

Millsite Lake Questions and Answers, 2014 CSLAP

Q1. What is the condition of our lake this year?

A1. Water quality conditions in Millsite Lake continue to be highly favorable. Water clarity is very high due to very low nutrient and algae levels. Aquatic plants are usually low or kept in control with herbicides- these were not needed in 2015. These stable water quality conditions lead to highly favorable recreational assessments.

Q2. Is there anything new that showed up in the testing this year?

A2. Chloride testing results were typical of lakes with low to moderate impacts from road salt runoff, although no impacts were measured or reported.

Q3. How does the condition of our lake this year compare with other lakes in the area?

A3. Millsite Lake had higher water clarity, and lower nutrient and algae levels, than the typical lake in the area. Aquatic plant coverage was much lower than in these other lakes in 2015, and herbicide treatments were not needed.

Q4. Are there any trends in our lake's condition?

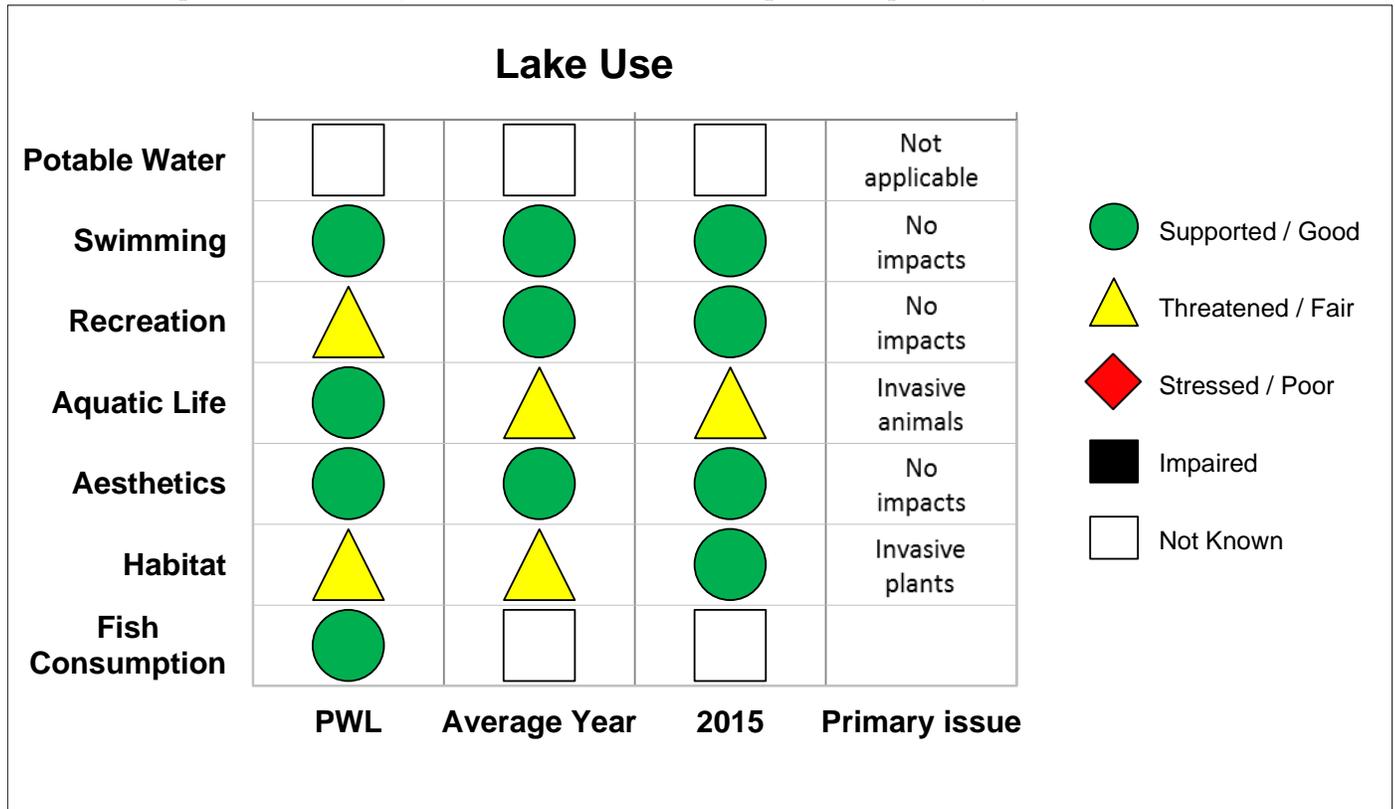
A4. Water temperatures at the surface and in bottom waters have decreased slightly over the last two decades. None of the other indicators has exhibited any clear long-term trends.

Q5. Should we be concerned about the condition of our lake? Are we close to a tipping point?

A5. Millsite Lake does not appear to be susceptible to shoreline blue green algae blooms, due to low open water nutrient and algae levels. No water quality problems are apparent or likely in the near future given the lake data.

Q6. Are any actions indicated, based on the trends and this year's results?

A6. Individual stewardship activities such as pumping your septic system, growing a buffer of native plants next to the water bodies, and reducing erosion from shoreline properties and runoff into the lake will help to maintain lake health by reducing nutrient and sediment loading to the lake. Visiting boats should be inspected to reduce the risk of new invasive species, since nearby lakes harbor several invasive plants not presently found in the lake.

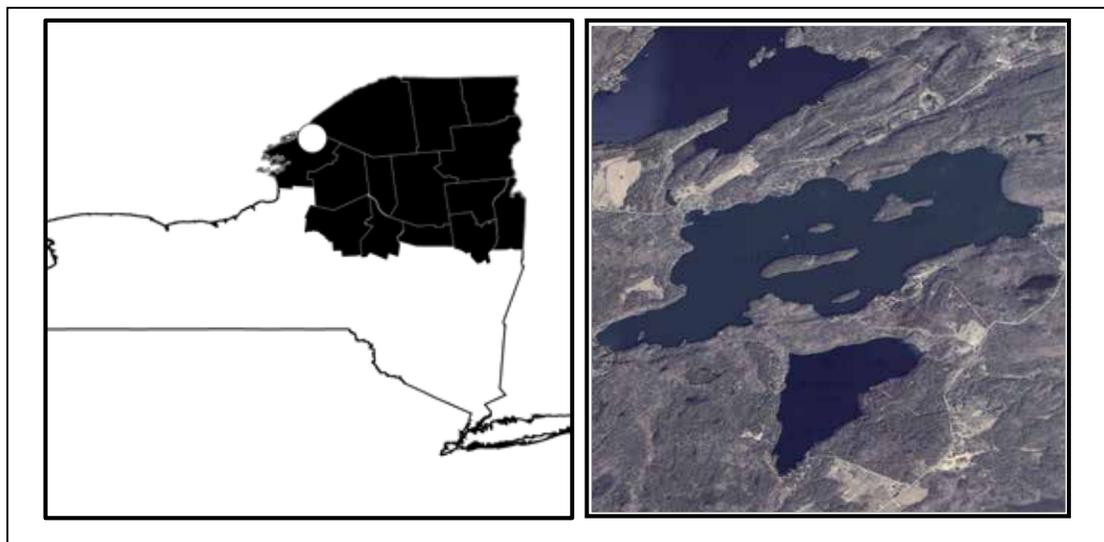


CSLAP 2015 Lake Water Quality Summary: Millsite Lake

General Lake Information

Location	Town of Theresa
County	Jefferson
Basin	St. Lawrence River
Size	204.6 hectares (505.4 acres)
Lake Origins	Natural
Watershed Area	420 hectares (1,037 acres)
Retention Time	13.7 years
Mean Depth	12.8 meters
Sounding Depth	24 meters
Public Access?	cartop launch
Major Tributaries	Outlet from Sixberry Lake
Lake Tributary To...	groundwater feed to Butterfield Lake to Black Creek to Black Lake to Oswegatchie River to St. Lawrence River
WQ Classification	B (contact recreation = swimming)
Lake Outlet Latitude	44.283
Lake Outlet Longitude	-75.792
Sampling Years	1997-2015
2015 Samplers	Janice Douglass
Main Contact	Janice Douglass

Lake Map



Background

Millsite Lake is a 505 acre, class B lake found in the Town of Theresa in Jefferson County, in the St. Lawrence River Basin area of New York State. It was first sampled as part of CSLAP in 1997.

It is one of eight CSLAP lakes among the more than 140 lakes found in Jefferson County and one of 26 CSLAP lakes among the more than 1650 lakes and ponds in the St. Lawrence River drainage basin.

Lake Uses

Millsite Lake is a Class B lake; this means that the best intended use for the lake is for contact recreation—swimming and bathing—as well as for non-contact recreation—boating, angling, and aesthetics. The lake is used by lake residents and the public for boating and other recreation via shoreline properties and a cartop launch. Lake residents also use the lake for swimming and bathing.

Millsite Lake is regularly stocked with rainbow trout- typical 500 eight inch trout each spring. It is not known if private stocking efforts occur at Millsite Lake. Open season on black bass is the third Saturday in June through the end of November, with a minimum length of 12 inch and a daily limit of five fish. The open season on sunfish and yellow perch lasts all year, with no size or daily take limits.

Statewide fish consumption advisories apply to Millsite Lake—no site-specific advisories have been issued for the lake.

Historical Water Quality Data

CSLAP sampling was conducted on Millsite Lake from 1997 to 2015. The CSLAP reports for each of the past several years can be found on the NYSFOLA website at <http://nysfola.mylaketown.com>. The most recent CSLAP report and scorecard for Millsite Lake will also be found on the NYSDEC web page at <http://www.dec.ny.gov/lands/77865.html>

Millsite Lake was sampled by the Conservation Department (the predecessor to the NYSDEC) in 1931 as part of the Biological Survey of the St. Lawrence River basin. Most of the water quality parameters measured through CSLAP were not included in this study of the lake. However, the limited water quality monitoring showed pH readings (= 7.5) comparable to those measured through CSLAP, and dissolved oxygen readings at the lake bottom similar to those measured at the lake surface. Contemporary data indicate that deepwater D.O. readings may be slightly depressed (based on slightly elevated phosphorus readings- see below), but these differences may not be significant. The field notes from this study reported the following:

“Millsite is a clear, deep lake with sand or rubble beaches. The shores are precipitous and wooded. The abrupt descent of the beaches into deep water and the lack of bays protected from the winds results in the scarcity of aquatic vegetation”

Millsite Lake was also sampled on July 29th, 2008 as part of the lake biomonitoring study conducted by the NYSDEC on about a dozen CSLAP lakes. Millsite Lake was the deep,

unproductive, non-Adirondack lake sampled in this study. The water quality sampling results from this limited study indicate conditions comparable to those measured through CSLAP. The profile data showed that the lake was thermally stratified (warmer water above, colder water below) at a depth of about seven meters, with very high dissolved oxygen readings in the upper portion of the hypolimnion, and sufficiently high throughout the water column to support both warm- and cold-water fisheries. Deepwater nitrate readings were slightly higher than those at the lake surface, but still well below the state water quality standards. Deepwater phosphorus, ammonia and iron readings were relatively low, indicating consistently high deepwater oxygen readings, although deepwater manganese levels were slightly elevated. None of the water quality data collected as part of this limited study indicated any water quality problems in the lake.

Surficial (surface) sediment samples were also collected as part of this study; approximately 50 separate compounds or contaminants are analyzed in these samples. DDT and PCB (total and fractions) were not detected in the sediments. Among the metals analyzed, antimony, arsenic, cadmium, cobalt, mercury, selenium, silver, thallium and tin were also not detected, and beryllium and vanadium were detectable but below “threshold effects concentration” (TEC), the lowest level of concern. Chromium, copper, lead, nickel and zinc were above the TEC but below the “probable effects concentration”. Readings below the latter in most cases translate to no significant harm to the environment.

Lake Association and Management History

Millsite Lake is represented by the Millsite Lake Property Owners Association. It is not known if the lake association is involved in any lake management activities, although the lake has been treated in the past with 2,4-D and recently with triclopyr to control nuisance weeds. It is also not known if the Millsite Lake Property Owners Association maintains a website.

Summary of 2015 CSLAP Sampling Results

Evaluation of 2015 Annual and Monthly Results Relative to 1997-2014

The summer (mid-June through mid-September) average readings are compared to historical averages for all CSLAP sampling seasons in the “Lake Condition Summary” table, and are compared to individual historical CSLAP sampling seasons in the “Long Term Data Plots – Millsite Lake” section in Appendix C.

Evaluation of Eutrophication Indicators

Algae levels were slightly lower than usual in 2015, resulting in an increase in water clarity. However, nutrient (phosphorus) levels were close to normal in 2015, and none of these trophic indicators has changed significantly over the last two decades. These data suggest that water quality conditions are fairly stable and highly favorable.

Water clarity readings decrease slightly in late summer into the fall, consistent with a slight increase in nutrient (phosphorus) and algae (chlorophyll *a*) levels over the same period. In 2015, phosphorus readings decreased in mid-summer, and increased into fall, but neither water clarity nor chlorophyll *a* (indicative of algae levels) exhibited any clear seasonal trends.

The lake can be characterized as *oligotrophic*, based on water clarity, chlorophyll *a* and total phosphorus readings (all typical of *oligotrophic* lakes). The trophic state indices (TSI) evaluation suggests that these readings are usually “internally consistent”- that is, each can be predicted from the other indicators. Overall trophic conditions are summarized on the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Potable Water Indicators

Surface algae levels are not high enough to trigger slight impacts from taste and odor compounds or dangerous chlorinated compounds associated with excessive algae, although the lake is not classified for potable water. Hypolimnetic phosphorus and ammonia readings in Millsite Lake are only slightly higher than those at the lake surface. Deepwater phosphorus readings were slightly lower than usual in 2014 and 2015, but deepwater ammonia readings were slightly higher than usual, but all readings were still fairly low. These data suggests that deepwater potable intakes should not be compromised. Potable water conditions, at least as measurable through CSLAP, are summarized in the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Limnological Indicators

Calcium readings were slightly lower than normal in 2015, but these readings have not varied significantly since the early 2000s. None of these indicators has exhibited any clear long-term trends. It is likely that the small changes in each of these indicators from year to year represent normal variability.

Chloride levels in the 2015 samples, conducted for the first time through CSLAP and cited in Appendix A, ranged from 5 to 12 mg/l. These values are within the lower end of the range of “minor” to “moderate” road salt runoff levels cited by the New Hampshire DES. These readings are well below the state potable water quality standard of 250 mg/l and below range of values found in a number of NYS lakes.

Overall limnological conditions are summarized in the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Biological Condition

The macrophyte data collected by SUNY Plattsburgh show relatively low plant diversity, and at least three exotic plant species—*Myriophyllum spicatum* (Eurasian watermilfoil), *Trapa natans* (water chestnut), and *Lythrum salicaria* (purple loosestrife)—were found in the lake. It is likely that there are other native plant species in the lake. Given the existing inventory information, the modified floristic quality index (FQI) for the lake indicates that the quality of the aquatic plant community is “poor.” However, it is anticipated that additional plant information would modify this assessment. Nuisance plant growth is controlled by Renovate (triclopyr), an aquatic herbicide, but the herbicide was not used in 2015 due to relatively low Eurasian watermilfoil growth.

