

The Oneida Lake Bulletin

Fall 2023

www.oneidalakeassociation.org

Water Level Management on Oneida Lake

By OLA President John Harmon

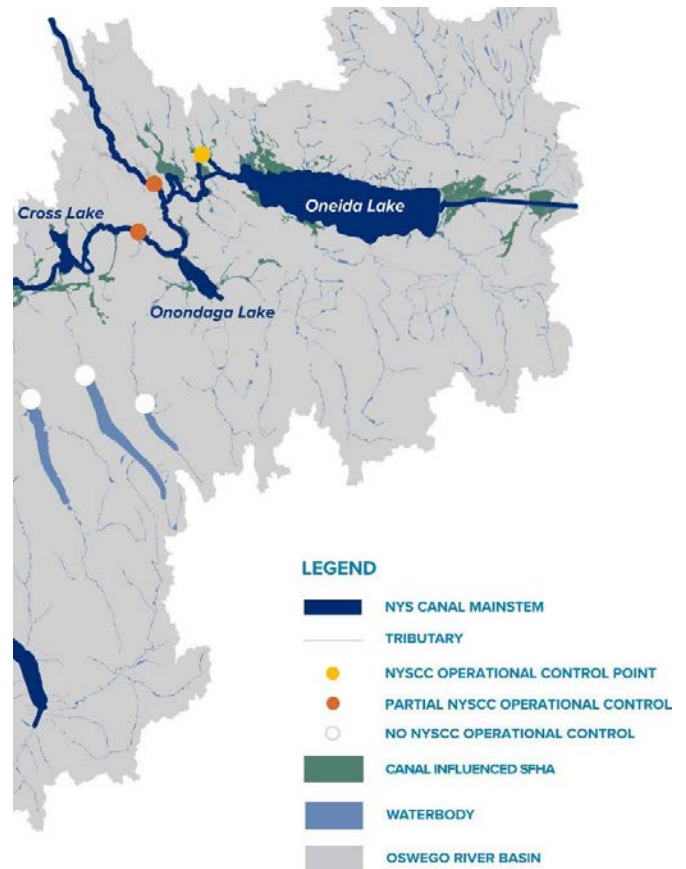
Pop quiz: Who remembers the optimal water level of Oneida Lake, measured in feet above sea level? Faithful readers of the *OLA Bulletin* will recall that in our last issue we discussed the critical issue of water levels on our lake. At the time of that publication, the Upstate Flood Mitigation Task Force was wrapping up its work, preparing a report to send to Governor Hochul on July 1st. **Fortunately, the Oneida Lake Association was a participant in that Task Force, offering our position and input during several stages of the study.** Directors John Harmon and Rip Colesante represented the OLA during these meetings.

As we know, only a few inches of change in the water level of our lake can cause major impacts. Six inches too high can send water several feet onto the shoreline, due to the shallow depths and gradually sloping lakebed. Docks quickly become submerged and boats start bobbing on their hoists. On the other hand, when the level drops by a foot, boat launches become unusable, dangerous shoals seem to reach up and seek out our boats, and we lose acres of navigable water. Of course, water levels are often beyond human control. As we stated in the last issue: Hydrologists plan; Mother Nature laughs.

The role of the Task Force, however, is to take whatever measures we can to avoid future flooding situations. Though the final report is several hundred pages long, filled with detailed technical information, and a host of super expensive recommendations, the Executive Summary

is much more approachable. **Readers can find this document on the Oneida Lake Association website.** However, we can summarize the document even further for you in a just a few pages right here.

Let's begin with the purpose of the Task Force. The report states that the New York State Canal Corporation is "tasked with conducting an in-depth examination ... of flood control study sectors and issues related to floodplain management, debris management, flood control and flood mitigation in the upstate flood mitigation region encompassed by the Mohawk and the Oswego River Basins." Although we do indeed care about our neighbors to the east, our focus here is only Oneida Lake, which finds itself in the Oswego River basin. Rebecca Hughes, Executive Deputy Director at NYS Canal Corporation, tells the OLA that "Foremost, the Upstate Flood Mitigation report and recommendations are the product of civil action; the communities impacted by recurring flooding called upon their legislators to advocate for their needs, and their representatives responded. And the Canal Corporation and other



appointed members of the Task Force took their mandate seriously, producing a report with real and tangible interventions for the impacted areas."

One specific goal of the Task Force is to "Assess Erie Canal operation procedures and plans which may have a direct or indirect impact on flood mitigation and flood management." As you know, Oneida Lake, as well as its major waterways on both ends, is a major sector of the Erie Canal.

(Continued on page 3)

President's Message

In my role as president of the OLA, I am often asked about my “leadership style.” My reply usually surprises most people. “It’s not about leadership,” I reply, “It’s about stewardship.”

Of course, like all successful organizations, the Oneida Lake Association needs great leadership. It’s one of the many “ships” that I wrote about in my last President’s Address. As we all know, we’ve had that for over 77 years. This leadership came in the form of past presidents, especially those who helped shape the OLA from its inception. Like the founding fathers of the United States, these early leaders had the foresight to develop a set of By-Laws—a Constitution of sorts—that outlined a system of collective leadership, in the form of a Board of Directors. As a long-time member of the OLA, I quickly learned that in our modern era, that’s where the true leadership of our organization lies.

