



PA's Nutrient Trading Program

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Nutrient Trading is not a new concept:

- Trading of emission reductions has been in place in air pollution programs since the early 1990's, in Pennsylvania and around the country, and is established by the Clean Air Act.
- Water Quality trading programs have also been established in other states.



http://www.envtn.org/wqt/stateprograms_page.html



Formula for Water Quality Trading:

- Trading is:
 - DRIVEN by regulation;
 - MOTIVATED by economics;
 - GOVERNED by local trading rules;
 - BUILT on trust.
- But.....
- TRADING MAY NOT BE VIABLE EVERYWHERE AND FOR EVERY SITUATION.



WQ Trading Keys to Success:

- Transparency:
 - Keep the public informed at every step of the process.
- Real Reductions:
 - Show pollutant reductions and water quality improvement.
- Accountability:
 - Manage the program effectively.
- Defensibility:
 - Base the program on sound science and protocol.
- Enforceability:
 - Establish responsibility for meeting water quality standards.



Pa's Nutrient Trading Program:

- Is a voluntary program;
 - Limited only by creativity, imagination and doing business as usual.
- Provides flexibility for a PS to meet compliance obligations;
 - Can be temporary or permanent compliance solution.
 - Build All- Trade None; Build Some-Trade Some; Build None-Trade All
- Lowers compliance costs;
 - Treatment levels vs. cost analysis vs. off-site alternatives



Program Timeline:

- 2003- Discussion on the Pfizer Voluntary Trade began.
- 2004- Chesapeake Bay Tributary Strategy was issued that include a description of the market based program.
- 2005- Interim Final Policy was published in October.
- 2006- Throughout the year a number of stakeholder meetings were held to develop and define the program. In December the Final Policy, Appendix and 3 Attachments were published.
- 2007 - Present: Program implementation, outreach and enhancements have been made.



Who can participate in the program ?

- Any facility subject to new cap loads for nutrients or sediment related to restoration and protection of the Bay, mostly wastewater treatment facilities.
- Any farmer who may voluntarily choose to implement nutrient or sediment reduction measures beyond those required and thereby earn revenue.
- Any developer that seeks to create a new or expanding discharge that must meet the zero net load.
- Any aggregator that seeks to arrange for the sale of credits generated by another person, or arranges for the credits to be certified, verified and registered.



Program Basics:

- Applicable for the Chesapeake Bay Watershed
- Credit = Unit of Trade.
 - Expressed as mass/per unit time (lbs/yr).
 - Shelf life of one year (October- September).
 - Generated and traded in the same watershed.
 - Must be certified, verified and registered prior to use for permit compliance.
- Total phosphorous and/or total nitrogen reduction credits.
 - All trading must involve comparable credits (nitrogen for nitrogen).
- Nitrogen and phosphorous reductions TO THE BAY beyond baseline and threshold requirements.
- Applicable trading ratios that are being used:
 - Edge of Segment;
 - Delivery; and
 - Reserve.



Eligibility for Credit Generation:

Point Source

- Discharge loading limit expressed in an NPDES Permit.

Nonpoint Source

- Must be in baseline compliance with applicable conservation and nutrient management requirements.
- Must be beyond compliance, by either a 20% reduction in nutrients, 100' setback OR the establishment of a 35' buffer.

So how does one move forward with:



- Submitting a Proposal
 - and Obtaining Approval
 - (Certification)
- Interacting on the
 - Marketplace Entering
 - into a Trade
 - (Verification and
 - Registration)



Credits and Contracts

- 90 proposals have been submitted
- 59 have been approved
 - approximately 3.3 million nitrogen (N) credits, 235,000 phosphorous (P) credits
- 8 contracts completed:
 - 6 for new development
 - 2 for existing WWTP facilities



Certified Credit Generating Activities

Agricultural BMPS	No-till, cover crops, riparian buffer, stream bank fencing, rotational grazing, field lane stabilization, manure storages, mortality composters, poultry manure export
Manure Technology	Bion Environmental Technologies- Dairy Manure Processing; EnergyWorks- Poultry Manure Processing; CARD- Dairy Manure Processing
Point Source	Milton Regional Sewer Authority



Credit Generating Activities- currently in for consideration

- Technologies: ElectroCell
- Point Source: Bellefonte,
Northwestern Lancaster County
Authority, LASA.
- AG: grazing, storage, buffers



Future Program Activities

- In addition to the on-going review of proposals and outreach opportunities, staff is working on the follow key initiatives related to the program:
 - development of a “bank and exchange”; and
 - development of regulations.



Bank and Exchange:

- The Bank and Exchange will:
 - Purchase nutrient credits as needed to establish a portfolio of available nutrient reduction credits; and
 - Sell nutrient reduction credits for a set price and time period.
- PENNVEST awarded a contract to Chicago Climate Exchange (CCX) in Jan 2009 to establish the framework for the Bank and Exchange.
 - The design and function of the Bank and Exchange were discussed at the October PENNVEST Board Meeting.
- 1st formal auction Fall 2010.



Final-Form Rulemaking:

- Codify the Department's existing nutrient and sediment credit trading policy.
- Provide a cost-effective means for facilities subject to new limits for nitrogen, phosphorus and sediment.
- Assist the Commonwealth in its efforts to achieve its Chesapeake Bay nutrient reduction goals.
- EQB Final-Form Rulemaking July 20, 2010.



Watershed Implementation Plan

- Timeframe for development
- Development Structure: Management Team and 3 workgroups
- Approach
 - Milestone implementation and tracking (Point & Nonpoint);
 - Enhancing compliance efforts; and
 - Supporting the implementation of advanced technologies and nutrient trading.



What's Next?



Where to go for more information?

PA DEP's Nutrient Trading Website:

<http://www.dep.state.pa.us>

Keyword: "Nutrient Trading"