

## Lake Lincolndale Questions and Answers, 2015 CSLAP

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

A1. Water quality conditions in Lake Lincolndale were probably less favorable than usual in 2015—water clarity was lower due to higher open water algae levels. Blue green algae levels were similar to those in previous years, and some of these blooms exhibited small to moderate toxin levels.

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

A2. Chloride testing results are consistent with other lakes with moderate to high impacts from road salt runoff, and no biological impacts have been apparent.

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

A3. Lake Lincolndale had lower water clarity, and higher nutrient and algae levels, than the typical lake in the area (although this difference decreased in late summer). Aquatic plant coverage continues to be slightly lower than in these other lakes, especially in late summer.

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

A4. Water clarity has decreased from the mid-1990s to 2015, consistent with an increase in phosphorus levels over the later part of this period. Conductivity may also have increased. Aquatic plant coverage also increased from the mid-2000s to 2015, triggering a long-term degradation in recreational assessments.

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

A5. Lake Lincolndale is highly susceptible to shoreline algae blooms, due to high nutrient and open water algae levels. The lake association should determine if any external sources of nutrient lead to the increase in phosphorus readings from the mid-1990s to the present. Aeration should continue to be evaluated to determine if it is effectively improving lake conditions.

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

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

<b>Lake Use</b>				
	PWL	Average Year	2015	Primary issue
<b>Potable Water</b>	□	□	□	Not applicable
<b>Swimming</b>	◆	■	■	Algae levels
<b>Recreation</b>	■	■	■	Algae levels
<b>Aquatic Life</b>	◆	●	▲	Road salt
<b>Aesthetics</b>	◆	●	◆	Algae blooms
<b>Habitat</b>	▲	▲	▲	Invasive plants
<b>Fish Consumption</b>	●	▲	▲	

● Supported / Good  
▲ Threatened / Fair  
◆ Stressed / Poor  
■ Impaired  
 Not Known

## CSLAP 2015 Lake Water Quality Summary: Lake Lincolndale

### General Lake Information

<b>Location</b>	Town of Somers
<b>County</b>	Westchester
<b>Basin</b>	Lower Hudson River
<b>Size</b>	7.8 hectares (19.3 acres)
<b>Lake Origins</b>	Augmented by 22' x 580' earthen dam (1935)
<b>Watershed Area</b>	131 hectares (323.6 acres)
<b>Retention Time</b>	0.2 years
<b>Mean Depth</b>	2.0 meters
<b>Sounding Depth</b>	3.5 meters
<b>Public Access?</b>	association beach
<b>Major Tributaries</b>	no named tribs
<b>Lake Tributary To...</b>	unnamed outlet to Plum Brook to Croton River to Muscoot Reservoir to...to Hudson River
<b>WQ Classification</b>	B (contact recreation = swimming)
<b>Lake Outlet Latitude</b>	41.339
<b>Lake Outlet Longitude</b>	-73.727
<b>Sampling Years</b>	1993-2005, 2007-2009, 2013-2015
<b>2015 Samplers</b>	Michael O'Keefe and Gary Tole
<b>Main Contact</b>	Michael O'Keefe

### Lake Map

(sampling location marked with a circle)



## **Background**

Lake Lincolndale is a 19 acre, class B lake found in the Town of Somers in Westchester County, in the lower Hudson River region of New York State. It was first sampled as part of CSLAP in 1993.

It is one of 19 CSLAP lakes among the more than 625 lakes and ponds found in Westchester County, and one of 67 CSLAP lakes among the more than 3680 lakes and ponds in the Lower Hudson River drainage basin.

## **Lake Uses**

Lake Lincolndale 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—boating and fishing, aquatic life, and aesthetics. The lake is used by lake residents and invited guests for non-power boating and swimming at an association beach; the lake does not have public access.

Lake Lincolndale has not been stocked through any state fisheries stocking programs. It is not known if any private stocking has occurred.

General statewide fishing regulations may be applicable in Lake Lincolndale; no site specific regulations are in place.

There are no lake-specific fish consumption advisories on Lake Lincolndale.

## **Historical Water Quality Data**

CSLAP sampling was conducted on Lake Lincolndale from 1993-2005, 2007, 2009 and 2013 to 2015. The CSLAP report for the lake can be found on the NYSFOLA website at <http://nysfola.mylaketown.com>. The most recent CSLAP report and scorecard for Lake Lincolndale can also be found on the NYSDEC web page at <http://www.dec.ny.gov/lands/77829.html>.

Lake Lincolndale was not sampled by the NYSDEC as part of any of the significant contemporary statewide or regional water quality monitoring programs prior to CSLAP.

None of the unnamed ephemeral tributaries, nor the outlet of the lake have been monitored through the NYSDEC Rotating Intensive Basins (RIBS) program or the state stream macroinvertebrate monitoring program. The lake has not been sampled by DEC fisheries staff in support of fish stocking activities.

## **Lake Association and Management History**

Lake Lincolndale is served by the Lake Lincolndale Property Owners Association, which was established in 1937, seven years after the formation of the private lake. The lake association is involved in a variety of lake management and lake use activities, including:

- Swimming, fishing, non-motorized boating, and ice skating
- Use of a Clubhouse for regular association meetings
- Implementing a dredging project in 1979
- constructed beach area with play gym

- hired Pegasus Engineering to analyze dam and prepare report for repair and maintenance and to meet new DEC regulations

The lake association maintains a web site at <http://www.lakelincolndale.org>.

## **Summary of 2015 CSLAP Sampling Results**

### **Evaluation of 2015 Annual Results Relative to 1993-2014**

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 – Lake Lincolndale” section in Appendix C.

### **Evaluation of Eutrophication Indicators**

Water clarity was slightly lower than usual in 2014 and 2015 as part of a longer-term trend from the mid-1990s to the present. This is consistent with an increase in phosphorus levels from the early 2000s (and total nitrogen readings since the mid-2000s), but phosphorus and chlorophyll *a* readings in 2015 were close to (recent) normal and algae levels have been highly variable from year to year.

Water clarity typically decreases from early summer to late summer, mostly coincident with an increase in phosphorus and chlorophyll *a* readings over the same period. Phosphorus levels then decrease through the end of the typical year, but this does not translate into comparable change in algae levels and water clarity readings. Similar patterns were apparent though mid-summer in 2015, but trophic conditions were stable through the rest of the summer in 2015.

The lake can be characterized as *eutrophic*, or highly productive, based on water clarity, total phosphorus and chlorophyll *a* readings (all typical of *eutrophic* lakes). The TSI evaluation suggests that algae levels were slightly higher than expected given the nutrient and water clarity readings in the lake. This suggests that algae growth is spotty or ephemeral. Overall trophic conditions are summarized on the Lake Scorecard.

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

Algae levels are frequently 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, although the lake is not classified for use for drinking water.

### **Evaluation of Limnological Indicators**

Color readings were slightly higher than normal in 2015, and these readings have been relatively stable (or varied inconsistently in any given year). Conductivity readings rose from the mid-1990s to the mid-2000s, but did not change significantly after the mid-2000s (at least until 2015), despite slightly lower readings in 2015. It is likely that the small changes in each of the other water quality indicators have been within the normal range of variability in the lake.

Chloride levels in the 2015 samples, conducted for the first time through CSLAP and cited in Appendix A, averaged 50 mg/l. These values are within the range of “major” road salt runoff

levels cited by the New Hampshire DES. There readings are well below the state potable water quality standard of 250 mg/l but above the range of values found in a number of NYS lakes.

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

Overall limnological conditions are summarized in the Lake Scorecard.

### **Evaluation of Biological Condition**

The fluoroprobe screening data analyzed by SUNY ESF in recent years showed elevated blue green algae levels in both the open water and within shoreline blooms, with a mix of toxin-producing species (*Anabaena*, *Aphanizomenon*, *Microcystis*, *Planktothrix*) and non-toxin producers (*Woronichina*), as well as some green algae and other algal species. Algae levels in the open water (near the center of the lake) showed “bloom” conditions in each of the last three years. It is not known if algae growth was actively managed in 2015.

Macrophyte surveys have been conducted through CSLAP at Lake Lincolndale. At least 14 aquatic plant species have been found, including at least three exotic plant species (*Myriophyllum spicatum*, Eurasian watermilfoil; *Potamogeton crispus*, curly-leafed pondweed, and *Najas minor*, brittle naiad) and at least one protected aquatic plant species (*Stuckenia filiformis*, fineleaf pondweed). The modified FQI for the lake indicates that the quality of the aquatic plant community is “fair.”

The composition of the fish community is not known, but it is assumed that the lake can most likely be characterized as a warmwater fishery.

Zooplankton and macroinvertebrates have not been evaluated through CSLAP in Lake Lincolndale.

### **Evaluation of Lake Perception**

Recreational assessments improved slightly in 2015, despite higher aquatic plant coverage, higher algae levels, and similar water quality assessments. These assessments improve in some years in late summer after the Cutrine treatment and lake aeration. Recreational and water quality assessments degrade slightly from June to July, but steadily improved through the rest of the summer. These assessments are usually stable or typically improve in late summer, although no clear late summer trends were observed in 2015. None of these measures of lake perception has exhibited any clear long-term trends. Overall lake perception is summarized on the Lake Scorecard.

### **Evaluation of Local Climate Change**

Water temperature readings in the summer index period were close to normal in 2015, and these temperatures have decreased slightly since the mid-1990s. It is not known if this is an indication of local climate change (contradicting an expected increase) or if these changes cannot be well evaluated through CSLAP.

### **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 indicate a high susceptibility for algae blooms generally and harmful (blue green) algal blooms (HABs) specifically. Open water microcystin levels have been well below the thresholds for safe swimming, although some elevated readings have been apparent along the shoreline. Notwithstanding these results,, lake residents and pets should continue to avoid exposure to any surface scums or heavily discolored water potentially associated with blue green algae blooms.