As I was exploring the possibility of joining the Board, I was truly intimidated at the tremendous strength, intellect, and talents, of the current Board members. If I had asked myself, “Do I belong at the same table as these Directors?” the answer would be “Heck, No!” But if I asked the question a different way—“Can I make some positive contributions?”—then my answer changed. “I think so.”

After all, our current Board consists of folks with a wide variety of talents and experiences. Our list of Directors includes: A former director of the Cornell University Field Station on Oneida Lake. A former Director of the Fish Hatchery in Constantia. A Current DEC employee. We have the Executive Director of an environmental association. A practicing lawyer. Retired scientists. Retired Undersheriff of Onondaga County. An IT specialist. Data engineers. People who own their own highly successful businesses. A renowned fishing guide. There are also several Past Presidents of the organization sitting at the table. (And whenever their names are spoken, I see knowing nods of respect). And we have one Director who has served on the Board for 47 years! Do you think any of these brilliant men and women need leadership?

Of course, not. Instead, my role as president is one of stewardship, that is, by definition, the act of “overseeing and protection of something considered worth caring for and preserving.” Our Oneida Lake Association is certainly worth caring for. My prime responsibility, therefore, is not to take care of the lake. That goal is managed effectively and efficiently by the Board of Directors, working hand-in-hand with our many members who take an active role in supporting our mission. (For example, when our fishery was threatened by the alarming poaching incident in the spring of 2022, the Directors immediately mounted a response in opposition. We called upon our members to join us in communicating our position with elected officials and the misguided DEC leadership. We are grateful that many of you answered the call).

As I see it, my role is to take care of the folks who take care of the lake. Stewardship. That means giving them the time and tools to do the work that needs to be done. It also means volunteering to work alongside them with an eagerness to do the hard work. And it might even mean to get the heck out of their way!

I am so grateful to have the advice and counsel of this high-functioning, multi-talented Board. I continuously seek of the valuable advice of the many long-time members, and I listen carefully to the innovations and alternatives offered by our newly elected Directors.

My point is. . . Presidents come and go. But the true leadership of our organization rests with the talented members of the Board, as well as the many fine members of the organization who support us and rally to our cause whenever we need them.

John Harmon

John Harmon, President OLA
www.OneidaLakeAssociation.org
president@oneidalakeassociation.org

The Oneida Lake Association, Inc.

Founded in 1945

The Bulletin is published by the Oneida Lake Association, Inc., so that its members may be informed regarding the activities of the association. The Oneida Lake Association, Inc., was organized in 1945 to restore and preserve the natural resources of Oneida Lake and its environs.

Officers

President..... John Harmon
Vice President William Girvan
Treasurer Bob Walczyk
Secretary Matt Snyder

Board of Directors

Terms Expiring April 30, 2024

Anthony Buffa	Matt Kazmierski
Richard Colesante	Greg Keeneri
Robert Cote	Bob Walczyk
William Girvan	

Terms Expiring April 30, 2025

Patricia Cerro-Reehil	Michael Scanlon
Warren Darby	Kurt Snyder
John Harmon	Matt Snyder
William Lints, Jr.	Lance Vella

Terms Expiring April 30, 2026

William Alexander	Rowland Hrywnak
Ryan Asmus	Dr. Edward Mills
Mike Barretta	George Reck
Bruce Schantz	Amy Hetherington

Important Notice

On August 21, 2023, the President of the Oneida Lake Association resigned. The Nominating Committee immediately convened to select a new slate of leadership. They recommended that Immediate Past President, John Harmon, serve as President until April 30, 2024. They also recommended that former President Matt Snyder serve as President from May 1, 2024 to April 30, 2025. The Board ratified these nominations at the September meeting. The Board’s goal is to resume the regular schedule of nominations in time for the 2025 Spring Membership meeting.

Water Level Management

(Continued from page 1)

In fact, let's start with a quick geography lesson.

As you can see from the graphic, Oneida Lake empties into the Oneida River to the west. This westward flow meets the waters of the Seneca River at the junction known as Three Rivers. Here they form the Oswego River which then flows north onto Lake Ontario. To summarize, we have two small lakes (Cross Lake and Onondaga Lake) as part of the Seneca River system to the west, and then one very large Lake (Oneida) flowing through the Oneida River from the east. And all of this water meets in a single spot (Three Rivers), in order to flow north into Lake Ontario. You don't have to be a scientist to quickly recognize the problem during any high rainfall event.

Although we can't regulate the rain, the Canal Corporation does its best to monitor and adjust the flow of water through the Oswego River Basin. Although we often think that the Canal Corporation regulates water levels year-round, this is almost exactly half true. The Canal Corporation regulates the Seneca River from May through October during the navigation season. Because a considerable amount of ground water and precipitation is locked up in snow and ice during the winter months, there is minimal flooding threat until spring. In fact, according to the report: "Oneida Lake levels have not approached the Lake's initiation of flooding damage levels at any time in the last five years

during the non-navigation season. Oneida Lake levels have exceeded the initiation of lake flooding damage level twice during the navigation season in the last five years, but in both instances the gates at Caughdenoy Dam were fully opened as they are during the non-navigation season such that Canal System operations did not negatively affect flood levels."

