A Powerful and Fragile Teacher

by Carrie Laben, Essay Contest Winner

The tale of my love for the Cayuga Lake Watershed actually begins in another watershed, not so long ago and not so far away in the grand scheme of things, but long ago and far away enough. I grew up on a small farm, and always felt especially drawn to the streams that cut across our property, intensely curious as to where and how they ended up, what became of the tiny fish and the twigs that I floated downstream. Alas, my knowledge ended at our property line – or when I was feeling particularly bold, a little beyond it. I had never heard the word watershed back then, and Lake Erie (which I now realize was the ultimate destination of my little streams) might as well have been on the far side of the moon. I knew only that my ignorance on the subject was unacceptably deep.

When I came to Ithaca, I was an eager student. I learned from college, to be sure, but I also learned from the community and the land – how to navigate on my own, lead my life, interpret a bus schedule, rent an apartment, explore a neighborhood. I learned the word watershed and for the first time, thanks to the trail system and public parks, I was able to see the system as a whole, from a rivulet on the hill to the majesty of the lake below. I learned to make connections.

When I lean down along the South Hill Recreation Way and pick up a rock, perhaps it is imprinted with the shell of a creature that lived in equatorial ocean in the Devonian age, and was covered in silt and darkness until the icy fingers of the glaciers carved out lakes and centuries of running water through the gorges polished it loose again. When I look up at the thunderous falls, I am seeing more evidence of those glaciers, seeing the layers of the earth exposed so that anyone can view the epic history that in other, flatter places is hidden and readable only by geologists with specialized tools. This sense of connection is what I rely on to put the many little stresses of daily life into perspective. When the snow is piled to my knees, I can picture the beauty of the waterfalls after the first thaw of spring. The irksomeness of a job fades into the background when measured against the

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On October 23rd, Cayuga Lake Watershed Network held a conference for watershed residents called “Neighbors Around Cayuga Lake Watershed.” In addition to attending nine sessions on diverse watershed topics, participants revealed their priority issues of concern. Priorities included water quality, invasive species, sedimentation, pollution from lawn and household chemicals, septic systems, and boats, loss of farmers and farmland, natural area protection, diminished fishing at either end of the lake, flooding and lake water levels. Priority recommendations included enforcement of protective legislation, increased public understanding of the watershed, further monitoring and research of the watershed. Requests included better access to the lake and more hiking trails.

On November 22nd, The Watershed Network coordinated a successful tree planting in Six Mile Creek. The roots of these trees will stabilize the banks of the creek, reducing soil loss, and preventing sedimentation downstream. The City of Ithaca provided the saplings and strong support staff. Without the help of our volunteers we would never have gotten it done. Six Mile Creek says “thanks to all of you!” Our next tree planting is already in the works.

Volunteers J. Coggin, D. Weintraub and A. Fernandez plant a maple and protect it from deer browsing so its roots can help stabilize the banks of Six Mile Creek.

Give us a call if you would like to join the team as a volunteer tree planter in April 2005, when hundreds more seedlings will be planted along Six Mile Creek.

Who can help to keep unwanted things out of our water? The power behind our organization lies in each one of us. Volunteer tree planters help hold down the soil. Our volunteer board members steer us forward. Each member contributes what one person can do, and together we keep our eyes on the prize – our Cayuga Lake Watershed!
“ITHACA IS GORGES” is the most popular t-shirt and bumper sticker around. When most people think of our gorges they think flowing water, thundering falls, and the lush greens of summer. But our gorges are just as gorgeous in the winter when water levels drop and streams are covered in a blanket of snow; when the falls are sheathed in icy armor, and a hushed whiteness descends. Ice climbing is a growing recreational activity that thrives on this special time of year. Thus, in winter the gorges can continue their great value as a recreational and tourist attraction, contributing to the economy, wellness, and mental health of the Cayuga Lake Watershed.

While our local gorges are not suitable for rock climbing due to their very crumbly sedimentary rock, they are just about perfect for ice climbing. Not only is the ice hundreds of feet high, it is easily accessible.

