SUMMARY OF DEPTH PROFILES

MONITORING DAY : 9/30/2009

Lovers Lake - South Deep Basin

ft	meters	Temp (C)
0	0	19.1
3	0.9	19.1
6	1.8	19.1
9	2.7	19.0
12	3.7	18.8
15	4.6	18.7
18	5.5	18.4
19	5.8	17.4
20	6.1	16.5

Lovers Lake - North Deep Basin

ft	m	Temp (C)
0	0	19.0
3.3	1	19.0
6.6	2	19.0
9.8	3	19.0
13.1	4	19.0
16.4	5	18.9
19.7	6	18.9
22	6.7	17.8
23	7.0	16.9
24	7.3	15.8
25	7.6	14.5
26	7.9	13.8
27	8.2	12.8

Stillwater Pond - Deep Basin

ft	meters	Temp (C)
0	0	19.7
3	0.9	19.4
6	1.8	19.2
9	2.7	19.1
12	3.7	19.0
15	4.6	18.9
17	5.2	18.5
18	5.5	17.9
19	5.8	16.5
20	6.1	14.9
21	6.4	13.6
24	7.3	11.3
27	8.2	9.7
30	9.1	8.4
35	10.7	7.6

Pre-treatment monitoring

Monitoring day: 9/22/2010

Lovers Lake - North Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO (%)	Cond (mS/cm)
0	19.6	6.9	8.5	92.5	0.2
1	19.6	6.9	8.4	91.5	0.2
2	19.6	6.9	8.4	91.2	0.2
3	19.6	6.9	8.3	91.0	0.2
4	19.6	6.9	8.3	90.9	0.2
5	19.5	6.9	8.3	90.7	0.2
6	18.5	6.6	2.8	30.1	0.2
7	12.3	6.6	0.6	0.6	0.3
8	10.5	6.7	0.2	1.8	0.3
9	9.7	6.8	0.2	1.7	0.4
10	9.4	6.8	0.2	1.6	0.5

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Lovers Lake - South Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO %	Cond (mS/cm)
0	19.7	7.1	8.7	95.1	0.2
1	19.7	7.1	8.6	93.8	0.2
2	19.6	7.1	8.5	93.1	0.2
3	19.6	7.1	8.5	92.5	0.2
4	19.6	7.0	8.4	91.4	0.2
5	19.1	6.7	4.1	44.8	0.2
6	13.7	6.8	0.6	5.1	0.5
6.1	13.8	7.1	0.3	2.5	0.5

Stillwater Pond - Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO %	Cond (mS/cm)
0	20.0	7.4	9.1	100.3	0.2
1	19.9	7.3	9.0	98.2	0.2
2	19.8	7.2	8.9	97.2	0.2
3	19.7	7.2	8.6	94.1	0.2
4	19.6	7.1	8.3	90.2	0.2
4.5	19.5	6.9	7.7	84.4	0.2
5	17.7	6.7	0.8	8.6	0.2
6	11.8	6.5	0.3	2.3	0.2
7	9.8	6.4	0.2	1.9	0.2
8	8.4	6.5	0.2	1.5	0.2
9	7.5	6.5	0.2	1.3	0.2
10	7.3	6.5	0.2	1.4	0.2
11	7.2	6.5	0.2	1.2	0.2
12	7.1	6.5	0.1	1.1	0.2
13	7.1	6.5	0.1	1.1	0.2

Initial post-implementation Monitoring

Monitoring day: 11/2/2010

Lovers Lake - North Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO%	Cond (mS/cm)
0	12.4	7.2	9.8	91.6	0.2
1	12.4	7.2	9.8	92.1	0.2
2	12.4	7.2	9.8	92.2	0.2
3	12.4	7.2	9.8	92.1	0.2
4	12.4	7.2	9.8	92.0	0.2
5	12.4	7.2	9.8	92.1	0.2
6	12.4	7.2	9.8	91.4	0.2
7	12.4	7.1	9.8	91.6	0.2
8	12.3	7.1	9.8	91.3	0.2
9	12.1	7.1	9.7	90.7	0.2

Secchi: 2.80 m

Lovers Lake - South Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO %	Cond (mS/cm)
0	12.0	6.7	9.9	92.2	0.2
1	12.0	6.8	10.0	93.2	0.2
2	12.1	6.9	10.1	93.5	0.2
3	12.1	6.9	10.1	93.6	0.2
4	12.1	7.0	10.0	93.3	0.2
5	12.1	7.0	10.1	93.5	0.2
6	12.0	7.0	10.0	92.7	0.2

Secchi: 3.44 m

Stillwater Pond - Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO %	Cond (mS/cm)
0	12.1	7.2	9.1	85.2	0.2
1	12.2	7.1	9.1	84.7	0.2
2	12.2	7.1	9.0	84.3	0.2
3	12.2	7.1	9.0	84.1	0.2
4	12.2	7.0	9.0	84.1	0.2
5	12.2	7.0	8.9	82.8	0.2
6	12.1	6.9	8.7	80.6	0.2
7	12.1	6.8	8.4	78.2	0.2
8	11.3	6.6	6.0	55.6	0.2
9	8.4	6.5	0.8	7.2	0.2
10	7.7	6.5	0.8	6.4	0.2
11	7.5	6.4	0.9	7.3	0.2
12	7.4	6.4	0.9	7.6	0.2
13	7.3	6.4	0.9	7.5	0.2
14	7.2	6.5	0.9	7.4	0.2

Secchi: 2.40 m

SUMMARY OF TEMPERATURE PROFILES AND SECCHI DEPTH DURING ALUM TREATMENT PERIOD

Monitoring Day	10/8/2010 Secchi (m)	10/9/2010 Secchi (m)	10/12/2010 Secchi (m)	10/14/2010 Secchi (m)	10/18/2010 Secchi (m)	10/20/2010 Secchi (m)	10/22/2010 Secchi (m)
LL South	0.95	1.55	1.2	1.7	1.9, 2.15		
LL North	0.95		1.0	2.05	1.3, 1.3		
Stillwater						1.95	2.9, 3.35

Lovers Lake - South Deep Basin

Monitoring Day Depth (m)	10/8/2010 Temp (C)	10/9/2010 Temp (C)	10/12/2010 Temp (C)	10/14/2010 Temp (C)
0	17	16.7	15.9	14.3
1	17.1	16.6	15.9	14.3
2	17.1	16.6	16	14.3
3	17.1	16.4	15.9	14.3
4	17	16.3	15.9	14.3
5	17	16.2	15.9	14.3
6	16.8	16	15.8	14.7
6.5	13.6	15.8	15.2	
7			14.6	

Lovers Lake - North Deep Basin

Monitoring Day Depth (m)	10/8/2010 Temp (C)	10/9/2010 Temp (C)	10/12/2010 Temp (C)	10/14/2010 Temp (C)
0	17.3	16.7	16	14.7
1	17.3	16.7	16	14.6
2	17.3	16.7	15.9	14.6
3	17.2	16.6	15.9	14.6
4	17.2	16.4	15.9	14.6
5	17.2	16.3	15.9	14.5
6	17.2	16.2	15.9	14.5
7	17.2	16.1	15.9	14.4
7.5	16.3	15.9	15.5	14.35
8	12.6	14.5	15.1	14.3
9	10.5	11.5	11.2	12.5
10	9.6		9.9	10.3

Stillwater Pond - Deep Basin

Monitoring Day Depth (m)	10/18/2010 Temp (C)	10/20/2010 Temp (C)
0	14.1	13.8
1	14.1	13.9
2	14.1	13.9
3	14.1	13.9
4	14.1	13.8
5	14.1	13.8
6	14	13.8
7	13.8	13.7
7.5	11.9	12.6
8	9.9	11.7
9	8.5	8.6
10	7.7	7.8
11	7.4	7.5
12	7.2	7.4
13	7.2	7.2
14	7.1	7.2
15	7.1	7.2
16		7.1

