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Elaine Rossi
Program Coordinator, Water Resources Program
Rutgers New Jersey Agricultural Experiment Station Cooperative Extension
Rutgers, The State University of New Jersey
14 College Farm Road
New Brunswick • New Jersey 08901
Phone: 732-932-9800 x 6129
Fax: 732-932-8644
Website: <http://www.water.rutgers.edu>
Email: erossi@aesop.rutgers.edu

PRESS RELEASE

Water Conservation Program for New Jersey

Rutgers Cooperative Research and Extension Water Resource Program, in partnership, with the New Jersey Department of Environmental Protection, received a grant from the U.S. Environmental Protection Agency to develop a model community based water conservation education program.

The partnership will result in the creation of a pilot program that will promote a responsible water-use ethic in both the private and public sectors and reduce overall water waste, according to Dr. Christopher Obropta. The Water Conservation Program for New Jersey will serve as a clearinghouse for exchanging information on water-wise practices and is projecting a 10% reduction in residential water use. This comprehensive educational program will involve informational seminars, in-classroom exercises, demonstrations, media relations, advertising, as well as continuing education opportunities for professional groups.

Conservation can save water utilities and the state considerable capital expenditures over the long term by delaying or even eliminating the need to develop new or expanded water supply systems and wastewater treatment plants. Reducing water waste is a major component of the state's water supply planning efforts.

As New Jersey's population continues to grow and water sources are further constrained, more must be done to safeguard a sustainable water supply. Promoting the efficient use of water will help meet this goal for generations to come. For more information please contact Elaine Rossi, Program Coordinator at 732-932-9800 x 6129.

PRESS RELEASE

The New Jersey Water Conservation Program Fall 2008 Update

The Rutgers Cooperative Extension (RCE) Water Resources Program, in partnership with the New Jersey Department of Environmental Protection (NJDEP), received a grant from the U.S. Environmental Protection Agency to develop a model community based water conservation education program.

As shared previously, this three-year pilot program will promote a responsible water-use ethic in both the private and public sectors and reduce overall water waste. The Water Conservation Program for New Jersey will serve as a clearinghouse for exchanging information on water-wise practices and is targeting a 10% reduction in residential water use. This comprehensive educational program will involve informational seminars, in-classroom exercises, demonstrations, media relations, advertising, as well as continuing education opportunities for professional groups.

We have selected five municipalities across the state (i.e., Belmar, East Greenwich, Egg Harbor Twp., Livingston, and City of Rahway). To test various aspects of this program, the NJDEP and the RCE Water Resources Program have worked closely to develop an application process for municipalities and have conducted in-person interviews with all of the selected municipalities. A site visit has been conducted in each of the recruited municipalities and a planning session has been scheduled for September for municipal decision makers.

As New Jersey's population continues to grow and water sources are further constrained, more must be done to safeguard a sustainable water supply. This program is very important for New Jersey's most precious resource. Conservation can save water utilities and the State's considerable capital expenditures over the long term by delaying or even eliminating the need to develop new or expanded water supply systems and wastewater treatment plants. If you have any questions regarding this program, please contact Elaine Rossi, Program Coordinator at 732-932-9800 x 6129 or by e-mail at erossi@aesop.rutgers.edu.

by gwen mcnamara

Let it Rain

Capturing rainfall helps reduce pollution in local waterways

For Milly King a rainy day is something to smile about. At her home near the Great Road in Princeton Township rainwater is put to good use.

Ms. King uses a custom system of copper water chain and underground cistern designed by Anthony Canamucio of Bell'acqua Associates in Newtown, Pa., to collect rainwater, funnel it to the dry portions of her yard, and even use it to water her patio plants and other gardens.

Attractive and functional, Ms. King's system combines the grace of a fountain with the ability to collect up to 150 gallons of rainwater.

On average, an 800-square-foot roof can produce more than 500 gallons of runoff for every 1 inch of rain that falls

on it, according to the Rutgers New Jersey Agricultural Experiment Station Water Resources Program. Capturing this rainfall saves water, saves money and helps reduce pollution in local waterways.