The 2008 DEC macroinvertebrate survey results from Millsite Lake continue to be evaluated. The preliminary data show a small number of macroinvertebrate species, a low percentage of ETO (*Ephemeroptera*, *Trichoptera*, and *Odonata*) species (indicating moderate to poor water quality). However, the diversity index was high and percentage of tolerant species was low,

indicating a macroinvertebrate community sensitive to pollution (often indicative of healthy lakes). These apparently contradictory results preclude a definitive assessment of the macroinvertebrate community in the lake, although this may become more apparent with additional analysis of the data.

The fish community in the lake is comprised of a mix of coldwater (at least three species), coolwater (at least two species) and warmwater (at least two species) fish, suggesting a two-story fishery. Chinese mystery snail (*Bellamya chinensis*), an exotic species, has been found in the lake.

Zooplankton information has not been collected through CSLAP at Millsite Lake. The fluoroprobe screening analysis conducted by SUNY ESF in the last several years indicated very low algae and blue green algae levels. Open water samples are comprised of a mix of algae species. No shoreline blooms have been reported or sampled, at least in 2015 and in the last few years.

Biological conditions in the lake are summarized in the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Lake Perception

Water quality, aquatic plant, and recreational assessments were close to normal in each of the last three years, and these indicators have varied only slightly from year to years. Water quality and recreational assessments remain highly favorable, consistent with water quality conditions. Seasonal trends in lake perception have not been apparent in most years, including 2015, although aquatic plant coverage does increase through late summer and occasionally into the fall. Overall lake perception is summarized on the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Local Climate Change

Water temperature readings in the summer index period have decreased slightly since CSLAP sampling began in 1997, including 2014 and 2015. However, it is not likely that any changes in air or water temperature readings are indicative of local climate change in the lake, although this should continue to be watched.

Evaluation of Algal Toxins

Algal toxin levels can vary significantly within blooms and from shoreline to lake, and the absence of toxins in a sample does not indicate safe swimming conditions. Fluoroprobe readings have been well below the thresholds for harmful algal blooms (HABs). An analysis of open water samples show algal toxins readings well below thresholds identified as supportive of safe swimming. No shoreline blooms have been reported or sampled, and the lake does not appear to be susceptible to these blooms.

Lake Condition Summary

Category	Indicator	Min	Overall Avg	Max	2015 Avg	Classification	2015 Change?	Long-term Change?
Eutrophication Indicators	Water Clarity	3.45	6.64	9.65	7.28	Oligotrophic	Within Normal Range	No Change
	Chlorophyll <i>a</i>	0.09	1.83	8.89	1.24	Oligotrophic	Within Normal Range	No Change
	Total Phosphorus	0.002	0.008	0.020	0.007	Oligotrophic	Within Normal Range	No Change
Potable Water Indicators	Hypolimnetic Ammonia	0.00	0.03	0.19	0.04	Close to Surface NH4 Readings	Higher than Normal	Not known
	Hypolimnetic Arsenic							Not known
	Hypolimnetic Iron							Not known
	Hypolimnetic Manganese							Not known
Limnological Indicators	Hypolimnetic Phosphorus	0.005	0.025	0.094	0.011	Close to Surface TP Readings	Lower Than Normal	Not known
	Nitrate + Nitrite	0.00	0.02	0.22	0.01	Low NOx	Within Normal Range	No Change
	Ammonia	0.00	0.02	0.16	0.02	Low Ammonia	Within Normal Range	No Change
	Total Nitrogen	0.03	0.35	1.44	0.30	Low Total Nitrogen	Within Normal Range	No Change
	pH	5.21	7.75	9.13	7.92	Alkaline	Within Normal Range	No Change
	Specific Conductance	46	91	119	88	Softwater	Within Normal Range	No Change
	True Color	1	7	39	4	Uncolored	Within Normal Range	No Change
	Calcium	1.3	12.0	16.8	10.9	May be Susceptible to Zebra Mussels	Lower Than Normal	No Change
Lake Perception	WQ Assessment	1	1.1	2	1.0	Crystal Clear	Within Normal Range	No Change
	Aquatic Plant Coverage	1	1.9	3	1.5	Subsurface Plant Growth	Within Normal Range	No Change
	Recreational Assessment	1	1.1	4	1.0	Could Not Be Nicer	Within Normal Range	No Change
Biological Condition	Phytoplankton					Open water-low blue green algae biomass	Not known	Not known
	Macrophytes					Poor quality of the aquatic plant community	Not known	Not known
	Zooplankton					Not measured through CSLAP	Not known	Not known
	Macroinvertebrates					Inconclusive results- will require analyses from additional lakes	Not known	Not known
	Fish					Two story fishery	Not known	Not known
	Invasive Species					Banded mystery snail, Eurasian watermilfoil, water chestnut, purple loosestrife	Not known	Not known
Local Climate Change	Air Temperature	11	22.5	33	20.8		Within Normal Range	No Change
	Water Temperature	9	20.9	28	19.8		Within Normal Range	Decreasing Significantly

Category	Indicator	Min	Overall Avg	Max	2015 Avg	Classification	2015 Change?	Long-term Change?
Harmful Algal Blooms	Open Water Phycocyanin	0	5	36	5	No readings indicate high risk of BGA	Not known	Not known
	Open Water FP Chl.a	0	2	24	0	Few readings indicate high algae levels	Not known	Not known
	Open Water FP BG Chl.a	0	1	21	0	Few readings indicate high BGA levels	Not known	Not known
	Open Water Microcystis	<DL	<DL	0.9	<DL	Low to undetectable open water microcystins	Not known	Not known
	Open Water Anatoxin a	<DL	<DL	<DL	<DL	Open water Anatoxin-a consistently not detectable	Not known	Not known
	Shoreline Phycocyanin					No shoreline blooms sampled for PC	Not known	Not known
	Shoreline FP Chl.a					No shoreline blooms sampled for FP	Not known	Not known
	Shoreline FP BG Chl.a					No shoreline blooms sampled for FP	Not known	Not known
	Shoreline Microcystis					No shoreline bloom MC-LR data	Not known	Not known
	Shoreline Anatoxin a					No shoreline bloom anatoxin data	Not known	Not known

Evaluation of Lake Condition Impacts to Lake Uses

The 2008 NYSDEC Priority Waterbody Listings (PWL) for the St. Lawrence River drainage basin indicate that recreation and habitat in Millsite Lake may be *threatened* by exotic species. The PWL listing for the lake is shown in Appendix B.

Potable Water (Drinking Water)

The CSLAP dataset at Millsite Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, is inadequate to evaluate the use of the lake for potable water, and the lake is not used for this purpose. The limited CSLAP data indicate no impacts to "unofficial" use of the lake for this purpose.

Public Bathing

The CSLAP dataset at Millsite Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggests that public bathing, if conducted at a public swimming beach, should be supported. Additional information about bacterial levels is needed to evaluate the safety of the water for swimming.

Recreation (Swimming and Non-Contact Uses)

The CSLAP dataset on Millsite Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that recreation should be supported, although these uses may ultimately be *threatened* by the presence of Eurasian watermilfoil (*Myriophyllum spicatum*), water chestnut (*Trapa natans*) and purple loosestrife (*Lythrum salicaria*).

Aquatic Life

The CSLAP dataset on Millsite Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aquatic life may be *threatened* by elevated pH, and several exotic plants and animals. Additional data are needed to evaluate the food and habitat conditions for aquatic organisms in the lake.

Aesthetics and Habitat

The CSLAP dataset on Millsite Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aesthetics should be *good*. Habitat in some years may only be *fair* due to invasive weeds, although habitat was more favorable in 2015 due to lower Eurasian watermilfoil growth (even though herbicides were not used).

Fish Consumption

There are no fish consumption advisories posted for Millsite Lake.

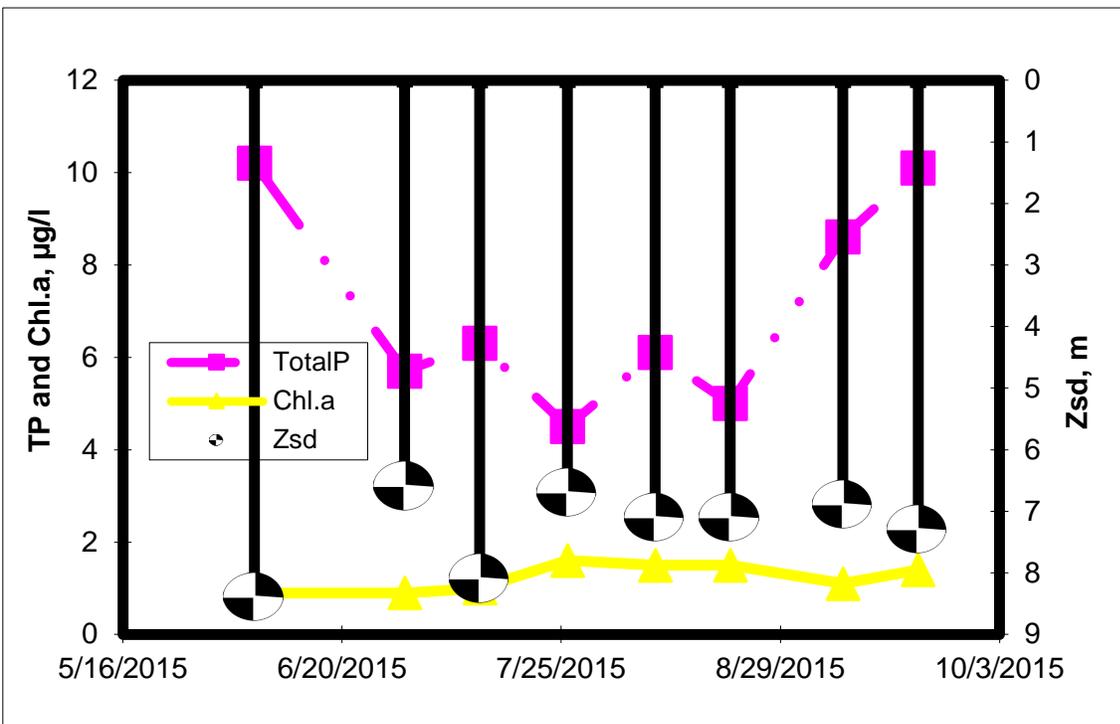
Additional Comments and Recommendations

Additional aquatic plant survey information would help to better assess the health of the aquatic plant communities in the lake, and to better evaluate the impact of the aquatic herbicide treatments. Lake residents are advised to report (and avoid exposure to) any shoreline scums or heavily discolored water, particularly since these have been found in some nearby lakes.

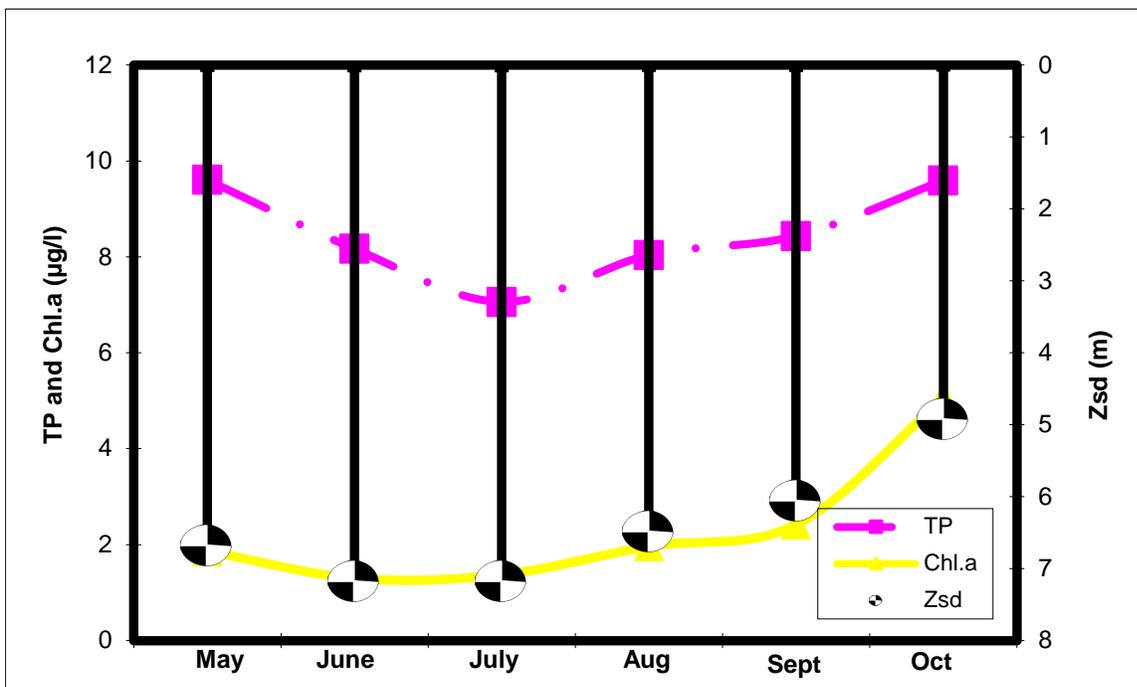
Aquatic Plant IDs-2015

None submitted for identification in 2015.

