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July 7, 2017

Re: Draft Maryland Water Quality Nutrient and Sediment Trading and Offset Program

Dear Mr. Setzer,

Thank you for the opportunity to comment on the Department's draft proposal to create a Maryland Water Quality Nutrient and Sediment Trading and Offset Program. The Chesapeake Bay Foundation (CBF) is pleased that MDE is committed to developing regulations to govern a water quality trading program in Maryland. We believe that a trading program that includes conservative trading ratios, robust verification, effective enforcement, and trading geographies that are protective of local water quality could advance the Chesapeake Bay clean-up in a cost-effective manner. These major tenants of water quality trading programs are also dictated by the EPA through its series of water quality trading policies, guidance, toolkits and Appendix S of the Chesapeake Bay TMDL.¹ However, several of these critical pieces of an effective water quality trading program are missing from the proposed draft regulations or fail to be protective enough to ensure a successful trading program. Generally, this proposal is missing basic concepts required by EPA Technical Memorandum² and appears to fall short of EPA expectations for a valid trading program. CBF urges the Department to adhere to the EPA Technical Memorandum, and adopt the attached draft regulation language (Stakeholder's Draft) that was submitted previously covering the issues raised in this letter. CBF has the following major substantive comments on the draft proposal, explained in more detail below:

- The proposed draft regulations lack meaningful and consistent certification and verification processes for credit generation;
- Non-regulated and onsite sewage system sources lack a baseline, and should include a baseline requirement that is consistent with the more stringent of Chesapeake Bay or local TMDLs;

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¹ United States Environmental Protection Agency, Chesapeake Bay Total Daily Maximum Load, (December 29, 2010).

² United States Environmental Protection Agency, Final Water Quality Trading Policy, (2003); Office of Policy, Economics and Innovation, U.S. Environmental Protection Agency, Water Quality Trading Evaluation, (2008); Office of Wastewater Management, U.S. Environmental Protection Agency, Water Quality Trading Toolkit for Permit Writers, (2007)

- The proposed draft regulations must ensure a net reduction in pollution loads by requiring retirement of credits and an uncertainty trading ratio for non-point sources, which is entirely absent;
- Excess capacity at wastewater treatment plants should not be used to provide water quality nutrient trading credits;
- Public participation is restricted to review of general permit terms allowing trading, which is insufficient and fails to include any public participation or transparency for other regulated entities in the program;
- The three proposed trading geographies are too large to bear any connection to hydrological function and fail to protect local water quality, in violation of anti-degradation principles;
- The proposed draft regulations fall short of providing adequate enforcement; and,
- The proposed draft regulations introduce a highly problematic concept of “bubble” or “overlay” permits that can cover an unlimited number of facilities in a watershed of an undefined size, violating concepts of the Chesapeake Bay TMDL and local TMDLs.

These critical issues are explained in more detail below, and suggested language can be found in the attached Stakeholder’s Draft regulations offered previously by CBF and other stakeholders.

Detailed Comments

1. The proposed draft regulations lack meaningful certification and verification processes for credit generation

Arguably the most important aspect of any nutrient trading program is that credit-generating practices are properly implemented and consistently performing as expected. There is very little in the draft proposed regulations to ensure implementation and maintenance of credit-generating practices. The draft proposed regulations make reference to “certified” credits several times through the regulations, but do not provide an adequate certification or verification process.

Verification of credit-generating practices is notably absent from the draft proposed regulations. While nonpoint source practices on *agricultural* land have a robust site-inspection, verification and certification process stated clearly in regulation,³ the proposed draft does not specify any verification process for any of the credit-generating practices subject to this proposed regulation. In proposed draft regulation section .08 regarding enforcement, there is a passing reference to an enforcement action including review of “certified” discharge monitoring reports, annual reports, inspections, etc., but there is no place in the regulation that requires the collection of this documentation. Presumably, these records may be required by the terms of the permit, but that should not be taken for granted and the appropriate certification documents and their retention must be spelled out in the regulation.

