

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

Week 6 AM: 07/11/2006

River Flow (Jay, Maine): 3,094 cfs

Weather: P. sunny, slight fog

Air Temperature: 70 deg. F (21 deg. C)

Comments: Significant drop in pond level (2-3 m) . Slight green tint in top meter of water c
 Algae particles visible at very low density on surface and low density in column at Lower Na

AM Meter Verification: Before Sampling

Model	Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
YSI 85	Primary	5:10	7.3	23.3	Y
YSI 55	Comparison	5:10	7.3	23.4	Y

Depth (m)	Twin Bridges		Turner Bridge		Upper Narrows	
	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)
0	7.3	23.6	7.0	24.2	7.0	24.5
1			6.5	24.2	7.0	24.5
2			6.6	24.2	7.0	24.4
3			6.4	24.2	7.0	24.3
4			6.6	24.2	6.9	24.3
5			6.6	24.2	7.0	24.3
6			6.6	24.2	7.0	24.2
7			6.6	24.2	5.5	23.9
8			6.6	24.2	4.5	23.9
9			6.5	24.2		
10			6.5	24.1		
11			5.5	24.1		
12						
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23						
24						
25						

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2006 Gulf Island Pond Water Quality Study
Dissolved Oxygen and Temperature Profiles

Week 6 PM: 07/11/2006

River Flow (Jay, Maine): 3,094 cfs

Weather: Clouds, breezy early PM, Rain/thunderstorms, windy late PM

Air Temperature: 70 deg. F (21 deg. C)

Comments: Significant drop in pond level (2-3 m) . Slight green tint in top meter of water c
 Algae particles visible at very low density on surface and low density in column at Lower Na

PM Meter Verification: Before Sampling

Model	Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
YSI 85	Primary	10:45	8.8	25.8	Y
YSI 55	Comparison	10:45	8.9	25.6	Y

Depth (m)	Twin Bridges		Turner Bridge		Upper Narrows	
	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)
0	7.7	24.1	DNS	DNS	7.9	24.9
1			DNS	DNS	7.9	24.9
2			DNS	DNS	7.8	24.6
3			DNS	DNS	8.0	24.5
4			DNS	DNS	8.2	24.4
5			DNS	DNS	8.1	24.4
6			DNS	DNS	8.0	24.3
7			DNS	DNS	7.6	24.3
8			DNS	DNS	4.5	24.1
9			DNS	DNS		
10			DNS	DNS		
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						

column at Deep Hole, GIP 4, Upper Narrows, and Turner Bridge.
 arrows.

AM Meter Verification: After Sampling

Model	Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
YSI 85	Primary	8:20	7.7	24.3	Y
YSI 55	Comparison	8:20	7.6	24.1	Y

Lower Narrows		GIP 4		Deep Hole	
DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)
7.5	25.0	7.5	24.8	7.3	24.4
7.2	25.0	7.3	24.8	7.0	24.4
7.3	24.9	7.3	24.8	6.8	24.4
7.2	24.8	7.2	24.8	6.7	24.4
7.3	24.4	6.4	24.0	6.2	23.7
7.0	24.1	6.1	23.6	5.7	23.5
6.4	23.9	6.1	23.4	5.7	23.4
5.8	23.7	6.0	23.4	5.6	23.4
5.5	23.5	6.0	23.3	5.5	23.3
4.8	23.3	5.8	23.2	5.4	23.2
4.7	23.0	5.8	23.1	5.5	23.1
4.2	22.9	5.5	23.0	5.4	23.1
4.3	22.8	5.3	23.0	5.3	23.0
4.0	22.7	5.5	22.8	5.4	22.9
3.0	22.5	4.8	22.7	5.2	22.8
0.5	22.3	4.0	22.5	5.0	22.7
		0.5	22.2	4.2	22.5
				4.0	22.4
				3.0	22.1
				1.9	21.2
				1.2	20.8
				1.2	20.5
				0.5	20.3
				0.1	19.9

column at Deep Hole, GIP 4, Upper Narrows, and Turner Bridge.
 arrows. Turner Bridge not sampled due to thunderstorms