### Lake Condition Summary

Category	Indicator	Min	Overall Avg	Max	2015 Avg	Classification	2015 Change?	Long-term Change?
Eutrophication Indicators	Water Clarity	0.45	1.28	3.50	0.98	Eutrophic	Lower Than Normal	Decreasing Slightly
	Chlorophyll <i>a</i>	3.70	35.55	176.02	46.46	Eutrophic	Within Normal Range	No Change
	Total Phosphorus	0.009	0.056	0.286	0.062	Eutrophic	Within Normal Range	No Change
Potable Water Indicators	Hypolimnetic Ammonia							Not known
	Hypolimnetic Arsenic							Not known
	Hypolimnetic Iron							Not known
	Hypolimnetic Manganese							Not known
Limnological Indicators	Hypolimnetic Phosphorus							Not known
	Nitrate + Nitrite	0.00	0.06	0.52	0.05	Low NOx	Within Normal Range	No Change
	Ammonia	0.00	0.10	0.54	0.06	Intermediate Ammonia	Within Normal Range	No Change
	Total Nitrogen	0.17	0.89	2.13	0.90	Intermediate Total Nitrogen	Within Normal Range	No Change
	pH	3.94	7.84	9.66	7.72	Alkaline	Within Normal Range	No Change
	Specific Conductance	362	603	983	888	Hardwater	Higher than Normal	Increasing Slightly
	True Color	2	17	77	11	Intermediate Color	Within Normal Range	No Change
	Calcium	21.5	37.3	47.9	38.9	Highly Susceptible to Zebra Mussels	Within Normal Range	No Change
Lake Perception	WQ Assessment	1	2.9	5	2.8	Definite Algal Greenness	Within Normal Range	No Change
	Aquatic Plant Coverage	1	1.6	5	2.3	Subsurface Plant Growth	Within Normal Range	No Change
	Recreational Assessment	1	2.6	4	2.0	Slightly Impaired	More Favorable Than Normal	No Change
Biological Condition	Phytoplankton					Open water-high blue green algae biomass Shoreline-low blue green algae biomass	Not known	Not known
	Macrophytes					Fair quality of the 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					Warmwater fishery	Not known	Not known
	Invasive Species					Eurasian watermilfoil, curly-leafed pondweed, brittle naiad	Not known	Not known
Local Climate Change	Air Temperature	9	24.0	34	25.3		Within Normal Range	No Change
	Water Temperature	10	23.9	29	24.8		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	120	732	65	Most readings indicate high risk of BGA	Not known	Not known
	Open Water FP Chl.a	3	28	102	24	Some readings indicate high algae levels	Not known	Not known
	Open Water FP BG Chl.a	0	14	99	4	Some readings indicate high BGA levels	Not known	Not known
	Open Water Microcystis	<DL	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
	Shoreline FP Chl.a	17	4142	43565	740	Most readings indicate high algae levels	Not known	Not known
	Shoreline FP BG Chl.a	8	3942	43565	607	Most readings indicate high BGA levels	Not known	Not known
	Shoreline Microcystis	<DL	1.9	13.9	0.0	At times measurable shoreline bloom MC-LR	Not known	Not known
	Shoreline Anatoxin a	<DL	1.9	0.3		Shoreline bloom Anatoxin-a at times detectable	Not known	Not known

## Evaluation of Lake Condition Impacts to Lake Uses

Lake Lincolndale is presently among the lakes cited on the 2009 Lower Hudson River Basin PWL, with recreation listed as impaired and aquatic life and aesthetics listed as stressed due to excessive algae, weeds and nutrients. The PWL listing for Lake Lincolndale is listed in Appendix B.

### Potable Water (Drinking Water)

The CSLAP dataset at Lake Lincolndale, 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 high algae levels may impact any "unofficial" potable water use from the surface waters of the lake, from either the open water or within shoreline blooms.

### Public Bathing

The CSLAP dataset at Lake Lincolndale, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggests that public bathing may be *impaired* by excessive algae, shoreline algae blooms and poor water clarity, although 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 Lake Lincolndale, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that contact recreation may be *stressed for this use*, although this use may also be *threatened* by excessive weeds, particularly Eurasian watermilfoil, curly-leafed pondweed, and brittle naiad.

### Aquatic Life

The CSLAP dataset on Lake Lincolndale, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aquatic life may be *threatened* by invasive weeds, although additional data are needed to evaluate the food and habitat conditions for aquatic organisms in the lake.

### **Aesthetics and Habitat**

The CSLAP dataset on Lake Lincolndale, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aesthetics may be *fair* due to shoreline and open water blue green algae blooms and excessive weeds, and by periodic reports to and from the public.

### **Fish Consumption**

There are no fish consumption advisories posted for Lake Lincolndale.

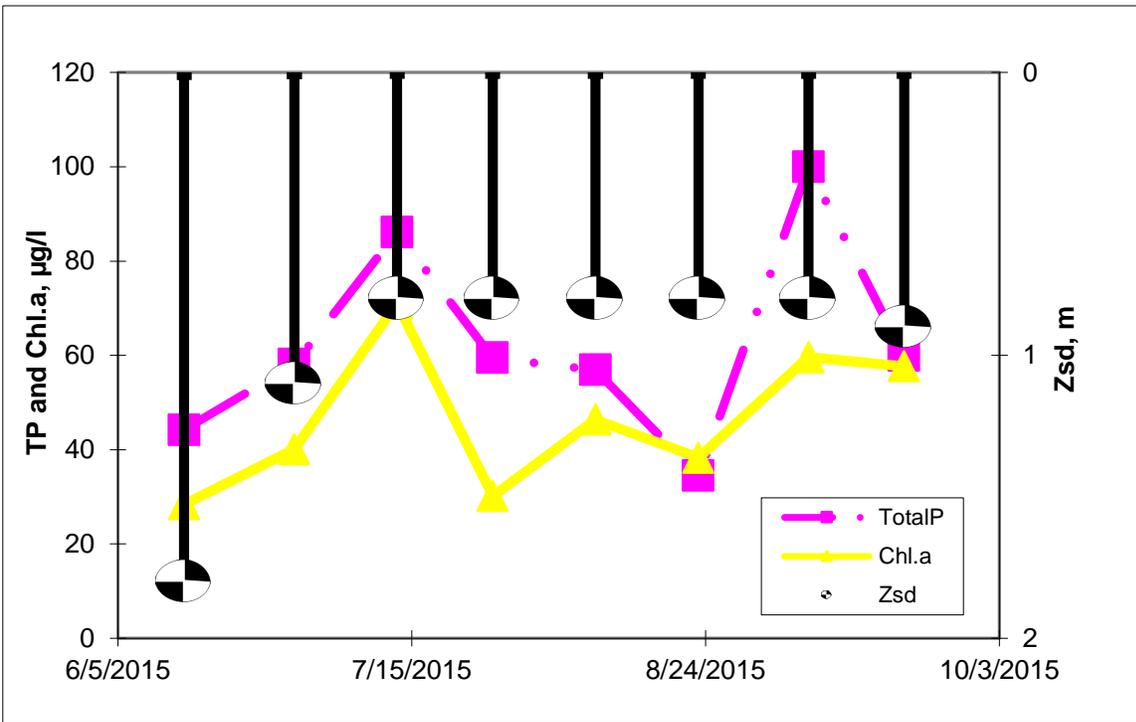
### **Additional Comments and Recommendations**

Lake residents are advised to report and avoid exposure to shoreline blooms. The use of various lake management tools- algicides, aeration, etc.- should continue to be reported and closely tracked to evaluate their effectiveness.

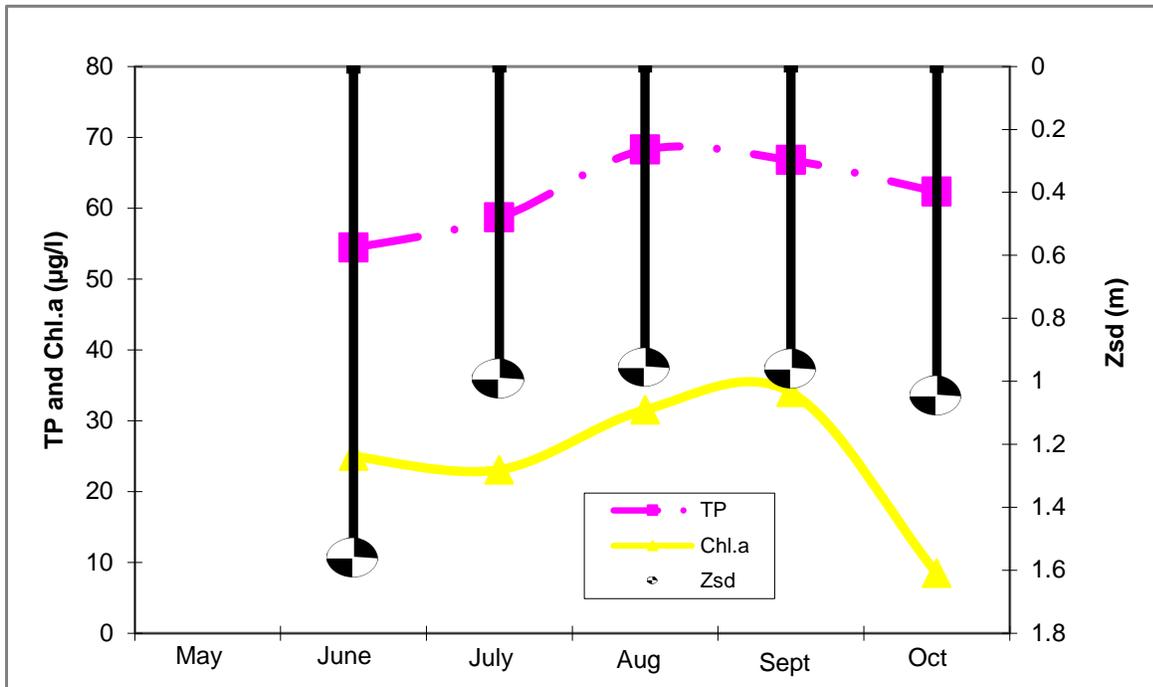
### **Aquatic Plant IDs-2015**

None submitted for identification.

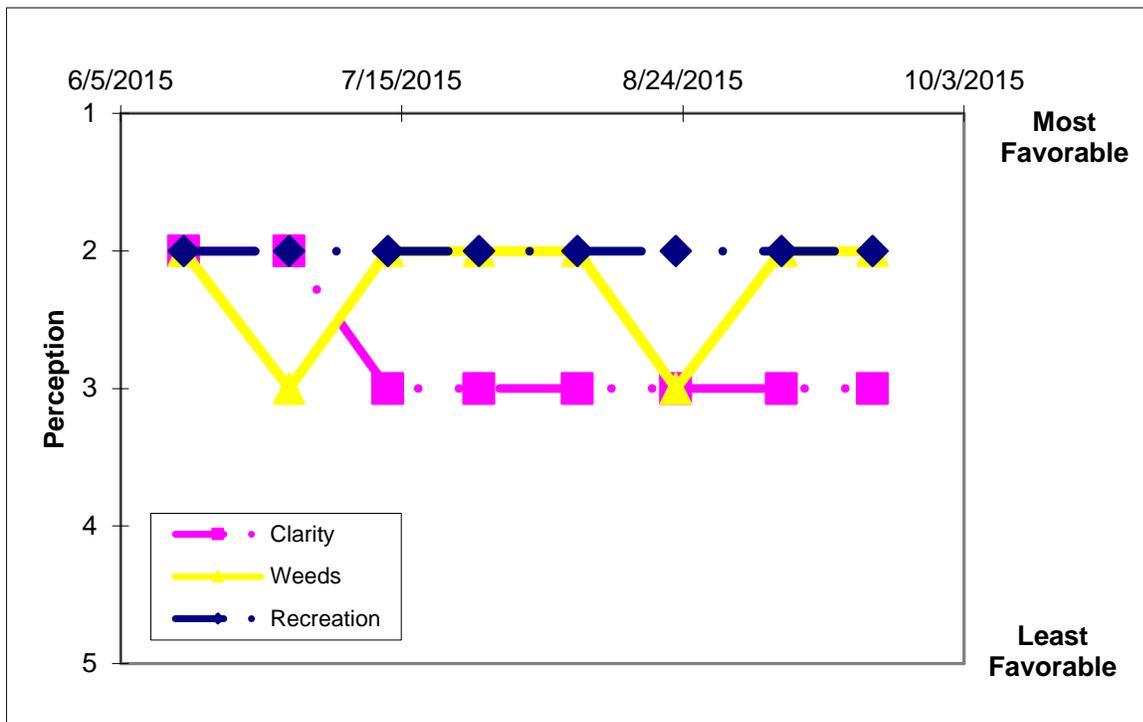
## Time Series: Trophic Indicators, 2015



