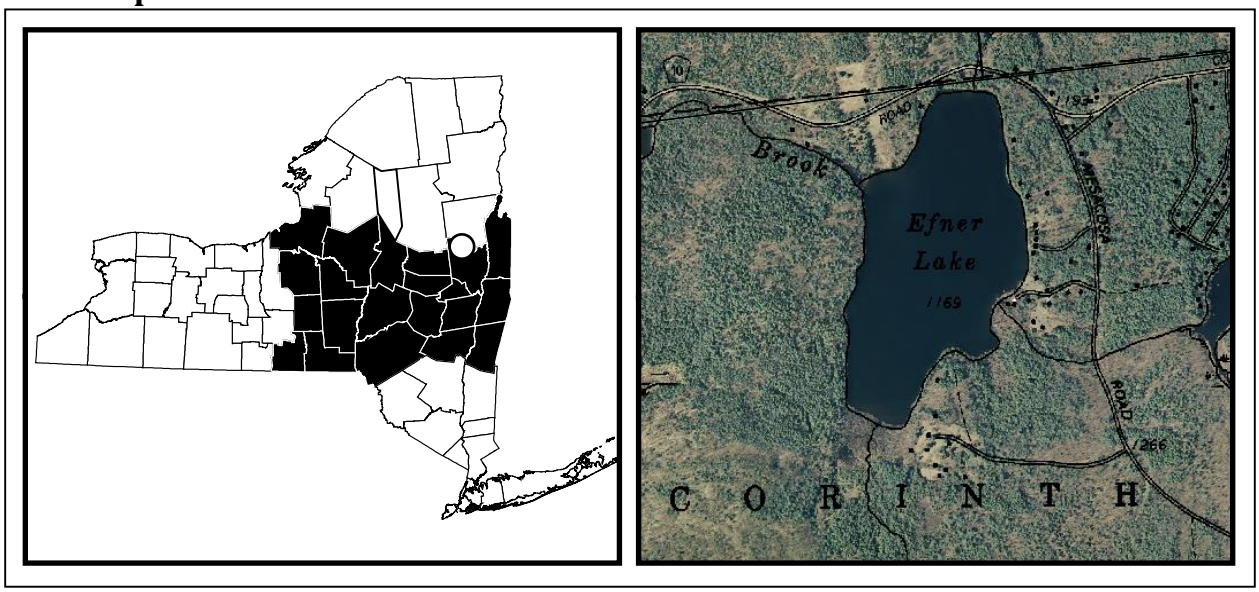
CSLAP 2015 Lake Water Quality Summary:
Efner Lake

General Lake Information

Location	Town of Corinth
County	Saratoga
Basin	Upper Hudson River
Size	38.9 hectares (96.1 acres)
Lake Origins	Natural
Watershed Area	410.0 hectares (1010 acres)
Retention Time	0.7 years
Mean Depth	4.2 meters
Sounding Depth	14.5 meters
Public Access?	None- private access only
Major Tributaries	Unnamed outlet from Jenny Lake
Lake Tributary To…	Efner Lake Brook to Black Pond Creek to Daly Creek to Great Sacandaga Lake
WQ Classification	B (contact recreation = swimming)
Lake Outlet Latitude	43.269
Lake Outlet Longitude	-73.931
Sampling Years	1997-2001, 2012-2015
2015 Samplers	Nancy and Harry Hansen
Main Contact	Harry Hansen

Lake Map



Background

Efner Lake is a 96 acre, class B lake found in the Town of Corinth in Saratoga County, in the southern Adirondack region of New York State. It was sampled for the first time through CSLAP in 1997.

It is one of seven CSLAP lakes among the more than 380 lakes and ponds found in Saratoga County, and one of 32 CSLAP lakes among the more than 1370 lakes and ponds in the Upper Hudson River drainage basin.

Lake Uses

Efner Lake is a Class B lake; this means that the best intended use for the lake is for contact recreation—swimming and bathing, non-contact recreation—fishing and boating, aquatic life, and aesthetics. The lake is used by lake residents and invited guests for swimming and passive boating—the lake has no public access. Motor boat limits are in place at the lake.

It is not known by the report authors if Efner Lake has recently been stocked as part of any private stocking effort; the lake is not stocked by the state of New York.

General statewide fishing regulations are applicable in Efner Lake, and there are no lake-specific fish consumption advisories on Efner Lake.

Historical Water Quality Data

CSLAP sampling was conducted on Efner Lake from 1997 to 2001 and in 2012 to 2015. The CSLAP reports for some of the past years can be found on the NYSFOLA website at http://nysfola.mylaketown.com. The most recent CSLAP report and scorecard for Efner Lake can be found on the NYSDEC web page at http://www.dec.ny.gov/lands/77843.html.

Efner Lake was sampled through the state Biological Survey conducted by the state Conservation Department in the Upper Hudson River basin in 1932. That survey found that aquatic vegetation is "scant", and found high oxygen levels throughout the water column. Water clarity readings in June were higher than in the present studies, but pH readings were lower (and below the contemporary state water quality standards). The fisheries sampling found a small number of warmwater and coolwater fish species, including largemouth and smallmouth bass, bullhead, common sunfish, yellow perch, and minnows.

The lake was also sampled by the NYSDEC in 1976. This sampling showed water clarity readings higher than in the present studies (but lower than in the 1930s), conductivity readings that were lower than those measured in recent years, but pH, NOx, and algae levels (chlorophyll *a*) comparable to present-day readings.

None of the unnamed ephemeral tributaries to the lake, nor the outlet of the lake, have been monitored through the NYSDEC Rotating Intensive Basins (RIBS) or stream biomonitoring programs.

Lake Association and Management History

Efner Lake is represented by the Efner Lake Association. The Corinth Town Board passed a local law in 1992, initiated by the lake association, restricting the size of boat motors (inboard and outboard) on the lake, with a 7 1/2 hp maximum allowable motor output. At least at one

time, the lake association conducted some bacteriological sampling. It is not known if the lake association is actively engaged in any other lake management actions, or if the lake association maintains a web page.

Summary of 2015 CSLAP Sampling Results

Evaluation of 2015 Annual 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 – Efner Lake" section in Appendix C.

Evaluation of Eutrophication Indicators

Phosphorus readings were slightly higher than normal in 2015, consistent with a slight decrease in water clarity. However, both algae and water color readings were close to normal; this suggests that most of these changes are (again) part of normal variability in the lake. Water clarity has decreased slightly since the 1990s.

None of the trophic indicators (Secchi disk transparency, chlorophyll a, and total phosphorus) change significantly during the typical summer. In 2015, phosphorus readings spiked in July, but this did not result in significant changes in either water clarity or algae levels over the same period.

The lake can be characterized as *mesoligotrophic*, or moderately unproductive, based on chlorophyll *a*, total phosphorus (both typical of *oligotrophic* lakes) and Secchi disk transparency readings (typical of *mesotrophic* lakes). The trophic state indices (TSI) evaluation suggests that each of these trophic indicators is "internally consistent"—each of these indicators is in the expected range given the readings of the other indicators, although water clarity readings in the lake are slightly lower than expected given the algae levels and nutrients in the lake. This suggests that the water clarity may be influenced, or at least limited, by factors other than algae (or color). Overall trophic conditions are summarized on the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Potable Water Indicators

Algae levels are too low to render the lake susceptible to taste and odor compounds or elevated DBP (disinfection by product) compounds that could affect the potability of the water, and the lake is not used for drinking water. Deepwater phosphorus and ammonia readings are slightly higher than those measured at the lake surface, but well below the state water quality standards, so deepwater intakes may also support "unofficial" potable water use. Potable water conditions, at least as measurable through CSLAP, are summarized in the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Limnological Indicators

Total nitrogen and pH levels were slightly higher than usual in 2015, and TN readings have increased slightly in recent years (although they are still low). Color readings were close to normal in 2015, but higher readings have been measured in Efner Lake since the early 2000s, probably due to the change in labs. It is likely that the small changes in the other limnological

indicators (NOx, ammonia, pH, conductivity and calcium) have been within the normal range of variability in the lake.

Chloride levels in the 2015 samples, collected for the first time through CSLAP and cited in Appendix A, ranged from 17 to 18 mg/l. These values fall within the "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 within than the range of values found in most NYS lakes. These readings suggest a moderate likelihood of biological impacts from road salt. Additional data will help to determine if these represent normal readings for the lake

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

Evaluation of Biological Condition

Phytoplankton, zooplankton, macroinvertebrate, and fisheries sampling has not been conducted through CSLAP at Efner Lake. The fluoroprobe data since 2012 indicates very low blue green algae levels in all samples, consistent with very low overall algae levels. The algae community appears to be dominated by a mix of algae, particularly green algae. No shoreline blooms have been reported.

RPI conducted a plant survey of the lake in 1999. This survey found 31 different aquatic plant species, including one protected plant species (lesser bladderwort, Utricularia minor) and one exotic plant species (fanwort, Cabomba caroliniana); the latter is also found in Jenny and Hunt Lakes. The modified floristic quality index (FQI) for the lake indicates that the quality of the aquatic plant community is "excellent".

The composition of the fish community is not known, but is assumed to be comprised of coolwater and warmwater fish species.

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

Evaluation of Lake Perception

Aquatic plant coverage was slightly lower than normal in 2014 and 2015; it is not known if this is due to a reduction in fanwort or native plants. Recreational and water quality assessments were close to normal in both years, and again very highly favorable, despite the slight decrease in water transparency. None of these indicators has exhibited a significant long-term trend. Aquatic plant coverage typically increases from May through July, although no clear seasonal trends were apparent in 2015. It is not known if these seasonal changes are associated with changes in fanwort or native plant communities. Overall lake perception is summarized on the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Local Climate Change

Water and air temperature readings in the summer index period have been close to the CSLAP readings since 1997 in recent years, although deepwater temperatures may have dropped slightly.

