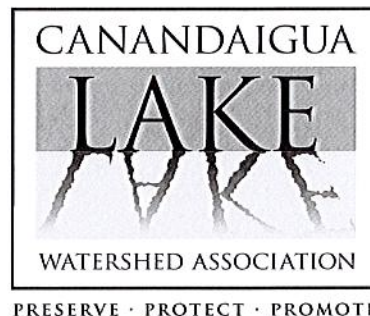


The Lake Reporter



JANUARY 2014 • VOLUME 12 • ISSUE 1

VIEWPOINT'S EVENT SERIES:

Four Important Points About Shale Gas Extraction

Please join us at 6pm on Thursday, February 6 at Stage 14 at FLCC for our next CLWA Viewpoints series event. Anthony Ingraffea, Ph.D., P.E. will be discussing four major reasons why shale gas production should not be permitted in New York State. Topics will include spatial intensity, heavy industrial impact, and well leaks into water else's, surface wells, and the atmosphere. He will also discuss why natural gas is NOT a clean fossil fuel and explore a better plan for New York State's energy supply.

Dr. Ingraffea is a Professor and Engineer at Cornell University. His research concentration is computer simulation and physical testing of complex fracturing processes. He has won numerous awards for his research and always gives a straight-forward, information filled, and thought-provoking presentation. This is an extremely important issue for our area and our watershed. We hope you take advantage of this opportunity to hear one of the top experts in this field and to continue to inform yourselves on the process of high volume hydraulic fracturing.

Speaker: Anthony R. Ingraffea, Ph.D., P.E.
Title: New York State: Why NOT Shale Gas?
Date: February 6, 2014 at 6:00 pm
Where: Finger Lakes Community College, Stage 14,
Canandaigua, NY

We will discuss four major reasons why shale gas production should not be permitted in New York State:

- It Is Spatially Intense, and There Is a Significant Heavy Industrial Impact, During and After Development
- Many Gas Wells Will Leak into Water Wells, Surface Waters, and the Atmosphere
- Shale Gas is NOT a Clean Fossil Fuel
- There Is a Better Plan for NYS Energy Supply

A. R. Ingraffea, Ph.D., P.E. is the Dwight C. Baum Professor of Engineering and Weiss Presidential Teaching Fellow at Cornell University.

As a concerned scientist/engineer, he engages beyond the academy to further inform and educate the public on critical scientific issues that involve public health and safety. Dr. Ingraffea is President of Physicians, Scientists, and Engineers for Healthy Energy, Inc.

www.psehealthyenergy.org

THE REGULATION OF STEEP SLOPES IN THE CANANDAUGUA LAKE WATERSHED

The Canandaigua Lake Watershed Association favors greater regulation of steep slopes by the municipalities of the watershed area for the following reasons:

- Municipalities exist to protect the health, safety and general welfare of citizens, and regulation of activities on steep slopes offers such protection.
- Canandaigua Lake is one of the prime economic assets of the region. Impairments of its water quality by polluted runoff would be felt in the costs of drinking water, attraction to tourists and recreationists, and real estate market.
- The potential damage caused by erosion, sedimentation and eutrophication rises exponentially as slopes of affected watershed land increase.

CONTINUED ON PAGE 3

From the Chair:

By Jack Dailey, President

The Uniform Docks and Moorings (D&M) regulations have been instrumental in assuring the lake shore is responsibly used by lakeside residents. Before its adoption, there was little control over the type of structures that could be placed at the shore and in the lake itself. As a result, we had docks that were far too large in area based on front footage available, encroached on the neighbors property, extended too far into the lake and boat houses that obstructed neighbor views. The problem was driven home in the early '80s when the owners of Thendara constructed in excess of 50 slips along the lakefront.

As a result, residents working with city/town and county leaders as well as officials from NYS were able to enact the D&M regulations which began to place prudent limits on how shore owners could use their lake frontage. It didn't come easily.

First, NYS had to agree that regulation involving use of the lake itself could be delegated to local municipalities (NYS owns the lake to the mean high water mark as well as the lake bottom). Second, ALL of the municipalities needed to agree on common regulations for the WHOLE lake. With the involvement of all stakeholders and much discussion the UNIFORM D&M regulations were drafted and ultimately approved by each of the municipalities bounding the lake .