According to the Stony Brook-Millstone Watershed Association in Hopewell, people pollution — things like fertilizers, pet waste, grit, oils, pesticides and trash — picked up by rainwater as it travels over roads, driveways and lawns is one of the major causes of water pollution across central New Jersey.

"Capturing rainwater before it makes it to our driveways, streets and storm drains can make a big difference," says Amy Weaver, stewardship program coordinator at the Watershed Association.

In addition to Ms. King's attractive cistern system, there are several ways to collect and harvest rainwater. One option: install a rain barrel.

Rain barrels can vary in size, but typically hold about 50 to 60 gallons of water. Connected to a home, garage or shed's downspout, the barrels hold rainwater until needed and allow you to direct overflow away from paved surfaces. They can be connected together to create a rain barrel chain, or attached to a soaker hose to channel water to a particular location in a garden or flowerbed.

"Rainwater is great for indoor plants, the garden or lawn, washing your car and even birdbaths," says Barbara Bromley, Mercer County Horticulturist.

If you don't have a rain barrel, even simply putting containers on your driveway or under downspouts during a rainstorm can help.

"Lawns are good at absorbing water and channeling it back into the ground," says Ms. Bromley. "But impervious surfaces like driveways aren't. I have a kiddie swimming pool that I put on my driveway when it rains. Collecting every bit helps."

To see rain barrels in action visit the Mercer Educational Gardens in Pennington

or the Stony Brook-Millstone Watershed Reserve. To showcase how beautiful and functional rain barrels can be, the Lawrence Township Green Team is teaming up with community group Sustainable Lawrence and the Lawrenceville Main Street Artists Network to launch a creative display of decorated rain barrels throughout the township in June.

"We're going to display painted rain barrels around the community to build awareness about conserving water," says Township Councilwoman Pam Mount.


Another great way to harness the power of rainwater is with a rain garden. Rain gardens are designed to capture and manage stormwater runoff. During a storm, the rain garden fills with water and slowly filters it into the ground instead of running swiftly into storm drains and flooding waterways. Compared to a portion of lawn, a rain garden will allow about 30 percent more water to soak into the ground, according to the Rutgers Water Resources Program.

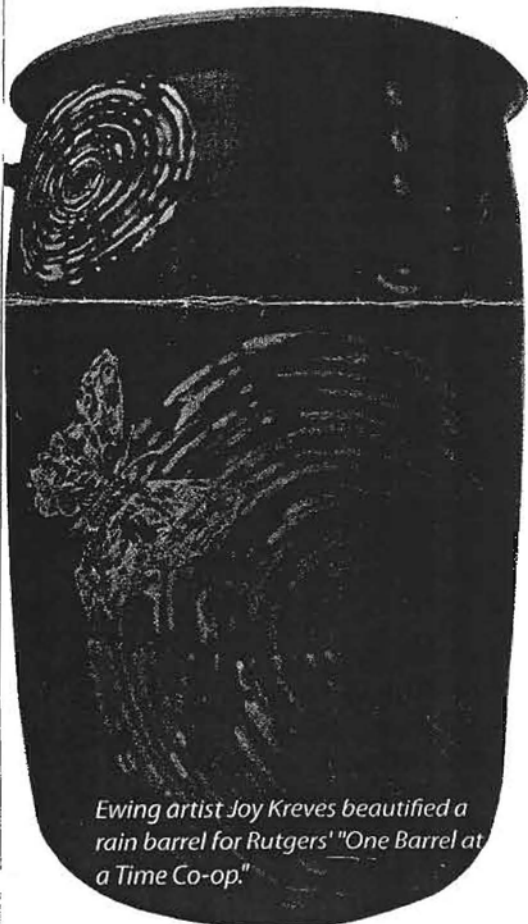
"Rain gardens capture stormwater to reduce runoff and flooding and improve groundwater recharge," says Ms. Weaver. "They can be beautiful and provide great habitat for native butterflies, birds and beneficial insects."