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 algae levels have been well below the levels indicating susceptibility for harmful algal blooms (HABs), and open water microcystin levels have been well below the thresholds for safe swimming. No shoreline blooms have been reported or sampled.

Lake Condition Summary

Category	Indicator	Min	Overall Avg	Max	2015 Avg	Classification	2015 Change?	Long-term Change?
Eutrophication Indicators	Water Clarity	2.70	4.58	7.13	4.00	Mesotrophic	Within Normal Range	Decreasing Slightly
	Chlorophyll *a*	0.39	1.87	5.51	1.68	Oligotrophic	Within Normal Range	No Change
	Total Phosphorus	0.002	0.007	0.016	0.009	Oligotrophic	Higher than Normal	No Change
Potable Water Indicators	Hypolimnetic Ammonia	0.08	0.19	0.35	0.17	Elevated Deepwater NH4	Within Normal Range	
	Hypolimnetic Arsenic							Not known
	Hypolimnetic Iron							Not known
	Hypolimnetic Manganese							Not known
Limnological Indicators	Hypolimnetic Phosphorus	0.009	0.018	0.039	0.015	Close to Surface TP Readings	Within Normal Range	Not known
	Nitrate + Nitrite	0.00	0.01	0.06	0.01	Low NOx	Within Normal Range	No Change
	Ammonia	0.01	0.02	0.08	0.03	Low Ammonia	Within Normal Range	
	Total Nitrogen	0.14	0.26	0.45	0.31	Low Total Nitrogen	Higher than Normal	
	pH	6.02	7.27	8.22	7.49	Circumneutral	Higher than Normal	No Change
	Specific Conductance	33	68	89	66	Softwater	Within Normal Range	No Change
	True Color	3	11	25	12	Intermediate Color	Within Normal Range	Increasing Slightly
	Calcium	3.7	4.0	4.3	4.1	Not Susceptible to Zebra Mussels	Within Normal Range	
Lake Perception	WQ Assessment	1	1.0	1	1.0	Crystal Clear	Within Normal Range	No Change
	Aquatic Plant Coverage	1	2.8	3	3.0	Surface Plant Growth	Less Favorable than Normal	No Change
	Recreational Assessment	1	1.1	2	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					Excellent quality of aquatic plant community	Not known	Not known
	Zooplankton					Not measured through CSLAP	Not known	Not known
	Macroinvertebrates					Not measured through CSLAP	Not known	Not known
	Fish					Coolwater fisheries?	Not known	Not known
	Invasive Species					Fanwort	Not known	Not known
Local Climate Change	Air Temperature	5	22.5	30	22.4		Within Normal Range	No Change
	Water Temperature	12	21.2	28	21.2		Within Normal Range	No Change

Category	Indicator	Min	Overall Avg	Max	2015 Avg	Classification	2015 Change?	Long-term Change?
Harmful Algal Blooms	Open Water Phycocyanin	0	2	4	1	No readings indicate high risk of BGA	Not known	Not known
	Open Water FP Chl.a	0	1	2	1	No readings indicate high algae levels	Not known	Not known
	Open Water FP BG Chl.a	0	0	1	0	No readings indicate high BGA levels	Not known	Not known
	Open Water Microcystis	<DL	0.2	0.9	<DL	Mostly undetectable open water MC-LR	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

Efner Lake is presently among the lakes listed on the Upper Hudson River drainage basin Priority Waterbody List (PWL) as having *no known impacts*. The PWL citation for the lake is listed in Appendix B.

Potable Water (Drinking Water)

The CSLAP dataset at Efner 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 low surface algae levels and relatively low deepwater ammonia and phosphorus readings do not indicate any threats to any "unofficial" potable water use.

Public Bathing

The CSLAP dataset at Efner 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 fully supported, although this use may be *threatened* by decreasing water clarity. 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 Efner Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that recreation should be fully supported.

Aquatic Life

The CSLAP dataset on Efner Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aquatic life should be fully supported, although this use may be *threatened* by depressed deepwater oxygen (based on slightly elevated ammonia and phosphorus levels) and fanwort. Additional data are needed to evaluate the food and habitat conditions for aquatic organisms in the lake.

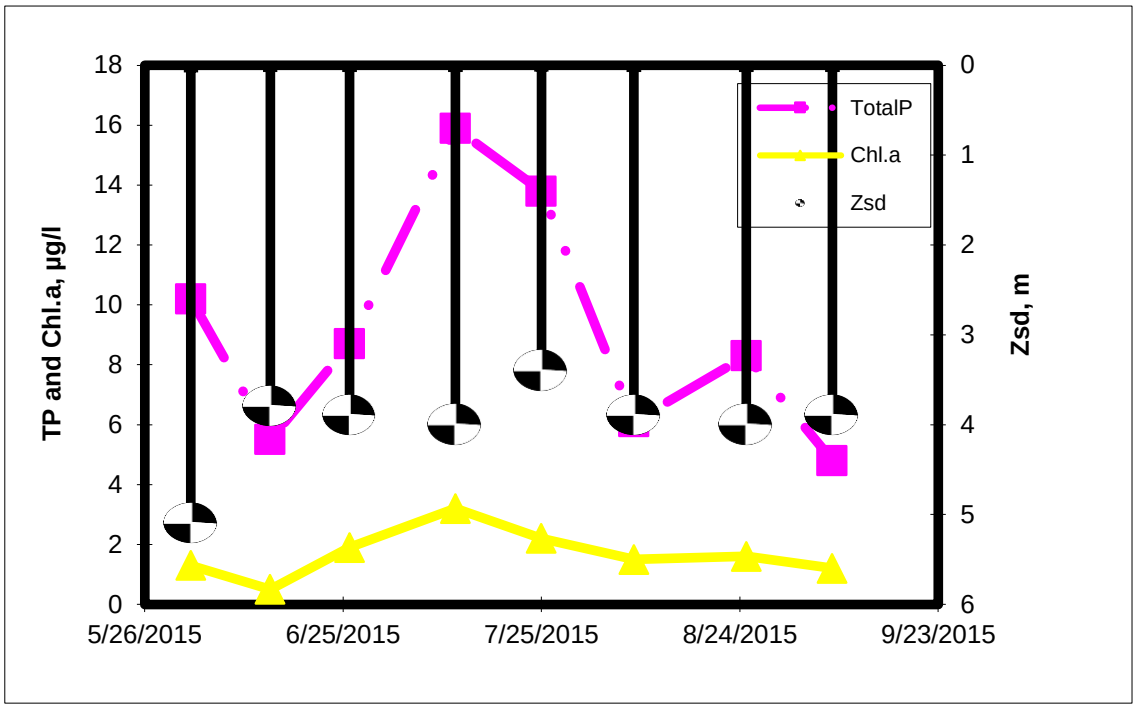
Aesthetics and Habitat
The CSLAP dataset on Efner Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aesthetics and habitat should be fully supported, although these conditions may be *threatened* by native (aesthetics) or invasive (habitat) plants. .

Fish Consumption
There are no fish consumption advisories posted for Efner Lake.

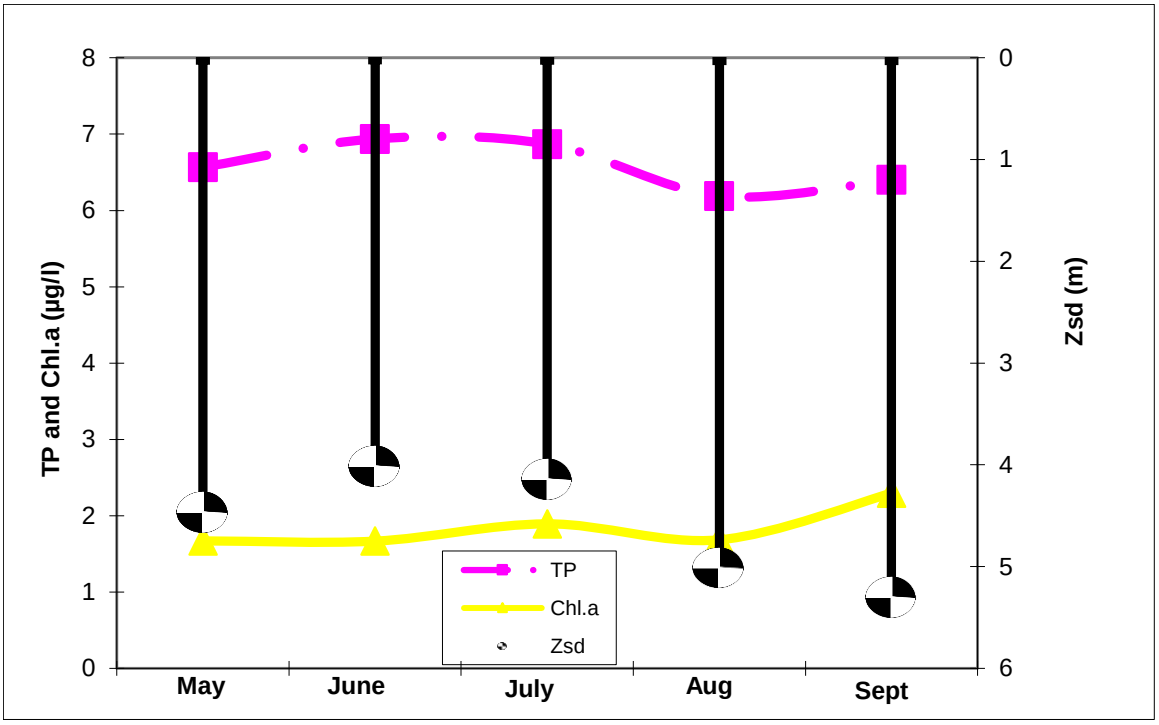
Additional Comments and Recommendations
More detailed plant surveys may help to evaluate whether fanwort is growing invasively in the lake, or if native plant growth is affecting lake use.

Aquatic Plant IDs-2015
None submitted for identification in 2015.

