

**Hamilton County
Soil and Water Conservation District
2014 Preliminary Water Monitoring Report**



*Working to manage and promote
the wise use of natural resources
in Hamilton County since 1965.*

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November 2014

The Hamilton County Soil & Water Conservation District
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Total Alkalinity mg/l CaCO₃

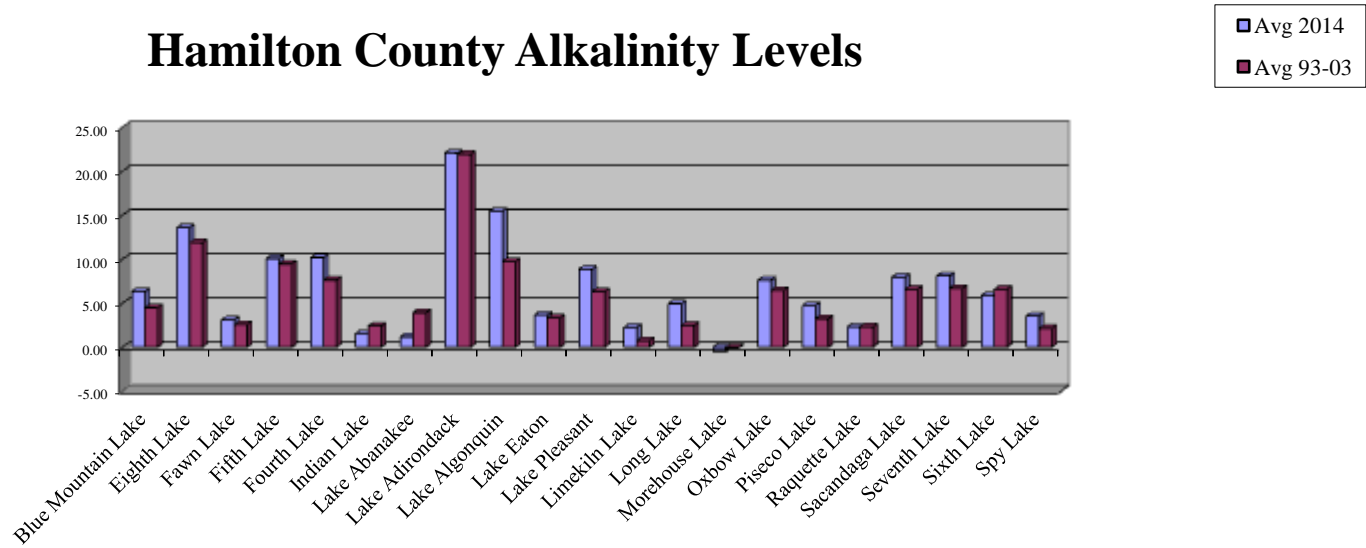
Site	2014				1993-2003			
	June 2014	July 2014	August 2014	Avg 2014	Avg Jun	Avg Jul	Avg Aug	Avg 93-03
Blue Mountain Lake	8.01	5.81	5.14	6.32	4.55	4.27	4.63	4.48
Eighth Lake	15.10	11.95	13.70	13.58	11.84	11.67	12.09	11.87
Fawn Lake	1.07	2.51	5.69	3.09	2.50	2.64	2.55	2.56
Fifth Lake	8.19	8.73	13.30	10.07	9.38	9.21	9.75	9.45
Fourth Lake	9.58	7.59	13.40	10.19	7.47	6.97	8.43	7.62
Indian Lake	1.69	bdl	1.38	1.54	2.15	2.22	2.82	2.39
Lake Abanakee	bdl	0.79	1.57	1.18	4.03	3.85	3.87	3.92
Lake Adirondack	bdl	17.80	26.30	22.05	21.30	21.78	22.70	21.93
Lake Algonquin	bdl	14.20	16.70	15.45	7.32	9.32	12.61	9.75
Lake Eaton	3.83	3.79	3.31	3.64	3.45	3.34	3.16	3.32
Lake Pleasant	7.28	8.27	11.00	8.85	6.08	6.04	6.72	6.28
Limekiln Lake	2.35	0.86	3.49	2.23	0.53	0.66	0.93	0.71
Long Lake	3.91	bdl	5.98	4.95	2.08	2.48	2.84	2.47
Morehouse Lake	-0.70	-2.29	1.50	-0.50	-0.26	-0.09	0.12	-0.08
Oxbow Lake	6.79	bdl	8.39	7.59	5.66	6.77	6.88	6.44
Piseco Lake	6.00	1.59	6.61	4.73	3.18	2.86	3.65	3.23
Raquette Lake	-0.63	bdl	5.17	2.27	2.79	2.22	1.90	2.30
Sacandaga Lake	7.27	5.01	11.60	7.96	6.35	6.64	6.72	6.57
Seventh Lake	5.38	bdl	10.80	8.09	5.75	7.37	6.88	6.67
Sixth Lake	1.32	4.27	12.00	5.86	6.92	7.05	5.77	6.58
Spy Lake	bdl	2.34	4.71	3.53	1.92	1.80	2.66	2.13

Alkalinity

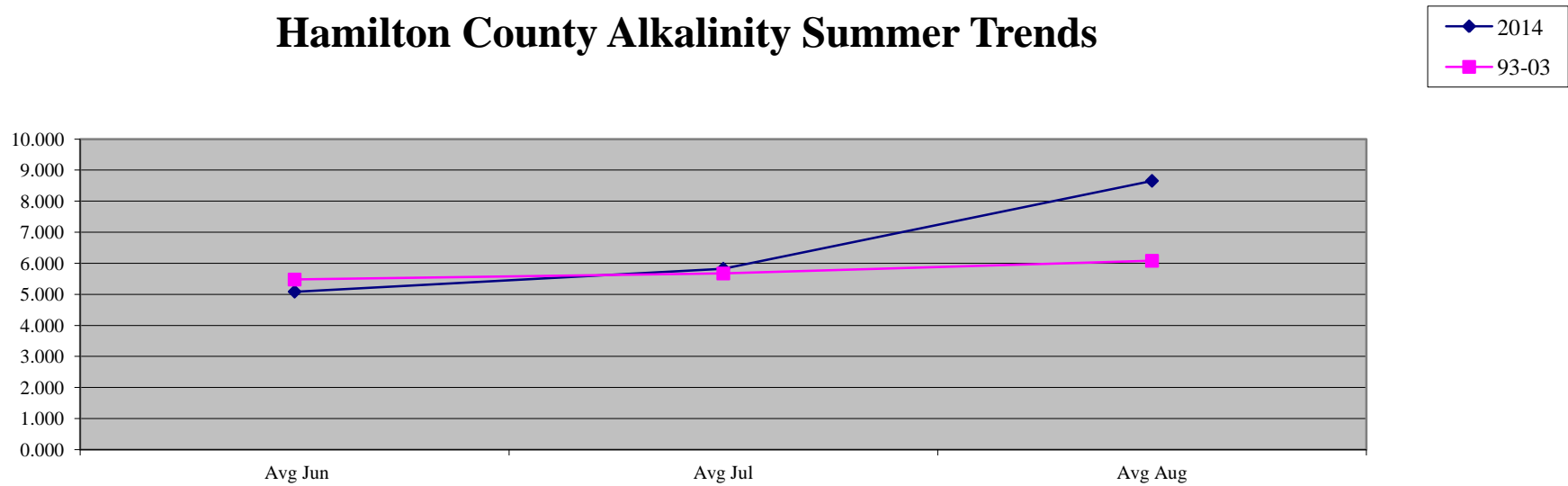
> 20 mg/l CaCO₃ needed to effectively neutralize acid.