Water level, therefore, becomes a management issue. One barrier to this management is that the Canal Corporation (NYSCC) has limited control of the water flow itself. Weather and gravity follow the laws of nature, and human enterprises do the best to manage what Nature brings about. We would like to think that a single, fair-minded, well-informed, highly funded agency controls the decision-making regarding the several water controls in our basin. That is far from the case. In the Oswego River basin, there are fourteen control points, places where human intervention can affect the water levels. These control points could be gated dams, hydroelectric power stations, or other outlets from the several lakes in the watershed. **Of these key control points, the NYSCC has jurisdiction over only five!** They control gated or movable dams at Lock 27, Lock 26, Lock 25, and Lock 23. They also control the critical Caughdenoy Tainter Dam that, in turn, controls Oneida Lake outflow.

Two other control points are regulated by independent power companies in Baldwinsville and Phoenix. And the other seven control points are under the jurisdiction of municipalities, such as the Skaneateles Lake Outlet, the Seneca Lake Outlet, and others. Some of these control points are indicated on the map above. Again, it is easy to see that each of these entities has competing values when it comes to controlling water levels.

In an era where there is a strong push to reduce carbon emission, hydroelectric power is an attractive, renewable alternative. In fact, there are a total of eleven hydroelectric facilities in the Oswego River basin. Although we support this

alternative power generation, the mission of independent power companies may be far different from the mission of the Oneida Lake Association. And each individual community, such as Skaneateles Lake or Seneca Lake, quite naturally, favors outcomes that are best for its own residents.

Recommendations

As you are reading, you have already guessed one of the recommendations of the Task Force. One recommendation identifies the following problem: **No single entity . . . has flood mitigation as its primary mandate when managing water releases from lakes and reservoirs.**

The Task Force recommended actions include the following:

- Establish a permanent, standing committee for [the Oswego River basin]
- Include water control entities, **community stakeholders**, NYSDEC, DHSES, and others
- Develop better flood operational strategies, coordinated releases, and improved communication

Here is where the OLA comes in. As stakeholders during the original discussions, we expect to remain active as this recommendation is enacted. The OLA is certainly a "community stakeholder" that represents the interests of hundreds of thousands of residents and millions of dollars in business revenues, especially agriculture and recreation.

The Task Force also made recommendations that are specific to the Oneida Lake watershed. The report states that **"There is limited flow release coordination during flood events and normal conditions. The Finger Lakes [including Oneida Lake] have some limited capacity to store water during a flood event, but they are governed by a Rule Curve, and a different entity controls discharge from each one. There is a significant amount of structures in Seneca River's Canal**

(Continued on page 4)

To submit questions or comments about *The Bulletin*, contact editor John Harmon at jpharmon1@gmail.com



**"Like Us"
on Facebook**

[www.facebook.com/
OneidaLakeAssociation](http://www.facebook.com/OneidaLakeAssociation)

Water Level Management

(Continued from page 3)

operations influenced SFHA from Erie Canal Lock E-25 and Cayuga-Seneca Canal Lock CS-1 to Erie Canal Lock E-24 that experience ‘nuisance flooding’ during events less than the 1% annual probability event.”

In order to address this issue, the report recommends:

- Use Numerical Watershed Models to estimate the benefits from using flood storage above each Finger Lake’s Rule Curve to provide a framework for watershed releases during high flow events
- Create a stakeholder group to review model results, including all entities that control flood water discharges or a tributary thereof, community stakeholder groups [such as the OLA], NYSDEC, and subject matter experts.
- Consider phasing of this group from initial group, to volunteer group, to water regulating district

Another related recommendation of the Task Force is to “**Increase Public Outreach, Education, and Communication.**” Specifically, this goal includes the development of “informal working group to include water control entities, lake associations, local governments, . . . NYSDEC, and others to develop an improved education strategy within the next twelve months.” The **Oneida Lake Association** expects to be an active part of this recommendation.

Since this study has committed to scientifically based actions, one of the first steps includes developing data driven models to help us understand the how changes in climate, terrain, infrastructure, etc would affect future water levels. Specific actions include:

- Enable scenario development and response simulation
- Complete land and water-based surveys and update with new surveys
- Consider partnering with federal forecasting and educational entities

- Develop hydrologic models using industry standard software

One other recommendation could have a specific impact on Oneida Lake’s waters. The Oswego Basin report singles out the Baldwinsville Dam (Erie Canal Lock 24) as a focus issue. The report recommends that there should be an analysis of possible alternative modifications to the dam, including an analysis of “possible upstream constrictions.”

OLA's Position

The leadership of the OLA appreciates the opportunity to participate on this important panel. In fact, as an OLA Director, I was asked to review the final document before it was submitted to the Governor. As part of my review, I made two suggestions to the Task Force. I wrote:

“1. A quick bit of addition suggests that funding all of the recommendations would amount to tens of millions of dollars. I’d like to see some suggestion of where or how these worthwhile plans would get funded. Eventually, there would have to be a prioritization of the individual items, since I doubt all of the recommendations would get fully funded.

