



Nutrient Trading Testimony

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Pennsylvania Environmental Council

By

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Introduction

Thank you for inviting us to testify today on an issue that is of great importance to our state and the nation. I am Brian Hill, President of the Pennsylvania Environmental Council (Council) and I am joined by Matthew Ehrhart, our new Sr. Vice President for Watersheds and Working Lands.

The Council is active in the development of nutrient trading policy and the nutrient trading program in Pennsylvania. We also coordinated and managed the first nutrient credit trade at the New Street Park in Lititz in 2004 with Pfizer, Inc. We believe that nutrient trading will provide a flexible and voluntary option for achieving net water quality improvement to the Chesapeake Bay. We recognize that it is not a panacea, but it is an important tool to help improve water quality. We understand that trading presents several challenges, including credit estimation, certification, and market confidence. However, the Council believes that nutrient trading can work. The Council has learned that partnerships and communication are the key ingredients for the success of the trading program.

The Council is currently managing the development of an online nutrient trading marketplace, pilot projects, and third party nutrient trading proposal review services in coordination with the Department of Environmental Protection (Department) as part of the overall effort to develop a functioning nutrient trading market for the Chesapeake Bay Watershed in Pennsylvania.

The Council has led or is leading several efforts to further the development of the nutrient trading program in Pennsylvania. These efforts are described below:

NutrientNet Online Trading Tool:

The Council is working with the World Resources Institute (WRI) to develop an online marketplace for nutrient reduction credits available for sale from both point sources like wastewater treatment plant and nonpoint sources like farms. The marketplace is called NutrientNet and was originally developed by WRI to provide a central standardized nutrient trading credit exchange or marketplace where nutrient trading parties can post offers to buy and sell certified nutrient reduction credits in watersheds across the country. WRI is also working in Michigan, West Virginia and the District of Columbia to develop trading tools similar to the tool being developed for the Bay Watershed in Pennsylvania.

PA NutrientNet includes a nutrient reduction credit calculation tool which will enable a farmer or a Conservation District to estimate how many nutrient reduction credits can be generated by agricultural best management practices such as stream bank fencing or conservation tillage. The tool includes 10 crop and pasture BMPs, four streambank BMPs and a manure management BMP as part of the credit estimation component. The tool will provide a marketplace for farmers or wastewater treatment plant operators to post “buy” or “sell” offers for sale for DEP certified nitrogen, phosphorous and sediment reduction credits at variable prices. The tool will automatically convert nutrient and sediment reductions at their

source, either a wastewater treatment facility or farm, and apply the appropriate nutrient trading ratios as specified by the Pennsylvania trading policy.

A trial version of the website will be delivered in the spring of 2008. The Council will coordinate with the Department and project partners to publicize the deployment of the NutrientNet tool. Currently, County Conservation Districts are reviewing draft phosphorous reduction calculation spreadsheets for agricultural best management practices. Following their review, the spreadsheets will be installed as part of the online nutrient trading tool analysis. Members of the Technical Subcommittee of the Agricultural Workgroup, that reports to the Chesapeake Bay Tributary Strategy Steering Committee, including Dr. Doug Beegle and Dr. Barry Evans of the Pennsylvania State University, have assisted the Department, the Council and WRI with development of calculation methodologies for the online nutrient trading tool.

A version of the NutrientNet tool has already been successfully demonstrated in a pilot nutrient trading project in the Conestoga Watershed in Lancaster County with the vital assistance of the Lancaster County Conservation District.

Conestoga River Reverse Auction Project

The Council recently completed the Conestoga River Reverse Auction Project in Lancaster County using the NutrientNet tool to estimate and rank competing agricultural BMPs on multiple farms based on their cost-effectiveness in reducing phosphorous runoff from crop fields and livestock operations. The Council used a reverse auction format where multiple sellers (farmers) competed to bid the price down of pounds of nutrient reductions (phosphorous) to a single buyer (PEC). With the assistance of the Lancaster County Conservation District and WRI, the Council solicited bids from over 25 farmers for over 30 different BMP projects.

PEC awarded approximately \$481,000 to 13 farms for the installation of the 16 most cost-effective projects that are reducing phosphorous runoff to local streams. The Reverse Auction was supported by a grant from the USDA NRCS Conservation Innovation Grant Program.