PM Meter Verification: After Sampling

Model	Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
YSI 85	Primary	17:15	6.7	23.0	Y
YSI 55	Comparison	17:15	6.5	23.0	Y

Dup. Upper Narrows		Lower Narrows		GIP 4		Deep Hole	
DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)
8.0	24.9	7.9	25.1	7.8	24.9	7.8	24.6
7.9	24.9	7.9	25.1	7.6	25.0	7.6	24.7
8.1	24.5	7.9	25.0	7.6	25.0	7.8	24.7
8.0	24.5	8.0	24.7	7.3	25.0	7.4	24.5
8.0	24.4	8.0	24.5	7.4	24.8	6.7	23.9
8.1	24.4	7.9	24.3	6.5	23.9	6.6	23.8
8.0	24.3	7.5	24.1	6.1	23.7	6.5	23.6
7.7	24.3	6.5	23.8	6.1	23.4	6.2	23.5
4.4	24.1	6.2	23.7	5.9	23.3	6.2	23.4
		6.1	23.6	5.7	23.1	5.9	23.3
		5.9	23.5	5.7	23.1	5.9	23.2
		5.5	23.2	5.6	23.1	6.1	23.1
		5.1	23.0	5.1	22.9	6.0	23.1
		5.0	22.9	5.0	22.8	5.8	23.1
		4.4	22.7	4.8	22.6	5.8	23.0
				4.2	22.5	5.4	22.8
						4.6	22.6
						4.2	22.4
						3.5	22.3
						2.6	21.9
						2.3	21.0
						1.2	20.6
						0.7	20.5

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Week 7 AM: 7/18/2006

River Flow (Jay, Maine): 3,201 cfs

Weather: Foggy, light mist early AM; sunny, breezy late AM

Air Temperature: 70 deg. F (21 deg. C)

Comments: Pond level back to normal from previous week's drop. Slight green tint in top meter of density on surface and low density in column at Deep Hole/GIP 4; algae particles at medium-low den

AM Meter Verification: Before Sampling

Model	Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
YSI 85	Primary	5:00	7.0	26.2	Y
YSI 55	Comparison	5:00	7.3	26.2	Y

Model
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	7.0	26.3	7.1	27.0	7.4	27.2	7.7
1			7.1	26.8	7.5	27.0	7.8
2			7.0	26.7	7.6	26.9	7.7
3			7.0	26.6	7.6	26.8	7.7
4			6.9	26.6	7.7	26.8	7.9
5			6.9	26.6	7.7	26.8	7.7
6			6.9	26.6	7.7	26.7	7.3
7			6.9	26.5	7.5	26.6	6.7
8			6.9	26.5	7.2	26.3	6.4
9			6.9	26.5	5.0	26.3	5.6
10			6.9	26.5			5.4
11			5.9	26.5			4.6
12							3.7
13							2.2
14							1.7
15							0.1
16							0.1
17							
18							
19							
20							
21							
22							
23							
24							
25							

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Week 7 PM: 07/18/2006

River Flow (Jay, Maine): 3,201 cfs

Weather: Hazy, sunny early PM; extreme wind and thunderstorms mid-late PM

Air Temperature: 95 deg. F (35 deg. C)

Comments: Pond level back to normal from previous week's drop. Slight green tint in top meter of density on surface and low density in column at Deep Hole/GIP 4; algae particles at medium-low den Pond unnavigable due to extreme wind and thunderstorms; extreme weather prevented completion of

PM Meter Verification: Before Sampling

Model	Use	Time	DO(mg/L)	Temp. (°C)	Calibrated	Model
YSI 85	Primary	11:45	7.8	28.6	Y	YSI 85
YSI 55	Comparison	11:45	7.8	28.6	Y	YSI 55

