



Owasco Lake Watershed Management Council (OLWMC)

October 15, 2019, 10:00am – Director’s Summary

As a reminder, the Advanced Harmful Algal Blooms (HABs) Monitoring Buoy data for Seneca, Skaneateles & Owasco Lakes can be found on, and downloaded from, the US Geological Survey (USGS) website. (<https://ny.water.usgs.gov/maps/habs/>). The USGS, in addition to conducting HABs monitoring with the New York State Department of Environmental Conservation (NYSDEC), operates the Owasco Lake water-level gage in the outlet near Emerson Park, and the streamflow gage in the inlet near Moravia. That work is done out of the Ithaca Sub-District office, but coordination and supervision come from the New York District office near Troy. The NYSDEC Finger Lakes Hub and the Owasco Watershed Lake Association (OWLA) coordinated HAB surveillance for Owasco Lake this year. An online fillable form that tracks the exact location of the HABs can be found at: on.ny.gov/nyhabs. As of Friday October 11th, there were three suspicious HABs reported for Owasco Lake within the previous two weeks, and over 40 observed suspicious blooms have been documented this year.

Owasco Lake Watershed Inspection and Protection Division (OLWIPD)

- On Monday, September 30th, following our recruitment initiative to increase the areal coverage for watershed inspections to help meet the needs of the potential rollout of new Watershed Rules and Regulations, Watershed Deputy Inspector, Ms. Kaitlyn Shanahan, started working for the OLWIPD. She has been actively engaging with the community, shadowing watershed lead inspector, Andrew Snell, during field surveillance, and has participated in a number of training activities. All employees of the OLWMC were trained on CPR and workplace harassment on October 1st. Kaitlyn also participated in a soil health workshop provided by Cayuga County Soil and Water Conservation District (CCSWCD) on October 7th. Kaitlyn will assist Andrew with monthly Watershed Inspection Reports, sharing her noteworthy field observations. Kaitlyn introduced herself at the October 3rd Water Quality Management Agency (WQMA) meeting. On October 9th, she shadowed the CCSWCD in the field for pre-construction planning for forthcoming flood mitigation projects along Oakhill Road in the Village of Moravia. Kaitlyn will be presenting at an Auburn City Council meeting on November 14th at 6 pm. She will introduce herself to City representatives and share with them what she plans to bring to the OLWIPD. I will

follow Kaitlyn's introduction to the City with a detailed description of the OLWMC proposed budget for 2020. The City of Auburn increased their government grant funding contribution to the OLWMC by 25% for the 2020 calendar year that matches our fiscal year. This increased contribution will vastly cover the costs of the Deputy Inspector position. It stands to reason the City will have the opportunity to meet Kaitlyn and consider the value their increased contribution offers to advance OLWMC activities. Over the long term, Kaitlyn plans to develop watershed science curriculum for presentations at schools throughout the watershed. We look forward to Kaitlyn's enthusiasm and willingness to engage with the community on watershed issues for the sake of improved land use activities that support the protection of water quality.

- We are encouraging greater involvement and collaboration between municipal code enforcement officers and the OLWIPD. Based on feedback with contact information from respective Director municipal representatives, we reached out to code enforcement officers for the Towns of Scipio, Summerhill, Locke, Owasco, Niles and the Village of Moravia requesting they engage actively with the division and inviting them to join us for our monthly meetings.
- The OLWIPD will promote a free salt calibration workshop with local watershed highway departments to be held at the Syracuse Fairgrounds Tuesday, October 29th from 7:30am-2:00pm. In partnership with the Central New York Regional Planning and Development Board, Onondaga County Soil and Water Conservation District, the CNY Stormwater Coalition, and others, this workshop seeks to educate municipal operators on safety, snow and ice removal materials and their impact on the environment, and the importance of salt truck equipment calibrations for the protection of surface water quality.

Cayuga County staff are summarizing and collating the public responses received regarding the draft Owasco Lake Watershed Rules and Regulations discussed at the public meetings held in May, 2019. The working group is preparing a summary document intended to organize and present the public feedback and provide detailed responses. It will be paired with a revised draft of the proposed Watershed Rules and Regulations that incorporates changes for consideration by the Steering Committee and the External Workgroup partners. Cayuga County staff will be reaching out to representatives of Tompkins and Onondaga Counties to ensure their feedback is considered in both the summary document and revised draft. The estimated completion of this process is by the end of October, at which point a follow-on meeting with the Steering Committee and External Workgroup partners will be scheduled to review the comments and responses, and present the revised draft. Following the Steering Committee and External Workgroup partner meetings, Cayuga County staff will share comments and responses publicly on the project website, and will provide the summary document and revised final draft to the Town of Owasco and City of Auburn elected representatives for their consideration.