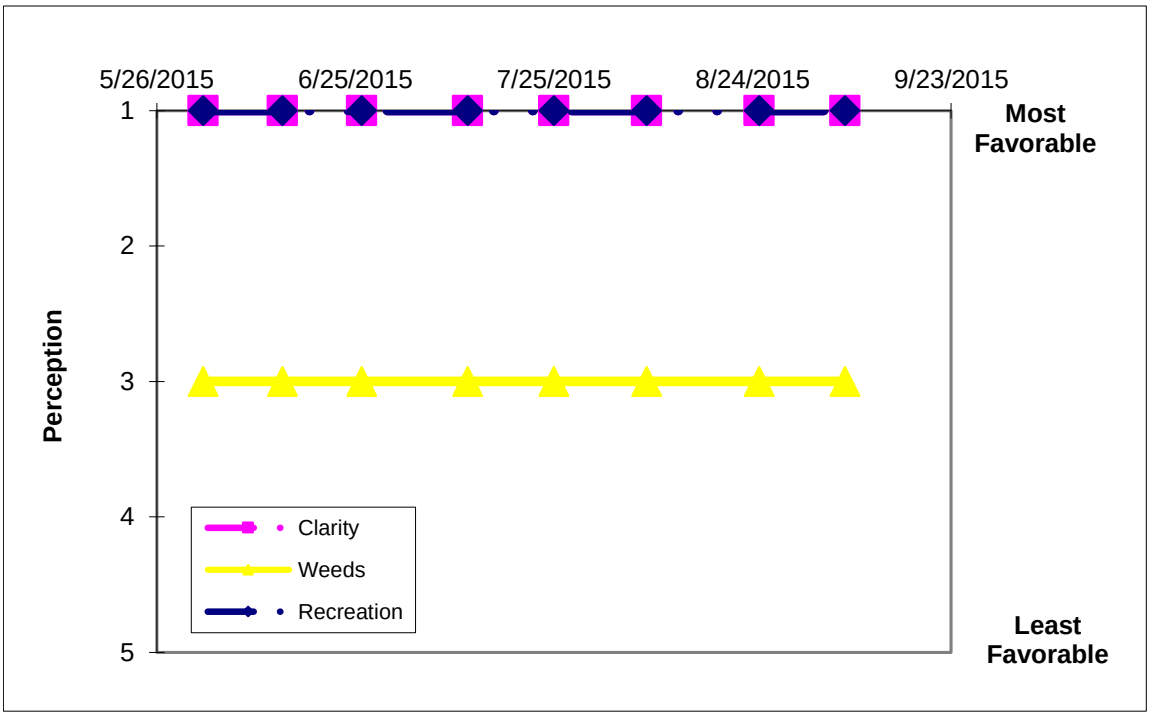
Time Series: Trophic Indicators, 2015



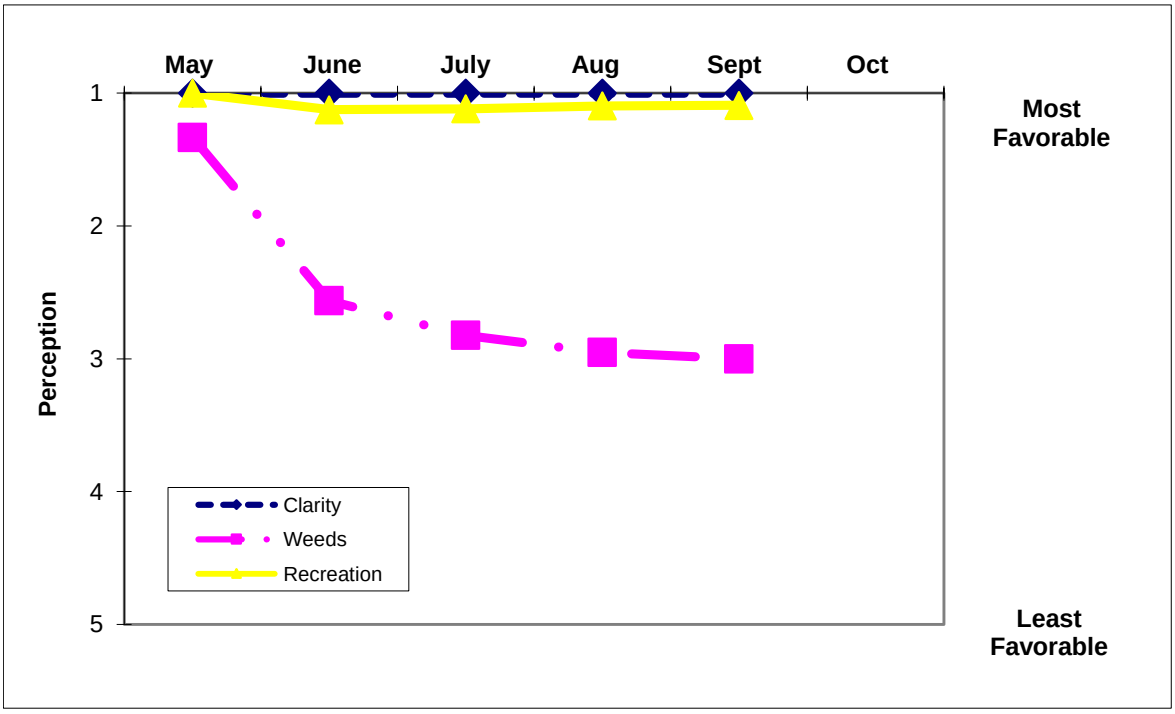
Time Series: Trophic Indicators, Typical Year (1997-2015)



Time Series: Lake Perception Indicators, 2015



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



Appendix A- CSLAP Water Quality Sampling Results for Efner Lake

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
131	Efner L	5/24/1997	12.0	6.88	1.5	0.006	0.06				10	7.41	58		1.18	
131	Efner L	6/8/1997	11.8	6.55	1.5	0.004	0.02				10	7.32	62		1.26	
131	Efner L	6/23/1997	11.0	4.65	1.5	0.006	0.01				10	7.37	64		0.68	
131	Efner L	7/6/1997	11.8	5.38	1.5											
131	Efner L	7/20/1997	11.8	6.00	1.5	0.005	0.01				10	6.02	71		2.14	
131	Efner L	8/3/1997	11.8	5.63	1.5	0.005	0.01				7	7.33	69		1.74	
131	Efner L	8/17/1997	12.0	5.50	1.5	0.004	0.01				6	7.54	68		2.81	
131	Efner L	8/31/1997	12.8	7.13	1.5	0.005	0.01				7	7.23	68		1.59	
131	Efner L	5/31/1998	11.8	3.63	1.5	0.005	0.01				12	6.92	64		1.73	
131	Efner L	6/21/1998	12.0	3.80	1.5		0.01				8	7.29	62		2.19	
131	Efner L	6/28/1998	11.8	3.50	1.5		0.01				11	6.10	65		1.77	
131	Efner L	7/12/1998	12.0	3.75	1.5		0.01				10	7.26	64		2.50	
131	Efner L	8/1/1998	11.8	5.75	1.5						5	6.90	66		1.80	
131	Efner L	8/9/1998	11.8	4.63	1.5						4	7.06	65		1.17	
131	Efner L	8/25/1998	15.0	6.45	1.5						4	7.43	65		0.39	
131	Efner L	9/13/1998	11.8	7.00	1.5	0.007					4	7.08	68		1.33	
131	Efner L	6/13/1999	12.0	4.20	1.5	0.007	0.01				10	7.18	71		1.06	
131	Efner L	7/5/1999	12.2	5.30	1.5	0.006	0.01				4	7.48	70		0.85	
131	Efner L	7/18/1999	11.8	4.80	1.5	0.004	0.01				7	6.64	69		1.12	
131	Efner L	8/1/1999	18.9	6.00	1.5	0.005	0.01				6	7.63	70		3.32	
131	Efner L	8/22/1999	12.5	5.45	1.5	0.010	0.01				3	7.33	76		0.98	
131	Efner L	8/29/1999	12.3	6.75	1.5	0.005	0.01				7	7.46	67		0.70	
131	Efner L	9/5/1999	18.0	7.13	1.5	0.002	0.01				9	7.80	69		1.38	
131	Efner L	9/19/1999	11.8	5.00	1.5	0.008	0.01				5	6.75	69		1.26	
131	Efner L	6/25/2000	11.8	3.50	1.5	0.007	0.01				16	7.85	68		3.96	
131	Efner L	7/9/2000	12.3	3.88	1.5	0.005	0.01				13	8.01	69		3.59	
131	Efner L	7/30/2000	11.8	3.38	1.5	0.007	0.01				12	7.32	68		2.95	
131	Efner L	8/6/2000	13.8	3.50	1.5	0.005	0.01				12	6.92	69		2.62	
131	Efner L	8/20/2000	13.0	4.50	1.5	0.013					12	6.84	70		1.26	
131	Efner L	9/3/2000	13.8	5.50	1.5	0.005					16	6.32	69		3.12	
131	Efner L	9/24/2000	12.5	3.88	1.5	0.010	0.01				13	7.34	70		4.58	
131	Efner L	10/9/2000	12.8	5.13	1.5	0.007					12	6.80	70		3.05	
131	Efner L	6/17/2001	12.8	3.88	1.5	0.007	0.01				11	7.57	67		1.75	
131	Efner L	7/15/2001	12.5	5.40	1.5	0.005	0.01				8	7.56	71		0.88	
131	Efner L	7/22/2001	13.8	4.38	1.5	0.005	0.01				8	7.46	71		0.69	
131	Efner L	7/29/2001	13.0	3.85	1.5	0.004	0.01				7	8.22	71		0.97	
131	Efner L	8/12/2001	13.0	4.20	1.5	0.005	0.01				7	7.53	72			
131	Efner L	8/26/2001	12.3	5.05	1.5	0.005	0.01				7	7.14	72		1.20	
131	Efner L	9/9/2001	13.3	6.25		0.003	0.01				9	7.47	71		5.51	
131	Efner L	9/23/2001	12.8	6.25	1.5	0.010	0.01				7	7.19	70		1.57	
131	Efner L	6/25/2012	12.2	3.60	1.5	0.005	0.02	0.03	0.21	88.86	13	8.16	66	4	4.40	
131	Efner L	7/9/2012	13.6	3.65	1.5	0.006	0.01	0.01	0.17	61.60	12	7.04	58		2.70	
131	Efner L	7/23/2012	13.0	4.10	1.5	0.006	0.06	0.08	0.25	88.35	19	7.90	72		1.00	
131	Efner L	8/7/2012	14.0	4.55	1.5	0.007	0.01	0.02	0.17	50.38	15	6.80	73		1.20	
131	Efner L	8/17/2012	13.9	3.75	1.5	0.007	0.01	0.01	0.33	107.74	14	7.81	69	4	2.30	
131	Efner L	9/3/2012	13.8	3.70	1.5	0.011	0.01	0.03	0.20	40.00	9	6.94	73		3.20	
131	Efner L	9/17/2012	14.8	4.95	1.5	0.007	0.01	0.02	0.32	105.00	7	7.10	77		1.10	
131	Efner L	10/2/2012	14.3	3.65	1.5	0.007	0.01	0.01	0.19	59.71	8	6.96	70		2.80	
131	Efner L	6/3/2013	13.8	4.20	1.5	0.009	0.01	0.01	0.14	34.79	11	7.05	56	3.7	1.30	
131	Efner L	6/15/2013	13.8	4.00	1.5	0.005			0.22	94.77		7.13	56		1.30	
131	Efner L	6/30/2013	13.5	2.70	1.5	0.009	0.01	0.01	0.33	79.78	22	7.05	71		0.80	
131	Efner L	7/14/2013	13.9	2.85	1.5	0.008			0.24	67.71	25	7.79	60		1.50	
131	Efner L	7/29/2013	14.3	3.00	1.5	0.006	0.01	0.02			13	7.05	74			
131	Efner L	8/12/2013	14.1	3.80	1.5	0.006			0.38	133.48	16	7.46	63		3.80	
131	Efner L	8/25/2013	13.8	4.50	1.5	0.005	0.01	0.02	0.31	139.79	8	7.68	77		1.10	
131	Efner L	9/9/2013	13.3	4.75	1.5	0.004			0.36	189.40	15	6.99	76		1.50	
131	Efner L	5/25/2014	14.8	2.90	1.5	0.009	0.02	0.03	0.17	43.24	22	7.44	61	3.8	2.10	
131	Efner L	6/8/2014	14.4	3.45	1.5	0.008			0.35	98.86	12	6.66	70		2.10	
131	Efner L	6/24/2014	13.8	3.45	1.5	0.007	0.00	0.02	0.24	82.58	17	7.12	73		0.40	
131	Efner L	7/6/2014	13.6	3.80	1.5	0.007			0.26	84.39	20	7.55	74		1.30	
131	Efner L	7/21/2014	14.4	3.70	1.5	0.006	0.01	0.04	0.21	78.90	16	6.57	74	4.0	2.70	
131	Efner L	8/4/2014	14.2	4.60	1.5	0.005			0.19	91.91	9	6.87	74		1.40	
131	Efner L	8/16/2014	14.2	5.70	1.5	0.005	0.01	0.03	0.23	93.40	9	7.79	76		1.20	

