



November 9, 2009

Board of Directors

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Senator Ben Cardin
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Dear Senator Cardin:

The draft Chesapeake Clean Water and Ecosystem Restoration Act of 2009 signals the beginning of a new era of commitment to Bay restoration. The legislation's mandatory implementation plans and the authorities given to the EPA will ensure that those plans amount to more than paper exercises. The inclusion of enforceable deadlines, both the two-year milestones and the 2025 date for final implementation, are critical to inserting much-needed accountability into Bay restoration efforts. Not only is the draft legislation a tremendous step in the right direction for saving the Bay, but it also has the right elements to make the Bay Program and the Bay-wide TMDL models for watersheds across the country.

We write, however, to make specific, targeted suggestions for improving the legislation's nutrient trading program. Effluent trading has the potential to reduce the cost of complying with pollution reductions and to give non-point sources strong incentives to significantly reduce nutrient discharges. The difficulty lies in translating this potential into actual pollution reductions. Without careful design and comprehensive monitoring of progress, nutrient trading could backfire, increasing pollution in specific locations.

Our recommendations address five fundamental concerns:

- **Temporal and Geographic Limitations.** We hope you will consider incorporating safeguards that limit the geographic scope of trading to the individual river basins that are the platform for setting Total Maximum Daily Loads (TMDL) and that curtail trades that result in pollution spikes during seasons that are important to wildlife;
- **Baselines.** The legislation could define environmental criteria for defining baselines and measuring exceedances to prevent the choice of periods when nutrient discharges were artificially elevated;
- **Prevention of Hotspots.** We can foresee situations where trading creates localized, undesirable impacts—or "hotspots" of pollution—that that could be quite damaging to the Bay's ecology, even if the temporal and geographic aspects of trading are restricted and baselines are set at an appropriate level. We hope you will consider instructing the EPA to keep a careful watch on such developments, and give the Agency authority to suspend trading if such hot spots occur;

- **Accountability and Monitoring.** Technologies to accurately gauge the amounts of pollution prevented by Best Management Practices in the non-point pollution arena are not yet completely reliable. One of the biggest challenges to the program’s credibility will be the possibility of sham trading, either because it is so difficult to quantify accurately the pollution reductions achieved at non-point sources through such “best management practices” as the planting of cover crops or because data about discharges is kept confidential. To avoid these outcomes, we hope you will consider deleting the provision that prohibits the EPA from disclosing farm-specific data on the implementation of conservation management practices. Farmers expecting to get the benefits of trading, or—for that matter—federal subsidies for pollution prevention, must also be willing to share information about their practices with the public.
- **Allowances Not Property Rights.** Title IV of the Clean Air Act, designed to curtail sulfur dioxide emissions that cause acid rain, specifically provides that the federal government’s allocation of allowances does not create property rights to hold those allowances indefinitely, and we suggest that you include a similar provision in your bill.

Issue 1: The geographic scope of the trading program is unclear.

Under the draft legislation, the geographic scope of the nutrient trading program is unclear and could lead to trades that undermine purpose of the program. The predominant areas that need clarification are as follows:

- **The legislation uses the term “interstate” in a way that implies the program could include sources in jurisdictions outside of the Chesapeake Bay watershed.** At the outset of the section creating the trading program, the current draft establishes an *interstate* nitrogen and phosphorous trading program for the Chesapeake Bay. Changing the language to specify the program as “a nitrogen and phosphorus trading program *among Chesapeake Bay watershed states*” would clarify that the program involves sources in Bay watershed states only.
- **The legislation appears to use the term “watershed” inconsistently, confusing the geographic scope of the program.** Section (a)(9) defines the “Chesapeake Bay Watershed” as the “Chesapeake Bay and the area consisting of 19 tributary basins within the Chesapeake Bay States through which precipitation drains into the Chesapeake Bay.” Such a definition would seem to confine the trading program to include trades only among sources in the Bay watershed when the term “watershed” is used in the trading context. Several provisions, however, appear to use the term watershed differently, with the effect of changing the program’s geographic scope. For example, section 6(B)(ix) provides that, for trades in impaired waters for which “a TMDL has not yet been implemented for the impairment... dischargers in the watershed may not rely on credits produced outside the watershed.” This condition implies that dischargers to waters with an implemented TMDL *may* rely on credits produced outside the watershed. We doubt that this broad scope is the intent of the legislation, as both buyers and sellers must trade pollution credits within the Bay watershed in order for nutrient trading to reduce nutrient pollution overall in the Bay as intended.