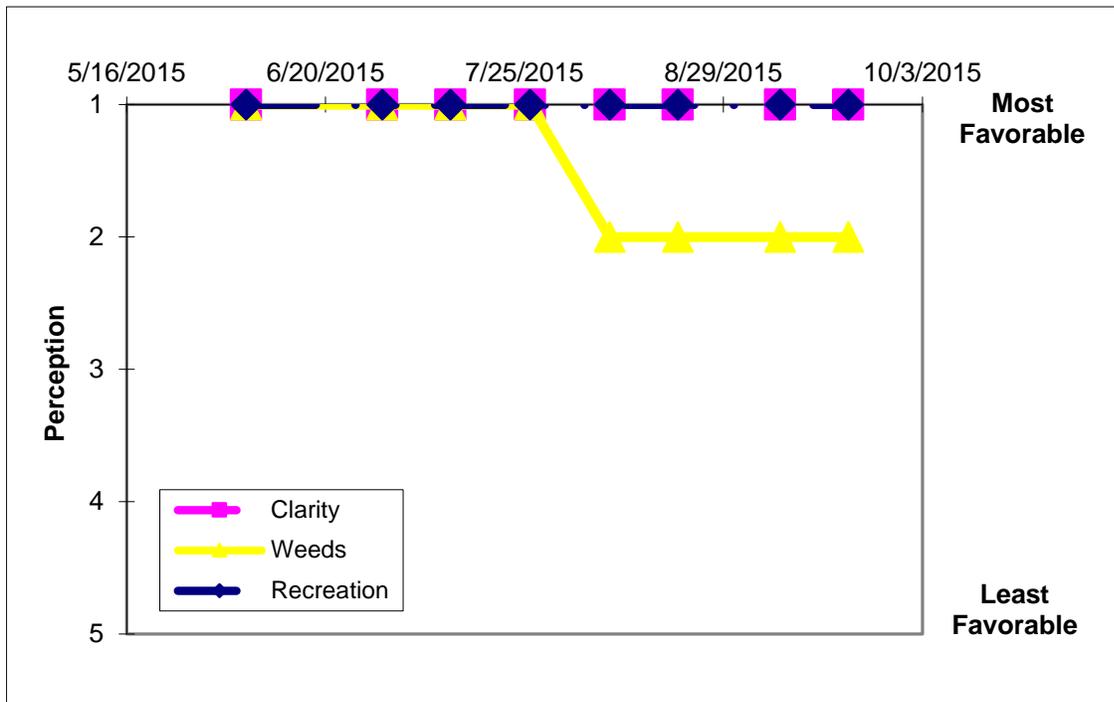
Time Series: Trophic Indicators, 2015



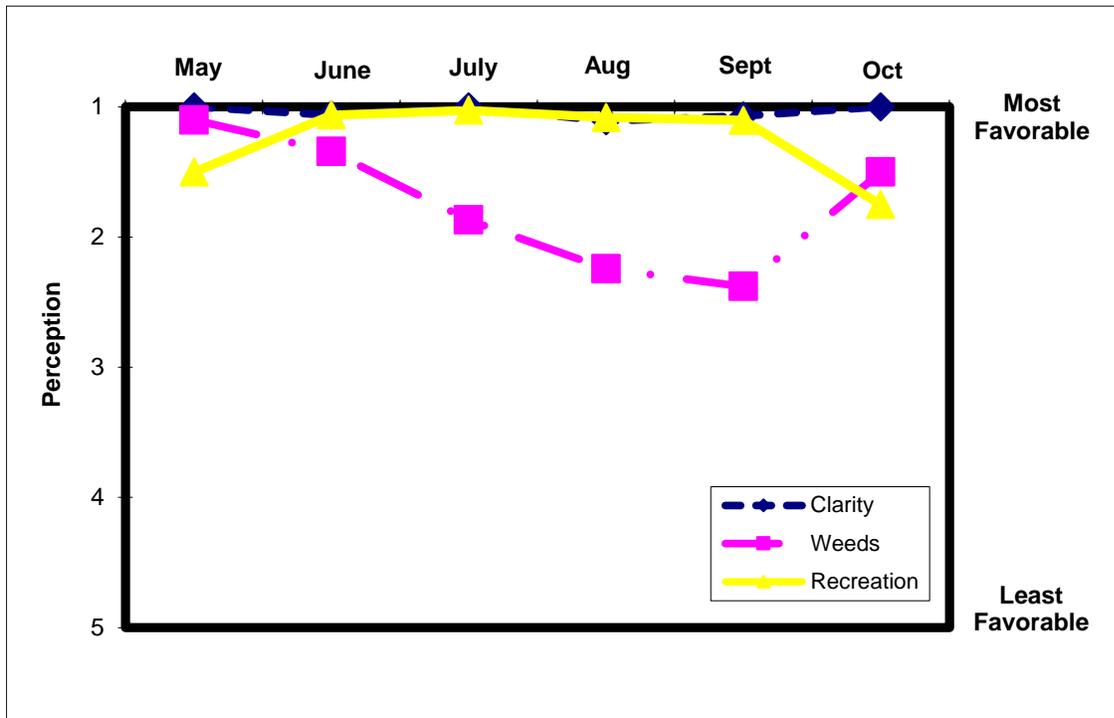
Time Series: Trophic Indicators, Typical Year (1997-2015)



Time Series: Lake Perception Indicators, 2015



Time Series: Lake Perception Indicators, Typical Year (1997-2015)



Appendix A- CSLAP Water Quality Sampling Results for Millsite Lake

LNum	LName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
137	Millsite L	5/11/1997	24.9	6.10	1.5	0.011	0.01				5	6.94	90		0.70	
137	Millsite L	5/26/1997	25.0	6.25		0.011	0.01				5	7.55	90		1.70	
137	Millsite L	6/8/1997	28.0	8.15		0.005	0.01				5	7.92	94		0.60	
137	Millsite L	6/22/1997	25.0	7.40	1.5	0.006	0.01				5	7.37	93		0.83	
137	Millsite L	7/6/1997	25.0	6.15	1.5	0.006	0.01				20	7.86	93		2.34	
137	Millsite L	7/20/1997	25.0	6.65		0.006	0.01				5	7.53	94		1.80	
137	Millsite L	8/3/1997		5.85		0.005	0.01				4				2.84	
137	Millsite L	8/17/1997		4.75		0.007	0.01				3	7.65	97		0.99	
137	Millsite L	5/24/1998	27.8	7.73	1.5	0.009	0.01				1	7.35	95		0.09	
137	Millsite L	6/7/1998		6.05	1.5	0.006	0.01				3	7.43	94		1.08	
137	Millsite L	6/21/1998	21.9	8.15	1.5		0.01				3	6.87	93		0.69	
137	Millsite L	7/5/1998	23.5	8.35			0.01				1	7.06	93		1.30	
137	Millsite L	7/19/1998	23.5	6.80							2	7.95	94		1.40	
137	Millsite L	8/2/1998	23.5	5.30							1	7.78	95		1.36	
137	Millsite L	8/16/1998	23.5	5.40							4	8.12	96		1.17	
137	Millsite L	8/30/1998	23.5	4.95							4	7.98	95		2.23	
137	Millsite L	5/30/1999	26.8	8.45	1.5	0.006	0.01				4	6.86	97		0.47	
137	Millsite L	6/19/1999	26.8	6.93	1.5	0.008	0.01				6	7.64	98			
137	Millsite L	7/5/1999	26.8	6.75		0.006	0.01				3	7.12	98		1.04	
137	Millsite L	7/18/1999	26.8	6.90		0.006	0.01				4	8.02	96		0.90	
137	Millsite L	8/1/1999	26.8	7.40		0.006	0.01				3	7.34	106		1.21	
137	Millsite L	8/14/1999		5.60	1	0.005	0.01				5	7.57	100		2.32	
137	Millsite L	8/29/1999	26.2	6.20		0.005	0.01				5	6.82	98		2.00	
137	Millsite L	9/12/1999		5.85		0.005	0.01				3	8.08	98		1.33	
137	Millsite L	5/28/2000		6.65	1.0	0.008	0.01				4	7.15	96		0.99	
137	Millsite L	6/11/2000		7.15	1.0	0.005	0.01				4	7.48	95		1.37	
137	Millsite L	6/25/2000		6.60	1.0	0.006	0.01				4	7.72	95		0.80	
137	Millsite L	7/9/2000		6.10	1.0	0.008	0.01				1	7.70	97			
137	Millsite L	7/23/2000		8.40	1.0	0.009					3	6.61	97		0.75	
137	Millsite L	8/6/2000		8.95	1.0	0.008					1	8.06	97		0.94	
137	Millsite L	8/20/2000		6.45	1.0	0.007										
137	Millsite L	9/4/2000		6.65	1.0	0.009					2	7.17	97		0.94	
137	Millsite L	6/10/2001	30.5	8.35	1.0	0.004	0.01				4	7.53	100		0.31	
137	Millsite L	6/23/2001		8.25	1.0		0.01				1	7.87	97		1.19	
137	Millsite L	7/8/2001		7.95	1.0	0.005	0.01				1	5.21	119		0.38	
137	Millsite L	7/25/2001		8.20	1.0	0.003	0.01				1	7.91	99		0.52	
137	Millsite L	8/5/2001		7.45	1.0	0.007	0.01				1	7.49	101		1.32	
137	Millsite L	8/19/2001		5.40	1.0	0.005	0.01				3	8.29	100		0.61	
137	Millsite L	9/3/2001		5.00	1.0	0.006	0.01				1	8.43	100		2.37	
137	Millsite L	9/16/2001		6.65	1.5	0.005	0.01				2	8.06	100		0.65	
137	Millsite L	06/30/02		6.70	1.0	0.010	0.01	0.03	0.29	62.58	3	8.02	97		1.10	
137	Millsite L	07/14/02		6.95	1.0	0.008	0.00	0.06	0.40	112.32	5	7.99	99		0.44	
137	Millsite L	08/04/02		5.05	1.0	0.004	0.00	0.01	0.54	330.88	6	8.62	98		1.84	
137	Millsite L	08/13/02		4.40	1.0	0.018	0.01	0.01	0.64	79.20	12	8.94	100		5.90	
137	Millsite L	09/01/02		4.45	1.0	0.012	0.00	0.02	0.54	95.62	12	9.10	98	10.0	0.97	
137	Millsite L	09/27/02		3.50	1.0	0.011	0.00	0.02	0.58	116.56	14	9.13	97		4.30	
137	Millsite L	10/27/02		4.15	1.0		0.00	0.05	0.44							
137	Millsite L	6/15/2003		7.55	1.0	0.010	0.00	0.01	0.24	53.96	3	8.04	98			
137	Millsite L	7/6/2003		7.55	1.0	0.008	0.01	0.02	0.23	59.70	12	8.48	98		0.88	
137	Millsite L	7/13/2003		7.50	1.0	0.009	0.00	0.00	0.26	64.56	16	8.60	95		3.78	
137	Millsite L	7/27/2003		7.45	1.0	0.013	0.00	0.00	0.06	10.59	3	8.55	93		1.54	
137	Millsite L	8/30/2003		7.45	1.0	0.008	0.00	0.01	0.18	48.55	11	8.11	98	13.0	1.99	
137	Millsite L	9/1/2003		7.75	1.0	0.009	0.01	0.04	0.32	77.87	4	8.27	97		2.51	
137	Millsite L	9/7/2003		7.70	1.0	0.010	0.00	0.00			3	8.14	97		2.38	
137	Millsite L	9/14/2003		8.00	1.0	0.010	0.01	0.01	0.28	62.72	8	8.80	95		1.92	
137	Millsite L	5/31/2004	27.4	7.55	1.0	0.014	0.01	0.01			7	7.73	99		8.89	
137	Millsite L	6/12/2004	27.4	8.30	1.0	0.011	0.01	0.01			6	6.33	91		0.75	
137	Millsite L	6/29/2004		7.90	1.0	0.011	0.01	0.01	0.29	56.94	9	7.16	103		2.70	
137	Millsite L	8/1/2004		7.75	1.0	0.013	0.01	0.01	0.33	54.75	9	7.10	75		1.30	
137	Millsite L	8/14/2004		7.80	1.0	0.007	0.04	0.03	0.46	136.28	8	8.35	83	13.8	2.56	
137	Millsite L	9/6/2004		7.60	1.0	0.005	0.06	0.03	0.21	100.66		8.77	73		1.90	
137	Millsite L	9/19/2004		7.60	1.0	0.007	0.01	0.01	0.41	138.46	3	6.45	71		1.31	
137	Millsite L	10/3/2004		7.60	1.0	0.008	0.22	0.01	0.26	72.21		7.08	46		1.28	