bdl = below detection level

Hamilton County Alkalinity Levels



Hamilton County Alkalinity Summer Trends

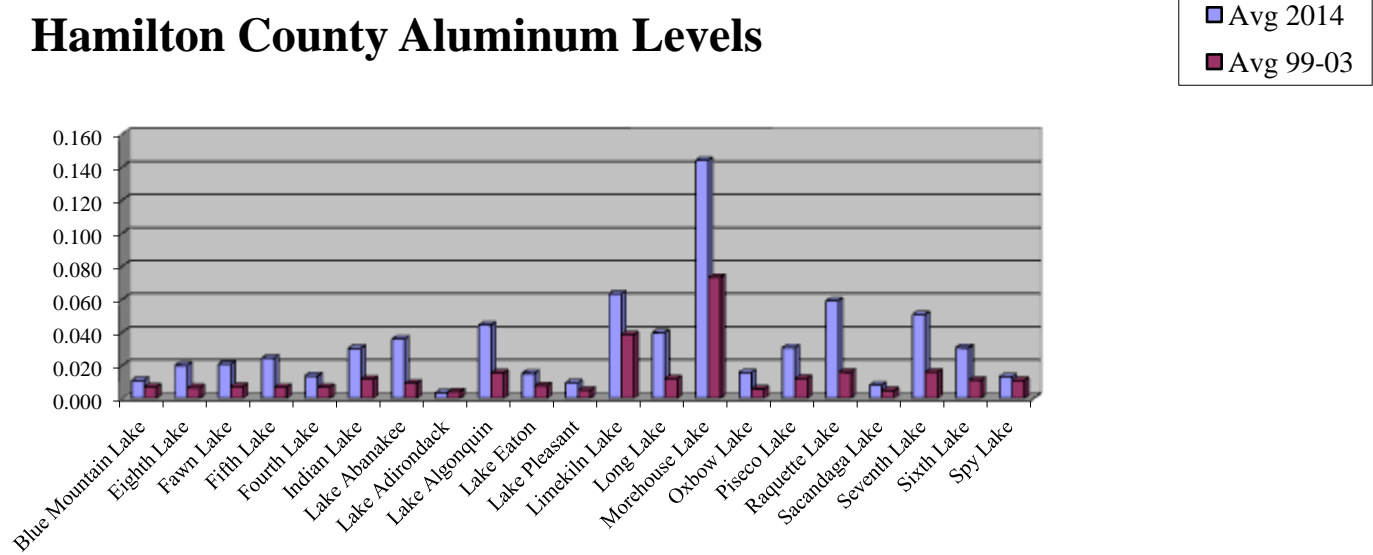


Aluminum mg/l

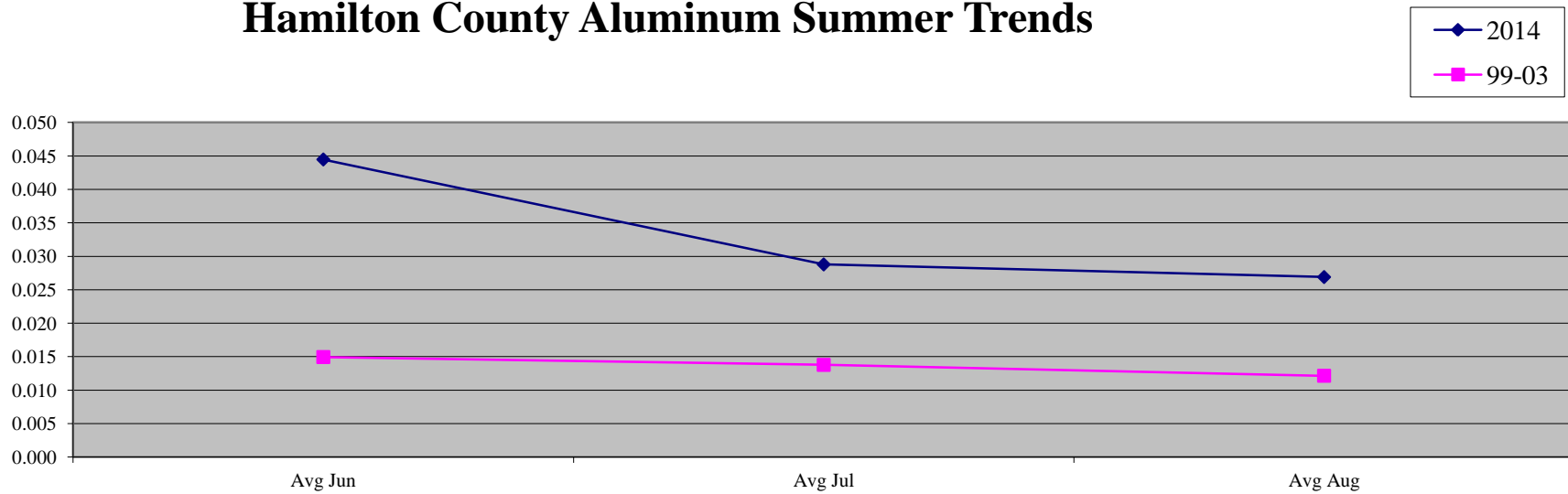
Site	2014				1993-2003			
	June 2014	July 2014	August 2014	Avg 2014	Avg Jun	Avg Jul	Avg Aug	Avg 99-03
Blue Mountain Lake	0.015	bdl	0.007	0.011	0.005	0.007	0.009	0.007
Eighth Lake	0.016	0.017	0.026	0.020	0.005	0.005	0.010	0.007
Fawn Lake	0.028	0.020	0.014	0.021	0.009	0.005	0.008	0.007
Fifth Lake	0.041	0.016	0.016	0.024	0.008	0.006	0.007	0.007
Fourth Lake	0.018	0.013	0.010	0.014	0.008	0.006	0.006	0.007
Indian Lake	0.036	0.032	0.023	0.030	0.016	0.011	0.008	0.012
Lake Abanakee	0.049	0.028	0.030	0.036	0.007	0.009	0.012	0.009
Lake Adirondack	bdl	0.005	0.002	0.003	0.004	0.006	0.002	0.004
Lake Algonquin	0.055	0.034	0.044	0.044	0.026	0.012	0.008	0.015
Lake Eaton	0.016	0.015	0.015	0.015	0.006	0.009	0.007	0.008
Lake Pleasant	0.011	0.011	0.006	0.009	0.005	0.006	0.004	0.005
Limekiln Lake	0.078	0.062	0.050	0.063	0.045	0.041	0.030	0.039
Long Lake	0.058	0.036	0.025	0.040	0.016	0.013	0.007	0.012
Morehouse Lake	0.189	0.120	0.122	0.144	0.072	0.077	0.071	0.073
Oxbow Lake	0.019	0.014	0.014	0.016	0.003	0.011	0.003	0.006
Piseco Lake	0.037	0.029	0.026	0.031	0.011	0.012	0.014	0.012
Raquette Lake	0.078	0.051	0.047	0.059	0.020	0.014	0.013	0.016
Sacandaga Lake	0.010	0.008	0.006	0.008	0.005	0.004	0.005	0.005
Seventh Lake	0.061	0.045	0.046	0.051	0.020	0.017	0.011	0.016
Sixth Lake	0.048	0.019	0.025	0.031	0.012	0.011	0.011	0.011
Spy Lake	0.027	0.001	0.011	0.013	0.012	0.009	0.012	0.011

