# Pond Possibilities

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THE NEWSLETTER OF THE MANCHESTER URBAN PONDS RESTORATION PROGRAM


## FIRST ANNUAL MANCHESTER EARTH & POND FESTIVAL HELD AT LIVINGSTON PARK

On Saturday June 23, The Manchester Conservation Commission, Urban Ponds Restoration Program, along with the Manchester Recycling Program sponsored the city's first annual Urban Ponds/ Earth Day celebration. Senator Bob Smith joined Mayor Robert Baines and Conservation Commission Chairperson Jane Beaulieau in addressing the crowds on Manchester's natural resources and environmental stewardship. Manchester has seven urban ponds with a variety of uses, including boating, fishing, some swimming, and a wide spectrum of wildlife habitat. In addition, hiking trails exist on Hackett Hill, around Dorr's Pond, Maxwell Pond, and on McIntyre Hill. Many local, state, and regional environmental organizations participated in the event. The New Hampshire Department of Environmental Services, (shoreland protection, exotic species, and limnology programs), the Amoskeag Fishways, Manchester Water Works, Manchester Recycling Program, NH Sierra Club, EPA Region 1, among others all had representatives distributing environmental educational materials and answering questions from attendees. Catherine Corkery from the NH Sierra Club gave a speech on global climate change. Warren Howard of EPA New England used a 3-D model to demonstrate how land use activities in the watershed can create polluted runoff after a rainstorm in our lakes and ponds. The land use activities include the overuse of fertilizers and pesticides on our lawns and golf courses; oil and grease spills in the maintenance of our automobiles; lack of vegetation or silt fencing on construction sites to hold soil from eroding; household waste improperly dispose of; the spreading of manure on farmland at excessive amounts and inappropriate times; and allowing our animals to roam the streets unattended creating harmful waste problems (including failing to pick up and dispose properly of pet feces).

*Speakers at the 1st Annual Manchester Earth & Ponds Festival included: Left: Jane Beaulieu; Center: Mayor Bob Baines; Right: Senator Bob Smith. Photos by Jen Drociak*

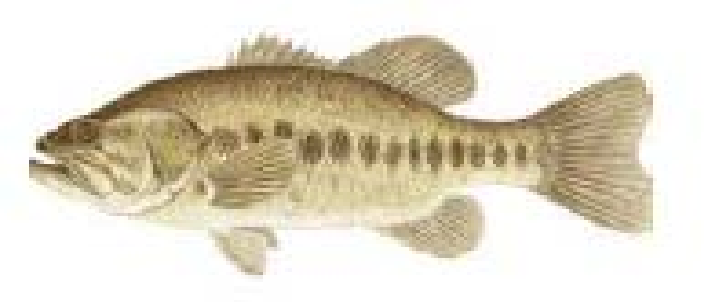
*Jen Drociak exhibits the native carnivorous plant, Bladderwort.*

The pollution problems created from these activities can kill the fish and shellfish we eat, destroy the wildlife and plants and degrade the overall quality of our waters to a point where the recreational uses in those waters are prohibited. Gary Springs, DES Shoreland Program said, "Manchester Ponds Day was a wonderful opportunity to educate the people from my home town about lake ecology and Shoreland Protection. Manchester has a lot of protected waterbodies and it was nice to see such interest in their protection." Activities included environmental

educational scavenger hunts for children, interpretive trail walks around Dorr's Pond for children and accompanying adults, kayak demonstrations, and face painting. Jen Drociak, Manchester Conservation Commissioner, led two trail walks, and pointed out the area's native and exotic terrestrial and aquatic plant species. On one scavenger hunt, children identified birds, insects, snails, fish, a turtle, and many other organisms.

Late Night Radio, a bluegrass band from Weare, NH, played two sets. The closing song of the day was one about recycling. Drawings were held with the first place prize being a kayak provided by Eastern Mountain Sports, Manchester. Other gift certificates were donated by Jane & the Beanstalks, Fratellos, Shorty's, Puritan Back Room, Bike Barn, Lakorn Thai, Cotton, Luisa's, and Chalifours. Approximately 600-1,000 people attended the event. Art Grindle, Urban Pond Restoration Program Coordinator, said he is "pleased that Manchester's first Ponds Day was such a success and is looking forward to next year's event."

## FISH SURVEYS BEING CONDUCTED



Part of the process of investigating pond health is studying creatures that live in the pond. Large fish (like largemouth bass) are the top predators in the pond food chain, so they can tell us a lot about how polluted the pond is (or isn't). With technical assistance from the NH Fish & Game Department, the urban ponds are being surveyed for fish this summer. So far Nutts Pond, Pine Island Pond and Crystal Lake have been surveyed. Stevens Pond was already surveyed in July 2000. Why is this being done? Not only to better understand fish populations in the ponds, but also to determine if the fish are contaminated with pollutants from the urban environment. As fish are captured during the survey, a few of the larger predatory fish are keep for tissue analysis. By checking the meaty tissues of the fish, it can determined whether or not the fish are contaminated and whether or not they are safe to eat. Results from the Stevens Pond fish survey showed that the largemouth bass are cleaner than one might expect. Of all the analyses run, (polyaromatic hydrocarbons*, pesticides, PCB's, and over 30 metals) only copper showed up above the detectable limits of the analysis. Copper levels where still well below human health standards.

* *Polyaromatic Hydrocarbons are various byproducts of petroleum consumption*

## VEGETATION INVENTORIES UNDERWAY

Vegetation inventories have begun at all seven urban ponds. Identified and listed have been emergent, floating, submerged, wetland herb, wetland shrub, wetland tree, and some upland herb, upland shrub, and upland trees. A report detailing aquatic plant communities, biological interations, invasive exotic plant infestations, and possible management options will be available Spring or Summer 2002.