I think you would agree that these regulations have worked for the betterment of the lake.

Is it time for the lake and watershed community to address the methods and practices by which development of property adjacent to the lake and on surrounding hillsides is undertaken? Currently, all political bodies have zoning regulations, but these regulations vary substantially. One community may allow building heights of 30' while another has 35'; some communities have steep slope development regulations while others have none; some have setback requirements from streams and gullies while other towns are silent. And how about ridge development and the protection of views. Again, the same issue; some towns have addressed the issue while others are silent or close to silent.

We are a lake community...shouldn't we aim for some uniformity in our approach to protecting the quality of the lake and the surrounding vistas?

And how about adhering to the zoning regulations that we do have? Town Zoning Boards of Appeal and Planning Boards are continually petitioned by residents to allow deviation from zoning regulations. These boards try to exercise their oversight of exception diligently, but a review of decisions would indicate variances are granted too frequently. Exceptions should only be granted when there is a hardship and that hardship was not caused by the petitioner. As a matter fact NYS regulations and guidelines are geared to minimal exceptions.

Again, we are a lake community....shouldn't we aim for some uniformity in our approach to protecting the quality of the lake and the surrounding vistas?

CLWA will be working hard in 2014 to promote uniform and responsible lake development/redevelopment regulation. Can you join us?

-Jack Dailey, President

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Please contact us at:

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Phone: 585-394-5030

E-mail: info@canandaigualakeassoc.org

Website: www.canandaigualakeassoc.org

The Lake Reporter is published quarterly and distributed free to members and supporters. We invite submissions. Please send them via e-mail to info@canandaigualakeassoc.org or to PO Box 323, Canandaigua, NY 14424.

MEMORIAL

George and Sally L. Conyne of Rushland, PA
have made a contribution to CLWA
in the name of Charlotte White.
It is much appreciated and we extend our
sincerest condolences.

The Regulation of Steep Slopes

CONTINUED FROM PAGE 1

- As more easily developable locations in the watershed have been developed, development activities have expanded onto steep-sloping properties.
- Greater care and more use of best management practices can decrease the damage done by the development of steep slopes, to an extent but not absolutely.
- Canandaigua Lake is a public resource of great economic and environmental value whose condition is directly affected by municipal land use regulations in its watershed which is eleven times the size of the lake.
- Private property values, public health and safety of existing developed properties in the watershed may be adversely impacted by the development of upstream steeply sloping properties.
- Though CLWA promotes better regulation of the development of steep slopes in any watershed municipality, the municipalities of Middlesex and South Bristol which combine very steep slopes very close to the lakeshore represent the greatest hazard of private property damage, public property damage and water quality impairments.
- Better regulation of steep slopes will have practical consequences. The disturbance of steep slopes has been a contributing factor in instances of damage to public and private property south of Menteth Point, north of Woodville in South Bristol, and along South Lake Road in Middlesex. **CLWA**

A Local, Organic Option to Lawn and Garden Care Around the Lake by Zack Sarkis

When making a decision on how to care for your property next season, why not consider organic vermiculture soil amendments? These worm compost products are great for both plants and the soil, and safe for humans, animals, and the watershed.

The products are called soil amendments because they work to rebuild and restore degraded soils - rather than acting as a temporary nutrient supplement to degraded soils, as is the case with most conventional fertilizers. They contain a wide spectrum of microbial life, nutrients, trace minerals, and essential bacterium, all which are crucial for soil health and root development.

The active microbial life in vermicompost works to create a regenerative healthy soil. This means less nutrient input is needed, once established, and reduces (if not eliminates) chemical fertilizer dependence. Furthermore, these products have a great impact in developing a healthy rhizosphere (the space around the roots), which aids in root development for plants, and increases nutrient uptake from the soil.

A hardier root means the plants are healthier and that the soil is more structurally intact. This combination can significantly reduce topsoil erosion, which we know is crucial for properties around the lake. A healthy soil is also more porous, which increases water retention - meaning the grass stays green longer, even during the dry part of the season. Also, the product has no odor (which is uncommon when searching for organic

lawn care solutions), and the phosphorus levels are below the DEC requirements established in 2012. It is also NOFA-Approved for organic farming/gardening, and your veggies or flowers couldn't be happier with anything else

It should also be known that the products are relatively affordable when compared to conventional fertilizers. Vermiculture products are being used on golf courses and lawns, in green houses and nurseries, and even on sports fields at local schools in the area. Testimonials confirm that they help grass grow where it didn't before, keep grass green when it's dry, and increase plant life and vitality wherever they are used. And you can find local producers including Hi-Zor farms in Seneca Castle (between Canandaigua and Geneva).