bdl = below detection level

Hamilton County Aluminum Levels



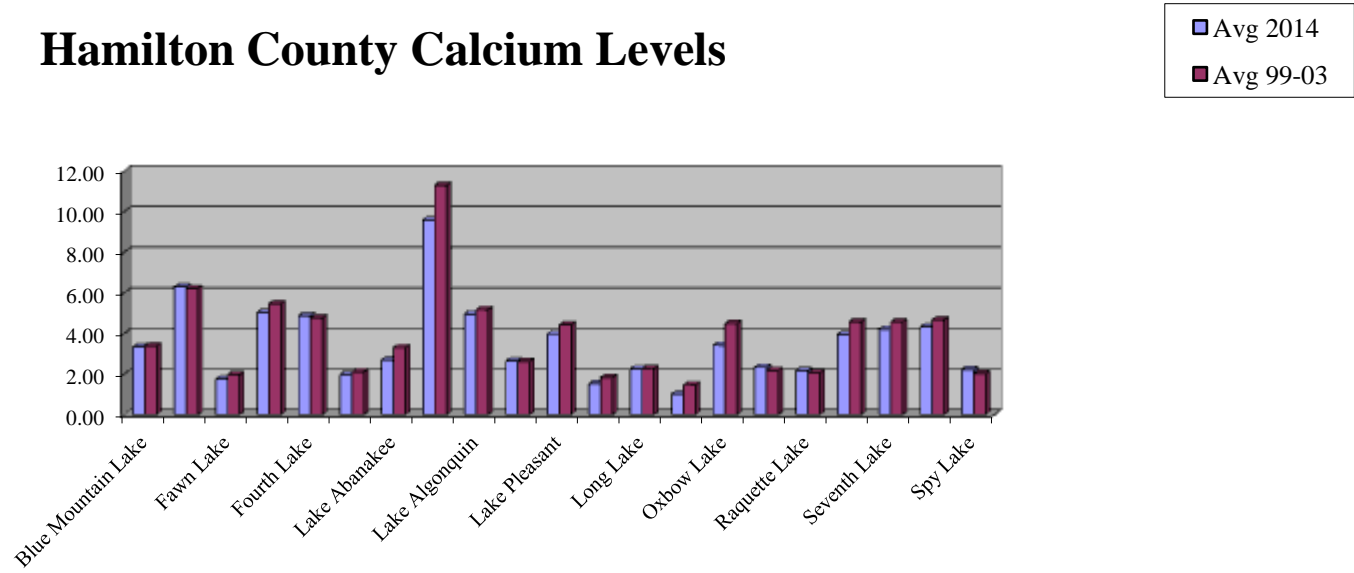
Hamilton County Aluminum Summer Trends



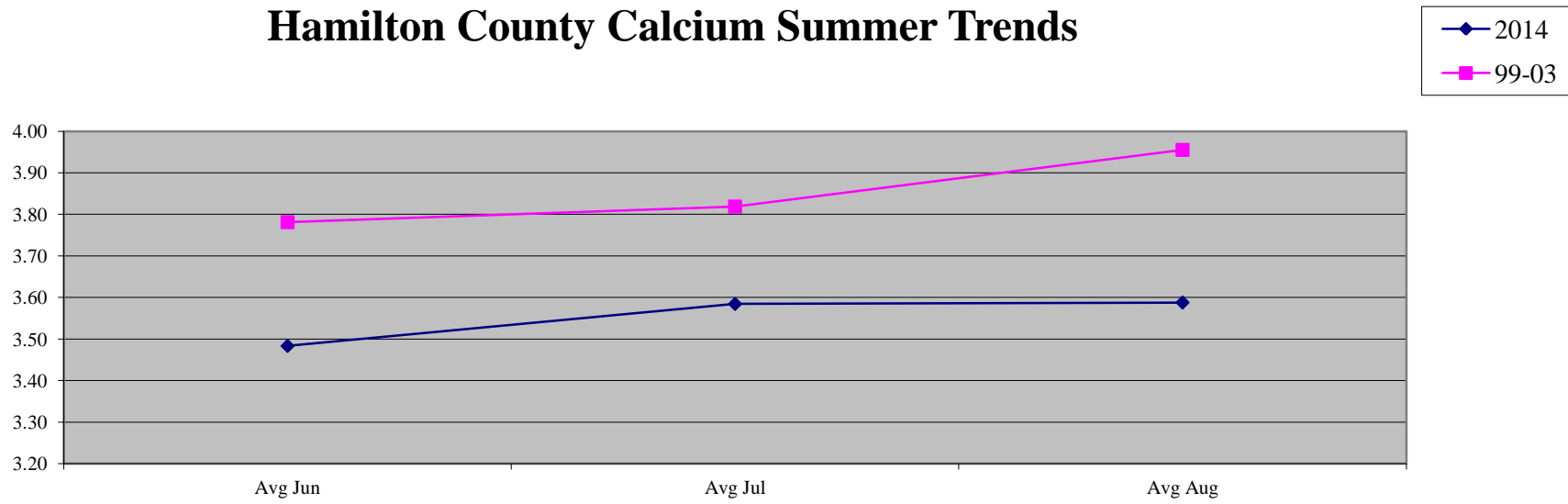
Calcium mg/l

Site	2014				1993-2003			
	June 2014	July 2014	August 2014	Avg 2014	Avg Jun	Avg Jul	Avg Aug	Avg 99-03
Blue Mountain Lake	3.38	3.26	3.38	3.34	3.37	3.44	3.34	3.38
Eighth Lake	6.40	6.23	6.26	6.30	6.13	6.23	6.28	6.21
Fawn Lake	1.73	1.73	1.78	1.75	1.93	1.97	2.00	1.97
Fifth Lake	4.65	5.39	5.10	5.05	5.43	5.45	5.52	5.47
Fourth Lake	4.78	4.96	4.89	4.87	4.75	4.71	4.83	4.76
Indian Lake	1.96	1.93	2.04	1.98	2.11	2.06	2.16	2.11
Lake Abanakee	2.52	2.96	2.60	2.69	3.29	3.30	3.31	3.30
Lake Adirondack	9.83	9.67	9.30	9.60	11.28	11.28	11.35	11.30
Lake Algonquin	4.29	5.07	5.51	4.96	4.34	5.28	5.92	5.18
Lake Eaton	2.70	2.62	2.62	2.65	2.62	2.58	2.68	2.62
Lake Pleasant	3.93	3.97	4.01	3.97	4.36	4.38	4.54	4.43
Limekiln Lake	1.52	1.50	1.56	1.53	1.81	1.81	1.88	1.84
Long Lake	2.23	2.26	2.28	2.26	2.21	2.19	2.39	2.26
Morehouse Lake	1.03	1.01	1.00	1.01	1.45	1.43	1.53	1.47
Oxbow Lake	3.30	3.48	3.48	3.42	4.21	4.27	4.99	4.49
Piseco Lake	2.39	2.23	2.39	2.34	2.25	2.21	2.10	2.18
Raquette Lake	2.18	2.21	2.15	2.18	2.12	2.01	2.08	2.07
Sacandaga Lake	3.98	3.93	3.96	3.96	4.52	4.43	4.79	4.58
Seventh Lake	4.11	4.26	4.26	4.21	4.58	4.50	4.62	4.57
Sixth Lake	4.12	4.38	4.47	4.32	4.65	4.65	4.72	4.67