- **The final legislation should use the geographic boundaries of the eight major river basins that make up the Bay watershed to define the trading program.** The Bay consists of eight major river basins: the Susquehanna River Basin, the Western Shore Maryland, the Patuxent River Basin, the Potomac River Basin, the Rappahannock River Basin, the York River Basin, the James River Basin, and the Eastern Shore. These basins encompass the 92 tributary segments that will be assigned individual TMDLs as part of the Bay-wide TMDL. The legislation should permit trades only within a major river basin to ensure that the drainage of each major basin into the Chesapeake Bay complies with the assigned nutrient loads. Using these major river basins will also minimize the occurrence of localized hotspots, discussed below.
- **The fact that the trading program encompasses the entire Bay watershed could result in localized hotspots.** Creating a trading program that includes any source discharging nitrogen and phosphorus within the 64,000 square-mile watershed expands the market of buyers and sellers able to participate in the program, and it would enlist *all* sources in the effort to meet the Bay-wide TMDL. A distinct disadvantage to this approach, however, is the potential for hotspots, or localized concentrations of pollutants, to occur. For example, a credit buyer in the District of Columbia could purchase from a credit seller that generated reductions in New York. Because the buyer and seller have different receiving waters within the Bay watershed, a pollution imbalance results within their waters. Although the seller's receiving waters in New York would improve, pollution in the buyer's receiving waters in the District of Columbia would increase. This increase in pollution has the potential to cause localized impacts that are not offset by a reduction in the same waters.

Issue 2: The temporal parameters of generating and applying the credits should be specified.

The final legislation should give greater guidance regarding the lifespan of nutrient credits, the time span during which a credit can be applied, and the time limits on using banked credits.

- **The current draft fails to define the temporal parameters for using or applying trading credits, which could result in violations of water quality standards, TMDLs, or wasteload and load allocations for the receiving water.** In defining the temporal scope of nutrient credits, the time frame for generating credits and applying credits must correspond to each other. For example, the dead zone in the Chesapeake Bay appears during the warmer summer months. Allowing a credit-buyer to apply a credit that resulted from a nutrient reduction in the winter and thus *increase* its discharge during the summer would add to the nutrient pollution causing the dead zone.
- **The current draft fails to account for the temporal disparity between credit generation and credit application, which could result in violations of water quality standards, TMDLs, or wasteload and load allocations for the receiving water.** Reducing pollution from nonpoint sources may take longer to realize than an immediate discharge of pollution from a point source. The nutrient trading program must account for this disparity. A buyer should be prohibited from using credits until the seller has demonstrated an actual pollution reduction.

- **The lack of deadlines for the use of banked credits may undermine progress toward improving water quality in the Bay.** Banked credits should have an expiration date or a specified period of use, after which they cannot be used or must be retired. This limitation will prevent the application of credits to the discharge of sudden and large amounts of nutrients.

Issue 3: The determination of the baseline and its relationship to the TMDL is unclear.

Setting the baseline is a crucial component of the trading program. Section (a)(3), which defines baseline, provides:

The term ‘baseline’ means the basic standard or level used for measuring (as applicable)-

- (A) the nutrient control requirements credit sellers must achieve before becoming eligible to generate saleable nutrient credits; or
- (B) the nutrient load reductions required by individual dischargers to meet water quality standards or goals under a TMDL or watershed implementation plan.

We are unclear why some credit sellers—namely, nonpoint sources—are not explicitly subject to water quality standards or goals under a TMDL or watershed implementation plan but individual point source dischargers may be so subject. We recommend that all sellers be required to meet water quality standards or goals under a TMDL or watershed implementation plan, just as individual dischargers are so required.

Issue 4: What constitutes exceedance of TMDLs is unclear.

The legislation prohibits the use or application of trading credits that would cause exceedances of water quality standards, the TMDL, or wasteload and load allocations. However, what constitutes an exceedance is unclear because there are multiple TMDLs and various units of time to measure the TMDLs.

