



Title: Evaluating Point-Nonpoint Source Pollutant Trading Opportunities in EPA Region 2

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Organization: Rutgers Cooperative Extension

State: NJ **Region:** New York - New Jersey - Puerto Rico - Virgin Islands

Year of Funding:

Theme: Watershed Management

Situation: If New Jersey plans to successfully meet its goals to improve and preserve water quality, nutrient trading will have to play a significant role in obtaining cost-effective reductions. As the NJDEP moves toward assigning the point source dischargers total phosphorus effluent limitations of 0.1 mg/l for discharges to waterways that are impaired for phosphorus, a potential for “point-nonpoint” source trading becomes a very attractive alternative to treatment plant upgrades.

Objectives: The objective of this project is to identify potential water quality trading opportunities within the Raritan River Basin that are both scientifically and economically feasible for total phosphorus.

Methods: Using available databases and GIS data, sub-watershed basins were identified as potential candidates for trading. Each sub-watershed basins was evaluated based upon point source loadings, nonpoint source loadings, land use/land cover characteristics, riparian buffer conditions, soil properties, and economic parameters. Based upon this evaluation, 3 of the 13 basins were identified as having the highest potential for successfully implementing a trading program that could restore water quality.

Partnerships: Partnerships with Rutgers Cooperative Extension, US EPA Region 2, NJDEP, Natural Resource Conservation Service (NRCS), New Jersey Water Supply Authority, and other local and state agencies will be established and enhanced.

Research: The project integrates research and outreach by researchers and extension educators transferring economic and scientific knowledge about point-nonpoint source pollutant trading opportunities to key stakeholders within the Raritan River Basin.

Resources: The New Jersey Agricultural Experiment Station funded this project through a mini-grant that provided hourly wages for research and GIS support. Faculty and support staff time also contributed to the project.

Results: A trading program provides profitable opportunities for sources with low treatment costs to reduce their loading beyond legal requirements, generate a credit, and sell these credits to dischargers with high treatment costs. This flexibility produces a less expensive outcome while achieving the desired environmental target. In addition to the economic benefits, a trading program also provides ancillary effects such as wetland restoration or the implementation of BMPs that improve wildlife habitat in addition to improving water quality.



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