2. There is no mention of the PROCESS of stakeholder input. For example, you had at least three meetings in which the progress of the Task Force was shared with the public and outside organizations.

I think the Governor and the legislature would benefit from knowing your commitment to seek stakeholder input. Even a brief added section would be helpful. Then, in that section, it would be great to mention the participation of the Oneida Lake Association—by far the largest of the lake-oriented organizations in both drainage basins. We support many of the recommendations offered in the report. We would also like our Position Paper included in this section. [Please see Page 5 for our Position Paper].

Rebecca Hughes, one of the directors of this project at the NYSCC wrote back to say: “This is something we can work on

as an added resource. As discussed during our final official meeting, there is interest in a resource that guides citizens in how to engage with their elected representatives. I think it would make sense to also list the various associations and interest groups involved in each region as well. Will keep you posted on that.”

She also stated that, “Now that the report is published, the onus is on agencies including Canal Corporation, Department of Environmental Conservation, the Department of Homeland Security and Emergency Services to advance the strategies identified to mitigate flooding. First among these is the pursuit of funding to create numeric models of the river basins so that we have a data-driven basis by which we can evaluate other interventions. Another immediate activity is improved coordination among water managers in the Oswego River Basin. It is important to remember that flood mitigation is complex and will take time as well as persistent advocacy. I am confident that the publication of the report is the first step in the right direction.”

The next step now is to await a response from the Governor’s office. As I stated, that response would have to take into account the many millions of dollars it would require to fund many of the recommendations. And we’ll see which freezes over first, our lake or . . . well, you know.

By the way . . . It’s 371!

OLA Mission

The Mission of the Oneida Lake Association is to protect the fisheries, wildlife, and natural resources of Oneida Lake by promoting science-based conservation and management through education and outreach, in partnership with our members and local communities.

Oneida Lake Association Position on Water Level Management

The natural resources, riparian property, and boating of Oneida Lake are irreplaceable and valuable assets. The people who value these assets have benefited greatly from **successful past practices in water level management** that the New York State Canal Corporation put in place since the mid-2000s.

Therefore, the Oneida Lake Association adopts the position that future water level management in the Oneida Lake watershed and the greater Oswego River basin should continue to abide by these same, successful strategies:

1. Water level management should promote the health of the Oneida Lake ecosystem and minimize spring flood damage by maintaining lake levels between 368.5' BCD (current winter draw-down level) and 373' (reported flood stage).
2. Strategies to manage Oneida Lake levels must not involve lowering Oneida Lake to any elevation less than 368.5'; must not involve removal of any natural shoals that may fix the winter water elevation in Oneida Lake; and must consider possible adverse effects on both Oneida Lake residents and residents downriver from the Caughdenoy Dam.
3. Water level management strategies should prioritize navigation (both inter-lake, via the Canal; and intra-lake, via trips from private docks and marinas on Oneida Lake). This should be accomplished by driving levels toward the high side of allowable levels from June through November, in particular by maintaining levels slightly above the maximum range of the current Oneida Lake rule curve during these months. This approach, which has been implemented since the mid-2000s, has proven to provide a buffer against drought during the summer and fall months without adverse effects. Going forward, summer and fall levels should continue to be managed toward the following targets:
 - a. 371.5' +/- .5' in June, July, and August;
 - b. 371' +/- .5' in September, October, and November; and
 - c. Natural winter draw-down levels, no lower than 368.5', starting Dec. 1.

These past practices in water level management have proven beneficial to summer and fall navigation, especially in October and November when anglers and waterfowl hunters are Oneida Lake's most numerous users. These practices have not caused adverse effects on people or properties on Oneida Lake or downstream.

Adopted unanimously by the Oneida Lake Association, Inc. Board of Directors and duly entered into the minutes of the Board's regular meeting of June 12, 2023.

Status of the 2023 Oneida Lake Walleye Population

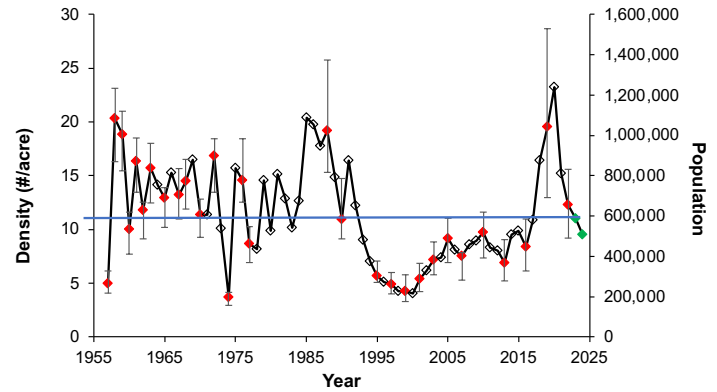
By Tony VanDeValk, Research Specialist,
Cornell University at Shackleton Point

Oneida Lake currently is home to a healthy adult (age-4 and older) walleye population. The lake’s population has historically varied from the lows of around 200,000 fish in the late 1990s to as high as one million in the mid-1980s and again in 2019 and 2020 (Figure 1.) The current adult population is estimated at around 630,000 fish—slightly above the long-term average of 600,000. The drop from around one million fish in 2020 is due to a combination of harvest and relatively low recruitment of young walleye to the adult population. We expect the addition of young fish over the next two years will be adequate to maintain the adult population near the current level. While it’s still too early to tell for sure, we expect the fish hatched in 2022 will increase the adult population in 2026, as initial indications suggest a strong 2022 year class.

