

ORIGINAL



Upper Peninsula Power Company
(a subsidiary of WPS Resources Corporation)
P.O. Box 19001
Green Bay, WI 54307-9001

December 28, 2006

Ms. Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
Mail Code: DTCA, HL 21.3
888 First Street, N.E.
Washington, DC 20426

Dear Secretary Salas:

Bond Falls Hydroelectric Project - 2006 Water Quality Monitoring Results

As per the Order Modifying and Approving Water Quality Monitoring Plan Under Article 409, dated March 22, 2006, Upper Peninsula Power Company (UPPCO) is pleased to submit water quality monitoring data from the 2006 monitoring year.

Per the Water Quality Monitoring Plan for the Bond Falls Hydroelectric Project, dissolved oxygen (D.O.) and temperature were monitored at four locations within the project: downstream of the Bond Falls Flowage in the Middle Branch of the Ontonagon River, downstream of the Bond Falls Flowage in Roselawn Creek, in the West Branch of the Ontonagon River below Bergland Dam, and in the West Branch of the Ontonagon River below the Victoria Powerhouse. In addition, temperature monitoring was conducted in a bypass reach of the Middle branch of the Ontonagon River. Monitoring was conducted hourly during the months of June through September. Also, D.O. and temperature profiles were conducted at the Victoria Dam and Bond Falls Dam during the monitoring periods.

Deviations from the State dissolved oxygen water quality standard was observed at the Victoria Powerhouse tailrace and in Roselawn Creek. UPPCO believes these deviations are due to warm, dry conditions observed during the monitoring period. One hourly reading was below the water quality standard in Roselawn Creek on September 1st. At the Victoria powerhouse monitoring location, 47.4% of the hourly readings were below 7.0 mg/l. Dissolved oxygen monitoring data from the five monitoring locations is attached in Appendix A. Please note that additional dissolved oxygen readings taken downstream of the monitoring location with a hand held D.O. meter showed D.O. levels were above the State water quality standard within 200 meters of the Victoria powerhouse monitoring location. Downstream water quality readings taken can be found with D.O. profile data in Appendix B for the Victoria Reservoir. Copies of equipment calibration log sheets are provided in Appendix C.

Deviations from the License maximum monthly average water temperature were observed at the Bond Falls monitoring location in August, the Roselawn Creek monitoring location in July and August, and Victoria Powerhouse tailrace monitoring location during the months of June, July, and August. UPPCO believes these deviations are due to warm, dry conditions observed during the monitoring period. All temperature monitoring data is attached in Appendix D.

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FEDERAL ENERGY REGULATORY COMMISSION

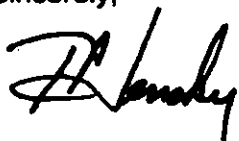
Ms. Magalie R. Salas, Secretary
December 28, 2006
Page 2

Per the water quality monitoring plan, temperature monitoring occurred in the bypass reach of the Middle Branch of the Ontonagon River. Water discharged from the Bond Falls Reservoir via a bypass line is withdrawn from the hypolimnion of the reservoir. A graphical comparison of the bypass temperature monitoring data versus the downstream monitoring location is also included in Appendix D. In general, the temperature in the bypass reach was slightly cooler in June and July, and nearly the same or slightly warmer in August and September.

UPPCO has had ongoing consultation with members of the Bond Falls Implementation Team regarding water quality monitoring data. Documentation of agency consultation is attached in Appendix E. Please note that all monitoring data for 2006 was submitted to the Bond Falls Implementation Team on October 27, 2006. No comments were received from the members of the Implementation Team on the water quality monitoring data.

Should you have any questions regarding this submittal, please do not hesitate to call Mr. Mark Metcalf at (920) 433-1833. Thank you for your time and consideration.

Sincerely,



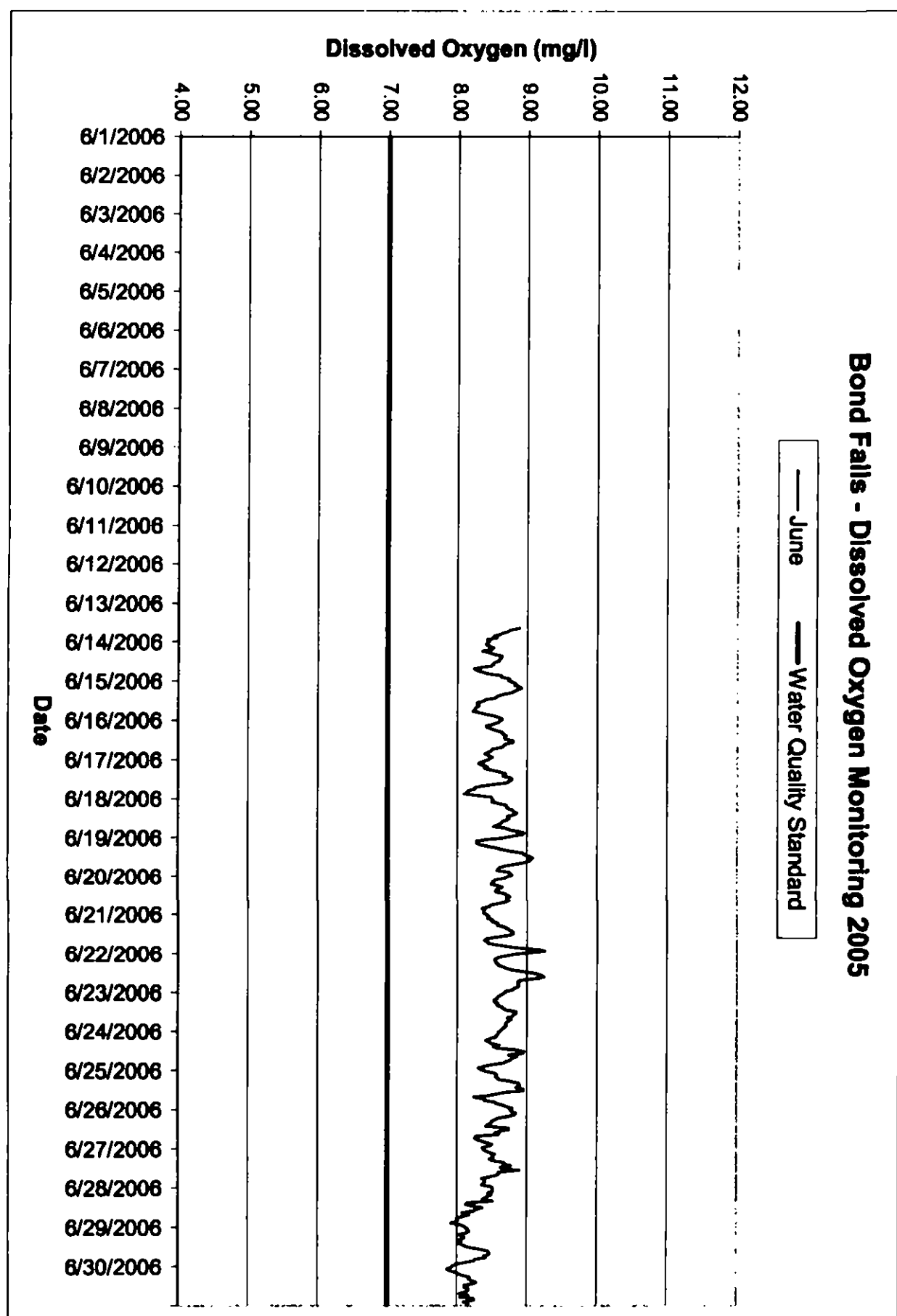
Terry P. Jensky
Vice President - Energy Supply Operations
for Wisconsin Public Service Corporation
Telephone: (715) 355-2047

Attach.

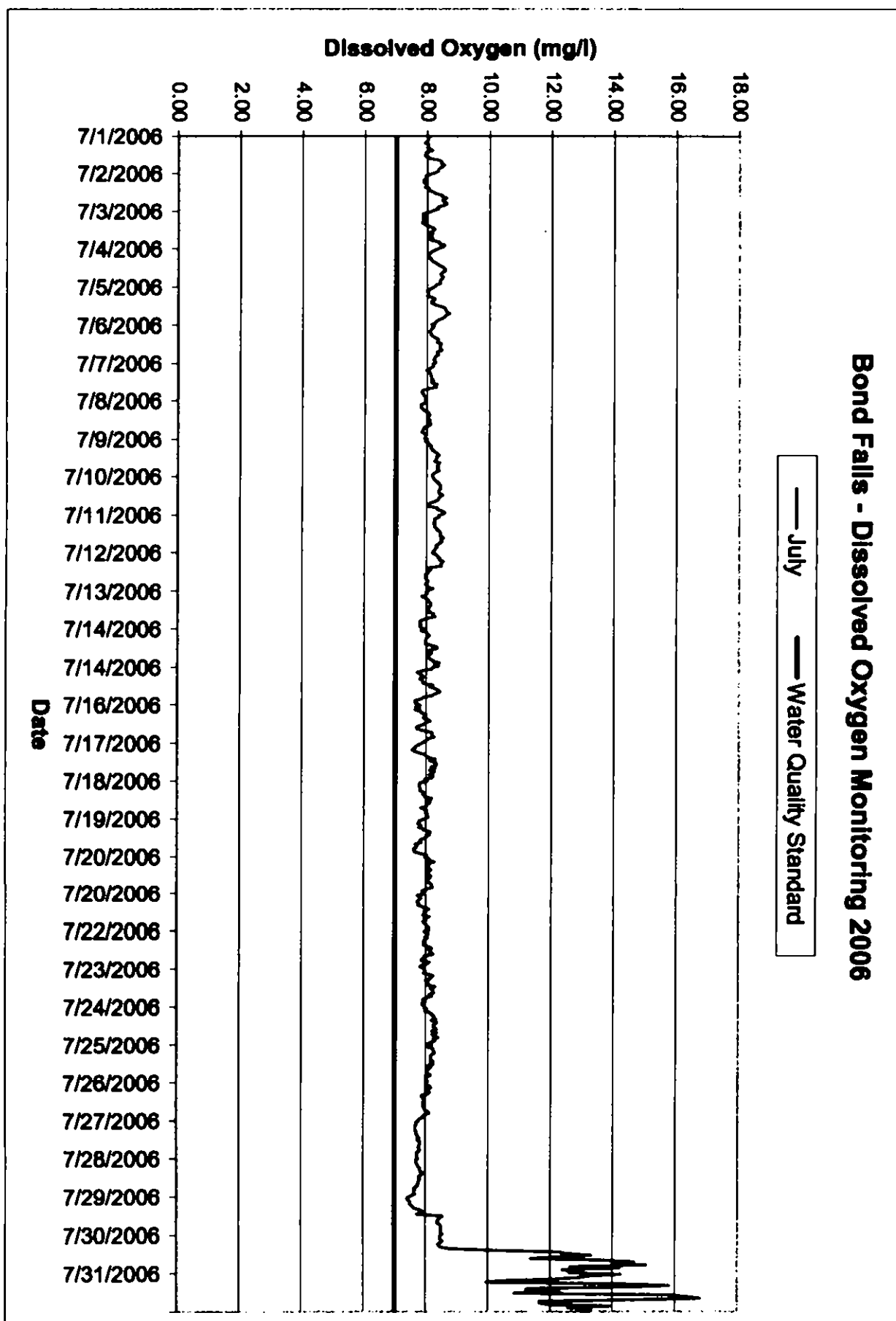
cc: Bond Falls Implementation Team (cover only)
Mr. Jim Melchori, UPPCO - UVD (cover only)
Mr. Kevin Poissant, UPPCO - UVD (cover only)
Ms. Joan Johaneck, WPSC - D2 (File)

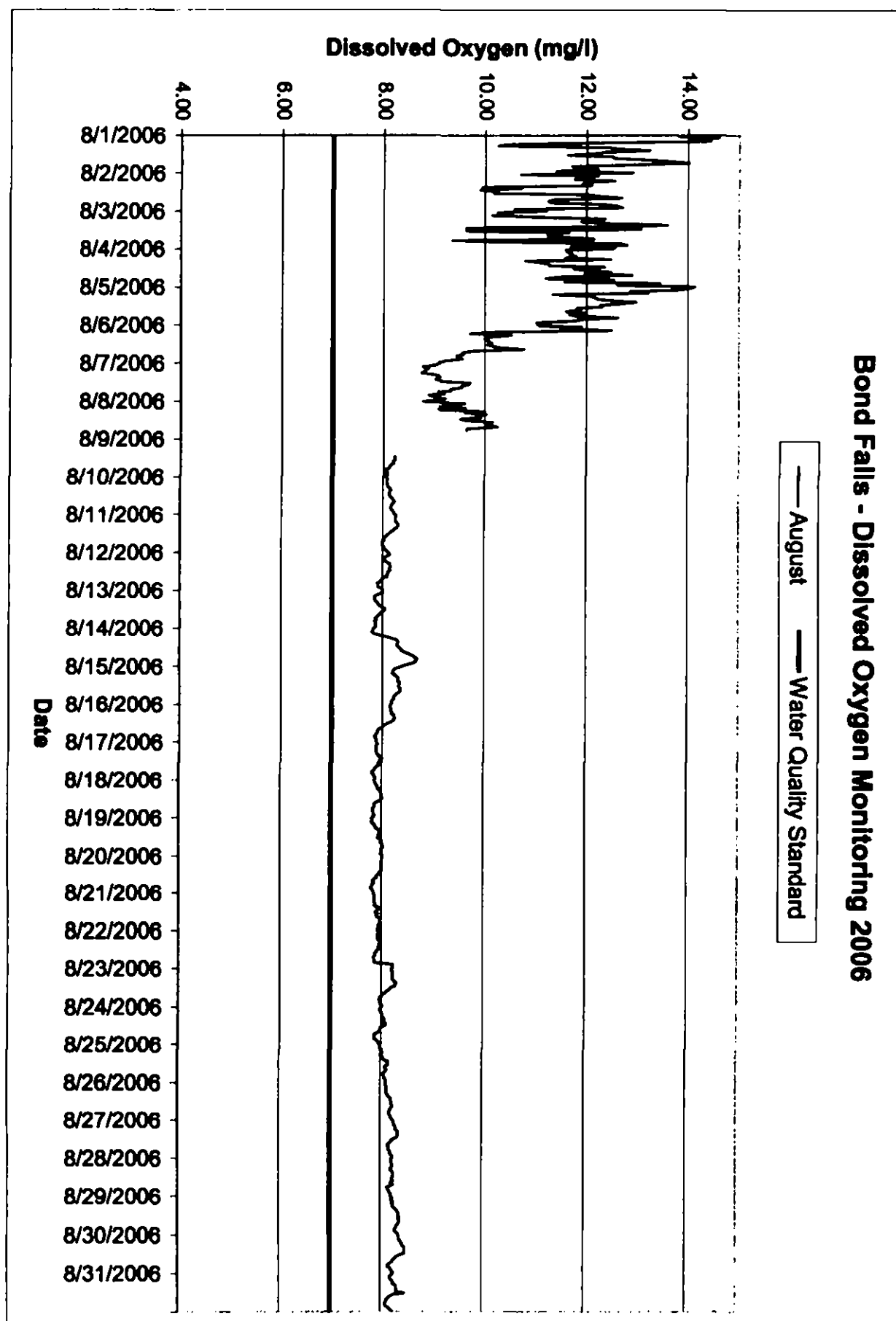
APPENDIX A

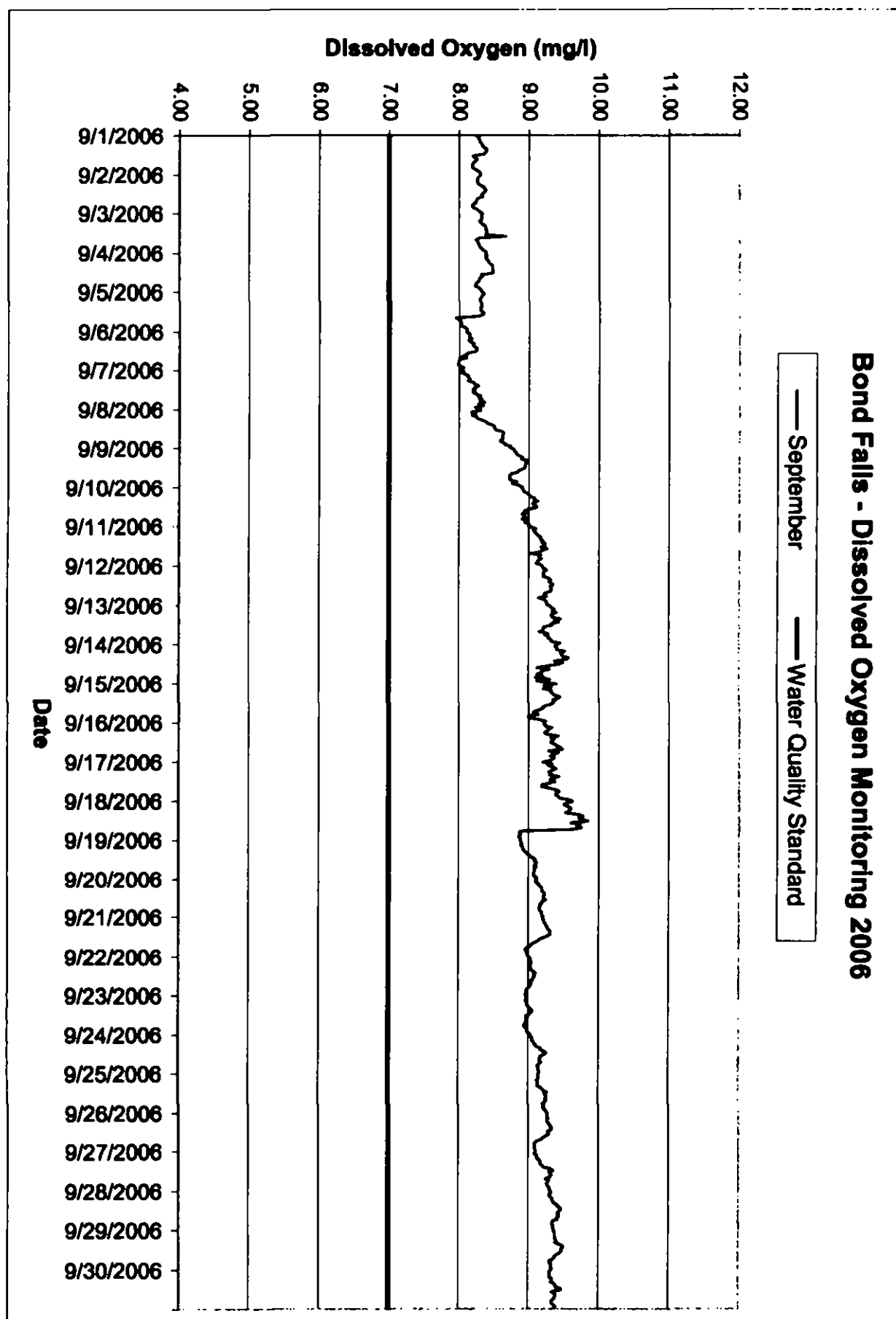
DISSOLVED OXYGEN MONITORING DATA



Bond Falls - Dissolved Oxygen Monitoring 2006







Bond Falls Dam Dissolved Oxygen Summary - June 2008

Time	06/01/08	06/02/08	06/03/08	06/04/08	06/05/08	06/06/08	06/07/08	06/08/08	06/09/08	06/10/08	06/11/08	06/12/08	06/13/08	06/14/08	06/15/08	06/16/08
HHMMSS	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.43	8.78	8.61
10000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.40	8.84	8.57
20000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.45	8.82	8.51
30000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.51	8.89	8.41
40000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.48	8.92	8.43
50000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.36	8.85	8.50
60000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.46	8.81	8.57
70000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.52	8.74	8.65
80000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.64	8.63	8.66
90000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.63	8.56	8.70
100000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.60	8.54	8.67
110000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.60	8.40	8.68
120000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.53	8.35	8.80
130000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.51	8.28	8.79
140000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.48	8.31	8.69
150000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.34	8.30	8.68
160000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.24	8.28	8.84
170000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.28	8.25	8.50
180000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.37	8.22	8.49
190000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.44	8.31	8.44
200000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.62	8.42	8.39
210000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.63	8.53	8.45
220000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.74	8.60	8.50
230000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.73	8.64	8.46
Daily Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.74	8.92	8.80
Daily Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.24	8.22	8.39
Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.23	8.50	8.55	8.57

Missing data from
6-1 to 6-13 due to
equipment problem

Bond Falls Dam Dissolved Oxygen Summary - June 2006

Time HH:MM:SS	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
0	8.42	8.50	8.66	8.72	8.42	8.82	8.67	8.59	8.41	8.77	8.38	8.52	8.14	7.91
10000	8.35	8.51	8.43	8.67	8.45	8.89	8.63	8.59	8.52	8.79	8.41	8.52	8.16	7.86
20000	8.30	8.50	8.28	8.55	8.43	8.56	8.59	8.56	8.57	8.84	8.47	8.51	8.18	7.91
30000	8.35	8.59	8.28	8.52	8.50	8.54	8.57	8.56	8.55	8.83	8.54	8.44	8.13	7.99
40000	8.43	8.70	8.33	8.51	8.50	8.54	8.52	8.47	8.57	8.73	8.51	8.50	8.04	8.03
50000	8.39	8.70	8.43	8.48	8.58	8.55	8.54	8.41	8.61	8.59	8.53	8.43	8.10	8.10
60000	8.48	8.72	8.55	8.58	8.57	8.58	8.58	8.47	8.76	8.54	8.47	8.41	8.10	8.19
70000	8.59	8.79	8.65	8.65	8.66	8.60	8.58	8.49	8.87	8.50	8.51	8.37	8.04	8.17
80000	8.67	8.80	8.77	8.58	8.72	8.66	8.63	8.60	8.89	8.49	8.68	8.51	8.07	8.21
90000	8.69	8.86	8.93	8.56	8.75	8.72	8.66	8.52	8.90	8.43	8.67	8.15	8.03	8.28
100000	8.66	8.80	8.97	8.56	8.79	8.81	8.69	8.60	8.84	8.42	8.77	8.13	8.07	8.24
110000	8.77	8.71	9.03	8.68	8.80	8.86	8.84	8.86	8.95	8.74	8.62	8.22	8.12	8.11
120000	8.73	8.75	9.08	8.72	8.74	9.12	8.84	8.95	8.95	8.74	8.67	8.37	8.21	8.11
130000	8.75	8.71	9.04	8.76	8.58	9.20	8.80	8.94	8.89	8.62	8.69	8.28	8.36	8.17
140000	8.72	8.65	9.04	8.71	8.42	9.24	8.79	8.74	8.57	8.55	8.59	8.25	8.45	8.17
150000	8.54	8.63	8.95	8.74	8.39	9.15	8.72	8.65	8.46	8.60	8.61	8.08	8.46	8.13
160000	8.35	8.58	8.83	8.70	8.44	8.93	8.77	8.79	8.24	8.28	8.57	8.17	8.47	8.04
170000	8.25	8.52	8.69	8.59	8.45	8.87	8.74	8.77	8.39	8.26	8.47	8.11	8.38	8.18
180000	8.25	8.70	8.61	8.47	8.59	8.87	8.70	8.70	8.40	8.28	8.36	8.00	8.42	8.05
190000	8.15	8.75	8.59	8.46	8.72	8.89	8.69	8.67	8.53	8.36	8.41	8.02	8.26	8.25
200000	8.15	8.87	8.58	8.35	8.91	8.87	8.70	8.50	8.57	8.43	8.40	8.00	8.25	8.25
210000	8.10	8.95	8.74	8.38	9.18	8.82	8.68	8.38	8.68	8.50	8.39	7.92	8.11	8.10
220000	8.29	8.93	8.76	8.36	9.25	8.79	8.64	8.31	8.72	8.45	8.36	8.05	7.99	8.17
230000	8.49	8.77	8.79	8.37	9.01	8.89	8.62	8.35	8.79	8.37	8.49	8.10	7.95	8.16
Daily Max	8.78	8.95	9.08	8.76	9.25	9.24	8.84	8.95	8.95	8.84	8.68	8.52	8.47	8.28
Daily Min	8.10	8.50	8.28	8.35	8.39	8.54	8.52	8.31	8.24	8.26	8.36	7.92	7.95	7.86
Average	8.46	8.71	8.71	8.57	8.66	8.81	8.67	8.61	8.64	8.55	8.53	8.25	8.19	8.12

Bond Falls Dam Dissolved Oxygen Summary - July 2006

Time	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
HM-MSS	8.07	8.10	8.05	8.25	8.16	8.21	8.17	7.93	8.01	8.19	8.38	8.20	7.98	7.95	8.19	7.80
0	8.01	7.93	7.85	8.15	8.03	8.17	8.20	7.94	7.93	8.21	8.39	8.32	8.02	7.82	8.17	7.86
10000	8.00	7.95	7.82	8.09	7.98	8.13	8.16	7.80	8.05	8.25	8.23	8.34	7.96	8.00	7.88	7.78
20000	8.00	7.91	7.86	8.03	8.03	8.10	8.07	7.80	8.05	8.34	8.23	8.42	7.85	8.02	7.89	7.64
30000	7.90	7.88	7.85	8.02	8.04	8.10	7.97	7.82	8.13	8.37	8.26	8.40	7.96	8.10	7.81	7.82
40000	8.02	7.87	7.91	8.07	7.99	8.12	8.06	7.87	8.12	8.43	8.21	8.53	8.03	8.02	7.84	7.85
50000	8.03	7.98	7.88	8.11	8.15	8.16	8.09	7.94	8.17	8.43	8.27	8.48	8.07	7.96	7.92	7.99
60000	7.99	7.97	7.81	8.15	8.24	8.23	8.11	8.03	8.17	8.44	8.24	8.45	8.11	7.98	7.79	7.99
70000	8.08	7.91	7.92	8.28	8.18	8.36	8.13	8.06	8.27	8.39	8.31	8.47	8.14	7.96	7.86	7.91
80000	8.16	8.04	8.01	8.32	8.12	8.33	8.14	8.07	8.33	8.40	8.33	8.00	8.12	7.96	7.89	8.04
90000	7.95	8.02	8.16	8.41	8.17	8.32	8.14	7.99	8.39	8.39	8.41	8.13	8.07	8.17	7.90	8.12
100000	7.95	8.17	8.23	8.52	8.31	8.45	8.22	8.03	8.31	8.51	8.43	8.07	8.02	8.35	8.21	8.00
110000	7.91	8.26	8.18	8.57	8.51	8.40	8.13	8.09	8.32	8.42	8.44	8.04	8.09	8.31	8.11	7.92
120000	7.96	8.43	8.07	8.56	8.58	8.41	8.31	8.10	8.29	8.38	8.44	7.95	8.06	8.09	8.24	7.77
130000	8.09	8.50	8.16	8.49	8.59	8.42	8.26	8.11	8.24	8.35	8.54	7.99	8.23	8.16	8.35	7.67
140000	8.38	8.60	8.12	8.42	8.63	8.48	8.29	8.07	8.41	8.25	8.44	7.97	8.20	8.16	8.43	7.73
150000	8.46	8.48	8.06	8.46	8.71	8.30	8.05	7.91	8.37	8.13	8.49	7.96	8.27	8.03	8.41	7.89
160000	8.43	8.50	8.18	8.50	8.59	8.31	7.86	7.89	8.33	8.04	8.47	8.03	8.04	8.03	8.24	8.15
170000	8.53	8.60	8.11	8.46	8.55	8.36	7.83	7.87	8.36	8.06	8.37	8.02	7.88	8.06	8.16	8.19
180000	8.48	8.61	8.37	8.42	8.49	8.27	7.85	7.83	8.33	8.32	8.28	7.96	7.78	8.15	7.91	8.17
190000	8.40	8.42	8.38	8.39	8.35	8.24	7.89	7.91	8.39	8.33	8.34	8.02	7.79	8.24	7.84	8.26
200000	8.35	8.31	8.55	8.42	8.28	8.20	7.92	7.94	8.29	8.48	8.27	8.00	7.82	8.41	7.64	8.06
210000	8.33	8.34	8.51	8.29	8.26	8.23	7.98	7.97	8.21	8.58	8.28	8.20	7.78	8.27	7.65	8.02
220000	8.23	8.16	8.36	8.23	8.14	8.26	7.94	7.92	8.16	8.52	8.20	8.05	7.82	8.38	7.86	7.93
230000	8.53	8.61	8.55	8.57	8.71	8.48	8.31	8.11	8.41	8.58	8.54	8.53	8.27	8.41	8.43	8.26
Daily Max	7.90	7.87	7.81	8.02	7.96	8.10	7.83	7.80	7.93	8.04	8.20	7.95	7.78	7.82	7.64	7.64
Daily Min	8.15	8.21	8.10	8.32	8.29	8.27	8.07	7.95	8.23	8.34	8.34	8.17	8.00	8.11	7.99	7.93
Average																

Bond Falls Dam Dissolved Oxygen Summary - July 2006

Time HH:MM:SS	07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
0	7.85	8.03	7.83	7.96	7.97	7.93	7.94	7.95	8.20	8.02	7.77	7.76	7.48	8.46	14.28
10000	7.74	7.82	7.79	8.10	7.73	8.06	7.99	8.04	8.07	8.00	7.69	7.68	7.41	8.46	13.27
20000	7.65	7.78	7.78	8.07	7.81	8.06	7.93	7.96	8.24	8.14	7.71	7.71	7.46	8.45	12.93
30000	7.63	7.78	7.74	8.27	7.83	7.97	8.11	8.13	8.24	8.17	7.67	7.71	7.51	8.54	12.08
40000	7.56	7.79	7.84	8.06	7.77	8.04	8.24	8.19	8.27	8.01	7.67	7.74	7.49	8.50	10.38
50000	7.64	7.81	7.76	8.10	7.72	7.95	8.12	8.24	8.28	8.05	7.67	7.77	7.53	8.40	9.94
60000	7.76	7.80	7.89	8.06	7.77	7.94	8.15	8.25	8.19	8.13	7.67	7.83	7.59	8.43	14.15
70000	7.85	7.90	7.94	8.04	7.72	7.91	7.99	8.32	8.14	8.07	7.70	7.82	7.64	8.48	15.81
80000	8.01	7.86	8.12	8.16	7.83	7.93	8.06	8.16	8.17	7.86	7.70	7.84	7.82	8.78	14.58
90000	8.10	7.96	8.11	8.08	7.96	8.05	8.06	8.34	8.16	7.90	7.73	7.94	7.90	8.78	11.28
100000	8.28	7.97	8.11	8.08	8.10	8.19	8.04	8.33	8.23	7.92	7.75	7.86	7.82	12.32	11.22
110000	8.11	8.16	8.03	8.05	7.95	8.10	8.31	8.23	8.15	7.95	7.60	7.78	7.73	12.47	12.30
120000	8.29	8.07	7.97	8.16	8.01	8.17	8.15	8.25	8.24	7.92	7.73	7.83	8.55	13.31	10.84
130000	8.33	8.13	7.83	8.13	7.93	8.13	8.23	8.31	8.08	7.93	7.81	7.80	8.47	12.25	15.79
140000	8.32	8.10	7.80	8.09	7.91	8.23	8.22	8.34	8.18	7.91	7.82	7.78	8.41	11.37	16.40
150000	8.16	8.01	7.85	8.04	8.11	7.86	8.26	8.20	8.09	7.83	7.81	7.78	8.39	13.56	16.81
160000	8.30	8.01	7.85	8.02	7.94	7.92	8.12	8.35	8.06	7.85	7.79	7.74	8.36	14.70	14.87
170000	8.11	7.84	7.70	8.13	8.01	7.91	8.16	8.21	8.06	7.98	7.77	7.74	8.46	14.02	11.65
180000	8.26	7.96	7.68	8.19	7.91	7.85	8.03	8.28	8.07	8.06	7.81	7.64	8.49	15.06	11.67
190000	8.21	8.03	7.80	8.17	7.96	8.12	7.92	8.40	8.16	8.11	7.81	7.67	8.49	12.64	11.98
200000	8.11	7.96	7.61	8.20	8.00	8.04	7.99	8.25	8.04	7.87	7.72	7.62	8.49	14.23	13.98
210000	8.23	8.04	7.66	8.01	8.05	7.87	7.89	8.30	8.01	7.91	7.73	7.64	8.48	12.39	12.59
220000	8.18	8.00	7.88	7.87	8.10	7.81	7.88	8.19	8.00	7.90	7.73	7.66	8.49	12.76	13.33
230000	7.95	8.07	8.03	7.91	8.10	7.96	7.97	8.06	8.06	7.79	7.73	7.56	8.54	12.62	13.08
Daily Max	8.33	8.18	8.12	8.27	8.11	8.23	8.31	8.40	8.28	8.17	7.82	7.94	8.55	15.08	16.81
Daily Min	7.56	7.76	7.60	7.67	7.72	7.61	7.86	7.95	8.00	7.79	7.67	7.56	7.41	8.40	9.94
Average	8.03	7.96	7.84	8.06	7.92	8.01	8.06	8.22	8.14	7.98	7.74	7.75	8.04	11.27	13.13

Equipment malfunction caused D.O. values to increase to very high levels.

Bond Falls Dam Dissolved Oxygen Summary - August 2006

Time	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/06/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
HHMMSS																
0	13.81	10.70	10.25	11.80	14.04	11.09	9.08	8.79	0.00	8.07	8.28	8.13	8.00	7.82	8.37	8.17
10000	14.59	12.22	10.53	11.62	13.82	11.90	9.04	8.60	0.00	8.09	8.28	8.13	8.01	7.82	8.28	8.15
20000	14.05	11.93	10.15	11.71	12.87	11.50	8.79	9.47	0.00	8.08	8.28	8.08	7.93	7.80	8.22	8.16
30000	14.44	11.78	11.13	11.68	13.21	12.49	8.89	9.12	0.00	8.09	8.25	8.03	7.85	7.83	8.21	8.18
40000	12.39	12.55	12.37	11.79	11.33	10.21	8.82	9.61	0.00	8.09	8.25	8.02	7.85	7.82	8.20	8.17
50000	10.44	11.96	12.21	11.58	12.08	9.71	8.82	9.09	0.00	8.09	8.28	8.05	7.85	8.08	8.23	8.19
60000	10.25	11.92	11.90	12.47	12.17	10.52	8.75	9.89	0.00	8.10	8.30	8.10	7.85	8.16	8.28	8.19
70000	12.45	12.09	12.41	10.80	12.22	10.14	9.01	9.61	0.00	8.14	8.30	8.15	7.89	8.27	8.31	8.23
80000	12.61	9.93	13.59	11.08	12.52	9.99	8.11	10.03	0.00	8.16	8.27	8.14	7.91	8.30	8.32	8.23
90000	13.24	10.71	12.83	11.25	12.98	10.04	8.09	9.64	0.00	8.14	8.23	8.15	7.93	8.31	8.30	8.24
100000	12.38	9.91	9.63	11.28	12.88	10.07	9.03	9.82	0.00	8.13	8.19	8.13	7.96	8.30	8.34	8.22
110000	12.12	10.26	13.07	12.36	12.27	10.13	9.15	9.62	8.23	8.13	8.14	8.15	8.04	8.29	8.33	8.19
120000	11.62	10.19	9.63	11.75	12.31	10.05	9.70	9.66	8.23	8.14	8.11	8.10	8.06	8.33	8.33	8.11
130000	12.50	12.03	11.85	11.98	11.80	10.16	9.68	10.15	8.23	8.18	8.08	8.11	8.00	8.37	8.33	8.06
140000	12.56	12.28	11.33	12.47	11.88	10.32	9.54	10.02	8.19	8.20	8.04	8.09	7.95	8.38	8.36	8.01
150000	13.23	12.70	11.23	11.97	11.80	10.77	9.54	10.13	8.20	8.22	8.03	8.06	7.93	8.45	8.36	7.98
160000	13.70	11.36	11.57	12.89	11.99	9.78	9.33	10.25	8.16	8.23	8.03	7.99	7.90	8.52	8.34	7.92
170000	14.01	11.25	12.14	11.52	11.67	9.55	9.32	9.66	8.13	8.19	7.99	7.98	7.85	8.59	8.29	7.91
180000	12.96	11.31	9.36	11.19	11.82	9.58	9.08	9.64	8.11	8.17	8.00	7.94	7.86	8.64	8.25	7.90
190000	11.70	12.36	10.84	12.53	12.62	9.44	9.19	0.00	8.05	8.16	7.99	7.90	7.85	8.68	8.23	7.86
200000	12.15	12.60	12.69	11.57	11.92	9.50	8.90	0.00	8.06	8.16	8.02	7.91	7.87	8.67	8.23	7.86
210000	12.22	12.71	12.80	13.44	11.76	9.55	9.01	0.00	8.08	8.19	8.03	7.91	7.86	8.65	8.21	7.87
220000	11.40	10.59	11.69	12.61	11.02	9.22	9.22	0.00	8.08	8.21	8.06	7.96	7.86	8.59	8.19	7.88
230000	12.91	11.20	12.55	14.13	11.04	9.12	9.08	0.00	8.07	8.23	8.10	8.00	7.86	8.45	8.19	7.88
Daily Max	14.59	12.71	13.59	14.13	14.04	12.49	9.70	10.25	8.23	8.23	8.30	8.15	8.06	8.68	8.37	8.24
Daily Min	10.25	9.91	9.36	10.80	11.02	9.12	8.75	0.00	0.00	8.07	7.99	7.90	7.85	7.80	8.19	7.86
Average	12.65	11.52	11.56	11.97	12.23	10.20	9.13	7.67	4.41	8.15	8.14	8.05	7.91	8.30	8.28	8.07

Equipment malfunction from 7/30/06 through 08/09/06.

Bond Falls Dam Dissolved Oxygen Summary - August 2006

Time HH:MM:SS	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
0	7.89	7.86	7.81	8.01	7.85	7.84	8.21	8.01	7.97	8.11	8.25	8.22	8.22	8.36	8.23
10000	7.91	7.87	7.82	8.01	7.86	7.85	8.21	7.96	7.99	8.11	8.27	8.22	8.24	8.37	8.21
20000	7.86	7.89	7.80	8.01	7.86	7.82	8.23	7.96	7.96	8.12	8.27	8.22	8.22	8.37	8.18
30000	7.86	7.89	7.83	8.00	7.87	7.84	8.22	8.01	8.01	8.12	8.28	8.23	8.25	8.39	8.2
40000	7.89	7.92	7.87	7.99	7.87	7.83	8.22	8.01	8.02	8.12	8.30	8.24	8.23	8.41	8.23
50000	7.87	7.92	7.88	8.01	7.85	7.84	8.23	8.03	8.04	8.12	8.30	8.23	8.25	8.43	8.25
60000	7.89	7.96	7.80	7.99	7.87	7.86	8.22	8.02	8.01	8.12	8.31	8.21	8.24	8.44	8.24
70000	7.90	7.96	7.85	8.00	7.87	7.89	8.24	8.06	8.01	8.13	8.35	8.21	8.26	8.47	8.3
80000	7.83	7.99	7.99	8.01	7.87	7.86	8.28	8.06	8.05	8.16	8.35	8.21	8.31	8.48	8.31
90000	7.96	8.00	7.96	7.99	7.94	7.96	8.30	8.06	8.05	8.19	8.35	8.26	8.34	8.48	8.31
100000	8.00	7.99	7.94	7.95	7.95	7.94	8.28	8.09	8.06	8.21	8.34	8.26	8.35	8.47	8.32
110000	7.97	8.01	7.87	7.96	7.92	7.95	8.28	8.09	8.15	8.21	8.31	8.25	8.36	8.48	8.31
120000	7.83	8.00	7.82	7.91	7.86	7.91	8.19	8.05	8.15	8.22	8.26	8.24	8.36	8.37	8.48
130000	7.95	7.96	8.00	7.91	7.83	7.80	8.17	7.99	8.15	8.22	8.22	8.24	8.36	8.32	8.25
140000	7.95	7.89	8.00	7.86	7.90	7.87	8.13	7.99	8.09	8.23	8.20	8.25	8.36	8.28	8.19
150000	7.80	7.86	7.98	7.83	7.82	7.89	8.09	7.98	8.10	8.23	8.16	8.21	8.39	8.25	8.16
160000	7.87	7.87	8.02	7.83	7.87	7.86	8.05	7.94	8.12	8.21	8.14	8.25	8.37	8.24	8.12
170000	7.86	7.95	8.02	7.85	7.96	7.85	8.02	7.96	8.10	8.19	8.17	8.21	8.36	8.19	8.12
180000	7.82	7.82	8.03	7.82	7.99	7.86	7.96	7.86	8.06	8.18	8.16	8.14	8.33	8.16	8.10
190000	7.81	7.83	8.00	7.82	7.96	7.87	7.97	7.87	8.07	8.18	8.19	8.16	8.31	8.14	8.09
200000	7.84	7.84	7.99	7.79	7.95	7.87	7.97	7.87	8.07	8.18	8.19	8.17	8.29	8.19	8.11
210000	7.85	7.84	8.01	7.81	7.85	8.23	7.96	7.91	8.08	8.20	8.20	8.18	8.29	8.21	8.16
220000	7.87	7.86	7.99	7.83	7.94	8.23	7.99	7.94	8.11	8.21	8.23	8.21	8.33	8.23	8.18
230000	7.87	7.85	8.01	7.84	7.83	8.23	8.02	7.96	8.11	8.23	8.24	8.21	8.35	8.28	8.23
Daily Max	8.00	8.01	8.03	8.01	7.99	8.23	8.30	8.09	8.15	8.23	8.35	8.26	8.39	8.48	8.48
Daily Min	7.81	7.82	7.80	7.79	7.85	7.85	7.97	7.86	7.97	8.11	8.14	8.14	8.22	8.14	8.09
Average	7.90	7.91	7.95	7.92	7.91	7.96	8.14	7.99	8.07	8.18	8.25	8.22	8.31	8.33	8.22

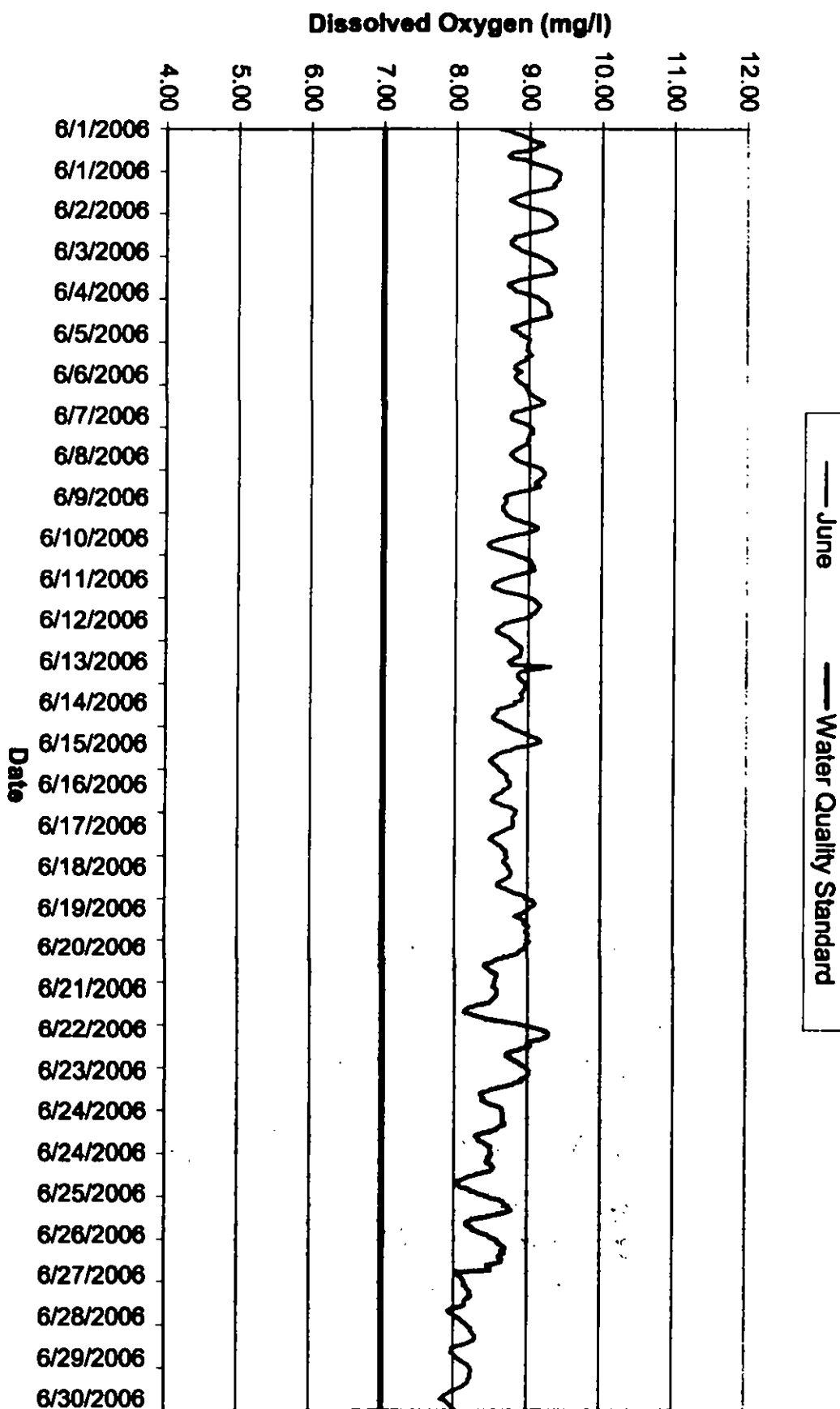
Bond Falls Dam Dissolved Oxygen Summary - September 2006

Time HH:MM:SS	09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/18/06
0	8.24	8.30	8.33	8.36	8.34	8.11	8.06	8.31	8.78	8.90	9.03	9.19	9.30	9.38	9.40	9.21
10000	8.28	8.27	8.32	8.40	8.36	8.15	8.03	8.17	8.79	8.92	9.10	9.21	9.33	9.38	9.22	9.23
20000	8.28	8.26	8.32	8.38	8.33	8.14	8.06	8.24	8.82	8.92	9.06	9.25	9.36	9.41	9.33	9.23
30000	8.29	8.25	8.32	8.39	8.32	8.15	8.13	8.16	8.82	8.97	9.08	9.22	9.34	9.40	9.21	9.32
40000	8.30	8.26	8.28	8.41	8.30	8.16	8.13	8.26	8.86	9.00	9.10	9.20	9.39	9.52	9.33	9.26
50000	8.32	8.27	8.31	8.42	8.30	8.13	8.15	8.28	8.91	9.02	9.13	9.22	9.33	9.46	9.31	9.26
60000	8.33	8.30	8.34	8.44	8.31	8.16	8.13	8.33	8.89	9.06	9.17	9.20	9.32	9.47	9.35	9.22
70000	8.35	8.35	8.37	8.47	8.32	8.21	8.20	8.38	8.99	9.07	9.16	9.29	9.34	9.49	9.36	9.26
80000	8.39	8.36	8.38	8.48	8.32	8.19	8.22	8.41	8.96	9.12	9.20	9.31	9.46	9.57	9.45	9.42
90000	8.39	8.36	8.36	8.46	8.30	8.21	8.27	8.47	8.95	9.06	9.16	9.28	9.37	9.53	9.43	9.31
100000	8.37	8.36	8.40	8.48	8.30	8.25	8.23	8.51	8.96	9.05	9.23	9.31	9.43	9.37	9.35	9.36
110000	8.35	8.34	8.39	8.46	8.32	8.25	8.19	8.50	8.94	9.11	9.23	9.35	9.32	9.48	9.36	9.33
120000	8.19	8.31	8.39	8.49	8.35	8.23	8.23	8.53	8.91	9.11	9.17	9.30	9.33	9.42	9.34	9.31
130000	8.23	8.34	8.67	8.32	8.33	8.11	8.19	8.61	8.84	9.00	9.26	9.32	9.22	9.25	9.29	9.37
140000	8.25	8.27	8.29	8.34	8.27	8.11	8.25	8.64	8.84	8.93	9.19	9.32	9.21	9.12	9.21	9.40
150000	8.23	8.25	8.24	8.30	7.95	8.04	8.30	8.62	8.75	8.98	9.16	9.31	9.21	9.28	9.19	9.45
160000	8.20	8.24	8.26	8.29	7.99	8.10	8.28	8.63	8.73	8.90	9.03	9.23	9.15	9.18	9.16	9.48
170000	8.19	8.23	8.27	8.29	8.02	8.01	8.32	8.62	8.72	8.93	9.17	9.22	9.26	9.18	9.08	9.26
180000	8.18	8.19	8.28	8.25	8.02	7.99	8.30	8.62	8.72	8.95	9.14	9.25	9.23	9.12	9.06	9.42
190000	8.18	8.16	8.24	8.24	8.03	7.99	8.36	8.59	8.75	8.90	9.16	9.14	9.29	9.20	9.13	9.35
200000	8.22	8.21	8.31	8.23	8.03	7.98	8.28	8.65	8.83	8.96	9.14	9.22	9.28	9.10	8.99	9.31
210000	8.26	8.26	8.33	8.28	8.08	8.01	8.34	8.65	8.76	8.94	9.13	9.25	9.33	9.30	9.00	8.36
220000	8.29	8.28	8.36	8.31	8.11	8.06	8.23	8.74	8.85	9.00	9.10	9.25	9.32	9.12	9.15	9.34
230000	8.30	8.32	8.39	8.32	8.10	8.00	8.29	8.73	8.90	8.99	9.18	9.28	9.45	9.25	9.23	9.29
Daily Max	8.39	8.36	8.67	8.49	8.36	8.25	8.36	8.74	8.99	9.12	9.26	9.35	9.46	9.57	9.45	9.46
Daily Min	8.18	8.16	8.24	8.23	7.95	7.98	8.03	8.17	8.72	8.90	9.03	9.14	9.15	9.10	8.99	9.21
Average	8.28	8.28	8.34	8.37	8.21	8.12	8.22	8.48	8.84	8.99	9.15	9.25	9.31	9.33	9.25	9.32

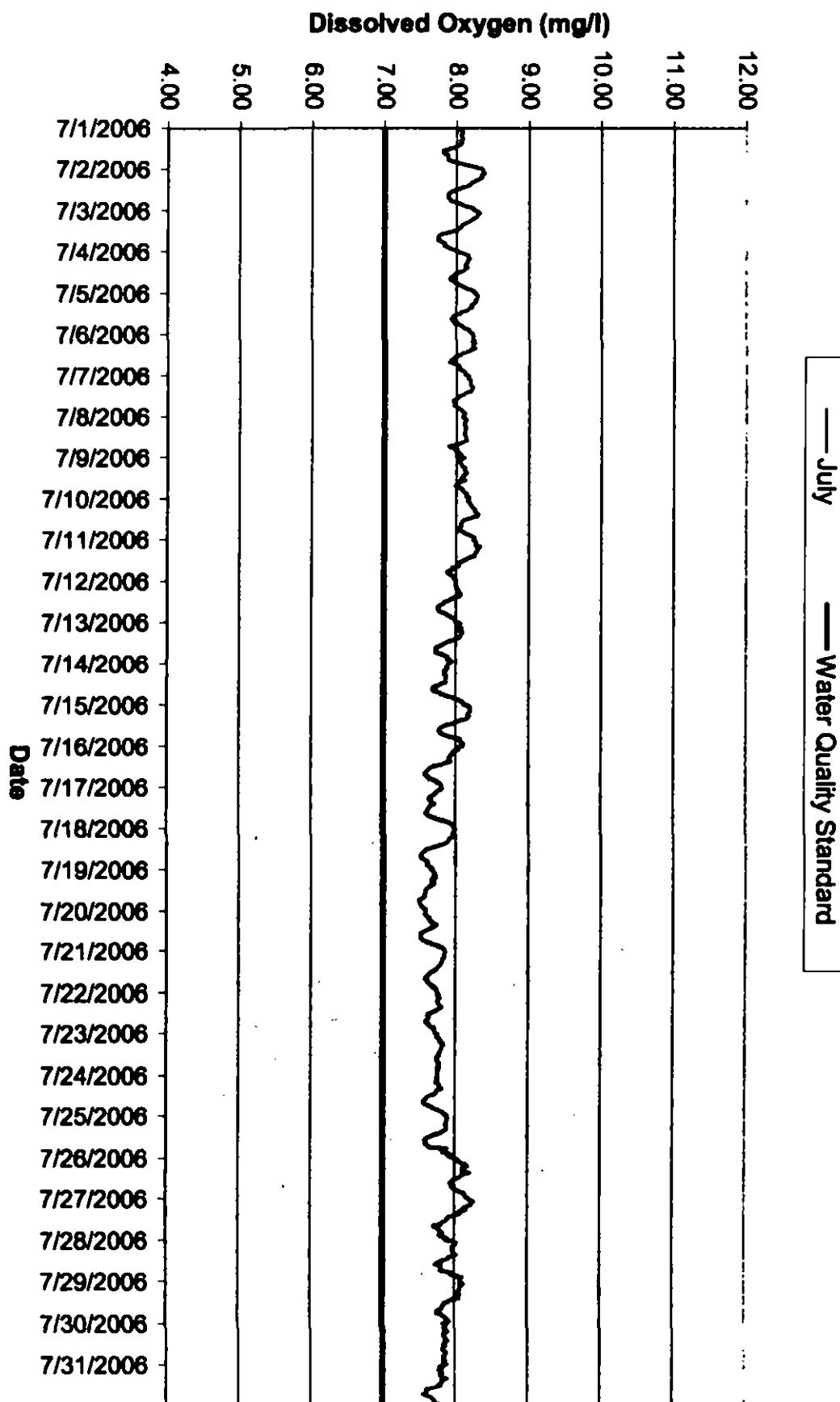
Bond Falls Dam Dissolved Oxygen Summary - September 2006

Time HH:MM:SS	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
0	9.20	9.63	8.88	9.11	9.21	9.01	8.97	9.03	9.15	9.27	9.10	9.33	9.36	9.32
10000	9.33	9.55	8.89	9.10	9.20	9.03	8.96	9.06	9.15	9.27	9.09	9.31	9.38	9.30
20000	9.28	9.51	8.90	9.12	9.22	9.03	8.96	9.06	9.15	9.26	9.13	9.29	9.38	9.31
30000	9.34	9.55	8.89	9.15	9.22	9.04	8.96	9.06	9.15	9.26	9.12	9.31	9.38	9.30
40000	9.39	9.61	8.92	9.15	9.24	9.04	8.98	9.06	9.12	9.26	9.14	9.34	9.38	9.30
50000	9.34	9.59	8.92	9.16	9.25	9.03	8.98	9.06	9.14	9.27	9.16	9.34	9.38	9.34
60000	9.26	9.58	8.93	9.19	9.27	9.02	8.99	9.11	9.13	9.29	9.17	9.35	9.41	9.34
70000	9.31	9.52	8.96	9.19	9.28	9.03	9.01	9.12	9.13	9.31	9.17	9.37	9.38	9.32
80000	9.30	9.72	8.97	9.20	9.31	9.04	9.04	9.17	9.17	9.32	9.20	9.41	9.44	9.36
90000	9.43	9.77	9.01	9.23	9.31	9.07	9.06	9.17	9.20	9.33	9.22	9.42	9.46	9.39
100000	9.34	9.72	9.04	9.23	9.30	9.10	9.05	9.22	9.22	9.33	9.31	9.46	9.50	9.40
110000	9.30	9.77	9.09	9.21	9.26	9.08	9.02	9.26	9.27	9.27	9.36	9.46	9.47	9.47
120000	9.36	9.85	9.06	9.22	9.20	9.09	8.96	9.23	9.26	9.29	9.30	9.44	9.48	9.47
130000	9.29	9.60	9.11	9.25	9.15	9.07	8.99	9.17	9.24	9.29	9.33	9.42	9.46	9.33
140000	9.19	9.74	9.11	9.19	9.12	9.07	8.97	9.16	9.25	9.25	9.33	9.42	9.42	9.37
150000	9.18	9.69	9.08	9.19	9.06	9.04	8.97	9.16	9.24	9.21	9.30	9.44	9.38	9.39
160000	9.29	9.76	9.11	9.16	9.04	9.04	8.96	9.17	9.26	9.19	9.24	9.41	9.38	9.38
170000	9.39	9.61	9.08	9.17	9.02	9.03	8.96	9.19	9.24	9.13	9.29	9.42	9.35	9.36
180000	9.43	8.89	9.08	9.15	8.98	9.02	8.94	9.15	9.20	9.10	9.26	9.35	9.30	9.34
190000	9.39	8.87	9.07	9.16	8.96	9.00	8.95	9.13	9.22	9.08	9.28	9.34	9.30	9.34
200000	9.39	8.89	9.07	9.17	8.96	8.98	8.99	9.15	9.20	9.09	9.27	9.35	9.33	9.34
210000	9.12	8.87	9.07	9.19	8.97	8.97	8.99	9.14	9.22	9.09	9.30	9.35	9.33	9.37
220000	9.44	8.86	9.09	9.19	8.96	8.96	8.96	9.15	9.25	9.09	9.30	9.35	9.32	9.40
230000	9.57	8.88	9.12	9.20	8.99	8.96	9.01	9.16	9.25	9.10	9.31	9.36	9.34	9.37
Daily Max	9.57	9.85	9.12	9.25	9.31	9.10	9.06	9.26	9.27	9.33	9.36	9.46	9.50	9.47
Daily Min	9.16	8.86	8.86	9.10	8.96	8.96	8.94	9.03	9.12	9.06	9.09	9.29	9.30	9.30
Average	9.34	9.46	9.02	9.16	9.15	9.03	8.99	9.14	9.20	9.22	9.24	9.36	9.39	9.36

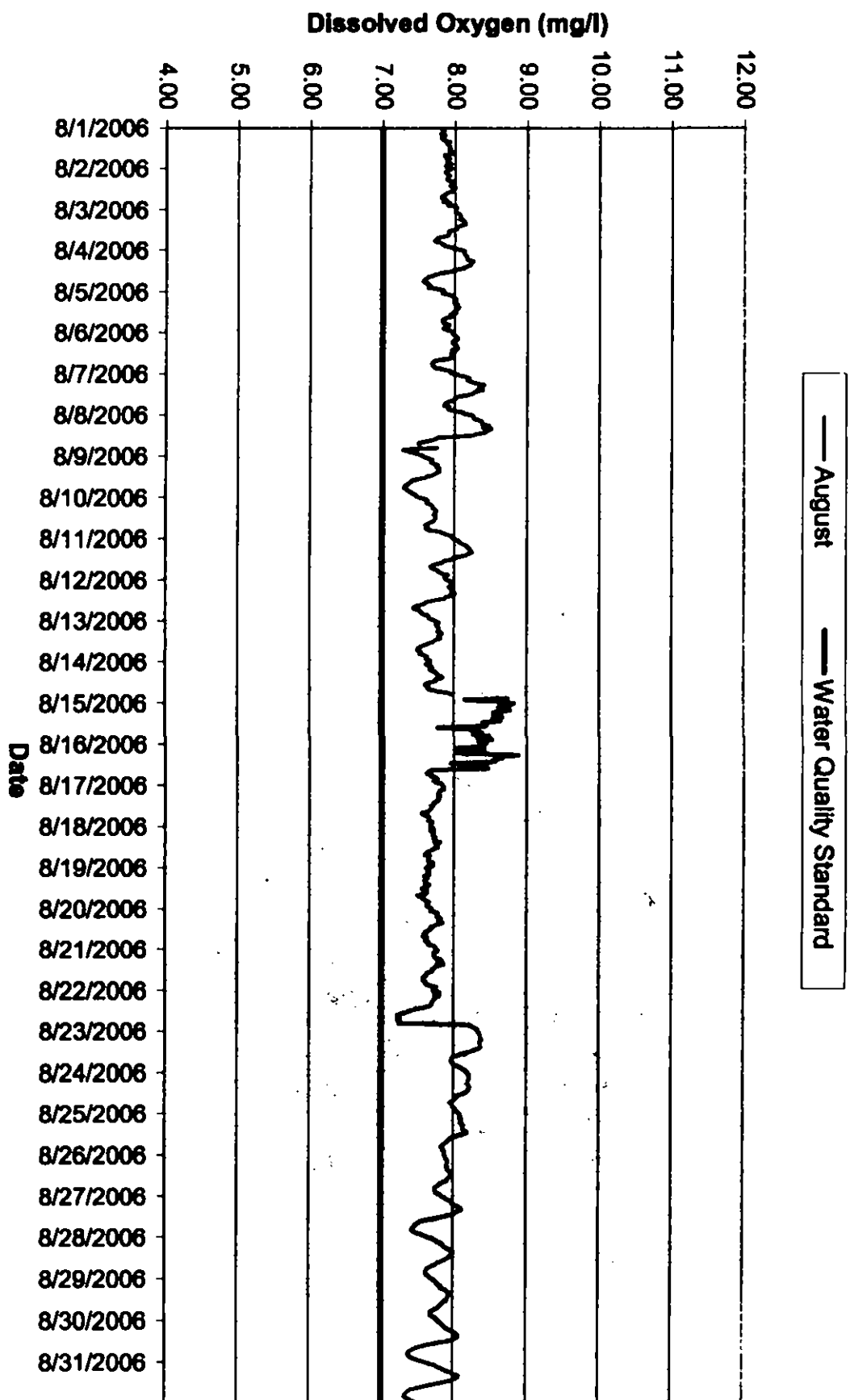
Roselawn Creek - Dissolved Oxygen Monitoring 2006



