

## Jenny Lake Questions and Answers, 2014 CSLAP

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

A1. Conditions in Jenny Lake were mostly similar in 2014 to those measured in recent years and continue to be favorable. Water clarity was slightly lower than normal in the last few years, but algae levels were also lower, suggesting that this represents normal variations from year to year.

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

A2. The HABs testing includes information about the types of algae found in the water samples. These results showed open water algae communities comprised of primarily green algae, with very low blue green algae levels. No shoreline blooms have been detected, at least in recent years.

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

A3. Jenny Lake had similar water clarity, and lower nutrient levels and algae levels, than most other nearby lakes. Aquatic plant coverage was slightly less extensive than in many other nearby lakes.

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

A4. None of the CSLAP indicators has exhibited significant change since the early 1990s. Water clarity was slightly lower in the last few years, and nutrient levels were slightly higher. However, algae levels have not exhibited the same changes.

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

A5. Jenny Lake does not appear to be susceptible to shoreline blue green algae blooms. Although the slight drop in water clarity in recent years may represent normal variability, this should continue to be watched, and lake residents should look for any nearby nutrient sources that could explain the recent (slightly) higher phosphorus readings.

**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 improve 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.

<b>Lake Use</b>				
<b>Potable Water</b>				Not applicable
<b>Swimming</b>				No impacts
<b>Boating / Fishing</b>				Invasive plants
<b>Aquatic Life</b>				Invasive plants
<b>Aesthetics</b>				No impacts
<b>Fish Consumption</b>	<b>PWL</b>	<b>Average Year</b>	<b>2014</b>	<b>Primary issue</b>
				Not applicable

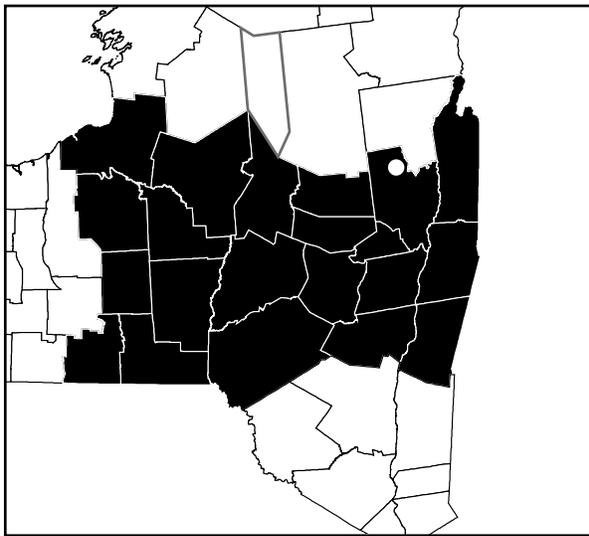
 Supported  
 Threatened  
 Stressed  
 Impaired  
 Not Known

# CSLAP 2014 Lake Water Quality Summary: Jenny Lake

## General Lake Information

<b>Location</b>	Town of Corinth
<b>County</b>	Saratoga
<b>Basin</b>	Upper Hudson River
<b>Size</b>	35.7 hectares (88.3 acres)
<b>Lake Origins</b>	Augmented by 2ft by 23ft timber dam (1930)
<b>Watershed Area</b>	178.7 hectares ( 441.6 acres)
<b>Retention Time</b>	1.7 years
<b>Mean Depth</b>	5.5 meters
<b>Sounding Depth</b>	7.0 meters
<b>Public Access</b>	None- private (association) beach
<b>Major Tributaries</b>	Daly Creek and tribs
<b>Lake Tributary To...</b>	Daly Creek and tribs to Great Sacandaga Lake
<b>WQ Classification</b>	B (contact recreation = swimming)
<b>Lake Outlet Latitude</b>	-73.918256
<b>Lake Outlet Longitude</b>	43.264556
<b>Sampling Years</b>	1994-1998, 2001-2007, 2011-2014
<b>2014 Samplers</b>	Jeanne Shoulder, Charles Moore, Betty Castle, Ed Linville, Pierce Schmidt, John Barbie, and Robin Stocks
<b>Main Contact</b>	Charles Moore

## Lake Map



## **Background**

Jenny Lake is an 88 acre, class B lake found in the Town of Corinth in Saratoga County, in the southeastern Adirondack region of New York State. It was first sampled as part of CSLAP in 1994.

It is one of seven CSLAP lakes among the more than 50 lakes found in Saratoga County, and one of 31 CSLAP lakes among the more than 470 lakes and ponds in the Upper Hudson River drainage basin.

## **Lake Uses**

Jenny 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.

It is not known by the report authors if Jenny Lake has been stocked by lake residents or municipal officials.

General statewide fishing regulations are applicable in Jenny Lake. In addition, open season for pickerel runs from the 1st Saturday in May to March 15<sup>th</sup>, with no size limit and a daily take limit of five fish. The open season on trout runs from April 1<sup>st</sup> to October 15<sup>th</sup>, with no size limit but a daily take limit of five fish with no more than five brook trout less than eight inches.

## **Historical Water Quality Data**

CSLAP sampling was conducted on Jenny Lake each year from 1994 to 1998, 2001 to 2007, and 2011 to 2014. 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 Jenny Lake is also be found on the NYSDEC web page at <http://www.dec.ny.gov/lands/77843.html>.

Jenny Lake was sampled by the NYSDEC as part of its ambient lake monitoring program in 1976. The very limited data in this “study” found water transparency readings comparable to those measured through CSLAP.

The lake was also sampled by Union College in 1979. These data indicate that water clarity and pH were higher than in other contemporary or later studies, although nutrient levels were comparable. Conductivity was also lower than in other later studies.

Jenny Lake was also sampled as part of the Adirondack Lake Survey Corporation (ALSC) study of more than 1500 Adirondack lakes in the mid 1980s (in this case, 1987). The ALSC data found nutrient levels, water transparency, pH and water color at levels similar to those measured in pre- and post-ALSC studies.

An overall summary of these datasets indicates that water clarity and other trophic indicators (particularly phosphorus), as well as pH and color, have varied slightly from one year to the next but have not exhibited any strong long-term patterns. Conductivity readings have steadily risen

since at least the mid 1970s, a pattern that has been generally observed through CSLAP sampling.

Aquatic plant surveys conducted through CSLAP and in partnership with the Darrin Freshwater Institute and the NYSDEC at Jenny Lake have identified a wide variety of aquatic plants- detailed plant maps and summaries have been provided elsewhere. These plant surveys identified large beds of fanwort (*Cabomba caroliniana*) that have been closely monitored by DFWI.

## **Lake Association and Management History**

Jenny Lake is served by several lake associations involved in the monitoring, management, and stewardship of the lake. These activities include the maintenance of the association swimming beach and educational programs.

## **Summary of 2014 CSLAP Sampling Results**

### **Evaluation of 2014 Annual Results Relative to 1994-2013**

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 – Jenny Lake” section in Appendix C.

### **Evaluation of Eutrophication Indicators**

Water clarity was slightly lower than normal in 2014, and these readings have been lower than normal over the last three years. However, TP has also been lower than normal over the last three years, and algae levels have not changed over this period. This suggests that these small differences are within the normal range of variability for the lake.

Lake productivity often increases slightly during the summer- water clarity decreases from June through August as phosphorus levels increase over the same period. This seasonal change in productivity reverses in the fall, although phosphorus levels continue to increase slightly as deepwater nutrients mix with surface waters. These seasonal trends were generally apparent in 2014.

The lake continues to be characterized as *mesoligotrophic*, based on water clarity, chlorophyll *a* (both typical of *mesotrophic* lakes), and total phosphorus readings (typical of *oligotrophic* lakes). This trophic characterization was also valid in 2014. The trophic state indices (TSI) evaluation suggests that phosphorus readings were lower than expected given the chlorophyll *a* and Secchi disk transparency readings in the lake. This was also seen in Hunt Lake and Efner Lake, and suggests a high susceptibility for an increase in algae levels if phosphorus loading to the lake increases. Overall trophic conditions are summarized on the Lake Scorecard and Lake Condition Summary Table.

### **Evaluation of Potable Water Indicators**

Algae levels are not high enough 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. However, the lake is not classified for this use. Deepwater ammonia and phosphorus are fairly

low and similar to those measured at the lake surface. Deepwater ammonia readings were slightly higher than normal (though still fairly low) in 2014, but deepwater phosphorus readings were lower than normal. This suggests that any “unofficial” 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**

pH readings were slightly higher than normal in 2014, while total nitrogen readings were slightly lower than normal. None of these indicators has exhibited any clear long-term trends. It is likely that the small changes in each of these other indicators from year to year represent normal variability. Overall limnological conditions are summarized in the Lake Scorecard and Lake Condition Summary Table.

### **Evaluation of Biological Condition**

Phytoplankton sampling was conducted in the mid 1990s, and found small quantities and a high diversity of algal species. The fluoroprobe screening samples analyzed by SUNY ESF in the last several years indicated mostly low levels of algae and low percentages of blue green algae. The algae communities were comprised primarily of green algae. No shoreline blooms were reported or sampled.

Zooplankton monitoring in the same timeframe found zooplankton communities dominated by rotifers. Macroinvertebrate sampling through the ALSC study found a low diversity of these benthic organisms, although it is not known if this was representative of normal conditions in the lake.

Macrophytes sampling through the Darrin Freshwater Institute, CSLAP, and the ALSC found a high diversity of aquatic plants, but also found dense (but stable, rather than expanding) deepwater populations of fanwort (*Cabomba caroliniana*), an invasive aquatic plant. The modified floristic quality index (FQI) for the lake indicates an “excellent” quality of the aquatic plant community.

