

Governor Cuomo's HABs Initiative Update

Terry Gronwall, Honeoye Lake Watershed Task Force
Megan Webster, Ontario County Soil & Water
Conservation District

Governor Cuomo's HABs Proposal

December 21st, 2017

- \$ 65 Million Program to address the HABs issue in 12 High Priority NYS Lakes
 - Including Honeoye Lake
- DEC will developed a HABs Action Plan for each lake
- \$ 500,000 per Lake for HABs Action Plan Development
- ~\$ 60 Million to be shared by the 12 lakes for HABs Action Plan implementation
- Lakes chosen because they have either chronic toxic blue-green algae blooms, are a public water supply, or are a major tourist destination

Timeline

- January DEC started developing HABs Action Plan
 - Based on Draft DEC Total Maximum Daily Load Report
 - Recommendations from local steering committee
- Western Lake Summit Public Information Session
 - March 26 6-8 PM at Monroe Community College
 - Recommendations from nation panel of experts, local steering committee, and public
- DEC release of their draft HABs Action Plan for public review and comment expected in June 2018
- Grant Funding and HABs projects implementation will take a number of years

HABs Action Plan Funding

- Competitive DEC Water Quality Improvement Grants
 - Reimbursement grants
 - 25% local match required
 - Grant applications will receive 3 bonus points
 - 2018 WQIP grant submission deadline July 27th
- Larger action plan projects will require significant engineering and project costs estimates before applying for grant funding
- Will take a number of years to implement our HABs action plan

HONEOYE LAKE

Ontario County



Department of
Environmental
Conservation

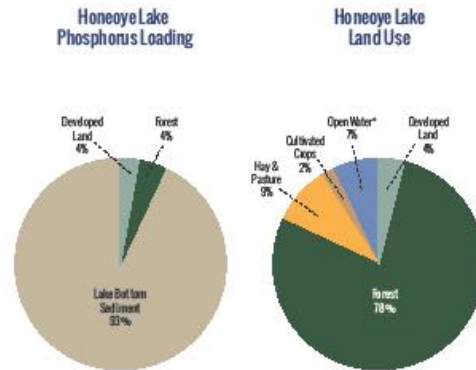
Department
of Health

Honeoye Lake is one of twelve lakes identified as priority areas of study because they are vulnerable to HABs, critical sources of drinking water and vital tourism drivers. These lakes represent a wide range of conditions and will improve our understanding of HABs to help protect and restore other vulnerable waterbodies.

Phosphorus pollution—from sources such as wastewater treatment plants, septic systems, fertilizer runoff from farms and yards—is a major cause of HABs. There are other poorly understood factors that appear to be contributing to the uptick in HABs, including higher temperatures, increased precipitation, and invasive species. The causes of HABs varies from lake to lake.



The black outline shows the lake's watershed area: all the land area where rain, snowmelt, streams or runoff flow into the lake. Land uses and activities on the land in this area have the potential to impact the lake.



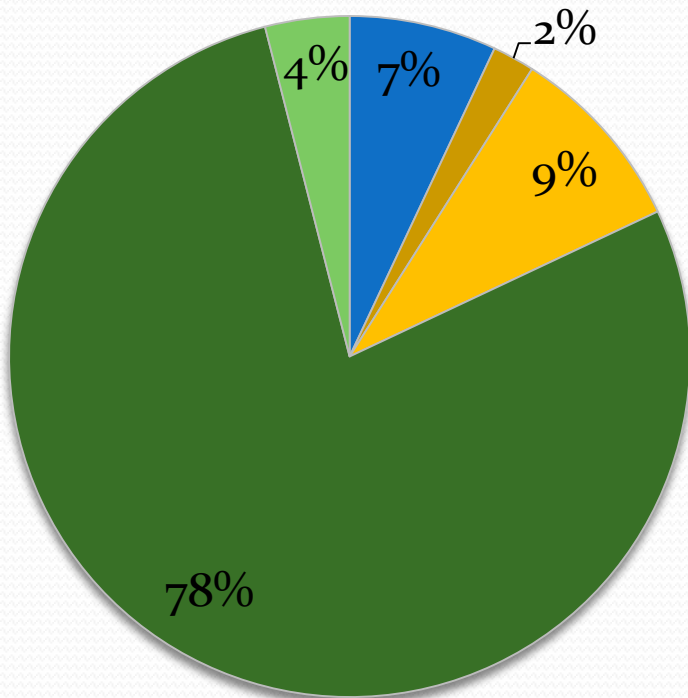
These charts show the percentages of different land uses within the lake watershed and an estimate of the amount of nutrients entering the lake from nonpoint sources.