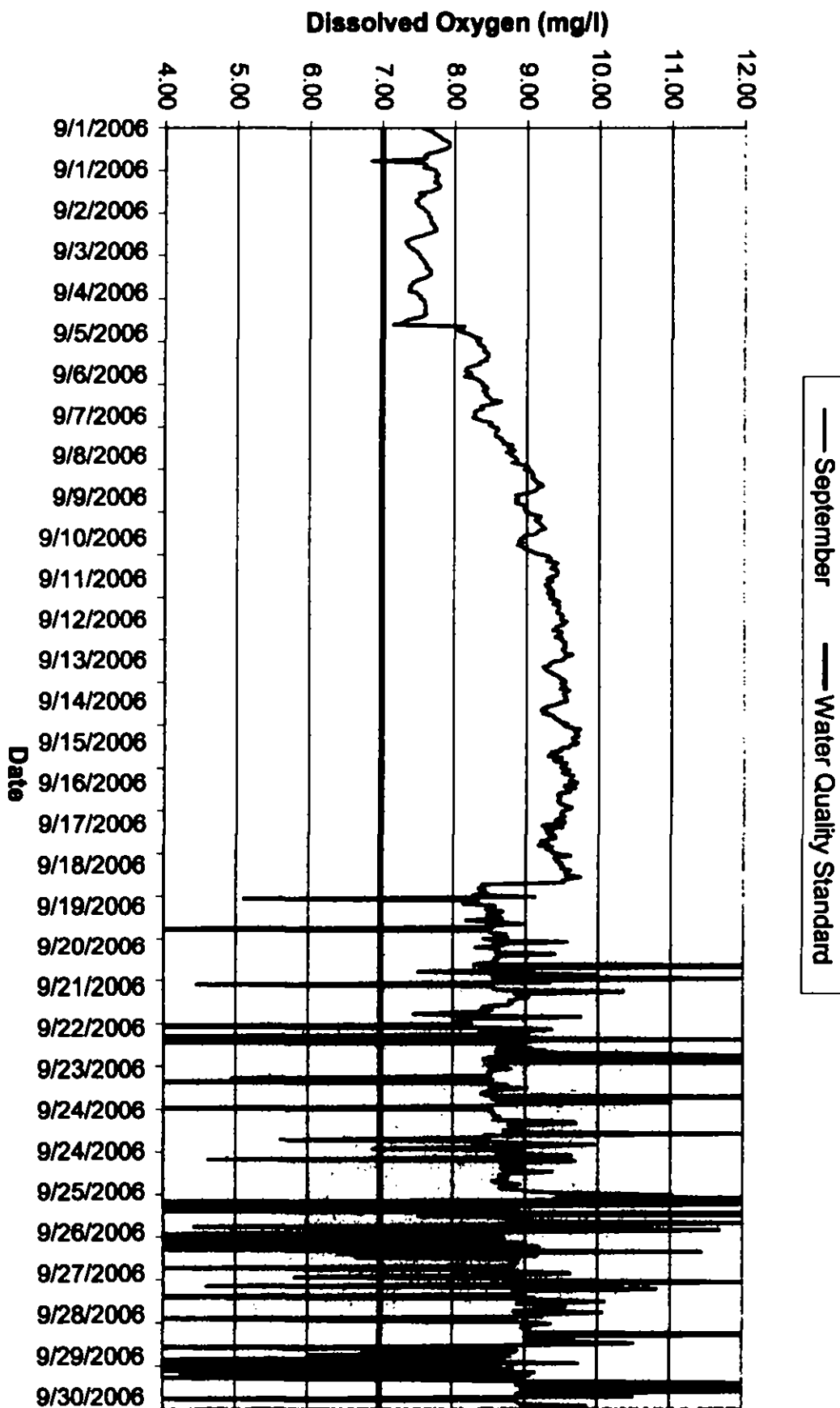
Roselawn Creek - Dissolved Oxygen Monitoring 2006



Roselawn Creek - Dissolved Oxygen Monitoring 2006



Roselawn Creek - Dissolved Oxygen Monitoring 2006



Rosehewn Creek Dissolved Oxygen Summary - June 2006

Time HHMMSS	06/01/06	06/02/06	06/03/06	06/04/06	06/05/06	06/06/06	06/07/06	06/08/06	06/09/06	06/10/06	06/11/06	06/12/06	06/13/06	06/14/06	06/15/06	06/16/06
0	8.61	9.40	9.28	9.14	9.16	8.89	8.96	9.03	9.16	8.68	8.83	9.04	8.78	8.95	8.75	8.90
10000	8.73	9.42	9.30	9.18	9.21	8.96	8.96	9.05	9.21	8.69	8.91	9.09	8.82	8.95	8.79	8.84
20000	8.78	9.41	9.34	9.24	9.24	8.96	8.97	9.05	9.22	8.73	8.96	9.11	8.85	8.96	8.86	8.88
30000	8.86	9.40	9.34	9.28	9.25	8.99	9.00	9.05	9.20	8.77	9.02	9.13	8.89	8.94	8.92	8.72
40000	8.93	9.41	9.37	9.30	9.26	8.97	8.99	9.00	9.16	8.86	9.04	9.17	8.91	8.93	8.97	8.71
50000	8.98	9.36	9.37	9.32	9.27	9.00	9.03	8.98	9.14	8.92	9.05	9.14	8.90	8.89	9.02	8.72
60000	9.03	9.36	9.36	9.35	9.25	9.00	9.07	8.98	9.12	9.01	9.07	9.13	8.90	8.91	9.10	8.72
70000	9.08	9.33	9.32	9.36	9.29	9.04	9.11	8.97	9.08	9.06	9.06	9.10	8.89	8.91	9.15	8.75
80000	9.17	9.35	9.29	9.36	9.30	8.95	9.14	8.99	9.14	9.12	9.08	9.09	8.89	8.92	9.18	8.76
90000	9.19	9.30	9.22	9.33	9.27	8.96	9.20	8.96	9.15	9.12	9.00	9.03	8.81	8.91	9.13	8.75
100000	9.11	9.21	9.10	9.21	9.17	8.94	9.20	8.92	9.06	9.06	8.91	9.03	8.76	8.81	9.05	8.73
110000	9.07	9.08	8.99	9.08	9.06	8.88	9.13	8.88	8.98	8.98	8.81	8.86	8.73	8.82	8.91	8.67
120000	8.96	8.96	8.91	8.86	8.97	8.84	9.05	8.83	8.87	8.76	8.72	8.87	8.77	8.76	8.81	8.67
130000	8.77	8.90	8.78	8.86	8.90	8.81	8.98	8.79	8.66	8.76	8.65	8.67	8.75	8.59	8.66	8.64
140000	8.73	8.84	8.80	8.78	8.83	8.80	8.90	8.74	8.69	8.66	8.59	8.67	8.31	8.59	8.66	8.58
150000	8.71	8.79	8.75	8.72	8.76	8.83	8.78	8.74	8.66	8.57	8.54	8.64	9.16	8.59	8.59	8.53
160000	8.75	8.73	8.74	8.70	8.77	8.90	8.76	8.77	8.69	8.50	8.52	8.60	9.00	8.56	8.56	8.53
170000	8.94	8.77	8.75	8.76	8.82	8.86	8.75	8.79	8.68	8.45	8.50	8.57	8.89	8.55	8.53	8.50
180000	9.00	8.82	8.79	8.79	8.87	8.83	8.75	8.82	8.68	8.44	8.52	8.56	8.66	8.52	8.50	8.53
190000	9.07	8.88	8.85	8.82	8.88	8.81	8.76	8.87	8.66	8.47	8.60	8.56	8.85	8.52	8.48	8.62
200000	9.16	8.96	8.87	8.91	8.93	8.82	8.83	8.94	8.84	8.51	8.65	8.63	8.86	8.55	8.51	8.65
210000	9.23	9.05	8.94	8.99	8.98	8.84	8.89	9.00	8.63	8.61	8.78	8.66	8.89	8.61	8.53	8.76
220000	9.30	9.16	9.01	9.09	9.01	8.87	8.97	9.10	8.64	8.70	8.89	8.74	8.90	8.66	8.57	8.80
230000	9.36	9.22	9.10	9.14	9.00	8.90	9.00	9.16	8.67	8.78	8.95	8.76	8.96	8.70	8.59	8.84
Daily Max	9.36	9.42	9.37	9.36	9.30	9.04	9.20	9.16	9.22	9.12	9.06	9.17	9.31	8.96	9.16	8.84
Daily Min	8.61	8.73	8.74	8.70	8.76	8.80	8.75	8.74	8.63	8.44	8.50	8.56	8.73	8.52	8.48	8.50
Average	8.98	9.13	9.07	9.07	9.06	8.91	8.97	8.94	8.91	8.76	8.82	8.88	8.89	8.78	8.79	8.67
Monthly average: 8.73																

Rosestem Creek Dissolved Oxygen Summary - June 2006

Time	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
H-MMS	8.84	8.71	8.97	8.89	8.54	8.94	8.89	8.65	8.52	8.43	8.54	8.15	8.18	8.23
0	8.84	8.71	8.97	8.89	8.54	8.94	8.89	8.65	8.52	8.43	8.54	8.15	8.18	8.23
10000	8.83	8.72	9.07	9.03	8.55	9.04	9.01	8.66	8.51	8.46	8.60	8.14	8.21	8.25
20000	8.80	8.69	9.09	9.00	8.52	9.13	9.01	8.67	8.46	8.59	8.58	8.14	8.24	8.24
30000	8.79	8.66	9.11	8.96	8.55	9.22	9.03	8.67	8.49	8.67	8.63	8.17	8.23	8.22
40000	8.80	8.67	9.09	9.00	8.57	9.27	9.01	8.65	8.44	8.66	8.65	8.17	8.26	8.22
50000	8.80	8.71	9.03	8.98	8.58	9.29	8.97	8.66	8.44	8.66	8.70	8.22	8.27	8.23
60000	8.80	8.73	9.02	8.92	8.57	9.28	8.91	8.66	8.51	8.74	8.71	8.23	8.29	8.20
70000	8.81	8.74	8.98	8.88	8.58	9.27	8.93	8.69	8.51	8.74	8.64	8.21	8.29	8.20
80000	8.79	8.76	8.94	8.86	8.55	9.19	8.83	8.70	8.54	8.73	8.70	8.24	8.29	8.20
90000	8.77	8.77	8.89	8.80	8.52	9.09	8.80	8.62	8.53	8.64	8.64	8.21	8.24	8.16
100000	8.68	8.77	8.83	8.70	8.49	9.00	8.69	8.59	8.50	8.65	8.61	8.16	8.19	8.12
110000	8.62	8.77	8.90	8.61	8.47	9.00	8.59	8.56	8.39	8.53	8.63	8.14	8.13	8.07
120000	8.59	8.75	8.94	8.54	8.33	9.05	8.50	8.48	8.29	8.44	8.66	8.15	8.03	8.02
130000	8.52	8.70	8.96	8.52	8.24	8.94	8.35	8.37	8.15	8.22	8.65	8.16	7.97	7.96
140000	8.52	8.66	8.95	8.41	8.17	8.90	8.35	8.28	8.10	8.22	8.45	7.99	7.96	7.82
150000	8.48	8.60	8.97	8.40	8.15	8.78	8.36	8.33	8.10	8.16	8.45	7.92	7.85	7.82
160000	8.53	8.59	9.02	8.43	8.13	8.71	8.37	8.33	8.02	8.17	8.47	7.92	7.99	7.87
170000	8.56	8.59	9.00	8.47	8.18	8.70	8.41	8.34	8.03	8.16	8.50	7.94	8.01	7.82
180000	8.59	8.65	8.98	8.49	8.25	8.74	8.37	8.41	8.07	8.26	8.51	7.98	8.05	7.89
190000	8.64	8.72	8.98	8.54	8.34	8.79	8.42	8.43	8.08	8.24	8.02	8.01	8.08	7.82
200000	8.65	8.76	8.99	8.56	8.41	8.83	8.47	8.50	8.19	8.33	8.04	8.07	8.12	7.83
210000	8.69	8.83	9.02	8.56	8.52	8.88	8.55	8.49	8.22	8.38	8.07	8.10	8.16	7.86
220000	8.71	8.93	9.00	8.56	8.68	8.91	8.62	8.49	8.29	8.46	8.12	8.12	8.20	7.99
230000	8.69	8.97	9.00	8.56	8.84	8.96	8.66	8.48	8.34	8.48	8.12	8.17	8.21	8.02
Daily Max	8.84	8.97	9.11	9.03	8.84	9.29	9.03	8.70	8.54	8.76	8.71	8.24	8.28	8.25
Daily Min	8.48	8.59	8.83	8.40	8.13	8.70	8.36	8.28	8.02	8.16	8.02	7.92	7.96	7.82
Average	8.69	8.73	8.99	8.70	8.45	9.00	8.66	8.53	8.33	8.47	8.49	8.12	8.15	8.06

Rosetman Creek Discharged Oxygen Summary - July 2006

Time	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
HHMMSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	8.03	8.36	8.29	8.04	8.27	8.23	8.17	8.08	8.11	8.17	8.24	8.00	8.01	7.90	8.11	8.10
10000	8.06	8.36	8.31	8.10	8.29	8.23	8.16	8.12	8.05	8.16	8.27	8.00	8.06	7.88	8.17	8.04
20000	8.08	8.38	8.29	8.16	8.28	8.22	8.18	8.13	8.05	8.18	8.26	8.01	8.04	7.87	8.20	8.04
30000	8.06	8.33	8.28	8.16	8.26	8.24	8.19	8.11	8.05	8.20	8.28	8.00	8.07	7.88	8.19	7.87
40000	8.08	8.36	8.25	8.18	8.25	8.21	8.18	8.11	8.07	8.21	8.33	8.01	8.06	7.83	8.20	7.96
50000	8.07	8.33	8.21	8.15	8.27	8.25	8.19	8.10	8.08	8.23	8.29	8.03	8.06	7.85	8.17	7.94
60000	8.09	8.28	8.18	8.15	8.24	8.22	8.20	8.13	8.12	8.26	8.29	8.02	8.08	7.84	8.16	7.92
70000	8.05	8.24	8.12	8.13	8.20	8.21	8.22	8.13	8.11	8.25	8.28	8.06	8.07	7.86	8.16	7.90
80000	8.07	8.19	8.07	8.12	8.22	8.25	8.21	8.11	8.12	8.28	8.28	8.07	8.06	7.87	8.15	7.91
90000	8.06	8.18	8.07	8.15	8.17	8.19	8.20	8.12	8.14	8.31	8.26	8.03	8.04	7.86	8.10	7.93
100000	8.01	8.10	8.04	8.12	8.14	8.15	8.12	8.10	8.09	8.27	8.18	7.83	7.87	7.86	7.99	7.85
110000	7.96	8.05	8.01	8.09	8.06	8.08	8.10	8.12	8.08	8.19	8.14	7.91	7.80	7.86	7.97	7.78
120000	7.87	7.96	7.83	8.02	8.05	8.04	8.03	8.12	8.06	8.12	8.09	7.83	7.83	7.75	7.85	7.69
130000	7.80	7.97	7.82	7.97	7.86	7.96	8.02	8.13	8.12	8.08	8.01	7.82	7.80	7.75	7.80	7.65
140000	7.82	7.86	7.76	7.95	7.95	7.96	7.95	8.14	8.05	8.06	8.01	7.79	7.74	7.68	7.77	7.62
150000	7.87	7.88	7.74	7.91	7.83	7.82	7.96	8.08	8.01	8.05	8.04	7.75	7.71	7.67	7.77	7.60
160000	7.88	7.88	7.74	7.92	7.95	7.89	7.97	8.03	7.98	8.07	7.94	7.75	7.72	7.70	7.78	7.57
170000	7.87	7.90	7.74	7.98	7.97	7.99	7.98	7.89	8.03	8.03	7.95	7.76	7.72	7.76	7.81	7.58
180000	7.89	7.92	7.80	7.98	8.03	8.03	7.98	7.91	8.09	8.03	7.87	7.80	7.78	7.80	7.88	7.62
190000	7.94	8.02	7.84	8.05	8.08	8.04	8.03	8.01	8.09	8.09	7.89	7.86	7.84	7.87	7.96	7.64
200000	8.05	8.07	7.82	8.09	8.10	8.04	8.08	7.89	8.12	8.12	7.82	7.90	7.88	7.96	8.06	7.70
210000	8.14	8.13	7.87	8.14	8.17	8.08	8.08	8.03	8.14	8.16	7.97	7.83	7.88	8.01	8.05	7.75
220000	8.23	8.22	7.82	8.23	8.18	8.11	8.12	8.06	8.13	8.22	7.97	7.98	7.93	8.07	8.08	7.78
230000	8.34	8.23	7.98	8.24	8.21	8.11	8.11	8.06	8.17	8.26	7.99	7.98	7.94	8.10	8.11	7.80
Daily Max	8.34	8.38	8.31	8.24	8.29	8.25	8.22	8.14	8.17	8.31	8.33	8.07	8.09	8.10	8.20	8.10
Daily Min	7.80	7.88	7.74	7.91	7.83	7.89	7.95	7.89	7.96	8.03	7.87	7.75	7.71	7.67	7.77	7.57
Average	8.01	8.13	8.00	8.08	8.14	8.12	8.10	8.08	8.08	8.17	8.11	7.93	7.93	7.86	8.02	7.81
Monthly average:					7.92											

Roseman Creek Dissolved Oxygen Summary - July 2006

Time	07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
HHMMSS															
0	7.79	7.99	7.698822	7.58	7.85	7.75	7.72	7.76	7.89	7.96	8.18	7.87	8.08	7.84	7.89
10000	7.81	8.00	7.690594	7.58	7.86	7.77	7.76	7.74	7.89	8.03	8.20	7.99	8.06	7.89	7.79
20000	7.76	7.98	7.701306	7.58	7.85	7.77	7.74	7.76	7.90	8.04	8.26	8.02	8.12	7.86	7.83
30000	7.74	7.96	7.722047	7.61	7.84	7.79	7.77	7.75	7.88	8.09	8.23	8.00	8.08	7.85	7.76
40000	7.73	7.97	7.692769	7.64	7.85	7.76	7.78	7.73	7.88	8.15	8.23	7.97	8.08	7.89	7.82
50000	7.69	7.96	7.723531	7.64	7.82	7.76	7.79	7.77	7.87	8.18	8.15	7.97	8.07	7.90	7.83
60000	7.64	7.91	7.664273	7.67	7.82	7.76	7.83	7.78	7.87	8.10	8.11	7.97	8.06	7.83	7.79
70000	7.63	7.80	7.675015	7.69	7.81	7.76	7.84	7.77	7.87	8.12	8.15	7.98	8.04	7.84	7.82
80000	7.66	7.89	7.705757	7.74	7.79	7.81	7.82	7.81	7.86	8.10	8.05	7.97	8.06	7.86	7.89
90000	7.67	7.83	7.678499	7.70	7.77	7.79	7.81	7.75	7.84	8.21	8.08	7.93	8.05	7.86	7.86
100000	7.71	7.76	7.627224	7.67	7.75	7.75	7.80	7.75	7.80	8.10	8.01	7.93	8.07	7.90	7.83
110000	7.65	7.68	7.597982	7.62	7.73	7.71	7.79	7.73	7.73	8.09	7.92	7.91	7.94	7.86	7.79
120000	7.63	7.60	7.578724	7.57	7.69	7.64	7.77	7.65	7.67	8.05	7.89	7.84	7.92	7.84	7.81
130000	7.62	7.57	7.569466	7.52	7.65	7.61	7.78	7.61	7.61	7.98	7.88	7.79	7.86	7.87	7.74
140000	7.60	7.54	7.570206	7.52	7.63	7.63	7.74	7.60	7.58	7.97	7.82	7.73	7.83	7.83	7.60
150000	7.59	7.52	7.58095	7.53	7.62	7.63	7.74	7.56	7.60	7.93	7.82	7.82	7.84	7.83	7.62
160000	7.61	7.51	7.561691	7.52	7.58	7.58	7.75	7.57	7.59	7.95	7.71	7.81	7.82	7.85	7.62
170000	7.65	7.52	7.482433	7.54	7.60	7.59	7.77	7.57	7.62	7.95	7.76	7.81	7.75	7.89	7.56
180000	7.71	7.56	7.503175	7.56	7.62	7.61	7.78	7.62	7.64	7.97	7.76	7.81	7.75	7.87	7.62
190000	7.78	7.61	7.503917	7.64	7.64	7.64	7.76	7.67	7.69	8.00	7.81	7.94	7.83	7.83	7.66
200000	7.87	7.62	7.514659	7.67	7.67	7.64	7.78	7.71	7.87	8.05	7.83	7.94	7.85	7.85	7.69
210000	7.93	7.60	7.525401	7.75	7.69	7.71	7.75	7.77	7.84	8.13	7.76	8.00	7.90	7.84	7.73
220000	7.98	7.63	7.558142	7.79	7.73	7.70	7.77	7.83	7.94	8.14	7.82	8.11	7.91	7.86	7.73
230000	7.97	7.66	7.586884	7.84	7.74	7.72	7.75	7.85	7.91	8.15	7.80	8.08	7.93	7.84	7.81
Daily Max	7.97	8.00	7.72	7.84	7.86	7.81	7.84	7.85	7.94	8.21	8.26	8.11	8.12	7.90	7.89
Daily Min	7.59	7.51	7.49	7.52	7.58	7.59	7.72	7.56	7.56	7.93	7.71	7.73	7.75	7.83	7.56
Average	7.73	7.74	7.61	7.63	7.73	7.71	7.77	7.71	7.79	8.06	7.97	7.93	7.95	7.86	7.75

Rosetown Creek Dissolved Oxygen Summary - August 2006

Time HH:MM:SS	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/08/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
0	7.80	7.95	8.01	8.13	7.82	7.98	8.02	8.25	7.57	7.51	7.98	7.90	7.75	7.87	8.83	8.39
10000	7.84	7.88	8.00	8.12	7.90	8.00	8.12	8.26	7.82	7.61	8.05	7.95	7.79	7.61	8.75	8.41
20000	7.84	7.85	8.05	8.13	7.97	8.00	8.20	8.26	7.70	7.63	8.06	7.95	7.75	7.65	8.61	8.01
30000	7.80	7.90	8.08	8.16	7.99	8.05	8.17	8.36	7.67	7.61	8.11	7.98	7.77	7.70	8.98	8.42
40000	7.87	7.93	8.08	8.17	8.02	8.03	8.22	8.36	7.70	7.68	8.16	7.92	7.76	7.68	8.78	8.02
50000	7.80	7.90	8.06	8.17	7.96	7.98	8.28	8.36	7.77	7.70	8.18	7.97	7.79	7.69	8.54	8.12
60000	7.81	7.88	8.12	8.25	7.99	7.97	8.41	8.47	7.74	7.70	8.21	7.97	7.77	7.75	8.65	8.69
70000	7.84	7.91	8.13	8.22	8.04	8.02	8.36	8.36	7.77	7.73	8.22	7.96	7.83	7.78	8.54	8.62
80000	7.82	7.98	8.14	8.21	8.03	8.02	8.32	8.50	7.79	7.75	8.24	8.01	7.81	7.81	8.67	8.66
90000	7.88	7.94	8.08	8.17	8.08	8.05	8.39	8.46	7.78	7.74	8.18	7.99	7.78	7.84	8.57	8.53
100000	7.92	7.93	8.02	8.12	8.03	7.95	8.28	8.42	7.73	7.71	8.13	7.88	7.81	7.75	8.65	8.57
110000	7.92	8.00	8.03	8.00	7.98	8.00	8.26	8.31	7.68	7.74	8.01	7.86	7.74	7.75	8.39	7.95
120000	7.93	7.98	7.91	7.94	8.02	7.94	8.18	8.21	7.61	7.74	7.96	7.71	7.71	7.65	8.43	8.28
130000	7.91	7.95	7.90	7.77	7.92	7.96	8.04	7.75	7.52	7.72	7.83	7.62	7.65	7.59	8.45	8.34
140000	7.95	7.88	7.91	7.70	7.95	7.96	8.00	7.73	7.42	7.71	7.83	7.56	7.59	7.65	7.77	7.69
150000	7.97	7.86	7.89	7.63	7.87	7.89	7.99	7.64	7.38	7.64	7.72	7.49	7.53	7.63	8.27	7.84
160000	7.85	7.81	7.78	7.60	7.82	7.71	7.91	7.50	7.36	7.59	7.67	7.43	7.50	7.69	8.26	7.84
170000	7.86	7.81	7.74	7.56	7.83	7.69	7.86	7.51	7.32	7.63	7.88	7.45	7.49	7.78	8.39	7.82
180000	7.88	7.88	7.71	7.58	7.84	7.88	7.85	0.00	7.29	7.60	7.75	7.52	7.54	7.93	8.27	7.69
190000	7.88	7.83	7.79	7.63	7.92	7.70	7.92	7.76	7.33	7.64	7.78	7.55	7.52	7.98	8.49	7.72
200000	7.88	7.83	7.82	7.65	7.87	7.71	7.90	7.28	7.36	7.78	7.82	7.57	7.59	0.00	8.32	7.77
210000	7.95	7.90	7.87	7.63	7.84	7.84	7.95	7.36	7.40	7.85	7.91	7.65	7.63	8.74	8.52	7.72
220000	7.87	8.02	7.96	7.80	7.90	7.94	8.10	7.45	7.45	7.92	7.86	7.65	7.61	8.14	8.33	7.75
230000	7.87	8.02	8.04	7.85	7.97	7.96	8.13	7.52	7.47	7.98	7.87	7.66	7.67	8.66	8.44	7.83
Daily Max	7.97	8.02	8.14	8.25	8.06	8.05	8.41	8.50	7.79	7.96	8.24	8.01	7.83	8.74	8.83	8.89
Daily Min	7.80	7.81	7.71	7.56	7.82	7.88	7.85	0.00	7.29	7.51	7.67	7.43	7.49	0.00	7.77	7.62
Average	7.88	7.91	7.96	7.92	7.94	7.92	8.12	7.67	7.56	7.70	7.97	7.78	7.68	7.50	8.48	8.13
Monthly average: 7.85																

Roseblum Creek Dissolved Oxygen Summary - August 2006

Time	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
HH:MM:SS															
0	7.84	7.68	7.61	7.70	7.75	7.72	8.34	8.19	8.08	7.88	7.84	7.65	7.69	7.80	7.61
10000	7.86	7.72	7.64	7.67	7.78	7.61	8.35	8.22	8.10	7.89	7.89	7.72	7.73	7.81	7.67
20000	7.86	7.67	7.66	7.77	7.72	7.73	8.36	8.21	8.06	7.90	7.92	7.76	7.76	7.84	7.76
30000	7.80	7.72	7.63	7.76	7.73	7.80	8.37	8.21	8.11	7.92	7.96	7.80	7.76	7.87	7.79
40000	7.79	7.71	7.66	7.76	7.73	7.74	8.37	8.20	8.10	7.92	7.96	7.86	7.79	7.90	7.86
50000	7.78	7.71	7.59	7.82	7.74	7.73	8.38	8.20	8.12	7.91	8.00	7.86	7.84	7.93	7.89
60000	7.81	7.74	7.64	7.76	7.81	7.71	8.35	8.20	8.11	7.90	8.06	7.89	7.83	7.97	7.96
70000	7.78	7.74	7.59	7.82	7.84	7.70	8.37	8.20	8.14	7.93	8.09	7.94	7.90	8.02	8.02
80000	7.79	7.72	7.61	7.85	7.77	7.69	8.37	8.22	8.13	7.91	8.12	7.99	7.92	8.06	8.07
90000	7.78	7.61	7.60	7.77	7.86	7.66	8.37	8.22	8.14	7.94	8.08	8.00	7.94	8.06	8.07
100000	7.71	7.74	7.66	7.71	7.76	7.56	8.35	8.20	8.15	7.96	8.01	7.98	7.94	8.06	8.03
110000	7.72	7.75	7.60	7.67	7.74	7.43	8.28	8.16	8.19	7.99	8.00	7.96	7.93	8.00	7.97
120000	7.69	7.78	7.56	7.69	7.69	7.36	8.21	8.13	8.14	7.93	7.90	7.89	7.92	7.91	7.84
130000	7.69	7.71	7.63	7.63	7.71	7.30	8.12	8.05	8.04	7.93	7.78	7.89	7.91	7.78	7.74
140000	7.66	7.67	7.63	7.59	7.62	7.22	8.06	8.05	7.96	7.92	7.66	7.84	7.86	7.84	7.61
150000	7.65	7.64	7.62	7.62	7.63	7.22	7.99	8.02	7.94	7.91	7.54	7.76	7.84	7.55	7.51
160000	7.55	7.60	7.49	7.57	7.56	7.26	7.97	7.99	7.93	7.84	7.51	7.76	7.81	7.48	7.41
170000	7.60	7.67	7.55	7.63	7.58	7.22	7.96	7.95	7.86	7.81	7.47	7.70	7.79	7.41	7.37
180000	7.65	7.65	7.58	7.60	7.58	7.27	7.98	7.99	7.86	7.78	7.46	7.65	7.74	7.39	7.35
190000	7.66	7.64	7.61	7.61	7.61	7.24	8.00	7.96	7.83	7.74	7.43	7.63	7.69	7.37	7.34
200000	7.64	7.65	7.66	7.66	7.61	6.21	8.04	8.00	7.85	7.75	7.43	7.62	7.68	7.39	7.32
210000	7.70	7.71	7.62	7.64	7.67	6.25	8.11	8.03	7.85	7.75	7.47	7.62	7.69	7.40	7.37
220000	7.68	7.65	7.62	7.72	7.76	6.30	8.14	8.03	7.88	7.76	7.52	7.64	7.75	7.45	7.42
230000	7.66	7.71	7.67	7.75	7.71	6.33	8.18	8.06	7.86	7.61	7.59	7.67	7.76	7.53	7.48
Daily Max	7.86	7.81	7.67	7.65	7.86	8.33	8.38	8.22	8.19	7.99	8.12	8.00	7.94	8.08	8.07
Daily Min	7.55	7.60	7.49	7.57	7.56	7.22	7.98	7.95	7.83	7.74	7.43	7.62	7.68	7.37	7.32
Average	7.72	7.70	7.61	7.70	7.71	7.65	8.21	8.11	8.02	7.88	7.78	7.80	7.81	7.74	7.69

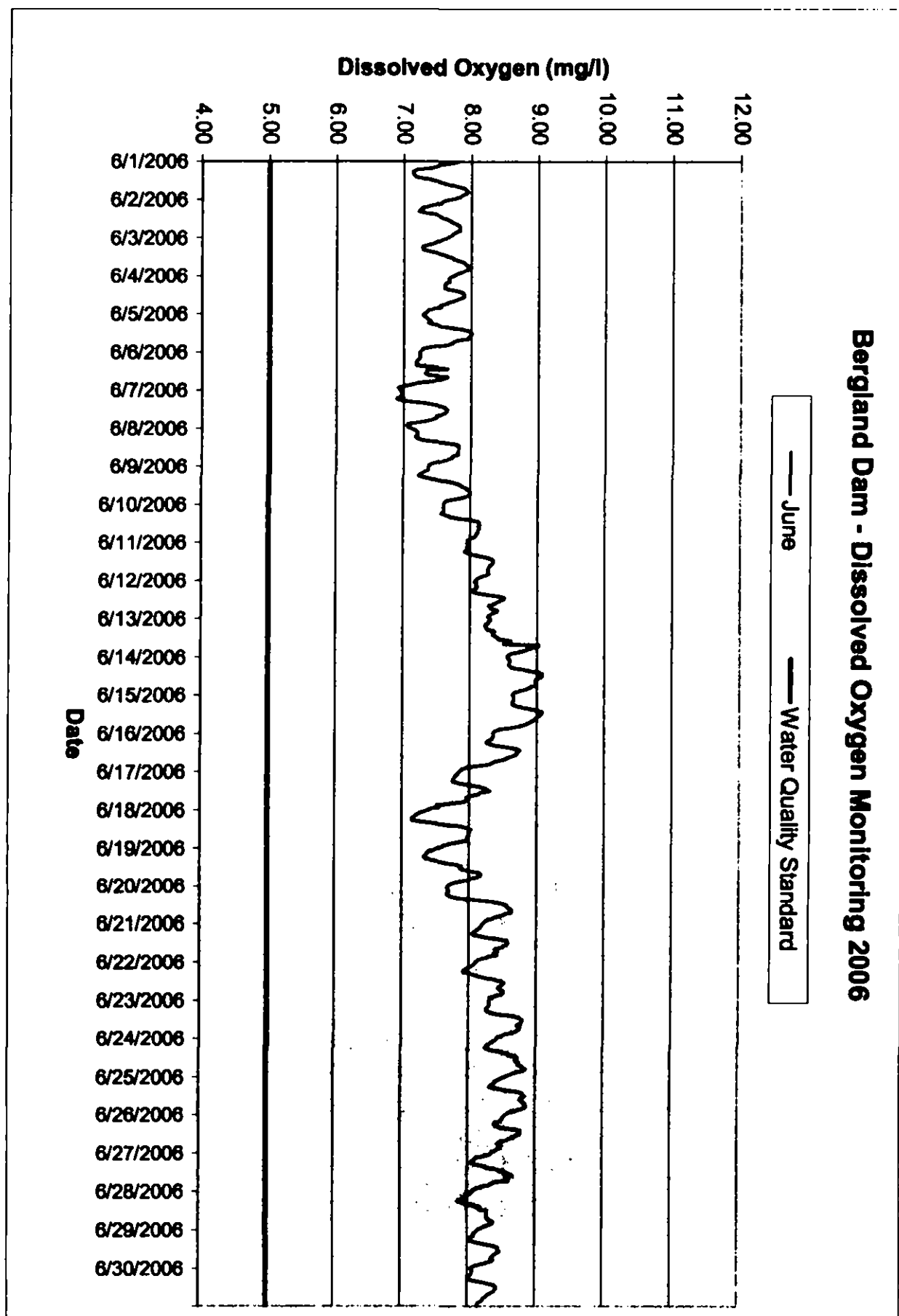
Rosestown Creek Dissolved Oxygen Summary - September 2006

Time	09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/16/06
HI-WAASS	7.66	7.73	7.63	7.51	7.56	8.36	8.39	8.58	8.98	9.03	9.27	9.32	9.48	9.48	9.52	9.54
0	7.63	7.74	7.63	7.54	7.57	8.33	8.44	8.61	9.07	9.06	9.32	9.41	9.54	9.52	9.61	9.60
10000	7.69	7.77	7.66	7.57	7.58	8.39	8.46	8.56	9.07	9.19	9.33	9.45	9.53	9.54	9.74	9.50
20000	7.71	7.72	7.67	7.57	7.58	8.41	8.39	8.57	9.08	9.18	9.28	9.37	9.51	9.47	9.67	9.54
30000	7.76	7.75	7.66	7.59	7.59	8.42	8.44	8.56	9.07	9.11	9.42	9.45	9.54	9.59	9.69	9.65
40000	7.80	7.75	7.67	7.61	7.58	8.46	8.43	8.57	9.08	9.15	9.38	9.45	9.49	9.53	9.70	9.62
50000	7.83	7.71	7.71	7.60	7.56	8.48	8.45	8.65	9.13	9.18	9.39	9.45	9.52	9.51	9.72	9.63
60000	7.87	7.77	7.71	7.65	7.58	8.47	8.49	8.64	9.14	9.21	9.33	9.42	9.53	9.52	9.63	9.59
70000	7.92	7.79	7.73	7.66	7.60	8.46	8.51	8.69	9.20	9.22	9.41	9.42	9.63	9.55	9.66	9.70
80000	7.92	7.78	7.74	7.67	7.56	8.44	8.64	8.67	9.22	9.26	9.43	9.48	9.55	9.52	9.67	9.63
90000	7.92	7.78	7.69	7.64	7.49	8.45	8.56	8.81	9.14	9.18	9.42	9.50	9.51	9.57	9.71	9.52
100000	7.86	7.73	7.61	7.54	7.38	8.34	8.42	8.74	9.14	9.14	9.41	9.47	9.50	9.47	9.61	9.68
110000	7.80	7.50	7.54	7.54	7.30	8.36	8.36	8.76	9.09	9.12	9.33	9.47	9.36	9.42	9.59	9.56
120000	7.72	7.57	7.45	7.48	7.30	8.28	8.40	8.64	9.00	8.96	9.28	9.56	9.31	9.30	9.46	9.60
130000	7.63	7.52	7.38	7.41	7.14	8.18	8.30	8.71	8.86	8.96	9.38	9.51	9.33	9.25	9.46	9.47
140000	7.57	7.50	7.31	7.41	8.12	8.15	8.27	8.80	8.88	8.91	9.32	9.51	9.23	9.21	9.34	9.43
150000	7.61	7.46	7.32	7.38	8.11	8.16	8.28	8.78	8.85	8.89	9.28	9.41	9.28	9.27	9.32	9.47
160000	7.57	7.45	7.35	7.39	8.04	8.22	8.30	8.84	8.86	8.95	9.28	9.42	9.29	9.23	9.30	9.47
170000	6.84	7.49	7.36	7.36	8.10	8.23	8.25	8.86	8.84	8.87	9.34	9.37	9.34	9.35	9.49	9.43
180000	7.51	7.49	7.39	7.38	8.17	8.14	8.31	8.87	8.89	8.94	9.29	9.49	9.36	9.38	9.38	9.46
190000	7.60	7.54	7.42	7.46	8.22	8.27	8.38	8.80	8.98	8.97	9.37	9.44	9.44	9.40	9.41	9.48
200000	7.61	7.57	7.47	7.49	8.27	8.34	8.51	8.91	8.97	9.03	9.29	9.46	9.46	9.45	9.56	9.55
210000	7.56	7.59	7.49	7.52	8.35	8.36	8.48	9.01	8.97	9.06	9.36	9.39	9.51	9.47	9.50	9.63
220000	7.71	7.63	7.51	7.51	8.31	8.39	8.51	9.03	8.98	9.14	9.33	9.50	9.54	9.57	9.48	9.57
230000																
Daily Max	7.92	7.79	7.74	7.67	8.35	8.47	8.64	9.03	9.22	9.26	9.43	9.56	9.63	9.59	9.74	9.70
Daily Min	6.84	7.45	7.31	7.36	7.14	8.14	8.25	8.56	8.84	8.87	9.26	9.32	9.23	9.21	9.30	9.43
Average	7.66	7.63	7.55	7.52	7.75	8.33	8.42	8.74	9.02	9.07	9.34	9.45	9.45	9.44	9.55	9.55
Monthly average:					8.66											

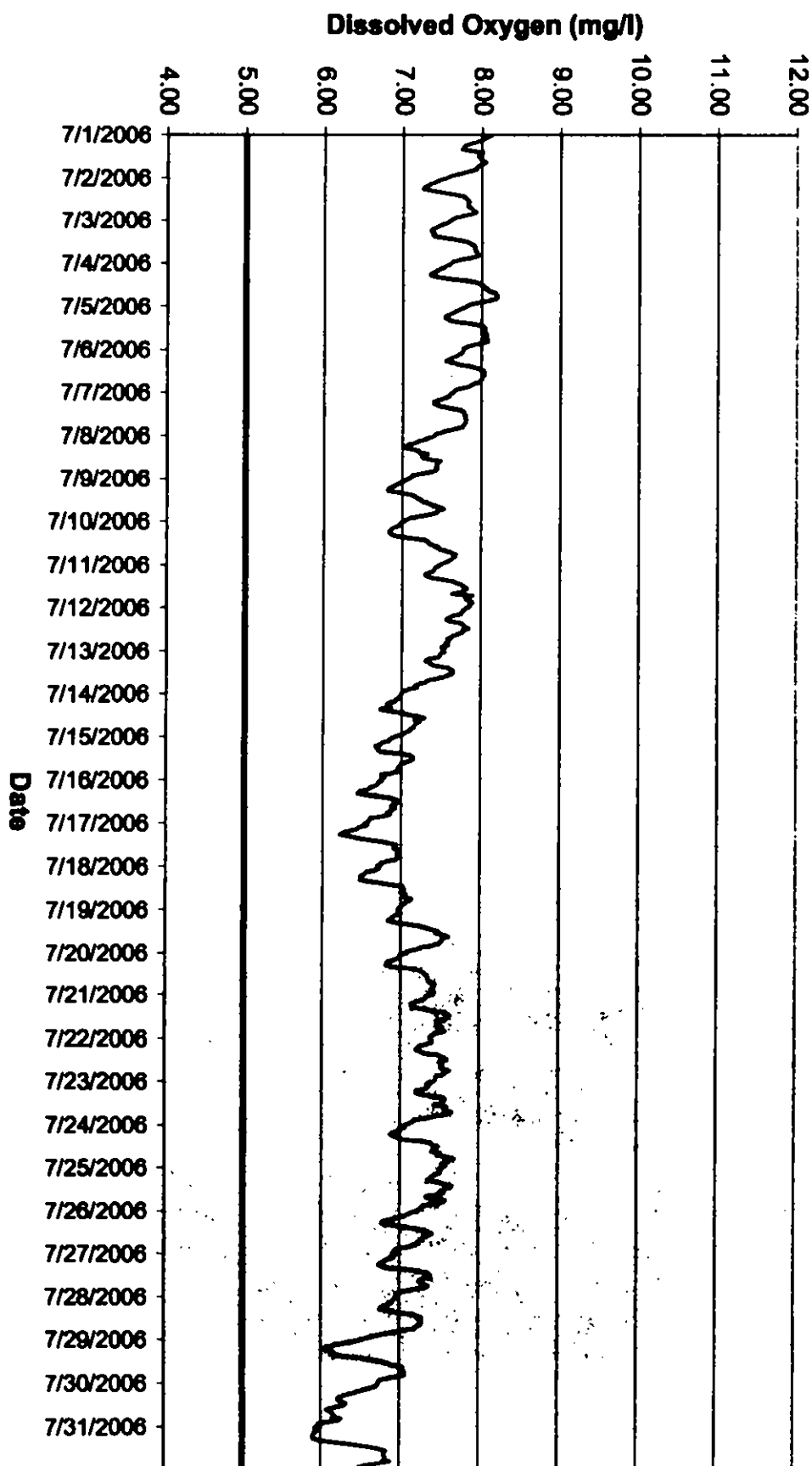
Roselawn Creek Dissolved Oxygen Summary - September 2006

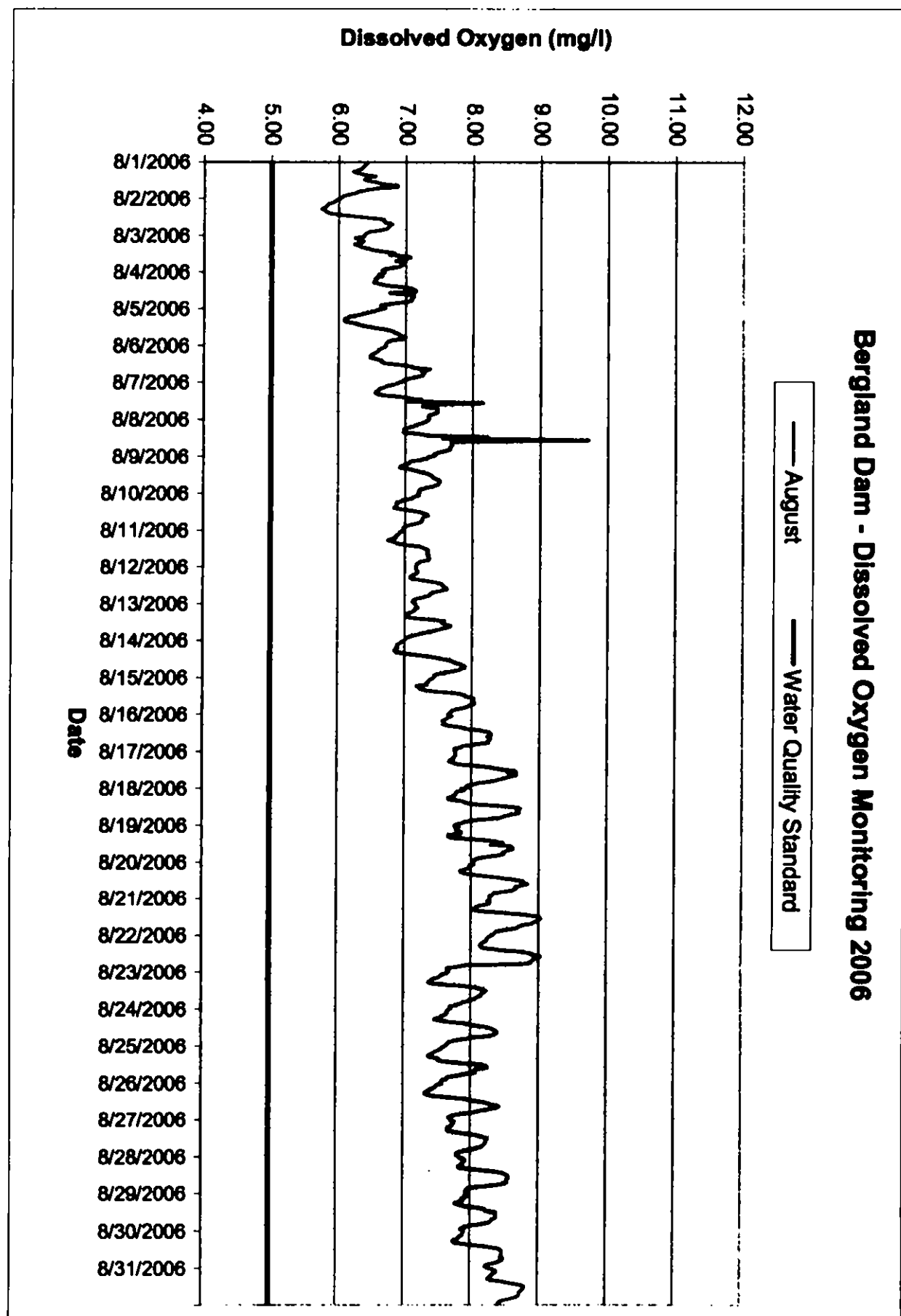
Time	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
HHMMSS	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
0	9.50	9.46	9.13	8.42	9.04	8.25	8.51	8.54	8.61	11.02	8.71	8.90	9.35	2.64
10000	9.48	9.62	9.59	9.33	9.33	1.30	8.80	8.53	8.61	9.46	8.71	12.37	9.02	8.84
20000	9.48	9.39	9.57	9.57	4.46	8.29	8.55	8.57	9.84	13.34	2.09	9.38	8.95	3.33
30000	9.53	9.42	8.34	8.67	8.54	9.37	8.49	8.55	8.82	8.92	9.01	4.60	9.07	9.14
40000	9.48	9.42	8.14	8.69	8.56	9.07	8.53	8.55	4.62	0.52	0.95	8.98	9.05	4.26
50000	9.40	9.51	8.58	8.31	8.62	8.35	8.50	8.61	9.69	12.79	9.19	10.81	9.09	9.07
60000	9.53	9.47	8.55	8.61	10.35	9.04	4.95	8.56	8.69	10.97	0.67	8.84	16.49	3.01
70000	9.50	9.52	8.45	8.64	8.85	0.74	8.55	9.66	8.68	3.68	6.28	8.97	9.00	7.35
80000	9.22	9.49	8.69	8.59	9.02	8.37	1.72	9.70	8.93	8.90	11.43	8.96	9.07	8.91
90000	9.50	9.62	8.63	9.40	9.04	12.88	8.10	8.77	8.68	3.64	6.42	1.20	9.03	12.12
100000	9.26	9.55	8.47	8.69	8.87	1.88	8.75	8.98	8.78	8.95	9.17	9.13	9.79	8.89
110000	9.36	9.59	8.61	8.59	8.78	8.64	8.51	8.92	9.37	21.71	6.68	9.04	10.50	9.00
120000	9.29	9.56	8.68	8.62	8.82	8.95	9.02	8.71	8.74	7.53	8.92	10.09	8.98	15.50
130000	9.33	9.78	8.18	8.57	8.78	8.78	8.52	8.71	8.64	8.97	8.88	8.89	1.84	8.95
140000	9.40	9.61	8.60	8.55	8.41	8.61	8.43	12.35	8.78	9.03	8.90	9.56	8.77	12.25
150000	9.42	9.51	8.98	8.29	8.47	9.28	8.39	8.43	8.74	8.77	8.79	9.53	8.90	8.90
160000	9.29	9.52	8.47	16.40	8.54	8.59	8.47	8.44	8.54	12.78	8.85	9.24	8.85	8.88
170000	9.21	8.40	8.56	8.42	8.33	10.47	14.51	5.62	8.59	8.79	3.47	8.84	8.01	10.49
180000	9.31	8.43	8.52	9.10	7.46	12.08	8.54	8.51	8.93	4.43	8.79	10.06	8.80	1.95
190000	9.18	8.35	8.52	7.52	8.10	8.51	8.75	8.75	8.68	9.13	8.73	9.08	6.65	8.89
200000	9.37	8.44	8.51	8.60	9.76	8.42	11.00	9.96	8.64	11.68	9.62	9.23	1.47	8.90
210000	9.28	8.37	8.73	9.99	8.16	47.53	8.61	9.00	8.90	8.70	8.94	3.26	8.82	8.95
220000	9.38	8.48	8.59	8.55	8.05	8.61	8.53	6.90	9.06	2.81	5.82	6.34	9.74	9.65
230000	9.37	8.27	8.75	12.04	8.12	8.51	2.34	8.93	9.50	5.15	8.93	9.02	1.96	9.62
Daily Max	9.53	9.78	9.13	16.40	10.35	47.53	14.51	12.35	9.69	21.71	11.43	12.37	16.49	15.50
Daily Min	9.18	8.27	1.86	7.52	4.46	0.74	1.72	5.62	4.62	0.52	0.67	1.20	1.47	1.95
Average	9.38	8.20	8.14	9.14	8.52	9.78	8.21	8.76	8.72	8.82	7.42	8.51	8.29	8.32

Apparent equipment malfunction shortly after deployment on 9/18. All data from 9/19 through 9/31 is questionable..

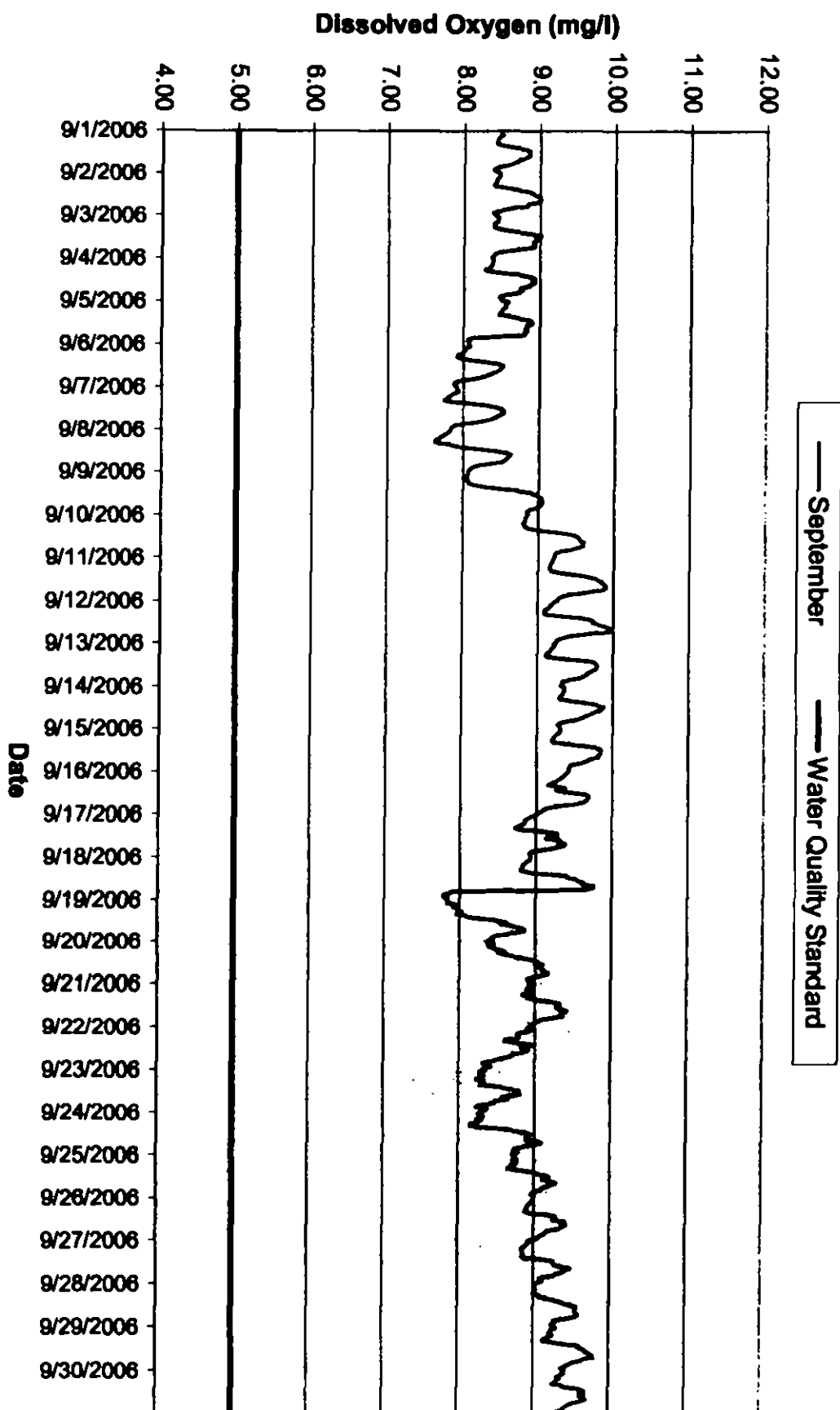


Bergland Dam - Dissolved Oxygen Monitoring 2006





Bergland Dam - Dissolved Oxygen Monitoring 2006



Bergland Dam Dissolved Oxygen Summary - June 2006

Time HH:MM:SS	06/01/06	06/02/06	06/03/06	06/04/06	06/05/06	06/06/06	06/07/06	06/08/06	06/09/06	06/10/06	06/11/06	06/12/06	06/13/06	06/14/06	06/15/06	06/16/06
0	7.80	7.82	7.60	7.70	7.28	7.23	6.85	7.13	7.37	7.61	7.86	8.07	8.31	8.57	8.65	8.36
10000	7.69	7.56	7.55	7.67	7.31	7.24	6.99	7.18	7.37	7.60	7.97	8.10	8.28	8.60	8.66	8.36
20000	7.52	7.55	7.50	7.67	7.34	7.23	6.98	7.20	7.36	7.61	7.96	8.09	8.28	8.60	8.66	8.34
30000	7.49	7.45	7.45	7.68	7.36	7.24	6.97	7.21	7.31	7.61	7.95	8.11	8.23	8.59	8.65	8.33
40000	7.41	7.36	7.36	7.62	7.40	7.23	6.94	7.21	7.27	7.60	7.95	8.09	8.23	8.58	8.64	8.28
50000	7.19	7.27	7.28	7.61	7.36	7.20	6.90	7.17	7.23	7.57	7.92	8.05	8.25	8.60	8.63	8.25
60000	7.13	7.26	7.28	7.61	7.44	7.16	6.95	7.21	7.25	7.63	7.97	8.04	8.27	8.64	8.68	8.30
70000	7.14	7.22	7.26	7.60	7.54	7.19	7.12	7.27	7.36	7.69	8.03	8.09	8.37	8.79	8.78	8.39
80000	7.14	7.32	7.38	7.67	7.88	7.19	7.35	7.42	7.45	7.79	8.16	8.23	8.36	8.69	8.89	8.55
90000	7.16	7.46	7.48	7.80	7.86	7.45	7.46	7.68	7.68	7.96	8.27	8.41	8.34	9.04	9.01	8.69
100000	7.22	7.53	7.59	7.86	7.97	7.65	7.59	7.81	7.78	8.11	8.33	8.51	8.37	9.06	9.08	8.75
110000	7.37	7.67	7.65	7.89	8.00	7.34	7.63	7.82	7.84	8.14	8.35	8.50	8.41	9.06	9.07	8.70
120000	7.45	7.85	7.72	7.90	8.01	7.34	7.65	7.82	7.88	8.14	8.34	8.45	8.43	9.06	9.05	8.71
130000	7.46	7.88	7.74	7.88	7.98	7.32	7.63	7.81	7.93	8.12	8.32	8.40	8.61	9.00	9.01	8.69
140000	7.63	7.72	7.83	7.81	7.97	7.37	7.60	7.81	7.96	8.14	8.29	8.36	8.54	8.96	8.98	8.62
150000	7.75	7.78	7.80	7.76	7.95	7.65	7.55	7.80	7.99	8.13	8.26	8.26	8.50	8.97	8.96	8.56
160000	7.83	7.82	7.91	7.76	7.95	7.60	7.49	7.81	8.00	8.11	8.27	8.31	8.53	9.03	9.03	8.51
170000	7.83	7.83	7.86	7.62	7.73	7.51	7.49	7.72	8.00	8.12	8.26	8.31	8.56	8.99	8.98	8.40
180000	7.92	7.83	8.00	7.54	7.71	7.45	7.43	7.72	7.96	8.09	8.26	8.41	8.69	8.92	8.82	8.34
190000	7.95	7.83	7.98	7.55	7.63	7.21	7.34	7.67	7.90	8.09	8.26	8.40	8.63	8.86	8.74	8.30
200000	7.91	7.77	7.91	7.46	7.46	7.13	7.19	7.60	7.78	8.07	8.23	8.33	8.76	8.81	8.59	8.14
210000	7.86	7.73	7.86	7.37	7.31	6.99	7.06	7.50	7.65	8.00	8.15	8.29	8.64	8.72	8.45	7.97
220000	7.83	7.70	7.79	7.34	7.27	6.92	7.05	7.41	7.62	7.96	8.11	8.27	8.57	8.66	8.36	7.89
230000	7.75	7.66	7.75	7.32	7.25	6.96	7.07	7.36	7.61	7.97	8.09	8.29	8.56	8.64	8.35	7.87
Daily Max	7.95	7.83	8.00	7.90	8.01	7.65	7.65	7.82	8.00	8.14	8.35	8.51	9.03	9.06	9.08	8.75
Daily Min	7.13	7.22	7.26	7.32	7.25	6.92	6.90	7.13	7.23	7.57	7.92	8.04	8.23	8.57	8.35	7.87
Average	7.57	7.59	7.66	7.65	7.61	7.28	7.27	7.50	7.65	7.91	8.16	8.27	8.50	8.62	8.77	8.39
Monthly average:					8.06			Missing data on 6/8 due to equipment malfunction								

Time	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
HHMMSS	0	7.84	7.38	7.53	7.68	8.20	8.10	8.41	8.53	8.56	8.35	8.06	8.14	8.06
10000	7.83	7.32	7.47	7.68	8.19	8.07	8.31	8.39	8.48	8.53	8.31	8.05	8.12	8.08
20000	7.80	7.25	7.41	7.69	8.17	8.05	8.31	8.33	8.43	8.52	8.19	8.01	8.09	8.07
30000	7.78	7.21	7.37	7.70	8.13	8.00	8.30	8.32	8.40	8.50	8.12	7.97	8.10	8.06
40000	7.77	7.19	7.36	7.69	8.10	7.97	8.27	8.27	8.38	8.48	8.10	7.93	8.06	8.03
50000	7.75	7.15	7.33	7.67	8.06	7.92	8.26	8.26	8.34	8.40	8.07	7.88	8.02	8.01
60000	7.77	7.15	7.35	7.70	8.07	7.92	8.27	8.27	8.32	8.40	8.06	7.86	8.03	8.02
70000	7.86	7.27	7.44	7.75	8.16	8.02	8.32	8.34	8.44	8.42	8.13	7.94	8.11	8.06
80000	8.00	7.46	7.54	7.88	8.29	8.08	8.41	8.47	8.55	8.50	8.25	8.01	8.22	8.20
90000	8.14	7.67	7.86	8.14	8.47	8.17	8.62	8.56	8.72	8.69	8.29	8.15	8.34	8.31
100000	8.23	7.89	7.83	8.34	8.57	8.27	8.74	8.61	8.81	8.79	8.43	8.20	8.43	8.41
110000	8.27	7.95	7.89	8.46	8.58	8.40	8.77	8.70	8.82	8.78	8.48	8.17	8.46	8.43
120000	8.31	8.03	7.87	8.54	8.57	8.48	8.80	8.74	8.85	8.78	8.57	8.29	8.45	8.42
130000	8.16	8.01	7.91	8.57	8.52	8.53	8.79	8.70	8.80	8.72	8.63	8.29	8.48	8.41
140000	8.15	8.00	8.01	8.58	8.50	8.50	8.78	8.72	8.77	8.68	8.67	8.29	8.43	8.39
150000	8.01	7.98	8.15	8.63	8.39	8.47	8.71	8.76	8.81	8.81	8.56	8.29	8.40	8.35
160000	7.95	8.00	8.18	8.63	8.39	8.44	8.77	8.74	8.82	8.66	8.62	8.29	8.38	8.30
170000	8.00	7.97	8.17	8.64	8.43	8.46	8.76	8.80	8.86	8.47	8.61	8.31	8.35	8.29
180000	7.98	7.98	8.12	8.54	8.37	8.51	8.75	8.82	8.86	8.45	8.41	8.35	8.39	8.23
190000	7.90	7.98	8.02	8.49	8.42	8.52	8.70	8.86	8.88	8.51	8.37	8.39	8.38	8.23
200000	7.67	7.85	7.96	8.39	8.31	8.48	8.63	8.82	8.82	8.49	8.33	8.36	8.27	8.21
210000	7.52	7.73	7.85	8.33	8.23	8.38	8.54	8.70	8.73	8.46	8.20	8.28	8.18	8.16
220000	7.55	7.63	7.75	8.26	8.15	8.32	8.49	8.63	8.65	8.42	8.14	8.22	8.09	8.15
230000	7.45	7.59	7.71	8.23	8.11	8.31	8.43	8.58	8.59	8.37	8.09	8.17	8.05	8.15
Daily Max	8.31	8.03	8.18	8.64	8.58	8.53	8.80	8.86	8.88	8.79	8.67	8.39	8.48	8.43
Daily Min	7.45	7.15	7.33	7.67	8.06	7.92	8.26	8.26	8.32	8.37	8.06	7.86	8.02	8.01
Average	7.90	7.65	7.75	8.18	8.31	8.27	8.54	8.58	8.65	8.54	8.33	8.16	8.25	8.21