The recent harvest regulation change appears to have had little effect on the adult walleye population. Beginning on May 1, 2022 anglers were allowed to harvest five walleye per day, an increase from the three per day regulation that was in place since 2000. The 2022 creel survey revealed that only 7% of the anglers interviewed reported harvesting more than the previous limit of three walleye per day. The additional harvest from the higher creel limit increased the total walleye harvest 12% above what it would have been if the regulation had not been changed. The total number of walleye harvested in the summer of 2022 was estimated at 107,000, so the 12% increase due to the regulation change accounted for an additional 13,000 walleye being harvested (only 2% of the total adult walleye population of 630,000 in 2022).

When we think of a fish population as it relates to a fishery, it’s easy to jump on the “more is better” bandwagon, but that may not always be the best scenario. The recent high walleye population years exhibited record low walleye condition indicating the prey fish numbers were not adequate to maintain walleye at weights more typical of years with lower walleye abundance (Figure 2.) Data from Oneida Lake show that walleye condition improves as the amount of prey per walleye increases (Figure 3), and this relationship becomes more pronounced as water temperatures increase. Extreme fluctuations in fish condition can be indicative of an unstable fish community which is usually undesirable from a management perspective. Walleye condition in 2022 exhibited signs of improvement and we expect condition to continue to improve in the absence of a high walleye population.

Figure 1



Annual abundance estimates of the Oneida Lake adult walleye population since 1957. Red symbols identify estimates from mark-recapture, open symbols identify estimates based on surrounding mark-recapture estimates adjusted for estimates of mortality and recruitment, green symbols are predicted, and error bars provide 95% Confidence Intervals. The blue line depicts the long-term average population.

Figure 2

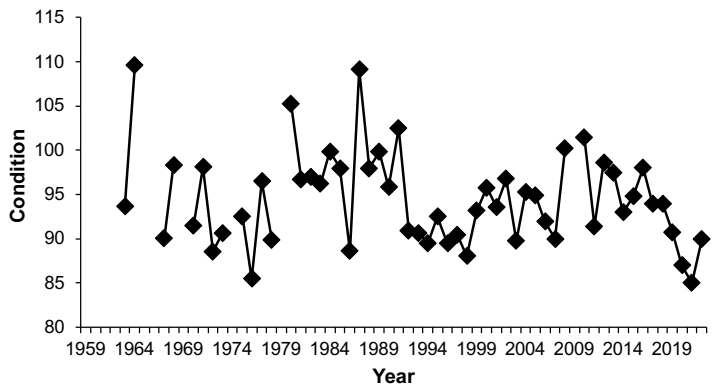
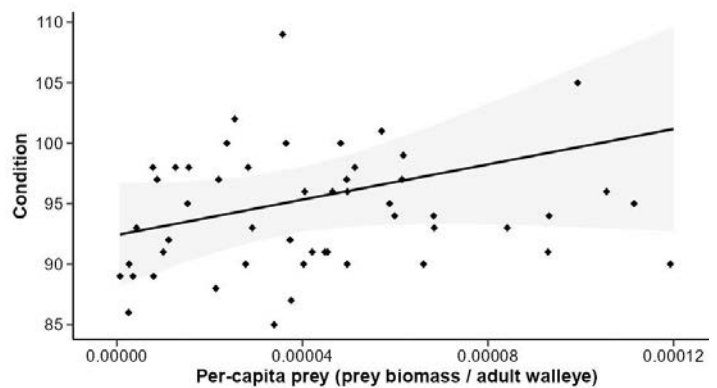


Figure 3



Walleye condition measured in the fall each year since 1963 (top panel) and walleye condition as it relates to the amount of prey fish available per walleye (bottom panel). Grey area in bottom panel provides 95% Confidence Intervals.

OLA Remembers Mike Bragman

by OLA Director Matt Snyder

The Oneida Lake Association is saddened to learn of the passing of OLA member Michael J. Bragman, who died on October 13. Bragman is best known as a 21-year member of the New York State Assembly. His contributions to conserving Oneida Lake are among the signature, lasting achievements of his time as an elected official. In 1990, OLA honored Bragman with its highest accolade, the Conservationist of the Year Award. The Association lauds Bragman as one of the most productive and passionate elected officials to ever work on behalf of Oneida Lake.