*Open water represents all surface water (lake, rivers, streams) in the watershed.



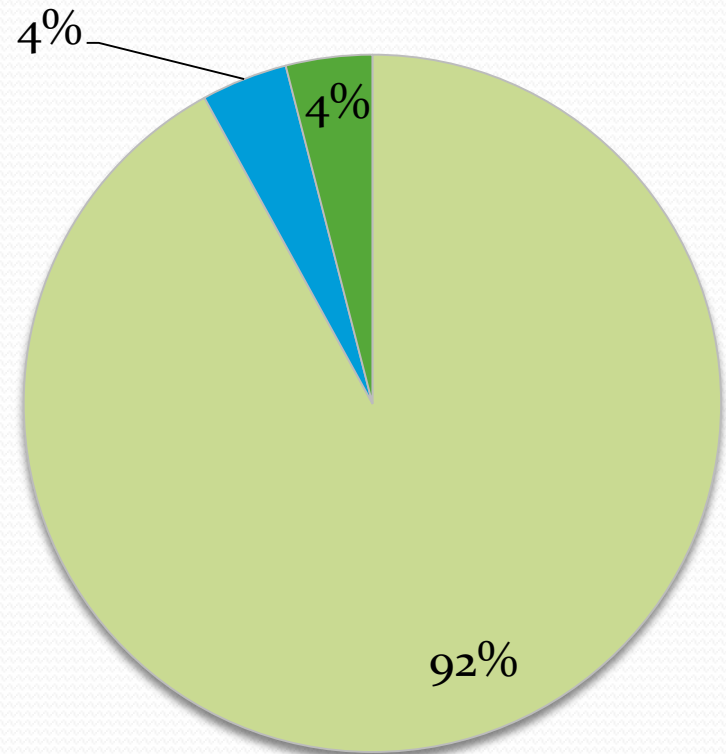
Honeoye Lake Land Use

- Open Water
- Cultivated Crops
- Hay and Pasture
- Forest
- Developed Land



Honeoye Lake Phosphorus Loading

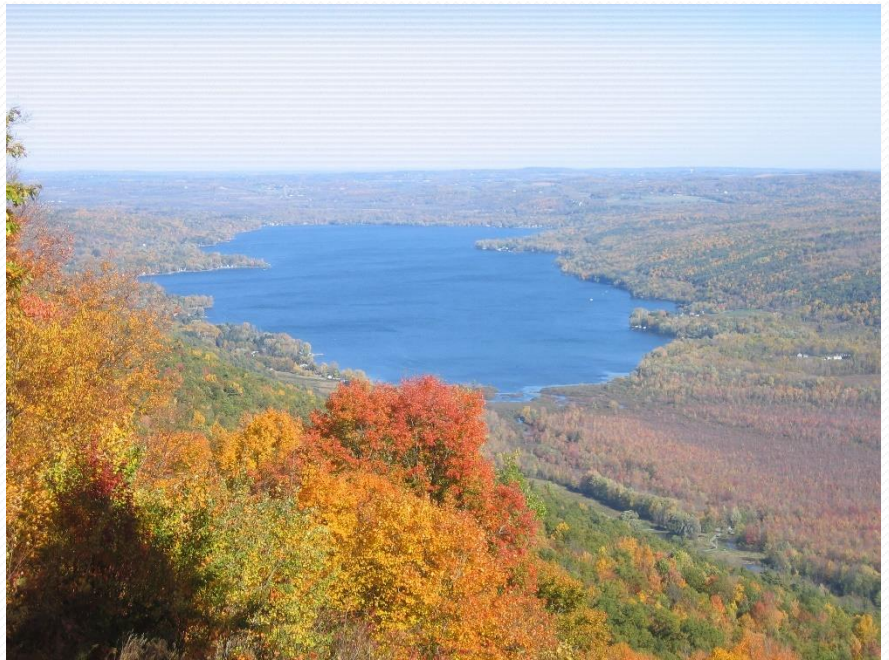
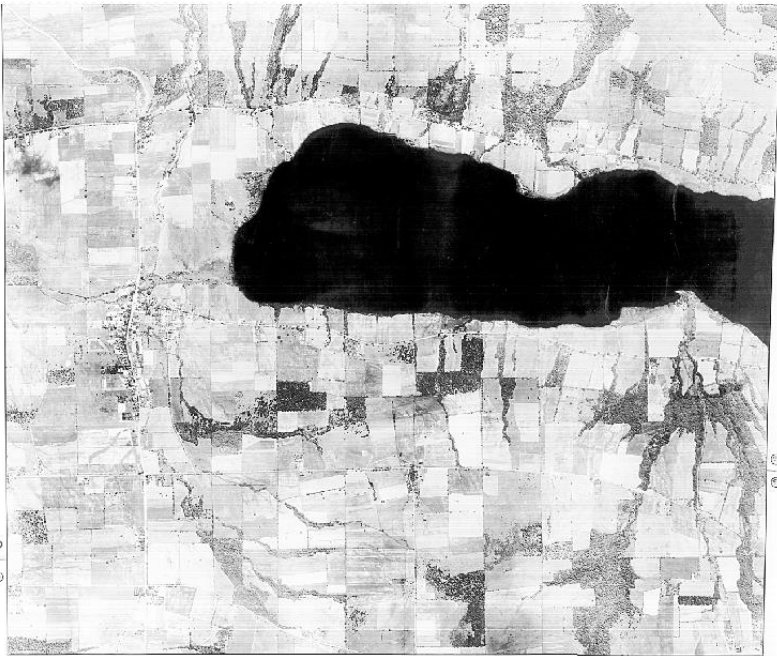
- Lake Bottom Sediment
- Developed Land
- Forest