Bergland Dam Dissolved Oxygen Summary - July 2006

Time	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
HHMMSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10000	8.12	7.53	7.60	7.59	7.78	7.77	7.63	7.39	7.07	7.01	7.47	7.80	7.54	6.99	6.89	6.75
20000	8.08	7.47	7.56	7.54	7.73	7.75	7.60	7.34	7.03	6.87	7.42	7.78	7.49	6.97	6.84	6.71
30000	8.04	7.42	7.50	7.51	7.68	7.73	7.59	7.27	6.96	6.85	7.41	7.75	7.48	6.96	6.84	6.70
40000	7.99	7.36	7.45	7.46	7.64	7.69	7.52	7.20	6.83	6.89	7.40	7.75	7.46	6.82	6.75	6.68
50000	7.92	7.30	7.41	7.42	7.59	7.63	7.47	7.14	6.89	6.86	7.35	7.84	7.35	6.81	6.73	6.60
60000	7.84	7.26	7.36	7.37	7.54	7.59	7.40	7.06	6.84	6.83	7.29	7.61	7.30	6.81	6.67	6.57
70000	7.77	7.25	7.36	7.34	7.54	7.55	7.39	7.01	6.81	6.84	7.31	7.56	7.34	6.82	6.70	6.47
80000	7.74	7.37	7.40	7.41	7.58	7.64	7.44	7.06	6.82	6.87	7.37	7.60	7.37	6.86	6.70	6.44
90000	7.69	7.48	7.38	7.54	7.63	7.70	7.50	7.20	6.98	6.93	7.50	7.74	7.42	6.72	6.73	6.54
100000	8.01	7.63	7.40	7.75	7.81	7.83	7.65	7.20	7.11	7.12	7.63	7.78	7.56	6.81	6.94	6.74
110000	7.99	7.76	7.59	7.91	7.95	7.83	7.74	7.32	7.16	7.28	7.70	7.79	7.62	7.01	7.10	6.90
120000	7.95	7.78	7.74	7.98	8.02	8.00	7.78	7.24	7.19	7.33	7.75	7.84	7.65	7.06	7.15	6.95
130000	7.95	7.82	7.83	8.00	8.04	8.03	7.78	7.35	7.24	7.35	7.78	7.77	7.65	7.20	7.15	6.90
140000	7.86	7.84	7.86	8.04	8.01	8.02	7.80	7.26	7.26	7.40	7.82	7.77	7.61	7.28	7.12	6.94
150000	7.89	7.83	7.90	8.06	8.02	8.04	7.79	7.46	7.34	7.46	7.79	7.71	7.54	7.16	7.05	6.87
160000	8.05	7.81	7.91	8.10	8.06	8.00	7.80	7.45	7.38	7.47	7.74	7.64	7.44	7.23	6.99	6.92
170000	8.01	7.63	7.91	8.17	8.06	8.01	7.61	7.43	7.46	7.57	7.63	7.62	7.33	7.18	6.96	6.87
180000	7.95	7.67	7.92	8.19	8.06	7.98	7.79	7.42	7.52	7.63	7.69	7.57	7.30	7.16	6.95	6.87
190000	7.83	7.89	7.94	8.20	8.07	7.88	7.77	7.44	7.44	7.68	7.80	7.59	7.21	7.15	7.00	6.82
200000	7.92	7.92	7.96	8.19	8.06	7.88	7.75	7.42	7.44	7.67	7.81	7.55	7.18	7.12	6.97	6.86
210000	7.83	7.86	7.91	8.12	7.99	7.85	7.68	7.37	7.34	7.64	7.88	7.59	7.20	7.11	6.89	6.76
220000	7.75	7.77	7.78	7.99	7.88	7.77	7.56	7.24	7.21	7.61	7.90	7.50	7.10	7.08	6.74	6.61
230000	7.66	7.67	7.68	7.89	7.80	7.68	7.48	7.13	7.09	7.57	7.85	7.54	7.02	7.02	6.79	6.59
Daily Max	8.12	7.92	7.98	8.20	8.08	8.04	7.81	7.48	7.52	7.68	7.90	7.84	7.65	7.29	7.15	6.95
Daily Min	7.59	7.25	7.36	7.34	7.54	7.55	7.39	7.01	6.81	6.83	7.29	7.50	7.00	6.72	6.67	6.44
Average	7.91	7.64	7.67	7.82	7.85	7.82	7.63	7.27	7.15	7.27	7.64	7.67	7.36	7.02	6.89	6.73
Monthly average:					7.25											

Bergland Dam Dissolved Oxygen Summary - July 2006

Time HH:MM:SS	07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
0	6.52	6.69	6.96	7.08	7.41	7.36	7.43	7.05	7.53	7.22	6.91	6.96	6.50	6.72	5.83
10000	6.56	6.72	6.97	6.99	7.33	7.40	7.35	7.06	7.50	7.13	6.94	6.95	6.42	6.72	5.83
20000	6.46	6.67	7.00	6.98	7.32	7.32	7.33	6.98	7.51	7.09	6.92	6.91	6.30	6.66	5.95
30000	6.44	6.56	6.93	6.96	7.26	7.32	7.35	7.00	7.50	7.05	6.86	6.91	6.17	6.59	5.91
40000	6.35	6.53	6.90	6.91	7.20	7.23	7.33	6.89	7.45	6.95	6.81	6.87	6.08	6.49	5.90
50000	6.26	6.48	6.87	6.82	7.13	7.23	7.20	6.87	7.39	6.86	6.78	6.82	6.04	6.43	5.89
60000	6.22	6.50	6.83	6.84	7.13	7.19	7.19	6.92	7.39	6.76	6.73	6.76	6.11	6.34	5.90
70000	6.32	6.47	6.90	6.81	7.15	7.26	7.25	6.92	7.36	6.78	6.78	6.75	6.16	6.25	5.98
80000	6.42	6.56	7.03	6.91	7.30	7.30	7.39	7.02	7.47	6.89	6.86	6.86	6.12	6.21	6.16
90000	6.54	6.76	7.23	7.13	7.41	7.48	7.54	7.25	7.56	7.03	7.13	6.96	6.26	6.22	6.35
100000	6.74	6.87	7.32	7.25	7.56	7.52	7.57	7.38	7.63	7.17	7.28	7.16	6.49	6.28	6.51
110000	6.85	7.02	7.38	7.28	7.60	7.57	7.54	7.40	7.65	7.31	7.36	7.21	6.61	6.32	6.67
120000	6.94	7.04	7.47	7.30	7.62	7.59	7.53	7.48	7.66	7.36	7.39	7.28	6.78	6.27	6.78
130000	6.92	7.04	7.44	7.33	7.58	7.49	7.43	7.43	7.50	7.41	7.39	7.26	6.85	6.17	6.82
140000	6.90	6.99	7.52	7.33	7.52	7.53	7.58	7.43	7.56	7.36	7.27	7.27	6.91	6.07	6.90
150000	6.96	7.05	7.60	7.34	7.45	7.54	7.56	7.40	7.45	7.29	7.24	7.28	7.05	6.13	6.79
160000	6.96	7.06	7.52	7.35	7.46	7.51	7.60	7.51	7.33	7.26	7.28	7.21	7.01	6.15	6.81
170000	6.95	7.05	7.53	7.36	7.48	7.54	7.65	7.47	7.37	7.26	7.30	7.21	7.03	6.17	6.82
180000	6.96	7.14	7.50	7.43	7.53	7.62	7.59	7.59	7.58	7.22	7.38	7.19	7.07	6.14	6.80
190000	6.95	7.10	7.48	7.43	7.51	7.56	7.44	7.66	7.55	7.21	7.30	7.03	7.07	6.25	6.86
200000	6.94	7.06	7.40	7.41	7.56	7.56	7.34	7.62	7.43	7.14	7.17	6.93	7.00	6.20	6.73
210000	6.83	7.03	7.25	7.36	7.44	7.45	7.17	7.61	7.31	7.01	7.05	6.79	6.96	6.08	6.56
220000	6.75	7.01	7.20	7.41	7.41	7.44	7.12	7.53	7.28	6.94	6.96	6.66	6.75	5.96	6.48
230000	6.74	6.97	7.06	7.42	7.38	7.45	7.12	7.57	7.25	6.92	6.85	6.59	6.73	5.96	6.45
Daily Max	6.96	7.14	7.60	7.43	7.62	7.62	7.65	7.66	7.65	7.41	7.39	7.26	7.07	6.72	6.88
Daily Min	6.22	6.47	6.83	6.61	7.13	7.19	7.12	6.87	7.25	6.76	6.73	6.59	6.04	5.96	5.89
Average	6.69	6.85	7.22	7.19	7.41	7.44	7.40	7.30	7.46	7.11	7.06	7.00	6.60	6.28	6.41

Bergland Dam Dissolved Oxygen Summary - August 2006

Time	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/06/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
HH:MM:SS																
0	6.42	5.99	6.37	6.68	6.60	6.70	6.88	7.34	7.35	7.18	6.85	7.16	7.16	6.97	7.42	7.64
10000	6.40	5.96	6.24	6.59	6.52	6.84	6.81	7.31	7.31	7.21	6.92	7.17	7.17	6.94	7.37	7.70
20000	6.38	5.82	6.29	6.55	6.42	6.61	6.72	7.24	7.22	7.12	6.81	7.19	7.20	6.90	7.36	7.64
30000	6.35	5.84	6.37	6.55	6.35	6.57	6.68	7.17	7.06	7.10	6.86	7.19	7.14	6.88	7.32	7.61
40000	6.34	5.82	6.34	6.53	6.23	6.54	6.81	7.11	7.06	6.98	6.87	7.16	7.14	6.90	7.34	7.56
50000	6.29	5.79	6.23	6.55	6.14	6.50	6.58	7.03	7.00	6.93	6.81	7.11	7.09	6.86	7.18	7.60
60000	6.21	5.74	6.29	6.51	6.09	6.47	6.55	6.97	6.93	6.86	6.74	7.07	7.02	6.84	7.22	7.57
70000	6.27	5.78	6.35	6.60	6.09	6.47	6.58	6.98	6.92	6.88	6.84	7.10	7.01	6.88	7.25	7.65
80000	6.36	5.81	6.44	6.70	6.11	6.55	6.68	6.97	7.07	6.88	6.86	7.22	7.02	6.98	7.32	7.83
90000	6.54	5.86	6.51	6.92	6.26	6.63	6.82	7.21	7.15	6.83	7.02	7.37	7.17	7.19	7.57	7.90
100000	6.43	6.04	6.68	7.06	6.31	6.85	7.07	7.33	7.26	6.94	7.22	7.50	7.46	7.36	7.80	8.10
110000	6.37	6.25	6.82	7.13	6.42	6.69	7.24	8.22	7.33	7.10	7.27	7.56	7.56	7.50	7.89	8.24
120000	6.41	6.49	6.75	7.16	6.56	6.91	7.04	7.56	7.39	7.30	7.33	7.56	7.55	7.62	7.91	8.28
130000	6.56	6.86	7.02	7.15	6.70	7.06	8.15	9.71	7.40	7.34	7.35	7.61	7.61	7.71	8.03	8.23
140000	6.63	6.86	7.07	7.04	6.80	7.13	7.39	7.67	7.44	7.27	7.32	7.54	7.62	7.83	8.00	8.28
150000	6.87	6.89	6.95	7.12	6.84	7.36	7.25	7.69	7.50	7.27	7.36	7.43	7.54	7.69	8.04	8.27
160000	6.88	6.78	6.85	7.11	6.90	7.23	7.42	7.66	7.52	7.26	7.36	7.38	7.45	7.83	8.04	8.24
170000	6.59	6.75	6.94	7.07	6.93	7.28	7.49	7.65	7.49	7.25	7.36	7.36	7.45	7.90	8.04	8.25
180000	6.41	6.74	6.98	7.09	6.99	7.27	7.48	7.67	7.49	7.19	7.35	7.28	7.25	7.76	7.91	8.08
190000	6.29	6.71	6.94	7.02	6.95	7.26	7.48	7.62	7.43	7.08	7.23	7.19	7.14	7.63	7.83	7.88
200000	6.25	6.63	6.88	6.82	6.78	7.17	7.42	7.62	7.31	7.00	7.19	7.13	7.07	7.52	7.72	7.84
210000	6.15	6.46	6.78	6.83	6.73	7.06	7.34	7.48	7.23	7.00	7.17	7.11	7.01	7.44	7.63	7.74
220000	6.06	6.39	6.64	6.61	6.70	6.98	7.35	7.43	7.20	6.97	7.17	7.15	7.01	7.44	7.63	7.75
230000	6.04	6.36	6.67	6.69	6.71	6.94	7.35	7.45	7.22	6.97	7.17	7.15	7.01	7.44	7.69	7.75
Daily Max	6.88	6.79	7.07	7.16	6.98	7.36	8.15	9.71	7.52	7.34	7.36	7.63	7.69	7.90	8.04	8.29
Daily Min	6.04	5.74	6.23	6.51	6.09	6.47	6.55	6.97	6.92	6.83	6.74	7.07	7.01	6.84	7.16	7.56
Average	6.40	6.26	6.64	6.82	6.55	6.86	7.10	7.51	7.26	7.09	7.12	7.30	7.27	7.36	7.66	7.93
Monthly average:					7.58											

Bergland Dam Dissolved Oxygen Summary - August 2006

Time	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
HHMMSS															
0	7.76	7.85	7.75	8.04	8.28	8.28	7.65	7.66	7.61	7.58	7.71	7.63	7.94	7.90	8.33
10000	7.76	7.89	7.81	8.04	8.24	8.24	7.59	7.64	7.57	7.49	7.76	7.90	7.82	7.90	8.39
20000	7.77	7.79	7.77	7.97	8.28	8.24	7.54	7.65	7.54	7.49	7.75	7.93	7.95	7.89	8.39
30000	7.74	7.76	7.78	7.99	8.27	8.22	7.53	7.63	7.50	7.45	7.72	7.89	7.86	7.83	8.34
40000	7.73	7.76	7.85	7.92	8.16	8.17	7.45	7.57	7.45	7.39	7.73	7.88	7.90	7.84	8.32
50000	7.69	7.71	7.85	7.84	8.08	8.14	7.41	7.53	7.42	7.35	7.66	7.86	7.84	7.77	8.29
60000	7.67	7.65	7.66	7.85	8.06	8.14	7.37	7.46	7.37	7.32	7.65	7.82	7.77	7.74	8.27
70000	7.72	7.66	7.66	7.92	8.00	8.15	7.41	7.54	7.39	7.35	7.66	7.84	7.85	7.78	8.31
80000	7.81	7.86	7.74	8.08	8.14	8.27	7.62	7.72	7.52	7.44	7.79	7.89	7.93	7.93	8.49
90000	8.07	7.91	8.16	8.30	8.44	8.50	7.96	7.93	7.52	7.70	7.94	8.09	7.83	7.83	8.58
100000	8.28	8.00	8.35	8.47	8.71	8.78	8.10	8.01	7.61	7.93	8.11	8.47	8.21	8.33	8.73
110000	8.40	8.36	8.48	8.64	8.85	8.89	8.17	8.22	7.84	7.89	8.16	8.52	8.23	8.43	8.80
120000	8.64	8.66	8.29	8.75	9.01	9.03	8.23	8.30	8.15	8.19	8.25	8.56	8.38	8.46	8.81
130000	8.53	8.72	8.56	8.75	8.93	8.93	8.19	8.34	8.24	8.28	8.22	8.56	8.38	8.48	8.78
140000	8.67	8.67	8.62	8.84	9.01	8.97	8.16	8.38	8.26	8.34	8.24	8.56	8.38	8.47	8.77
150000	8.66	8.71	8.62	8.73	8.94	8.93	8.16	8.40	8.07	8.43	8.22	8.53	8.39	8.46	8.73
160000	8.57	8.70	8.54	8.65	8.90	8.90	8.09	8.36	8.05	8.37	8.20	8.55	8.33	8.45	8.73
170000	8.49	8.57	8.47	8.67	8.78	8.88	8.06	8.28	7.91	8.14	8.16	8.52	8.31	8.49	8.72
180000	8.39	8.47	8.49	8.62	8.70	8.64	7.98	8.05	7.80	7.92	8.09	8.40	8.16	8.44	8.70
190000	8.32	8.40	8.41	8.52	8.68	7.92	7.90	7.92	7.80	7.86	7.90	8.23	8.18	8.44	8.62
200000	6.13	8.12	8.26	8.34	8.53	7.80	7.84	7.78	7.66	7.86	7.80	7.99	8.02	8.37	8.51
210000	8.04	7.94	8.09	8.32	8.37	7.65	7.79	7.69	7.66	7.74	7.61	7.95	7.90	8.25	8.45
220000	7.93	7.87	8.05	8.27	8.35	7.65	7.69	7.66	7.56	7.68	7.79	7.93	7.86	8.22	8.42
230000	7.97	7.76	8.01	8.26	8.33	7.66	7.71	7.65	7.56	7.73	7.83	7.96	7.90	8.25	8.42
Daily Max	8.67	8.72	8.62	8.84	9.03	9.03	8.23	8.40	8.26	8.43	8.25	8.58	8.39	8.48	8.81
Daily Min	7.67	7.65	7.66	7.84	8.00	7.65	7.37	7.46	7.37	7.32	7.65	7.82	7.77	7.74	8.27
Average	8.12	8.12	8.14	8.33	8.51	8.38	7.82	7.89	7.72	7.81	7.93	8.17	8.06	8.18	8.54

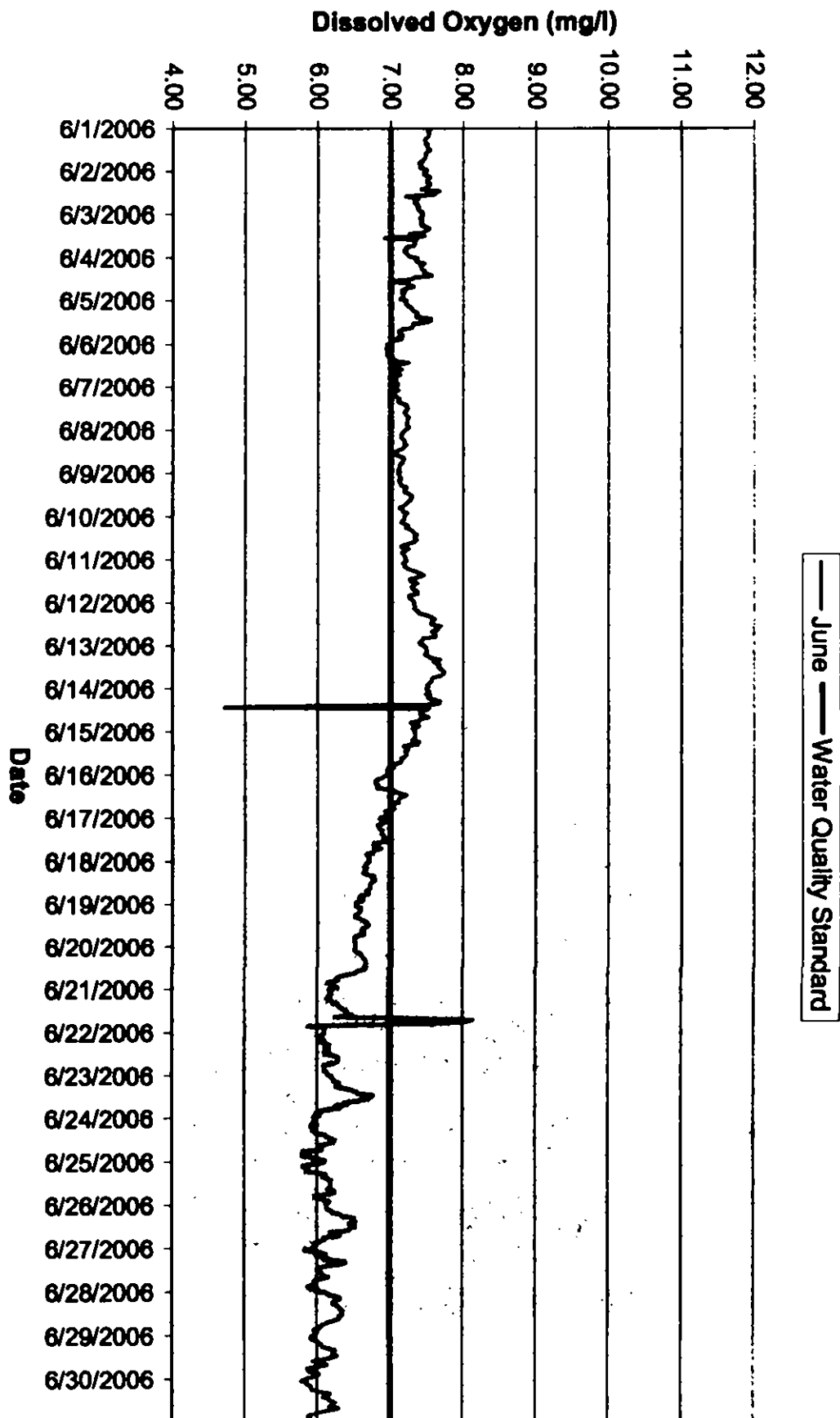
Bergland Dam Dissolved Oxygen Summary - September 2006

Time HH:MM:SS	09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/16/06
0	8.49	8.48	8.44	8.39	8.59	8.08	7.91	7.83	8.06	8.85	9.20	9.22	9.21	9.36	9.30	9.41
10000	8.49	8.48	8.46	8.39	8.56	8.03	7.91	7.80	8.06	8.83	9.19	9.19	9.23	9.37	9.31	9.36
20000	8.51	8.45	8.44	8.38	8.54	8.03	7.93	7.78	8.05	8.82	9.18	9.17	9.20	9.36	9.28	9.37
30000	8.46	8.43	8.44	8.37	8.55	8.02	7.89	7.74	8.04	8.82	9.17	9.16	9.17	9.34	9.26	9.34
40000	8.44	8.43	8.38	8.35	8.50	8.00	7.84	7.69	8.04	8.80	9.16	9.11	9.16	9.34	9.24	9.29
50000	8.43	8.41	8.41	8.35	8.51	7.86	7.81	7.66	8.07	8.82	9.14	9.09	9.13	9.31	9.22	9.26
60000	8.43	8.40	8.39	8.28	8.48	7.82	7.77	7.63	8.07	8.82	9.17	9.10	9.11	9.29	9.21	9.20
70000	8.44	8.41	8.45	8.35	8.46	7.82	7.74	7.63	8.14	8.88	9.18	9.09	9.13	9.33	9.22	9.15
80000	8.52	8.56	8.56	8.52	8.58	7.98	7.86	7.81	8.28	9.01	9.31	9.30	9.31	9.47	9.36	9.26
90000	8.66	8.67	8.74	8.77	8.69	8.11	8.10	7.86	8.48	9.18	9.51	9.57	9.55	9.64	9.56	9.36
100000	8.82	8.85	8.91	8.87	8.85	8.32	8.29	7.86	8.72	9.36	9.66	9.68	9.75	9.78	9.76	9.26
110000	8.86	8.90	9.02	8.94	8.90	8.47	8.42	8.26	8.89	9.48	9.75	9.74	9.76	9.86	9.85	9.36
120000	8.85	8.94	8.97	8.90	8.82	8.52	8.50	8.44	8.95	9.54	9.85	9.82	9.73	9.80	9.85	9.57
130000	8.87	9.01	8.94	8.94	8.80	8.50	8.54	8.57	9.00	9.56	9.86	9.80	9.78	9.83	9.82	9.69
140000	8.84	9.01	8.91	8.89	8.84	8.49	8.54	8.63	9.05	9.56	9.86	9.80	9.78	9.83	9.85	9.68
150000	8.78	9.01	8.91	8.85	8.81	8.44	8.51	8.61	9.05	9.60	9.90	9.86	9.73	9.72	9.81	9.68
160000	8.70	8.97	8.83	8.74	8.84	8.36	8.46	8.56	9.06	9.59	9.81	9.99	9.86	9.67	9.76	9.66
170000	8.72	8.83	8.84	8.78	8.81	8.34	8.42	8.55	9.05	9.60	9.86	9.94	9.65	9.62	9.70	9.62
180000	8.65	8.84	8.77	8.74	8.80	8.27	8.33	8.51	9.04	9.52	9.75	9.73	9.62	9.57	9.65	9.53
190000	8.58	8.67	8.66	8.71	8.69	8.16	8.23	8.36	9.00	9.43	9.63	9.54	9.55	9.46	9.57	9.32
200000	8.45	8.57	8.46	8.54	8.13	7.96	8.03	8.19	8.91	9.30	9.41	9.37	9.42	9.34	9.45	9.17
210000	8.39	8.46	8.40	8.46	8.06	7.88	7.89	8.12	8.86	9.23	9.32	9.30	9.34	9.27	9.44	9.09
220000	8.40	8.37	8.39	8.48	8.07	7.87	7.85	8.09	8.85	9.22	9.27	9.25	9.34	9.29	9.42	9.07
230000	8.45	8.41	8.37	8.54	8.06	7.86	7.84	8.07	8.86	9.21	9.27	9.25	9.31	9.30	9.43	9.03
Daily Max	8.87	9.01	9.02	8.94	8.90	8.52	8.54	8.63	9.06	9.60	9.91	9.99	9.80	9.86	9.85	9.69
Daily Min	8.39	8.37	8.37	8.28	8.06	7.87	7.74	7.63	8.04	8.80	9.14	9.09	9.11	9.27	9.21	9.03
Average	8.59	8.65	8.64	8.60	8.59	8.15	8.11	8.10	8.61	9.21	9.48	9.47	9.45	9.51	9.52	9.37
Monthly average:	8.91															

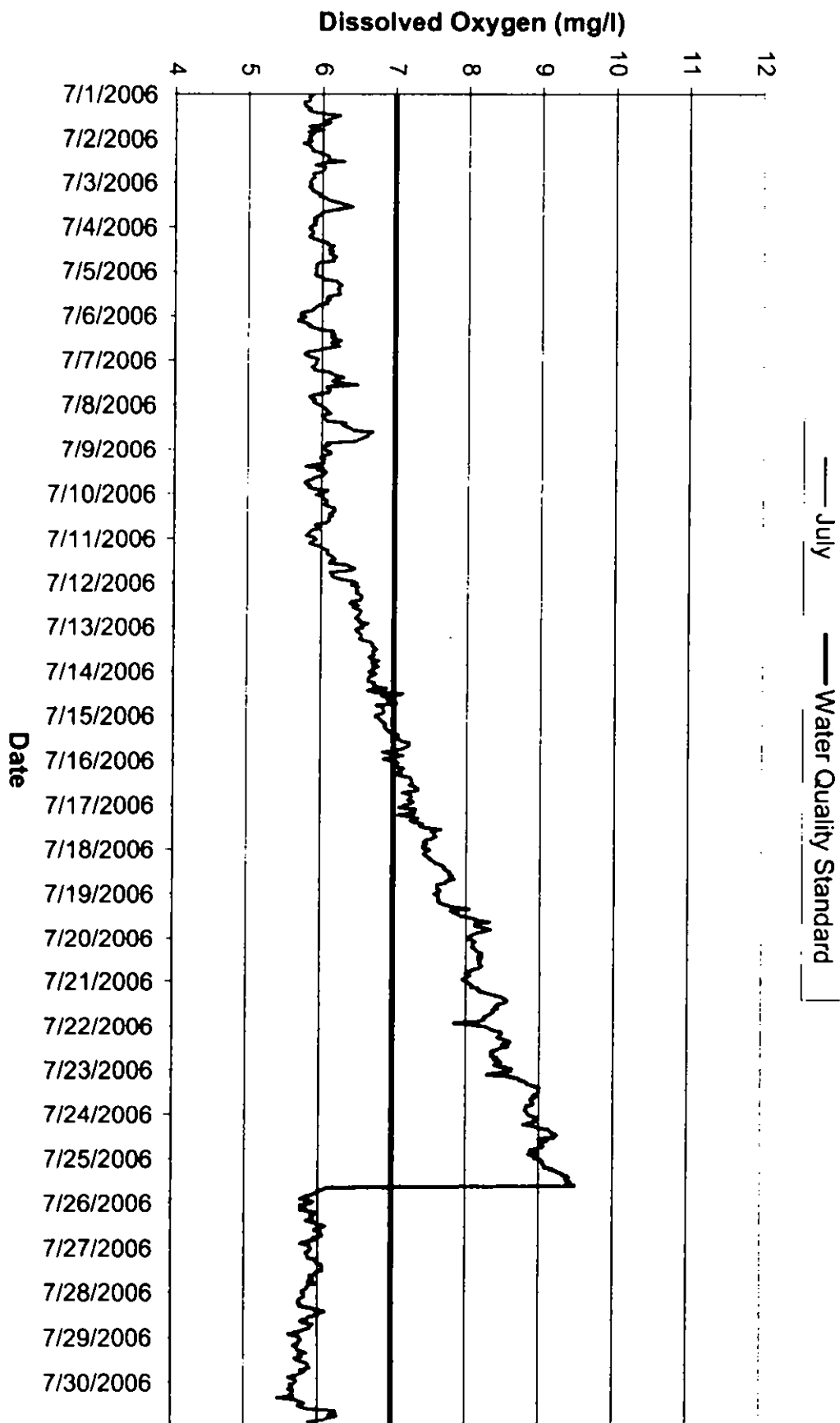
Bergland Dam Dissolved Oxygen Summary - September 2006

Time HHMMSS	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
0	8.97	8.83	7.84	8.36	8.96	8.80	8.36	8.26	8.74	9.00	8.83	9.02	9.30	9.38
10000	8.93	8.92	7.84	8.46	8.97	8.96	8.27	8.31	8.73	8.99	8.93	9.01	9.24	9.41
20000	8.89	8.88	7.95	8.38	8.89	8.82	8.28	8.33	8.79	8.95	8.90	9.01	9.24	9.38
30000	8.85	8.84	7.91	8.44	8.94	8.77	8.34	8.24	8.72	8.93	8.88	9.03	9.21	9.30
40000	8.86	8.83	7.99	8.48	8.97	8.76	8.30	8.30	8.76	8.90	8.84	9.01	9.26	9.36
50000	8.83	8.82	7.97	8.59	8.84	8.79	8.23	8.24	8.70	8.91	8.86	9.00	9.21	9.31
60000	8.78	8.80	8.04	8.50	8.91	8.75	8.34	8.16	8.66	8.89	8.85	9.06	9.14	9.29
70000	8.72	8.81	7.96	8.58	8.94	8.61	8.29	8.15	8.65	8.86	8.87	9.07	9.13	9.25
80000	8.82	8.91	8.07	8.71	9.03	8.60	8.28	8.26	8.82	8.95	8.85	9.19	9.28	9.38
90000	9.06	9.11	8.12	8.85	9.22	8.87	8.54	8.52	9.00	9.18	8.86	9.26	9.44	9.41
100000	9.27	9.41	8.35	8.95	9.31	8.98	8.62	8.72	9.06	9.28	9.15	9.36	9.44	9.61
110000	9.29	9.42	8.52	9.01	9.34	8.81	8.80	8.86	9.16	9.27	9.26	9.43	9.60	9.69
120000	9.15	9.52	8.63	9.04	9.28	8.88	8.78	8.95	9.20	9.25	9.27	9.51	9.67	9.62
130000	9.13	9.55	8.54	9.08	9.33	8.91	8.81	8.89	9.11	9.41	9.27	9.58	9.69	9.69
140000	9.33	9.63	8.72	9.05	9.42	8.85	8.69	8.94	9.21	9.37	9.37	9.55	9.75	9.62
150000	9.30	9.61	8.82	9.09	9.37	8.71	8.56	8.88	9.29	9.43	9.49	9.55	9.79	9.67
160000	9.39	9.76	8.86	9.09	9.34	8.70	8.65	9.03	9.23	9.37	9.42	9.57	9.80	9.70
170000	9.38	9.76	8.84	9.12	9.36	8.63	8.48	8.94	9.18	9.34	9.39	9.59	9.67	9.65
180000	9.30	9.63	8.71	9.17	9.24	8.53	8.48	8.84	9.10	9.20	9.29	9.57	9.63	9.55
190000	9.18	7.90	8.65	9.09	9.06	8.45	8.37	8.83	9.09	9.16	9.26	9.44	9.51	9.49
200000	8.97	7.83	8.48	8.97	9.05	8.32	8.23	8.75	8.99	9.14	9.09	9.27	9.47	9.44
210000	8.92	7.77	8.43	8.90	9.00	8.36	8.35	8.73	8.96	9.07	9.07	9.29	9.43	9.41
220000	8.93	7.80	8.44	8.98	8.94	8.43	8.37	8.80	9.01	9.07	9.12	9.24	9.37	9.38
230000	8.93	7.85	8.36	8.92	8.92	8.33	8.32	8.71	8.99	8.99	9.05	9.27	9.42	9.30
Daily Max	9.39	9.76	8.86	9.17	9.42	8.98	8.81	9.10	9.29	9.43	9.49	9.59	9.80	9.70
Daily Min	8.72	7.77	7.84	8.36	8.84	8.32	8.23	8.15	8.65	8.88	8.84	9.00	9.13	9.25
Average	9.05	8.93	8.34	8.83	9.11	8.70	8.45	8.62	8.97	9.12	9.10	9.29	9.45	9.47

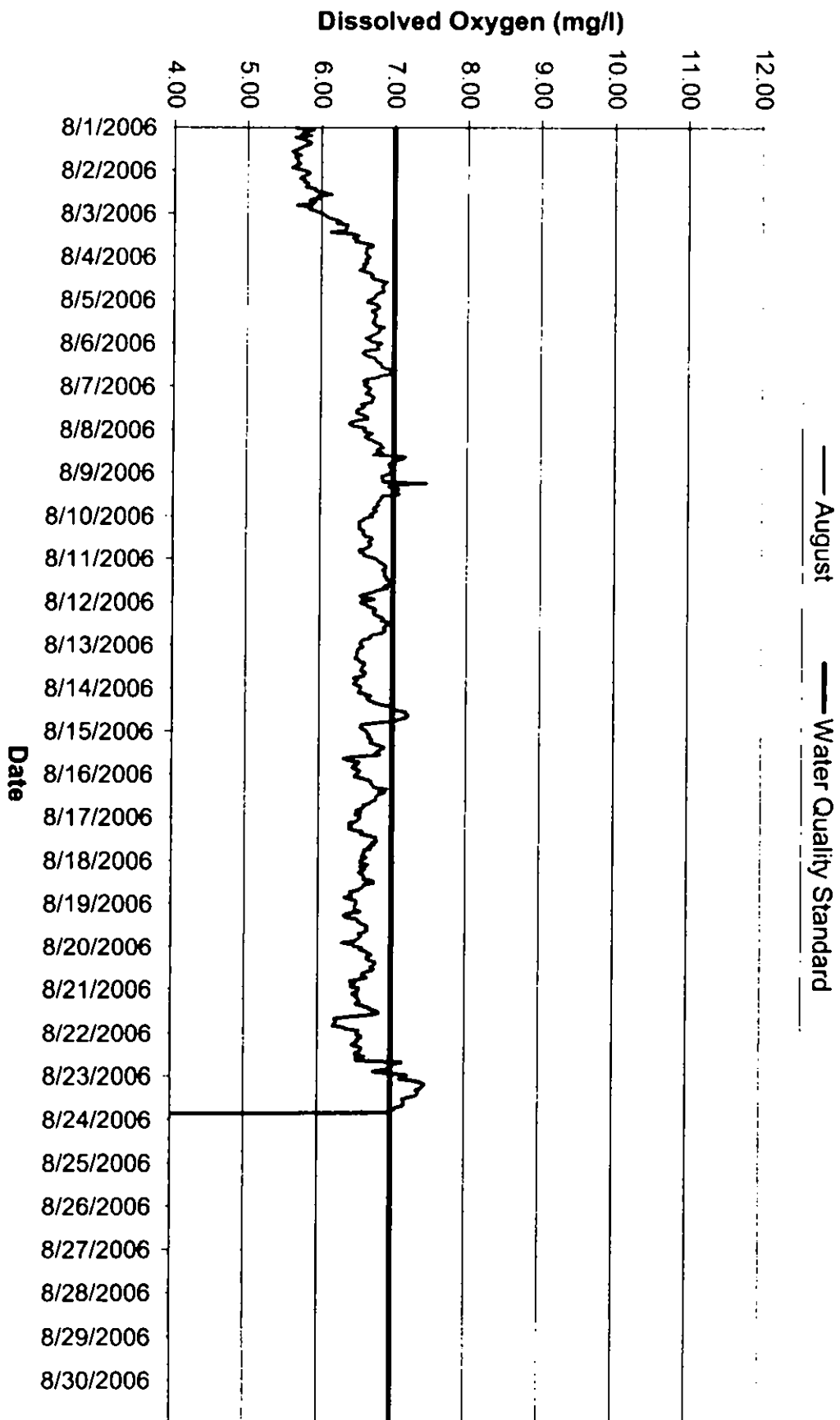
Victoria Powerhouse Tailrace Dissolved Oxygen - 2006



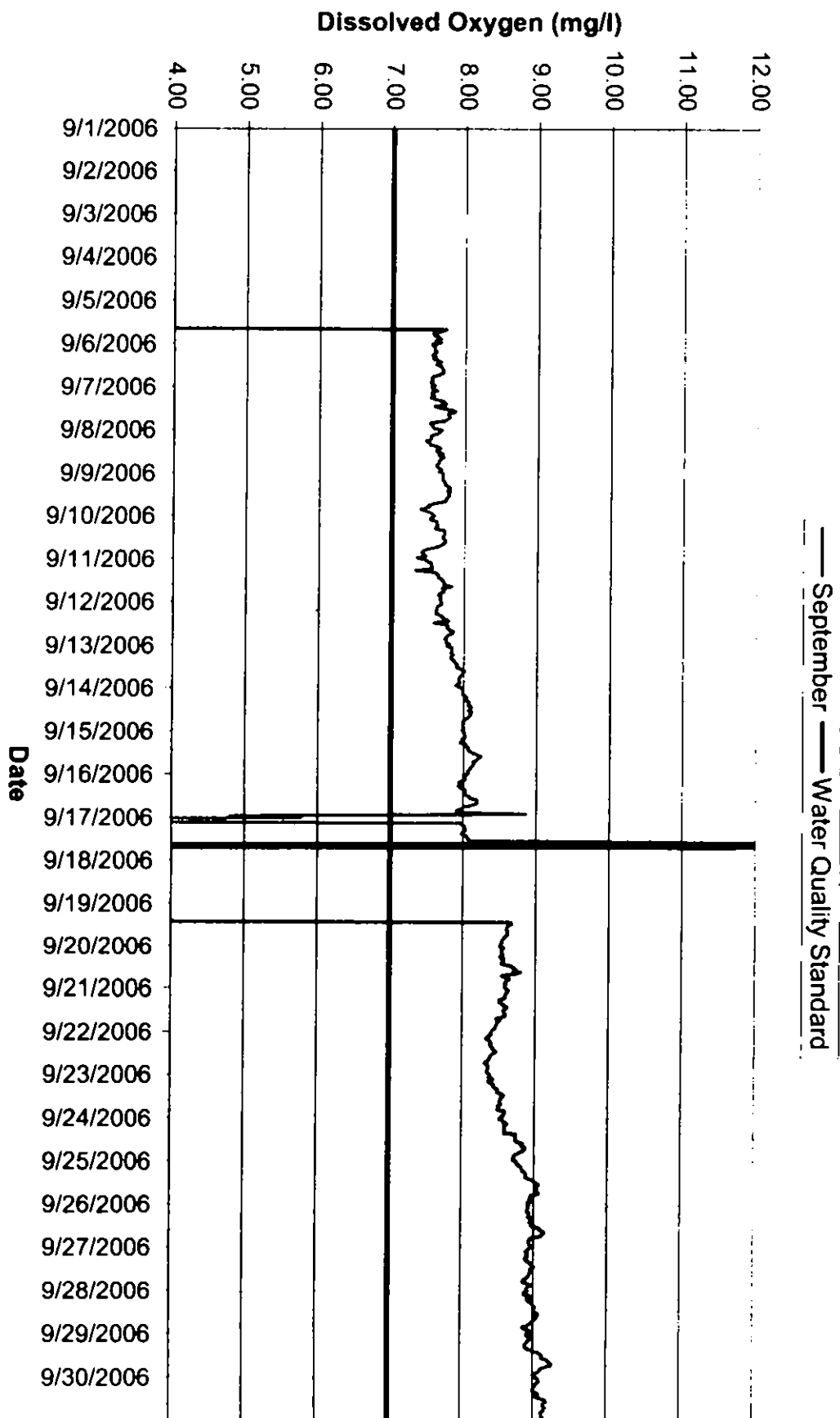
Victoria Powerhouse Tailrace Dissolved Oxygen - 2006



Victoria Powerhouse Tailrace Dissolved Oxygen - August 2006



Victoria Powerhouse Tailrace Dissolved Oxygen - September 2006



Victoria Powerhouse Tailrace Dissolved Oxygen Summary - June 2006

Time HHMMSS	06/01/06	06/02/06	06/03/06	06/04/06	06/05/06	06/06/06	06/07/06	06/08/06	06/09/06	06/10/06	06/11/06	06/12/06	06/13/06	06/14/06	06/15/06	06/16/06
0	7.56	7.49	7.45	7.37	7.22	6.94	7.01	7.19	7.10	7.18	7.21	7.32	7.46	7.49	7.33	6.95
10000	7.51	7.45	7.43	7.34	7.22	6.96	7.01	7.17	7.12	7.19	7.22	7.32	7.49	7.51	7.34	6.91
20000	7.54	7.48	7.40	7.37	7.21	6.93	7.11	7.14	7.12	7.17	7.17	7.33	7.49	7.53	7.34	6.83
30000	7.53	7.54	7.43	7.46	7.24	6.96	7.02	7.15	7.15	7.14	7.20	7.33	7.50	7.49	7.34	6.79
40000	7.52	7.52	7.44	7.40	7.29	6.94	7.05	7.14	7.11	7.19	7.19	7.35	7.49	7.55	7.33	6.79
50000	7.50	7.50	7.41	7.42	7.30	6.95	7.07	7.18	7.13	7.25	7.23	7.38	7.47	7.52	7.30	6.80
60000	7.47	7.50	7.42	7.43	7.32	6.96	7.09	7.20	7.13	7.21	7.29	7.40	7.52	7.57	7.40	6.84
70000	7.48	7.55	7.50	7.47	7.37	6.98	7.12	7.19	7.15	7.27	7.35	7.50	7.56	7.68	7.38	6.82
80000	7.47	7.52	7.53	7.46	7.36	7.05	7.10	7.22	7.22	7.31	7.41	7.56	7.68	7.68	7.18	7.04
90000	7.51	7.49	7.47	7.51	7.34	7.03	7.12	7.19	7.19	7.32	7.45	7.61	7.59	7.56	7.24	7.06
100000	7.50	7.42	7.46	7.57	7.55	7.25	7.20	7.16		7.36	7.36	7.58	7.64	4.72	7.24	7.14
110000	7.52	7.67	7.25	7.32	7.55	7.13	7.22	7.10	7.22	7.33	7.26	7.56	7.68	7.53	7.20	7.22
120000	7.54	7.62	7.46	7.26	7.49	6.98	7.23	7.07	7.27	7.33	7.28	7.56	7.66	7.49	7.23	7.15
130000	7.49	7.60	6.91	7.00	7.30	7.06	7.22	7.03	7.30	7.36	7.37	7.69	7.69	7.41	7.22	7.12
140000	7.47	7.21	7.36	7.24	7.31	7.16	7.19	7.10	7.29	7.32	7.33	7.62	7.72	7.41	7.20	7.11
150000	7.49	7.38	7.33	7.24	7.29	6.99	7.21	7.17	7.27	7.23	7.29	7.65	7.75	7.45	7.15	7.12
160000	7.48	7.36	7.34	7.32	7.15	7.01	7.22	7.18	7.23	7.14	7.30	7.56	7.73	7.52	7.16	6.99
170000	7.46	7.32	7.33	7.22	7.11	7.13	7.25	7.16	7.21	7.15	7.34	7.60	7.70	7.41	7.14	7.05
180000	7.45	7.36	7.21	7.14	7.12	7.05	7.23	7.16	7.17	7.25	7.37	7.61	7.59	7.40	7.05	7.03
190000	7.39	7.35	7.22	7.19	7.17	7.04	7.23	7.12	7.12	7.20	7.37	7.62	7.57	7.28	7.04	7.06
200000	7.43	7.39	7.18	7.15	7.10	7.08	7.22	7.12	7.16	7.16	7.25	7.45	7.56	7.32	6.97	6.92
210000	7.40	7.37	7.21	7.17	7.15	7.03	7.22	7.13	7.17	7.18	7.26	7.44	7.54	7.40	6.96	6.94
220000	7.41	7.40	7.23	7.18	7.02	7.10	7.25	7.10	7.23	7.20	7.28	7.40	7.50	7.31	6.96	6.93
230000	7.50	7.44	7.26	7.13	7.01	7.11	7.23	7.13	7.20	7.21	7.31	7.41	7.52	7.34	6.96	6.94
Missing data due to equipment change 6/9																
Daily Max	7.56	7.67	7.53	7.57	7.55	7.25	7.25	7.22	7.30	7.36	7.45	7.69	7.75	7.68	7.40	7.22
Daily Min	7.39	7.21	6.91	7.00	7.01	6.93	7.01	7.03	7.10	7.14	7.17	7.32	7.46	4.72	6.96	6.79
Average	7.48	7.46	7.34	7.31	7.26	7.03	7.16	7.15	7.18	7.24	7.30	7.49	7.59	7.36	7.19	6.98
Monthly average	6.82															

Victoria Powerhouse Tailrace Dissolved Oxygen Summary - June 2006

Time HHMMSS	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
0	6.85	6.72	6.54	6.53	6.16	6.10	6.20	5.98	6.10	6.12	5.98	6.06	5.94	5.82
10000	6.89	6.66	6.52	6.51	6.20	6.06	6.20	5.97	5.94	6.13	5.82	6.15	5.91	5.77
20000	6.93	6.67	6.60	6.51	6.17	6.04	6.23	5.95	5.80	6.14	5.95	6.17	5.92	5.87
30000	6.90	6.64	6.58	6.52	6.20	6.07	6.23	5.93	5.87	6.20	6.12	6.31	6.00	5.86
40000	6.82	6.68	6.59	6.59	6.16	6.10	6.31	5.90	5.89	6.20	5.99	6.32	6.02	5.92
50000	6.84	6.65	6.56	6.60	6.13	6.04	6.27	5.97	5.84	6.32	6.15	6.25	6.06	5.92
60000	6.85	6.63	6.51	6.62	6.19	6.13	6.26	5.93	6.02	6.35	6.09	6.21	6.07	5.93
70000	6.89	6.67	6.52	6.64	6.21	6.17	6.40	5.96	6.13	6.52	6.38	6.24	6.14	6.04
80000	6.89	6.78	6.59	6.66	6.29	6.10	6.49	5.99	6.07	6.50	6.40	6.29	6.25	6.18
90000	6.88	6.74	6.62	6.67	6.29	6.16	6.55	6.11	6.13	6.53	6.28	6.31	6.24	6.15
100000	6.92	6.80	6.68	6.67	6.33	6.17	6.56	6.14	6.20	6.44	6.10	6.33	6.21	6.08
110000	6.92	6.76	6.69	6.65	6.37	6.10	6.77	6.20	6.18	6.47	6.00	6.36	6.28	6.16
120000	6.90	6.73	6.70	6.67	6.42	6.13	6.72	6.25	6.19	6.53	6.00	6.34	6.22	6.18
130000	6.94	6.72	6.65	6.65	6.40	6.25	6.68	6.20	6.19	6.44	6.05	6.35	6.11	6.25
140000	6.76	6.72	6.61	6.55	6.49	6.30	6.56	6.12	6.19	6.44	6.07	6.30	5.94	6.21
150000	6.82	6.72	6.64	6.53	6.24	6.30	6.37	6.06	6.14	6.18	6.08	6.31	6.08	6.16
160000	6.77	6.66	6.62	6.41	7.21	6.28	6.42	6.07	6.24	6.33	6.16	6.23	6.14	6.30
170000	6.88	6.68	6.65	6.30	8.14	6.22	6.25	6.08	6.22	6.31	6.04	6.15	6.01	6.22
180000	6.78	6.71	6.51	6.26	8.04	6.09	6.32	5.80	6.10	6.08	5.96	6.07	5.86	6.07
190000	6.77	6.60	6.50	6.30	7.60	6.09	6.11	5.88	5.97	6.11	5.96	6.06	5.88	5.98
200000	6.67	6.57	6.51	6.14	5.87	6.10	6.01	5.79	6.04	6.05	5.96	6.02	5.90	5.88
210000	6.72	6.62	6.50	6.18	6.12	6.09	5.98	5.92	6.09	5.96	5.87	5.95	6.03	5.87
220000	6.69	6.63	6.52	6.23	6.09	6.14	6.04	5.98	6.18	6.00	5.90	6.01	6.01	5.92
230000	6.71	6.52	6.52	6.28	6.10	6.14	5.95	6.11	6.12	5.95	5.99	5.99	5.92	5.85
Daily Max	6.94	6.80	6.70	6.67	8.14	6.30	6.77	6.25	6.24	6.53	6.40	6.36	6.28	6.30
Daily Min	6.67	6.52	6.50	6.14	5.87	6.04	5.95	5.79	5.80	5.95	5.82	5.95	5.86	5.77
Average	6.83	6.68	6.58	6.49	6.48	6.14	6.33	6.01	6.08	6.26	6.05	6.20	6.05	6.02

Victoria Powerhouse Tailrace Dissolved Oxygen Summary - July 2006

Time HH:MM:SS	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
0	5.86	5.80	5.83	5.82	5.92	5.78	5.93	5.99	6.05	5.93	5.93	6.49	6.58	6.66	6.74	7.01
10000	5.81	5.85	5.85	5.85	5.90	5.70	5.92	6.02	6.13	6.03	5.89	6.41	6.48	6.76	6.80	7.07
20000	5.82	5.73	5.81	5.88	5.92	5.67	5.91	6.06	6.13	6.01	5.84	6.51	6.49	6.71	6.83	6.98
30000	5.82	5.81	5.86	5.87	6.01	5.75	5.86	6.08	6.04	6.07	5.90	6.48	6.53	6.66	6.85	7.03
40000	5.74	5.83	5.86	5.82	6.03	5.83	5.89	6.12	5.98	6.08	5.99	6.50	6.55	6.65	6.90	7.14
50000	5.75	5.86	5.92	5.83	6.21	5.82	5.90	6.00	6.04	6.04	6.01	6.47	6.56	6.65	6.87	7.08
60000	5.76	5.86	5.97	5.90	6.22	5.89	6.09	6.03	6.03	6.07	6.09	6.52	6.53	6.74	6.89	7.11
70000	5.83	5.95	5.95	5.96	6.27	5.99	6.14	6.05	6.04	6.17	6.09	6.56	6.57	6.74	6.92	7.04
80000	5.80	6.01	6.05	6.07	6.22	6.15	6.19	6.07	5.92	6.19	6.08	6.55	6.59	6.72	6.94	7.12
90000	5.86	6.09	6.08	6.07	6.21	6.13	6.30	6.33	5.78	6.18	6.13	6.54	6.71	6.90	7.00	7.23
100000	6.01	6.09	6.16	6.16	6.24	6.18	6.20	6.28	6.03	6.10	6.17	6.40	6.70	6.64	7.07	7.24
110000	6.24	6.07	6.25	6.11	6.23	6.12	6.14	6.33	5.94	6.16	6.19	6.40	6.73	6.73	7.06	7.25
120000	6.17	6.30	6.34	6.09	6.24	6.16	6.23	6.40	6.05	6.10	6.13	6.51	6.77	7.12	7.07	7.26
130000	6.08	6.01	6.41	6.15	6.10	6.26	6.49	6.43	6.05	6.10	6.11	6.43	6.71	6.83	7.10	7.21
140000	6.03	5.90	6.27	6.10	6.06	6.12	6.06	6.69	6.01	6.11	6.35	6.49	6.72	6.97	7.21	7.29
150000	6.10	6.03	6.13	6.14	6.11	6.16	6.08	6.64	5.90	6.06	6.40	6.55	6.74	6.91	7.22	7.34
160000	6.04	6.03	5.99	6.19	6.05	6.24	6.11	6.63	5.87	5.91	6.46	6.53	6.66	6.93	7.20	7.33
170000	5.81	6.01	5.97	6.14	6.07	6.05	6.10	6.57	5.78	5.98	6.41	6.52	6.69	7.04	7.14	7.12
180000	5.86	5.98	5.94	6.16	5.94	5.95	5.95	6.50	5.78	5.99	6.12	6.50	6.80	6.76	7.06	7.23
190000	6.01	5.87	5.88	5.97	5.91	5.79	5.83	6.46	5.85	5.88	6.16	6.47	6.70	6.85	6.85	7.24
200000	5.80	5.88	5.92	5.92	5.89	5.76	5.85	6.06	5.83	5.85	6.14	6.54	6.72	6.85	6.96	7.23
210000	5.88	5.89	5.88	5.93	5.82	5.80	5.91	6.11	5.89	5.83	6.20	6.52	6.79	6.86	7.14	7.19
220000	5.81	5.85	5.91	5.91	5.71	5.89	5.88	6.00	6.09	5.79	6.28	6.65	6.71	6.87	6.97	7.27
230000	5.84	5.83	5.86	5.92	5.70	5.95	5.93	6.04	6.02	5.90	6.44	6.55	6.73	6.79	6.86	7.23
Daily Max	6.24	6.30	6.41	6.19	6.27	6.26	6.49	6.69	6.13	6.19	6.46	6.65	6.80	7.12	7.22	7.34
Daily Min	5.74	5.73	5.81	5.82	5.70	5.67	5.83	5.99	5.78	5.79	5.84	6.40	6.48	6.64	6.74	6.98
Average	5.91	5.94	6.00	6.00	6.04	5.96	6.04	6.25	5.97	6.02	6.15	6.51	6.66	6.81	6.98	7.18
Monthly average:					6.75											

Victoria Powerhouse Tailrace Dissolved Oxygen Summary - July 2006

Time HH:MM:SS	07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
0	7.14	7.51	7.56	8.01	8.00	8.26	8.62	8.87	9.03	5.86	5.91	5.79	5.76	5.69	6.01
10000	7.07	7.46	7.62	8.09	8.03	8.31	8.51	8.96	9.06	5.76	5.90	5.82	5.78	5.62	5.97
20000	7.31	7.41	7.61	8.13	8.08	8.37	8.29	8.93	9.05	5.84	5.84	5.82	5.74	5.66	5.95
30000	7.24	7.45	7.63	8.09	8.07	8.48	8.60	8.98	9.08	5.76	5.86	5.76	5.75	5.60	5.97
40000	7.29	7.49	7.61	8.10	8.18	8.50	8.71	8.90	9.07	5.88	5.86	5.75	5.67	5.68	6.00
50000	7.06	7.51	7.66	8.08	8.17	8.47	8.74	8.78	9.18	5.98	5.88	5.73	5.72	5.66	6.05
60000	7.26	7.55	7.72	8.13	8.26	8.43	8.83	8.93	9.23	5.90	5.97	5.77	5.72	5.63	5.92
70000	7.33	7.58	7.81	8.13	8.36	8.49	8.84	8.99	9.30	5.93	5.98	5.75	5.77	5.68	5.85
80000	7.23	7.65	8.04	8.20	8.46	8.57	8.93	9.13	9.33	5.94	6.00	5.89	5.85	5.45	5.82
90000	7.28	7.70	7.78	8.22	8.52	8.61	9.00	9.15	9.41	5.84	6.06	5.98	5.74	5.69	5.85
100000	7.41	7.69	7.83	8.17	8.56	8.49	9.00	9.20	9.36	5.95	6.06	6.10	5.79	5.76	5.91
110000	7.36	7.72	7.89	8.22	8.54	8.58	8.99	9.25	9.38	5.99	6.06	5.98	5.69	5.83	5.89
120000	7.43	7.78	7.93	8.16	8.42	8.47	8.99	9.21	9.44	6.10	6.06	6.01	5.73	5.73	5.85
130000	7.66	7.76	8.08	8.20	8.39	8.41	8.91	9.00	9.37	6.04	5.98	5.88	5.81	5.77	5.91
140000	7.52	7.81	8.16	8.17	8.43	8.34	8.95	9.12	9.49	5.95	5.96	5.87	5.87	5.88	5.67
150000	7.57	7.77	8.32	8.20	8.36	8.37	8.88	9.00	6.12	6.03	5.89	5.77	5.86	6.24	5.53
160000	7.56	7.84	8.11	8.22	8.37	8.34	8.89	9.02	6.08	6.05	5.94	5.81	5.90	6.25	5.88
170000	7.59	7.71	8.12	8.17	8.33	8.43	8.91	9.07	6.01	6.06	5.90	5.94	5.77	6.15	6.15
180000	7.53	7.72	8.34	8.09	8.28	8.38	8.92	8.99	5.97	5.94	5.87	5.90	5.83	6.27	6.15
190000	7.43	7.60	8.34	8.02	8.23	8.47	8.82	8.88	5.91	5.96	5.97	5.90	5.76	6.14	6.41
200000	7.42	7.50	8.24	7.99	8.25	8.48	8.82	8.96	5.81	5.87	5.88	5.80	5.70	6.08	6.25
210000	7.46	7.60	8.15	8.06	8.17	8.39	8.80	8.86	5.76	5.77	5.87	5.73	5.60	5.87	6.01
220000	7.40	7.65	8.08	8.00	7.83	8.47	8.83	8.96	5.88	5.89	5.84	5.60	5.70	5.98	5.98
230000	7.41	7.62	8.06	7.95	8.06	8.63	8.84	8.94	5.94	5.89	5.79	5.74	5.71	5.96	5.91
Daily Max	7.66	7.84	8.34	8.22	8.56	8.63	9.00	9.25	9.49	6.10	6.06	6.10	5.90	6.27	6.41
Daily Min	7.06	7.41	7.56	7.95	7.83	8.26	8.29	8.78	5.76	5.76	5.79	5.60	5.60	5.45	5.53
Average	7.37	7.63	7.94	8.11	8.27	8.45	8.82	9.00	8.01	5.92	5.93	5.84	5.76	5.84	5.95

Large drop in D.O. due to large post-cal adjustment in last-deployed datasonde 7/25

Victoria Powerhouse Tailrace Dissolved Oxygen Summary - August 2006

Time HHMMSS	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/06/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
0	5.65	5.80	6.03	6.66	6.64	6.83	6.62	6.59	6.97	6.72	6.78	6.56	6.59	6.56	6.66	6.51
10000	5.89	5.84	6.06	6.60	6.63	6.77	6.68	6.60	6.93	6.60	6.79	6.65	6.59	6.65	6.66	6.49
20000	5.78	5.81	6.10	6.63	6.74	6.77	6.67	6.71	6.84	6.60	6.83	6.66	6.53	6.75	6.69	6.60
30000	5.73	5.74	6.19	6.63	6.78	6.79	6.65	6.65	6.84	6.54	6.88	6.75	6.52	6.64	6.67	6.68
40000	5.86	5.70	6.26	6.57	6.80	6.60	6.61	6.61	6.86	6.53	6.90	6.77	6.52	6.71	6.71	6.72
50000	5.64	5.78	6.20	6.60	6.76	6.57	6.68	6.65	6.85	6.54	6.90	6.73	6.52	6.65	6.73	6.71
60000	5.73	5.76	6.36	6.57	6.69	6.59	6.72	6.71	7.45	6.53	6.86	6.74	6.52	6.67	6.70	6.74
70000	5.79	5.82	6.35	6.52	6.72	6.64	6.72	6.75	6.95	6.55	6.89	6.77	6.49	6.72	6.76	6.75
80000	5.86	5.81	6.34	6.60	6.76	6.73	6.69	6.82	6.93	6.60	6.89	6.85	6.53	6.83	6.83	6.93
90000	5.84	5.78	6.33	6.68	6.75	6.75	6.70	6.83	7.07	6.59	6.87	6.88	6.55	6.87	6.89	6.83
100000	5.76	5.92	6.13	6.71	6.73	6.76	6.55	6.86	7.05	6.60	6.91	6.85	6.62	6.99	6.85	6.91
110000	5.71	5.91	6.43	6.68	6.73	6.82	6.60	6.78	7.00	6.61	6.91	6.96	6.62	6.99	6.81	6.83
120000	5.66	6.03	6.51	6.71	6.70	6.82	6.58	6.77	7.08	6.71	6.96	6.96	6.59	7.05	6.77	6.78
130000	5.60	6.14	6.43	6.81	6.73	6.83	6.50	6.85	6.85	6.71	6.98	6.89	6.58	7.18	6.84	6.78
140000	5.64	5.94	6.49	6.90	6.75	6.89	6.48	6.72	6.84	6.66	6.93	6.87	6.57	7.18	6.51	6.78
150000	5.72	5.98	6.46	6.86	6.86	7.02	6.50	7.16	6.82	6.69	6.87	6.90	6.63	7.22	6.33	6.72
160000	5.64	5.84	6.57	6.83	6.80	6.95	6.58	7.14	6.79	6.70	6.92	6.90	6.62	7.20	6.40	6.70
170000	5.66	5.92	6.70	6.85	6.80	6.96	6.64	7.07	6.78	6.68	6.80	6.86	6.61	7.10	6.55	6.61
180000	5.68	5.89	6.70	6.84	6.78	6.82	6.64	7.02	6.80	6.63	6.74	6.72	6.47	7.04	6.54	6.63
190000	5.68	5.66	6.61	6.86	6.72	6.78	6.48	6.94	6.74	6.53	6.66	6.68	6.53	6.79	6.48	6.58
200000	5.71	5.86	6.62	6.78	6.68	6.63	6.40	6.94	6.73	6.55	6.55	6.70	6.51	6.58	6.46	6.51
210000	5.65	5.83	6.61	6.75	6.61	6.58	6.40	6.95	6.77	6.60	6.60	6.58	6.48	6.57	6.52	6.58
220000	5.60	5.90	6.61	6.73	6.66	6.64	6.45	6.99	6.72	6.61	6.75	6.57	6.50	6.57	6.56	6.50
230000	5.70	5.97	6.64	6.72	6.69	6.59	6.61	6.96	6.68	6.70	6.57	6.56	6.57	6.63	6.54	6.56
Daily Max	5.89	6.14	6.70	6.90	6.86	7.02	6.72	7.16	7.45	6.72	6.98	6.96	6.63	7.22	6.89	6.93
Daily Min	5.60	5.66	6.03	6.52	6.61	6.57	6.40	6.59	6.68	6.53	6.55	6.56	6.47	6.54	6.33	6.49
Average	5.72	5.86	6.41	6.71	6.73	6.76	6.59	6.84	6.89	6.62	6.82	6.77	6.55	6.82	6.64	6.68

