

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF POLICY AND COMMUNICATIONS

**DOCUMENT NUMBER** 392-0900-001

**TITLE:** DRAFT TRADING OF NUTRIENT AND SEDIMENT REDUCTION CREDITS – POLICY AND GUIDELINES (Revisions the Interim Final Trading of Nutrient and Sediment Reduction Credits - Policy and Guidelines)

**EFFECTIVE DATE:** The Trading of Nutrient and Sediment Reduction Credits - Policy and Guidelines will be effective upon publication of notice of availability in the Pennsylvania Bulletin.

**AUTHORITY:** Pennsylvania Clean Streams Law (35 P.S. §§ 691.1 – 691.1001; Federal Clean Water Act (33 U.S.C.A. § 1342), 40 CFR Part 122 and 25 Pa Code Chapters 92, 93, 96

**POLICY:** The Department of Environmental Protection (Department) will allow for the voluntary generation and trading of nutrient and sediment reduction credits to meet water quality requirements under applicable laws and regulations.

**PURPOSE:** The purpose of this document is to establish the Commonwealth’s general policy and provide guidance for the generation and trading of nutrient and sediment reduction credits. The guidance is also intended to assist individuals through the process of submitting proposals for the approval, certification, verification and registration of credits, and to describe how nutrient reduction credits that may be used to fulfill a permit requirement.

Appendix A contains details on how this trading program will be implemented in the Chesapeake Bay watershed.

**APPLICABILITY:** This policy applies to Department programs associated with point and non-point source discharges to surface waters. It is intended to provide guidance and support to persons interested in participating in nutrient trading opportunities.

**DISCLAIMER:** The policies and procedures outlined in this guidance document are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of the Department to give the rules in these policies that weight or deference. This document establishes the framework, within which the Department will exercise its administrative discretion in the future. The Department reserves the discretion to deviate from this policy statement if circumstances warrant.

**PAGE LENGTH:** 16 pages

**LOCATION:** Volume 15, Tab 27

## INTRODUCTION:

Nutrient and sediment trading is one approach to maintain and improve water quality using market mechanisms to produce nutrient reductions at lower costs. The voluntary trading program is an option for point and non-point sources that exceed their environmental obligations to earn credits that may be sold to others who desire nutrient reduction credits.

Market mechanisms can provide for an efficient and effective means of solving environmental challenges. Nutrient and sediment trading has been used for this purpose around the country and around the world. The Department recognizes the many benefits of this approach, including flexibility for the regulated community in meeting legal requirements, especially when done on a watershed basis.

## I. DEFINITIONS:

**“Aggregator/Broker”**- *An individual or entity that can collect and compile credits from individual sources. These credits can then either be sold on the credit marketplace, or sold directly to a point source, developer or third-party.*

**“Baseline”**- *The compliance activities and performance standards which must be implemented to meet current environmental laws and regulations for a particular sector. This includes allocations established in a TMDL approved by the Department that are specific to a particular source at a defined location.*

**“Best Management Practice (BMP)”** – *Schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.*

**“Credit”** – *The unit of compliance, used in a trade, that corresponds with a pound of reduction of nutrient or sediment.*

**“Credit Marketplace”**- *A web-based site administered by the Department where buyers and sellers can meet, negotiate trades and finalize transactions.*

**“Credit Reserve”** – *Credits set aside by the Department to address nutrient and sediment reduction failures, uncertainty, and to provide liquidity in the market.*

**“Delivery Factor”**- *The factor that compensates for the natural attenuation or loss of nutrients and sediments as they travel in water. Also known as a delivery ratio.*

**“Exchange”**- *An entity authorized to collect and distribute approved credits; handle financial transactions related to the buying and selling of approved credits; and record necessary information related to credit and financial transactions.*

**“Non-point Source”** – A source of water pollution that is not a point source. Non-point source pollution, sometimes referred to as “polluted runoff”, is generally caused by stormwater runoff across the land. Examples of non-point sources include: agriculture, abandoned mining activities, urban runoff, abandoned oil and gas wells, atmospheric deposition, construction activities, on-lot sewage systems, leachate (landfills) and silviculture (forestry).