Honeoye Lake Watershed Past & Present

1929 Aerial Photo

2018 Harriet Hollister Park



Summary of the Western Lakes Summit

HABs Causes

- **The largest source of nutrients to fuel HABs in these three lakes is from legacy phosphorus in the lake bottom sediments:**
 - **Honeoye 93%, Conesus 80%, & Chautauqua 55%**
- Understanding why HABs are increasing is complicated and expensive.
- Key driver of HABs is an increase in phosphorus and nitrogen.
- Other factors are:
 - Milder winters, fewer days of ice cover, Warming Water Temp,
 - Increase frequency of major rain storms due to warming climate
 - Wind direction and speed
 - Shape of the lake (depth, & lake orientation to prevailing winds)
 - Zebra and quagga mussels
 - Etc.

Summary of the Western Lakes Summit

Potential HABs Mitigation Strategies

- **Legacy lake bottom nutrient inactivation was a major focus of discussion by the experts:**
 - Alum, Aeration, and many other proven techniques.
 - There are positive and negative trade-offs for each potential mitigation technique.
 - The experts did not reach a group conclusion about the best technique(s)
- Reduce residential sources of nutrients (septic system repair, use no phosphorus fertilizer, private stream bank stabilization,)
- Use advanced agricultural Best Management Practices (BMPs)
- Implement storm water Best Management Practices (tributaries, roadside ditches,)
- Educational outreach for all stakeholders; county, towns, residents, farmers,
- Launch terrestrial invasive species (HWA, EAB,) control initiatives to protect the trees in our lake's watershed
- Etc.

Potential Internal Load Mitigation Projects

- Potential Internal Load Mitigation Recommendations
 - Alum Treatment
 - Aeration Destratification System
 -
- Next Steps
 - Engage a Certified Lake Management Consultant
 - Internal load study & make specific recommendations
 - Detailed engineering design for recommendations
 - Detailed project cost estimates
- Grant funding & permits dependent on successful 2018 DEC pilot project completion

Potential External Load Mitigation Projects

- Waste Water Treatment Plant Updates
- Septic System Program/Sewer Extension
- Stormwater BMPs
- Streambank & Shoreline Stabilization Projects
- Improved Riparian Corridors & Terrestrial Invasive Species Control
- Forestry BMPs
- Agricultural BMPs
- Education/Outreach on Landowner Practices

Next Steps

- Release of DEC's HAB Action Plan for Honeoye
- Future release of TMDL study for Honeoye Lake
- Public Comment Period
- 2018 Funding Opportunities
- Ongoing projects in Honeoye Lake Watershed

Thank You Questions