LNum	LName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
137	Millsite L	5/30/2005		7.77	1.0	0.010	0.06	0.01	0.30	63.02	7	7.25	81	11.6	0.39	
137	Millsite L	6/12/2005		7.90	1.0	0.003	0.01	0.01	0.22	154.02	4	7.89	97		2.72	
137	Millsite L	6/20/2005		7.95	1.0	0.007	0.01	0.01	0.18	53.49					0.20	
137	Millsite L	7/10/2005		6.85	1.0	0.007	0.01	0.01	0.22	65.77	8	7.70	108		1.21	
137	Millsite L	7/24/2005		7.10	1.0	0.007	0.05	0.01	0.29	96.42	7	7.42	97	12.3	0.22	
137	Millsite L	8/7/2005		6.50	1.0	0.006	0.02	0.01	0.18	62.25	7	7.59	84		1.42	
137	Millsite L	8/29/2005		5.70	1.0	0.006	0.01	0.01	0.12	40.82	9	7.62	70		1.22	
137	Millsite L	9/5/2005		5.70		0.007	0.01	0.01	0.15	49.71	6	7.37	79		1.21	
137	Millsite L	5/29/2006		5.95	1.0	0.008	0.01	0.02	0.81	225.12		7.03	84	12.0	1.53	
137	Millsite L	6/13/2006		7.20	1.0	0.006	0.03	0.04	0.32	113.53	8	7.94	99		1.59	
137	Millsite L	6/25/2006		7.60	1.0	0.005	0.00	0.01	0.36	156.53	10	8.15	94		0.26	
137	Millsite L	7/3/2006		6.45	1.0	0.007	0.01	0.01	0.45	144.20		8.41	90		0.86	
137	Millsite L	7/16/2006		6.95	1.0	0.004	0.01	0.03	0.57	304.49		7.97	80	1.3	0.89	
137	Millsite L	7/30/2006		7.25	1.0	0.005	0.01	0.02	0.64	288.24	6	8.21	72		1.19	
137	Millsite L	9/3/2006		6.95	1.0	0.006			0.46	166.36	6	8.18	78		2.18	
137	Millsite L	9/30/2006		5.10	1.0	0.007	0.01	0.02	0.79	247.56	4	8.25	89		3.32	
137	Millsite L	6/24/2007	~27.4	5.35	1.0	0.008	0.01	0.02	0.68	182.01	12	7.09	78	13.8	0.56	
137	Millsite L	7/8/2007		6.65	1.0	0.007	0.01	0.03	0.55	166.52	13	8.25	62		1.18	
137	Millsite L	7/22/2007		7.50	1.0	0.006	0.01	0.01	0.37	125.61	2	7.33	90		0.51	
137	Millsite L	8/5/2007		6.65	1.0	0.008	0.03	0.12	0.45	128.58	9	7.93	76		0.90	
137	Millsite L	8/20/2007		5.40	1.0	0.009	0.01	0.01	0.53	127.32	10	9.09	56	11.5	0.58	
137	Millsite L	9/1/2007		5.70	1.0	0.008	0.00	0.01	0.42	121.39	20	7.82			2.10	
137	Millsite L	9/30/2007		4.00	1.0	0.011	0.02	0.01	0.50	103.98	6	7.87	74		5.41	
137	Millsite L	10/7/2007		3.85	1.0	0.008	0.03	0.16	0.61	172.12	19	7.70	97		6.55	
137	Millsite L	6/8/2008		3.45	3.0	0.011	0.00	0.05	0.37	77.66	4	7.26	90	12.5	8.76	
137	Millsite L	6/21/2008		6.00	1.0	0.009	0.06	0.01	0.13	29.92	4	7.46	72		1.70	
137	Millsite L	7/5/2008		6.00	1.0	0.002	0.01	0.03	0.32	412.98	8	7.87	73		2.22	
137	Millsite L	7/20/2008	>30	5.90	1.0	0.008	0.01	0.01	0.40	107.85	6	7.89	62		2.08	
137	Millsite L	8/3/2008	>30	6.15	1.5	0.012	0.01	0.01	0.39	71.53	3	8.12	88	9.7	2.48	
137	Millsite L	8/20/2008	>30	6.93	1.0	0.002	0.00	0.01	0.26	263.53	7	7.99	106		2.36	
137	Millsite L	8/30/2008	>30	7.35	1.0	0.007	0.01	0.00	0.32	106.82	4	7.32	68		2.68	
137	Millsite L	9/27/2008	>30	6.75	1.0	0.008	0.02	0.01	0.25	68.85	6	7.26	87		2.53	
137	Millsite L	05/25/2009	>12.5	4.80	1.0	0.008	0.01	0.01	0.03	7.14	11	8.01	92	16.8	3.32	
137	Millsite L	06/28/2009	>13.2	7.85	1.0	0.008	0.01	0.01	0.35	90.62	16	7.49	80		0.93	
137	Millsite L	07/12/2009	>30	8.30	1.0	0.002	0.01	0.01	0.20	235.05	17	7.26	79		1.21	
137	Millsite L	07/19/2009	>30	8.35	1.0	0.020	0.01	0.01	0.22	23.88	6				1.32	
137	Millsite L	08/02/2009	>30	7.90	1.0	0.012	0.01	0.01	0.13	24.61	20	8.20	69	13.2	0.61	
137	Millsite L	08/09/2009	>30	6.95	1.0	0.009	0.01	0.01	0.20	48.75	13	7.29	81		2.50	
137	Millsite L	08/23/2009	>30	5.95	1.0	0.014	0.02	0.06	0.34	52.83	39	7.97	70		1.80	
137	Millsite L	09/05/2009	>30	5.75	1.0	0.009	0.01	0.08	0.25	63.95	17	7.99	73		2.70	
137	Millsite L	5/31/2010	7.5	5.55	1.0	0.008	0.02	0.02			6	7.70	98	13.8	0.60	
137	Millsite L	6/13/2010	7.5	5.65	1.0	0.011	0.03	0.02			5	7.35	96		0.20	
137	Millsite L	7/5/2010	7.5	7.05	1.0	0.011	0.04	0.03			4	7.60	99		1.50	
137	Millsite L	7/18/2010	7.5	5.05	1.0	0.008	0.10	0.04	0.36	96.85	10	7.11	96		3.30	
137	Millsite L	8/1/2010	7.5	3.90	1.0	0.011	0.01	0.03			3	8.57	91	13.7	4.70	
137	Millsite L	8/18/2010	7.5	4.50	1.0	0.008	0.01	0.01	0.30	86.83	9	8.38	101		4.10	
137	Millsite L	9/13/2010	7.5	4.55	1.0	0.011	0.03	0.03	0.55	113.08	1	7.18	104		3.80	
137	Millsite L	9/26/2010	7.5	4.75	1.0	0.006	0.03	0.02	0.33	117.45	15	7.40	104		2.20	
137	Millsite L	6/5/2011	~22	6.55	1.0	0.010	0.19	0.04	0.34	79.43	6	7.46	94	12.5	1.20	
137	Millsite L	6/26/2011	~22	5.60	1.0	0.011	0.13	0.02	0.41	85.28	10	8.11	103		0.70	
137	Millsite L	7/9/2011	~22	5.60	1.0	0.011	0.04	0.02	0.15	31.08	4	6.93	95		1.50	
137	Millsite L	7/24/2011	~22	5.75	1.0		0.03	0.02	0.36		13	8.32	83		1.90	
137	Millsite L	8/7/2011	~22	4.95	1.5	0.018	0.12	0.03	0.46	56.59	7	8.40	87	12.6	3.10	
137	Millsite L	8/27/2011	~22	3.90	1.0	0.014	0.02	0.03	0.34	52.62	11	7.46	96		3.20	
137	Millsite L	8/27/2011			bloom											
137	Millsite L	9/3/2011	~22	3.95	1.5	0.010	0.01	0.01	0.33	69.63	9	8.28	90		5.00	
137	Millsite L	6/10/2012	22.0	8.55	1.5	0.009	0.01	0.01	0.21	55.13	6	7.68	87	13.3	0.30	
137	Millsite L	6/24/2012	22.0	8.55	1.5	0.006	0.01	0.03	0.25	88.35	7	7.65	87		0.60	
137	Millsite L	7/8/2012	22.0	7.55	1.5	0.006	0.01	0.01	0.21	74.52	5	7.54	86		1.00	
137	Millsite L	7/22/2012	22.0	7.55	1.5	0.008	0.01	0.04	0.14	37.95	6	8.06	87		1.20	
137	Millsite L	7/28/2012	22.0	6.25	1.5	0.008	0.02	0.02	0.36	103.43	6	7.32	90	14.1	1.10	
137	Millsite L	8/12/2012	22.0	6.55	1.5	0.008	0.02	0.03	0.33	86.17	4	7.67	73		1.50	
137	Millsite L	8/25/2012	22.0	6.55	1.5	0.007	0.01	0.12	0.30	87.70	3	7.95	92		1.00	
137	Millsite L	9/1/2012	22.0	6.85	1.5	0.009	0.01	0.03	0.28	65.53	6	6.88	96		1.90	
137	Millsite L	6/8/2013	>50	9.65	1.5	0.007	0.01	0.01	0.20	64.03	5	8.24	65		1.40	
137	Millsite L	6/30/2013	>50	6.60	1.5	0.009			0.29	68.26	16	7.56	97		1.10	

LNum	LName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
137	Millsite L	7/15/2013	>50	8.05	1.5	0.010	0.02	0.03	0.04	8.99	4	8.28	106		0.60	
137	Millsite L	7/29/2013	>50	9.65	1.5	0.007			0.45	149.96	7	7.73	81			
137	Millsite L	8/11/2013	>50	7.85	1.5	0.009	0.01	0.03	0.34	82.22	7	7.71	97		1.30	
137	Millsite L	9/3/2013	>50	6.85	1.5	0.009			0.39	97.38	8	7.55	97		2.30	
137	Millsite L	9/17/2013	>50	6.85	1.5	0.010	0.01	0.01	0.39	84.80	10	7.31	109		2.00	
137	Millsite L	9/30/2013	>50	6.15	1.5	0.009			0.39	93.09	7	7.82	100		2.10	
137	Millsite L	6/6/2014	>50	5.55	1.5	0.019	0.01	0.02	0.26	29.37	6	7.42	92	11.7	2.40	
137	Millsite L	6/29/2014	>50	7.25	1.5	0.008			0.58	164.15	7	7.21	96		1.10	
137	Millsite L	7/14/2014	>50	7.15	1.5		0.01	0.01	0.45	48.95	4	7.95	96		1.40	
137	Millsite L	7/29/2014	>50	8.15	1.5	0.010			1.44	326.37	2	7.16	96		3.30	
137	Millsite L	8/10/2014	>50	8.50	1.5	0.010	0.01	0.02	0.30	66.00	2	8.21	98	12.0	1.00	
137	Millsite L	8/24/2014	>50	6.55	1.5	0.009			0.29	72.75	2	7.23	106		2.70	
137	Millsite L	9/8/2014	>50	6.00	1.5	0.011	0.01	0.02	0.24	48.16	4	7.89	94		4.00	
137	Millsite L	9/19/2014	>50	5.15	1.5	0.008			0.30	83.27	4	8.60	87		4.20	
137	Millsite L	6/6/2015	50.0	8.40	1.5	0.010	0.01	0.01	0.23	22.35	8	7.41	84	10.3	0.90	
137	Millsite L	6/30/2015	40.0	6.60	1.5	0.006			0.43	75.26	7	8.14	102		0.90	
137	Millsite L	7/12/2015	48.0	8.10	1.5	0.006	0.00	0.02	0.30	46.98	5	7.39	89		1.00	11.7
137	Millsite L	7/26/2015		6.70	1.5	0.005			0.33	72.22	7	7.79	95		1.60	
137	Millsite L	8/9/2015	50.0	7.10	1.5	0.006	0.02	0.04			3	8.16	100	11.4	1.50	
137	Millsite L	8/21/2015	50.0	7.10	1.5	0.005			0.34	68.80	2	7.63	96		1.50	
137	Millsite L	9/8/2015	50.0	6.90	1.5	0.009	0.01	0.03	0.29	33.14	2	8.23	91		1.10	5.0
137	Millsite L	9/20/2015	50.0	7.30	1.5	0.010			0.21	20.79	1	8.61	49		1.40	
137	Millsite L	6/6/2015	50.0	8.40	1.5	0.010	0.01	0.01	0.23	22.35	8	7.41	84	10.3	0.90	
137	Millsite L	6/7/1998				0.009										
137	Millsite L	7/5/1998				0.015										
137	Millsite L	8/2/1998			10.7	0.010										
137	Millsite L	8/30/1998				0.011										
137	Millsite L	6/19/1999				0.009										
137	Millsite L	7/18/1999				0.010										
137	Millsite L	8/14/1999	19.8			0.008										
137	Millsite L	9/12/1999				0.012										
137	Millsite L	06/30/02		6.70		0.021	0.00	0.05	0.26	12.73						
137	Millsite L	07/14/02				0.013	0.03	0.06	0.54	41.70						
137	Millsite L	08/04/02		5.05	12.8	0.011	0.01	0.01	0.50	46.91						
137	Millsite L	08/13/02		4.40	12.8	0.023	0.01	0.03	0.41	18.14						
137	Millsite L	09/01/02		4.45	13.1	0.033	0.02	0.01	0.34	10.25						
137	Millsite L	09/27/02		3.50	13.1	0.024	0.04	0.03	0.62	25.89						
137	Millsite L	10/27/02		4.15	13.1		0.03	0.06	0.44							
137	Millsite L	6/15/2003			11		0.00	0.01	0.14							
137	Millsite L	7/6/2003			12.2	0.054	0.00	0.01	0.23	4.20						
137	Millsite L	7/13/2003			12.2	0.055	0.00	0.00	0.16	2.82						
137	Millsite L	7/27/2003			12.2	0.046	0.00	0.00	0.19	4.05						
137	Millsite L	8/30/2003			12.2	0.033	0.00	0.01	0.18	5.50						
137	Millsite L	9/1/2003			12.2	0.018	0.00	0.02	0.29	16.60						
137	Millsite L	9/7/2003			12.2	0.016	0.01	0.01								
137	Millsite L	9/14/2003			1.5	0.018	0.02	0.01	0.22	12.13						
137	Millsite L	5/31/2004	27.4		12	0.011	0.01	0.01								
137	Millsite L	6/12/2004	27.4		14	0.031	0.01	0.01								
137	Millsite L	6/29/2004			15		0.01	0.03	0.25							
137	Millsite L	8/1/2004			13	0.027	0.58	0.02	0.72	26.2						
137	Millsite L	8/14/2004			15	0.016	0.01	0.01	0.35	22.2						
137	Millsite L	9/6/2004			14	0.023	0.01	0.01	0.32	13.7						
137	Millsite L	9/19/2004			14	0.025	0.01	0.01	0.28	11.5						
137	Millsite L	10/3/2004			14	0.025	0.01	0.01	0.40	16.0						
137	Millsite L	5/30/2005			13	0.028										
137	Millsite L	6/12/2005			13.0	0.029									0.23	
137	Millsite L	6/20/2005			13.0	0.029										
137	Millsite L	7/10/2005			13.0	0.008										
137	Millsite L	7/24/2005			13.0	0.023										
137	Millsite L	8/7/2005			13.0	0.043										
137	Millsite L	8/29/2005			13.0	0.016										
137	Millsite L	9/5/2005				0.013										
137	Millsite L	5/29/2006			12.5	0.048										
137	Millsite L	6/13/2006			12.5	0.063										
137	Millsite L	6/25/2006			12.5	0.060										
137	Millsite L	7/3/2006			12.5	0.025										

LNum	LName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
137	Millsite L	7/16/2006			12.5	0.013										
137	Millsite L	7/30/2006			12.5	0.045										
137	Millsite L	9/3/2006			12.5	0.047										
137	Millsite L	9/30/2006			12.5	0.094										
137	Millsite L	6/24/2007	~27.4		12.8	0.080										
137	Millsite L	7/8/2007			12.8	0.091										
137	Millsite L	7/22/2007			12.8	0.058										
137	Millsite L	8/5/2007			12.8	0.060										
137	Millsite L	8/20/2007			12.8	0.042										
137	Millsite L	9/1/2007			12.8	0.019										
137	Millsite L	9/30/2007			12.8	0.053										
137	Millsite L	10/7/2007			12.8	0.088										
137	Millsite L	6/8/2008	3.40		22.0	0.011										
137	Millsite L	6/21/2008	6.00		22.0	0.012										
137	Millsite L	7/5/2008	6.00		22.0	0.013										
137	Millsite L	7/20/2008	5.80		22.0	0.015										
137	Millsite L	8/3/2008	6.30		22.0	0.017										
137	Millsite L	8/20/2008	6.90		22.0	0.016										
137	Millsite L	8/30/2008	7.30		22.0	0.020										
137	Millsite L	9/27/2008	6.70		22.0	0.019										
137	Millsite L	05/25/2009	>12.5		12.5	0.014		0.03								
137	Millsite L	06/28/2009	>13.2		13.2	0.041										
137	Millsite L	07/12/2009	>30		16.0	0.005		0.02								
137	Millsite L	07/19/2009	>30		21.9	0.037										
137	Millsite L	08/02/2009	>30		21.9	0.017		0.01								
137	Millsite L	08/09/2009	>30		21.9	0.027										
137	Millsite L	08/23/2009	>30		21.9	0.043		0.06								
137	Millsite L	09/05/2009	>30		21.9	0.054										
137	Millsite L	5/31/2010	7.5		21.9	0.012		0.04								
137	Millsite L	7/5/2010	7.5		21.9	0.015		0.02								
137	Millsite L	8/1/2010	7.5		21.9	0.011		0.05								
137	Millsite L	9/13/2010	7.5		21.9	0.013		0.03								
137	Millsite L	6/5/2011	~22	6.55	21.9	0.012		0.03								
137	Millsite L	7/9/2011	~22	5.60	21.9	0.014		0.02								
137	Millsite L	8/7/2011	~22	4.95	21.9	0.014		0.02								
137	Millsite L	9/3/2011	~22	3.95	21.9	0.013		0.01								
137	Millsite L	6/10/2012			21.9	0.012		0.01								
137	Millsite L	7/8/2012			21.9	0.012		0.19								
137	Millsite L	7/29/2012			21.9	0.013		0.02								
137	Millsite L	8/25/2012			21.9	0.012		0.05								
137	Millsite L	6/8/2013			21.9	0.017		0.02								
137	Millsite L	7/15/2013			21.9	0.020		0.05								
137	Millsite L	8/11/2013			21.9	0.012		0.03								
137	Millsite L	9/17/2013			21.9	0.010		0.01								
137	Millsite L	6/6/2014			21.9	0.015		0.04								
137	Millsite L	6/29/2014			21.9	0.017										
137	Millsite L	7/14/2014			21.9	0.014		0.05								
137	Millsite L	7/29/2014			21.9	0.013										
137	Millsite L	8/10/2014			21.9	0.016		0.02								
137	Millsite L	8/24/2014			21.9	0.020										
137	Millsite L	9/8/2014			21.9	0.014		0.03								
137	Millsite L	9/19/2014			21.9	0.011										
137	Millsite L	6/6/2015			22.0	0.015		0.04								
137	Millsite L	6/30/2015			21.9	0.008										
137	Millsite L	7/12/2015			22.0	0.012		0.04								
137	Millsite L	7/26/2015			22.0	0.013										
137	Millsite L	8/9/2015			22.0	0.010		0.04								
137	Millsite L	8/21/2015			22.0	0.007										
137	Millsite L	9/8/2015			22.0	0.014		0.04								
137	Millsite L	9/20/2015			22.0	0.013										