Unfortunately, for far too long ice climbing has been locked out by local land managers, private land owners, and governmental agencies. There is much ignorance and thus great fear of liability, and to some extent, a concern about safety. A number of local residents are working on opening a few of the many local waterfalls to legal ice climbing, in the hope of further enhancing winter’s recreational, economic, and health values for the watershed. Individual climbers, the Cornell Outing Club, local retail outlets, the Chamber of Commerce, and Cornell Outdoor Education have come together to determine best ways to legalize local climbing. They continue to meet with a wide variety of stakeholders including landowners, environmentalists, rescue personnel, and government officials.

“It has been a very positive experience,” says Marcus Collins, a Cornell doctoral candidate and avid ice climber. He continues, “Officials from the City of Ithaca have had understandable concerns, but they have worked with us and been consistently open to our ideas—we’re very fortunate.”

As a part of their efforts, local climbers showcased ice climbing in Six Mile Creek Gorge at the inaugural “Light In Winter” Festival in early 2004. Over two hundred spectators braved a cold January Sunday morning to watch climbers ascend one of the nicer local climbs, named “Businessman’s Lunch.” It isn’t just locals who will come out to watch the excitement of ice climbing, but tourists, too.

Ice climbing, because it occurs on a renewable resource—frozen water—is a non-impact sport. It is environmentally friendly. Climbers walk in on a bed of snow or ice and walk out, leaving only footprints and ice axe marks, marks that will be gone by the next snowfall or freeze-thaw cycle. Just to be on the safe side, climbers have begun to work with Professor Tom Whitlow of Cornell to develop baseline studies of flora before areas are opened up to climbing. That way the climbers, land owners/managers, and environmentalists can be assured that the climbing truly is doing no harm.

Ithaca already has a reputation as a great outdoor town. It was rated as one of the 10 best towns for mountain biking in the country and one of the best college outdoor towns in the country (both Outside magazine and USA Today). Ice climbing could further diversify Ithaca’s outdoor reputation. The word will spread quickly once it is legal. Combine ice climbing with mountain biking, gorges, wineries, and fall colors, and you have a full season adventure tourist destination. It provides an exciting, currently missing, and potentially unique key to a great future vision for the winter watershed.

Those interested in the efforts to open local lands to ice climbing can contact Todd Miner at tm49@cornell.edu or 607-255-8004.

Cayuga Lake Watershed Network has an email listserv to help keep you informed!
Between newsletter issues we send out announcements on watershed related events, volunteer opportunities and other information of interest. To join the listserv, email a request to manager@cayugalake.org

CORRECTION NOTE: In the cover article of our autumn 2004 issue, there was a factual error. The steamer Frontenac sank offshore from Aurora, not Deans Cove.
Winter Manure Spreading
By Kathy Barrett, Projects Director, Cayuga Marketing LLC

When snow-white fields turn brown with manure, passersby may mistakenly think a law is being broken. Dairy farming is a 24/7, 365 days a year job. Cows are milked, fed and cared for every day, regardless of the time of year or weather conditions. Consequently manure gets produced year round as well. The nutrients from cow manure are used to fertilize the crops that are grown to feed the cows, which then produce milk and the circle is completed. It’s a remarkable system by any standard.

During the winter when crops are not being grown, manure is still being produced. Farmers are faced with the challenge of spreading manure over the fields at just the right time to preserve the nutrients for enhanced crop growth. Cold weather, saturated soils, frozen ground and rainfall or snowmelt can multiply the challenge because under these conditions the manure is likely to lose some of its valuable nutrients to run off. Farms can avoid spreading during times of higher risk by having adequate manure storage during the winter months. Many dairy farms in the watershed have implemented expensive manure storage and handling technology to maximize the nutrient value of manure while minimizing odors and environmental impact. All manure storage facilities are engineered to Natural Resources Conservation Service standards to prohibit leaks or run off. Storing manure and maximizing its nutrient value minimizes chemical fertilizer use.

When manure is spread in the winter, farmers develop a spreading plan using several tools, including the New York State Phosphorus Index, to avoid too large a dose of phosphorus in the soil at one time. In addition to a manure storage facility, to avoid daily spreading during the winter months, many farms use multiple methods of application to reduce the risk of run off into the watershed. When the weather conditions are right during the growing season, the farms with stored manure can target their farm’s fertility and manage risk by distributing the manure in a short period of time on a specific field.

Sensitive to both neighbor and environmental concerns, farmers stay aware of the newest technologies. Applying manure through soil injection is one of the most promising methods for reducing the risk of surface run off during spreading. This method makes it possible to uniformly apply the nutrients into the ground to insure fertile soils, without over-applying the nutrients or leaving manure on the soil surface. Farm owned or contracted manure injection systems can be found throughout the watershed.