April Monitoring**
Monitoring day: 4/19/11

Lovers Lake - North Deep Basin

Depth (m)	Temp (C)	pH**	DO (mg/L)	DO (%)	Cond (mS/cm)
0	11.01	8.20	11.96	108.4	0.202
1	10.98	8.19	11.90	107.9	0.202
2	10.96	8.18	11.87	107.6	0.202
3	10.95	8.16	11.86	107.5	0.202
4	10.95	8.16	11.86	107.5	0.202
5	10.95	8.15	11.82	107.1	0.202
6	10.91	8.14	11.80	106.9	0.202
7	10.90	8.15	11.76	106.5	0.202
8	10.90	8.14	11.73	106.2	0.202
9	10.71	8.12	11.65	104.9	0.202

Secchi: 4.60 m

Lovers Lake - South Deep Basin

Depth (m)	Temp (C)	pH**	DO (mg/L)	DO (%)	Cond (mS/cm)
0	11.10	8.93	12.04	109.5	0.204
1	11.00	8.71	12.06	109.4	0.203
2	10.91	8.64	12.06	109.3	0.203
3	10.90	8.55	12.11	109.6	0.203
4	10.72	8.49	12.05	108.6	0.203
5	10.47	8.42	11.92	106.8	0.203
6	10.15	8.35	11.45	101.1	0.203

Secchi: 4.28 m

Stillwater Pond - Deep Basin

Depth (m)	Temp (C)	pH**	DO (mg/L)	DO (%)	Cond (mS/cm)
0	11.29	8.12	12.14	110.8	0.194
1	11.13	8.09	12.11	110.2	0.194
2	11.06	8.06	12.13	110.2	0.194
3	10.98	8.07	12.07	109.4	0.194
4	10.61	8.06	12.17	109.4	0.194
5	10.17	8.07	12.26	109.1	0.194
6	9.84	8.06	12.24	108.1	0.194
7	9.27	8.03	12.17	105.8	0.195
8	7.89	7.98	11.65	98.3	0.196
9	7.23	7.92	10.51	87.5	0.197
10	7.16	7.85	9.96	82.3	0.197
11	7.14	7.80	9.85	81.5	0.197
12	7.13	7.77	9.80	81.0	0.197
13	7.12	7.75	9.74	80.5	0.197
14	7.11	7.73	9.65	79.6	0.197

Secchi: 3.30 m

**pH probe didn't calibrate well, both 7 and 10 standards seemed ok at end of day but data might be suspect

June Monitoring
Monitoring day: 6/20/11

Lovers Lake - North Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO %	Cond (mS/cm)
0	21.60	6.16	8.93	101.3	0.224
1	21.49	6.47	8.96	101.5	0.220
2	21.44	6.58	8.88	100.5	0.220
3	20.66	6.70	9.09	101.3	0.218
4	19.88	6.75	8.71	95.7	0.218
4.5	19.33	6.80	8.80	95.6	0.217
5	17.82	6.78	8.78	92.5	0.217
6	15.18	6.59	4.17	41.6	0.218
7	14.21	6.49	0.75	7.4	0.219
8	13.36	6.45	0.62	5.9	0.215
9	12.00	6.33	0.23	2.4	0.264

Secchi: 3.50 m

Lovers Lake - South Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO (%)	Cond (mS/cm)
0	21.65	7.38	8.97	102.0	0.211
1	21.49	7.36	8.88	100.4	0.211
2	21.41	7.35	8.67	98.2	0.211
3	21.02	7.33	8.63	97.0	0.210
4	20.02	7.20	6.90	76.1	0.211
4.5	19.44	6.99	5.99	65.0	0.211
5	17.70	6.87	4.02	42.3	0.213
6	15.43	6.73	1.23	12.9	0.215
7	14.70	6.83	0.33	3.3	0.222

Secchi: 3.92 m

Stillwater Pond - Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO (%)	Cond (mS/cm)
0	22.37	7.74	9.27	106.8	0.200
1	22.21	7.75	9.18	105.5	0.200
2	21.33	7.79	9.58	107.9	0.199
3	20.00	7.78	9.68	106.5	0.199
3.5	19.17	7.72	9.52	103.4	0.198
4	17.44	7.79	10.67	111.4	0.196
4.5	16.62	7.81	11.18	114.3	0.195
5	14.97	7.81	11.23	111.3	0.196
6	13.02	7.68	8.64	83.9	0.195
7	11.13	7.48	5.06	46.0	0.197
8	9.65	7.34	3.03	26.6	0.198
9	8.63	7.21	0.81	7.6	0.138
10	8.11	7.11	0.35	3.0	0.202
11	7.86	7.02	0.22	1.9	0.204
12	7.77	6.96	0.18	1.5	0.206
13	7.72	6.92	0.14	1.3	0.209
14	7.68	6.91	0.11	0.9	0.211

Secchi: 2.55 m

August Monitoring
Monitoring day: 8/22/11

Lovers Lake - North Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO (%)	Cond (mS/cm)
0	25.69	7.74	8.07	99.0	0.209
1	25.67	7.76	8.04	98.6	0.209
2	25.65	7.76	8.06	98.7	0.209
3	25.63	7.75	7.98	97.7	0.209
4	25.32	7.65	7.51	91.6	0.209
5	22.95	7.01	3.06	35.6	0.209
6	19.29	6.74	1.82	19.7	0.214
7	15.88	6.51	0.81	8.2	0.187
8	14.07	6.43	0.6	6.0	0.232
9	12.74	6.65	0.48	4.5	0.288
9.5	12.06	6.75	0.39	3.6	0.400
Secchi:	3.31 m				

Lovers Lake - South Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO (%)	Cond (mS/cm)
0	25.51	7.71	8.11	99.2	0.209
1	25.50	7.71	8.13	99.4	0.209
2	25.44	7.69	8.07	98.5	0.209
3	25.43	7.68	8.08	98.6	0.209
4	24.58	7.22	5.43	65.4	0.210
5	22.58	6.93	2.58	29.9	0.208
6	18.28	6.71	1.36	15.3	0.237
6.5	16.16	7.03	0.57	5.8	0.383
Secchi:	3.55 m				

Stillwater Pond - Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO (%)	Cond (mS/cm)
0	25.86	7.71	7.92	97.3	0.203
1	25.83	7.68	8.00	98.2	0.203
2	25.74	7.66	8.06	98.9	0.203
3	25.36	7.60	8.29	101.0	0.203
4	24.26	7.51	8.01	95.8	0.202
5	21.00	7.05	7.78	87.5	0.199
5.5	18.55	6.95	8.47	90.6	0.198
6	16.51	6.88	8.56	87.8	0.198
7	13.38	6.46	5.87	57.0	0.197
8	11.03	6.32	1.23	11.9	0.202
9	9.71	6.27	0.51	4.5	0.210
10	8.98	6.29	0.44	3.9	0.215
11	8.54	6.31	0.40	3.4	0.219
12	8.29	6.32	0.38	3.2	0.222
13	8.14	6.36	0.37	3.2	0.227
14	8.07	6.39	0.35	3.0	0.231
15	8.01	6.44	0.35	2.9	0.239
Secchi:	3.50 m				

October
Monitoring day: 10/25/11

Lovers Lake - North Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)**	DO (%)**	Cond (mS/cm)
0	16.35	7.78	8.04	82.0	0.208
1	16.34	7.69	8.06	82.3	0.208
2	16.34	7.51	8.05	82.2	0.208
3	16.33	7.44	7.96	81.3	0.208
4	16.32	7.37	7.92	80.7	0.208
5	16.31	7.35	7.93	81.0	0.208
6	16.30	7.34	7.92	80.9	0.208
7	16.30	7.32	7.93	80.7	0.208
8	16.29	7.26	7.65	78.1	0.208
9	16.16	7.11	6.84	69.7	0.210
Secchi:	1.95 m				

