

## Adopt-A-Stream Events

### Have we been busy this fall!

Classroom presentations at area schools have been interesting and fun for students (and for me!) who get a hand in the field using methods and equipment from Adopt-A-Stream for water quality monitoring.

Teachers are appreciative having an experienced environmentalist come in to demonstrate and guide their students through the process, and also gain some familiarity with equipment and methods.

We are pleased to be able to offer this service to area Elementary, Middle and High School classes (home-schooled groups, as well!). Visit our website for a list of available classroom and field presentations!

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### Some area schools active in monitoring are...

#### ....Greece Athena



Working the Sequential Diversity Index on benthic macroinvertebrates

Environmental Science students in Nancy Sloan's class have a creek on school property to monitor. We spent one classroom period looking at Oak Orchard watershed and the creek's watershed basin, land uses and how they can affect water quality, and took stream flow measurements to determine stream volume flow. The next time we met, we sampled the benthic invertebrates to relate the composition and diversity to water quality and to the physical parameters we'd measured the week before. Our last meeting was spent collecting samples and analyzing them for dissolved oxygen, pH, temperature, turbidity, and conductivity. To close the unit they will visit the Shoremont Water Treatment Facility, which is responsible for making the Lake water clean enough to drink. "After picking bugs and trash out of our stream we need to make sure they are doing a very good job, or we may never drink from the fountain again!"



Greece Athena students at (in) Round Pond Creek

#### ....Gates Chili

Dean Myslivecek's AP Biology class and area home-schooled chemistry students and I spent a cool fall day at Black Creek Park collecting biological, physical, and chemical data on several sites along the creek. Adopt-A-Stream has Vernier probes and new laptops to gather and graph water quality data. This is their second year collecting fall data from Black Creek.

Did you know that Adopt-A-Stream was part of C.S.I.? Current Science Issues, that is. Mr. Myslivecek invited AAS to come in to demonstrate testing with probes as part of his in-service course at Gates-Chili.

Can't bring the students to water...Gates-Chili Middle School now has a beautiful new pond, complete with waterfall, stream, and basin! This will enable teachers from various disciplines to monitor and explore the properties and aesthetics of water as frequently as they want. Science Club teacher Tom Swain and his students built the pond in a courtyard within the new building addition. Everyone is looking forward to spring planting around the pond, and to see how adding the plants, fish, and other critters affect the water chemistry!

### OUR MISSION

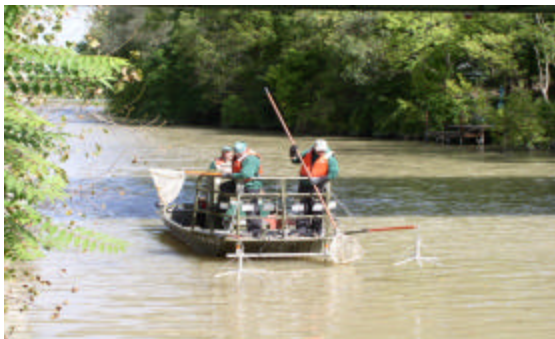
*Delta Laboratories, Inc. is a not for profit environmental organization that provides education, guidance, and resources for communities and individuals in order to preserve and protect our natural resources and the environment.*

### Contact Us!

Address:  
300 Linden Oaks, Suite 100  
Rochester, NY 14625  
Web site: [www.adopt-a-stream.org](http://www.adopt-a-stream.org)  
E-mail: [info@adopt-a-stream.org](mailto:info@adopt-a-stream.org)

## Field Exploration Days

The third annual collaborative event with Adopt-A-Stream and NYS Department of Environmental Conservation and Rochester area schools was a great hands-on experience for 140 AP and Environmental Science students from Gates-Chili, Webster, and East Rochester schools. On September 29<sup>th</sup>, busloads of students came to Perinton Park to see personnel from the Fisheries Unit from Avon's Region 8 office sample the Barge Canal's aquatic vertebrate biota, and to gain insight into other aspects of monitoring including water chemistry, invasive aquatic species, and the smaller residents of the Canal (planktonic species). The goals of the outdoor experience were to give science a real-life application, to stress the importance of monitoring to oversee quality and management of our water resources, and the role of personal stewardship.



## Lend your time to help your community on Earth Day

As the snows of winter melt away, and before the new spring growth emerges, the extent of human impact on our neighborhoods is revealed. The fast food wrappers, bottles and cans, old tires and plastic bags litter the landscape. Spring is a time of renewal, and Earth Day is the day and the opportunity for us to do a little spring-cleaning.

Groups, families and individuals can volunteer to actively show their concern by participating in the Greater Rochester Area Clean Up Saturday April 23, 2005. Last year nearly 200 people helped clean up their local parks, roadways, and stream embankments.

*Cleaning human debris from the environment does more than simply make it look better.*

It helps protect wildlife that may view waste as food or a place to live, curbs pollution, and the spread of disease. People treat trash-free areas with greater respect and care. Usually, natural debris is not removed during a cleanup. This type of debris may be necessary for fish and wildlife habitat.



Friendly's Restaurants and Waste Management have kindly offered to cosponsor the project this year. **When you sign up, we'll supply your group with free garbage bags to do your clean up.** Bags, registration forms and other information will be available at Rochester area Friendly's locations. It's not always easy to dispose of all that garbage, so Waste Management will be supplying three dumpsters for participants to dispose of the collected refuse!

