

CURRENTS

Two Incumbents
In Barnegat Race
For School Board

There will be at least one new member of the Barnegat Board of Education when elections take place on Tuesday, April 20.

Filing in the race for three three-year terms on the nine-member board were incumbents Dereck Davis and Lauren Sarno. Newcomers Joseph Cloke and Jim Mihalik are also in the running. Linda Mitchell declined to seek a fifth term.

Davis was initially elected in 2007; Sarno won an unexpired two-year term in 2008.

"I'm the last of the Mohicans," said Davis, referring to the old majority that lost control of the board two years ago. "But we've done a lot of building expansion projects in this district, and with my background the board needs to make sure we get a good return on our investments. A lot has changed on the board, but we all have to keep the same focus on education."

Sarno said that she, Cloke and Mihalik would be running as a slate.

"Joe has young children in the school system and Jim is very active in the Pheasant Run community," she said. "I think we're all a good fit. Our main priority will be education and to make sure the children have what they need."

Mitchell, who up until 2008 had been board president for six consecutive years, was first elected in 1998.

"Twelve years is enough," said Mitchell. "But much has changed since I first joined the board. The town has grown so much. In that time we built the Horbelt (Elementary) School, the high school and two years ago we opened the Donahue (Elementary School). I'm proud of the fact that I was able to lead this board during times of tremendous change. But now it's time for someone else to do it." —E.E.

Summer Grants Offered
For Barnegat Bay Research

The Barnegat Bay Student Grant Program Committee is now accepting applications for the 2010 summer research projects. College-bound high school students and undergraduate college students pursuing a degree in marine science, natural resource management, environmental education or related field at an accredited college or university are encouraged to apply for these \$1,500 grants.

Selected candidates will be required to conduct an approved research project in the Barnegat Bay ecosystem during the summer of 2010 with the guidance of an approved mentor. The application for this grant program consists largely of the student's summer research proposal.

The deadline for applications is April 1. For more information, including a downloadable application, visit the Save Barnegat Bay web site, www.savebarnegatbay.org.

The student grant program is now in its fourth year and is funded in part by a grant from the Trust for Public Land Barnegat Bay Environmental Grant Fund. It was originally created by a group of local professional conservationists in 2007 to help deserving students committed to a career related to improvement and preservation of the natural resources of Barnegat Bay and its watershed to achieve their educational goals.

To date, the student grant program committee has awarded funding to 16 students for their summer research projects that investigated various aspects of the Barnegat Bay ecosystem. To view the final reports of the five 2009 grant recipients, visit www.bbneq.org/studentgrants.html. —A.A.

Atlantic City Use Lowers Aquifer

Beneath the Tap: Concern

As the sun melts away the winter wonderland, the precipitation either runs down the storm drains into the surface water of the bay and streams or seeps into the ground, and in some cases ultimately reaches the drinking water supply.

The water supply that is used on Long Beach Island and the adjacent mainland comes from an aquifer situated deep beneath the ground. The 800-foot sands is the coastal portion of one of the largest aquifers, the Kirkwood-Cohansey aquifer.

The subsurface sandy layers that contain water for human use are known as aquifers. "AC (Atlantic City) is pumping so much from the 800-foot sands aquifer so there is a huge funnel, known as a cone of depression," said Richard Bizub, director of water programs for the Pinelands Preservation Alliance.

In a water level contour map prepared by the U.S. Geological Survey, a cone of depression was identified in Atlantic City; it is the epicenter of water withdrawal from the primary coastal groundwater sources along the southern New Jersey shore. "This aquifer is very productive and runs under Beach Haven through Ship Bottom up to Barnegat Light, yet a withdrawal spiral can be seen from Cape May Point to Barnegat Light."

As productive as the aquifer can be, there are strains on all aquifers in Ocean County and water levels are decreasing. "There is a 20-foot drop from pumping in AC. The effects of the pumping can be felt on LBI. The southern tip of LBI has a drop of 40 feet in water level and a drop in pressure, explained Bizub. "It is hard to quantify and project problems and trends since there are so many factors that affect water."

"The Kirkwood-Cohansey is a shallow aquifer and the first water you hit in Ocean County. It is less than 10 feet and is the source of 95 percent of water to all the streams in the Barnegat Bay watershed," said Bizub. "The snow melt will have an impact on the shallow aquifers and replenish water. The deeper aquifers will not see any impacts from the snow melt."