LNum	LName	Date	Site	TAir	TH2O	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cyl	FP-Chl	FP-BG	HAB form	Shore HAB
137	Millsite L	5/11/1997	epi	12	9	1	1	4	5											
137	Millsite L	5/26/1997	epi	12	11	1	2	3	56											
137	Millsite L	6/8/1997	epi	23	20	1	2	1	5											
137	Millsite L	6/22/1997	epi	23	24	2	2	2	5											
137	Millsite L	7/6/1997	epi	24	23	1	2	1												
137	Millsite L	7/20/1997	epi	22	26	1	2	1	6											
137	Millsite L	8/3/1997	epi	23	24	1	3	2												
137	Millsite L	8/17/1997	epi	18	22															
137	Millsite L	5/24/1998	epi	32	20	1	1	1												
137	Millsite L	6/7/1998	epi	16	16	1	1	1	5											
137	Millsite L	6/21/1998	epi	30	27	1	1	1												
137	Millsite L	7/5/1998	epi	27	23	1	1	1												
137	Millsite L	7/19/1998	epi	27	25	1	1	1												
137	Millsite L	8/2/1998	epi	27	24	1	1	1												
137	Millsite L	8/16/1998	epi	29	25	1	1	1												
137	Millsite L	8/30/1998	epi	24	24	1	1	1												
137	Millsite L	5/30/1999	epi	26	19	1	1	1												
137	Millsite L	6/19/1999	epi	24	27	1	2	1	6											
137	Millsite L	7/5/1999	epi	29	25	1	1	1												
137	Millsite L	7/18/1999	epi	26	25	1	2	1												
137	Millsite L	8/1/1999	epi	26	26	1	3	2												
137	Millsite L	8/14/1999	epi	17	22	1	2	1												
137	Millsite L	8/29/1999	epi	18	22	1	3	1												
137	Millsite L	9/12/1999	epi	21	21	1	3	1												
137	Millsite L	5/28/2000	epi	14	14	1	1	1	5											
137	Millsite L	6/11/2000	epi	11	16	1	2	1	5											
137	Millsite L	6/25/2000	epi	24	20	1	2	1	5											
137	Millsite L	7/9/2000	epi	15	21	1	3	2	5											
137	Millsite L	7/23/2000	epi	24	22	1	3	1												
137	Millsite L	8/6/2000	epi	25	23	1	3	1												
137	Millsite L	8/20/2000	epi	19	22	1	3	1												
137	Millsite L	9/4/2000	epi	19	23	1	3	2												
137	Millsite L	6/10/2001	epi	25	19	2	1	1	6											
137	Millsite L	6/23/2001	epi	18	21	1	2	1	5											
137	Millsite L	7/8/2001	epi	19	20	1	1	1												
137	Millsite L	7/25/2001	epi	30	24	1	3	1												
137	Millsite L	8/5/2001	epi	33	26	1	3	1												
137	Millsite L	8/19/2001	epi	25	24	1	3	1	5											
137	Millsite L	9/3/2001	epi	24	22	1	2	1												
137	Millsite L	9/16/2001	epi	20	20	1	3	1												
137	Millsite L	06/30/02	epi	28	24	1	2	1	8											
137	Millsite L	07/14/02	epi	31	24	1	2	1	78											
137	Millsite L	08/04/02	epi	32	26	2	2	1	8											
137	Millsite L	08/13/02	epi	28	25	2	2	1	8											
137	Millsite L	09/01/02	epi	26	24	1	3	1	7											
137	Millsite L	09/27/02	epi	24	19	2	1	1	8											
137	Millsite L	10/27/02	epi	12	11	1	1	4	5											
137	Millsite L	6/15/2003	epi	20	17	1	1	1	5											
137	Millsite L	7/6/2003	epi	30	25	1	1	1	0											
137	Millsite L	7/13/2003	epi	25	22	1	1	1	0											
137	Millsite L	7/27/2003	epi	22	21	1	2	1	5											
137	Millsite L	8/30/2003	epi	31	25	2	2	1	0											
137	Millsite L	9/1/2003	epi	20	21	1	1	1	0											
137	Millsite L	9/7/2003	epi	23	20	1	1	1	0											
137	Millsite L	9/14/2003	epi	31	21	1	1	1	0											
137	Millsite L	5/31/2004	epi	28	18	1	1	1	5											
137	Millsite L	6/12/2004	epi	30	20	1	2	1	8											
137	Millsite L	6/29/2004	epi	20	19	1	1	1	5											
137	Millsite L	8/1/2004	epi	20	24	1	2	1	8											
137	Millsite L	8/14/2004	epi	24	22	1	1	1	0											
137	Millsite L	9/6/2004	epi	25	22	1	2	1	8											

LNum	LName	Date	Site	TAir	TH2O	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cyl	FP-Chl	FP-BG	HAB form	Shore HAB
137	Millsite L	9/19/2004	epi	16	19	1	3	1	8											
137	Millsite L	10/3/2004	epi	18	18	1	2	1	8											
137	Millsite L	5/30/2005	epi	17	15	1	1	1	8											
137	Millsite L	6/12/2005	epi	27	24	1	1	1	8											
137	Millsite L	6/20/2005	epi	23	20	1	2	1	8											
137	Millsite L	7/10/2005	epi	28	24	1	2	1	8											
137	Millsite L	7/24/2005	epi	24	26	1	2	1	8											
137	Millsite L	8/7/2005	epi	19	25	1	3	1	8											
137	Millsite L	8/29/2005	epi	26	23	2	3	2	8											
137	Millsite L	9/5/2005	epi	23	21	2	3	1	8											
137	Millsite L	5/29/2006	epi	24	28	1	1	1	7											
137	Millsite L	6/13/2006	epi	26	18	1	1	1	8											
137	Millsite L	6/25/2006	epi	25	22	1	1	1	7											
137	Millsite L	7/3/2006	epi	28	24	1	2	1	7											
137	Millsite L	7/16/2006	epi	30	25	1	2	1	8											
137	Millsite L	7/30/2006	epi	25	25	1	2	1	0											
137	Millsite L	9/3/2006	epi	19	19	1	3	1	5											
137	Millsite L	9/30/2006	epi	16	15	1	3	1	5											
137	Millsite L	7/8/2007	epi	23	21	1	1	1	0											
137	Millsite L	7/22/2007	epi	21	21	1	1	1	0											
137	Millsite L	8/5/2007	epi	28	23	1	1	1	0											
137	Millsite L	8/20/2007	epi	24	25	1	1	1	0											
137	Millsite L	9/1/2007	epi	23	22	1	1	1	0											
137	Millsite L	9/30/2007	epi	23	21	1	1	1	0											
137	Millsite L	10/7/2007	epi	20	19	1	2	1	0											
137	Millsite L	7/8/2007	epi	20	19	1	2	1	8											
137	Millsite L	6/8/2008	epi	25	20	1	1	1												
137	Millsite L	6/21/2008	epi	21	20	1	1	1	0											
137	Millsite L	7/5/2008	epi	24	23	1	2	1	8											
137	Millsite L	7/20/2008	epi	23	22	1	2	1	0											
137	Millsite L	8/3/2008	epi	23	22	1	2	1	0											
137	Millsite L	8/20/2008	epi	21	22	1	2	1	0											
137	Millsite L	8/30/2008	epi	22	21	1	3	1	0											
137	Millsite L	9/27/2008	epi	16	17	1	3	3	5											
137	Millsite L	05/25/2009	epi	18	14	1	1	1	8											
137	Millsite L	06/28/2009	epi	26	21	1	1	2	6											
137	Millsite L	07/12/2009	epi	19	20	1	2	1	0											
137	Millsite L	07/19/2009	epi	20	19	1	2	1	0											
137	Millsite L	08/02/2009	epi	23	22	1	2	1	0											
137	Millsite L	08/09/2009	epi	20	20	1	2	1	5											
137	Millsite L	08/23/2009	epi	20	23	1	2	1	0											
137	Millsite L	09/05/2009	epi	23	21	1	2	1	0			36.4								
137	Millsite L	5/31/2010	epi	22	20	1	1	1	0	0										
137	Millsite L	6/13/2010	epi	18	18	1	1	1	0	0										
137	Millsite L	7/5/2010	epi	25	20	1	2	1	0	0										
137	Millsite L	7/18/2010	epi	27	28	1	2	1	0	0										
137	Millsite L	8/1/2010	epi	22	23	1	3	1	0	0										
137	Millsite L	8/18/2010	epi	20	20	1	3	1	3	0										
137	Millsite L	9/13/2010	epi	12	17	1	3	1	0	0										
137	Millsite L	9/26/2010	epi	14	14	1	3	1	0	0										
137	Millsite L	6/5/2011	epi	21	15	1	1	1	8	0	0									
137	Millsite L	6/26/2011	epi	20	19	1	1	1	5	0	0		5.80							
137	Millsite L	7/9/2011	epi	23	21	1	2	1	0	0	0	6.80	0.40							
137	Millsite L	7/24/2011	epi	25	23	1	2	1	7	0	0	4.80	0.77							
137	Millsite L	8/7/2011	epi	24	24	1	2	1	0	0	0		1.20							
137	Millsite L	8/27/2011	epi	24	21	1	3	1	0	0	0		1.40	0.30	<0.9	<0.1				
137	Millsite L	9/3/2011	epi	25	21	1	3	1	0	0	0		1.90							
137	Millsite L	10/9/2011	epi	17	15	1	1	1	0	0	0		2.80							
137	Millsite L	6/10/2012	epi	27	18	1	1	1	0	0	0		0.20	<0.30	<0.417		0.90	0.65		
137	Millsite L	6/24/2012	epi	22	21	1	2	1	5	0	0	0.10	0.20	<0.30	<0.410		1.12	0.56	I	
137	Millsite L	7/8/2012	epi	23	22	1	2	1	0	0	0	2.50	0.40	<0.30	<0.392		1.70	0.55	I	

LNum	LName	Date	Site	TAir	TH2O	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cyl	FP-Chl	FP-BG	HAB form	Shore HAB
137	Millsite L	7/22/2012	epi	25	22	1	3	1	0	0	0	0.80	0.20	<0.30	<0.292		0.91	0.06	I	
137	Millsite L	7/28/2012	epi	27	23	1	3	1	0	0	0	3.70	0.20	<0.30	<0.292		1.52	0.53	I	
137	Millsite L	8/12/2012	epi	20	21	1	3	1	5	0	0	3.60	0.30	<0.30	<0.537		2.44	1.21	I	
137	Millsite L	8/25/2012	epi	27	20	1	2	1	0	0	0	2.30	0.20	<0.30	<0.551		24.19	21.08	I	
137	Millsite L	9/1/2012	epi	24	21	1	3	1	0	0	0	4.70	0.30	<0.30	<0.580		2.25	1.44	I	
137	Millsite L	6/8/2013	epi	14	14	1	1	1	5	0	0	2.90	0.60	<0.30	<0.420		0.70	0.40	I	
137	Millsite L	6/30/2013	epi	25	21	1	1	1	0	0	0	1.80	0.80	<0.30	<0.650		0.60	0.00	I	I
137	Millsite L	7/15/2013	epi	31	25	1	2	1	0	0	0	1.70	0.60	<0.30	<0.910		0.20	0.00	D	D
137	Millsite L	7/29/2013	epi	17	21	1	2	1	0	0	0	2.50	0.80	<0.30	<0.380		1.50	0.60	I	I
137	Millsite L	8/11/2013	epi	19	19	1	3	1	0	0	0	1.00	0.60	<0.30	<0.340		0.90	0.70	I	I
137	Millsite L	9/3/2013	epi	18	20	1	3	1	5	0	0	4.20	1.20	<0.30	<0.570		1.20	0.00	I	I
137	Millsite L	9/17/2013	epi	18	15	1	3	1	0	0	0	5.70	1.20	<0.30	<19.130		1.30	0.00	I	I
137	Millsite L	9/30/2013	epi	21	16	1	3	1	0	0	0	7.60	1.30	<0.30	<0.100		1.30	0.00	I	I
137	Millsite L	6/6/2014	epi	17	17	1	1	1	0	0	0	0.05	1.20	<1.83	<0.17	<0.001	0.49	0.00	i	i
137	Millsite L	6/29/2014	epi	28	23	1	2	1	0	0	0	0.80	0.20	<1.60	<0.48	<0.002	1.56	0.99	i	i
137	Millsite L	7/14/2014	epi	22	20	1	2	1	0	0	0	2.60	0.20	<0.40	<0.48	<0.001	0.22	0.00	i	i
137	Millsite L	7/29/2014	epi	13	19	1	2	1	0	0	0	1.70	0.20	<0.31	<0.24	<0.002	0.24	0.00	i	i
137	Millsite L	8/10/2014	epi	26	22	1	2	1	0	0	0	0.10	0.20	<0.28	<0.05	<0.001	0.11	0.00	i	i
137	Millsite L	8/24/2014	epi	27	20	1	2	1	0	0	0	3.50	0.30	<0.26	<0.10	<0.002	1.18	0.00	i	i
137	Millsite L	9/8/2014	epi	20	20	1	2	1	0	0	0	4.10	0.20	<0.29	<0.14	<0.002	1.30	0.56	i	i
137	Millsite L	9/19/2014	epi	11	15	1	2	1	0	0	0	6.60	0.20	<0.49	<0.12	<0.001	1.42	0.00	i	i
137	Millsite L	6/6/2015	epi	17	15	1	1	1	0	0	0	11.20	0.70	<0.77	<0.126	<1.739	0.02	0.00	I	I
137	Millsite L	6/30/2015	epi	18	18	1	1	1	5	0	0	3.90	0.10	<0.88	<0.010	<0.000	0.42	0.00	I	I
137	Millsite L	7/12/2015	epi	24	21	1	1	1	0	0	0	4.20	0.20	<1.01	<0.003	<0.011	0.39	0.00	I	I
137	Millsite L	7/26/2015	epi	24	20	1	1	1	0	0	0	4.70	0.20	<0.30	<0.002	<0.014	0.33	0.01	I	I
137	Millsite L	8/9/2015	epi	25	21	1	2	1	0	0	0	2.00	0.30	<1.13	<0.002	<0.014	1.10	0.42	I	I
137	Millsite L	8/21/2015	epi	19	22	1	2	1	0	0	0	13.00	0.70	<0.21	<0.003	<0.010	0.53	0.00	I	I
137	Millsite L	9/8/2015	epi	25	22	1	2	1	0	0	0	0.40	0.05	<0.27	<0.009	<0.022	0.16	0.00	I	I
137	Millsite L	9/20/2015	epi	14	19	1	2	1	0	0	0	2.60	0.10	<0.30	<0.007	<0.035	0.73	0.00	I	I
137	Millsite L	6/6/2015	epi	17	15	1	1	1	0	0	0	11.20	0.70	<0.77	<0.126	<1.739	0.02	0.00	I	I
137	Millsite L	7/5/1998	hypo		9															
137	Millsite L	8/2/1998	hypo		23															
137	Millsite L	8/30/1998	hypo		24															
137	Millsite L	6/19/1999	hypo	24	18															
137	Millsite L	7/18/1999	hypo		10															
137	Millsite L	8/14/1999	hypo		9															
137	Millsite L	9/12/1999	hypo		9															
137	Millsite L	06/30/02	hypo	28	9	1	2	1	8											
137	Millsite L	08/04/02	hypo	32	12	2	2	1	8											
137	Millsite L	08/13/02	hypo	28	10	2	2	1	8											
137	Millsite L	09/01/02	hypo	26	9	1	3	1	7											
137	Millsite L	09/27/02	hypo	24	10	2	1	1	8											
137	Millsite L	10/27/02	hypo	12	9	1	1	4	8											
137	Millsite L	6/15/2003	hypo		8															
137	Millsite L	7/6/2003	hypo		6															
137	Millsite L	7/13/2003	hypo		7															
137	Millsite L	7/27/2003	hypo		7															
137	Millsite L	8/30/2003	hypo		7															
137	Millsite L	9/1/2003	hypo		8															
137	Millsite L	9/7/2003	hypo		8															
137	Millsite L	9/14/2003	hypo		7															
137	Millsite L	5/31/2004	hypo		15															
137	Millsite L	6/12/2004	hypo		8															
137	Millsite L	6/29/2004	hypo		9															
137	Millsite L	8/1/2004	hypo		9															
137	Millsite L	8/14/2004	hypo		10															
137	Millsite L	9/6/2004	hypo		8															
137	Millsite L	9/19/2004	hypo		8															
137	Millsite L	10/3/2004	hypo		8															
137	Millsite L	5/30/2005	hypo		7															
137	Millsite L	6/12/2005	hypo		9															