Victoria Powerhouse Tailrace Dissolved Oxygen Summary - August 2006

Time HHMMSS	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
0	6.58	6.57	6.52	6.60	6.56	6.53	7.16	0.20	0.20	0.19	0.18	0.17	0.17	0.16	2.33
10000	6.54	6.58	6.50	6.57	6.53	6.60	7.12	0.20	0.19	0.19	0.18	0.16	0.17	0.16	2.08
20000	6.52	6.68	6.50	6.65	6.47	6.60	7.31	0.20	0.19	0.19	0.18	0.16	0.17	0.16	2.06
30000	6.41	6.57	6.50	6.69	6.54	6.54	7.42	0.20	0.19	0.19	0.18	0.17	0.17	0.16	2.14
40000	6.46	6.65	6.58	6.74	6.54	6.56	7.46	0.20	0.19	0.19	0.18	0.17	0.17	0.16	2.12
50000	6.42	6.62	6.41	6.67	6.56	6.50	7.44	0.20	0.19	0.19	0.17	1.94	0.17	0.16	1.87
60000	6.42	6.55	6.35	6.66	6.57	6.47	7.41	0.20	0.19	0.19	0.17	0.17	0.17	0.16	1.95
70000	6.50	6.60	6.39	6.69	6.52	6.55	7.34	0.20	0.19	0.19	0.17	0.17	0.17	0.16	2.01
80000	6.60	6.62	6.53	6.78	6.61	6.60	7.38	0.20	0.19	0.19	0.17	0.17	0.17	0.16	1.87
90000	6.58	6.63	6.54	6.79	6.67	6.59	7.37	0.20	0.19	0.19	0.17	0.17	0.17	0.16	1.89
100000	6.68	6.62	6.57	6.76	6.72	6.57	7.35	0.00	0.19	0.19	0.18	0.17	0.17	0.17	1.97
110000	6.79	6.75	6.62	6.72	6.80	6.52	7.27	3.33	0.19	0.19	0.18	0.17	0.17	0.17	2.30
120000	6.78	6.76	6.68	6.76	6.84	6.52	7.16	0.20	0.19	0.19	0.18	0.17	0.17	0.17	2.24
130000	6.80	6.62	6.65	6.74	6.74	6.64	7.18	0.20	0.19	0.19	0.18	0.17	0.17	0.17	2.42
140000	6.73	6.62	6.68	6.64	6.44	6.52	7.18	0.20	0.19	0.19	0.18	0.17	0.17	0.17	2.30
150000	6.76	6.58	6.63	6.60	6.23	6.55	7.18	0.20	0.19	0.19	0.18	0.17	0.17	0.17	2.19
160000	6.68	6.56	6.55	6.63	6.24	7.15	7.18	0.20	0.19	0.19	0.17	0.17	0.17	0.17	2.25
170000	6.72	6.44	6.59	6.67	6.25	6.98	7.07	0.20	0.19	0.19	0.17	0.17	0.17	0.17	2.34
180000	6.62	6.44	6.57	6.55	6.24	6.98	7.06	0.20	0.19	0.18	0.17	0.17	0.17	0.17	2.11
190000	6.63	6.46	6.54	6.44	6.21	6.99	6.99	0.20	0.19	0.18	0.17	0.17	0.17	0.17	2.06
200000	6.62	6.35	6.52	6.51	6.36	6.93	6.95	0.20	0.19	0.18	0.17	0.17	0.17	0.17	1.94
210000	6.60	6.43	6.33	6.46	6.41	6.76	0.20	0.19	0.19	0.18	0.17	0.17	0.16	0.16	2.08
220000	6.65	6.52	6.48	6.46	6.56	6.98	0.20	0.19	0.19	0.18	0.17	0.17	0.16	0.16	2.28
230000	6.59	6.53	6.50	6.57	6.55	7.23	0.20	0.19	0.19	0.18	0.17	0.17	0.16	0.16	2.19
							Equipment malfunction 8/23 to 8/31								2.24
Daily Max	6.80	6.76	6.68	6.79	6.84	7.23	7.46	3.33	0.20	0.19	0.18	1.94	1.99	2.42	2.79
Daily Min	6.41	6.35	6.33	6.44	6.21	6.47	0.20	0.00	0.19	0.18	0.17	0.16	0.16	0.16	1.87
Average	6.61	6.57	6.53	6.64	6.51	6.70	6.36	0.32	0.19	0.19	0.17	0.24	0.24	1.46	2.18

Victoria Powerhouse Tailrace Dissolved Oxygen Summary - September 2006

Time HH:MM:SS	09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/16/06
0	2.09	2.30	0.15	0.14	0.14	7.54	7.53	7.68	7.70	7.58	7.46	7.68	7.76	7.99	8.00	8.05
10000	0.15	2.67	0.15	0.14	0.14	7.56	7.55	7.65	7.70	7.53	7.49	7.69	7.84	7.98	8.01	8.00
20000	0.15	2.97	2.55	0.14	0.14	7.58	7.61	7.62	7.70	7.52	7.55	7.63	7.83	7.99	8.01	8.03
30000	1.98	2.65	2.23	0.14	0.14	7.57	7.53	7.52	7.69	7.61	7.54	7.62	7.83	7.98	8.03	8.02
40000	2.42	2.69	0.14	0.14	0.14	7.60	7.53	7.53	7.70	7.61	7.55	7.62	7.82	8.01	7.97	7.94
50000	2.29	2.45	0.15	0.14	0.14	7.57	7.57	7.53	7.72	7.63	7.56	7.61	7.85	8.04	8.00	7.96
60000	1.95	2.06	2.75	0.14	0.15	7.54	7.52	7.46	7.72	7.60	7.32	7.61	7.82	8.03	7.95	7.93
70000	0.15	2.37	0.15	0.14	0.14	7.59	7.58	7.50	7.74	7.59	7.58	7.67	7.82	8.06	8.03	7.95
80000	0.15	2.15	0.15	0.15	0.14	7.55	7.68	7.52	7.79	7.72	7.63	7.70	7.86	8.08	8.04	8.01
90000	2.14	1.88	0.15	0.15	0.15	7.61	7.72	7.61	7.80	7.72	7.64	7.73	7.87	8.06	8.06	8.03
100000	2.11	2.82	0.15	0.15	0.15	7.66	7.73	7.66	7.75	7.72	7.64	7.79	7.90	8.10	8.06	8.03
110000	3.15	3.32	0.15	0.15	0.15	7.59	7.57	7.60	7.79	7.71	7.69	7.58	7.91	8.10	8.08	8.02
120000	2.37	3.91	0.15	0.15	0.15	7.65	7.66	7.61	7.77	7.70	7.72	7.76	7.90	8.06	8.13	8.07
130000	2.72	2.97	0.15	0.15	0.15	7.67	7.81	7.69	7.78	7.72	7.72	7.77	7.96	8.11	8.19	8.10
140000	3.81	2.69	0.15	0.15	0.15	7.69	7.86	7.64	7.74	7.74	7.72	7.76	8.01	8.09	8.24	8.19
150000	2.76	2.64	0.15	0.15	0.15	7.70	7.76	7.71	7.75	7.72	7.83	7.80	7.99	8.09	8.20	8.19
160000	2.82	2.19	0.15	0.15	0.15	7.73	7.69	7.66	7.72	7.67	7.69	7.85	7.98	8.06	8.17	8.19
170000	2.64	3.31	0.15	0.15	0.15	7.65	7.79	7.64	7.58	7.62	7.72	7.84	7.95	8.01	8.13	8.11
180000	2.82	1.85	0.15	0.15	0.15	7.55	7.75	7.64	7.50	7.49	7.72	7.77	7.94	7.99	8.14	8.00
190000	1.78	2.62	0.14	0.14	0.14	7.57	7.53	7.61	7.50	7.43	7.65	7.75	7.92	8.00	8.13	7.97
200000	1.44	3.12	0.15	0.14	0.14	7.62	7.55	7.61	7.39	7.41	7.65	7.73	7.94	7.99	8.10	7.91
210000	1.71	2.53	0.14	0.14	0.14	7.66	7.54	7.64	7.45	7.43	7.68	7.76	7.94	7.99	8.09	7.96
220000	2.54	3.03	0.15	0.15	0.15	7.58	7.55	7.68	7.52	7.47	7.66	7.75	7.89	8.00	8.05	8.86
230000	2.36	2.46	0.15	0.14	0.14	7.58	7.57	7.64	7.55	7.35	7.67	7.80	7.93	7.98	8.07	4.80
Equipment malfunction starting on 8/23/06																
Daily Max	3.81	3.91	2.75	0.15	0.15	7.73	7.70	7.71	7.80	7.74	7.83	7.85	8.01	8.11	8.24	8.86
Daily Min	0.15	1.85	0.14	0.14	0.14	7.52	7.51	7.46	7.39	7.35	7.32	7.58	7.76	7.98	7.95	4.80
Average	2.02	2.65	0.44	0.15	0.15	7.59	7.64	7.61	7.67	7.60	7.63	7.72	7.89	8.03	8.08	7.93
Monthly average:					6.70											

Victoria Powerhouse Tailrace Dissolved Oxygen Summary - September 2006

Time HH:MM:SS	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
0	5.77	0.11	0.10	8.51	8.60	8.40	8.39	8.52	8.76	8.94	8.96	8.92	8.90	9.06
10000	0.10	0.10	0.10	8.57	8.64	8.40	8.37	8.57	8.76	8.92	8.94	8.88	8.93	9.08
20000	0.10	0.10	0.10	8.54	8.61	8.36	8.43	8.58	8.78	8.93	8.89	8.87	8.98	9.08
30000	7.96	0.10	0.10	8.54	8.60	8.33	8.36	8.63	8.82	8.91	8.92	8.95	8.95	9.04
40000	7.99	0.10	0.10	8.54	8.58	8.37	8.39	8.60	8.83	8.90	8.90	8.96	8.92	9.04
50000	8.02	0.10	0.10	8.56	8.59	8.39	8.44	8.58	8.84	8.94	8.92	8.91	8.90	9.01
60000	8.02	0.10	0.10	8.51	8.51	8.40	8.43	8.60	8.87	8.94	8.88	8.94	8.88	9.00
70000	8.03	0.10	0.09	8.57	8.51	8.39	8.46	8.59	8.89	8.92	8.89	8.99	8.89	9.00
80000	7.99	0.10	0.09	8.55	8.55	8.41	8.50	8.58	8.88	8.97	8.93	8.99	8.93	9.05
90000	7.98	0.10	0.09	8.57	8.58	8.42	8.48	8.75	8.89	8.99	8.97	8.99	8.99	9.08
100000	8.05	0.10	8.66	8.53	8.62	8.44	8.54	8.74	8.95	8.94	8.98	9.02	9.00	9.02
110000	8.05	0.11	8.68	8.64	8.57	8.47	8.58	8.74	9.00	8.97	9.01	9.00	9.11	9.08
120000	8.07	0.11	8.62	8.70	8.57	8.42	8.55	8.76	9.02	8.96	8.95	9.01	9.13	9.17
130000	8.09	0.11	8.61	8.73	8.58	8.40	8.53	8.76	9.07	9.05	8.97	9.07	9.11	9.18
140000	14.07	0.10	8.60	8.70	8.60	8.38	8.53	8.85	9.04	9.08	8.95	9.06	9.21	9.14
150000	0.10	0.10	8.62	8.80	8.57	8.38	8.51	8.82	9.04	9.12	8.94	9.05	9.21	9.13
160000	29.72	0.10	8.61	8.70	8.47	8.36	8.54	8.86	9.04	9.14	8.94	9.02	9.26	9.17
170000	0.10	0.10	8.62	8.54	8.52	8.31	8.50	8.88	9.04	9.12	8.90	9.00	9.24	9.15
180000	0.10	0.10	8.59	8.62	8.49	8.35	8.50	8.85	9.07	9.10	8.87	8.96	9.14	9.15
190000	0.10	0.10	8.57	8.65	8.48	8.36	8.49	8.80	8.96	8.97	8.85	8.93	9.09	9.10
200000	0.10	0.10	8.55	8.59	8.46	8.36	8.59	8.74	8.95	8.93	8.90	8.85	9.10	9.12
210000	0.10	0.10	8.54	8.58	8.46	8.35	8.59	8.72	8.94	8.94	8.97	8.90	9.06	9.12
220000	0.10	0.10	8.54	8.60	8.43	8.34	8.58	8.73	8.97	8.94	8.93	8.96	9.00	9.15
230000	0.10	0.10	8.52	8.58	8.41	8.37	8.54	8.70	8.91	8.95	8.90	8.95	9.02	9.10
Equipment malfunction 9/16-9-19														
Daily Max	29.72	0.11	8.68	8.80	8.64	8.47	8.59	8.88	9.07	9.14	9.01	9.07	9.26	9.18
Daily Min	0.10	0.10	0.09	8.51	8.41	8.31	8.36	8.52	8.76	8.90	8.85	8.85	8.88	9.00
Average	5.78	0.10	5.05	8.60	8.54	8.38	8.49	8.71	8.93	8.98	8.93	8.97	9.04	9.09

APPENDIX B

DISSOLVED OXYGEN PROFILE DATA

BOND FALLS AND VICTORIA RESERVOIRS

DO profile - Bond reservoir

6/14/2006

09 15 CST

Weather: PT cloudy, 60°F, 5-10 mph

Secchi Disk depth - 69"

Depth meters	DO mg/l	Temperature Celsius
0.5	8.52	20.3
1.0	8.55	20.2
1.5	8.52	20.2
2.0	8.51	20.2
2.5	8.5	20.2
3.0	8.51	20.2
3.5	8.51	20.1
4.0	8.51	20.1
4.5	8.44	20
5.0	6.31	12.3
5.5	6.3	11.4
6.0	6.3	11.2
6.5	6.18	11.1
7.0	6.3	11
7.5	6.49	10.9
8.0	6.34	1.9
8.5	6.13	10.8
9.0	5.96	10.8
9.5	8.86	10.7

6/26/2006

09 30 CST

Weather: Fog, 65°F, Calm-5 mph

Secchi Disk depth - 99"

Depth meters	DO mg/l	Temperature Celsius
0.5	8.07	20.6
1.0	8.05	20.6
1.5	8.04	20.6
2.0	8.03	20.5
2.5	8.00	20.5
3.0	7.98	20.4
3.5	7.97	20.4
4.0	7.98	20.4
4.5	7.98	20.4
5.0	7.85	19.9
5.5	5.09	15.8
6.0	4.42	13.1
6.5	4.40	12.1
7.0	4.40	11.9
7.5	4.28	11.6
8.0	4.41	11.4
8.5	4.20	11.3
9.0	4.33	11.3
9.5	4.12	11.2
10.0	3.98	11.1

7/17/2006

09 30 CST

Weather: Clear, 75°F, Calm

Secchi Disk depth - 123"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	8.24	24.8
1.0	8.29	24.5
1.5	8.47	23.8
2.0	8.45	22.7
2.5	8.26	21.8
3.0	8.13	21.6
3.5	7.96	21.4
4.0	7.81	21.2
4.5	7.47	20.9
5.0	7.24	20.7
5.5	6.32	19.6
6.0	4.93	18.3
6.5	2.8	14.7
7.0	2.43	13.2
7.5	2.38	12.8
8.0	2.46	12.3
8.5	2.42	12
9.0	2.31	11.8
9.5	1.93	11.6

7/26/2006

08 15 CST

Weather: Cloudy, 70°F, Calm

Secchi Disk depth - 105"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	8.15	23.8
1.0	8.12	23.8
1.5	8.1	23.6
2.0	8.02	23.5
2.5	8.01	23.4
3.0	8.03	23.3
3.5	8.05	23.3
4.0	8.1	22.9
4.5	8.18	22.8
5.0	7.45	21.7
5.5	1.57	16.9
6.0	1.24	15.5
6.5	0.77	14.8
7.0	0.72	14.1
7.5	0.63	13.7
8.0	0.54	13.5
8.5	0.49	13.1

8/9/2006
08 15 CST
PT Cloudy, 65°F, 5-10 mph

Secchi Disk depth - 105"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	7.7	23.0
1.0	7.68	23.0
1.5	7.68	23.0
2.0	7.65	23.0
2.5	7.63	23.0
3.0	7.63	23.0
3.5	7.6	23.0
4.0	7.57	23.0
4.5	7.51	23.0
5.0	7.53	23.0
5.5	5.85	21.3
6.0	1.63	19.6
6.5	0.47	15.8
7.0	0.38	14.6
7.5	0.32	13.9
8.0	0.29	13.5
8.5	0.26	13.3

Comparison Readings

Depth meters	DO mg/l	Temperature Celsius
1.0 m	7.51	22.9
5.0 m	7.42	22.8

8/23/2006
08 15 CST
Overcast, 60°F, Calm 5 mph

Secchi Disk depth - 87"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	7.75	20.5
1.0	7.74	20.5
1.5	7.73	20.5
2.0	7.74	20.5
2.5	7.73	20.5
3.0	7.73	20.5
3.5	7.72	20.5
4.0	7.74	20.5
4.5	7.73	20.5
5.0	7.72	20.5
5.5	7.71	20.5
6.0	7.73	20.5
6.5	7.74	20.5
7.0	7.7	20.5
7.5	0.74	16.0

Comparison Readings

Depth meters	DO mg/l	Temperature Celsius
1.0 m	7.48	20.3
5.0 m	7.47	20.3

9/6/2006
08 45 CST
Overcast, 58°F, Calm

Secchi Disk depth - 129"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	8.28	19.8
1.0	8.28	19.8
1.5	8.26	19.8
2.0	8.29	19.8
2.5	8.28	19.8
3.0	8.28	19.8
3.5	8.43	19.8
4.0	8.43	19.8
4.5	8.43	19.8
5.0	8.45	19.8
5.5	8.42	19.8
6.0	8.39	19.7
6.5	6.68	19.1
7.0	4.78	18.7
7.5	0.5	16.9
8.0	0.46	16.3
8.5	0.42	15.0

Comparison Readings

Depth meters	DO mg/l	Temperature Celsius
1.0 m	8.08	19.7
5.0 m	7.99	19.5

9/18/2006
14 50 CST
Overcast, 50°F, 5-10 mph winds

Secchi Disk depth - 81"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	8.23	17.2
1.0	8.19	17.2
1.5	8.23	17.2
2.0	8.2	17.2
2.5	8.2	17.2
3.0	8.19	17.2
3.5	8.18	17.2
4.0	8.21	17.2
4.5	8.16	17.2
5.0	8.02	17.2
5.5	8.03	17.2
6.0	8.04	17.2
6.5	8.03	17.2
7.0	8.03	17.2
7.5	8.01	17.2

Comparison Readings

Depth meters	DO mg/l	Temperature Celsius
1.0 m	8.06	17.2
5.0 m	8	17.2

Dissolved Oxygen Profile Data - Victoria Reservoir 2006

6/13/2006
15 45 CST
Weather PT cloudy, 75°F, Calm

Secchi Disk depth - 63"

Depth meters	DO mg/l	Temperature Celsius
0.5	7.67	21.1
1.0	7.15	20.2
1.5	7.05	20
2.0	7.04	20
2.5	7.06	20
3.0	7.02	19.9
3.5	7.04	19.9
4.0	7.02	19.9
4.5	6.98	19.6
5.0	7.1	19.4
5.5	7.06	19.3
6.0		

Profile taken near tainter gates

Downstream DO Values
at monitor location 8.04 mg/l

6/27/2006
15 30 CST
Weather Cloudy, 70°F, 5-10 mph

Secchi Disk depth - 57"

Depth meters	DO mg/l	Temperature Celsius
0.5	8.81	24.6
1.0	8.59	23.9
1.5	8.00	23.1
2.0	7.80	23.0
2.5	7.29	22.7
3.0	7.21	22.7
3.5	7.15	22.7
4.0	7.00	22.6
4.5	6.63	22.5
5.0	6.55	22.5
5.5	5.71	22.2
6.0	5.50	21.9
6.5	4.84	21.6

Profile taken near tainter gates

Downstream DO Values
50m 6.85
100m 6.92
200m 7.15

7/11/2006
15 00 CST
Weather PT cloudy, 80°F, Calm

Secchi Disk depth - 69"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	7.5	24.3
1.0	7.3	23.7
1.5	7.34	23.6
2.0	7.13	23.5
2.5	7.1	23.3
3.0	7.19	23.3
3.5	7.06	23.2
4.0	6.71	23.2
4.5	6.65	23.2
5.0	6.58	23.2
5.5	6.56	23.1
6.0	6.5	23.1
6.5	4.75	22.7
7.0	2.67	20.9
7.5	2.69	20.4
8.0	2.82	20.1
8.5	3.06	19.7
9.0	3.08	19.5
9.5	2.8	19.3
10.0	2.46	18.9
10.5	2.08	18.2

Profile taken by intake

Downstream DO Values
300m 7.25

7/25/2006
15 45 CST
Weather PT cloudy, 90°F, Calm-5mph

Secchi Disk depth - 93"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	7.88	29.1
1.0	7.58	26.1
1.5	7.24	25.6
2.0	6.87	25.2
2.5	6.8	25.2
3.0	6.8	25.2
3.5	6.74	25.2
4.0	6.69	25.1
4.5	6.64	25.1
5.0	6.59	25.1
5.5	4.32	24.3
6.0	3.62	23.3
6.5	3.61	23.2
7.0	3.49	23.1
7.5	3.36	22.8
8.0	2.77	22.4
8.5	1.71	21.8
9.0	1.42	21.0
9.5	1.6	20.3
10.0	1.86	20.4
10.5	1.8	19.5
11	1.67	18.1
11.5	0.98	10.4

Profile taken by intake

Downstream DO Values
at monitor 6.8
50m 6.73
100m 7.48
200m 7.24

Dissolved Oxygen Profile Data - Victoria Reservoir 2006

8/8/2006
15:50 CST
Weather: Clear, 80°F, Calm - 5mph

Secchi Disk depth - 57"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	8.76	25.5
1.0	8.11	25.2
1.5	8.06	24.8
2.0	7.75	24.7
2.5	7.79	24.7
3.0	7.6	24.6
3.5	7.34	24.1
4.0	7.02	23.8
4.5	7.01	23.7
5.0	7.01	23.7
5.5	7	23.7
6.0	6.98	23.7
6.5	6.95	23.7
7.0	6.9	23.6
7.5	4.06	23.2
8.0	1.26	22.5
8.5	0.53	22.0
9.0	0.33	21.5
9.5	0.28	20.8
10	0.45	20.2
10.5	0.37	19.8
11	0.28	19.4
11.5	0.22	18.8
12	0.24	18.3

Profile taken by intake

Comparison Readings		
Depth meters	DO mg/l	Temperature Celsius
1.0 m	8.18	25.1
5.0 m	7.14	23.6

8/22/2006
16:45 CST
Clear, 75°F, 5-10 mph

Secchi Disk depth - 69"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	8.73	23.3
1.0	8.15	23.1
1.5	7.83	22.9
2.0	8	22.9
2.5	7.95	22.8
3.0	7.56	22.8
3.5	7.54	22.7
4.0	7.47	22.7
4.5	7.46	22.7
5.0	7.44	22.7
5.5	7.43	22.7
6.0	7.43	22.7
6.5	7.43	22.7
7.0	7.45	22.7
7.5	7.55	22.7
8.0	7.52	22.7
8.5	5.33	22.3
9.0	2.15	21.8
9.5	0.39	20.7
10.0	0.32	20.0
10.5	0.3	19.5
11.0	0.27	19.3
11.5	0.24	18.1
12.0	0.23	17.6

Profile taken by intake

Comparison Readings		
Depth meters	DO mg/l	Temperature Celsius
1.0 m	8.28	22.9
5.0 m	7.58	22.5

9/5/2006
17:00 CST
Clear, 75°F, Calm-5mph

Secchi Disk depth - 81"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	8.7	20.9
1.0	9.08	20.8
1.5	8.61	20.4
2.0	8.45	20.3
2.5	8.07	20.2
3.0	8.1	20.2
3.5	8.08	20.2
4.0	8.04	20.2
4.5	7.85	20.1
5.0	7.8	20.1
5.5	7.77	20.1
6.0	7.78	20.1
6.5	7.69	20.1
7.0	7.42	20.1
7.5	7.17	20.1
8.0	6.96	20.1
8.5	6.94	20.0
9.0	6.9	20.0
9.5	6.78	20.0
10.0	6.38	19.9
10.5	1.34	18.7
11.0	0.36	17.9
11.5	0.33	16.5
12.0	0.31	15.8

Profile taken by intake

Comparison Readings		
Depth meters	DO mg/l	Temperature Celsius
1.0 m	9.09	20.3
5.0 m	8.01	19.9

9/19/2006
08:00 CST
Rain, 50°F, 5 - 10 mph winds

Secchi Disk depth - 69"

Depth (meters)	DO (mg/l)	Temperature Celsius
0.5	8.74	17.0
1.0	8.76	17.1
1.5	8.82	17.1
2.0	8.82	17.1
2.5	8.8	17.1
3.0	8.81	17.1
3.5	8.82	17.1
4.0	8.82	17.1
4.5	8.8	17.1
5.0	8.82	17.1
5.5	8.74	17.1
6.0	8.8	17.1
6.5	8.79	17.1
7.0	8.78	17.1
7.5	8.77	17.1
8.0	8.78	17.1
8.5	8.82	17.1
9.0	8.83	17.1
9.5	8.84	17.1
10.0	8.81	17.1

Profile taken by intake

Comparison Readings		
Depth meters	DO mg/l	Temperature Celsius
1.0 m	8.68	17.2
5.0 m	8.74	17.2

APPENDIX C

EQUIPMENT CALIBRATION LOG SHEETS

PRE-DEPLOYMENT CALIBRATION LOG SHEETS

Field Notes for Datasonde Deployment

Date/Time: 5/30/06 12:45 Analyst: CSW
 Location: Bowd Datasonde Serial #: 42175

Calibration Information

Datasonde Battery (volts): 11.5

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>7.00</u>	<u>7.00</u>
10.00 Std	<u>9.93</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>285</u> Std	<u>258</u>	<u>285</u>	Before <u>0</u> After <u>0</u>

Barometric Pressure (mm Hg) 724.0

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>105.8</u>	<u>100.0</u>
mg/L D.O.	<u>8.10</u>	<u>7.60</u>
Temp - °C	<u>26.42</u>	<u>26.96</u>

YSI calibration (See field notes for YSI Model 95 calibration information)

	Before Calibration	After Calibration
% Saturation	<u>77.6</u>	<u>95.0</u>
mg/L D.O.	<u>6.58</u>	<u>8.05</u>
Temp - °C	<u>23.7</u>	<u>23.7</u>

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>90.3</u>	<u>90.6</u>	
mg/L D.O.	<u>8.66</u>	<u>9.06</u>	
Temp - °C	<u>15.09</u>	<u>15.3</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

DEPLOYED

YSI Reading at Tube

Time	_____
% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes: SEE ROSBLAWN

Field Notes for Datasonde Deployment

Date/Time: 6/13/06 13:00 Analyst: CSW
 Location: BOND FALLS Datasonde Serial #: 42628

Calibration Information

Datasonde Battery (volts): 12.2

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>7.37</u>	<u>7.00</u>
10.00 Std	<u>9.94</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.283</u> Std	<u>0.281</u>	<u>0.283</u>	Before <u>0.00</u> After <u>0.00</u>

Barometric Pressure (mm Hg) 730.5

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>98.9%</u>	<u>100.0%</u>
mg/L D.O.	<u>7.34 mg/L</u>	<u>7.41 mg/L</u>
Temp - °C	<u>25.47°C</u>	<u>25.50°C</u>

YSI calibration (See field notes for ~~YSI~~ Model 330i calibration information)

	Before Calibration	After Calibration
% Saturation		
mg/L D.O.		
Temp - °C		

SEE ROSELAWN

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>89.8</u>	<u>88.0</u>	
mg/L D.O.	<u>8.34</u>	<u>8.15</u>	
Temp - °C	<u>17.02</u>	<u>17.0</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

YSI Reading at Tube

	Time
% Saturation	
mg/L D.O.	
Temp - °C	

Check Status

Battery Life @ Start: 100%
 Battery Life @ End: 74%

Notes: OVERCAST, 70°F, CALM
BT3613 = TBSI PRGM

Field Notes for Datasonde Deployment

Date/Time: 6/27/06 Analyst: CSW
 Location: BOND FAULT Datasonde Serial #: 42171

Calibration Information

Datasonde Battery [volts]: 11.6

pH (s.u.) Before Cal. After Cal.
 7.00 Std 7.04 7.00
 10.00 Std 9.99 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.287 Std 0.284 0.287 Before 0.000 After 0.000

Barometric Pressure (mm Hg) 739

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 125.7% 100.0%
 mg/L D.O. 9.78 mg/L 7.71 mg/L
 Temp - °C 26.55°C 26.79°C

YSI calibration (See field notes for YSI Model 55 calibration information)
SBB VICTORIA 6-27-06

Before Calibration After Calibration
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation 73.6 77.9
 mg/L D.O. 6.28 6.64
 Temp - °C 21.8 21.9

Re-calibration required if outside 0.5 mg/l limit

Before Cal. After Cal. Datasonde YSI
 % Saturation _____
 mg/L D.O. _____
 Temp °C _____

DEPLOYED

YSI Reading at Tube

Time _____
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes: _____

START 14:15
STOP 14:30

Field Notes for Datasonde Deployment

Date/Time: 7/11/06 13:30 Analyst: CSW
 Location: BOND FALLS Datasonde Serial #: 42169

Calibration Information

Datasonde Battery (volts): 12.1 V

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>7.08</u>	<u>7.00</u>
10.00 Std	<u>10.01</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.287 Std	<u>0.288</u>	<u>0.287</u>	Before: <u>0.0000</u> After: <u>0.0000</u>

Barometric Pressure (mm Hg) 739 mm Hg

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>78.9</u>	<u>100.0</u>
mg/L D.O.	<u>7.45</u>	<u>7.52</u>
Temp - °C	<u>28.38</u>	<u>28.43</u>

YSI calibration (See field notes for YSI Model 95 calibration information) SBE VICTORIA 7/11/06

	Before Calibration	After Calibration
% Saturation	_____	_____
mg/L D.O.	_____	_____
Temp - °C	_____	_____

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>12.8</u>	<u>76.8%</u>	
mg/L D.O.	<u>6.10</u>	<u>6.60 mg/L</u>	
Temp - °C	<u>22.73</u>	<u>22.78</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	_____	_____	_____	_____
mg/L D.O.	_____	_____	_____	_____
Temp - °C	_____	_____	_____	_____

YSI Reading at Tube

	Time
% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes:

PT CLOUDY, 80°F, CALM - 5 mph
CALIBRATION D.O. w/ TAP H₂O

13:44
13:59

Field Notes for Datasonde Deployment

Date/Time: 7/26/06 06:45 Analyst: CSW
 Location: BOND FALLS Datasonde Serial #: _____

Calibration Information

Datasonde Battery [volts]: _____

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>7.84</u>	<u>7.00</u>
10.00 Std	<u>10.02</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.282</u> Std	<u>0.288</u>	<u>0.282</u>	Before <u>0.0000</u> After <u>0.0000</u>

Barometric Pressure (mm Hg) 715

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>118.3</u>	<u>100.1</u>
mg/L D.O.	<u>10.53</u>	<u>8.39</u>
Temp - °C	<u>20.98</u>	<u>20.98</u>

YSI calibration (See field notes for YSI Model 95 calibration information)

	Before Calibration	After Calibration
% Saturation	<u>98.9%</u>	<u>95.2%</u>
mg/L D.O.	<u>8.92 mg/L</u>	<u>8.59</u>
Temp - °C	<u>20.4°C</u>	<u>20.4°C</u>

Test Program Readings	<u>7:17</u>	<u>7:10</u>	<u>7:18</u>
	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
	% Saturation <u>104.2%</u>	<u>94.0%</u>	<u>93.7%</u>
	mg/L D.O. <u>7.64 mg/L</u>	<u>8.14 mg/L</u>	<u>8.06 mg/L</u>
Temp - °C	<u>22.46°C</u>	<u>22.5°C</u>	<u>22.5°C</u>

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	_____	_____	_____	_____
mg/L D.O.	_____	_____	_____	_____
Temp - °C	_____	_____	_____	_____

DEPLOYED

YSI Reading at Tube

Time	_____
% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes: PRECAL DONE @ ROSELAWN CREEK
OVERCAST, 68°F, CALM

Field Notes for Datasonde Deployment

Date/Time: 08/09/06 09:15 Analyst: CSWLocation: BOND FALLS Datasonde Serial #: 43728

Calibration Information

Datasonde Battery (volts): 11.8V

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>7.11</u>	<u>7.00</u>
10.00 Std	<u>9.93</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.286</u> Std	<u>0.296</u>	<u>0.285</u>	Before <u>0.0008</u> After <u>0.000</u>

Barometric Pressure (mm Hg) 724

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>92.5%</u>	<u>99.7%</u>
mg/L D.O.	<u>8.19 mg/L</u>	<u>8.35 mg/L</u>
Temp °C	<u>21.38°C</u>	<u>21.41°C</u>

YSI calibration (See field notes for YSI Model 95 calibration information)

	Before Calibration	After Calibration
% Saturation	<u>103.1%</u>	<u>95.3%</u>
mg/L D.O.	<u>9.88 mg/L</u>	<u>9.13 mg/L</u>
Temp °C	<u>17.4°C</u>	<u>17.4°C</u>

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>115.7</u>	<u>87.3</u>	
mg/L D.O.	<u>9.56</u>	<u>7.70</u>	
Temp °C	<u>21.43</u>	<u>21.6</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	<u>118.4%</u>	<u>100.0</u>	<u>97.5%</u>	<u>77.8 88.2%</u>
mg/L D.O.	<u>9.65</u>	<u>8.12</u>	<u>8.17</u>	<u>77.8 7.78 mg/L</u>
Temp °C	<u>23.19</u>	<u>23.20</u>	<u>21.63</u>	<u>21.6°C</u>

YSI Reading at Tube

Time	% Saturation	mg/L D.O.	Temp °C
_____	_____	_____	_____

DEPLOYED **check Status**Battery Life @ Start: _____
Battery Life @ End: _____

Notes:

PRE-CAL DONE @ ROSBLAWN CREEK
PT CLOUDY, 70°F, CALM-10MPH

Field Notes for Datasonde Deployment

Date/Time: 8/22/06 14:50 Analyst: CSW
 Location: BOND FALLS Datasonde Serial #: 42483

Calibration Information

Datasonde Battery [volts]: 12.5

pH (s.u.) Before Cal. After Cal.
 7.00 Std 6.93 7.00
 10.00 Std 9.96 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.291 Std 0.290 0.291 Before 0.000 After 0.000

Barometric Pressure (mm Hg) 742

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 102.9% 99.8%
 mg/L D.O. 7.70 mg/L 7.47 mg/L
 Temp - °C 29.16°C 29.09°C

YSI calibration (See field notes for YSI Model _____ calibration information)

Before Calibration After Calibration
 % Saturation 102.9% 99.8%
 mg/L D.O. 7.70 mg/L 7.47 mg/L
 Temp - °C 29.16°C 29.09°C

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>82.4</u>	<u>86.3</u>	
mg/L D.O.	<u>7.01</u>	<u>7.42</u>	
Temp - °C	<u>22.18</u>	<u>22.5</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	---	---	---	---
mg/L D.O.	---	---	---	---
Temp °C	---	---	---	---

DEPLOYED

YSI Reading at Tube

Time _____
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes: _____

Field Notes for Datasonde Deployment

Date/Time: Bond Falls 9/5/06

Analyst: _____

Location: _____

Datasonde Serial #: _____

Calibration Information

Datasonde Battery (volts): _____

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	_____	_____
10.00 Std	_____	_____

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
_____ Std	_____	_____	Before _____ After _____

Barometric Pressure (mm Hg) _____

Dissolved Oxygen	<u>Before Calibration</u>	<u>After Calibration</u>
% Saturation	_____	_____
mg/L D.O.	_____	_____
Temp - °C	_____	_____

YSI calibration (See field notes for YSI Model _____ calibration information)

	<u>Before Calibration</u>	<u>After Calibration</u>
% Saturation	_____	_____
mg/L D.O.	_____	_____
Temp - °C	_____	_____

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	_____	_____	
mg/L D.O.	_____	_____	
Temp - °C	_____	_____	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	_____	_____	_____	_____
mg/L D.O.	_____	_____	_____	_____
Temp - °C	_____	_____	_____	_____

YSI Reading at Tube

Time	_____
% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Check Status

Battery Life @ Start:	_____
Battery Life @ End:	_____

Notes: Log sheet was lost. Sonde # 42175 was calibrated and
deployed on 9/5/06. Test program results are attached.

Calibration was conducted @ Rockaway Creek w/ Rockaway + Bayland datasondes
MW 10/30/06

MiniSonde 4a 42175

Log File Name : Bond Falls Test 09/05/06

Setup Date (MMDDYY) : 090506

Setup Time (HHMMSS) : 132249

Starting Date (MMDDYY) : 090506

Starting Time (HHMMSS) : 132600

Stopping Date (MMDDYY) : 090506

Stopping Time (HHMMSS) : 134100

Interval (HHMMSS) : 000300

Sensor warmup (HHMMSS) : 000200

Circltr warmup (HHMMSS) : 000200

Date	Time	Temp	pH	SpCond	DO%	DO	IBatt	EBatt
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	Volts	Volts
9/5/2006	13:26:00	21.45	8.15	0.1362	95.1	7.98	11.7	0
9/5/2006	13:29:00	21.43	8.16	0.1367	94.9	7.97	11.7	0
9/5/2006	13:32:00	21.46	8.19	0.1363	94.7	7.94	11.6	0
9/5/2006	13:35:00	21.5	8.19	0.1358	94.3	7.9	11.7	0
9/5/2006	13:38:00	21.48	8.2	0.1363	94	7.89	11.6	0
9/5/2006	13:41:00	21.51	8.21	0.136	94	7.88	11.6	0

Recovery finished at 090506 134305

Field Notes for Datasonde Deployment

Date/Time: BOND FALLS Analyst: CSW
 Location: 9/18/06 15:50 Datasonde Serial #: 43730
 Datasonde Battery (volts): 12.1

Calibration Information

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>6.87</u>	<u>7.00</u>
10.00 Std	<u>10.02</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.289</u> Std	<u>0.289</u>	<u>0.289</u>	Before <u>0.0011</u> After <u>0.0000</u>

Barometric Pressure (mm Hg) 716 mmHg

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>102.4%</u>	<u>100.3%</u>
mg/L D.O.	<u>9.02 mg/L</u>	<u>8.64 mg/L</u>
Temp - °C	<u>19.10°C</u>	<u>19.07°C</u>

YSI calibration (See field notes for YSI Model 330i calibration information)

	Before Calibration	After Calibration
% Saturation		
mg/L D.O.		
Temp - °C		

SEE BOND FALLS
D.O. PROFILE
9/18/06

Test Program Readings

	Datasonde	YSI Meter (Must be within 0.5 mg/L D.O.)
% Saturation	<u>98.8%</u>	<u>97.4%</u>
mg/L D.O.	<u>9.02 mg/L</u>	<u>8.67</u>
Temp - °C	<u>16.82°C</u>	<u>16.8°C</u>

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp °C				

DEPLOYED

YSI Reading at Tube

	Time
% Saturation	
mg/L D.O.	
Temp - °C	

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes: CLOUDY 50-55°F, 5-10 MPH
CALIBRATED @ ROSBLAWN CREEK

Field Notes for Datasonde Deployment

Date/Time: 5/30/06 10:40

Analyst: CSW

Location: ROSELAWN CK

Datasonde Serial #: 43727

Calibration Information

Datasonde Battery [volts]: 11.20

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>6.94</u>	<u>7.00</u>
10.00 Std	<u>10.05</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.285</u> Std	<u>0.194</u>	<u>0.285</u>	Before <u>-</u> After <u>-</u>

Barometric Pressure (mm Hg) 725

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>106.7</u>	<u>106.2</u>
mg/L D.O.	<u>8.40</u>	<u>7.80</u>
Temp - °C	<u>25.10</u>	<u>25.40</u>

YSI calibration (See field notes for YSI Model 95 calibration information)

	Before Calibration	After Calibration
% Saturation	<u>77.6</u>	<u>95.0</u>
mg/L D.O.	<u>6.58</u>	<u>8.05</u>
Temp °C	<u>23.7</u>	<u>23.7</u>

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>95.1%</u>	<u>9.47 mg/L</u>	
mg/L D.O.	<u>9.17 mg/L</u>	<u>15.1°C</u>	
Temp - °C	<u>23.7°C</u>		

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	<u>DEPLOYED</u>			
mg/L D.O.				
Temp - °C				

YSI Reading at Tube

Time	
% Saturation	
mg/L D.O.	
Temp - °C	

Check Status

Battery Life @ Start: _____
Battery Life @ End: _____

Notes: OVERCAST, 73°F, 5-10MPH WIND

RL0530.TXT

Field Notes for Datasonde Deployment

Date/Time: 6/13/06 11:30 Analyst: CSW
 Location: ROSELAWN CK Datasonde Serial #: 36465

Calibration Information

Datasonde Battery [volts]: 11.6

pH (s.u.) Before Cal. After Cal.
 7.00 Std 6.85 7.00
 10.00 Std 10.05 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
 0.783 Std 0.788 0.783 Before 0.00 After 0.00

Barometric Pressure (mm Hg) 730.5

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 99.6 100.0
 mg/L D.O. 8.08 8.05
 Temp °C 23.95 23.96

YSI calibration (See field notes for YSI Model WTN 330 i calibration information)

Before Calibration After Calibration
 % Saturation 99.0 101.7
 mg/L D.O. 8.12 8.39
 Temp °C 23.0 22.9

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation ~~96.9~~ 96.9 102.8%
 mg/L D.O. ~~7.83~~ 9.07 9.53 mg/L
 Temp °C ~~16.2~~ 16.62 16.8

Re-calibration required if outside 0.5 mg/l limit

Before Cal. After Cal. Datasonde YSI
 % Saturation
 mg/L D.O.
 Temp °C

DEPLOYED

YSI Reading at Tube

Time
 % Saturation
 mg/L D.O.
 Temp °C

Check Status

Battery Life @ Start: 100%
 Battery Life @ End: 68%

Notes: OVERCAST, 72°F, CALM

TEST = RLT 0613

PRGM = ROSELAWN 06/13/06

Field Notes for Datasonde Deployment

Date/Time: 6/27/06 14 30

Analyst: CSW

Location: ROSBLAWN CREEK

Datasonde Serial #: 43729

Calibration Information

Datasonde Battery [volts]: 10.8

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	7.88	7.80
10.00 Std	9.90	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.287 Std	0.295	0.286	Before: 0034 After: 0000
	738		

Barometric Pressure (mm Hg) _____

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	105.4	99.6
mg/L D.O.	8.08	7.58
Temp °C	27.67	28.16

YSI calibration (See field notes for YSI Model information)

SS
SBB VICTORIA 6-27-00

	Before Calibration	After Calibration
% Saturation	105.4	99.6
mg/L D.O.	8.08	7.58
Temp - °C	27.67	28.16

Test Program Readings

	Datasonde	YSI Meter (Must be within 0.5 mg/L D.O.)
% Saturation	76.2	77.3
mg/L D.O.	6.50	6.80
Temp - °C	21.74	21.8

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

DEPLOYED

YSI Reading at Tube

	Time
% Saturation	
mg/L D.O.	
Temp - °C	

Check Status

Battery Life @ Start: _____
Battery Life @ End: _____

Notes: _____

Field Notes for Datasonde Deployment

Date/Time:

7/11/06 13:10

Analyst:

CSW

Location:

ROSELAWN CREEK

Datasonde Serial #:

42628

Calibration Information

Datasonde Battery [volts]:

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	7.00	7.00
10.00 Std	10.03	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.287 Std	0.286	0.287	Before 0.0000 After 0.0000

Barometric Pressure (mm Hg)

739

Dissolved Oxygen

Before Calibration

After Calibration

% Saturation

mg/L D.O.

Temp - °C

YSI calibration (See field notes for YSI Model

95

calibration

information)

SBE VICTORIA

7/11/06

	Before Calibration	After Calibration
% Saturation	79.5	100.0
mg/L D.O.	7.767	7.73
Temp - °C	26.50	26.56

Test Program Readings

	Datasonde	YSI Meter (Must be within 0.5 mg/L D.O.)
% Saturation	74.6	76.9
mg/L D.O.	6.25	6.62
Temp °C	22.70	22.8

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

DEPLOYED

YSI Reading at Tube

	Time
% Saturation	
mg/L D.O.	
Temp - °C	

Check Status

Battery Life @ Start:
Battery Life @ End:

Notes:

PT CLOUDY 80°F, CALM - SMPH
D.O. CALIBRATED W/ TAP H₂O

13:22 →
13:37

Field Notes for Datasonde Deployment

Date/Time: 7/25/06 13:15
Location: ROSELAWN CREEK

Analyst: CSW
Datasonde Serial #: 42771

Calibration Information

Datasonde Battery [volts]: 10.6

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	6.88	7.00
10.00 Std	9.98	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.282 Std	0.290	0.282	Before 0.0000 After

Barometric Pressure (mm Hg)

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	99.6	100.0
mg/L D.O.	6.53	6.56
Temp °C	36.15	36.17

YSI calibration (See field notes for YSI Model information)

calibration

	Before Calibration	After Calibration
% Saturation		
mg/L D.O.		
Temp - °C		

SEE VICTORIA
7/25/06

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	75.6	81.1	
mg/L D.O.	6.12	6.80	
Temp °C	24.09	24.2	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	92.8	100.3	81.0	81.1
mg/L D.O.	6.69	7.23	6.55	6.80
Temp °C	30.65	30.65	24.22	24.2

YSI Reading at Tube

	Time	Check Status
% Saturation		
mg/L D.O.		
Temp °C		

Battery Life @ Start:
Battery Life @ End:

Notes: CLEAR/PTCLOUDY, 85°F, CALM
CALIBRATED D.O. w/ TAP H₂O - RECAL w/ O.I. H₂O

Field Notes for Datasonde Deployment

Date/Time: 8/8/06 13:55 Analyst: CSW
 Location: ROSELAWN CREEK Datasonde Serial #: 42169
 Calibration Information Datasonde Battery [volts]: 11.1

pH (s.u.) Before Cal. After Cal.
 7.00 Std 6.91 7.00
 10.00 Std 9.90 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
 0.286 Std 0.287 0.286 Before 0.0000 After 0.0000

Barometric Pressure (mm Hg) 743

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 118.1% 100.0%
 mg/L D.O. 7.85 mg/L 6.91 mg/L
 Temp - °C 33.31°C 33.38°C

YSI calibration (See field notes for YSI Model 95 calibration information)

Before Calibration After Calibration
 % Saturation
 mg/L D.O.
 Temp - °C

SEE VICTORIA
 8/8/06

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation 74.6 86.6
 mg/L D.O. 6.62 7.40
 Temp °C 23.45 23.3

Re-calibration required if outside 0.5 mg/l limit

Before Cal. After Cal. Datasonde YSI
 % Saturation 91.7% 100.2% 81.4 83.3
 mg/L D.O. 6.58 mg/L 7.18 mg/L 6.82 7.15
 Temp - °C 31.76°C 31.78°C 23.24 23.3

YSI Reading at Tube

Time
 % Saturation
 mg/L D.O.
 Temp - °C

DEPLOYED

Check Status

Battery Life @ Start:
 Battery Life @ End:

Notes: PRE-CAL DONB @ VICTORIA
 CLEAR, 78°F, CALM-5MPH

Field Notes for Datasonde Deployment

Date/Time: 8/22/06 14:25

Analyst: CSW

Location: ROSELAWN CRBBK

Datasonde Serial #: 42484

Calibration Information

Datasonde Battery (volts): 11.9

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	6.77	7.00
10.00 Std	9.96	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.291 Std	0.284	0.291	Before 0.0000 After 0.0000

Barometric Pressure (mm Hg) 742

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	100.5%	100.1%
mg/L D.O.	7.45 mg/L	7.56 mg/L
Temp - °C	28.55°C	28.59°C

YSI calibration (See field notes for YSI Model information)

95 calibration

	Before Calibration	After Calibration
% Saturation		
mg/L D.O.		
Temp - °C		

SBE VICTORIA
8/22/06

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	84.5	85.1	
mg/L D.O.	7.17	7.37	
Temp °C	22.3	22.5	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp °C				

DEPLOYED

YSI Reading at Tube

	Time
% Saturation	
mg/L D.O.	
Temp °C	

Check Status

Battery Life @ Start: _____
Battery Life @ End: _____

Notes: CLEAR, 70°F, CALM-10 mph. PRE-CAL DONE @
VICTORIA TAIL. pH IS SLOW. HAD NEW pH PROBE

Field Notes for Datasonde Deployment

Date/Time: 4/5/06 12:55

Analyst: CSW

Location: ROSELAWN CREEK

Datasonde Serial #: 42171

Calibration Information

Datasonde Battery (volts): 11.7

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	6.86	7.00
10.00 Std	9.60	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.290 Std	0.261	0.291	Before 0.0000 After 0.0000

Barometric Pressure (mm Hg) 723

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	105.8%	11.8%
mg/L D.O.	8.08 mg/L	7.44 mg/L
Temp °C	27.93°C	27.91°C

YSI calibration (See field notes for YSI Model information)

calibration

	Before Calibration	After Calibration
% Saturation	43%	-
mg/L D.O.	7.89	-
Temp - °C	-	-

SEE VICTORIA
9/5/06

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	93.7%	94.9%	
mg/L D.O.	7.89 mg/L	8.31 mg/L	
Temp - °C	21.31°C	21.5°C	

Re-calibration required if outside 0.5 mg/L limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	-	-	-	-
mg/L D.O.	-	-	-	-
Temp - °C	-	-	-	-

YSI Reading at Tube

	Time
% Saturation	-
mg/L D.O.	-
Temp °C	-

Check Status

Battery Life @ Start:	-
Battery Life @ End:	-

Notes:

CLEAR, 75°F, CALM-5MPH
CALIBRATION DONE @ ROSELAWN CREEK

Field Notes for Datasonde Deployment

Date/Time: 9/18/06 15:35
Location: ROSELAWN CREEK

Analyst: CSW
Datasonde Serial #: 4272

Calibration Information

Datasonde Battery (volts): 12.1

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	7.03	7.00
10.00 Std	10.00	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.289 Std	0.293	0.284	Before 0.0000 After 0.0000

Barometric Pressure (mm Hg) 716 mmHg

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	97.5%	100.1%
mg/L D.O.	8.62 mg/L	8.51 mg/L
Temp °C	20.85°C	20.83°C

YSI calibration (See field notes for YSI Model 330 i calibration information)

	Before Calibration	After Calibration
% Saturation	---	---
mg/L D.O.	---	---
Temp °C	---	---

SEE BOND FALLS
D.O. PROFILE
9/18/06

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	92.9%	98.1%	
mg/L D.O.	8.49 mg/L	8.91 mg/L	
Temp - °C	16.83°C	16.9°C	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp °C				

DEPLOYED

YSI Reading at Tube

	Time
% Saturation	
mg/L D.O.	
Temp °C	

Check Status

Battery Life @ Start:
Battery Life @ End:

Notes:

CLOUDY, 50-55°F, 5-10 MPH
CALIBRATED @ ROSELAWN CREEK

Field Notes for Datasonde Deployment

Date/Time: 5/30/06 14:05 Analyst: UWM

Location: Bergland Dam Datasonde Serial #: 43731

Calibration Information

Datasonde Battery (volts): 11.1

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>8.10</u>	<u>7.01</u>
10.00 Std	<u>9.93</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.285</u> Std	<u>0.241</u>	<u>0.285</u>	Before _____ After _____

Barometric Pressure (mm Hg) 723

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>98.9</u>	<u>100.0</u>
mg/L D.O.	<u>7.39</u>	<u>7.41</u>
Temp - °C	<u>28.14</u>	<u>28.18</u>

YSI calibration (See field notes for YSI Model 95 calibration information)

	Before Calibration	After Calibration
% Saturation	_____	_____
mg/L D.O.	_____	_____
Temp - °C	_____	_____

See Rosekum Cr. Cal.

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>97.3%</u>	<u>90.6</u>	
mg/L D.O.	<u>9.09 mg/L</u>	<u>9.08</u>	
Temp - °C	<u>16.65</u>	<u>16.1</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	_____	_____	_____	_____
mg/L D.O.	_____	_____	_____	_____
Temp - °C	_____	_____	_____	_____

DEPLOYED

YSI Reading at Tube

Time	_____
% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Check Status

Battery Life @ Start: _____
Battery Life @ End: _____

Notes:

BERG TBST.TXT

PT CLOUDY 75°F 5-15 MPH

Field Notes for Datasonde Deployment

Date/Time: 06/13/06 12:45 Analyst: CSW
 Location: BELGLAND Datasonde Serial #: 43703
 Calibration Information Datasonde Battery [volts]: 12.1

pH (s.u.) Before Cal. After Cal.
 7.00 Std 7.02 7.01
 10.00 Std 9.97 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.283 Std 0.283 0.283 Before 0.00 After 0.00

Barometric Pressure (mm Hg) 730.5

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 97.5 100.0
 mg/L D.O. 8.01 8.06
 Temp - °C 24.10 24.14

YSI calibration (See field notes for YSI Model WTW 330i calibration information)

Before Calibration After Calibration
 % Saturation SET
 mg/L D.O. ROSEBLAWN
 Temp - °C

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>106.4</u>	<u>102.8</u>	
mg/L D.O.	<u>9.32</u>	<u>9.48</u>	
Temp - °C	<u>16.97</u>	<u>16.9</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

YSI Reading at Tube

Time
 % Saturation
 mg/L D.O.
 Temp - °C

Check Status

Battery Life @ Start: 100%
 Battery Life @ End: 28%

Notes:

Field Notes for Datasonde Deployment

Date/Time: 6/27/06 13:35

Analyst: CSW

Location: BRIGHTLAND

Datasonde Serial #: 42482

Calibration Information

Datasonde Battery (volts): 10.8

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	7.21	7.00
10.00 Std	9.99	10.01

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.287 Std	0.282	0.287	Before 0.000 After 0.000

Barometric Pressure (mm Hg): 738

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	95.3%	100.1%
mg/L D.O.	7.77 mg/L	8.04 mg/L
Temp - °C	24.44°C	24.54°C

YSI calibration (See field notes for YSI Model 95 calibration information)

	Before Calibration	After Calibration
% Saturation	105.5%	102.3%
mg/L D.O.	8.65 mg/L	8.60 mg/L
Temp - °C	24.02°C	24.12°C

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	81.6%	85.6%	77.2%
mg/L D.O.	6.92 mg/L	7.47 mg/L	6.79 mg/L
Temp - °C	21.72°C	21.5°C	21.6°C

Re-calibration required if outside 0.5 mg/L limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	DEPLOYED			
mg/L D.O.	DEPLOYED			
Temp - °C	DEPLOYED			

YSI Reading at Tube

	Time
% Saturation	
mg/L D.O.	
Temp - °C	

Check Status

Battery Life @ Start:	
Battery Life @ End:	

Notes: PT CLOUDY, 70°F, CALM - 5 MPH

Field Notes for Datasonde Deployment

Date/Time: 7/11/06 12:50

Analyst: CSW

Location: BERGLAND

Datasonde Serial #: 42170

Calibration Information

Datasonde Battery (volts): 11.5

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	7.13	7.00
10.00 Std	4.91	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.287 Std	0.289	287	Before 0.0000 After 0.0000

Barometric Pressure (mm Hg) 739

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	99.0	100.1
mg/L D.O.	7.46	7.46
Temp - °C	28.78	28.92

YSI calibration (See field notes for YSI Model 95 - SBE VICTORIA DAM calibration 7/11/06 information)

	Before Calibration	After Calibration
% Saturation		
mg/L D.O.		
Temp - °C		

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	77.4	78.6	77%
mg/L D.O.	6.62	6.75	6.64
Temp - °C	22.83	22.9	22.8

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

DEPLOYED

YSI Reading at Tube

	Time
% Saturation	
mg/L D.O.	
Temp - °C	

Check Status

Battery Life @ Start: 93%

Battery Life @ End: 66%

Notes: PT CLOUDY, 80°F CALM - 5 MPH

CALIBRATED @ VICTORIA

Field Notes for Datasonde Deployment

Date/Time: 7/25/06 13:05 Analyst: CSW
 Location: BERGLAND DAM Datasonde Serial #: 42483

Calibration Information

Datasonde Battery (volts): 11.9

pH (s.u.) Before Cal. After Cal.
 7.00 Std 6.95 7.00
 10.00 Std 9.87 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
 0.282 Std 0.293 0.282 Before 0.0007 After 0.0000

Barometric Pressure (mm Hg) 733

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 100.5 100.5
 mg/L D.O. 6.85 6.82
 Temp °C 33.85 33.98

YSI calibration (See field notes for YSI Model information) SBB VICTORIA calibration 7/25/06

Before Calibration After Calibration
 % Saturation 100.5 100.5
 mg/L D.O. 6.85 6.82
 Temp - °C 33.85 33.98

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation 76.1% 81.4% 80.3%
 mg/L D.O. 6.16 mg/L 6.58 mg/L 6.38 mg/L 6.82
 Temp °C 24.15°C 24.2°C

Re-calibration required if outside 0.5 mg/l limit

Before Cal. After Cal. Datasonde YSI
 % Saturation 76.1% 81.4%
 mg/L D.O. 6.16 6.58
 Temp - °C 24.15 24.2
 DEPLOYED

YSI Reading at Tube

Time
 % Saturation
 mg/L D.O.
 Temp °C

Check Status

Battery Life @ Start:
 Battery Life @ End:

Notes: P. OUDY, 85°F L/HLM
 UPDATED SOFTWARE IN PROBE
 CAL D.O. W/TAP H₂O - ~~PROBE W/ D.E. H₂O~~

Field Notes for Datasonde Deployment

Date/Time: 8/8/06 13:40 Analyst: CSW
 Location: BERGLAND Datasonde Serial #: 42175
 Calibration Information Datasonde Battery [volts]: 10.7

pH (s.u.) Before Cal. After Cal.
 7.00 Std 7.06 6.99
 10.00 Std 9.75 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
 0.286 Std 0.285 0.286 Before 0.0000 After 0.0000

Barometric Pressure (mm Hg) 745

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 102.4 100.1
 mg/L D.O. 7.98 7.43
 Temp °C 29.80 29.87

YSI calibration (See field notes for YSI Model information)

Before Calibration After Calibration
 % Saturation
 mg/L D.O.
 Temp - °C

SEE VICTORIA
 8/8/06

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation 78.9% 86.2%
 mg/L D.O. 6.58 7.36
 Temp °C 23.24 23.3%

Re-calibration required if outside 0.5 mg/l limit

Before Cal. After Cal. Datasonde YSI
 % Saturation 90.7% 100.2% 78.9% 86.3%
 mg/L D.O. 6.34 7.00 6.58 7.15
 Temp - °C 33.24 33.24 23.19 23.3

YSI Reading at Tube

Time
 % Saturation
 mg/L D.O.
 Temp - °C

DEPLOYED Check Status
 Battery Life @ Start:
 Battery Life @ End:

Notes: PRE-CAL DONE @ VICTORIA
 CLEAR, 78°F, CALM-SMPH

Field Notes for Datasonde Deployment

Date/Time: 8/22/06 14:10

Analyst: CSW

Location: BERGLAND

Datasonde Serial #: 42173

Calibration Information

Datasonde Battery (volts): 11.6

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	6.96	7.00
10.00 Std	9.96	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
6.291	Std 0.284	0.291	Before 0.000 After 0.000

Barometric Pressure (mm Hg) 742

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	95.6%	99.9
mg/L D.O.	6.99	7.30
Temp °C	30.40	30.33

YSI calibration (See field notes for YSI Model information)

95

calibration

	Before Calibration	After Calibration
% Saturation	_____	_____
mg/L D.O.	_____	_____
Temp - °C	_____	_____

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	77.9	89.5%	
mg/L D.O.	6.67	7.75 mg/L	
Temp - °C	22.86	22.5°C	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	94.6	100.2	89.5 76.4	86.3
mg/L D.O.	7.8	7.61	6.49	7.54
Temp °C	28.27	28.23	22.25	22.5

YSI Reading at Tube

Time	_____
% Saturation	_____
mg/L D.O.	_____
Temp °C	_____

Check Status

Battery Life @ Start: _____

Battery Life @ End: _____

Notes:

PT CLOUDY, 10°F, 5-10 mph. PRE-CAL DONE @ VICTORIA

DO NOT DEPLOY

D.O. IS OFF BY > 1.0 mg/L

Field Notes for Datasonde Deployment

Date/Time:

8/22/06 15:45

Analyst:

CSW

Location:

BERGLAND

Datasonde Serial #:

42628

Calibration Information

Datasonde Battery [volts]:

10.8

pH (s.u.)

Before Cal.

After Cal.

7.00 Std

9.78

7.00

10.00 Std

9.78

10.00

Conductivity (mS/cm) Before Cal.

After Cal.

Zero Conductivity Calibration

0.291 Std

0.259

0.291

Before 0.0000

After 0.0000

Barometric Pressure (mm Hg)

741

Dissolved Oxygen

Before Calibration

After Calibration

% Saturation

106.5

49.9

mg/L D.O.

7.97

7.47

Temp - °C

29.63

29.00

YSI calibration (See field notes for YSI Model information)

95

calibration

% Saturation

Before Calibration

After Calibration

mg/L D.O.

Temp - °C

SBB VICTORIA
8/22/06

Test Program Readings

% Saturation

Datasonde

YSI Meter

(Must be within 0.5 mg/L D.O.)

mg/L D.O.

Temp - °C

7.03 83.09
7.03 mg/L
22.2965.2
7.38
22.5

Re-calibration required if outside 0.5 mg/l limit

% Saturation

Before Cal.

After Cal.

Datasonde

YSI

mg/L D.O.

Temp - °C

Deployed

YSI Reading at Tube

Time

% Saturation

mg/L D.O.

Temp - °C

Check Status

Battery Life @ Start:

Battery Life @ End:

Notes:

COPR 75°F, 5-10 MP1

PRB CAL DONE @ VICTORIA

TOOK 3 TRYS w/ 3 SONDOS TO GET GOOD

TBST PRGM - BGT30822.TXT

Field Notes for Datasonde Deployment

Date/Time:

9/5/06 13:25

Analyst:

CSW

Location:

BERGLAND

Datasonde Serial #:

43728

Calibration Information

Datasonde Battery [volts]:

11.3

pH (s.u.)	Before Cal	After Cal.
7.00 Std	6.96	7.00
10.00 Std	10.00	10.00

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
0.291 Std	6.268	6.291	Before 0.0000 After 0.0000

1 N A/R

Barometric Pressure (mm Hg)

722

Dissolved Oxygen

Before Calibration

After Calibration

% Saturation

97.8%

94.9%

mg/L D.O.

7.21 mg/L

7.07 mg/L

Temp °C

30.82°C

30.78°C

YSI calibration (See field notes for YSI Model

95

calibration

SEE VICTORIA
9/5/06

% Saturation

Before Calibration

After Calibration

mg/L D.O.

Temp °C

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	99.2%	95.4%	
mg/L D.O.	8.30 mg/L	8.41 mg/L	
Temp - °C	21.52°C	21.6°C	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

DEPLOYED

YSI Reading at Tube

Time
% Saturation
mg/L D.O.
Temp - °C

Check Status

Battery Life @ Start:
Battery Life @ End:

Notes:

CLBAR, 75°F, CALM-5 MPH
CALIBRATION DONE @ ROSELAWN CREEK

Field Notes for Datasonde Deployment

Date/Time:

9/18/06 16:00

Analyst:

CSW

Location:

BERGLAND

Datasonde Serial #:

42167

Calibration Information

Datasonde Battery [volts]:

11.4

pH (s.u.)

Before Cal.

After Cal.

7.00 Std

7.10

7.00

10.00 Std

9.98

10.01

Conductivity (mS/cm)

Before Cal.

After Cal.

Zero Conductivity Calibration

0.289

Std

0.295

0.290

Before 0.000

After 0.000

Barometric Pressure (mm Hg)

716 mm Hg

Dissolved Oxygen

Before Calibration

After Calibration

% Saturation

128.0%

99.9%

mg/L D.O.