The soil through which the snow melt will seep is fast being recognized as a critical component of aquifer recharge, and the correlation between healthy soil and the quality and quantity of surface and groundwater recharge.

"A healthy soil is a critical buffer of chemicals used at the land surface and represents the gateway for recharge of underlying aquifers," said Timothy Reilly, research hydrologist for the U.S. Geological Service.

The service is taking a lead role in the groundwater to surface water interface from environmental and recharge angles.

"Healthy soil function and services are many and would include providing clean water recharging aquifers, storing and filtering storm water," said Bob Nicholson, service liaison to the Barnegat Bay National Estuary Program who will present his Barnegat Bay case study at the Soil Conference on March 9 at Burlington County College.

The five coastal plain aquifers in New Jersey are the Kirkwood-Cohansey (part of which is the Atlantic City 800-foot sands), the Piney Point aquifer, the Wenonah-Mount Laurel aquifer, the Englishtown aquifer and the Potomac-Raritan-Magothy aquifer system.

The most important aquifer ecologically is the Kirkwood-Cohansey as it is the shallowest and provides water to streams and rivers and wetlands. "Quality of water in the Kirkwood-Cohansey aquifer is a reasonable indicator of the quality of freshwater inflow into the estuary," reported Nicholson in a 2003 study report.

"The southeast front of the 800-foot sands is out into the ocean about 10 miles and the western edge at about Rt. 9. In this corridor saltwater intrusion is not a concern like it is for Cape May, which is a peninsula."

"The saltwater front is the magic number — 250 milligrams per liter of chloride in any given aquifer," he said. The state Department of Environmental Protection monitors the salt- and



Ryan Morrill

FINITE RESOURCE: It's hard to imagine that water demand in Atlantic City affects the shore as far as Barnegat Light, yet that is what aquifer studies show.

freshwater interface to see that the withdrawals along this portion of the shore do not pull saltwater in, explained Bizub.

"It does not really matter where on LBI the wells are; you are dipping into the same pot," he said. "The bigger immediate problem along the coast is the short-term water storage."

Quantity Shares Spotlight
With Quality

The short- and long-term look at problems facing groundwater change according to conditions and consumption. "There is an overall long-term sustainability problem with water," said Bizub. "The average person wants good water pressure and clear water coming out of the faucet; the technical end of groundwater is not on most people's minds."

To the north of LBI, coastal towns dip into the Piney Point aquifer. "The Piney Point water is declining from Seaside Park consumption," said Bizub. Even though the water level is going down, he said, "They are holding their own with no real problem"

More than 75 percent of the freshwater supply in the New Jersey coastal plain is from ground water. The wells used for public supply generate approximately 500 to 1,000 gallons per minute. The state average household use is about 100 gallons per person per day.

Increased use in one well can "create a lack of flow in a river or dry up a stream which impacts how the saltwater front moves upstream,

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Soil 'Health' Vital
To Healthy Earth

Soil will make its debut as the cornerstone to ecological well-being on the scientific stage at the first statewide Healthy Soil Conference, to be held on March 9 at the Burlington County College Enterprise Center.

Organized by the N.J. Association of Conservation Districts, the conference is designed to promote a broad understanding of the connection of soil health to just about any and every environmental ailment, including climate change, stormwater recharge, water quality, habitat and ecosystems, and sustainable agriculture.

"Soil is the root of everything," said Christine Raabe, education specialist for the Ocean County Soil Conservation District, a founding sponsor of the conference.

The conference is open to planners, engineers, environmental commissions, educators, developers, landscapers, conservationists and "anyone interested in or that deals with soil as part of their job."

A unifying concept for the conference is described in the promotional literature from one of the event organizers, Marilyn Mroz, a New Jersey-based consulting engineer.

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40 High Jumper

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his first attempt at the Meet of Champions, then missed 6-2 on his second. He cleared that height in his third and final jump, but placed seventh because of the missed second attempt.

"I took it as a learning experience," Miller remarked. "When you don't win, you use it as a lesson. You take the negative and turn it into a positive, as my coaches always say."

"I came in as a wild card, and I'm proud of myself," he added.

According to Tummey, "Tim is a gracious winner," but he is also gracious when he doesn't prevail in first place. He is quick to congratulate his opponents—though he says his "main competitor is the bar"—and he doesn't dwell on missteps.

Miller's approach to the high jump is mature and focused, almost Zen-like, as he tries to clear his mind before an attempt. "Sometimes there's nothing going on in my head, and then I stop and actually realize that I'm not thinking anything," which, in a sport where all eyes are fixed on an individual, is perhaps the best strategy of all.

