

Oneida Lake Association

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Greetings!

Hello again members and friends. What a summer so far! Canal Corp has no difficulty managing itsguide curve for lake levels this month, with this drought – least amount ofrainfall recorded. Sunny and hot, "justthe way we like it!" I overhead a pairof bass boats salute this morning – there were at least two BASS and oneWalleye tournaments on the lake atsunrise. Scores of pleasure craftmotored to Sylvan Beach or Three Mile Bay, the PWC's, tubers, skiiers, kayakersand party boats were out in force all afternoon. By sunset the lake was calm and empty, save afew evening boats in search of deep walleye.

For some of you this is the firsttime you have gotten this electronic newsletter from the OLA. The Spring Meeting membership cards with youremail were recorded and scrubbed for current and future use. We hope that you enjoy this monthly dialogue. We expect some feedback (otherwise this is a monologue)via emails or Facebook.

Here is 'the news'!

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WATER CHESTNUT UPDATE: Volunteers will pullweeds July 29 from the Big Bay area. Ifyou have an interest in helping, contact an OLA Director ASAP.

Sadly, we have confirmation of a newinfestation off Lewis Point. We had anunconfirmed report last season, but Roy Widrig of Onondaga County CornellCooperative Extension and Tom Brookings from Cornell Biological ResearchStation confirmed the report this week, indicating presence of several plants. OLA asks residents of the area orangler/boaters in this area of the lake to pull the weeds. Put them in a plastic bag and dispose of themin the trash (if you cannot otherwise compost them well inland). To identify the plant **visit the OLA website** and review **Bob Johnson's description of vegetation** common in Oneida Lake orsee <u>http://www.sleloinvasives.org/about-invasives/target-species/water-chestnut/</u>.

NEW DIRECTOR: John Harmon of Cicero was elected to the Board of Directors July 11. John is a retired Skaneateles teacher and CurriculumCoordinator. John has editing an writingskills with an environmental avocation that will serve us well on the Educationand Outreach Committee (including enhancing the OLA Bulletin and *E-NEWS*.

The Board hopes to fill the one remainingvacancy with someone from the east end of our membership. We especially are interested in someone withsome legal or regulatory background. If you have an interest, or know of someone who may be, please contact a Director.

WATCH THE STICKER ON THE PUMP: A newly released survey by <u>Boating Industry magazine</u>points to ethanol as playing an even "bigger role" in service issues than it was just a year ago, with 87% of respondents reporting seeing boatengine damage caused by ethanol, up from 73 percent in the same survey in April2015. The survey, sent to a mix of readers from dealerships, marinas, engine and boat manufacturers around the country, was answered in April and May. Most notably, many respondents raised concerns of misfueling at roadside gas stations.

Signed into law in 2005, the Renewable FuelStandard (RFS) requires an increasing amount of biofuels such as corn ethanolto be blended into the gasoline supply. When it was written, the RFS assumedthat America's use of gasoline would continue to grow. Since 2005, however, gasoline usage hasactually declined steadily which today forces more ethanol into each gallon ofgas. To keep up with the RFS mandate, in 2010 the EPA permitted E15 (fuelcontaining up to 15% ethanol) into the marketplace. Even though E15 isprohibited for use in marine engines, snowmobiles, motorcycles, lawnmowers, andany vehicle made before 2001, it can now be found in 23 states (but notNY?). Boat Owners Association of TheUnited States (<u>BoatUS</u>) isurging all recreational boaters to send a message today urging the EPA to lowerthe ethanol mandates.

BRIDGEPORT CHITTENANGOCREEK PADDLEFEST: Starts at Stones Marina off North Road from12-5 PM July 31. Fun family event with prizes is aimed at kayakers, paddleboarders and canoeists or those interested in just spending a day `up thecreek' or wanting to play in the Bounce-house, Horseshoes, or Volleyball! Participation contribution is \$10 per person,\$15 per couple. Kids under 15 free when accompanied by an adult. Pre-SaleTickets will be available at the Chapman Park Concerts. This event is being sponsored by the Bridgeport-LakeportCivic Organization and others.

