

Hemlock Farms Community Association Lake Manager's Report (July 2008)

On July 30, 2008, **Ecological Solutions, Inc. (ECS)** visited the fourteen (14) lakes and ponds within the Hemlock Farms Community Association to perform their monthly monitoring activities. **ECS** observed conditions on the property from 10:00 a.m. until 3:00 p.m. During that site visit the following tasks were performed:

1. Water Quality Monitoring

Weather: Mostly Sunny; High temperature was around 78°F.

In general, the results of the water chemistry showed average surface temperatures. In addition, the pH values fell within normal limits. Therefore, acidic and alkaline conditions were not a concern within the lake systems. In general, the dissolved oxygen levels were slightly higher than those observed in June. Therefore, there was no concern about the amount of available oxygen for fish populations within these pond and lake communities. The water was clear as indicated by the low turbidity levels, with the exception of Rockwood, Ledgeway, and Hemlock. According to the water quality results thus far throughout the sampling season, the water appears to be soft but appears to have a slight sensitivity to acid rain. The secchi depth measurements ranged in depth from 1.1 to 3.2 meters. The nitrate levels observed within the water communities were considered normal for this time of year. However, a majority of the lakes contained high phosphorous levels. The levels ranged from 0.03ppm to 2.89ppm.

2. Aquatic Plant Growth

During the site visit, **ECS** observed heavy filamentous algae mats and water star grass in the northeastern half of Bluestone pond. Mirror and Willow ponds were experiencing algae blooms during the site visit. A few small filamentous algae mats were observed on the surface. McConnell Lake was finished being treated for an identified small pondweed. Rimrock and Rockwood Ponds contained heavy bladderwort. Of the observations made during this site visit, Rockwood appeared to be in the worst shape visually. It was 75% covered with bladderwort. In addition, a few small areas of bladderwort were observed on the surface of Rimrock as well. Ledgeway was beginning to experience the browning of white water lilies. Ledgeway was treated two days prior to the monitoring. Little Bell was beginning to show some water star grass growth in the back western corner of the pond. Finally, Little Camp pond contained a few filamentous algae mats on the surface. Elm, Hemlock, Lower Hemlock, and Saddlebrook were absent of any algae or weeds.

3. General Observations

Bluestone

When ECS arrived at Bluestone Pond on July 30, 2008 two fishermen were located at the boat launch. A heavy filamentous algae bloom and water star grass was observed in the northeastern half of the lake. This was also evident by the high nutrient levels found within the pond. ECS treated these areas on August 4, 2008. In addition, ECS returned on August 11, 2008 and observed improved conditions at the pond. Fragments of water star grass were blown in to shore and no algae mats were observed on the pond.

Mirror

A minimal amount of algae was present on the surface of mirror pond. Approximately three (3) algae mats were floating on the surface. In addition, white water lilies were actively growing on the pond covering approximately 10% of the pond. ECS arrived on August 11, 2008 and observed a larger portion of filamentous algae on the surface and a small portion of water star grass beginning to grow on the bottom. The pond was treated on August 13, 2008. In addition, a snapping turtle was observed basking on the surface, a unique fungus was observed along the southwestern portion of pond, and a cardinal flower was blooming on the western shore of the pond. Owners of the pond greeted ECS and discussed the history of the pond with them. ECS left their business card with the owners and directed them to contact us if they had any other questions or problems with the pond.

Willow

On July 30, 2008, approximately one month after treating the pond for algae, bladderwort, and water star grass. ECS observed no weed growth within the pond on July 30, 2008. However, a few small algae patches were observed near the inlet of the pond. In addition, the spatterdock appeared to be more mature but not flowering, indicating that it was not yet ready to be treated. Finally, on August 11, 2008, the same amount of algae was observed on the pond. ECS did feel the amount of algae warranted a treatment.

McConnell

ECS began treating the unidentified pondweed in the central portion of the lake on July 28, 2008. The final treatment was completed on July 30, 2008. In addition, ECS surveyed the lake on August 11, 2008 and observed clear lake conditions around the Laurel Ridge marine area. The water chemistry results indicated high phosphorous levels in the lake. However, on August 11, 2008 no algae was present on the lake.

Rockwood

ECS observed heavy bladderwort mats covering approximately 75% of the pond's surface. **ECS** met with the homeowner on July 30, 2008 to attempt to gain access through their property in order to conduct a better treatment of the pond. On August 4, 2008 the pond was treated for bladderwort. When **ECS** returned on August 11, 2008 the entire pond was clear of bladderwort. In addition, the nutrient levels within the pond were within normal limits.