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
131	Efner L	9/1/2014	14.4	5.35	1.5	0.005			0.20	84.68	13	7.20	70		1.80	
131	Efner L	6/2/2015	14.5	5.10	1.5	0.010	0.01	0.02	0.24	23.14	12	7.42	69	4.1	1.30	
131	Efner L	6/14/2015	14.3	3.80	1.5	0.006			0.31	57.09	6	7.51	71		0.50	
131	Efner L	6/26/2015	14.5	3.90	1.5	0.009	0.01	0.03	0.25	29.20	11	8.19	76		1.90	18.0
131	Efner L	7/12/2015	14.3	4.00	1.5	0.016			0.26	16.60	15	6.96	33		3.20	
131	Efner L	7/25/2015	14.2	3.40	1.5	0.014	0.01	0.03	0.42	30.29	13	7.48	39	4.0	2.20	
131	Efner L	8/8/2015	13.9	3.90	1.5	0.006			0.45	73.44	14	7.17	89		1.50	
131	Efner L	8/25/2015	14.1	4.00	1.5	0.008	0.00	0.05	0.33	40.24	11	7.24	86		1.60	17.7
131	Efner L	9/7/2015	14.1	3.90	1.5	0.005			0.23	48.13	10	7.96	68		1.20	
131	Efner L	6/28/1998			10.0	0.016										
131	Efner L	8/1/1998			11.0	0.017										
131	Efner L	8/9/1998			11.0	0.039										
131	Efner L	9/13/1998				0.025										
131	Efner L	7/5/1999			11.0	0.010										
131	Efner L	8/22/1999			12.0	0.021										
131	Efner L	8/29/1999			11.5	0.022										
131	Efner L	9/19/1999			11.0	0.022										
131	Efner L	6/25/2012			11.0	0.011		0.13								
131	Efner L	7/23/2012			12.0	0.016		0.22								
131	Efner L	8/17/2012			12.5	0.027		0.08								
131	Efner L	9/17/2012			12.5	0.030		0.35								
131	Efner L	6/3/2013			12.0	0.014		0.10								
131	Efner L	6/30/2013			12.5	0.035		0.24								
131	Efner L	7/29/2013			13.2	0.021		0.19								
131	Efner L	8/25/2013			13.0	0.018		0.25								
131	Efner L	5/25/2014			13.0	0.010		0.15								
131	Efner L	6/8/2014			13.0	0.011										
131	Efner L	6/24/2014			13.0	0.009		0.19								
131	Efner L	7/6/2014			13.0	0.012										
131	Efner L	7/21/2014			13.0	0.014		0.14								
131	Efner L	8/4/2014			13.0	0.017										
131	Efner L	8/16/2014			13.0	0.021		0.24								
131	Efner L	9/1/2014			13.0	0.023										
131	Efner L	6/2/2015			12.5	0.013		0.13								
131	Efner L	6/14/2015			13.0	0.014										
131	Efner L	6/26/2015			13.0	0.012		0.15								
131	Efner L	7/12/2015			13.0	0.027										
131	Efner L	7/25/2015			13.0	0.014		0.13								
131	Efner L	8/8/2015			13.0	0.016										
131	Efner L	8/25/2015			12.5	0.010		0.27								
131	Efner L	9/7/2015			13.0	0.017										

LNum	PName	Date	Site	TAir	TH20	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cyl	FP-Chl	FP-BG	HAB form	Shore HAB
131	Efner L	5/24/1997	epi	22	14	1	1	1	5											
131	Efner L	6/8/1997	epi	25	20	1	2	1												
131	Efner L	6/23/1997	epi	24	22	1	3	2	45											
131	Efner L	7/6/1997	epi	26	23	1	3	1												
131	Efner L	7/20/1997	epi	19	22	1	2	1												
131	Efner L	8/3/1997	epi	23	24	1	2	1	6											
131	Efner L	8/17/1997	epi	28	24	1	3	1	5											
131	Efner L	8/31/1997	epi	25	22	1	3	1	5											
131	Efner L	5/31/1998	epi	22	18	1	2	1	5											
131	Efner L	6/21/1998	epi	28	22	1	3	1												
131	Efner L	6/28/1998	epi	24	22	1	2	1												
131	Efner L	7/12/1998	epi	23	22															
131	Efner L	8/1/1998	epi	22	23	1	3	1												
131	Efner L	8/9/1998	epi	25	24	1	3	1												
131	Efner L	8/25/1998	epi	24	22	1	3	1	5											
131	Efner L	9/13/1998	epi	15	19	1	3	1												
131	Efner L	6/13/1999	epi	24	22	1	2	1												
131	Efner L	7/5/1999	epi	30	28	1	2	1												
131	Efner L	7/18/1999	epi	28	25	1	2	1												