Spy Lake	2.12	2.22	2.30	2.22	2.00	2.03	2.05	2.03

Hamilton County Calcium Levels



Hamilton County Calcium Summer Trends

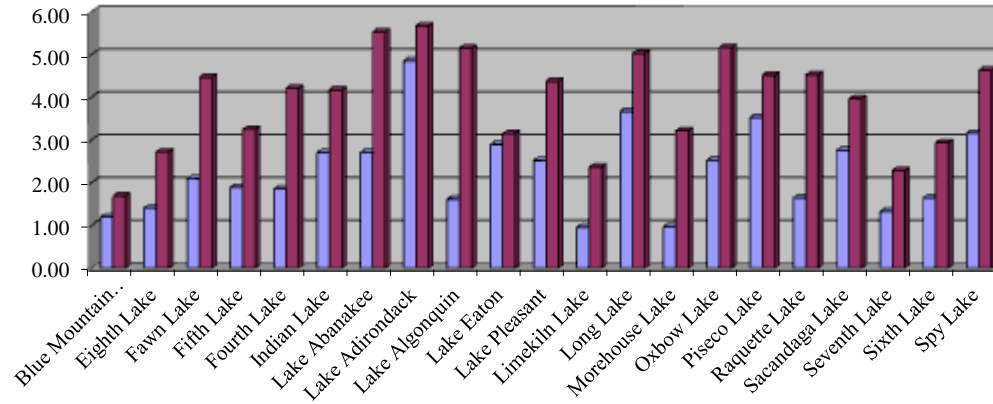


Chlorophyll A ug/l

Site	2014				1993-2003			
	June 2014	July 2014	August 2014	Avg 2014	Avg Jun	Avg Jul	Avg Aug	Avg 99-03
Blue Mountain Lake	2.07	0.94	0.59	1.20	1.53	1.69	1.87	1.69
Eighth Lake	0.32	2.55	1.36	1.41	2.24	2.85	3.09	2.73
Fawn Lake	2.71	2.36	1.23	2.10	4.26	5.35	3.78	4.46
Fifth Lake	2.31	2.24	1.13	1.89	3.00	3.30	3.46	3.25
Fourth Lake	2.08	2.25	1.23	1.85	3.58	4.46	4.61	4.21
Indian Lake	2.40	3.11	2.61	2.71	3.41	4.69	4.43	4.17
Lake Abanakee	2.86	3.58	1.69	2.71	4.51	5.55	6.54	5.53
Lake Adirondack	4.67	6.84	3.05	4.85	4.85	6.88	5.29	5.67
Lake Algonquin	1.69	2.01	1.15	1.62	4.61	5.25	5.58	5.15
Lake Eaton	6.57	1.23	0.89	2.90	2.97	3.57	2.91	3.15
Lake Pleasant	2.75	2.37	2.44	2.52	3.71	4.80	4.61	4.37
Limekiln Lake	0.18	1.58	1.11	0.96	1.87	2.15	3.08	2.37
Long Lake	4.11	2.00	4.89	3.67	3.97	5.89	5.22	5.02
Morehouse Lake	2.07	0.48	0.36	0.97	2.92	3.00	3.73	3.22
Oxbow Lake	2.99	2.91	1.68	2.53	5.16	5.72	4.62	5.17
Piseco Lake	4.93	3.21	2.44	3.53	4.18	4.32	5.05	4.52
Raquette Lake	1.50	2.05	1.40	1.65	4.10	4.48	5.00	4.53
Sacandaga Lake	2.76	4.35	1.18	2.76	3.02	4.43	4.45	3.96
Seventh Lake	2.13	1.30	0.57	1.33	1.87	2.58	2.42	2.29
Sixth Lake	2.50	1.70	0.74	1.65	2.09	2.47	4.24	2.94
Spy Lake	3.41	4.02	2.04	3.16	3.48	4.96	5.44	4.63