Lovers Lake - South Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO (%)**	Cond (mS/cm)
0	16.10	7.39	8.50	86.4	0.207
1	16.10	7.36	8.49	86.2	0.208
2	16.10	7.37	8.50	86.3	0.208
3	16.09	7.37	8.50	86.3	0.208
4	16.09	7.35	8.49	86.2	0.208
5	16.09	7.36	8.48	86.1	0.208
6	16.08	7.34	8.46	86.1	0.208
Secchi:	2.25 m				

Stillwater Pond - Deep Basin

Depth (m)	Temp (C)	pH	DO (mg/L)	DO (%)**	Cond (mS/cm)
0	16.39	7.47	8.23	84.4	0.198
1	16.39	7.36	8.12	83.0	0.198
2	16.38	7.31	8.07	82.5	0.198
3	16.31	7.26	8.08	82.4	0.198
4	16.30	7.21	8.02	81.9	0.198
5	16.28	7.18	7.99	81.5	0.198
6	16.27	7.16	7.99	81.4	0.198
7	15.91	6.99	6.96	70.4	0.198
8	12.52	6.47	0.35	3.4	0.204
9	10.13	6.50	0.31	2.8	0.220
10	9.13	6.50	0.27	2.4	0.224
11	8.72	6.49	0.26	2.2	0.227
12	8.44	6.49	0.26	2.2	0.231
13	8.34	6.49	0.25	2.1	0.234
14	8.25	6.48	0.25	2.1	0.236
Secchi:	2.70				

**DO pre-cal was off , m

Town of Chatham 9/30/09
Stillwater Pond jon boat
Lovers Lake Jarrett Drake
Sediment Sampling N. ESTEN

10:10 AM left boat ramp on
Lovers Lake

0	~~18~~, 19°C	Profile LL1
1m	19.0	
2m	~~18~~ 19.0	
3m	19.0	
4m	19.0	
5m	18.9	
6m	18.9	
7m	18.5	
~~8m 23ft~~		
22ft	17.8	
23ft	~~17~~ 16.9	
8m	15.8	
25ft	14.5	
26ft	13.8	
27ft	12.8	
28ft	Bottom	

10:40 AM Sample LL1
N 41° 41.951'
W 69° 59.083'

Took top 1 inch Grab 1 ~31 ft
Took top 1 inch Grab 2

Black mayo consistency
10cm = ~4 inches

11:00 AM LL2 ~30 ft
N 41 41.938'
W 69 59.085'

took top 1 inch Grab 1 black mayo consistency
top 1 inch a few swirls of brown
Grab 2 black mayo

11:20 AM LL3 20 ft
N 41° 41.747'
69° 59.007'6

Grab 1 black mayo top 1 inch
Grab 2 black, a little more solid than
location is between dock + previous access point
took sample top 1 inch

11:30
~~11:40~~ LL~~3~~4 22 ft

N 41° 41.729'
W 69° 58.946'

Grab 1 - took top 1 inch
black mayo - very watery
Grab 2 - took top 1 inch less
water than Grab 1

Profile LL4

Surface	19.1°C
3 ft	19.1°C
6	19.1
9	19.0
12	18.8
15	18.7
18	18.4
20	16.5
pulled up to 19 ft	
19	17.4

Weather partly cloudy wind
~5 knots!

12:22 Stillwater Pond

SW1 ~48.6 ft

Surface	19.7	
3 ft	19.4	
6 ft	19.2	
9 ft	19.1	
12 ft	19.0	
15 ft	18.9	
18 ft	17.9	
17 ft	18.5	pulled up to 17 ft
19 ft	16.5	DO dropped to 2
20 ft	14.9	
21 ft	13.6	
24 ft	11.3	
27 ft	9.7	
30 ft	8.4	
35	7.6	

N 41° 42.194'
W 69° 59.183'

12:50 sample

Grab 1 Black mayo took top inch
Grab 2 SAME, took top inch
Grab 3 Same
Grab 4 same.

SW2 ~31 ft

1:20 sample.

N 41° 42.195'
W 69° 59.112'

Grab 1 black mayo grab
came back with
some algae mat.
Grab 2 black mayo -
no algae took
photos of this grab.

7/19/10
M. Esten
J. Drake

Task:

1141 On ~~Pond~~
Lovers Lake
Collect water 10 ft
Contour deep pond
fill 3 cubitainers

weather calm - 5 knots
partly cloudy
warm.

Collected @ 35 ft deep hole location
10 feet sample depth
water ~85 °F

Toxicity Testing Water Collection

Stillwater Pond + Lovers Lake
Pre-Treatment monitoring

SW - 1 sample deep basin
LL - 2 sample locs.

To Do @ each station
1. profile: 1m increments
Temp, Cond, DO, pH

2. Water collection:
Surface 1 m from top
Deep 1 m from btm

Analysis: dissolved Al
total P
dissolved PO4
Alkalinity
(4 bottles)

3. Secchi Depth

9/22/10

0800 Lovers Lake
Instrument cal check

	std	reading	post cal check	
pH	7.00	7.07	6.66	lot 2003791 3/12
pH	4.00	3.96	4.03	lot 2001172 12/11
Sp. Cond	std 1.413 mS/cm	reading 1.377 mS/cm	post cal 1.371 mS/cm	lot 2005458 11/11

Temp Comp

	std	reading	postcal check
DO	100 %	102.4%	99.8%
			27.76°C

Did not calibrate - No need
Standards close enough.

Instrument 600XLM-M
SN 02H0893
Pine Env Rental

Lovers Lake
Partly Cloudy
Windy 10-15 knots South, waves
Gusting 20-25

LL North (Deep hole)
Total depth 33 ft
Secchi depth (m) 1.7m
rough water obscures disk

m	temp°C	pH	DO mg/L / %	~~mS/cm~~ mS/cm Cond
0	19.60	6.85	92.5% / 8.46	.173
1m	19.59	6.85	91.5 / 8.38	.173
2m	19.58	6.86	91.2 / 8.37	.173
3m	19.58	6.88	91.0 / 8.34	.173
4m	19.56	6.89	90.9 / 8.33	.173
5m	19.54	6.89	90.7 / 8.31	.173
6m	18.48	6.61	30.8% / 2.82	.186
7m	12.28	6.55	0.57 / 4.8%	.257
8m	10.48	6.70	1.8% / 0.20	.279
9m	9.67	6.77	1.7% / 0.19	.407
10m	9.44	6.82	1.6% / 0.18	.490

09:07 WATER SAMPLE 1M (SURFACE)
09:13 " 10M (BOTTOM)

(Southern deep hole)

LL South - calmer

Total depth 22 ft

Secchi Depth (m) 2.35

m	°C temp	pH	mg/L DO	% sat	°C mS/cm Cond
0	19.74	7.12	8.69	95.1	.172
1	19.68	7.07	8.58	93.8	.172
2	19.64	7.05	8.52	93.1	.172
3	19.62	7.05	8.47	92.5	.173
4	19.60	7.04	8.38	91.4	.173
5	19.07	6.71	4.14	44.8	.180
6	13.67	6.83	0.57	5.1%	.486
7 20ft ~~12.5~~		7.09	0.26	2.5%	.462
(approx) 13.80					
(1 ft deeper than 6m)					

