

**DRAFT - ISSUE PAPER**

**Bay Restoration Fund Nutrient Credit Purchase Policies and Procedures**

**Issue Statement**

An amendment to the Bay Restoration Fund (BRF) statute proposes to expand the uses of funds generated from wastewater sewer user fees to allow the State to purchase cost-effective nutrient credits for the purpose of accelerating nutrient reductions to the Chesapeake Bay (Environment Article § 9-1605.2.).

Several policy issues remain to be established. First is to determine how the credits are purchased when BRF revenue is used. Second is to address what types of pollution control practices may be used to generate credits. Third is to address the matter of where credits may be generated relative to where they are credited. Fourth determine how the credits are distributed among pollution source sectors, local jurisdictions and geographically. A full listing of issues raised by stakeholders during the discussion of the BRF legislative amendment proposed in 2016 (HB 325), and potential resolutions, is provided in Appendix A.

**Purpose**

This issue paper is an initial draft of a document that describes policies and procedure for implementing the proposed legislative amendment to use BRF funds for the purchase of nutrient reduction credits. It is intended to identify policy issues and options in support of a comprehensive stakeholder dialogue on the subject. The eventual policy and procedures document may be adopted as a section of Maryland's Trading Manual or may be a stand-alone document.

**Background and Discussion**

Maryland's Phase I and II WIPs established midpoint nutrient reduction responsibilities among all major controllable sources and also 2025 pollution caps, but recognizes the path to 2025 will be further refined in the Phase III WIP. In 2016, the Governor's Bay Cabinet outlined a path forward to begin to close the 2025 funding gap and communicated that more cost effective solutions would be needed if Maryland is to achieve its 2025 goals. More specifically, restoration success is possible and a more efficient, market-based approach to financing will reduce costs and accelerate implementation leading to a restored Bay. One of the recommendations included focusing on pollution reduction targets and transitioning to a pollution reduction credit based financing and accounting system that would foster cost efficiency.

One way to accomplish this is to use the BRF framework. It is an existing, efficient way to pool revenue from the developed land sector and fund cost-effective nutrient reductions. The BRF is composed of two funds, one for septic system revenue and one for sewer system revenue. The septic system funds total about \$28 million/year and are used to 1) pay for septic system BAT upgrades (60% or \$17 million/year),

## BRF Credit Purchase Issue Paper - WQ TAC Draft Version 10/17/16

which are not cost-effective, and connections to BNR/ENR facility, which can be cost-effective particularly in the critical area, 2) pay for agricultural cover-crops (40% or \$11 million/year), which are cost-effective. The cover crop reductions from this revenue stream are credited towards the Bay goals for the agricultural sector.

The wastewater sewer funds total about \$110 million/year and are used for two broad purposes: 1) to pay off past loans in the form of bonds that were used to upgrade 67 of Maryland's major wastewater treatment plants (45% or \$50 million/year), and 2) to fund the upgrade of minor wastewater plants and other authorized activities with water quality and health benefits (55% or \$60 million/year). Starting FY18 BRF funding can also be provided for Stormwater management BMPs.

The proposed amendment would use funds from the wastewater sewer user fees, which become available in FY18 when funding for the upgrade of all major wastewater treatment plants (WWTPs) will all be in place. The revenue stream will be available for achieving the most cost-effective nutrient reductions possible. Using the available sewer funds avoids disrupting the highly cost-effective purchase of cover crops that rely, in part, on septic system user fees.

The State has no way to compel non-permitted sectors to make reductions other than to pay for it. Reductions from septic systems and non-MS4 stormwater amount to about 1.6 million pounds or 14% of the total nitrogen reduction needed between 2010 to 2025. If the reduction responsibility is not borne by these sectors, it would need to be absorbed by other sectors.

## Options and Considerations

Key topics are presented below with options and considerations for each.

**How are Credits to be Purchased?** The manner in which the credits are purchased should consider administrative efficiency, maximizing benefits to the Bay (cost-effective), considering local benefits and co-benefits, avoiding any appearance of conflict of interest and considering other operational issues.