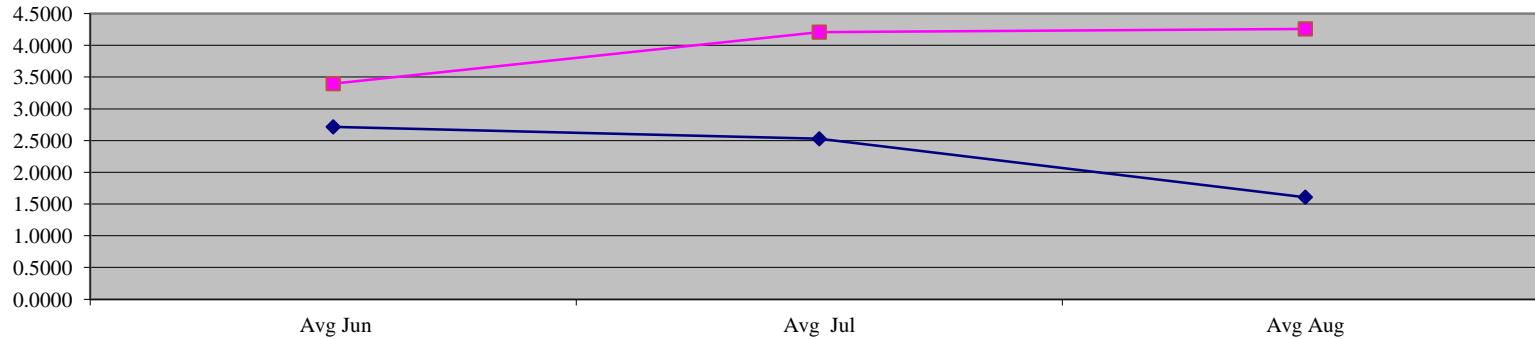
Hamilton County Chlorophyll A Levels

■ Avg 2014
■ Avg 99-03



Hamilton County Chlorophyll A Levels Summer Trends

◆ 2014
■ 93-03

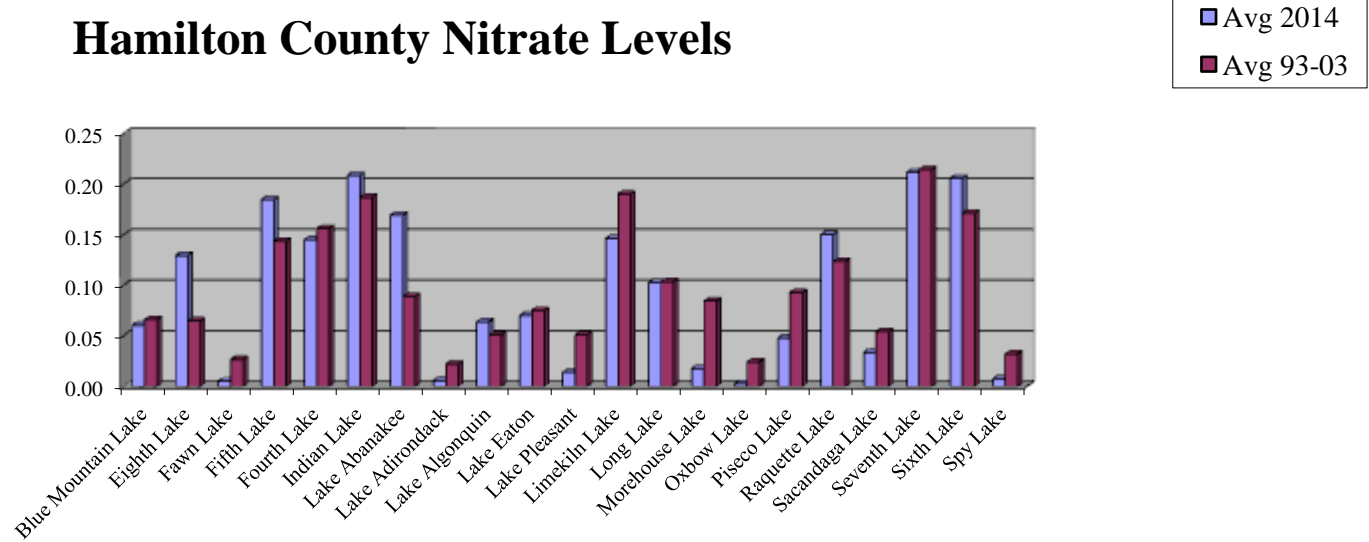


Nitrates mg/l

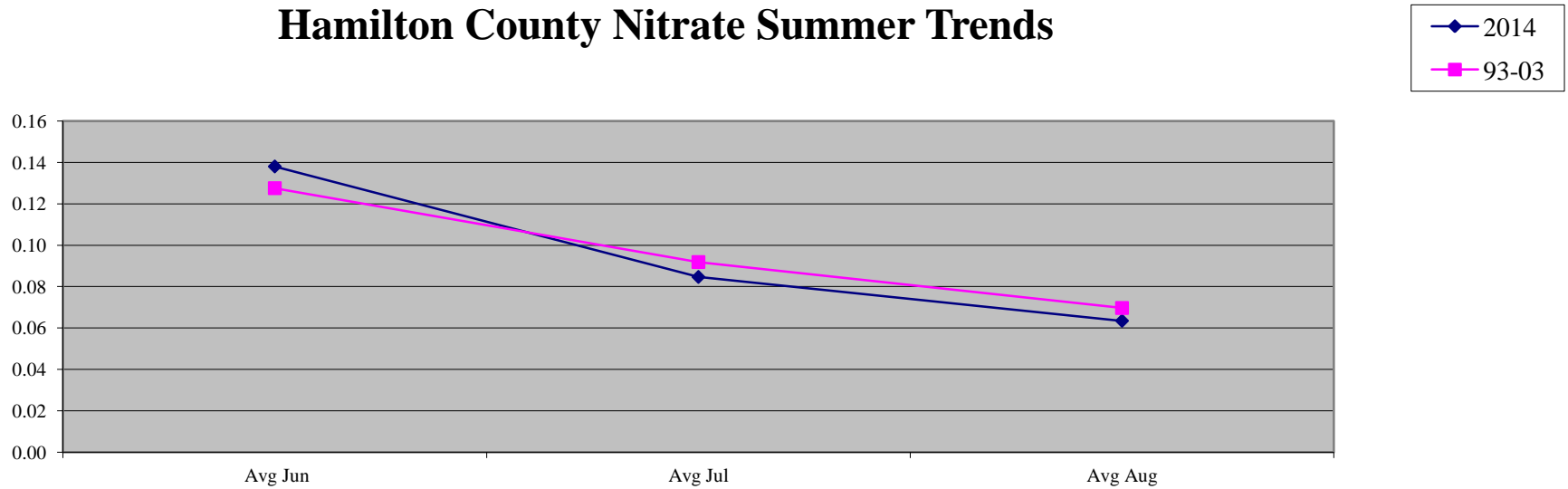
Site	2014				1993-2003			
	June 2014	July 2014	August 2014	Avg 2014	Avg Jun	Avg Jul	Avg Aug	Avg 93-03
Blue Mountain Lake	0.11	0.06	0.02	0.06	0.08	0.07	0.05	0.07
Eighth Lake	0.18	0.11	0.10	0.13	0.10	0.06	0.03	0.06
Fawn Lake	0.01	0.01	0.00	0.01	0.03	0.03	0.02	0.03
Fifth Lake	0.25	0.17	0.14	0.18	0.18	0.15	0.10	0.14
Fourth Lake	0.20	0.13	0.10	0.15	0.20	0.16	0.10	0.16
Indian Lake	0.28	0.20	0.15	0.21	0.24	0.18	0.14	0.19
Lake Abanakee	0.24	0.14	0.13	0.17	0.11	0.08	0.08	0.09
Lake Adirondack	0.01	0.00	0.00	0.01	0.02	0.02	0.02	0.02
Lake Algonquin	0.10	0.05	0.04	0.06	0.07	0.05	0.03	0.05
Lake Eaton	0.11	0.08	0.02	0.07	0.10	0.07	0.05	0.08
Lake Pleasant	0.04	0.00	0.00	0.01	0.08	0.04	0.03	0.05
Limekiln Lake	0.21	0.13	0.10	0.15	0.23	0.18	0.16	0.19
Long Lake	0.18	0.09	0.04	0.10	0.15	0.10	0.06	0.10
Morehouse Lake	0.06	0.00	0.00	0.02	0.14	0.06	0.05	0.08
Oxbow Lake	0.01	0.00	bdl	0.00	0.02	0.02	0.03	0.02
Piseco Lake	0.11	0.04	0.00	0.05	0.13	0.09	0.06	0.09
Raquette Lake	0.20	0.15	0.11	0.15	0.15	0.13	0.09	0.12
Sacandaga Lake	0.10	0.00	0.00	0.03	0.10	0.04	0.02	0.05
Seventh Lake	0.26	0.19	0.18	0.21	0.27	0.21	0.17	0.21
Sixth Lake	0.24	0.24	0.14	0.21	0.22	0.16	0.13	0.17
Spy Lake	0.02	0.00	0.00	0.01	0.05	0.02	0.03	0.03

