

Seneca Lake Water Quality Monitoring and Research Review Meeting- Nov.6, 2020

Attendee's: Rich Adams, Lisa Cleckner, Dan Corbett, Kelly Coughlin, Kaitlin Fello, John Halfman, Larry Martin, Lewis McCaffrey, Faye Phillips, Ed Przybylowicz, Bill Roege, Mary Rose, Ian Smith

Meeting Objective: High level review of WQ monitoring and research work done on Seneca Lake in 2020- reviewing scope of work, discussing key findings to date, and initiating thoughts on program adjustments for the 2021 season.

Brief Summary Points by Program:

- Stream Sampling (Pure Waters and 9E)
 - Sampling sites were somewhat trimmed for the 2020 season, but we now have a very solid chemistry data base for our streams, especially at base flow conditions
 - The dry summer affected ability to sample Kashong, and made for very limited storm flow sampling
 - Data to date is very representative of past years, minus the storm events
 - Ian collected stream mouth samples and stream flow data for the 9E project- 4 base flow and 2 (almost) storm flows
 - One last sampling of Keuka Outlet during Keuka Lake fall release is upcoming for 9E project inputs
 - Ian's help in sampling and getting all samples to Ithaca was very helpful
 - The old Montour Falls WWTP is now handling no waste and any impact on stream chemistry should be evaluated in past data
 - 2021 program may look very similar to 2020, minus the 9E sampling, with a minimum of doing all stream mouths for synoptic and storms sampling
 - Flow measurement of streams w/o USGS gauges should be included in 2021 as is possible with help from Ian
 - John Halfman has plans for discharge stage loggers on Castle, Wilson, and Kashong Creeks in 2021
 - Lew reinforces benefit of continued focus on Reeder Creek, with DEC interest and Army evaluations (looking to compare Reeder data to other nearby streams)
 - Suggested possible focus in 2021 on small streams, or "hot spots"
- HABS Monitoring
 - The SLPWA shoreline monitoring program is now very mature and runs well
 - 15 reported blooms, on only 7 days this year- a very light year for HABS on Seneca Lake!
 - Other Finger Lakes reported many blooms
 - Discussion of potential reasons for low blooms included windy/wavy days, lack of storms and nutrient inflow, low water levels in the late season, etc.
 - No sampling (and toxin testing) was done this year

- Field test kits were purchased but under utilized due to lack of blooms, though limited work was promising
- Volunteer force and lake shore coverage very good, and should be maintained for 2021
- Some level of sampling and toxin testing should be included in 2021
- Will look to evaluate test kits more extensively in 2021
- HABS Dock Monitoring
 - Data downloading is ongoing now
 - No blooms detected by cameras mounted on docks (lack of blooms)
 - No water chemistry sampling/testing done in 2020
 - Saw less rain, more sun, and changing wind directions
 - Some camera equipment issues
 - Report of results planned for end of December
 - Would like to continue in 2021, and will need some equipment renewal
 - John has continued work with Owasco Lake, where blooms were at a record level this year!
- FLI Research
 - Major focus of 2020 a joint project with Cornell looking at a molecular assessment of cyanobacteria, at top and bottom water layers near shore
 - Multi organization project using drones and a Corning camera/spectral technology continues, and caught one nice bloom on Cayuga Lake
 - John Halfman continues his lake sampling program on Seneca and other Finger Lakes
 - Future efforts to be focused on controlled experiments for specific relationships between nutrients and bloom response
 - Recently added post doc at FLI has optical/spectral experience and interest that can be brought to bear on these issues
- CSLAP
 - Got off to a late start but was able to get all 8 sampling trips in for all 4 teams
 - NYSFOLA has provided a report of observations (not chemistries) by site for 2020 season (Lew has distributed this to participants)
 - DEC report will be done this coming winter
 - If we choose to continue with 4 sites in 2021, will need to recruit one new team
 - Plan to look at '19 and '20 data for site to site differences as input to decision on sites for 2021
- Invasive Species Monitoring
 - Rake toss (Macrophyte Sampling) surveys done on 6 locations of Seneca throughout the summer and early fall
 - No primary thrust invasive species found in Seneca (Hydrilla, Starry Stonewort, Water Chestnut)

- Will plan to continue this monitoring in 2021
- Will look to support the boat launch stewardship efforts in some way, Covid dependent
- Cladophora Monitoring
 - Rich Adams initiated a survey process using HABS volunteers in the early summer timeframe
 - This is a major aesthetic issue for many lake dwellers and recreationalists
 - Will look to improve this effort in 2021
- DEC
 - Auto sampler project for rapid sampling of storm events on key tributaries did not occur in 2020 and will be dependent on funding availability for 2021
 - No stream sampling planned for 2021, and no winter lake sampling
 - Focus this winter will be documentation of work done to date
 - 2020 is the last year of the USGS/DEC buoy and data logging at the north end of the lake