11.25 mg/L

8.63 mg/L

Temp - °C

19.63°C

19.60°C

YSI calibration

(See field notes for YSI Model

3301

calibration

information)

Before Calibration

After Calibration

% Saturation

mg/L D.O.

Temp °C

SEE BOND FALLS
D.O. PROFILE
9/18/06

Test Program Readings

% Saturation

mg/L D.O.

Temp - °C

Datasonde

92.6%

8.45 mg/L

16.86°C

YSI Meter

97.1%

8.87 mg/L

16.7°C

(Must be within 0.5 mg/L D.O.)

Re-calibration required if outside 0.5 mg/L limit

Before Cal.

After Cal.

Datasonde

YSI

% Saturation

mg/L D.O.

Temp - °C

DEPLOYED

YSI Reading at Tube

Time

% Saturation

mg/L D.O.

Temp - °C

Check Status

Battery Life @ Start:

Battery Life @ End:

Notes:

CLOUDY, 50-55°F, 5-10 MPH

Field Notes for Datasonde Deployment

Date/Time: 5/30/06 12:00 Analyst: CSW

Location: VICTORIA Datasonde Serial #: 42482

Calibration Information

Datasonde Battery (volts): 11.5

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>6.86</u>	<u>7.00</u>
10.00 Std	<u>10.64</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.285</u> Std	<u>0.284</u>	<u>0.285</u>	Before <u>0.00</u> After <u>0.00</u>

Barometric Pressure (mm Hg) 723.9

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>101.4</u>	<u>78.100</u>
mg/L D.O.	<u>7.84</u>	<u>7.75</u>
Temp - °C	<u>25.34</u>	<u>25.34</u>

YSI calibration (See field notes for YSI Model 95 calibration information)

	Before Calibration	After Calibration
% Saturation	<u>77.6</u>	<u>95.0</u>
mg/L D.O.	<u>6.58</u>	<u>8.65</u>
Temp - °C	<u>23.7</u>	<u>23.7</u>

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>96.3</u>	<u>91.4</u>	
mg/L D.O.	<u>9.23</u>	<u>9.22</u>	
Temp - °C	<u>14.89</u>	<u>15.0</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	<u>DEP</u>	<u>04</u>	<u>BD</u>	
mg/L D.O.				
Temp - °C				

YSI Reading at Tube

Time	_____
% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Check Status

Battery Life @ Start: _____
Battery Life @ End: _____

Notes: SBB ROSBLAWN

Field Notes for Datasonde Deployment

Date/Time: 6/13/06 12:05 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: ~~3017~~ 43730

Calibration Information

Datasonde Battery (volts): 12.3

pH (s.u.) Before Cal. After Cal.
 7.00 Std 6.86 7.02
 10.00 Std 10.06 10.07

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.283 Std 0.285 0.283 Before 0.00 After 0.00

Barometric Pressure (mm Hg) _____

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 100.8 99.8
 mg/L D.O. 8.28 8.02
 Temp - °C 24.20 24.39

YSI calibration (See field notes for YSI Model WTW 330 calibration information)

Before Calibration After Calibration
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

SEE ROSELAWN

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation 98.9 102.4%
 mg/L D.O. 9.21 9.48 mg/L
 Temp - °C 16.86 16.9°C

Re-calibration required if outside 0.5 mg/L limit

Before Cal. After Cal. Datasonde YSI
 % Saturation _____
 mg/L D.O. DEPLOYED _____
 Temp - °C _____

YSI Reading at Tube

Time _____
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Check Status

Battery Life @ Start: 100%
 Battery Life @ End: 32%

Notes:

OVERCAST, 70°F, CALM

TEST = VICTOG13

PRGM = ~~WATER~~ 4 VICTORIA 06/14/06

Field Notes for Datasonde Deployment

Date/Time: 6/27/06 13:15 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: 42627
 Calibration Information Datasonde Battery (volts): 12.6

pH (s.u.) Before Cal. After Cal.
 7.00 Std 7.27 7.00
 10.00 Std 9.79 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.287 Std 0.316 0.287 Before 0.00 After 0.00

Barometric Pressure (mm Hg) 738

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 116.3% 99.3%
 mg/L D.O. 9.04 mg/L 8.04 mg/L
 Temp - °C 24.40°C 24.56°C

YSI calibration (See field notes for YSI Model 859555 calibration information)

Before Calibration After Calibration
 % Saturation 115.5% 97.0%
 mg/L D.O. 9.30 mg/L 7.10 mg/L
 Temp °C 26.5°C 26.5°C

PBCOPY

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>80.4</u>	<u>87.2%</u>	<u>85.0%</u>
mg/L D.O.	<u>6.93 mg/L</u>	<u>6.79 mg/L</u>	<u>7.47 mg/L</u>
Temp °C	<u>21.58</u>	<u>21.6°C</u>	<u>21.5°C</u>

Re-calibration required if outside 0.5 mg/L limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

DEPLOYED

YSI Reading at Tube

Time _____
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes: CLOUDY, 70°F, CALM
TBST = VICT0627

TBST START: 13:35
STOP: 13:50

Field Notes for Datasonde Deployment

Date/Time: 7/11/06 12:30 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: 43730
 Calibration Information Datasonde Battery (volts): 12.5

pH (s.u.) Before Cal. After Cal.
 7.00 Std 7.05 7.00
 10.00 Std 9.91 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.287 Std 0.288 Before 0.000 After 0.000

Barometric Pressure (mm Hg) 739 mm Hg

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 104.3 100.2
 mg/L D.O. 7.65 7.23
 Temp °C 30.95 31.24

YSI calibration (See field notes for YSI Model 95 calibration information) 700FT 739 mm Hg

Before Calibration After Calibration
 % Saturation 97.3 97.3
 mg/L D.O. 7.47 7.46
 Temp °C 29.1 29.2

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation 79.3% 78.6%
 mg/L D.O. 6.5 mg/L 6.75 mg/L
 Temp - °C 22.8°C 22.9

Re-calibration required if outside 0.5 mg/L limit

Before Cal. After Cal. Datasonde YSI
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

YSI Reading at Tube

Time _____
 % Saturation _____
 mg/L D.O. _____
 Temp °C _____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes: PT CLOUDY, 80°F, CALM-5 MPH
D.O. BELOW 7.00 mg/L @ DEPLOYMENT SITE - D.O. @
D.O. CALIBRATED w/ TAP H₂O

Field Notes for Datasonde Deployment

Date/Time: 7/25/06 14:00 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: 43727
 Calibration Information Datasonde Battery [volts]: 11.3

pH (s.u.) Before Cal. After Cal.
 7.00 Std 7.03 7.00
 10.00 Std 9.88 10.00

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.282 Std 0.285 0.282 Before 0.007 After 0.000

Barometric Pressure (mm Hg) _____

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 99.6 106.0
 mg/L D.O. 6.73 6.76
 Temp - °C 34.31 34.33

YSI calibration (See field notes for YSI Model information)

~~Before Calibration After Calibration~~
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

95 calibration
SEE VICTORIA
7/25/06 12:35

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation 79.8% 81.3%
 mg/L D.O. 6.45 mg/L 6.81
 Temp - °C 24.13 24.2

Re-calibration required if outside 0.5 mg/l limit

Before Cal. After Cal. Datasonde YSI
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____
DEPLOYED

YSI Reading at Tube

Time _____
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes:

1ST PRE-CAL FAILED ON #43711
PT CLOUDY, 90°F, CALM
CALIBRATED D.O. w/ D.I. H₂O
D.O. @ 6.80 mg/L @ DATASONDE
50m DOWNSTREAM = 6.73
100m DOWNSTREAM = 7.48
200m DOWNSTREAM = 7.24

Field Notes for Datasonde Deployment

Date/Time: 8/08/06 13:20 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: ~~43703~~ 43703
 Calibration Information Datasonde Battery (volts): ~~10.8~~ 12.1

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>6.99</u>	<u>7.00</u>
10.00 Std	<u>9.96</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.286</u> Std	<u>0.288</u>	<u>0.286</u>	Before <u>0.0000</u> After <u>0.0000</u>

Barometric Pressure (mm Hg) 745

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>100.8%</u>	<u>100.8%</u>
mg/L D.O.	<u>7.56 mg/L</u>	<u>7.51 mg/L</u>
Temp - °C	<u>29.58°C</u>	<u>29.66°C</u>

YSI calibration (See field notes for YSI Model 95 calibration information)

	Before Calibration	After Calibration
% Saturation	<u>92.1%</u>	<u>95.8%</u>
mg/L D.O.	<u>6.71 mg/L</u>	<u>6.97 mg/L</u>
Temp - °C	<u>32.2°C</u>	<u>32.2°C</u>

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>84.7%</u>	<u>86.5%</u>	
mg/L D.O.	<u>7.41 mg/L</u>	<u>7.37 mg/L</u>	
Temp - °C	<u>23.34°C</u>	<u>23.4°C</u>	

13:40-13:55

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

DEPLOYED

YSI Reading at Tube

Time	_____
% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Check Status

Battery Life @ Start:	_____
Battery Life @ End:	_____

Notes: PRE-CAL DONE @ VICTORIA. CLEAR 78°F, CALM-5MPH

Field Notes for Datasonde Deployment

Date/Time: 8/22/06 13:45 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: 42486

Calibration Information

Datasonde Battery (volts): 12.0

pH (s.u.) Before Cal. After Cal.
 7.00 Std 6.92 7.00
 10.00 Std 10.01

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.291 Std 0.290 0.291 Before 0.0000 After 0.0000

Barometric Pressure (mm Hg) 743 IN AIR

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 100.4 100.0
 mg/L D.O. 7.49 7.43
 Temp - °C 29.63°C 29.66

YSI calibration (See field notes for YSI Model 95 calibration information)

Before Calibration After Calibration
 % Saturation 92.8% 97.3%
 mg/L D.O. 7.25 mg/L 7.61 mg/L
 Temp - °C 28.1°C 28.1°C

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>85.1%</u>	<u>86.7%</u>	
mg/L D.O.	<u>7.23 mg/L</u>	<u>7.51 mg/L</u>	
Temp - °C	<u>22.27°C</u>	<u>22.5°C</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation	—	<u>DEPLOYED</u>	—	—
mg/L D.O.	—		—	—
Temp - °C	—		—	—

YSI Reading at Tube

Time _____
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes: PT CLOUDY, 70°F, 5-10 mph, DISCHARGE @ DATASONDE HIGHER
THAN NORMAL - MAY BE DUE TO DAM REPAIRS

Field Notes for Datasonde Deployment

Date/Time: 9/5/06 12:40 Analyst: CSW
 Location: VICTORIA DAM Datasonde Serial #: 43729

Calibration Information

Datasonde Battery [volts]: 11.3

pH (s.u.)	Before Cal.	After Cal.
7.00 Std	<u>6.90</u>	<u>7.00</u>
10.00 Std	<u>10.04</u>	<u>10.00</u>

Conductivity (mS/cm)	Before Cal.	After Cal.	Zero Conductivity Calibration
<u>0.290</u> Std	<u>0.266</u>	<u>0.291</u>	<u>IN AIR</u>
			Before <u>0.000</u> After

Barometric Pressure (mm Hg): 724

Dissolved Oxygen	Before Calibration	After Calibration
% Saturation	<u>100.4%</u>	<u>99.5%</u>
mg/L D.O.	<u>7.45 mg/L</u>	<u>7.11 mg/L</u>
Temp °C	<u>30.40°C</u>	<u>30.38°C</u>

YSI calibration (See field notes for YSI Model 95 calibration information) @ 1300 FT

	Before Calibration	After Calibration
% Saturation	<u>89.9%</u>	<u>95.2%</u>
mg/L D.O.	<u>6.85 mg/L</u>	<u>7.23 mg/L</u>
Temp - °C	<u>29.4°C</u>	<u>29.7°C</u>

Test Program Readings

	Datasonde	YSI Meter	(Must be within 0.5 mg/L D.O.)
% Saturation	<u>96.6%</u>	<u>95.8</u>	
mg/L D.O.	<u>8.15 mg/L</u>	<u>8.44</u>	
Temp - °C	<u>21.27°C</u>	<u>21.7</u>	

Re-calibration required if outside 0.5 mg/l limit

	Before Cal.	After Cal.	Datasonde	YSI
% Saturation				
mg/L D.O.				
Temp - °C				

DEPLOYED

YSI Reading at Tube

Time	_____
% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes:

CLEAR, 75°F, CALM-5 MPH
CALIBRATION DONE @ ROSBLAWN CREEK

Field Notes for Datasonde Deployment

Date/Time: 01/30/2006 3:40 Analyst: COG
 Location: VICTORIA DAM Datasonde Serial #: 43727

Calibration Information

Datasonde Battery (volts): 11.9

pH (s.u.) Before Cal. After Cal.
 7.00 Std 7.26 6.99
 10.00 Std 10.02 10.02

Conductivity (mS/cm) Before Cal. After Cal. Zero Conductivity Calibration
0.284 Std 0.291 0.284 Before 0.0059 After 0.0000

Barometric Pressure (mm Hg) 736 mm Hg

Dissolved Oxygen Before Calibration After Calibration
 % Saturation 103.3 99.0
 mg/L D.O. 11.00 10.81
 Temp °C 9.68 9.68

YSI calibration (See field notes for YSI Model WTW 330i calibration information)

Before Calibration After Calibration
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

SEE VICTORIA D.O. PROFILE 9/19/06

Test Program Readings

Datasonde YSI Meter (Must be within 0.5 mg/L D.O.)
 % Saturation 93.2 90.2%
 mg/L D.O. 8.76 8.42 mg/L
 Temp - °C 10.66 16.70

Re-calibration required if outside 0.5 mg/L limit

Before Cal. After Cal. Datasonde YSI
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

DEPLOYED

YSI Reading at Tube

Time _____
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Check Status

Battery Life @ Start: _____
 Battery Life @ End: _____

Notes:

LT RAIN, 50°F, 5 mph

POST-DEPLOYMENT CALIBRATION LOG SHEETS

Field Notes for Datasonde Post CalibrationDate/Time: 6/13/06 Analyst: CSWLocation: BOND FALLS Datasonde Serial #: 42175Ending Datasonde Battery [volts]: **Calibration Information**

pH (s.u.)	Reads
7.00 Std	<u> </u>
10.00 Std	<u> </u>

Conductivity (mS/cm) Std Reads Zero Reads Barometric Pressure (mm Hg) 730.5

Dissolved Oxygen	before cal	after cal
% Saturation	<u> </u>	<u> </u>
mg/L D.O.	<u> </u>	<u> </u>
Temp - °C	<u> </u>	<u> </u>

YSI calibration (See field notes for for calibration info.)

% Saturation	<u> </u>
mg/L D.O.	<u> </u>
Temp - °C	<u> </u>

Notes:

DATASONDE DEPLOYED W/ SAMPLE CUP ON
INSTEAD OF WEIGHT!

Field Notes for Datasonde Post Calibration

Date/Time: 6/28/06 08:30 Analyst: CSW

Location: BOND Datasonde Serial #: 42628

Ending Datasonde Battery [volts]: 10.8

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.51</u>
10.00 Std	<u>10.55</u>

Conductivity (mS/cm) 0.287 Std 0.278 Reads 0.000 Zero Reads

Barometric Pressure (mm Hg) 725

Dissolved Oxygen	before cal	after cal
% Saturation	83.5% <u>87.4</u>	<u>106.1</u>
mg/L D.O.	7.40 <u>8.17</u>	<u>9.27</u>
Temp - °C	16.00 <u>16.73</u>	<u>16.77</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Notes:

FOG, 60°F, CALM-5 MPH

pH SHOWS ~.5 UNITS HIGH

DATA= BOND0627.TXT

D.O. LOOKS GOOD

pH IN LOW-8'S TO LOW-9'S

Field Notes for Datasonde Post Calibration

Date/Time: 1/12/06 08:15 Analyst: CSW
 Location: BOND FALLS Datasonde Serial #: 4271
 Ending Datasonde Battery [volts]: 11.0

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.04</u>
10.00 Std	<u>10.04</u>

Conductivity (mS/cm) 0.287 Std 0.289 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 724 mm Hg

Dissolved Oxygen	before cal	after cal
% Saturation	<u>81.3</u>	<u>99.9</u>
mg/L D.O.	<u>7.21</u>	<u>8.66</u>
Temp - °C	<u>19.73</u>	<u>19.84</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Notes:

LITTLE BIOFOULING ON PROBE
60°F, CLEAR, CALM
RE-CALIBRATED D.O. w/ TAP H₂O
D.O. SHOWING BELOW 7.00 mg/L, BUT WILL BE
ABOVE 7.00 mg/L AFTER POST-CAL ADJUSTMENT
OF 1.45 mg/L. pH + TEMP OK.

Field Notes for Datasonde Post Calibration

Date/Time: 7/26/06 07:45

Analyst: CSW

Location: BOND FALLS

Datasonde Serial #: 42169

Ending Datasonde Battery [volts]: 11.1V

Calibration Information

pH (s.u.) Reads
7.00 Std 7.10
10.00 Std 10.12

Conductivity (mS/cm) 0.282 Std 0.288 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 715

	before cal	after cal
Dissolved Oxygen		
% Saturation	87.4	100.1
mg/L D.O.	7.49	8.29
Temp - °C	21.60	21.58

YSI calibration (See field notes for _____ for calibration info.)

% Saturation
mg/L D.O.
Temp - °C

Notes:

FILE = BOND 0726.TXT
DUBR CAST, 68°F, CALM
VERY LITTLE BIOFOULING
D.O. & pH LOOK GOOD, TEMP FROM 18'S TO 21'S

Field Notes for Datasonde Post Calibration

Date/Time: 8/9/06 10:25 Analyst: CSW
 Location: BOND FALLS Datasonde Serial #: 42177
 Ending Datasonde Battery [volts]: 10.2

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>6.97</u>
10.00 Std	<u>9.94</u>

Conductivity (mS/cm) 0.286 Std 0.283 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 723

Dissolved Oxygen	before cal	after cal
% Saturation	<u>89.0</u>	<u>100.0</u>
mg/L D.O.	<u>6.88</u>	<u>7.81</u>
Temp - °C	<u>25.23</u>	<u>25.25</u>

YSI calibration (See field notes for 95 for calibration info.)
 % Saturation X
 mg/L D.O. X
 Temp - °C X

Notes:

PT CLOUDY, 70°F, 5-10MPH
SOME BIOFOULING ON PROBE
FILE = BOND0809.TXT
LOW TEMP ON 7/30/06 10.39°C SHARP DROP @ 09:00
VERY HIGH D.O. READINGS ON 7/30 AS WELL
DATASONDE SHUT DOWN 23 HRS EARLY

Field Notes for Datasonde Post Calibration

Date/Time: 9/5/06 Analyst: CSW
 Location: BOND FALLS 14:50 Datasonde Serial #: 42483
 Ending Datasonde Battery (volts): 9.9

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.12</u>
10.00 Std	<u>16.06</u>

Conductivity (mS/cm) 0.290 Std 0.289 Reads 0.0000 Zero Reads IN AIR
 Barometric Pressure (mm Hg) 723

Dissolved Oxygen	before cal	after cal
% Saturation	<u>94.8</u>	<u>97.00.5</u>
mg/L D.O.	<u>8.52</u>	<u>8.39</u>
Temp - °C	<u>21.53</u>	<u>21.57</u>

YSI calibration (See field notes for X for calibration info.)
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Notes:

CLEAR, 75°F, CALM-5 MPH
D.O. pH & TEMP LOOK FINE
VERY LIGHT BIOFOULING

Field Notes for Datasonde Post Calibration

Date/Time: 9/18/06 17:10 Analyst: CSW
 Location: BOND FALLS Datasonde Serial #: 42175
 Ending Datasonde Battery [volts]: 11.1

Calibration Information

pH (s.u.) Reads
 7.00 Std 7.13
 10.00 Std 10.19

Conductivity (mS/cm) 0.289 Std 0.292 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 718 mmHg

	before cal	after cal
Dissolved Oxygen		
% Saturation	<u>83.0</u>	<u>100.0</u>
mg/L D.O.	<u>7.82</u>	<u>9.38</u>
Temp - °C	<u>15.76</u>	<u>15.67</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation X
 mg/L D.O. X
 Temp - °C X

Notes:

CLOUDY, 50-55°F, 5-10MPH
VERY LITTLE BIOFOULING ON DATASONDE
DATA LOOKS FINE

Field Notes for Datasonde Post Calibration

Date/Time: 10/03/06 12:30 Analyst: CSW

Location: BOND FALLS Datasonde Serial #: 43730

Ending Datasonde Battery (volts): 10.3

Calibration Information

pH (s.u.)	Reads
7.00 Std	7.68
10.00 Std	10.04

Conductivity (mS/cm) 0.29 Std 0.323 Reads 0.000 Zero Reads (u)

Barometric Pressure (mm Hg) 725 AIR

Dissolved Oxygen	before cal	after cal
% Saturation	104.4	99.9
mg/L D.O.	9.79	9.47
Temp - °C	15.56	15.58

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	_____
mg/L D.O.	_____
Temp °C	_____

Notes:

OVERCAST, 60°F, CALM

DATA LOOKS GOOD

VERY LIGHT BIOFOULING

Field Notes for Datasonde Post Calibration

Date/Time: 6/13/06 Analyst: CSW
 Location: ROSEBLAWN Datasonde Serial #: 43727
 Ending Datasonde Battery (volts): 10.2

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.60</u>
10.00 Std	<u>9.98</u>

Conductivity (mS/cm) 0.283 Std 0.278 Reads 0.283 Zero Reads

Barometric Pressure (mm Hg) 730.5

Dissolved Oxygen	before cal	after cal
% Saturation	<u>102.7</u>	<u>102.6</u>
mg/L D.O.	<u>8.8</u>	<u>8.80</u>
Temp - °C	<u>20.83</u>	<u>20.89</u>

YSI calibration (See field notes for ROSEBLAWN 06/13/06 for calibration info.)

% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Notes:

5-24 TO 6-13 = ROSE0613.TXT

Field Notes for Datasonde Post Calibration

Date/Time: 6/27/06 18:10 Analyst: CSW
 Location: ROSELAWN CREEK Datasonde Serial #: 36465
 Ending Datasonde Battery (volts): 11.1

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.12</u>
10.00 Std	<u>9.99</u>

Conductivity (mS/cm) 0.287 Std 0.274 Reads 0.000 Zero Reads

Barometric Pressure (mm Hg) 720

	before cal	after cal
Dissolved Oxygen		
% Saturation	<u>95.0%</u>	<u>100.0%</u>
mg/L D.O.	<u>8.06 mg/L</u>	<u>8.36 mg/L</u>
Temp - °C	<u>21.45°C</u>	<u>21.43°C</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Notes:

DATA = ROSE0627.TXT
PT CLOUDY, 68°F, CALM-5MPH
DATASONDE IS HIGHLY BIO-FOULLED WITH
INSECT LARVAE
DATA LOOKS GOOD - D.O. MOSTLY 8.00+ mg/L
- pH IN MID-7'S
CIRCULATOR INOP.

Field Notes for Datasonde Post Calibration

Date/Time: 7/11/06 17:40 Analyst: CSW
 Location: ROSELAWN CK Datasonde Serial #: 43729
 Ending Datasonde Battery (volts): 8.9

Calibration Information

pH (s.u.) Reads
 7.00 Std 6.84
 10.00 Std 9.87

Conductivity (mS/cm) 0.287 Std 0.284 Reads 0.000 Zero Reads

Barometric Pressure (mm Hg) 722 mm Hg

	before cal	after cal
Dissolved Oxygen		
% Saturation	<u>91.7</u>	<u>100.0</u>
mg/L D.O.	<u>7.33</u>	<u>7.19</u>
Temp - °C	<u>25.17</u>	<u>25.36</u>

YSI calibration (See field notes for _____ for calibration info.)
 % Saturation X
 mg/L D.O. X
 Temp - °C X

Notes:

PT CLOUDY, 80°F, CALM
DATASONDE HIGHLY BIO-FOULLED
DISCHARGE HIGHER THAN NORMAL
D.O., pH + TEMP LOOK GOOD

1. Monday 10th, April 1901

2. Left at 10.15 for the station

3. Arrived at 11.15

4. Left at 11.45 for the station

5. Arrived at 12.15

6. Left at 12.45 for the station

7. Arrived at 1.15

8. Left at 1.45 for the station

9. Arrived at 2.15

10. Left at 2.45 for the station

11. Arrived at 3.15

12. Left at 3.45 for the station

13. Arrived at 4.15

14. Left at 4.45 for the station

15. Arrived at 5.15

16. Left at 5.45 for the station

17. Arrived at 6.15

18. Left at 6.45 for the station

19. Arrived at 7.15

20. Left at 7.45 for the station

21. Arrived at 8.15

22. Left at 8.45 for the station

23. Arrived at 9.15

24. Left at 9.45 for the station

25. Arrived at 10.15

26. Left at 10.45 for the station

27. Arrived at 11.15

28. Left at 11.45 for the station

29. Arrived at 12.15

30. Left at 12.45 for the station

31. Arrived at 1.15

32. Left at 1.45 for the station

33. Arrived at 2.15

34. Left at 2.45 for the station

35. Arrived at 3.15

36. Left at 3.45 for the station

37. Arrived at 4.15

38. Left at 4.45 for the station

39. Arrived at 5.15

40. Left at 5.45 for the station

41. Arrived at 6.15

42. Left at 6.45 for the station

43. Arrived at 7.15

44. Left at 7.45 for the station

45. Arrived at 8.15

46. Left at 8.45 for the station

47. Arrived at 9.15

48. Left at 9.45 for the station

49. Arrived at 10.15

50. Left at 10.45 for the station

51. Arrived at 11.15

52. Left at 11.45 for the station

53. Arrived at 12.15

54. Left at 12.45 for the station

55. Arrived at 1.15

56. Left at 1.45 for the station

57. Arrived at 2.15

58. Left at 2.45 for the station

59. Arrived at 3.15

60. Left at 3.45 for the station

61. Arrived at 4.15

62. Left at 4.45 for the station

63. Arrived at 5.15

64. Left at 5.45 for the station

65. Arrived at 6.15

66. Left at 6.45 for the station

67. Arrived at 7.15

68. Left at 7.45 for the station

69. Arrived at 8.15

70. Left at 8.45 for the station

71. Arrived at 9.15

72. Left at 9.45 for the station

73. Arrived at 10.15

74. Left at 10.45 for the station

75. Arrived at 11.15

76. Left at 11.45 for the station

77. Arrived at 12.15

78. Left at 12.45 for the station

79. Arrived at 1.15

80. Left at 1.45 for the station

81. Arrived at 2.15

82. Left at 2.45 for the station

83. Arrived at 3.15

84. Left at 3.45 for the station

85. Arrived at 4.15

86. Left at 4.45 for the station

87. Arrived at 5.15

88. Left at 5.45 for the station

89. Arrived at 6.15

90. Left at 6.45 for the station

91. Arrived at 7.15

92. Left at 7.45 for the station

93. Arrived at 8.15

94. Left at 8.45 for the station

95. Arrived at 9.15

96. Left at 9.45 for the station

97. Arrived at 10.15

98. Left at 10.45 for the station

99. Arrived at 11.15

100. Left at 11.45 for the station

101. Arrived at 12.15

102. Left at 12.45 for the station

103. Arrived at 1.15

104. Left at 1.45 for the station

105. Arrived at 2.15

106. Left at 2.45 for the station

107. Arrived at 3.15

108. Left at 3.45 for the station

109. Arrived at 4.15

110. Left at 4.45 for the station

111. Arrived at 5.15

112. Left at 5.45 for the station

113. Arrived at 6.15

114. Left at 6.45 for the station

115. Arrived at 7.15

116. Left at 7.45 for the station

117. Arrived at 8.15

118. Left at 8.45 for the station

119. Arrived at 9.15

120. Left at 9.45 for the station

121. Arrived at 10.15

122. Left at 10.45 for the station

123. Arrived at 11.15

124. Left at 11.45 for the station

125. Arrived at 12.15

126. Left at 12.45 for the station

127. Arrived at 1.15

128. Left at 1.45 for the station

129. Arrived at 2.15

130. Left at 2.45 for the station

131. Arrived at 3.15

132. Left at 3.45 for the station

133. Arrived at 4.15

134. Left at 4.45 for the station

135. Arrived at 5.15

136. Left at 5.45 for the station

137. Arrived at 6.15

138. Left at 6.45 for the station

139. Arrived at 7.15

140. Left at 7.45 for the station

141. Arrived at 8.15

142. Left at 8.45 for the station

143. Arrived at 9.15

144. Left at 9.45 for the station

145. Arrived at 10.15

146. Left at 10.45 for the station

147. Arrived at 11.15

148. Left at 11.45 for the station

149. Arrived at 12.15

150. Left at 12.45 for the station

151. Arrived at 1.15

152. Left at 1.45 for the station

153. Arrived at 2.15

154. Left at 2.45 for the station

155. Arrived at 3.15

156. Left at 3.45 for the station

157. Arrived at 4.15

158. Left at 4.45 for the station

159. Arrived at 5.15

160. Left at 5.45 for the station

161. Arrived at 6.15

162. Left at 6.45 for the station

163. Arrived at 7.15

164. Left at 7.45 for the station

165. Arrived at 8.15

166. Left at 8.45 for the station

167. Arrived at 9.15

168. Left at 9.45 for the station

169. Arrived at 10.15

170. Left at 10.45 for the station

171. Arrived at 11.15

172. Left at 11.45 for the station

173. Arrived at 12.15

174. Left at 12.45 for the station

175. Arrived at 1.15

176. Left at 1.45 for the station

177. Arrived at 2.15

178. Left at 2.45 for the station

179. Arrived at 3.15

180. Left at 3.45 for the station

181. Arrived at

Field Notes for Datasonde Post Calibration

Date/Time: 8/8/06 18:30 Analyst: CSW
 Location: ROSELAWN CREEK Datasonde Serial #: 4271
 Ending Datasonde Battery (volts): 10.2

Calibration Information

pH (s.u.) Reads
 7.00 Std 7.17
 10.00 Std 16.06

Conductivity (mS/cm) 0.286 Std 0.282 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 726

	before cal	after cal
Dissolved Oxygen		
% Saturation	<u>91.8</u>	<u>100.0</u>
mg/L D.O.	<u>7.03</u>	<u>7.59</u>
Temp - °C	<u>27.21</u>	<u>27.16</u>

YSI calibration (See field notes for 95 for calibration info.)

% Saturation X
 mg/L D.O. X
 Temp - °C X

Notes:

CLEAR, 75°F, CALM MODERATE BIOFOULING ON
DATASONDE
2 D.O. DEVIATIONS ON 8/8/06 - SHOULD BE OK
AFTER D.O. ADJUSTMENT (+0.56mg/L) pH IS GOOD,
TEMP IN LOW-MID 20'S.

Field Notes for Datasonde Post Calibration

Date/Time:

8/22/06 14:30

Analyst:

CSW

Location:

ROSELAWN CRIBB

Datasonde Serial #:

42169

Ending Datasonde Battery (volts):

9.6

Calibration Information

pH (s.u.) Reads

7.00 Std

10.00 Std

Conductivity (mS/cm)

Std

Reads

Zero Reads

Barometric Pressure (mm Hg)

Dissolved Oxygen

before cal

after cal

% Saturation

mg/L D.O.

Temp - °C

YSI calibration (See field notes for

for calibration info.)

% Saturation

mg/L D.O.

Temp - °C

Notes:

UNABLE TO POST-CAL. DATASONDE READ 0'S FOR
 pH, SDC, D.O.%, AND D.O. mg/L WHEN IN
 TERMINAL MODE. BATTERY COVER WAS CRACKED + LEAKED
 WATER INTO BATTERY COMPARTMENT. DATA TRANSFER
 WORKED FINE & DID NOT LOSE ANY DATA. ALL
 DATA LOOKED FINE.

Field Notes for Datasonde Post Calibration

Date/Time: 9/5/06 14:15 Analyst: CSWLocation: ROSELAWN CREEK Datasonde Serial #: 42484Ending Datasonde Battery [volts]: ~~10.0~~ 9.7

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>6.73</u>
10.00 Std	<u>9.58</u>

Conductivity (mS/cm) 0.291 Std 0.291 Reads 0.0007 Zero Reads WBarometric Pressure (mm Hg) 723 AIR

Dissolved Oxygen	before cal	after cal
% Saturation	<u>112.4</u>	<u>104.6</u>
mg/L D.O.	<u>9.31</u>	<u>8.43</u>
Temp °C	<u>23.51</u>	<u>23.53</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	<u> </u>
mg/L D.O.	<u> </u>
Temp - °C	<u> </u>

Notes:

CLEAR, 75°F, 5-10 MPHDATASONDE HIGHLY BIOFOULEDD.O., pH + TEMP LOOK FINEpH RESPONDS SLOWLY - READS LOW + OCCASIONALLY GOES TO 0.00.

Field Notes for Datasonde Post Calibration

Date/Time: 10/3/06 13:05 Analyst: CSW
 Location: ROSELAWN CREEK Datasonde Serial #: 4272
 Ending Datasonde Battery [volts]: ?

Calibration Information

pH (s.u.) Reads

7.00 Std

10.00 Std

~~—~~

Conductivity (mS/cm)

~~—~~

Std

Reads

Zero Reads

Barometric Pressure (mm Hg)

~~—~~

Dissolved Oxygen

before cal

after cal

% Saturation

mg/L D.O.

Temp - °C

~~—~~~~—~~

YSI calibration (See field notes for _____ for calibration info.)

% Saturation

mg/L D.O.

Temp - °C

~~—~~

Notes:

OVERCAST, 60°F, CALMDATASONDE MALFUNCTION:-

BATTERY COVER CRACKED & LEAKED. INITIALLY, DATASONDE
COMMUNICATED W/ TERMINAL. TRIED TO DOWNLOAD &
LOCKED UP. REPLACED BATT & WOULD NOT TALK
TO LAPTOP. COULD NOT RETRIEVE DATA OR
POST-CAL.

Field Notes for Datasonde Post Calibration

Date/Time: 7 BERGLAND DAM Analyst: CSW
 Location: 6/13/06 15:45 Datasonde Serial #: 43731
 Ending Datasonde Battery [volts]: 10.4

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.58</u>
10.00 Std	<u>10.54</u>

Conductivity (mS/cm) 0.283 Std 0.283 Reads 0.00 Zero Reads

Barometric Pressure (mm Hg) _____

Dissolved Oxygen	before cal	after cal
% Saturation	<u>101.6</u>	<u>101.6 99.7</u>
mg/L D.O.	<u>8.65</u>	<u>8.65 8.55</u>
Temp - °C	<u>20.63</u>	<u>20.92</u>

YSI calibration (See field notes for ROSEBURN 6/13/06 for calibration info.)
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Notes:

BERG0613.TXT = 05/24 - 06/13 DATA

Field Notes for Datasonde Post Calibration

Date/Time: 6/27/06 17:00 Analyst: CSW
 Location: BERGLAND Datasonde Serial #: 43703
 Ending Datasonde Battery (volts): 10.4

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.13</u>
10.00 Std	<u>10.09</u>

Conductivity (mS/cm) 0.287 Std 0.287 Reads 0.0004 Zero Reads

Barometric Pressure (mm Hg) 722

Dissolved Oxygen	before cal	after cal
% Saturation	<u>100.8</u>	<u>100.5</u>
mg/L D.O.	<u>8.50</u>	<u>8.35</u>
Temp - °C	<u>21.79</u>	<u>21.92</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Notes:

DATA = BERG0627.TXT
CLOUDY, 68°F, CALM - 5MPH
DATA LOOKS GOOD. DO. ALL ABOVE 7.00mg/L
NO POST-CAL ADJUSTMENT NEEDED
pH RANGES FROM LOW 8'S TO LOW 9'S

Field Notes for Datasonde Post Calibration

Date/Time: 7/11/06 16:30 Analyst: CSWLocation: BERGLAND Datasonde Serial #: 42452Ending Datasonde Battery [volts]: 8.0
7.7Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.09</u>
10.00 Std	<u>10.04</u>

Conductivity (mS/cm) 0.287 Std 0.286 Reads 0.0008 Zero ReadsBarometric Pressure (mm Hg) 723

	before cal	after cal
Dissolved Oxygen		
% Saturation	<u>100.2</u>	<u>99.100.4</u>
mg/L D.O.	<u>8.25</u>	<u>7.95</u>
Temp - °C	<u>23.86</u>	<u>24.22</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	<u> </u>
mg/L D.O.	<u> </u>
Temp - °C	<u> </u>

Notes:

PT CLOUDY, 80°F, CALM-5 MPHSOME BIO-FOULING ON DATASONDE - NO BUGS.FILE = BBRG0711.TXTD.O. CALIBRATED W/ TAP WATERVERY LOW BATT - RECHECK POST-CAL IN LAB- LDO WOULD NOT DISPLAY AFTER DOWNLOAD!- LDO PROBE BROKEN @ BASE OF PROBE.

1. $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$
 2. $\frac{1}{4} \times \frac{1}{5} = \frac{1}{20}$
 3. $\frac{1}{6} \times \frac{1}{7} = \frac{1}{42}$
 4. $\frac{1}{8} \times \frac{1}{9} = \frac{1}{72}$
 5. $\frac{1}{10} \times \frac{1}{11} = \frac{1}{110}$

Field Notes for Datasonde Post Calibration

Date/Time: 8/8/06 17:30 Analyst: CSW
 Location: BERGLAND Datasonde Serial #: 42483
 Ending Datasonde Battery (volts): 9.8

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.02</u>
10.00 Std	<u>10.07</u>

Conductivity (mS/cm) 0.286 Std 0.283 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 727

Dissolved Oxygen	before cal	after cal
% Saturation	<u>106.0</u>	<u>101.9</u>
mg/L D.O.	<u>8.72</u>	<u>8.37</u>
Temp - °C	<u>23.23</u>	<u>23.26</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	<u>X</u>
mg/L D.O.	<u>X</u>
Temp °C	<u>X</u>

Notes:

CLEAR, 75°F, CALM
SLIGHT BIOFOULING. D.O. CALIBRATED W/ TAP H₂O
D.O. MOSTLY IN 6'S & 7'S. SOME VERY HIGH VALUES
ON 8/8/06 IN MID AFTERNOON (10.06 mg/L @ 13:00)
TEMP BETWEEN 22 + 28°C, pH LOOKS FINE

Field Notes for Datasonde Post Calibration

Date/Time: 9/5/01 Analyst: CSW
 Location: BERGLAND 1910 Datasonde Serial #: 43628
 Ending Datasonde Battery (volts): 9.7

Calibration Information

pH (s.u.) Reads
 7.00 Std 7.37
 10.00 Std 10.10

Conductivity (mS/cm) 0.290 Std 0.291 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 725

	before cal	after cal
Dissolved Oxygen	<u>91.0</u>	<u>100.2</u>
% Saturation	<u>7.3</u>	<u>7.88</u>
mg/L D.O.	<u>25.07</u>	<u>25.02</u>
Temp - °C		

YSI calibration (See field notes for _____ for calibration info.)

% Saturation /
 mg/L D.O. /
 Temp - °C /

Notes:

CLEAR, 68°F, CALM
DATA LOOKS FINE
NO BIOFOULING!

Field Notes for Datasonde Post Calibration

Date/Time: 9/18/06 18:10 Analyst: CSW
 Location: BERGLAND DAM Datasonde Serial #: 43728
 Ending Datasonde Battery [volts]: 9.6

Calibration Information

pH (s.u.) Reads
 7.00 Std 7.28
 10.00 Std 10.29

Conductivity (mS/cm) 0.289 Std 0.294 Reads 0.0010 Zero Reads

Barometric Pressure (mm Hg) 716 mmHg

	before cal	after cal
Dissolved Oxygen		
% Saturation	<u>89.6</u>	<u>100.2</u>
mg/L D.O.	<u>8.59</u>	<u>9.53</u>
Temp - °C	<u>14.89</u>	<u>14.85</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation X
 mg/L D.O. X
 Temp - °C X

Notes:

CLOUDY, 50°F, CALM - 5 MPY
NO BIOFOULING
DATA LOOKS FINE

Field Notes for Datasonde Post Calibration

Date/Time: 10/10/06 14:10 Analyst: CSW
 Location: BREGLAND DAM Datasonde Serial #: 42167
 Ending Datasonde Battery [volts]: 10.8

Calibration Information

pH (s.u.) Reads
 7.00 Std 7.09
 10.00 Std 9.97

Conductivity (mS/cm) 0.291 Std 0.303 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 725

	before cal	after cal
Dissolved Oxygen		
% Saturation	<u>95.8</u>	<u>100.0</u>
mg/L D.O.	<u>8.52</u>	<u>8.99</u>
Temp - °C	<u>18.22</u>	<u>16.26</u>

YSI calibration (See field notes for _____ for calibration info.)
 % Saturation _____
 mg/L D.O. _____
 Temp - °C _____

Notes:

OVERCAST, 65°F, CALM - 5MPH
NO BIOFOULING, DATA LOOK FINE

Field Notes for Datasonde Post Calibration

Date/Time: 6/14/06 10:30 Analyst: CSWLocation: VICTORIA Datasonde Serial #: 42482Ending Datasonde Battery [volts]: 10.4Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>6.97</u>
10.00 Std	<u>9.98</u>

Conductivity (mS/cm) 0.283 Std 0.275 Reads 0.00 Zero ReadsBarometric Pressure (mm Hg) 747 mmHg

Dissolved Oxygen	before cal	after cal
% Saturation	<u>100.1%</u>	<u>100.3%</u>
mg/L D.O.	<u>8.34 mg/L</u>	<u>8.56 mg/L</u>
Temp - °C	<u>21.60°C</u>	<u>22.05°C</u>

WtW
~~YSI~~ calibration (See field notes for BOND D.O. PROFILE 6/14/06 for calibration info.)

% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Notes:

SUNNY, 68°F, 5 mph
DATASONDE WAS FOUND PULLED UP NEAR SHORE.
SENSORS WERE STILL SUBMERGED
DATA FOR 5/31/06 - 6/14/06 = VIC 0614

Field Notes for Datasonde Post Calibration

Date/Time: 6/27/06 Analyst: CSWLocation: VICTORIA Datasonde Serial #: 43730Ending Datasonde Battery [volts]: 10.8

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.03</u>
10.00 Std	<u>9.98</u>

Conductivity (mS/cm) 0.287 Std 0.284 Reads 0.003 Zero ReadsBarometric Pressure (mm Hg) 738

Dissolved Oxygen	before cal	after cal
% Saturation	<u>105.7</u>	<u>100.2</u>
mg/L D.O.	<u>8.41</u>	<u>8.05</u>
Temp - °C	<u>24.79</u>	<u>24.87</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Notes:

PROBE HIGHLY BIO-FOULED.FILE = VIC0627.TXTLOWEST D.O. = 6.07 mg/L ON 6/24/06pH IN MID 7'S

Field Notes for Datasonde Post Calibration

Date/Time:

7/11/06 13:45

Analyst:

C. SW

Location:

VICTORIA

Datasonde Serial #:

42627

Ending Datasonde Battery (volts): 10.8

Calibration Information

pH (s.u.) Reads

7.00 Std

7.10

10.00 Std

9.97

- VERY UNSTEADY

Conductivity (mS/cm)

0.287 Std

0.247

Reads

0.000

Zero Reads

Barometric Pressure (mm Hg)

739

Dissolved Oxygen

before cal

after cal

% Saturation

97.7

100.0

mg/L D.O.

7.66

7.83

Temp -- °C

26.25

26.31

YSI calibration

(See field notes for

for calibration info.)

% Saturation

mg/L D.O.

Temp -- °C

Notes:

DATASONDE HIGHLY BIOFOULLED

CIRCULATOR IN OP.

LIVE BUGS ALL OVER DATASONDE

D.O. BELOW 7.00 mg/L FOR ENTIRE PERIOD

pH LOOKS O.K.

D.O. @ 7.25 mg/L ~ 300m DOWNSTREAM

FAST RAPIDS

Field Notes for Datasonde Post Calibration

Date/Time: 7/25/06 14:45 Analyst: CSW

Location: VICTORIA Datasonde Serial #: 43700

Ending Datasonde Battery [volts]: ~~10.5~~ 10.4

Calibration Information

pH (s.u.)	Reads
7.00 Std	7.04
10.00 Std	9.99

Conductivity (mS/cm) 0.282 Std 0.280 Reads 0.0012 Zero Reads

Barometric Pressure (mm Hg) 732

Dissolved Oxygen	before cal	after cal
% Saturation	65.9 54.8	99.8
mg/L D.O.	4.21	7.64
Temp - °C	26.92	27.03

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Notes:

PT CLOUDY, 90°F, CALM
 DO. ALL BELOW 7.00mg/L, TEMP ALL ABOVE 20.00°C
 pH LOOKS FINE (MID 7'S)
 DATASONDE COMPLETELY BIOFOULED

Field Notes for Datasonde Post Calibration

Date/Time: 8/8/06 14:15 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: 43727
 Ending Datasonde Battery [volts]: 9.5V

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.04</u>
10.00 Std	<u>10.01</u>

Conductivity (mS/cm) 0.286 Std 0.284 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 742

Dissolved Oxygen	before cal	after cal
% Saturation	<u>100.6</u>	<u>100.3</u>
mg/L D.O.	<u>7.54</u>	<u>7.51</u>
Temp - °C	<u>28.36</u>	<u>28.37</u>

YSI calibration (See field notes for 95 for calibration info.)
 % Saturation X
 mg/L D.O. X
 Temp - °C X
SEE VICTORIA DEPLOYMENT
08/08/06

Notes:

CLEAR, 80°F, 5MPH
D.O. READING 6.72 mg/L @ 14:00 ON 8/8/06 - YSI 95
+ OTHER DATASONDES READING ~ 7.35 AT SAME TIME.
POST CAL SHOWS NO ADJUSTMENT NEEDED.
PROBES HIGHLY BIOFOULLED.
EV OK, D.O. + TEMP DEVIATIONS THROUGHOUT DATA.

Field Notes for Datasonde Post Calibration

Date/Time: 8/22/06 15:25 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: 43103
 Ending Datasonde Battery [volts]: 10.2

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>7.11</u>
10.00 Std	<u>10.05</u>

Conductivity (mS/cm) 0.291 Std 0.288 Reads 0.023 Zero Reads IN AIR

Barometric Pressure (mm Hg) 741

Dissolved Oxygen	before cal	after cal
% Saturation	<u>106.3</u>	<u>100.7</u>
mg/L D.O.	<u>8.49</u>	<u>8.00</u>
Temp - °C	<u>25.77</u>	<u>25.77</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	_____
mg/L D.O.	_____
Temp - °C	_____

Notes:

CLEAR, 75°F, CALM 10MPH. POST-CAL DO. DOUB
W/TAPE H₂O. PROBE MODERATELY BIOFOULED.
pH IN MID 7'S. TEMP OK, DO. IN HIGH 6'S → LOW 7'S.

Field Notes for Datasonde Post Calibration

Date/Time: 9/5/06 16:00 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: 42486
 Ending Datasonde Battery (volts): 9.7

Calibration Information

pH (s.u.) Reads
 7.00 Std 7.27
 10.00 Std 10.21

Conductivity (mS/cm) 0.290 Std 0.289 Reads 0.0003 Zero Reads

Barometric Pressure (mm Hg) 740

	before cal	after cal
Dissolved Oxygen		
% Saturation	<u>2.9</u>	<u>100.6</u>
mg/L D.O.	<u>0.24</u>	<u>8.29</u>
Temp - °C	<u>23.49</u>	<u>23.53</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation X
 mg/L D.O. X
 Temp - °C X

Notes:

CLEAR 75°F, CALM-5MPH

TBMP + pH LOOK FINE. D.O. MALFUNCTION ON

8/23/06 AT 21:00. - READ 0.2 mg/L FOR

HOURS ON BND. SOMETIMES CHANGED SLIGHTLY

OR WENT TO 0. CAN'T PERFORM ACCURATE

D.O. POST-CAL. UNSURE WHY CALIBRATION WAS
LOST.

Field Notes for Datasonde Post Calibration

Date/Time: 01/03/07 09:15 Analyst: CSW
 Location: Victoria Dam Datasonde Serial #: 43729

Ending Datasonde Battery (volts):

Calibration Information

pH (s.u.) Reads
 7.00 Std 7.00
 10.00 Std 10.00

Conductivity (mS/cm) 0.1 Std 0.1 Reads 10.1 Zero Reads

Barometric Pressure (mm Hg) 29.7

Dissolved Oxygen	before cal	after cal
% Saturation	<u>100</u>	<u>100</u>
mg/L D.O.	<u>1.00</u>	<u>1.00</u>
Temp - °C	<u>10.0</u>	<u>10.0</u>

YSI calibration (See field notes for for calibration info.)

% Saturation ✓
 mg/L D.O.
 Temp - °C

Notes:

Dissolved Oxygen not reading D.O. when
recovered. Data looks fine until
2 - 3 min into out of.

Field Notes for Datasonde Post Calibration

Date/Time: 10/03/06 15:25 Analyst: CSW
 Location: VICTORIA Datasonde Serial #: 43727
 Ending Datasonde Battery [volts]: 10.1

Calibration Information

pH (s.u.)	Reads
7.00 Std	<u>6.81</u>
10.00 Std	<u>9.79</u>

Conductivity (mS/cm) 0.291 Std 0.298 Reads 0.0000 Zero Reads

Barometric Pressure (mm Hg) 740

Dissolved Oxygen	before cal	after cal
% Saturation	<u>99.7</u>	<u>99.8</u>
mg/L D.O.	<u>10.05</u>	<u>10.11</u>
Temp - °C	<u>13.50</u>	<u>13.52</u>

YSI calibration (See field notes for _____ for calibration info.)

% Saturation	<u> </u>
mg/L D.O.	<u> </u>
Temp - °C	<u> </u>

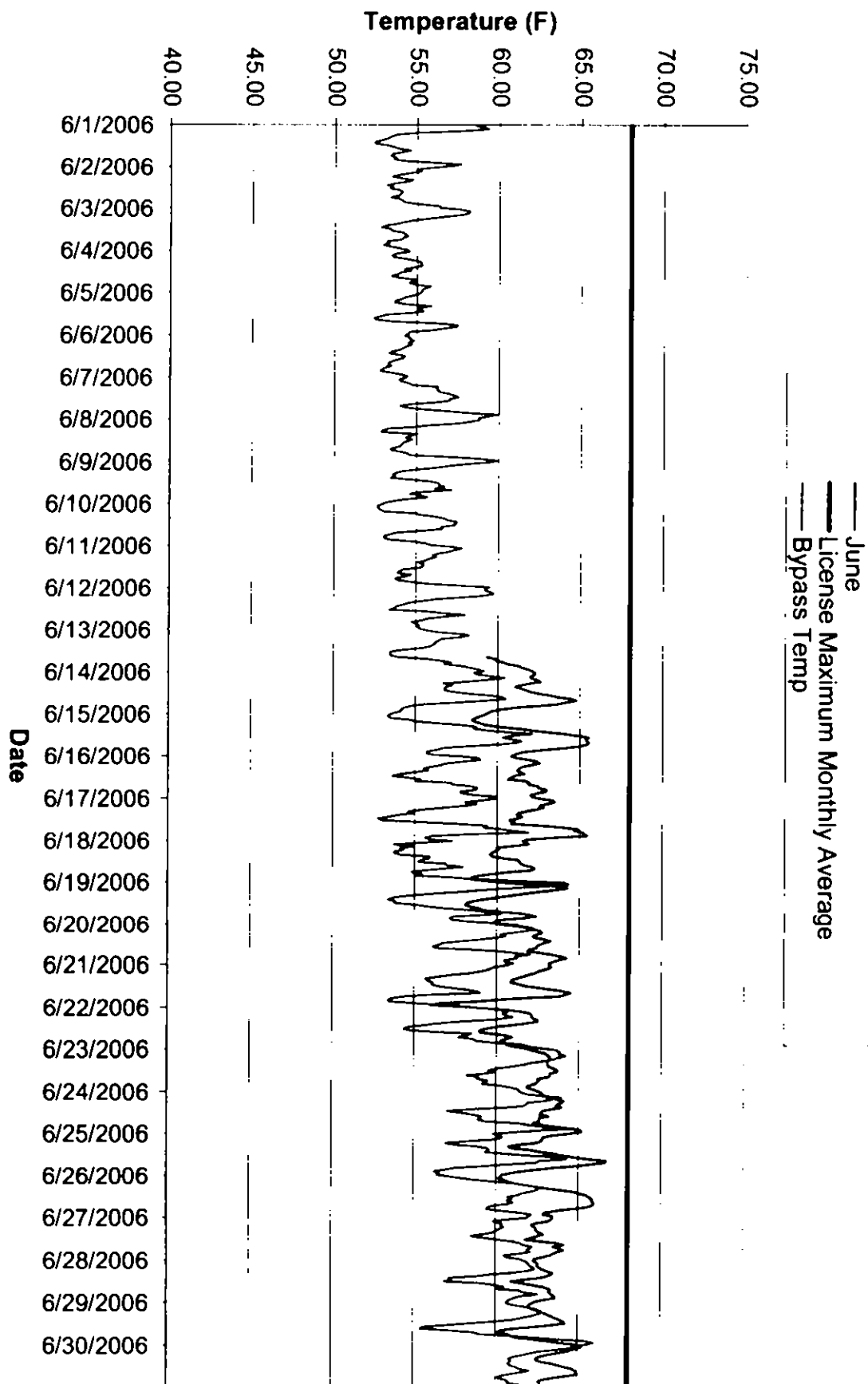
Notes:

OVERCAST 70°F, CALM
LIGHT BIOFOULING
DATA LOOKING

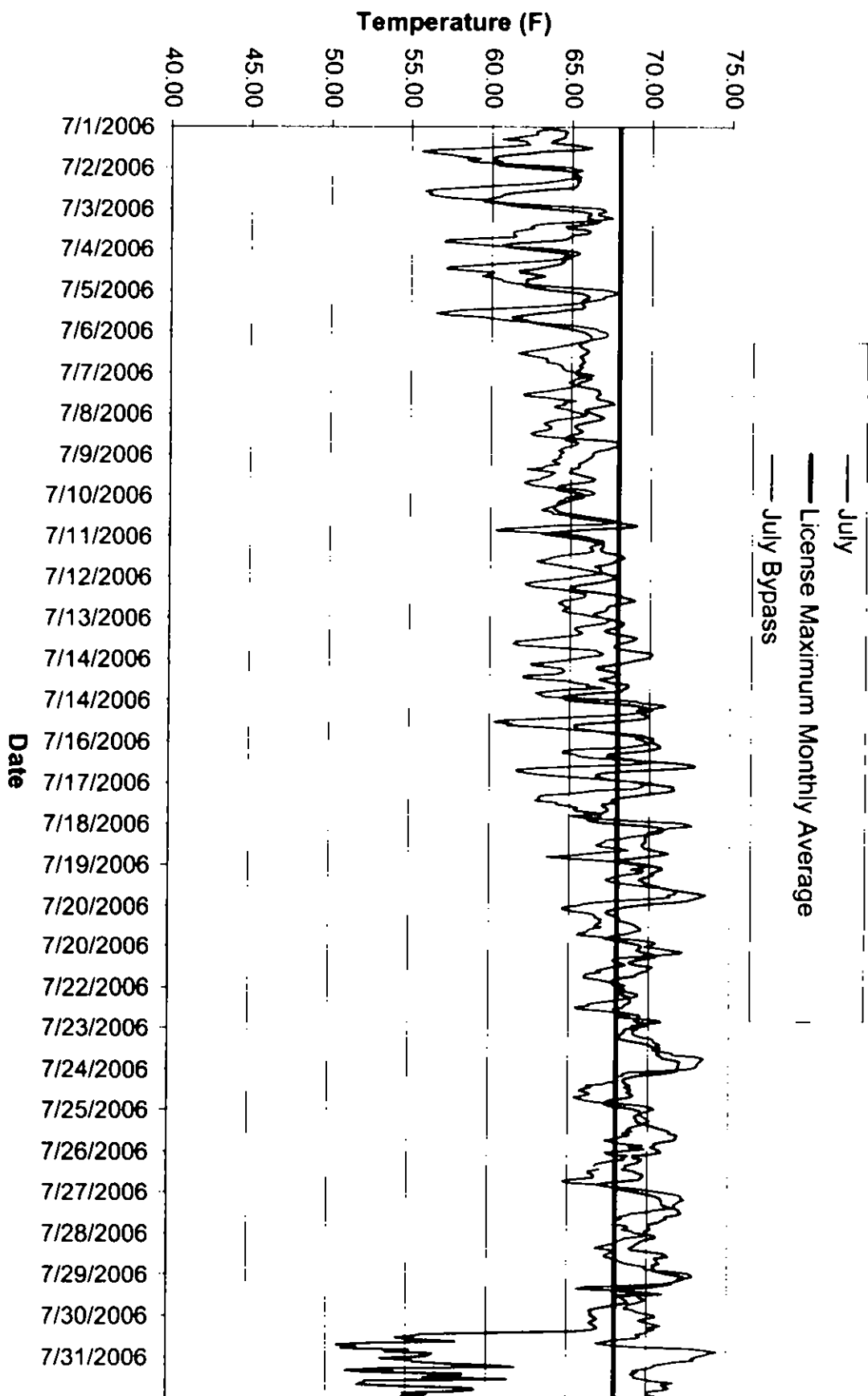
APPENDIX D

TEMPERATURE MONITORING DATA

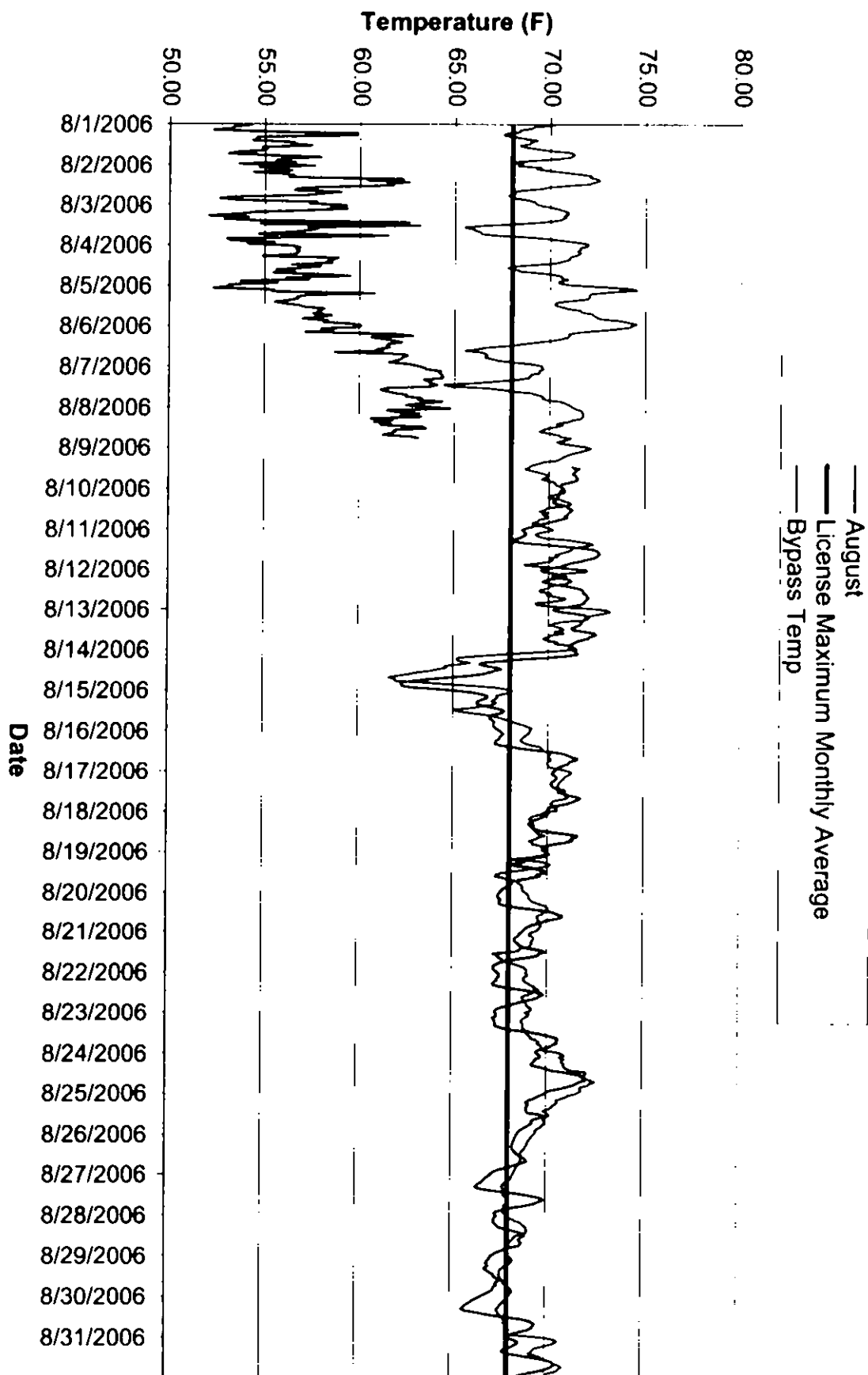
Bond Falls Temperature Monitoring - June, 2006



