



June 2021

**Owasco Flats Wetland Restoration and Riparian Buffers Initiative Project**  
**Michele Wunderlich, Cayuga County Planning Department**

Cayuga County received two grants from the New York State Environmental Facilities Corporation’s Green Innovation Grant Program for the Owasco Flats Wetland Restoration and Riparian Buffers Initiative project. This project is located on City of Auburn owned land off of New York Route 38 in the Town of Moravia. The Owasco Inlet was reconnected with its floodplain with water control structures so that during high flow events water will flow into created and existing wetlands to filter out nutrients and sediment. The created wetlands are similar to natural vernal pools that have standing water for a short period after storm events. Riparian buffers have also been added along drainageways and the Owasco Inlet to further reduce nutrients and sediment inputs. Overall, the project will reduce phosphorus and sediment that reaches Owasco Lake while improving habitat for invertebrates, reptiles, amphibians and birds.

Phase 1 of the project included Basins #1 and #2 which were completed in 2018. Phase 2 of the project included Basin #3 as well as vernal pools and hummocks. Phase 2 is in the process of being completed and the second grant is being closed out. A future article will go more in depth on the project and include more photos once the seeding and plantings have a chance to fill in.

Owasco Flats Wetland Creation  
Basins 1 and 2 Completed



2015 Cayuga County Imagery - BEFORE



2020 Google Earth Imagery - AFTER

Even as construction has progressed, we have needed to conduct operation and maintenance of the Phase 1 portion of the project to meet our permit conditions. We have been assisted in this by Cayuga County SWCD, the Owasco Lake Watershed Inspection and Protection Division and the City of Auburn.

One of our permits condition is that we have to keep track of the water level in the basins for the first year of operations to help us understand how the basins are working. Cayuga County Planning, the Owasco Lake Watershed Management Council and the City of Auburn worked with Hyfi, a company that has a grant to install their water levels sensors in the Great Lakes Basin, to install water level sensors in the three Owasco Flats Wetland project basins. You can view the data from the basins as well as other tributaries in the Owasco Lake Watershed at <https://play.hyfi.io/d/3fU3UplGz/water-elevations-time-series?orgId=2>.



*Michele Wunderlich and Drew Snell install a Hyfi Sensor in Basin #3. Photo by Ally Berry.*

Another condition of our permits is to check the basins after they have filled to see if there are any fish present and to return them to the Owasco Inlet unharmed. We did a fish survey on April 13, 2021 and found no fish in either Basin #1 or #2. This is a good thing because it means the fish exclusion screens on the inlets to the basins are working properly.



*Michele Wunderlich, Drew Snell and Greg Diebold conduct a fish survey of Basin #2. Photo by Ally Berry.*

Our permits also require a certain percentage of our wetland plantings to survive. This year Ally Berry, Drew Snell and Michele Wunderlich added willows and red osier dogwoods to Basin #2 as well as to a channel at the back of Basin #2 due to poor survival of plantings. Cayuga County SWCD also conducted mowing of Basin #1 around our plantings over the winter as specified in our permits.



*Red osier dogwood.*

We also have to add stop logs in the water control structures in the summer because the elevation of the site is close to or just above lake level year round and the lake's level is higher in the summer. We want to fill the basins with the dirtiest flood waters possible so we need to adjust the basin inlet elevations at which flow is diverted so we don't get clean water entering the basins in the summer.



*Drew Snell, Ally Berry and Tehya Kloster add a stop log to the water control structure*

A big thank you to all those who have helped on the operations and maintenance of this important project.

### **Tire Collection Event**

#### **Doug Kierst, Cayuga County Soil and Water Conservation District (SWCD)**

Cayuga SWCD Staff worked in conjunction with Cornell Cooperative Extension of Cayuga County and the Cayuga County Department of Planning and Economic Development to carry out the County's Annual Tire Round-up that was held at the SWCD offices on June 12th. Special thanks goes to the Cayuga County Highway Department for assisting with the transport of the tires to NUCOR Steel and to NUCOR for creating availability to receive them for further recycling and for providing volunteers to assist in the event as well. Approximately 5,000 tires were collected and recycled during the event.



*Photo provided by Doug Kierst.*

**Cross Lake in Photos**  
**Lee Badman, Central NY Waterways**



*Seneca River joins Cross Lake at the South End near Big Island on the Onondaga County side.*



*Big Island at the south end of Cross Lake has many looks, depending on the season.*



*Cross Lake photographed from the north end on the Cayuga County side.*



*Cross Lake's many fish species are as interesting to watch as they are to catch.*

**Road Flares, Ring of Fire Celebrations, and Toxic Chemicals- Technological Advancements provide Opportunities for Safer and Environmentally Conscious Celebrations**  
**Ally Berry, Owasco Lake Watershed Inspection and Protection Division**

Celebratory traditions in the Finger Lakes region have served as a community foundation for lake appreciation for generations. These annual activities bring residents together in order to honor our serene landscapes and shared customs as a community.