LNum	PName	Date	Site	TAir	TH20	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cyl	FP-Chl	FP-BG	HAB form	Shore HAB
131	Efner L	8/1/1999	epi	28	17	1	3	1												
131	Efner L	8/22/1999	epi	19	22	1	3	1	6											
131	Efner L	8/29/1999	epi	23	22	1	3	1												
131	Efner L	9/5/1999	epi	25	23	1	3	1	0											
131	Efner L	9/19/1999	epi	20	19															
131	Efner L	6/25/2000	epi	25	22	1	3	1	56											
131	Efner L	7/9/2000	epi	20	21	1	3	1												
131	Efner L	7/30/2000	epi	23	22	1	3	1	56											
131	Efner L	8/6/2000	epi	19	22	1	3	1	5											
131	Efner L	8/20/2000	epi	17	20	1	3	1												
131	Efner L	9/3/2000	epi	15	21	1	3	1	56											
131	Efner L	9/24/2000	epi	15	18	1	3	1	5											
131	Efner L	10/9/2000	epi	5	12	1	3	1												
131	Efner L	6/17/2001	epi	26	23	1	3	1	6											
131	Efner L	7/15/2001	epi	23	20	1	3	1												
131	Efner L	7/22/2001	epi	30	24	1	3	1	6											
131	Efner L	7/29/2001	epi	25	24	1	3	1	2											
131	Efner L	8/12/2001	epi	26	23	1	3	1												
131	Efner L	8/26/2001	epi	21	23	1	3	1												
131	Efner L	9/9/2001	epi	25	23	1	3	1												
131	Efner L	9/23/2001	epi	20	19	1	3	1	6											
131	Efner L	6/25/2012	epi	17	24	1	3	2	0	0	0	2.90	0.60	<0.30	<0.410		0.60	0.39	I	
131	Efner L	7/9/2012	epi	23	26	1	3	2	0	0	0	0.90	0.90	<0.30	<0.392		1.67	0.41	I	
131	Efner L	7/23/2012	epi	23	26	1	3	2	0	0	0	0.20	0.40	<0.30	<0.292		0.65	0.04	I	
131	Efner L	8/7/2012	epi	30	26	1	3	2	0	0	0	4.20	0.60	<0.30	<0.330		1.23	0.08	I	
131	Efner L	8/17/2012	epi	26	25	1	3	2	0	0	0	2.50	0.30	<0.30	<0.552		1.83	1.27	I	
131	Efner L	9/3/2012	epi	27	21	1	3	2	0	0	0	2.90	0.40	<0.30	<0.725		2.13	1.07	I	
131	Efner L	9/17/2012	epi	23	18	1	3	1	0	0	0	1.60	0.30	0.42	<3.299		0.66	0.63	I	
131	Efner L	10/2/2012	epi	15	13	1	3	1	0	0	0	1.60	0.40	<0.30	<3.205		1.67	1.06	I	
131	Efner L	6/3/2013	epi	15	20	1	2	1	0	0	0	2.10	1.40	<0.30	<0.630		1.30	0.00	I	I
131	Efner L	6/15/2013	epi	20	16	1	2	1	0	0	0	1.00	1.20	<0.30	<0.440		1.00	0.00	I	I
131	Efner L	6/30/2013	epi	30	22	1	3	1	0	0	0	2.80	2.50	<0.30	<0.650		1.50	0.00	I	I
131	Efner L	7/14/2013	epi	29	23	1	3	1	0	0	0	0.60	1.90	<0.30	<0.370		1.40	0.00	I	I
131	Efner L	7/29/2013	epi	23	22	1	3	1	0	0	0	2.30	1.40	<0.30	<0.380		0.80	0.00	I	I
131	Efner L	8/12/2013	epi	23	20	1	3	1	0	0	0			<0.30	<0.380		0.80	0.00	I	I
131	Efner L	8/25/2013	epi	25	21	1	3	1	0	0	0	3.50	0.70	<0.30	<0.570		0.50	0.10	I	I
131	Efner L	9/9/2013	epi	18	18	1	3	1	0	0	0	3.60	1.70	<0.30	<19.130		0.90	0.00	I	I
131	Efner L	5/25/2014	epi	17	15	1	1	1	0	0	0	0.20	3.10	<0.53	<0.40	<0.001	0.35	0.00	I	I
131	Efner L	6/8/2014	epi	20	19	1	1	1	0	0	0	0.50	1.00	<1.83	<0.17	<0.001	0.58	0.00	I	I
131	Efner L	6/24/2014	epi	17	19	1	3	1	0	0	0	2.70	0.30	<1.60	<0.28	<0.002	0.59	0.00	I	I
131	Efner L	7/6/2014	epi	24	21	1	3	1	0	0	0	2.20	0.30	<0.40	<0.48	<0.001	0.48	0.00	I	I
131	Efner L	7/21/2014	epi	22	22	1	3	1	0	0	0	3.50	0.30	<0.39	<0.03	<0.001	0.51	0.00	I	I
131	Efner L	8/4/2014	epi	25	22	1	3	1	0	0	0	4.10	0.20	<0.33	<0.01	<0.002	1.03	0.26	I	I
131	Efner L	8/16/2014	epi	19	19	1	3	1	0	0	0	0.80	0.30	<0.39	<0.03	<0.001	0.39	0.00	I	I
131	Efner L	9/1/2014	epi	23	20	1	3	1	0	0	0	2.00	0.20	<0.25	<0.14	<0.002	0.57	0.00	I	I
131	Efner L	6/2/2015	epi	13	15	1	3	1	0	0	0	2.80	0.20	<0.56	<0.119	<0.706	1.00	0.00	I	I
131	Efner L	6/14/2015	epi	24	20	1	3	1	0	0	0	2.10	0.40	<0.55	<0.018	<0.139	1.30	0.30	I	I
131	Efner L	6/26/2015	epi	22	21	1	3	1	0	0	0	1.30	0.40	<1.01	<0.007	<0.040	0.90	0.00	I	I
131	Efner L	7/12/2015	epi	26	24	1	3	1	0	0	0	1.50	0.50	<0.30	<0.005	<0.028	0.80	0.00	I	I
131	Efner L	7/25/2015	epi	21	22	1	3	1	0	0	0	0.40	0.30	<0.19	<0.002	<0.014	0.80	0.00	I	I
131	Efner L	8/8/2015	epi	22	21	1	3	1	0	0	0	0.20	0.05	<0.44	<0.002	<0.014	0.60	0.00	I	I
131	Efner L	8/25/2015	epi	24	24	1	3	1	0	0	0	3.10	0.40	<0.21	<0.003	<0.010	1.70	0.00	I	I
131	Efner L	9/7/2015	epi	27	22	1	3	1	0	0	0	0.05	0.40	<0.30	<0.007	<0.035	1.10	0.00	I	I
131	Efner L	6/28/1998	hypo		15															
131	Efner L	8/1/1998	hypo		10															
131	Efner L	8/9/1998	hypo		8															
131	Efner L	6/25/2012	hypo		11															
131	Efner L	7/23/2012	hypo		10															
131	Efner L	8/17/2012	hypo		9															
131	Efner L	9/17/2012	hypo	21	19															
131	Efner L	6/3/2013	hypo		4															

LNum	PName	Date	Site	TAir	TH20	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cyl	FP-Chl	FP-BG	HAB form	Shore HAB
131	Efner L	6/30/2013	hypo		5															
131	Efner L	7/29/2013	hypo		5															
131	Efner L	8/25/2013	hypo		5															
131	Efner L	5/25/2014	hypo		4															
131	Efner L	6/8/2014	hypo		4															
131	Efner L	6/24/2014	hypo		4															
131	Efner L	7/6/2014	hypo		4															
131	Efner L	7/21/2014	hypo		5															
131	Efner L	8/4/2014	hypo		5															
131	Efner L	8/16/2014	hypo		5															
131	Efner L	9/1/2014	hypo		4															
131	Efner L	6/2/2015	hypo		3															
131	Efner L	6/14/2015	hypo		4															
131	Efner L	6/26/2015	hypo		4															
131	Efner L	7/12/2015	hypo		5															
131	Efner L	7/25/2015	hypo		5															
131	Efner L	8/8/2015	hypo		5															
131	Efner L	8/25/2015	hypo		5															
131	Efner L	9/7/2015	hypo		5															

Legend Information

Indicator	*Description*	*Detection Limit*	*Standard (S) / Criteria (C)*
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/1	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 (aquaflor) (unitless)	1 unit	none
AQ-Chl	Chlorophyll *a* (aquaflor) (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	Cylindrospermposin (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- PWL Listing for Efner Lake

Efner, Jenny and Hunt Lakes (1104-0105) NoKnownImpct

Waterbody Location Information

Revised: 12/11/2006

Water Index No: H-369-P127- 2..P129,P130,P131
Hydro Unit Code: 02020002/080 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 313.8 Acres
Seg Description: total area of all three lake

Drain Basin: Upper Hudson River
Sacandaga River
Reg/County: 5/Saratoga Co. (46)
Quad Map: CONKLINGVILLE (H-25-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted **Severity** **Problem Documentation**
NO USE IMPAIRMNT

Type of Pollutant(s)
Known: - - -
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)
Known: - - -
Suspected: - - -
Possible: - - -

Resolution/Management Information

Issue Resolvability: 8 (No Known Use Impairment)
Verification Status: (Not Applicable for Selected RESOLVABILITY)
Lead Agency/Office: n/a **Resolution Potential:**
TMDL/303d Status: n/a ())

Further Details

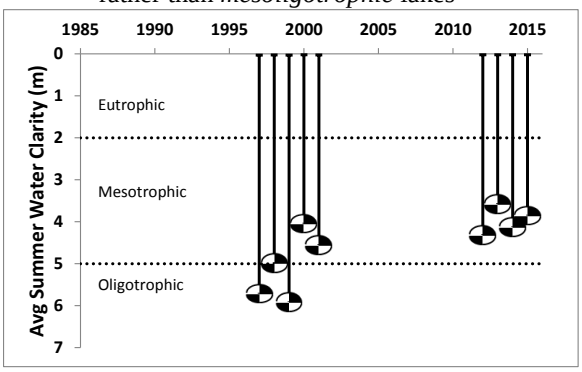
Jenny and Hunt Lakes have been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1994 and continuing through 2005. Interpretive Summary reports of the findings of this sampling were published in 2006. These data indicate that the lakes continue to be best characterized as mesooligotropic, or moderately unproductive. Phosphorus levels in both lakes are well below criteria that would indicate impacted recreational uses and transparency measurements easily satisfy what is recommended for swimming beaches. (DEC/DOW, BWAM/CSLAP, May 2006)

Public perception and uses of the lakes are also evaluated as part of the CSLAP program. These assessments indicate recreational suitability of the lakes to be highly favorable since the lakes were first evaluated and continuing through the most recent assessments. Recreational conditions in the lake have been most often described as "could not be nicer" to "excellent" for most uses. The lake is regularly described as "crystal cleear" or "not quite crystal clear." Mostly native aquatic plants are present and grow to the surface in the lakes, but they are not dense. However the presence of fanwort in both lakes has been confirmed and warrant continued monitoring. (DEC/DOW, BWAM/CSLAP, May 2006)

Appendix C- Long Term Trends: Efner Lake

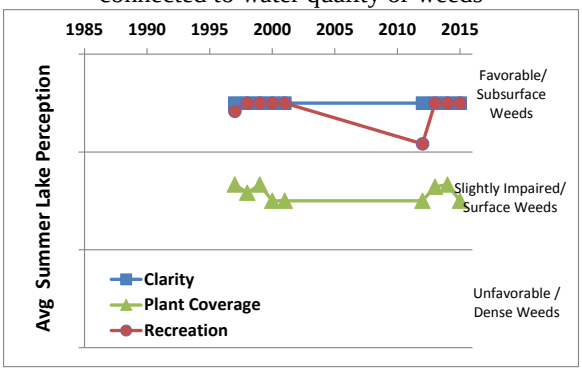
Long Term Trends: Water Clarity

- Drop in 2012-15 might indicate a trend
- Most readings now typical of *mesotrophic* rather than *mesoligotrophic* lakes