To get started she recommends checking out the Native Plant Society of New Jersey's Rain Garden Manual (available at npsnj.org), which provides guidelines for soil type, plants, garden size and construction. "Rain gardens need plants that can handle really wet conditions, but have to tolerate dry conditions too," says Ms. Weaver.

The Rutgers Water Resources Program also offers Rain Garden Certification. This program offers participants — everyone from gardeners to landscape professionals — one-day classroom training and a half-day hands-on-training, where participants construct a rain garden together.

Other water conservation tips for the garden: water plants only when they need it instead of on a schedule, says Ms. Weaver. Water less frequently, but for longer periods of time; don't water on windy days; and use mulch to help soil retain moisture.

"Imagine how much water we could save if we each collect just some of the rain that would otherwise hit our driveways, come off our roofs and down our downspouts," says Ms. Bromley. "Rainwater is an incredible resource." 



Ewing artist Joy Kreves beautified a rain barrel for Rutgers' "One Barrel at a Time Co-op."



WATER PAGES

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

Build-Your-Own-Rain Barrel Workshops Held Throughout New Jersey

For the second year in a row, the Rutgers Cooperative Extension Water Resources Program has helped New Jersey residents conserve water by converting recycled food grade barrels into rain barrels. These rain barrels help save water and reduce the amount of rainwater entering the storm drain system, thereby preventing flooding and pollution from entering New Jersey's lakes and streams.

Since the beginning of the year, over 330 barrels have been sold throughout the State. The Water Resources Program staff teaches residents about water conservation options in the home, along with the benefits of using a rain barrel at each Build-Your-Own Rain Barrel Workshop. Food grade 55 gallon drums, once utilized for storing a variety of foods (coconuts, fruit juices and olives), are prepared for homeowners with a thorough cleaning and a 9"x9" square cut in the top of the barrel. At each workshop the participants retrofit the barrels by inserting a spigot and overflow hose adaptor. A 10" x 10" plastic, aquatic basket covered with netting sits in the top hole to capture the runoff water. Information about how to safely install the rain barrel at home is also provided at the workshops.

These informative and practical workshops have been offered at Farmer Markets, Public Libraries, Corporations, Community Parks, Rutgers University, and on the Jersey Boardwalk.

"We are often asked if the captured water is safe to use on a vegetable garden," commented Dr. Christopher Obropta, Associate Professor and Associate Extension Specialist in Water Resources. "We recommend the roof runoff water is tested prior to use if it will be used on a vegetable garden. However, ornamental plants thrive on the rainwater. Using the rain barrel water to wash cars and in toilets are also other good uses."

For more information on the water quality of roof top runoff, see Fact Sheet number 1118 at: <http://njaes.rutgers.edu/pubs/publication.asp?pid=FS1118>.



Credit Nate Schweber

Sara Mellor is helping Joseph Earley, of New Providence, at the Livingston Public Library on June 29, 2010.



Washington Park in Jersey City, NJ on June 19, 2010



Rain Barrel Workshops Held in The Garden and Empire States

Below are Rain Barrel Workshops held in New Jersey and New York since March 2010

Union County Rain Barrel Train the Trainer, Rahway, NJ
South Bronx Conservancy, South Bronx, NY
New Jersey Department of Environmental Protection, Trenton, NJ
Middlesex County, Earth Center, New Brunswick, NJ
Belmar Township, Taylor Pavilion, Belmar, NJ
Egg Harbor Township, Egg Harbor Community Center, Egg Harbor, NJ
East Greenwich Township, Samuel Mickel School, Mickelton, NJ
Trailside Nature Center, Union, NJ
Como Construir un Barril de Lluvia, Unity Center Partnership, New Brunswick, NJ
New Jersey Water Supply Authority, Somerville, NJ
Holmdel Township, Senior Community Center, Holmdel, NJ
4-H Training, Morris, NJ
Washington Park, Jersey City, NJ
Pennington Farmer's Market, Pennington, NJ
Livingston Township, Livingston Library, Livingston, NJ
ETHICON, Somerville, NJ



Wherever you live in New Jersey, there is a Build-Your-Own Rain Barrel workshop near you!

