

INSIDE  
TODAY

## SPORTS

ORANGE'S LAST-SECOND SHOT  
IN OVERTIME SNAPS SKID

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## LOCAL

GREECE PARENTS REACT TO  
SEPARATION AGREEMENT WITH  
SCHOOLS SUPERINTENDENT

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## LIVING

TAME YOUR ELECTRONIC  
CLUTTER BY ORGANIZING  
E-MAIL AND OTHER FILES

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## BUSINESS

PAETEC COMMUNICATIONS INC.  
WILL MOVE SOME OF ITS  
OPERATIONS TO CREATE

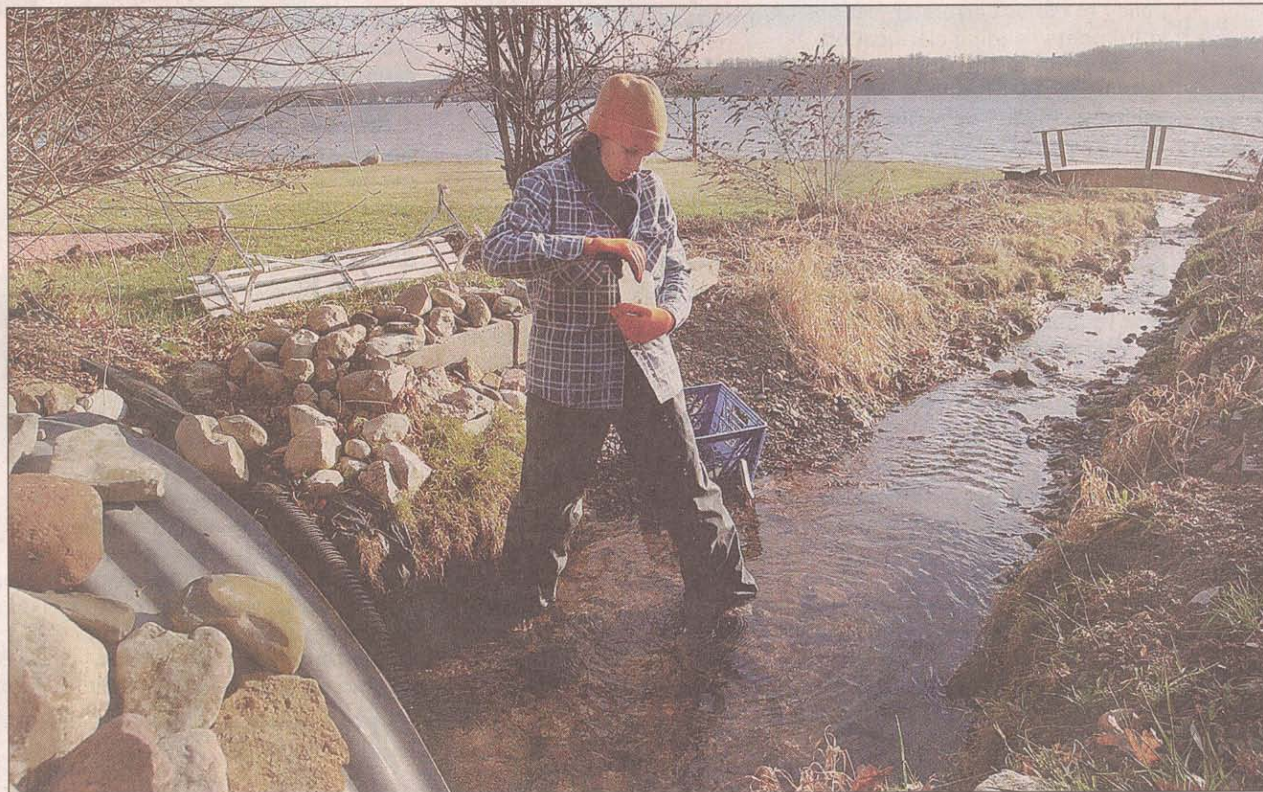
AT LEAST 50 JOBS

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## LOCAL

# Neighbors work to keep the yuck out of Conesus



MAX SCHULTE staff photographer

Sarah Halbrend, a graduate student at SUNY Brockport, catalogs water samples at the Graywood Creek test site at Conesus Lake on Tuesday. Area farmers, researchers and local residents are working together to preserve the lake.