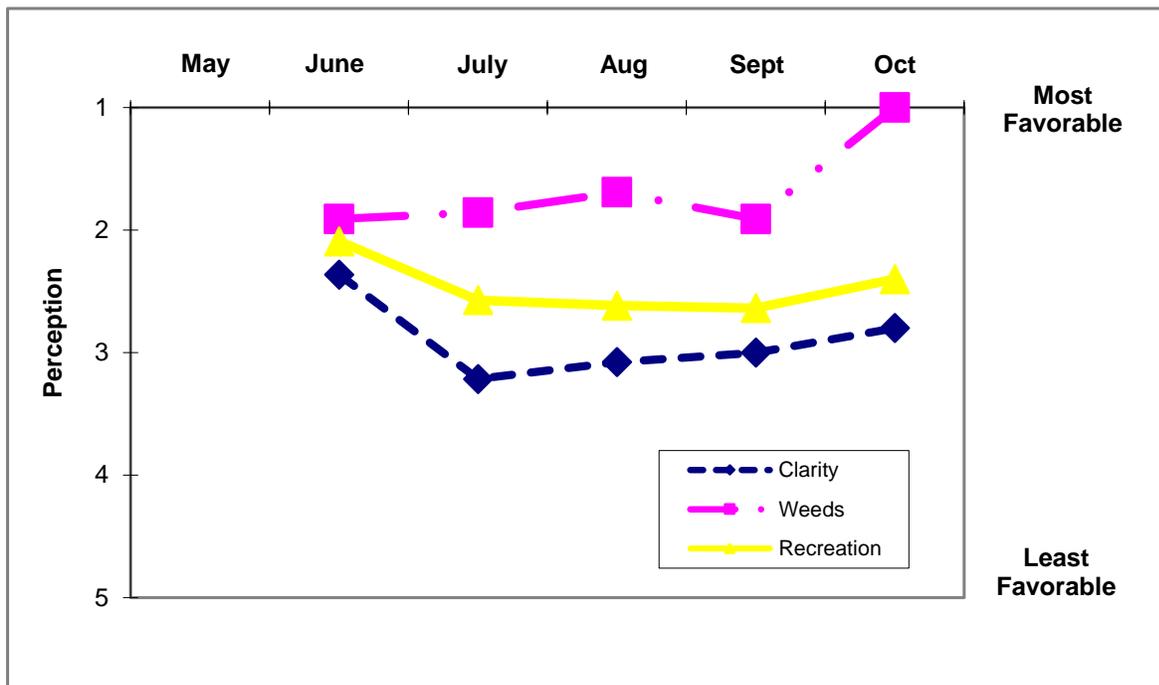
## Time Series: Trophic Indicators, Typical Year (1993-2015)



## Time Series: Lake Perception Indicators, 2015



## Time Series: Lake Perception Indicators, Typical Year (1993-2015)



## Appendix B- CSLAP Water Quality Sampling Results for Lake Lincolndale

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
102	L Lincolndale	7/3/1993	4.3	2.30	1.5	0.034	0.02				8	8.28	473		14.40	
102	L Lincolndale	7/19/1993	3.1	1.40	1.5	0.048	0.01				2	8.02	496		25.30	
102	L Lincolndale	8/2/1993	3.2	2.69	1.5		0.01				3	8.07	502		5.85	
102	L Lincolndale	8/15/1993	3.3	1.50	1.5	0.039	0.01				7	8.17	509		15.60	
102	L Lincolndale	8/30/1993	3.0	1.25	1.5	0.026	0.01				8	8.39	484		5.22	
102	L Lincolndale	9/12/1993	3.3	1.50	1.5	0.042	0.01				10	8.31	492		26.80	
102	L Lincolndale	9/27/1993	3.5	1.00	1.5	0.043	0.01				7	8.15	491		62.90	
102	L Lincolndale	10/11/1993	3.5	1.38	1.5	0.029	0.03				10	8.33	491		11.80	
102	L Lincolndale	6/6/1994	3.5	3.38	3.5	0.013	0.03				6	9.66	426		3.70	
102	L Lincolndale	6/19/1994	3.5	3.00	1.5	0.028	0.01				8	9.15	417		31.00	
102	L Lincolndale	7/5/1994	3.5	1.50	1.5	0.049	0.01				17	7.64	423		20.50	
102	L Lincolndale	7/15/1994	3.5	1.63	1.5	0.036	0.01				22	8.56	434		28.10	
102	L Lincolndale	8/1/1994	3.5	0.75	1.5	0.061	0.01				12	8.02	434		48.20	
102	L Lincolndale	8/14/1994	3.5	1.00	1.5	0.062	0.01				16	7.90	447		29.60	
102	L Lincolndale	8/29/1994	3.5	1.00	1.5	0.051	0.06				16	8.02	456		59.50	
102	L Lincolndale	9/12/1994	3.5	1.00	1.5	0.055	0.01				14	7.89	476		44.70	
102	L Lincolndale	6/24/1995	3.5	1.75	1.5	0.033	0.01				5	8.51	510		18.60	
102	L Lincolndale	7/10/1995	3.0	1.00	1.5	0.058	0.01				15	8.77	517		69.00	
102	L Lincolndale	7/29/1995	3.3	0.75	1.5	0.072	0.01				10	7.93	504		65.50	
102	L Lincolndale	8/6/1995	3.5	0.75	1.5	0.057	0.03				15		485		81.20	
102	L Lincolndale	8/22/1995	3.3	1.50	1.5	0.036	0.01				10	7.98	517		25.30	
102	L Lincolndale	9/2/1995	3.0	1.00	1.5	0.064	0.01				15	7.86	529		71.90	
102	L Lincolndale	9/18/1995	3.0	1.00	1.5	0.056	0.01				30	7.69	540		28.80	
102	L Lincolndale	10/2/1995	3.5	1.50	1.5	0.046	0.03				10	7.72	534		35.60	
102	L Lincolndale	6/20/1996	3.5	1.00	1.5	0.040	0.01				5	7.81	566		20.00	
102	L Lincolndale	7/2/1996	3.3	1.25	1.5	0.041	0.01				5	8.14	580		25.00	
102	L Lincolndale	7/17/1996	3.5	1.75	1.5	0.058	0.17				20	8.04	459		69.00	
102	L Lincolndale	8/4/1996	3.5	2.00	1.5	0.027	0.01				15	9.20	477		11.00	
102	L Lincolndale	8/19/1996	3.5	1.50	1.5	0.031	0.01				10	8.75	503		24.00	
102	L Lincolndale	9/2/1996	3.5	1.00	1.5	0.074	0.01				15	7.55	510		35.00	
102	L Lincolndale	9/14/1996	3.5	1.00	1.5	0.100	0.01				15	7.63	504		58.00	
102	L Lincolndale	10/5/1996	3.8	1.00	1.5	0.056	0.15				8	7.99	485		57.10	
102	L Lincolndale	6/1/1997	3.5	1.63	1.5	0.018	0.24				15	8.81	533		12.20	
102	L Lincolndale	6/14/1997	3.5	2.75	1.5	0.025	0.13				10	8.24	533		7.19	
102	L Lincolndale	7/11/1997	3.5	1.00	1.5	0.047	0.01				15	7.77	507		27.40	
102	L Lincolndale	7/26/1997	3.5	1.13	1.5	0.045	0.01				10	7.80	521		19.80	
102	L Lincolndale	8/11/1997	3.3	1.50	1.5	0.049	0.01				10	8.21	531		16.30	
102	L Lincolndale	8/24/1997	3.3	1.00	1.5	0.059					13	7.88	506		27.40	
102	L Lincolndale	9/7/1997				0.074					10	7.51	517		27.90	
102	L Lincolndale	5/31/1998	3.5	2.50	1.5	0.018	0.33				7	8.72	525		11.00	
102	L Lincolndale	6/15/1998	3.5	1.50	1.5	0.031	0.11				6	8.33	473		33.80	
102	L Lincolndale	6/27/1998	3.3	1.25	1.5		0.03				9	7.87	495		22.50	
102	L Lincolndale	7/13/1998	3.8	2.00	1.5	0.024	0.05				10	8.36	488		10.90	
102	L Lincolndale	7/26/1998	3.5	1.50	1.5	0.036	0.01				8	8.01	503		9.63	
102	L Lincolndale	8/20/1998	3.3	1.25	1.5	0.066	0.01				4	7.49	519		18.10	
102	L Lincolndale	8/31/1998	3.5	1.25	1.5	0.069	0.01				16	7.74	506		154.00	
102	L Lincolndale	9/13/1998	3.5	2.00	1.5	0.037	0.01				8	8.49	508		22.50	
102	L Lincolndale	9/26/1998	3.5	1.25	1.5	0.033	0.01				26	7.15	516		54.30	
102	L Lincolndale	5/31/1999	3.5	2.00	1.5	0.024	0.07				11	7.59	595		20.40	
102	L Lincolndale	6/16/1999	3.3	1.00	1.5	0.036	0.01				18	7.52	591		28.80	
102	L Lincolndale	7/9/1999	3.3	1.50	1.5	0.042	0.01				15	8.01	586		30.20	
102	L Lincolndale	7/25/1999	3.0	1.00	1.5	0.044	0.01				12	8.64	556		31.80	
102	L Lincolndale	8/7/1999	3.1	1.00	1.5	0.055	0.01				8	7.47	573		46.70	
102	L Lincolndale	8/24/1999	3.3	0.75	1.5	0.089	0.01				11	7.65	547		61.50	
102	L Lincolndale	9/6/1999	3.3	0.75	1.5	0.066	0.01				12	8.10	569		78.50	
102	L Lincolndale	9/22/1999	3.5	1.50	1.5	0.080					23	7.25	362		20.00	
102	L Lincolndale	6/5/2000	3.5	2.25	1.5	0.031	0.06				6	8.44	579		11.40	
102	L Lincolndale	6/20/2000	3.5	2.00	1.5	0.009	0.06				13	7.41	565		12.60	
102	L Lincolndale	7/16/2000	3.5	1.13	1.5	0.053	0.01				9	7.29	583		56.50	
102	L Lincolndale	8/2/2000	3.3	1.00	1.5	0.050	0.01				9	7.03	572		69.00	
102	L Lincolndale	8/15/2000	3.3	1.00	1.5	0.055	0.02				8	7.71	554		54.50	
102	L Lincolndale	8/27/2000	3.5	1.00	1.5	0.072	0.01				9	8.06	568		59.50	