0953 LL South Surface 3ft from Surface.

1000 LL South - B 3 ft from Bottom

SWater (deep hole) ARCIVE 1043

Total depth 49 ft

Secchi depth 2.3 m

m	°C temp	pH	DO mg/L	% sat	Cond mS/cm °C
0	20.01	7.36	9.13	100.3	0.168
1	19.91	7.25	8.95	98.2	0.168
2	19.78	7.22	8.87	97.2	0.169
3	19.67	7.19	8.61	94.1	0.168
4	19.57	7.14	8.26	90.2	0.168
4.5	19.50	6.85	7.75	84.4	0.168
5	17.70	6.69	0.82	8.6	0.167
6	11.77	6.45	0.26	2.3	0.184
7	9.78	6.44	0.21	1.9	0.187
8	8.41	6.49	0.18	1.5	0.196
9	7.47	6.52	0.16	1.3	0.210
10	7.30	6.51	0.17	1.4	0.216
11	7.20	6.50	0.15	1.2	0.220
12	7.10	6.49	0.14	1.1	0.226
13	7.07	6.47	0.13	1.1	0.231

1115 SW - S surface sampl

1122 SW - B bottom samples

Friday 10/8/10
Lovers Lake
weather: clear, warm

H+S meeting:
overview of project + AHA
Marie Esler
Daniel F. Mitchell
[illegible]

- Pre-Treatment (South Basin)

22 ft 56 °F

South Basin

0	17 °C
1m	17.1 °C
2m	17.1 °C
3m	17.1 °C
4m	17.0 °C
5m	17.0 °C
6m	16.8 °C
~~7m~~	
6.5m	13.6 °C
~~7.0m~~	

Secchi disk = 0.95m
~3 ft

~~Alkalinity~~

	18 ft	0 ft
pH	7.0 / S.U.	7.25 S.U
Alk	19.6 mg/L	19.3 mg/L

.1600N H_2SO_4
Digital titrator
Indicator soln.

0900 NW 6 mph, clear + 58 °F

09:03 harvester starts first run

North Basin

Secchi depth = 0.95m
~~Sample~~ Station Depth = 31 ft (~28 ft)

	surface	depth
pH	7.0	7.0 S.U.
Alkalinity	19.7	48.8 mg/L

Wind: 3-4 mph gusts 8-11 mph

North Basin

depth m	Temp °C
0	17.3
1	17.3
2	17.3
3	17.2
4	17.2
5	17.2
6	17.2
7	17.2
7.5 ~~8~~	16.3
8	12.6
9	10.5
10	9.6

S. Basin

Time	Location	Observations
0932	In floc	pH 7.25
0935	In floc	pH 7.00
0936	1st load complete, getting 2nd load	
1017	loading 3rd load	
1020	in floc	18ft sample
	21 ft total depth	
	0	7.00 pH 20.0 mg/L
	18 ft	6.50 18.9 mg/L

floc in both bottom + top samples
ran bottom again got 7.0
ran 3rd time = 7.0

S. Basin

1046 Visual survey - no observations of distressed organisms

1052 loading 4th load

1129 loading 5th load

1132 22ft total depth - S. Basin
18ft bottom sample
0 = surface.

depth	pH(su)	Alk (mg/L)
0	6.75	19.0
18ft	6.75	18.6

floc in surface + deep sample
do pH against something white

1158 depth = surface right in floc 6.75 S.U.

Active algae bloom in progress

1214 Wind South 0-5 knots
Visual survey of North + South ends of pond-difficult to determine difference between alum floc and mph algae. measured 8-9 ~~knots~~ gusting 11 or so mph

Alum related floc of algae.

1331 floc still visible on surface
wind 4 mph, gust ~9 mph
South hole.
23 ft total depth

	pH	alk
0	7.0	18.5 mg/L
20 ft	6.75	24.2

1.65 Secchi depth (M)

floc in surface sample + particles but not floc in btm

1355 North Basin Deep hole.

	0	25 ft
pH	7.25	7.00
Alk	18.6	19.8

Visual samples + underwater camera
In between basins 2.5 M
can see floc.

In calmer shallows little floc along windier sections floc on plants.

~16 ft deep - good accumulation - light dusting but good coverage

Lovers Lake Sat 10/9/10

0757 Secchi depth 1.55m
Bloom still in progress surface
scum of algae (small)

Surface pH = 7.0
South Basin Center

partly cloudy, windy + cool
wind North 5-10

Visual survey of entire
pond shore line - No distressed
or dead organisms.
Great blue heron, ducks
geese + swans present.

0830 Left site

M. Esten

10/12/10 - Tuesday

508-
341-
1470

D. Mitchell 413-748-3187
M. ESTEN 401-741-2684 (Sean)

AHA - 1st Aide kit location
Emergency Contact
No real changes.
ACT Treating North Basin Today

LL- Deep Basin North
Secchi - 1m
total depth 30 ft
weather cloudy, pur rain
~60°F, calm

m	temp °C
0	16.7
1	16.7
2	16.7
3	16.6
4	16.4
5	16.3
6	16.2
7	16.1
7.5	15.9
8	14.5
9	11.5

	pH	mg/L
0	7.25	18.1
25ft	7.0	20.3

North basin in floc pH 7.25

0820 Shoreline Survey no problems
underwater camera S Basin
- no floc on plants 1st time
- alittle on plants in second area (~3 ft)
- ~4.5 ft light covering of floc on bottom

South Basin.
20 ft total depth
1.2 m secchi depth (m)
~~pH alk (mg/L)~~

~~20~~
~~18 ft~~

0943 Lower Lake I°C South Basin

Surface	16.7		Top	18 ft
1	16.6	pH	7.0	7.0
2	16.6			
3	16.4	alk.	19.5	19.3
4	16.3			
5	16.2			
6	16.0			
6.5	15.8			

0900 applying ~~3rd~~ 2nd load

0946 applying 3rd load
~~South~~ North basin
25 ft total depth
20 ft deep sample
Surface Sample

	0	25 ft	
pH	7.0	7.0	samples in floc zone
alk	19.3	19.6	

floc present in surface sample but not in btm.

1003 Loading 4th load Alum.

South Basin 22 ft total
ft 18 ft sample depth.
0 7.0 S.U. 18.9 mg/L
18 6.5 18.8
duplicate @ 18 ft 6.5 S.U.
Surface sample has little linear algae like fibers

1131 6th load alum leaves

weather overast + cloudy
Northwind ~5 knots

South basin ~13 ft
deep sample @ 10 ft
in floc area where they
are treating.

lower lake mid-station between basin

	Top	8 ft
pH	7.0	17.5
alkalinity	7.0	19.4

1201 Shoreline survey North Basin
16 ft depth
underwater camera
lots of floc on bottom
decreasing amounts as
gets shallower + sandier
no floc visible on pond surface
11 ft covering of floc
4 out of ~~10~~ 5
Video in NE corner.

1348 7th load of 11 total
NE corner in floc zone
22 ft total

	pH	alka (mg/L)
0	7.0	17.4
18 ft	7.0	18.6

1403 South Basin
22 ft total

	pH	alk (mg/L)
0	7.25	18.8
18 ft	6.75	19.3

weather = starting to become
partly cloudy

Act returning for 8th load

1455 Act leaving w/ 9th load

1509 29 ft total depth in North Basin
area of floc just after pass of
25 sample barge

	pH	alk
0	7.0	18.5
25 ft	6.75	19.5

1524 30 ft North Basin
~~20-25 ft~~ encountered floc ~~depth~~ from surface to 25 ft. (underwater video)

ACT goes to get 10th load.

1530 North end of pond underwater video, approx 5 ft deep level 4 of ~~10~~ 5 for floc coverage. Approx 9 ft few plants heavy floc at edge of treatment area heavy floc. 5/~~10~~ 5 at edge of treatment area.