Rimrock

Overall the condition of the pond was good. A few small areas of floating bladderwort were present on the pond. However, it appeared that the floating mats were already dead and that fragments had broken loose to the surface. Therefore, **ECS** did not perform an herbicide treatment. In addition, the water chemistry results came back normal.

Ledgeway

The white water lilies that were covering 60% of the pond were treated on July 28, 2008. When **ECS** arrived on July 30, 2008 some of the lilies were all ready starting to brown. While on site on August 11, 2008, **ECS** observed the majority of the lilies had dissipated. **ECS** was approached by homeowner on August 13, 2008 to ensure we had authority to be on the property. The matter was cleared.

Little Bell

Unfortunately, our water sample was lost on July 30, 2008. However, no algae was observed on the pond. In contrast, a small area of Water star grass was beginning to grow on the bottom of the pond in the back western corner. There have been no complaints made about the condition of the pond this year. It appears that nuisance algae is not a concern this year. **ECS** plans to monitor the weed growth and will conduct a treatment if necessary.

Elm

Hemlock security approached **ECS** to acquire permission to be on the lake with a gas motor. This was not the first time this problem has arisen on this lake. As in every month so far, Elm Lake did not contain any submerged weeds and no algae blooms have occurred on the lake. Secchi depths are the deepest on this lake. Several painted and snapping turtles have been observed on the lake this year. Also, this lake contained the lowest nutrient levels.

July Report

Hemlock

A few small patches of white water lily were observed in the southern cove areas on July 30, 2008. The lake had a secchi depth of 1.8 meters and an algae bloom occurring was not a concern. This was the second deepest measurement throughout the community. Hemlock Farms has received a few complaints about algae on the lake since July 30, 2008. When **ECS** on site on August 13, 2008 a planktonic algae bloom was noticed in the Little Camp beach area. In addition, a filamentous and planktonic bloom was observed at the Fairway Drive boat launch. Due to problems obtaining enough algacide and thunderstorms a treatment was not completed. An algae treatment is scheduled for August 18, 2008.

Lower Hemlock

In previous years algae blooms were frequent occurrences on this lake. However, in 2008, the first algae bloom was not observed on the lake until August 13, 2008. This fact is reiterated by the low nutrient levels obtained thus far in 2008. This lake is also so scheduled to be treated for a planktonic algae bloom on August 18, 2008.

Saddlebrook

ECS has yet to observe any submerged weeds on algae in the pond in 2008. However, the water chemistry results obtained on July 30, 2008 contained very high phosphorous levels in the pond. **ECS** will continue to monitor the pond for an algae bloom. There are a few areas along the shoreline that will be treated in August for invasive phragmites.

Little Camp

This pond has been treated once in 2008 for filamentous algae and encroaching cattails along the shoreline. On the July monitoring visit a few patches of algae were observed on the pond. In addition, on August 11, 2008 the algae had become expanded and **ECS** planned to treat the pond. On August 13, 2008 the pond did not contain any filamentous algae. This was probably due to heavy thunderstorms in the area. Therefore, the pond has not been treated for algae, as it was not warranted.

ECS will continue to monitor the lakes and ponds for any changes. A summary chart has been attached showing cumulative treatment and monitoring results thus far in 2008.

If you have any questions regarding any aspect of this report, please do not hesitate to contact us.