Over the past four years, the Canandaigua Lake Watershed Association (CLWA) and Greg Talomie have been addressing the challenge of advising and educating the community of the Canandaigua Lake watershed and the greater Finger Lakes region about the environmental and safety concerns related to the 'Ring of Fire' tradition. Commonly, Ring of Fire celebrations involve light displays at night, utilizing conventional incendiary flares which produce dangerous compounds that can negatively impact the water quality of the Finger Lakes. The Ring of Fire event was originally a sacred, Indigenous tradition of the Seneca Nation, one of the largest nations in the Iroquois Confederacy, or Haudenosaunee. The tradition Genundowa, or the Festival of Lights, is an event that largely symbolizes gratitude. Today, The Ring of Fire event serves to illuminate the shores of Canandaigua Lake and other Finger Lakes. This lighting display of the shoreline through the use of conventional flares is nothing short of awe-inspiring, however, increasing concerns about the safety of incendiary flares has inspired a transition to promoting the usage of light-emitting diode, or LED, flares.

Chemical, or incendiary (burning) flares, otherwise known as "road flares," have been utilized for decades, and are reliable. However, traditional flares are considered "flammable solids," as they release dangerous potassium perchlorate and strontium nitrate when burned. These hazardous chemicals can cause adverse health effects, such as injury to eyes, skin, and respiratory system. Furthermore, the blinding light and smoke produced from these toxic flares create additional safety issues on the road. Traditional flares are hot enough to melt tires, skin, and clothing, and cannot be used where other hazardous materials are present, in high winds, or during heavy rain conditions. These limitations are hardly preventable or predictable, thus increasing the likelihood of harm. The size and duration of the use of traditional flares suggests a minimal impact to water quality, but when used in large numbers during Ring of Fire celebrations, at rates greater than common use scenarios, residual ash has a high possibility of contaminating nearby soil and water.

The Finger Lakes are sensitive drinking water sources and essential economic drivers that are currently threatened by pollutants that drive the increasing frequency of Harmful Algal Blooms (HABs) among

other water quality concerns. It is in the community's best interest to transition to the use of LED flares to protect themselves and their drinking water sources while participating in Ring of Fire events. LED flares are non-combustible, low-cost, waterproof, endlessly reusable, and do not contain hazardous materials that can burn the skin, eyes, and lungs. Furthermore, the lack of hazardous materials produced by LED flares lends not only to ambient safety, but also to reducing the contamination of the water and soil of the Finger Lakes. This alternative will allow for traditions such as the Ring of Fire to continue, while protecting water quality and the safety of participants.

In consideration of Greg Talomie's efforts with the CLWA, six of the eleven Finger Lakes' watershed organizations, including the Owasco Lake Watershed Management Council, have committed to advancing the transition from incendiary to LED flares. Through this dedicated and expansive campaign, Wegmans has agreed to sell LED flares for the first time! Starting June 5, 2021, Wegmans will be offering LED flares, while supplies last, providing customers with a choice to make the transition. Participating Wegmans locations (Auburn, Geneva, Geneseo, Jamestown, Corning, Hornell, Canandaigua, Newark, and Webster) will sell two-packs and four-packs of LED flares, and will release signage and a shelf display to signify its support of this integrated partnership. In addition, Wegmans has agreed to donate to the Owasco Lake Watershed Management Council (OLWMC) \$2.00 for each two-pack of LED flares, and \$6.00 for every six-pack LED flares sold, from June through September, based on the sales at the Auburn store.

The Owasco Lake Watershed Inspection and Protection Division (OLWIPD) of the OLWMC will continue to work closely with the watershed community, and dedicated partners such as the CLWA and Wegmans Food Markets to advance this exciting initiative.



*Greg Talomie from the Canandaigua Lake Watershed Association (CLWA) simulates the Ring of Fire event with LED flares for the first time. Courtesy of Lindsay McMillan and Katrina Busch of the CLWA.*

## **Cayuga County WQMA**

For more information about the Cayuga County Water Quality Management Agency, check out our website at [www.cayugacountywater.org](http://www.cayugacountywater.org). The Cayuga County WQMA is also on social media. For up to date information on water quality issues and events, please either friend us on Facebook at <https://facebook.com/CayugaCoWQMA> or follow us on Twitter at <https://twitter.com/CayugaCoWQMA>.

The Cayuga County WQMA is looking for story ideas for its webpage and its newsletter. If you have something you would like to share, please email us at [wqma@cayugacounty.us](mailto:wqma@cayugacounty.us).



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