1. Open auction by MDE. Under this option, MDE takes bid/proposals from any entity that offers a fixed selling price/lb per year delivered to tidal waters for nitrogen and phosphorus, for at least 5 years and up to 15 years. Select proposals with lowest cost/lb; or
2. MDE sets a purchase price "floor rate" for nitrogen and phosphorus credit purchase. This low price is available to any entity that cannot sell the credit in the open nutrient trading market for a higher price; or
3. MDE sets a purchase price "spark rate" for nitrogen and phosphorus credit purchase. This high price is available to any entity until the annually allocated funds are all used up. This option is to stimulate the market to get nutrient trading going in MD.

### BRF Credit Purchase Issue Paper - WQ TAC Draft Version 10/17/16

The 5 to 15 year contract establishes a framework for investors to front the funds to build BMPs and seek a guaranteed annual return that hopefully generates a profit. The BRF's annual payment process, contingent on an annual verification, protects the financial interests of the State and ratepayers.

In each case above, the credits will be verified each fiscal year, prior to making payment. Only proposals with a minimum nitrogen reduction rate of 1,000 lbs/yr (1,000 credits) or phosphorus reduction rate of 100 lbs/yr (100 credits) will be considered. The proposal does not include the purchase of sediment credits at this time.

Nitrogen and phosphorus credits for a given conservation practice are sold separately. The amounts of nitrogen and phosphorus credits to be purchased by the BRF fund will be determined based on need. This need will be informed by relative amount of BRF revenues generated by jurisdiction and the preferential order of reduction obligations described in the section on "How to distribute credits?" The details for doing this are to be determined.

In the event there are more credits available with the same prices when the annual funding cap is reached, a lottery system will be used to break the tie.

#### **What Credits are Eligible for Purchase?**

The initial proposal is intended to establish an initiative that is sufficiently simple, yet broad and flexible enough to be successful in the short term. Over time, refinements can be made that are widely accepted as being beneficial. The initiative can also be ended if better ways to meet Maryland's Bay restoration goals are identified.

At this stage, only nitrogen and phosphorus credits that are certified and registered in the Chesapeake Bay Nutrient Trading Tool (CBNTT) will be eligible for purchase by the BRF. This credit generating and trading platform has undergone technical review, which ensures the credits are technically defensible. It is also governed by State regulation that helps ensure verification of credits, transparency, accountability.

The initial proposal does not include the purchase of sediment credits for sake of simplicity and because current accounting shows Maryland's sediment goals for the Bay are under control. Credits generated by practices that must be repeated each year may be purchased using the BRF (annual practices). The credits will be verified each fiscal year, prior to making payment. Cover crops will not be eligible for generating credits for purchase by the BRF, but will count toward meeting the baseline to generate credits.

The proposed policy is for credits to have a duration of between 5 years to 15 years. This means that the contract for generating credits must be for that duration. The underlying practice(s) that generate the credit may have a shorter life-span, e.g., one-year, or seasonal, but in such cases must be repeated for at least five years according to the contractual obligation.

## BRF Credit Purchase Issue Paper - WQ TAC Draft Version 10/17/16

Although innovative practices are desired in the long run, credit purchases by the BRF will be limited to practices that are credited for annual progress evaluations according to Chesapeake Bay Program partnership procedures.

The BRF will not be used to purchase credits generated by wastewater treatment plants.

### **Where to Purchase Credits Relative to Where Credits are Applied?**

To maximize cost benefits, credits should be purchased from locations that are most cost-effective in terms of pounds-delivered to the Bay per dollar expended. This implies that the location of credit generation need not be within the jurisdiction that receives the credit. In addition to minimizing cost, the approach also simplifies the administration of this initiative.

Because this process involves reducing pollution, it does not pose local water quality concerns associated with new or increased pollution sources. Ultimately, the State is responsible for achieving nutrient reductions that are geographically distributed in a way that ensure attainment of water quality acceptable to the U.S. Environmental Protection Agency (EPA). Given the modest pace of implementation associated with this proposal, any observed concerns can be evaluated and adjusted through policy changes if needed in the future.

### **How to distribute the credits?**

The proposal is to distribute the credits in proportion to the total funds paid into the BRF by local jurisdictions annually (combined septic & wastewater fees)<sup>1</sup>. The credits will be applied in preferential order of meeting the reduction goals for septic systems, non-MS4 stormwater and MS4 stormwater. This preferential order recognizes the need to fund septic system and non-MS4 stormwater sectors for which there are no regulatory instruments to compel reductions<sup>2</sup>. This preferential order and the amount of revenues contributed by each jurisdiction will inform the relative amount of nitrogen and phosphorus credits purchased each year.