bdl = below detection level

Hamilton County Nitrate Levels



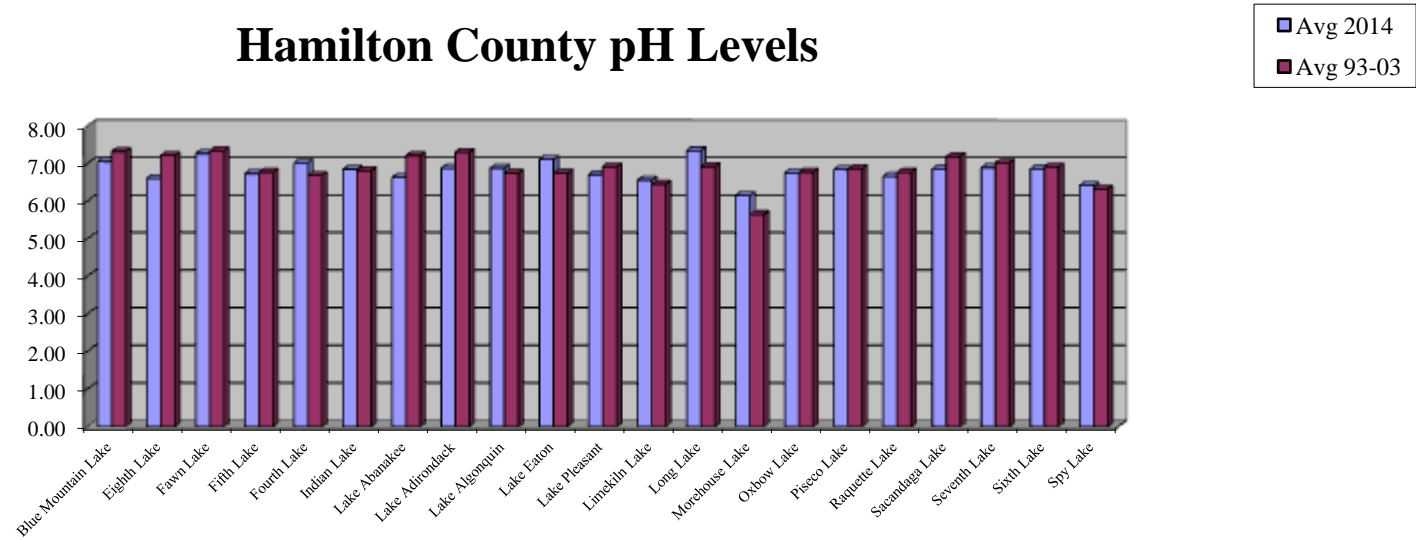
Hamilton County Nitrate Summer Trends



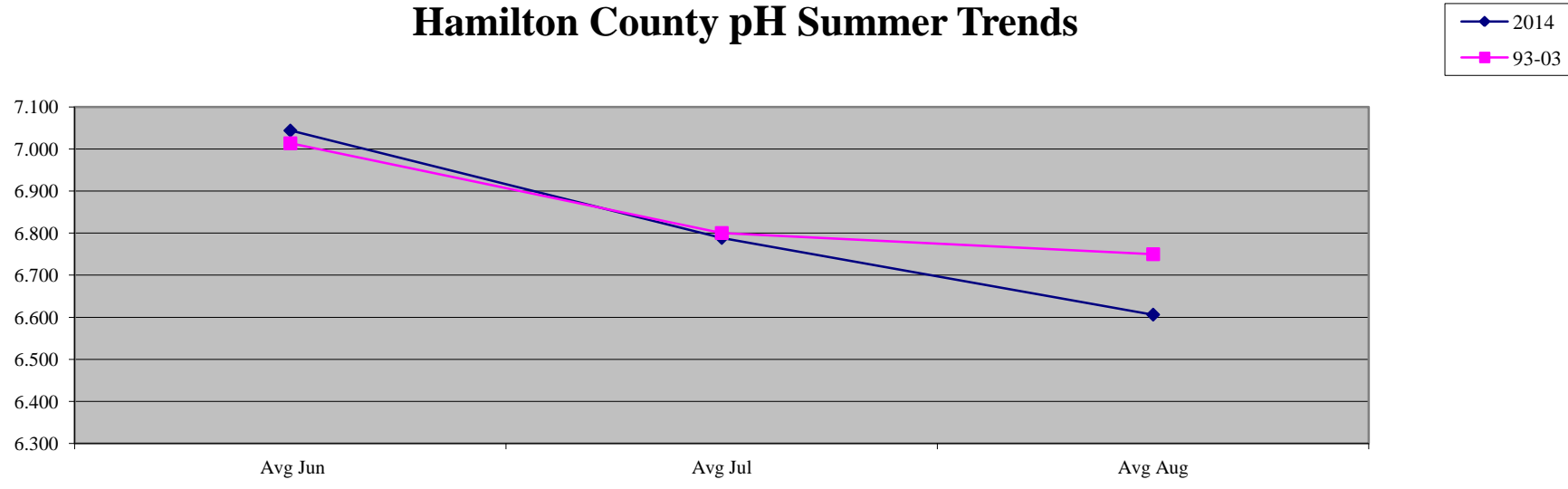
pH (1 meter down)