0 = no apparent floc
1 = few isolated floc (salt)
2 = moderate floc in plants, partially covered
3 = moderate floc coverage, still bottom arrayed
4 = heavy floc accumulation in plant fronds, heavy coverage
5 = very little bottom, "snow drifts" heavy floc

South Basin

1621 ACT leaves w/ last load
22 ft total depth

0	7.0 S.U.	18.6 mg/L
18 ft	7.0	18.7

North basin
31 ft total depth

0	7.0 S.U	18.3
25 ft	6.5	21.6
	PH	ALK (mg/L)

floc visible on surface & in surface sample.
Wind 3-4 mph

10/14/10 Thursday

0735 On-pond Janett Drake
- Discussed no AHA charges Dave Ester

South Basin
22 max depth

	0	18 ft
pH	7.0	7.0
alk.	17.6	19.1

surface scum layer, worst we have seen fog on the water

North Basin

32 max depth

	0	28 ft
pH	7.0	7.8
alk.	18.4	55.7

weather calm, sunny

- Noted 3 trollers near surface in South basin

0807 - ACT leaves w/ first load for ~~North basin~~ - actually South basin up to the turn to N. Basin

0822 perimeter survey - S. Basin
no distressed pigs

0830 ACT collecting 2nd load
21 ft total depth
(m) 1.7m Secchi depth S. Basin

depth	temp °C
0	15.9
1	15.9
2	16.0
3	15.9
4	15.9
5	15.9
6	15.8
7	14.6

0840 North basin perimeter survey
no problems

0912 ACT loading 3rd load

0917 North Basin
2.05m Secchi depth
31ft total depth

(m)	temp (°C)
0	16.0
1	16.0
2	15.9
3	15.9
4	15.9
5	15.9
6	15.9
7	15.9
8	15.1
9	11.2
10	9.9

Noticed large flock of sparrows diving along surface of pond

0940 ACT loading 4th load

(N. Basin?)
22 ft total depth
18 ft sample depth

	pH	alk (mg/L)
0	7.0	18.4
18	6.75	19.4

collected sample in floc zone

- ACT now moving to North Basin

1055 ACT taking on 6th load

1057 South basin
total depth ~22ft

	pH	alk
0	7.0	18.5
18	6.5	19.8

ACT treating North basin

1113 North Basin - in floc area

	pH	alk
0	6.5	17.3
10 ft	6.75	20.1

13 ft total depth.

floc evident in both surface + deep samples

1127 ACT taking on 7th load

1237 act applying N. Basin 8th load?

South Basin
22 ft total depth

	pH	alk (mg/L)
0	7.0	18.1
18	6.75	18.1

floc in surface sampl

Wind 8 mph max
partly cloudy
4.2-7.8 mph range
from South.

1250 9th load loading

1259 North Basin
24 ft total depth

	pH	Alk (mg/L)
0 ft	7.0	18.5
20	7.0	17.9

Collected in surface floc zone.

Underwater camera

1318 Northeastern shore near bouy for treatment zone. Very close to shore to bouy. Saw fairly heavy even coverage up to around 5 ft, caught in plants. A bit heavier ~~near~~ as moving toward 13 ft bouy. Decreases in coverage moving toward shore.

Northern edge of pond
4 ft depth medium

flor coverage getting heavier until 13 ft.

1337 ACT getting 10th load
weather getting cooler + more clouds

1352 South west part of South Basin

Heavy coverage until about 5 ft when it becomes light.

1456 South Basin (ACT in N Basin)
22 ft total depth

ft	pH	all
0	7.0	17.5
18	6.75	18.7

flor in surface sample

1409 ACT done for day

31 ft deep

ft	pH	all (ug/L)
0	7.0	18.0
25	6.5	21.5
28	7.0	~~8.26~~ 82.6
		~~7.96~~ duplicate 79.6

1440 Shoreline survey of N + S Basin.

1 dead fish, western edge along berd between N + S Basins – looks like its been dead awhile, smells + gray gills believed to be a bass about 8" long.

no further dead or distressed organisms

10/18/10 Monday M. Estes D. Mitchell

0727 N. Basin
32 ft total depth

(m) depth	temp °C
0	14.7
1	14.6
2	14.6
3	14.6
4	14.6
5	14.5
6	14.5
7	14.4
8	14.3
9	12.5
10	10.3

Secchi 1.3m

	0	28 ft
pH	7.0	~~19.5~~ 6.75
alk	17.5	19.5

0744 ACT drops buoys + applies 1st load
0813 ACT loading 2nd/6 loads in North end of N. Basin

0816 S. Basin
22 ft total depth

(ft) depth	pH	alk (mg/L)
0	7.0	18.9
18	7.0	19.2

depth (m)	Temp (°C)
0	14.3
1	14.3
2	14.3
3	14.3
4	14.3
5	14.3
6	14.7

1.9m Secchi depth

weather - clear, cool North wind 0-5.

Visual survey of entire pond - no distressed organisms.

~0915 ACT 3rd load applying
wind 6-8 mph gusting to 12

0920 N. Basin
27 total depth

ft	pH	alk (mg/L)
0	7.0	17.1
15 ~~25~~	7.0	19.4

taken in floc zone - surface

ACT applying in N Basin

0946 ACT goes back for 4th load

Floc observation

N Basin ~ 5 ft near northern edge some floc, rating (2-3)

N. Basin 5-10 near application zone rating (5)
good over floc on bottom

N. Basin NE cove near boat club
3-5 ft drift occurs. rating (3-4)
some outer plants covered Fairly well
inner plants less so

N. Basin NW corner @ 5-10 ft very
little floc on this side rating = 1

1000 ACT starting 4th load

1006 South Basin

ft	pH	alk (mg/L)
0	7.0	18.5
18	7.0	18.1

22 ft total depth

Wind gusting to 11 ~~knots~~ mph
sustained 5-10 mph

1125 ACT leaves w/ last load.

South Basin

1149 wind 7-8 gusting to 11
total depth 21 ft

depth (ft)	pH	alk
0	7.0	17.0
~~18~~ 17	7.0	16.9

Secchi depth 2.15 m

North Basin

1220 33 ft total

ft	pH	alk (mg/L)
0	7.0	17.6
28	7.0	19.9

1.3 m secchi depth
flux in surface sample

1220 ACT completes job + heads back

Shore line survey of South + North Basin – no stressed orgs.

4-5 mph gusting to around 8 mph, Clear + cool.

10/20/10 Wed

Stillwater Pond

Discussed AHA 0730

0803 48 ft total Deep hole

ft	pH	alk (mg/L)
0	7.0	17.5
45	6.25	60.0

(m) ~~ft~~	Temp (°C)
0	14.1
1	14.1
2	14.1
3	14.1
4	14.1
5	14.1
6	14.0
7	13.8
7.5 ~~8~~	11.9
8	9.9
9	8.5
10	7.7
11	7.4
12	7.2
13	7.2
14	7.1
15	7.1

Secchi 1.95 m

M. Esten +
J. Drake

0846 ACT leaves dock

0850 Reference area 8 ft total sample @ 3 ft.

	pH	alk
3 ft	7.0	18.1

0900 surface in floc zone
pH = 7.0
alk = 16.2 mg/L

0905 surface floc zone
pH = 7.0

Visual survey

0918 ACT getting load 2 of 7½

no problems, no distressed organisms - surface layer of algae visible

1013 48 ft total Deep hole

(ft)	pH	alk (mg/L)
0	7.0	17.1
45	6.5	57.1

1026 ACT applying 3rd load

~1000 Don St. Pierre, Herring Warden stopped by. he says 2" herring are running out of stillwater

1039 weather clear, cool wind max 10.5 mph. SW

1045 ACT applying 4th load

1057 Reference area (SE corner) 3 ft sample depth

pH = 7
alk = 16.4

1104 some floc visible in vicinity of reference area

1107 ACT goes back for 5th load

1254 ACT gets 6th 5th load from new truck

49 ft deep hole
sample @ 45 ft

ft	pH	alk.
0	7.0	18.0
45	6.5	53.0

1319 Underwater video NW side of pond - Cranberry side
floc 5/5 heavy blanket to about 5 ft where it decreases in thickness

1324 Underwater video S cove in pond
5-8 ft 4/5 light covering

8-12 ft heavy 5/5

1333 ACT getting 6th load

15-10 ft 5/5 coverage but not as heavy as South cove on pond

10-7 ft 4/5 flocc level and 10 ft from shore

Eastern edge of pond

Along treatment buoy markers ~19 ft its very thick + heavy blanket.