The fisheries information in the lake collected through the ALSC study indicates that Jenny Lake is a warmwater fishery, with at least one coolwater, and six warmwater fish species. The lake can probably best be characterized as a warmwater fishery.

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

### **Evaluation of Lake Perception**

Water quality assessments, aquatic plant coverage, and recreational assessments were close to normal in 2013 and 2014, and none of these indicators of lake perception has changed significantly since first evaluated in the mid 1990s. No clear seasonal trends in lake perception have been apparent, and no seasonal trends were apparent in 2013 or 2014. Overall lake perception is summarized on the Lake Scorecard and Lake Condition Summary Table.

## Evaluation of Local Climate Change

Water temperature readings were slightly lower than normal during the summer index period in 2014, but neither air nor water temperatures have exhibited a clear long-term change, at least since first evaluated through CSLAP in the mid 1990s.

## 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. Phycocyanin readings have been well below the levels indicating susceptibility for harmful algal blooms (HABs). This is consistent with recent fluoroprobe screening data indicating low levels of blue green algae. Open water algal toxin data indicated very low to undetectable levels of microcystis-LR and anatoxin-a, consistent with very low levels of blue green algae.

## Lake Condition Summary

Category	Indicator	Min	94-14 Avg	Max	2014 Avg	Classification	2014 Change?	Long-term Change?
Eutrophication Indicators	Water Clarity	2.10	4.18	7.10	3.84	Mesotrophic	Within Normal Range	No Change
	Chlorophyll <i>a</i>	0.19	3.62	22.90	2.66	Mesotrophic	Within Normal Range	No Change
	Total Phosphorus	0.001	0.007	0.015	0.006	Oligotrophic	Within Normal Range	No Change
Potable Water Indicators	Hypolimnetic Ammonia	0.00	0.03	0.16	0.07	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	0.001	0.010	0.064	0.007	Close to Surface TP Readings	Lower Than Normal	Not known
	Nitrate + Nitrite	0.00	0.02	0.25	0.01	Low NOx	Within Normal Range	No Change
	Ammonia	0.00	0.02	0.10	0.03	Low Ammonia	Within Normal Range	No Change
	Total Nitrogen	0.01	0.33	0.96	0.23	Low Total Nitrogen	Within Normal Range	No Change
	pH	5.38	7.23	8.58	7.45	Circumneutral	Within Normal Range	No Change
	Specific Conductance	52	99	134	100	Softwater	Within Normal Range	No Change
	True Color	1	9	66	7	Uncolored	Within Normal Range	No Change
	Calcium	1.4	5.4	18.2	4.6	Not Susceptible to Zebra Mussels	Within Normal Range	No Change
Lake Perception	WQ Assessment	1	1.5	3	1.7	Crystal Clear	Within Normal Range	No Change
	Aquatic Plant Coverage	1	2.4	3	2.3	Subsurface Plant Growth	Within Normal Range	No Change
	Recreational Assessment	1	1.2	3	1.1	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 the aquatic plant community	Not known	Not known
	Zooplankton					Zooplankton community dominated by rotifers	Not known	Not known
	Macroinvertebrates					ALSC assessment unclear	Not known	Not known
	Fish					Warmwater fishery and favorable fish IBI	Not known	Not known
	Invasive Species					Fanwort	Not known	Not known
Local Climate Change	Air Temperature	7	22.1	32	19.5		Lower Than Normal	No Change
	Water Temperature	9	22.0	35	20.4		Lower Than Normal	No Change

Category	Indicator	Min	94-14 Avg	Max	2014 Avg	Classification	2014 Change?	Long-term Change?
Harmful Algal Blooms	Open Water Phycocyanin	-1	3	12	3	No readings indicate high risk of BGA	Not known	Not known
	Open Water FP Chl.a	0	2	5	2	No readings indicate high algae levels	Not known	Not known
	Open Water FP BG Chl.a	0	0	2	0	No readings indicate high BGA levels	Not known	Not known
	Open Water Microcystis	0.2	0.2	0.4	<0.30	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
	Screening FP Chl.a					No shoreline blooms sampled for FP	Not known	Not known
	Screening 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 2007 NYSDEC Priority Waterbody Listings (PWL) for the Upper Hudson River drainage basin indicate that Jenny Lake has “no known impacts”. The PWL listing for Jenny Lake is included in Appendix B.

### Potable Water (Drinking Water)

The CSLAP dataset at Jenny 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 classified for this use. The limited CSLAP data suggest that any “unofficial” potable water use should be supported.

### Contact Recreation (Swimming)

The CSLAP dataset at Jenny Lake, including water chemistry data, physical measurements, and volunteer samplers’ perception data, suggests that swimming and contact recreation should be fully supported. However, bacterial data would need to be collected to evaluate the safety of the water for swimming.

### Non-Contact Recreation (Boating and Fishing)

The CSLAP dataset on Jenny Lake, including water chemistry data, physical measurements, and volunteer samplers’ perception data, suggest that non-contact recreation should be fully supported, although this use remains *threatened* by fanwort.

### Aquatic Life

The CSLAP dataset on Jenny Lake, including water chemistry data, physical measurements, and volunteer samplers’ perception data, suggest that aquatic life may be *threatened* by the presence of fanwort, although actual impacts have not been observed. Additional data are needed to evaluate the food and habitat conditions for aquatic organisms in the lake.

### Aesthetics

The CSLAP dataset on Jenny Lake, including water chemistry data, physical measurements, and volunteer samplers’ perception data, suggest that aesthetics should be fully supported.

**Fish Consumption**

There are no fish consumption advisories posted for Jenny Lake.

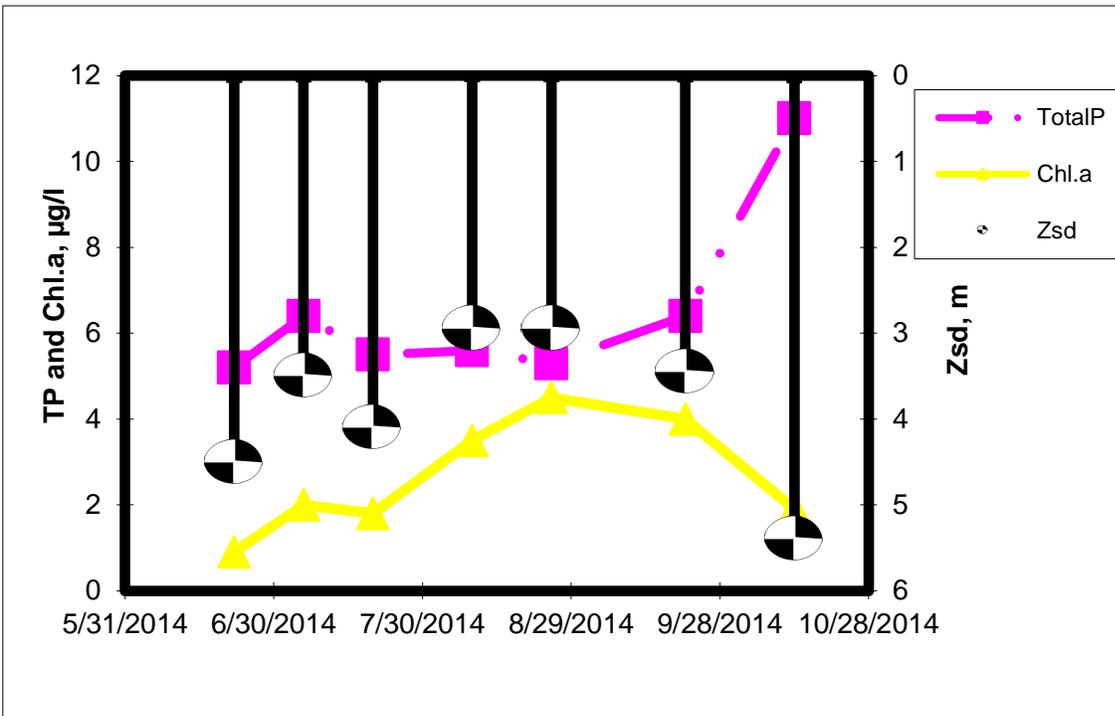
**Additional Comments and Recommendations**

Continuing plant survey information should be collected to determine if the plant community (and recreational and aquatic life uses) has been affected by fanwort.