Depth (m)	Twin Bridges		Turner Bridge		Upper Narrows		Dup. Upp
	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)
0	27.3	7.4	DNS	DNS	DNS	DNS	DNS
1			DNS	DNS	DNS	DNS	DNS
2			DNS	DNS	DNS	DNS	DNS
3			DNS	DNS	DNS	DNS	DNS
4			DNS	DNS	DNS	DNS	DNS
5			DNS	DNS	DNS	DNS	DNS
6			DNS	DNS	DNS	DNS	DNS
7			DNS	DNS	DNS	DNS	DNS
8			DNS	DNS	DNS	DNS	DNS
9			DNS	DNS	DNS	DNS	DNS
10			DNS	DNS			
11							
12							
13							
14							
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16							
17							
18							
19							
20							
21							
22							
23							

24
25

water column at all sites. Algae particles at very low density on surface and medium density in column at Upper and Lower Narrows

AM Meter Verification: After Sampling

Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
Primary	9:30	7.9	27.5	Y
Comparison	9:30	7.7	27.7	Y

Narrows	GIP 4		Deep Hole	
	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)
27.4	7.5	27.1	7.2	26.4
27.3	7.4	27.1	6.8	26.5
27.2	7.3	27.1	6.8	26.5
27.2	7.4	26.8	7.0	26.6
27.0	6.9	26.2	7.1	26.1
26.5	6.6	26.0	6.7	25.9
26.2	6.6	25.9	6.8	25.8
26.0	6.6	25.6	6.6	25.7
25.9	6.5	25.5	6.2	25.5
25.4	6.4	25.4	6.2	25.5
25.0	6.3	25.3	5.9	25.4
24.5	6.4	25.1	5.8	25.1
24.3	6.3	25.0	5.9	25.0
23.9	6.3	24.7	5.8	24.8
23.2	6.0	24.6	6.1	24.7
22.2	5.6	24.4	5.7	24.5
22.0	4.9	24.2	5.2	24.3
	2.9	24.0	4.6	24.2
			3.5	23.9
			1.9	23.8
			0.5	22.1
			0.1	20.8
			0.1	20.3
			0.0	20.0
			0.0	19.6
			0.0	19.6

water column at all sites. Algae particles at very low density on surface and medium density in column at Upper and Lower Narrows sampling

PM Meter Verification: After Sampling

Use	Time	DO(mg/L)	Temp. (°C)	Calibrated
Primary	18:55	8.0	25.9	Y
Comparison	18:55	8.1	25.9	Y

Upper Narrows	Lower Narrows		GIP 4		Deep Hole	
Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)	DO (mg/L)	Temp. (°C)
DNS	7.5	29.8	7.4	29.9	7.6	29.0
DNS	7.5	28.3	7.3	28.8	7.8	28.1
DNS	7.5	27.5	6.9	27.4	7.5	27.6
DNS	DNS	DNS	6.9	27.1	7.5	27.0
DNS	DNS	DNS	6.7	26.8	7.5	26.6
DNS	DNS	DNS	6.7	26.7	7.5	26.3
DNS	DNS	DNS	6.6	26.6	7.3	26.1
DNS	DNS	DNS	6.5	26.4	7.0	26.0
DNS	DNS	DNS	6.5	26.0	7.1	25.8
DNS	DNS	DNS	6.5	25.8	6.7	25.7
	DNS	DNS	6.6	25.7	6.6	25.6
	DNS	DNS	6.2	25.6	6.6	25.5
	DNS	DNS	6.2	25.5	6.5	25.2
	DNS	DNS	6.0	25.4	6.5	25.2
	DNS	DNS	6.1	24.8	6.2	25.0
	DNS	DNS	5.8	24.6	6.1	24.8
	DNS	DNS	5.2	24.5	5.5	24.5
	DNS	DNS	3.7	24.3	5.0	24.3
					3.1	23.9
					2.2	23.6
					0.2	21.9
					0.1	20.7
					0.0	20.3
					0.0	20.1

0.0	19.8
0.0	19.5