*Improve the quality of the area where you live or play by volunteering a few hours of your time to collect garbage along a nearby shoreline, or any other place in your neighborhood!*

## State-wide Monitoring (1968)



Jack Sorensen, at Eastman Kodak Co., had infrared 25mm film hand rolled to use for aerial photos. The infrared photographs enable us to visualize the impact of a water pollution discharge to a lake in a startling way. This is the first time infrared film is used for a water pollution study.

### Excerpted from “Commitment” by Wayne M. Harris

Local water monitoring efforts by Wayne Harris and Grant Pike had prompted an interest in testing stream samples that flow through New York State’s other major cities. Are they really just ‘fine’? Several factors must be determined before a study can take place: college students would find such an undertaking motivating and educational; can a comprehensive study be designed for the duration of a summer? Grant Pike is consulted on the study design, which includes total coliform and dissolved oxygen tests for waterways of 12 cities in New York: Albany, Binghamton, Buffalo, Messena, Ogdensburg, Rochester, Rome, Schenectady, Syracuse, Troy, Utica, and Watertown.

Two college students agree to undertake the project: David Zogg, a Cornell University student, and Mr. Harris’ son Wayne, then at Temple University. They will take aerial photographs of the waterways whenever possible.

Thanks to Robert Lee, who donated \$5,000 to finance the project, the rush is on to get equipment. A Monroe Conservation Council member adapted the cigarette lighter of an old station wagon to run the incubator to grow bacterial plate cultures en route. Once equipment is procured and operational, the survey team is on the road.

As results from the team come back, waters are much more polluted than they had ever anticipated with coliform counts in all cities in excess of 300,000 cfu in 100 ml of water. Aerial photos taken with infrared film allow us to better view the impact of water pollution discharge on a lake in a startling fashion, and are an innovation for a water pollution study.

On their way back to Rochester, the boys check the sewage facilities of the New York State Fair in Syracuse, which is in progress. What they found shocked and dismayed me. The results in some coliform samples are over 1,000,000 cfu in 100 ml, and that the fecal coliform counts have averaged over 5,400. There is almost no treatment of the sewage waste from the Fair-- its effluent goes into Nine Mile Creek and flows from there into Onondaga Lake. As an effective demonstration for the media, green dye is flushed in the toilets of the State Fair, and photographers await the green dye as it flows from the Fair to the creek. The sewage gets wide spread publicity of the neglect and indifference of government to the public’s health.

For the next two years, test crews returned to the New York State Fair to do the dye test, and photographed the

resultant discharge evidence as it traveled down Nine Mile Creek to the Lake. (In 1969, the dye color was changed from green to red, creating some very graphic pollution photos.) In 1971, sewage discharge from the State Fair is finally connected to the Syracuse Treatment Plant.

Delta Laboratories was created so everyone can have a resource for information available to the general public, media, and legislators. Even more important, a nonprofit laboratory which is unrestricted by the politics of the day, to look to the future, suggest changes, and to work with industries to assist in adjusting their discharges and waste.

### Camp Hacammo

Initial meetings are promising for a working collaboration between Rotary Club’s Camp Haccamo in Fairport, NY and Delta Laboratories. Hidden away behind several industries, bordered by Allen’s Creek and a bass-stocked pond, is an oasis for children and young adults who are developmentally disabled. Children come here during summer months to provide a valuable experience for them, and to provide a respite for the caregivers who love them.

### Interesting Sites on the Web

**An excellent site for lake ecology.**

<http://www.waterontheweb.org>

**Watershed overview:**

[http://www.epa.gov/watertrain/#top\\_page](http://www.epa.gov/watertrain/#top_page)

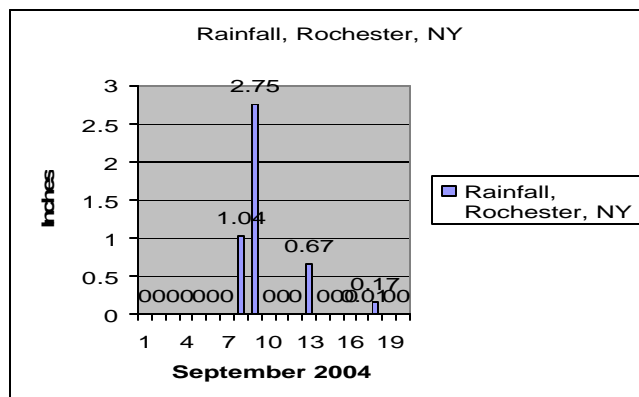
## Monitoring Results

### Testing for 2004

Delta Laboratories, Inc. continued its on-going water quality analysis of the Canal. Our analysis focused on two areas, one on the section of the Canal from Montezuma to just west of Syracuse. The samples were analyzed for a variety of water quality indicator parameters to identify any concerns.

The second focus addressed a concern that developed from our testing last year. Samples taken from Palmyra, Lyons, Genesee Valley Park and Winton Road exceeded the mean monthly limit of 200 col/100 ml for fecal coliform. The higher results in these samples relative to adjacent sampling sites prompted us to undertake additional sampling to try to isolate the source of contamination. Samples were taken for analysis monthly from May through October to determine if there is a strong seasonal influence on the fecal coliform level.

The test date that showed the most significant contamination were the samples dated September 20, 2004 from the Winton Rd. and Genesee Valley Park sites. Because these elevated levels may be due to rain events, a search of the precipitation history for September was done.



Results show a significant rainfall event on September 8 and 9, of 1.04 inches and 2.75 inches of rain respectively, for a total of 3.79 inches.



Adopt-A-Stream  
300 Linden Oaks, Suite 100  
Rochester, NY 14625