Andrew Snell and I presented on OLWIPD activities and watershed dynamics, respectively, at the conservation Field Days at Emerson Park September 18th. Conservation Field Days is an educational event organized by the CCSWCD with district and partner presentations for school students to gain visual and hands-on knowledge about environmental conservation methods and

activities. The young students were an important audience for us to engage with to help us advance the Council's outreach and education objectives.

On September 25th, representatives from OWLA and the Finger Lakes Partnership for Regional Invasive Species Management (PRISM) discussed a future partnership for advancing invasive species management for Owasco Lake. It was decided we would collaborate during the Winter months and organize a meeting where PRISM can train interested partners on techniques for early detection and mitigation of aquatic invasive species and discuss the best path forward for working collaboratively. Scientific research has indicated aquatic invasive species are one of many features that drive HABs and may be an important feature to continue to research and target for reducing the occurrences of blooms.

Representatives from OWLA, Assemblyman Gary Finch of the 126th District, and I attended a HABs mitigation technology demonstration by the company Purus™ on September 26th at the Links at Erie Village in East Syracuse. The technology uses ozone rather than oxygen in an advanced aeration system to shred algae molecules. Unfortunately, the technology does not discriminate between toxic/harmful and non-toxic/beneficial algae, and may therefore pose a threat to critical food web dynamics. It is important to consider that fact that, although nutrient limitation is a target for reducing primary productivity and occurrence of HABs, the prevalence of HABs is based in part, on community composition dynamics. Nutrient conditions have not fluctuated much over the past decade and the lake is considered oligo-mesotrophic (i.e., having relatively low average nutrient concentrations).

On October 9th, I met with behavioral scientists from a company called Evidn, contracted by The Nature Conservancy (TNC) to research the motivations and barriers in place that influence the advancement of soil health practices in the Finger Lakes Region. Their company was tasked, and had some success, with embedding new behavioral skills for Australian communities where land use practices are considered to have an effect on the degradation of the Great Barrier Reefs. Evidn's research within the Owasco Watershed community may generate important tools for watershed education and outreach initiatives, encouraging community interest and engagement for improved land use and best management practices. Evidn plans to update us on their progress with a presentation end of this year.

The Hamlet of Locke, the State Engineer's Office of the United States Department of Agriculture (USDA), and I are working with the Hamlet on the submission of an income survey that may lead to project funding for the municipality. We were informed the applicant's request for authorization to complete an income survey needs to include:

1. The specific reasons why the applicant believes the census data for the proposed service area is not accurate.
2. A proposed reliable, impartial source not associated with the project that will conduct the survey.
3. Survey procedures including:
 - a. Methods of making contacts, and
 - b. An outlined format for reporting survey results, including a map to identify all potential users and those responding clearly identified.

Based on their median income statistics, the Hamlet may be eligible for funding for an engineer's report detailing municipal illicit connections within their stormwater system that can lead to further funding opportunities for projects to improve overall stormwater infrastructure. If there is indeed a reason to believe the census data for Locke may not be representative (e.g., omissions, duplications, erroneous enumerations, and errors of geography and demographic characteristics), Locke may be eligible for this income survey as a possible path for funding for your community.

With our required registration with NYS Grant Gateway complete, we are now positioned to compose proposals for state grant funding opportunities for nonprofit organizations that align with watershed restoration projects of interest. On October 3rd the NYS Department of Conservation (NYSDEC) announced they are accepting applications for Urban Forestry Grants. I plan to propose one or more projects with NYSDEC for support for reforestation initiatives that may include tree planting at Emerson Park, as part of a public planting and educational event, and a residential street side planting project. We will continue to look for grant support that might mitigate the financial impact of new Watershed Rules and Regulations on small farmers that operate on small margins. OWLA and I are discussing how we can best collaborate on grant proposals for future projects.

