

Network News



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Balancing Conservation and Agricultural Production Priorities: The Canoga Creek Farm Project

By Keith Tidball, Peter Kleinman, and Hilary Lambert

Wetlands in Our Watershed

As every resident knows, the Cayuga Lake watershed is water-rich. Creeks and streams surround us, and many originate in the region's plentiful wetlands and marshes. Once reviled as wastelands, fit only for "reclamation" for "better" uses, wetlands are now regarded as basic to good ecosystem health. Among other functions, wetlands filter nutrients for improved water quality, provide habitat and wildlife support, and help maintain stream banks by absorbing high water flow into surrounding wetland areas.

Wetlands are regulated at the federal level by the US Army Corps of Engineers and at the state level by the NYS Department of Environmental Conservation, whose definition of wetlands is: "Lands and

submerged lands commonly known as swamps, sloughs, bogs, and flats which support wetland vegetation. Wetland vegetation is categorized into wetland trees, wetland shrubs, and wet meadow vegetation that... 'depend on permanent or seasonal flooding [wetland hydrology] or sufficiently water-logged soils [hydric soils] to give them a competitive advantage over other [vegetation].'" The US Army Corps definition adds that "Wetlands generally include swamps, marshes, bogs, and similar areas."

In the Cayuga Lake watershed, there are about 6,575 acres of state-regulated wetlands in area 12.1 acres or greater, often also covered by US Fish and Wildlife Service wetlands designation. This is about 1% of the watershed's total area; there are many additional thousands of wetland acres below that size threshold. While wetlands are found across the watershed, certain locations are favored, such as the flat lands at the top of the watershed, away from the steep slopes that drain directly to the lake.

The north end of Cayuga Lake, lower in elevation and flatter, is home to extensive wetlands, crowned by the magnificent 6,820 acre Montezuma National Wildlife Refuge



Canoga Creek is situated just south of Seneca Falls, near the northwest end of Cayuga Lake. This map depicts the creek and its watershed.

Marcellus Shale and Hydrofracking Update

In our year-end issue (2009 i3), the front-page article encouraged Network members to submit comments about proposed hydrofracking regulations to the NY Department of Environmental Conservation. Thanks to an astonishing effort by residents, landowners, farmers, elected officials and local, county and state governments, over 13,500 comments were submitted by the December 31, 2009 deadline.

The Network's comments stressed that "The Cayuga Lake Watershed Network is a not-for-profit citizens group which covers the Cayuga Lake and its tributaries with the mission to 'Identify key threats to Cayuga Lake and its watershed and advocate for solutions that support a healthy environment and vibrant communities'. It is in relation to this mission that we submit these comments.

"We accept that natural gas is a valuable resource and will be for some time to come and that New York State uses more than it produces. Therefore, there is some obligation on the State to produce more. In addition gas production will generate valuable income for many rural people with limited incomes. Hence we do not object to gas drilling but demand that it be exploited only if the environment is adequately protected. The proposed draft SGEIS and its 1992 precursor do not as they stand adequately protect the environment.