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
102	L Lincolndale	9/13/2000	3.3	1.75	1.5	0.042	0.01				8	8.22	578		23.70	
102	L Lincolndale	6/13/2001	3.5	2.00	1.5	0.024	0.01				9	8.26	755		4.89	
102	L Lincolndale	6/28/2001	3.5	1.50	1.5	0.037	0.04				8	7.82	665		15.00	
102	L Lincolndale	7/11/2001	3.5	1.25	1.5	0.053	0.01				15	7.43	668		40.60	
102	L Lincolndale	7/30/2001	3.5	0.75	1.5	0.106	0.01				9	7.35	684		76.23	
102	L Lincolndale	8/6/2001	3.5	0.75	1.5	0.081	0.01				9	7.41	692		94.71	
102	L Lincolndale	8/27/2001	3.5	0.75	1.5	0.286					8	7.67	689		176.02	
102	L Lincolndale	9/12/2001	3.8	0.75	1.5	0.074					11	7.75	673			
102	L Lincolndale	9/29/2001	3.5	0.75	1.5	0.078					31	7.17	655			
102	L Lincolndale	06/09/02	3.5	3.50	1.5	0.024	0.27	0.24	1.34	124.00	9	7.91	731		4.47	
102	L Lincolndale	06/28/02	3.5	1.25	1.5	0.056	0.09	0.17	0.77	30.33	26	8.28	721		37.85	
102	L Lincolndale	07/10/02	3.5	1.50	1.5											
102	L Lincolndale	07/22/02	3.5	0.50	1.5	0.085	0.00	0.03	0.57	14.62	53	8.44	712		73.61	
102	L Lincolndale	07/31/02	3.3	0.75	1.5	0.100	0.02	0.02	0.65	14.38	21	8.73	679		98.69	
102	L Lincolndale	08/18/02	3.5	0.75	1.5	0.098	0.00	0.03	0.76	17.21	24	7.94	682		29.71	
102	L Lincolndale	09/08/02	3.5	1.00	1.5	0.103	0.02	0.05	0.99	21.23	18	8.29	688		25.81	
102	L Lincolndale	10/06/02	3.5	1.00	1.5	0.066	0.02	0.27	1.09	36.07	16	7.83	675		19.31	
102	L Lincolndale	6/21/2003	3.5	1.50	1.5	0.032	0.35	0.06	0.76	52.80	17	7.6	814	43.0	39.38	
102	L Lincolndale	7/5/2003	3.5	1.50	1.5	0.033	0.18	0.14	0.67	43.68	31	7.8	814		24.83	
102	L Lincolndale	7/24/2003	3.5	1.00	1.5	0.043	0.00	0.00	0.55	28.39	23	7.9	737		29.26	
102	L Lincolndale	8/12/2003	3.5	2.50	1.5	0.015	0.05	0.12	0.50	73.46	16	8.0	776		9.66	
102	L Lincolndale	8/24/2003	3.5	1.50	1.5	0.025	0.01	0.05	0.42	36.41	7	7.9	785	47.0	13.34	
102	L Lincolndale	9/7/2003	3.5	1.25	1.5	0.041	0.07	0.00			14	8.0	716		16.64	
102	L Lincolndale	9/18/2003	3.8	2.50	1.5	0.033	0.07	0.22	0.63	41.76	14	7.9	792		6.95	
102	L Lincolndale	10/6/2003	3.5	1.25	1.0	0.059	0.06	0.00	0.40	15.18	15	8.4	716		35.66	
102	L Lincolndale (@dam)	6/12/2004	3.0	3.25	1.5	0.025	0.19	0.03	0.67	59.67	32	3.94	729			
102	L Lincolndale (@dam)	7/4/2004	3.3	1.75	1.5	0.026	0.01	0.01	0.23	19.39	23	6.72	724		15.1	
102	L Lincolndale (@dam)	7/27/2004	3.5	1.00	1.5	0.052	0.03	0.02	0.89	37.91	24	8.35	736		70.7	
102	L Lincolndale (@dam)	8/11/2004	3.5	0.75	1.5	0.030	0.01	0.05	0.38	27.29	24	7.49	780		66.8	
102	L Lincolndale (@dam)	9/1/2004	3.5	1.25	1.5	0.058	0.05	0.01	0.54	20.47	12	8.12	528	40.0	42.9	
102	L Lincolndale (@dam)	9/21/2004	3.3	1.00	1.5	0.063	0.30	0.03	0.71	24.64	16	7.9	531		49.4	
102	L Lincolndale (@dam)	10/2/2004	3.5	0.75	1.5	0.045	0.30	0.10	0.61	29.65	18	7.58	537			
102	L Lincolndale (@dam)	11/2/2004	3.5	0.50	1.5	0.037	0.01	0.02			34	7.98	587		95.2	
102	L Lincolndale (@dam)	6/5/2005	3.0	2.50	1.5	0.038	0.22	0.17	0.54	30.78	28	7.79	682	48.0	10.17	
102	L Lincolndale (@dam)	7/6/2005	3.0	1.25	1.5	0.033	0.11	0.04	0.60	40.47	19	7.70	728		23.56	
102	L Lincolndale (@dam)	8/8/2005	3.0	0.75	1.5	0.074					11	7.94	690		35.18	
102	L Lincolndale (@dam)	8/23/2005	3.0	0.75	1.5	0.060	0.08	0.01	0.23	8.58	16	7.94	672		46.65	
102	L Lincolndale (@dam)	9/5/2005	3.0	1.00	1.5	0.068	0.01	0.01	0.36	11.69	6	7.81	641	34.3	38.72	
102	L Lincolndale (@dam)	9/18/2005	3.0	1.75	1.5	0.041			0.48	25.54	26	7.69	637		15.38	
102	L Lincolndale (@dam)	10/23/05	3.0	1.75	1.5	0.056	0.26	0.83	0.97	38.38	37	7.86	499		14.86	
102	L Lincolndale (@dam)	7/29/2007	3.0	0.50	1.5	0.060	0.01	0.03	1.18	43.02	37	7.96	549		12.45	
102	L Lincolndale-Dam	6/24/2008	3.5	1.75	1.5	0.030	0.06	0.09	0.63	46.18	20	7.38	567	21.5	5.20	
102	L Lincolndale-Dam	7/7/2008	3.5	0.75	1.5	0.049	0.02	0.03	1.28	57.64	24	7.53	686		10.00	
102	L Lincolndale-Dam	7/17/2008	3.5	1.00	1.5	0.057			0.75	29.27	22	7.76	711		7.77	
102	L Lincolndale-Dam	7/31/2008	3.5	1.50	1.5	0.061	0.01	0.11	0.47	17.02	28	8.28	569		7.43	
102	L Lincolndale-Dam	8/22/2008	3.3	0.50	1.5	0.112	0.00	0.08	0.85	16.72	45	7.69	491	35.1	36.50	
102	L Lincolndale-Dam	9/6/2008	3.5	1.00	1.5	0.081	0.00	0.14	0.97	26.27	12	7.75	622		13.24	
102	L Lincolndale-Dam	06/24/2009	3.5	1.00	2	0.051	0.09	0.26	1.08	46.68	15	5.50	680	37.0	27.26	
102	L Lincolndale-Dam	07/15/2009	3.5	1.00	2	0.057	0.03	0.14	1.11	42.54	25	5.69	557		7.63	
102	L Lincolndale-Dam	07/28/2009	3.5	1.00	2	0.057	0.04	0.37	1.15	44.50	20	5.83	530		8.13	
102	L Lincolndale-Dam	08/17/2009	3.5	1.00	2	0.083	0.02	0.39	1.75	46.06	27	6.52	612		14.90	
102	L Lincolndale-Dam	09/04/2009	3.5	0.75	2	0.061	0.13	0.54	1.95	70.59	28		478	34.0	40.00	
102	L Lincolndale-Dam	06/15/2013	3.6	1.30	2	0.084	0.52	0.04	1.38	35.93	30	7.51	596		9.60	
102	L Lincolndale-Dam	06/15/2013			bloom											
102	L Lincolndale-Dam	06/29/2013	3.6	0.75	2	0.144			2.13	32.47	31	8.12	576		16.80	
102	L Lincolndale-Dam	06/29/2013			Bloom											
102	L Lincolndale-Dam	07/14/2013	3.5	0.49	2	0.070	0.01	0.06	1.25	39.20	64	7.88	621		6.30	
102	L Lincolndale-Dam	07/14/2013			Bloom											
102	L Lincolndale-Dam	07/29/2013	3.7	0.75	2	0.077			1.46	41.46	25	8.39	620			
102	L Lincolndale-Dam	07/29/2013			Bloom											
102	L Lincolndale-Dam	08/11/2013	3.7	0.76	2	0.076	0.06	0.13	1.01	29.46	77	7.91	621		10.10	
102	L Lincolndale-Dam	08/11/2013			Bloom											
102	L Lincolndale-Dam	08/26/2013	3.0	0.65	2	0.095			1.35	31.21	15	8.13	655		47.80	
102	L Lincolndale-Dam	08/26/2013			Bloom											
102	L Lincolndale-Dam	09/08/2013	3.6	0.45	2	0.096	0.01	0.29	1.82	41.83	37	7.96	616		92.00	

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
102	L Lincolndale-Dam	09/08/2013			bloom											
102	L Lincolndale-Dam	09/22/2013	4.4	2.00	2	0.078			1.43	40.13	29	7.55	624		9.20	
102	Lake Lincolndale	6/1/2014	3.5	1.75	1.5	0.035	0.37	0.05	0.85	54.17	24	7.56	764	35.8	15.50	
102	Lake Lincolndale	6/14/2014	3.6	1.00	1.5	0.035			1.07	66.81	13	7.72	765		60.00	
102	Lake Lincolndale	6/14/2014			Bloom											
102	Lake Lincolndale	6/28/2014			Bloom											
102	Lake Lincolndale	6/28/2014	3.7	1.25	1.5	0.056	0.01	0.05	0.88	34.63	30	7.50	550		62.20	
102	Lake Lincolndale	7/13/2014			Bloom											
102	Lake Lincolndale	7/13/2014	3.7	0.85	1.5	0.076			0.91	26.31	14	7.80	531		37.80	
102	Lake Lincolndale	8/3/2014	3.7	0.90	1.5	0.064	0.01	0.06	0.95	32.57	10	8.10	683	30.7	35.50	
102	Lake Lincolndale	8/17/2014			bloom											
102	Lake Lincolndale	8/18/2014	4.0	1.05	1.5	0.067			1.31	43.08	12	7.52	727		29.40	
102	Lake Lincolndale	9/1/2014	3.8	0.65	1.5	0.065	0.01	0.01	0.95	32.30	60	8.06	714		3.70	
102	Lake Lincolndale	10/12/2014	3.7	1.00	1.5	0.055			0.71	28.57	11	7.74	730		4.00	
102	Lake Lincolndale	6/14/2015	3.9	1.80	1.5	0.044	0.17	0.03	0.68	15.38	6	7.71	937	35.2	28.40	
102	Lake Lincolndale	6/29/2015	3.6	1.10	1.5	0.058			0.55	9.43	9	7.69	969		40.10	
102	Lake Lincolndale	7/13/2015	3.7	0.80	1.5	0.086	0.01	0.04	0.94	10.95	16	7.46	803		71.00	50.0
102	Lake Lincolndale	7/26/2015	3.7	0.80	1.5	0.060			0.90	15.16	13	7.49	942		30.20	
102	Lake Lincolndale	8/9/2015	3.0	0.80	1.5	0.057	0.02	0.04	0.85	14.87	14	7.91		42.5	46.40	
102	Lake Lincolndale	8/23/2015	3.5	0.80	1.5	0.035			1.08	31.36	10	7.69	780		38.30	
102	Lake Lincolndale	9/7/2015	3.1	0.80	1.5	0.100	0.02	0.13	1.26	12.56	14	8.16	983		59.60	50.0
102	Lake Lincolndale	6/29/2015														
102	Lake Lincolndale	7/13/2015														
102	Lake Lincolndale	8/23/2015														
102	Lake Lincolndale	9/7/2015														
102	Lake Lincolndale	9/20/2015	2.8	0.90	1.5	0.060			0.98	16.38	5	7.65	805		57.70	
102.1	LL Beach	6/12/2004	3.0	3.00	1.5	0.024	0.19	0.02	0.53	48.46	46	7.5	785		0.9	
102.1	LL Beach	7/4/2004	3.0	2.00	1.5	0.024	0.02	0.01	0.28	25.75	23	7.19	714		20.4	
102.1	LL Beach	7/27/2004	3.0	1.00	1.5	0.050	0.01	0.01	0.42	18.68	31	8.37	752		59.2	
102.1	LL Beach	8/11/2004	3.0	0.75	1.5	0.054	0.01	0.02	0.46	18.57	26	8.04	754		58.5	
102.1	LL Beach	9/1/2004	3.0	1.00	1.5	0.047	0.02	0.03	0.60	28.04	14	8.2	515	39.4	37.3	
102.1	LL Beach	9/21/2004	3.0	1.00	1.5	0.068	0.36	0.03	1.20	38.90	15	8.05	515		52.8	
102.1	LL Beach	10/2/2004	3.0	0.75	1.5	0.052	0.18	0.20	0.59	24.83	20	8.27	516			
102.1	LL Beach	11/7/2004	3.0	0.50	1.5	0.045	0.01	0.03			35	8.22	568		92.7	
102.1	LL Beach	7/29/2007	3.0	0.50	1.5	0.060	0.01	0.03	1.18	43.02	37	7.96	549		12.45	
102.1	LL Beach	8/11/2007		0.75	1.5	0.072	0.04	0.17	0.97	29.57	19	8.03	511		10.98	
102.1	LL Beach	8/24/2007	3.0	0.50	1.5	0.091	0.33	0.07	1.26	30.43	35	7.94	524		25.92	
102.1	LL Beach	9/8/2007	3.0	0.25	1.5	0.073	0.01	0.04	1.81	54.98	48	7.75	489	35.9	19.95	
102.1	LL Beach	9/22/2007	3.0	1.00	1.5	0.058	0.01	0.11	1.22	46.01	26	7.75	569		12.36	
102.1	LL Beach	10/6/2007	3.0	0.75	1.5	0.076	0.01	0.10	1.76	51.28	38	8.05	661		8.40	
102.1	LL Beach	10/13/2007	3.0	1.00	1.5	0.074	0.02	0.25	0.97	29.11	29	7.01	611		6.46	
102.1	LL Beach	6/24/2008	3.0	1.75	1.5	0.028	0.07	0.11	0.62	48.11	16	7.54	578	21.3	3.64	
102.1	LL Beach	7/7/2008	3.0	1.00	1.5	0.057	0.01	0.03	1.27	48.78	26	7.27	682		14.80	
102.1	LL Beach	7/17/2008		1.00	1.5	0.054	0.01	0.09	0.70	28.82	32	7.76	713		6.07	
102.1	LL Beach	7/31/2008	3.0	1.50	1.5	0.062	0.02	0.10	0.50	17.85	41	8.31	566		2.19	
102.1	LL Beach	8/22/2008	3.0	3.00	1.5	0.060	0.00	0.02	0.48	17.57	49	8.33	520	34.0	10.25	
102.1	LL Beach	9/6/2008				0.053	0.00	0.05	0.58	23.93	29	7.33	614		3.15	