Furthermore, the draft proposed regulations are either silent or vague on what documentation, inspections, and record-keeping must be done for non-regulated entities or non-regulated practices. Section .10 contains the supposed “verification” of practices by reference to existing regulations for stormwater management, sediment control, construction in wetlands, and onsite sewage disposals

³ See, e.g., COMAR 15.20.12.07 (setting out process for on-site inspection for baseline compliance, on-site inspection for BMP implementation, review of documentation and records, and authority to request additional information such as monitoring).

systems. These provisions do not provide central record-keeping or tracking of BMPs, and are also insufficient for inspection and verification purposes. As we know through experience, the minimal and infrequent inspection of practices under these regulations results in a large number of underperforming BMPs that are not maintained properly, sometimes installed improperly, or sometimes simply don't exist. MDE has openly acknowledged that it lacks the number of inspectors necessary to comply with previous regulatory inspection requirements, and now the regulations lack inspection requirements entirely after the regulation was amended to remove the two-week inspection requirements. The existing regulations also rely on a variety of state and local entities to do the inspection and maintenance of various BMPs, making it impossible for the public to know who would be responsible for a noncompliant or failing credit-generating practice. A transparent and verifiable trading program must include a common registry for all credit-generating practices and a clear indication of the records and documentation that must accompany the practices on the registry.

Also in section .10, the draft proposed regulation incorporates broad references to the Maryland Stormwater Design Manual and/or Maryland's Accounting for Stormwater Waste Load Allocations and Impervious Acres Treated as de facto criteria for practices to generate nutrient and sediment credits. However, these reference documents, particularly the Accounting for Stormwater Waste Load Allocation and Impervious Acres Treated document, include placeholders for practices not yet specified, designed, or approved. This conflicts with Section .05, which requires credits to be generated using practices that are accepted by the Chesapeake Bay Program. CBF recommends limiting acceptable credit-generating practices to those approved by the Chesapeake Bay Program as suggested in the draft proposed regulation's General Policies.

Finally, the only substantive mention of "credit determination and verification" in section .10(C) relies entirely on modeling, and does not include any field verification. As suggested above, CBF strongly recommends that the regulations incorporate a field verification where appropriate.

In sum, the Department must amend the draft proposed regulations to include meaningful verification and certification procedures that include clear guidance on: (1) who is qualified to perform verifications; (2) frequency of visual verifications for credit-generating BMPs, on at least an annual basis; (3) frequency of inspections of records such as daily monitoring reports, appropriate annual reports, or other documentation underlying baseline and credit-generating activities; and (4) incorporation of Maryland Department of Agricultural credit-generating verification process where appropriate.

See Sections .13 Approval of Trades and .14 Verification in the attached stakeholder's draft for CBF's recommended language for verification.

2. Non-regulated and onsite sewage system sources lack a baseline, and should include a baseline requirement that is consistent with the more stringent of Chesapeake Bay or local TMDLs.

The proposed draft regulations state that "each source must satisfy the baseline established in accordance with this chapter or established in its permit before generating credits..."⁴ However, the chapter does not set any baseline for non-regulated sources and onsite sewage systems. This lack of a baseline would appear to put agricultural credits at a severe disadvantage, as the agricultural credit-

⁴ Draft proposed regulation COMAR 26.08.11 section .05(C).

generating regulations require attainment of the baseline level of nutrient or sediment reductions, stated as “the more stringent of either the applicable Chesapeake Bay or local TMDL...”⁵ CBF believes that compliance with equivalent baselines, sufficient to meet applicable Chesapeake Bay or local TMDLs, must be applied to all sources before a source can be certified for trading credits.

3. The proposed draft regulations must ensure a net reduction in pollution loads by requiring retirement of credits and an uncertainty trading ratio for nonpoint sources.

As mentioned above, Maryland’s nutrient trading program must comply with the Clean Water Act, state law, and EPA technical guidance. There is a known degree of scientific uncertainty surrounding the effectiveness of non-point source credit generation. One of the clear directives in the TMs is the necessity of having a protective uncertainty ratio no less than two credits purchased for each single credit required for all trades involving nonpoint credit generating practices, otherwise expressed as a 2:1 ratio.⁶ The requirement for a protective trading ratio is also documented in Maryland’s WIP, which states that a Maryland nutrient trading program will “provide a safety margin by requiring those acquiring nutrient offsets to purchase slightly more credits than they will receive.”⁷ However, while the proposed draft regulations provide an appropriate definition for “uncertainty ratio,” that phrase never again appears in the regulations. Similarly, the draft proposed regulations include a definition for “trading ratio” that mentions “retirement” ratios, which is not defined and never appears again in the regulations.

