

More to fall cleanup than raking

With my sister's family busily digging out from under 15 inches of fresh Halloween snow in Denver and other relatives dealing with record November heat in Arizona and California, I guess I'm thankful for only having to deal with a light, colorful blanket of fallen leaves.

Ah, the joys of raking, blowing and bagging these leaves — not only my own, but from trees all across the neighborhood. Some trees have dropped all their leaves already, while some oaks and beeches will wait until next year's buds push off browned leaves in the early spring (just my luck, a spring-time fall cleanup).

Driving anywhere in Central Jersey, the sight's the same: lawns, rooftops and gutters littered with leaves, and from those intrepid weekend gardeners working between the raindrops — piles of garden refuse bags or mounds of leaves sitting patiently curbside for pickup.

But a problem sits with those mounds of leaves — they never stay sitting patiently where you put them. Some people have adapted temporary seasonal fencing to keep the leaves from blowing back onto the property they just spent hours cleaning up, while others keep the garden hose handy and weigh the piles down with water.

This simple act of fall cleanup has now become part of a bigger issue called stormwater management — leaves left curbside can easily become more than just a nuisance if they block storm drains and cause preventable flooding during our seasonal storm events.

And the longer those curbside leaves lie there, as the leaves start to break down and decay, the greater potential exists for nutrients and byproducts to leach out from these piles and into our storm drains.

THE GARDENER STATE



By Nicholas Polanin

Online resources

When water from rainfall or melting snow flows across the landscape, it is referred to as stormwater runoff. As this stormwater runs over the land, and into storm sewers, it washes soil particles, leaves, litter, bacteria, pesticides, fertilizer, pet waste, oil and other materials into our lakes, streams and groundwater.

Integrated into our lifestyles are many activities that can both produce and reduce nonpoint source pollution. Because we are part of the problem, we are also part of the solution. By adjusting our lifestyles to reduce nonpoint source pollution, we can make a tremendous difference in the quality of the state's water resources.

The NJDEP's Stormwater and Nonpoint Source Pollution Web site, www.nj.gov/dep/stormwater, and the Clean Water Book, [www.nj.gov/dep/watershedmgt/cleanwaterbook/waterbook\(underscore\)title.htm](http://www.nj.gov/dep/watershedmgt/cleanwaterbook/waterbook(underscore)title.htm), help explain water pollution mysteries and suggest choices we can make to reduce water pollution.

The Rutgers Water Resources Program, www.water.rutgers.edu, also provides solutions for many of the water quality and quantity issues facing New Jersey through research, project development, assessment and extension.

In addition to preparing and distributing fact sheets, educational programming in the form of



PHOTO COURTESY OF MICHELE BAKACS OF THE RUTGERS COOPERATIVE EXTENSION OF UNION AND MIDDLESEX COUNTIES

Tina Campangna of Rahway displays her newly built rain barrel at a build-a-rain-barrel workshop in Rahway.

lectures, seminars and workshops also are provided as part of their outreach. Rain barrel and rain garden workshops are just two examples of this effort.

With New Jersey Agriculture Experiment Station funding and other state and federal sources, research findings will ultimately be used by stakeholders to improve water resources throughout New Jersey.

New agents of change

The Rutgers Cooperative Extension, or RCE, has recently hired five environmental and resource management county agents. The New Jersey Department of Environmental Protection, or NJDEP, jointly funded these positions with the RCE. These new agents will focus on helping urban and nonurban stakeholders address water-resources issues in a two-county area.

Pat Rector is the new

working to develop educational programming for Department of Public Works employees, which will include several demonstration projects of greening in Somerset County. She can be reached directly at 973-285-8300, ext. 225, or at rector@njaes.rutgers.edu.

Covering both Middlesex and Union counties is Michele Bakacs, who is focusing her efforts on working with stakeholders to implement the Robinsons Branch Regional Stormwater Management Plan and the Manalapan Lake and Brook Watershed Restoration Plan.

Bakacs has hosted several "Build-a-Rain-Barrel" workshops and developed a train-the-trainer program so she can instruct local organizations on how to deliver these workshops.