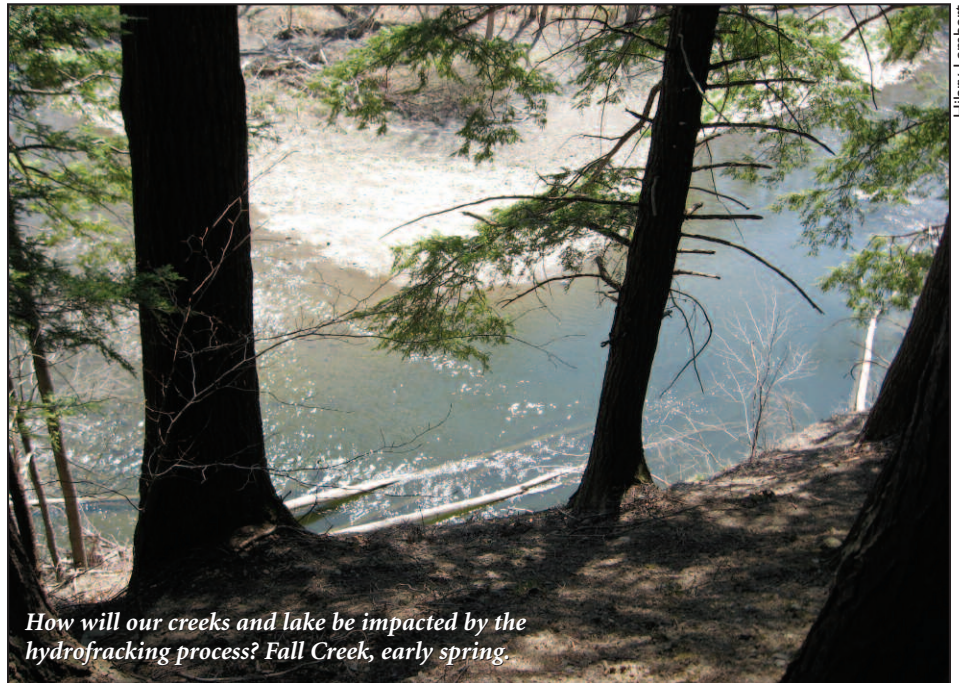
"Natural gas is a valuable commodity but clean water is even more valuable. Many residents in the watershed rely on groundwater, and many more residents and towns rely on Cayuga Lake and its tributaries for clean water, via municipal supplies and wells. Both sources, if seriously

polluted, will take very large efforts and expense to clean up. Tourism and agriculture also rely on clean water and are amongst our main current industries. They must all be protected.

"We regard exploitation of the Marcellus Shale, with the requirement

regarding cumulative impacts, stormwater pollution prevention plans, water withdrawals, water resources impacts, groundwater impacts to karst, drilling and hydrofracking chemicals, and enforcement of regulations.

The Network's full comments can be viewed online at our Website, www.cayugalake.org – scroll down to and click on "Comments on dsGEIS." If you would like to have a copy mailed to you, let us know at steward@cayugalake.org or by phone at 315 364-2992. Comments submitted by other Cayuga Lake area organizations, agencies and municipalities can



How will our creeks and lake be impacted by the hydrofracking process? Fall Creek, early spring.

for hydro-fracking, as a potential major threat to the 800 square mile Cayuga Lake watershed if it is not adequately regulated. We are very concerned about these proposed regulations"... Our detailed comments continue, discussing concerns

be viewed online at www.tcgasmap.org – scroll down to "Draft SGEIS Information." The Network will keep members up to date with this contentious situation. 🐦

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Balancing Conservation and Agricultural Production Priorities: The Canoga Creek Farm Project *continued from cover*

Bill Hecht



Photo looking east across Canoga Marsh to Cayuga Lake and beyond, taken in October 2005 before marsh restoration.

(Genesee/Finger Lakes Regional Planning Council, 2001. *Cayuga Lake Watershed Wetland Management Project*, pp. 9-10). Nearby is Canoga Creek, draining to the lake's west shore through marshes whose restoration is the focus of this article.

Restoration of Canoga Creek Marsh

A century ago, Canoga Creek wound its way through a natural delta of marshes to its outlet with Cayuga Lake. With the intensification of farming, the vernal pools, springs, seeps, and meanders were filled in and straightened, replaced by row crops and pasture lands. Yet over time, the economic and environmental balance has tipped in favor of wetlands restoration. *The Cayuga Lake Watershed Restoration and Protection Plan* (Genesee/Finger Lakes Regional Planning Council and EcoLogic, 2001) lists the Canoga Creek subwatershed as a priority for restoration and protection efforts within the Cayuga Lake watershed. The present major marsh restoration project was brought to fruition during the mid-'00s when the privately-owned Canoga Creek Farm added conservation explicitly to its mission and placed its marshland acreage in the USDA Wetlands Reserve Program, joining forces with the adjacent state-owned NYS Department of Environmental Conservation Wildlife Management Area to restore a total of 70 acres.

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Photo of Canoga Marsh and creek, taken in October 2005 before marsh restoration. South is at the top of the photo.



Following restoration, Canoga Marsh has regained some of the natural complexity that characterizes pristine marshes, and is both attractive to wildlife and beneficial for water quality. South is at the left side of the photo.