ACT confirmed 10 ft app depth

1503 ACT applying last ½ load

1506 Visual survey ACT finishes
no distressed organisms

wind 7-8 mph

1515 Collect reference
sample 3 ft.

total depth 5 ft

3 ft	pH	alk
	7.0	16.3 mg/L

1526 Deep hole 50 ft total

ft	pH	alk
0	7.0	17.3
45	6.5	52.4

flow in bottom sample

* Note color change in deep samples goes to more of a very pale yellow!

10/22/10 FRIDAY

J. Drake
10/22/10
sunny, clear 47
wind <7.8 gusts 7.8

Stillwater Pond

AHA discussed

0740 on pond

tanker at ramp, loading 1st load

Central Station

Total depth = 49 ft

SDT = 2.9 M

bottom sample taken at 40 ft

pH = 6.5 alk = 48.0

surface WQ

pH 7.0

alk = 16.5

0756 Reference location
in SE lobe

top depth = 6.3 ft

bottom sample at
SDT = 6.3 ft
To bottom

top sample

pH 6.75

alk = 16.4

bottom sample

pH = 6.75

alk = 17.4

8:13 ACT re-start 1st load needed to return to fix equipment

tour of pond shoreline - no dead fish or unusual observations

Floc sample

pH = 6.75

alk - 17.2

Floc with 15 ft of shoreline at northern end in NNW shoreline

8:32	T°(C)	Central Hole
0.5	13.8	
1	13.9	total depth = 49 ft
2	13.9	
3	13.9	wind mostly 6-8 mph
4	13.8	gusting to 16 mph
5	13.8	
6	13.8	air temp = 47.1
7	13.7	
7.5	12.6	
8	11.7	
9	8.6	
10	7.8	
11	7.5	
12	7.4	
13	7.2	
14	7.2	
15	7.2	
16	7.1 @ bottom	

8:40 ACT w/ 2nd load

0913 ACT starting 3rd load

0925 Inspected Reference Area for floc depth at reference locsh in SE cove
floc (1) at 4-5 feet v. little accumulation
floc (1+) at 9' ft depth sparse, patchy floc accumulation

0930 Floc sample taken at Northern end
pH = 6.75
alk = 16.2

floc @ 5 ft (2)
floc @ 9 ft (4) plants
floc @ 18 ft (4)

0945 ACT starting 4th load

1015 ACT back at tanker truck

0100 Central Basin
total depth = 49 ft
sample taken at = 45 ft H_2S evident small
some floc present

Bottom Sample	Surface Sample
pH = 6.5	pH = 6.75
Alk - 56.7	Alk / 7.5

10:35 Reference Location

Wind
7-9 sustained
W-NW gusts 17

Surface sample (only)
pH = 6.75
alk = 17.7

10:45 PAUSE FOR SECOND TANKER TRUCK
ARRIVED w NOON

12:13 POND SHORELINE SURVEY - ALL OK

12:20 ACT STARTS 5th LOAD

12:25 SDT @ central basin 3.35 M

12:48 ACT DONE WITH 5th load

12:50 CENTRAL BASIN

WIND, rel calm 2-3 mph
w/ gusts 9-10

TOTAL DEPTH: 49'
SAMPLE TAKEN: 45'

AIR TEMP = 57

	bottom	surface
pH	6.5	pH = 6.75
alk	54.2	alk = 17.0

1:05 ACT OUT WITH LOAD #6

1:21 REFERENCE STATION

pH = 7.0
alk = 17.0

1:25 ACT DONE w/ 5th load

1:40 ACT STARTS 6th LOAD

FLOC INSPECTION

WESTERN SHORELINE NEAR TRTMT BUOYS

at 5' depth (2) moderate floc accumulation on plant
7' (4) heavy floc, some plants
9 (5) } dense carpet of floc
13 - 19.6 (5)

Overall, past 13 feet, a very dense carpet of floc
visibility distinctly better than Lovers lake

1:45 - NORTHWEST COVE WELL PAST BUOYS

1:55 transect from cove to guide buoy @ 20 ft
6.4 ft (1) v little floc
8 ft (1) v. little floc
9-10 ft (3) moderate floc, some drifting
13-14 (4) heavy floc carpet
>15 ft (5) heavy floc carpet, in water

2:10 ACT FINISHED WITH 6TH LOAD
MET DON ST. PIERRE

2:15 ACT ON 7th LOAD LAST

2:30 ACT DONE

WIND = 3-4 mph, gusting to 12 mph

2:32 REFERENCE STATION
depth = 6.4
pH = 6.75
alk = 48.1

2:47 - 2:57 POND SHORELINE SURVEY - ALL OK
TALKED WITH DON ST. PIERRE - HE REMARKED ON THE CLARITY OF THE WATER

3:00 CENTRAL STATION

TOTAL DEPTH = 49 ft
SAMPLE TAKEN = 45 ft

	BOTTOM STATION	SURFACE SAMPLE
pH =	6.5	pH = 7.0
alk =	48.0	alk = 17.1

3:00 ACT DONE / 3:15 MONITORING COMPLETED

11/2/10 Quarterly sampling

0849 Lovers Lake 11:23

	std	pre reading	post cal check
pH	7.0	7.05	7.02
pH	4.0	4.05	4.09
Cond	1.413	1.401 mS/cm²	1.377
DO	100%	100.3	101.3
	15.23°C		6.49°C

(didn't cal since check so good)
Conductivity 1.413 mS/cm
1# 8124 7/8/11 Exp.
pH 4 lot 2001172 12/11
pH 7 lot 2904342 3/11

0855 South - Lovers Lake
deep hole.

24 ft total depth.
3.44 m Secchi depth.

Samples @ 3 ft (Surface)
@ 29 ft (btm)

~~0~~(m) Depth	pH	SP Cond mS/cm	mg/L DO	%	Temp °C
0	6.65	.227	9.93	92.2	12.02
1m	6.77	0.227	10.03	93.2	12.03
2	6.88	0.227	10.06	93.5	12.06
3	6.94	0.227	10.07	93.6	12.06
4	6.98	0.227	10.04	93.3	12.05
5	6.99	0.227	10.05	93.5	12.05
6	6.99	0.227	9.98	92.7	12.02
~~7~~					
~~8.5~~					

Lower Lake North.

0929 32 ft total depth
2.8 meters Secchi depth

3 ft = surface
29 ft = bottom.

depth (m)	pH	SP Cond mS/cm	mg/L DO	% DO	Temp °C
~~0~~					~~12.36~~
0	7.15	0.228	9.78	91.6	12.36
1	7.16	0.228	9.83	92.1	12.40
2	7.17	0.228	9.84	92.2	12.40
3	7.18	0.228	9.83	92.1	12.40
4	7.18	0.228	9.82	92.0	12.40
5	7.17	0.228	9.84	92.1	12.38
6	7.16	0.228	9.77	91.4	12.36
7	7.14	0.228	9.79	91.6	12.36
8	7.10	0.228	9.76	91.3	12.32
9	7.07	0.228	9.74	90.7	12.11
~~10~~					

weather - overcast + cloudy
cool.