Out of the more than \$200 million in New York State funding that Bragman steered to Central New York during his time in the Assembly, many positive impacts were realized for Oneida Lake. Those include:

- Massive support for first responders on Oneida Lake, including funding for boats for Environmental Conservation officers, support for Air1's aerial search and rescue capabilities, equipment upgrades for local sheriffs' and fire departments' marine patrols, steadfast support for training academies to bring new law enforcement officers into the field, and constant work with agencies to allocate the maximum available resources to safety and conservation on Oneida Lake.
- Solidified state funding for operations at the Oneida Lake Fish Cultural Station and multiple physical plant upgrades, including the comprehensive renovation to the facility in the early 1990s and the addition of chillers to enable higher success rates in stocking operations.
- Creation and upgrades of the I-81 Fishing Access Site in Brewerton, which included new pathways, pedestrian bridges, elevated fishing platforms, and parking to support safe, convenient fishing.
- Funding and political support for cormorant management on Oneida Lake,

starting with the political impetus to kick off the public stakeholder meetings that ultimately led to New York State and eventually federal cormorant management. Cormorant management on Oneida Lake saved the walleye and perch fisheries, contributed tens of millions of dollars to the local economy, became a template for best practices, and Bragman was a tireless opponent of cormorant predation who presided over the project's formative days.

Bragman, a native and lifetime resident of Cicero, was born into a family of avid anglers and hunters who made great use of Oneida Lake. He graduated from North Syracuse High School and Syracuse University, then began his career

in public service in 1965 as a member of the Cicero Town Council and later, the Onondaga County Legislature. His greatest results were realized as a member of the Assembly, in which he served nine terms from 1981 to 2000. He was majority leader from 1993-2000, a period of unprecedented New York State investments in Oneida Lake.

Over the years, OLA was just one of many conservation organizations to honor Bragman for his tireless efforts as an advocate of hunters and anglers. Mike and his wife, Sue, raised their three children to share the same passion for the outdoors. Bragman's impact on his community and on Oneida Lake will not be forgotten!

Caughdenoy Rescue Boat

Submitted by the Caughdenoy Volunteer Fire Department

The Caughdenoy Volunteer Fire Department Inc. purchased a rescue boat, 6WR-1, in 2022. This vessel replaced our sixteen-foot GIII Bass boat that was donated to our department many years ago. This craft was built by Stanley Boats in Ontario, Canada and purchased from a broker at Antique Boat America located in Clayton, NY.

The vessel has a 26' aluminum Modified V hull with an enclosed cabin that can seat three adults. It is powered by a 200 HP Suzuki motor installed by Aqua Mania of Alexandria Bay. It is equipped with GPS, side and rear sonar, and soon a FLIR infrared system to assist with navigation and rescue operations at night.

The vessel's versatility is invaluable as it can be operated in shallow waters and can be beached if necessary. The vessel features a sixty-foot front-dropdown ramp with hand winch to easily load or offload personnel or equipment. It has a 5000-pound weight capacity and can comfortably transport and operate with four divers and equipment on board. 6WR-1 carries a Basic Life Support EMS bag and floating backboards. Additionally, it is equipped with an onboard detached water pump to assist with firefighting capabilities or pumping out a vessel taking on water.

The 6WR-1 features a custom vinyl wrap completed by Wayne Designs of West Monroe. The Bald Eagle head on the front port and starboard sides with the American Flag design, represents strength, courage, and freedom as well as highlights our devotion to service and love of country.

6WR-1 was docked in a private slip on the Oneida River off County Route 37. The slip was donated to the Fire Department for the 2023 summer season by Honorary Member and Owner/Operator of the Red Onion Grocery Store and Pizzeria, Bruce Rio.

We are extremely proud of this vessel and are prepared to serve mariners as well as our neighboring departments, not only on the river, but on the lake as well. We would like to thank the Oneida Lake Association for the opportunity to showcase 6WR-1 to our community members. Our doors are always open, and we welcome to the community to learn more about our organization.



Oneida Lake Mussels

By Wiley Gifford

Although Zebra and Quagga mussels are native to Eastern Europe in the Black and Caspian Seas, they have invaded countless freshwater systems across North America and Western Europe since the early 1990s. In 1991, Zebra mussels were first discovered in the Great Lakes and rapidly spread to countless freshwater systems in the Northeast including Oneida Lake, where they were first found in 1992. Quagga mussels quickly followed the Zebra mussels, invading the Northeastern United States in 1993. They did not have a significant presence in Oneida Lake until the early 2010s where they have since overtaken Zebra mussel as the more dominant Dreissenid species in the lake. Since the arrival of invasive mussels, native mollusks have suffered greatly; the productivity of these freshwater systems has decreased due to Dreissenids' efficient filter feeding mechanism. Shorelines have been altered dramatically by the mussels' sharp shells. Understanding these organisms is essential to repairing native ecosystems and mitigating damages.



Wiley Gifford on CBFS Limnology boat filtering mussel samples.

This past summer, as a Cornell University Undergraduate Research Intern, I worked at the Cornell Biological Field Station at Shackleton Point (CBFS) where my research mentor, Dr. Lars Rudstam, and I studied population dynamics of these invasive mussel species to better understand the regions in which they thrive. Specifically, I was interested in conducting a length-weight regression analysis to observe how lake productivity, water depth, and substrate impact the growth rates of Zebra and Quagga mussels. Over the first half of the summer, I worked alongside Dr. Rudstam, the CBFS staff, and David Andrews at the Upstate Freshwater Institute to sample Oneida Lake, Onondaga Lake, and Skaneateles Lake for mussel density and health. The second half of the summer was spent processing mussels at CBFS and analyzing data to attain several regression models.