Bill Hecht

Canoga Creek Conservancy

CREEK CLEANUPS AROUND THE LAKE

Join the Network's spring-summer campaign to foster watershed-wide awareness!

WHAT: We are embracing and encircling Cayuga Lake with creek and lake-front cleanups, starting this spring and into early summer. Thirty-four major creeks drain to the lake, along with the Seneca-Cayuga Canal and hundreds of small straight streams. In cooperation with the Floating Classroom and the Center for Environmental Sustainability, the Network is organizing a rolling schedule of weekend creek and waterfront cleanups around the lake. We invite individuals, families, schools, churches, Scouts and community groups to take part.

WHEN: We'll have a celebration and kickoff cleanup during the weekend of April 16-18, the Global Days of Service prior to the 40th anniversary of Earth Day the following weekend. A rolling schedule will keep these cleanups going until the plants grow too high for effective cleanups (hard to imagine right now!).

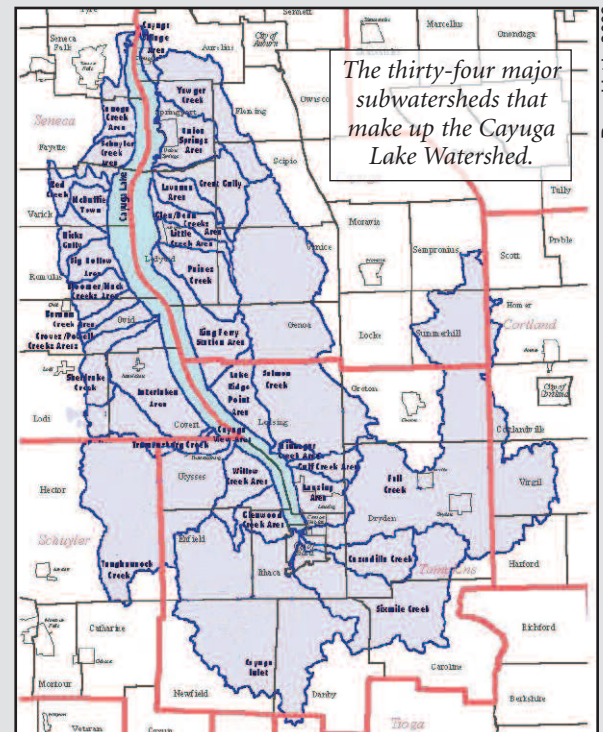
WHERE: Anywhere in the Cayuga Lake Watershed, where waters are flowing in the direction of Cayuga Lake. Do you have a favorite neighborhood creek or wetland, where trash has built up? Here is your chance to get that cleaned up. Was your picnic spot or shoreline area along the lake marred by garbage, last fall? Let's get that stuff out of there! A couple of communities are already organizing for a creek cleanup, but not many yet.

WHO: Individuals, families, schools, churches, Scouts, community groups. You! As a group organizes for a cleanup, we'll help pick a good spot along the chosen creek or waterfront area that is safe for all ages and approved by landowners, and get the word out via email, a press release to local newspapers, radio, etc. We are only asking for a couple of hours of volunteer time to pick up trash and clean up around a carefully-selected area.

Here is a list of the major creeks around the lake. Which one is yours?

Barnum Creek Area
Big Hollow Area
Bloomer/Mack Creeks Area
Canoga Creek Area
Cascadilla Creek
Cayuga Inlet
Cayuga View Area
Cayuga Village Area
Fall Creek
Glen/Dean Creeks Area
Glenwood Creek Area
Great Gully
Groves/Powell Creeks Area
Gulf Creek Area
Hicks Gully
Interlaken Area
King Ferry Station Area
Lake Ridge Point Area
Lansing Area
Lavanna Area
Little Creek Area
McDuffie Town Area
Minnegar Creek Area
Paines Creek
Red Creek

Salmon Creek
Schuyler Creek Area
Seneca-Cayuga Canal
Sheldrake Creek
Six Mile Creek
Taughannock Creek
Trumansburg Creek
Union Springs Area
Willow Creek Area
Yawger Creek



You can join a group that is already organized, or start your own.

