

IT'S NOT YOUR TYPICAL SUMMER JOB...

This summer the Rutgers Cooperative Extension (RCE) Water Resources Program employed six Rutgers University students to assist in water quality sampling, benthic sampling, flow monitoring, site investigations, stream visual assessments, and Geographic Information Systems (GIS) analysis.

While working on real world water resources projects this summer under the guidance of the Water Resources Program staff, the students had the opportunity to learn many skills that may give them a head-start in their careers. The skills gained can also be applied throughout the remainder of their academic careers. Two students were even featured on a local cable channel while collecting surface water samples from the Tenakill and Musquapsink Brooks.

On behalf of the RCE Water Resources Program, we would like to thank Brian Kelly, from the Environmental Sciences graduate program, and Jillian Thompson, Robert Flaherty, Benjamin Pearson, Daryl Strom, and Colin Warnick, from the Bioresource Engineering undergraduate program, for their hard work. All of our students were immensely helpful, and we look forward to continuing to provide University students with relevant real world experience.



Daryl Strom monitoring flow in the Neshanic River Watershed
Hunterdon County, NJ



Robert Flaherty monitoring flow in West Portal Brook
Musconetcong River Watershed
Hunterdon County, NJ

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A Quarterly Newsletter Produced by the Rutgers Cooperative Extension
Water Resources Program: Creating Solutions for Water Quality Issues in NJ



THE WATER RESOURCES PROGRAM IS HONORED WITH THE NJAES TEAM AWARD

The Water Resources Program was honored at the 14th Annual School of Environmental and Biological Sciences (SEBS) and the New Jersey Agricultural Experiment Station (NJAES) "Celebration of Excellence" awards ceremony on April 26, 2007. The Water Resources Program was presented with the SEBS and NJAES Team Award by Robert Goodman, Executive Dean of Agriculture and Natural Resources. With approximately 200 members of the Cook community to celebrate the accomplishments of their fellow colleagues and students, Dean Goodman noted that there is a critical need to address water quality in New Jersey. The Water Resources Program, as an unbiased, university-based group, was recognized for its unique ability to bring stakeholders together to address the restoration and protection of our surface water resources throughout the State.



Featured in this picture: Mehran Niazi, Dr. Robert Miskewitz, Josef Kardos, Eileen Althouse, Sean Walsh, Dr. Karyn Malinowski, Katie Buckley, and Dr. Peter Kallin.

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STORMWATER EDUCATION FOR NEW JERSEY, NEW YORK, AND VIRGINIA HOMEOWNERS

What started in 2003 as a lecture tour by Christopher C. Obropta, Ph.D., P.E., Extension Specialist in Water Resources, has now become a formal Extension Education initiative of the Water Resource Program. It's called Stormwater Management in Your Backyard (SWMIYB) and it helps to build the capacity among Rutgers Cooperative Extension (RCE) county personnel and Master Gardener volunteers who install demonstration rain gardens and develop community-based extension education programs around those demonstration sites. Through SWMIYB, Water Resources Program (WRP) personnel provide train-the-trainer training; training to the general public and local stakeholders; and technical and labor support for the design, installation and maintenance of demonstration rain gardens. The success of the initiative is contingent upon working closely with County Agents and Master Gardeners within a county. To date, eleven demonstration rain gardens in six New Jersey counties have been installed with technical guidance from faculty and staff from the Water Resources Program.

The Union County effort, led by Agricultural Agent Madeline Flahive DiNardo, has been the most successful case study to date and has the potential to be enhanced and expanded upon within New Jersey and beyond. Thanks to a recent grant from the United States Department of Agriculture (USDA) National Integrated Water Quality Program (\$200,000 over three years), the SWMIYB will be enhanced and expanded. To start, investigators will try to mimic the success of the Union County program in Gloucester County by building community and agricultural demonstration rain gardens and developing similar extension education programs for local communities. Local stakeholder input from the RCE of Gloucester County, the Soil Conservation District, the South Jersey Land and Water Trust, and other local groups will be an important driving force for developing such programs. A statewide landscaping certification program and homeowner incentive program for Union County will round out the New Jersey portion of the grant project.

SWMIYB will also expand into Virginia and New York

thanks to the collaborative nature of the 2007 USDA CSREES National Water Conference. RCE WRP faculty and staff will work with faculty and staff from Virginia Tech and Cornell Cooperative Extension to set up SWMIYB programs for Frederick and Ulster Counties, respectively. The Ulster County effort has already led to broader collaboration with Cornell University faculty who are conducting research and developing extension programs on rain gardens in other parts of the state. The rain garden working group will continue to meet to guide the statewide initiative in an effective and technically sound manner.