LNum	PName	Date	Type	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
102	L Lincolndale	7/3/1993	epi	27	25	3	3	2	23											
102	L Lincolndale	7/19/1993	epi	22	26	3	2	2	1											
102	L Lincolndale	8/2/1993	epi	26	26	3	3	3	23											
102	L Lincolndale	8/15/1993	epi	31	26	3	3	3	2											
102	L Lincolndale	8/30/1993	epi	23	27	4	4	4	24											
102	L Lincolndale	9/12/1993	epi	22	22	4	3	3	2											
102	L Lincolndale	9/27/1993	epi	19	18	5	1	4	345											
102	L Lincolndale	10/11/1993	epi	13	15															
102	L Lincolndale	6/6/1994	epi	23	22	2	3	4	245											
102	L Lincolndale	6/19/1994	epi	30	28	2	3	3	234											
102	L Lincolndale	7/5/1994	epi	29	28	2	3	2												
102	L Lincolndale	7/15/1994	epi	25	27	3	3	3	2											
102	L Lincolndale	8/1/1994	epi	27	28	3	5	3	123											
102	L Lincolndale	8/14/1994	epi	22	25	2	1	2	5											
102	L Lincolndale	8/29/1994	epi	20	24	3	3	2	1											

LNum	PName	Date	Type	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
102	L Lincolndale	9/12/1994	epi	24	21	3	2	2	13											
102	L Lincolndale	6/24/1995	epi	21	27	2	3	3	25											
102	L Lincolndale	7/10/1995	epi	21	26	3	3	3	2											
102	L Lincolndale	7/29/1995	epi	30	29	3	3	3	1											
102	L Lincolndale	8/6/1995	epi	22	29	3	3	3	135											
102	L Lincolndale	8/22/1995	epi	23	28	3	2	3	6											
102	L Lincolndale	9/2/1995	epi	19	24	3	2	2	1											
102	L Lincolndale	9/18/1995	epi	20	21	3	3	2	5											
102	L Lincolndale	10/2/1995	epi	20	18	3	2	2	3											
102	L Lincolndale	6/20/1996	epi	20	22	2	1	2	15											
102	L Lincolndale	7/2/1996	epi	23	28	2	1	2	1											
102	L Lincolndale	7/17/1996	epi	23	29	3	1	2	1											
102	L Lincolndale	8/4/1996	epi	29	27	2	1	2												
102	L Lincolndale	8/19/1996	epi	28	27	3	1	2												
102	L Lincolndale	9/2/1996	epi	29	27	4	1	3	1											
102	L Lincolndale	9/14/1996	epi	21	23	3	1	3	13											
102	L Lincolndale	10/5/1996	epi	14	17	4	1	4	13											
102	L Lincolndale	6/1/1997	epi	23	21	4	1	3	3											
102	L Lincolndale	6/14/1997	epi	24	25	3	1	2	3											
102	L Lincolndale	7/11/1997	epi	22	27	3	1	2	1											
102	L Lincolndale	7/26/1997	epi	24	26	3	1	2	1											
102	L Lincolndale	8/11/1997	epi	23	26	2	1	2												
102	L Lincolndale	8/24/1997	epi	21	23	3	1	2	5											
102	L Lincolndale	9/7/1997	epi																	
102	L Lincolndale	5/31/1998	epi	24	24	3	1	2	5											
102	L Lincolndale	6/15/1998	epi	20	21	3	1	2	5											
102	L Lincolndale	6/27/1998	epi	27	26	3	1	2	1											
102	L Lincolndale	7/13/1998	epi	30	26	3	1	3	3											
102	L Lincolndale	7/26/1998	epi	22	28	2	1	2												
102	L Lincolndale	8/20/1998	epi	22	25	2	1	2	5											
102	L Lincolndale	8/31/1998	epi	26	26	2	1	2												
102	L Lincolndale	9/13/1998	epi	25	25	1	1	1												
102	L Lincolndale	9/26/1998	epi	20	21	3	1	2												
102	L Lincolndale	5/31/1999	epi	29	24	4	1	3	3											
102	L Lincolndale	6/16/1999	epi	17	24	3	1	3	1											
102	L Lincolndale	7/9/1999	epi	26	28	3	1	3	13											
102	L Lincolndale	7/25/1999	epi	31	29	5	1	3	134											
102	L Lincolndale	8/7/1999	epi	25	28	3	1	3	13											
102	L Lincolndale	8/24/1999	epi	27	25	5	1	4	134											
102	L Lincolndale	9/6/1999	epi	25	28	4	1	4	134											
102	L Lincolndale	9/22/1999	epi	14	17	2	1	3	5											
102	L Lincolndale	6/5/2000	epi	19	21	3	1	2	35											
102	L Lincolndale	6/20/2000	epi	27	23	3	1	3	3											
102	L Lincolndale	7/16/2000	epi	20	20	3	2	3	13											
102	L Lincolndale	8/2/2000	epi	19	18	4	1	4	1345											
102	L Lincolndale	8/15/2000	epi	22	21	3	1	3	13											
102	L Lincolndale	8/27/2000	epi	27	23	4	1	4	134											
102	L Lincolndale	9/13/2000	epi	12		3	1	3	3											
102	L Lincolndale	6/13/2001	epi			2	1	2	3											
102	L Lincolndale	6/28/2001	epi	30		2	1	2	3											
102	L Lincolndale	7/11/2001	epi	27	26	3	1	3	1											
102	L Lincolndale	7/30/2001	epi	32	29	3	1	3	13											
102	L Lincolndale	8/6/2001	epi	30	27	4	1	3	13											
102	L Lincolndale	8/27/2001	epi	25	25	3	1	2	13											
102	L Lincolndale	9/12/2001	epi	26	21	3	1	3	13											
102	L Lincolndale	9/29/2001	epi	17	18	3	1	3	1											
102	L Lincolndale	06/09/02	epi	29	22	2	1	2												
102	L Lincolndale	06/28/02	epi	30	28	2	1	2	1											
102	L Lincolndale	07/10/02	epi	26	27	3	1	3	12											
102	L Lincolndale	07/22/02	epi	26	27	3	1	3	13											
102	L Lincolndale	07/31/02	epi	29	27	4	1	3	123											
102	L Lincolndale	08/18/02	epi	34	29	4	1	4	134											
102	L Lincolndale	09/08/02	epi	29	23	4	1	4	134											
102	L Lincolndale	10/06/02	epi	18	20	4	1	4	134											