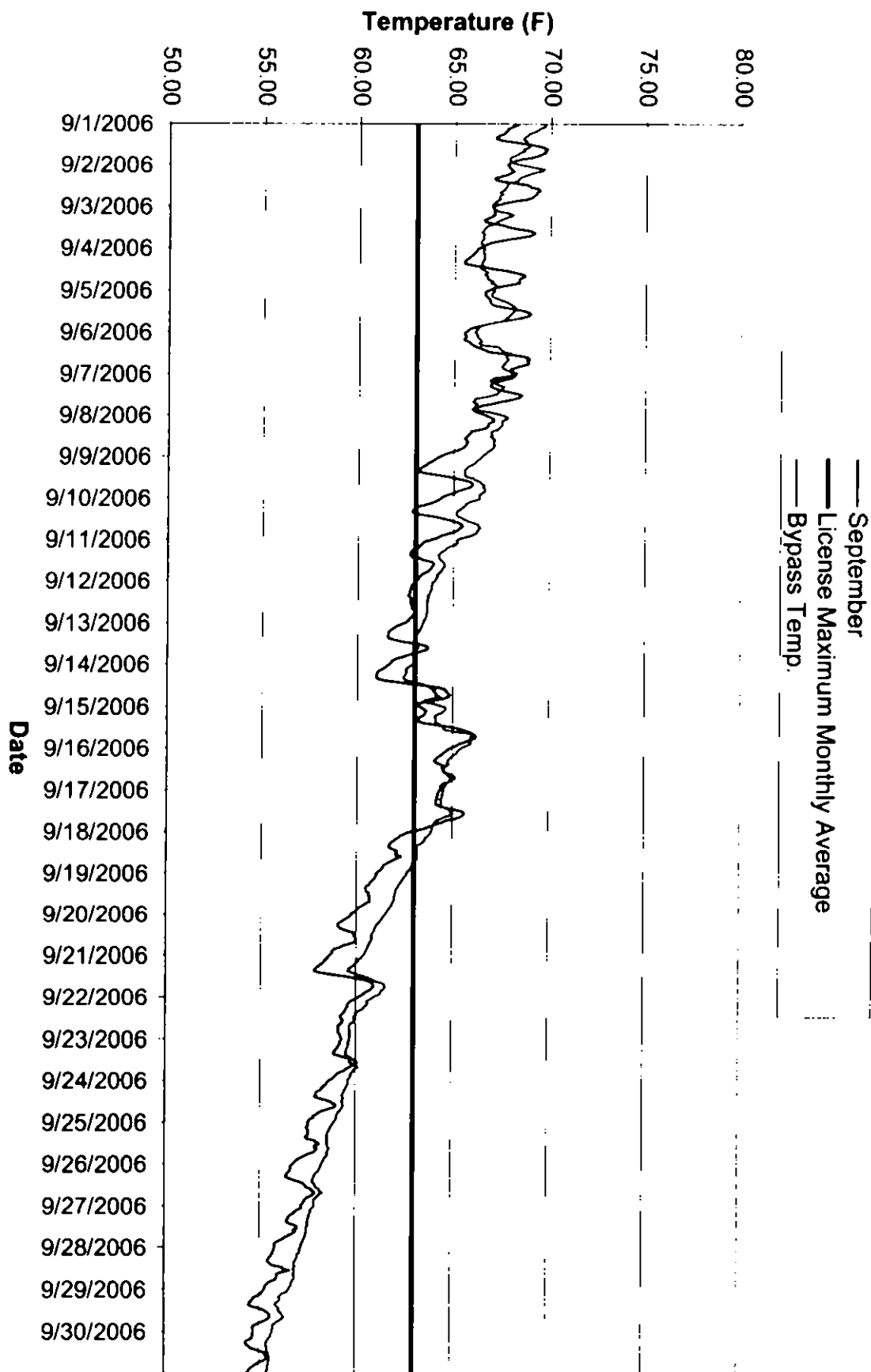
Bond Falls Temperature Monitoring - July, 2006



Bond Falls Temperature Monitoring - August 2006



Bond Falls Temperature Monitoring - September, 2006



Bond Falls Dam Temperature Summary - June 2006

Time	Readings taken in Middle Branch of Ontonagon River.	06/01/06	06/02/06	06/03/06	06/04/06	06/05/06	06/06/06	06/07/06	06/08/06	06/09/06	06/10/06	06/11/06	06/12/06	06/13/06	06/14/06	06/15/06	06/16/06
HHMMSS																	
0																	
10000															62.24	59.27	60.84
20000															62.28	58.93	61.16
30000															61.97	58.69	61.92
40000															62.02	58.44	62.40
50000															62.37	58.59	62.55
60000															62.60	58.93	62.04
70000															62.01	59.29	61.50
80000															61.45	60.12	61.32
90000															61.05	61.30	61.21
100000															61.41	62.10	61.34
110000															61.74	62.91	61.61
120000															62.02	64.02	61.05
130000															62.55	64.81	60.84
140000															63.16	65.53	60.64
150000															63.61	65.34	61.66
160000														59.32	64.44	65.43	61.93
170000														59.86	64.78	65.53	61.88
180000														59.85	64.17	65.43	62.46
190000														60.33	63.64	64.99	62.47
200000														60.60	62.44	64.13	63.00
210000														61.25	61.14	62.96	62.92
220000														61.45	60.31	61.88	62.46
230000														61.86	59.70	61.32	62.02
														62.10	59.43	61.02	62.10
Daily Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.10	64.78	65.53	63.00
Daily Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.32	59.43	58.44	60.64
Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	60.74	62.19	62.12	61.81
Missing data due to equipment failure																	
Monthly average 62.34																	
License Maximum Monthly Average: 68.00																	

Bond Falls Dam Temperature Summary - June 2006

Time	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
HHMMSS														
0	62.53	61.54	60.49	60.31	63.21	59.45	62.11	62.74	64.26	60.28	63.43	62.31	62.20	65.28
10000	63.36	61.75	62.38	61.23	63.32	60.62	62.56	62.85	63.32	60.15	63.37	62.47	62.04	65.07
20000	63.50	61.92	63.84	61.93	63.03	61.52	63.00	62.94	62.82	60.46	63.10	62.58	61.99	64.65
30000	63.01	60.93	64.27	62.31	62.60	62.02	63.14	63.16	62.80	60.73	62.42	62.55	62.20	64.40
40000	62.58	59.97	63.57	62.64	62.33	62.13	63.25	63.66	62.74	61.09	62.17	62.64	62.56	63.82
50000	62.80	60.10	62.60	62.74	61.95	62.11	63.27	64.09	62.38	61.72	62.37	62.83	62.85	63.18
60000	62.44	59.86	61.66	62.44	61.61	62.28	63.10	64.00	61.41	62.37	62.44	63.09	63.10	62.73
70000	61.81	59.70	60.85	62.19	61.20	62.53	63.12	63.77	60.76	63.07	62.46	63.45	63.36	62.47
80000	61.30	59.58	59.97	62.33	60.91	62.47	63.12	63.64	61.09	63.91	62.64	63.37	63.61	62.49
90000	61.18	59.70	59.18	62.91	60.85	61.77	63.21	63.99	62.20	64.62	62.89	63.09	63.88	62.82
100000	61.52	60.37	58.55	63.25	61.36	60.94	63.48	63.39	62.74	65.08	62.58	62.71	64.11	63.43
110000	61.30	61.32	58.19	62.89	61.74	59.94	63.72	62.80	63.59	65.50	62.19	61.72	64.22	63.81
120000	60.75	61.34	58.10	62.62	62.49	59.41	63.72	62.76	63.95	65.64	61.79	60.98	63.43	64.22
130000	61.05	61.45	58.37	62.42	63.30	58.96	63.28	62.65	64.80	65.86	62.71	61.56	62.40	64.69
140000	60.85	61.61	58.93	62.40	64.06	59.00	63.25	63.18	65.62	65.80	63.72	62.24	61.12	64.85
150000	62.60	62.11	59.13	61.97	64.47	59.56	63.18	62.62	66.70	65.91	64.13	62.89	60.33	64.92
160000	63.97	62.28	60.17	61.88	64.18	60.53	62.51	62.64	66.60	65.97	63.50	63.23	60.13	64.99
170000	64.87	62.10	61.45	62.71	63.81	60.96	62.58	62.64	65.68	65.84	63.84	63.34	60.73	64.40
180000	64.67	60.73	61.93	63.36	61.88	60.58	62.47	62.24	64.71	65.44	64.13	63.25	60.98	63.61
190000	65.21	59.76	62.35	63.86	60.06	60.28	62.37	62.76	63.59	64.44	63.75	63.41	61.25	62.98
200000	65.23	58.96	61.65	64.26	58.91	60.55	61.99	63.66	62.60	63.61	63.50	63.59	62.19	62.60
210000	65.46	58.51	60.35	63.77	56.59	60.60	61.86	64.71	61.63	62.92	63.30	63.63	63.10	62.71
220000	63.46	58.32	59.86	63.50	56.01	60.94	62.17	65.16	60.94	62.89	62.83	62.91	63.84	62.69
230000	61.95	59.29	59.90	63.16	57.88	61.70	62.47	65.14	60.37	63.46	62.35	62.42	64.89	62.71
Daily Max	65.46	62.28	64.27	64.26	64.47	62.53	63.72	65.16	66.70	65.97	64.13	63.63	64.89	65.28
Daily Min	60.75	58.32	58.10	60.31	56.01	58.96	61.86	62.24	60.37	60.15	61.79	60.98	60.13	62.47
Average	62.81	60.55	60.74	62.63	61.57	60.87	62.87	63.38	63.22	63.61	62.98	62.76	62.52	63.73

Bond Falls Dam Temperature Summary - July 2006

Time HHMMSS	Readings taken in Middle Branch of Ontonagon River															
	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
0	63.19	63.16	64.51	62.69	64.60	65.82	65.26	66.51	66.40	65.82	64.87	67.80	67.42	69.17	65.48	70.09
10000	63.75	64.53	65.64	63.84	65.59	66.00	65.53	66.85	66.24	65.70	65.61	67.48	67.95	68.70	67.12	70.39
20000	64.63	65.05	66.16	64.53	65.88	66.18	65.97	67.05	66.06	65.07	66.22	67.05	68.32	68.18	68.68	70.61
30000	64.67	65.25	66.15	64.90	66.07	66.22	66.20	66.81	65.93	64.76	66.60	66.31	68.34	67.50	69.42	70.63
40000	64.56	64.99	65.98	64.99	66.00	66.18	65.91	66.33	65.73	64.51	67.01	65.55	68.23	66.67	69.87	70.30
50000	64.56	65.07	65.97	64.76	65.71	66.02	65.57	65.75	65.48	64.18	67.08	65.07	67.86	66.69	70.12	69.62
60000	64.51	65.26	66.38	64.40	65.66	65.68	65.41	65.34	65.55	63.93	67.01	64.99	67.33	67.33	69.75	68.34
70000	64.11	65.48	66.74	64.51	65.64	65.50	65.41	65.21	65.53	63.97	66.87	65.52	67.17	67.86	69.48	67.39
80000	63.77	65.34	66.42	64.31	65.70	65.53	65.86	65.37	65.08	64.09	66.96	66.58	67.50	68.11	69.80	67.35
90000	63.70	65.34	65.66	63.81	65.80	65.71	66.42	65.62	64.96	64.29	67.21	67.39	68.16	67.87	69.94	67.91
100000	64.87	65.28	64.60	63.25	65.62	65.97	66.76	65.71	64.94	64.78	67.87	68.13	68.77	67.55	69.60	68.94
110000	65.57	65.05	64.76	62.78	64.62	66.09	66.74	65.44	65.43	65.61	68.23	68.36	69.17	66.83	68.81	70.05
120000	66.20	63.64	65.93	61.72	63.95	65.95	66.83	64.94	65.77	66.20	68.36	68.76	68.97	67.24	67.55	71.67
130000	65.53	62.35	66.13	61.75	62.91	65.71	66.61	64.72	66.24	67.10	68.18	69.08	68.67	67.60	65.98	72.66
140000	63.10	61.39	65.98	62.65	62.10	65.52	66.54	65.44	66.51	67.62	67.75	68.56	68.14	68.58	65.28	72.84
150000	62.35	60.75	65.12	63.30	61.29	65.71	66.69	67.14	66.38	67.82	67.64	68.04	67.82	68.68	65.43	72.09
160000	61.07	60.53	64.90	62.82	61.52	65.73	67.26	68.05	65.80	68.52	67.17	67.46	67.77	68.58	65.39	70.18
170000	60.22	60.12	64.71	62.15	62.17	65.84	67.59	67.89	64.83	69.15	66.56	67.32	68.02	68.32	66.40	68.25
180000	60.08	59.58	64.29	62.19	62.51	65.66	67.66	67.93	64.26	68.81	66.85	67.32	68.54	68.20	67.15	67.03
190000	60.19	59.49	62.67	62.19	62.85	65.50	67.05	67.66	64.24	66.70	66.90	67.21	69.37	66.72	67.82	66.67
200000	60.58	60.46	61.29	61.95	63.66	65.68	66.54	67.30	64.13	65.17	66.92	66.78	70.12	65.53	68.68	66.69
210000	60.24	61.05	60.66	62.13	64.27	65.59	65.89	66.78	64.54	63.91	67.08	66.47	70.12	64.62	69.57	67.06
220000	60.42	61.83	60.96	62.78	64.94	65.37	65.88	66.49	65.46	63.27	67.48	66.58	70.03	64.62	70.23	67.66
230000	61.74	63.10	61.68	63.54	65.41	65.30	66.24	66.34	65.77	64.04	68.00	66.97	69.76	64.74	70.21	68.85
Daily Max	66.20	65.48	66.74	64.99	66.07	66.22	67.66	68.05	66.51	69.15	68.36	69.08	70.12	69.17	70.23	72.84
Daily Min	60.08	59.49	60.66	61.72	61.29	65.30	65.26	64.72	64.13	63.27	64.87	64.99	67.17	64.62	65.28	66.67
Average	63.07	63.09	64.72	63.25	64.35	65.77	66.33	66.36	65.47	65.63	67.10	67.11	68.48	67.33	68.24	69.30

Monthly average: 66.93
License Maximum Monthly Average: 68.00

Bond Falls Dam Temperature Summary - July 2006

Time	07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
HHMMSS															
0	69.73	68.38	70.03	68.38	69.53	68.47	68.63	71.83	69.49	70.83	69.51	70.07	71.96	66.78	53.40
10000	70.65	70.05	70.74	67.95	69.42	68.23	68.45	71.47	69.57	70.20	70.09	70.54	72.28	66.92	55.36
20000	71.47	70.74	70.83	67.44	69.24	68.18	68.49	70.56	69.46	69.12	70.47	70.47	72.30	66.69	55.44
30000	71.44	70.93	70.54	67.32	69.51	68.29	68.32	69.42	69.21	69.12	70.77	69.87	71.96	66.45	57.31
40000	71.55	70.32	70.20	67.46	69.91	68.52	68.22	68.92	69.21	69.66	70.84	69.60	71.60	66.58	60.33
50000	71.02	69.93	70.29	67.87	70.47	68.85	68.13	68.49	69.30	69.55	70.92	69.48	71.55	66.81	61.77
60000	69.93	69.85	70.07	68.11	70.45	68.86	68.29	68.43	69.31	69.39	70.88	69.30	70.97	66.94	53.35
70000	69.33	69.82	69.64	68.14	69.84	68.85	68.83	68.50	69.57	68.95	70.93	69.13	70.20	66.72	51.21
80000	68.45	69.75	69.37	68.25	69.21	68.88	69.44	68.68	69.94	68.63	71.17	68.92	68.61	65.88	52.45
90000	67.77	69.75	69.58	68.63	68.79	68.63	69.96	68.88	70.29	68.63	71.69	69.01	67.91	60.98	58.53
100000	67.64	69.78	69.80	68.95	68.90	68.43	70.23	68.54	70.61	68.45	71.98	70.07	69.48	55.92	58.33
110000	67.95	69.64	70.07	68.19	69.35	68.50	70.36	68.88	71.04	69.15	72.00	70.88	70.93	55.47	56.12
120000	67.10	69.53	70.59	68.31	70.23	67.84	70.29	68.92	71.33	69.37	72.12	71.20	68.20	54.36	61.32
130000	67.05	69.60	70.90	69.48	70.00	67.98	70.68	68.68	71.31	69.67	71.83	71.29	68.45	55.62	52.45
140000	67.30	69.73	71.56	69.46	69.94	68.23	70.56	68.92	71.83	69.73	71.10	70.48	68.63	58.08	52.39
150000	67.42	70.25	72.36	68.99	69.53	68.90	70.56	69.08	71.76	69.57	71.19	70.61	68.76	52.92	51.94
160000	67.39	70.75	73.13	68.74	69.24	69.46	70.81	68.83	71.76	69.53	70.92	70.65	68.81	50.70	54.43
170000	67.08	71.20	73.51	68.16	69.13	69.42	70.90	68.18	71.56	67.44	70.74	70.79	68.13	51.84	59.13
180000	66.79	70.61	73.20	67.64	68.38	69.40	71.58	67.51	70.92	67.44	70.18	70.34	67.53	50.97	59.27
190000	66.94	69.75	72.82	67.23	67.89	69.12	71.96	67.28	70.39	66.85	70.07	70.47	66.88	55.17	58.23
200000	66.85	68.85	72.48	67.68	67.68	69.44	71.92	67.33	70.43	67.53	70.14	70.39	66.47	53.74	54.79
210000	66.15	67.86	71.58	68.27	67.73	69.87	71.89	67.62	70.21	67.96	70.21	70.38	66.47	58.66	56.28
220000	66.31	68.11	70.25	68.90	67.91	69.85	71.85	68.41	70.54	68.40	69.87	70.72	66.60	56.46	54.75
230000	67.05	69.01	69.21	69.39	68.23	69.26	71.82	69.12	70.77	68.99	69.98	71.20	66.47	56.14	54.95
Daily Max	71.55	71.20	73.51	69.48	70.47	69.87	71.96	71.83	71.83	70.83	72.12	71.29	72.30	66.94	61.77
Daily Min	66.15	67.86	69.21	67.23	67.68	67.84	68.13	67.28	69.21	66.85	69.51	68.92	66.47	50.70	51.21
Average	68.35	69.76	70.95	68.37	69.19	68.81	70.09	68.85	70.41	68.97	70.82	70.24	69.21	59.37	55.98

Equipment problems on 7/30 and 7/31 caused anomalously low temperature readings.

Bond Falls Dam Temperature Summary - August 2006

Time	Readings taken in Middle Branch of Ontonagon River															
HH-MM-SS	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/06/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
0	54.30	57.60	58.29	56.43	53.26	59.99	63.39	64.74		70.68	68.61	69.58	70.27	71.38	65.25	67.57
10000	53.38	54.70	58.48	56.86	52.32	57.99	63.52	61.45		70.59	68.67	69.71	70.63	71.47	66.09	67.66
20000	53.26	55.99	59.31	56.64	55.49	58.57	64.26	61.95		70.56	68.77	70.21	71.33	71.53	66.58	67.55
30000	52.30	56.41	57.02	56.82	55.40	57.15	64.20	63.16		70.52	68.79	70.77	71.89	71.10	66.81	67.50
40000	55.38	54.39	54.46	56.71	60.78	61.88	64.31	62.19		70.48	68.63	70.93	72.09	70.07	66.79	67.44
50000	59.86	56.10	53.71	56.53	57.27	62.82	64.36	63.27		70.39	68.38	70.38	72.05	68.72	66.56	67.32
60000	59.85	56.55	52.03	54.88	56.71	60.62	64.40	60.60		70.34	68.16	69.87	71.89	67.68	66.31	67.24
70000	54.59	56.26	54.12	58.87	56.75	61.30	63.39	61.74		70.23	68.18	69.67	71.69	66.61	66.25	67.23
80000	54.63	62.26	52.86	58.57	56.28	61.92	63.75	60.78		70.20	68.76	70.02	71.71	66.40	66.34	67.50
90000	54.32	60.40	54.52	58.26	55.53	62.24	63.70	61.65		70.59	69.75	70.52	71.67	66.69	66.72	68.13
100000	56.52	62.58	62.60	58.55	56.12	61.47	64.09	61.14		70.92	70.81	71.04	71.40	67.30	67.17	68.59
110000	56.41	61.43	54.75	56.41	56.80	61.45	63.72	63.34	71.19	70.99	71.74	71.49	71.20	67.53	67.53	69.42
120000	57.45	61.72	63.16	57.94	57.09	61.59	61.45	63.52	71.58	71.20	72.32	71.74	71.28	67.19	67.71	70.23
130000	54.86	58.03	57.27	57.13	58.15	60.94	61.12	61.84	71.35	71.15	72.55	71.80	71.85	66.87	67.57	70.79
140000	55.08	56.77	57.74	55.60	57.85	61.25	61.47	61.82	71.37	71.02	72.63	71.83	72.43	66.56	67.12	71.08
150000	54.82	56.55	57.29	56.55	57.96	58.69	61.83	61.65	71.24	70.95	72.64	71.96	72.48	65.77	66.94	71.55
160000	53.56	59.00	56.41	55.42	57.56	62.33	62.49	61.23	71.37	70.83	72.52	72.01	72.18	64.80	66.96	71.47
170000	53.08	58.10	54.68	58.10	58.53	62.53	62.44	62.74	71.44	70.93	72.36	72.09	72.05	63.72	67.08	71.47
180000	55.53	57.22	61.47	59.50	57.90	62.26	63.28	63.10	71.47	70.56	71.92	71.98	71.71	62.92	67.17	71.10
190000	57.94	53.44	57.52	56.16	56.98	62.17	63.10		71.42	70.27	71.60	71.89	71.44	62.31	67.15	71.10
200000	55.89	52.63	53.01	57.31	58.32	61.88	64.36		71.08	69.85	71.15	71.85	71.24	62.29	67.14	70.86
210000	55.62	53.69	53.22	53.73	58.10	61.56	63.37		70.68	69.40	70.84	71.56	71.06	62.35	67.17	70.57
220000	56.59	57.72	55.51	55.67	59.58	62.60	62.46		70.57	69.19	70.57	71.04	71.19	62.91	67.30	70.45
230000	53.64	57.36	54.09	53.13	60.06	63.03	63.39		70.68	68.85	70.11	70.47	71.08	64.27	67.41	70.41
Daily Max	59.86	62.58	63.16	59.50	60.78	63.03	64.40	64.74	71.58	71.20	72.64	72.09	72.48	71.53	67.71	71.55
Daily Min	52.30	52.63	52.03	53.13	52.32	57.15	61.12	60.60	70.57	68.85	68.16	69.58	70.27	62.29	65.25	67.23
Average	55.37	57.37	56.44	56.74	57.12	61.18	63.24	62.21	71.19	70.45	70.44	71.02	71.57	66.60	66.88	69.33

** All data in degrees F
Monthly average: 69.04
License Maximum Monthly Average: 68

Equipment problems starting on 7/30/06 caused abnormally low temperature readings and missing data on 8/8 and 8/9

Bond Falls Dam Temperature Summary - August 2006

Time	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
HHMMSS	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
0	70.27	70.05	69.91	67.48	68.68	67.44	67.33	69.53	69.91	68.47	67.08	67.44	67.15	66.54	68.07
10000	70.23	70.00	69.98	67.42	68.59	67.51	67.35	69.69	69.69	68.43	66.97	67.37	67.12	66.40	68.41
20000	70.36	69.96	69.98	67.42	68.52	67.50	67.37	69.69	69.49	68.38	66.85	67.28	67.05	66.20	68.58
30000	70.47	69.71	69.40	67.46	68.41	67.39	67.17	69.48	69.30	68.36	66.74	67.30	66.97	66.07	68.59
40000	70.45	69.51	69.03	67.57	68.31	67.39	67.24	69.39	69.08	68.31	66.67	67.30	66.90	65.93	68.41
50000	70.36	69.28	68.85	67.51	68.29	67.28	67.28	69.30	68.95	68.27	66.54	67.39	66.96	65.80	68.27
60000	70.23	69.08	68.63	67.48	68.36	67.17	67.30	69.22	69.06	68.25	66.40	67.50	67.01	65.70	67.98
70000	70.18	69.01	68.11	67.60	68.47	67.21	67.32	69.24	69.03	68.25	66.31	67.59	68.83	65.61	67.77
80000	70.20	69.12	68.40	68.00	68.56	67.55	67.32	69.73	68.97	68.25	66.51	67.89	66.87	65.82	67.77
90000	70.30	69.19	69.17	68.50	68.72	68.02	67.64	69.98	68.95	68.29	67.06	68.32	67.01	66.45	68.05
100000	70.48	69.37	69.49	69.26	69.08	68.72	68.00	70.29	69.04	68.38	67.86	68.65	67.14	66.83	68.52
110000	70.90	69.58	69.85	70.03	69.64	69.22	68.76	70.86	69.04	68.58	68.54	68.81	67.30	67.33	69.06
120000	70.81	70.27	69.93	70.32	69.87	69.71	69.42	71.44	69.64	68.70	68.53	68.76	67.46	68.76	70.12
130000	70.92	70.99	69.46	70.52	69.62	69.82	69.87	71.87	69.94	68.47	68.70	68.76	67.46	68.76	70.38
140000	71.11	71.58	69.62	70.77	69.53	69.62	70.23	71.94	69.66	68.88	69.84	68.63	67.64	69.17	70.38
150000	71.55	71.46	69.15	70.79	69.21	69.49	70.56	72.07	69.35	68.95	69.85	68.63	67.48	69.33	70.48
160000	71.73	71.22	68.61	70.47	68.56	69.19	70.61	72.03	69.22	69.01	69.62	68.74	67.41	69.46	70.48
170000	71.46	71.29	68.20	70.07	67.93	68.85	70.50	71.73	69.30	68.77	69.39	68.72	67.46	69.35	70.36
180000	71.28	70.90	68.16	69.71	67.60	68.50	70.54	71.55	69.17	68.45	68.95	68.65	67.33	69.35	70.18
190000	71.04	70.36	68.04	69.48	67.37	68.18	70.32	71.37	68.99	68.18	68.43	68.23	67.28	69.17	69.93
200000	70.50	69.96	67.87	69.22	67.21	67.89	70.14	71.08	68.85	67.84	67.98	67.91	67.23	68.79	69.48
210000	70.18	69.80	67.75	68.99	67.19	67.55	69.80	70.70	68.72	67.51	67.59	67.66	67.08	68.47	69.04
220000	70.02	69.73	67.66	68.86	67.23	67.37	69.55	70.25	68.59	67.30	67.35	67.46	66.88	68.14	68.67
230000	70.03	69.84	67.53	68.79	67.33	67.26	69.44	70.00	68.52	67.15	67.35	67.30	66.72	67.91	68.40
Daily Max	71.73	71.58	69.98	70.79	69.87	69.82	70.61	72.07	69.94	69.01	69.85	68.90	67.84	69.46	70.48
Daily Min	70.02	69.01	67.53	67.42	67.19	67.17	67.17	69.22	68.52	67.15	66.31	67.28	66.72	65.61	67.77
Average	70.63	70.05	68.87	68.91	68.43	68.16	68.79	70.52	69.18	68.31	67.85	68.02	67.15	67.53	69.03

Bond Falls Dam Temperature Summary - September 2006

Time		Readings taken in Middle Branch of Ontonagon River															
HHMMSS		09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/16/06
0	68.25	67.77	66.96	66.16	66.61	65.50	68.00	66.70	64.15	64.26	63.67	63.00	62.26	61.61	63.32	64.85	
10000	68.00	67.84	67.05	66.11	66.56	65.52	68.13	66.90	64.00	64.09	63.37	62.89	62.04	61.48	63.48	64.69	
20000	67.75	67.91	67.01	66.04	66.60	65.59	67.98	67.06	63.86	63.90	63.28	62.82	61.90	61.36	63.61	64.56	
30000	67.69	68.04	67.06	65.95	66.69	65.57	67.59	67.05	63.66	63.61	63.21	62.80	61.75	61.18	63.57	64.45	
40000	67.62	67.93	67.06	65.82	66.79	65.46	67.15	66.85	63.55	63.23	63.12	62.76	61.66	61.05	63.50	64.35	
50000	67.51	67.73	66.88	65.70	66.83	65.71	66.99	66.78	63.39	63.01	62.87	62.73	61.59	61.02	63.41	64.18	
60000	67.28	67.39	66.70	65.57	66.85	65.82	66.88	66.76	63.27	62.92	62.78	62.71	61.61	61.02	63.23	64.09	
70000	67.14	67.06	66.52	65.50	66.88	65.93	66.90	66.63	63.12	62.82	62.74	62.65	61.57	61.02	63.09	64.04	
80000	67.12	67.10	66.58	65.50	67.10	66.11	67.12	66.27	63.18	62.89	62.74	62.64	61.61	61.05	63.19	64.15	
90000	67.48	67.53	67.01	66.51	66.97	66.36	67.41	65.89	63.52	63.23	62.85	62.76	61.97	61.41	63.45	64.36	
100000	68.18	68.20	67.57	66.51	68.13	66.58	67.86	65.84	64.18	63.86	63.27	62.78	62.35	62.17	63.97	64.56	
110000	68.81	68.83	67.80	66.99	68.61	66.79	68.29	65.77	64.72	64.31	63.43	62.76	62.91	62.94	64.65	64.45	
120000	69.30	68.94	68.31	67.69	68.88	67.60	68.52	65.66	65.08	64.69	63.86	62.76	63.36	63.68	65.17	64.54	
130000	69.64	69.33	68.85	68.11	68.95	68.32	68.45	65.55	65.55	65.05	63.95	62.82	63.64	64.29	65.52	64.49	
140000	69.80	69.42	68.93	68.13	68.54	68.79	68.18	65.62	65.84	65.32	63.93	62.82	63.68	64.60	65.80	64.69	
150000	69.67	69.26	68.92	68.67	68.56	68.90	67.78	65.70	65.97	65.41	63.88	62.83	63.59	64.63	65.98	64.92	
160000	69.71	69.22	68.90	68.47	68.11	68.77	67.30	65.64	65.95	65.46	63.81	62.94	63.28	64.74	66.15	65.12	
170000	69.49	69.13	68.40	68.36	67.53	68.88	66.92	65.61	65.86	65.32	63.72	63.00	62.98	64.83	66.20	65.10	
180000	69.28	69.03	67.82	68.36	67.05	68.85	66.43	65.52	65.59	65.23	63.59	62.94	62.65	64.78	66.00	64.92	
190000	68.94	68.76	67.33	68.36	66.76	68.49	66.15	65.37	65.32	65.03	63.41	62.89	62.42	64.47	65.84	64.76	
200000	68.40	68.14	66.92	67.86	66.33	68.14	65.95	65.14	65.08	64.67	63.27	62.78	62.10	63.97	65.64	64.53	
210000	68.09	67.66	66.69	67.37	65.97	67.93	66.00	64.81	64.83	64.38	63.19	62.71	61.88	63.50	65.37	64.38	
220000	67.87	67.30	66.51	66.99	65.75	67.93	66.20	64.58	64.56	64.20	63.14	62.64	61.75	63.19	65.21	64.36	
230000	67.71	66.97	66.33	66.79	65.66	68.05	66.49	64.35	64.35	63.93	63.05	62.51	61.70	63.18	65.03	64.38	
Daily Max	69.80	69.42	69.13	68.67	68.95	68.90	68.52	67.06	65.97	65.46	63.95	63.00	63.68	64.83	66.20	65.12	
Daily Min	67.12	66.97	66.33	65.50	65.66	65.46	65.95	64.35	63.12	62.82	62.74	62.51	61.57	60.96	63.09	64.04	
Average	68.36	68.19	67.44	66.97	67.23	67.15	67.28	65.92	64.52	64.20	63.34	62.79	62.34	62.80	64.60	64.54	
		Monthly average: 62.23 License Maximum Monthly Average 63 F															

Monthly average: 62.23
License Maximum Monthly Average 63 F

Bond Falls Dam Temperature Summary - September 2006

Time	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
HHMMSS														
0	64.29	62.67	61.03	59.70	58.57	60.08	59.23	58.59	57.54	56.70	57.20	55.80	55.22	54.66
10000	64.26	62.47	61.02	59.65	58.48	59.88	59.14	58.50	57.52	56.62	57.20	55.76	55.15	54.66
20000	64.22	62.28	60.96	59.52	58.39	59.72	59.18	58.44	57.47	56.62	57.00	55.72	55.08	54.64
30000	64.20	62.17	60.91	59.34	58.32	59.59	59.13	58.32	57.47	56.59	56.86	55.69	54.91	54.61
40000	64.18	62.02	60.82	59.22	58.23	59.58	59.07	58.23	57.52	56.53	56.79	55.63	54.72	54.52
50000	64.17	61.90	60.73	59.05	58.08	59.56	58.98	58.19	57.52	56.46	56.62	55.68	54.64	54.28
60000	64.13	61.79	60.67	59.02	57.94	59.49	58.93	57.99	57.52	56.39	56.52	55.49	54.59	54.28
70000	64.11	61.74	60.53	59.07	57.85	59.45	58.82	57.92	57.49	56.35	56.48	55.44	54.50	54.34
80000	64.17	61.68	60.48	59.16	57.81	59.40	58.87	57.94	57.45	56.53	56.44	55.47	54.45	54.46
90000	64.36	61.72	60.49	59.38	58.08	59.34	59.14	57.85	57.45	56.80	56.43	55.56	54.55	54.57
100000	64.69	61.95	60.49	59.65	58.71	59.23	59.47	58.15	57.83	57.11	56.55	55.72	54.95	54.86
110000	65.16	62.11	60.66	59.97	59.40	59.16	59.86	58.48	57.99	57.29	56.86	56.17	55.22	55.13
120000	65.53	62.04	60.60	59.88	59.94	59.27	60.03	58.69	58.12	57.38	56.98	56.23	55.35	55.36
130000	65.61	62.04	60.71	59.94	60.40	59.32	60.08	58.84	57.90	57.45	56.97	56.57	55.51	55.33
140000	65.55	62.33	60.66	59.97	60.71	59.29	59.97	58.98	57.87	57.70	56.77	56.16	55.53	55.42
150000	65.37	62.13	60.69	60.01	60.87	59.20	59.77	58.91	57.99	57.74	56.88	55.90	55.47	55.26
160000	65.14	61.93	60.67	59.95	60.89	59.09	59.65	58.62	57.90	57.83	56.71	55.92	55.33	55.00
170000	64.69	61.75	60.49	59.67	60.93	59.05	59.49	58.32	57.81	57.83	56.52	55.90	55.11	54.86
180000	64.49	61.59	60.37	59.32	60.84	59.09	59.34	58.12	57.51	57.69	56.34	55.85	55.11	54.86
190000	64.20	61.43	60.19	59.16	60.75	59.09	59.13	57.99	57.34	57.51	56.19	55.63	54.86	54.72
200000	63.91	61.38	60.06	58.89	60.60	59.09	59.02	57.81	57.15	57.40	56.03	55.44	54.70	54.57
210000	63.70	61.34	60.01	58.75	60.44	59.16	58.95	57.81	56.98	57.33	55.89	55.36	54.64	54.50
220000	63.43	61.25	59.92	58.73	60.33	59.20	58.86	57.61	56.91	57.27	55.78	55.29	54.66	54.41
230000	63.00	61.12	59.77	58.66	60.22	59.23	58.73	57.54	56.80	57.20	55.80	55.27	54.68	54.34
Daily Max	65.61	62.67	61.03	60.01	60.93	60.08	60.08	58.98	58.12	57.88	57.20	56.57	55.56	55.42
Daily Min	63.00	61.12	59.77	58.66	57.81	59.05	58.73	57.54	56.80	56.35	55.78	55.27	54.45	54.28
Average	64.44	61.87	60.54	59.40	59.45	59.36	59.29	58.24	57.54	57.10	56.57	55.73	54.97	54.76

Bond Falls Bypass Temperature Summary - June 2006

Time HHMMSS	06/01/06	06/02/06	06/03/06	06/04/06	06/05/06	06/06/06	06/07/06	06/08/06	06/09/06	06/10/06	06/11/06	06/12/06	06/13/06	06/14/06	06/15/06	06/16/06
0	58 58	55 82	57 59	54 52	55 12	54 26	54 21	58 84	59 40	52 86	57 20	59 23	55 73	58 58	53 38	57 85
10000	59 01	54 95	58 15	53 73	54 87	54 56	53 91	58 24	57 94	52 64	57 77	59 23	56 43	58 80	53 34	58 84
20000	59 32	55 21	58 20	53 47	54 34	54 56	54 08	57 46	57 03	52 64	57 33	59 62	57 85	59 66	53 52	58 97
30000	57 72	54 56	57 77	53 56	54 08	54 82	54 52	55 69	56 29	52 82	56 99	59 70	58 24	60 43	54 65	57 94
40000	55 04	53 95	56 69	54 26	53 73	54 47	54 73	54 73	55 17	53 08	56 34	59 01	57 64	59 27	55 04	56 86
50000	53 73	53 47	55 78	54 78	53 65	54 69	56 29	53 25	54 17	55 00	55 99	57 64	56 56	58 07	56 38	56 56
60000	53 43	53 99	54 82	55 26	54 34	54 43	56 21	52 95	53 78	55 21	56 21	56 21	56 38	56 69	57 89	55 91
70000	53 25	54 73	54 26	55 26	55 86	54 17	56 29	52 86	53 56	56 17	55 78	55 43	56 17	57 25	58 71	55 56
80000	52 90	54 43	53 78	55 30	55 12	53 99	56 38	55 04	53 69	56 69	55 52	54 56	56 12	56 86	58 58	55 78
90000	52 47	53 60	53 08	54 78	55 17	53 52	56 90	54 60	53 43	56 90	55 12	54 26	55 86	56 77	59 40	55 00
100000	52 38	53 17	52 82	54 21	55 39	53 30	57 25	54 34	54 65	57 46	55 47	53 82	55 43	56 81	60 56	54 13
110000	53 17	53 52	53 38	54 65	54 73	54 04	57 55	54 73	55 82	57 38	55 43	53 69	54 26	57 38	62 11	53 60
120000	53 56	53 34	53 47	53 99	53 12	54 26	57 03	54 47	56 34	57 29	55 26	53 38	53 52	58 33	60 86	54 56
130000	53 91	53 95	54 17	53 78	52 77	54 08	56 99	54 17	56 38	56 51	54 21	55 60	53 43	59 53	60 30	55 34
140000	54 56	54 08	54 26	53 47	52 38	53 69	56 12	54 08	56 69	56 60	53 95	56 64	53 47	60 26	60 86	55 12
150000	54 08	53 99	54 43	53 95	52 55	53 34	54 73	53 99	56 12	55 43	53 86	57 98	53 91	60 47	61 46	57 16
160000	53 47	53 86	54 17	54 91	53 47	53 25	53 99	53 52	57 12	53 86	54 69	56 77	55 65	59 23	61 08	57 29
170000	53 38	53 38	54 04	54 78	56 17	53 43	54 30	53 43	55 43	53 43	54 30	55 78	56 38	57 46	60 09	58 45
180000	53 69	53 91	53 17	54 52	57 46	53 12	55 34	54 04	54 60	53 03	53 73	55 39	57 16	55 56	58 20	58 80
190000	53 56	54 08	53 30	55 00	57 42	52 90	56 81	54 43	55 26	53 03	53 91	54 73	56 73	54 69	56 73	58 71
200000	54 30	54 30	52 95	55 82	56 60	52 77	58 07	54 60	55 65	53 34	54 73	55 04	57 77	54 34	56 34	57 77
210000	55 91	55 08	53 34	55 52	55 82	53 43	59 87	57 20	54 39	54 73	55 78	55 17	58 33	54 13	55 73	57 85
220000	57 64	56 34	53 91	55 30	54 52	54 04	59 36	58 88	53 65	55 56	57 64	55 12	58 84	54 17	55 69	58 54
230000	57 07	56 43	54 39	55 30	54 47	54 43	58 76	59 92	53 12	55 86	59 44	55 26	59 14	53 73	56 12	59 96
Daily Max	59 32	56 43	58 20	55 82	57 46	54 82	59 87	59 92	59 40	57 46	59 44	59 70	59 14	60 47	62 11	59 96
Daily Min	52 38	53 17	52 82	53 47	52 38	52 77	53 91	52 86	53 12	52 64	53 73	53 38	53 43	53 73	53 34	53 60
Average	54 84	54 34	54 66	54 59	54 72	53 90	56 24	55 23	55 40	54 90	55 69	56 22	56 29	57 44	57 79	56 94

Bond Falls Bypass Temperature Summary - June 2006

06/03/06	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
57 59	59 87	57 29	64 07	61 21	60 60	59 40	63 60	61 59	59 83	57 20	61 85	61 76	60 69	64 76
58 15	59 10	55 56	64 33	61 55	59 83	60 30	63 86	61 89	60 30	57 94	60 52	61 93	61 16	64 59
58 20	58 07	53 73	62 62	62 11	59 57	60 69	63 78	62 79	60 39	58 67	59 87	62 02	61 89	63 69
57 77	58 71	55 00	60 69	62 32	59 14	60 39	64 20	63 95	59 87	59 83	60 39	62 06	62 41	62 70
56 69	58 20	54 13	59 19	61 68	58 41	60 56	63 82	63 43	58 24	61 12	60 35	62 32	62 75	62 19
55 78	56 94	54 30	57 72	60 86	57 33	60 99	63 47	62 88	56 94	61 80	60 47	62 36	62 83	61 72
54 82	55 69	53 78	55 99	60 22	56 43	60 35	62 92	61 93	57 51	62 45	60 26	61 89	62 58	61 16
54 26	54 65	53 73	54 60	60 52	55 69	59 14	62 06	61 85	58 88	62 62	60 05	60 99	62 19	60 82
53 78	54 91	54 17	53 69	59 92	55 82	57 59	61 68	61 68	59 53	62 49	59 87	59 62	61 59	60 95
53 08	53 99	55 91	53 38	59 01	56 12	56 34	60 90	60 56	59 57	62 11	59 32	58 76	61 08	60 90
52 82	53 38	55 86	53 82	57 85	56 08	55 65	60 05	58 45	59 36	61 59	58 50	57 16	59 92	60 77
53 38	52 77	55 39	53 78	56 69	56 47	54 60	59 53	57 03	60 69	61 33	59 27	57 33	58 37	60 90
53 47	52 99	55 21	55 08	56 56	57 25	54 39	59 96	57 85	62 02	60 73	60 13	56 90	56 99	61 29
54 17	55 34	56 86	55 82	56 12	58 11	54 78	59 36	58 54	64 25	60 99	60 99	59 14	55 65	61 51
54 26	57 55	56 99	56 86	56 34	58 84	56 38	58 24	59 10	64 29	60 69	61 51	59 96	55 43	62 06
54 43	59 40	57 94	58 41	58 41	59 01	58 50	58 93	59 06	62 62	61 03	61 68	60 52	57 12	61 46
54 17	59 19	56 73	59 32	60 22	55 86	58 20	58 84	58 88	62 45	60 77	62 19	60 13	58 63	60 82
54 04	60 30	55 60	60 30	61 16	54 30	57 72	59 49	59 36	60 52	59 83	62 06	61 46	59 01	60 35
53 17	60 95	54 82	59 36	62 02	53 69	58 58	59 23	61 42	59 27	59 53	61 89	61 72	60 90	60 05
53 30	61 89	55 47	57 33	61 12	53 43	58 76	59 14	62 02	57 55	59 44	62 11	62 58	62 45	60 60
52 95	58 50	55 00	57 16	61 25	53 52	59 79	60 26	63 22	56 99	60 43	61 46	61 46	63 69	60 77
53 34	56 08	57 20	57 29	60 47	55 12	61 55	60 90	64 42	56 25	61 55	60 52	61 12	65 44	60 77
53 91	55 65	58 37	58 24	60 47	56 69	61 85	61 33	62 53	56 56	62 15	60 69	60 82	65 96	61 51
54 39	55 95	61 38	59 87	60 99	58 20	62 62	61 38	61 16	56 43	62 02	61 46	60 69	65 57	62 11
58 20	61 89	61 38	64 33	62 32	60 60	62 62	64 20	64 42	64 29	62 62	62 19	62 58	65 96	64 76
52 82	52 77	53 73	53 38	56 12	53 43	54 39	58 24	57 03	56 25	57 20	58 50	56 90	55 43	60 05
54 66	57 09	55 85	57 87	59 96	56 90	58 71	61 12	61 07	59 60	60 76	60 72	60 61	61 01	61 60

Bond Falls Dam Bypass Temperature Summary - July 2006

Bypass Temperature		Time															
HH:MM:SS	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06	
0	63.52	65.19	67.03	64.46	67.63	67.16	66.00	65.96	64.29	65.19	66.09	64.89	67.63	64.76	69.13	69.86	
10000	63.56	65.66	67.11	65.32	67.80	67.24	66.39	65.70	64.37	64.63	66.39	63.82	67.37	63.90	69.51	69.94	
20000	62.75	65.15	66.64	65.49	67.67	67.20	65.87	64.97	64.12	64.59	67.03	62.88	67.29	62.58	70.76	69.21	
30000	62.83	65.27	66.60	65.32	66.98	66.98	65.23	64.12	63.82	64.29	67.07	62.23	66.64	62.66	70.97	68.31	
40000	62.83	65.36	67.16	64.46	67.03	66.38	65.15	63.73	64.12	64.12	66.81	62.32	65.74	63.90	70.29	65.57	
50000	62.11	65.57	67.50	64.50	66.52	65.87	64.84	63.30	64.29	64.16	66.34	62.83	65.32	64.55	69.17	64.67	
60000	61.46	64.76	66.56	63.56	65.92	65.40	65.15	63.43	63.43	63.86	66.17	64.16	65.32	64.67	69.60	64.59	
70000	60.65	64.07	65.57	62.23	65.23	64.89	65.32	63.73	63.30	63.47	66.39	64.93	65.57	64.55	69.00	65.36	
80000	62.15	63.35	63.52	60.60	64.16	64.29	64.97	63.73	62.28	63.18	66.43	65.36	65.79	64.07	67.46	65.57	
90000	62.15	62.15	62.75	58.97	62.58	63.73	64.25	63.43	63.30	63.86	66.04	65.96	65.49	62.11	65.49	66.39	
100000	62.36	60.09	62.45	57.42	60.39	62.96	63.69	62.79	64.03	63.90	65.06	65.96	64.67	62.11	63.35	68.57	
110000	61.03	58.33	62.62	57.16	58.24	62.28	62.75	62.49	63.82	64.89	64.16	65.79	63.65	63.18	60.99	69.77	
120000	59.40	56.60	61.98	58.54	57.20	61.68	62.02	62.75	63.65	64.97	63.82	65.36	62.53	65.02	60.30	69.77	
130000	56.56	55.82	61.33	60.13	56.56	62.23	62.11	63.73	63.26	65.87	63.47	64.55	61.63	65.32	61.42	68.31	
140000	55.60	56.21	61.33	60.05	57.29	62.83	63.52	65.19	63.09	66.69	62.88	64.29	61.46	66.17	61.12	65.06	
150000	56.38	56.08	61.42	59.40	59.40	63.47	64.25	64.67	62.41	67.80	63.35	64.42	61.85	66.09	63.30	63.05	
160000	57.46	56.73	61.51	60.09	60.09	63.52	65.27	65.44	62.06	67.11	64.12	64.67	63.47	67.20	64.72	61.72	
170000	58.11	57.46	58.93	60.65	61.03	63.43	64.55	65.40	62.36	63.99	64.67	64.97	65.06	64.80	65.83	61.72	
180000	59.27	59.44	57.25	60.69	62.53	64.12	64.67	65.15	62.96	62.58	65.44	64.67	66.60	63.69	67.59	62.36	
190000	58.45	59.96	57.03	61.29	63.69	64.42	63.95	64.67	63.90	60.90	66.00	64.50	66.77	62.88	68.66	63.26	
200000	58.88	61.08	58.28	62.58	65.19	64.42	64.03	64.37	65.70	60.35	66.56	64.93	67.07	63.18	69.68	64.55	
210000	60.82	63.01	59.57	63.82	65.92	64.50	64.76	64.20	66.21	62.75	67.20	65.74	67.03	63.39	69.56	66.30	
220000	62.53	64.93	61.25	65.57	66.56	64.63	65.06	64.55	66.47	64.33	66.17	66.26	66.00	64.72	69.13	67.50	
230000	64.72	66.69	63.47	67.20	66.69	65.32	65.49	64.37	66.39	65.62	65.40	66.90	65.44	67.50	69.56	69.04	
Daily Max	64.72	66.69	67.50	67.20	67.80	67.24	66.39	65.96	66.47	67.80	67.20	66.90	67.63	67.50	70.97	69.99	
Daily Min	55.60	55.82	57.03	57.16	56.56	61.68	62.02	62.49	62.06	60.35	62.88	62.23	61.46	62.11	60.30	61.72	
Average	60.65	61.62	62.87	62.06	63.43	64.54	64.55	64.25	63.90	64.30	65.54	64.68	65.23	64.29	66.94	66.28	
Bypass monthly average			66.36														

Bond Falls Dam Bypass Temperature Summary - July 2006

Bypass Ter		Time														
HHMMSS		07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
0		70.24	72.39	69.86	64.63	69.73	68.14	69.34	70.97	70.03	67.37	71.19	70.16	72.78	70.54	72.83
10000		69.51	72.65	69.64	64.59	70.54	68.23	69.04	68.78	69.84	67.54	71.83	69.68	72.83	69.81	72.96
20000		69.51	71.27	68.87	65.06	71.23	68.78	69.04	68.40	69.47	68.78	72.14	68.66	72.05	69.47	71.83
30000		69.09	70.89	68.68	65.96	72.09	69.34	69.04	68.44	69.88	68.40	72.09	68.44	71.83	69.99	71.15
40000		66.77	70.80	68.47	66.52	71.96	69.30	69.30	67.93	69.81	68.57	72.31	68.14	71.66	70.46	70.46
50000		65.92	70.59	68.57	66.69	70.54	69.00	69.64	67.97	69.99	67.71	72.01	67.97	70.97	70.89	70.46
60000		64.84	69.73	67.93	66.64	68.96	68.40	70.29	68.14	70.12	67.16	71.83	67.54	69.04	70.12	69.94
70000		63.30	68.87	67.63	67.03	67.93	67.67	70.33	67.50	69.77	66.77	71.86	67.07	66.21	70.50	68.17
80000		63.09	68.40	67.29	66.90	67.76	66.94	70.42	67.20	69.60	66.69	71.70	66.77	65.62	70.12	68.43
90000		63.13	67.33	67.54	67.03	67.97	66.26	70.72	66.17	69.21	66.89	71.49	67.80	68.01	70.03	68.04
100000		62.88	67.20	68.19	66.73	68.44	66.30	70.46	66.43	68.83	66.98	70.46	67.88	69.09	69.34	68.26
110000		64.25	66.98	69.04	66.64	68.53	65.44	70.76	65.92	68.70	66.30	70.16	67.67	69.81	69.60	68.26
120000		64.20	66.69	70.12	67.03	67.71	65.62	70.59	65.70	69.04	66.30	69.04	67.37	69.51	69.43	69.86
130000		64.89	67.11	71.19	66.39	67.24	66.90	70.76	66.26	68.44	66.64	68.78	67.37	69.47	68.14	70.37
140000		65.53	68.14	71.45	66.21	66.77	68.01	71.45	66.39	68.87	66.69	68.27	67.93	69.94	67.41	71.66
150000		65.27	68.70	71.75	66.13	67.03	68.06	71.53	66.00	68.36	66.56	68.40	68.19	69.73	66.86	70.97
160000		65.44	67.41	71.62	65.57	66.09	68.78	72.91	65.40	68.14	65.27	67.97	68.40	69.34	67.67	71.10
170000		66.64	66.17	71.15	65.53	66.00	68.06	73.43	66.17	67.33	64.72	68.06	68.70	68.83	69.26	71.45
180000		67.03	65.23	71.32	66.81	66.00	69.34	73.34	66.17	67.84	65.02	67.88	69.39	68.78	72.65	71.06
190000		65.15	63.60	70.33	68.06	68.86	70.63	73.21	67.03	68.44	66.98	68.70	69.94	68.61	73.84	70.16
200000		65.83	65.19	68.23	69.26	67.48	70.80	73.08	68.74	69.68	67.41	68.83	69.86	69.17	74.38	70.03
210000		67.37	66.86	66.77	70.16	67.93	69.80	73.04	69.81	68.87	68.74	68.44	70.54	69.39	73.90	70.07
220000		69.17	68.48	65.96	70.42	68.53	68.96	73.00	70.24	69.81	69.77	69.04	71.88	69.94	73.56	70.67
230000		71.92	69.77	65.57	70.20	67.97	68.96	72.48	70.37	68.74	70.50	69.21	72.61	70.50	73.13	70.29
Daily Max		71.92	72.65	71.75	70.42	72.09	70.80	73.43	70.97	70.12	70.50	72.31	72.61	72.83	74.38	72.96
Daily Min		62.88	63.60	65.57	64.59	66.00	65.44	69.04	65.40	67.33	64.72	67.88	66.77	65.62	66.86	69.04
Average		66.29	68.35	69.13	66.92	68.39	68.24	71.13	67.57	69.10	67.26	70.06	68.75	69.71	70.45	70.56
Bypass mtc		Hour missing while down loading data.														

Bond Falls Bypass Temperature Summary - August 2006

Time HHMMSS	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/06/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
0	69.17	69.47	70.03	71.58	74.21	73.39	69.64	71.58	71.88	70.85	69.90	72.01	73.21	69.26	68.06	69.00
10000	68.96	69.26	70.37	71.58	74.55	72.31	69.43	71.70	71.58	70.76	69.43	70.76	72.96	67.63	67.54	68.83
20000	68.40	69.94	70.72	71.45	73.21	71.45	69.47	71.70	71.19	70.37	69.30	70.37	72.35	66.52	67.29	68.74
30000	68.36	70.72	70.93	71.58	72.18	70.97	69.00	71.75	70.93	69.94	69.47	70.20	72.05	65.27	67.33	68.66
40000	67.63	71.53	70.93	71.45	72.05	71.02	68.96	71.70	70.76	69.99	69.81	70.76	71.92	65.19	67.16	68.57
50000	67.54	72.09	70.72	71.15	72.05	70.89	68.91	71.62	70.59	70.59	70.93	71.15	71.88	65.27	67.07	68.66
60000	68.14	72.05	70.80	71.02	71.96	70.50	68.23	71.19	70.37	70.80	71.53	71.19	70.80	65.92	67.29	68.83
70000	68.66	72.48	70.63	70.97	71.19	69.94	67.07	70.93	69.68	71.10	72.14	70.93	70.29	65.49	67.11	69.17
80000	69.30	72.57	70.33	70.63	70.42	69.30	66.04	70.37	69.39	71.15	72.31	70.42	70.07	64.59	66.64	69.60
90000	68.96	72.31	69.43	70.29	70.24	68.53	64.42	70.67	69.09	70.76	71.83	70.03	70.37	64.67	66.04	69.68
100000	68.91	72.01	67.97	69.17	70.29	67.88	64.89	70.33	68.96	69.90	71.27	69.99	70.72	64.25	65.02	69.77
110000	68.40	70.89	66.52	67.93	70.67	66.73	66.64	69.86	68.74	69.81	71.19	69.60	70.80	63.82	65.27	69.90
120000	68.70	69.94	65.49	67.76	70.93	66.21	67.50	69.64	69.00	69.51	71.02	69.51	70.33	63.05	65.96	70.16
130000	69.28	69.51	65.92	68.23	71.58	65.57	68.14	69.47	69.39	69.90	70.72	70.12	70.80	62.70	66.64	70.07
140000	69.94	68.48	66.04	68.44	71.66	68.39	69.04	69.90	69.73	69.64	70.37	69.90	70.16	62.06	67.20	69.99
150000	70.89	67.88	66.34	69.43	72.18	68.69	69.34	70.46	69.99	69.94	70.50	70.33	70.03	61.83	67.54	70.16
160000	71.23	68.14	66.39	70.20	72.31	66.69	69.64	70.59	69.90	69.90	70.07	70.89	69.73	61.98	67.80	70.16
170000	71.19	67.80	67.20	70.59	72.44	66.60	69.60	71.10	69.60	69.47	70.20	70.76	69.90	61.98	68.10	69.99
180000	71.02	67.93	69.00	70.63	72.65	66.98	69.86	70.85	69.90	69.43	70.03	70.12	70.46	63.39	68.40	69.99
190000	70.37	68.23	69.90	70.93	73.69	67.29	70.54	70.37	70.29	69.13	69.47	69.30	70.33	64.76	68.70	70.03
200000	68.91	68.87	70.76	70.46	74.12	68.19	70.80	70.59	70.29	69.21	68.70	69.39	71.23	66.30	68.96	70.07
210000	68.01	69.17	71.49	70.46	74.51	69.00	71.02	71.23	70.46	69.68	69.60	70.54	71.27	67.24	69.13	70.50
220000	68.53	69.21	71.96	71.02	74.29	69.56	71.15	71.83	70.72	69.99	70.85	72.01	71.49	67.84	69.09	70.93
230000	68.31	69.51	71.96	72.70	74.16	69.60	71.32	72.18	70.76	70.20	71.96	73.00	70.72	68.10	69.04	71.23
Daily Max	71.23	72.57	71.96	72.70	74.55	73.39	71.32	72.18	71.88	71.15	72.31	73.00	73.21	69.26	69.13	71.23
Daily Min	67.54	67.80	65.49	67.76	70.24	65.57	64.42	69.47	68.74	69.13	68.70	69.30	69.73	61.63	65.02	68.57
Average	69.12	70.00	69.24	70.40	72.40	68.82	68.78	70.90	70.13	70.08	70.53	70.55	70.99	64.95	67.43	69.69
Bypass Monthly Average Temperature (°F)	69.40															

Bond Falls Bypass Temperature Summary - August 2006

Time	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
HHMMSS	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
0	71.19	69.73	70.12	69.00	69.09	69.00	69.09	70.93	71.19	69.26	68.23	68.01	68.19	67.97	70.12
10000	71.06	69.39	69.43	69.04	69.09	68.91	69.00	70.67	71.02	69.21	68.19	68.27	68.27	67.88	70.54
20000	70.89	69.13	69.13	69.04	69.26	68.78	68.87	70.93	70.76	69.13	68.10	68.40	68.27	67.80	70.63
30000	70.85	69.04	67.93	69.13	69.30	68.78	68.74	70.80	70.50	69.09	67.97	68.70	68.23	67.71	70.50
40000	70.76	69.17	69.47	69.21	69.26	68.87	68.66	70.80	70.59	69.04	67.84	68.78	68.10	67.63	70.20
50000	70.63	69.17	69.90	69.43	69.17	69.00	68.70	70.93	70.30	69.00	67.76	68.87	67.93	67.58	69.86
60000	70.59	69.26	70.16	69.68	69.21	69.17	68.78	70.89	70.33	68.96	67.71	69.00	67.80	67.46	69.47
70000	70.54	69.30	70.03	69.94	69.13	69.39	68.78	70.97	70.29	68.91	67.76	69.00	67.67	67.50	69.39
80000	70.54	69.21	69.56	70.03	69.13	69.34	68.78	71.06	70.16	68.83	67.84	69.04	67.63	67.56	69.30
90000	70.50	69.26	68.91	70.03	68.61	69.60	68.78	71.32	69.96	68.74	67.83	69.00	67.63	67.54	69.17
100000	70.54	69.34	68.44	69.99	68.57	69.56	69.09	72.05	70.03	68.70	67.80	68.46	67.63	68.14	69.47
110000	70.54	69.51	67.63	69.77	67.16	69.04	69.04	71.96	70.12	68.88	67.97	68.36	67.67	67.84	69.90
120000	70.85	69.51	67.33	69.77	67.16	68.74	69.17	71.83	69.94	68.70	68.01	68.31	67.76	67.88	70.07
130000	70.93	69.86	67.29	69.47	67.46	68.74	69.17	72.14	69.96	68.70	67.93	68.23	67.90	67.84	70.33
140000	71.06	69.51	67.71	69.51	67.41	68.74	69.17	72.14	69.96	68.70	67.93	68.23	67.90	67.84	70.33
150000	70.93	69.39	68.10	69.51	67.63	68.78	69.43	72.35	69.94	68.66	67.97	68.10	67.84	67.93	70.50
160000	70.37	69.04	68.48	69.56	67.67	68.83	69.60	72.52	69.94	68.61	67.83	68.10	67.93	67.97	70.72
170000	70.24	69.21	68.48	69.51	68.06	68.91	69.51	72.28	69.86	68.57	67.84	68.10	68.06	67.97	70.89
180000	70.16	69.21	68.66	69.64	68.31	68.96	69.73	72.18	69.77	68.48	67.84	68.10	68.23	68.14	70.76
190000	70.29	69.68	68.70	69.64	68.61	69.00	69.73	71.83	69.68	68.44	67.84	68.06	68.23	68.06	70.87
200000	70.37	69.90	68.70	69.64	68.83	69.17	69.77	71.75	69.47	68.40	67.80	68.06	68.27	67.93	70.50
210000	70.50	70.03	68.70	69.56	68.96	69.21	69.86	71.83	69.47	68.36	67.80	68.01	68.19	67.88	70.12
220000	70.46	70.03	68.78	69.51	68.96	69.13	70.50	71.75	69.43	68.31	67.88	68.01	68.14	69.26	70.07
230000	69.86	69.94	68.91	69.30	68.91	68.87	70.85	71.53	69.34	68.27	67.87	68.06	68.06	70.12	69.99
Daily Max	71.19	70.03	70.16	70.03	69.30	69.60	70.85	72.52	71.19	71.19	68.23	69.04	68.27	70.12	70.89
Daily Min	69.86	69.04	67.29	69.00	67.16	68.74	68.66	70.67	69.34	69.34	67.71	68.01	67.59	67.46	69.17
Average	70.61	69.45	68.77	69.54	68.58	69.04	69.27	70.09	70.09	70.09	67.91	68.41	67.96	67.87	70.12
Bypass Mo															

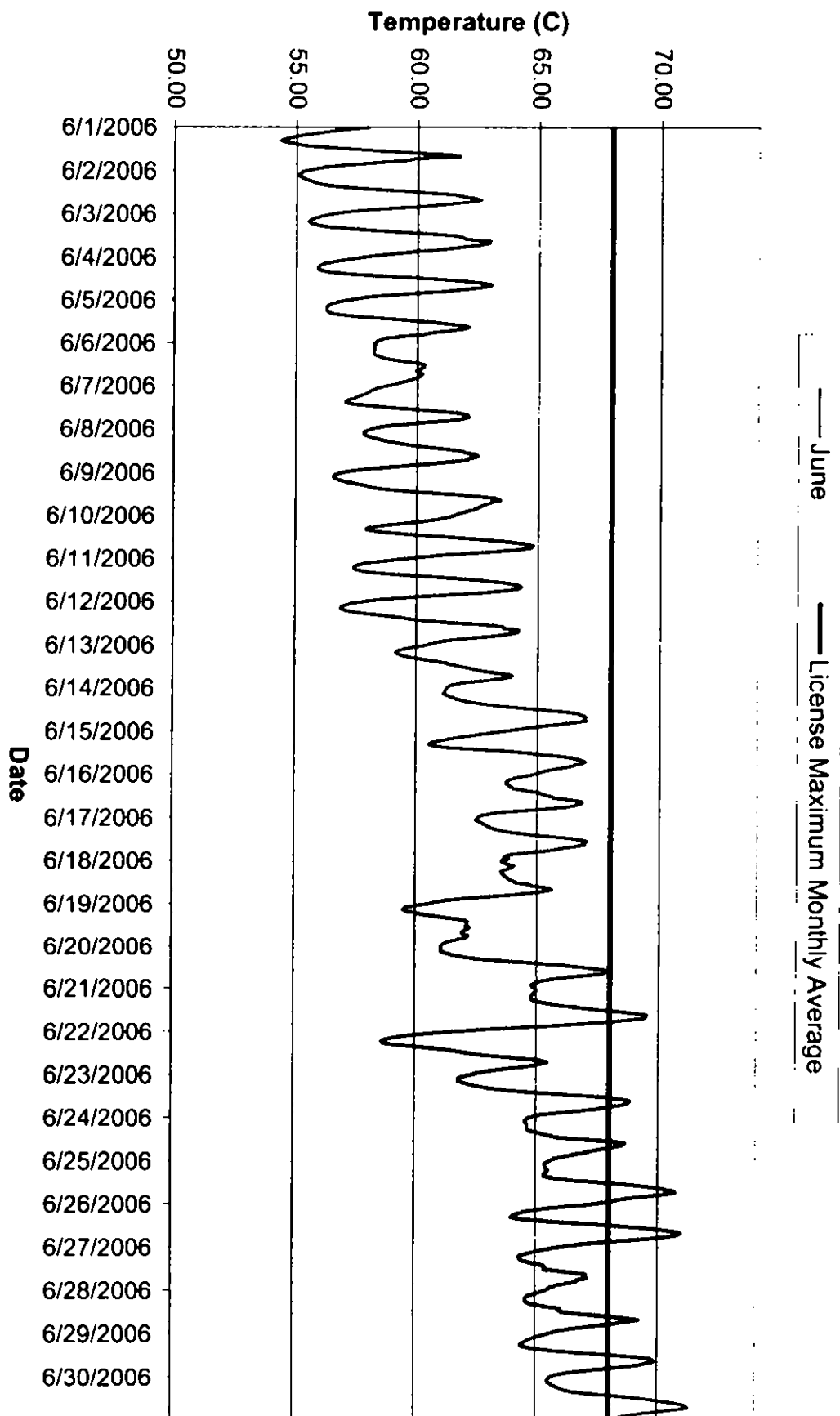
Bond Falls Bypass Temperature Summary - September 2006