LNum	LName	Date	Site	TAir	TH2O	QA	QB	QC	QD	QE	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cyl	FP-Chl	FP-BG	HAB form	Shore HAB
137	Millsite L	6/20/2005	hypo		9																
137	Millsite L	7/10/2005	hypo		10																
137	Millsite L	7/24/2005	hypo		10																
137	Millsite L	8/7/2005	hypo		9																
137	Millsite L	8/29/2005	hypo		15																
137	Millsite L	5/29/2006	hypo		8																
137	Millsite L	6/13/2006	hypo		8																
137	Millsite L	6/25/2006	hypo		9																
137	Millsite L	7/3/2006	hypo		10																
137	Millsite L	7/16/2006	hypo		9																
137	Millsite L	7/30/2006	hypo		10																
137	Millsite L	9/3/2006	hypo		9																
137	Millsite L	9/30/2006	hypo		9																
137	Millsite L	6/24/2007	hypo		7																
137	Millsite L	7/8/2007	hypo		6																
137	Millsite L	7/22/2007	hypo		8																
137	Millsite L	8/5/2007	hypo		8																
137	Millsite L	8/20/2007	hypo		7																
137	Millsite L	9/1/2007	hypo		7																
137	Millsite L	9/30/2007	hypo		7																
137	Millsite L	10/7/2007	hypo		8																
137	Millsite L	6/8/2008	hypo		6																
137	Millsite L	6/21/2008	hypo		6																
137	Millsite L	7/5/2008	hypo		5																
137	Millsite L	7/20/2008	hypo		5																
137	Millsite L	8/3/2008	hypo		6																
137	Millsite L	8/20/2008	hypo		5																
137	Millsite L	8/30/2008	hypo		5																
137	Millsite L	9/27/2008	hypo		5																
137	Millsite L	5/31/2010	hypo		6																
137	Millsite L	7/5/2010	hypo		6																
137	Millsite L	8/1/2010	hypo		6																
137	Millsite L	9/13/2010	hypo		6																
137	Millsite L	6/5/2011	hypo		5																
137	Millsite L	7/9/2011	hypo		5																
137	Millsite L	8/7/2011	hypo		6																
137	Millsite L	9/3/2011	hypo		6																
137	Millsite L	6/10/2012	hypo		5																
137	Millsite L	7/8/2012	hypo		6																
137	Millsite L	7/29/2012	hypo		7																
137	Millsite L	8/25/2012	hypo		7																
137	Millsite L	6/8/2013	hypo		4																
137	Millsite L	7/15/2013	hypo		5																
137	Millsite L	8/11/2013	hypo		6																
137	Millsite L	9/17/2013	hypo		5																
137	Millsite L	6/6/2014	hypo		4																
137	Millsite L	6/29/2014	hypo		5																
137	Millsite L	7/14/2014	hypo		4																
137	Millsite L	7/29/2014	hypo		5																
137	Millsite L	8/10/2014	hypo		5																
137	Millsite L	8/24/2014	hypo		5																
137	Millsite L	9/8/2014	hypo		5																
137	Millsite L	9/19/2014	hypo		5																
137	Millsite L	6/6/2015	hypo		4																
137	Millsite L	6/30/2015	hypo		4																
137	Millsite L	7/12/2015	hypo		5																
137	Millsite L	7/26/2015	hypo		5																
137	Millsite L	8/9/2015	hypo		5																
137	Millsite L	8/21/2015	hypo		6																
137	Millsite L	9/8/2015	hypo		6																
137	Millsite L	9/20/2015	hypo		5																

Legend Information

<i>Indicator</i>	<i>Description</i>	<i>Detection Limit</i>	<i>Standard (S) / Criteria (C)</i>
General Information			
Lnum	lake number (unique to CSLAP)		
Lname	name of lake (as it appears in the Gazetteer of NYS Lakes)		
Date	sampling date		
Field Parameters			
Zbot	lake depth at sampling point, meters (m)		
Zsd	Secchi disk transparency or clarity	0.1m	1.2m (C)
Zsamp	water sample depth (m) (epi = epilimnion or surface; bot = bottom)	0.1m	none
Tair	air temperature (C)	-10C	none
TH20	water temperature (C)	-10C	none
Laboratory Parameters			
Tot.P	total phosphorus (mg/l)	0.003 mg/l	0.020 mg/l (C)
NOx	nitrate + nitrite (mg/l)	0.01 mg/l	10 mg/l NO3 (S), 2 mg/l NO2 (S)
NH4	total ammonia (mg/l)	0.01 mg/l	2 mg/l NH4 (S)
TN	total nitrogen (mg/l)	0.01 mg/l	none
TN/TP	nitrogen to phosphorus (molar) ratio, = (TKN + NOx)*2.2/TP		none
TCOLOR	true (filtered) color (ptu, platinum color units)	1 ptu	none
pH	powers of hydrogen (S.U., standard pH units)	0.1 S.U.	6.5, 8.5 S.U. (S)
Cond25	specific conductance, corrected to 25C (umho/cm)	1 umho/cm	none
Ca, Cl	calcium, chloride (mg/l)	1 mg/l	none
Chl.a	chlorophyll a (ug/l)	0.01 ug/l	none
Fe	iron (mg/l)	0.1 mg/l	1.0 mg/l (S)
Mn	manganese (mg/l)	0.01 mg/l	0.3 mg/l (S)
As	arsenic (ug/l)	1 ug/l	10 ug/l (S)
AQ-PC	Phycocyanin (aquafior) (unitless)	1 unit	none
AQ-Chl	Chlorophyll a (aquafior) (ug/l)	1 ug/l	none
MC-LR	Microcystis-LR (ug/l)	0.01 ug/l	1 ug/l potable (C) 20 ug/l swimming (C)
Ana	Anatoxin-a (ug/l)	variable	none
Cyl	Cylindrospermopsin (ug/l)	0.1 ug/l	none
FP-Chl, FP-BG	Fluoroprobe total chlorophyll, fluoroprobe blue-green chlorophyll (ug/l)	0.1 ug/l	none
Lake Assessment			
QA	water quality assessment; 1 = crystal clear, 2 = not quite crystal clear, 3 = definite algae greenness, 4 = high algae levels, 5 = severely high algae levels		
QB	aquatic plant assessment; 1 = no plants visible, 2 = plants below surface, 3 = plants at surface, 4 = plants dense at surface, 5 = surface plant coverage		
QC	recreational assessment; 1 = could not be nicer, 2 = excellent, 3 = slightly impaired, 4 = substantially impaired, 5 = lake not usable		
QD	reasons for recreational assessment; 1 = poor water clarity, 2 = excessive weeds, 3 = too much algae, 4 = lake looks bad, 5 = poor weather, 6 = litter/surface debris, 7 = too many lake users, 8 = other		
QF, QG	Health and safety issues today (QF) and past week (QG); 0 = none, 1 = taste/odor, 2 = GI illness humans/animals, 3 = swimmers itch, 4 = algae blooms, 5 = dead fish, 6 = unusual animals, 7 = other		
HAB form, Shore HAB	HAB evaluation; A = spilled paint, B = pea soup, C = streaks, D = green dots, E = bubbling scum, F = green/brown tint, G = duckweed, H = other, I = no bloom		

Appendix B: Priority Waterbody Listing for Millsite Lake

Millsite Lake (0906-0064)

Threatened

Waterbody Location Information

Revised: 03/18/2009

Water Index No:	SL-25- 7/P1- 8- P54..P55	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150303/080	Str Class:	B
Waterbody Type:	Lake	Reg/County:	6/Jefferson Co. (23)
Waterbody Size:	473.9 Acres	Quad Map:	REDWOOD (D-17-3)
Seg Description:	entire lake		

Water Quality Problem/Issue Information (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Recreation	Threatened	Known
Habitat/Hydrology	Threatened	Known

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, PROBLEM SPECIES (Eurasian milfoil)
 Suspected: ---
 Possible: ---

Source(s) of Pollutant(s)

Known: HABITAT MODIFICATION
 Suspected: ---
 Possible: ---

Resolution/Management Information

Issue Resolvability:	2 (Strategy Exists, Needs Funding/Resources)	
Verification Status:	5 (Management Strategy has been Developed)	
Lead Agency/Office:	ext/WQCC	Resolution Potential: Medium
TMDL/303d Status:	n/a	

Further Details

Overview

Recreational uses and habitat of Millsite Lake are know to experience threats from invasive plants. Eurasian watermilfoil has been documented on the lake and control strategies (heerbicide treatments and weed harvesting) have been implemented by lake residents in the past.

Water Quality Sampling

Millsite Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1997 and continuing through 2006. An Interpretive Summary report of the findings of this sampling was published in 2007. These data indicate that the lake continues to be best characterized as oligotrophic, or highly unproductive. Phosphorus levels in the lake typically fall well below the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements easily meet what is the recommended minimum for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is weakly colored, but color does not limit water transparency. (DEC/DOW, BWAM/CSLAP, June 2007)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be highly favorable since the lake was first evaluated and continuing through the most recent assessment. The recreational suitability of the lake is described most frequently as "could not be nicer" for most uses. The lake itself is most often described as "crystal clear," an assessment that is consistent with measured water quality characteristics. Assessments have noted that aquatic plants rarely grow to the lake surface, although Eurasian milfoil has some impacts on portions of the lake. (DEC/DOW, BWAM/CSLAP, June 2007)

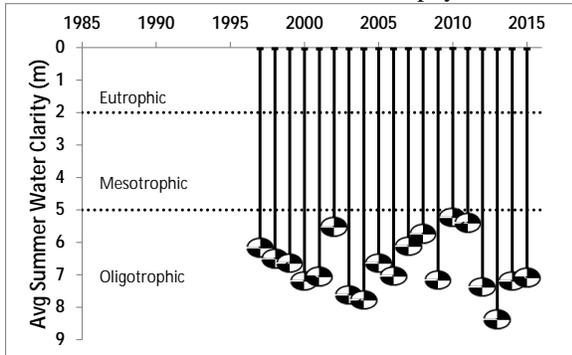
Lake Uses

This lake waterbody is designated class B, suitable for use as a public bathing beach, general recreation and aquatic life support, but not as a water supply. Water quality monitoring by NYSDEC focuses primarily on support of general recreation and aquatic life. Samples to evaluate the bacteriological condition and bathing use of the lake or to evaluate contamination from organic compounds, metals or other inorganic pollutants have not been collected as part of the CSLAP monitoring program. Monitoring to assess potable water supply and public bathing use is generally the responsibility of state and/or local health departments.

Appendix C- Long Term Trends: Millsite Lake

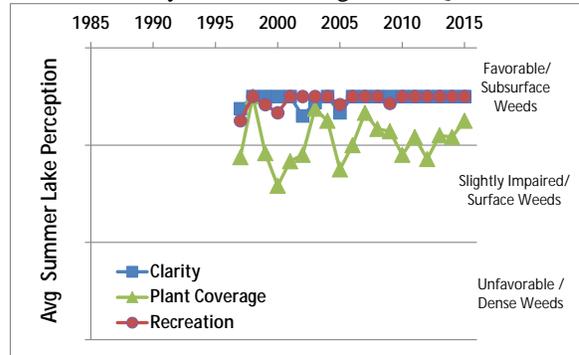
Long Term Trends: Water Clarity

- No trends apparent
- Most readings typical of *oligotrophic* lakes, consistent with TP and chlorophyll *a*



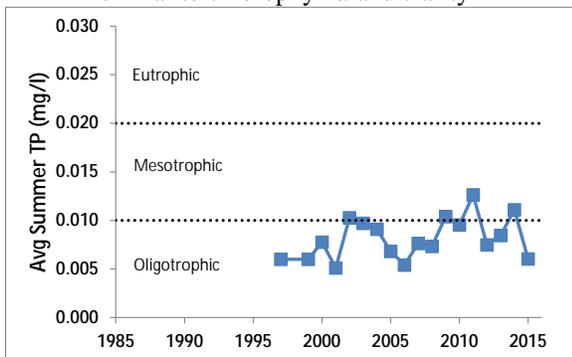
Long Term Trends: Lake Perception

- Highly favorable rec/WQ; plants stabilizing
- Recreational perception probably more closely linked to changes in WQ than weeds



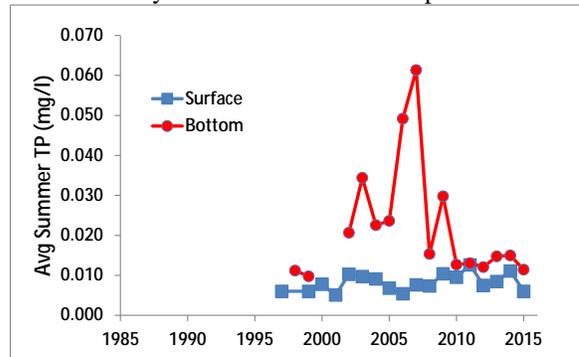
Long Term Trends: Phosphorus

- Slight ↑ since early 00s, but variable
- Most readings typical of *oligotrophic* lakes, similar to chlorophyll *a* and clarity



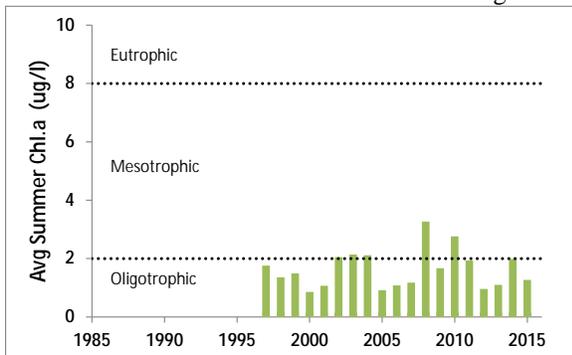
Long Term Trends: Bottom Phosphorus

- Bottom TP higher at times than at surface
- Indicates strong thermal stratification but likely little internal nutrient inputs



