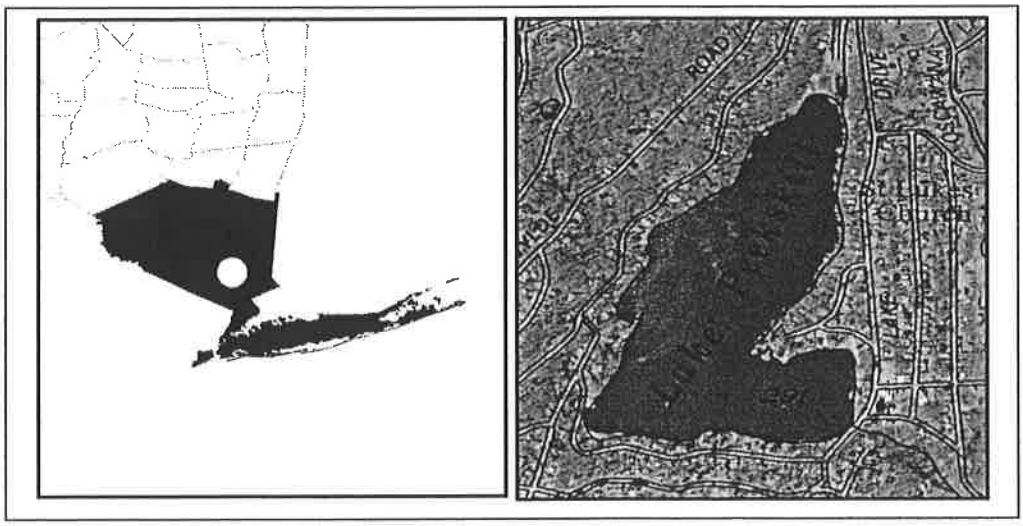
Appendix A:
CSLAP 2009 Lake Water Quality Summary: Lake Peekskill

General Lake Information

Location	town of Putnam Valley
County	Putnam
Basin	Lower Hudson River
Size	23.3 hectares (57.6 acres)
Lake Origins	Natural
Watershed Area	286 hectares (706.4 acres)
Retention Time	0.5 years
Mean Depth	3.7 meters
Sounding Depth	7.5 meters
Public Access?	no
Major Tributaries	no named tribs
Lake Tributary To...	unnamed outlet to Peekskill Hollow Creek to Annsville Creek to Hudson River
WQ Classification	B (contact recreation = swimming)
Lake Outlet Latitude	41.337
Lake Outlet Longitude	-73.880
Sampling Years	1990-1994, 1996, 1998, 2000-2009
2009 Samplers	Mark Wisniewski, Tony Campanini and Patrick Gillease
Main Contact	Ted Muniak

Lake Map

(sampling location marked with a circle)



Background

Lake Peekskill is a 57 acre, class B lake found in the Town of Putnam Valley in Putnam County, in the lower Hudson River region of New York State. It was first sampled as part of CSLAP in 1990.

It is one of 11 CSLAP lakes among the >75 lakes found in Putnam County, and one of 41 CSLAP lakes among the >360 lakes and ponds in the Lower Hudson River drainage basin.

Lake Uses

Lake Peekskill is a Class B lake; this means that the best intended use for the lake is for contact recreation—swimming and bathing—and non-contact recreation—boating and aesthetics, although the lake is for aesthetics and by aquatic life. The lake is used by lake residents and invited guests for a variety of recreational purposes—the lake has no public access.

The state does not stock Lake Peekskill; it is not known if any private stocking occurs.

General statewide fishing regulations are applicable in Lake Peekskill.

Historical Water Quality Data

CSLAP sampling was conducted on Lake Peekskill from 1990-1994, 1996, 1998, and 2000-2009. Some of the CSLAP reports for Lake Peekskill are found on the NYSFOLA website at www.nysfola.org, under NYS Lake Association Lake List.

Lake Peekskill was not sampled through any of the major NYS monitoring programs. It is not known if private monitoring has been conducted to support resource management (water or fisheries).

Lake Association and Management History

Lake Peekskill is represented by the Lake Peekskill Improvement District (and Preservation Committee). In addition to involvement in CSLAP, the district is involved in a boat tagging program (to keep track of residential boats) and other lake management activities.

It is not known if the district or preservation committee maintains a website.

Summary of 2009 CSLAP Sampling Results

Evaluation of Eutrophication Indicators

Chlorophyll *a* readings in Lake Peekskill were lower than normal in 2009. However, total phosphorus readings were higher normal in 2009, and none of these trophic indicators has

exhibited any long-term trends. The lake continues to be characterized as *mesoeutrophic*, based on water clarity (typical of *mesotrophic* lakes), chlorophyll *a* and total phosphorus readings (both typical of *eutrophic* lakes). The TSI evaluation suggests that the trophic indicators are "internally consistent," meaning that each of the trophic indicators are in the expected range given the other indicators. Overall trophic conditions are summarized on the Lake Scorecard.

Evaluation of Potable Water Indicators

Algae levels are at times 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 this purpose. Lake Peekskill is not thermally stratified, at least on a consistent basis, so deepwater samples have not regularly been collected in the lake. The limited deepwater phosphorus data indicates that any deeper intakes may be compromised for potable water use, due to depressed oxygen levels.

Evaluation of Limnological Indicators

A few of the CSLAP water quality indicators were lower than normal in 2009. True color levels were higher than normal; this may have been in response to wetter than normal weather. No long-term changes in water color have been apparent. pH readings were lower than normal, but these readings has not exhibited a long-term trend. Specific conductance readings have increased over the last twenty years, although it is not known if this has resulted in any ecological impacts (and higher conductivity was not measured in 2009). It is likely that the small changes in these other indicators from year to year represent normal variability, or may have been due to wetter weather exhibited in much of the region in 2009. Overall limnological conditions are summarized in the Lake Scorecard.

Evaluation of Biological Condition

The 1992 phytoplankton survey of the lake exhibited low biomass dominated by green algae. It is not known if this was representative of normal conditions in the lake.