Time	09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/16/06
HHMMSS																
0	68.25	67.77	66.96	66.16	66.61	65.50	68.00	66.70	64.15	64.26	63.61	63.00	62.26	61.61	63.32	64.85
10000	68.00	67.84	67.05	66.11	66.56	65.52	68.13	66.90	64.00	64.09	63.37	62.89	62.04	61.48	63.48	64.69
20000	67.75	67.91	67.01	66.04	66.60	65.59	67.98	67.06	63.86	63.90	63.28	62.82	61.90	61.36	63.61	64.56
30000	67.69	68.04	67.06	65.95	66.69	65.57	67.59	67.05	63.66	63.61	63.21	62.80	61.75	61.18	63.57	64.45
40000	67.62	67.93	67.06	65.82	66.79	65.46	67.15	66.85	63.55	63.23	63.12	62.76	61.66	61.05	63.50	64.35
50000	67.51	67.73	66.88	65.70	66.83	65.71	66.99	66.78	63.39	63.01	62.87	62.73	61.59	61.02	63.41	64.18
60000	67.28	67.39	66.70	65.57	66.85	65.82	66.88	66.76	63.27	62.92	62.78	62.71	61.61	61.02	63.23	64.09
70000	67.14	67.06	66.52	65.50	66.88	65.50	66.90	66.63	63.12	62.82	62.74	62.65	61.57	60.96	63.09	64.04
80000	67.12	67.10	66.58	65.50	67.10	66.11	67.12	66.27	63.18	62.89	62.74	62.64	61.61	61.05	63.19	64.15
90000	67.48	67.53	67.01	66.97	67.57	66.36	67.41	65.89	63.52	63.23	62.85	62.76	61.97	61.41	63.45	64.36
100000	68.18	68.20	67.57	66.51	68.13	66.58	67.86	65.84	64.18	63.86	63.27	62.78	62.35	62.17	63.97	64.56
110000	68.81	68.83	67.80	66.99	68.61	66.79	68.29	65.77	64.72	64.31	63.43	62.76	62.91	62.94	64.65	64.45
120000	69.30	69.94	68.31	67.69	68.88	67.60	68.52	65.66	65.08	64.69	63.86	62.76	63.36	63.68	65.17	64.54
130000	69.64	69.33	68.85	68.11	68.95	68.32	68.45	65.55	65.55	65.05	63.95	62.82	63.64	64.29	65.52	64.49
140000	69.80	69.42	69.13	68.54	68.86	68.79	68.18	65.62	65.84	65.32	63.93	62.83	63.68	64.60	65.80	64.69
150000	69.67	69.26	69.12	68.67	68.56	68.90	67.78	65.70	65.97	65.41	63.88	62.83	63.59	64.63	65.98	64.92
160000	69.71	69.22	68.90	68.47	68.11	68.77	67.30	65.64	65.95	65.46	63.81	62.94	63.28	64.74	66.15	65.12
170000	69.49	69.13	68.40	68.36	67.53	68.88	66.92	65.61	65.86	65.32	63.72	63.00	62.98	64.83	66.20	65.10
180000	69.28	69.03	67.82	68.36	67.05	68.85	66.43	65.52	65.59	65.23	63.59	62.94	62.65	64.78	66.00	64.92
190000	68.94	68.76	67.33	68.36	66.76	68.49	66.15	65.37	65.32	65.03	63.41	62.89	62.42	64.47	65.84	64.76
200000	68.40	68.14	66.92	67.86	66.33	68.14	65.95	65.14	65.08	64.67	63.27	62.78	62.10	63.97	65.64	64.53
210000	68.09	67.66	66.69	67.37	65.97	67.93	66.00	64.81	64.83	64.38	63.19	62.71	61.88	63.50	65.37	64.38
220000	67.87	67.30	66.51	66.99	65.75	67.93	66.20	64.58	64.56	64.20	63.14	62.64	61.75	63.19	65.21	64.36
230000	67.71	66.97	66.33	66.79	65.66	68.05	66.49	64.35	64.35	63.93	63.05	62.51	61.70	63.18	65.03	64.38
Daily Max	69.80	69.42	69.13	68.67	68.95	68.90	68.52	67.06	65.97	65.46	63.95	63.00	63.68	64.83	66.20	65.12
Daily Min	67.12	66.97	66.33	65.50	65.66	65.46	65.95	64.35	63.12	62.82	62.74	62.51	61.57	60.96	63.09	64.04
Average	68.36	68.19	67.44	66.97	67.23	67.15	67.28	65.92	64.52	64.20	63.34	62.79	62.34	62.80	64.60	64.54
Monthly average: 62.23																
License Maximum Monthly Average 63 F																

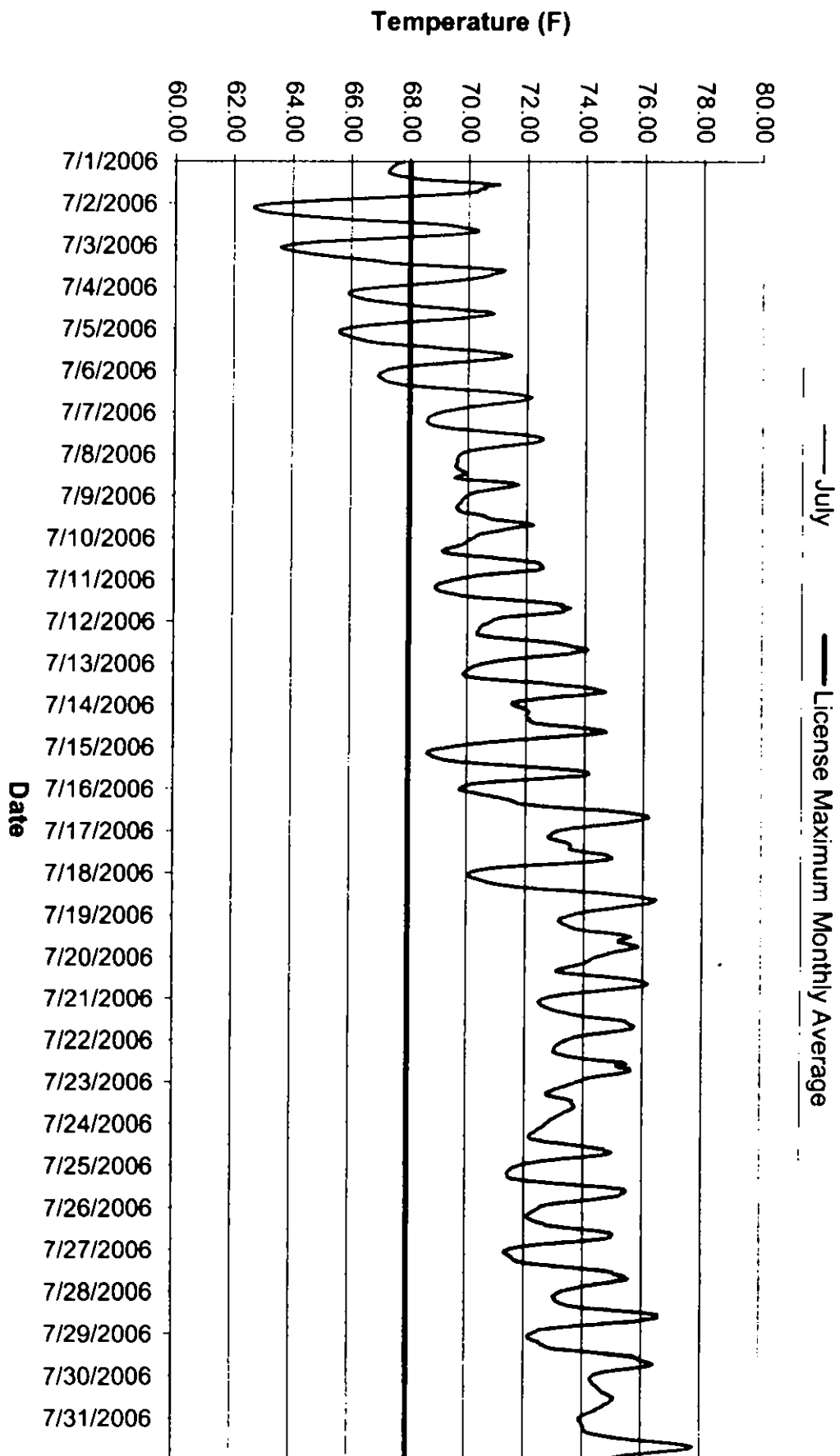
Bond Falls Bypass Temperature Summary - September 2006

Time HHMMSS	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
0	64.29	62.67	61.03	59.70	58.57	60.08	59.23	58.59	57.54	56.70	57.20	55.80	55.22	54.66
10000	64.26	62.47	61.02	59.65	58.48	59.88	59.14	58.50	57.52	56.62	57.20	55.76	55.15	54.66
20000	64.22	62.28	60.96	59.52	58.39	59.72	59.18	58.44	57.47	56.62	57.00	55.72	55.08	54.64
30000	64.20	62.17	60.91	59.34	58.32	59.59	59.13	58.32	57.47	56.59	56.86	55.69	54.91	54.61
40000	64.18	62.02	60.82	59.22	58.23	59.58	59.07	58.23	57.52	56.53	56.79	55.63	54.72	54.52
50000	64.17	61.90	60.73	59.05	58.08	59.56	58.98	58.19	57.52	56.46	56.62	55.58	54.64	54.28
60000	64.13	61.79	60.67	59.02	57.94	59.48	58.93	57.99	57.52	56.39	56.52	55.49	54.59	54.28
70000	64.11	61.74	60.53	59.07	57.85	59.45	58.82	57.92	57.49	56.35	56.48	55.44	54.50	54.34
80000	64.17	61.68	60.48	59.16	57.81	59.40	58.87	57.94	57.40	56.53	56.44	55.47	54.45	54.46
90000	64.36	61.72	60.49	59.38	58.08	59.34	59.14	57.85	57.45	56.80	56.43	55.56	54.55	54.86
100000	64.39	61.95	60.49	59.65	58.71	59.23	59.16	58.48	57.99	57.29	56.86	56.17	55.22	55.13
110000	65.16	62.11	60.66	59.97	59.40	59.27	59.86	58.15	57.83	57.11	56.55	55.72	55.22	55.36
120000	65.53	62.04	60.60	59.88	59.94	59.32	60.08	58.84	57.90	57.45	56.98	56.23	55.35	55.33
130000	65.61	62.04	60.71	59.94	60.40	59.32	60.08	58.91	57.90	57.70	56.77	56.16	55.53	55.42
140000	65.55	62.33	60.66	59.97	60.71	59.29	59.97	58.98	57.87	57.45	56.97	56.57	55.51	55.35
150000	65.37	62.13	60.69	60.01	60.87	59.20	59.77	58.91	57.99	57.74	56.88	55.90	55.56	55.26
160000	65.14	61.93	60.67	59.95	60.89	59.09	59.65	58.62	57.90	57.88	56.71	55.92	55.47	55.00
170000	64.69	61.75	60.49	59.67	60.93	59.05	59.49	58.32	57.81	57.83	56.52	55.90	55.33	54.86
180000	64.49	61.59	60.37	59.32	60.84	59.09	59.34	58.12	57.51	57.69	56.34	55.85	55.11	54.86
190000	64.20	61.43	60.19	59.16	60.75	59.09	59.13	57.99	57.34	57.51	56.19	55.63	54.86	54.72
200000	63.91	61.38	60.06	58.89	60.60	59.09	59.02	57.81	57.15	57.40	56.03	55.44	54.70	54.57
210000	63.70	61.34	60.01	58.75	60.44	59.16	58.95	57.81	56.98	57.33	55.89	55.36	54.64	54.50
220000	63.43	61.25	59.92	58.73	60.33	59.20	58.86	57.61	56.91	57.27	55.78	55.29	54.66	54.41
230000	63.00	61.12	59.77	58.66	60.22	59.23	58.73	57.54	56.80	57.20	55.80	55.27	54.68	54.34
Daily Max	65.61	62.67	61.03	60.01	60.93	60.08	60.08	58.98	58.12	57.88	57.20	56.57	55.56	55.42
Daily Min	63.00	61.12	59.77	58.66	57.81	59.05	58.73	57.54	56.80	56.35	55.78	55.27	54.45	54.28
Average	64.44	61.87	60.54	59.40	59.45	59.36	59.29	58.24	57.54	57.10	56.57	55.73	54.97	54.76

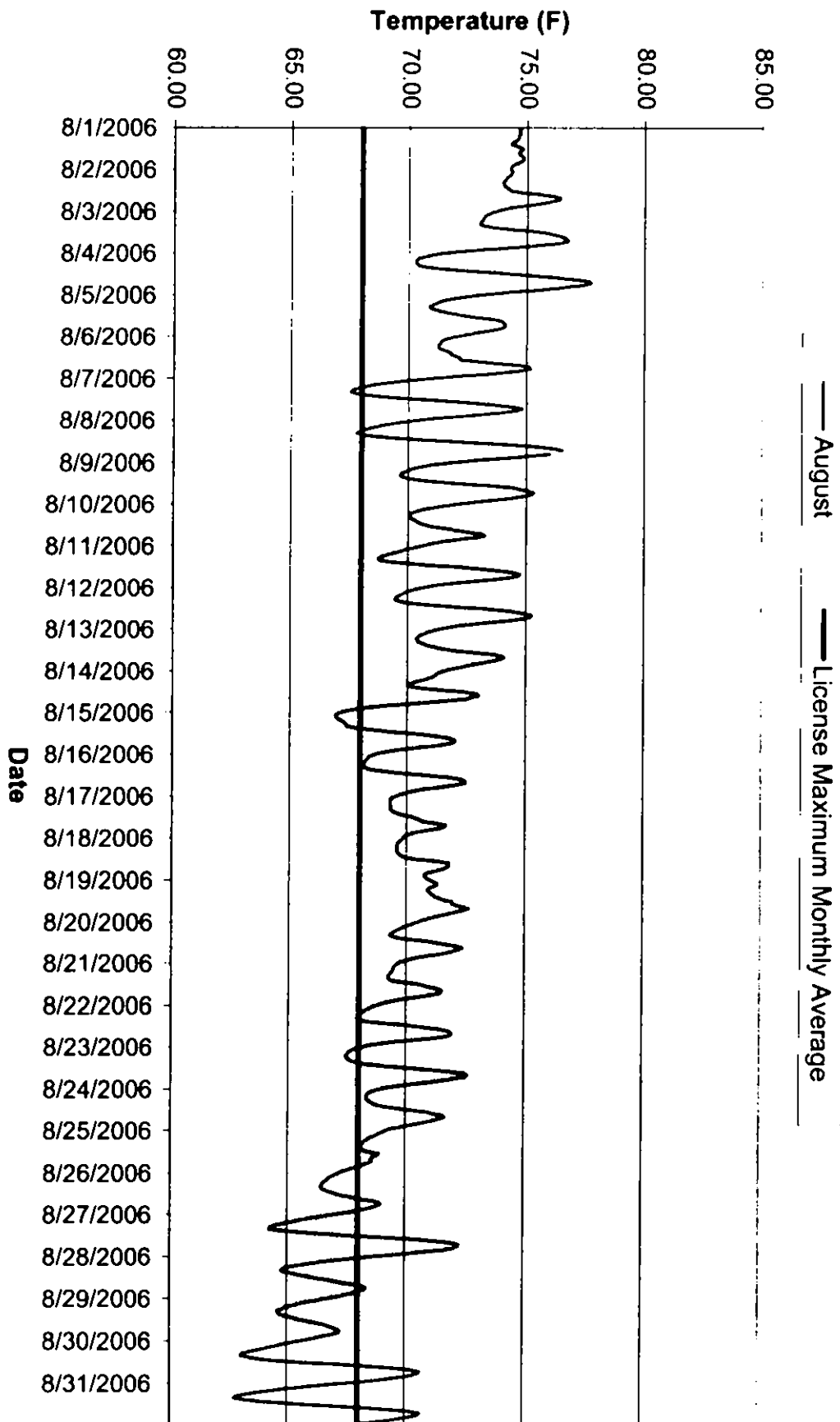
Roselawn Creek Temperatures - June 2006



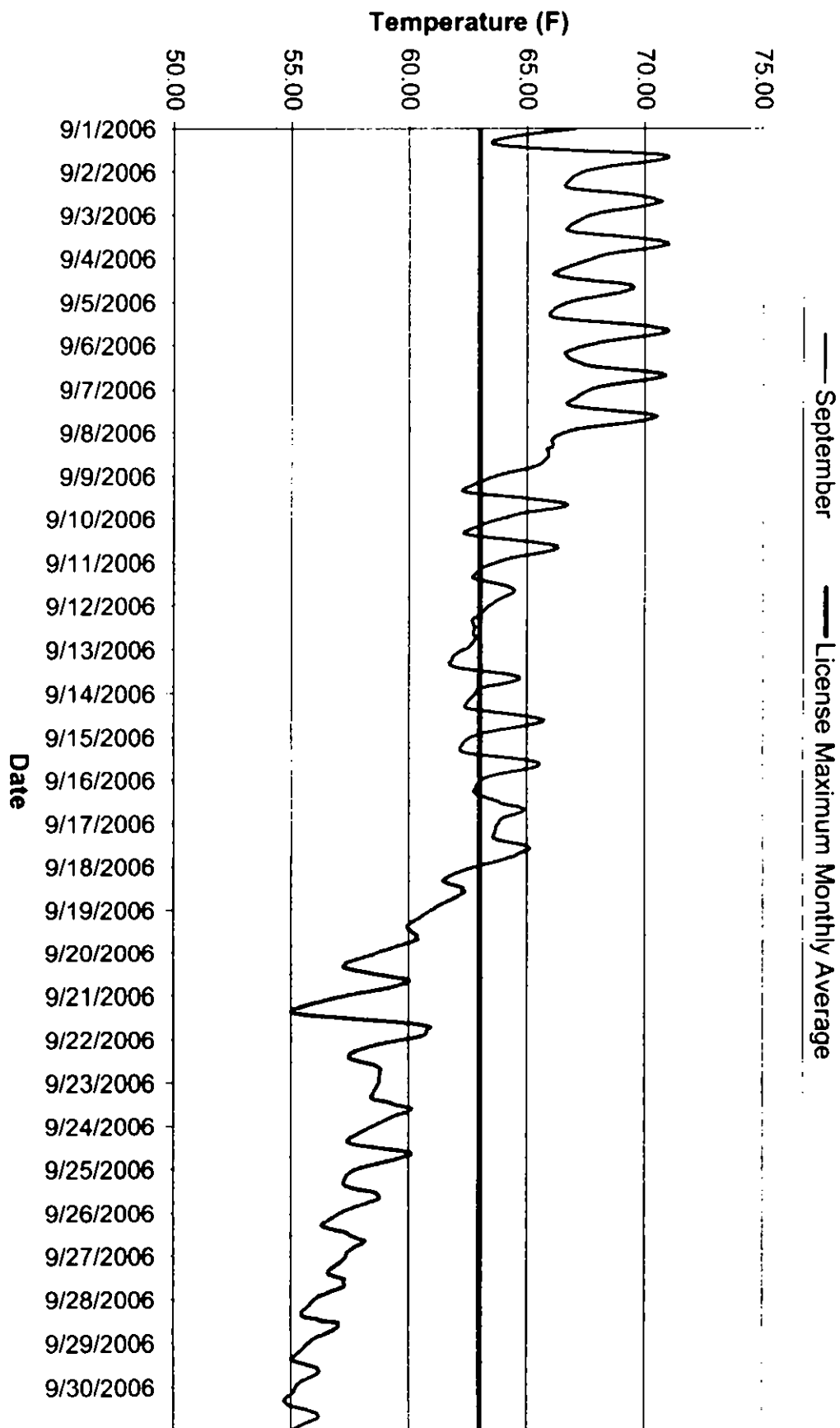
Roselawn Creek Temperatures - July 2006



Roselawn Creek Temperatures - August 2006



Roselawn Creek Temperatures - September 2006



Roselawn Creek Temperature Summary - June 2006

Time	06/01/06	06/02/06	06/03/06	06/04/06	06/05/06	06/06/06	06/07/06	06/08/06	06/09/06	06/10/06	06/11/06	06/12/06	06/13/06	06/14/06	06/15/06	06/16/06
HHMMSS																
0	57.96	55.35	56.50	57.63	57.04	58.23	58.60	58.01	56.80	61.48	59.41	57.79	60.42	61.27	63.46	64.85
10000	57.07	55.18	56.10	57.11	56.71	58.26	58.35	57.85	56.59	61.20	58.78	57.34	59.99	61.23	62.89	64.54
20000	56.44	55.11	55.81	56.59	56.46	58.24	58.14	57.79	56.53	60.80	58.15	57.09	59.58	61.18	62.35	64.11
30000	55.90	55.17	55.60	56.23	56.28	58.24	58.01	57.87	56.64	60.28	57.72	56.91	59.27	61.12	61.83	63.84
40000	55.33	55.27	55.51	56.01	56.25	58.21	57.85	58.08	56.84	59.58	57.47	56.88	59.16	61.27	61.38	63.72
50000	54.93	55.48	55.58	55.90	56.28	58.21	57.67	58.32	57.11	58.89	57.42	57.07	59.23	61.45	61.02	63.72
60000	54.57	55.71	55.87	55.89	56.28	58.23	57.47	58.60	57.52	58.33	57.49	57.38	59.45	61.63	60.67	63.82
70000	54.36	55.94	56.25	55.99	56.39	58.39	57.25	58.98	57.90	57.94	57.79	57.97	59.81	61.92	60.51	63.90
80000	54.59	56.37	57.07	56.35	56.73	58.60	57.07	59.40	58.15	57.94	58.35	58.71	60.30	62.29	60.73	64.04
90000	54.99	57.09	58.17	57.09	57.45	58.98	57.06	59.88	58.57	58.37	59.25	59.38	60.76	62.85	61.38	64.53
100000	55.40	58.21	59.40	58.24	58.50	59.45	57.42	60.57	59.40	59.20	60.42	59.81	61.16	63.43	62.53	65.05
110000	56.43	59.45	60.64	59.54	59.52	60.10	58.24	61.25	60.44	60.19	61.54	60.57	61.43	64.31	63.79	65.23
120000	57.69	60.42	61.65	60.78	60.48	60.30	59.07	61.99	61.63	61.25	62.56	61.65	62.20	65.17	64.60	65.52
130000	58.71	61.50	61.88	61.79	61.18	60.28	60.21	61.77	62.47	62.26	63.27	62.80	62.83	65.93	65.32	65.71
140000	59.95	61.86	62.02	62.51	61.86	60.19	61.07	62.40	63.19	63.27	63.90	63.54	62.53	66.60	66.09	66.33
150000	61.32	62.31	62.98	63.05	62.13	59.95	61.77	62.51	63.45	63.97	64.18	63.61	62.94	66.81	66.51	66.83
160000	61.74	62.60	62.94	62.98	61.88	60.03	62.08	62.15	63.16	64.54	64.33	64.22	63.61	66.99	66.79	66.81
170000	59.97	62.17	62.62	62.49	61.32	60.21	62.11	62.04	62.94	64.80	64.15	64.18	63.95	66.92	66.96	66.56
180000	59.52	61.50	61.92	61.81	60.57	60.17	61.86	61.16	62.73	64.65	63.64	63.77	63.88	66.99	66.78	66.20
190000	58.59	60.76	61.30	61.16	60.28	60.03	61.30	60.55	62.56	64.17	62.73	63.25	63.39	66.47	66.47	65.30
200000	57.72	59.86	60.57	59.97	59.36	59.79	60.24	59.58	62.44	63.21	61.56	62.40	62.73	65.89	66.18	64.40
210000	56.89	58.66	59.70	58.96	58.64	59.54	59.47	58.68	62.13	62.01	60.21	61.61	61.95	65.16	65.68	63.43
220000	56.17	57.67	58.95	58.01	58.50	59.22	58.71	57.79	61.86	60.94	59.18	61.02	61.52	64.60	65.32	63.00
230000	55.74	56.97	58.21	57.51	58.32	58.95	58.30	57.15	61.66	60.10	58.39	60.69	61.32	64.02	65.05	62.62
Daily Max	61.74	62.60	62.98	63.05	62.13	60.30	62.11	62.51	63.45	64.80	64.33	64.22	63.95	66.99	66.96	66.83
Daily Min	54.36	55.11	55.51	55.89	56.25	58.21	57.06	57.15	56.53	57.94	57.42	56.88	59.16	61.12	60.51	62.62
Average	57.17	58.36	59.05	58.90	58.68	59.24	59.14	59.77	60.11	61.22	60.50	60.40	61.35	63.98	63.93	64.75

Monthly average: 62.72
License Maximum Monthly Average: 68

Roselawn Creek Temperature Summary - June 2006

Time	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
HHMMSS														
0	62.55	63.54	60.49	61.07	64.94	61.34	62.20	64.65	65.52	67.12	65.80	65.39	65.46	65.57
10000	62.46	63.55	59.94	61.07	64.98	60.57	61.92	64.54	65.35	66.27	65.37	65.16	65.17	65.50
20000	62.62	63.79	59.58	61.05	64.96	59.76	61.77	64.54	65.37	65.59	65.03	64.90	64.90	65.48
30000	62.76	64.06	59.50	61.05	64.81	59.18	61.79	64.60	65.39	65.01	64.71	64.69	64.71	65.55
40000	62.85	63.95	59.61	61.27	64.78	58.82	62.02	64.63	65.46	64.60	64.44	64.58	64.58	65.68
50000	63.00	63.70	60.03	61.54	64.76	58.64	62.28	64.63	65.50	64.27	64.29	64.56	64.42	65.82
60000	63.16	63.52	60.39	61.93	64.81	58.68	62.64	64.63	65.41	64.06	64.35	64.58	64.38	66.00
70000	63.46	63.55	60.91	62.40	65.12	59.07	63.09	64.69	65.32	63.99	64.40	64.72	64.53	66.18
80000	63.88	63.63	61.54	63.10	65.57	59.74	63.72	65.01	65.30	64.26	64.67	65.03	64.96	66.51
90000	64.47	63.73	62.04	64.11	65.98	60.49	64.58	65.26	65.64	64.98	65.05	65.46	65.66	67.10
100000	65.21	63.82	62.17	65.17	66.72	61.25	65.75	65.57	66.11	66.09	65.35	66.00	66.65	67.98
110000	66.00	63.99	62.13	66.13	67.35	61.79	66.90	65.93	67.21	67.39	65.39	65.97	67.75	68.85
120000	66.69	64.13	62.08	66.87	68.20	62.22	67.86	66.97	68.07	68.56	65.32	66.06	68.77	69.55
130000	67.03	64.69	62.24	67.55	68.86	62.76	68.43	68.14	68.99	69.49	65.93	66.74	69.62	70.05
140000	66.85	64.83	62.17	67.95	69.51	63.70	68.85	68.67	69.67	70.20	66.58	67.71	69.84	70.61
150000	66.96	65.48	61.97	67.82	69.51	64.33	68.81	68.54	70.16	70.83	67.08	68.54	69.89	71.02
160000	66.54	65.61	61.92	67.66	69.40	65.16	68.67	68.23	70.63	70.97	66.99	69.24	69.53	71.24
170000	66.02	65.26	61.99	66.85	68.83	65.46	68.27	67.86	70.74	70.77	67.12	68.79	69.19	71.26
180000	65.68	64.60	62.20	66.15	68.11	65.17	67.80	67.37	70.38	70.25	66.69	68.31	68.45	70.68
190000	65.07	63.84	62.11	65.61	67.19	64.71	67.35	67.05	69.76	69.48	66.69	67.71	67.75	70.02
200000	64.27	62.83	61.81	65.16	66.16	64.06	66.69	66.63	69.03	68.50	66.31	67.06	67.10	69.37
210000	63.77	61.97	61.47	64.92	64.98	63.41	66.88	66.22	68.50	67.60	65.91	66.42	66.43	68.81
220000	63.64	61.27	61.23	64.78	63.63	62.91	65.19	65.86	68.11	66.83	65.66	65.93	65.93	68.47
230000	63.84	60.80	61.11	64.81	62.40	62.56	64.87	65.64	67.71	66.27	65.52	65.66	65.70	68.09
Daily Max	67.03	65.61	62.24	67.95	69.51	65.46	68.85	68.67	70.74	70.97	67.12	69.24	69.89	71.26
Daily Min	62.46	60.80	59.50	61.05	62.40	58.64	61.77	64.54	65.30	63.99	64.29	64.56	64.38	65.48
Average	64.53	63.76	61.28	64.42	66.32	61.91	65.30	66.08	67.47	67.22	65.61	66.22	66.72	68.14

Roselwan Creek Temperature Summary - July 2006

Time	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
HHMMSS																
0	67.78	63.32	63.77	66.83	65.71	67.10	68.95	69.69	69.91	70.12	69.46	70.79	70.48	71.62	69.24	69.75
10000	67.55	62.78	63.57	66.31	65.59	66.97	68.79	69.66	69.84	70.03	69.24	70.65	70.27	71.80	68.90	69.98
20000	67.46	62.65	63.68	66.02	65.61	66.94	68.67	69.62	69.80	69.94	69.04	70.48	70.14	71.98	68.67	70.29
30000	67.35	62.73	63.95	65.89	65.71	66.94	68.63	69.62	69.76	69.85	68.94	70.43	70.05	72.07	68.65	70.57
40000	67.32	62.87	64.31	65.93	65.89	67.05	68.61	69.62	69.69	69.69	68.90	70.41	69.96	72.10	68.74	70.90
50000	67.26	63.21	64.71	66.07	66.09	67.12	68.59	69.60	69.64	69.48	68.94	70.36	69.91	72.03	68.85	71.20
60000	67.24	63.66	65.19	66.25	66.31	67.30	68.67	69.55	69.60	69.26	69.04	70.32	69.85	72.01	69.03	71.46
70000	67.41	64.31	65.79	66.52	66.58	67.55	68.79	69.62	69.64	69.13	69.30	70.32	69.94	72.05	69.26	71.62
80000	67.59	65.05	66.45	66.96	66.98	67.96	69.13	69.67	69.73	69.17	69.58	70.54	70.29	72.14	69.71	71.74
90000	68.02	65.89	66.94	67.39	67.73	68.61	69.66	69.82	69.85	69.49	69.85	71.02	70.92	72.16	70.41	72.19
100000	68.43	67.08	67.30	68.00	68.70	69.51	70.34	69.91	70.34	70.11	70.47	71.80	71.78	72.30	71.35	72.90
110000	69.31	68.29	68.18	68.58	69.24	70.43	70.93	69.91	70.57	70.83	71.20	72.46	72.64	72.73	72.28	73.85
120000	70.41	69.21	69.40	69.35	70.16	71.15	71.71	69.69	70.68	71.42	72.05	73.06	73.02	73.53	73.09	74.79
130000	71.04	69.60	70.54	69.93	70.75	71.69	72.25	69.53	70.93	72.00	72.73	73.38	73.85	74.07	73.78	75.45
140000	70.50	69.91	71.22	70.66	71.28	71.98	72.52	69.84	71.56	72.39	73.26	73.60	74.28	74.57	74.12	75.88
150000	70.57	70.30	71.15	70.86	71.46	72.16	72.54	70.75	72.05	72.46	73.17	73.98	74.48	74.73	74.16	76.17
160000	70.32	70.30	70.84	70.56	71.22	72.00	72.43	71.49	72.23	72.54	73.51	74.10	74.71	74.32	73.98	76.19
170000	70.29	69.94	70.72	70.12	70.77	71.74	72.10	71.71	71.78	72.55	73.27	73.71	74.35	74.62	73.18	75.97
180000	69.78	69.19	70.45	69.53	70.05	71.22	71.60	71.49	71.38	72.39	73.26	73.40	73.74	73.82	72.28	75.65
190000	68.77	68.18	70.07	68.58	69.26	70.68	71.06	71.11	71.15	71.76	72.73	72.81	73.04	72.01	71.33	75.22
200000	67.50	67.06	69.55	67.82	68.61	70.27	70.61	70.70	70.79	71.10	72.07	72.16	72.46	71.29	70.59	74.62
210000	65.25	65.84	69.01	67.10	67.91	69.82	70.20	70.32	70.47	70.47	71.38	71.49	71.94	70.61	70.11	74.08
220000	65.12	64.81	68.31	66.51	67.48	69.49	69.91	70.11	70.30	70.03	71.02	71.10	71.60	70.07	69.96	73.53
230000	64.11	64.22	67.55	66.06	67.24	69.19	69.78	70.02	70.23	69.69	70.84	70.75	71.51	69.64	69.80	73.22
Daily Max	71.04	70.30	71.22	70.86	71.46	72.16	72.54	71.71	72.23	72.55	73.51	74.10	74.71	74.73	74.16	76.19
Daily Min	64.11	62.65	63.57	65.89	65.59	66.94	68.59	69.53	69.60	69.13	68.90	70.32	69.85	69.64	68.65	69.75
Average	68.23	66.27	67.61	67.83	68.18	69.37	70.27	70.13	70.50	70.66	70.97	71.80	71.89	72.34	70.89	73.22
Monthly average																
License Maximum																
Monthly Average																

Roseman Creek Temperature Summary - July 2006

Time	07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
HHMMSS	73 02	70 07	73 526	74 372	72 59	73 4	73 724	72 716	71 762	72 5	71 456	73 274	72 338	74 336	73 866
0	73 02	70 07	73 31	74 228	72 482	73 238	73 562	72 644	71 618	72 428	71 348	73 166	72 158	74 282	73 922
10000	72 90	70 12	73 184	74 174	72 514	73 148	73 4	72 554	71 528	72 32	71 348	73 076	72 14	74 3	73 976
20000	72 86	70 32	73 148	74 048	72 464	73 058	73 22	72 446	71 456	72 194	71 474	73 004	72 194	74 336	73 994
30000	72 86	70 52	73 22	73 814	72 626	73 022	73 022	72 392	71 438	72 122	71 564	73 04	72 338	74 39	74 068
40000	73 13	70 70	73 328	73 58	72 734	73 004	72 896	72 266	71 438	72 122	71 618	73 076	72 518	74 462	74 066
50000	73 38	70 99	73 472	73 292	72 878	72 986	72 734	72 194	71 456	72 176	71 672	73 166	72 554	74 534	74 048
60000	73 51	71 35	73 58	73 076	73 076	73 094	72 752	72 158	71 546	72 302	71 816	73 31	72 68	74 606	74 102
70000	73 54	71 89	73 796	73 094	73 346	73 31	72 896	72 212	71 888	72 464	72 122	73 49	72 806	74 642	74 192
80000	73 51	72 70	74 282	73 454	73 598	73 598	73 202	72 482	72 374	72 68	72 68	73 868	73 022	74 714	74 444
90000	73 49	73 63	74 84	74 156	73 922	74 048	73 526	72 77	73 184	72 806	73 346	74 462	73 67	74 858	74 768
100000	73 81	74 55	75 362	74 858	74 372	74 606	73 634	73 346	74 03	73 292	73 976	75 308	74 426	74 966	75 146
110000	74 25	75 22	75 596	75 47	75 02	75 344	73 616	73 814	74 768	73 832	74 552	75 992	75 128	75 092	75 668
120000	74 73	75 76	75 452	75 812	75 434	75 47	73 67	74 264	75 362	74 426	75 02	76 568	75 704	75 056	76 334
130000	74 84	76 15	75 182	76 01	75 488	75 11	73 724	74 696	75 47	74 894	75 074	76 55	75 92	74 984	77 072
140000	74 97	76 46	75 164	76 19	75 578	75 236	73 67	74 768	75 452	75 02	75 362	76 568	75 974	74 894	77 576
150000	74 80	76 37	75 434	76 082	75 722	75 578	73 544	74 984	75 29	74 984	75 47	76 118	76 28	74 75	77 774
160000	74 26	76 21	75 74	75 776	75 686	75 596	73 382	74 84	75 236	74 966	75 56	75 812	76 424	74 714	77 648
170000	73 51	75 27	75 848	75 29	75 452	75 434	73 292	74 408	74 768	74 624	75 182	75 092	76 298	74 534	77 234
180000	72 45	75 27	75 614	74 714	75 056	75 038	73 184	73 814	74 336	74 03	74 876	74 39	75 866	74 498	76 658
190000	71 53	74 84	75 308	74 12	74 534	74 588	73 076	73 202	73 832	73 328	74 462	73 598	75 308	74 3	76 046
200000	70 84	74 39	75 002	73 544	74 066	74 21	72 95	72 626	73 22	72 536	74 066	73 112	74 858	74 192	75 506
210000	70 45	74 03	74 804	73 13	73 724	74 066	72 86	72 284	72 824	72 014	73 778	72 554	74 57	74 048	75 128
220000	70 20	73 74	74 57	72 806	73 526	73 886	72 788	71 996	72 572	71 69	73 508	72 464	74 408	73 976	74 858
230000															
Daily Max	74 97	76 46	75 85	76 19	75 72	75 60	73 72	74 98	75 47	75 02	75 56	76 57	76 42	75 09	77 77
Daily Min	70 20	70 07	73 15	72 81	72 46	72 99	72 73	72 00	71 44	71 69	71 35	72 46	72 14	73 98	73 89
Average	73 15	73 38	74 53	74 38	74 00	74 17	73 26	73 16	73 20	73 16	73 39	74 21	74 15	74 56	75 34

Roseawn Creek Temperature Summary - August 2006

Time	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/06/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
HHMMSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	74.71	74.32	73.62	71.44	72.84	71.89	70.59	70.11	71.64	71.92	70.56	70.56	71.31	71.49	67.06	68.52
10000	74.66	74.37	73.38	70.99	72.27	71.60	69.85	69.57	71.04	71.40	70.23	70.25	71.02	71.31	66.94	68.38
20000	74.71	74.34	73.24	70.65	71.74	71.38	69.13	69.15	70.61	70.99	69.91	70.02	70.77	71.20	66.96	68.31
30000	74.71	74.28	73.18	70.38	71.42	71.37	68.59	68.77	70.29	70.63	69.64	69.82	70.59	71.10	67.03	68.23
40000	74.62	74.19	73.13	70.30	71.22	71.29	68.20	68.45	70.05	70.36	69.35	69.69	70.45	70.92	67.15	68.20
50000	74.64	74.10	73.09	70.30	71.02	71.26	67.86	68.14	69.85	70.11	69.08	69.57	70.38	70.66	67.30	68.16
60000	74.61	74.07	73.02	70.32	70.88	71.26	67.64	67.93	69.71	70.03	68.85	69.48	70.39	70.39	67.37	68.16
70000	74.53	73.99	73.00	70.41	70.90	71.37	67.53	67.80	69.66	70.07	68.72	69.48	70.45	70.14	67.41	68.16
80000	74.39	73.99	73.15	70.75	71.04	71.58	67.71	68.02	69.68	70.12	68.83	69.69	70.63	70.00	67.64	68.34
90000	74.32	74.03	73.62	71.44	71.38	71.76	68.18	68.58	70.02	70.27	69.26	70.07	70.79	70.16	68.09	68.74
100000	74.53	74.14	74.37	72.43	71.69	71.80	68.83	69.51	70.65	70.38	70.11	70.92	71.10	70.79	68.86	69.39
110000	74.68	74.21	75.16	73.45	72.10	71.96	69.76	70.70	71.33	70.48	71.22	71.98	71.46	71.60	69.67	70.21
120000	74.82	74.34	75.79	74.52	72.54	72.19	71.10	72.12	72.37	70.75	72.28	73.09	71.91	72.45	70.48	71.08
130000	74.71	74.77	76.14	75.52	73.24	72.18	72.23	73.51	74.37	71.08	73.11	73.96	72.66	72.97	71.15	71.82
140000	74.62	75.56	76.42	76.33	73.74	72.90	73.09	74.73	74.36	71.64	73.85	74.50	73.44	73.02	71.67	72.28
150000	74.68	76.12	76.62	77.13	73.98	73.71	73.85	75.69	74.73	72.05	74.41	74.91	73.94	72.75	72.00	72.45
160000	74.79	76.41	76.71	77.63	74.05	74.64	74.55	76.28	75.07	72.54	74.75	75.24	74.10	72.52	72.05	72.48
170000	74.86	76.35	76.75	77.72	74.10	75.07	74.82	76.53	75.31	73.06	74.68	75.20	73.92	71.76	71.91	72.21
180000	74.84	76.01	76.42	77.41	74.05	75.16	74.57	75.97	74.97	73.26	74.26	74.84	73.60	70.86	71.51	71.71
190000	74.77	75.67	75.76	76.78	73.89	74.86	74.08	75.97	74.97	72.88	73.58	74.30	73.17	69.87	70.90	71.11
200000	74.61	75.18	74.95	76.14	73.51	74.19	73.36	75.18	74.52	72.21	72.81	73.56	72.81	68.97	70.21	70.56
210000	74.43	74.57	73.92	75.34	73.02	73.42	72.50	74.26	73.87	71.64	72.03	72.81	72.43	68.22	69.58	70.16
220000	74.34	74.14	72.93	74.28	72.66	72.43	71.56	73.27	73.17	71.20	71.40	72.18	72.10	67.68	69.10	69.85
230000	74.30	73.83	72.10	73.51	72.25	71.46	70.75	72.39	72.52	70.88	70.93	71.71	71.76	67.33	68.76	69.64
Daily Max	74.86	76.41	76.75	77.72	74.10	75.16	74.82	76.53	75.31	73.26	74.75	75.24	74.10	73.02	72.05	72.48
Daily Min	74.30	73.83	72.10	70.30	70.88	71.26	67.53	67.80	69.66	70.03	68.72	69.48	70.38	67.33	66.94	68.16
Average	74.62	74.71	74.44	73.55	72.48	72.53	70.85	71.59	72.26	71.25	71.41	71.99	71.88	70.76	69.20	69.92
** All temperatures in degrees F																
Monthly average 71.71																
License Maximum Monthly Average: 68 F																

Roselawn Creek Temperature Summary - August 2006

Time	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
HHMMSS															
0	69.46	69.82	71.04	70.39	69.64	68.63	68.14	68.76	69.12	67.10	66.94	68.41	66.67	65.41	67.19
10000	69.30	69.75	71.20	70.18	69.53	68.45	67.84	68.54	68.95	66.96	66.47	67.66	66.25	65.05	66.31
20000	69.30	69.64	71.31	70.00	69.46	68.29	67.66	68.40	68.79	66.83	65.98	66.94	65.82	64.67	65.50
30000	69.30	69.60	71.20	69.78	69.46	68.20	67.55	68.34	68.65	66.72	65.55	66.33	65.46	64.35	64.85
40000	69.30	69.58	70.97	69.64	69.42	68.11	67.50	68.32	68.45	66.63	65.17	65.84	65.19	64.00	64.24
50000	69.31	69.58	70.88	69.51	69.37	68.00	67.44	68.31	68.36	66.52	64.81	65.37	64.96	63.70	63.70
60000	69.31	69.60	70.93	69.39	69.30	67.93	67.50	68.41	68.23	66.47	64.49	64.99	64.78	63.34	63.19
70000	69.31	69.58	71.01	69.30	69.24	67.93	67.55	68.50	68.20	66.43	64.26	64.78	64.58	63.05	62.83
80000	69.39	69.62	71.10	69.40	69.22	68.02	67.69	68.63	68.14	66.43	64.24	64.78	64.63	63.03	62.74
90000	69.53	69.69	71.22	69.76	69.26	68.43	67.98	68.83	68.14	66.47	64.71	65.03	64.72	63.41	63.12
100000	69.75	69.80	71.40	70.30	69.44	69.10	68.38	69.15	68.09	66.63	65.50	65.37	64.98	63.86	63.82
110000	70.14	69.98	71.60	70.99	70.02	69.98	69.22	69.76	68.23	66.85	66.63	65.73	65.28	64.60	64.81
120000	70.34	70.48	71.94	71.35	70.56	70.57	70.20	70.32	68.52	67.08	67.73	66.16	65.55	65.80	65.86
130000	70.54	71.33	71.92	71.80	70.83	71.15	70.99	70.93	68.86	67.33	69.15	66.61	65.95	67.21	67.19
140000	70.68	71.80	72.14	72.23	71.13	71.60	71.87	71.17	68.74	67.75	70.54	67.01	66.38	68.47	68.52
150000	71.22	71.80	72.37	72.37	71.42	71.85	72.46	71.55	68.58	68.07	71.35	67.42	66.69	69.55	69.62
160000	71.64	71.78	72.64	72.18	71.51	71.94	72.61	71.65	68.52	68.58	72.03	67.91	66.87	70.25	70.34
170000	71.64	71.60	72.34	71.94	71.42	71.87	72.52	71.42	68.58	68.92	72.27	68.25	67.12	70.63	70.63
180000	71.29	71.35	72.03	71.65	71.08	71.69	72.00	71.15	68.43	68.95	72.21	68.34	67.24	70.56	70.54
190000	70.92	71.04	71.76	71.24	70.54	71.08	71.51	70.81	68.22	68.79	72.03	68.23	67.21	70.32	70.20
200000	70.48	70.79	71.44	70.74	69.96	70.18	70.86	70.43	67.96	68.54	71.58	68.00	66.88	69.85	69.76
210000	70.16	70.74	71.11	70.34	69.49	69.46	70.18	70.03	67.73	68.23	70.86	67.75	66.56	69.39	69.31
220000	69.96	70.37	70.84	70.05	69.15	68.86	69.58	69.71	67.51	67.89	70.07	67.42	66.18	68.81	68.65
230000	69.87	70.90	70.61	69.80	68.88	68.40	69.12	69.33	67.30	67.42	69.24	67.10	65.82	68.05	67.89
Daily Max	71.64	71.80	72.64	72.37	71.51	71.94	72.61	71.65	69.12	68.95	72.27	68.41	67.24	70.63	70.63
Daily Min	69.30	69.58	70.61	69.30	68.88	67.93	67.44	68.31	67.30	66.43	64.24	64.76	64.58	63.03	62.74
Average	70.09	70.44	71.46	70.60	69.97	69.57	69.51	69.69	68.35	67.40	68.08	66.73	65.91	66.56	66.70

Roselawn Creek Temperature Summary - September 2006

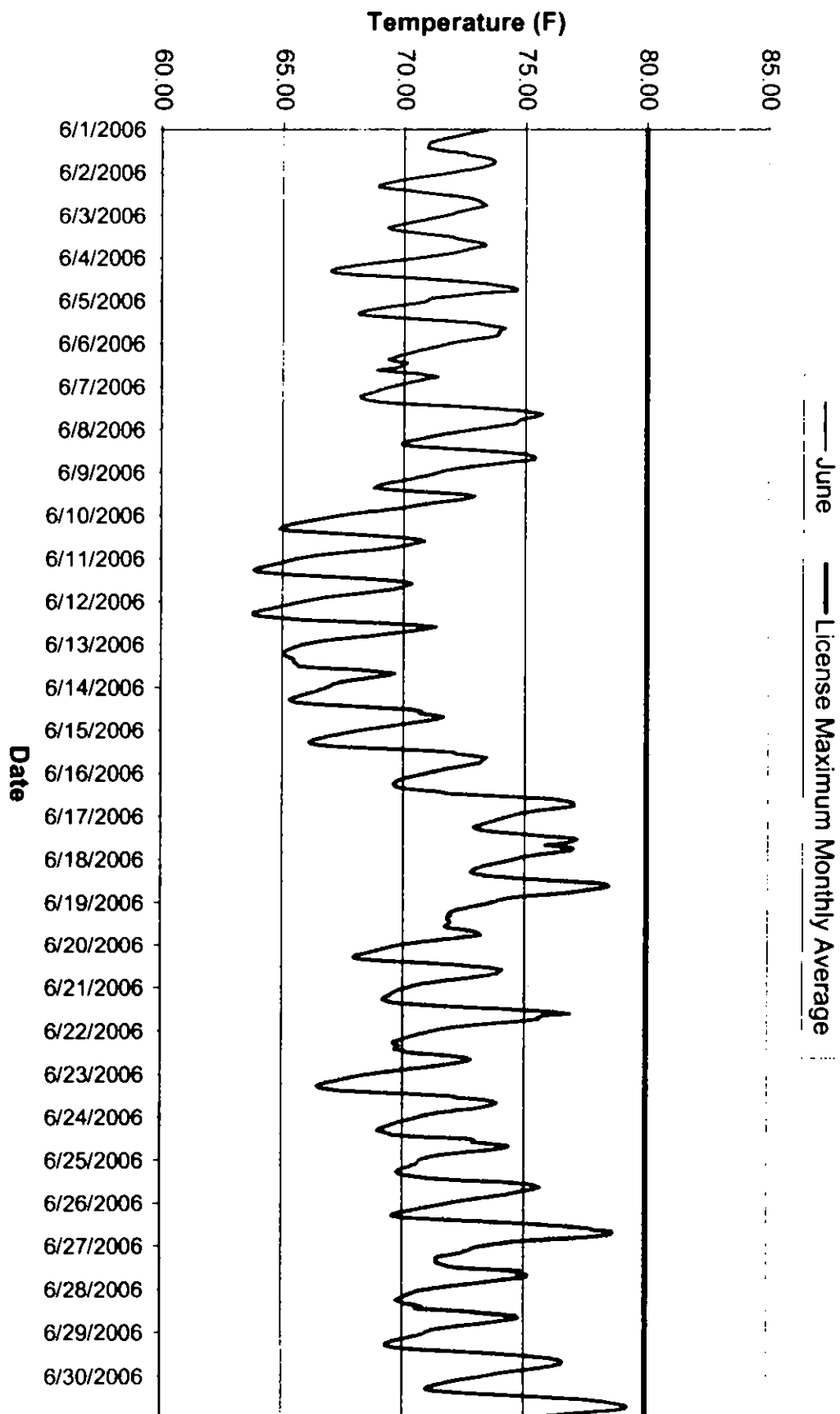
Time HH:MM:SS	09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/16/06
0	67.05	67.28	67.60	67.69	66.63	67.46	67.64	66.58	63.64	63.88	63.66	63.39	62.29	62.80	62.65	63.09
10000	66.24	67.15	67.41	67.48	66.45	67.15	67.46	66.40	63.41	63.61	63.39	63.28	62.13	62.74	62.51	62.98
20000	65.53	66.99	67.26	67.21	66.29	66.92	67.32	66.24	63.01	63.32	63.21	63.23	62.01	62.69	62.40	62.92
30000	64.90	66.86	67.14	66.97	66.16	66.72	67.21	66.13	63.03	63.12	63.05	63.14	61.92	62.60	62.31	62.87
40000	64.35	66.81	66.97	66.74	66.09	66.58	67.10	66.06	62.82	62.92	63.00	63.05	61.84	62.51	62.28	62.85
50000	63.95	66.74	66.85	66.52	65.98	66.65	66.97	66.06	62.64	62.73	62.91	62.94	61.83	62.47	62.22	62.82
60000	63.63	66.65	66.74	66.34	65.95	66.70	66.79	66.09	62.46	62.53	62.82	62.85	61.77	62.42	62.17	62.76
70000	63.48	66.60	66.65	66.20	65.97	66.79	66.69	66.09	62.29	62.37	62.69	62.73	61.70	62.37	62.15	62.76
80000	63.54	66.65	66.69	66.09	66.11	66.97	66.69	66.07	62.26	62.31	62.69	62.67	61.75	62.40	62.22	62.85
90000	63.95	66.92	67.03	66.36	66.58	67.19	66.90	65.82	62.53	62.58	62.87	62.71	61.88	62.73	62.44	63.10
100000	64.85	67.69	67.75	66.72	67.39	67.41	67.44	65.86	63.23	63.19	63.21	62.73	62.19	63.34	62.94	63.27
110000	66.06	68.61	68.54	67.35	68.38	67.64	68.22	65.91	64.08	63.99	63.61	62.78	62.80	63.99	63.64	63.52
120000	67.51	69.40	69.42	68.11	69.35	68.38	69.75	65.89	64.90	64.71	63.97	62.80	63.46	64.62	64.38	63.81
130000	69.35	69.85	70.16	68.95	70.12	69.28	69.75	65.86	65.52	65.34	64.22	62.76	64.04	65.16	64.96	63.88
140000	70.63	70.34	70.66	69.39	70.59	70.09	70.30	65.86	66.18	65.93	64.40	62.74	64.44	65.57	65.37	64.18
150000	70.99	70.43	70.95	69.53	70.97	70.70	70.52	65.77	66.60	66.27	64.49	62.71	64.69	65.71	65.55	64.65
160000	70.99	70.74	70.99	69.48	70.99	70.88	70.29	65.70	66.72	66.31	64.45	62.76	64.69	65.64	65.50	64.87
170000	70.88	70.48	70.65	69.22	70.97	70.72	69.98	65.59	66.60	66.15	64.36	62.85	64.51	65.30	65.03	64.76
180000	70.18	70.14	70.21	68.95	69.36	70.30	69.57	65.43	66.22	65.80	64.18	62.82	64.20	64.89	65.03	64.53
190000	69.57	69.73	69.62	68.52	69.76	69.80	68.99	65.23	65.68	65.41	64.00	62.76	63.81	64.40	64.60	64.53
200000	68.90	69.19	68.99	68.11	69.15	69.15	68.29	64.90	65.14	64.92	63.86	62.71	63.37	63.88	64.17	64.24
210000	68.38	68.63	68.47	67.64	68.59	68.58	67.62	64.54	64.67	64.47	63.72	62.62	63.05	63.46	63.75	64.00
220000	67.93	68.18	68.13	67.21	68.16	68.14	67.12	64.20	64.40	64.13	63.61	62.56	62.89	63.10	63.45	63.88
230000	67.55	67.89	67.89	66.88	67.80	67.84	66.83	63.90	64.15	63.88	63.50	62.47	62.87	62.85	63.23	63.84
Daily Max	70.99	70.74	70.99	69.53	70.99	70.88	70.52	66.58	66.72	66.31	64.49	63.39	64.69	65.71	65.55	64.87
Daily Min	63.48	66.60	66.65	66.09	65.95	66.58	66.69	63.90	62.26	62.31	62.69	62.47	61.70	62.37	62.15	62.76
Average	67.09	68.33	68.45	67.65	68.11	68.25	68.11	65.68	64.27	64.16	63.58	62.84	62.92	63.65	63.55	63.64

** All temperatures in degrees F
 Monthly average: 62.26
 License Maximum Monthly Average: 63 F

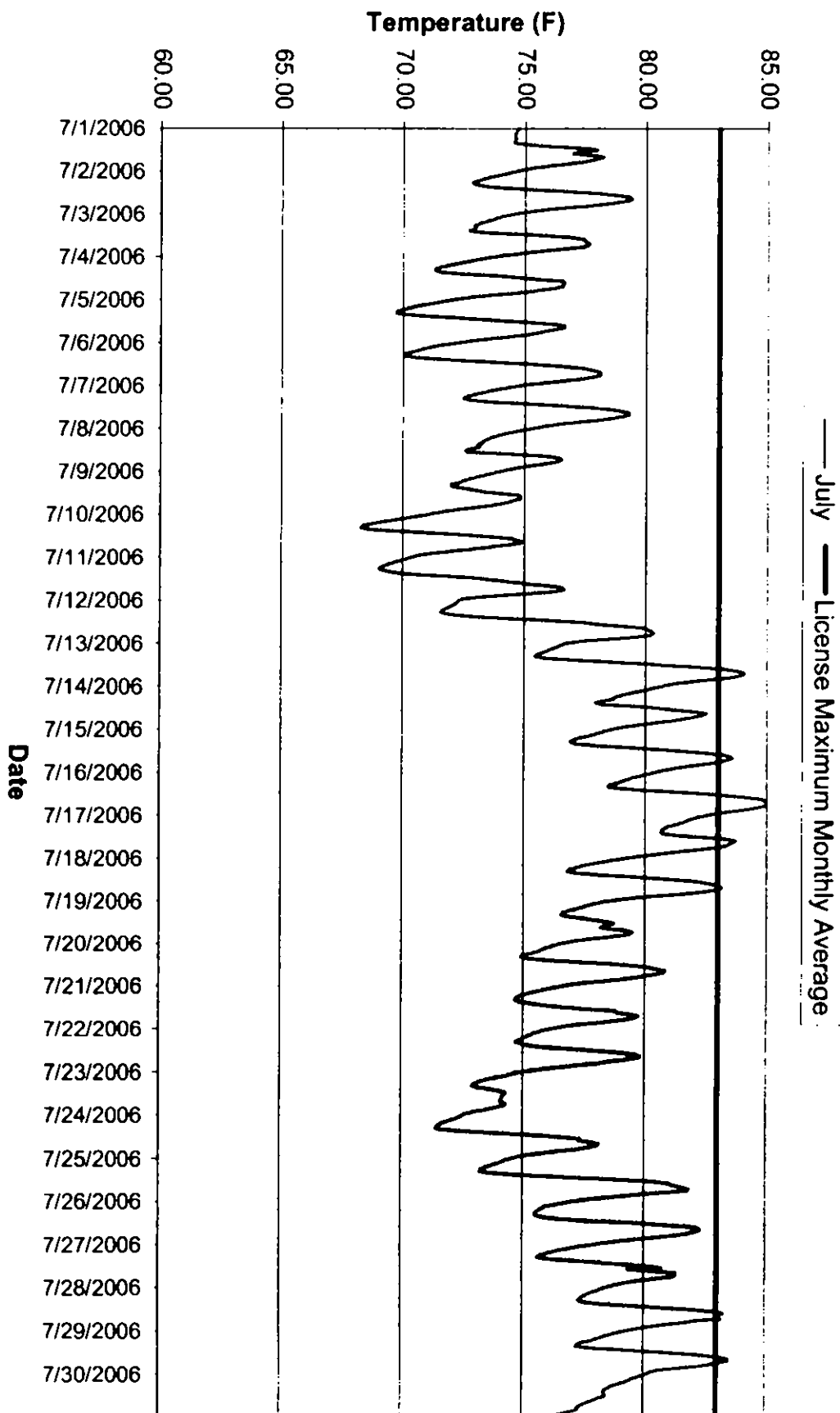
Roselawn Creek Temperature Summary - September 2006

Time	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
HHMMSS														
0	63.81	62.85	60.94	58.62	57.33	59.79	58.75	58.50	57.81	57.13	57.34	56.01	55.71	55.18
10000	63.73	62.60	60.82	58.48	56.93	59.36	58.68	58.32	57.63	56.98	57.33	55.94	55.62	55.15
20000	63.68	62.37	60.69	58.23	56.57	58.96	58.66	58.17	57.49	56.88	57.24	55.85	55.56	55.11
30000	63.66	62.15	60.58	57.97	56.25	58.60	58.60	58.03	57.38	56.75	57.15	55.81	55.49	55.06
40000	63.66	61.97	60.49	57.74	55.92	58.32	58.55	57.90	57.34	56.62	57.07	55.71	55.40	54.99
50000	63.66	61.79	60.31	57.49	55.62	58.06	58.51	57.79	57.29	56.50	56.95	55.63	55.29	54.82
60000	63.61	61.65	60.19	57.33	55.33	57.81	58.46	57.61	57.25	56.39	56.84	55.53	55.18	54.75
70000	63.57	61.52	60.06	57.24	55.08	57.65	58.41	57.47	57.25	56.30	56.71	55.47	55.08	54.70
80000	63.57	61.45	59.97	57.22	54.99	57.49	58.41	57.40	57.22	56.39	56.62	55.45	54.99	54.77
90000	63.73	61.57	59.92	57.38	55.18	57.47	58.55	57.38	57.33	56.62	56.57	55.45	55.08	54.84
100000	64.04	61.83	59.97	57.72	55.81	57.45	58.98	57.58	57.56	56.91	56.62	55.62	55.29	55.00
110000	64.47	62.11	60.10	58.21	56.75	57.56	59.27	57.83	57.87	57.31	56.84	56.16	55.60	55.31
120000	64.90	62.31	60.17	58.53	57.67	57.85	59.47	58.46	58.44	57.45	57.13	56.26	55.89	55.63
130000	65.05	62.26	60.28	59.04	58.66	58.10	59.86	59.02	58.64	57.54	57.31	57.04	56.14	55.87
140000	65.12	62.38	60.37	59.50	59.58	58.48	60.13	59.61	58.69	57.76	57.25	57.00	56.16	56.12
150000	65.01	62.20	60.31	59.97	60.28	58.66	60.06	60.08	58.77	57.90	57.25	57.02	56.21	56.14
160000	64.81	62.11	60.40	60.04	60.76	58.77	59.92	60.12	58.77	58.17	57.29	56.91	56.12	56.17
170000	64.62	62.02	60.22	59.94	60.94	58.84	59.67	59.97	58.59	58.10	57.27	56.80	56.01	56.10
180000	64.49	61.84	60.01	59.61	60.82	58.78	59.43	59.67	58.33	57.97	57.06	56.59	55.81	55.90
190000	64.24	61.65	59.74	59.36	60.75	58.78	59.27	59.41	58.14	57.76	56.82	56.43	55.63	55.74
200000	64.00	61.48	59.50	59.04	60.78	58.77	59.09	59.05	57.88	57.63	56.62	56.21	55.45	55.54
210000	63.73	61.32	59.31	58.64	60.73	58.75	58.93	58.73	57.69	57.51	56.41	56.03	55.35	55.38
220000	63.48	61.18	59.11	58.17	60.51	58.75	58.80	58.37	57.47	57.43	56.21	55.89	55.29	55.24
230000	63.14	61.09	58.84	57.72	60.19	58.75	58.64	58.05	57.27	57.36	56.10	55.80	55.22	55.09
Daily Max	65.12	62.85	60.94	60.04	60.94	59.79	60.13	60.12	58.77	58.17	57.34	57.04	56.21	56.17
Daily Min	63.14	61.09	58.84	57.22	54.99	57.45	58.41	57.38	57.22	56.30	56.10	55.45	54.99	54.70
Average	64.08	61.90	60.10	58.47	58.06	58.41	59.05	58.52	57.84	57.22	56.92	56.11	55.57	55.36