Sincerely,

Jessica Demusz

Jessica Demusz
Environmental Scientist

Attachments:
June 2008 Water Quality Parameter Worksheet
Treatment Detail Sheets

Lake/Pond	Date	Surface Temp (°C)	Surface D.O. (mg/l)	pH	Turbidity (FTU)	Nitrates (ppm)	Phosphates (ppm)	Alkalinity/Hardness (ppm)	Secchi (m)	Conductivity (um/hos)	Treated (Y/N)	Chemical Used	Amount Applied (gal/lbs.)	Comments
Elm	5/28/08	19.9	9.18	7.2	2	0.10	0.37	12/N A	2.7	150	N	NA	NA	no algae or weeds were observed on the lake surface.
Elm	6/23/08	25.7	8.5	7.6	0	0.08	2.72	12/28	5	140	N	NA	NA	no algae or weeds were observed on the lake surface.
Elm	7/30/08	29.1	7.51	7.3	4	0.19	0.09	NA	3.2	130	N	NA	NA	no algae or weeds were observed on the lake surface.
Hemlock	5/28/08	18.7	9.75	7.2	6	0.23	0.88	16/N A	1.9	140	N	NA	NA	no algae was observed in nuisance areas.
Hemlock	6/23/08	25.6	8.19	7.4	0	0.13	2.22	20/32	1.3	130	N	NA	NA	water lillies beginning to surface in cove.
Hemlock	7/30/08	29.8	8.89	7.6	13	0.09	0.69	NA	1.8	110	N	NA	NA	No algae was observed in cove areas.
Lower Hemlock	5/28/08	19.2	9.24	7.3	4	0.17	0.91	16/N A	2.5	120	N	NA	NA	no algae was visible on the surface.
Lower Hemlock	6/23/08	26.5	8.69	7.5	11	0	0.83	20/36	1.3	130	N	NA	NA	no algae was visible.
Lower Hemlock	7/30/08	28.9	8.76	7.6	0	0.19	0.03	NA	1.1	110	N	NA	NA	no algae was visible.
Saddlebrook	5/28/08	21.0	8.58	7.1	2	0.11	0.04	8/NA	2 (bot)	100	N	NA	NA	no algae or weeds visible
Saddlebrook	6/23/08	26.1	8.33	7.5	3	0.08	0.49	16/20	1.4	100	N	NA	NA	no algae or weeds visible.
Saddlebrook	7/30/08	30.5	8.34	8	5	0.07	2.89	NA	1.5 (bot)	100	N	NA	NA	no algae or weeds visible
Little Camp	5/28/08	22	12.13	7.4	8	0.1	0.37	8	1.5 (bot)	160	N	NA	NA	filamentous algae on surface. Will treat on next visit.
Little Camp	6/4/08	25.1	10.33	8.2	N/A	N/A	N/A	N/A	1.2	170	Y	Cutrine/Reward	2.5 Cutrine 1 qt. Reward	Reward was used on cattails where fishing takes place and Cutrine was used on filamentous algae mats.
Little Camp	6/23/08	26.3	8.58	7.4	2	0.08	0.24	20/40	1	170	N	NA	NA	Algae has cleared up from previous treatment. Some bladderwort in small patches.
Little Camp	7/30/08	29.8	12.95	8.2	0	0.03	1.99	NA	1.1 (bot)	150	N	NA	NA	very small area of filamentous algae on surface.

Rockwood	5/28/08	20.5	8.63	7.4	7	0.12	0.23	8/NA	2 (bot)	30	N	NA	NA	bladderwort was heavy on the bottom and some mats are starting to form.
Rockwood	6/23/08	25.0	7.84	7.7	0	0.00	0.15	16/24	2	30	N	NA	NA	bladderwort needs to be treated on next visit.
Rockwood	6/25/08	NA	7.53	NA	NA	NA	NA	NA	NA	NA	Y	Citrine/Reward	1 Reward 0.75 Citrine	treated bladderwort
Rockwood	7/30/08	30.4	8.42	7.3	11	0.17	0.45	NA	bottom	30	N	NA	NA	bladderwort if floating on the surface. 75% coverage.
Rockwood	8/4/08	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	Citrine/Reward	1.5 of each	treated floating bladderwort and brown algae.
Rimrock	5/28/08	21.2	8.73	7.3	0	0.15	0.2	8/NA	2.5 (bot)	50	N	NA	NA	bladderwort was starting growing on the bottom.
Rimrock	6/23/08	25.9	7.76	7.8	2	0.09	0.33	12/20	1.7	50	N	NA	NA	bladderwort is ready to treat on next visit.
Rimrock	6/25/08	NA	8.02	NA	NA	NA	NA	NA	NA	NA	Y	Citrine/Reward	3 gal each	treated the bladderwort.
Rimrock	7/30/08	30.4	8.15	7.1	0	0.03	1.02	NA	1.4	50	N	NA	NA	small areas of bladderwort floating on surface.
Ledgeway	5/28/08	21.7	7.95	7.2	4	0.0	1.05	12/N A	1.4	100	N	NA	NA	water lillies were starting to surface.
Ledgeway	6/23/08	25.8	6.76	7.5	10	0.2	0.29	8/28	1.5	100	N	NA	NA	water lillies surfacing and bladderwort starting to show on bottom.
Ledgeway	7/28/08	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	AquaPro	1	Treated water lillies
Ledgeway	7/30/08	31	7.73	7.7	13	0.17	0.08	NA	1.1	90	N	NA	NA	lillies starting to brown out from treatment.
Little Bell	5/28/08	18.8	10.06	7.3	0	0.16	0.25	12/N A	2	190	N	NA	NA	no weeds or algae visible
Little Bell	6/23/08	24.7	8.36	7.5	12	0.09	0.68	12/36	1.9	190	N	NA	NA	No algae was visible and some water star grass was observed along northern shoreline.
Little Bell	7/30/08	30.5	9.54	7.6	NA	NA	NA	NA	1.5	160	N	NA	NA	lost our sample. Some water star grass was beginning to grow in back quarter.
Bluestone	5/28/08	20.2	9.45	7.3	7	0.11	1.75	12/N A	2.7 (bot)	170	Y	Citrine/Reward	1 gal each	water star grass and algae were heavy around boat launch.
Bluestone	6/23/08	25.0	8.51	7.6	0	0.06	1.41	20/32	1.57	160	N	NA	NA	water star grass and algae have cleared up from last month's treatment.