Very limited macrophyte surveys have been conducted through CSLAP at Lake Peekskill. These surveys found a small number of native plant species, but no evidence of either exotic or protected plants. The very limited dataset and modified FQI calculations indicate that the quality of the aquatic plant community is "excellent."

Zooplankton and macroinvertebrate surveys have not been conducted through CSLAP. The composition of the fish community is not known, although it is likely that Lake Peekskill supports a warmwater fishery.

Evaluation of Lake Perception

Recreational assessments were less favorable than normal in 2009, consistent with higher phosphorus readings but inconsistent with lower chlorophyll *a* readings and the lack of change in

water quality assessments. However, water quality assessments have become less favorable over the last two decades, despite some variability from year to year. Overall lake perception is summarized on the Lake Scorecard.

Evaluation of Local Climate Change

Neither air temperature nor water temperature were significantly different in 2009, and neither measure of local climate change has exhibited significant long-term change.

Lake Scorecard

Category	Indicator	Classification	2009 Change?	Long Term Change?
Eutrophication Indicators	Water Clarity	Mesotrophic	No	No
	Chlorophyll *a*	Eutrophic	Lower than normal	No
	Total Phosphorus	Eutrophic	Higher than normal	No
Potable Water Indicators	Hypolimnetic Ammonia	Not measured		
	Hypolimnetic Arsenic			
	Hypolimnetic Iron			
	Hypolimnetic Manganese			
Limnological Indicators	Hypolimnetic Phosphorus	Highly Elevated		
	Nitrate + Nitrite	Low NOx	No	No
	Ammonia	Low Ammonia	No	No
	Total Nitrogen	Low Total Nitrogen	No	No
	pH	Alkaline	Lower than normal	No
	Specific Conductance	Hardwater	No	Increasing
	True Color	Intermediate Color	Higher than normal	No
	Calcium	Highly Susceptible to Zebra Mussels	No	No
Lake Perception	WQ Assessment	Definite Algal Greenness	No	Degrading
	Aquatic Plant Coverage	Subsurface Plant Growth	No	No
	Recreational Assessment	Excellent	Less favorable	No
Biological Condition	Phytoplankton	Dominated by green algae?	Not known	Not known
	Macrophytes	"Excellent" 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	Not available through CSLAP	Not known	Not known
	Invasive Species	None observed through CSLAP	Not known	Not known
Local Climate Change	Air Temperature		No	No
	Water Temperature		No	No

Evaluation of Lake Condition Impacts to Lake Uses

The 2008 NYSDEC Priority Waterbody Listings (PWL) for the Lower Hudson River drainage basin indicate that *recreation* and *aquatic life* in Lake Peekskill may be *stressed* by poor cover (due to habitat modification). The 2008 PWL listing for the lake is shown in Appendix C.

Potable Water (Drinking Water)

The CSLAP dataset at Lake Peekskill, 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. These data suggest that any "unofficial" use of the lake for potable water may be compromised by excessive algae.

Contact Recreation (Swimming)

The CSLAP dataset at Lake Peekskill, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggests that swimming and contact recreation may be *stressed* by excessive algae and poor water clarity, although bacterial data are needed to evaluate the safety of the lake for swimming.

Non-Contact Recreation (Boating and Fishing)

The CSLAP dataset on Lake Peekskill, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that non-contact recreation should be fully supported.

Aquatic Life

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

Aesthetics

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

Fish Consumption

There is no fish consumption advisories posted for Lake Peekskill.

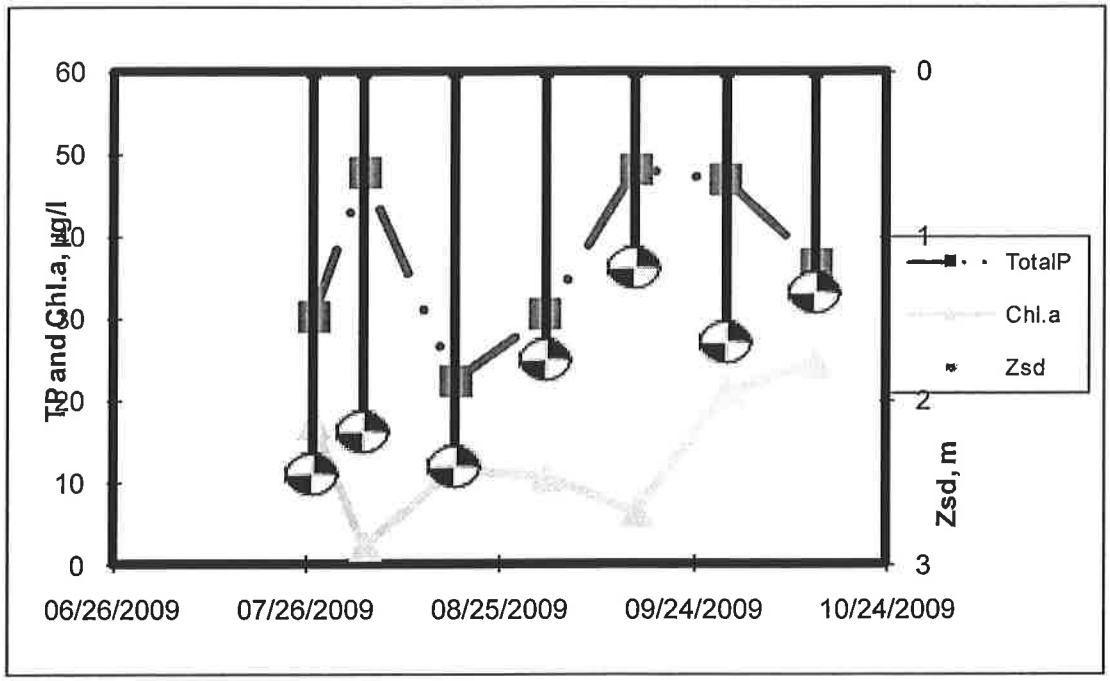
Additional Comments and Recommendations

It is not known if any exotic plant species have been introduced to the lake; the sampling volunteers should conduct any aquatic plant inventory.