We discovered that both Zebra and Quagga mussels thrive in more productive regions such as Oneida Lake and Onondaga Lake, as they are able to uptake more phytoplankton and use it as energy that can be devoted to growth. In terms of depth, Zebra and Quagga mussels are able to grow largest in mid-depth regions, specifically between 3 and 12 meters. Here they are able to uptake phytoplankton readily, yet they are not severely impacted by predation from the Round Goby and strong waves near the shallow shoreline. Lastly, we found that Zebra mussels are able to grow largest in rocky substrates, although they also do quite well in muddy substrates.

Quaggas, however, were significantly more successful in muddy substrates than anywhere else. This is explained by the fact that Zebra mussels tend to find hard surfaces to station themselves and attach their byssal threads while Quagga mussels have more of an ability to use organisms in their own species as an anchor to



Oneida mussels in drying oven - part of mussel processing for length-weight regression analysis.

attach themselves. This is an evolutionary advantage that has allowed Quagga mussels to overtake Zebra mussels in many freshwater systems.

Going forward, I am continuing this research throughout my senior year at Cornell where I plan to expand my data to include mussels from a fourth lake, Otsego and to explain how lake productivity, depth, and substrate impacts mussel density in addition to growth rates. I plan to publish a paper at the end of the academic year on mussel population dynamics with the help of Dr. Lars Rudstam. Lastly, I would love to thank the Cornell Biological Field Station, Cornell University, and Upstate Freshwater Institute for all of their help throughout this process!

Wiley Gifford is currently a senior at Cornell University studying Environment and Sustainability with a concentration in renewable energy and natural processes. She writes: "I am specifically interested in renewable energy, environmental law, environmental consulting, and oceanography."

The Big Red "Drop Box:" An Outreach Program for K-12 Education Around Oneida Lake

by Michael Geiler, science teacher in Claiborne County, Tennessee

New to the local school districts surrounding Oneida Lake this year is an outreach initiative I created as a Syracuse native and Paul Smith's College graduate student. As part of the college's final master's project, I revamped a program designed to bring aspects of Oneida Lake to the nearby high schools for students who would otherwise be unable to explore the lake on their own accord. As a math and physics teacher in Claiborne County Tennessee, I took previous work from the members of the Cornell Biological Field Station on the lake and adapted it to fit modern lesson standards.

The program, originally dubbed the "Big Red Box," was a large red tote-bin filled with various biological specimens from Oneida Lake along with laminated handouts that included games and activities that teachers would use throughout the school year. These activities were mostly geared towards high school students taking Living Environment (Biology). Teachers would need to visit the Field Station at Shackleton Point to receive an overview training on the contents of the box and their intended usage. Unfortunately, because the program was still in its infancy before the onset of the COVID-19 epidemic, the program was unable to receive much update during that time.

In an initial survey from participating teachers, I found that many of the original specimens, if still present, had degraded beyond acceptable use. Because of this, the revitalized program will provide students with the same specimens and more through a digital interface to avoid any degradation for the future. (The name for my project is based on the popular digital file sharing service "DropBox.") Although nothing can truly beat a hands-on experience, such as holding a walleye with your own hands, the provided specimens include high-quality and accurate

pictures of each species, as well as a list of facts about each specimen.

To supplement the loss of tactile learning, there are new activities included within the program designed to give students the opportunity to practice their biology knowledge and apply it to practical situations scientists would find themselves working on around Oneida Lake. One such activity, per the request of many of the surveyed teachers, is a game focused on managing the lake for invasive species prevention. In the game, several invasive species have entered the lake through a variety of means and students must spend (pretend) money to protect their portion of the lake. The only catch, each group has enough money to protect against roughly a third of the problems they will face, encouraging students to work

together to best protect the whole lake.

As a teacher myself, I know how difficult it can be to take time away from teaching lessons focused on preparing students for the Regents exams, and instead provide students with a different educational experience. That is why I used the modern Next Generation Science Standards to design each of the activities included in the program. Now, participating teachers will not have to feel as though they are losing days to diverge from the rigors of regular classroom instruction. Additionally, because the program is now digital, lessons and materials may be updated by the teachers themselves and shared with others in the building or even at other grade levels in the district. The program is expected to arrive in classrooms this school year.

Walleye (*Sander vitreus*)



Walleye (*Sander vitreus*) – The walleye is a very popular game fish found in Oneida Lake. They are named for their unique, hazy coloring of their eyes.

Average Length	22 and 42 inches
Average Weight	3 and 7 pounds
Age Lifespan	15 to 25 years old
Depth	10 to 40 feet
Diet	Zooplankton, small fish, crayfish, snails
Conservation Status	Least Concern
Closest Relatives	Yellow Perch
Schooling	Yes



SOUTH BAY SAIL & KAYAK

Located in

43 North Marina

32 Weber Rd, Central Square, NY 13036

We are now a sailing and kayaking store focusing on sales, service and rentals



We rent Hobie Mirage kayaks, Eclipses and Stand-up paddleboards by the hour, 4-hours, 24 hours, weekend and week