High jumpers have ample time to wait, watch opponents and wonder about their own attempts, and over-thinking can easily lead to

mental sabotage, but it takes a lot to faze Miller. He admitted to some anxiety before the Meet of Champions, but he didn't allow his nerves to get the best of him.

While he is currently a calm and collected high jumper who eagerly discusses his future in the sport, his initial introduction to the event, as a freshman, was not love, or even like, at first try.

"High jump is not as easy as it may look to some people," said Bradley, and Miller, who had previous success as a long jumper and a sprinter, was upset that he didn't see instant results with the high jump.

But from Miller's first attempt, Tummey was sure this was a match. "You could just tell."

In addition, said Tummey, "If you were to mold a jumper, he has all those attributes." Miller is tall—6 feet, 4 inches—lean, quick and coordinated. With practice, and a few specialized high-jump classes, it all started to click.

"He was frustrated at first, but now he's a county champ and a sectional champ," said Bradley. "He's really stepping into his own and realizing he's a competitor. He's done very well for us, and he has great potential."

Last year, Miller explained, he began to grasp that he can keep getting better, and he has set to the task with determination. He hopes to beat the school record in high jump (6-7), as well as continue to perform well in meets, and even to

jump in college.

While training on the outside jump has been impossible lately amid all the snow, Miller has practiced by bounding and skipping in the hallways of the school, as well as lifting weights, working with stability balls and sprinting, increasing his speed, his quickness and his core strength.

Miller calls Bradley, who has coached at Pinelands for 21 years, and Tummey, now in his 15th year, the "best coaches I've ever met," and he believes his ability to progress in the sport stems from their support and the support of his parents.

"My parents are my biggest fans," Miller acknowledged.

"I guess we're three and four," Tummey said of Bradley and himself.

Miller also credits his mother, a former standout soccer player, and her great-grandparents, who swam in Olympic trials, for some genetic gifts.

Overall, Miller's recent success has sometimes left him a bit speechless, but it has also helped propel him ever forward.

"I'm excited to see what he can do," Bradley stated.

"I know if I push myself, there's no stopping me," Miller explained. "I'm going to practice hard and set high goals and just go for it."

—Juliet Kaszas-Hoch

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Soil Conference

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"Imagine if every landowner maintained their soil structure as diligently as they changed the oil in their vehicles; we would not be having this conference."

There will be a live soil demonstration by Fred Schoenagel, a resource soil scientist for the U.S. Department of Agriculture, featuring an "infiltration simulator."

"Soils are living ecosystems that interact with every other ecosystem on the planet," said Schoenagel. "Soils that are not healthy cannot carry out their normal functions and will inhibit these interactions, and eventually all the adjoining ecosystems may collapse. Healthy soils are essential to the overall health of the planet."

Eileen Miller, a resource conservationist with the USDA, will present a workshop, "Barnegat Bay Soil Health Card—an Assessment Tool." This program will premiere the statewide launch of the Blue Card for the Blue Crab program, which was initiated locally by the Ocean County Soil Conservation District, and is a training program to evaluate soil conditions and offer suggestions to improve and sustain healthy, functioning soils through a scoring scale to give soil a health overview.

The premise of the program is that healthy, functioning soils can improve both water quality and quantity. Participants in the program are requested to have knowledge of the soil card before the conference.

"Healthy soil means to me that our ecosystem is fully functioning. It means a soil that can buffer nutrients, absorb water and is rich in living organisms and can produce healthy food and fiber for our world to enjoy. It is a source of our existence," stated Miller in the promotional material for the conference.

Although soil is often thought of as dirt and not holding the clout of other elements of the planet such as water, air and fire, scientists are beginning to emphasize that soil is the earth component, and it needs to start to hold its own.

"Soil conditions play a key role in both the reality and science of stormwater runoff," said Joseph Skupien, president of Stormwater Management Solution and a speaker at the conference. "Healthy soil conditions can play a key role in our effort to manage runoff and the activities that affect it." Skupien is the principal author of the N.J. Stormwater Best Management Practice Manual.

Robert Nicholsen, USGS liaison to the Barnegat Bay National Estuary Program, will present at the conference the results of a case study titled "Overview of Problems in Barnegat Bay."

—Angela Andersen

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The Professionals

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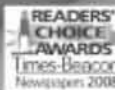
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