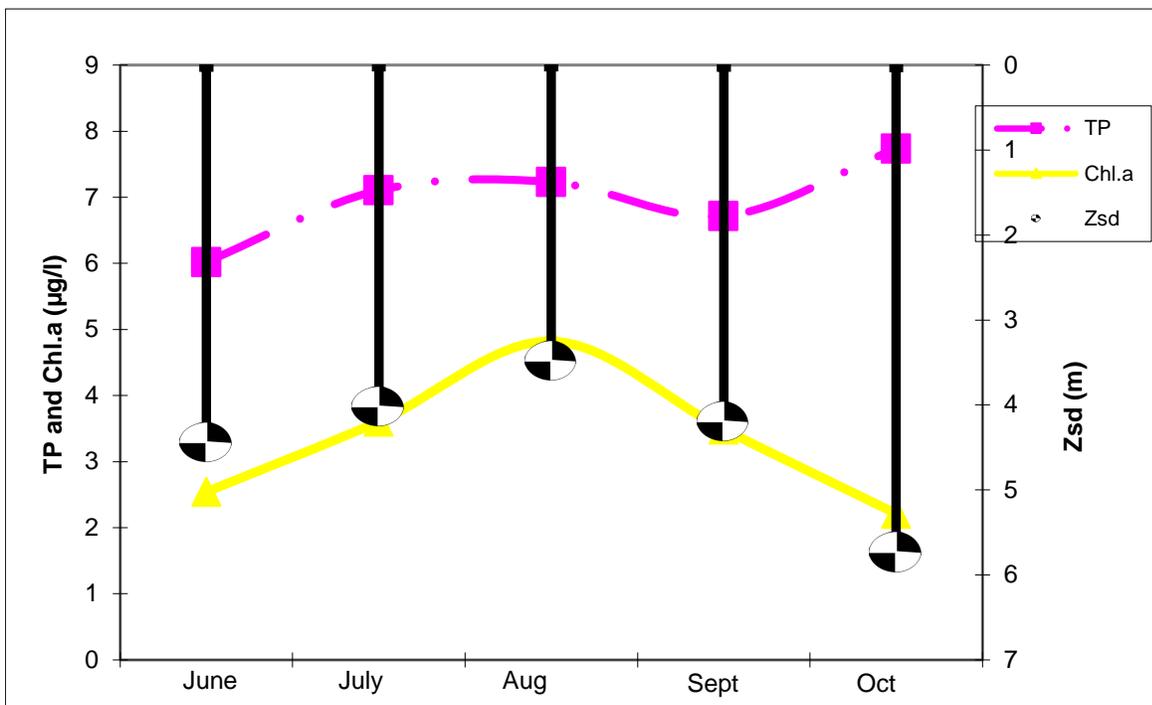
**Aquatic Plant IDs-2014**

None submitted for identification in 2014.

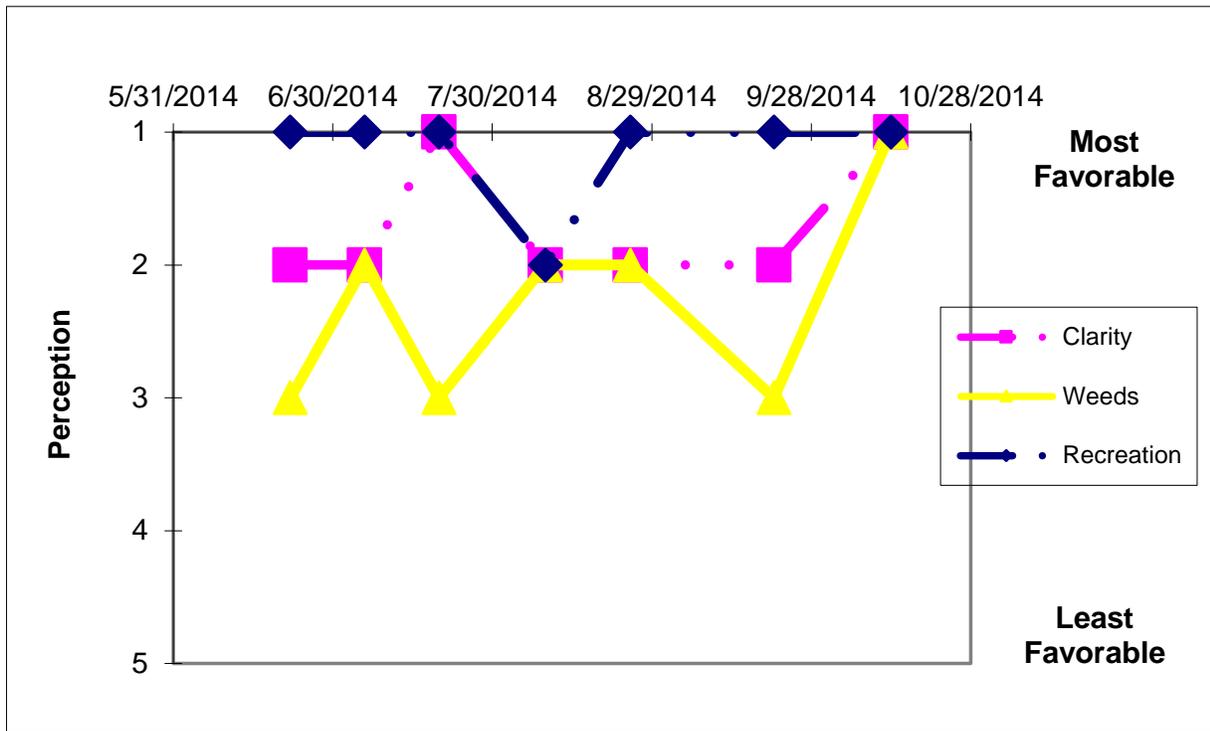
## Time Series: Trophic Indicators, 2014



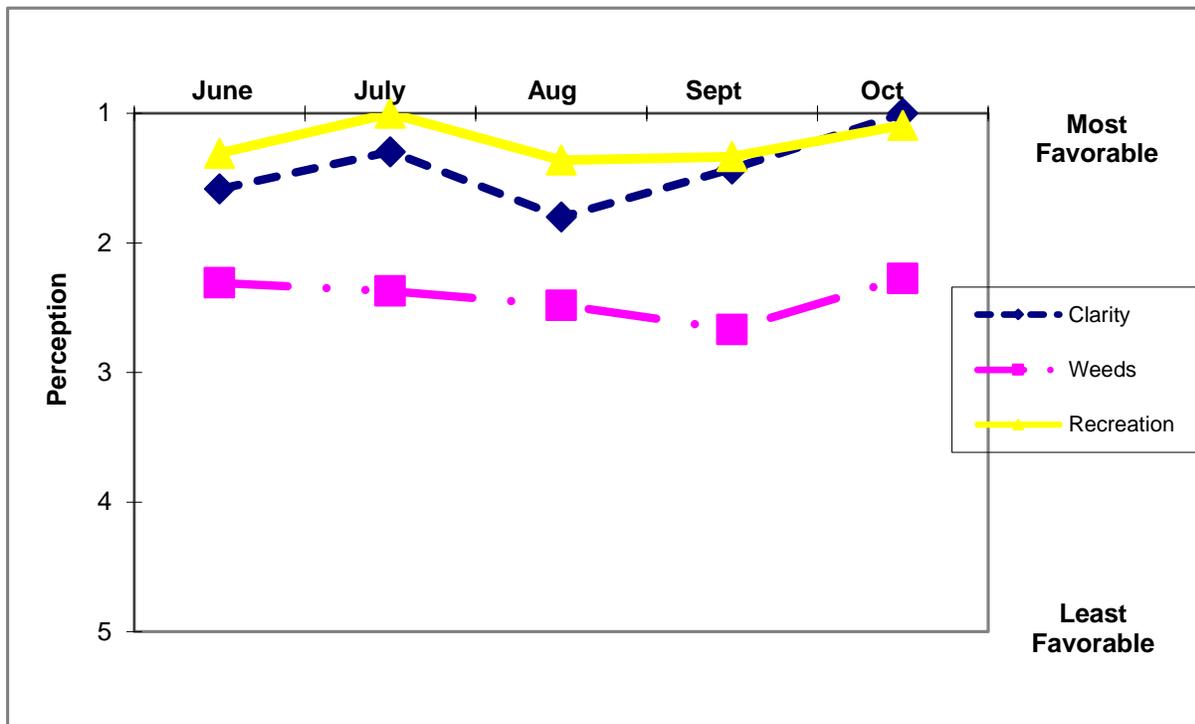
## Time Series: Trophic Indicators, Typical Year (1994-2014)