To start your own group and cleanup event, we'll help you organize the following details:

- A coordinator for your group – name, contact information (preferably both phone and email).
- You might want to come up with a fun name for your group and cleanup!
- A cleanup location – safe, easy-to-get-to with nearby parking, and landowner permission to be there. We'll need clear directions to provide to volunteers who want to show up on the date.
- A time period for the cleanup (two to four hours at most) and raindate.
- Publicity – a short news release for

local newspapers, radio stations, and other places you suggest (we'll help write that and send it out).

- Garbage bags to fill, and someone to collect and dispose of them properly afterwards (we'll help organize the pickup, and will provide garbage bags, and gloves to wear).
- A sign-in sheet for all participants (we will provide this).
- Signed safety waivers for all participants (we will provide waivers).
- Adult supervision and permissions for all youngsters.
- Appropriate clothing and footwear.
- Refreshments.
- Someone to take photos and keep notes of what you collect.

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Balancing Conservation and Agricultural Production Priorities: The Canoga Creek Farm Project *continued from page 3*

The purpose of the Canoga Marsh restoration project was to restore lost wetland functions (primarily wildlife use) on adjacent lands, one private (the Tidball property) and one owned by NY State. Potholes and level ditches were constructed to create openings in the degraded, freshwater, non-tidal Canoga Marsh wetland for enhancement of habitat value for migrating and nesting waterfowl, marsh birds and muskrats.

Plant diversity in the marsh has been increased by reestablishing hydric conditions that encourage the growth of submerged aquatic vegetation in the potholes and level ditches. Amphibians and macro-invertebrates now benefit from the construction of several fish-free potholes near shore. Waterfowl are finding suitable brood-rearing habitat. Visibility of wildlife has improved in some sections of the project for public enjoyment and educational opportunities. A personal commitment has been made by the private land owner (Tidball) to continue habitat improvement and management, and to increase community involvement in these activities. Public access has been encouraged on the public lands (Canoga Marsh WMA) and the project serves as a demonstration area for wetland enhancement.

Continuing interest in restoration activities by the Tidball family led to the pursuit of follow-on activities with CLWN and the Corporate Wetland Restoration Program. Additional pond construction on the upland portion of the restoration was completed in 2006, and interpretative signage was installed to identify partners and provide information to passers-by. Information is available online, here: <http://cayugalake.org/newsletter/summer/summer2006.pdf>

Research Continues at Canoga Creek Farm

In addition to marsh restoration work, both riparian and agricultural research is a focus at Canoga Creek Farm and Conservancy. Efforts are ongoing to engage in comprehensive monitoring of Canoga Creek, and a new USDA ARS

field edge research and monitoring project is underway, encompassing a water quality monitoring activity and a trial of agricultural best management practices for protecting and enhancing water quality through manure management.

Land application of manure is one of the most scrutinized aspects of livestock farm management. Odor and other air emissions, and runoff of nutrients in manures are all primary concerns. Technologies have existed to inject liquid manures into soils, removing them from the soil surface where they are vulnerable to environmental processes and placing them closer to crop roots where manure nutrients are readily taken up. However, until recently, no viable methods have existed to directly incorporate dry manures or compost.

New technology from USDA's Agricultural Research Service uses common no-till planting technology to place dry manure into furrows that are then sealed by a closing apparatus. The new technology is being evaluated at sites across the Chesapeake Bay Watershed. The Canoga Creek Farm project represents the first effort in the northeastern US to test the technology outside of the Chesapeake Bay Watershed. You can view the project's runoff plots on the east side of Rte. 89 as you drive by Canoga Creek Farm. These plots are being used to quantify differences in runoff between the ARS Subsurface Applicator (now called "the Subsurfer"), conventional broadcast application, and land that receives no manure at all. Composted manure from the farm is being used by the project.

If results from this project follow findings elsewhere, the Subsurfer should dramatically reduce phosphorus runoff to the Lake while increasing the efficiency with which the farm's grasses use nitrogen from the compost. The research is particularly significant as it is the first attempt to adapt the technology, developed collaboratively by USDA-ARS's Peter Kleinman, Cornell University's Quirine Ketterings, and Canoga Creek Farm and Conservancy's Keith Tidball.

continued on back cover

Creek Cleanups Around the Lake... *continued from page 4*

Afterwards, we'll want to know:

- How many bags of garbage did you collect?
- What was the grossest thing you found?
- What was the largest thing you found?
- What was the weirdest thing you found?
- How would you improve this event for next year?