Site	2014				1993-2003			
	June 2014	July 2014	August 2014	Avg 2014	Avg Jun	Avg Jul	Avg Aug	Avg 93-03
Blue Mountain Lake	7.53	6.92	6.72	7.06	7.42	7.28	7.27	7.32
Eighth Lake	6.67	6.70	6.44	6.60	7.14	7.27	7.25	7.22
Fawn Lake	7.46	6.86	7.48	7.27	7.55	7.04	7.44	7.35
Fifth Lake	6.83	6.78	6.59	6.73	6.99	6.64	6.69	6.77
Fourth Lake	7.15	7.17	6.74	7.02	7.15	6.21	6.69	6.69
Indian Lake	7.11	0.00	6.60	6.86	7.14	6.32	6.98	6.81
Lake Abanakee	6.74	6.57	6.58	6.63	7.53	7.25	6.86	7.21
Lake Adirondack	7.34	6.74	6.55	6.88	7.39	7.16	7.35	7.30
Lake Algonquin	6.88	7.13	6.63	6.88	6.95	6.90	6.37	6.74
Lake Eaton	8.06	6.66	6.62	7.11	6.92	6.65	6.65	6.74
Lake Pleasant	6.70	6.90	6.52	6.71	6.94	6.96	6.85	6.91
Limekiln Lake	6.60	6.63	6.45	6.56	6.64	6.44	6.28	6.45
Long Lake	8.28	6.87	6.88	7.34	7.03	6.94	6.79	6.92
Morehouse Lake	5.89	6.44	6.12	6.15	5.74	5.76	5.44	5.65
Oxbow Lake	7.08	6.58	6.60	6.75	6.84	6.90	6.59	6.77
Piseco Lake	7.36	6.68	6.49	6.84	6.98	6.92	6.70	6.87
Raquette Lake	7.00	6.61	6.38	6.66	7.05	6.80	6.46	6.77
Sacandaga Lake	6.86	7.06	6.67	6.86	7.23	7.26	7.07	7.19
Seventh Lake	7.01	6.99	6.68	6.89	7.03	7.12	6.91	7.02
Sixth Lake	6.96	6.94	6.69	6.86	7.09	6.75	6.90	6.91
Spy Lake	6.41	6.54	6.30	6.42	6.52	6.26	6.20	6.32

Hamilton County pH Levels



Hamilton County pH Summer Trends

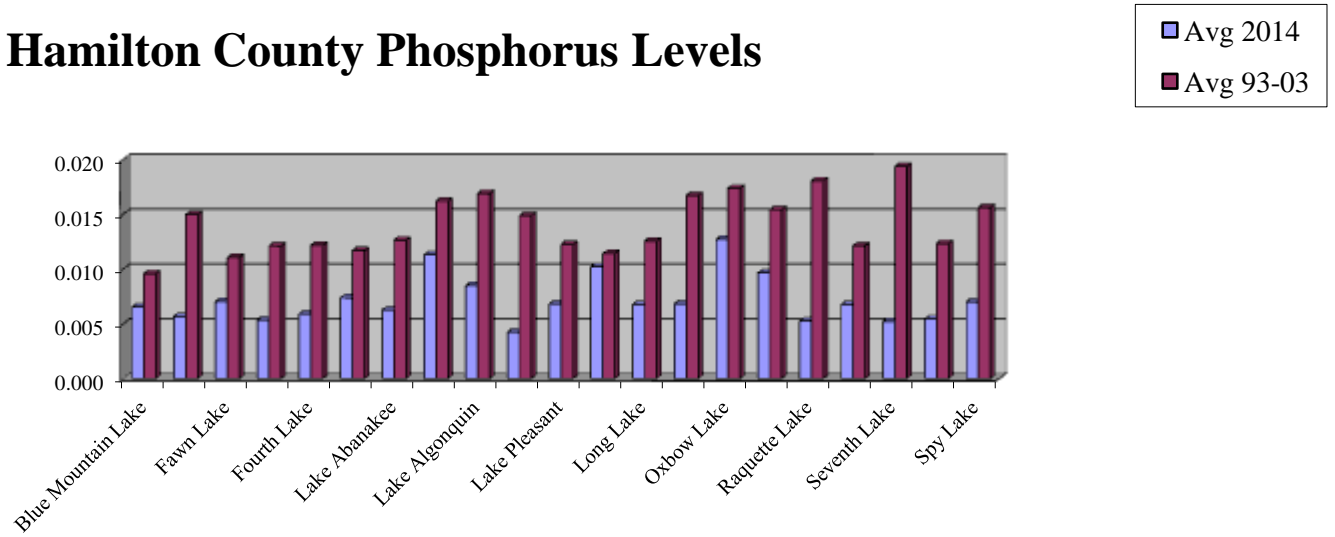


Total Phosphorus mg/l

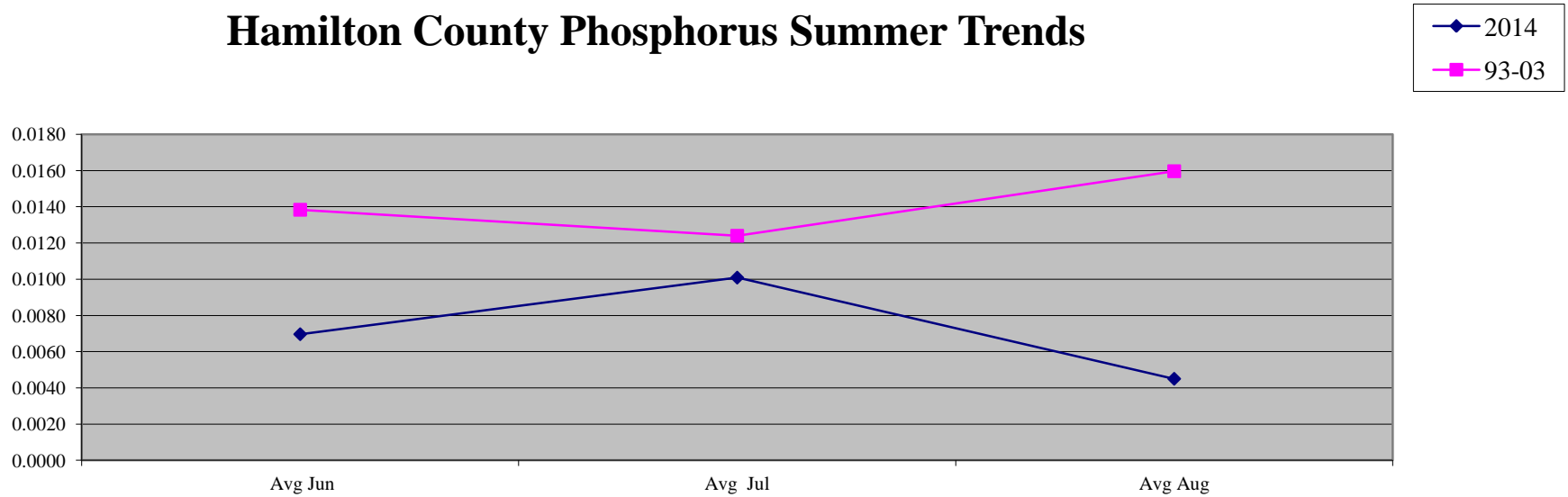
Site	2014				1993-2003			
	June 2014	July 2014	August 2014	Avg 2014	Avg Jun	Avg Jul	Avg Aug	Avg 93-03
Blue Mountain Lake	0.006	0.013	0.002	0.007	0.007	0.011	0.010	0.010
Eighth Lake	0.004	0.011	0.002	0.006	0.010	0.016	0.019	0.015
Fawn Lake	0.004	0.012	0.005	0.007	0.011	0.014	0.009	0.011
Fifth Lake	0.004	0.009	0.003	0.005	0.012	0.011	0.014	0.012
Fourth Lake	0.004	0.010	0.003	0.006	0.013	0.010	0.014	0.012
Indian Lake	0.004	0.012	0.006	0.007	0.011	0.010	0.014	0.012
Lake Abanakee	0.005	0.009	0.005	0.006	0.014	0.010	0.014	0.013
Lake Adirondack	0.011	0.014	0.009	0.011	0.019	0.014	0.015	0.016
Lake Algonquin	0.004	0.013	0.008	0.008	0.018	0.017	0.016	0.017
Lake Eaton	0.004	0.006	0.002	0.004	0.021	0.008	0.016	0.015
Lake Pleasant	0.008	0.008	0.005	0.007	0.014	0.009	0.013	0.012
Limekiln Lake	0.019	0.008	0.003	0.010	0.011	0.009	0.014	0.011
Long Lake	0.007	0.008	0.005	0.007	0.016	0.009	0.012	0.013
Morehouse Lake	0.007	0.009	0.004	0.007	0.013	0.024	0.013	0.017
Oxbow Lake	0.018	0.013	0.006	0.013	0.018	0.016	0.018	0.017
Piseco Lake	0.012	0.012	0.006	0.010	0.013	0.019	0.014	0.015
Raquette Lake	0.005	0.007	0.003	0.005	0.011	0.011	0.032	0.018
Sacandaga Lake	0.005	0.011	0.004	0.007	0.012	0.012	0.013	0.012
Seventh Lake	0.003	0.006	0.006	0.005	0.011	0.010	0.038	0.019
Sixth Lake	0.005	0.009	0.003	0.005	0.012	0.010	0.015	0.012
Spy Lake	0.007	0.011	0.004	0.007	0.025	0.011	0.011	0.016