An organic solution means fewer foreign chemicals entering our soils and our waterways, which is vital to maintain the health and integrity of our lake and watershed. However, it is up to each one of us to make the right decision as we move forth!

So, whether you do it yourself or use a professional landscaping service, take the time to consider organic vermiculture products for your lawn and garden care this year. **CLWA**

For more information, contact Zach Sarkis at zbsark@gmail.com, or (585)-747-6340.

DONORS TO THE 2013 ANNUAL APPEAL

These 205 donors representing thirty-seven percent of our members answered the call of CLWA's first Annual Appeal. This is a tremendous response, clearly showing the real care our members have for Canandaigua Lake and its watershed. The over \$18,000 donated during the Appeal has been used for special protective and restorative projects in the watershed that would have been impossible without our members generosity.

We send you our sincere thanks. We expect to appeal to you again in 2014 and will soon provide you with a list of the projects you would be supporting.

James Adams
Shirley Adams
Anonymous
David Appelbaum
Arrowhead Landing Homeowners
Neal and Maggie Atkins
John Bacher and Beverly Reed
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Margie Guttenberg

CONTINUED ON PAGE 5



You've Enjoyed the Lake - Now Consider a Gift That Continues Giving...

Make a contribution to acknowledge or commemorate a friend or family member. We will print acknowledgements and memorials in *The Lake Reporter*.

Consider including the Canandaigua Lake Watershed Association, Inc. in your will or estate plan. Provide for the future of Canandaigua Lake by making a new will, modifying your existing will, or by including the Canandaigua Lake Watershed Association, Inc. in your revocable trust. Consult with your attorney or financial planner. Here is some sample language for an unrestricted bequest for general purposes: "I hereby give, devise and bequeath to the Canandaigua Lake Watershed Association, Inc., a nonprofit corporation in*

New York State, for its general purposes _____ dollars, or _____ percent, or all the rest, residue, and remainder of my estate." Of course, such bequests may also be dedicated to specific purposes of the Watershed Association.

*Our official name is the Canandaigua Lake Watershed Association, Inc., and this name should be used on all legal documents. Gifts to the Canandaigua Lake Watershed Association, Inc. qualify as charitable contributions to a 501(c)3 organization for federal income, estate and gift tax purposes.

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CLWA

Help Us Go Green and Save Green

We are quickly upgrading our electronic capabilities, and we want to be sure we have your accurate email address. In 2014 we plan to deliver information to our members more quickly and efficiently via email. For example, we will deliver our quarterly newsletter electronically to all members who provide their email address so you can open and read at your leisure. We also plan to migrate our membership campaign and Annual Appeal to electronic format, too. The fast and easy delivery of email will help us provide timely information on important municipal meetings, education events, and perhaps simple ideas to help promote vital initiatives for the watershed. Our goal is to provide you with more content electronically and help reduce our administrative expenses... all in effort to become more "green".

HERE'S WHAT WE NEED FROM YOU:

Already receiving email from CLWA to the preferred email address? Great, you should be all set. If not, please take a moment to send your name and preferred contact email address to us at info@canandaigualakeassoc.org.

Bonus Promotion Just for Members: Refer a Friend Program

Share our mission with your friends and neighbors. Ask them to do their part to protect the lake and join CLWA. We have many neighbors and friends in the watershed that are not members yet. Encourage them to become members today and be sure you ask them to say you referred them. Here's why: Be one of the top three referring members, and we will recognize you at the annual meeting this summer with great CLWA gifts to show our appreciation!

If you would like any literature to help you refer friends and neighbors to join CLWA, let us know at info@canandaigualakeassoc.org.

Thank you for helping us!

Find Us Online Anytime!

by Katrina Busch


The new CLWA Website and Facebook Page

www.canandaigualakeassoc.org



Find us on
Facebook

Our brand new website is now up and running. Here you'll find information about our organization including the education programs, hot topics, helpful links to other resources and even past CLWA newsletters. Be sure to visit often and be up to speed with what is happening in our watershed.

