

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

On June 23, 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. The dissolved oxygen levels were slightly below normal within Ledgeway Pond, Willow Pond, and Orchard Pond. There was a slight concern about the amount of available oxygen for fish populations within these pond communities. The water was clear as indicated by the low turbidity levels. According to the results the water appears to be soft but is slightly sensitive to acid rain. The secchi depth measurements ranged in depth from 1.0 to 5.0 meters. In general the total nitrate levels were considered normal. In contrast, Little Bell, Mirror, and Saddlebrook had slightly above average total phosphorous levels. Finally, Bluestone, Lower Hemlock, Orchard, Hemlock, and Elm contained extremely high total phosphorous levels. High phosphorus levels indicate the potential for an algae bloom to occur.

2. Aquatic Plant Growth & Observations

During the site visit, **ECS** observed heavy filamentous algae mats, bladderwort, and Naiad in Willow Pond. In addition, several opened mussel shells were located within Willow Pond. Mirror Pond was experiencing an algae bloom during the site visit. Rimrock and Rockwood Ponds contained heavy bladderwort. Approximately, one quarter (25%) of Rockwood Pond had bladderwort reaching the surface. Water lilies were starting to surface on Ledgeway Pond. The weed beds which were observed last year on McConnell Lake were not present. Little Camp and Bluestone ponds have responded to last month's treatments. In general, the spring fish spawning was successful at the ponds and lakes within the community. Several young of the year were observed within the lake and pond communities. **ECS** treated the following on Wednesday, June 25, 2008: Mirror Pond, Willow Pond, Rimrock Pond, and Rockwood Pond. See the attached treatment detail sheets.

May Report

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

Parameter	McConnell Creek Watershed					York Creek Watershed	Maple Creek Watershed			Rock Hill Creek Watershed				
	Bluestone	McConnell	Mirror	Willow	Little Bell	Elm	Rockwood	Rimrock	Ledgeway	Little Camp	Lower	Hemlock	Saddlebrook	Orchard
pH	7.6	7.1	7.6	7.6	7.5	7.6	7.7	7.6	7.5	7.4	7.5	7.4	7.5	7.4
TDS(umhos)	160	120	160	170	190	140	30	50	100	170	130	130	100	110
DO(Surface)	8.51	8.38	7.42	6.64	8.36	8.5	7.84	7.76	6.76	8.58	8.69	8.19	8.33	5.82
DO(1m)	N/A	8.41	N/A	N/A	N/A	8.48	N/A	N/A	N/A	N/A	N/A	8.33	N/A	N/A
DO(2m)	N/A	8.38	N/A	N/A	N/A	8.31	N/A	N/A	N/A	N/A	N/A	7.96	N/A	N/A
DO (3m)	N/A	7.93	N/A	N/A	N/A	8.15	N/A	N/A	N/A	N/A	N/A	4.93	N/A	N/A
DO (4m)	N/A	N/A	N/A	N/A	N/A	8.1	N/A	N/A	N/A	N/A	N/A	0.41	N/A	N/A
DO (5m)	N/A	N/A	N/A	N/A	N/A	2.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Temp (°C) surface	25	26.5	23.4	23.8	24.7	25.7	25	25.9	25.8	26.3	26.5	25.6	26.1	26
Temp (°C) (1m)	N/A	25.8	N/A	N/A	N/A	25.2	N/A	N/A	N/A	N/A	N/A	24.8	N/A	N/A
Temp (°C) (2m)	N/A	24.9	N/A	N/A	N/A	25	N/A	N/A	N/A	N/A	N/A	24.6	N/A	N/A
Temp (°C) (3m)	N/A	24.6	N/A	N/A	N/A	24.8	N/A	N/A	N/A	N/A	N/A	23.7	N/A	N/A
Temp (°C) (4m)	N/A	N/A	N/A	N/A	N/A	23.3	N/A	N/A	N/A	N/A	N/A	21.4	N/A	N/A
Temp (°C) (5m)	N/A	N/A	N/A	N/A	N/A	20.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Air (°F)	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Secchi (m)	1.57	2	1.25	bottom	1.9	5	2	1.7	1.5	1	1.3	1.3	1.4	N/A
Turbidity (FTU)	0	4	11	9	12	0	0	2	10	2	11	0	3	8
Nitrates (mg/l)	0.06	0.17	0.07	0.07	0.09	0.08	0	0.09	0.22	0.08	0	0.13	0.08	0.06
Phosphates (mg/l)	1.41	0.02	0.54	0.17	0.68	2.72	0.15	0.33	0.29	0.24	0.83	2.22	0.49	0.97
Alkalinity (ppm)	20	24	20	20	12	12	16	12	8	20	20	20	16	40
Hardness (ppm)	32	36	32	36	36	28	24	20	28	40	36	32	20	48

Figure 1. Table displaying the water quality results collected at the fourteen (14) lakes and ponds located within the Hemlock Farms Community Association on June 23, 2008.



Aquatic Herbicide Treatment Details

Pond/Lake Name: Mirror Pond

Treatment Date: 6-25-2008

Arrival Time: 10:10

Departure Time: 10:30

Water Temperature (°C): 23.4 pH: 7.6

Dissolved Oxygen (mg/l): 8.05 Conductivity (ppm): 160

Water clarity (m): 1.25

Chemical Name: Citrine Plus

Amount Applied: 0.75 gal

Additional Information: Chemical was applied along the entire surface from the

shoreline using a backpack sprayer.



Aquatic Herbicide Treatment Details
Ecological Solutions, Inc.

Pond/Lake Name: Willow Pond

Treatment Date: 6-25-2008

Arrival Time: 10:20

Departure Time: 11:00

Water Temperature (°C): 23.8 pH: 7.6

Dissolved Oxygen (mg/l): 7.89 Conductivity (ppm): 170

Water clarity (m): to the bottom

Chemical Name: Citrine Plus & Reward

Amount Applied: 2.5 gal Citrine Plus and 1.25 gal Reward

Additional Information: Chemical was applied along the entire surface.

We
observed several opened mussel shells within the pond.

Ecological
Solutions, Inc.



Aquatic Herbicide Treatment Details

Ecological Solutions, Inc.

Pond/Lake Name: Rimrock Pond

Treatment Date: 6-25-2008

Arrival Time: 11:15

Departure Time: 12:20

Water Temperature (°C): 25.9 **pH:** 7.8

Dissolved Oxygen (mg/l): 7.76 **Conductivity (ppm):** 50

Water clarity (m): 1.7

Chemical Name: Citrine Plus & Reward

Amount Applied: 3 gal Citrine Plus and 3 gal Reward

Additional Information: Chemical was applied along the entire surface.

**Ecological
Solutions, Inc.**



Aquatic Herbicide Treatment Details

Ecological Solutions, Inc.

Pond/Lake Name: Rockwood Pond

Treatment Date: 6-25-2008

Arrival Time: 1:00

Departure Time: 1:30

Water Temperature (°C): 25.0 **pH:** 7.7

Dissolved Oxygen (mg/l): 7.53 **Conductivity (ppm):** 30

Water clarity (m): 2.0

Chemical Name: Citrine Plus & Reward

Amount Applied: 0.75 gal Citrine Plus and 1 gal Reward

Additional Information: Chemical was applied along the entire surface with a

backpack sprayer.
