

Verso Paper/NewPage Corporation
2006 Gulf Island Pond Water Quality Study
Dissolved Oxygen and Temperature Profiles

Week 12 AM: 08/22/2006

River Flow (Jay, Maine): 6850 cfs

Weather: Sunny, cool, light fog; light SW breeze late AM. Pond relatively calm.

Air Temperature: 55-65 deg. F (13-18 deg. C)

Comments: Pond level down 2-3 feet in AM. Diffuser running at medium strength in AM. Rain even cfs (8/20 11:45) to 8400 cfs peak (8/22 04:30). Pond loaded with debris. Slight green tint in upper 1/2 particles on surface and in column at Turner Bridge, Upper Narrows; at low density on surface and in column at GIP 4.

AM Meter Verification: Before Sampling

Model	Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
YSI 550A	Primary	5:30	8.1	20.5	N
YSI 85	Comparison	5:30	7.8	20.5	N
YSI 55	Comparison	n/a	n/a	n/a	N/A

Model
YSI 550A
YSI 85
YSI 55

Depth (m)	Twin Bridges		Turner Bridge		Upper Narrows		Lower
	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)
0	8.1	20.5	7.4	22.1	6.5	22.3	7.0
1			7.5	22.1	6.7	22.2	7.0
2			7.4	22.1	7.0	22.2	7.0
3			7.4	22.1	6.8	22.2	6.9
4			7.3	22.0	7.0	22.2	7.0
5			7.3	22.0	7.0	22.2	6.8
6			7.3	22.0	6.9	22.1	6.9
7			7.3	22.0	6.9	22.1	7.0
8			7.3	22.0	0.1	22.1	7.0
9			7.3	22.0			6.9
10			7.3	22.0			6.9
11			7.3	22.0			5.5
12							5.0
13							4.4
14							4.0
15							1.0
16							0.0
17							
18							
19							
20							
21							
22							
23							
24							

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Week 12 PM: 08/22/06

River Flow (Jay, Maine): 6850 cfs

Weather: Sunny, warm, light SW breeze early PM; increased wind velocity and change of direction to

Air Temperature: 70-80 deg. F (21-27 deg. C)

Comments: Pond at normal level in PM. Diffuser running full strength PM. Rain event on Sunday 8/22 to 8400 cfs peak (8/22 04:30). Pond loaded with debris. Slight green tint in upper 1/2 meter at all sites

PM Meter Verification: Before Sampling

Model	Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
YSI 550A	Primary	11:00	7.4	23	N
YSI 85	Comparison	11:00	7.4	23.2	Y
YSI 55	Comparison	11:00	7.4	23	N

Model
YSI 550A
YSI 85

Depth (m)	Twin Bridges		Turner Bridge		Upper Narrows		Lower
	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)
0	8.6	21.2	7.8	23.4	7.3	24.2	7.4
1			7.9	22.2	7.2	23.9	7.1
2			7.9	22.2	7.4	23.3	7.2
3			7.8	22.1	7.5	22.8	7.1
4			7.8	22.0	7.1	22.3	7.0
5			7.8	21.9	7.1	22.2	7.0
6			7.8	21.9	6.8	22.1	7.0
7			7.7	21.9	6.9	22.1	7.0
8			7.7	21.9	6.8	22.1	7.1
9			7.7	21.9	6.7	22.0	7.1
10			7.7	21.9			6.9
11			7.6	21.9			6.9
12							7.0
13							6.9
14							6.9
15							0.5
16							0.1
17							0.0
18							
19							
20							
21							

22
23
24
25

nt on Sunday 8/20 increased flow of river from 2595
 meter at all sites. Very low density of algae
 column at Lower Narrows and Deep Hole; and at

AM Meter Verification: After Sampling

Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
Primary	11:00	7.4	23.0	N
Comparison	11:00	7.4	23.2	Y
Comparison	11:00	7.5	23.0	N

Narrows	GIP 4		Deep Hole	
Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)
22.5	6.6	22.6	6.6	22.6
22.5	6.4	22.6	6.5	22.6
22.5	6.3	22.6	6.5	22.6
22.5	6.3	22.6	6.6	22.7
22.5	6.3	22.6	6.6	22.7
22.5	6.2	22.6	6.6	22.7
22.5	6.0	22.6	6.6	22.7
22.5	6.0	22.6	6.6	22.7
22.5	6.4	22.6	6.3	22.6
22.5	6.3	22.5	6.1	22.5
22.4	5.8	22.4	6.0	22.5
22.4	5.7	22.2	5.7	22.4
21.9	5.6	22.2	5.8	22.3
21.8	5.5	22.1	5.8	22.1
21.7	5.0	21.9	5.7	22.0
21.6	4.6	21.9	5.4	21.9
21.6	0.1	21.8	5.1	21.8
			4.8	21.8
			4.7	21.7
			4.3	21.7
			3.7	21.6
			3.3	21.6
			2.5	21.5
			2.3	21.5
			1.0	21.4

› NW late PM. Pond somewhat choppy.

/20 increased flow of river from 2595 cfs (8/20 11:45)

s. Very low density of algae particles on surface and in column at

PM Meter Verification: After Sampling

Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
Primary	15:21	7.5	22.3	Y
Comparison	15:21	7.6	22.1	N

Narrows	GIP-4		Dup.-GIP-4		Deep Hole	
	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)
24.1	7.0	23.9	7.8	23.9	7.2	23.9
23.2	6.9	23.8	6.8	23.8	7.1	23.7
22.7	6.9	22.9	6.8	23.4	7.1	23.4
22.6	7.0	22.6	7.1	22.6	6.7	22.9
22.5	7.1	22.5	7.0	22.5	6.8	22.7
22.4	6.8	22.5	6.8	22.5	6.7	22.6
22.4	6.9	22.5	6.6	22.5	6.7	22.6
22.4	6.7	22.5	6.8	22.5	6.6	22.6
22.4	6.8	22.5	6.8	22.5	6.5	22.6
22.3	6.6	22.4	6.7	22.4	6.3	22.5
22.3	6.5	22.4	6.7	22.4	6.3	22.5
22.2	6.4	22.3	6.3	22.3	6.2	22.4
22.2	6.3	22.3	6.1	22.3	6.0	22.2
22.2	6.2	22.3	6.0	22.2	5.9	22.2
22.1	6.0	22.2	6.0	22.2	5.8	22.1
22.1	5.4	21.9	5.6	22.0	5.3	21.9
22.0	5.3	21.9	5.1	21.9	5.1	21.8
21.9	0.1	21.8	0.1	21.8	4.9	21.8
					4.9	21.8
					4.5	21.7
					3.3	21.6
					3.2	21.5

2.7	21.5
2.2	21.4
1.1	21.4
0.1	21.2