All large farms in New York (more than 700 cows) are required by law to receive a state permit, which they obtain by submitting nutrient management plans that outline how, when and where nutrients will be used. These nutrient management plans cost thousands of dollars to develop and are even more expensive to implement. They outline the best management practices for field conservation, manure setbacks, handling, storage and other farmstead issues. Smaller farms also participate in the permitting process although full implementation of their plans will take place in the future.

Growing crops and managing nutrients is a demanding science. Farmers continually test their soils to ascertain nutrient levels; they continually test manure for the same reason. They match the soil and crop requirements with the nutrients in the manure. Farmers go to great lengths to provide just the right amount of nutrients at the right time for the crop being grown. When manure is spread during winter, the farmer’s goal is to strike the perfect balance by replenishing the soil’s nutrients without overloading it for the next season.

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time scale that the Devonian shell has seen.

“Learning” the watershed has meant learning to see details and overall outlines, learning to be patient and quiet when knowledge emerges like an red eft from under a rock, and learning that there is always more to learn. The Cayuga Lake Watershed has been the best teacher that a student could ever hope find.

Editor’s Note: An excerpt from the 2004 Essay Contest Winner, Adult Category

The red eft is the terrestrial stage of the Eastern Newt (Notophthalmus viridescens), and is part of the salamander family. All salamanders are sensitive to water quality.

Photo courtesy of www.adirondackholiday.com
When Cayuga Lake Freezes

By Walt Gable, Seneca Historical Society

With our modern-day refrigerators, today we can hardly appreciate the importance of ice to keep food fresh. Where did people in large cities get their ice at the turn of the century, especially the huge populations of Philadelphia and New York? Since there was no large body of pure water in these urban settings, New York City turned northwards to the clear, clean water of the Finger Lakes. Ice was harvested on Cayuga Lake right up to the late 1930’s. At the height of this harvesting in 1886, more than two million tons of ice were harvested. It would take hundreds of men and horses, and scores of boats and railroad cars to gather this ice and get it to the major cities.1

In the earlier days of ice harvesting, workers used axes. With technological improvements like the steam-powered ice saw, and then the electrically-powered saw, the job could be quickly accomplished. At the Village of Cayuga, about 500 railroad cars were filled with the frozen blocks and transported to eastern cities with each car carrying 25 tons of ice. The Independent Ice Company of Geneva, New York, had an ice harvesting complex at Wayne’s Point, south of Cayuga village. The well-insulated icehouses were forty feet high and 250 feet long. Ice blocks were laid out on the sand-packed floor, with sawdust sprinkled over each layer, until the house was full.

In the early 1900’s, once the cut ice made it to the city, an ice deliveryman would make his rounds from house to house. Typically, a housewife would place a card in the front window of the house, indicating how many pounds of ice were wanted. He would use tongs to lift the ice block onto scales, chip it down to the desired size, carry it to the house and place it in the ice box. It was also reported that the children would be near-by, gathering up ice chips on which to suck.2

New York ice was highly prized because it was usually clean, hard and slow to melt. In a January 13, 1868 diary entry, Edwin B. Morgan of Aurora reported that the ice on Paine’s Creek was so clear that one could read a letter through 2.5 feet of it! Weather determined the size and the quality of the ice harvest. The colder the weather and steadier the freezing, the cleaner and denser the ice. A thaw or a rainstorm could ruin the ice crop. Many farmers felt that if they had a good harvest two years in a row, they were fortunate. Morgan’s diary entries also note concerns about warm winters when there wouldn’t be enough ice to meet demand.3

On occasion, the lake has frozen completely over, but normally this lasts just a few days. Historically, this has provided both opportunities and challenges for those who ventured to cross it. Maurice Patterson wrote about the Busy Bee ferry boat, which regularly made the crossing between King Ferry and Kidders Ferry, a distance of just over two miles. As long as the lake’s water remained liquid, the Busy Bee could cross in as little as nine minutes under fully-billowed sail, or by horse (running the treadmill) in as long as one hour. But in an exceptionally cold winter things could be different. 1885 was such a winter, with severely long cold spells. Carrie Coleman wrote in her diary of this winter, that on March 6th the ice roared and groaned as it froze harder than the day before. On March 27th, she reported horse teams crossing the ice.4 Under these conditions, Patterson wrote that the Busy Bee attempted to cross the lake, but amazingly the boat froze fast in fifteen inches of ice. Fortunately, the ferry’s resourceful Captain Quick was able to rig up an iceboat and still deliver the mail!5 In winters like that one, there was no shortage of available ice for the cities.