- **The legislation should clarify the how exceedance is measured.** The EPA’s 2006 guidance recommends that TMDLs and associated wasteload and load allocations include a daily time increment in conjunction with “other appropriate temporal expressions that may be necessary to implement the relevant water quality standard.” The legislation should clarify which temporal expression will be used to determine if a given trade exceeds it. It is critical that the time frames for the units of trade are consistent with the TMDL.
- **The legislation should specify the TMDL—Bay-wide or individual tributary segment—by which to measure exceedance.** The Bay-wide TMDL applies to the entire watershed, but it is divided among 92 individual tributary segments. The legislation should specify which TMDL would be used to measure exceedance. We recommend that an exceedance be measured by the individual tributary segment TMDL. If the exceedance were defined as the overall wasteload and load allocations in the Bay-wide TMDL, trades would have few limits because they would rarely cause a measurable exceedance of this allocation. Thus, using the Bay-wide TMDL would undermine the purpose of the trading program.

Issue 5: The final legislation should include explicit and precautionary measures to prevent localized impacts.

The trading program requires that the application of credits not cause or contribute to, among other regulatory violations, localized impacts or hotspots. One of the greatest strengths of the Chesapeake Bay watershed is the science on nutrient impacts on specific tributaries of the Bay. EPA should be required to consider this information as it develops technical standards and protocols for minimizing localized impacts.

- **The final legislation must identify an appropriate geographic scope that balances market participants with geographic distances that could lead to hotspots.** As discussed above, trades across different waterbodies within the Bay watershed could lead to hotspots. The final trading program should be required account for and reduce the likelihood of this potential.
- **Trading of toxic water pollutions should be expressly prohibited, and safeguards should be established in case toxics pollutants accumulate as an unintended result of nutrient trading.** The final legislation should include an explicit prohibition on the trading of toxic water pollutants, especially those that may be coupled with increased discharges in nitrogen or phosphorous. The potential for toxic trading to concentrate pollution in disadvantaged communities could discredit the program. As written, the draft legislation applies to nutrient trading, but the final legislation could further clarify the nature of the trading program by prohibiting toxic pollutant trading and including measures to prevent accumulation of toxic pollutants.
- **A trading arrangement or contract between buyer and seller must be thoroughly reviewed for localized impacts prior to any actual trades.** To best prevent localized impacts, the EPA or Bay state must review all proposed trades. Trades that fail to conform to the Clean Water Act or the rules of the trading program should be rejected.
- **Trading should be suspended if hotspots or localized impacts develop or appear as a result of trading.** Nutrient trading is still a relatively new and experimental way to reduce nutrient pollution. The EPA should have the express authority to halt trading if negative consequences, such as localized impacts, arise or if trading fails to improve water quality standards.

Issue 6: The trading program needs stronger enforcement and accountability provisions to ensure actual reductions in pollution and actual progress toward meeting water quality goals.

The current draft seems to only ensure explicit enforceability between the participating parties and not enforceability by the Bay state or the EPA.

- **No trading program should be allowed to move forward unless at least one party is legally responsible to regulators and to the public for ensuring that actual reductions occur.** Private contracts between the parties could be linked to the accompanying NPDES permit. Thus, any violation of a contract obligation by an unregulated, nonpoint source party that sells credits would trigger renewed permit obligations by the NPDES-permitted point source party. Another way to address contract violations is to require that the

contracting parties name the state and the EPA as third-party beneficiaries that can also enforce the contract as well.

