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## Development and Implementation of a Water Quality Bank & Trade Program for the Potomac River Watershed, WV

Project No. WV-237  
Recipient: West Virginia University  
Principal Investigator: Richard Herd, Program Coordinator  
West Virginia Water Research Institute  
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Project Description: Excess nutrients entering the Potomac River are creating significant downstream water quality problems. Under the Clean Water Act (CWA), West Virginia is required to address the downstream problems in the Potomac River Watershed – a tributary of the Chesapeake Bay. West Virginia has committed to reducing the amount of phosphorus entering the Potomac River by 33% and nitrogen by 35%. Programs such as nutrient trading are being implemented to help meet the nutrient reduction requirements that EPA will impose by December, 2010.

Water Quality Trading is an innovative approach to efficiently achieve water quality goals. Trading is based on the fact that various nutrient sources in a watershed can face very different costs to control the same pollutant. Trading programs allow facilities facing high pollution control costs to meet their regulatory obligations by purchasing environmentally equivalent (or superior) pollution reductions from other sources with lower pollution reduction costs, thus achieving water quality improvement at a lower overall cost.

This project developed a methodology for calculating potential nutrient reduction credits resulting from various agricultural practices applied in West Virginia. These calculations have been integrated into West Virginia's online water quality trading platform called NutrientNet.

NutrientNet uses six steps to calculate Nitrogen and Phosphorus Credits involving Ratios, Factors and Baselines. This Credit Calculation program helps suppliers and buyers of nutrient credits define the product more clearly. It ensures that real and verifiable pollution load reductions are established.

Project Significance: Reducing nutrients in the Chesapeake Bay has been identified as a priority by Bay states and the US Environmental Protection Agency. Nutrient trading programs have proven to be a cost-effective means to achieve this goal. Voluntary incentive-based programs such as nutrient trading reduces the need for less flexible and mandatory regulations to control these sources of pollution.