1029 Stillwater Pond
Deep hole

total depth 49 ft
Secchi depth 2.4 m

Surface (3 ft from surface)
Bottom - 46 ft

Depth m	temp °C	SP mS/cm Cond	D.O%	DO mg/L	pH
0	12.12	0.214	85.2	9.14	7.18
1	12.17	0.214	84.7	9.09	7.13
2	12.17	0.214	84.3	9.04	7.09
3	12.17	0.214	84.1	9.02	7.06
4	12.17	0.214	84.1	9.02	7.03
5	12.16	0.214	82.8	8.85	6.96
6	12.12	0.214	80.6	8.65	6.86
7	12.06	0.214	78.2	8.41	6.80
8	11.32	0.211	55.6	5.99	6.60
9	8.36	0.220	7.2	0.84	6.49
10	7.73	0.226	6.4	0.77	6.46
11	7.48	0.230	7.3	0.87	6.44
12	7.35	0.235	7.6	0.92	6.44
13	7.25	0.239	7.5	0.90	6.44

	°C	mS/cm	%	mg/L	pH ~~DO~~
14m	7.22	0.240	7.4	0.88	6.45

1114 finish on pond (S.W)
post cal + return
home.

4/19/11

0800 Lovers Lake

Instrument Check

pH	7.00	7.45		Lot 8420 Exp 10-15-11
	4.00	5.43		Lot 8485 Exp 10-19-11
sp Cond	1.413 mS/cm	1.409 mS/cm	1.363 mS/cm	Lot 8428 Exp 10-20-11
Temp Comp	std	reading	post check	
		13.46°C		
		10.89 mg/L		
DO	100 % sat	104.6%	104.3%	
	std	Reading 08:00	post check	

pine Env. YSI 600 XL
065864 / 06F2353 AC

pH needed to be calibrated

std	reading	CAL
4.00	5.38	5.38
7.00	5.38 →	something appears incorrect w/ pH probe - re calibrated w/ just 7.00 standard

after calibration pH 7 = 7.03
-4 pH 4 = 5.63
9.64 -10 pH 10 = 9.49
postCal 7.68 -7

Lovers Lake ~~North~~. South

Overcast + cloudy, wind ~5 knots

23 ~~24~~ ft max depth

Secchi depth 4.28 m

depth (m) ~~0~~	Temp °C	Sp Cond µS/cm	pH	DO mg/L	% sat
0	11.10	0.204	8.93	12.04	109.5
1	11.00	0.203	8.71	12.06	109.4
2	10.91	0.203	8.64	12.06	109.3
3	10.90	0.203	8.55	12.11	109.6
4	10.72	0.203	8.49	12.05	108.6
5	10.47	0.203	8.42	11.92	106.8
6	10.15	0.203	8.35	11.45	101.1
7					

08:58 collected Surf 3 ft from top
Btm 3 ft from btm

Lovers Lake North

09:14 arrive
34 ft max depth
4.6 m Secchi depth

Depth m	Temp °C	mS/cm SpCond	DO mg/L	%SAT	pH
0	11.01	0.202	11.96	108.4	8.20
1	10.98	0.202	11.90	107.9	8.19
2	10.96	0.202	11.87	107.6	8.18
3	10.95	0.202	11.86	107.5	8.16
4	10.95	0.202	11.86	107.5	8.16
5	10.95	0.202	11.82	107.1	8.15
6	10.91	0.202	11.80	106.9	8.14
7	10.90	0.202	11.76	106.5	8.15
8	10.90	0.202	11.73	106.2	8.14
9	10.71	0.202	11.65	104.9	8.12

09:31 Samples surface 3ft from top
btm 3ft from btm

Stillwater Pond
10:07 AM - overcast but brighter

Total Depth 50ft
Secchi Depth 3.30m

(m) Depth	Temp °C	SpCond mS/cm	DO mg/L	%SAT	PH
0	11.29	0.194	12.14	110.8	8.12
1	11.13	0.194	12.11	110.2	8.09
2	11.06	0.194	12.13	110.2	8.06
3	10.98	0.194	12.07	109.4	8.07
4	10.61	0.194	12.17	109.4	8.06
5	10.17	0.194	12.26	109.1	8.07
6	9.84	0.194	12.24	108.1	8.06
7	9.27	0.195	12.17	105.8	8.03
8	~~7.95~~	~~0.196~~	~~11.8~~		
	7.89	0.196	11.65	98.3	7.98
9	7.23	0.197	10.51	87.5	7.92
10	7.16	0.197	9.96	82.3	7.85
11	7.14	0.197	9.85	81.5	7.80
12	7.13	0.197	9.80	81.0	7.77
13	7.12	0.197	9.74	80.5	7.75
14	7.11	0.197	9.65	79.6	7.73

10:37 AM 17ft Bottom sample (Bottom - 3ft)

3ft from top = surface

n. eaten + j. drake.

Mon 6/20/11
Lovers Lake + Stillwater Pd

Conductivity

Std	Calck	11:27 Post check
1.413 mS/cm	1.419 mS/cm	1.349
lot 8428	21.85°C	22.07°C
Exp 10/20/11	temp comp.	

pH			calck	postck
7.0	lot 2011038	Exp 10/12	7.13	6.92
4.0	2001172	12/11	4.14	4.04
10.0	8421	10/11	10.08	9.86
			21.55°C	

DO.		
	101.0%	98.6 %
	9.08 mg/L	8.53 mg/L
	20.6 °C	22.56 °C

instrument 600x1 -B-M
01K0643 AB.

LL North Deep hole

total depth 32 ft
Secchi depth 3.50 m

0902 surface 3 ft from surface
bottom 29 ft

Depth m	temp °C	SpCond mS/cm°	DO %	DO mg/L	pH
0	21.60	0.224	101.3	8.93	6.16
1	21.49	0.220	101.5	8.96	6.47
2	21.44	0.220	100.5	8.88	6.58
3	20.66	0.218	101.3	9.09	6.70
4	19.88	0.218	95.7	8.71	6.75
4.5	19.33	0.217	95.6	8.80	6.80
5	17.82	0.217	92.5	8.78	6.78
6	15.18	0.218	~~48~~ 41.6	4.17	6.59
7	14.21	0.219	7.4	0.75	6.49
8	13.36	0.215	5.9	0.62	6.45
9	12.60	0.264	2.4	0.23	6.33

pH kit pH ~ 7.5 @ surface

0924 LL South

Total depth 23 ft.
Secchi depth 3.92 m

Depth m	Temp °C	Sp Cond mS/cm	DO %	DO mg/L	pH
0	21.65	0.211	102.0	8.97	7.38
1	21.49	0.211	100.4	8.88	7.36
2	21.41	0.211	98.2	8.67	7.35
3	21.02	0.210	97.0	8.63	7.33
~~4~~	~~19.99~~	~~0.211~~	~~77.1~~		
4	20.02	0.211	76.1	6.90	7.20
4.5	19.44	0.211	65.0	5.99	6.99
5	17.70	0.213	42.3	4.02	6.87
6	15.43	0.215	12.9	1.23	6.73
7	~~13.94~~	~~0.282~~	~~1.9~~	~~0.17~~	~~6.59~~
	14.70	0.222	3.3	0.33	6.83

