

**A Note from the Editor:**

President Richard McCormick, in his inauguration speech and his annual address, focused on the need for Rutgers University to give back to the residents of the State. To quote President McCormick, it is important to connect “the University more closely to the people we serve. That connection is never more vital than when Rutgers people are out in the community, solving problems and offering expertise.” This follows closely with the mission of the Land Grant College and particularly Rutgers Cooperative Extension, the New Jersey Agricultural Experiment Station (NJAES), and Cook College, who have been following this charge of helping the New Jersey stakeholders solve their problems.

The intent of this newsletter is to inform the stakeholders of New Jersey about our program’s on-going water resources research and the education/outreach materials that we are currently producing as part of this program. We also hope to update you on new state and federal regulations that may directly impact you, whether you are a farmer, municipality, or individual resident in the Garden State. One of the goals of the water resources program is to form diverse local and regional partnerships to address the serious water resources problems of New Jersey. In this regard, we hope you will contact us if you are interested in partnering with us on existing or future projects.

**Evaluating Point-Nonpoint Source Pollutant Trading Opportunities:**

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 New Jersey Department of Environmental Protection (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. A trading policy 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 overall while achieving the desired environmental target. In addition to the economic benefits, a “point-nonpoint” source 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.

**Trade this.....**



*A wastewater treatment plant discharge*

**.....for this!**



*A goose control buffer in a municipal park.*

A methodology was developed to identify potential water quality trading opportunities within the Raritan River Basin that are both scientifically and economically feasible for total phosphorus. The focus of the trading opportunities is in areas where TMDLs have already been prepared or are pending. Since “point-nonpoint” trading opportunities can potentially yield the largest economic and wildlife habitat benefits, especially in areas where agricultural land use is significant, this project focuses on these opportunities. Using available databases and Geographic Information System (GIS) data, thirteen sub-watershed basins were initially identified as potential candidates for “point-nonpoint” source trading. Each of these sub-watershed basins were evaluated based upon point source loadings, nonpoint source loadings, land use/land cover characteristics, riparian buffer conditions, and soil properties. Based upon this evaluation and an examination of the economic parameters for each sub-watershed basin, three of the thirteen basins were identified as having the highest potential for successfully implementing a “point-nonpoint” source trading program that could restore water quality in its waterways.

The next steps in our pollutant trading initiative are to: 1) begin a similar evaluation in several Burlington County Watersheds, 2) hold a trading summit, and 3) start negotiations with the “point and nonpoint” sources of the areas that have been identify as having a high potential for a successful trading program. Several grant sources have been identified for these efforts, and we will attempt to secure funding to move forward with this initiative.



**Introducing NEMO to Ocean County:** The Ocean County Rutgers Cooperative Extension Office has received a mini-grant from the USDA CSREES Regional Water Quality Coordination

Program to introduce NEMO to five of the municipalities in the Barnegat Bay Watershed. NEMO is Nonpoint Education for Municipal Officials. The program links land use to water quality. We have also added a strong stormwater management element to the program to help the municipalities address the new Phase II Stormwater Permitting Regulations that are due to be final in January 2004. These new stormwater permitting rules will require every municipality in New Jersey to obtain a stormwater permit for their municipal separate storm sewer system. Some leveraging was performed with the initial mini-grant from the regional project to get the Barnegat Bay Estuary Program to authorize an additional \$30,000 in grant funding for RCE to bring NEMO to the remaining 28 municipalities in the watershed.

***Note: The new stormwater permitting rules will require the municipalities to prepare municipal stormwater management plans. We have prepared a sample plan for NJDEP to distribute in their Stormwater Best Management Practices Manual. We hope this document along with the step-by-step guide on producing maps for these plans will provide significant savings for the municipalities of our State when addressing these new regulations.***

**AFO/CAFO Regulations:** Specialists and County Agents from Rutgers Cooperative Extension have been working with the New Jersey Department of Agriculture (NJDA) Animal Waste Management Committee, which is preparing a draft Animal Waste Management Regulations for the (NJDA). As of February 12, 2003, all Concentrated Animal Feed Operations (CAFOs) are required to obtain stormwater permits for their facilities. Although most farmers recognize the term “CAFO” as only applying to farms that have more than 1,000 animal units, the CAFO regulations can apply to any size animal operation that has a direct discharge to a waterway. The NJDA Animal Waste Management Regulations may offer protection to the small animal operations from being regulated by the NJDEP CAFO Regulations. Please contact us for a copy of the draft NJDA Animal Waste Management Regulations. RCE and the NJDA would like your input.

**USDA CSREES Water Quality Coordination Project for EPA Region 2:** The CSREES National Water Quality Program, funded by the USDA CSREES National Program Office for Water Quality, is a member of the larger CSREES Integrated Research, Education, and Extension Competitive Grants Program. This program is often referred to as a “406” Program because of its legislative roots in Section 406 of the Agricultural Research, Extension, and Education Reform Act of 1998, the legislation that authorized the Secretary of Agriculture to establish this competitive grants program. The roots of this program are found in the Cooperative Extension Water Quality Initiative that began around 1989.

The goal of the CSREES National Water Quality Program is to protect or improve the quality of water resources throughout the United States and its territories, particularly in agriculturally managed watersheds at the national, regional, state and local levels. The program consists of nine Regional Programs, which are based on the ten EPA regions. New Jersey is part of Region 2, which consists of New York, New Jersey, Puerto Rico, and the U.S. Virgin Islands. The Program brings university scientists, instructors, and extension educators into more effective and efficient partnerships with Federal interagency priority programs, all while addressing water quality issues. This program provides the flexibility necessary for CSREES to bring the resources of researchers, instructors, and extension educators into national initiatives and programmatic partnerships that target evolving water quality needs in the following areas: 1) animal waste management, 2) drinking water and human health, 3) environmental restoration, 4) nutrient and pesticide management, 5) pollution assessment and prevention, 6) watershed management, 7) water conservation and agricultural water management, and 8) water policy and economics.

The CSREES National Water Quality Program recently launched a website ([www.usawaterquality.org](http://www.usawaterquality.org)). The website seeks to improve communication and coordination within the CSREES/Land Grant University network and to its national and regional partners. The site is designed for scientists, instructors, and extension educators to learn about successful water quality improvement programs across the nation by linking to Regional CSREES Water Quality Programs or browsing through the content of the national water quality topical themes, accomplishments, and success stories. To learn more about the USDA CSREES Water Quality Program, please visit [www.usawaterquality.org](http://www.usawaterquality.org) and click on the NY/NJ section of the map or contact Jeff Potent at [potent.jeffrey@epa.gov](mailto:potent.jeffrey@epa.gov).