- **The trading program should use trading ratios to account for the uncertainty of certain practices reducing pollution loadings.** Estimating nutrient loads in polluted nonpoint source runoff is complex and uncertain, at best. The fact that nonpoint sources are not regulated under the Clean Water Act is evidence of this difficulty in measuring this type of pollution. This uncertainty suggests the need for trading ratios that are reflective of the rate of uncertainty and the experimental nature of the trading program. For example, if a point source plans to purchase credits from a nonpoint source that is implementing a practice with only a 50% certainty rate that the actual pollution reduction will occur, the trade ratio could be increased to 2:1. The point source would have to purchase 2 credits from the nonpoint source for each credit that the point source seeks to apply.
- **The final legislation should also include explicit monitoring and reporting requirements for the trading parties.** A monitoring plan should be in place before any trades occur, and the legislation should not permit EPA or a Bay state to approve of any trading program that does not have a monitoring plan capable of determining whether individual trading parties are making promised reductions, as well as an overall assessment of whether the program is actually reducing ambient pollutant levels.
- **The final legislation should require trading parties to report actual progress and failures in their transactions.** A reporting requirement on actual progress made by nutrient trading and toward water quality improvements should also be written into the NPDES permit, and failure to report should be considered significant non-compliance that disqualifies the permitted discharger from participating in future trades until the reporting requirement is met.
- **The final legislation should prohibit trading until the trader's NPDES permit is modified as or reissued to incorporate limits consistent with the Bay-wide TMDL.** The Clean Water Act specifically requires all NPDES permits to comply with water quality standards, including water quality based effluent limitations.¹ But Section 6(C)(iv) of the draft legislation could abrogate this critical linchpin of the Clean Water Act. The draft section provides that the Administrator for EPA “shall ensure that the trading program established under this paragraph . . . incorporates a permitting approach under the national pollutant discharge elimination system established under section 402 that creates a general approval for trading *avoiding the need to reopen or reissue permits to incorporate individual trades.*” This seems to allow sources to trade prior to their NPDES permits being updated to meet the Bay-wide TMDL. Compliance with TMDLs must be an ongoing responsibility of all permit holders, regardless of whether they are participating in the trading program. If the purpose of the trading program is to attain and maintain the Bay-wide TMDL, sources should not be allowed to trade until their permits are modified or reissued to incorporate limits consistent to the Bay-wide TMDL.

¹ 33 U.S.C. 1342(a); 33 U.S.C. 1311(b)(1)(C).

Issue 7: The trading program should provide clear information and data on the implementation of practices used to generate trading credits for sale.

An effective trading program relies on the ability to verify that a seller is actually generating the pollution reductions it sells. As written, the draft legislation seems inconsistent on transparency and information availability requirements.

- **The final legislation should make publicly available information on practices implemented to generate pollution reduction and used as the basis for credit sales.** The draft legislation requires that the trading program “establish procedures or standards for providing public transparency on nutrient trading activity.” However, this requirement seems inconsistent with the provision establishing the Bay-wide database on implementation of conservation management practices. Under Section f(2), the database is limited to information presented in statistical or aggregate form and cannot identify any individuals or the specific data-gathering site. Because trading is conducted at the individual level between individual sellers and individual buyers, verifying the trade activity and ultimately the contributions to pollution reduction requires this individualized information.

Issue 8: The trading program should include a clear statement of the legal nature of the trading credits.

The current legislation does not address the legal implications and rights of credit purchasers. By contrast, the Clean Air Act’s Acid Rain Program specifically precludes allowances from being considered individual property rights. The legislation further declares, “Nothing in this subchapter or in any other provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization [to use an allowance].”² This provision enables the EPA to adjust the total number of allowances downward to increase stringency and ensure further improvements in air quality.

- **The final legislation should include an explicit statement that precludes trading credits from being considered individual property rights.** This provision is particularly important because the trading program is one of the first large-scale programs to be implemented, and the EPA or state governments should have the flexibility to alter or even halt the program if necessary. In addition, the Bay Program, this legislation, and the Executive Order all adopt an adaptive management approach. Adaptive management is an iterative learning process that requires flexibility to apply lessons learned about Bay restoration affect future actions. Without this blanket statement, the EPA and Bay states may be hindered in efforts to improve or rework the trading program.

While trading programs have been established in some regions, few if any approach the scale of the Bay. Innovation is important, but the trading program must be implemented with care, especially when it is slated as a cost-saving substitute for reliable but more expensive pollution controls. One practical option would be to require that EPA first establish a smaller-

² 42 U.S.C. 7651(b)(f).

scale, pilot trading program to work through the details prior to expanding the program to the entire Chesapeake Bay watershed.

We are happy to discuss these concerns with you or your staff. We thank you again for your strong leadership in the Bay.

Sincerely,



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