ONEIDASHORES PARK BOAT RAMP IMPROVEMENTS: Onondaga CountyDepartment of Parks and Recreation has applied for permit 7-3122-00034/00009from NYSDEC under Article 15 Title 5 Excavation & Fill in Navigable Watersand Section 401 - Clean Water Act Water Quality Certification. It proposes to repair and expand the OneidaShores Park boat launch. The existing concrete boat ramp will be enlargedlakeward 4,535 sq. ft, and 239.26 cu yds of stone rip rap will be used for lakebed scour protection at the toe of the new concrete pad. A temporary cofferdamwill be installed and water will be pumped out of the work area duringconstruction. Sediment and turbidity will be contained to the work area and will not discharge into the lake.

BOATLAUNCH STEWARDS. Amy Samuels, Education and Outreach Coordinator for the Onondaga Environmental Instituteasks that that anyone interested in volunteering as a boat steward shouldcontact her via phone (315 443-1757) or e-mail, <u>asamuels@oei2.org</u>

Boaters are reminded to remove any visible plant or animal from their boat, trailer, or equipment prior to launching a boat and again prior toleaving the boat launch. Also all bilge areas, live wells, bait wells and ballast tanks should be drained prior to launching and before leaving the boatlaunch.

MORE FROM THE BOOK:

Continuing some of the discussions regardingrelationships of physical, chemical, and biotic components of the lake thatcontribute to algal blooms, this month we are again referencing *"Oneida Lake: Long-Term Dynamics of a ManagedEcosystem and its Fishery"* as edited by a number of our associates atCornell, published by the American Fisheries Society earlier this year.

Prior to the arrival of zebra mussels, Phosphorous(P) was a water quality issue, with concentrations over 100 micrograms perliter (μ /L). Now, with concentrations in the range of 20-30 μ /L (or lower)scientists are speaking of the "oligotrophication" of Oneida Lake. For reference, in the old days we spoke ofOneida as eutrophic and the Finger Lakes as oligotrophic.

Since the 1970's the concentration of P has dropped. Restrictions on lawn fertilizers, eliminateof P in detergents, added municipal sewer systems, improved septic designs, andnew storm water erosion management has somewhat reduced nutrientladensediments from entering streams. Cornell'slong term data sets for plankton indicate this reduction in P has changed thelake, especially since zebra mussels arrived.

A concern now is for decreasing levels of algalcarbon (C). As the P loading declines, the C concentration is

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copepods



Daphnia

More mobile copepods can be more

conversely higher. Now with a C:P ratio under 300 there is concern that the Daphnia, onwhich young perch and walleye feed, population numbers may drop below a levelat which the zooplankton can maintain itself.

Total algal carbon has declined from 0.63 mg/L to 0.28 mg/L after zebramussels began water filtration. After2005 zooplankton biomass (both Daphnia and copepods – see photos) declined. Blue-green (BG or cyanobacteria) algae areessentially nonedible for the herbivore Daphnia. Important zooplankton like Daphnia arenon-selective filter feeders. It needsa healthy green algae concentration in the water column. selectivewhen grazing. Daphnia may graze/consumeBG algae, and thereby 'miss' the more nutritious green algae when the lake hasa bloom of cyanobacteria colonies. Inblooms the total phytoplankton biomass is high, but the 'best' food of Daphniacould be limited.

Light penetration increased, leading to morephotosynthesis, but it is by plants that do not help the base of the food chainfor juvenile fishes like perch, walleye, gizzard shad, and buckeye that thelarger fish prey on. In these postzebramussel years both food quality and quantity could be limiting the Daphnia, despite compensating mechanisms that the zooplankton have for surviving onmeager rations. There is growing concernthat the salmonid fishery of some of the Great Lakes is imperiled by a similar reduction in preyfish size and health, consequent to 'improved' waterquality. Further lowering of phosphorousin our waters may not be a good thing.

BEACH CLOSURES:

In earlier *e-NEWS* we have provided some of the physical, chemical, and biotic community processes on Oneida Lake, developing some lay background regarding changes. We have been leading up to a discussion of health advisories that lead to beach closures attributed to algae blooms. The OLA Board has some concern that mediaportrayal of a natural part of Oneida Lake's nature has caused many CNYresidents to opine that the lake is "dirty", "polluted", "filthy green" andgenerally a lousy place to recreate. Toomany people now equate blue green algae blooms with *s*ewerage bacteria. Some now fear letting their dog swim in the lake for fear of poisoning! We hope tobetter frame your perspective of Oneida Lake's health, and yours!