0949 20 ft sample depth
3 ft below surface

At launch quite a bit of green slimy algae

SW pond
Sunny, warm + light breeze

1030 Total depth 49 ft
Secchi depth 2.55 m

Depth	Temp °C	Sp Cond mS/cm	DO %	DO mg/L	pH
0	22.37	0.200	106.8	9.27	7.74
1	22.21	0.200	105.5	9.18	7.75
2	21.33	0.199	107.9	9.58	7.79
3	20.00	0.199	106.5	9.68	7.78
~~4~~ 3.5	19.17	0.198	103.4	9.52	7.72
~~4~~	~~17.70~~	~~0.197~~	~~108.6~~	~~10.38~~	~~7.69~~
~~5~~ 4	17.44	0.196	111.4	10.67	7.79
4.5	16.62	0.195	114.3	11.18	7.81
5	14.97	0.196	111.3	11.23	7.81
6	13.02	0.195	83.9	8.64	7.68
7	11.13	0.197	46.0	5.06	7.48
8	9.65	0.198	26.6	3.03	7.34
9	8.63	0.138	7.6	0.81	7.21
10	8.11	0.202	3.0	0.35	7.11
11	7.86	0.204	1.9	0.22	7.02
12	7.77	0.206	1.5	0.18	6.96
13	7.72	0.209	1.3	0.14	6.92
14	7.68	0.211	0.9	0.11	6.91

1104 3 ft from surface
46 ft bottom sample

8/22/11

		07:55 cal ck	1058 post cal
pH			
7.0	lot 2101037 12/12	7.05	7.07
4.0	#8420 10/11	3.99	4.02

Conductivity (temp corrected)

1.413 mS/cm #8428 10/11	1.446	1.446

DO 8:08 cal check

24.31°C	23.96
100.2 %	100.8
8.38 mg/L	8.49

LL North

total depth 32 ft
secchi depth 3.51

surface ~~8:35~~ 9:00 3 ft from surface
bottom 9:00 29 ft from surface

Depth m	Temp °C	SpCond mS/cm	DO %	mg/L	pH
0	25.69	0.209	99.0	8.07	7.74
1	25.67	0.209	98.6	8.04	7.76
2	25.65	0.209	98.7	8.06	7.76
3	25.63	0.209	97.7	7.98	7.75
4	25.32	0.209	91.6	7.51	7.65
5	22.95	0.209	35.6	3.06	7.01
6	19.29	0.214	19.7	1.82	6.74
7	15.88	0.187	8.2	0.81	6.51
8	14.07	0.232	6.0	0.60	6.43
9	12.74	0.288	4.5	0.48	6.65
9.5	12.06	0.400	3.6	0.39	6.75

weather partly cloudy to clearing as day went on
warm light breeze

LL South

total depth 22 ft
secchi depth 3.55m

surface 9:40 collected samples 3 ft from surface
Bottom 19 ft from surf.

Depth m	Temp °C	SpCond mS/cm	DO %	mg/L	pH
0	25.51	0.209	99.2	8.11	7.71
1	25.50	0.209	99.4	8.13	7.71
2	25.44	0.209	98.5	8.07	7.69
3	25.43	0.209	98.6	8.08	7.68
4	24.58	0.210	65.4	5.43	7.22
5	22.58	0.208	29.9	2.58	6.93
6	~~18.5~~ 18.28	0.237	15.3	1.36	6.71
6.5	16.16	0.383	5.8	0.57	7.03

SW pond
total depth 49 ft
Secchi depth 3.5 m

Depth m	Temp °C	Sp cond mS/cm	DO %	mg/L	pH
0	25.86	0.203	97.3	7.92	7.71
1	25.83	0.203	98.2	8.00	7.68
2	25.74	0.203	98.9	8.06	7.66
3	25.36	0.203	101.0	8.29	7.60
4	24.26	0.202	95.8	8.01	7.51
5	21.00	0.199	87.5	7.78	7.05
5.5	18.55	0.198	90.6	8.47	6.95
6	16.51	0.198	87.8	8.56	6.88
7	13.38	0.197	57.0	5.87	6.46
8	~~[illegible] 0.203 22~~				
	11.03	.202	11.9	1.23	6.32
9	9.71	.210	4.5	0.51	6.27
10	8.98	.215	3.9	0.44	6.29
11	8.54	.219	3.4	0.40	6.31
12	8.29	.222	3.2	0.38	6.32
13	8.14	.227	3.2	0.37	6.36
14	8.07	.231	3.0	0.35	6.39
15	8.01	.239	2.9	0.35	6.44

samples 1040 3 ft from surf
46 ft from sed

10/25/11

pH			0854 cal ck	1213 post ck
7.0	lot 12101384	Exp 11/13	7.04	7.06
4.0	2012159	11/12	3.98	3.98
10.0	1004683	11/12	10.06	10.07

Conductivity (SP) 0902

std	cal ck	Post check
1.413 mS/cm	1413 µS/cm	1413 µS/cm
lot #8901	15.4°C	
Exp 4/12		

D.O.

was called by	13.73°C	17.98°C
Sure at 100%	80.7%	91.8%
22°C	8.36 mg/L	8.70 mg/L

left cal as is due to cold temp

instrument 600XLM-M
SN 106 101854

LL North Deep hole

total depth - 32 ft
Secchi depth - 1.95 m

Depth m	Temp °C	spCond mS/cm	DO %	mg/L	pH
0	16.35	0.208	82.0	8.04	7.78
1	16.34	0.208	82.3	8.06	7.69
2	16.34	0.208	82.2	8.05	7.51
3	16.33	0.208	81.3	7.96	7.44
4	16.32	0.208	80.7	7.92	7.37
5	16.31	0.208	81.0	7.93	7.35
6	16.30	0.208	80.9	7.92	7.34
7	16.30	0.208	80.7	7.93	7.32
8	16.29	0.208	78.1	7.65	7.26
9	16.16	0.210	69.7	6.84	7.11
~~10~~					

10:00 3 ft below surface
29 ft bottom

weather - clear + cool
~10 knots - gusting higher
- Big storm last week

weeds in North west corner are less thick than last year

LL South

total depth - 22.5 ft
Secchi depth - 2.25 m

Depth m	Temp °C	spCond mS/cm	DO %	mg/L	pH
0	16.10	0.207	86.4	8.50	7.39
1	16.10	0.208	86.2	8.49	7.36
2	16.10	0.208	86.3	8.50	7.37
3	16.09	0.208	86.3	8.50	7.37
4	16.09	0.208	86.2	8.49	7.35
5	16.09	0.208	86.1	8.48	7.36
6	16.08	0.208	86.1	8.46	7.34
~~6.5~~					

10:35 Surface 3 ft from top
19 ft bottom

Aquatics (rated) at South end one patch was about the same + the other patch (towards launch) seemed ~~almost gone~~ required less silly sacks at launch

Site)

total depth 49 ft
Secchi depth 2.70 m

Depth m	Temp °C	Sp Cond mS/cm	DO %	mg/L	pH
0	16.39	0.198	84.4	8.23	7.47
1	16.39	0.198	83.0	8.12	7.36
2	16.38	0.198	82.5	8.07	7.31
3	16.31	0.198	82.4	8.08	7.26
4	16.30	0.198	81.9	8.02	7.21
5	16.28	0.198	81.5	7.99	7.18
6	16.27	0.198	81.4	7.99	7.16
7	~~15.88~~	~~0.198~~	~~73.~~		~~7.02~~
	15.91	0.198	70.4	6.96	6.99
8	12.52	0.204	3.4	0.35	6.47
9	10.13	0.220	2.8	0.31	6.50
10	9.13	0.224	2.4	0.27	6.50
11	8.72	0.227	2.2	0.26	6.49
12	8.44	0.231	2.2	0.26	6.49
13	8.34	0.234	2.1	0.25	6.49
14	8.25	0.236	2.1	0.25	6.48

1140 Surface 3 ft
46 ft

less lily-pads in the ~~[illegible]~~ small bay area, but overall can't remember heavy rooted aquatics being in the pond like Lovers Lake.