESD devices and horizontal controls both on the homeowner's lot and in the common areas.
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MONITORING POST CONSTRUCTION

- Engage third party firm to monitor and report results achieved

March 2015