## Time Series: Lake Perception Indicators, 2014



## Time Series: Lake Perception Indicators, Typical Year (1994-2014)



## Appendix A- CSLAP Water Quality Sampling Results for Jenny Lake

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a
108	Jenny L	6/30/1994	6.4	3.63	1.5	0.006	0.01				4	7.22	96		5.29
108	Jenny L	7/16/1994	6.0	2.88	1.5	0.008	0.01				4	7.57	92		17.50
108	Jenny L	7/29/1994	6.8	3.63	1.5	0.005	0.01				7	6.77	91		1.38
108	Jenny L	8/13/1994	6.0	3.42	1.5	0.007	0.01				7	7.38	86		4.47
108	Jenny L	8/27/1994	7.3	3.75	1.5	0.007	0.01				9	7.27	84		22.90
108	Jenny L	9/10/1994	6.8	3.50	1.5	0.007	0.01				6	7.42	85		5.95
108	Jenny L	9/23/1994	6.3	4.13	1.5	0.008	0.01				7	7.12	85		2.46
108	Jenny L	10/8/1994	6.5	6.50	1.5	0.008	0.01				9	6.88	85		1.67
108	Jenny L	6/4/1995			1.0	0.007						6.64	89		2.08
108	Jenny L	6/29/1995	5.9	4.15	1.5	0.004	0.01				5	7.03	91		2.12
108	Jenny L	7/13/1995	7.0	5.35	3.0										
108	Jenny L	7/27/1995	6.8	3.75	1.5										
108	Jenny L	8/7/1995		3.29	7.0	0.007	0.01				1	7.33	91		4.65
108	Jenny L	8/18/1995	7.1	5.10		0.004	0.01				5	7.33	90		2.88
108	Jenny L	9/4/1995	7.1	7.10	1.5	0.005	0.01				5	7.34	92		2.21
108	Jenny L	9/19/1995	7.1	7.10		0.006	0.01				5	7.15	93		6.64
108	Jenny L	10/2/1995	7.0	5.00	1.5	0.006	0.01				5	7.21	93		8.14
108	Jenny L	6/18/1996	7.5	4.88	1.5	0.005	0.01				5	6.95	116		1.10
108	Jenny L	7/1/1996	7.0	5.80	7.0	0.008	0.01				15	6.80	134		2.70
108	Jenny L	7/18/1996	7.3	4.50	1.5	0.007	0.01				20	7.04	109		4.10
108	Jenny L	7/29/1996	7.5	4.50	1.5	0.007	0.01				5	6.99	110		3.10
108	Jenny L	8/12/1996	7.3	4.28	1.5	0.006	0.01				15	5.38	108		5.00
108	Jenny L	9/10/1996	7.2	2.25	1.5	0.005	0.01				1	5.90	108		10.10
108	Jenny L	9/23/1996	7.5	3.50	1.5	0.007	0.01				5	7.09	108		5.66
108	Jenny L	6/8/1997	7.6	5.55	1.5	0.005	0.01				5	7.51	111		1.49
108	Jenny L	6/23/1997	7.2	5.10	1.5	0.006	0.01				5	7.47	111		1.33
108	Jenny L	7/6/1997	7.3	4.35	1.5	0.007	0.01				5	7.80	110		5.36
108	Jenny L	7/25/1997	7.3	2.55	1.5	0.010	0.01				5	6.78	110		6.53
108	Jenny L	8/4/1997	7.4	2.35	7.3	0.009	0.01				6	7.16	109		11.30
108	Jenny L	8/20/1997	7.2	2.55	1.5	0.007	0.01				5	7.88	110		7.33
108	Jenny L	8/31/1997	7.1	4.25	7	0.006	0.01				5	6.61	109		2.58
108	Jenny L	9/16/1997		4.95	1.5	0.009	0.01				4	7.84	109		2.05
108	Jenny L	6/28/1998	7.1	5.30	1.5		0.01				2	6.58	97		2.48
108	Jenny L	7/13/1998	7.0	3.75	1.5		0.01				5	7.59	97		5.30
108	Jenny L	7/28/1998	7.5	3.00	1.5		0.01				5	7.43	99		8.23
108	Jenny L	8/4/1998	7.5	2.55	1.5		0.01				3	7.25	99		8.05
108	Jenny L	8/17/1998	7.3	2.95	6.0						6	7.41	98		7.76
108	Jenny L	9/1/1998	7.3	4.50	1.5						6	7.42	100		2.78
108	Jenny L	9/16/1998	7.1	4.65	1.5										
108	Jenny L	6/27/2001	7.0	4.15	1.5	0.006	0.01				4	7.83	110		
108	Jenny L	7/18/2001	7.0	3.45	1.5	0.008	0.01				6	6.84	109		3.91
108	Jenny L	8/16/2001	7.0	3.40	1.5	0.006	0.01				4	7.77	110		2.79
108	Jenny L	10/1/2001	7.1	6.55	1.5	0.006	0.01				8	7.16	112		0.96
108	Jenny L	7/8/2002	6.5	3.60	1.5	0.008	0.01	0.06	0.47	57.7	8	7.20	110	1.4	1.16
108	Jenny L	7/22/2002	6.1	4.40	1.5			0.03	0.96		2	6.55	108		0.49
108	Jenny L	8/12/2002	6.3	3.05	1.5	0.008	0.00	0.03	0.48	63.8	4	7.39	110		0.86
108	Jenny L	8/27/2002	6.8	3.30	1.5	0.009	0.00	0.05	0.59	64.0	11	7.12	110		3.64
108	Jenny L	9/24/2002	7.2	3.95	1.5									5.74	
108	Jenny L	10/22/2002	7.0	6.00	1.5		0.02	0.08	0.82						
108	Jenny L	7/16/2003	6.8	5.05	1.5	0.003	0.00	0.00	0.38	128.2	6	7.3	120.8	5.7	2.96
108	Jenny L	7/29/2003	6.7	4.40	1.5	0.005	0.00	0.00	0.12	23.2	15	7.1	118.2		4.04
108	Jenny L	8/13/2003	7.2	4.90	1.5	0.004	0.00	0.02	0.28	65.5	52	7.1	111.4		1.31
108	Jenny L	8/26/2003	6.2	4.20	1.5	0.002	0.00	0.01	0.40	205.9	12	6.9	114.9		1.65
108	Jenny L	9/10/2003	6.8	5.75	1.5	0.001	0.01	0.02	0.20	404.3	5	6.8	51.8	3.8	0.19
108	Jenny L	10/10/2003	6.8	5.95		0.009	0.02	0.10	0.25	26.8	9	7.3	63.2		1.02
108	Jenny L	6/16/2004	7.0	5.00	1.5	0.003	0.01	0.01	0.40	125.0	14	6.62	114		7.7
108	Jenny L	7/13/2004	7.2	3.95		0.015	0.04	0.02	0.90	62.2	12	6.67	108		1.1
108	Jenny L	9/11/2004	7.5	3.15	1.5	0.005	0.03	0.01	0.35	71.4	11	6.09	91.5		0.5
108	Jenny L	6/28/2005	7.00	4.80	1.5	0.004	0.01	0.01	0.21	49.06	19	6.80	100	5.2	1.8
108	Jenny L	7/20/2005	6.30	4.80	1.5	0.007	0.12	0.02	0.45	61.06	3	6.31	88		0.6
108	Jenny L	7/27/2005	8.00	4.60		0.005	0.01	0.01	0.12	23.44	8	7.76	87		1.8
108	Jenny L	8/29/2005	7.10	5.10	1.5	0.009	0.01	0.01	0.24	28.20		7.73	109		
108	Jenny L	9/28/2005	6.90	5.45	1.5	0.006	0.01	0.01	0.01	0.88	6	7.69	109	3.7	0.8

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a
108	Jenny L	10/5/2005	6.85	5.75	1.5	0.008	0.02	0.01	0.19	22.39	66	7.29	65		1.1
108	Jenny L	6/27/2006	7.0	4.15		0.007	0.00	0.01	0.32	47.98		7.55	89	4.64	3.64
108	Jenny L	7/11/2006	7.1	4.75	7.0	0.006	0.01	0.07	0.50	81.37	13	6.77	64		3.61
108	Jenny L	7/27/2006	6.8	3.30	6.0										
108	Jenny L	8/10/2006	7.1	4.70	7.0										
108	Jenny L	8/24/2006	6.9	3.50	1.0	0.005	0.01	0.02	0.55	105.82	2	8.13	85	3.03	3.83
108	Jenny L	9/9/2006	7.1	4.50	7.1	0.005	0.01	0.01	0.30	64.17	4	7.49	71		0.98
108	Jenny L	10/23/2006	7.0	6.35	0.5	0.007	0.25	0.06	0.36	49.21	14	6.76	94		2.81
108	Jenny L	6/26/2011	7.4	4.08	1.5	0.006	0.03	0.03	0.20	70.26	9	8.58	133	4.6	2.40
108	Jenny L	7/11/2011	7.3	3.70	1.1	0.009	0.01	0.01	0.21	48.91	11	6.24	58		2.40
108	Jenny L	7/23/2011	8.4	4.30	1.5	0.005	0.04	0.03	0.22	94.77	9	8.52	113		3.90
108	Jenny L	8/6/2011	7.3	3.25	1.5	0.008	0.01	0.03	0.27	71.24	8	8.45	118		2.80
108	Jenny L	8/21/2011	7.1	3.70	1.5	0.012	0.02	0.01	0.26	46.73	14	8	107	18.2	2.50
108	Jenny L	9/4/2011	7.1	3.39	1.5	0.009	0.02	0.03	0.39	100.02	10	6.91	99		2.80
108	Jenny L	9/20/2011	7.2	2.10	1.5	0.006	0.01	0.02	0.26	95.21	14	8.34	116		6.00
108	Jenny L	10/4/2011	7.2	4.30	1.5	0.006	0.01	0.04	0.29	104.95	14	6.93	91		2.40
108	Jenny L	6/18/2012	7.2	3.65	1.5	0.008	0.01	0.03	0.34	88.79	7	7.98	100	4.8	2.00
108	Jenny L	7/3/2012	7.2	4.85	1.5	0.008	0.01	0.02	0.23	66.29	9	7.67	99		1.80
108	Jenny L	7/22/2012	6.9	4.30		0.005	0.02	0.02	0.22	95.48	19	8.25	97		2.70
108	Jenny L	8/12/2012	7.2	2.85	1.5	0.008	0.01	0.02	0.23	64.87	6	7.68	98		6.20
108	Jenny L	8/26/2012	7.2	2.40	1.5	0.008	0.01	0.02	0.37	104.36	6	7.46	97	5.4	2.90
108	Jenny L	9/10/2012	7.1	2.30	1.5	0.009	0.06	0.10	0.25	64.72	18	6.45	90		4.70
108	Jenny L	9/23/2012	7.3	3.65	1.5	0.009	0.01	0.02	0.61	143.23	7	7.17	87		3.50
108	Jenny L	10/7/2012	7.3	4.78	1.5	0.010	0.04	0.01	0.26	55.32	8	6.74	74		0.30
108	Jenny L	6/23/2013	7.0	3.35	1.5	0.006	0.01	0.03	0.38	128.91	7	6.63	106		1.20
108	Jenny L	7/5/2013	7.3	3.41	1.0	0.007			0.25	80.64	20	7.63	99		3.30
108	Jenny L	7/22/2013	7.2	3.65		0.005	0.01	0.01	0.13	54.35	9	7.28	91		1.90
108	Jenny L	8/5/2013	7.5	2.45	1.5	0.006			0.39	136.70	12	7.13	109		
108	Jenny L	8/24/2013	7.2	3.60	1.5	0.006	0.01	0.02	0.28	105.45	11	7.87	112		2.30
108	Jenny L	9/15/2013		4.20	1.5	0.008			0.38	105.81	21	6.98	99		1.90
108	Jenny L	9/28/2013	7.0	4.65	1.5	0.007	0.01	0.03	0.44	131.96	9	6.67	70		3.00
108	Jenny L	10/12/2013	7.1	6.55	1.5	0.005			0.37	158.90	8	6.71	113		1.80
108	Jenny L	6/22/2014	7.2	4.50	1.5	0.005	0.03	0.03	0.26	108.73	7	7.00	95	4.5	0.90
108	Jenny L	7/6/2014	7.2	3.50	1.5	0.006			0.30	104.16	7	8.32	85		2.00
108	Jenny L	7/20/2014	6.8	4.10	1.5	0.006			0.21	84.40	7	7.53	116		1.80
108	Jenny L	8/9/2014	7.0	2.95	1.5	0.006	0.01	0.02	0.26	102.14	2	7.21	106	4.7	3.50
108	Jenny L	8/25/2014	7.1	2.95	1.5	0.005			0.21	87.58	9	6.99	67		4.50
108	Jenny L	9/21/2014	6.5	3.45	1.5	0.006	0.01	0.03	0.16	55.00	9	7.12	109		4.00
108	Jenny L	10/13/2014	7.2	5.40	1.5	0.011			0.24	48.20	7	7.98	120		1.90
108	Jenny L	6/4/1995			0.5	0.010						6.66	91		1.33
108	Jenny L	6/4/1995			2.0	0.011						6.62	89		7.95
108	Jenny L	6/4/1995			4.0	0.004						6.65	89		6.65
108	Jenny L	6/4/1995			6.0	0.010						6.58	88		2.83
108	Jenny L	6/4/1995			6.5	0.056						6.48	88		
108	Jenny L	6/28/1998			6.0	0.012									
108	Jenny L	7/28/1998			6.0	0.015									
108	Jenny L	8/17/1998				0.020									
108	Jenny L	9/1/1998			6.2	0.019									
108	Jenny L	9/16/1998	7.1	4.65	1.5	0.064					7	7.21	102		2.21
108	Jenny L	7/8/2002	6.5			0.010	0.01	0.04	0.60	58.5					
108	Jenny L	7/22/2002	6.1				0.29	0.03	0.91						
108	Jenny L	8/12/2002	6.3			0.006	0.00	0.01	0.46	74.6					
108	Jenny L	8/27/2002	6.8			0.006	0.00	0.01	0.38	61.6					
108	Jenny L	10/22/2002	7.0				0.02	0.08	0.67						
108	Jenny L	7/16/2003				0.005	0.08	0.01	0.48	104.9					
108	Jenny L	7/29/2003			6.5	0.007	0.01	0.01	0.09	11.8					
108	Jenny L	8/13/2003				0.007	0.00	0.00							
108	Jenny L	8/26/2003			6.0	0.002	0.00	0.01	0.08	47.0					
108	Jenny L	9/10/2003				0.001	0.01	0.02	0.13	255.4					
108	Jenny L	10/10/2003			1.5	0.003	0.03	0.04	0.08	29.6					
108	Jenny L	6/16/2004				0.004	0.01	0.01	0.27	74.2					
108	Jenny L	7/13/2004			7.1	0.007	0.03	0.01	0.09	13.2					
108	Jenny L	9/11/2004			7.0	0.005	0.04	0.01	0.36	67.9					
108	Jenny L	6/28/2005	7.00		7.0	0.005									
108	Jenny L	7/20/2005	6.30			0.006									
108	Jenny L	7/27/2005	8.00		8.0	0.006									