**“NPDES”** – National Pollutant Discharge Elimination System, the permit program required under the federal Clean Water Act, administered by the Department in Pennsylvania.

**“Nutrient”** – nitrogen or phosphorus.

**“Nutrient Reduction”**- The difference in nutrient or sediment discharges to surface waters achieved by activities such as best management practices or technical upgrades, compared to the applicable baseline and threshold.

**“Nutrient Trading”** – Transactions that involve the exchange of quantifiable nutrient and sediment reduction credits, approved by the Department.

**“Point Source”** – Any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, CAFO, landfill leachate collection system, or vessel or other floating craft, from which pollutants are or may be discharged. Examples of point sources are wastewater treatment plants.

**“Registry”**- A system that tracks and records credits generated and traded between point sources, nonpoint sources and third parties.

**“Retirement/Reserve Ratio”**- The proportion of the credits generated by a nutrient reduction set aside in the credit reserve.

**“Sediment Trading”**- Trading that involves the exchange of sediment reduction credits.

**“Sources”**- Point, non-point and third party.

**“Technology-based effluent limits”**- The minimum level of treatment required for point sources based on currently available treatment technologies.

**“TMDL”** – Total maximum daily load which is the sum of individual waste load allocations for point sources, load allocations for non-point sources and natural quality and a margin of safety expressed in terms of mass per time, toxicity or other appropriate measures.

**“Third Party”**- Any entity that does not discharge nutrients or sediments and that participates in the trading program. This entity could include, but is not limited to,

*environmental groups, developers, watershed associations, aggregators/brokers, and nonprofit organizations.*

**“Trading Ratios”**- *Discount factors applied to nutrient and sediment reductions, to account for uncertainty, water quality, delivery or special need concerns.*

**“Trading Threshold”** – *Loading or level of nutrient and sediment reduction efforts to be achieved and maintained before credits can be generated for any additional reductions.*

## **II. FUNDAMENTALS:**

### **A. General**

Nutrient Trading has the potential to achieve cost effective water quality and environmental benefits. Nutrient Trading under the Policy will be consistent with legal requirements under applicable laws and regulations, including the federal Clean Water Act and the Clean Streams Law. For example, trading will conform to the water quality standards under Chapter 93. In addition, NPDES permits with provisions allowing trading will meet the requirements of Chapter 92.

Trading in a broader watershed area must not cause localized water quality impairment. Where a TMDL is established, trading will be consistent with the TMDL and associated implementation plans, approved by the Department.

### **B. Nutrients Traded**

This Policy deals primarily with (1) nitrogen and phosphorus, the main nutrients of concern for surface water quality, and (2) sediment.

Under this policy several principles apply throughout: (1) trades must involve comparable credits (e.g. nitrogen must be traded for nitrogen); (2) trades must be expressed as mass per unit time (e.g. pounds per year); (3) trades can occur only between eligible parties; and (4) credits generated by trading cannot be used to comply with existing technology-based effluent limits except as expressly authorized by federal regulations.

### **C. Trading Guidelines**

Trading may only occur in a Department defined watershed. This can be on any number of different scales, from a stream segment (e.g., in a TMDL) to the entire river basin watershed.

Regardless of watershed size, the Department must determine or concur on a maximum aggregate amount (i.e., a “cap load”) of a nutrient or sediment that is allowed to be discharged by all sources in the watershed on an annual basis as recognized by the Department.

Trading can then occur among the sources within that watershed for that nutrient, or for sediment, on the condition that the discharges covered by the trades, along with all

other discharges within the watershed, do not exceed water quality standards and the cap load established for the watershed.

Trading is not allowed between sources outside of watershed boundaries. Establishing trading areas that coincide with watershed boundaries ensures that trades will affect the same water body or stream segment, and that water quality standards are achieved and maintained throughout the trading area and contiguous waters.