LNum	PName	Date	Type	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
102	L Lincolndale	6/21/2003	epi	18	21	4	1	3	1											
102	L Lincolndale	7/5/2003	epi	28	26	2	1	2	1											
102	L Lincolndale	7/24/2003	epi	24	25	2	1	2	0											
102	L Lincolndale	8/12/2003	epi	26		2	1	2	8											
102	L Lincolndale	8/24/2003	epi	19	24	3	1	3	3											
102	L Lincolndale	9/7/2003	epi	32	25	3	1	4	1											
102	L Lincolndale	9/18/2003	epi	23	22	2	1	2												
102	L Lincolndale	10/6/2003	epi	13	14	4	1	4	3											
102	L Lincolndale (@dam)	6/12/2004	epi	25	23	2	1	1	0											
102	L Lincolndale (@dam)	7/4/2004	epi	28	26	3	1	3	3											
102	L Lincolndale (@dam)	7/27/2004	epi	23	24	4	1	4	135											
102	L Lincolndale (@dam)	8/11/2004	epi	26	24	3	1	3	13											
102	L Lincolndale (@dam)	9/1/2004	epi	23	27	3	1	3	13											
102	L Lincolndale (@dam)	9/21/2004	epi	26	21	3	1	3	13											
102	L Lincolndale (@dam)	10/2/2004	epi	21	18	4	1	4	135											
102	L Lincolndale (@dam)	11/2/2004	epi	18	10	3	1	3	13											
102	L Lincolndale (@dam)	6/5/2005	epi	22	23	2	1	2	6											
102	L Lincolndale (@dam)	7/6/2005	epi	27	26	3	1	2	3											
102	L Lincolndale (@dam)	8/8/2005	epi	27	27	3	1	3	3											
102	L Lincolndale (@dam)	8/23/2005	epi	29	26	4	1	4	134											
102	L Lincolndale (@dam)	9/5/2005	epi	18	23	3	1	3	13											
102	L Lincolndale (@dam)	9/18/2005	epi	29	26	3	1	2	1											
102	L Lincolndale (@dam)	10/27/2005	epi	9	12	2	1	2	5											
102	L Lincolndale (@dam)	7/13/2007	epi	29	27	3	3	2	1238											
102	L Lincolndale-Dam	6/24/2008	epi	23	25	2	1	2	0											
102	L Lincolndale-Dam	7/7/2008	epi	25	26	3	1	3	138											
102	L Lincolndale-Dam	7/17/2008	epi	31	29	3	1	2	8											
102	L Lincolndale-Dam	7/31/2008	epi	27	28	3	1	2	18											
102	L Lincolndale-Dam	8/22/2008	epi	25	24	3	1	2	18											
102	L Lincolndale-Dam	9/6/2008	epi	26	25	3	1	4	13458											
102	L Lincolndale-Dam	06/24/2009	epi	25	24	3	2	3	13											
102	L Lincolndale-Dam	07/15/2009	epi	27	24	3	2	3	13											
102	L Lincolndale-Dam	07/28/2009	epi	27	27	3	2	2	1											
102	L Lincolndale-Dam	08/17/2009	epi	32	29	3	1	2	13											
102	L Lincolndale-Dam	09/04/2009	epi	27	24															
102	L Lincolndale-Dam	06/15/2013	epi	20	17	3	1	2	0	4	4	99.50	3.70	<0.30	<0.440		19.90	16.50	ac	ac
102	L Lincolndale-Dam	06/15/2013	bloom											<0.60	<0.870		3010.0	2881		
102	L Lincolndale-Dam	06/29/2013	epi	24	24	3	2	2	12	4		177.20	6.30	<0.30	<0.650		40.40	38.10	bf	E
102	L Lincolndale-Dam	06/29/2013	bloom											<0.60	<1.220		2104.6	1495	e	
102	L Lincolndale-Dam	07/14/2013	epi	26	26	5	3	3	14	457		91.00	3.70	<0.30	<0.370		18.30	16.20	bf	be
102	L Lincolndale-Dam	07/14/2013	bloom											<1.20	<1.500		2456	2162	begh	
102	L Lincolndale-Dam	07/29/2013	epi	24	25	3	3	3	1	4	4	454.50	7.30	<0.30	<0.380		49.70	43.50	efg	efg
102	L Lincolndale-Dam	07/29/2013	bloom											<1.20	<1.370		2066.3	1598	efg	
102	L Lincolndale-Dam	08/11/2013	epi	22	22	4	2	3	13	4	4	416.20	8.30	<0.30	<0.340		26.20	19.00	A	A
102	L Lincolndale-Dam	08/11/2013	bloom											3.96	<0.680		837.50	522.00	e	
102	L Lincolndale-Dam	08/26/2013	epi	21	23	3	3	3	1	4	4	131.30	8.60	<0.30	<0.570		35.00	29.50	aef	ae
102	L Lincolndale-Dam	08/26/2013	bloom											<0.60	<0.254		753.80	113.80	ae	
102	L Lincolndale-Dam	09/08/2013	epi	24	23	3	3	3	1	0	0	731.60	11.70	<0.30	<19.13		101.80	99.40	A	
102	L Lincolndale-Dam	09/08/2013	bloom											<0.60	<2.200		43565	43565		
102	L Lincolndale-Dam	09/22/2013	epi	18	18	1	3	1	0	0	0	23.30	6.70	<0.30	<19.13		6.50	0.20	l	l
102	Lake Lincolndale	6/1/2014	epi	22	19	3	2	2	0	0	0	0.30	7.60	<0.53	<0.43	<0.001	7.60	0.00	efg	f
102	Lake Lincolndale	6/14/2014	epi	20	20	1	3	2	0	3	0	4.30	2.00	<0.53	<0.08	<0.002	8.20	0.00	f	c
102	Lake Lincolndale	6/14/2014	Bloom											1.75	<0.35	<0.003	68.00	58.70		
102	Lake Lincolndale	6/28/2014	Bloom											<1.60	<0.48	<0.002	1355.0	1355.0		
102	Lake Lincolndale	6/28/2014	epi	26	24	3	3	3	2	4	4	121.00	1.10	<0.81	<0.96	<0.003	26.10	23.50	aefgh	a
102	Lake Lincolndale	7/13/2014	Bloom											<0.40	<0.21	<0.003	2358.8	2358.8		a
102	Lake Lincolndale	7/13/2014	epi	25	25	3	3	3	1	4	4	70.70	0.80	<0.81	<0.96	<0.003	20.00	17.10	efg	c
102	Lake Lincolndale	8/3/2014	epi	25	23	3	1	2	1	0	0	4.20	3.80	<0.38	<0.05	<0.001	22.50	0.00	egi	i
102	Lake Lincolndale	8/17/2014	bloom											1.90	0.29	<0.002	600.00	600.00		a
102	Lake Lincolndale	8/18/2014	epi	23	22	2	2	2	2	0	0	16.30	3.00	<0.39	<0.03	<0.001	32.60	3.30	acg	ac
102	Lake Lincolndale	9/1/2014	epi	27	23	3	1	2	1	0	0	11.20	5.60	<0.25	<0.14	<0.002	44.60	0.00	e	a
102	Lake Lincolndale	10/12/2014	epi	13	15	2	1	1	0	0	0	4.40	2.80	<0.88	<0.12	<0.001	15.70	0.00	f	i
102	Lake Lincolndale	6/14/2015	epi	28	23	2	2	2	0	4	0	5.00	2.50	<0.86	<0.027	<0.318	8.01	0.00	EFGH	D
102	Lake Lincolndale	6/29/2015	epi	18	20	2	3	2	0	0	0	48.50	1.50	<0.63	<0.007	<0.000	15.87	7.69	l	l

LNum	PName	Date	Type	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
102	Lake Lincolndale	7/13/2015	epi	25	24	3	2	2	1	0	0	70.40	5.50	<0.76	<0.005	<0.028	28.21	3.57	FG	BG
102	Lake Lincolndale	7/26/2015	epi	30	27	3	2	2	1	0	0	42.00	5.60	<0.19	<0.005	<0.020	32.29	3.06	I	I
102	Lake Lincolndale	8/9/2015	epi	27	27	3	2	2	1	4	4	19.40	6.50	<0.44	<0.035	<0.023	32.97	0.00	FG	F
102	Lake Lincolndale	8/23/2015	epi	25	26	3	3	2	1	4	4	15.40	0.70	<0.28	<0.008	<0.021	2.99	1.26	FG	EF
102	Lake Lincolndale	9/7/2015	epi	27	26	3	2	2	1	4	4	257.60	4.80	<0.26	<0.023	<0.086	38.65	12.53	EFG	ABCEFG
102	Lake Lincolndale	6/29/2015	Bloom											13.87	<0.015	<0.001	41.31	31.95		
102	Lake Lincolndale	7/13/2015	Bloom											<2.02	<0.005	<0.021	17.47	7.53		
102	Lake Lincolndale	8/23/2015	Bloom											<1.54	<0.012	<0.037	111.25	25.00		
102	Lake Lincolndale	9/7/2015	Bloom											3.19	<0.020	<0.058	2789.7	2362.0		
102	Lake Lincolndale	9/20/2015	epi	22	25	3	2	2	1	4	4	60.90	5.50	<0.74	<0.007	<0.035	34.91	4.08	FG	I
102.1	L Lincolndale @beach	6/12/2004	beach	25	22	2	1	1	0											
102.1	L Lincolndale @beach	7/4/2004	beach	30	26	3	1	2	0											
102.1	L Lincolndale @beach	7/27/2004	beach	23	24	4	1	4	135											
102.1	L Lincolndale @beach	8/11/2004	beach	26	24	3	1	3	13											
102.1	L Lincolndale @beach	9/1/2004	beach	23	26	3	1	3	13											
102.1	L Lincolndale @beach	9/21/2004	beach	26	21	3	1	3	13											
102.1	L Lincolndale @beach	10/2/2004	beach	21	18	4	1	4	135											
102.1	L Lincolndale @beach	11/7/2004	beach	16	10	3	1	3	13											
102.1	L Lincolndale @beach	7/29/2007	beach	29	27	3	3	3	13											
102.1	L Lincolndale @beach	8/11/2007	beach	20	23	3	3	3	13											
102.1	L Lincolndale @beach	8/24/2007	beach	23	22	3	1	3	1234											
102.1	L Lincolndale @beach	9/8/2007	beach	29	26	3	3	3	13											
102.1	L Lincolndale @beach	9/22/2007	beach	20	21	5	3	5	134											
102.1	L Lincolndale @beach	10/6/2007	beach	28	23	3	1	3	1											
102.1	L Lincolndale @beach	10/13/2007	beach	18	18	3	1	2	0											
102.1	L Lincolndale Beach	6/24/2008	beach		25	2	1	2	0											
102.1	L Lincolndale Beach	7/7/2008	beach	25	26	3	1	3	138											
102.1	L Lincolndale Beach	7/17/2008	beach	31	29	3	1	2	8											
102.1	L Lincolndale Beach	7/31/2008	beach	27	28	3	1	2	1											
102.1	L Lincolndale Beach	8/22/2008	beach	25	25	3	1	2	18											

## Legend Information

<i>Indicator</i>	<i>Description</i>	<i>Detection Limit</i>	<i>Standard (S) / Criteria (C)</i>
<b>General Information</b>			
Lnum	lake number (unique to CSLAP)		
Lname	name of lake (as it appears in the Gazetteer of NYS Lakes)		
Date	sampling date		
<b>Field Parameters</b>			
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
<b>Laboratory Parameters</b>			
Tot.P	total phosphorus (mg/l)	0.003 mg/l	0.020 mg/l ( C)
NOx	nitrate + nitrite (mg/l)	0.01 mg/l	10 mg/l NO3 (S), 2 mg/l NO2 (S)
NH4	total ammonia (mg/l)	0.01 mg/l	2 mg/l NH4 (S)
TN	total nitrogen (mg/l)	0.01 mg/l	none
TN/TP	nitrogen to phosphorus (molar) ratio, = (TKN + NOx)*2.2/TP		none
TCOLOR	true (filtered) color (ptu, platinum color units)	1 ptu	none
pH	powers of hydrogen (S.U., standard pH units)	0.1 S.U.	6.5, 8.5 S.U. (S)
Cond25	specific conductance, corrected to 25C (umho/cm)	1 umho/cm	none
Ca, Cl	calcium, chloride (mg/l)	1 mg/l	none
Chl.a	chlorophyll a (ug/l)	0.01 ug/l	none
Fe	iron (mg/l)	0.1 mg/l	1.0 mg/l (S)
Mn	manganese (mg/l)	0.01 mg/l	0.3 mg/l (S)
As	arsenic (ug/l)	1 ug/l	10 ug/l (S)
AQ-PC	Phycocyanin (aquafior) (unitless)	1 unit	none
AQ-Chl	Chlorophyll a (aquafior) (ug/l)	1 ug/l	none
MC-LR	Microcystis-LR (ug/l)	0.01 ug/l	1 ug/l potable (C) 20 ug/l swimming (C)
Ana	Anatoxin-a (ug/l)	variable	none
Cyl	Cylindrospermopsin (ug/l)	0.1 ug/l	none
FP-Chl, FP-BG	Fluoroprobe total chlorophyll, fluoroprobe blue-green chlorophyll (ug/l)	0.1 ug/l	none
<b>Lake Assessment</b>			
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		



#### Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This most recent assessment (2005) indicates recreational suitability of the lake to be somewhat favorable. The recreational suitability of the lake is described most frequently as "excellent" to "slightly" impacted for most recreational uses. The lake itself is most often described as having "definite algae greenness," an assessment that is more favorable than expected based on measured water quality characteristics. Assessments have noted that aquatic plants rarely grow to the lake surface. (DEC/DOW, BWAM/CSLAP, March 2006)