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a
108	Jenny L	8/29/2005	7.10			0.010									
108	Jenny L	9/28/2005	6.90		6.7	0.009									
108	Jenny L	10/5/2005	6.85			0.003									
108	Jenny L	6/27/2006	7.0			0.006									
108	Jenny L	7/11/2006	7.1			0.010									
108	Jenny L	8/24/2006	6.9			0.001									
108	Jenny L	9/9/2006	7.1			0.003									
108	Jenny L	6/26/2011	7.4		5.9	0.017		0.02							
108	Jenny L	7/23/2011	8.4		6.9			0.02							
108	Jenny L	8/21/2011	7.1		5.8	0.010		0.01							
108	Jenny L	9/20/2011	7.2		6.7	0.009		0.02							
108	Jenny L	6/18/2012			5.7	0.014		0.04							
108	Jenny L	7/22/2012			6.0	0.010		0.02							
108	Jenny L	8/26/2012			5.7	0.011		0.03							
108	Jenny L	9/23/2012			7.3	0.009		0.02							
108	Jenny L	6/23/2013			5.5	0.009		0.03							
108	Jenny L	7/22/2013			5.7	0.014		0.01							
108	Jenny L	8/24/2013			5.6	0.007		0.02							
108	Jenny L	9/28/2013			5.5	0.005		0.03							
108	Jenny L	6/22/2014			5.6	0.007		0.16							
108	Jenny L	7/6/2014			5.6	0.008									
108	Jenny L	7/20/2014			5.3	0.008									
108	Jenny L	8/9/2014			5.5	0.006		0.02							
108	Jenny L	8/25/2014			5.5	0.009									
108	Jenny L	9/21/2014			5.0	0.007		0.02							
108	Jenny L	10/13/2014			5.6	0.005									

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
108	Jenny L	6/30/1994	epi	26	22		2	3	1											
108	Jenny L	7/16/1994	epi	28	25	1	3	1												
108	Jenny L	7/29/1994	epi	24	24	1	3	1												
108	Jenny L	8/13/1994	epi	24	23	1	3	2												
108	Jenny L	8/27/1994	epi	22	21	2	3	1												
108	Jenny L	9/10/1994	epi	14	17	1	3	2												
108	Jenny L	9/23/1994	epi	14	16	1	3	1	5											
108	Jenny L	10/8/1994	epi	14	35	1	3	1												
108	Jenny L	6/29/1995	epi	24	23	2	3	2												
108	Jenny L	7/13/1995	epi	28	24	3	3	1												
108	Jenny L	7/27/1995	epi	25	24	2	3	1	0											
108	Jenny L	8/7/1995	epi	19	23	2	3	1												
108	Jenny L	8/18/1995	epi	26	25	2	3	2	6											
108	Jenny L	9/4/1995	epi	25	21	1	3	1												
108	Jenny L	9/19/1995	epi	12	18	1	3	1												
108	Jenny L	10/2/1995	epi	17	17	2	3	1												
108	Jenny L	6/18/1996	epi	22	23	1	3	1												
108	Jenny L	7/1/1996	epi	22	20	1	3	1												
108	Jenny L	7/18/1996	epi	20	22	2	1	1	0											
108	Jenny L	7/29/1996	epi	22	22	1	3	1	6											
108	Jenny L	8/12/1996	epi	21	23	1	3	2												
108	Jenny L	9/10/1996	epi	21	22	3	3	2												
108	Jenny L	9/23/1996	epi	12	16	2	3	2												
108	Jenny L	6/8/1997	epi	26	19	2	1	1												
108	Jenny L	6/23/1997	epi	25	22	1	3	1												
108	Jenny L	7/6/1997	epi	25	23	1	1	1												
108	Jenny L	7/25/1997	epi	20	23	2	2	1												
108	Jenny L	8/4/1997	epi	23	23	2	3	1												
108	Jenny L	8/20/1997	epi	21	23	3	1	2	1											
108	Jenny L	8/31/1997	epi	25	21	1	3	1												
108	Jenny L	9/16/1997	epi	25	20	1	3	1												
108	Jenny L	6/28/1998	epi	25	23															
108	Jenny L	7/13/1998	epi	29	25	1	3	1												
108	Jenny L	7/28/1998	epi	29	24	1	3	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
108	Jenny L	8/4/1998	epi	24	25	2	3	2												
108	Jenny L	8/17/1998	epi	29	28	2	3	2												
108	Jenny L	9/1/1998	epi	26	23	2	3	1												
108	Jenny L	9/16/1998	epi			1	2	1												
108	Jenny L	6/27/2001	epi	26	24	1	3	1	0											
108	Jenny L	7/18/2001	epi	26	25	2	3	1	0											
108	Jenny L	8/16/2001	epi	25	26	1	3	1												
108	Jenny L	10/1/2001	epi	16	17	1	3	1												
108	Jenny L	7/8/2002	epi	22	26	1	3	1												
108	Jenny L	7/22/2002	epi	26	24	1	3	1												
108	Jenny L	8/12/2002	epi	26	26	1	2	1												
108	Jenny L	8/27/2002	epi	21	22	2	3	2												
108	Jenny L	9/24/2002	epi	21	21	1	3	1												
108	Jenny L	10/22/2002	epi	7	9	1	2	1												
108	Jenny L	7/16/2003	epi	15	26	1	2	1	0											
108	Jenny L	7/29/2003	epi	24	23	1	3	1	0											
108	Jenny L	8/13/2003	epi	26	27	1	3	1	0											
108	Jenny L	8/26/2003	Site	17	21	2	3	1	5											
108	Jenny L	9/10/2003	epi	26	21	1	3	1	0											
108	Jenny L	10/10/2003	epi	17	16	1	2	1	0											
108	Jenny L	6/16/2004	epi	27	23	1	3	1	0											
108	Jenny L	7/13/2004	epi	21	21	1	3	1	0											
108	Jenny L	9/11/2004	epi	22	18	1	3	1	0											
108	Jenny L	6/28/2005	epi	26.7	26.1	1	1	1	0											
108	Jenny L	7/20/2005	epi	26.1	25.5	1	1	1	0											
108	Jenny L	7/27/2005	epi	26.7	25.5	1	1	1	0											
108	Jenny L	8/29/2005	epi	26.1	22.2	1	1	1	0											
108	Jenny L	9/28/2005	epi		20.5	1	3	1	2											
108	Jenny L	10/5/2005	epi	15.5	18.3	1	3	1	0											
108	Jenny L	6/27/2006	epi	23	20	2	3	1	0											
108	Jenny L	7/11/2006	epi	27	19	2	3	1	0											
108	Jenny L	7/27/2006	epi	24	18															
108	Jenny L	8/10/2006	epi	24	19	1	2	1	0											
108	Jenny L	8/24/2006	epi	18	21															
108	Jenny L	9/9/2006	epi	19	18	1	3	2	0											
108	Jenny L	10/23/2006	epi	20	16	1	2	1	0											
108	Jenny L	6/26/2011	epi	21	21	1	2	1	5	0	0	11.40	4.90							
108	Jenny L	7/11/2011	epi	32	25	2	1	1	0	0	0	2.20	1.40							
108	Jenny L	7/23/2011	epi	25	28	1	2	1	0	0	0	6.10	3.04							
108	Jenny L	8/6/2011	epi	24	27	2	3	2	0	0	0	11.80	9.30						i	
108	Jenny L	8/21/2011	epi	26	25	2	3	1	0	0	0	4.10	1.90							
108	Jenny L	9/4/2011	epi	30	24	2	2	2	0	0	0	3.00	2.60							
108	Jenny L	9/20/2011	epi	18	20	1	1	1	0	0	0	4.50	3.00							
108	Jenny L	10/4/2011	epi	14	18	1	1	1	0	0		2.90	2.40							
108	Jenny L	6/18/2012	epi	17	23	1	2	1	0	0	7	-0.50	0.60	<0.30	<0.413	0.64	0.35	-0.50	i	
108	Jenny L	7/3/2012	epi	26	25	2	2	1	0	5	0	-0.10	0.50	<0.30	<0.423	0.72	0.17	-0.10	i	
108	Jenny L	7/22/2012	epi	28	27	1	2	1	0	0	0	-0.30	0.70	<0.30	<0.585	1.50	0.00	-0.30	i	
108	Jenny L	8/12/2012	epi	22	26	3	1	1	0	0	0	2.20	1.60	<0.30	<0.552	4.75	1.04	2.20		
108	Jenny L	8/26/2012	epi	23	25	2	2	2	1	4	4	2.70	1.50	0.36	<0.551	4.84	0.65	2.70		
108	Jenny L	9/10/2012	epi	19	23	2	3	1	0	0	0	9.70	1.10	<0.30	<0.580	4.03	1.20	9.70		
108	Jenny L	9/23/2012	epi	15	19	2	3	1	0	0	0	2.90	0.60	<0.30	<3.299	3.16	1.84	2.90		
108	Jenny L	10/7/2012	epi	11	17	1	3	2	0	0	0	1.10	0.30	<0.30	<3.205	0.83	0.00	1.10		
108	Jenny L	6/23/2013	epi	31	24	2	1	1	0	0	0	1.00	0.60	<0.30	<0.650	1.00	0.00	1.00	i	
108	Jenny L	7/5/2013	epi	27	26	1	1	1	0	0	0			<0.30	<0.510				i	
108	Jenny L	7/22/2013	epi	30	29	1	3	1	0	0	0	0.05	3.20	<0.30	<0.370	2.70	0.00	0.05		i
108	Jenny L	8/5/2013	epi	18	24	2	2	2	1	0	0	2.20	5.10	<0.30	<0.340	5.00	0.00	2.20	i	
108	Jenny L	8/24/2013	epi	18	23	2	3	1	0	0	0	1.00	2.10	<0.30	<0.570	1.90	0.00	1.00	i	i
108	Jenny L	9/15/2013	epi	24	21	1	1	1	0	0	0	2.70	2.00	0.20	<19.130	1.50	0.00	2.70	i	
108	Jenny L	9/28/2013	epi	26	17	2	2	2	0	0	0	1.40	1.20	<0.30	<0.100	0.90	0.00	1.40	i	i
108	Jenny L	10/12/2013	epi	12	16	1	2	1	0	0	0	1.20	0.60	<0.30	<0.090	0.10	0.00	1.20	i	i
108	Jenny L	6/22/2014	epi	20	21	2	3	1	0	0	0	1.70	0.20	<0.58	<0.44	<0.002	0.50	0.00		