#### **D. Eligibility**

Trading may take place between any combinations of eligible point sources, non-point sources and third parties. Each trading entity must meet applicable eligibility criteria established by the Department for this voluntary program. Eligibility criteria include:

##### 1. Legal Baseline

All sources must meet legal baseline requirements before nutrient and sediment reductions will be considered eligible for trade by the Department. This applies to those activities and performance standards associated with the pollutants being traded (e.g., nitrogen, phosphorus and sediment). Stricter limits may apply if a TMDL is established, and this is discussed in more detail later in this Policy.

For point sources, the baseline is the effluent limitation, over the applicable time period, expressed in an NPDES permit. The discharge must be under the effluent limit in order to generate tradable credits from nutrient or sediment reductions.

For non-point sources, legal baseline depends on the type of non-point source:

*a. agricultural operations:* legal baseline is compliance with Chapter 102 Erosion & Sedimentation Regulations, Chapter 91.36 (Agricultural Operations), Act 38 Nutrient Management Regulations, and Chapter 92 (Concentrated Animal Feeding Operations) as applicable.

*b. all others:* baseline is the set of legal requirements under current regulations. For instance, for on-lot systems, *see* 25 Pa. Code Chapter 73; for urban stormwater runoff, *see* 25 Pa. Code §92.21a(g).

##### 2. Trading Threshold

In certain circumstances, a trading threshold will apply, in addition to the legal baseline requirements. For example, there is a trading threshold for non-point sources proposing to generate tradable credits to meet water quality standards associated with the Chesapeake Bay. This is further described in Appendix A.

For non-agricultural, non-point sources without NPDES requirements, for allocations resulting from a TMDL and for other specified performance requirements, the trading threshold is the level of nutrient and sediment load associated with existing land uses and management practices that comply with applicable state regulations.

### 3. Farmland Preservation

The Trading Program is not intended to accelerate loss of productive farmland. Therefore, credits will not be generated under this policy from the purchase and idling of whole or substantial portions of farms to provide nutrient credits for use offsite. Individuals are eligible for nutrient credit generation when converting one land use to another, where the post-construction reduced nutrient loading can be established.

#### **E. Process for Managing Credits**

The Department is responsible for managing all credits. A credit must be approved and the trade registered under this process before it can be used in an NPDES permit.

The Department, or its delegate, will use the following elements in its process of managing the generation and use of credits in the trading program:

##### 1. Calculation and Approval of Credits

Using methodologies that have been approved by the Department, all credit calculations must be approved by the Department. This normally involves three steps:

- a) *Basic calculation.* The Department will in most cases have pre-approved calculation methodologies for use by persons seeking approval of credits. An example for agricultural practices is contained in Appendix A.

The Department will also consider other calculation approaches, although the proposal review time may take longer. The Department's website will contain information about credits approved.

Credits must be expressed as pounds per year and will be valid for one year. This means that credits need to be measured, verified and accounted for annually. If a BMP has a life span of 10 years, then credits can be generated for the life of the project but they have to be re-verified and accounted for each year. This can be accomplished through a request to the Department. Additionally, proposals to generate credits should include adequate provisions for verification throughout the credit generating life span of the project.

Groups of credits for discrete nutrient and sediment reduction activities will be assigned a unique identifier by the Department, and will be associated with a certain time period. The time period or "shelf life" for a credit is one year and can be generated for the water year, which is October thru September. Depending on the reduction activities implemented there may be overlap of the year and may generate a "shelf life" greater than a year.

Credits cannot be banked for future years. For example, if a BMP generates 100 credits each year and has a life span of five years, 500 credits cannot be applied to a permit in year five. Credits must be applied in the year that they are generated.

If state or federal funds are used to cost-share nutrient and sediment reduction activities or controls that generate credits, the Department will allow the portion of the credits paid for by state and federal funds to be available for trading, unless restrictions have been placed on the funds by the grantor.