The 9 Element (9E) Plan is expected to be completed by August 2020. The 9E plan is considered a quantitative framework to help guide project effectiveness based on predictions for associated nutrient loading (i.e., reductions). Importantly, the completion of the Federal and State recognized 9E process is expected to be a pathway for future project funding.

Subsequent to the OLWMC's application for registration with the NYS Office of General Services (OGS), I was informed the Council is likely to be approved and may be issued an authorized user number for state contract pricing on future equipment purchases. A proposal to the Emerson Foundation was submitted with a request for financial support to meet the costs of equipment procurement for the OLWIPD. This potential partnership with the foundation would support opportunities to build capacity for the Inspection Division.

While we consider future project initiatives, it is important to consider the bandwidth that will be necessary for the OLWMC to physically implement projects. Some of this capacity may be granted through volunteering and community events, and in partnership with the CCSWCD. We have had great success with seasonal interns, and there may be some potential for growth there. I have also corresponded with Rob Hampton of the Student Conservation Association (SCA), and we are considering the details of a possible future partnership with SCA's Excelsior and/or Conservation Interns Programs. These programs can offer placement for seasonal support staff for implementing conservation activities.

As we continue to build financial capacity for the OLWMC, we are working on establishing a line of credit through a credit application with local Tompkins Trust Company Bank. We await potential approval of a business credit account.

The council continues to look forward to buy-in from the remaining towns within the watershed that have yet to join to help direct project initiatives. They include the Towns of Sempronius,

Groton, Venice, Genoa, and Sennett, and I encourage the board of directors to reach out to representatives from these towns to elicit their buy-in.

Governor Andrew Cuomo announced the launch of a pilot project to combat HABs and return clean water to the Village of Southampton's Agawam Lake. The pilot is directed by the New York State Department of Environmental Conservation and the Office of General Services in partnership with the Village of Southampton. The pilot project is part of the State's \$82 million initiative to study, respond to, and prevent HABs in New York waterbodies. The mobile algae harvester is supposed to separate algae¹ and other substances from the water and return the resulting filtered and improved water to the lake to abate the HAB. According to the announcement, the algae harvester uses technology that is employed within drinking water plants. Governor Cuomo said, "We are deploying new and innovative tools like the HABs harvester to address the algal blooms in Agawam Lake, and will continue exploring the latest technology to eliminate these blooms altogether and keep waterbodies around the state clean and safe. If this pilot works, then we will bring it up to scale and apply it across the state wherever possible."

Communications

Prior to today's council meeting, the Watershed Inspection Committee reviewed and revised a proposed budget for 2020. I will share the revised council budget in the near term so the board of directors may review and ask any questions before a request for approval at our November meeting.

On Thursday, October 17 at 7:00PM at the Phipps Auditorium in Macmillan Hall at Wells College, Dr. Katharine Wilkinson will present a public talk titled "*Drawdown Rising: Leadership, and a Path Forward for the Climate Crisis*". Wilkinson will speak to both what we can do and what we can be, to affect the change required to address the all-encompassing threats posed by the climate crisis.

Crystal Creek Organics, a consulting firm that presented at our August 20th OLWMC meeting, will present a brief update on their progress with phosphorus removal from manure at the next OLWMC meeting, November 19th. For the past three months, Crystal Creek Organics has been conducting a full-scale test of its phosphorous removal technology at Spruce Haven Farm in Union Springs, New York. The demonstration is being funded by NYSERDA, and involves the processing of 400,000 gallons of digester effluent. It "mineralizes" the soluble phosphorous, converting it into a compound that is not readily available to plants, and into a large particle size that makes it unlikely to move in the fields once it is applied. Crystal Creek Organics has made progress with drafting a proposal for Assemblyman Magnarelli of the 129th district of the NYS Assembly for a request for continued funding of the pilot project. The company plans to collaborate with the Cayuga County Planning Department to use the Soil and Water Assessment Tool (SWAT) model, supported by the USDA, and designed to evaluate the predicted outcomes of various nutrient reduction initiatives implemented in complex watersheds.

¹ There was no indication the technology is selective for toxic algae, leaving other beneficial algae unharmed.

Dr. David Matthews, Executive Director of the Upstate Freshwater Institute (UFI), is scheduled to present at the next OLWMC meeting as well. He will present on drivers and associated features of HABs based on the NYS HABs survey, tailored to the Finger Lakes, and UFI's internal Citizens Statewide Lake Assessment Program laboratory results. Please join us.