A legitimate nutrient trading program requires a margin of safety to ensure that the program achieves a net reduction of pollution. There is inherent uncertainty in credit-generation or offsets, including geographic location, meteorological factors, and the modeled versus real-world effectiveness of any particular BMP installation.⁸ In addition to the general real life underperformance of nonpoint source BMPs,⁹ there is also significant underperformance of BMPs that are not adequately maintained. The EPA TM provides for several methods to reduce uncertainty and therefore apply a less protective trading ratio, including direct and representative monitoring of a BMP to prove efficacy and consistency or projects involving implementation of permanent land conservation measures.¹⁰

The inclusion of the definition of “uncertainty ratio” in the draft proposed regulations encourages CBF to believe the omission of an uncertainty ratio from the substantive regulations may have been unintentional. CBF urges the Department to correct this oversight by including substantive uncertainty trading ratios of at least 2:1, as required by the EPA, unless the well-defined exceptions to the protective trading ratio are clearly laid out in the regulations and applied.¹¹

⁵ COMAR 15.20.12.04(A).

⁶ U.S. EPA, Accounting for Uncertainty in Offset and Trading Programs – EPA Technical Memorandum, 4 (Feb. 12, 2014).

⁷ Maryland Watershed Implementation Plan, Phase II. October 26, 2012. Page 48.

⁸ See, e.g., U.S. EPA, Accounting for Uncertainty in Offset and Trading Programs – EPA Technical Memorandum, 4 (Feb. 12, 2014) (detailing a number of reasons that uncertainty exists in trading programs, necessitating a protective 2:1 trading ratio for nonpoint sources).

⁹ National Research Council (NRC), Achieving Nutrient and Sediment Reduction Goals in the Chesapeake Bay 73 (2011) (stating that BMP efficiencies as derived from limited, intensely monitored pilot programs may perform better than they would in aggregate in larger applications).

¹⁰ *Id.*

¹¹ U.S. EPA, Accounting for Uncertainty in Offset and Trading Programs – EPA Technical Memorandum, 4 (Feb. 12, 2014)(lowering uncertainty ratios if detailed targeted monitoring or permanent land conservation easements are applied).

Finally, CBF urges the Department to include the 10% retirement ratio found in the agricultural credit trading registry known as the “Maryland Nutrient Trading Tool.” This retirement ratio will advance water quality while supporting a robust trading market. The existing program governing agricultural credits requires the 10% retirement ratio, and therefore it must be applied across the board to ensure a level and fair market.

4. Excess capacity at wastewater treatment plants must not be used to provide water quality nutrient trading credits

CBF was disappointed to see the idea of trading “capacity” credits from excess capacity at wastewater treatment plants reemerge after consensus that such credits should not be allowed. As agreed upon by the Maryland Water Quality Trading Advisory Committee members at several meetings, it is inappropriate and inconsistent with the Maryland regulatory framework to allow wastewater treatment plants to trade excess capacity.

First and foremost, there is no “additionality” in trading excess capacity at wastewater treatment plants. Additionality is the basic threshold by which credit generating activities must be judged, and in the case of excess capacity, no additional nutrients are reduced or prevented. According to Maryland’s Watershed Implementation Plan (WIP), a major component of reaching the Chesapeake Bay TMDL by 2025 and holding that pollution reduction steady is allowing the population to grow into the excess capacity currently existing at some wastewater treatment plants.¹² In addition, the state is currently four years behind the WIP strategy for offsetting growth.¹³ The lack of a plan to offset the current growing new loads of pollution will compound the problems raised by “trading” away excess capacity at wastewater treatment plants, which is currently the *only* plan the state has in place to handle additional growth and new loads from development and other land conversion.

The concept of trading “capacity” credits has not only been rejected in general, but also particularly in the context of trading for Municipal Separate Storm Sewer System (MS4) permit compliance. However, these proposed draft regulations provide a pathway for MS4s to obtain capacity credits “if the trading market with other sources, including agriculture, does not reasonably meet the demand...”¹⁴ This policy is essentially a self-fulfilling prophecy, as the creation of arbitrary and non-additional “capacity” credits will likely flood the market and make any other credit sources noncompetitive.

CBF urges the deletion of the definition and allowance for “capacity” credits from the trading program.

5. Public participation is restricted to insufficient review of general permit terms allowing trading, and fails to include any public participation for other regulated entities in the program.

Transparency and robust public participation is crucial in a nutrient trading program to leverage local knowledge, to prevent fraud, and to increase accountability overall. Effective EPA supported water

¹² Maryland Watershed Implementation Plan Phase II. October 26, 2012. *See* page 28, discussing the attainment of the Final Target by having municipal plants retain capacity to accommodate growth beyond 2025.

¹³ Maryland Watershed Implementation Plan Phase II. October 26, 2012. *See* page 46, committing to finalization of an “accounting for growth” program by the end of 2013.