For more information about this grant project, contact Madeline Flahive DiNardo (flahive@aesop.rutgers.edu; 908-654-9854), who will serve as the Principle Investigator. For more information about SWMIYB in general visit <http://www.water.rutgers.edu> or contact Gregory Rusciano (greg.rusciano@rutgers.edu; 732-932-9800 ext. 6130). For more information about the Master Gardener program in your county, visit <http://njaes.rutgers.edu/county/default.asp>.



Volunteers assist with a demonstration rain garden project at the New Jersey Highlands Council grounds in Chester, New Jersey.

AN UPDATE ON SVAP IN NEW JERSEY

The RCE Water Resources Program has been using a modified version of the Stream Visual Assessment Protocol (SVAP) tool for several years in an effort to collect information statewide that can be used to document stream conditions, locate restoration opportunities, relate elements of stream health to water quality data, and analyze for correlation with watershed characteristics. Until this past year, RCE Water Resources Program has conducted SVAP training workshops on request. However, due to the mounting interest in SVAP and the new database that has been launched to keep data organized and GIS-ready, our Program has formalized training opportunities.

SVAP is one method within the hierarchy of tools available to characterize stream health. SVAP was originally developed in 1998 by the US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) and was later modified for New Jersey streams by Omni Environmental Corporation (Princeton, NJ) and the Water Resources Program. This protocol is an easy to use, inexpensive method to document and characterize stream conditions. The protocol was originally developed for use by the landowner (Newton et al., 1998), but it has proved to also be useful by those familiar with the river system and flooding occurrences.

The outcome of the previous training sessions, recent workshops, and work performed by the RCE Water Resources Program has resulted in the collection of more than 700 data points characterizing the health of stream reaches throughout New Jersey. We believe the online database that we have created to make it easier for stakeholders to enter their data has help rapidly accelerate the use of SVAP in New Jersey. The RCE Water Resources Program has been or is actively involved in working with partnering agencies and watershed groups in the collection of data in the following watersheds, depicted in Figure 1.

The RCE Water Resources Program continues to partner with various entities across the state including the Bergen County Department of Health Services, Raritan-Highlands Compact, North Jersey RC&D, NJ Institute of Technology, South Branch Watershed Association, NJ Water Supply Authority, Pompeston Creek Watershed Association, South Jersey Land & Water Trust, RCE of Salem County, Cumberland-Salem Conservation District, and the NJDEP. We are excited about the data that is being collected by stakeholders across the State using the SVAP protocol and are currently creating a training course to help groups better interpret the data that they are collecting. If you are interested in obtaining more information on SVAP and our training programs, please feel to contact us.

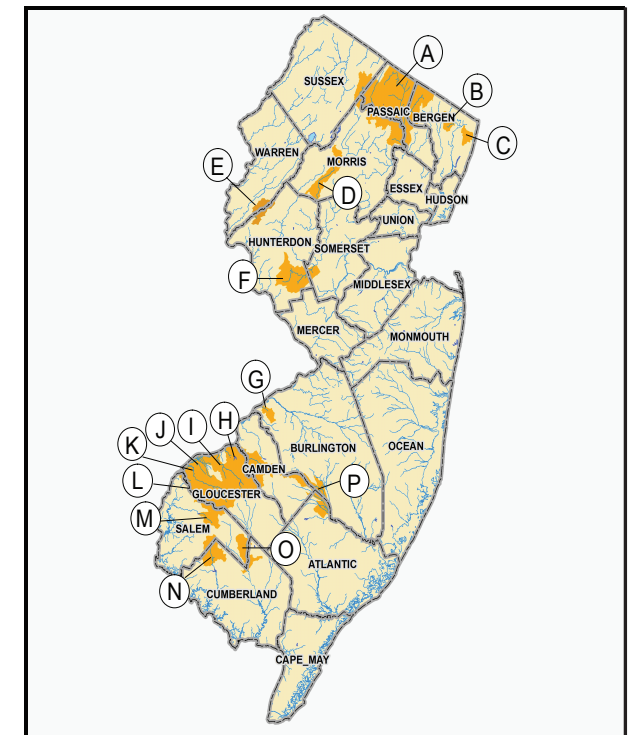


Figure 1: Project Watersheds with SVAP Data (as of August 2007)

- A. Watershed Management Area (WMA) 3;
- B. Musquapsink Brook;
- C. Tenakill Brook;
- D. Black River;
- E. Musconetcong River;
- F. Neshanic River;
- G. Pompeston Creek;
- H. Big Timber Creek and Woodbury Creek;
- I. Mantua Creek;
- J. Repaupo Creek;
- K. Raccoon Creek;
- L. Oldmans Creek;
- M. Upper Salem River;
- N. Upper Cohanse River;
- O. Upper Maurice River; and
- P. Mullica River.