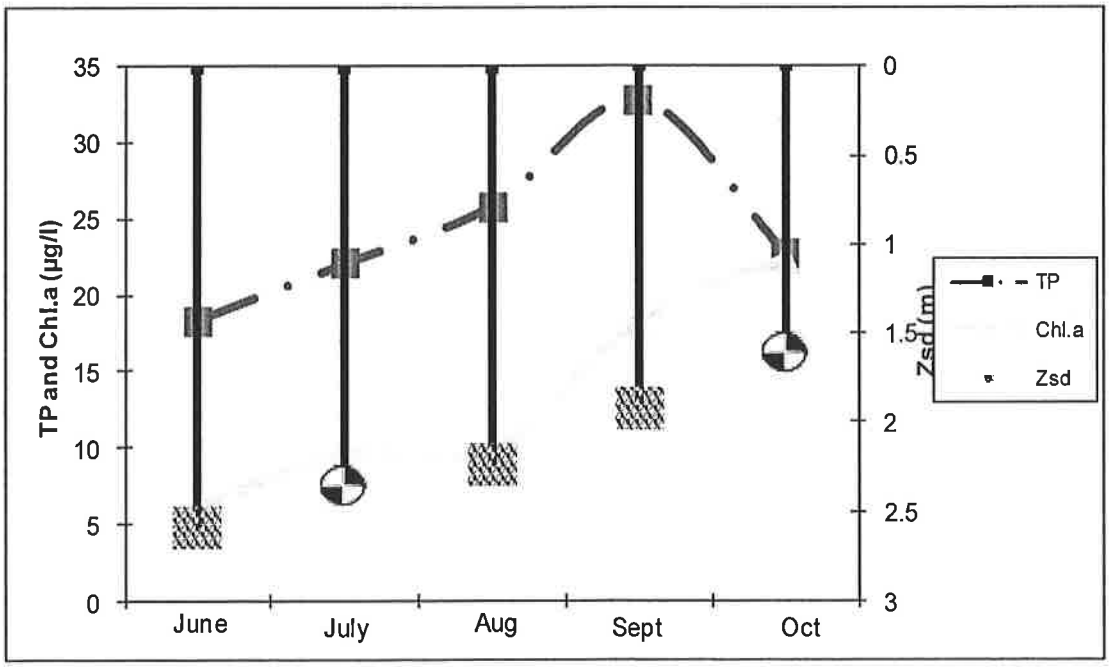
Aquatic Plant IDs-2009

None submitted for identification

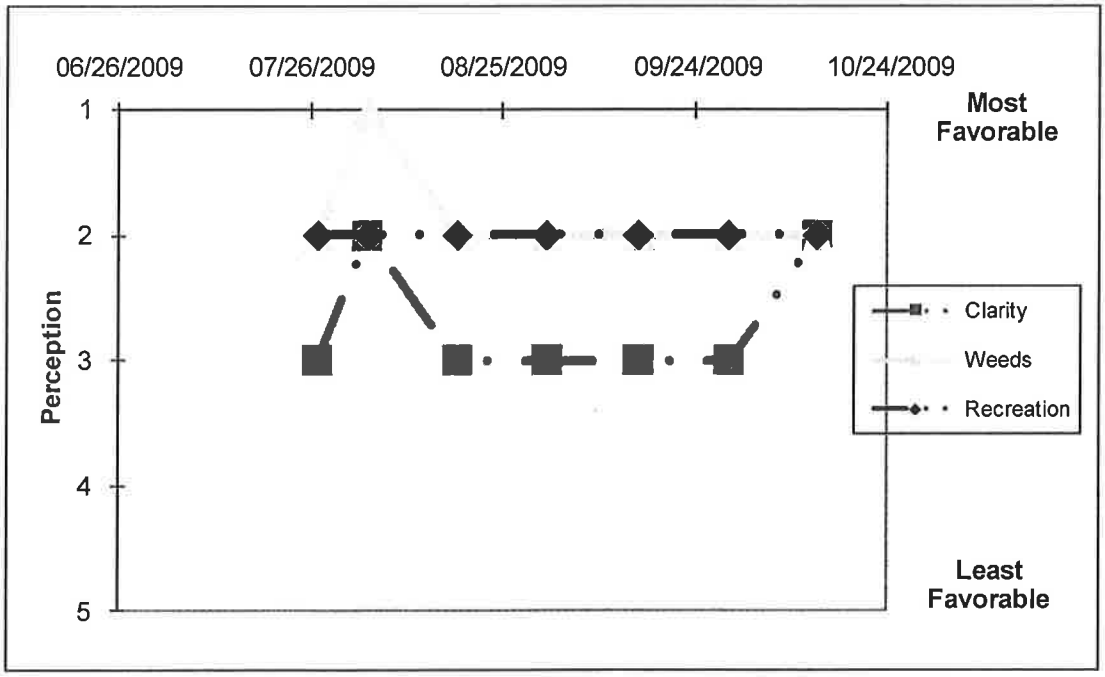
Time Series: Trophic Indicators, 2009



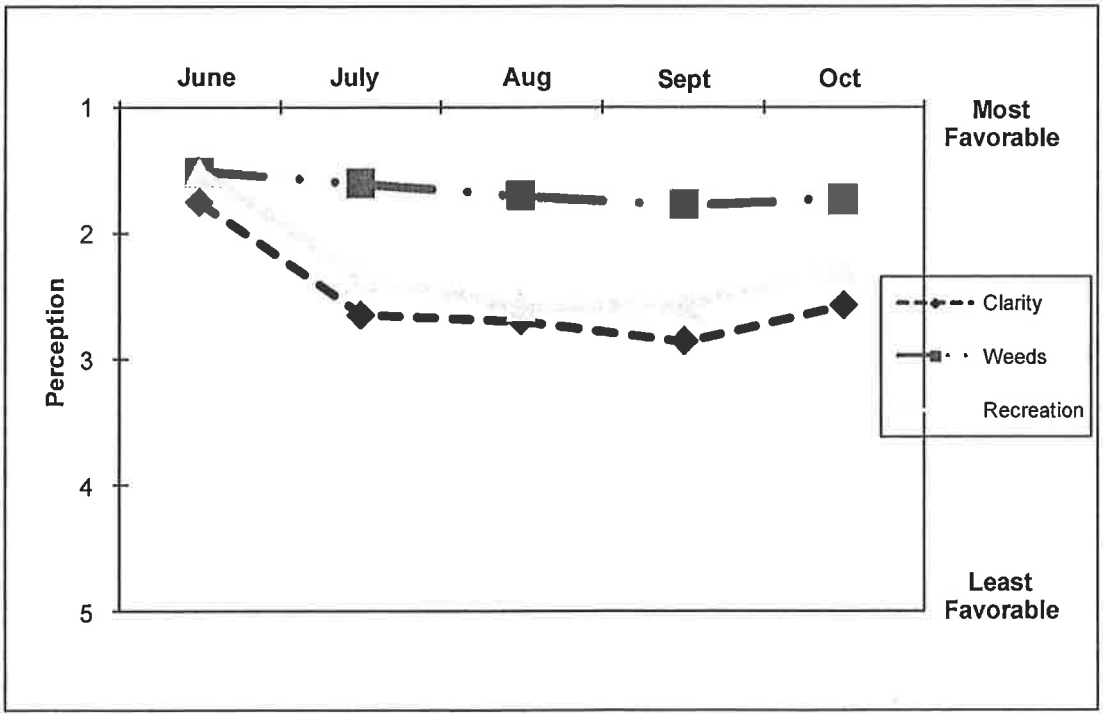
Time Series: Trophic Indicators, Typical Year (1990-2009)



Time Series: Lake Perception Indicators, 2009



Time Series: Lake Perception Indicators, Typical Year (1990-2009)



Appendix B- CSLAP Water Quality Sampling Results for Lake Peekskill

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a
73	L Peekskill	7/8/1990	7.5	3.38	1.5	0.013	0.05				8	7.33	206		4.07
73	L Peekskill	7/22/1990	7.8	4.13	1.5	0.013	0.02				7	7.56	180		5.74
73	L Peekskill	8/5/1990	8.0	3.50	1.5	0.015	0.01				8	8.01	190		6.96
73	L Peekskill	8/19/1990	6.8	3.00	1.5	0.015	0.01				11	7.87	165		9.40
73	L Peekskill	9/10/1990	7.6	2.38	1.5	0.021	0.01				18	7.90	143		21.30
73	L Peekskill	9/24/1990	7.6	1.63	1.5	0.027	0.01				15	7.76	176		31.00
73	L Peekskill	10/7/1990	7.6	1.63	1.5	0.018	0.01				19	7.83	145		31.00
73	L Peekskill	7/22/1991	6.5	2.71	1.5	0.019	0.01				11	8.51	188		7.81
73	L Peekskill	7/28/1991	6.5	1.58	1.5	0.033	0.01				10	7.89	183		13.20
73	L Peekskill	8/4/1991	6.8	1.58	1.5	0.030	0.01					8.20	152		8.74
73	L Peekskill	8/11/1991	7.0	2.00	1.5	0.023	0.01				11	7.67	198		13.20
73	L Peekskill	8/18/1991	7.0	2.00	1.5	0.014	0.01				10	7.89	149		8.28
73	L Peekskill	8/25/1991	7.3	2.00	1.5	0.026	0.01				12	7.39	162		14.30
73	L Peekskill	9/2/1991	7.0	3.00	1.5	0.020	0.01				7	7.85	199		10.30
73	L Peekskill	9/8/1991	7.0	2.00	1.5	0.024	0.01				6	8.00	199		11.10
73	L Peekskill	9/15/1991	7.0	1.50	1.5	0.021	0.02				6	7.87	163		21.70
73	L Peekskill	6/7/1992	7.0	2.00	1.5	0.031	0.01				12	7.81	211		9.30
73	L Peekskill	6/20/1992	8.3	2.00	1.5	0.023					6	7.88	213		13.00
73	L Peekskill	7/5/1992	8.0	2.63	1.5	0.015	0.01				7	7.81	214		15.50
73	L Peekskill	7/19/1992	8.0	2.00	1.5	0.018					10	7.80	212		9.60
73	L Peekskill	8/2/1992	8.0	2.00	1.5	0.022	0.01				8	7.71	214		11.60
73	L Peekskill	8/16/1992	8.5	2.50	1.5	0.016					8	7.68	216		9.18
73	L Peekskill	8/30/1992	8.0	3.88	1.5	0.018	0.01				9	7.88	215		3.58
73	L Peekskill	9/13/1992	8.0	3.00	1.5	0.023	0.01					7.88	214		
73	L Peekskill	6/20/1993	8.0	2.63	1.5	0.018					7	8.82	269		3.16
73	L Peekskill	6/27/1993	8.5	2.25	1.5	0.018	0.01				6	8.71	269		4.46
73	L Peekskill	7/11/1993	7.3	2.50	1.5	0.009					3	8.80	270		4.00
73	L Peekskill	7/25/1993	8.1	3.13	1.5	0.013	0.01				2	8.40	265		47.20
73	L Peekskill	8/8/1993	8.0	3.50	1.5	0.017					4	7.49	276		4.72