- Awards will be made for Best, Most, Largest, Weirdest, etc!

Business Sponsorships:

We are seeking donations from area businesses to help support this project. Please contact steward@ycaugalake.org if you are interested.

How to Get Involved: Contact the Network at the following email addresses and let us know you want to get involved: amunoz@wells.edu, mbirklin@wells.edu. You can also leave us a message at 315 364-2992. Watch for information on our Web site, www.cayugalake.org by mid-March – we'll list groups with contact information. 

UPCOMING EVENTS in Spring 2010

Please send information about upcoming watershed events to steward@cayugalake.org. We'll share them in these pages, at our Website www.cayugalake.org, and via email to the CLWN listserv.

APRIL 10: The Network's spring conference, "Our Wetlands Protect Us - Help to Protect Them" will be held at the Kuneytown Sportsmens Club on Hoster Road, Fayette NY. See below for details.

APRIL 16-18: Kick-Off of our 2010 spring-summer volunteer campaign, Creek Cleanups Around the Lake, organized in cooperation with the Floating Classroom and the Center for Environmental Sustainability's Earth Day celebration. See page 4 for more information.

APRIL 24, 10 am-3 pm: Join the Center for Environmental Sustainability for an Earth Day conversation, with parade and potluck. Celebrate Earth Day's 40th anniversary, complete with an Earth Day cake, at Ithaca's Southside Community Center, 305 S. Plain Street. Information: earthdayithaca@yahoo.com

APRIL 28: Bill Kappel, US Geological Survey, will talk about "Lake Levels" at 7 pm on April 28 at Lansing Town Hall. His talk will be held in conjunction with an art and photo exhibit at the Lansing Public Library and is co-sponsored by the Finger Lakes Ecology Association (FLEA). 🐾

Our Wetlands Protect Us - *Help to Protect Them*

Members of the Cayuga Lake Watershed Network and the general public are encouraged to attend our annual spring conference!

WHAT: A free restored wetland tour and conference for the public, with expert speakers and panelists
WHEN: Saturday, April 10, 9:30 am – 4 pm
WHERE: Canoga Marsh and Kuneytown Sportsmens Club, Fayette NY

9:30 am: Guided Tour of the Canoga Creek Conservancy's Canoga Marsh Restoration project. Meet Keith Tidball between 9:15-9:30 at 3208 State Route 89, two miles south of Cayuga Lake State Park.
12:00 noon: Lunch (optional, cash) at Kuneytown Sportsmens Club (3735 Hoster Rd, Fayette).
1:00 pm: Presentations at Kuneytown Sportsmens Club begin at 1 pm, with a break for coffee and snacks, followed by a panel discussion.
4:00 pm: Cash bar opens for mixing and mingling.

PRESENTATION TOPICS:

1:00 pm - Tom Jasikoff, Montezuma Refuge: Keynote Address
1:35 pm - Keith Tidball, Canoga Creek Conservancy & Cornell University, Civic Ecology Lab: Citizen Wetlands Restoration
2:00 pm - Andy Buss, Applied Ecological Services, Inc.: Corporate Wetlands Restoration
2:25 pm - BREAK: Cookies, fruit, beverage courtesy of the CLW Intermunicipal Organization

2:35 pm - Jon Negley: Farm Wetlands Management

3:00 pm - Panel discussion including above speakers and Kris West, Finger Lakes Land Trust; Darby Kiley, Tompkins County Water Resources Council and IO; Peter Kleinman, Agricultural Research Service; Dan Delawyer, Ducks Unlimited.

4:00 pm - Cash bar and informal discussions following the conference

WHO SHOULD ATTEND: Farmers, landowners, sportsmen and women, municipal officials and community leaders, interested public, and agency personnel. Information and expertise will be available for landowners seeking information.