In July, the Rutgers Cooperative Extension kicked off the first of 12 statewide Build-A-Rain Barrel workshops at the EARTH Center in Middlesex County. At these workshops, participants learn about what they can do at home to conserve water and reduce rain water runoff from their landscapes, build their own 55-gallon rain barrel, and receive instruction on maintenance and home installation.

To learn more about rain barrels and to find out about upcoming workshops, visit <http://water.rutgers.edu> and click on rain barrels. As part of the statewide water conservation program, Bakacs will also be testing a residential incentive program in Rahway to encourage residents to adopt water saving practices in their homes. Bakacs can be reached at 732-998-5270 or at bakacs@njaes.rutgers.edu.

Nicholas Polanin is an agriculture and resource management agent for Rutgers, New Jersey Agricultural Experiment Station, Cooperative Extension of Somerset County.

One project seeks to implement strategies to reduce the impact of runoff from impervious coverage such as paved roads so that the natural filtration process has an opportunity to occur. These can include rain gardens, rain barrels and bio-retention basins.

These can all help address runoff for the majority of storm events by taking water that would flow into our catch basins and have it instead flow into a garden that is created and sited specifically in the landscape to capture the runoff.

Additionally, she is

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Rahway Water Champions



Union County Freeholder Bette Jane Kowalski (3rd R) congratulates members of Rahway Water Champions on their efforts in water conservation. The students presented a cost/analysis of water usage at Rahway High School to federal and state environmental officials, executives from American Standard and county officials. The students' analysis shows that the school could reduce its water use by two-thirds through water-saving plumbing. Rahway Water Champions pictured are Rahway High School students (from left: Jennifer Santos, Jennifer Matos, Paloma Ferreyrn, Moreen Famosa and Jamie Pierre. (Photo by Lowney/County of Union)

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High school research will lower water waste

Rahway students' audit brings serious savings

By Eliot Caroom
FOR THE STAR-LEDGER

Teens at Rahway High School audited their school's water consumption, with a little help from Rutgers, and figured out a way to save 1.6 million gallons of water a year.

Now, thanks to the work of the Rahway Water Champions, a three-year-old club at Rahway High School, and a donation from American Standard, the school will save not only water but also money — an estimated \$6,500 or more a year.

The club examined the school's water fixtures to gauge their efficiency.

"These (sinks) are ancient," explained Jamie Pierre, a rising junior at Rahway High, pointing to a row of water-glugging fixtures in a bathroom on the school's second floor.

Water

CONTINUED FROM PAGE 31

Measuring the flow of the faucets meant using household tools for a scientific purpose.

"For my group, we used measuring cups and used a timer (to evaluate faucet flow)," said Emera De los Santos, another rising junior.

The students audited the school's water use and found that with along with old faucets, the school's toilets consume about 200,000 gallons of water a month.

That includes 37 toilets flushing 3.5 gallons each use

and nine urinals flushing 2.5 gallons every time.

New toilets and sink faucets worth about \$60,000 will be donated to Rahway High School by Piscataway-based American Standard, a historic toilet and plumbing fixture manufacturer.

The contribution was arranged by staff at American Standard who reached out to Rutgers.

With those installed, the school will save upwards of a million gallons of water a year, with the new toilets and urinals using 63 percent and 95 percent less water, respectively,

according to the Rahway Water Champions.

"This is the first pilot high school," said Elaine Rossi-Griffin coordinator of the water resource program of the Rutgers Cooperative Extension. "We're hoping that other schools in our pilot areas will want to do it this way."

In addition to auditing their school, the Rahway students reached out to City Hall, the Rahway YMCA and local restaurant the Waiting Room and did surveys there, too.

But one of the most memorable parts was the students' visit to the source of the water

that spouts from fountains at the high school: the Rahway River.

The students cleaned trash from the riverside and got a tactile experience of the source of water for their community — and an appreciation for the value of pure water.

"I wouldn't drink it straight from the tap," said Pierre. "I have to have that filtered first."