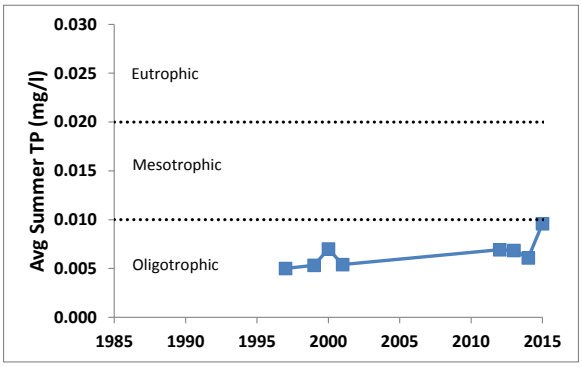
Long Term Trends: Lake Perception

- No clear trends in any perception indicators
- Recreational perception not closely connected to water quality or weeds



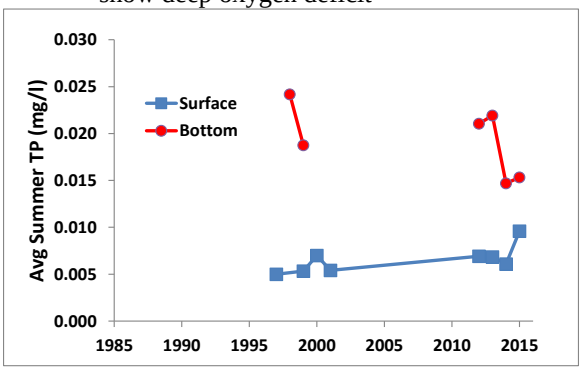
Long Term Trends: Phosphorus

- No long term trend, but perhaps recent ↑
- Most readings typical of *oligotrophic* lakes



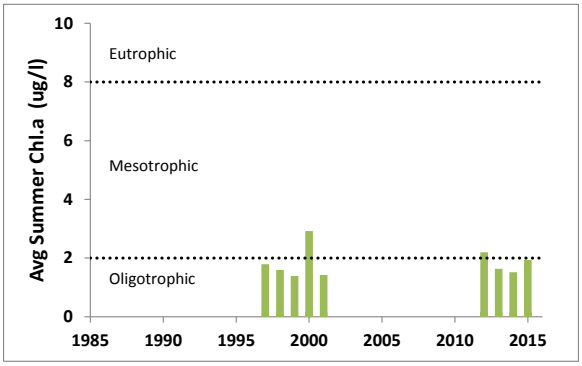
Long Term Trends: Bottom Phosphorus

- Bottom TP only slightly higher than surface
- No increase in surface TP levels, but may show deep oxygen deficit



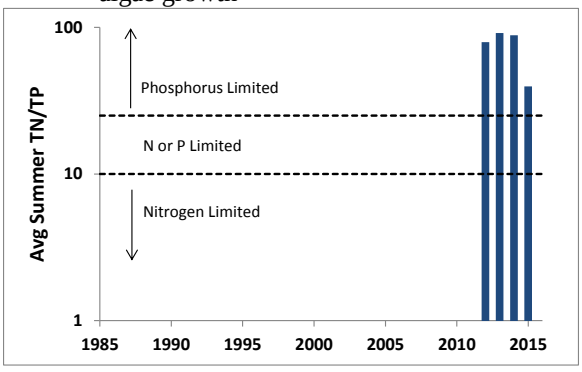
Long Term Trends: Chlorophyll a

- No long term trend; fairly stable readings
- Most readings typical of *mesoligotrophic* lakes



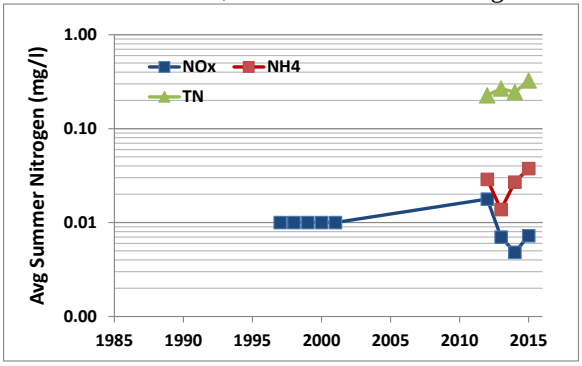
Long Term Trends: N:P Ratio

- Trends not yet apparent; recent ↓
- Most readings indicate phosphorus limits algae growth



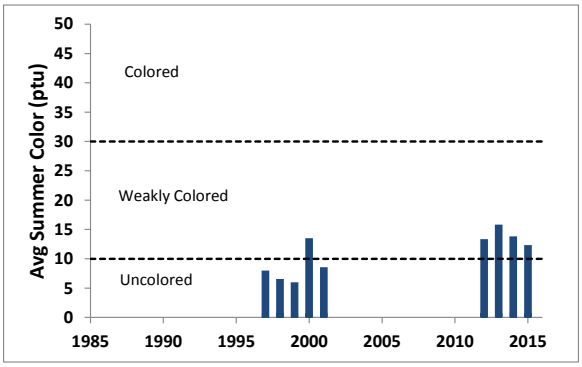
Long Term Trends: Nitrogen

- Recent drop in NOx, and recent increase in NH4 and TN
- Low nitrate, ammonia and total nitrogen



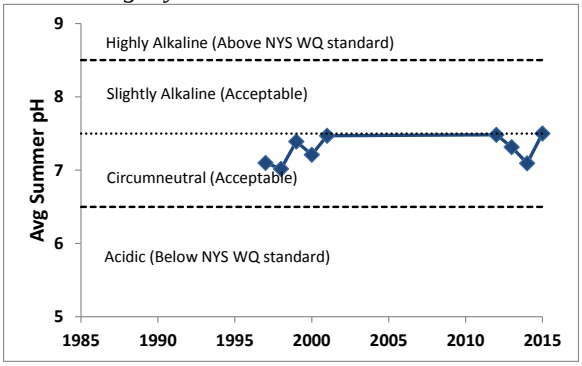
Long Term Trends: Color

- ↑ last 4 years may be from 2002 lab change
- Most readings typical of *weakly colored* to *uncolored* lakes



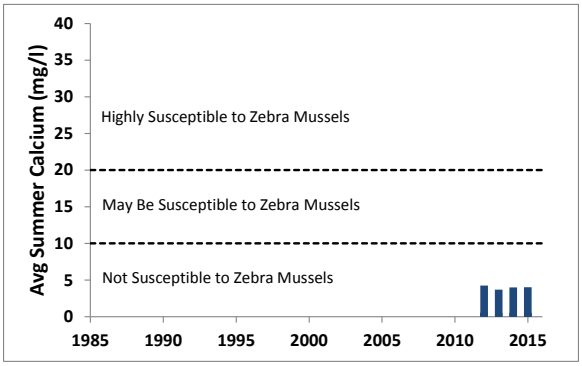
Long Term Trends: pH

- No long term trend
- Most readings typical of *circumneutral* to *slightly alkaline* lakes



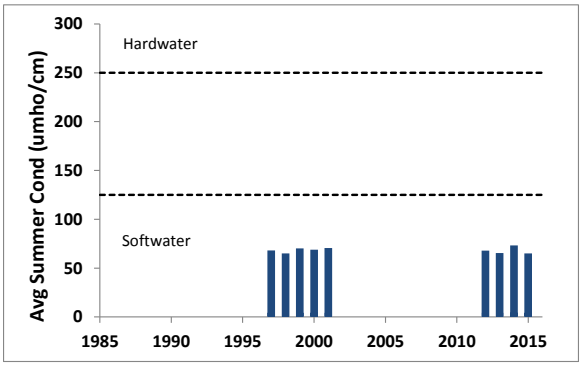
Long Term Trends: Calcium

- Fairly stable readings last four years
- Most readings indicate low susceptibility to zebra mussels



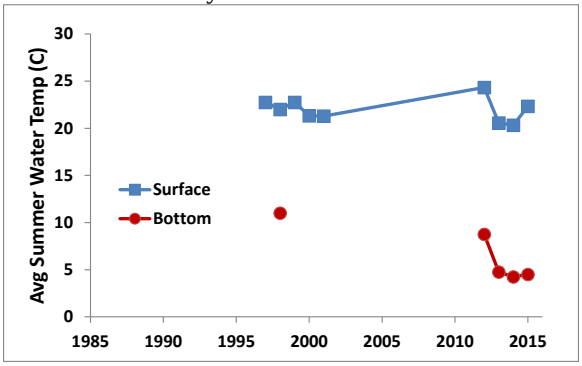
Long Term Trends: Conductivity

- No long term trend; stable readings
- Most readings typical of *softwater* lakes



Long Term Trends: Water Temperature

- No long term trend, recent drop in deep T
- Low deepwater temperatures indicates strong thermal layer



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.