73	L Peekskill	8/22/1993	7.8	4.50	1.5	0.011	0.01				4	7.90	272		6.20
73	L Peekskill	9/5/1993	8.0	4.00	1.5	0.015					5	7.80	272		6.38
73	L Peekskill	9/26/1993	7.1	3.00	1.5	0.014	0.03				6	7.91	272		19.80
73	L Peekskill	6/11/1994	8.0	3.00	1.5	0.013	0.01				3	7.90	290		5.97
73	L Peekskill	6/19/1994	8.1	2.88	1.5	0.007					4	8.29	286		6.18
73	L Peekskill	7/10/1994	8.0	3.50	1.5	0.009	0.01				2	9.08	276		11.60
73	L Peekskill	7/26/1994	7.8	2.38	1.5	0.012					2	8.96	278		3.94
73	L Peekskill	8/7/1994	7.5	3.25	1.5	0.020	0.01				2	7.39	284		6.18
73	L Peekskill	8/21/1994	8.0	3.50	1.5	0.010	0.01				8	7.89	281		4.71
73	L Peekskill	9/4/1994	8.0	3.50	1.5	0.010	0.01					7.54	281		
73	L Peekskill	7/14/1996		2.00	1.5		0.01				10	7.19	291		1.80
73	L Peekskill	8/25/1996		1.50		0.026	0.01				10	7.86	303		13.80
73	L Peekskill	9/15/1996	8.0	1.50	1.5	0.036	0.01				10	7.15	303		31.40
73	L Peekskill	10/6/1996	8.0	1.50	1.5	0.022	0.01				6	7.04	294		38.10
73	L Peekskill	6/28/1998	7.0	4.00	1.5	0.028	0.01				3	6.79	275		4.20
73	L Peekskill	7/19/1998	6.5	3.13	1.5	0.015	0.01				5	7.77	276		8.84
73	L Peekskill	7/26/1998	7.0	2.50	1.5		0.01				2	8.19	279		19.60
73	L Peekskill	8/2/1998	7.0	1.50	1.5	0.039	0.01				18	7.60	278		33.80
73	L Peekskill	9/10/2000		2.00	1.5	0.042	0.01				9	7.62	278		19.20
73	L Peekskill	9/24/2000		1.38	1.5	0.034	0.01				9	7.89	274		33.90
73	L Peekskill	7/1/2001		2.00	1.5	0.020	0.01				8	8.51	310		
73	L Peekskill	7/15/2001	3.2	1.80	1.5	0.029	0.01				7	7.66	313		13.60
73	L Peekskill	7/29/2001	4.2	1.60	1.5	0.034	0.01				5	6.73	323		8.20
73	L Peekskill	8/12/2001	4.0	2.10	1.5	0.025	0.01				8	8.02	320		23.91
73	L Peekskill	6/23/2002	6.8	1.95	1.3	0.027	0.10	0.03	0.69	25.88	5	7.83	337		2.71
73	L Peekskill	7/7/2002	6.6	1.20	1.2	0.025	0.00	0.04			11	6.62	350		2.45
73	L Peekskill	7/21/2002	3.9	1.06	1.5	0.025	0.03	0.07	0.51	20.40	11	8.98	353		7.23
73	L Peekskill	8/4/2002	4.1	1.17	1.5	0.028	0.00	0.01	0.55	19.47	9	9.33	347		2.11
73	L Peekskill	8/18/2002	4.2	1.50	1.5	0.024	0.00	0.04	0.66	27.04	7	8.96	349		5.72
73	L Peekskill	9/2/2002	4.2	1.70	1.5	0.027	0.00	0.03			10	7.59	354		8.64
73	L Peekskill	9/16/2002	4.7	2.15	1.5	0.034	0.00	0.05	0.54	15.95	11	7.28	367		7.19
73	L Peekskill	10/6/2002	5.5	1.80	1.5	0.011	0.05	0.06	0.64	56.78	4	8.06	266		0.29
73	L Peekskill	7/13/2003	4.1	2.91	1.5	0.015	0.035	0.083	0.58	39.9	3	7.5	438	24	3.54
73	L Peekskill	7/30/2003	6.7	3.05	1.5	0.012	0.010	0.019	0.10	8.3	9	7.6	430		1.78
73	L Peekskill	8/18/2003	3.9	2.83	1.5	0.015	0.003	0.011	0.34	23.1	4	7.3	420		3.22