Antrim Township Nutrient Trading Planning Project

Beginning in the spring of 2007 the Council, in partnership with LandStudies, Inc. and Brinjac Engineering, are assisting Antrim Township in Adams County with evaluating nutrient trading options as part of their Act 537 wastewater treatment planning efforts. LandStudies is proceeding with a detailed evaluation of a floodplain restoration, wetland creation, and legacy sediment removal project in Antrim Township that could generate nutrient and sediment reduction credits to offset the Township's wastewater treatment plant permit requirements. The Antrim Township project is scheduled for completion in June of this year.

The lower Susquehanna and Potomac basins have many legacy sediment sites that could lead to major water quality improvements by restoring floodplains, creating wetlands, and removing sediments created by historic land clearing and mill dam construction activities. The Legacy Sediment Workgroup that also reports to the Department's Tributary Strategy Steering Committee is evaluating the potential for legacy sediment removal as a viable nutrient trading strategy for the Chesapeake Bay watershed.

Golf Course Best Management Practices Manual

The Council is also working with LandStudies and golf course industry representatives to develop a best management practices manual for golf courses in Pennsylvania. The manual will include such practices as buffer installation, floodplain and wetland restoration, and composted manure applications. These

practices can reduce maintenance costs while also reducing nutrient and sediment runoff from golf courses. The manual will enable golf courses to improve stormwater management, aquifer recharge and filtration, water usage, native plant communities, and wildlife habitat, and will help courses and municipalities meet stormwater management requirements. And for those interested in carbon sequestration, such practices may have the potential of sequestering carbon. The project team will also develop a framework for quantifying nutrient and sediment reduction credits through this process. The final product will be published in a handbook, available in both hard copy and web-based formats.

Third Party Nutrient Trading Proposal Review Services

The Council is also overseeing the third party nutrient trading proposal review services provided by the Penn State Institutes of Energy and the Environment. Dr. Barry Evans is leading the review team which will provide impartial and expert nutrient trading proposal review services through June 30, 2008. This service should help expedite and streamline the current nutrient trading credit proposal review, approval, and certification process.

The NutrientNet, Antrim Township Planning Project, Golf Course BMP Project and Third Party Review Service Projects will be completed by June 30, 2008.

Exelon Partnership: East Hempfield Township Forested Riparian Buffer Project

In September 22, 2007 the Council, in partnership with Exelon Corporation, Lancaster General Hospital, Little Conestoga Watershed Alliance, Lancaster County Conservancy, Environmental Resources Trust, and RETTEW Associates, planted a forested riparian buffer along 1,100 feet of an unnamed tributary to the Little Conestoga River in East Hempfield Township, Lancaster County. The project will demonstrate how a privately-funded conservation effort can generate

transferable carbon sequestration and nutrient reduction trading credits by implementing agricultural best management practices. With the support of Exelon Corporation, the Council will transfer title to the environmental credits from the property owner, Lancaster General HealthCare Foundation, to the Exelon Corporation for a period of 25 years. The forested buffer will be placed under a conservation easement held by the Lancaster County Conservancy for the 25-year term.

Poultry Manure for AML Restoration Project

The Council is leading an effort to demonstrate an innovative mine reclamation process at a 30-acre commercial-scale mining operation by using excess poultry manure and poultry manure compost to grow warm-season grasses for biomass production at an operating coal mine or abandoned mine land site. Up to 1,500 tons of poultry manure will be needed for the reclamation of the mined property. The project will include assistance to those farmers who are eligible to generate nutrient reduction credits through manure export from their operations with participation in the nutrient trading program.

Conclusion:

In Conclusion, we recognize that there are several challenges that remain, including the significant expense for upgrading wastewater treatment facilities and the need for securing long-term sources of nutrient reduction credits to meet the demands of the development community. The Council supports additional funding for wastewater infrastructure improvements and also recommends a focused effort to find long-term sources of credits for new developments.

Thank you again for the opportunity to testify today, and I would be happy to answer any question you have.



The Pennsylvania Environmental Council promotes the protection and restoration of the natural and built environments through innovation, collaboration, education and advocacy with the private sector, government, individuals and communities as partners to improve the quality of life for all Pennsylvanians.

The Council was founded in 1970 and serves the entire state through offices in Meadville, Franklin, Wilkes-Barre, Pittsburgh, Harrisburg and Philadelphia. For more information visit www.pecpa.org or call 717-230-8044.

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