## Project cuts fertilizer runoff that feeds algae

### MISTY EDGECOMB

STAFF WRITER

LAKEVILLE — You can't fight physics. The rain that falls atop hills surrounding Conesus Lake will flow down, rushing over the rich soils of cornfields and rolling by placid cows. It will find paths through manure piles and across chemically enhanced lawns.

When it reaches the lake, delivering a nutrient-saturated jolt, it will feed the growths of algae that threaten the lake's health.

At least 23 small creeks carry the traces of their journey — soil, phosphorus and nitrogen — into the lake, located about 25 miles south of Rochester. But now, a cooperative project among local farmers, lake-

### On Page 4A

■ Conesus project not only affects water quality, but also farm profits, property values and tourism.

■ Map of Conesus watershed, pollution chart.

side residents and researchers at several area colleges is proving that a few changes upstream can

make a big difference to any lake.

"It's all about gravity. Everything you do up there ends up down here — if you don't do it right," said Joseph Makarewicz, a professor of biology and environmental science at the State University College at Brockport.

CONESUS, PAGE 4A

## Graywood Creek runoff

Levels of phosphorus and nitrogen in runoff streams fell after local farmers started making changes in 2002. Phosphorus and nitrogen found in most fertilizers can feed algae blooms in the lake.

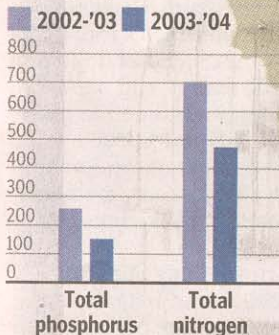
### Conesus Lake watershed

Labeled subwatersheds are involved in the Brockport study

#### Graywood Creek subwatershed

### Amounts of nutrients in Graywood Creek

In micrograms per liter

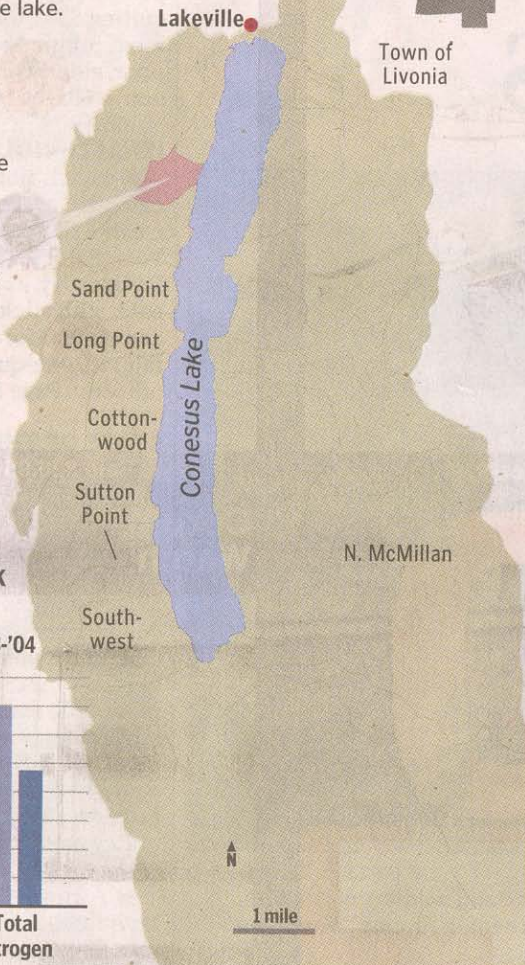


SOURCE: Department of Environmental Science and Biology, SUNY Brockport

LARRY SEIL, staff artist



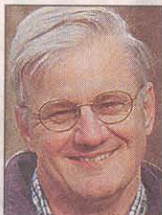
Town of Livonia



## Conesus

FROM PAGE 1A

In 2002, as local farmers prepared to comply with new best management practices to reduce erosion, researchers from SUNY Brockport, the Rochester Institute of Technology and the State University College at Geneseo decided to take a scientific



**Makarewicz**

look at the success rates of different approaches.

Some farms changed their cattle's grazing patterns; others stopped spreading manure on their fields in the wintertime, when it's prone to run off with the spring thaw.