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a
73	L Peekskill	9/7/2003	3.9	1.95	1.5	0.022	0.037	0.012			11	7.5	434		16.43
73	L Peekskill	9/28/2003	3.8	1.88		0.021	0.098	0.040	0.43	20.7	8	7.5	416	24	13.80
73	L Peekskill	10/13/2003	3.5	2.27	1.5	0.003	0.009	0.007	0.16	45.8	11	7.3	436		
73	L Peekskill	10/26/2003	4.8	1.85											
73	L Peekskill	11/9/2003	2.9	2.02	1.5										
73	L Peekskill	7/25/2004	6.2	1.60	1.5		0.01	0.01	0.01		20	7.88	494	29.1	1.7
73	L Peekskill	8/9/2004	4.4	1.40	1.5	0.028	0.04	0.02	0.36	12.79	12	8.05	322		8.9
73	L Peekskill	8/15/2004	4.7	1.60	1.5	0.026	0.09	0.04	0.34	12.76	8	8.41	382		10.0
73	L Peekskill	8/22/2004	4.7	1.50	1.5	0.027	0.07	0.02	0.56	21.02	19	7.70	346		15.6
73	L Peekskill	7/25/2005	3.7	1.95	1.0	0.017	0.08	0.01	0.17	10.48	14	8.56	346	19.8	2.8
73	L Peekskill	8/3/2005	6.9	2.34	1.5	0.037	0.01	0.01	0.20	5.30	18	8.46	410		1.0
73	L Peekskill	8/18/2005	7.4	1.80	1.5	0.032	0.07	0.01	0.25	7.71	8	8.39	388		1.8
73	L Peekskill	9/1/2005	7.2	1.52	1.5	0.046	0.02	0.01	0.15	3.33	12	8.53	398		14.3
73	L Peekskill	9/11/2005	7.2	1.15	1.5	0.047	0.01	0.01	0.16	3.43	6	7.76	378	16.7	36.9
73	L Peekskill	9/24/2005	7.3	1.08	1.5	0.045	0.01	0.01	0.21	4.54	10	8.02	409		26.0
73	L Peekskill	10/30/2005	8.9	1.69	1.5	0.038	0.10	0.44	0.61	15.95		7.60	349		14.6
73	L Peekskill	7/9/2006	7.5	1.50	1.5	0.049	0.01	0.10	0.75	33.59	17	8.37	368	20.0	7.08
73	L Peekskill	8/13/2006	5.5	1.04	1.5	0.041	0.02	0.06	0.71	38.30	8	8.08	408		23.74
73	L Peekskill	9/4/2006	7.1	1.17	1.5	0.045	0.02	0.09	0.74	36.45	7	7.15	388		36.96
73	L Peekskill	9/17/2006	6.9	1.37	1.5	0.049	0.02	0.14	1.00	45.07	27	7.39	331		19.11
73	L Peekskill	8/5/2007	4.0	2.33	1.5	0.033	0.00	0.02	0.95	62.94		8.08	370	20.9	
73	L Peekskill	8/12/2008	7.0	1.30	1.5	0.038	0.01	0.02	0.39	22.64	10	8.33	393	21.9	17.19
73	L Peekskill	8/18/2008	3.0	1.43	1.5	0.048	0.01	0.02	0.39	17.54	24	8.06	351		2.24
73	L Peekskill	9/2/2008	7.5	1.80	1.5	0.023	0.01	0.00	0.39	37.20	8	7.84	390		11.63
73	L Peekskill	9/10/2008	7.4	1.75	1.5	0.061	0.00	0.01	0.33	11.96	19	7.52	558		10.56
73	L Peekskill	9/17/2008	5.5	1.60	1.5	0.053	0.01	0.01	0.32	13.33	7	7.86	389	21.3	6.34
73	L Peekskill	9/29/2008	6.8	1.40	1.5	0.031	0.01	0.05	0.50	34.95	16	7.81	392		21.04
73	L Peekskill	10/6/2008	4.0	1.20	3.0	0.029	0.01	0.02	0.34	25.82	7	7.14	387		24.56
73	L Peekskill	10/13/2008	6.3	1.45	1.5		0.02	0.00	0.44		50	7.31	340		23.72
73	L Peekskill	07/27/2009	6.3	2.45	2.0	0.030	0.05	0.04	0.46	33.33	26	7.47	333	25.6	1.46
73	L Peekskill	08/04/2009	6.4	2.20	1.5	0.048	0.04	0.02	0.34	15.59	21	7.61	289		6.33
73	L Peekskill	08/18/2009	7.1	2.40	1.5	0.022	0.02	0.03	0.36	35.16	13	7.68	306		5.80
73	L Peekskill	09/01/2009	6.2	1.75	1.5	0.030	0.04	0.04	0.39	28.30	8	7.13	396		12.70
73	L Peekskill	09/15/2009	7.0	1.20	1.5	0.048	0.01	0.01	0.40	18.03	24	7.57	345	28.0	10.60
73	L Peekskill	09/29/2009	4.5	1.65	1.5	0.047	0.01	0.03	0.39	18.43	48	7.35	435		1.75
73	L Peekskill	10/13/2009	6.0	1.35	1.5	0.037	0.01	0.07	0.51	30.42	20	6.90	314		15.20
73	L Peekskill	8/5/2008	4.0	2.33	1.5	0.033	0.00	0.02	0.95	62.94		8.08	370	20.9	
73	L Peekskill	7/26/1998	7.0		6.0	0.053									
73	L Peekskill	9/4/2006				0.924									
73	L Peekskill	9/17/2006				0.139									
73	L Peekskill	8/5/2007				0.159									