- b) *Trading ratios.* Nutrient reductions may be discounted to account for factors such as location, reserve, uncertainty or special needs. Trading ratios may need to be considered and used as appropriate to ensure that trading provides the desired level of nutrient reductions or other water quality benefits.

For example, one ratio that can be applied is the distance from the location where the nutrient or sediment activities are carried out, to the compliance point. There may be some diminution of the nutrient reductions allowed due to the distance between the two locations. This is called a “delivery ratio”.

Ratios may also be used to contribute to a credit reserve, where the Department determines that it is necessary to address uncertainty and to provide for possible failures in nutrient or sediment reduction efforts.

- c) *Approval letter.* When the Department is satisfied that the nutrient and sediment reductions supplied in the proposal meet the requirements described in the policy, it will issue an approval letter, certifying credits potentially generated from the proposal. The letter provides approval of the methodology used to calculate and verify the nutrient reductions from the activities proposed by the submitting entity. It does not guarantee that the credits may be used in a particular trade or permit, unless the letter so states. The letter may include conditions, which must be met before registration of a trade.

## 2. Guidelines for Approvals of Activities that Reduce Nutrients and Potentially Create Credits

- a) *General.* Proposals need to meet the following minimum criteria in order to be considered for approval:
- Be consistent with the Department’s Trading Policy, and appropriate appendices (e.g. Appendix A- Chesapeake Bay);
  - Include documentation that demonstrates that credit-generating projects meet applicable baseline and trading thresholds. Examples of information include calculations or text that explains how thresholds are being met;
  - Credit generating practices/technologies should meet applicable legal requirements and trading thresholds and acceptable standards for construction and performance throughout the credit generating cycle;
  - Load reduction/credit generation calculations and measurements should be based on Department approved, scientifically recognized and accepted methods in order to be approved by the Department;
  - Contain an acceptable and credible process for calculating credits with the applicable trading ratios (e.g. delivery and retirement/reserve) applied;
  - Information and documents submitted in the proposals that the submitting entity

claims is confidential business information, or protected trade secrets, should be clearly labeled or highlighted;

- Timing of credits (e.g., timing of delivery, phase-in period, timeframe for use in permits);
- Include methods for documenting implementation and maintenance of projects and credit generation;
- Include methods for credit verification and documentation methods;
- Include or acknowledge if a funding source, that was used to pay for the reduction activity, has any restrictions or limits credit sale or income;
- Include background on the submitting entity, research information and pictures, any calculations of nutrient reductions, project participants, etc; and
- Include contact information of the submitting entity.

b) *Elements Needed for Potential Credit-Generating Projects.* The general information suggested for proposal submittals is as follows:

1. Generator/Producer
  - Generator Type
  - Generator Name
  - Generator Address
  - Generator Address
  - Generator County
  - Generator Zip Code
2. Watersheds and Watershed Segment
  - Specify any special protection or impairment designations
3. Current Practices
  - Baseline
  - Baseline Compliance Checklist
  - Date completed
  - Current Installed BMPs
  - BMP units (acres, feet)
4. Reduction- Point or Nonpoint
  - Reduction Description
  - Area of Reduction
  - Nutrient Reduced
  - Nutrient Source
  - Ratios Applied
  - Quantification Method
  - Generated Credits
  - Project Lifespan
5. Method of verification (Specify records of BMP implementation, nutrient application and crop yields to be maintained by the landowner)
6. Describe any preservation/conservation easements on lands where credit-generating BMPs are to be implemented
7. Submitting Entity

- c) *Proposal Review Process.* Proposals are reviewed by a panel of Department and selected experts, as identified by the Department, for technical acceptability, and consistency with program, policy and legal requirements. Currently, those experts include representatives from the State Conservation Commission, USDA Natural Resources Conservation Service (NRCS) and World Resources Institute. The Department will add additional experts as needed. The Department will publish public notice in the PA Bulletin of receipt of complete proposals for credit generating activities, approvals of credits and trades of credits. This information will also be placed on the Department's website and the on-line marketplace called NutrientNet.
- d) *Proposal Approval.* Following proposal review, the Department will respond to the applicant in writing with its determination. Approved proposals will need to meet any specific terms or conditions as provided by the Department. These terms and conditions may include:
- Requirement for adherence with the Department's Trading Policy and appropriate appendix document;
  - Conditional terms based on applicable rules of exchange;
  - Conditions related to record keeping and reporting subject to review and audit by the department;
  - Approval for a set period of time.