This Fall the Water Resources Program will offer three "Mega" Build-Your-Own Rain Barrel workshops. There are two times the program will be offered each day. The program has a teaching component and a hands-on retrofitting of the barrels. The cost is \$45 per barrel which includes all materials and use of tools.

North Jersey	Saturday, October 9, 2010	9AM-11AM and 11AM-1PM
Central Jersey	Saturday, October 16, 2010	9AM-11AM and 11AM-1PM
South Jersey	Saturday, October 23, 2010	9AM-11AM and 11AM-1PM

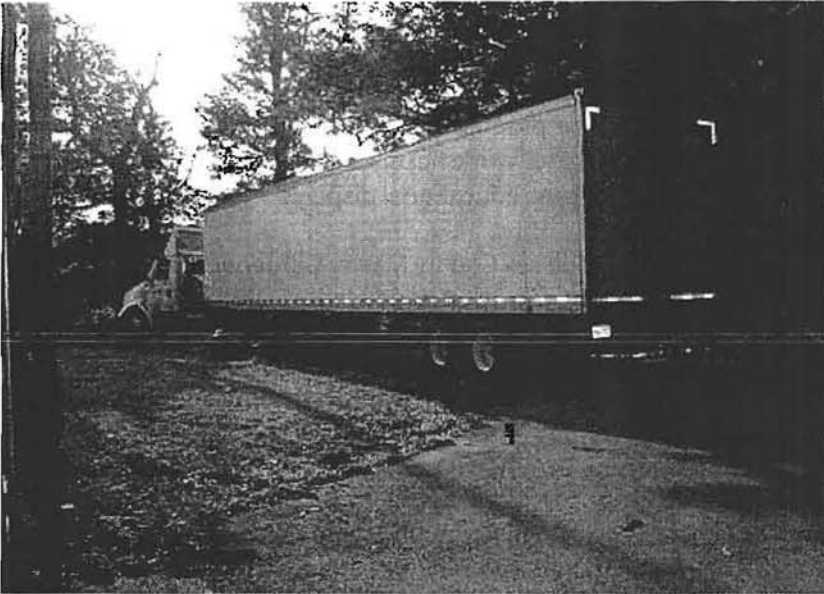
Exact locations are yet to be determined. For more information about each workshop and to register, go to www.water.rutgers.edu

Other Events

August 28	Pennington Farmer's Market Build-Your-Own Rain Barrel Workshop
September 11	The Kingston Village Picnic, Rain Barrel Demonstration, Kingston, NJ
September 18	Go Green at the Red Mill, Rain Barrel Demonstration, Clinton, NJ
September	Rutgers Employees Build-Your-Own Rain Barrel Workshop, Cook Campus
September 25	North Brunswick Heritage Day Rain Garden & Rain Barrel Display
September 25	Cherry Hill Public Day Rain Garden Planting
October 2	4-H Rain Barrel Art Program, Rutgers Zimmerli Art Museum, New Brunswick, NJ
October 9	Regional Build-Your-Own Rain Barrel Workshop, North Jersey
October 15	ANJEC Association of NJ Environmental Commissions Display
October 16	Regional Build-Your-Own Rain Barrel Workshop, Central Jersey
October 23	Regional Build-Your-Own Rain Barrel Workshop, South Jersey
October 25	Sea Grant Art Fund Raiser at Bahrs, Atlantic Highlands, NJ



Where Do Rain Barrels Come From?



Rain Barrels are delivered via a Semi-trailer truck (after much coordination and paying the bill)!

The barrels we use for rain barrels come from many different sources. The Water Resources Program has purchased many barrels from a Canadian company; the barrels originally stored olives. Local companies, such as Coca-Cola and Ocean Spray have been generous in making contributions to the water conservation efforts of the Water Resources Program, as well.



Water Resources Program Interns unload 324 drums off a Semi.