LNum	PName	Date	Zbot	Zsd	Zsamp	QaQc	TAir	TH20	QA	QB	QC	QD
73	L Peekskill	7/8/1990	7.5	3.38	1.5	1						
73	L Peekskill	7/22/1990	7.8	4.13	1.5	1	26	28				
73	L Peekskill	8/5/1990	8.0	3.50	1.5	1	24	28				
73	L Peekskill	8/19/1990	6.8	3.00	1.5	1	21	27				
73	L Peekskill	9/10/1990	7.6	2.38	1.5	1	25	23				
73	L Peekskill	9/24/1990	7.6	1.63	1.5	1	14	19				
73	L Peekskill	10/7/1990	7.6	1.63	1.5	1	25	19				
73	L Peekskill	7/22/1991	6.5	2.71	1.5	1	27	29				
73	L Peekskill	7/28/1991	6.5	1.58	1.5	1	28	25				
73	L Peekskill	8/4/1991	6.8	1.58	1.5	1	23	26				
73	L Peekskill	8/11/1991	7.0	2.00	1.5	1	28	28				
73	L Peekskill	8/18/1991	7.0	2.00	1.5	1	26	27				
73	L Peekskill	8/25/1991	7.3	2.00	1.5	1	20	24				
73	L Peekskill	9/2/1991	7.0	3.00	1.5	1	17	23				
73	L Peekskill	9/8/1991	7.0	2.00	1.5	1	21	25				
73	L Peekskill	9/15/1991	7.0	1.50	1.5	1	19	22				
73	L Peekskill	6/7/1992	7.0	2.00	1.5	1	26	21	2	2	2	0
73	L Peekskill	6/20/1992	8.3	2.00	1.5	1	25	23	2	2	2	5
73	L Peekskill	7/5/1992	8.0	2.63	1.5	1	24	24	2	3	2	
73	L Peekskill	7/19/1992	8.0	2.00	1.5	1	26	25	2	1	2	5
73	L Peekskill	8/2/1992	8.0	2.00	1.5	1	24	23	3	3	3	26
73	L Peekskill	8/16/1992	8.5	2.50	1.5	1	19	25	3	3	2	5