Eliot Caroom at New Jersey Local News Service: (908) 243-6215 or ecaroom@njlns.com



Everything Jersey

Rahway students find ways to save 1.6M gallons of water at school

Published: Sunday, July 18, 2010, 5:41 AM



Eliot Caroom/For the Star-Ledger

RAHWAY — Teens at Rahway High School audited their school's water consumption, with a little help from Rutgers, and figured out a way to save 1.6 million gallons of water a year.

Now, thanks to the work of the Rahway Water Champions, a three-year-old club at Rahway High School, and a donation from American Standard, the school will save not only water but also money--an estimated \$6,500 or more a year.



David Gard/New Jersey Local News Service

A group of Rahway High School Students conducted a water audit of the school that will lead to 1.6 million gallons of water a year saved.

The club examined the school's water fixtures to gauge their efficiency.

These (sinks) are ancient," explained Jamie Pierre, a rising junior at Rahway High, pointing to a row of water-glugging fixtures in a bathroom on the school's second floor.

Measuring the flow of the faucets meant using household tools for a scientific purpose.

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Rahway Water Champions Save Water, Save School Money

Friday, July 23, 2010

RAHWAY — Rahway High School's Social Action Club, led by faculty Advisor, Liz Jotz, and AmeriCorp Watershed Ambassador, Steven Hruby, recently completed pre-water audits in a heavily trafficked restroom and calculated a cost-benefit analysis, showing new fixtures would save over \$6,500 in water costs yearly.

They presented preliminary findings to the Rahway Board of Education, American Standard, U.S. EPA, New Jersey Department of Environmental Protection (NJDEP), and the Rutgers Cooperative Extension Water Resources Program. Their presentation led American Standard to donate new fixtures worth \$60,000 to the high school.

The Social Action Club members created Rahway Water Champions in conjunction with the NJDEP, Rutgers Cooperative Extension Water Resources Program and the NJ Watershed Ambassadors. The group's objective is to take action in their school and community to promote water efficiency and publicize the EPA's WaterSense® program, which identifies high efficiency plumbing products and their corresponding water savings.

Based on the student's initial findings, the NJ Water Savers program provided a grant to cover the labor costs to update two bathrooms in the high school with new plumbing fixtures this summer. Once the fixtures are installed, the students will conduct a post audit to compare their projections to the actual water savings, plus measure the user satisfaction. In addition to finalizing their reports, the students will continue their outreach to the community to demonstrate the many ways New Jersey residents can "go blue" and save water as individuals.

Piscataway-based American Standard Brands donated the high efficiency faucets, toilets and urinals to the school as part of the company's participation in the New Jersey Water Savers program. "The efforts of these students coincide well with American Standard's goal to educate consumers that water conservation can and does begin at home – and at school," said Don Devine, president and chief executive officer of American Standard Brands. "As a New Jersey employer, we are pleased to help a new generation learn the science of sustainable buildings."

"We are greatly appreciative of American Standard's contributions. The water efficient products they have donated will not only bring immediate water savings to Rahway schools but will demonstrate to Rahway residents how easy it is for anyone to take similar water saving measures right in their own homes," said Jeffrey Robinson, Chairman to the Rahway Environmental Commission.



The partners in the Rahway Water Champions project, part of the New Jersey Water Savers Program, came together to hear the results of the water audit and analyses conducted by Rahway High School students. Pictured here are representatives from the federal government (U.S. EPA), state government (NJDEP, NJ Watershed Ambassadors Program), Rutgers University Water Resources Program, and corporate sponsor American Standard Brands.