Storing barrels at G.H. Cook Campus of Rutgers University. Next is a good cleaning and cutting a square in the top!



Training Community Groups to Run Local Rain Barrel Programs

Rain Barrels are a great tool for promoting water conservation and the reduction of stormwater runoff in a community. Many municipalities in New Jersey have expressed interest in starting local rain barrel programs or incorporating rain barrels into existing educational activities. Additionally, running rain barrel programs is a great way for a municipality to receive points towards the Sustainable Jersey certification program. Starting a rain barrel program from scratch, though, can be intimidating. Questions such as "Where do I get barrels and materials?" and "How will I transport and store barrels?" can stop most rain barrel enthusiasts in their tracks.

The Rain Barrel Train the Trainer program is for Master Gardeners, environmental commission members, educators, municipalities, community gardeners, and environmental organizations interested in learning how to teach others about the environmental benefits of rain barrels. Three Train the Trainers workshops have been held, one in the fall of 2009 and two in 2010, in Middlesex and Union Counties with over 60 participants from all over the state. Participants receive a packet containing all workshop materials and presentations on hard copy and CD so they can easily put the information to work. The program is run by Michele Bakacs, Environmental and Resource Management Agent for Middlesex and Union Counties.

The goals of the program are to provide participants with:

- the skills to teach others how to build and install a rain barrel;
- the knowledge to teach others about best management practices for water conservation and stormwater management;
- the tools to conduct rain barrel activities in their communities.

Information from questionnaires to program participants revealed that the most important information they needed covered at a Train the Trainer was how to build, install, and maintain a rain barrel. The highest frequency activities participants planned to implement after attending the Train the Trainer was a Build A Rain Barrel workshop, and teaching youth about rain barrels. Additionally, many participants plan to install rain barrels in high traffic areas, such as community gardens and schools, where special planning is needed for safety and security. Instructions for installing on both public buildings and houses, and how to educate the public on appropriate use and application of rain barrel water are taught. Program participants also learn about the water quality of rooftop runoff, as well as how to get rain barrel water tested.

Through the Train the Trainer program, Rutgers Cooperative Extension is able to extend its reach and provide outside organizations with the teaching tools needed to educate the

public on rain barrels, water conservation, and stormwater management. Since March, 2010, 11 rain barrel programs and activities have been conducted by rain barrel trainers to 157 participants. The programs and activities were as follows: two Build A Rain Barrel workshops, six presentations and demonstrations, and three educational displays.

Union and Middlesex County Master Gardeners that participate in the program can receive education credits and volunteer hours. They are required to conduct 8 eight rain barrel volunteer hours at extension events before they can conduct their own activities. Participants also have the opportunity to build a rain barrel for use in their community. There is a fee to attend the workshop. Additional Train the Trainers are planned for the coming year. For more information about the program call Michele Bakacs, Environmental and Resource Management Agent at (732) 398-5274 or email at bakacs@njaes.rutgers.edu.

By Michele Bakacs, Environmental and Resource Management Agent of Middlesex and Union Counties



Rain barrel trainers from the Green Collar Apprenticeship Program, Lincoln Park Coast Cultural District, Newark, NJ



Art Rain Barrels Sell on eBay®

The New Jersey Department of Environmental Protection, Rutgers Cooperative Extension Water Resources Program, and Lucid Graphics coordinated and carried out the pilot "One Barrel at a Time Co-op" program from December 2009 through May 2010. This exciting program gave New Jersey artists an opportunity to beautify rain barrels that were then auctioned off to the public. The objectives of the "One Barrel at a Time Co-op" program were to lend a hand to the environment by having residents bid on beautiful rain barrels and then install them at their homes.

By engaging local artists, rain barrels were designed to be more appealing to the general public while bringing local art to a wider audience. These beautified barrels were displayed in public areas in Trenton, Livingston, Belmar, Egg Harbor Township, Rahway, and East Greenwich. The rain barrels were auctioned off via eBay®, with the profit going to the artist. The eBay® auction kicked off on the 40th anniversary of Earth Day (Thursday, April 22nd) and ran until Saturday, May 1st.