The ice harvesting business on Cayuga Lake ended before World War II. In 1910 the first ice was manufactured artificially. The first electrically-operated refrigerator was produced in 1915. With these developments, there was little need for commercial ice harvesting. A disastrous fire in December 1936 destroyed the seven ice-houses of the Independent Ice Company at Wayne’s Point. The loss was estimated at $25,000. The company decided not to rebuild, and ice harvesting on Cayuga Lake became a thing of the past.6

Nowadays, people other than ice fishers do not envision freezing conditions as providing a potential resource. Unfortunately, many view it as “an ice problem.” The lake level is drawn down for the winter months, challenging lakeshore residents to get their boats out of their hoists and stored for the winter before the lake level gets too low. Those wishing to draw water from the lake for use in their homes have to make sure that their water intake pipe is far enough out into the lake to remain submerged during low water levels. Residents further south on the lake worry that strong winds will break up the northern ice and bring it crashing into their docks and boat hoists.

In all fairness, the current problems pall in comparison with the hardships that lakeshore residents had to contend with a hundred years ago or more. We may nostalgically
Meet the Board

Our Board of Directors is composed of 15 members. Four Directors are elected from each of the three counties with lakeshore properties (Cayuga, Seneca and Tompkins). Three other Directors may reside anywhere in the watershed. Meet two directors now and meet more in future issues of Network News. Members are welcome at Board meetings, which begin at 7 pm. The next ones will be: February 10, 2005 at Gould’s Pump in Seneca Falls; March 10, 2005 at Tompkins County Transit Center in Ithaca, and; April 14, 2005, at Wells College Library in Cayuga!

Mary Seitz, Cayuga County
Mary Seitz was born and raised in the Village of Cayuga. She grew up with strong ties to the lake – enjoying swimming, boating, camping, fishing, water skiing, snowmobiling, hunting and ice fishing. Her family had a camp near Long Point State Park, and her father ran a fishing charter business on the lake. Mary graduated from Alfred State College. Married for nine years, she lives with her daughter and husband who owns a hoof trimming business. Serving on the Cayuga Lake Watershed Network Board of Directors is just one way Mary lives her philosophy, which she states as “You can’t just stand by – you need to get involved and make a difference.” She also is active with the school district and other community groups. When not volunteering or working at the Hillside Children Center’s Finger Lakes Campus Residential Treatment Facility she enjoys spending time with her young daughter, planting flowers and four wheeling in the family’s Jeeps.

Keith Tidball, Seneca County
Keith Tidball lives with his family in their home overlooking Canoga Marsh. Yellow Creek, a tributary of Canoga Creek, is a significant feature of their farm. Keith was raised in the Great Lakes region and his wife Moira has deep family roots in and around the Finger Lakes region. They are glad to be raising their two daughters on the shores of Cayuga Lake.

Keith has worked extensively with agricultural water quality issues and watershed approaches to conservation, both domestically and internationally. He earned academic degrees focused on agricultural and international affairs. Keith notes, “Our family philosophy is one that includes watershed stewardship as a core value. Community participation and involvement are ways in which that value is expressed.” Keith is active with planning efforts in the Town of Fayette. In his free time, he enjoys hunting, fishing, sporting dog breeds, writing and art and antiquities.

Annual Essay Contest

Write an essay about Cayuga Lake’s rich history and you could win a cash prize! Entries are welcome now until April 1 in our 5th Annual Essay Contest. The theme is “The Rich History of the Cayuga Lake Watershed.” Choose a topic under this broad theme to research using your local library, historical society, or other resources. Your writing may inspire others to a greater appreciation of the watershed’s rich history.

Here are some ideas to get you thinking:
• Can you describe a historic incident concerning the watershed?
• What are historic uses of the watershed (including recreation, agriculture, transportation, commerce)?
• How have the geologic formations evolved within the watershed?
• How has the watershed impacted events over time?
• How has the watershed been impacted by development, and how has the natural environment shifted?