Phosphorus	
Oligotrophic	<.010 mg/l
Mesotrophic	.01-.026 mg/l
Eutrophic	>.026 mg/l

Hamilton County Phosphorus Levels



Hamilton County Phosphorus Summer Trends

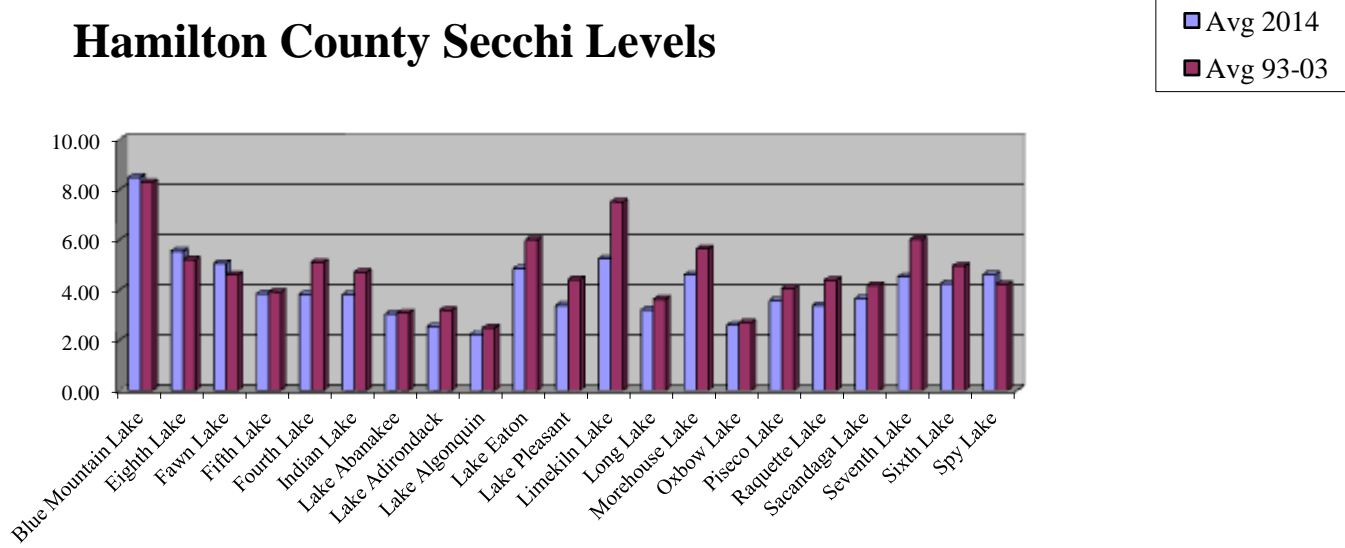


Secchi (m)

Site	2014				1993-2003			
	June 2014	July 2014	August 2014	Avg 2014	Avg Jun	Avg Jul	Avg Aug	Avg 93-03
Blue Mountain Lake	9.20	7.41	8.89	8.50	8.24	8.15	8.47	8.28
Eighth Lake	6.47	5.12	5.09	5.56	5.47	5.01	5.17	5.22
Fawn Lake	4.81	5.33	5.05	5.06	4.39	4.28	5.15	4.61
Fifth Lake	3.84	3.75	3.98	3.86	3.95	4.06	3.75	3.92
Fourth Lake	3.12	3.86	4.53	3.84	5.04	4.71	5.60	5.11
Indian Lake	3.95	4.05	3.47	3.82	4.59	4.57	5.00	4.72
Lake Abanakee	3.25	2.84	3.04	3.04	2.46	3.20	3.62	3.09
Lake Adirondack	2.76	2.60	2.29	2.55	3.39	3.01	3.20	3.20
Lake Algonquin	2.18	2.04	2.48	2.23	2.49	2.50	2.50	2.50
Lake Eaton	4.86	5.53	4.18	4.86	6.53	5.35	6.13	6.00
Lake Pleasant	3.37	2.84	3.98	3.40	4.41	4.32	4.53	4.42
Limekiln Lake	5.99	5.26	4.50	5.25	7.96	7.18	7.42	7.52
Long Lake	3.01	3.35	3.29	3.22	3.78	3.47	3.67	3.64
Morehouse Lake	5.44	3.47	4.90	4.60	5.14	6.04	5.75	5.64
Oxbow Lake	2.30	2.73	2.78	2.60	2.77	2.54	2.81	2.71
Piseco Lake	3.18	3.38	4.21	3.59	4.24	3.96	3.96	4.05
Raquette Lake	3.37	3.45	3.34	3.39	4.19	4.69	4.33	4.40
Sacandaga Lake	3.47	3.44	4.08	3.66	4.27	3.76	4.55	4.19
Seventh Lake	3.95	5.29	4.33	4.52	6.09	6.02	5.96	6.02
Sixth Lake	3.35	5.08	4.32	4.25	4.94	4.71	5.25	4.97
Spy Lake	3.74	4.71	5.43	4.63	4.41	4.06	4.21	4.23

<u>Secchi Reading</u>	
Oligotrophic	>4.6 m
Mesotrophic	1.9-4.6 m
Eutrophic	<1.9 m

Hamilton County Secchi Levels



Hamilton County Secchi Summer Trends

