



Of Note

Volunteer for NepRWA

'Looking for a way to give back to the environment in 2010?

The Citizen Water Monitoring Network (CWMN) might offer just the perfect fit! Contact NepRWA Environmental Scientist Bill Guenther at 781-575-0354 or guenther@neponset.org, or visit www.neponset.org, to learn more.

Become a Beetle Rancher! Volunteer for an exciting, hands-on wetland restoration project. Contact NepRWA Restoration Manager Carly Rocklen at rocklen@neponset.org or 781-575-0354, or visit www.neponset.org, to learn more.

water shed (n): 1. the area of land draining into a particular body of water

Neponset River Watershed Association

NepRWA is a nonprofit conservation group founded in 1967 to protect and restore the Neponset River, its tributaries and their watershed lands. *News from the Neponset* is published six times each year. Printing by Blue Hill Press, Canton.

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2. a crucial turning point, 3. communities connected by water

Director's Corner: Focus on Water Conservation Opportunities & Issues

Thank you, to the hundreds of members and friends who responded so generously to NepRWA's year-end fundraiser! You have enabled us to meet our double challenge grant and secure more than \$60,000 to launch our new three-year action plan for addressing polluted runoff, wasteful water use and degraded habitats!

Inside, you'll find a special thank you to the founding members of the Neponset Society, our most generous members and the folks who helped to put us "over the top" in meeting our challenge.

This newsletter delves into the challenge of wasteful water use, which contributes significantly to low river flows. It's a topic that's particularly timely as all water withdrawal permits around the Neponset come up for renewal, and significant changes may be afoot for water use policy in Massachusetts.

You'll also read about the difficulty of getting most water suppliers excited about improving water efficiency. Perhaps it will come as no surprise that the reason even the most environmentally minded water suppliers are often reluctant to conserve is us—the water supply customer. It's a challenge that I hope you can help us overcome by getting involved with water policy in your town!

Sincerely,

Ian Cooke
Executive Director

Major Water Withdrawal Permits Up for Renewal: Opportunity to Strengthen Town Conservation Measures

Most water used in the Neponset watershed is withdrawn by towns from local aquifers. These withdrawals contribute substantially to low flows in the Neponset River.

The withdrawals are regulated by state permits that run for 20 years. Twenty years ago, when the current round of permits was issued, little attention was paid to the impacts of local water withdrawals on water levels in nearby streams, or to the opportunity to minimize those impacts through improved efficiency.

During 2010, NepRWA will have a unique opportunity to advocate for more environmentally sensitive water use practices, as water withdrawal permits for most of our watershed towns are up for renewal for the first time in two decades.

There is enormous potential to



improve water efficiency throughout the watershed, even in the few communities that already meet the state's not-very-ambitious residential water efficiency goal of 65 gallons per person per day. NepRWA will be asking all of our communities to commit to meaningful efficiency programs.

In some cases, we'll also be asking communities to modify the mix of water supply sources that they use,

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Water Conservation Lessons in the Classroom: NepRWA Reaches Out to Families Through Children

The most effective advocates within a family are frequently its children, and, for the past two years, NepRWA has brought the message of water conservation into the classrooms of Neponset watershed communities.

Currently focusing on third and fourth graders within the Towns of Sharon, Walpole and Milton, NepRWA Water Conservation Coordinator Nancy Fyler has partnered with school science coordinators and local water departments to integrate water conservation lessons within state educational frameworks.

The lessons are part of a three-day

program that focuses on local water supply infrastructure, individual water consumption, water resources and pollution.

Lessons begin with a discussion of the amount of fresh water available on the planet and how we use it on a daily basis. Students then learn about the water system in their town and the number of local water "customers". Students look over maps depicting local aquifers, wetlands, wells, water tanks and the Neponset River Watershed. Discussion focuses on how we all are connected by water.

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Water Conservation Lessons in the Classroom, from page 1



Water Conservation Coordinator Nancy Fyler, left, teaches a Sharon class about local water resources and issues. She uses a groundwater model to demonstrate the flow of water and pollutants.

Students estimate the gallons of water that they use on a daily basis, with estimates ranging from two gallons to one million. After students learn water measurements such as gallons per minute (gpm) and gallons per flush (gpf), the teacher, as a “water consumer,” is asked to reveal her water

usage from the time she awoke to the present, that day. For each water usage “event,” the students tally water used. For instance, if Mrs. Smith went to the bathroom two times since she woke up (which always elicits giggles), students multiply two times 1.5 gpf (rounded down for the sake of easier math). Mrs. Smith continues to answer questions about whether she brushed her teeth, washed her hands, took a shower, washed dishes, did laundry, etc. Each time, students multiply gpm by the minutes spent on each activity. At the end of the exercise, the gallons are added up and students realize how much water can be used over the course of a day.

For the final lesson, NepRWA’s groundwater model is used to demonstrate how water withdrawals can affect drinking water supplies and aggravate low flows in the river, especially in summer. Students also learn how pollution travels through groundwater and discuss protection of water resources and proper methods of hazardous material disposal.

Students are enthusiastic about the water conservation lessons; we often hear that it is “the best program ever.” Teachers and administrators are likewise impressed, and often reveal limited prior knowledge of their own water consumption. Over the course of three days, students and teachers come to understand their town water system and personal usage, and water conservation becomes part of their consciousness.