Check the Cayuga Lake Watershed Network's Website for details and directions www.cayugalake.org
Contact: steward@cayugalake.org

Co-sponsored by the Cayuga Lake Watershed Intermunicipal Organization www.cayugawatershed.org



Please Join or Donate to the Network



The Cayuga Lake Watershed Network has lively, lake-advocacy events and projects planned for 2010. These are made possible by grants and support from people, organizations and businesses concerned about Cayuga Lake and its watershed. Times are tough, and big changes are facing the watershed with the potential start-up of unconventional gas drilling in 2010. Help us protect our lake!

Fund for Intern Support

Thanks to a timely donation by one of our members, we have established a special Fund for Intern Support. In addition to providing college credit-based intern opportunities, we'd like to continue supporting paid interns to help with office work and research. Your special donations to this fund are especially welcome.

Joining or donating is easy to do!

MAIL: Fill out the information below, select a donation level, and mail the form with your check to Cayuga Lake Watershed Network, P.O. Box 348, Aurora, NY 13026

PAYPAL: Join via your PayPal account or credit card online at www.cayugalake.org

As a member, you receive a one-year subscription to Network News, our quarterly newsletter, invitations to free events such as our upcoming spring conference on Wetlands (see page 6), and volunteer opportunities such as our upcoming creek cleanups (see page 4). Your membership shows that you appreciate the beauty and vitality of Cayuga Lake and its watershed and the need to protect these natural resources.

- ☐ I am joining the Cayuga Lake Watershed Network with the enclosed contribution.
- ☐ I am renewing my membership with the enclosed contribution.
- ☐ Send a gift membership to the person listed below, and send me a gift card to give them.
- ☐ Please use my donation for intern support.

Name _____

Address _____

Email _____ May we add you to our listserv? ☐ Yes ☐ No

Please Select the Support Level You Prefer:

- | | |
|--|---|
| ☐ \$500 Watershed Benefactor | ☐ \$250 Lake Sponsor |
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| ☐ Other _____ | |

Thank you for your support!!!

Your Contributions to the Cayuga Lake Watershed Network are tax deductible.

Balancing Conservation and Agricultural Production Priorities: The Canoga Creek Farm Project

continued from page 5

Watershed Implications

The activities at Canoga Creek Farm and Conservancy represent a true effort to balance the dual priorities of environmental conservation and farm production. As part of the marsh restoration efforts, the Farm has transferred 35 acres of arable land prone to erosion from intensive row cropping to productive grasslands. The gullies and rills that once scarred the fields leading to the marsh are largely gone. Rotational mowing ensures breeding habitat for upland birds, and a commitment to organic farming ensures that beneficial insect populations keep potential pests at bay. While local and federal programs help to defer the economic costs to the Farm, the changes have required personal commitment and investment in time, energy and capital by Tidball and his family. This investment, they hope, will result in a beneficial legacy accrued not only by their family but also by their community, as well as for Cayuga Lake.

The farm's commitment to research represents Tidball's efforts to not only lead by example, but also to provide new water quality information and to promote conservation innovation. The edge-of-field monitoring information gathered from the USDA-ARS/Cornell research will shed

light on opportunities for nutrient conservation practices. While the need for soil conservation efforts can often be "seen" in eroded landscapes and sediment-choked runoff, the need for better nutrient management is not as obvious. Tidball hopes that the field runoff monitoring will serve as the core of broader efforts to quantify the benefits of activities in the Canoga Creek Watershed. He is also hopeful that his efforts will show that the USDA-ARS Subsurfer technology is not only appropriate for large farms, as has been shown elsewhere, but is also appropriate for small farms, including those of his many neighbors in the Canoga Creek Watershed. 🦅

Peter Kleinman is a soil scientist leading the watershed and water quality division of USDA-ARS's Pasture Systems and Watershed Management Research Unit in State College, PA. Quirine Ketterings is a soil scientist in the Department of Dairy and Animal Science at Cornell University. Keith Tidball works for Cornell University's Department of Natural Resources, is a progressive farmer and owner of Canoga Creek Farm (and Conservancy), and a member of the Cayuga Lake Watershed Network's Board of Directors.

The Mission...

The Cayuga Lake Watershed Network identifies key threats to Cayuga Lake and its watershed, and it advocates for solutions that support a healthy environment and vibrant communities.



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