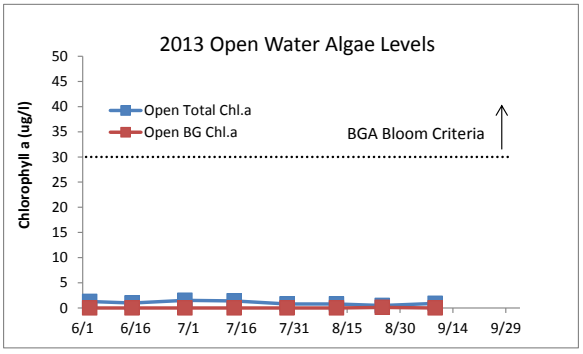


Figure D1:
2013 Open Water Total and BGA Chl.a

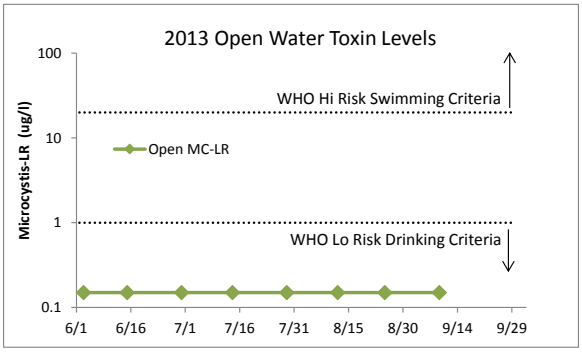


Figure D2:
2013 Open Water Microcystin-LR

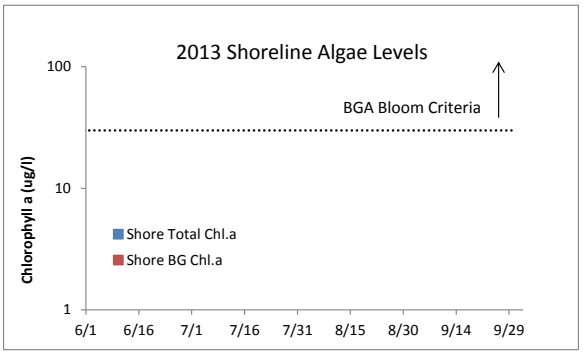


Figure D3:
2013 Shoreline Total and BGA Chl.a

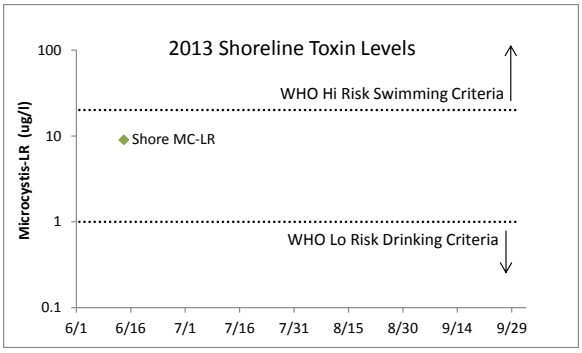


Figure D4:
2013 Shoreline Microcystin-LR

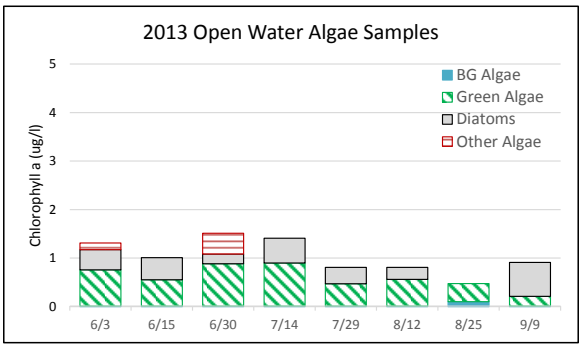


Figure D5:
2013 Open Water Algae Types

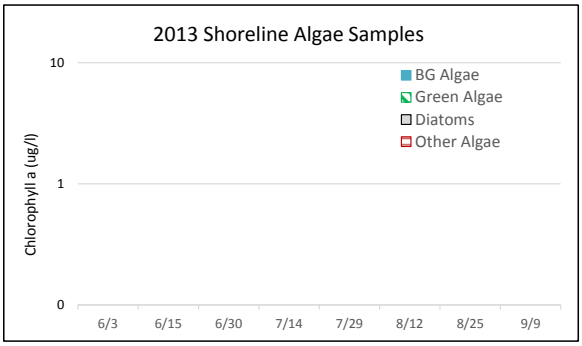


Figure D6:
2013 Shoreline Algae Types

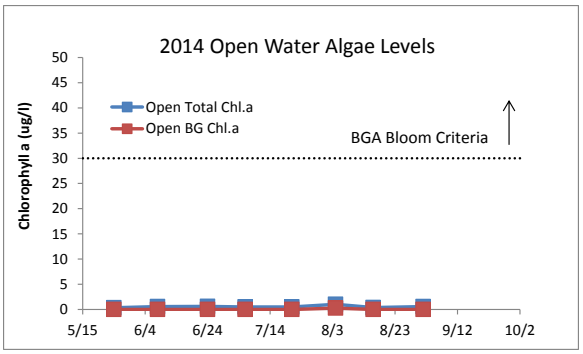


Figure D7:
2014 Open Water Total and BGA Chl.a

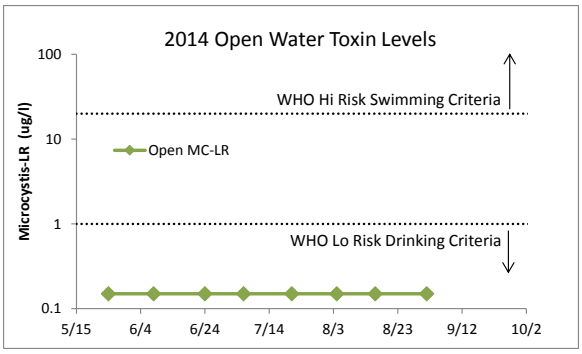


Figure D8:
2014 Open Water Microcystin-LR

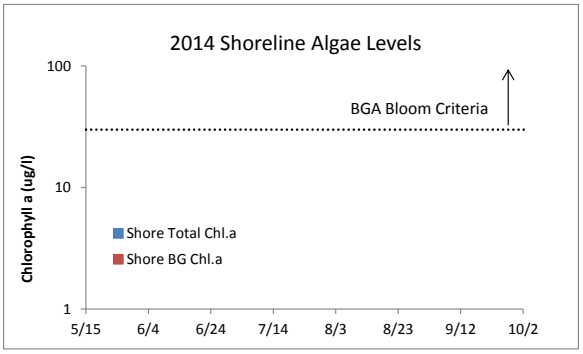


Figure D9:
2014 Shoreline Total and BGA Chl.a

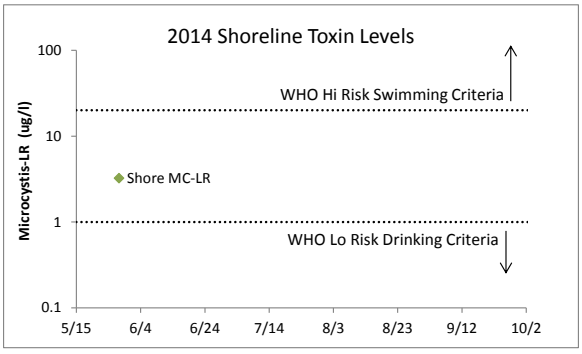


Figure D10:
2014 Shoreline Microcystin-LR

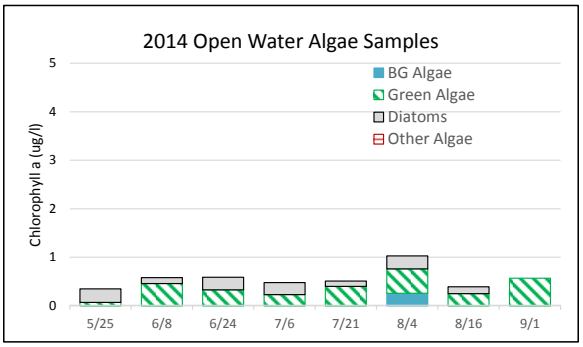


Figure D11:
2014 Open Water Algae Types

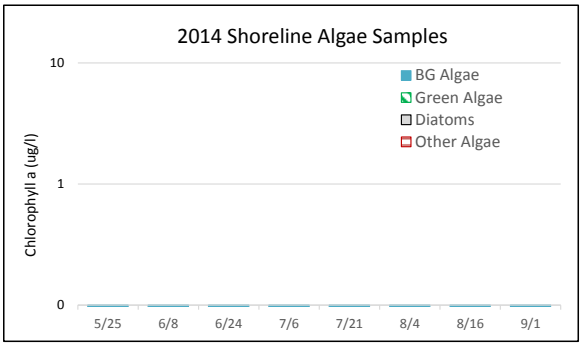


Figure D12:
2014 Shoreline Algae Types

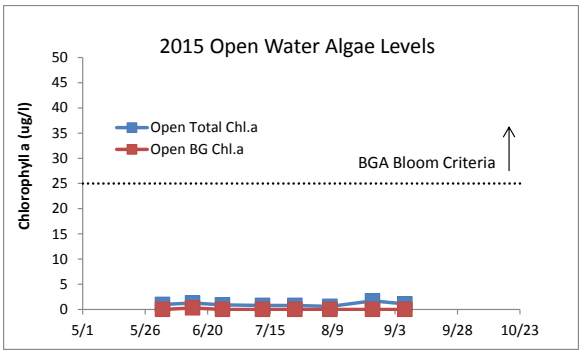


Figure D13:
2015 Open Water Total and BGA Chl.a

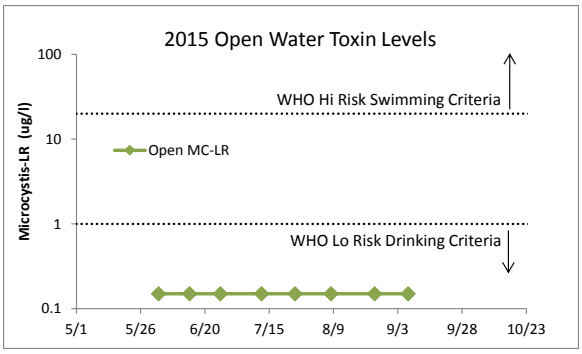


Figure D14:
2015 Open Water Microcystin-LR

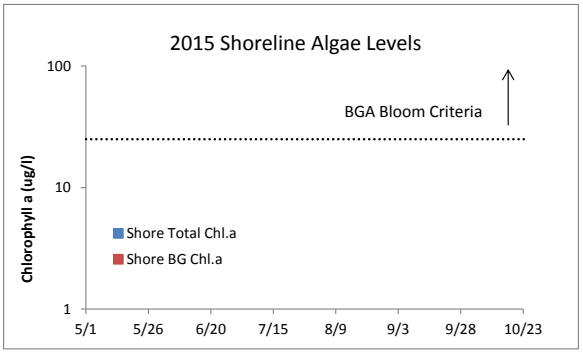


Figure D15:
2015 Shoreline Total and BGA Chl.a

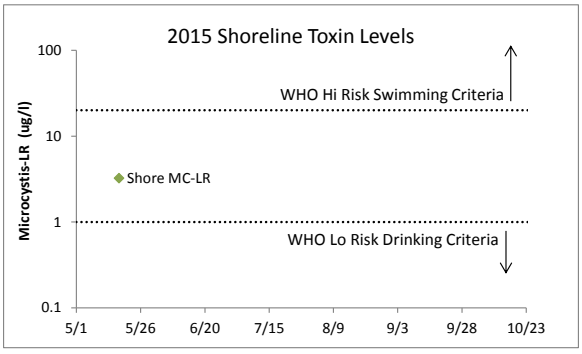


Figure D16:
2015 Shoreline Microcystin-LR

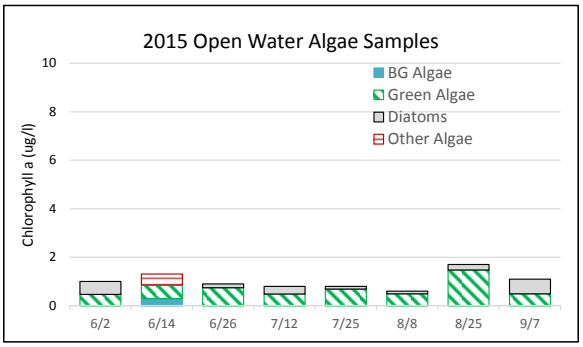


Figure D17:
2015 Open Water Algae Types

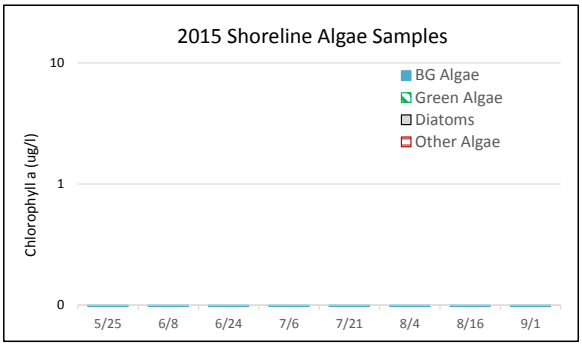


Figure D18:
2015 Shoreline Algae Types

Appendix E:
AIS Species in Saratoga County

The table below shows the invasive aquatic plants and animals that have been documented in Saratoga 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).

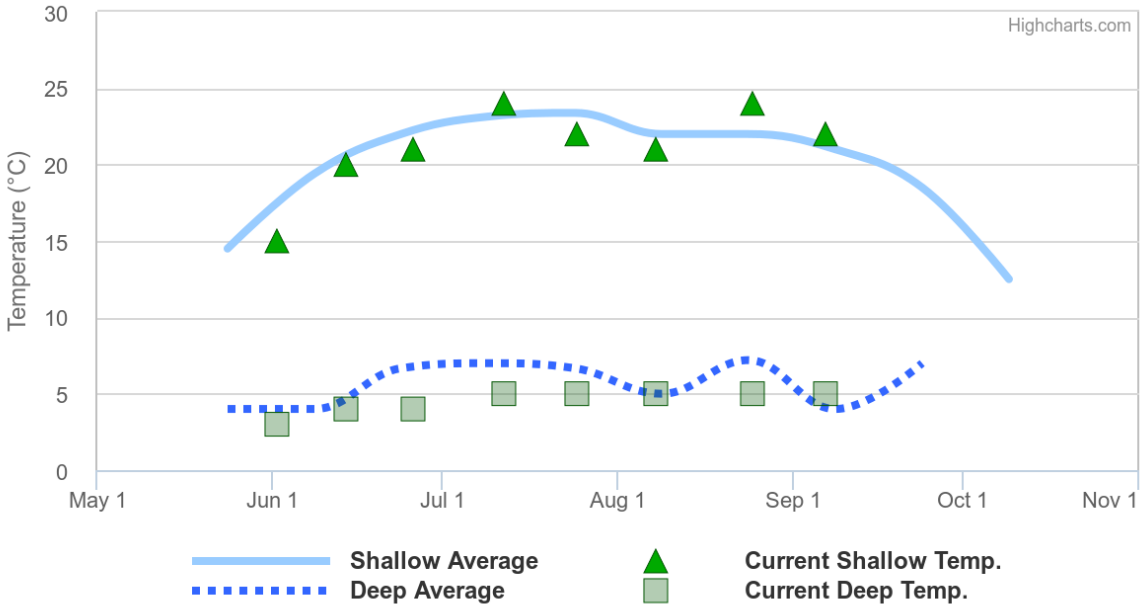
This list is not complete, but instead represents only those species that have been reported and verified within the county. If any additional aquatic invasive species (AIS) are known or suspected in these or other waterbodies in the county, this information should be reported through iMap invasives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

Aquatic Invasive Species – Saratoga County			
Waterbody	**Kingdom**	**Common name**	**Scientific name**
Anthony Kill	Plant	Water chestnut	*Trapa natans*