Learn more by contacting Water Conservation Coordinator Nancy Fyler at 781-575-0354 or fyler@neponset.org.



How much water can your family save at home?

NepRWA Thanks Neponset Society Founding Members

At the end of 2009, NepRWA announced the creation of the Neponset Society to better recognize donors whose gifts total \$500 or more, each year. Support from Neponset Society members makes a tremendous, positive impact on the health of the Neponset River.

NepRWA would like to offer a special thank you to these individuals and organizations who are the Founding Members of the Neponset Society:

Analog Devices	Eugene and Maryjeanne Langevin
Anonymous	Janet and Allen Lapey
Richard Ballantyne	Paul Lauenstein and Lonnie Friedman
David Biggers and Kathleen O’Connell	Florence Locke
Thomas Birmingham and Amy Killeen	Pamela Lee Lowry
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Dolores Kong	
Robert Kormis and Margaret Ferguson	

NepRWA Welcomes Tom Palmer as New Willett Pond Manager

NepRWA’s newest staff member is Tom Palmer, a naturalist and photographer from Milton, who replaces Laura Hallowell as Willett Pond Manager.



Tom Palmer talks with Willett Pond neighbors at a Pond Smart workshop.

A long-standing NepRWA Board member, Tom also was formerly President of the Friends of the Blue Hills, and has authored several books, including *Landscape with Reptile: Rattlesnakes in an Urban World*.

Tom is responsible for overseeing NepRWA’s Willett Pond, a 220-acre impoundment of clean water in Norwood, Westwood and Walpole that is rich in wildlife and provides a steady, year-round flow to the mainstem Neponset via Hawes Brook in Norwood. Tom surveyed Willett’s aquatic plants in 2002 and weed-whacked the dam’s new turf of native perennial grasses in September.

“I’ve waded, canoed, and snorkeled most of the river’s fresh and salt waters,” says Tom. “Willett is one place where we have an opportunity to conserve and protect water directly, and it’s comparatively free of historic pollution and stormwater impacts. I’m looking forward to getting to know it better.”

Contact Tom Palmer at 781-575-0354 or palmer@neponset.org.

Water Withdrawal Permits, from page 1

for instance, to cut back on withdrawals from sources that impact the most sensitive streams and wetlands and rely more on sources that can better tolerate withdrawals while still keeping nearby streams flowing and healthy.

NepRWA will be reviewing each of the upcoming permit renewal applications in depth. We plan to work closely with each town to identify a reasonable level of effort for water efficiency and other measures to protect streams, and we will advocate for the state to incorporate those actions as permit requirements for each town.

In the meantime, larger deliberations on water policy are also underway, with the recent formation of the Integrated Water Resources Task Force. This group, convened by the state, will examine issues of water allocation (or more specifically, over-allocation) across the state as a whole and recommend policy changes to address these problems using an integrated approach to managing water withdrawals, wastewater returns, and runoff from paved surfaces. NepRWA expects to be an active participant in these deliberations, as well.

Learn more about these efforts by contacting Advocacy Director Steve Pearlman at 781-575-0354 or pearlman@neponset.org.

The Water Supplier’s Dilemma: How Economics and Politics Can Make Water Efficiency a Difficult Choice

Across the state, more and more rivers are turning up dry, and the Neponset is no exception. The quickest, easiest and cheapest way to improve this situation is for towns to invest in helping their customers to use water more efficiently.

Water-demand reductions of 30% or more could be attained through improved efficiency. Communities like the Town of Sharon have shown dramatic water-demand reductions in just a few years, saving money for ratepayers while protecting local waterways.

But across the Commonwealth, many water suppliers have been vigorously opposing requirements to help customers become more water-efficient, and here in the Neponset Watershed, many towns are lukewarm on the idea of water efficiency programs.

The root of the problem is that to supply water, towns (and/or the Mass Water Resources Authority) have to make large investments in infrastructure like pipes and water tanks. These investments are financed with long-term debt. In the near- to mid-term, 80-90% of a town’s water supply costs may be fixed, based on past decisions which all too often didn’t factor in the potential for reduced demand due to improved efficiency.

On the other hand, water bills sent to homeowners are generally based on gallons used; if a homeowner cuts her use in half, her bill goes down by about half, even though the town’s cost to provide water hasn’t changed nearly as much. Thus, for most communities, encouraging water efficiency results in both lower bills and increased rates.

Unfortunately, water suppliers usually get clobbered, politically, every time they raise rates, even when they are simultaneously lowering bills. That’s the dilemma for water suppliers across the state and for those like NepRWA who aim to restore healthy river flow and stop wasteful water use.

In addition to the irony, while increased efficiency has only a partial impact on short-term water supply costs, the long-term cost savings can be enormous, and suppliers who fail to embrace efficiency now plant the seeds for unnecessarily high water bills in the future. Big savings from water efficiency come once those past infrastructure investments have run their course. At that point, efficiency improvements can save a town millions or tens of millions of dollars by eliminating the need to build expanded supplies, postponing infrastructure rehabilitation, avoiding environmental mitigation requirements, and dividing the cost of existing infrastructure across a growing population.