## MANCHESTER STUDENTS MAKE A SPLASH!

*By: Katie Hughes - Amoskeag Fishways, and Beth Brazil - Merrimack River Watershed Council.*

As part of the SEPP project going on in and around Manchester, both the Amoskeag Fishways and Merrimack River Watershed Council (MRWC) have been working with 8th grade teachers and students on a new interdisciplinary environmental curriculum called the MATTERS Curriculum (Manchester's Actions That Totally Enhance River Systems).

To finish off the 2000-01 school year, Hillside Middle School decided to coordinate a "Pond Day" at Dorrs Pond and Ray Brook while Parkside Middle School focused their day along the Piscataquog River. A description of each event is included below.

On June 12th Hillside set up four different activity stations around Dorrs Pond. At one station students conducted chemical water quality monitoring where they determined the pond's pH, dissolved oxygen, turbidity and conductivity. A macroinvertebrate station was set up to collect and identify aquatic insects and evaluate them to assess levels of pollution. At the planting station students planted dogwood bushes along the banks of Ray Brook in hopes of preventing future erosion. The last station consisted of a general cleanup of the park, which yielded 4+ bags of trash and a rusted out gas grill.

Parkside held their watershed day on June 20th along different stretches of the Piscataquog River. Similarly to Hillside, the teachers set up four different stations; however, the activities were different. Two stations focused on collecting marcoinvertebrates. Students had so much fun that they abandoned the nets and decided to swim in the river to catch the critters! Another station focused on looking at erosion along the banks of the Piscataquog River and floating paper boats to determine the river's flow. Of course, the boats were collected later that day. Finally, staff from Manchester's Environmental Protection Division graciously led a tour of the Kelly Street combined sewer overflow construction site where students were able to connect what they learned in class about the City's complex sewer issues.

The two events were coordinated by Manchester teachers, the Amoskeag Fishways, and Merrimack River Watershed Council with technical support from many helpful individuals from the NH Department of Environmental Services (DES), City of Manchester, and the Urban Pond Coordinator. The water testing equipment was generously on loan from the DES and MRWC. From what we heard, the students talked about it for the rest of the year (about 2 weeks!) and there are plans to have similar events for the upcoming school year.

$250,000 of the $5.6 million SEPP was directed at developing an environmental curriculum for Manchester eighth grade. Progress to date includes:

- The Merrimack River Watershed Council was contracted to help develop a curriculum for the schools.
- A draft curriculum entitled, Merrimack River MATTERS (Manchester's Actions That Totally Enhance River Systems) was prepared working with a Teacher Advisory Committee.
- The curriculum was implemented at the four Middle Schools in Manchester.
- As part of the curriculum, students have participated in environmental field trips. Students from Parkside were out on the Piscataquog River collecting bugs and sampling water quality. Students from Hillside helped with clean up and water testing and students from Southside are creating a children's book about the Merrimack River.
- The Merrimack River Watershed Council received a $10,500 grant from EPA-New England in fall 2001 to help implement the curriculum

## POND POSSIBILITIES

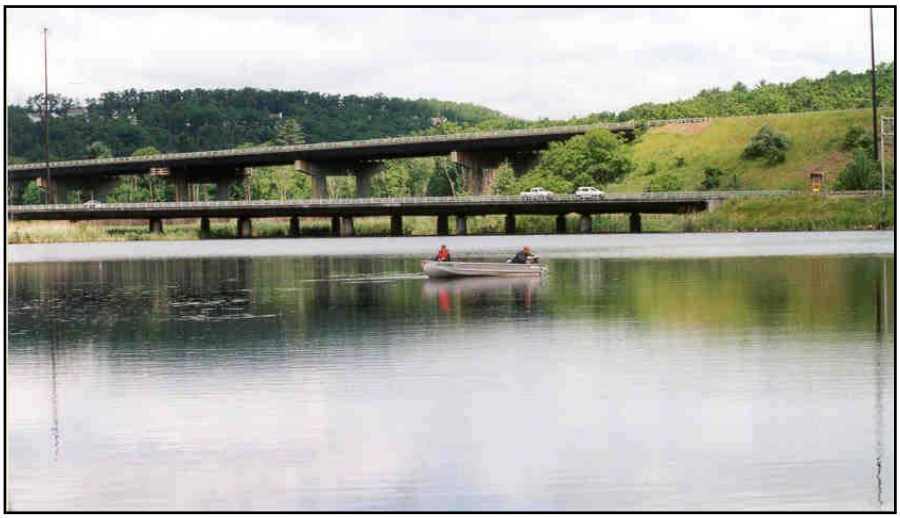
Pond Possibilities is a bi-annual publication of the Manchester Urban Ponds Restoration Program.

Art Grindle – **Program Coordinator**

Jen Drociak –Editor & Layout

**Conservation Commissioners**
Michael Poisson – Eric Skoglund
Jen Drociak – JoAnn O'Shaughnessy
Kathleen Neville – Todd Connors
Marty Gavin

1 City Hall Plaza – Manchester NH 03103
(603) 624-6450
agrindle@ci.manchester.nh.us
www.manchester.nh.gov/UrbanPonds



*Stevens Pond. Photo by Art Grindle*

**MANCHESTER URBAN PONDS RESTORATION PROGRAM**
1 City Hall Plaza
Manchester, NH 03101
(603) 624-6450
www.manchesternh.gov/UrbanPonds

**MAIL TO:**