Some of the beautified rain barrels were revealed during the 40th anniversary of Earth Day celebration at the New Jersey Department of Environmental Protection office in Trenton on Thursday, April 22nd. All thirty-six of the stunning rain barrels were revealed together on Saturday, April 24th at Rutgers Day (a.k.a. Ag Field Day) on the George H. Cook Campus in New Brunswick. The folks who got a glimpse of the barrels that day were intrigued and were inspired to inquire further about the program. A few visitors from Rutgers Day actually won some of the barrels from the eBay® auction. This program was a great success and helped encourage homeowners to think about and be willing to take a step toward helping to protect water resources in New Jersey.

For more information on the "One Barrel at a Time Co-op" program, please visit www.water.rutgers.edu.



Artist: Carol Jean Feinstein
Sold on eBay for \$305



Artist: Joy Kreves
Sold on eBay for \$280



Artist: Joan Horn
Sold on eBay for \$182.50



Artist: Edwin Messy
Sold on eBay for \$158



Artist: Helen Haniffy
Sold on eBay for \$152.50



Artist: Tamara Petrosino
Sold on eBay for \$143.50

The Water Resources Program Staff Grows



Top row, left to right: Amy Boyajian, Program Associate, Jeremiah Bergstrom, Senior Senior Program Manager, Sean Walsh, Program Associate, Jillian Thompson, Program Associate, Dr. Chris Obropta, Associate Extension Specialist in Water Resources and Associate Professor in Environmental Sciences, Lisa Galloway Evrard, Senior Program Coordinator, Dr. Susan Gergeau, Post-Doctoral Associate, Ben Pearson, Program Associate, Caitrin Higgins, Program Associate. Front Row, left to right: Cheryl Burdick, Administrative Assistant, Sara Mellor, Program Coordinator, Hae-An Chyun, Intern, Elaine Rossi-Griffin, Program Coordinator, Dr. Sandra Goodrow, Senior Program Coordinator.



Ben and Rain Barrel



Student Interns: Dan Yu, Daryl Strom, and Kate Sullivan



Jillian, Friend, and Amy



PRESS RELEASE

Communities Save Water & Money through the New Jersey Water Savers Program

New Jersey uses nearly **1 trillion** gallons of water per year. This equates to **2.6 billion** gallons per day statewide on average. To put that in perspective, that is enough water to cover the entire State of New Jersey eight inches deep! To help curtail water waste and extend the life of our States precious water supply, the Rutgers Cooperative Extension Water Resources Program has partnered with the New Jersey Department of Environmental Protection, the United States Environmental Protection Agency and to develop and implement “New Jersey Water Savers” which is a pilot water conservation program specific to New Jersey’s needs.

The New Jersey Water Savers program is currently working within the communities of Belmar, East Greenwich, Egg Harbor Township, Livingston, and Rahway to implement custom demonstration projects with measurable results that can be replicated Statewide. Demonstration Projects include, outdoor demonstration sites featuring native plant gardens, rain gardens, porous pavers and the use of Smart Irrigation technologies. Outreach Programs include: Build-A-Rain Barrel programs which community participants have the opportunity to build and take home their own rain barrel; the One Barrel at a Time Co-op which featured the work of thirty five artists from around the State on rain barrels; the Rahway Name Your Rebate program which helped Rahway residents purchase water saving fixtures and appliances at a reduced rate, Project WET teacher trainings in which professional environmental educators taught teachers how to effectively communicate water education to youth, and an in-school bathroom retrofit project in which American Standard donated toilets, urinals, faucets and sinks to schools in need of an update.

All of these projects and more are being rolled into case studies which will be promoted through the forthcoming New Jersey Water Savers conservation webpage. This website will be an informational portal for residents to find out about water supply issues in New Jersey and how they can help. The website will also feature the New Jersey water supply story video entitled “Water, a Matter of Importance” and two additional videos that will offer specific tips on how residents can conserve water both inside and outside of the home. The New Jersey Water Savers is true collaborative effort engaging State, Federal, and local governments along with those in the academic, industrial, and commercial sectors. Our partners include, American Standard, Birdsall Corporation, Brickman Landscaping, Home Depot, New Jersey American Water, and United Water Rahway. For more information on the New Jersey Water Savers program, visit www.water.rutgers.edu.