The preferential order of credit purchases promotes the assurance of implementation of the Bay TMDL load allocations<sup>3</sup> (meeting waste load allocations is assured through permits). This is consistent with the Environmental Finance Center policy recommendation that identifies two options for advancing implementation, “..the State can either regulate the reductions or pay for the reductions.”<sup>4</sup> By design,

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<sup>1</sup> Given that the State has historically shifted funds among jurisdictions, e.g., using funds from minor WWTP sewer service areas to fund major WWTP upgrades, this policy could result in some jurisdictions receiving more direct beneficial use of their BRF revenue than they have in the past.

<sup>2</sup> Because septic systems only discharge nitrogen, and nitrogen and phosphorus credits are sold separately, the State proposes preferentially purchasing nitrogen credits.

<sup>3</sup> Load allocations are non-permitted part of a Total Maximum Daily Load (TMDL). Because it is difficult to compel reductions associated with LAs, TMDLs require an assurance of implementation element, which is a key function of the Bay Watershed Implementation Plans.

<sup>4</sup> Maryland’s Chesapeake Bay Restoration Financing Strategy Final Report, Environmental Finance Center, University of Maryland. February 2015. P.6 [https://efc.umd.edu/assets/financing\\_strategy\\_final\\_6\\_5.pdf](https://efc.umd.edu/assets/financing_strategy_final_6_5.pdf)

the proposed statute amendment includes an annual funding cap on credit purchases to ensure BRF monies remain available for addressing MS4-permitted stormwater and other needs.

## **Summary**

The Governor's Bay Cabinet outlined a path for Maryland to achieve its share of the Chesapeake Bay nutrient reduction goal that depends on transitioning to a credit based financing and accounting system to foster cost efficiency. The proposed amendment to the BRF statute, which would authorize using a portion of the sewer fee to purchase low-cost nutrient reduction credits, is a modest step in this direction.

MDE would purchase credits in a manner that targets cost-efficiency, promotes investment by the private sector and safeguards State and ratepayer financial interests. The types of activities that could generate credits would be limited to those activities that can be reflected in the Chesapeake Bay Nutrient Trading Tool (CBNTT). This credit generating and trading platform is technically sound, and helps ensure transparency, verification, accountability by State agencies and the public.

To maximize cost benefits, credits should be purchased from locations that are most cost-effective and distributed geographically in proportion to the total funds paid into the BRF by local jurisdictions annually (combined septic & wastewater fees). This aspect of the initiative does not create local water quality hot spots, because it is a pollution reduction process rather than a process for offsetting new loads. The credits are proposed to be applied in preferential order of meeting the reduction goals for septic systems, non-MS4 stormwater and MS4 stormwater.

The proposed BRF credit purchase initiative proposes directing a modest level of funding to begin exercising parts of Maryland's water quality trading infrastructure. This initiative could provide a valuable lessons in support of transitioning to a pollution reduction credit based financing and accounting system that helps restore the Chesapeake Bay and local water quality.

## Appendix A

This appendix identifies issues raised by stakeholders during the discussion of the BRF legislative amendment proposed in 2016 (HB 325) and offers responses with cross-references to the Issue Paper on Bay Restoration Fund Nutrient Credit Purchase Policies and Procedures.

### **Issue 1: The original proposal had no limits on when & how many credits (\$) may be purchased.**

**Response:** Of the approximately \$60 million dollars per year available for use, the legislation proposes a \$10 million annual cap for purchasing nutrient credits. The proposal is for the State to purchase credits one time annually. The proposed amendment does not specify the duration of this expanded use of the BRF; however, a sunset clause could be added.

### **Issue 2: How will the credits apportioned?**

**Response:** The proposal is to apportion the credits toward meeting the nutrient reduction obligations of non-permitted sources in proportion to payments received from local jurisdictions (non-MS4 stormwater and septic systems). After obligations of non-permitted sources are met the credits could be applied to meeting reduction obligations of regulated sectors (MS4s).

The State can only compel reductions through permit requirements or by paying non-permitted entities<sup>5</sup>. The State's Bay TMDL allocations call for about 1.6 million pounds of nitrogen reduction from non-permitted sectors (about 14% of the total reduction)<sup>6</sup>. Consequently, the State has an interest in apportioning the BRF-funded credits to meet the reduction requirements of non-permitted sectors .