¹⁴ .08 MS4 Stormwater Point Source Trading.

quality trading programs require public participation provisions allowing for accessible information and forums for input at the earliest stages of development.¹⁵ A successful nutrient trading program requires the sustained and good faith involvement of various stakeholders spanning the State. MDE should include into the development strategy a more comprehensive framework for public involvement. The certification and public review processes in the Agricultural Nutrient and Sediment Credit Certification Program at COMAR 15.20.12 may provide some guidance.

Unfortunately, the proposed draft regulations fall short of providing adequate public notice and participation. The only place the draft proposed regulations include public notice and comment is for NPDES and state discharge permittees. We appreciate the inclusion of public notice and comments for permits, as it is legally required. However, the limited public participation that is provided for permitted participants is insufficient. The draft proposed regulations would only allow public notice and comment on the fact that a permittee may use some nutrient credits for compliance, but does not require that permit to indicate how many credits will be utilized for compliance, what kind of credit-generating activities will be involved, or from where credits are generated. The draft proposed regulation appears to allow the public only to comment on the simple fact of whether a permittee may be able to avail itself of nutrient credits as part of permit compliance.

Further, the draft regulation excludes any kind of public transparency or participation for all other participants in the trading program, such as non-regulated sources, third parties, aggregators, or other private entities with credit-generating practices. At very least, the trading program must contain public transparency for credits generated or purchased by these participants. Currently, the proposed draft regulations propose to require non-regulated sources to “report in accordance” with the draft proposed, but there is no section in the proposed regulations that indicate where, how, or to whom reports by non-regulated sources are made.

CBF strongly recommends that the trading program require individual credit-generating practices and all verification documents to be registered with a unique registration identification number and available on a publicly available online registry. The credits being applied to permits must be listed in the register with the applicable permit number. The currently proposed requirement for permittees to annually report the number of credits utilized that year is good, but must also incorporate the unique identification number of those credits.

See Section .12 Registration of Trades in the attached stakeholder’s draft for CBF’s recommended language regarding the Registry.

6. The three proposed trading geographies are too large to reflect hydrological function and fail to protect local water quality in violation of anti-degradation principles

CBF has repeatedly objected to the proposed three trading regions that would include the Potomac River Basin, Patuxent River Basin, and the combined Eastern Shore and Western River Basins, including a portion of the Susquehanna watershed. These regions are far too expansive and have no hydrological justification when considering compliance with local TMDLs. As a result, the proposed

¹⁵ United States Environmental Protection Agency, Final Water Quality Trading Policy, B-10 (2003)

trading regulations would almost certainly degrade water quality in certain areas in violation of the Clean Water Act.

Any system of trading and offsets ultimately is aimed at net pollution reduction, but jurisdictions developing such programs still must comply with the CWA and local policies concerning anti-degradation and protection of local water quality. Existing anti-degradation mandates of 40 CFR 122.44 and Maryland regulations¹⁶ are understood to set the governing standards for any water quality trading program. Under the broader Federal mandates, NPDES permits may not authorize trading which would result in nonattainment of water quality standards; therefore, all trade agreements must comport with statutory anti-degradation provisions and, when necessary, anti-degradation reviews must be performed.¹⁷ Trading will not be permitted where the trade generates a net increase of the pollutant being discharged or where the individual trade will generate localized impairments.¹⁸

One solution to avoid local water quality impacts is to require the generated credit to be located upstream of a purchased credit in impaired waterways. CBF appreciates the language in Section .05 indicating that “trading may not cause or contribute to local water quality impairments,” but believes that the proposed three trading geographies are too expansive and hydrologically distinct to ensure that principle. The provision in Section .05 requiring trades within watersheds with local TMDLs to have the credit generated upstream is an excellent approach to avoid local water quality impairments. However, that provision includes a nonsensical exception whereby the Department can approve trades to an impaired waterway with credit-generating practices from other locations if the Department determines “that the water quality impairment is not likely caused by nutrients or sediments.”¹⁹ This exception is in direct conflict with the preceding provision that states affirmatively that the upstream credit-generation requirement applies to areas “subject to an approved local TMDL for *total nitrogen, total phosphorus, or total suspended solids...*”²⁰ If a local impaired waterway already has a TMDL for nutrients and sediments, it is not appropriate for the Department to determine that the water quality impairment is not caused by nutrients or sediments. The exception to the upstream credit-generation requirement for locally impaired waters must be removed.

Finally, in addition to the restriction requiring credit-generation upstream of credit-purchases in impaired watersheds, CBF recommends using an 8-digit Hydrological Unit Code (HUC) scale. Trading within the combined boundary of an eight-digit watershed overlaid with the municipal boundary of an MS4 permittee is sufficiently expansive to generate a market for credits, and would ensure that water quality benefits are seen equitably across the state. However, at very least, the trading geographies must separate the Eastern and Western Shores.