If a proposal is not approved, the letter will state one of two things: why the proposal will not generate reduction credits; or inform the entity that additional information is needed.

### 3. Verification

- a) *General.* A combination of record keeping, monitoring, reporting, inspections, self-certifications and compliance audits will be used to ensure that the credit-generating obligations are being met. The Department may also conduct spot checks of credit generating projects and verification activities to ensure approved practices and activities are being implemented.
- b) *Baseline and threshold verification.* The Department, and approved projects, will verify and will ensure that the generator of the credits meets the baseline and threshold requirements of the trading program. This may involve a site visit by Department staff or a Department approved entity, or self-verification by the generator of the credits by means of a process established by the Department. This step may occur at anytime in the process, but will most likely occur before credit approval.

For agricultural operations, baseline compliance will be determined through a site visit, or verification of the development and implementation of a Nutrient Management Plan, Erosion and Sedimentation Control Plan or an acceptable Conservation Plan, and Manure Management Plan, as applicable. Compliance must

be verified by the Department, Conservation District, or other entity approved by the Department.

- c) *Nutrient and Sediment Reduction.* The Department, and the generator of the credits, will have a process to verify that the reduction efforts have occurred as planned, such as implementation of agriculture best management practices or of infrastructure upgrades. This may occur at any time during the life of the credit attributed to a particular activity.
- d) *Operation and Maintenance.* The Department, and the generator of the credits, will have a process for verifying that the operation and maintenance of any nutrient or sediment reduction efforts are being implemented as planned. This may occur at any time during the life of the credit attributed to a particular reduction activity.

#### 4. Registration and Tracking

- a) *Trade Contracts.* The Department may require a review of trading contracts before approval of a credit, registration of a trade, or use of credits to meet legal requirements. These are contracts between buyer and seller of the credits, such as a developer, and a non-point source or aggregator/broker. The purpose is to obtain assurance that the credits meet the provisions of the Trading Policy.

A model trading contract will be created as a tool to assist in the trading process. This model contract is not required for the Department approval of credits or of trades; other contract terms may be acceptable. The Department will look for certain essential elements of a trading contract, unless the circumstances allow otherwise. These will be shown on the Department's Nutrient Trading website.

- b) *Registration.* Trades must be registered before the credits can be used to meet permit limits. The Department is developing a web-based registration process that will assign unique identifiers to groups of credits. The registration system will be used by Department staff when credits are proposed to be used in a new NPDES permit, and to verify compliance with a NPDES permit during its term.

The registration system may also be used by buyers and sellers to verify that their trades have been approved by the Department.

- c) *Tracking.* The Department will operate a tracking system that identifies all approved credits, trade transactions and use of credits to fulfill legal requirements such as NPDES permits.

#### 5. Guidelines for Proposed Trades of Approved Nutrient Reduction Credits

- a) *General.* For a proposal to receive approval for a trade it should meet the following minimum criteria:
  - Be consistent with the Department's Trading Policy, and appropriate appendices (e.g. Appendix A- Chesapeake Bay);
  - State clearly whether the trade involves reduction credits that have already been approved by the Department.