Find us now on Facebook too! We hope to increase our reach to lake lovers near and far in effort to continue to gain support in what we are all drawn together by: preserving, protecting and promoting our wonderful natural resource. Please comment and share your stories and pictures. We'd love to hear about what the lake means to you and what you are doing to help. We will post information about what's happening in the watershed and helpful hints on how everyone can help keep our land healthy and water clean. 

Ontario County Sheriff Marine & Recreation Division Canandaigua Lake Report for Summer, 2013 (May - September)

with thanks to Lt. William Gallagher, Jr.

The Marine and Recreational Vehicle (MRV) Unit operates year around and provides police services related to recreation related activity that takes place with boats, snowmobiles and all terrain vehicles in Ontario County.

This unit provides both education and law enforcement services related to the use of these recreational vehicles. During warm weather months, daily boat patrols are maintained on both Canandaigua and Honeoye lakes. Less often patrols are done on Canadice, Hemlock and Seneca lakes. Along with boat patrols on the lakes, MRV staff patrol areas that border the lakes, including parks, launch sites, and water treatment plants. They also answer calls related to navigation complaints on these waterways and aid disabled boaters as needed. During the winter season, MRV members provide snowmobile patrols as needed within the county. This unit also provides patrols using all terrain vehicles as needed in the county.

Members of the MRV unit operate 4 vessels, 2 of the boats are assigned to Canandaigua Lake, one is assigned to Honeoye Lake, and the other, which was put into service in late September 2007 is maintained on a trailer for use where needed. Two Whaler boats are assigned to Canandaigua Lake, one of the boats is a 2008 model and the other was new in 2011.

In 2013, the MRV provided patrols on Canandaigua Lake:

- Handled 175 service calls
- Assisted 24 disabled boats
- Towed 9 disabled boats
- Removed debris from Canandaigua Lake on 12 occasions
- Recovered 2 floating docks
- Recovered 3 vessels
- Inspected 398 vessels
- Issued 46 warnings for no personal flotation device (PDF), no registration, inadequate equipment, no fire extinguisher, bow riding, Personal Water Craft (PWC) after-hours, no lights, speed
- Issued 11 tickets- no PDF and no safety certificate on PWC and no spotter
- Investigated 2 boat crashes and 1 boat fire
- Investigated a stolen paddleboat
- Investigated seaplane crash on the lake assisted with recovery and removal
- Searched for drowning victim two days before recovery
- Answered three after-hours callouts for emergencies
- Checked and replaced equipment, washed boats
- Assisted Ontario Co. Sheriff's Scuba Team with training
- In-service training for boating, navigation, range, noise enforcement
- Escorted fireworks barge, assisted fireworks display, Finger Lakes Triathlon, Naples Grape Festival and Ring of Fire
- Gave special attention to Bristol Harbor, Deep Run, Onanda Park, Butler Swim Beach, Ontario Park, Vine Valley, Kershaw Park, City Pier, Holiday Harbor, Crystal Beach, State Boat Launches, Woodville, Grimes Glen and Ontario County Park **CLWA**

NEW STATE LAW REQUIRES BOATERS TO MEET EDUCATIONAL AND SAFETY STANDARDS

Law extends requirements which previously only applied to personal watercraft

Governor Cuomo signed a law on September 27, 2013 that requires all boat operators to obtain a boating safety certificate by completing an 8 hour safe boating course. The law will be put into effect over a period of years, beginning next year with all 18-year-old boaters. Certificates can be obtained and the safety course completed with the NYS Office of Parks and Recreation, U.S. Power Squadrons, or the U.S. Coast Guard.

2014 Photo Contest

The Canandaigua Lake Watershed Association will again sponsor a photo contest in 2014. So HEADS UP NEIGHBORS! Photos taken in 2014 of still life or animals in the Canandaigua Lake watershed area are eligible for this year's contest. And we are expanding this year to include a youth division, up to age 14 in addition to the non-professional adult photographers. Kathryn Wegman won top prize for 2013, and has had her photo featured on the CLWA website (www.canandaigualakeassoc.org).

Submissions to the contest must be made on our website by July 31, 2014. Prize winners will be announced at CLWA's Annual Meeting in August, 2014.

