

Regional Framework

The Region 2 Water Quality Program brings expertise from the Land Grant Universities to bear in solving critical water quality issues facing the region. Annual and topic-specific meetings, discussions with faculty and working relationships with US EPA and other federal and state agencies are mechanisms used to develop partnerships throughout the region. The program is led by a Regional Coordinator, who also serves as Interagency Liaison between the Land Grant Universities and US EPA, Region 2. State Water Quality Coordinators, representing each partner Land Grant University, provide access to faculty, academic departments and to the network of county-based Cooperative Extension programs that are a unique component of the Land Grant system. The Coordinators also provide a connection to water quality stakeholders within each state.

Key Elements

- *Regional Initiatives* - Our water quality needs assessment identified issues of significance within Region 2 that fall within the CSREES National Integrated Water Quality Program theme areas. Examination of these issues identified several that would benefit from university / agency coordination on a regional scale. Regional initiatives were created to provide a mechanism for this coordination, bringing faculty and agency representatives together to improve understanding and to conduct projects of mutual interest. The initiatives also serve to test effective mechanisms for regional coordination that can be readily applied to address emerging water quality issues.

- *Leveraging Resources* - The program has leveraged approximately 1.5 million dollars in funding beyond regional program funding provided by USDA CSREES.

- *Working with US EPA Region 2* - Our geographic region is unique to EPA, as no other federal agency or regional authority shares this geographic boundary. As a result, coordination with EPA is an important element of the regional program. We have built a strong working relationship with EPA through our Interagency Liaison and through routine interaction among faculty and agency management and staff.



REGION 2
Advancing Land Grant University Partnerships to Restore and Protect Water Quality



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<http://rwqp.rutgers.edu/>

Regional Water Quality Initiatives

Animal Waste Management for Small Farms

Through regional coordination, facilitating Extension projects to address producer needs and to improve understanding of the waste management challenges facing small farms:

- Demonstration low cost manure management systems for substance farms and methane digestion in Puerto Rico.
- Assessment of management practices and water quality sampling in New Jersey, and statewide outreach to encourage nutrient management planning.

Onsite Wastewater Treatment System Management

Bringing together expertise from the four Land Grant Universities to help states and localities adopt innovative technologies and effective management of onsite systems, as a permanent element of the wastewater treatment infrastructure:

- Technology and management training for Extension educators, government officials and industry representatives in Puerto Rico and the US Virgin Islands. Program presented in partnership with the Consortium of Institutes for Decentralized Wastewater Treatment.
- Regional onsite system management forums in partnership with US EPA.

Water Quality Trading

Applying science and local knowledge to achieve cost effective water resource management (see highlight below).

Watershed Management

Identifying areas of watershed management that would benefit from coordinated Land Grant University action:

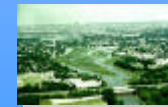
- Developing agricultural stormwater BMP demonstration site at the Rutgers University, Equine Science Center, and planning an agricultural stormwater management regional symposium.
- Cornell and University of Puerto Rico collaboration to adapt and translate into Spanish a Cornell University local government nonpoint source educational program for use in Puerto Rico.

Highlighted Regional Effort

Water Quality Trading Regional Initiative

Financing the control and prevention of water pollution to achieve designated uses of our rivers, lakes and coastal waters is a national challenge. Water quality trading is being advanced as one tool to optimize the use of limited financial resources through cost effective implementation on a watershed scale. However, many questions must be addressed in establishing trading programs that draw on both local knowledge and numerous scientific disciplines.

The Regional Trading Initiative was established to improve understanding of this incentive-based approach. The initiative brings together faculty and partner agencies to assess trading feasibility in specific geographic areas throughout the region, to reduce unregulated nonpoint source pollution and to improve the economic efficiency of point source control. Through this effort, a trading project has been developed in New Jersey and a preliminary trading assessment and farm nutrient mass balance evaluation is being planned for the Upper Susquehanna Watershed in New York State (to support the Chesapeake Bay Program tributary strategies).



Development throughout much of Region 2 is characterized by the close proximity of numerous land uses. This intensity results in complex water resource management challenges, but also creates opportunities for trading by taking advantage of differences in control costs among water pollution sources.

In July 2004 the Rutgers University, Water Resources Program, in partnership with Cornell University faculty, the New Jersey Department of Environmental Protection and several other New Jersey organizations, was awarded a \$900,000 US EPA Targeted Watershed Grant. The award will fund "Development, Implementation, and Evaluation of a Water Quality Trading Program for the Non-tidal Passaic River Watershed." This phosphorous trading project grew out of regional discussions facilitated through the Water Quality Trading Regional Initiative.