- If it is a trade of non-approved credits, the proposal should contain the criteria listed above for approving credits.
  - If it is a trade of approved credits, it should state from which proposal and supply a copy of the approval letter.
- Information submitted in the proposals that the submitting entity claims is confidential business information, or protected trade secrets, should be clearly labeled or highlighted;
  - Include methods for credit verification and documentation methods;
  - Include: buyer and seller; watershed; approved proposal information; facility or project using credits; annual amount of credits purchased (in pounds of nitrogen and phosphorus); applicable trading ratios (e.g. delivery and retirement/reserve), number of years of the potential trade; timing of credits (e.g. timing of delivery, phase in period);
  - Include or acknowledge if a funding source, that was used to pay for the reduction activity, has any restrictions or limits credit sale or income; and
  - Include contact information of the submitting entity.
- b) *Elements Needed for Proposals Regarding the Trade of Nutrient Credits.* The general format/information suggested for proposal submittals is as follows:
1. Date of Submission
  2. Generator/Producer
    - Generator Type
    - Generator Name
    - Generator Address
    - Generator Address
    - Generator County
    - Generator Watershed ID
  3. Buyer/Purchaser
    - Buyer Type
    - Buyer Name
    - Buyer Address
    - Buyer Address
    - Buyer County
    - Buyer Watershed ID
  4. Reduction- Point or Nonpoint
    - Reduction Description
    - Area of Reduction
    - Nutrient Reduced
    - Nutrient Source
    - Ratios Applied
    - Quantification Method
    - Generated Credits
    - Project Lifespan

5. Point Source Specific
  - Permit Number
  - Regulated Limit
6. BMP Specific
  - BMP Installed
  - BMP Lifespan
7. Certified
  - Certified Date
  - Certifier
8. Trade Information
  - Date of Trade Agreement
  - Contract Duration
  - Purpose of Trade
  - Nutrient Traded
  - Number Credits
9. Verifier
  - Verified Date

c) *Verification of Credits.* The Department needs verification that credits have been generated. The Department anticipates that it will approve third parties to perform verifications. For a third party to qualify for verifying credits, the Department would require that the party meet the following:

- Have the necessary qualifications to perform the verification, e.g., a certified nutrient management planner under the Act 38 program;
- Assist potential trading partners with preparing trade agreement documents;
- Provide potential trading partners with information on the program;
- Calculate credits based on the Department's Trading policy;
- Accurately provide the Department with the information listed in the Specific Elements Needed for Potential Credit-Generating Projects;
- Confirm in writing that the activities intended to generate credits have occurred or are scheduled to occur prior to the end of the water year, which is October through September; and
- Confirm in writing that the credit-generating entity meets baseline and trading threshold criteria, using checklists and forms provided by the Department.

## **F. Use of Credits in NPDES Permits**

Credits may be used by NPDES permittees to meet effluent limits under specific conditions. Because the credits will be used to meet a permit effluent limit, permittees will only be authorized to use credits through the provisions of their NPDES permit. The permit terms and conditions for trades will require record keeping, monitoring and tracking, which will be documented through reporting in the monthly discharge monitoring reports.

The Department will ensure the effectiveness and validity of the credits used in NPDES permits under this Policy. This program will include use of (1) the credit reserve, (2) verification processes and requirements, and (3) methodologies used to calculate credits before approval. Permittees will have some responsibility to enforce the terms of their

credit purchase agreements, except when the activities fail due to uncontrollable or unforeseeable circumstances such as extreme weather conditions. The Department will exercise enforcement discretion with respect to permittees in the year in which credits are determined to be invalid, as long as the permittee replaces the credits for future compliance periods.

### **G. Use of Credits in the Sewage Facilities (Act 537) Planning Program**

Under Act 537 and its implementing regulations, all municipalities must develop and implement a sewage facilities plan that addresses present and future sewage disposal needs for the municipality. These plans are modified as new land development projects are proposed or whenever a municipality's sewage disposal needs change. The Department reviews the official plans and any subsequent revisions in accordance with the requirements of 25 PA. Code Chapter 71. This process involves the consideration of the size and timing of a development project, the anticipated nutrient loads, the method of discharge (e.g. on-lot disposal system or through a sewage treatment plant) and the hydraulic and treatment capacity of the receiving sewage treatment plant.