Winning essays will be published on the Cayuga Lake Watershed Network Website, with excerpts in the Cayuga Lake Watershed Network News.

The essay contest has three categories:
• Students grades 6-8, 500-word limit
  (1st prize $75, 2nd prize $30. 3rd prize $10)
• Students grades 9-12, 1000-word limit
  (1st prize $150)
• Adults, 2000-word limit (1st prize $250)


Alternately, essays can be sent to Judy Pipher, 2429 Lower Lake Rd., Seneca Falls, NY 13148, postmarked no later than April 1, 2005. For more information, contact the Watershed Network office (607-532-4104) or jlpipher@astro.pas.rochester.edu. Winners will be announced during Water Week, in early May 2005.

Funding for the Annual Essay Contest is provided by Goulds Pumps – ITT Industries.
How Well Is Your Water?

Programs on protecting private drinking water wells are being offered by the Watershed Network. The sessions will feature information on well construction and maintenance, a review of water quality and health concerns. The programs are free and open to everyone. Thanks to funding from the Tompkins County Department of Health, Tompkins County residents can have their well water tested for bacteria and nitrate at a 75% discount rate. Attendance of an educational session is necessary to qualify for the discount. Four sessions will be offered in rural locations. For contact information, see the Septic System Workshops box on back page.

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look forward to having another opportunity to enjoy a complete freeze-over of Cayuga Lake, but few would want the cold temperatures that make it possible for the lake to remain frozen for an entire month. In the past, many more of us turned to the winter outdoors for adventure. In a closing excerpt, Carrie Coleman wrote in her diary that in 1912, the lake again froze over in mid February and did not thaw again until St Patrick’s Day. She reported “a great many people – hundreds – crossing the lake, skating and walking… Frozen lake conditions attracted people from Auburn who traveled by train to King Ferry and skated or rode on iceboat over the lake.”

1 Lorraine Withers, “More Little Known Facts of Seneca Falls,” April 2003 newsletter of the Seneca Falls Historical Society
3 Sisler, p. 116
4 Bits and Pieces of 200 Years, compiled by the Ovid Bicentennial History Committee, Ovid: W.E. Morrison and Co. Printers, 1994, p 104
5 Maurice L. Patterson, Between the Lakes: The History of South Seneca County, Interlaken: Heart of the Lakes Publishing, 2003, p. 10
6 Withers.
Out of sight out of mind is an adage that applies to many things, but perhaps none more than the fate of wastewater from kitchens, bathrooms and laundry. Wastewater from rural homes is usually treated on the property by what is commonly called a septic system. These on-site wastewater treatment systems are economical and environmentally friendly when installed correctly and then cared for. But a septic system that is ignored or mistreated can be a headache for the homeowner and a nuisance to the environment. Preventive maintenance and routine care save money as well as protect water quality.

Household wastewater contains chemicals, grease, bacteria and nutrients. Failing septic systems allow these wastes to enter the groundwater where they can contaminate streams and lakes, and even nearby drinking water wells. When the system fails, repairs or replacement costs can range from several hundred to several thousand dollars. Regular maintenance helps keep an on-site wastewaters system working. Solids and grease that build up in the septic tank need to be removed by a professional on a regular basis. In addition, hazardous chemicals should never be dumped down the drain, and the area above the septic system requires protection.

Taking care of your septic system is an important way to guard against water pollution. A failed system can let pathogens and excess nutrients, primarily nitrogen and phosphorus, escape into our water supplies. Too many nutrients can cause downstream excesses of algae and weed growth. Pathogens, such as bacteria and viruses, can make people sick if they spread via groundwater to the family or neighbors’ drinking water well or to recreational waters.

The choices one household makes may not seem that important but with thousands of households in the watershed using septic systems, individual choices add up to make a big difference.

### Septic System Workshops
Four programs on septic systems will be offered in early 2005. The free programs are open to everyone and will cover how conventional and alternative systems work, preventive maintenance and routine care that can save costly repairs while protecting water quality. Thanks to funding from the Tompkins County Department of Health, Tompkins County residents who attend one of the programs will receive a $20 discount coupon towards septic system pumping. For information on dates and locations join our listserv to get notification via email, visit www.cayugalake.org or contact Cayuga Lake Watershed Network at manager@cayugalake.org or 607-532-4104.