7. The proposed draft regulations fall short of providing adequate enforcement and must be strengthened and be specific to the trading program.

The proposed draft regulations do not include any enforcement specific to the proposed trading program, but instead incorporates by reference the general enforcement provisions found in the

¹⁶ COMAR 26.08.02.04

¹⁷ Office of Wastewater Management, U.S. Environmental Protection Agency, Water Quality Trading Toolkit for Permit Writers, 11 (2007)

¹⁸ Id.

¹⁹ Proposed draft regulations Section .05(B)(2).

²⁰ Proposed Draft Regulations Section .05(B)(1).

Environment Article, §§9-334 through 9-344. A trading program raises a host of unique issues that are not adequately addressed by those existing general enforcement provisions, such as credit failure, fraudulent trading, verification misrepresentations, and repeat offenders. The proposed draft regulations are unclear or silent on the responsibilities of permitted credit purchasers, aggregators, and credit-generators if a credit is found to be failing or fraudulent.

First and foremost, the trading program must include an express statement that credit purchasers are responsible for replacing any failed or fraudulent credits and set a reasonable schedule for compliance to remedy the failure, including mitigation for any excess pollution that was discharged without an appropriate offsetting credit. Currently, the draft proposed regulations only indicate responsibility for credit failure for MS4 permittees, and is silent on the responsibilities of other credit-purchasers, credit-generators, and aggregators. The regulations must include clear responsibility for credit failure for all credit purchasers, and set an effective compliance schedule to remedy the failure.

The regulation also fails to prohibit fraudulent credits, or address other willful actions that would result in credits being bought or sold without associated expected pollution reductions. This is a problem because the enforcement provisions incorporated by reference in the draft proposed regulation authorize the Department to enforce a *violation* of any rule or regulation issued under that subtitle. If there is not a prohibition on fraudulent practices, then technically a fraudulent sale would not be a violation of the subtitle. This is one of many examples of why it is important to craft an enforcement scheme specific to a trading program.

Finally, the enforcement regulations should include an opportunity for citizen enforcement, or at very least, clarify that the reliance on credits does not interfere with citizens' current ability to challenge non-compliance with a permit.

See Sections .15 Permits and Enforcement and .17 Enforcement in the attached stakeholder's draft for CBF's recommended language.

8. The proposed draft regulations introduce a highly problematic concept of “bubble” or “overlay” permits that can cover an unlimited number of facilities in a watershed of an undefined size, violating concepts of the Chesapeake Bay TMDL and local TMDLs.

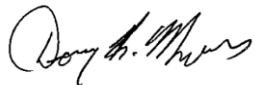
The proposed draft regulations introduce a concept of “bubble” or “overlay” permits for an unlimited amount of facility owners within an undefined watershed. There is no restriction on the size of the “watershed” being discussed – it could be the Chesapeake Bay watershed – and there is no restriction on the number of “multiple owners.” Although we do not expect all point sources in Maryland to form an association and apply for a single permit, the draft proposed regulation would allow it. Bubble permits for water pollution require unwieldy mass-balance calculations, even when the bubble is restricted to single waterways. As bubbles expand to multiple waterways, some of which have insufficient ambient monitoring, the calculus becomes much harder – effectively impossible – and the permit writer loses the ability to predict local water quality impacts. Once a permit is issued, the sources within a bubble may shift pollution loads in unpredictable ways, creating a high likelihood of permit-sanctioned water pollution hotspots.

CBF urges the Department to remove all reference to bubble or overlay permits from the draft proposed regulation, as bubble permits are a completely different and distinct concept from nutrient trading that is deserving of a separate public notice and comment.

Conclusion

CBF appreciates this opportunity to comment on the first draft of regulations for a Maryland water quality trading program. Having a clear regulatory framework is critical for a functioning trading program, and to ensure confidence in the public as well as the regulated community. As indicated here, there are several important additions or clarifications to the proposal that CBF believes are necessary to ensure that a trading program complies with legal requirements and protects local water quality. We look forward to continuing to work with the Department to ensure any trading program that is ultimately promulgated advances clean water in local streams, rivers, and the Chesapeake Bay.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug Myers". The signature is cursive and somewhat stylized, with the first name "Doug" being more prominent.

Doug Myers, Senior Scientist
Chesapeake Bay Foundation
Maryland Water Quality Trading Advisory Committee Member