LNum	PName	Date	Zbot	Zsd	Zsamp	QaQc	TAir	TH20	QA	QB	QC	QD
73	L Peekskill	8/30/1992	8.0	3.88	1.5	1	24	25	1	2	1	0
73	L Peekskill	9/13/1992	8.0	3.00	1.5	1	20	26	2	3	3	2
73	L Peekskill	6/20/1993	8.0	2.63	1.5	1	27	28	2	1	1	56
73	L Peekskill	6/27/1993	8.5	2.25	1.5	1	23	28	1	3	1	
73	L Peekskill	7/11/1993	7.3	2.50	1.5	1	26	29	2	3	2	
73	L Peekskill	7/25/1993	8.1	3.13	1.5	1	34	26	3	2	1	1
73	L Peekskill	8/8/1993	8.0	3.50	1.5	1	21	25	2	2	2	6
73	L Peekskill	8/22/1993	7.8	4.50	1.5	1	27	22	1	4	3	2
73	L Peekskill	9/5/1993	8.0	4.00	1.5	1	22	27	1	3	2	2
73	L Peekskill	9/26/1993	7.1	3.00	1.5	1	21	20	2	3	2	5
73	L Peekskill	6/11/1994	8.0	3.00	1.5	1	22	23	1	1	1	5
73	L Peekskill	6/19/1994	8.1	2.88	1.5	1	38	29	3	1	2	1
73	L Peekskill	7/10/1994	8.0	3.50	1.5	1	32	28	2	3	3	2
73	L Peekskill	7/26/1994	7.8	2.38	1.5	1	33	27	4	4	3	2
73	L Peekskill	8/7/1994	7.5	3.25	1.5	1	22	25	2	4	3	2
73	L Peekskill	8/21/1994	8.0	3.50	1.5	1	27	26	1	3	2	
73	L Peekskill	9/4/1994	8.0	3.50	1.5	1	25	27	1	3	2	2
73	L Peekskill	7/14/1996		2.00	1.5	1	28	26	3	1	3	1
73	L Peekskill	8/25/1996		1.50		1	27	26				
73	L Peekskill	9/15/1996	8.0	1.50	1.5	1	15	18	2	1	2	6
73	L Peekskill	10/6/1996	8.0	1.50	1.5	1	7	16	2	1	1	5
73	L Peekskill	6/28/1998	7.0	4.00	1.5	1	21	24	1	1	1	
73	L Peekskill	7/19/1998	6.5	3.13	1.5	1	26	26	1	1	1	
73	L Peekskill	7/26/1998	7.0	2.50	1.5	1	25	25	1	1	1	
73	L Peekskill	8/2/1998	7.0	1.50	1.5	1	27	26	3	1	2	1
73	L Peekskill	9/10/2000		2.00	1.5	1	27	26				
73	L Peekskill	9/24/2000		1.38	1.5	1	25	22				
73	L Peekskill	7/1/2001		2.00	1.5	1	28	27	3	1	2	
73	L Peekskill	7/15/2001	3.2	1.80	1.5	1	27	24	2	1	2	
73	L Peekskill	7/29/2001	4.2	1.60	1.5	1	27	26	3	1	2	
73	L Peekskill	8/12/2001	4.0	2.10	1.5	1	24	28	2	1	2	
73	L Peekskill	6/23/2002	6.8	1.95	1.3	1	33	26	2	1	2	
73	L Peekskill	7/7/2002	6.6	1.20	1.2	1	29	27	3	1	2	
73	L Peekskill	7/21/2002	3.9	1.06	1.5	1	29	28	3	1	2	
73	L Peekskill	8/4/2002	4.1	1.17	1.5	1	35	30	3	1	2	
73	L Peekskill	8/18/2002	4.2	1.50	1.5	1	35	29	3	1	2	
73	L Peekskill	9/2/2002	4.2	1.70	1.5	1	19	21	3	1	2	
73	L Peekskill	9/16/2002	4.7	2.15	1.5	1	28	24	3	1	2	5
73	L Peekskill	10/6/2002	5.5	1.80	1.5	1	22	19	2	1	2	
73	L Peekskill	7/13/2003	4.1	2.91	1.5	1	27	26	3	1	3	8
73	L Peekskill	7/30/2003	6.7	3.05	1.5	1	28	28	3	2	3	
73	L Peekskill	8/18/2003	3.9	2.83	1.5	1	26	27	3	1	3	56
73	L Peekskill	9/7/2003	3.9	1.95	1.5	1	28	24	4	2	4	134
73	L Peekskill	9/28/2003	3.8	1.88		1	16	19	3	1	3	158
73	L Peekskill	10/13/2003	3.5	2.27	1.5	1	21	17	4	2	4	134
73	L Peekskill	10/26/2003	4.8	1.85		1	19	13	5	1	5	1345
73	L Peekskill	11/9/2003	2.9	2.02	1.5	1	5	10	4	1	5	1345
73	L Peekskill	7/25/2004	6.2	1.60	1.5	1	27	26	3	1	3	1
73	L Peekskill	8/9/2004	4.4	1.40	1.5	1	29	25	4	1	3	13
73	L Peekskill	8/15/2004	4.7	1.60	1.5	1	23	25	3	1	3	13
73	L Peekskill	8/22/2004	4.7	1.50	1.5	1	24	24	4	1	4	1346
73	L Peekskill	7/25/2005	3.7	1.95	1.0	1	31	29	3	1	4	1348
73	L Peekskill	8/3/2005	6.9	2.34	1.5	1	34	30	3	1	4	138
73	L Peekskill	8/18/2005	7.4	1.80	1.5	1	30	28	4	1	4	134
73	L Peekskill	9/1/2005	7.2	1.52	1.5	1	30	26	3	1	3	15
73	L Peekskill	9/11/2005	7.2	1.15	1.5	1	28	25	4	1	4	134
73	L Peekskill	9/24/2005	7.3	1.08	1.5	1	24	24	4	1	4	134
73	L Peekskill	10/30/2005	8.9	1.69	1.5	1	18	12	3	1	3	135
73	L Peekskill	7/9/2006	7.5	1.50	1.5	1	30	27	4	1	4	134
73	L Peekskill	8/13/2006	5.5	1.04	1.5	1	32	26	4	1	4	1
73	L Peekskill	9/4/2006	7.1	1.17	1.5	1	24	21	3	1	3	158
73	L Peekskill	9/17/2006	6.9	1.37	1.5	1	26	23	4	1	4	134