#### Lake Uses

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

#### New York City Watershed

Lake Lincolndale is tributary to the Croton System of New York City water supply reservoirs (see New Croton Reservoir, Segment 1302-0010). A Watershed Agreement is in place between NYCDEP and the Croton Watershed communities which sets forth programs and funding for watershed protection. In addition, NYCDEP has developed a phosphorus TMDL for the entire Croton System Watershed to aid in the management of nutrients. An Implementation Plan for this TMDL is being developed. (NYCDEP, July 2006)

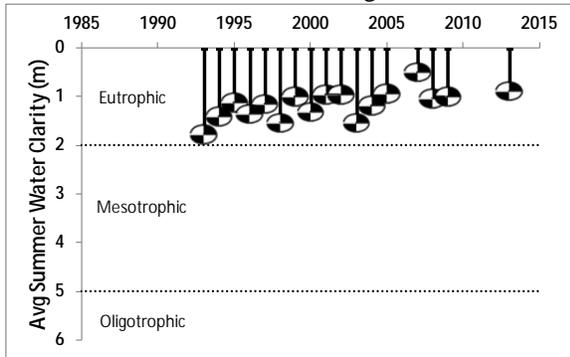
#### Section 303(d) Listing

Lake Lincolndale is currently included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included on Part 3a of the List as a Water Requiring Verification of Impairment, however this updated assessment suggests that the suspected impairments to water quality and uses are verified and it is recommended that this listing for phosphorus in the lake be moved to Part 1 of the List, indicating a waterbody with an impairment requiring TMDL development. (DEC/DOW, BWAM/WQAS, May 2008)

# Appendix C- Long Term Trends: Lake Lincolndale

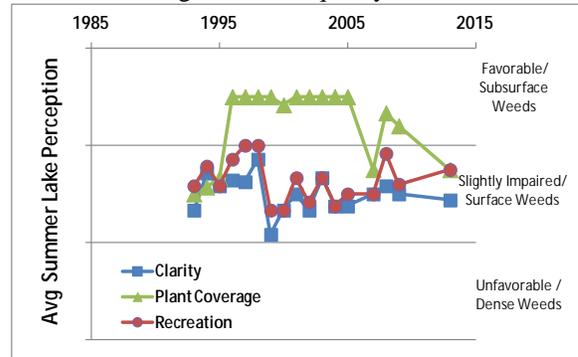
## Long Term Trends: Water Clarity

- Decreasing clarity since early 1990s
- Most readings typical of *eutrophic* lakes, consistent with TP and algae levels



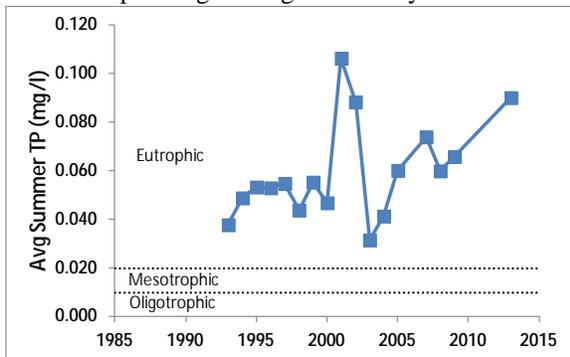
## Long Term Trends: Lake Perception

- No clear trends; weeds increasing?
- Recreational perception more closely linked to changes in water quality than weeds



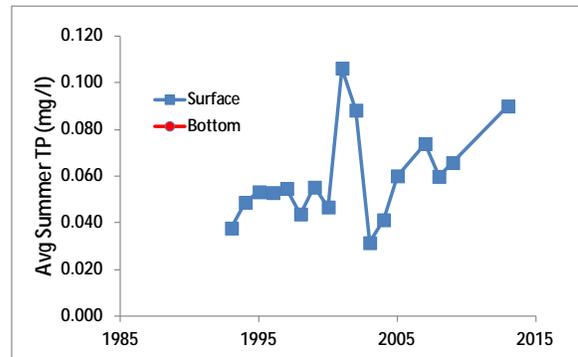
## Long Term Trends: Phosphorus

- Phosphorus increasing but variable
- Most readings typical of *eutrophic* lakes, as expected given algae or clarity levels



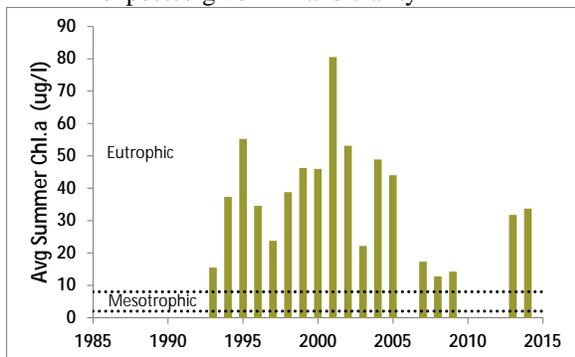
## Long Term Trends: Bottom Phosphorus

- No bottom TP data
- Surface and bottom TP usually similar in shallow lakes



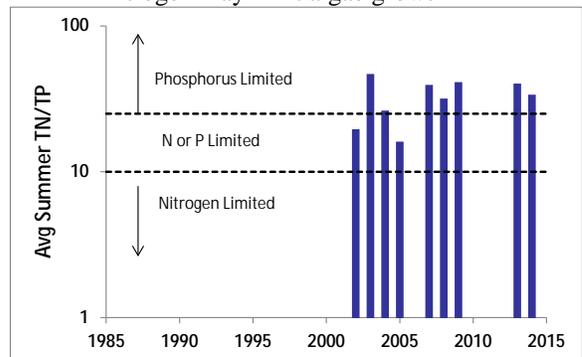
## Long Term Trends: Chlorophyll a

- Highly variable; lower since early 2000s
- Most readings typical of *eutrophic* lakes, as expected given TP and clarity



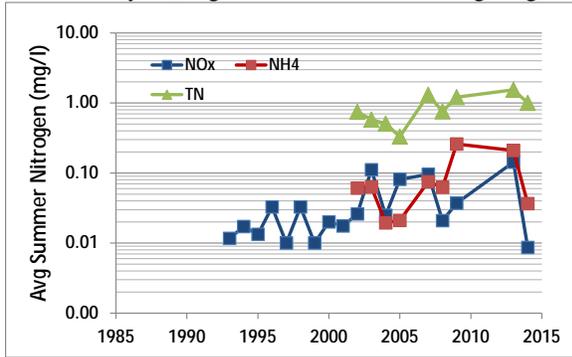
## Long Term Trends: N:P Ratio

- No trends apparent
- Most readings indicate phosphorus or nitrogen may limit algae growth



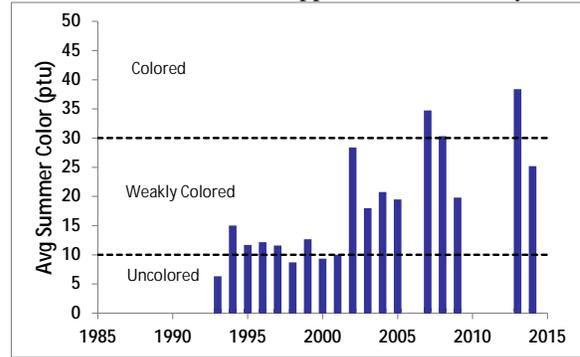
### Long Term Trends: Nitrogen

- TN, NH<sub>4</sub> ↑ mid 00s-14; NO<sub>x</sub> ↑ mid 90s-14
- Some variability in nitrogen levels from year to year; high TN associated with high algae



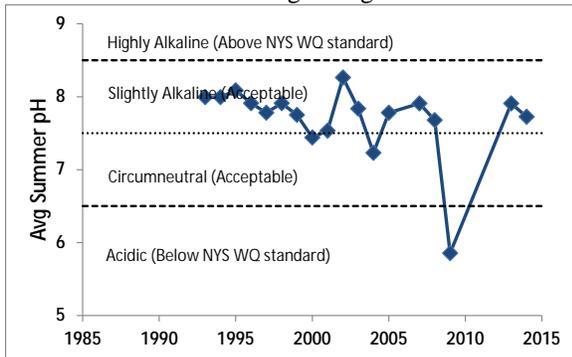
### Long Term Trends: Color

- Much higher color after lab change in 2002
- Most readings typical of *weakly colored* lakes, but do not appear to affect clarity



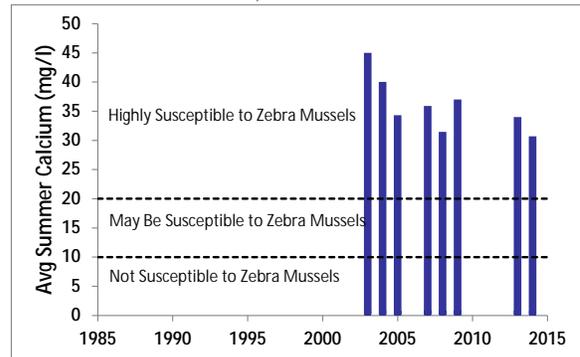
### Long Term Trends: pH

- pH variable- no clear trends
- Most readings typical *slightly alkaline* lakes, consistent with higher algae levels



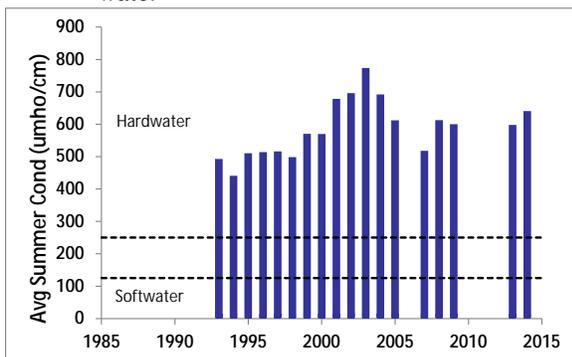
### Long Term Trends: Calcium

- Decreasing calcium levels
- Most readings indicate high susceptibility to zebra mussels; these not found in lake



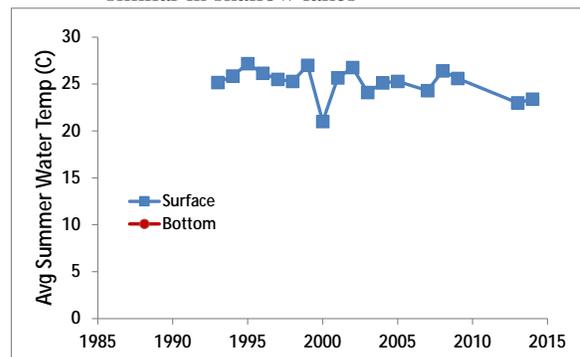
### Long Term Trends: Conductivity

- ↑ 1993-2003; stable since then
- Nearly all readings typical of lakes with *hard water*



### Long Term Trends: Water Temperature

- Slight decrease but no clear trends apparent
- Surface and bottom temperatures usually similar in shallow lakes



## **Appendix D: Algae Testing Results from SUNY ESF Study**

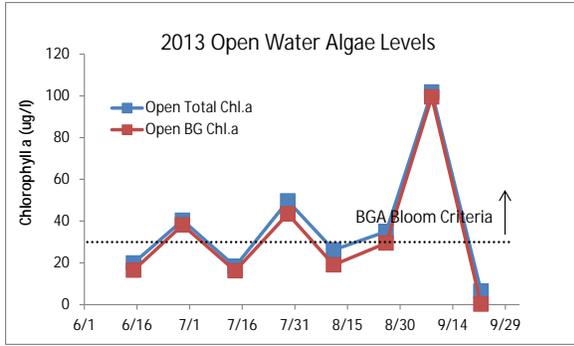
Most algae are harmless, naturally present, and an important part of the food web. However excessive algae growth can cause health, recreational, and aesthetic problems. Some algae can produce toxins that can be harmful to people and animals. High quantities of these algae are called harmful algal blooms (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