Watch for more details, and until then...GET OUT THERE! Explore the watershed on foot, by boat, by bike, by car or by air (if you are able). You will love what you see. Take some memorable photos...and Good Luck ! **CLWA**

Gift to Land Trust Helps Protect Canandaigua Lake

by Andrew Zepp, Finger Lakes Land Trust Executive Director

In August, 2013, the Finger Lakes Land Trust announced that it has received a gift of 9.2 acres of woodland located near Canandaigua Lake in the Town of Naples. The property was donated by Inez Lipman of Rockville, Maryland and her family.

The Lipman property consists of steeply sloping hardwood forest with more than 1,300 feet of frontage on State Route 21. The parcel is located adjacent to the extensive wetlands of New York State's Hi Tor Wildlife Management Area and includes all or part of five significant gullies. The property is considered a high priority for protection due to the important role it plays in helping to maintain water quality at the south end of the lake and because it is located in an Important Bird Area recognized by the National Audubon Society.

FLLT Executive Director Andrew Zepp says, "We're grateful to Inez Lipman and the Lipman family for this generous gift. This property is located within one of region's most significant wildlife habitats. Protection of the land will also help ensure Canandaigua Lake's water quality and maintain a scenic highway corridor that is enjoyed by local residents and many visitors to the region.

The property had been held by the Lipman family for many years and was originally acquired by the late Albert Lipman, Inez Lipman's husband and a Rochester native who considered the Naples area to be "God's country." According to his son Martin Lipman, "he would be pleased that this gift will help preserve open spaces and the natural beauty of the land." **CLWA**

Lake Levels - January 3, 2014

by Steve Lewandowski with thanks to Will Clark

Canandaigua Lake has been below the Guide Curve elevations since July. Evaporation was a major factor in the early part of this period. The City's gates behind Wegmans have been closed and flows through the Feeder Canal (required to be 35cfs or greater) have been adequate but not excessive.

All that came to an end with the big meltoff of snow and ice in late December and the first few days of the new year. Though the City's controlling gates have been opened, the lake measures 687.84 feet, 0.9 feet or 10 inches above the desired winter level of 686.9 feet above mean sea level. During the warm period the lake rose over 1.4 feet in just a few days, a good illustration of why the desired winter levels are lower- so that lake can collect more runoff without reaching flood levels.

City officials will continue to keep the gates open to return to winter levels because the recent snowfall will melt again.....

CLWA

Report from the Watershed Education Program

by Sharon Radak

The watershed education program got off to a buggy start this year as sixth graders at Canandaigua Middle School got up close and personal with aquatic insects known as macroinvertebrates. The students spent two days with educators Sharon Radak, Nadia Harvieux and Emily Staychock learning where the insects live and what they can tell us about water quality. They identified macroinvertebrates found in two area streams and tried to determine the water quality based on their findings. The students not only gained a great deal of knowledge, but they also found a new appreciation for the critters living in our surrounding waters. This is our eighth year working with the sixth graders at Canandaigua Middle School and we are always impressed by their insight and enthusiasm.

We helped to facilitate a service project this fall with seventh graders from Canandaigua Middle School. Within the Canandaigua Lake Watershed the students took to the streets close to their school and placed markers on the storm drains. These markers informed the public of the perils of dumping materials into the drains. The seventh graders have been a part of our program since they were in the third grade and are well aware of the importance of this project.

We are looking forward to a busy winter spending time with third, fourth and fifth graders in Naples and Canandaigua.

On a different note, Sharon Radak will be taking the position of Watershed Education Coordinator as Nadia takes on a new role with the Finger Lakes Institute. She will continue to help support our program in other ways. Not enough can be said for what she has done for this program. Thank you, Nadia, for all of your hard work and the countless hours that you have devoted to this program. It would not be what it is today without you. **CLWA**



Nadia Harvieux (left) and Sharon Radak

Urban Forestry for the Finger Lakes

by Christopher Luley, PhD.

Urban forestry may have a key role to play in the future quality of life in our communities, the quality of our local environment, and health of Canandaigua Lake. Compared to other areas of the country, it has mostly been ignored as a management tool in the Finger Lakes (and in New York State in general). This trend will likely continue unless concerted effort is made to include it in the suite of best management practices to offset development impacts. Urban forest management has the potential to help preserve the quality of our environment and lake while also allowing development to continue.