Meyer's RV & Marine

EXPERIENCE THE DIFFERENCE

8575 Brewerton Road
Cicero, NY 13039

855-907-0935

MEYERSBOATS.COM



**BOAT RENTALS
DOCKAGE
STORAGE
SERVICE
SHIP STORE
VALVTEC
FUEL**



BREWERTONBOATYARD.COM
BBYRENTALS.COM

5405 BENNETT ST, BREWERTON, NY
(315) 676-3762



43° NORTH MARINA

8 Weber Rd.

Central Square, NY

www.43northmarina.com

(315) 676-3536

admin@43northmarina.com

**Full Service Marina
Power boat sales
Heated and Rack Storage
Gas
Marine Parts
Repairs and detailing**



Brewerton Pharmacy & Compounding Center

PRESCRIPTIONS • SPECIALTY COMPOUNDING • HOME MEDICAL EQUIPMENT
SALES / RENTAL / SERVICE

- Bio-Identical Hormone Replacement Therapy (BHRT)
- Topical Pain Management
- Veterinary Compounding
- Dermatology
- Hospital Beds
- Lift Chairs
- Scooters & Wheelchairs
- Walkers
- Commodes

Serving Oswego & Onondaga Counties for 4 Decades!

Two Convenient Locations : Brewerton- 9679 Brewerton Rd~(315) 676-4441
: Central Square- 537 S. Main St~(315) 668-2659

BLANDING HARDWARE & BUILDING SUPPLIES

Gary, Don, and Dwayne Blanding

(315) 633-5731 blandinghardware@gmail.com
499 State Route 31 www.blandinghardware.com
Bridgeport, NY 13030



MARIANNE WHEELER
Vice President

mair@fremacmarine.com

315-633-2661

fremacmarine.com

1801 Route 31
Bridgeport, NY 13030



Capt. Tony Buffa's Fishing Charters

Oneida Lake, Lakeport, NY



Walleye Charters

We fish from my 28' Offshore

Email: capntony@twcny.rr.com

www.captaintonybuffafishingcharters.com

April through November

Call for reservations (315) 427-2278

REPORT TAGGED STURGEON

Sturgeon in Oneida Lake and nearby waters may be tagged. Biologists at Cornell University and NYSDEC need your help to track these fish. Yellow tags may be attached at the base of the dorsal fin. If you catch a tagged sturgeon, please write down the number on the tag and length of fish, release the fish immediately, and call Cornell University at (315) 633-9243 or contact NYSDEC at (315) 785-2262 as soon as possible.



Cornell Field Station
Bridgeport, NY 13030
(315) 633-9243



New York State
Department of Environmental
Conservation



FORMERLY JEFF BELL'S AUTO
BODY & COLLISION REPAIR

SCRATCHES & SCRUFFS • RUST WORK • COLLISION REPAIR • FULL RESTORATIONS
SATISFACTION GUARANTEED

PROUDLY SERVING THE ONEIDA LAKE COMMUNITY!

9168 BREWERTON ROAD, BREWERTON NY 13029

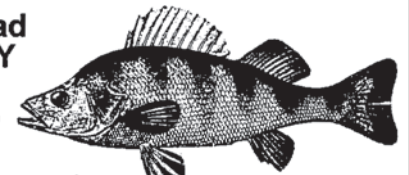
FREE ESTIMATES! • ☎ 315-698-5399 • www.centralcityautobody.com

Mickey's Bait & Tackle

715 South Bay Road
North Syracuse, NY

458-7998

An Oneida Lake
Tradition for over 50 years!



www.fishingcny.com

Spera's

est. 1982

Old-Fashioned Meat Market & Deli

Where You Can Talk to the Butcher

6250 Route 31 • Corner of Doreen Ave., Cicero, NY

699-4422

www.speras.net

email: mspera@verizon.net

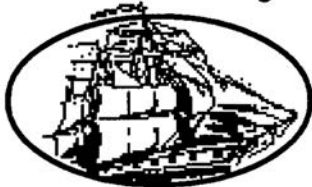
OLA

ONEIDA LAKE ASSOCIATION, INC.
PO BOX 3536
SYRACUSE, NEW YORK 13220-3536

NON-PROFIT ORG
U.S. POSTAGE
PAID
SYRACUSE, NY
PERMIT NO. 999

Like having **BOSTON** in *your* backyard!

Public
Boat
Launching!



Seasonal
or per
Launch

JOHNNIE'S PIER 31

— Restaurant & Marina —

OPEN YEAR-ROUND

Seafood-Steaks-Pasta

Overlooking Beautiful *Oneida Lake!*

Just 10 minutes from the Turning Stone Casino
Thruway Exit 34, Canastota, NY
3/4 mile west of Route 13 on Route 31

(315) 697-7007

www.pier31.com



Oneida Lake Association

Conservationists and Environmental Advocates since 1945

It's Your Lake. Keep it Clean.

www.OneidaLakeAssociation.org

ONEIDA LAKE

ASSOCIATION MEMBER

MEMBERSHIP \$8.00

**It's Your Lake
Help to Preserve It**

Complete information,
cut along dotted line and mail.

Oneida Lake Association, Inc.

P.O. Box 3536 • Syracuse, New York 13220-3536

Membership valid through April 30, 2024

Name _____

Street _____

City _____ State _____

Zip _____ Phone () _____

E-Mail _____

Check here if you would like to receive *The OLA Bulletin* electronically.

Please Support Your Advertisers