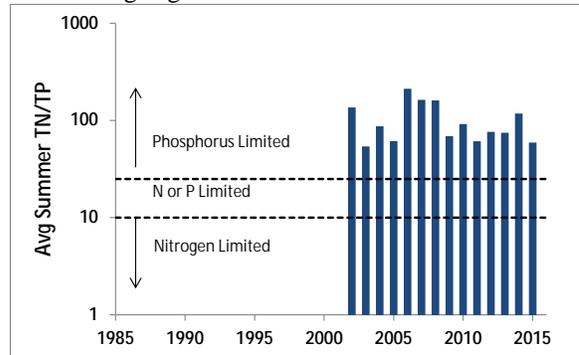
Long Term Trends: Chlorophyll a

- No trends apparent; slight annual changes
- Most readings typical of *oligotrophic* lakes, consistent with Secchi and TP readings



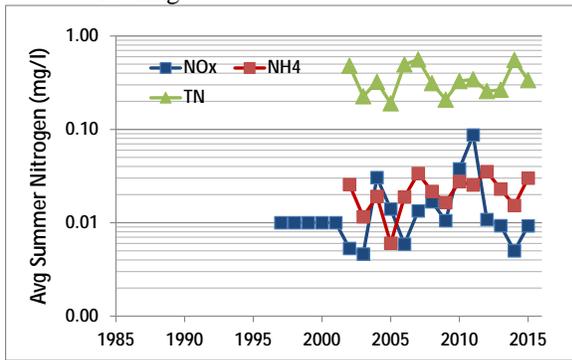
Long Term Trends: N:P Ratio

- No trends apparent
- Most readings indicate phosphorus limits algae growth



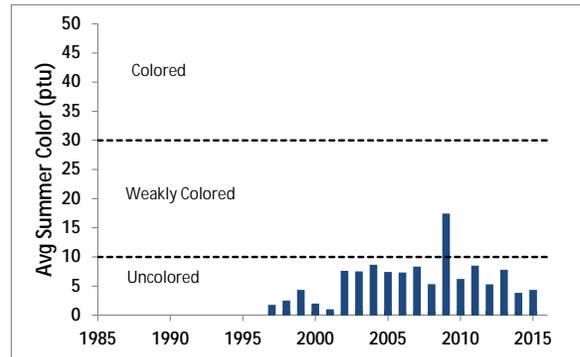
Long Term Trends: Nitrogen

- No trends apparent
- Low NOx, ammonia and total nitrogen readings



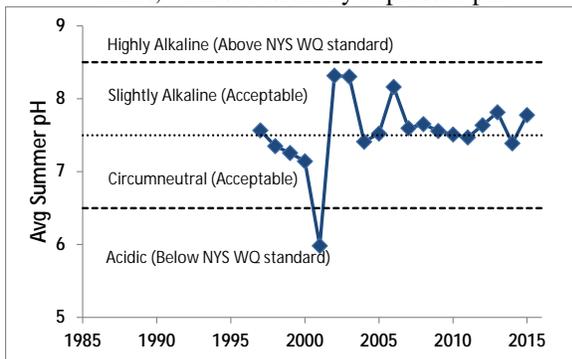
Long Term Trends: Color

- Slightly higher after lab change in 2002
- Most readings still typical of *uncolored* lakes



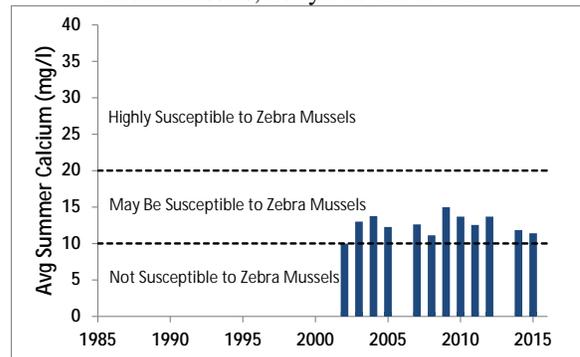
Long Term Trends: pH

- Stable pH over the last decade
- Most readings typical of *slightly alkaline* lakes, with occasionally depressed pH



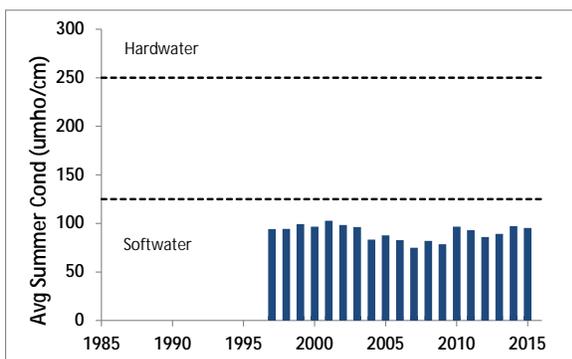
Long Term Trends: Calcium

- No trends apparent
- Data indicates little to no susceptibility to zebra mussels, not yet found at lake



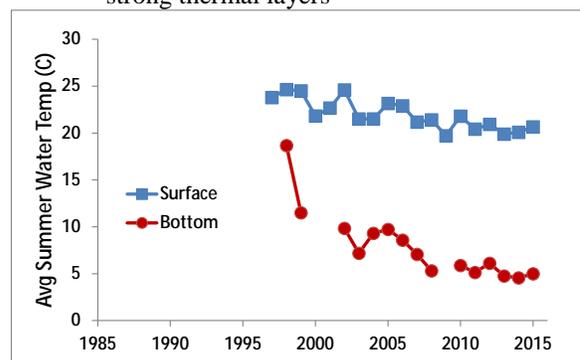
Long Term Trends: Conductivity

- Slight increase last 5 yrs, but mostly stable
- Most readings typical of *softwater* lakes



Long Term Trends: Water Temperature

- Surface and bottom temperatures decreasing
- Much lower deepwater temperatures indicate strong thermal layers



Appendix D: Algae Testing Results from SUNY ESF Study

Most algae are harmless, naturally present, and an important part of the food web. However excessive algae growth can cause health, recreational, and aesthetic problems. Some algae can produce toxins that can be harmful to people and animals. High quantities of these algae are called harmful algal blooms (HABs). CSLAP lakes have been sampled for a variety of HAB indicators since 2008. This was completed on selected lakes as part of a NYS DOH study from 2008-2010. In 2011, enhanced sampling on all CSLAP lakes was initiated through an EPA-funded project that has continued through the current sampling season. This study has evaluated a number of HAB indicators as follows:

- Algae types - blue green, green, diatoms, and "other"
- Algae densities
- Microscopic analysis of bloom samples
- Algal toxin analysis

Some of these results are reported in other portions of these reports. This appendix the seasonal change in blue green algae, other algae types, and the primary algal toxin (microcystin-LR, a liver toxin). Analysis was completed on open water samples and, for some lakes, shoreline samples that were collected when visual evidence of blooms were apparent. Results are compared to the DEC criteria of 25-30 ug/l blue green chlorophyll a and 20 ug/l microcystin-LR (based on the World Health Organization (WHO) threshold for unsafe swimming conditions) and the WHO provisional criteria for long-term protection of treated water supplies (= 1 ug/l microcystin-LR). The data for algae types are drawn from a high end fluorometer used by SUNY ESF. While these results are useful for timely approximation of lake conditions, they are not as accurate as the total chlorophyll results measured as a regular part of CSLAP since 1986 in all open water samples. Therefore these results are used judiciously in the assessment of sampled waterbodies.

Two separate samples are evaluated. A sample is taken at the CSLAP sample point at the deepest point of the lake at every sample session. In addition, shoreline samples can be taken when a bloom is visible. It should be noted that shoreline conditions can vary significantly over time and from one location to another. The shoreline bloom sampling results summarized below are not collected as routinely as open water samples, and therefore represent snapshots in time. It is assumed that sampling results showing high blue green algae and/or toxin levels indicate that algae blooms may be common and/or widespread on these lakes. However, the absence of elevated blue green algae and toxin levels does not assure the lack of shoreline blooms on these lakes. Elevated open water readings may indicate a higher likelihood of shoreline blooms, but in some lakes, these shoreline blooms have not been (well) documented.

The results from these samples are summarized within the CSLAP report for the lake.