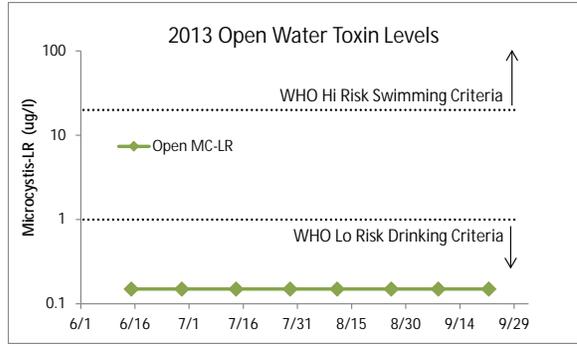
Some of these results are reported in other portions of these reports. This appendix the seasonal change in blue green algae, other algae types, and the primary algal toxin (microcystin-LR, a liver toxin). Analysis was completed on open water samples and, for some lakes, shoreline samples that were collected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

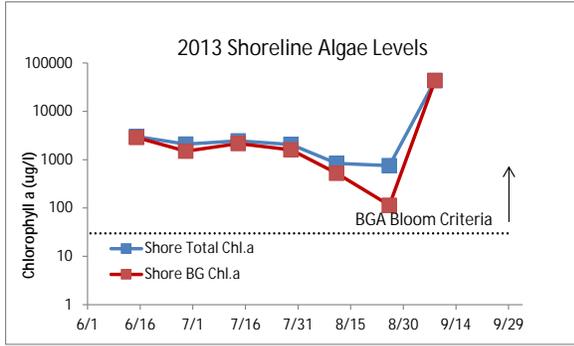
The results from these samples are summarized within the CSLAP report for the lake.



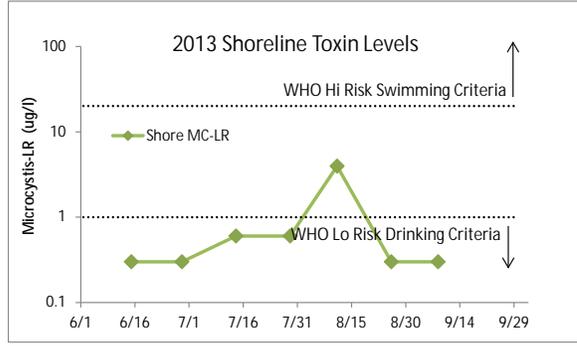
**Figure D1:**  
2013 Open Water Total and BGA Chl.a



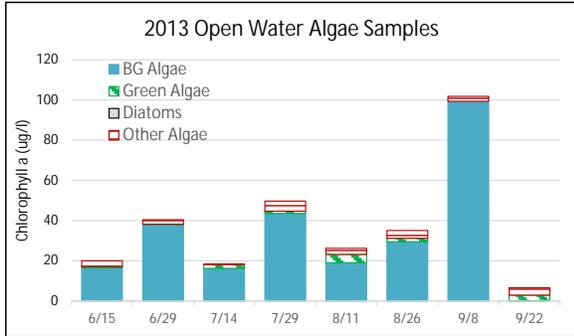
**Figure D2:**  
2013 Open Water Microcystin-LR



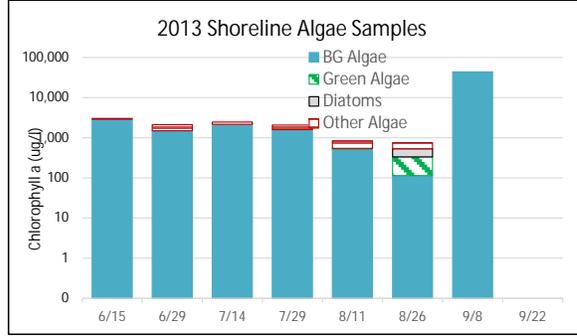
**Figure D3:**  
2013 Shoreline Total and BGA Chl.a



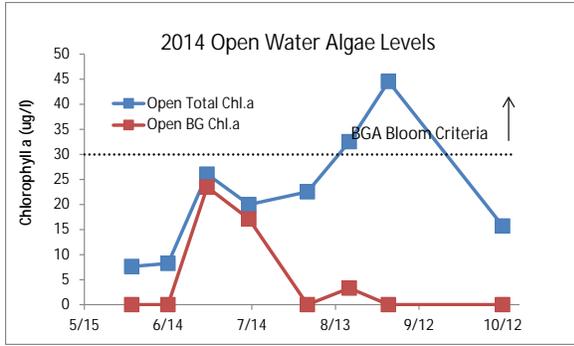
**Figure D4:**  
2013 Shoreline Microcystin-LR



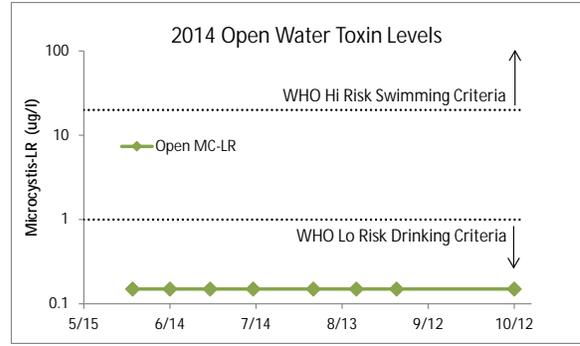
**Figure D5:**  
2013 Open Water Algae Types



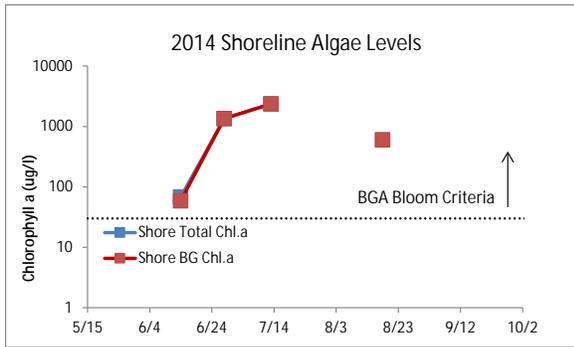
**Figure D6:**  
2013 Shoreline Algae Types



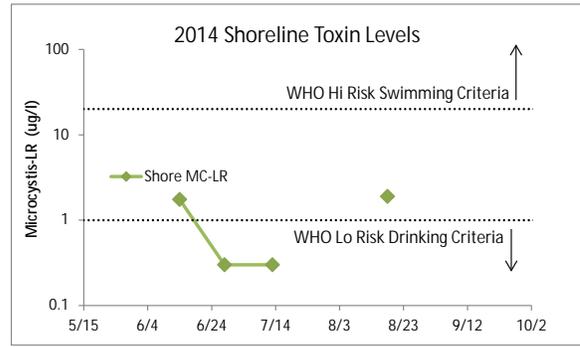
**Figure D7:**  
2014 Open Water Total and BGA Chl.a



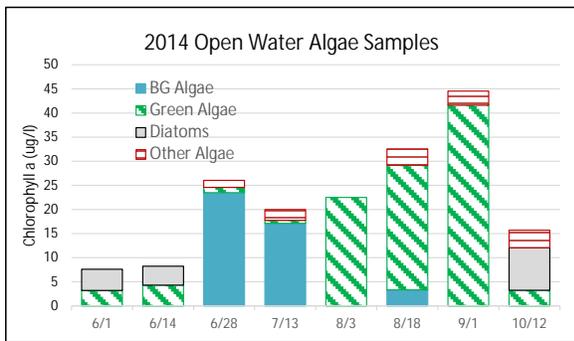
**Figure D8:**  
2014 Open Water Microcystin-LR



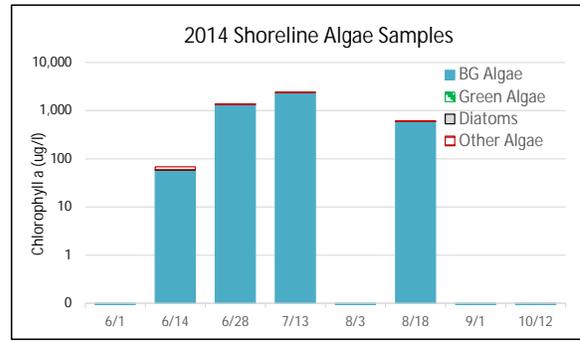
**Figure D9:**  
2014 Shoreline Total and BGA Chl.a



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



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



**Figure D12:**  
2014 Shoreline Algae Types

## Appendix E: AIS Species in Westchester County

The table below shows the invasive aquatic plants and animals that have been documented in Westchester 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 - Westchester County</b>			
<b>Waterbody</b>	<b>Kingdom</b>	<b>Common name</b>	<b>Scientific name</b>
Cross River Reservoir	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Cross River Reservoir	Animal	Virile crayfish	<i>Orconectes virilis</i>
Croton River	Plant	Hydrilla	<i>Hydrilla verticillata</i>
Croton River	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Croton River	Plant	Brittle naiad	<i>Najas minor</i>
Croton River	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Grassy Sprain Reservoir	Animal	American alligator	<i>Alligator mississippiensis</i>
Howlands Lake	Plant	Brittle naiad	<i>Najas minor</i>
Hudson River	Plant	Water chestnut	<i>Trapa natans</i>
Hudson River	Animal	Zebra mussel	<i>Dreissena polymorpha</i>
Huguenot Lake	Animal	American alligator	<i>Alligator mississippiensis</i>
Lake Katonah	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Lake Lincolndale	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake Lincolndale	Plant	Brittle naiad	<i>Najas minor</i>
Lake Mohegan	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake Oscaleta	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake Oscaleta	Plant	Brittle naiad	<i>Najas minor</i>
Lake Oscaleta	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Lake Rippowam	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake Waccabuc	Plant	Brazilian elodea	<i>Egeria densa</i>
Lake Waccabuc	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Lake Waccabuc	Plant	Brittle naiad	<i>Najas minor</i>
Lake Waccabuc	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Lake Waccabuc	Plant	Water chestnut	<i>Trapa natans</i>

<b>Waterbody</b>	<b>Kingdom</b>	<b>Common name</b>	<b>Scientific name</b>
Lounsbury Pond	Plant	Water chestnut	<i>Trapa natans</i>
Mohansic Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Muscoot Reservoir	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Muscoot Reservoir	Animal	Rusty crayfish	<i>Orconectes rusticus</i>
Muscoot Reservoir	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Muscoot Reservoir	Plant	Water chestnut	<i>Trapa natans</i>
New Croton Reservoir	Plant	Hydrilla	<i>Hydrilla verticillata</i>
New Croton Reservoir	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Peach Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Pine Lake	Plant	Water chestnut	<i>Trapa natans</i>
Tarrytown Reservoir	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Teatown Lake	Plant	European four leaf clover	<i>Marsilea quadrifolia</i>
Teatown Lake	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Teatown Lake	Plant	Water chestnut	<i>Trapa natans</i>
Titicus Reservoir	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Troublesome Brook n of Tuckahoe	Animal	Asian Clam	<i>Corbicula fluminea</i>
Truesdale Lake	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Vernay Lake	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Wallace Pond	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>
Wampus Lake Reservoir	Plant	Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Wampus Lake Reservoir	Plant	Curly leafed pondweed	<i>Potamogeton crispus</i>

## Appendix F: Watershed and Land Use Map for Lake Lincolndale

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.