With \$660,000 from the U.S. Department of Agriculture, the local Cooperative Extension office provided grants to cover a portion of four farmers' costs and to set up 11 research stations.

Later, Altria Group Inc., which uses Conesus Lake as the water source for its Cool Whip factory in Avon, Livingston County, provided a \$23,400 grant through the Cornell Cooperative Extension service.

Scientists visited the sites weekly to take water samples and used \$7,000 automated machines to record constant data about water levels and save wa-

ter samples during storms, when a great deal of erosion occurs.

At Cottonwood Gully on the lake's west side, the water tests indicated a 94 percent reduction in soil erosion and a drop of more than 35 percent in phosphorus and organic nitrogen loss between 2002 and 2003.

Limiting erosion is crucial, because nutrients such as nitrogen and phosphorus, which boost algae growth, ride downstream attached to tiny soil particles, Makarewicz explained.

Near Graywood Creek, one farmer who raises corn for his dairy cows agreed to reduce his use of commercial fertilizers and stop spreading manure in sensitive areas. He saved more than \$5,000 and reduced the total nitrogen running off his land by more than a third — without harming his crop output.

"(Some people) have this perception that farmers couldn't care less what's going on, but they're just as concerned about this problem and how it affects that lake as the people who live on the lake," said Sarah Halbrend, a graduate student at Brockport who is writing a portion of her thesis on the Conesus project.

Much of the project has been about proving scientifically what farm families have always known, said Peter Kanouse, of the Livingston County Soil and Water Conservation District in Leicester.

Dean Meyer of Lakeville constructed a better manure storage facility to keep rain from send-



MAX SCHULTE staff photographer

**Sarah Halbrend catalogs water samples on Tuesday. She is writing part of her thesis on the Conesus Lake project.**

ing nutrients downhill, something he would have done anyway, he said.

Though they aren't always given credit for their efforts, farmers have every reason to "do it right," said Meyer, who raises about 700 cows and 3,000 acres of crops in the Conesus watershed.

"It's part of your livelihood," he said. "We don't want to lose soil from the land."

The data collected by Makarewicz and his partners can also persuade more cautious farmers to follow suit or support their efforts to secure grant money. The strategies that found success at Conesus "would be applicable on just about any water body," Kanouse said.

"We've asked them to reduce their fertilizer — that's their lifeline," Halbrend said. "That they're willing to take that gamble ... I really respect that."

Lakeside residents, too, have a stake in the lake's health. For the past decade, "big globs" of algae have grown atop the mats of non-native Eurasian milfoil that clog the lake in mid-summer. Bacteria populations rise and phosphorus levels exceed state recommendations.

"This is so dense at times that you can't swim. You can't get your boat in and out," Makarew-

## What's at stake

■ **Water quality.** The strategies developed at Conesus Lake could be applied throughout the Finger Lakes region, including Canadice and Hemlock lakes, where the city of Rochester gets some of its drinking water.

■ **Farm profits.** On a large scale, reducing the cost of dairy farming can result in more affordable milk for everyone.

■ **Property values.** High-end homes line the shores of Conesus Lake, but Eurasian milfoil, algae and bacteria in the lake threaten to make the area less appealing.

■ **Tourism revenue.** The Conesus Lake Association estimates that the lake draws visitors who contribute \$20 million annually to the local economy.

## To learn more

For more information, visit the Conesus Lake Association Web site at [www.conesuslake.org](http://www.conesuslake.org).

icz said.

Since the collaborative project began, researchers have tracked a "significant reduction" of algae where the streams meet the lake, and a trend, albeit statistically insignificant, toward less Eurasian milfoil growth in the lake down-current of the streams.

Members of the 75 year-old Conesus Lake Association support the effort wholeheartedly, said member Greg Foust, who lives in Geneseo, Livingston County. Unless everyone does their part, the pollution problems will never be addressed, he said.

Over the past year, about 750 of the lake's 1,800 residents have signed a "lake-friendly pledge" to reduce lawn fertilizers, retain lakeside trees and take other actions to reduce erosion and nutrient pollution, he said.

"It's contingent on farms and homeowners ... all the constituents," Foust said. "There's not fault here. It's about doing the right thing to improve the lake." □

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