According to the USDA Forest Service as of 2000, 3.1 % of the U.S. land area was classified as urban yet it harbors nearly 80% of our population. This trend can be visualized every day locally, as more rural land is converted to urbanized development around our highly desirable lake watershed. Without mindful application of urban forestry

and planning, development will change the face and quality of our landscapes and lakes forever. Some of these changes are irreversible because of the nature of development, but many of the impacts are avoidable with better urban forest management and planning. Ultimately we do have a choice whether to enhance our local environment with good planning and forest management, or to allow our landscape and lake to degrade as we slowly convert forest and field to low quality (environmentally speaking) landscapes.

Urban forestry is defined as the management of tree populations in urban settings for the purpose of improving the urban environment. This definition is too restrictive, as the American Planning Association (APA) recently acknowledged in a review of urban forestry practices (see the CLWA website for a link to this publication). APA

CONTINUED ON PAGE 11

Secchi Disk Reading of Water Clarity - An Ancient Technique Put to Modern Use

by Dr. Bruce Gilman, Dept. of Environmental Conservation and Horticulture, FLCC

Like a primary care physician assessing your health through multiple tests, a limnologist will compile the results of several water quality tests to determine the overall health of a lake. One standard water quality summary is the Carlson Trophic State Index Score which uses winter levels of total phosphorus (an essential nutrient for biological growth), summer concentration of chlorophyll a (the dominant pigment in all algae), and secchi disk depth (a measure of water clarity). The secchi disk measurement has been used by limnologists for two centuries, first in Russia by a German naturalist Adelbert von Chamisso when he attached a whitened surface to a sounding line. As part of my monthly Canandaigua Lake sampling and monitoring program, I have been measuring secchi disk water clarity since the 1980's at two mid-lake stations. During the last four years, CLWA volunteers have collected weekly secchi disk data at twenty locations around the lake!

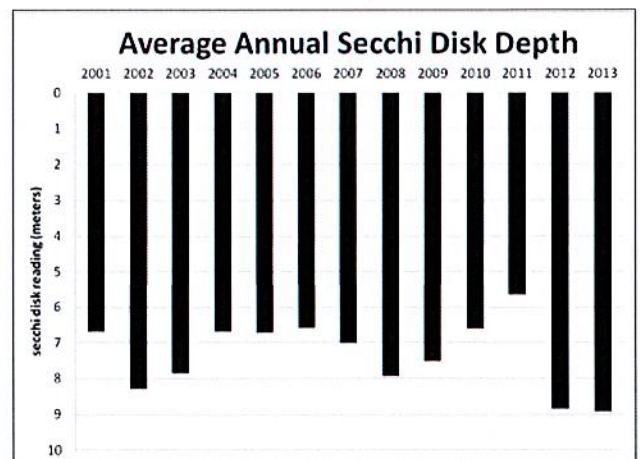
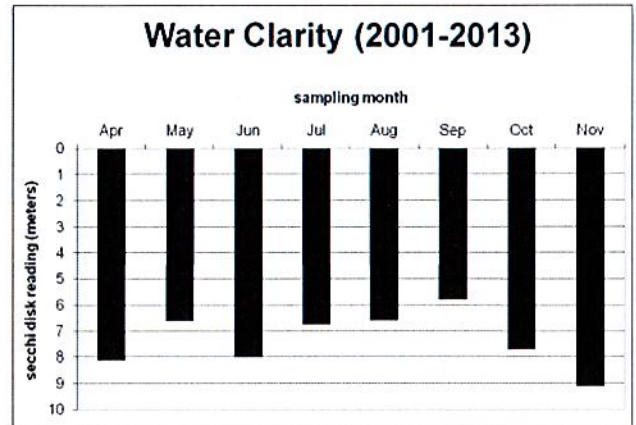
Seasonal patterns are evident during the biological growing season in Canandaigua Lake. The following chart illustrates average monthly patterns for this century.

In April, at the beginning of the growing season, lake waters are still cold and clarity exceeds eight meters. As algal populations begin to appear in May, the water clarity is reduced but it recovers during June when zooplankton hatch and begin to feed on the planktonic algae. However by mid-summer, young fish fry feed on the zooplankton and reduce the zooplankton's ability to suppress the algal populations.