### **Issue 3: Safeguard the uses of dedicated funds.**

**Response:** The legislative amendment proposes a \$10 million annual cap on using the BRF to purchase credits out of a total of about \$60 million/year. In addition, the legislation could include a sunset provision, ideally after 2025.

### **Issue 4: Potential impacts on Ag sector ability to meet its Bay goals.**

**Response:** Participation of farms in generating credits for sale would be on a voluntary basis. Only farms that have achieved their share of reductions toward the Bay restoration goals would be eligible to generate credits for sale. The legislative amendment proposes a \$10 million annual cap on funds. This

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<sup>5</sup> Maryland's Chesapeake Bay Restoration Financing Strategy Final Report, Environmental Finance Center, University of Maryland. February 2015. .

<sup>6</sup> Maryland's Bay TMDL allocations imply nitrogen reductions of about 0.42 million lbs/yr from non-MS4 stormwater and 1.15 million lbs/yr from septic systems, which is about 13.5% of the total nitrogen reduction.

[BRF Credit Purchase Issue Paper - WQ TAC Draft Version 10/17/16](#)

compares with over \$40 million in funding for the FY15 MACS program<sup>7</sup>. MDA is sensitive to avoiding the disruption of existing funding programs, such as the cover crop program, which will be excluded from the eligible practices funded via BRF credit purchases.

**Issue 5: State involvement in market place pricing**

**Response:** For several years Maryland has had in place the administrative and information technology infrastructure for trading market activity in the agricultural sector; however, there is no reliable demand to generate credits. It is uncertain whether the MS4 stormwater permit will materialize to serve as a driver of demand. A BRF credit purchase program would be a public private partnership that creates reliable demand. This could drive the generation and exchange of credits that would mimic many aspects of a more ideal market. In addition to exercising key market mechanics, such as farm credit calculations, credit certification and verification, and operation of the credit registry system, it would begin to generate information about pricing of credits. Although it would be an imperfect market, a great deal of beneficial experience with the trading infrastructure could be gained and it would drive the generation of relatively low cost nutrient reductions that otherwise would not occur.

**Issue 6: Premature given limited understanding of trading program.**

**Response:** Many of the mechanisms for purchasing credits already exist as apply to the agricultural sector. Stormwater elements of the Trading Manual are not relevant to the BRF credit purchases.

**Issue 7: Potential expectation for restoration to occur in urban locale.**

**Response:** The expressed purpose of the BRF credit purchase concept is to maximize to cost-effectiveness of limited revenue toward achieving the Bay nutrient reduction goals by 2025. A tradeoff in meeting the optimal cost-effectiveness objective is that the reductions will be located where they have the greatest effect on Bay restoration. Although this may shift the location of the reductions away from urban areas, the credit can be applied to those urban areas that generated the revenue, which made the accelerated reductions possible.

**Issue 8: Potential impact on funding stormwater permit obligations**

**Response:** This issue paper proposes to direct the credits purchased by the BRF, under a funding cap, toward non-permitted activities for which the State has no means to complete reductions other than to pay for them. The annual BRF revenue stream for pollution reductions is estimated to be about \$60 million/year beginning in FY18. If the BRF credit purchases are capped at \$10 million/year, this would leave \$50 million/year available for which permitted stormwater would be an eligible use. (See: "How to distribute the credits?"). In principle, an additional tranche of funding, above the \$10 million/year cap,

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<sup>7</sup> Maryland Agricultural Water Quality Cost-Share Program, Annual Report 2015. Maryland Department of Agriculture.

[BRF Credit Purchase Issue Paper - WQ TAC Draft Version 10/17/16](#)

e.g., to \$20 million/year, which could be used to purchase credits on behalf of the the federally permitted stormwater sector. There are many similar alternatives that could be explored.

**Issue 9: Concern small WWTPs will not receive upgrade funding.**

**Response:** By statute, the upgrade of minor WWTPs is the first priority for BRF funding following the funding of major WWTPs upgrades, which will be completed in FY18. Only after the needs of minor WWTPs are met is the Department enabled to use the BRF funds for other authorized purposes to meet water quality and health benefits.