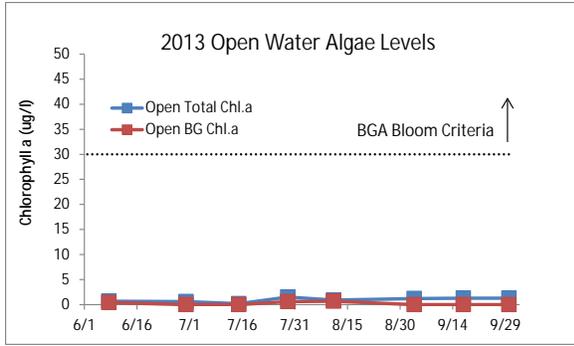


Figure D1:
2013 Open Water Total and BGA Chl.a

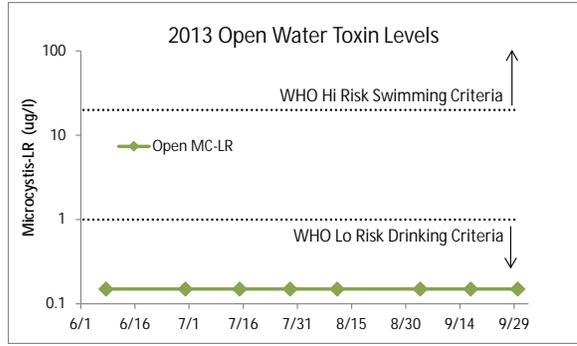


Figure D2:
2013 Open Water Microcystin-LR



Figure D3:
2013 Shoreline Total and BGA Chl.a

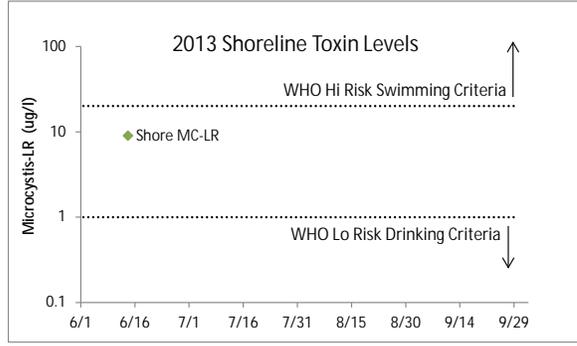


Figure D4:
2013 Shoreline Microcystin-LR

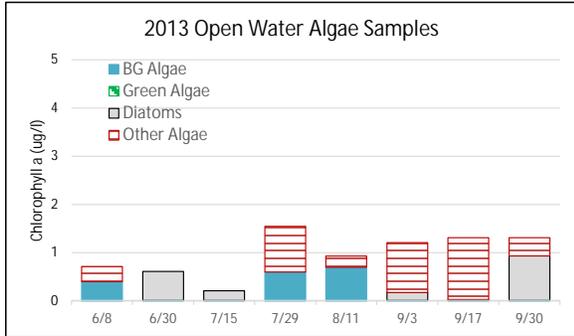


Figure D5:
2013 Open Water Algae Types

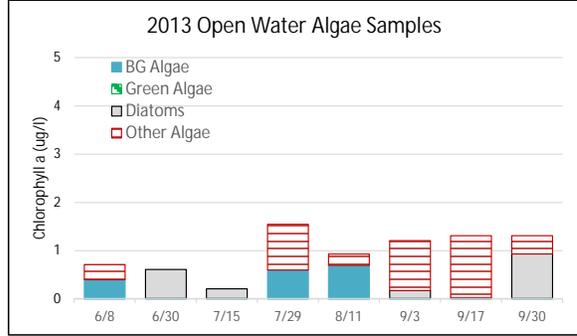


Figure D6:
2013 Shoreline Algae Types

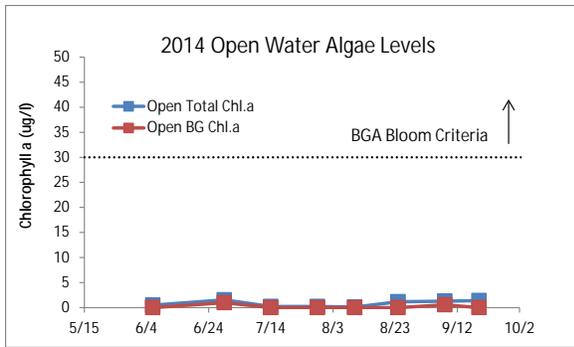


Figure D7:
2014 Open Water Total and BGA Chl.a

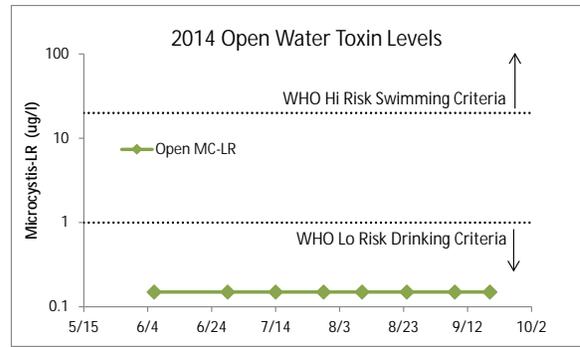


Figure D8:
2014 Open Water Microcystin-LR

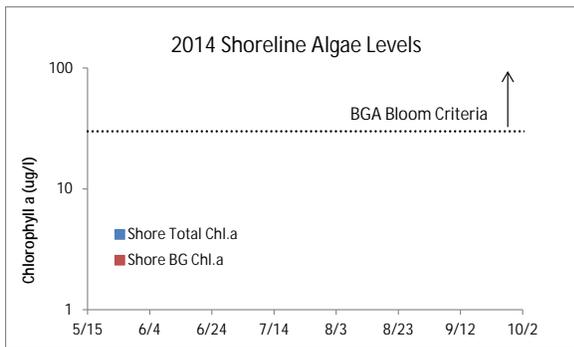


Figure D9:
2014 Shoreline Total and BGA Chl.a

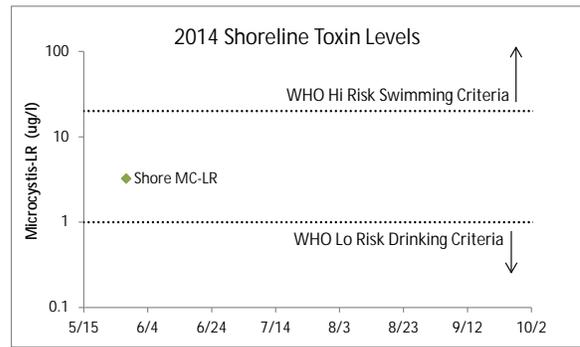


Figure D10:
2014 Shoreline Microcystin-LR

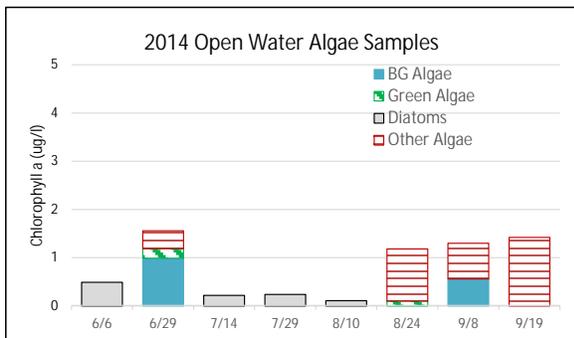


Figure D11:
2014 Open Water Algae Types

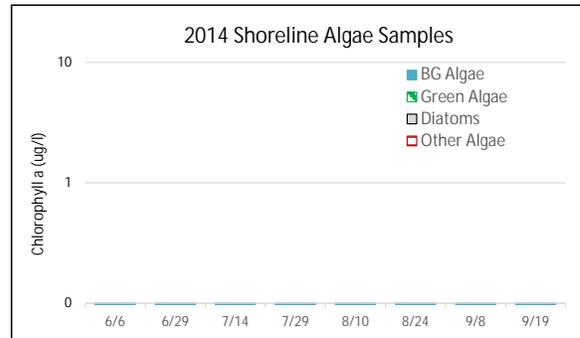


Figure D12:
2014 Shoreline Algae Types

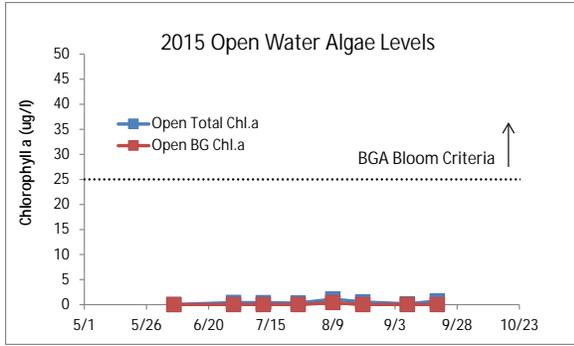


Figure D13:
2015 Open Water Total and BGA Chl.a

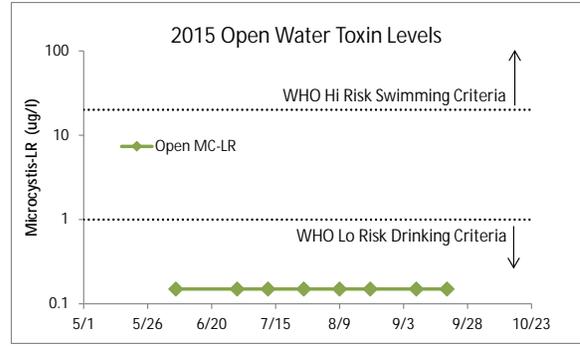


Figure D14:
2015 Open Water Microcystin-LR

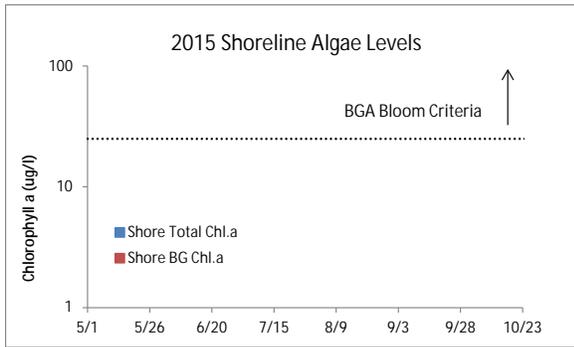


Figure D15:
2015 Shoreline Total and BGA Chl.a

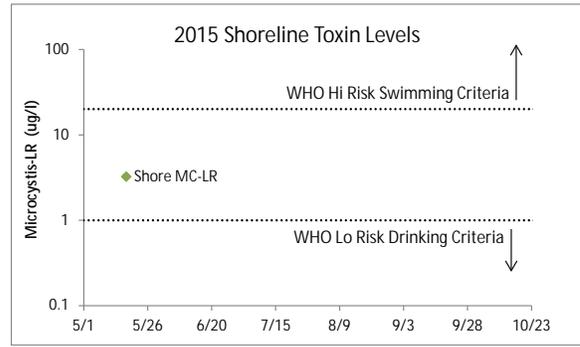


Figure D16:
2015 Shoreline Microcystin-LR

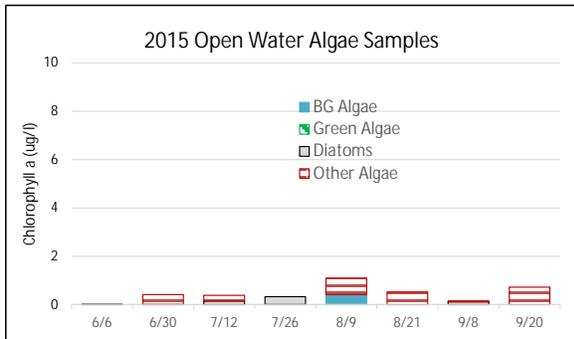


Figure D17:
2015 Open Water Algae Types

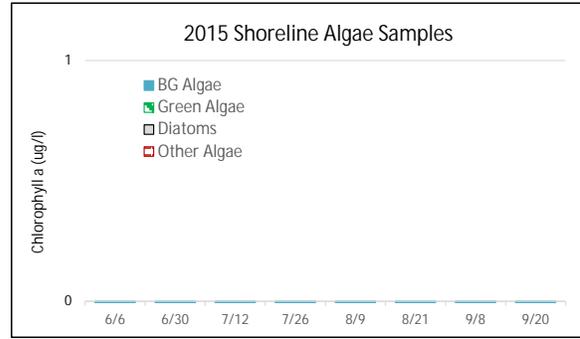


Figure D18:
2015 Shoreline Algae Types

Appendix E: AIS Species in Jefferson County

The table below shows the invasive aquatic plants and animals that have been documented in Jefferson County, as cited in either the iMapInvasives database (<http://www.imapinvasives.org/>) or in the NYSDEC Division of Water database. These databases may include some, but not all, non-native plants or animals that have not been identified as “Prohibited and Regulated Invasive Species” in New York state regulations (6 NYCRR Part 575; http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf).

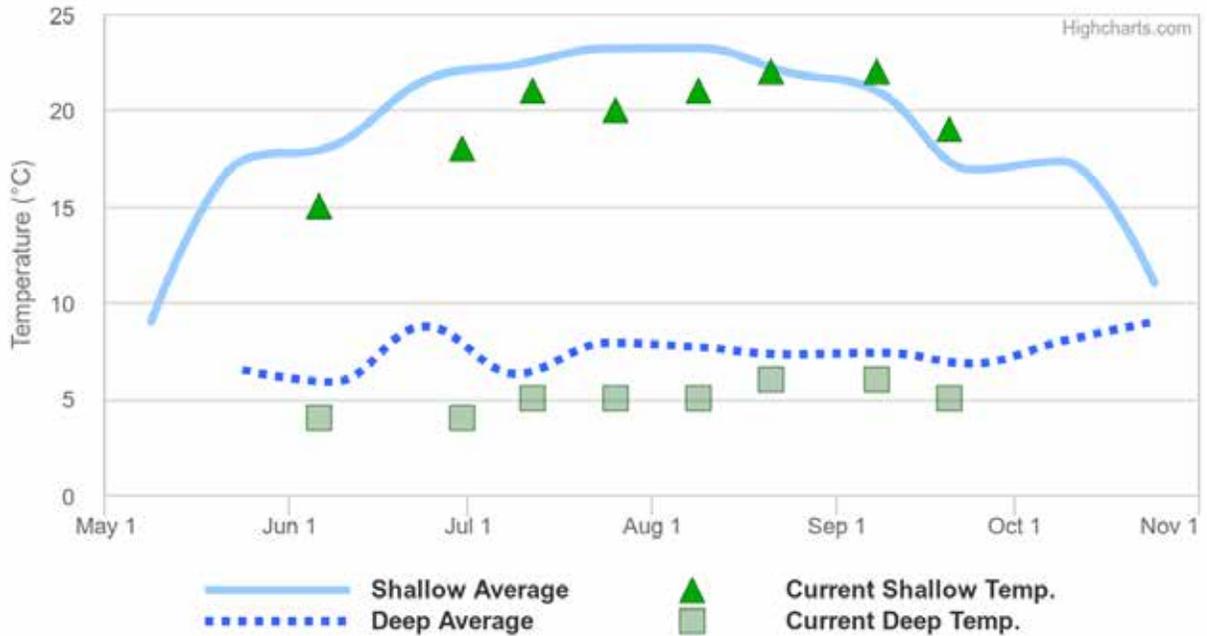
This list is not complete, but instead represents only those species that have been reported and verified within the county. If any additional aquatic invasive species (AIS) are known or suspected in these or other waterbodies in the county, this information should be reported through iMap invasives or by contacting NYSDEC at dowinfo@dec.ny.gov.

Aquatic Invasive Species - Jefferson County			
Waterbody	Kingdom	Common name	Scientific name
Black Pond	Animal	Common carp	<i>Cyprinus carpio</i>
Black Pond	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
Black Pond	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Butterfield Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Cranberry Pond	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
Crooked Creek	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
Floodwood Pond	Plant	Common carp	<i>Cyprinus carpio</i>
Floodwood Pond	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
Floodwood Pond	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Floodwood Pond	Plant	Brittle naiad	<i>Najas minor</i>
Floodwood Pond	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Floodwood Pond	Plant	Water chestnut	<i>Trapa natans</i>
Goose Pond	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Hyde Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake of the Isles	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake of the Woods	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake Ontario	Plant	Flowering-rush, Flowering rush	<i>Butomus umbellatus</i>
Lake Ontario	Animal	Common carp	<i>Cyprinus carpio</i>
Lake Ontario	Animal	Quagga mussel	<i>Dreissena bugensis</i>
Lake Ontario	Animal	Zebra mussel	<i>Dreissena polymorpha</i>
Lake Ontario	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
Lake Ontario	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake Ontario	Plant	Brittle naiad	<i>Najas minor</i>
Lake Ontario	Animal	Round goby	<i>Neogobius melanostomus</i>

Waterbody	Kingdom	Common name	Scientific name
Lake Ontario	Plant	Starry stonewort	<i>Nitellopsis obtusa</i>
Lake Ontario	Animal	Allegheny crayfish	<i>Orconectes obscurus</i>
Lake Ontario	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Lake Ontario	Plant	Water chestnut	<i>Trapa natans</i>
Lakeview Pond	Animal	Common carp	<i>Cyprinus carpio</i>
Lakeview Pond	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lakeview Pond	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Millsite Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Millsite Lake	Plant	Banded mystery snail	<i>Viviparus georgianus</i>
Moon Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Moon Lake	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Mud Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Muskellunge Lake	Animal	Rudd	<i>Scardinius erythrophthalmus</i>
North Colwell Pond	Plant	Brittle naiad	<i>Najas minor</i>
North Colwell Pond	Plant	Water chestnut	<i>Trapa natans</i>
Payne Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Payne Lake	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Pleasant Lake	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
Pleasant Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Red Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Saint James Lake	Animal	Common carp	<i>Cyprinus carpio</i>
Saint James Lake	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
Saint James Lake	Animal	Round goby	<i>Neogobius melanostomus</i>
Saint James Lake	Plant	Water chestnut	<i>Trapa natans</i>
South Colwell Pond	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
South Colwell Pond	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
South Colwell Pond	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
South Colwell Pond	Plant	Water chestnut	<i>Trapa natans</i>
St. Lawrence River	Animal	Zebra mussel	<i>Dreissena polymorpha</i>
St. Lawrence River	Plant	European frogbit	<i>Hydrocharis morsus-ranae</i>
St. Lawrence River	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
St. Lawrence River	Plant	Starry stonewort	<i>Nitellopsis obtusa</i>
St. Lawrence River	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>

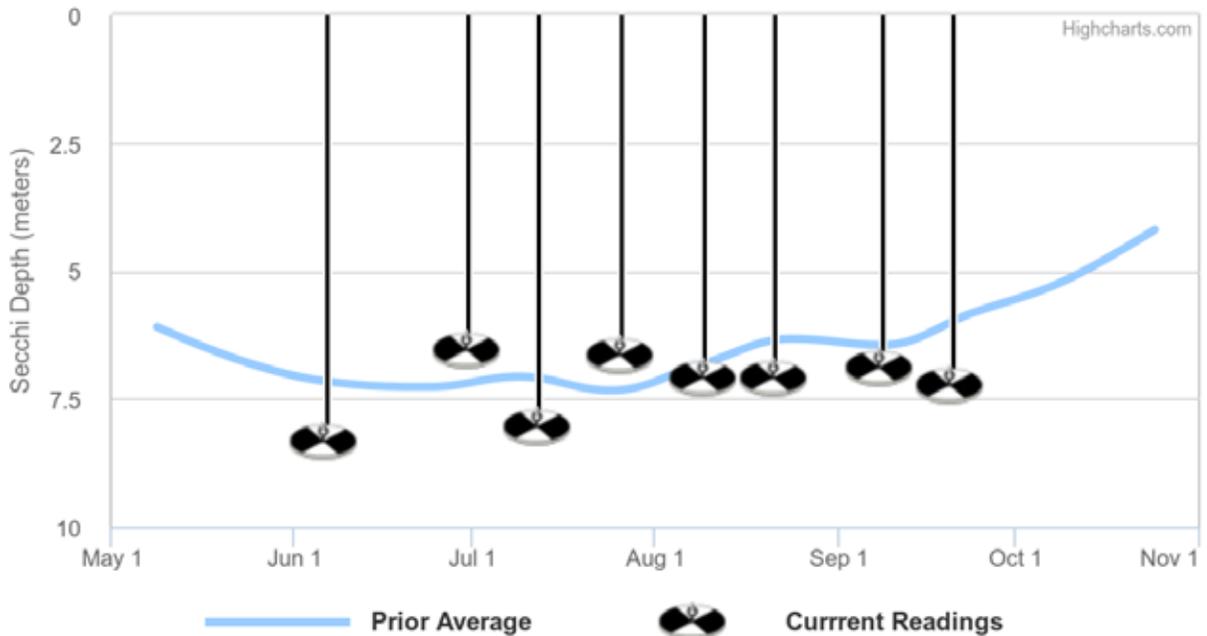
Appendix F: Current Year vs. Prior Averages for Millsite Lake

Current Year Water Temperatures vs. Prior Average



This year's shallow water sample temperatures are tending to be lower than normal when compared to the average of readings collected from 1997 to 2014. This year's deep water sample temperatures are tending to be lower than normal when compared to the average of readings collected from 1999 to 2014.

Current Year Secchi Readings vs. Prior Average



This year's session Secchi readings are tending to be higher than normal when compared to the average of readings collected from 1997 to 2014

Appendix G: Watershed and Land Use Map for Millsite Lake

This watershed and land use map was developed using USGS StreamStats and ESRI ArcGIS using the 2006 land use satellite imagery. The actual watershed map and present land uses within this watershed may be slightly different due to the age of the underlying data and some limits to the use of these tools in some geographic regions and under varying flow conditions. However, these maps are intended to show the approximate extent of the lake drainage basin and the major land uses found within the boundaries of the basin.