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
108	Jenny L	7/6/2014	epi	20	23	2	2	1	0	0	0	0.70	0.40	<0.62	<0.03	<0.002	1.00	0.00	i	
108	Jenny L	7/20/2014	epi	22	24	1	3	1	0	5	5	0.40	0.50	<0.39	<0.21	<0.003	1.60	0.00	i	i
108	Jenny L	8/9/2014	epi	24	23	2	2	2	0	0	0	0.50	0.60	<0.39	<0.03	<0.001	1.90	0.00	i	i
108	Jenny L	8/25/2014	epi	24	21	2	2	1	0	0	0	1.80	0.60	<0.25	<0.14	<0.002	3.40	0.00	i	i
108	Jenny L	9/21/2014	epi	19	18	2	3	1	0	0	0	2.20	0.30	<0.48	<0.04	<0.001	1.20	0.00	i	i
108	Jenny L	10/13/2014	epi	9	13	1	1	1	0	0	0	1.50	0.10	<0.73	<0.06	<0.001	0.50	0.00	i	i
108	Jenny L	6/28/2005	hypo		20.0															
108	Jenny L	7/20/2005	hypo		25.5															
108	Jenny L	7/27/2005	hypo		24.4															
108	Jenny L	9/28/2005	hypo		17.8															
108	Jenny L	6/26/2011	hypo		14															
108	Jenny L	7/23/2011	hypo		17															
108	Jenny L	8/21/2011	hypo		23															
108	Jenny L	9/20/2011	hypo		20															
108	Jenny L	6/18/2012	hypo		19															
108	Jenny L	7/22/2012	hypo		24															
108	Jenny L	8/26/2012	hypo		24															
108	Jenny L	9/23/2012	hypo		19															
108	Jenny L	6/23/2013	hypo		19															
108	Jenny L	7/22/2013	hypo		23															
108	Jenny L	8/24/2013	hypo		21															
108	Jenny L	9/28/2013	hypo		17															
108	Jenny L	6/22/2014	hypo		16															
108	Jenny L	7/6/2014	hypo		22															
108	Jenny L	7/20/2014	hypo		25															
108	Jenny L	8/9/2014	hypo		23															
108	Jenny L	8/25/2014	hypo		21															
108	Jenny L	9/21/2014	hypo		16															
108	Jenny L	10/13/2014	hypo		14															

## Legend Information

<i>Indicator</i>	<i>Description</i>	<i>Detection Limit</i>	<i>Standard (S) / Criteria (C)</i>
<b>General Information</b>			
<b>Lnum</b>	lake number (unique to CSLAP)		
<b>Lname</b>	name of lake (as it appears in the Gazetteer of NYS Lakes)		
<b>Date</b>	sampling date		
<b>Field Parameters</b>			
<b>Zbot</b>	lake depth at sampling point, meters (m)		
<b>Zsd</b>	Secchi disk transparency or clarity	0.1m	1.2m ( C)
<b>Zsamp</b>	water sample depth (m) (epi = epilimnion or surface; bot = bottom)	0.1m	none
<b>Tair</b>	air temperature ( C)	-10C	none
<b>TH20</b>	water temperature ( C)	-10C	none
<b>Laboratory Parameters</b>			
<b>Tot.P</b>	total phosphorus (mg/l)	0.003 mg/l	0.020 mg/l ( C)
<b>NOx</b>	nitrate + nitrite (mg/l)	0.01 mg/l	10 mg/l NO3 (S), 2 mg/l NO2 (S)
<b>NH4</b>	total ammonia (mg/l)	0.01 mg/l	2 mg/l NH4 (S)
<b>TN</b>	total nitrogen (mg/l)	0.01 mg/l	none
<b>TN/TP</b>	nitrogen to phosphorus (molar) ratio, = (TKN + NOx)*2.2/TP		none
<b>TCOLOR</b>	true (filtered) color (ptu, platinum color units)	1 ptu	none
<b>pH</b>	powers of hydrogen (S.U., standard pH units)	0.1 S.U.	6.5, 8.5 S.U. (S)
<b>Cond25</b>	specific conductance, corrected to 25C (umho/cm)	1 umho/cm	none
<b>Ca</b>	calcium (mg/l)	1 mg/l	none
<b>Chl.a</b>	chlorophyll a (ug/l)	0.01 ug/l	none
<b>Fe</b>	iron (mg/l)	0.1 mg/l	1.0 mg/l (S)
<b>Mn</b>	manganese (mg/l)	0.01 mg/l	0.3 mg/l (S)
<b>As</b>	arsenic (ug/l)	1 ug/l	10 ug/l (S)
<b>AQ-PC</b>	Phycocyanin (aquafior) (unitless)	1 unit	none
<b>AQ-Chl</b>	Chlorophyll a (aquafior) (ug/l)	1 ug/l	none
<b>MC-LR</b>	Microcystis-LR (ug/l)	0.01 ug/l	1 ug/l potable (C) 20 ug/l swimming (C)
<b>Ana</b>	Anatoxin-a (ug/l)	variable	none
<b>Cyl</b>	Cylindrospermopsin (ug/l)	0.1 ug/l	none
<b>FP-Chl, FP-BG</b>	Fluoroprobe total chlorophyll, fluoroprobe blue-green chlorophyll (ug/l)	0.1 ug/l	none
<b>Lake Assessment</b>			
<b>QA</b>	water quality assessment; 1 = crystal clear, 2 = not quite crystal clear, 3 = definite algae greenness, 4 = high algae levels, 5 = severely high algae levels		
<b>QB</b>	aquatic plant assessment; 1 = no plants visible, 2 = plants below surface, 3 = plants at surface, 4 = plants dense at surface, 5 = surface plant coverage		
<b>QC</b>	recreational assessment; 1 = could not be nicer, 2 = excellent, 3 = slightly impaired, 4 = substantially impaired, 5 = lake not usable		
<b>QD</b>	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		
<b>QF, QG</b>	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		
<b>HAB form, Shore HAB</b>	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 Jenny Lake

