

## **Recommendations for Initial Nutrient Trading Program:**

In March 2006, at the request of the Chesapeake Bay Tributary Strategy Steering Committee, the Agricultural Workgroup began meeting to develop recommendations for the participation of the agricultural community in the PA DEP Nutrient Trading Program. The following are the Agricultural Workgroup's recommendations for the Steering Committee.

### **Baseline Requirements**

- Compliance with Act 38 Nutrient Management Regulations, Chapter 102 Erosion & Sedimentation Regulations, Chapter 91.36 (Agricultural Operations), and Chapter 92 (CAFOs) as applicable.
- Compliance can be determined through a site visit OR verification of the development and implementation of a nutrient management plan, E&S Plan or an acceptable Conservation Plan, as well as a Manure Management Plan, as applicable.
- Compliance must be verified by DEP, Conservation District, or other agent approved by DEP.

### **Threshold Requirements**

- 100 Foot setback or equivalent; this is achieved when *ONE of the following* is met:
  - Manure is not mechanically applied within 100 feet of surface water <sup>1</sup>
  - There are no surface waters on or within 100 feet of the farm.
  - Farm uses no manure application and applies commercial fertilizer at or below the Penn State recommended agronomic rates.

### **OR**

- 35 Foot buffer or equivalent; this is achieved when all of the following are met:
  - A minimum of 35 feet of permanent vegetation is established and maintained between the field and surface water.
  - Area can be grazed or cropped under a specific management plan, and permanent vegetation must be maintained at all times. (*Permanent vegetative buffers 50' or greater in width may qualify to generate nutrient reduction credits.*)

### **OR**

- 20 % Reduction Option
    - A reduction of 20% in the farm's overall nutrient balance beyond baseline compliance.
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<sup>1</sup> As applicable; for instance, setbacks for CAFOs apply to a broader range of surface waters than non-CAFO operations.

### **Trading Ratio**

In order to provide the greatest opportunity for credit generation and a fair market for all participants, all nutrient reduction credits generated by agricultural operations should be traded at a 1:1 ratio.

### **Edge of Segment Ratio**

The Workgroup recommends applying the Edge of Segment (EOS) Ratio associated with each watershed segment as developed from the EPA Chesapeake Bay Model. The Workgroup has tried to develop alternate solutions. However, at the present time the group has not developed a scientifically defensible alternate strategy to determine EOS nutrient loads on an individual farm basis. Individuals on the Workgroup plan to continue studying this topic and will provide further recommendations when a suitable alternate strategy is available.

### **Credit Generation Methodology**

The following methodology is recommended by the Ag Workgroup for calculation of nutrient reduction credits on agricultural operations. The Workgroup understands that this may not be the only methodology that could be utilized for the generation of credits from agricultural operations

- 1) Determine if farm is in Baseline Compliance and meets the Threshold for trading
- 2) Determine current rates of nutrient application
- 3) Account for any overall reductions in applications
  - Commercial Fertilizer Applications – Reduction in commercial fertilizer applications below PSU agronomic rate
  - Manure Applications – Reduction in total manure applications below current practices (and below minimal acceptable PSU agronomic rates) through better manure management practices.
  - Combination – Reduction in total nutrient applications (manure and commercial fertilizers) below current practices (and below PSU agronomic rates) through better manure management practices.
- 4) Calculate new nutrient load not going to crop production.
- 5) Apply EOS factor to load
- 6) Calculate nutrient reductions from BMP efficiencies. BMP Efficiencies can be calculated from the following methods:
  - *Table 1: Nonpoint Source Best Management Practices that have been Peer-Reviewed and CBP-Approved for Phase 5.0 of the Chesapeake Bay Program Watershed Model, Revised 1/12/06*
  - *Table 2: Nonpoint Source Best Management Practices requiring additional Peer-Review for Phase 5.0 of the Chesapeake Bay Program Watershed Model, Revised 1/12/06*
  - Additional methods or Tables that have been approved by the Department
- 7) Total all nutrient reductions in terms of Pounds
- 8) Apply Delivery Ratio
- 9) Apply Retirement Ratio
- 10) Total Credits available

### **Retirement of Agricultural Land**

In order to address the concern that productive farmland might be retired for the sole purpose of generating credits, the Workgroup offers the following language to the Steering Committee for the Nutrient Trading Program Policy.

*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.*

### **January 2005 Implementation Date**

The Agricultural Workgroup endorses the DEP Policy that non-structural BMPs (*e.g., no-till practices, cover crops, advanced nutrient management*) that were implemented prior to January 2005 and continue to be utilized and maintained on an annual basis shall be eligible to earn nutrient reduction credits.