Under these regulations, new land development projects that propose a connection to a treatment facility, or that propose a new treatment facility, must show that the facility will have the ability to meet its effluent limitations. The use of nutrient reduction credits may be included in any Act 537 proposal concerning a new or expanded discharge to address this legal requirement. The Department will expect to see assurances in the proposal that the credits will be available for the life of the treatment facility or, if not, another method to meet the regulations in Chapter 71.

### **H. Public Participation**

Public notice and comment on the use of trading in permits will be part of the routine procedure followed by the Department with all NPDES permit applications. The Department is required to allow for public participation under the regulations governing NPDES permits. *See* 25 Pa. Code § 92.61. The requirement is to publish notice of completed applications for permits, indicating certain details such as the proposed effluent limitations and a description of how the permittee will be required to meet them.

The Department will describe for the public in this notice any trading provisions in the draft permit. Descriptions of how the trading provisions will meet effluent limits and other regulatory requirements will also be included in the fact sheet as appropriate. These conditions will be subject to the normal public comment period (usually 30 days), which may include a public hearing, along with all of the other conditions in the draft permit. The Department will consider any comments on provisions regarding trading in its finalization of the permit.

The Department will operate a transparent system for review and approval of credits, and registration of trades. Public notice will be made of credit generating proposals, their methods, number of credits to be certified and any trades that occur. Once generators have approved methods of generating credits only the number of credits to be certified will

be public notice for future submissions and approvals. The Department, however, will not subject each credit review or trade registration to public notice and comment.

This approach is endorsed by EPA in its January 13, 2003 Water Quality Trading Policy and is consistent with the federal public participation requirements upon which the Pennsylvania NPDES regulations are based.

## **I. Managing for Success**

The Department recognizes that there is some level of uncertainty in the ultimate success of nutrient and sediment reductions that will serve as the basis for tradable credits. This uncertainty is addressed in several ways:

- a) *General.* Non-point source practices generate greater uncertainty with reductions and may need to be addressed by establishing a threshold above legal baseline for generation of credits.
- b) *Conservative assumptions.* The Department will use conservative assumptions and methodologies when calculating credits. This includes the use of scientifically demonstrated methodologies where available. The Department will confer with experts in agronomics and other specialized areas when applying its credit calculation protocols.
- c) *Credit reserve.* The Department will adjust all credits approved by reducing the amount by a percentage, to populate a reserve of annual credits. This percentage will be defined for watershed specific needs.
- d) *Verification.* The Department will conduct verification of baseline, threshold and reduction activities/technologies. Sampling and other monitoring will be conducted where/when appropriate.

## **J. Department organization**

This trading program will be a joint effort between Central Office and Department Regional Offices.

- a. *Credits* will be approved by the Department through consultation with Water Planning Office, appropriate Regional Office and other offices within the DEP Central Office such as Bureau of Watershed Standards and Facility Regulations and the Bureau of Watershed Management and additional experts as appropriate.
- b. *Verification* will be coordinated by the Water Planning Office but in most cases will be conducted by the Regional Office or an approved entity.
- c. *Registration* of trades will be managed by the Water Planning Office, in coordination with the Regional Office.

- d. *Use of credits* in permits and in sewage and wastewater management planning will be managed by the Regional Offices.
- e. *Public participation* during the permit process will be the responsibility of the Regional Offices.

## **K. Water Quality and TMDLs**

Trading will be allowed only where water quality will be protected and maintained as required by applicable regulations, including those regarding anti-degradation.

- a. *No net increased discharges.* Trading will ensure that there is no net increase in discharge of pollutants and every applicable water quality requirement is met.

The Department will not allow credits to be used to meet local water quality requirements. Use of credits must ensure that all applicable water quality requirements will be met.

- b. *TMDLs.* Once a TMDL is approved by EPA, any load allocations and individual waste load allocations established by the TMDL to meet local water quality standards apply. This may mean that additional “baseline” requirements must be implemented before credits can be generated.

Trading will be consistent with the assumptions and requirements upon which the TMDL is based.