Conserving Water

Despite an average annual rainfall of 45 inches, the Garden State is vulnerable to water supply shortages

By Susan Van Dongen

The venerable *National Geographic* magazine put out a special edition in April titled "Water: Our Thirsty World," highlighting our profound need for water, and humanities' innate connection with it.

Some of the most astonishing facts involved the ways Americans waste water: for example, *NG* reports that in Florida, 3,000 gallons are used to water the grass for each golf game played.

Another chart broke down the amount of "virtual water" it takes to create a product, such as an item of food or clothing. To wit: a pound of sausage requires almost 1,400 gallons of water, while even a humble eggplant takes 25 gallons.

But in the summer of 2010, in central New Jersey, we haven't needed an essay by Barbara Kingsolver to realize how precious water is. We just look out our windows and see the brown grass and the wilting flowers from the low rainfall and searing heat.

Lack of water is a worldwide problem for sure, but one that New Jerseyans are starting to realize as well. Despite an average annual rainfall of 45 inches, the Garden State is vulnerable to water supply shortages.

"Water use in New Jersey is high, because water is available, clean and inexpensive, so people

take advantage," says Elaine Rossi-Griffin, program coordinator for the Rutgers Cooperative Extension's Water Resources Program in New Brunswick.

"In New Jersey, the average water use is 100 gallons per day and in the summer months this number can swell to as much as 185 gallons per day," Ms. Rossi-Griffin says. "But studies show that you only need about 12 gallons a day."

Ms. Rossi-Griffin adds that conserving water can save the individual consumer money, but could potentially save taxpayer dollars as well.

"When people use a lot of water, it puts more demands on the infrastructure, the pipes, the treatment centers and facilities," she says. "By conserving, you're not putting as much of a strain on the system."

One 18th-century technique for conservation has become particularly trendy. Rain barrels are the hot, new, old-fashioned thing, with the Water Resources Program championing "Build Your Own Rain Barrel" workshops, teaching how to construct and install your own device.

"On the market, you could pay \$100 for a barrel, but when you build your own, it's only about \$35," Ms.

Continued on
page 11

Continued from page 10

Rossi-Griffin says. "Rain barrels are a wonderful way to harvest water and you can use them for ornamental purposes as well."

Harvesting rainwater has many benefits, including saving water, saving on your water bill, and preventing basement flooding. In addition, by collecting rainwater,

homeowners are also helping to reduce flooding and pollution in local waterways.

Rain barrels are food grade drums converted with a spigot and screen to collect rainwater from rooftops. Each barrel can hold about 50 gallons of water, which can be employed for lawn and garden use, to water indoor plants, or to wash the car. In general, for every inch of rain that falls, an 800-square foot roof can yield some

500 gallons of rainwater.

Unadorned, the barrels are pretty plain, but Ms. Rossi says, earlier this year, the N.J. Dept. of Environmental Protection, together with the Water Resources Program and Lucid Graphics, launched a special program to make people think about rain barrels in a more artistic way.

"With the 'One Barrel at a Time Co-op,' we had New Jersey-based artists paint the barrels and then the barrels went 'on tour' in public locations throughout New Jersey and New York," she says. "People could view them and then bid on a barrel they liked."

While installing a rain barrel at home isn't a total solution to our water supply problems, it has helped to serve as a catalyst for change. Ms. Rossi-Griffin is pleased that the rain barrel workshops have motivated New Jerseyans to think about water resources and how we can make a difference.

"The general public really cares, especially in areas where water rates have jumped," she says. "In affluent areas, we sell out at these events. People are ready to buy three or four barrels."

Rutgers Cooperative Extension's Water Resources Program on the web: water.rutgers.edu