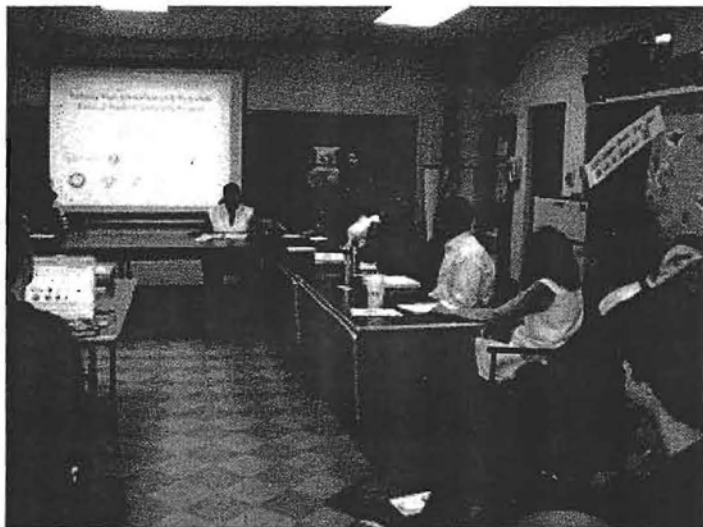
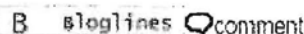
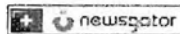
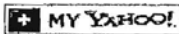
The Rahway Water Champions Project through the New Jersey Water Savers Program was made possible through the successful partnership of government, business and municipalities. Part of the team that made it happen: AmeriCorps Ambassador Steven Hruby; corporate sponsor American Standard Brands' Jeannette Long, Debbie Drury and Lisa Escudero; Rahway Public Schools Superintendent Edward Yergaloni; NJDEP Environmental Specialist Katie Barnett; and Rahway High School Interim Principal John Farinella.



Retiring Rahway High School Principal Paula Braxton provides words of encouragement to her students, members of the school's Social Action Club, who presented the results of their audit and analyses of the school's water usage. The students believe that Rahway High School can reduce its water usage by up to two-thirds by installing water efficient plumbing fixtures and faucets.

Retrofits will save 1.6 million gallons of water

Sep 7, 2010 11:16 AM, BY CANDACE ROULO Of CONTRACTOR's staff



RAHWAY, N.J. □ Students at Rahway High School here believe in water conservation. Based on the water audit they conducted, the students concluded that their school will reduce its water use by two-thirds □ up to 1.6 million gallons of water and approximately \$6,500 in cost a year □ by upgrading bathroom plumbing fixtures with water-conserving faucets, urinals and toilets.

Members of the Rahway High School Social Action Club and Rahway Water Champions conducted the water audit in two of the high school bathrooms and presented their findings to school officials, American Standard executives, the Rahway school board, and representatives from the U.S. Environmental Protection Agency (EPA), New Jersey Department of Environmental Protection (NJDEP) and Rutgers University this July.

□The most impressive part of the students' presentation was their passion for protecting their local water resources and making a positive mark on our world, □ said Katie Barnett, environmental specialist at the NJDEP. □In just a few short months these students learned about the importance of water in their lives and community, took an active role in changing their school's □water footprint□ for the better and helped educate the community about water

conservation.□

After the students□ presentation, American Standard accepted the student's request to donate more than \$60,000 worth of water-saving products to the school, so every bathroom in the school can be updated with water-efficient plumbing fixtures. The New Jersey Water Savers program, a pilot water conservation program that addresses the increasing demand on New Jersey□s water supply, provided a grant for the labor costs of installing the donated fixtures in the two bathrooms students are conducting water audits in.

□After auditing our school I was surprised how much water we were using,□ said Paloma Ferreyra, a junior at Rahway High School and member of the Rahway Water Champions and Rahway High School Social Action Club. □We were not only wasting water but also money. With the new fixtures we would not only save water but also money that can be used for something else in school.□

Tom Flanagan, owner of Flanagan's Plumbing, Rahway, N.J., installed the donated fixtures in the two bathrooms this summer, and will continue to retrofit the other bathrooms during the school year.



□The new fixtures will use much less water than what was being used with the original fixtures,□ said Flanagan. □This is going to be a huge improvement for water savings. The new urinals and toilets have sensor heads. Everything is much more efficient.□

Initial audit

Before the students could conduct the initial water audit, they had to learn how to read the indicators on the bathroom fixtures.