Oneida Lake today has sewer systems in all of its majortributaries, and circling the lake in all but about maybe 15 miles of its 55miles of shoreline. This is a guess, forthe complete documentation of extant and planned systems is not readily available GIS databases. Based on parcel andreal property data, there are over 600 developed properties in Onondaga Countywith frontage on Oneida Lake. Accordingto our sewer folks, the vast majority of those are on sewers.

The numbers for Madison, Oneida, and Oswego werenot obtained. Much of the south shore, but for from Shackleton Point to Lakeport, is on sewer. A system is planned and awaits funding inWest Monroe and Hastings for the Wedgeworth Point area and over to Brewerton. Sullivan has polled residents, and isevaluating a new district for the area north of Route 31, contingent uponfunding support from Albany and Washington.

The takeaway is that algae is not the likelyculprit when officials decide to close beaches. The weather and lake's physical chemistry are the triggeringagents. The protocols of the officialsvaries somewhat, but follow a general formula based on water sampling for pollution.

Common reasons for beach closuresinclude:

- Exceedance Bacterial indicator levels exceed thestate standard
- Predicted exceedance: Model A model based onenvironmental conditions predicts that water quality is poor
- Predicted exceedance: Rainfall Because of recentheavy rain, it is predicted that water quality is poor
- High waves Waves or rough conditions
- Turbidity Cloudy water that could prevent lifeguardsfrom being able to see swimmers
- No lifeguard When lifeguards are not available, beaches are closed
- Closed for end of season Beach closed for the season
- Cold water Temperatures below 50°F

For instance, at Verona Beach State Park, it is upto the manager of the park to close the beach. Parks has set procedures of follow regarding E Coli numbers and such that managers follow but eachmanager makes the call. Especially when it comes to blue greenalgae. NYSOPR & HP environmental management bureau in Albany writesmost of the procedures and consults with managers regarding beach waterquality. State Parks is unique in that it does not defer to the localcounty health department for our beach closures.

State Parks posts on itswebsite the results of weekly. Here's a link to the test results and someinfo on bathing beaches: <u>http://parks.ny.gov/recreation/swimming/beach-results/</u>. NYSDEC hassome information on blue green algae at

<u>http://www.dec.ny.gov/chemical/77118.html</u>, and a map of the blooms across the state at <u>http://www.dec.ny.gov/chemical/83310.html</u>.For additional information visit: <u>TheNYS</u> <u>Department of Health sanitary code</u>.

State Park beaches are sampled at leastonce a week for bacterial indicators of impaired water quality. Freshwater samples are analyzed for *Escherichia coli (E.coli)*. A resultequal to or above 235 *E. coli* colonies/100ml represents an exceedance of the state standard. Test results are available approximately 24hours after the samples are taken, as sample analysis takes approximately 18-24hours. Results will be posted daily at the park office and posted at the beachwhen there is an exceedance, results can also be accessed from this page andthrough a link available on the webpage of each park with a swimming beach. State Park beaches are closed whenthere is a known or anticipated risk to public health or safety. Beach signswill be posted and the public notified 18-24 hours after an elevatedconcentration of bacteria occurs. Thecauses of elevated bacteria levels are not always clear. They may be related toland uses in the watershed; stormwater runoff; naturally occurring sand or soilbacteria; or other factors.

Closure decisions are based uponmonitoring results in combination with other factors that influence waterquality, including water conditions (sewage overflows, cold temperatures, orhigh waves), environmental conditions (thunderstorms, strong winds), and historical data. This historical data on the frequency of exceedances and the drop-off rates of indicator bacteria from beaches statewide has been used to assign beaches to one of two categories.

- *Category 1*: These arebeaches with low rates of exceedance, satisfactory resample results within 24 hours, and/or wet sampling results.
- If these beaches are subject to an exceedance, they areimmediately resampled. If
 other water quality factors are satisfactory atthe time of resampling, the beach will
 remain open and the closuredecision will be deferred until the resample results are
 obtained. Thebeaches are closed following an exceedance if other water quality
 factors(such as current weather or beach water conditions) are not satisfactoryor if
 the sample exceeds a second time.
- *Category 2*: These arebeaches without sufficient resampling data or with unsatisfactoryresampling data.
- At these beaches, an exceedance leads to resampling andan automatic and immediate closure, along with notification of exceedanceand alerts issued to the appropriate media outlets.

