Principles for Nutrient Credit Trading

September 2012

Use of nutrient trading in the region must ensure that water quality is protected or improved, especially as more nonpoint and nontraditional sources become involved.

Nutrient credit trading in the Chesapeake Bay watershed could make meeting the reductions required in the Chesapeake Bay Total Maximum Daily Load (TMDL) more easily achievable by 2025 because of the reduced cost of compliance. In addition, it provides a framework to track and offset loads of pollution from new development and sewer/septic systems. However, improperly designed programs increase the chances of water quality degradation which ultimately means failure to meet water quality goals – an unacceptable outcome.

There is currently much discussion about nutrient trading, especially since individual Bay watershed states have included trading as a way to meet and maintain their pollution allocations under the TMDL. Nutrient trading programs depend on viable markets to achieve the necessary reductions in water pollution. Strong regulation and the threat of enforcement are drivers for the robust generation of credits, which is a precondition for successful water quality markets. If trading occurs, it is critical that the evaluation of practices and reduction credits are based on sound science and consistently applied. Members of the Coalition's TMDL workgroup have identified the following principles that must be meaningfully incorporated into any trading program.

1) **Water quality must be protected or improved.** Local water quality and uses must not be sacrificed or degraded for any trade. There must be a standardized process for evaluating proposed trades to ensure that they do not degrade local water quality. In the case of offsets for new loads, there should be an "upstream reduction policy" where credit sellers are located upstream of credit buyers.

2) **Minimum criteria must be met to trade.** Credits may be created only through measures which go beyond a baseline performance level needed to achieve compliance with all applicable water quality standards and TMDLs. Only credits from projects that are "additional to" the legally required measures represent a net environmental benefit. Baselines for non-point source credit generators must include implemented management practices that provide reasonable assurance that they will do their fair share of achieving and maintaining compliance. States must provide a clear demonstration that their baseline definition is consistent with these requirements. These principles apply regardless of whether a water quality standard is expressed in numerical or narrative terms.

3) **Accountability, transparency and verification are essential.** A public process for reviewing, commenting on, and challenging credit-generating proposals during the certification process is critical. The methodology used to estimate credits should be clear and transparent.
    - Permits that allow for a nutrient credit trading option must have terms and conditions that clearly state the permittee's obligations regarding the use of the credits, provide assurance of actual reductions by the seller to meet effluent limits in the buyer's permit and include clearly enforceable terms.
    - Credit generating proposals must be verified by a government agency or an independent third party. Monitoring and verification procedures must ensure that any credits which are traded or transferred result in real, verifiable and durable pollution reductions. This information must be publicly available in the annual or monthly discharge monitoring reports of the permittee.

4) **Trading programs must address the differences in the value of credits.** Trading programs must account for differences in the relative value of credits stemming from effectiveness uncertainty, locations of the respective facilities, and other relevant factors. This is particularly critical when reductions to point sources that would typically be measured at the outfall are traded away for non-point management practices which currently have no associated quantitative monitoring assurances.
    - Uncertainty ratios[1] account for the multiple types of uncertainty that occur with pollution reductions from non-point sources relative to the point sources (*e.g.,* wastewater treatment plants and industrial dischargers). Virginia has established a 2:1 ratio for trades involving nonpoint sources – this should be supported and maintained. Other Bay jurisdictions that have not adopted policies adequately addressing uncertainty, should - at a minimum - adopt uncertainty ratios for management practices that reflect the degree of scientific confidence in the associated pollution reductions and the ease of verification.
    - Delivery ratios account for differences in location between buyers and sellers that will impact the amount of pollution delivered to the tidal waters. State nutrient trading programs currently have adopted the delivery ratios used by the Chesapeake Bay Program. We support this approach.

5) **Trading programs must result in actual net improvements to water quality.** There are several tools available to do this through ratios. Retirement ratios require a permanent retirement of a portion of all credits. For example, Maryland requires that 5% of credits generated by point sources, and 10% of credits generated by nonpoint sources, be retired. We believe this is an

[1] This uncertainty stems from difficulties in measuring pollution reductions from nonpoint source management practices and includes: the degree of confidence that they are properly implemented and maintained; the amount of scientific information supporting the estimates of pollution reductions; and, the effects of weather-related variability on their performance.

appropriate approach. Credit retirement is a useful and strongly recommended tool to achieve net water quality improvements.

6) **Credits used to offset loads associated with new development should be permanent.** To ensure the necessary duration of the credits used to offset the new source, the contract between the trading parties should contain a legally enforceable requirement that the management practices which generate the credit, or other management practices which will yield the same or greater amount of nutrient reduction, must be maintained in perpetuity, or so long as the nutrient discharge-generating activity is being conducted.

7) **Trading programs should ensure that credits are generated recently.** To ensure the integrity of the trading program, when credit generating measures were implemented prior to the proposed trade, their implementation should have been recent.

8) **Trading programs should ensure the credit generator is not compensated twice for the same credit-generating measures.** A trading program should not allow a pollution reduction measure which has been paid for by a government agency (except for the purpose of generating a nutrient credit) to be sold as a "credit" without making appropriate provision for reimbursement of the government agency sufficient to avoid a "double recovery."

9) **Projects that substantially increase impervious surface should not be eligible to generate credits.** For example, the conversion of farmland to residential, commercial or industrial development should be ineligible for trading credits. Credits should not be allowed which would either (1) result in a net increase in impervious area at the site generating the credit (unless potential runoff is prevented or substantially mitigated as part of management practices) or (2) result in an increase in sediment releases from the site generating the credit, absent exceptional and compelling circumstances.

10) **Trading programs can be developed to support smart growth.** Trading ratios, discussed above, could also be used to promote smart growth by reducing them when using existing infrastructure and increasing them when new infrastructure is required.