□After we knew how to determine the amount of water each fixture used we calculated the amount of use they had per day,□ said Emera De los Santos, a junior at Rahway High School and member of the Rahway Water Champions and Rahway High School Social Action Club. □So we basically counted the amount of people that used the bathroom, and with the information we collected we drew an average and did further calculations. If the fixtures did not have an indicator on them we would estimate that the toilets used 3.5-gpf, and in order to figure out the amount of water a sink fixture used we would use a timer and measuring cup.□

Based on the water audit conducted by the students, the following water savings percentages were estimated:

- Toilets: 63% water savings using new water efficient 1.28-gpf toilets based on current toilets using 3.5-gpf.
- Sink faucets: 46% water savings using new 1.5 GPM faucets based on current faucets using 2.78 GPM.
- Urinals: 95% water savings using new high efficiency 0.125-gpf urinals based on current urinals using 2.5-gpf.

According to De los Santos, the Rahway Water Champions were really surprised with the water audit results because the amount of water consumption was huge for just the 10 months that school is in session.

When asked what her reaction was when she found out American Standard was donating toilets and faucets for the bathrooms, De los Santos told CONTRACTOR she was really excited since she was the one who asked them to donate all of the fixtures.

□It was just a really exciting moment for me,□ said De los Santos. □I was really nervous, but when they said yes I was very thrilled and felt like the main purpose of the entire program had been accomplished.□

□The efforts of these students coincide well with American Standard□s goal to educate consumers that water conservation can and does begin at home □ and at school,□ said Don Devine, president and chief executive officer of American Standard Brands. □As a New Jersey employer, we are pleased to help a new generation learn the science of sustainable buildings.□

As part of this water conservation project, students will conduct a water audit on all the new fixtures during the beginning of the school year to find out how much water is being saved via the water-conserving products. The students also plan to measure user satisfaction of the new fixtures.

Water conservation programs

Rahway Water Champions was created by the high school□s Social Action Club, in conjunction with the New Jersey Department of Environmental Protection, Rutgers Cooperative Extension Water Resources Program and the New Jersey Watershed Ambassadors. Its objective is to take action in the school and community to promote water efficiency and publicize the EPA's WaterSense program.

De los Santos said she became involved with the Water Champions Program because she felt that it was extremely important for her to make a difference in her community. She also served as a junior intern earlier this year at the NJDEP.

□The best aspect of being a member of the Water Champions Program is the overall impact that this program has had on all the members and the impact it has on the people who learn

about water conservation through this program," said De los Santos.

"By being an integral component of the overall project, the students not only want to have water saving technologies in their reach, but also take further behavioral actions such as turning the faucet off while brushing their teeth, taking shorter showers and becoming their households' water use regulator" by asking their family members to do the same," said Barnett. "Engaging the students truly begins to change the water use ethic of a community and that is what will ultimately make a lasting difference on our environment and world."

In addition to conducting a water audit on all the new plumbing fixtures in the two bathrooms and presenting the results, Rahway Water Champion students will continue to be involved in community outreach programs promoting water conservation and demonstrating the many ways individuals can save water. They also plan to conduct water audits for three local businesses.

Rahway, N.J., is one of five pilot communities across the state participating in the Water Savers Program. Other communities participating are Belmar Boro, East Greenwich, Egg Harbor Township and Livingston. The program identifies best practices in water conservation, encourages local stakeholders to change their water use behavior and identifies ways to save New Jersey taxpayers money. American Standard is supporting the New Jersey Water Savers program in all five pilots, which includes tests on various government structures such as schools and municipal buildings.

"These results can provide a good case to support the cost-effective steps we can all take to mitigate New Jersey infrastructure costs related to our water demand," stated Devine.

"Using the high efficiency toilets, urinals and faucets supplied by American Standard, we're confident that the other government buildings will achieve a minimum of 20% water savings, and believe it can be significantly higher."

Find this article at:

<http://www.contractormag.com/plumbing/retrofits-save-water-2345/index.html>

Check the box to include the list of links referenced in the article.

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