Parks maintains a daily list of beach conditionsat

http://parks.ny.gov/recreation/swimming/beach-

<u>results/documents/results/BeachResults.pdf</u>and advises that for the most up to date status, call the park beforeyou go.

Oswego and Oneida County did not respond to theOLA inquiry, but we can assume that they generally follow with what AaronLazzara of the Madison County Department of Health reported. Madison County has one beach on Oneida Lake, asmall campground called Sunset Beach at Lewis Point in Lenox. ChapmanPark Beach in Sullivan has been closed for a couple of years for budgetary(life guard) reasons.

The process forbeach closure in Madison County is the following: Blue green algae conditions are visually observed in the bathing area by either the beach operator of staff from this department requires immediate closure and posting of closure. The NYSDOH Regional Office and NYSDEC along with themedia are notified of closures. Reopening of the bathing area is twofold.

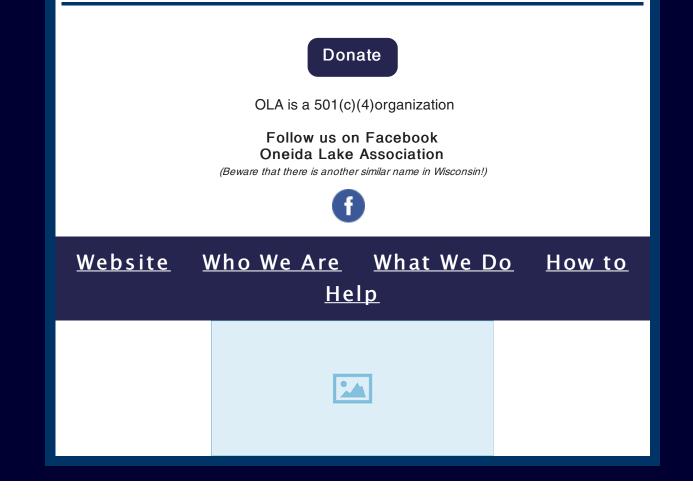
- 1. Visual observation that the bloom has moved outor dissipated from the bathing area for a minimum of 24 hours.
- 2. After 24 hours the water is tested onsite by ourstaff or by the beach operator. Any sample results with <10ppb formicrocystin will make a bathing beach eligible for reopening. We havetest kits here in our office but also require some bathing beach operators whohave a history of BGA to have kits onsite as well. If blue greenalgae reappears in the bathing area the process begins again.</p>

Blue green algae observed in a body of water butnot in the bathing area requires advisory posting and continue visualobservation. Madison, Onondaga and Oneida County all use the sametest kits; presumably Oswego does as well for areas such as Taft Bay inConstantia.

Onondaga County Historically samples all countybeaches for *E. coli* monthly duringtheir operating season. Subpart 6-2 of the NYS Sanitary Code for bathing beaches recognizes 235 *E.coli* per 100 ml sample as the upper limit for acceptablebacterial levels at bathing beaches. Acount above that level immediately warrants a repeat sample. If the second sample comes back above 235 *E. coli* per 100 ml the bathing beachoperator is notified by Onondaga County Health Department that they are toclose the beach. A press release isissued by the Health Department notifying the public of the closure, or if it's county beach the County Parks Department may issue the press release. Onondaga then conducts a sanitary survey totry to determine the reason why the counts are up. It also will continue to sample daily until twosamples with bacterial numbers below 235 *E.coli* per 100 ml are recorded. If waterquality conditions are expected to remain acceptable the facility operator canreopen the beach.

According to Onondaga County's Dave Czerkies ,"usually as the summer progresses and the water warms we start to see potentialproblems. Avian [geese] activity at thebeaches increases, bacteria live longer, algae and aquatic vegetation allnegatively impact water quality. Providedwe have a typical summer the beaches are usually in pretty good shape throughoutthe summer. Major weather patternchanges or avian activity are usually what cause changes to water quality. Whenever we become aware (usually by the beach operator) of changes to thewater quality through physical/chemical pollution or biological activity, weinvestigate, sample, continue to monitor and if necessary close the beach."

So, that is all for now. Please forward this email to any of your non-member friends and acquaintances who use Oneida Lake - especially you lakefront landowners! When issues arise that need the attention of your Board of Directors, there is strength in numbers.



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