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

NoKnownImpct

#### Waterbody Location Information

Revised: 12/11/2006

<b>Water Index No:</b>	H-369-P127- 2..P129,P130,P131	<b>Drain Basin:</b>	Upper Hudson River
<b>Hydro Unit Code:</b>	02020002/080	<b>Str Class:</b>	B
<b>Waterbody Type:</b>	Lake	<b>Reg/County:</b>	5/Saratoga Co. (46)
<b>Waterbody Size:</b>	313.8 Acres	<b>Quad Map:</b>	CONKLINGVILLE (H-25-4)
<b>Seg Description:</b>	total area of all three lake		

#### 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

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

#### Further Details

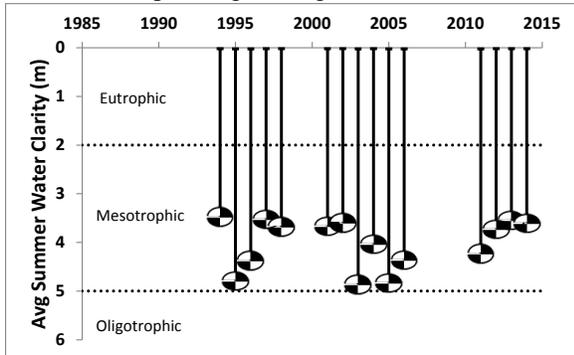
Jenny and Hunt Lakes have been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1994 and continuing through 2005. Interpretive Summary reports of the findings of this sampling were published in 2006. These data indicate that the lakes continue to be best characterized as mesooligotrophic, 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 clear" 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: Jenny Lake

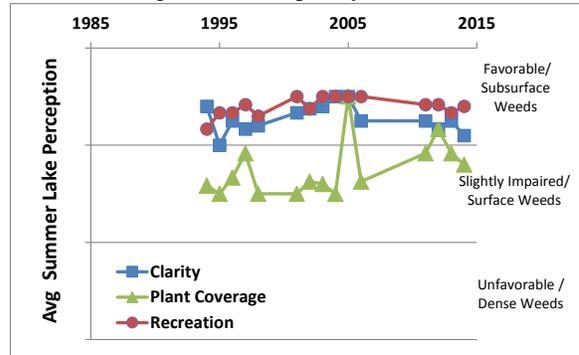
## Long Term Trends: Water Clarity

- Decrease since 2011, but no trends apparent
- Most readings typical of *mesotrophic* lakes, as expected given algae levels and color



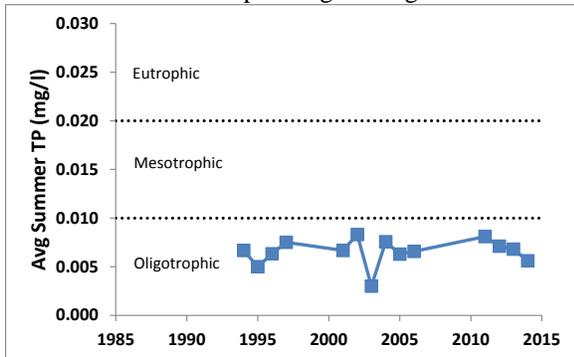
## Long Term Trends: Lake Perception

- No trends seen; slight decrease in weeds?
- Recreational perception not closely linked to changes in water quality or weeds



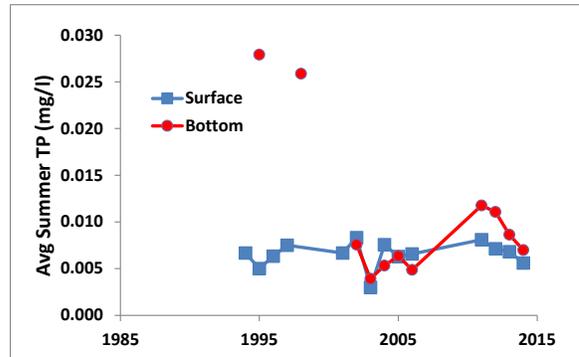
## Long Term Trends: Phosphorus

- No trends apparent; slight ↓ last 3 years
- Most readings typical of *oligotrophic* lakes, lower than expected given algae levels



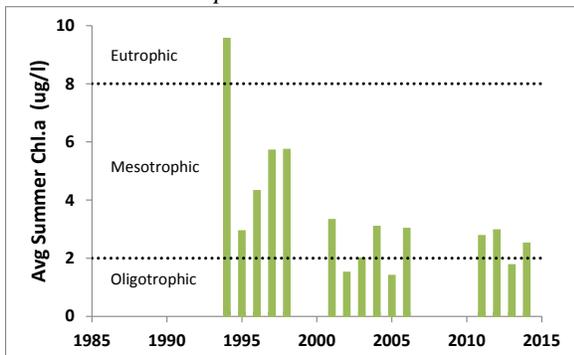
## Long Term Trends: Bottom Phosphorus

- Deepwater TP usually similar to surface TP
- Does not appear to have resulted in increase in surface TP levels



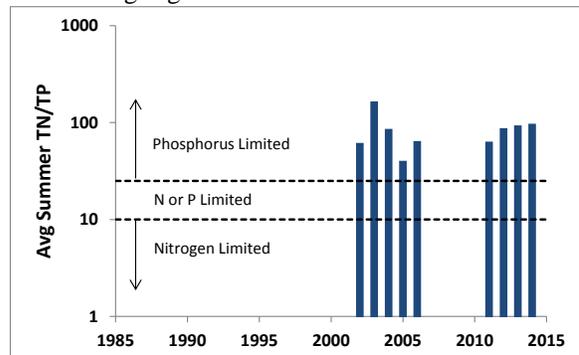
## Long Term Trends: Chlorophyll a

- Less algae since 1998, but no clear trends
- High variability in algae levels; most typical of *mesotrophic* lakes



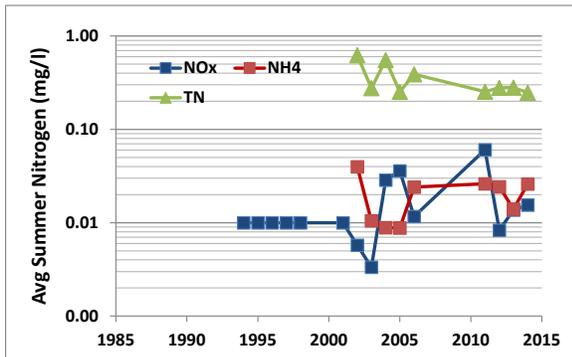
## Long Term Trends: N:P Ratio

- No trends apparent; slight ↑ last 3 years
- Most readings indicate phosphorus limits algae growth



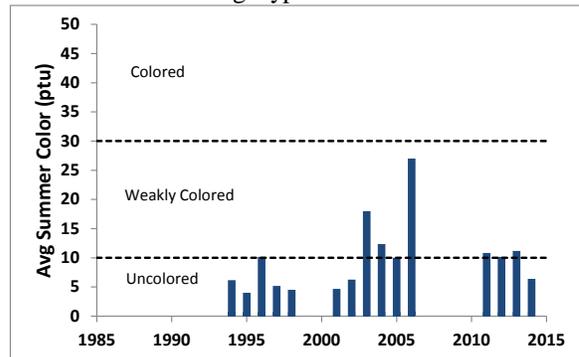
### Long Term Trends: Nitrogen

- No trends apparent
- Low nitrate, ammonia and total nitrogen



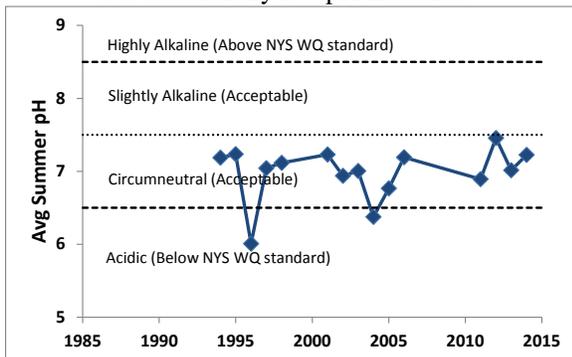
### Long Term Trends: Color

- Color slightly higher since 2002, due to lab change, but no clear trends
- Most readings typical of *uncolored* lakes



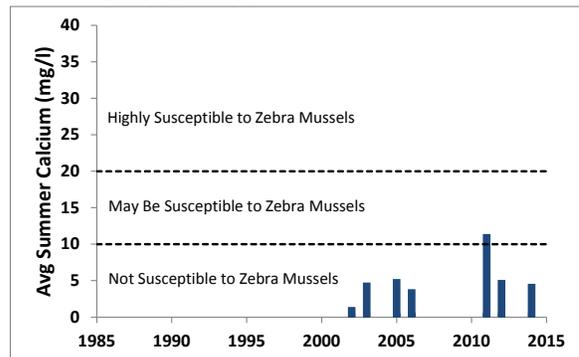
### Long Term Trends: pH

- No trends apparent
- Most readings typical of *circumneutral* lakes, but occasionally low pH measured