Ballston Lake	Animal	Zebra mussel	*Dreissena polymorpha*
Ballston Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Ballston Lake	Plant	Water chestnut	*Trapa natans*
Efner Lake	Plant	Fanwort	*Cabomba caroliniana*
Galway Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Galway Lake	Plant	Brittle naiad	*Najas minor*
Galway Lake	Plant	Water chestnut	*Trapa natans*
Great Sacandaga Lake	Animal	Spiny waterflea	*Bythotrephes longimanus*
Great Sacandaga Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Hudson River- Schuylerville	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Hudson River- Schuylerville	Plant	Water chestnut	*Trapa natans*
Hunt Lake	Plant	Fanwort	*Cabomba caroliniana*
Jenny Lake	Plant	Fanwort	*Cabomba caroliniana*
Little Round Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Little Round Lake	Plant	Brittle naiad	*Najas minor*
Little Round Lake	Plant	Water chestnut	*Trapa natans*
Mill Pond	Plant	Fanwort	*Cabomba caroliniana*
Moreau Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Round Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Round Lake	Plant	Brittle naiad	*Najas minor*
Round Lake	Plant	Water chestnut	*Trapa natans*
Saratoga Lake	Animal	Goldfish	*Carassius auratus*
Saratoga Lake	Animal	Common carp	*Cyprinus carpio*

Waterbody	Kingdom	Common name	Scientific name
Saratoga Lake	Animal	Zebra mussel	*Dreissena polymorpha*
Saratoga Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Saratoga Lake	Plant	Curly leafed pondweed	*Potamogeton crispus*
Saratoga Lake	Plant	Water chestnut	*Trapa natans*
Stoney Creek Reservoir	**Plant**	**Eurasian watermilfoil**	***Myriophyllum spicatum***
Stoney Creek Reservoir	**Plant**	**Water chestnut**	***Trapa natans***
Van Patten's Pond	Plant	Water chestnut	*Trapa natans*
Woodland Lake	Plant	Curly leafed pondweed	*Potamogeton crispus*

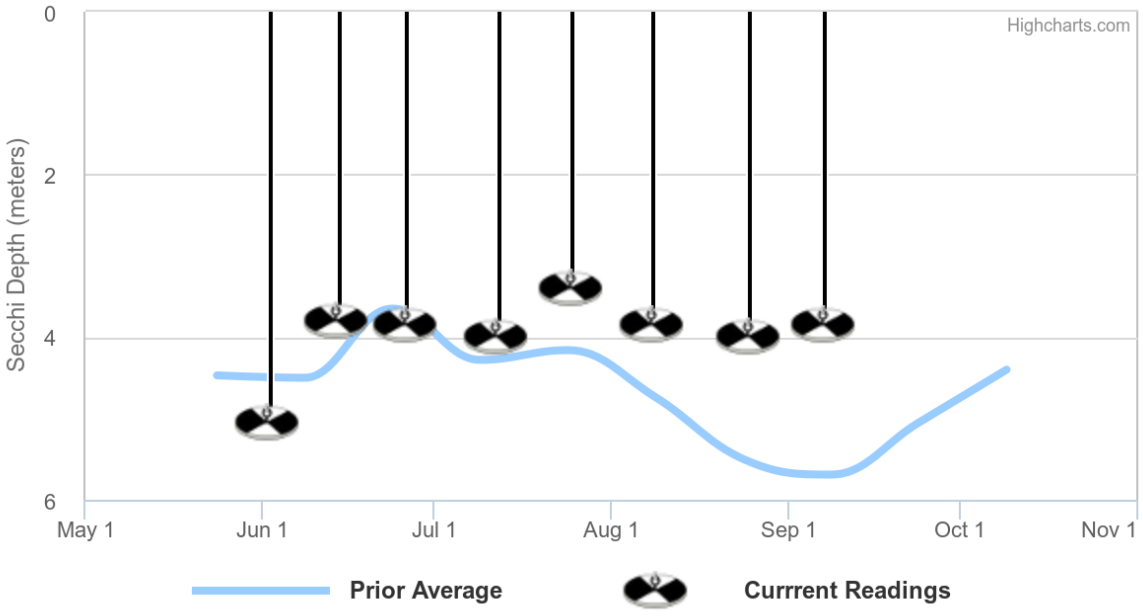
Appendix F: Current Year vs. Prior Averages for Efner Lake

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. There are not enough deep water sample temperatures to determine a trend for the current year 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 lower than normal when compared to the average of readings collected from 1997 to 2014

Appendix G: Watershed and Land Use Map for Efner 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.