Bluestone	7/30/08	30.7	14.28	7.6	0	0.26	2.04	NA	no access	150	N	NA	NA	heavy filamentous algae and water star grass in boat launch area.
Bluestone	8/4/08	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	Cutrine/ Reward/ AquaPro	3 gal Reward 3 gal Cutrine 0.25 AquaPro	treated 1/3 of lake in front of boat launch for algae and water star grass. Spot treatment for lillies was completed
Mirror	5/28/08	17.7	8.23	7.4	0	0.09	0.87	12/NA	1.5(bot)	160	N	NA	NA	no weeds or algae visible
Mirror	6/23/08	23.4	7.42	7.6	11	0.07	0.54	20/32	1.25	160	N	NA	NA	algae mats starting to form. Will treat on next visit.
Mirror	6/25/08	NA	8.05	NA	NA	NA	NA	NA	NA	NA	Y	Cutrine	0.75	Algae treatment was done for filamentous algae mats.
Mirror	7/30/08	28.5	10.09	7.5	4	0.24	0.76	NA	bottom	130	N	NA	NA	small area of filamentous algae on surface.
Willow	5/20/08	11.4	11.14	7.3	N/A	N/A	N/A	N/A	bottom	N/A	Y	Cutrine	3.5	Algae was growing from the bottom and water star grass was visible.
Willow	5/28/08	18.7	8.71	7.2	3	0.05	0.52	12/NA	0.6 (bot)	160	N	NA	NA	Algae has gone due to last week's treatment. Spatterdock beginning to grow.
Willow	6/23/08	23.8	6.64	7.6	9	0.07	0.17	20/36	bottom	170	N	NA	NA	bladderwort, water star grass, and algae heavy in areas. Will treat on next visit.
Willow	6/25/08	NA	7.89	NA	NA	NA	NA	NA	NA	NA	Y	Cutrine/ Reward	1.25 Reward 2.5 Cutrine	treated the bladderwort, water star grass, and algae.
Willow	7/30/08	28.8	9.93	7.6	0	0.16	1.08	NA	bottom	130	N	NA	NA	very small area of filamentous algae near inlet.
McConnell	5/28/08	19	9.47	7.6	2	0.12	0.29	8/NA	2.5	120	N	NA	NA	Good water clarity. Shoreline emergents starting to grow.
McConnell	6/23/08	26.5	8.38	7.1	4	0.17	0.02	24/36	2	120	N	NA	NA	nuisance weeds from last year have not emerged yet.
McConnell	7/28/08	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	Cutrine/ Reward/ AquaPro	10 Reward 5 Cutrine 0.5 AquaPro	treated unidentified pondweed in same areas as in 2007. Treated docks that were enclosed with lillies.
McConnell	7/30/08	28.7	7.95	6.9	0	0.12	2.21	NA	1.4	120	Y	Cutrine/ Reward	7.5 gal each	Finished treating pondweed from previous visit.

Figure 1. Summary table of the water chemistry results and treatment details observed in 2008 at the Hemlock Farms Community Association.

Ecological
Solutions, Inc.



Aquatic Herbicide Treatment Details

Pond/Lake Name: McConnell Lake

Treatment Date: 7-28-2008 & 7-30-2008

Arrival Time: 10:10

Departure Time: 12:00

Water Temperature (°C): 28.7 pH: 6.9

Dissolved Oxygen (mg/l): 7.95 Conductivity (ppm): 120

Water clarity (m): 1.4

Chemical Name: Citrine Plus; Reward; Rodeo

Amount Applied: 17.5 gals Reward; 12.5 Citrine Plus; 0.5 Aqua Pro

Additional Information: Chemical was applied in the central portion of the lake , in the same

areas as in 2007. Water lilies were spot treated in front of homeowner docks.

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Aquatic Herbicide Treatment Details

Ecological Solutions, Inc.

Pond/Lake Name: Ledgeway Pond

Treatment Date: 7-30-2008

Arrival Time: _____

Departure Time: _____

Water Temperature (°C): 31.0 **pH:** 77.6

Dissolved Oxygen (mg/l): 9.54 **Conductivity (ppm):** 160

Water clarity (m): 1.5

Chemical Name: AquaPro

Amount Applied: 1 gal

Additional Information: Water lilies were treated heavily. However, several areas were left

alone to preserve fish habitat.