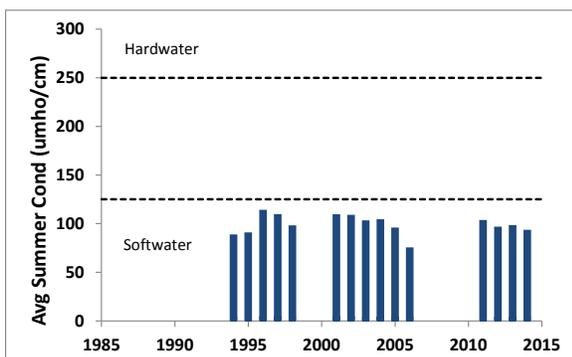
### Long Term Trends: Calcium

- No trends yet apparent
- Most readings indicate low susceptibility to zebra mussels



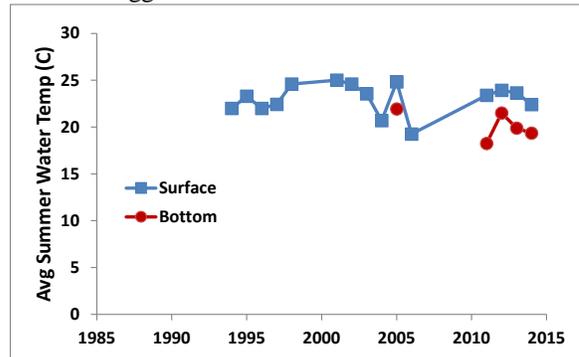
### Long Term Trends: Conductivity

- No trends apparent
- Most readings typical of *softwater* lakes



### Long Term Trends: Water Temperature

- Surface and bottom temps ↓ last 2 years
- Similar surface and bottom temperatures suggest inconsistent thermal stratification



## **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

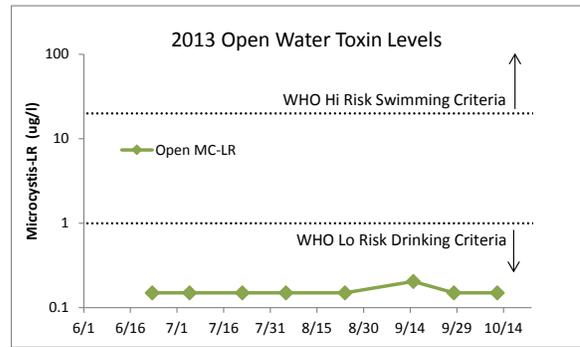
Some of these results are reported in other portions of these reports. This appendix the seasonal change in blue green algae, other algae types, and the primary algal toxin (microcystin-LR, a liver toxin). Analysis was completed on open water samples and, for some lakes, shoreline samples that were collected when visual evidence of blooms were apparent. Results are compared to the DEC criteria of 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.

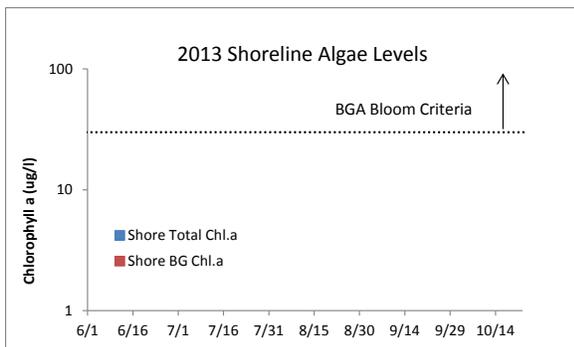
The results from these samples are summarized within the CSLAP report for the lake.



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



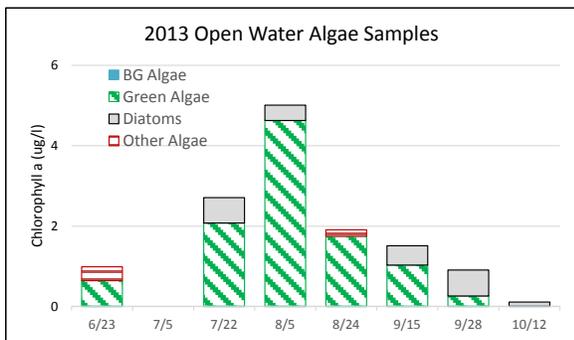
**Figure D2:**  
2013 Open Water Microcystin-LR



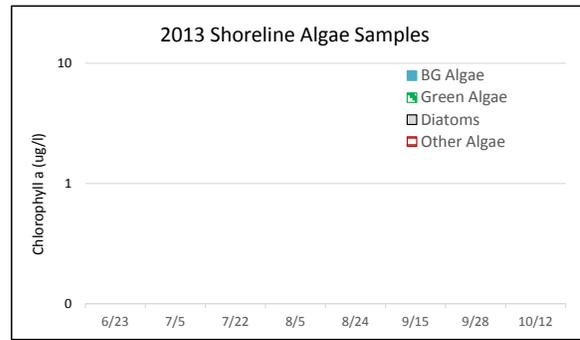
**Figure D3:**  
2013 Shoreline Total and BGA Chl.a



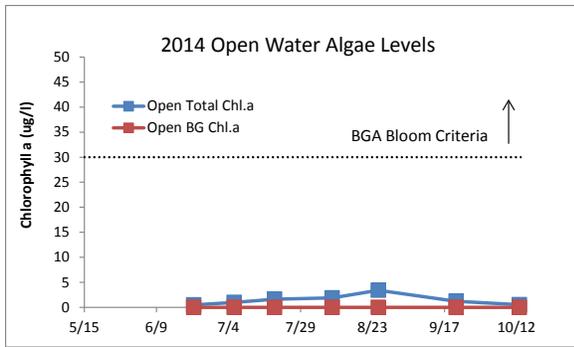
**Figure D4:**  
2013 Shoreline Microcystin-LR



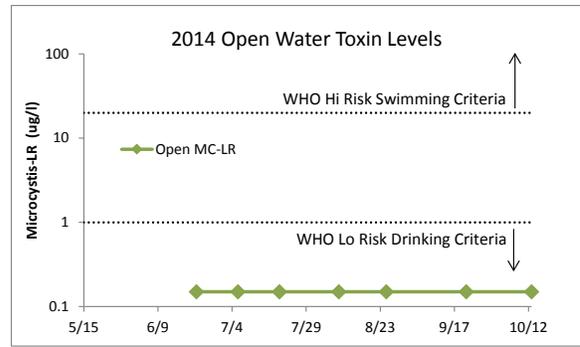
**Figure D5:**  
2013 Open Water Algae Types



**Figure D6:**  
2013 Shoreline Algae Types



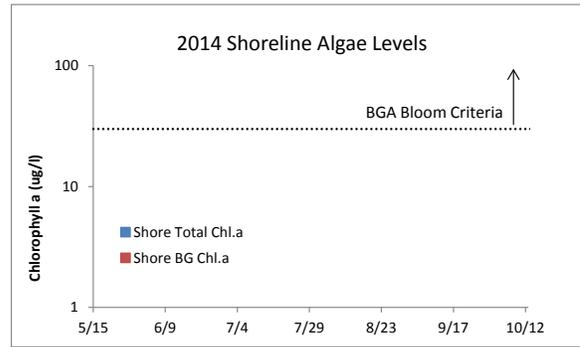
**Figure D7:**  
2014 Open Water Total and BGA Chl.a



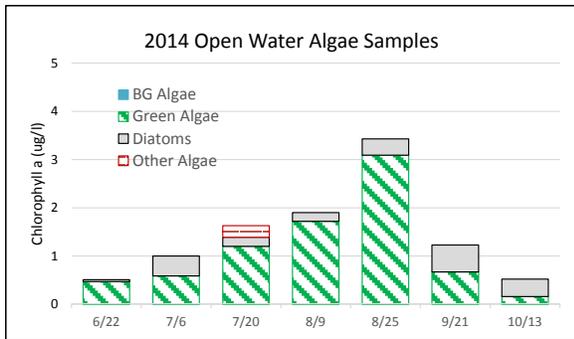
**Figure D8:**  
2014 Open Water Microcystin-LR



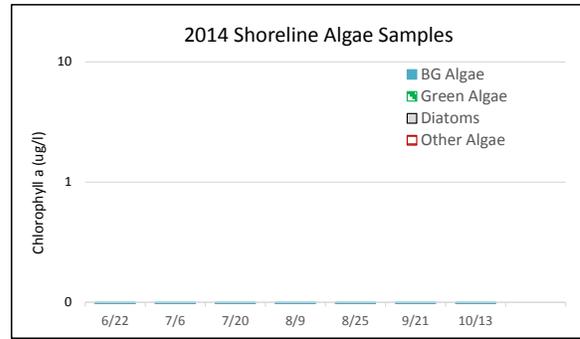
**Figure D9:**  
2014 Shoreline Total and BGA Chl.a



**Figure D10:**  
2014 Shoreline Microcystin-LR



**Figure D11:**  
2014 Open Water Algae Types



**Figure D12:**  
2014 Shoreline Algae Types

## 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](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](mailto:dowinfo@dec.ny.gov).

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

<b>Waterbody</b>	<b>Kingdom</b>	<b>Common name</b>	<b>Scientific name</b>
Saratoga Lake	Animal	Zebra mussel	<i>Dreissena polymorpha</i>
Saratoga Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Saratoga Lake	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Saratoga Lake	Plant	Water chestnut	<i>Trapa natans</i>
Van Patten's Pond	Plant	Water chestnut	<i>Trapa natans</i>
Woodland Lake	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>

## Appendix F: Watershed and Land Use Map for Jenny 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.