LNum	PName	Date	Zbot	Zsd	Zsamp	QaQc	TAir	TH20	QA	QB	QC	QD
73	L Peekskill	8/5/2007	4.0	2.33	1.5	1	29	27	3	1	3	13
73	L Peekskill	8/12/2008	7.0	1.30	1.5	1	25	26	3	2	2	8
73	L Peekskill	8/18/2008	3.0	1.43	1.5	1	28	26	2	1	2	8
73	L Peekskill	9/2/2008	7.5	1.80	1.5	1	23	23	3	2	2	6
73	L Peekskill	9/10/2008	7.4	1.75	1.5	1	19	23	3	2	2	68
73	L Peekskill	9/17/2008	5.5	1.60	1.5	1	22	23	3	2	2	8
73	L Peekskill	9/29/2008	6.8	1.40	1.5	1	22	28	3	2	2	8
73	L Peekskill	10/6/2008	4.0	1.20	3.0	1	14	17	2	2	2	8
73	L Peekskill	10/13/2008	6.3	1.45	1.5	1	20	18	3	3	2	8
73	L Peekskill	07/27/2009	6.3	2.45	2.0	1	30	27	4	2	4	1368
73	L Peekskill	08/04/2009	6.4	2.20	1.5	1	29	26	4	2	3	1268
73	L Peekskill	08/18/2009	7.1	2.40	1.5	1	29	27	2	2	3	1368
73	L Peekskill	09/01/2009	6.2	1.75	1.5	1	24	22	3	2	3	8
73	L Peekskill	09/15/2009	7.0	1.20	1.5	1	28	23	2	2	2	18
73	L Peekskill	09/29/2009	4.5	1.65	1.5	1	19	18	3	2	4	58
73	L Peekskill	10/13/2009	6.0	1.35	1.5	1	16	13	3	2	3	1
73	L Peekskill	8/5/2008	4.0	2.33	1.5	1	29	27	3	1	3	13

Legend Information

Indicator	*Description*	*Detection Limit*	*Standard (S) / Criteria (C)*
General Information			
Lnum	lake number (unique to CSLAP)		
Lname	name of lake (as it appears in the Gazetteer of NYS Lakes)		
Date	sampling date		
Field Parameters			
Zbot	lake depth at sampling point, meters (m)		
Zsd	Secchi disk transparency or clarity	0.1m	1.2m (C)
Zsamp	water sample depth (m)	0.1m	none
Tair	air temperature (C)	-10C	none
TH20	water temperature (C)	-10C	none
Laboratory Parameters			
Tot.P	total phosphorus (mg/l)	0.003 mg/l	0.020 mg/l (C)
NOx	nitrate + nitrite (mg/l)	0.01 mg/l	10 mg/l NO3 (S), 2 mg/l NO2 (S)
NH4	total ammonia (mg/l)	0.01 mg/l	2 mg/l NH4 (S)
TN	total nitrogen (mg/l)	0.01 mg/l	none
TN/TP	nitrogen to phosphorus (molar) ratio, = (TKN + NOx)*2.2/TP		none
TCOLOR	true (filtered) color (ptu, platinum color units)	1 ptu	none
pH	powers of hydrogen (S.U., standard pH units)	0.1 S.U.	6.5, 8.5 S.U. (S)
Cond25	specific conductance, corrected to 25C (umho/cm)	1 umho/cm	none
Ca	calcium (mg/l)	1 mg/l	none
Chl.a	chlorophyll a (ug/l)	0.01 ug/l	none
Fe	iron (mg/l)	0.1 mg/1	0.3 mg/l (S)
Mn	manganese (mg/l)	0.01 mg/l	0.3 mg/l (S)
As	arsenic (mg/l)	1 ug/l	10 ug/l (S)
Lake Assessment			
QA	water quality assessment, 5 point scale; 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, 5 point scale; 1 = no plants visible, 2 = plants below surface, 3 = plants at surface, 4 = plants dense at surface, 5 = surface plant coverage		
QC	recreational assessment, 5 point scale; 1 = could not be nicer, 2 = excellent, 3 = slightly impaired, 4 = substantially impaired, 5 = lake not usable		
QD	reasons for recreational assessment, 8 choices; 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		

Appendix C- PWL Listing for Lake Peekskill

Lake Peekskill (1301-0147) MinorImpacts

Waterbody Location Information

Revised: 04/29/2008

Water Index No:	H- 55- 7-P171	**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	**Str Class:** B		
Waterbody Type:	Lake	**Reg/County:**	3/Putnam Co. (40)
Waterbody Size:	58.5 Acres	**Quad Map:**	PEEKSKILL (P-25-4)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Aquatic Life	Stressed	Suspected
Recreation	Stressed	Known

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus)
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: Agriculture
Possible: ---

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: ext/WQCC **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview
Recreational uses in Lake Peekskill are known to experience minor impacts from nutrient loadings from nonpoint sources resulting in algal growth and eutrophic conditions.

Water Quality Sampling
Lake Peekskill has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1990 and continuing through 2007. An Interpretive Summary report of the findings of this sampling was published in 2008. These data indicate that the lake continues to be best characterized as eutrophic, or highly productive. Phosphorus levels in the lake regularly exceed the state guidance values indicating impacted/stressed recreational uses. However corresponding transparency measurements typically meet what is the recommended minimum for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. (DEC/DOW, BWAM/CSLAP, March 2008)

Recreational Assessment
Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates

recreational suitability of the lake to be unfavorable in recent years. The recreational suitability of the lake is described most frequently as "slightly" impacted for recreational use. The lake itself is most often described as having "definite algal greenness." These assessment are consistent with measured water quality characteristics. Assessments have noted that aquatic plants do not typically grow to the lake surface and are not usually cited as impacting recreational uses. (DEC/DOW, BWAM/CSLAP, March 2008)

Lake Uses

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