In the warmer waters of summer, the algae that become dominant are called blue-green algae, classified as cyanobacteria. *Microcystis* is a genus of blue-green algae that has become common in Canandaigua Lake during late summer. With the return of cool waters in the fall, biological activity in the lake slows and water clarity improves. This year's fall clearing event produced average secchi disks reading exceeding 15 meters in November!

The long-term trends in secchi disk readings also show patterns influenced by lake biota. The following chart presents the annual eight month (April to November) average secchi disk readings during this century.

You may recall the massive 2001 foaming events on the surface of Canandaigua Lake produced by decomposition by-products following a collapse of the invasive zebra mussel population. My bottom dredge samples in 2002 showed high densities of small, year-old zebra mussels and, not surprisingly due to their filter-feeding on plankton, improving water clarity that year. But the story is not quite so simple because zebra mussels have a dislike for blue-green algae. Over the years, their selective filter-feeding leaves more and more blue-green algae behind and as a consequence the initial clearing of the water column is followed by progressively worsening water clarity. This same pattern was repeated in 2008-2009 when quagga mussels invaded the lake, virtually outcompeting and replacing their close relatives, the zebra mussels. The striking clarity the last two years may be related to a combination of invasive mussel effects and changing storm patterns that influence sediment loads delivered to the lake. With continued cooperative monitoring in the years to come, we will learn even more about the factors that affect water clarity and overall lake health. **CLWA**



Urban Forestry for the Finger Lakes

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recognized that that real importance of urban forestry is its intersection with the process of community planning, and about where and how planning can advance the goals and benefits of the urban forest.

Locally, I see that urban forest management principles desperately need to be integrated into our watershed communities, as well as into the planning and development that is expanding the urban fringe around the lake. This will require affecting management on several fronts: (1) management of trees in communities, i.e., existing treed urban areas on both public and private property (2) protection and preservation of forests and trees and natural features during development and construction in both developed and undeveloped areas, and (3) preservation of soils and natural features in developments where no trees are present so native trees and forests can eventually be re-established.

Clearly this is a very tall order because we are starting from a position where almost no urban forest management is currently being integrated into the planning process. In addition, most local communities are not practicing even minimal urban forest management. However, change is possible, as good examples do exist elsewhere in the country. There, urban forestry in the traditional sense (management of trees in existing urban areas) and protection of trees and forests in developing areas have been made high priority. In many cases, urban forest management and planning were finally integrated because the impacts without it were so significant that public demand drove its acceptance.

Here in the Finger Lakes there is no reason that we can't start with the basics, such as education, and work toward increasing levels of urban forest management and planning. Realistically, we are not that far behind because urban forestry as a discipline is relatively young, and large scale development is just starting to accelerate. Initial recognition of the importance of managing urban tree populations began with a catastrophic start a little over 40 years ago as American elm populations were decimated by Dutch elm disease throughout much of the United States in the 1960's and 1970's. Urban planners and managers recognized from that catastrophe that, without wise planning and management, urban trees could become as much of a detriment as an asset.

A variety of tools are available to aid in the planning and management of the urban forest. Computerized management of urban tree populations became common place in the late 1980's and early 1990's. Today we have computer models that can predict the environmental and economic benefits of urban trees (see iTree.org), and we can easily geo-locate and manage urban trees using online tree inventory and management tools. Urban trees as critical elements of the city infrastructure, or "green infrastructure," is slowly being accepted as a reason for increasing management of urban tree populations (see EPA document on storm water and urban trees at the CLWA website).

The science of arboriculture has also advanced significantly in the past 20 years. We know how to protect trees during construction and development and have advanced tree diagnostic methods at our disposal. Further, industry standards have been developed for nearly every aspect of urban tree management, from pruning and fertilization, to tree risk management and protection of trees during construction and development.

So, it is not a lack of tools, information or need that is in the way. CLWA's Board recognizes that urban forest management should be an important component of their watershed management strategy to maintain the quality of Canandaigua Lake. This recognition should begin an increase in the use of urban forest management around the lake to preserve the quality of the lake into the future. Future articles on urban forestry will focus on management tools and options that would be useful increasing the awareness and potential benefits of urban forest management in the Finger Lakes. **CLWA**



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