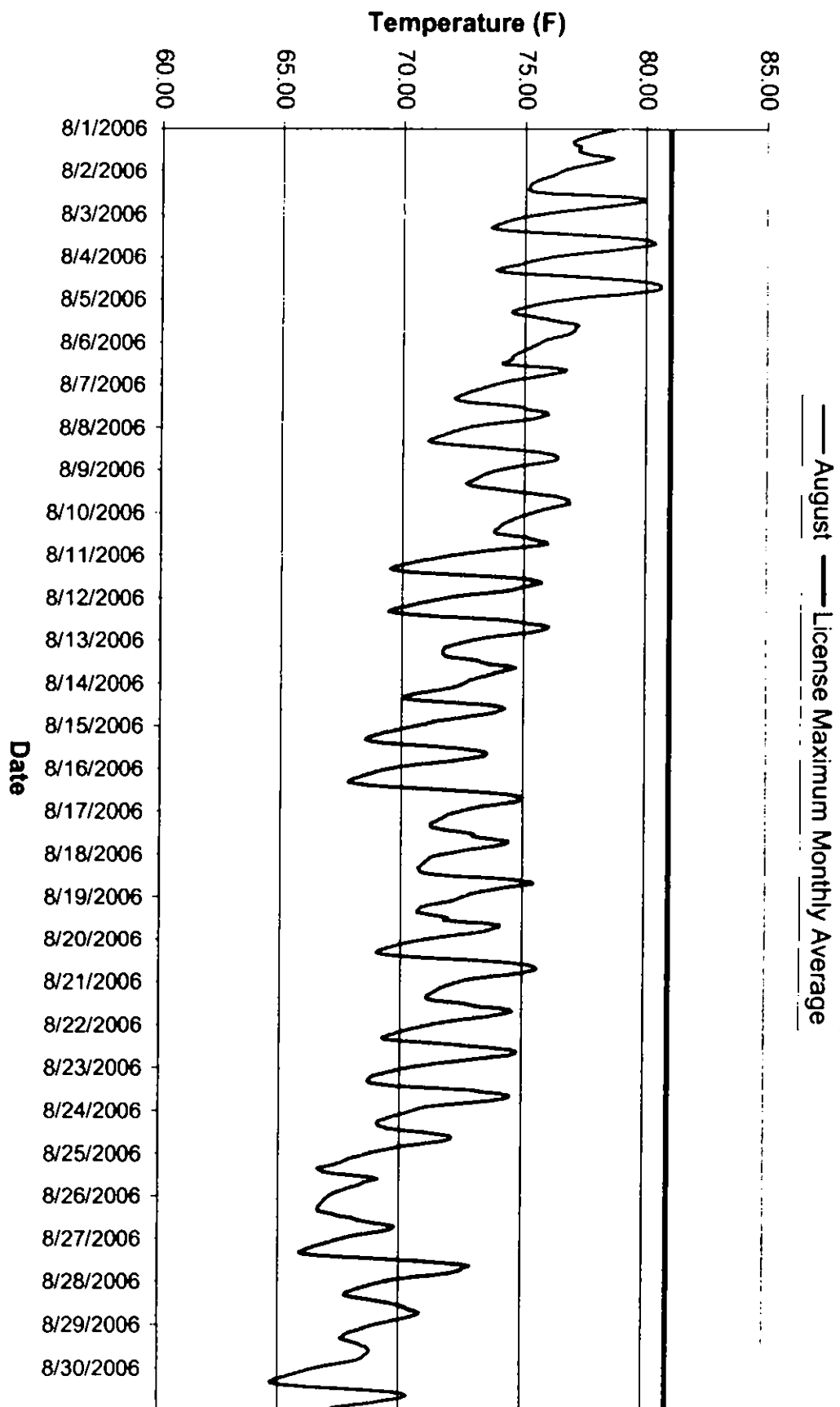
Bergland Dam - Water Temperatures 2006



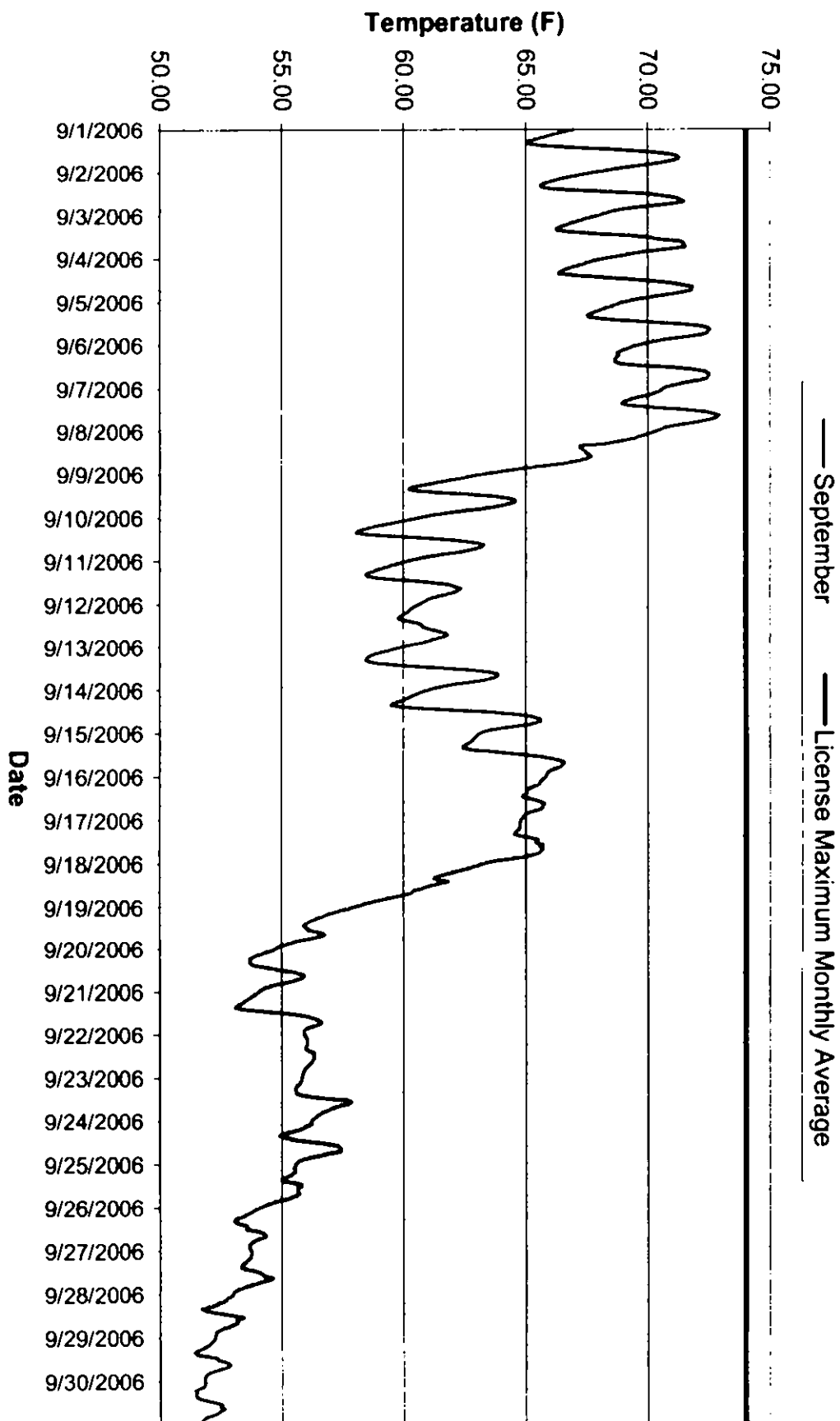
Bergland Dam - Water Temperatures 2006



Bergland Dam - Water Temperatures 2006



Bergland Dam - Water Temperatures 2006



Bergland Dam Temperature Summary - June 2006

Time HHMMSS	06/01/06	06/02/06	06/03/06	06/04/06	06/05/06	06/06/06	06/07/06	06/08/06	06/09/06	06/10/06	06/11/06	06/12/06	06/13/06	06/14/06	06/15/06	06/16/06
0	73.42	71.91	71.67	70.50	70.88	71.65	69.33	72.59	71.31	67.28	65.53	65.77	65.82	66.76	68.05	70.83
10000	73.00	71.44	71.33	69.85	70.41	71.40	69.08	72.09	71.01	66.81	65.25	65.39	65.57	66.56	67.62	70.48
20000	72.61	70.86	70.97	69.17	69.82	71.06	68.86	71.67	70.63	66.38	64.99	65.08	65.37	66.36	67.23	70.14
30000	72.30	70.43	70.59	68.52	69.33	70.68	68.65	71.26	70.30	65.97	64.67	64.74	65.19	66.06	66.83	69.91
40000	72.00	69.96	70.21	67.96	68.88	70.41	68.40	70.88	69.93	65.57	64.31	64.38	65.07	65.79	66.54	69.73
50000	71.64	69.58	69.85	67.48	68.49	70.14	68.20	70.50	69.49	65.26	63.99	64.06	65.05	65.55	66.27	69.60
60000	71.35	69.22	69.53	67.10	68.16	69.82	68.25	70.11	69.15	64.96	63.81	63.79	65.12	65.30	66.11	69.62
70000	71.11	68.95	69.31	66.96	68.11	69.66	68.47	69.91	68.92	64.89	63.91	63.79	65.28	65.34	66.16	69.71
80000	71.01	68.97	69.48	67.15	68.47	69.35	68.92	69.93	68.76	65.23	64.49	64.13	65.48	65.57	66.63	69.91
90000	71.01	69.42	70.00	67.91	69.53	69.57	69.75	70.68	69.30	66.29	65.50	64.98	65.46	66.47	67.68	70.72
100000	70.95	70.16	70.63	69.19	70.79	70.14	71.17	71.89	70.38	67.59	66.97	65.88	65.52	67.87	69.26	71.56
110000	71.28	70.70	71.28	70.48	71.94	70.03	72.57	73.11	71.47	68.85	68.36	67.44	65.62	69.08	70.84	71.87
120000	71.73	71.37	71.92	71.62	73.00	69.87	73.72	74.17	72.55	69.94	69.42	69.21	65.70	70.30	72.07	73.49
130000	72.54	72.12	72.14	72.63	73.33	69.57	74.75	74.88	72.91	70.57	70.09	70.50	66.70	70.74	72.21	74.93
140000	72.61	72.64	72.55	73.47	73.80	68.86	75.33	75.24	72.66	70.86	70.36	71.35	68.14	70.65	72.91	76.12
150000	73.13	72.93	73.04	73.92	74.17	69.58	75.69	75.42	72.27	70.54	70.09	70.88	68.86	71.15	73.44	76.64
160000	73.45	73.11	73.31	74.44	73.98	70.59	75.52	75.36	71.53	70.25	69.91	70.52	69.64	71.65	73.31	76.98
170000	73.67	73.22	73.35	74.64	73.87	71.01	75.15	74.71	71.04	69.84	69.57	69.96	69.39	71.44	73.26	77.02
180000	73.72	73.36	72.97	74.61	73.92	71.40	74.80	74.07	70.12	69.31	69.04	69.30	68.85	71.13	73.11	77.02
190000	73.65	73.18	72.64	73.22	73.87	70.92	74.68	73.47	70.59	68.63	68.45	68.72	68.34	70.63	72.70	76.59
200000	73.44	72.82	72.36	72.55	73.53	70.59	74.59	72.82	69.60	67.78	67.69	67.86	67.80	70.05	72.25	75.90
210000	73.15	72.52	72.03	71.95	72.90	70.23	74.16	72.25	68.99	67.05	67.03	67.14	67.33	69.51	71.85	75.29
220000	72.82	72.18	71.53	71.15	72.39	69.94	73.65	71.78	68.34	66.42	66.49	66.60	67.10	69.03	71.51	74.84
230000	72.32	71.98	71.08	70.99	71.94	69.66	73.11	71.49	67.73	65.93	66.13	66.16	66.97	68.52	71.15	74.55
Daily Max	73.72	73.36	73.35	74.64	74.17	71.65	75.69	75.42	72.91	70.86	70.36	71.35	69.64	71.65	73.44	77.02
Daily Min	70.95	68.95	69.31	66.96	68.11	68.86	68.20	69.91	67.73	64.89	63.81	63.79	65.05	65.30	66.11	69.60
Average	72.41	71.38	71.41	70.73	71.48	70.26	71.95	72.51	70.37	67.59	66.92	66.98	66.64	68.40	69.96	73.06
Monthly average 71.3																
License Maximum Monthly Average: 80																

Bergland Dam Temperature Summary - June 2006

Time	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
HHMMSS														
0	74.28	74.57	73.63	69.82	70.18	71.15	68.56	70.59	70.68	71.87	73.31	71.02	70.95	73.24
10000	74.07	74.25	73.27	69.48	69.85	70.86	68.09	70.32	70.65	71.46	72.93	70.61	70.81	72.77
20000	73.81	73.83	72.84	69.17	69.66	70.56	67.69	70.00	70.56	71.02	72.79	70.43	70.48	72.32
30000	73.54	73.53	72.61	68.88	69.53	70.32	67.33	69.75	70.34	70.63	72.59	70.25	70.14	71.92
40000	73.31	73.20	72.19	68.59	69.48	70.07	67.01	69.55	70.11	70.23	72.34	70.07	69.82	71.56
50000	73.08	73.00	72.00	68.29	69.24	69.84	66.70	69.33	69.87	69.89	71.92	69.85	69.49	71.26
60000	72.90	72.84	71.89	68.02	69.17	69.60	66.47	69.12	69.75	69.62	71.46	69.75	69.30	70.99
70000	73.02	72.77	71.96	67.95	69.33	69.64	66.56	68.95	69.80	69.57	71.37	69.93	69.31	70.95
80000	73.40	73.02	71.80	68.31	69.64	69.84	66.87	69.19	70.00	70.03	71.40	70.11	69.66	71.26
90000	74.16	73.45	71.82	69.39	70.56	69.76	67.53	69.44	70.57	71.20	71.38	70.56	70.48	72.18
100000	75.11	74.28	71.91	70.86	71.82	69.66	69.06	69.60	71.17	72.66	71.64	70.83	71.78	73.53
110000	75.90	75.36	71.94	71.89	73.42	70.02	70.54	70.84	72.41	74.19	71.87	70.56	73.15	75.00
120000	76.93	76.59	71.82	72.75	74.93	70.21	71.96	72.73	74.12	75.51	72.32	71.85	74.35	76.32
130000	77.16	78.03	71.73	73.65	76.21	71.15	72.32	72.99	75.07	76.60	73.85	72.97	75.33	77.45
140000	76.87	78.40	71.83	74.08	76.87	72.05	73.38	72.90	75.47	77.63	74.89	73.67	76.10	78.21
150000	76.66	78.46	72.54	74.01	75.94	72.61	73.74	73.80	75.65	77.88	74.73	74.68	76.44	78.69
160000	75.83	78.15	72.91	73.89	75.56	72.81	73.89	74.37	75.42	78.60	75.16	74.79	76.60	79.14
170000	76.66	77.59	73.08	73.58	75.61	72.55	73.71	74.25	74.97	78.66	75.15	74.46	76.55	79.29
180000	77.00	77.07	73.22	73.08	75.09	72.14	73.38	73.76	74.64	78.42	74.59	73.94	76.23	79.20
190000	76.87	76.33	72.82	72.54	74.23	71.64	72.95	73.02	74.28	77.70	74.01	73.36	75.74	78.76
200000	76.55	75.34	72.18	71.80	73.40	71.04	72.23	72.27	73.78	76.59	73.45	72.64	75.25	77.85
210000	75.72	74.57	71.49	71.22	72.63	70.34	71.64	71.65	73.22	75.29	72.79	71.94	74.64	76.82
220000	75.20	74.12	70.81	70.75	71.98	69.67	71.19	71.17	72.70	74.41	72.09	71.38	74.07	76.01
230000	74.82	73.85	70.27	70.43	71.49	69.06	70.88	70.86	72.25	73.85	71.53	71.11	73.65	75.27
Daily Max	77.16	78.46	73.63	74.08	76.87	72.81	73.89	74.37	75.65	78.66	75.16	74.79	76.60	79.29
Daily Min	72.90	72.77	70.27	67.95	69.17	69.06	66.47	68.95	69.75	69.57	71.37	69.75	69.30	70.95
Average	75.11	75.11	72.19	70.93	72.33	70.69	70.15	71.27	72.39	73.90	72.90	71.70	72.93	75.00

Bergland Dam Temperature Summary - July 2006

Time	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
HHMMSS																
0	74.77	74.55	74.44	73.49	71.85	72.09	74.70	75.24	73.90	70.97	70.25	72.28	76.68	80.56	78.62	80.33
10000	74.66	74.23	74.10	73.06	71.40	71.58	74.25	74.84	73.29	70.52	70.02	72.25	76.46	80.28	78.33	80.02
20000	74.64	73.87	73.85	72.68	71.01	71.20	73.81	74.46	73.29	70.03	69.76	72.14	76.32	79.95	78.06	79.70
30000	74.59	73.56	73.65	72.28	70.63	70.88	73.45	74.12	72.97	69.55	69.53	71.98	76.12	79.57	77.83	79.43
40000	74.59	73.29	73.38	71.92	70.32	70.59	73.15	73.85	72.66	69.10	69.31	71.80	75.94	79.23	77.54	79.23
50000	74.59	73.02	73.13	71.58	70.02	70.30	72.84	73.62	72.46	68.70	69.12	71.65	75.76	78.94	77.23	79.03
60000	74.62	72.82	72.91	71.33	69.75	70.05	72.55	73.45	72.34	68.38	69.03	71.58	75.54	78.67	77.02	78.78
70000	74.57	72.99	72.99	71.29	69.71	70.03	72.50	73.26	71.98	68.29	69.21	71.74	75.45	78.67	76.91	78.51
80000	74.55	73.36	72.91	71.55	70.12	70.47	72.86	73.26	72.03	68.58	69.55	72.27	75.78	78.24	77.13	78.46
90000	75.09	74.16	72.70	72.43	71.19	71.49	73.81	73.06	72.45	69.60	70.18	73.22	76.77	77.94	77.94	79.00
100000	76.05	75.47	73.20	73.72	72.54	72.90	75.15	73.17	72.90	71.06	71.47	74.75	78.19	78.22	79.14	80.08
110000	77.41	76.95	74.84	75.42	74.88	75.52	77.74	72.84	73.27	72.45	72.86	77.45	80.89	79.72	80.38	81.50
120000	77.97	78.12	75.99	76.42	75.99	76.57	78.57	72.64	73.87	72.45	72.86	77.08	79.65	78.22	80.38	81.50
130000	77.29	78.84	77.04	76.55	75.99	76.57	78.57	74.80	74.86	74.46	74.07	78.03	82.22	81.14	82.42	83.52
140000	76.96	79.29	77.45	76.64	76.62	77.40	79.05	74.23	74.86	74.68	74.80	79.11	83.14	82.04	83.19	84.22
150000	77.86	79.41	77.49	76.57	76.64	77.79	79.30	75.70	74.86	74.95	75.34	79.99	83.68	82.51	83.48	84.79
160000	78.22	79.27	77.65	76.57	76.35	78.06	79.30	76.35	74.55	74.77	76.35	80.10	84.02	82.26	83.57	84.94
170000	77.94	78.80	77.63	76.24	75.90	78.15	79.00	76.53	74.35	74.07	76.62	80.26	84.04	81.93	83.32	84.99
180000	77.59	78.22	77.41	75.67	75.58	78.10	78.58	76.41	73.96	73.49	76.62	80.31	83.79	81.59	83.01	84.96
190000	77.09	77.50	76.69	75.18	75.20	77.74	78.04	76.08	73.51	72.82	76.17	80.19	83.30	81.12	82.54	84.81
200000	76.42	76.69	75.87	74.43	74.62	77.25	77.31	75.58	72.93	72.23	75.20	79.63	82.63	80.51	81.97	84.47
210000	75.78	75.96	75.18	73.63	73.87	76.60	76.66	75.04	72.28	71.49	74.05	78.71	81.95	79.92	81.45	83.98
220000	75.27	75.38	74.57	72.91	73.18	75.94	76.12	74.57	71.80	70.88	73.08	77.74	81.32	79.39	81.03	83.35
230000	74.88	74.86	74.01	72.34	72.61	75.24	75.65	74.21	71.33	70.50	72.45	77.07	80.89	78.96	80.64	82.83
Daily Max	78.22	79.41	77.65	76.64	76.64	78.15	79.30	76.53	74.86	74.95	76.62	80.31	84.04	82.51	83.57	84.99
Daily Min	74.55	72.82	72.70	71.29	69.71	70.03	72.50	72.55	71.33	68.29	69.03	71.58	75.45	77.94	76.91	78.46
Average	75.98	75.86	74.96	73.84	73.06	74.18	75.87	74.38	73.21	71.46	72.44	75.85	79.60	80.08	80.18	81.82
Monthly average: 76.9																
License Maximum Monthly Average: 83																

Bergland Dam Temperature Summary - July 2006

Time	07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
HHMMSS															
0	82.49	79.11	78.28	76.42	76.42	75.96	74.79	72.54	74.52	77.20	77.94	78.44	79.12	80.01	76.03
10000	82.17	78.62	77.94	76.21	76.01	75.67	74.50	72.41	74.30	76.75	77.41	78.24	78.82	79.79	75.81
20000	81.91	78.19	77.67	75.96	75.65	75.45	74.16	72.23	74.14	76.39	76.96	78.06	78.53	79.57	75.63
30000	81.72	77.77	77.45	75.76	75.29	75.33	73.74	72.01	73.90	75.92	76.59	77.81	78.30	79.43	75.47
40000	81.52	77.45	77.16	75.65	75.07	75.13	73.40	71.80	73.67	75.81	76.26	77.65	78.08	79.23	75.36
50000	81.28	77.18	76.86	75.36	74.86	75.00	73.18	71.62	73.45	75.70	75.99	77.52	77.88	78.98	75.25
60000	80.98	76.91	76.62	75.04	74.70	74.80	73.00	71.49	73.29	75.58	75.76	77.43	77.47	78.57	75.02
70000	80.83	76.80	76.57	74.89	74.68	74.70	72.91	71.44	73.26	75.51	75.63	77.32	77.27	78.37	75.02
80000	80.71	77.18	76.77	75.13	74.91	74.95	73.18	71.60	73.60	75.58	75.88	77.41	77.23	78.44	75.20
90000	80.65	78.12	77.36	75.90	75.33	75.22	73.69	72.43	74.48	75.90	76.87	77.95	77.76	78.37	75.61
100000	80.73	79.30	77.90	77.16	76.62	75.87	74.03	73.76	75.92	76.48	78.03	79.11	78.87	78.39	76.15
110000	81.23	80.44	78.49	78.42	77.61	77.04	74.30	73.29	77.58	77.54	78.94	80.49	80.11	78.40	77.41
120000	82.20	81.50	78.73	79.43	77.61	78.13	74.26	76.39	79.18	79.50	80.10	81.81	81.43	78.42	78.76
130000	83.26	82.29	78.48	80.15	78.80	79.02	74.16	77.34	80.49	80.58	80.73	82.80	82.44	78.17	80.13
140000	83.71	82.69	78.17	80.46	78.91	79.65	74.16	77.32	81.00	81.88	79.34	83.28	83.07	77.97	81.52
150000	83.57	83.01	78.57	80.85	79.34	79.84	74.08	77.77	81.21	82.26	80.35	82.96	83.48	77.81	82.11
160000	83.43	83.14	79.29	80.74	79.75	79.59	74.08	78.15	81.52	82.31	81.30	83.12	83.48	77.58	82.31
170000	83.28	83.07	79.48	80.44	79.57	79.11	74.21	78.04	81.84	82.09	81.32	83.19	83.14	77.43	82.29
180000	82.81	82.62	79.36	79.97	79.21	78.49	74.32	77.63	81.79	81.81	81.19	82.09	82.80	77.27	81.93
190000	82.17	82.02	78.98	79.52	78.66	77.97	74.08	77.20	80.98	81.23	80.67	81.70	82.26	77.32	81.48
200000	81.45	81.23	78.33	78.91	78.08	77.23	73.76	76.48	79.95	80.55	80.02	80.92	81.46	77.20	80.76
210000	80.80	80.31	77.61	78.10	77.31	76.50	73.04	75.90	78.30	79.77	79.45	80.37	80.76	76.87	80.10
220000	80.19	79.50	77.09	77.40	76.77	75.81	73.04	75.25	78.48	79.09	79.03	79.88	80.38	76.55	79.56
230000	79.63	78.84	76.71	76.86	76.32	75.25	72.72	74.79	77.77	78.49	78.71	79.50	80.22	76.28	79.02
Daily Max	83.71	83.14	79.48	80.85	79.75	79.84	74.79	78.15	81.84	82.31	81.32	83.28	83.48	80.01	82.31
Daily Min	79.63	76.80	76.57	74.89	74.68	74.70	72.72	71.44	73.26	75.51	75.63	77.32	77.23	76.28	75.02
Average	81.78	79.89	77.91	77.70	76.91	76.74	73.80	74.62	77.32	78.50	78.52	79.96	80.18	78.20	78.25

Bergland Dam Temperature Summary - August 2006

Time	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
HHMMSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10000	71.94	71.22	72.21	70.39	72.09	70.77	69.91	70.27	68.41	66.97	67.23	68.99	68.63	66.09	66.40
20000	71.82	71.13	72.01	70.07	71.85	70.47	69.57	70.00	68.11	66.88	66.97	68.74	68.43	65.86	66.13
30000	71.69	71.06	71.55	69.84	71.64	70.21	69.26	69.73	67.84	66.83	66.72	68.45	68.18	65.62	65.91
40000	71.55	70.99	71.10	69.55	71.53	69.94	68.95	69.53	67.69	66.76	66.49	68.20	67.91	65.35	65.70
50000	71.38	70.88	70.84	69.31	71.40	69.67	68.79	69.30	67.50	66.70	66.25	68.00	67.78	65.10	65.50
60000	71.22	70.81	70.75	69.13	71.24	69.46	68.72	69.10	67.28	66.65	66.04	67.84	67.68	64.85	65.23
70000	71.19	70.70	70.68	68.99	71.10	69.26	68.65	69.06	66.96	66.61	65.88	67.73	67.57	64.67	64.98
80000	71.26	70.75	70.68	69.21	71.06	69.31	68.74	69.12	66.61	66.67	65.97	67.93	67.80	64.71	65.03
90000	71.55	70.79	71.11	69.82	71.11	70.03	69.24	69.30	66.72	66.96	66.60	68.40	68.07	65.14	65.53
100000	72.01	70.90	71.62	70.92	71.46	71.29	69.93	69.48	66.87	67.28	67.89	68.92	68.32	66.15	66.67
110000	72.66	71.44	71.96	72.39	72.43	72.23	71.28	70.12	67.30	67.51	69.39	69.31	68.45	67.51	67.96
120000	72.99	72.48	71.76	73.67	72.84	73.06	72.86	70.99	68.04	68.05	70.75	69.71	68.67	68.81	69.12
130000	72.93	74.19	72.23	74.61	73.13	73.83	73.36	71.51	68.83	68.29	71.73	70.02	68.74	69.67	69.96
140000	73.26	74.82	73.53	75.24	74.07	74.59	74.14	72.07	69.10	68.61	72.59	70.25	68.79	70.16	70.50
150000	74.01	75.34	74.07	75.49	74.53	74.80	74.52	72.14	68.76	69.06	72.91	70.38	68.74	70.34	70.72
160000	74.41	75.45	74.08	75.61	74.61	74.75	74.52	72.07	68.52	69.62	72.64	70.70	68.63	70.18	70.63
170000	74.39	74.93	73.78	75.56	74.35	74.46	74.28	71.76	68.41	69.80	72.57	70.84	68.54	69.76	70.39
180000	74.14	74.30	73.60	75.22	73.92	73.85	73.78	71.17	68.20	69.71	72.34	70.74	68.43	69.30	70.03
190000	73.74	73.87	73.33	74.89	73.53	73.15	73.11	70.61	67.95	69.49	72.03	70.48	68.25	68.92	69.57
200000	73.13	73.44	72.84	74.23	72.97	72.52	72.27	70.11	67.71	69.03	71.46	70.16	67.87	68.34	68.95
210000	72.63	73.08	72.21	73.53	72.39	71.83	71.42	69.69	67.50	68.50	70.68	69.80	67.51	67.68	68.29
220000	72.28	72.81	71.65	73.02	71.89	71.22	70.99	69.31	67.30	68.09	70.03	69.46	67.08	67.23	67.75
230000	71.89	72.63	71.20	72.63	71.46	70.72	70.74	68.92	67.17	67.77	69.60	69.15	66.69	66.96	67.33
Daily Max	74.41	75.45	74.08	75.61	74.61	74.80	74.52	72.14	69.10	69.80	72.91	70.84	68.86	70.34	70.72
Daily Min	71.19	70.70	70.68	68.99	71.06	69.26	68.65	68.92	66.61	66.61	65.88	67.73	66.69	64.67	64.98
Average	72.51	72.48	72.13	72.25	72.46	71.77	71.22	70.24	67.81	67.87	69.26	69.31	68.15	67.28	67.71

Bergland Dam Temperature Summary - August 2006

Time HHMMSS	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/06/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
0	78.69	76.41	75.47	75.96	76.51	75.60	73.60	72.46	73.74	75.16	71.83	71.62	72.77	72.52	70.48	69.28
10000	78.22	76.28	75.02	75.58	76.01	75.45	73.35	72.21	73.54	74.89	71.42	71.24	72.46	72.36	70.11	68.97
20000	77.92	76.14	74.68	75.25	75.61	75.31	73.09	72.00	73.33	74.68	71.04	70.83	72.21	72.10	69.80	68.74
30000	77.68	75.88	74.39	74.98	75.33	75.18	72.82	71.78	73.18	74.53	70.63	70.54	71.98	71.67	69.39	68.50
40000	77.41	75.67	74.14	74.73	75.04	74.97	72.63	71.56	73.08	74.39	70.29	70.21	71.76	71.24	69.08	68.29
50000	77.20	75.47	73.92	74.39	74.71	74.82	72.46	71.35	72.90	74.19	69.98	69.87	71.67	70.75	68.86	68.07
60000	77.00	75.31	73.74	74.03	74.50	74.68	72.27	71.13	72.75	74.07	69.67	69.58	71.69	70.36	68.61	67.87
70000	76.98	75.20	73.60	73.80	74.48	74.53	72.12	71.04	72.61	74.03	69.49	69.44	71.69	70.12	68.50	67.78
80000	77.04	75.18	73.89	73.96	74.71	74.48	72.25	71.24	72.79	73.92	69.62	69.75	71.73	70.05	68.67	68.13
90000	77.29	75.16	74.70	74.71	75.27	74.50	72.64	72.00	73.18	73.80	70.20	70.47	71.87	70.45	69.21	68.63
100000	77.27	75.13	76.06	75.99	75.72	74.35	73.42	73.04	73.87	73.78	71.46	71.51	72.54	71.51	70.21	69.75
110000	77.20	75.29	77.50	77.36	76.14	74.08	74.44	73.98	74.35	73.89	72.99	72.91	73.13	72.64	71.35	71.24
120000	77.22	75.97	78.66	78.55	77.14	74.10	74.98	75.02	75.02	74.44	74.41	74.14	73.27	73.60	72.34	72.59
130000	77.47	77.92	79.57	79.56	77.09	75.25	75.09	75.52	75.67	75.11	75.20	74.79	73.60	74.10	73.04	73.65
140000	77.76	79.34	80.13	80.19	77.22	76.28	75.65	75.97	76.30	75.27	75.56	75.16	74.32	74.25	73.45	74.43
150000	78.35	79.88	80.33	80.49	77.09	76.71	75.96	76.28	76.60	75.58	75.74	75.81	74.70	74.01	73.53	74.84
160000	78.64	79.99	80.38	80.62	77.09	76.64	75.97	76.39	76.84	75.94	75.42	76.05	74.39	73.85	73.44	75.00
170000	78.40	79.63	80.06	80.60	77.04	76.32	75.70	76.37	76.78	75.97	75.06	75.92	74.12	73.51	73.13	74.97
180000	78.10	79.07	79.48	80.55	76.93	75.88	75.45	76.17	76.89	75.47	74.79	75.70	73.80	72.97	72.57	74.71
190000	77.76	78.46	79.00	80.10	76.77	75.47	75.02	75.83	76.59	74.75	74.52	75.36	73.62	72.52	72.09	74.26
200000	77.38	77.85	78.39	79.47	76.48	74.93	74.39	75.33	76.21	74.05	73.98	74.71	73.33	71.98	71.44	73.71
210000	77.05	77.05	77.63	78.87	76.14	74.44	73.71	74.82	75.90	73.38	73.20	74.07	73.02	71.42	70.72	73.18
220000	76.80	76.51	76.95	77.74	75.87	74.14	73.15	74.43	75.65	72.81	72.45	73.54	72.79	71.13	70.12	72.81
230000	76.57	75.96	76.41	77.11	75.72	73.89	72.75	74.07	75.40	72.28	71.94	73.13	72.66	70.84	69.64	72.50
Daily Max	78.69	79.99	80.38	80.62	77.22	76.71	75.97	76.39	76.89	75.97	75.74	76.05	74.70	74.25	73.53	75.00
Daily Min	76.57	75.13	73.60	73.80	74.48	73.89	72.12	71.04	72.61	69.49	69.44	71.67	70.05	68.50	67.78	67.78
Average	77.56	76.87	76.84	77.27	76.00	75.08	73.87	73.74	74.72	74.43	72.54	72.76	72.88	72.08	70.82	71.33

Monthly average: 72.30
License Maximum Monthly Average: 81

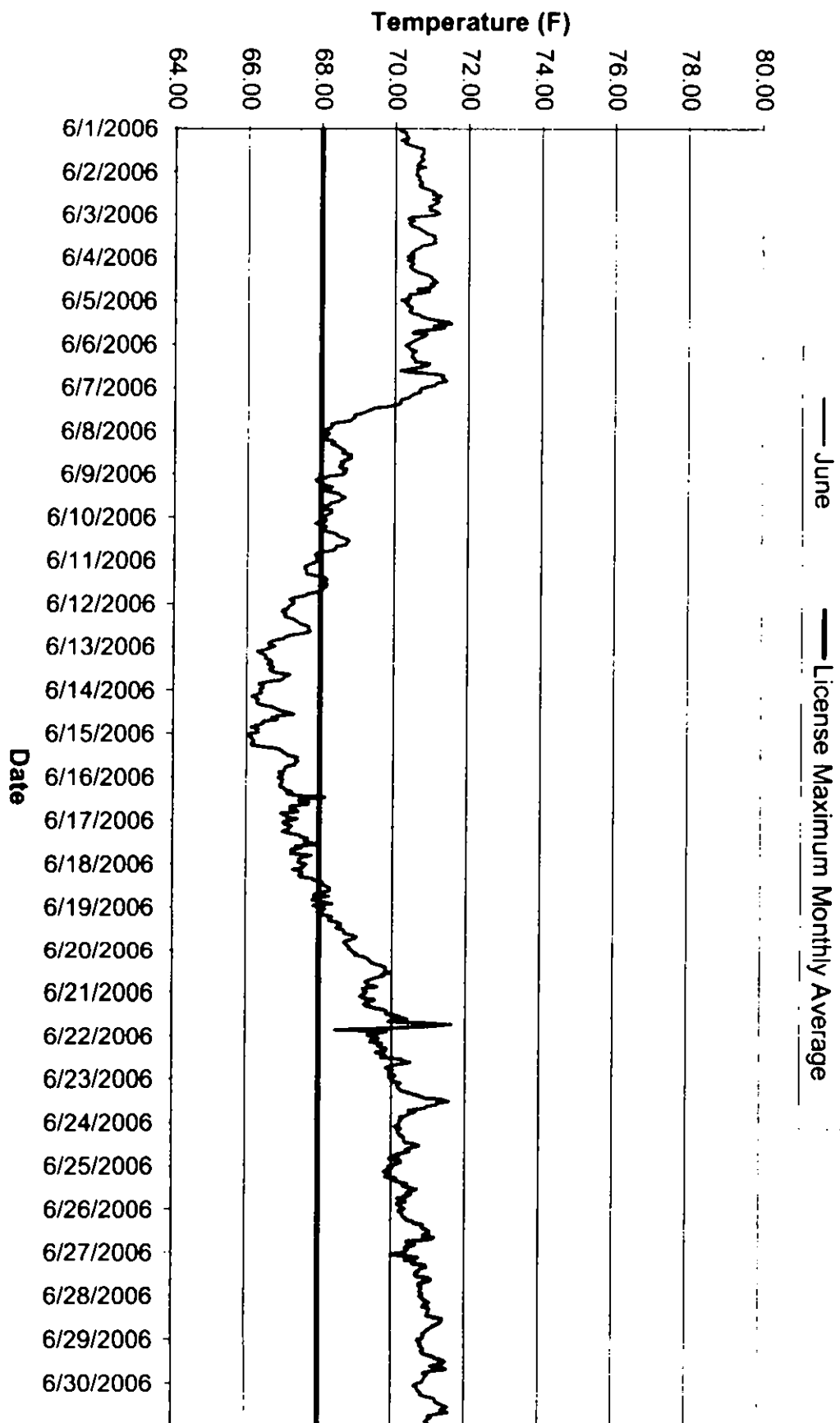
Bergland Dam Temperature Summary - September 2006

Time	09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/16/06
HHMMSS																
0	66.97	67.75	67.89	68.07	68.88	69.51	70.61	70.30	63.12	60.53	60.12	60.60	59.83	60.91	63.10	65.82
10000	66.61	67.30	67.62	67.75	68.68	69.31	70.48	70.09	62.71	60.13	59.86	60.46	59.54	60.71	63.03	65.75
20000	66.33	66.96	67.35	67.51	68.50	69.12	70.32	69.89	62.35	59.76	59.58	60.33	59.27	60.51	62.92	65.64
30000	66.04	66.61	67.12	67.30	68.29	68.92	70.11	69.62	61.92	59.38	59.32	60.22	58.98	60.35	62.87	65.59
40000	65.79	66.31	66.87	67.01	68.09	68.74	69.82	69.44	61.48	59.00	59.07	60.15	58.75	60.19	62.82	65.57
50000	65.55	66.00	66.65	66.79	67.89	68.83	69.48	69.06	61.11	58.68	58.84	60.04	58.55	60.01	62.73	65.43
60000	65.28	65.80	66.43	66.60	67.69	68.78	69.24	68.63	60.71	58.39	58.64	59.90	58.50	59.79	62.58	65.23
70000	65.05	65.61	66.25	66.38	67.53	68.70	69.03	68.25	60.37	58.14	58.46	59.77	58.46	59.56	62.44	65.05
80000	65.10	65.64	66.31	66.36	67.57	68.65	68.94	68.94	60.21	58.06	58.48	59.81	58.62	59.49	62.46	65.01
90000	65.70	65.97	66.88	67.05	68.04	68.67	69.17	67.21	60.58	58.53	58.86	60.19	59.04	59.90	62.78	65.07
100000	66.78	67.12	68.02	68.02	69.03	68.88	69.89	67.32	61.54	59.61	59.61	60.55	59.83	61.05	63.57	64.90
110000	68.23	68.72	69.37	69.17	70.30	69.66	70.90	67.42	62.64	60.87	60.69	60.73	60.89	62.38	64.29	64.87
120000	69.49	70.12	70.03	70.18	71.44	70.90	71.80	67.48	63.61	61.92	61.38	60.76	62.13	63.55	65.01	65.16
130000	70.43	70.66	70.48	70.93	72.21	71.74	72.45	67.62	64.22	62.60	61.90	60.93	63.00	64.42	65.66	65.43
140000	71.02	71.13	71.33	71.38	72.45	72.28	72.75	67.69	64.54	63.09	62.10	61.20	63.54	65.01	66.06	65.62
150000	71.26	71.31	71.47	71.83	72.54	72.46	72.91	67.55	64.58	63.28	62.35	61.48	63.88	65.39	66.42	65.77
160000	71.28	71.47	71.49	71.80	72.45	72.52	72.82	67.26	64.38	63.21	62.24	61.75	63.86	65.61	66.56	65.70
170000	71.08	71.10	71.50	71.80	72.45	72.46	72.61	66.88	64.06	62.96	62.10	61.79	63.72	65.62	66.56	65.71
180000	70.70	70.39	71.02	71.44	72.16	72.41	72.25	66.43	63.70	62.60	61.81	61.63	63.39	65.46	66.49	65.62
190000	70.21	69.64	70.38	70.99	71.67	72.14	71.85	65.86	63.18	62.22	61.54	61.30	63.01	65.17	66.36	65.39
200000	69.62	69.06	69.75	70.50	71.08	71.69	71.37	65.19	62.47	61.68	61.20	61.07	62.44	64.60	66.15	65.14
210000	69.03	68.55	69.30	70.03	70.54	71.29	70.95	64.62	61.83	61.16	60.98	60.87	61.93	64.02	65.98	64.96
220000	68.61	68.36	68.94	69.57	70.14	70.97	70.66	64.08	61.32	60.75	60.85	60.51	61.54	63.57	65.89	64.92
230000	68.20	68.14	68.49	69.19	69.82	70.68	70.50	63.61	60.93	60.40	60.75	60.15	61.18	63.27	65.86	64.85
Daily Max	71.28	71.47	71.55	71.83	72.54	72.52	72.91	70.30	64.58	63.28	62.35	61.79	63.88	65.62	66.56	65.82
Daily Min	65.05	65.61	66.25	66.36	67.53	68.65	68.94	63.61	60.21	58.06	58.46	59.77	58.46	59.49	62.44	64.85
Average	68.10	68.33	68.79	69.07	69.98	70.39	70.87	67.45	62.40	60.71	60.45	60.68	60.99	62.52	64.52	65.34
Monthly average: 61.02																
License Maximum Monthly Average: 74																

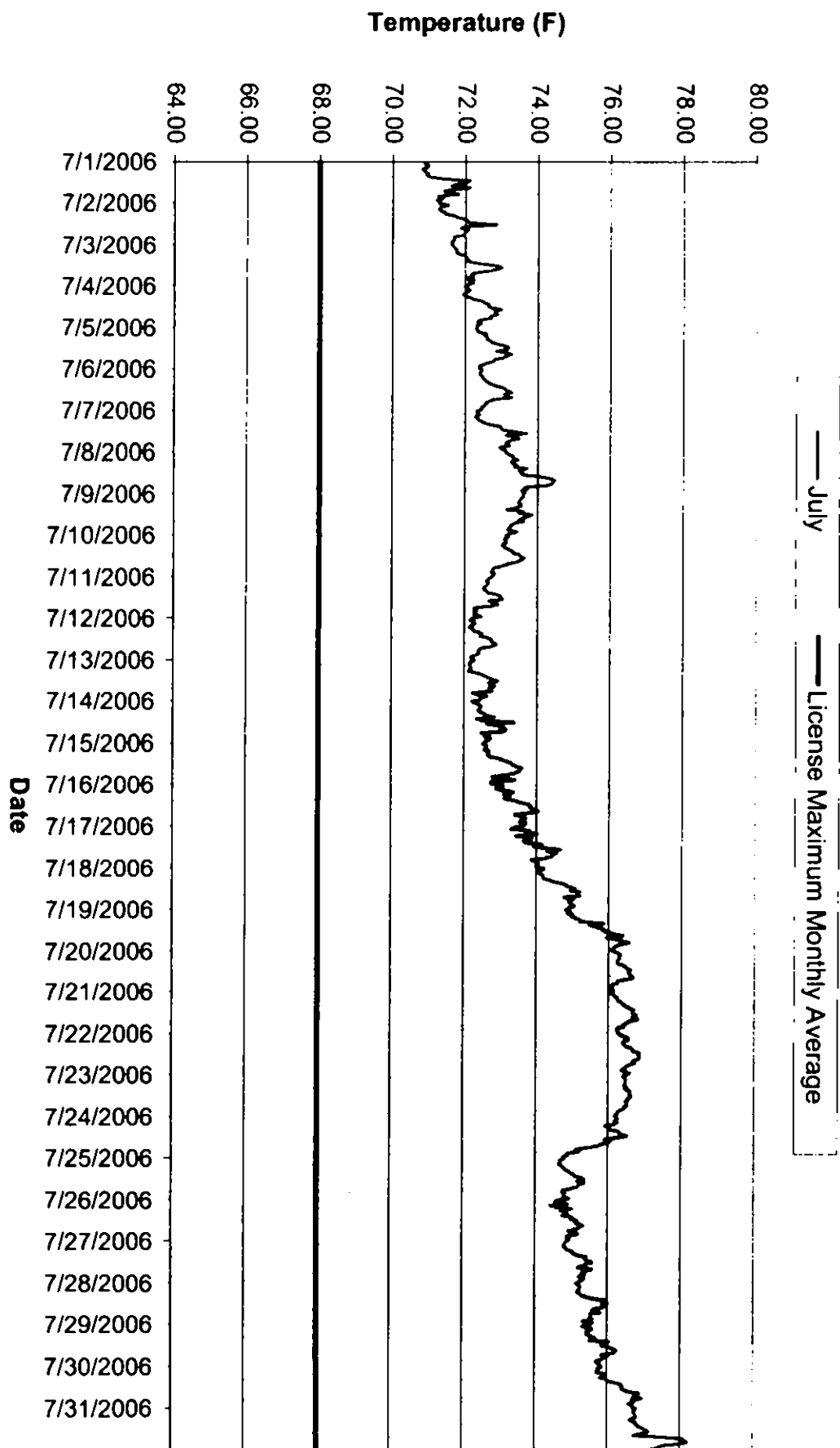
Bergland Dam Temperature Summary - September 2006

Time HHMMSS	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
0	64.80	63.37	57.94	54.72	54.01	55.96	55.83	56.21	55.56	54.07	53.76	52.99	52.27	51.84
10000	64.78	63.12	57.70	54.54	53.92	55.99	55.81	56.25	55.56	53.91	53.78	52.93	52.23	51.85
20000	64.78	62.85	57.38	54.28	53.80	56.03	55.78	56.16	55.49	53.78	53.74	52.77	52.16	51.82
30000	64.76	62.60	57.15	54.07	53.67	56.05	55.71	55.99	55.56	53.64	53.74	52.70	52.07	51.78
40000	64.76	62.33	56.86	53.85	53.56	56.05	55.60	55.87	55.54	53.51	53.69	52.61	52.00	51.55
50000	64.74	62.01	56.70	53.69	53.46	56.05	55.58	55.65	55.45	53.37	53.60	52.38	51.87	51.46
60000	64.65	61.70	56.50	53.71	53.35	56.03	55.58	55.35	55.33	53.15	53.51	52.27	51.67	51.49
70000	64.56	61.41	56.28	53.69	53.19	55.99	55.58	55.06	55.17	53.04	53.40	51.96	51.51	51.48
80000	64.54	61.25	56.14	53.71	53.10	55.99	55.60	54.91	54.99	53.13	53.35	51.73	51.42	51.48
90000	64.81	61.45	56.01	53.83	53.35	56.12	55.83	55.08	55.02	53.28	53.35	51.93	51.51	51.53
100000	65.23	61.83	55.89	54.23	54.00	56.34	56.21	55.38	55.49	53.56	53.55	52.20	51.91	51.75
110000	65.50	61.47	55.94	54.64	54.82	56.30	56.77	55.76	55.83	53.60	53.91	52.65	52.34	52.05
120000	65.43	61.18	56.08	54.93	55.53	56.32	57.63	56.50	55.83	53.55	54.10	53.06	52.36	52.39
130000	65.43	60.87	56.08	55.51	55.99	56.34	57.87	56.97	55.63	54.03	54.25	53.44	52.65	52.56
140000	65.70	60.69	56.44	55.74	56.25	56.28	57.76	57.33	55.65	54.25	54.30	53.13	52.84	52.47
150000	65.57	60.40	56.73	55.92	56.43	56.25	57.40	57.38	55.67	54.30	54.64	53.22	52.88	52.66
160000	65.70	60.33	56.75	55.87	56.61	56.16	57.18	57.45	55.74	54.36	54.52	53.17	52.74	52.48
170000	65.68	60.15	56.46	55.71	56.62	56.08	57.00	57.40	55.62	54.14	54.19	53.01	52.48	52.41
180000	65.59	59.77	56.17	55.47	56.50	56.01	56.84	56.89	55.45	53.94	53.94	52.81	52.21	52.27
190000	65.46	59.41	55.78	55.15	56.26	55.96	56.86	56.59	55.26	53.82	53.69	52.56	52.00	52.05
200000	65.23	59.27	55.51	54.73	56.03	55.90	56.53	56.30	54.91	53.71	53.46	52.39	51.89	51.85
210000	64.81	58.77	55.24	54.48	55.94	55.87	56.43	55.94	54.63	53.65	53.26	52.32	51.85	51.76
220000	64.26	58.46	55.04	54.27	55.90	55.85	56.35	55.72	54.43	53.67	53.10	52.29	51.84	51.71
230000	63.77	58.21	54.81	54.12	55.92	55.83	56.25	55.63	54.23	53.71	53.01	52.29	51.82	51.60
Daily Max	65.70	63.37	57.94	55.92	56.62	56.34	57.87	57.45	55.83	54.36	54.64	53.44	52.88	52.66
Daily Min	63.77	58.21	54.81	53.69	53.10	55.83	55.58	54.91	54.23	53.04	53.01	51.73	51.42	51.46
Average	65.02	60.95	56.32	54.62	54.93	56.07	56.41	56.16	55.34	53.71	53.74	52.62	52.11	51.93

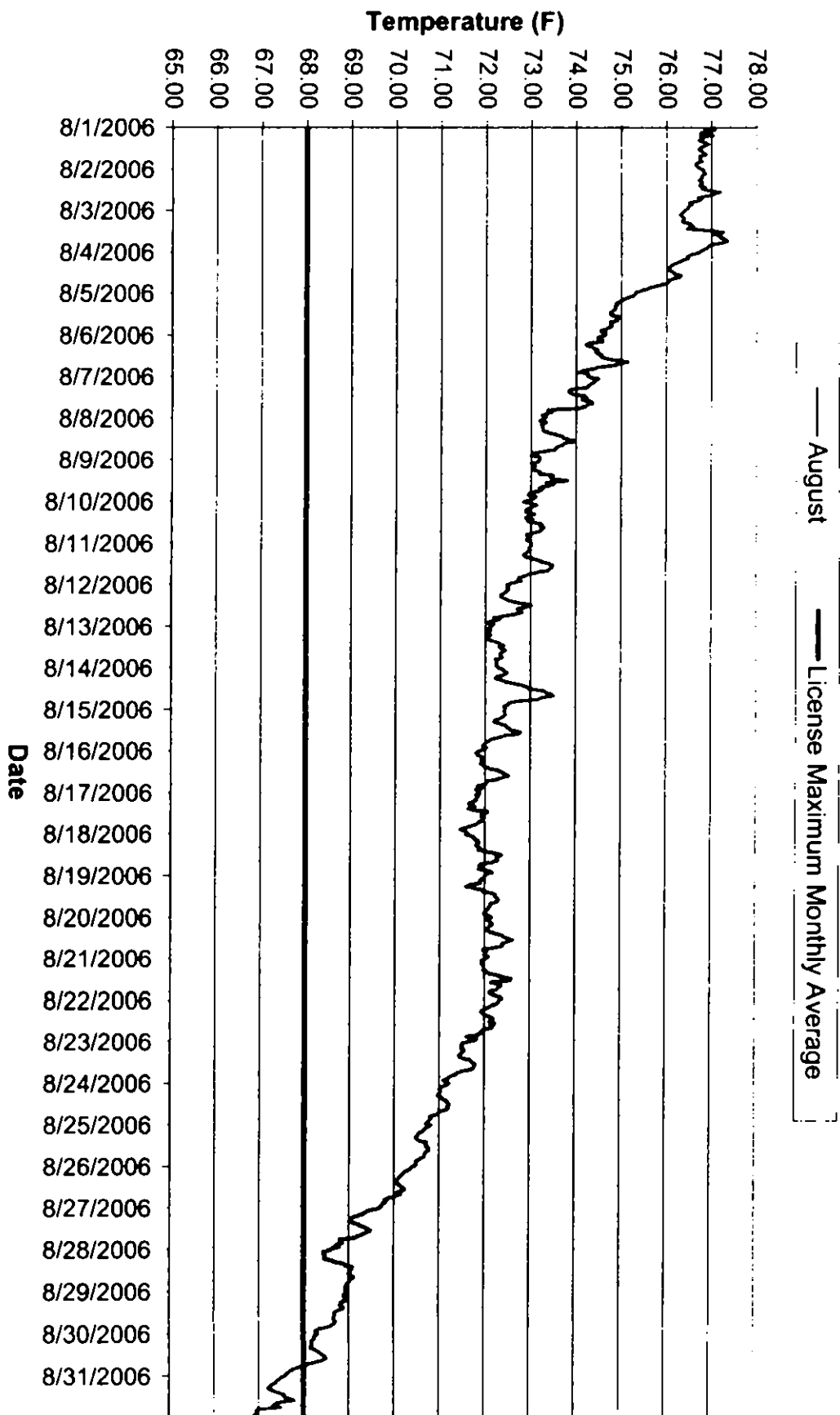
Victoria Powerhouse Tailrace Temperatures - June 2006



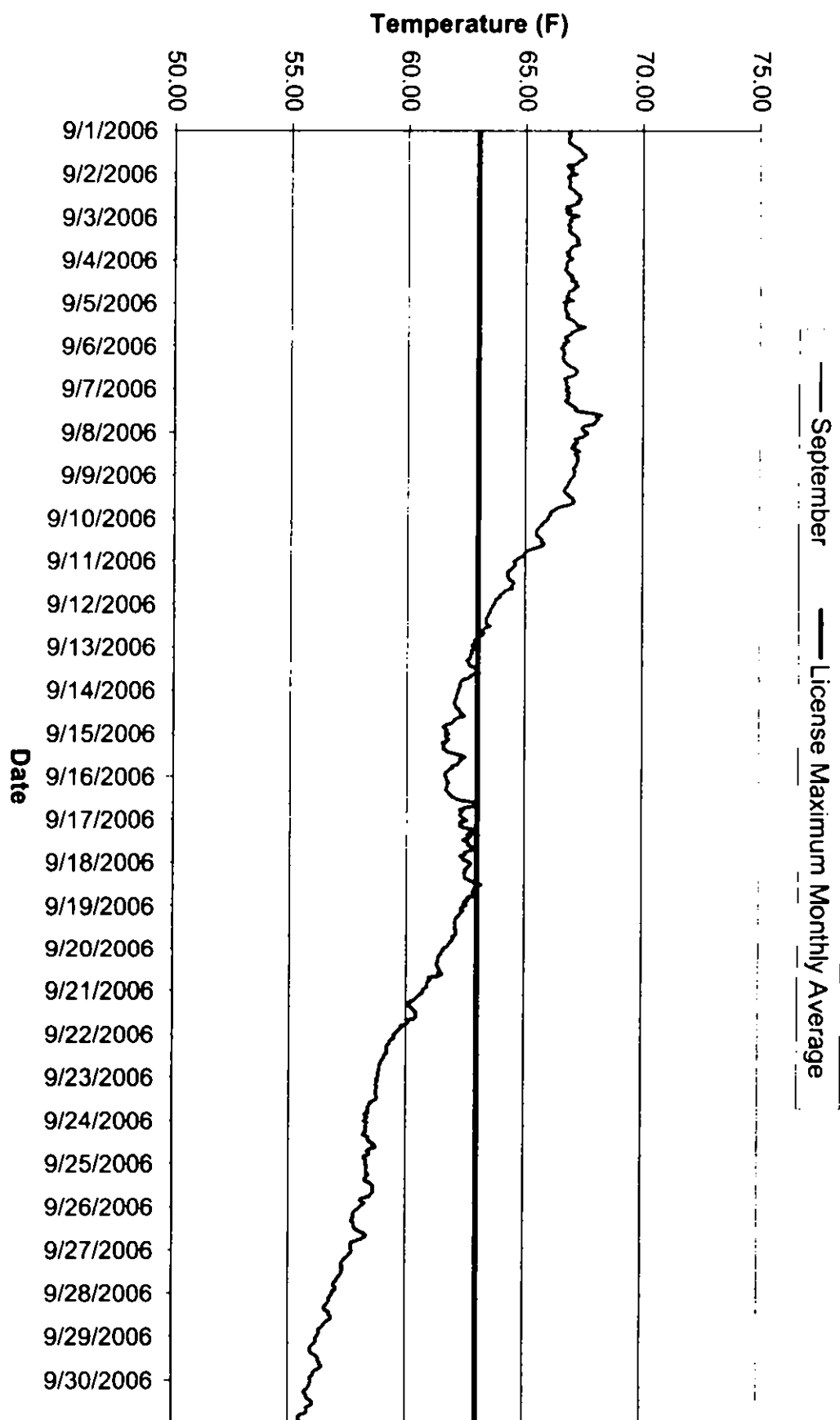
Victoria Powerhouse Tailrace Temperatures - July 2006



Victoria Powerhouse Tailrace Temperatures - August 2006



Victoria Powerhouse Tailrace Temperatures - September 2006



Victoria Powerhouse Tailrace Temperature Summary - June 2006

Time	06/01/06	06/02/06	06/03/06	06/04/06	06/05/06	06/06/06	06/07/06	06/08/06	06/09/06	06/10/06	06/11/06	06/12/06	06/13/06	06/14/06	06/15/06	06/16/06
HI-MMS	70 09	70 59	71 04	70 50	70 36	70 29	70 70	68 09	68 61	68 07	67 91	67 23	66 65	66 36	66 06	66 87
0	70 12	70 54	70 41	70 34	70 30	70 38	70 66	68 22	68 23	68 14	67 80	67 12	66 54	66 42	66 07	66 99
10000	70 29	70 63	70 34	70 47	70 34	70 43	70 70	68 14	68 07	68 11	67 68	67 12	66 29	66 29	66 15	66 96
20000	70 32	70 66	70 50	70 48	70 47	70 57	70 52	68 11	67 86	67 84	67 57	66 97	66 36	66 15	66 16	66 97
30000	70 37	70 63	70 38	70 41	70 45	70 47	70 43	68 02	67 89	68 05	67 55	66 94	66 49	66 27	66 20	66 92
40000	70 34	70 70	70 39	70 41	70 38	70 48	70 39	68 27	68 05	68 14	67 60	67 06	66 52	66 33	66 15	66 92
50000	70 14	70 74	70 47	70 48	70 47	70 45	70 20	68 36	68 05	67 98	67 60	67 01	66 49	66 27	66 15	67 05
60000	70 30	70 63	70 63	70 54	70 66	70 50	70 14	68 27	68 31	68 05	67 80	67 05	66 61	66 29	66 38	67 05
70000	70 25	70 70	70 70	70 68	70 74	70 54	70 16	68 45	68 23	68 23	67 82	67 24	66 69	66 45	66 81	67 24
80000	70 43	70 83	70 79	70 86	70 86	70 54	70 09	68 47	68 05	68 43	68 07	67 33	66 56	66 69	66 94	67 10
90000	70 59	70 97	70 86	70 97	71 11	70 95	69 82	68 58	68 31	68 45	68 16	67 41	66 67	66 81	66 99	67 35
100000	70 75	71 06	71 06	70 99	71 46	70 90	69 44	68 65	68 49	68 58	68 14	67 46	66 72	66 90	67 06	68 14
110000	70 75	71 01	71 04	71 08	71 53	70 72	69 33	68 56	68 52	68 72	68 09	67 64	66 61	67 10	67 15	67 50
120000	70 75	71 01	71 04	71 13	71 04	70 47	69 21	68 83	68 65	68 70	68 18	67 69	66 65	66 83	67 33	67 42
130000	70 72	71 17	71 04	70 95	71 35	70 14	69 10	68 72	68 54	68 70	68 14	67 68	66 78	66 83	67 33	67 71
140000	70 68	71 01	71 10	71 04	71 15	70 47	68 88	68 83	68 49	68 70	68 05	67 73	67 19	66 69	67 41	67 68
150000	70 72	71 17	70 93	70 93	70 59	71 15	68 92	68 70	68 25	68 41	68 04	67 55	67 05	66 85	67 32	67 21
160000	70 75	71 13	70 70	70 59	70 47	71 33	68 85	68 52	68 25	68 40	67 93	67 26	67 01	66 45	67 33	67 37
170000	70 65	71 02	70 66	70 93	70 86	71 28	68 77	68 61	68 02	68 36	67 66	67 05	66 92	66 47	67 08	67 42
180000	70 61	70 92	70 56	70 58	70 79	71 33	68 43	68 50	68 29	67 86	67 32	66 76	66 56	66 31	67 05	66 96
190000	70 57	70 95	70 48	70 38	70 65	71 40	68 25	68 50	68 29	67 86	67 15	66 60	66 43	66 33	66 88	67 12
200000	70 81	70 92	70 41	70 36	70 54	71 13	68 29	68 70	68 29	67 86	67 15	66 60	66 43	66 33	66 88	67 12
210000	70 57	71 11	70 50	70 41	70 47	71 10	68 27	68 59	68 20	67 93	67 24	66 58	66 45	66 27	67 01	67 10
220000	70 59	71 19	70 32	70 16	70 39	70 90	68 07	68 67	68 11	67 89	67 28	66 76	66 36	66 33	66 96	67 41
230000																
Daily Max	70 81	71 24	71 10	71 13	71 53	71 40	70 70	68 83	68 65	68 77	68 18	67 73	67 19	67 30	67 41	68 14
Daily Min	70 09	70 54	70 32	70 16	70 30	70 14	68 07	68 02	67 86	67 84	67 15	66 58	66 29	66 13	66 06	66 87
Average	70 50	70 90	70 68	70 66	70 73	70 75	69 48	68 47	68 24	68 24	67 76	67 18	66 62	66 51	66 80	67 24
Monthly average: 69.31																
License Maximum Monthly Average: 68 F																

Victoria Powerhouse Tailrace Temperature Summary - June 2006

Time	06/17/06	06/18/06	06/19/06	06/20/06	06/21/06	06/22/06	06/23/06	06/24/06	06/25/06	06/26/06	06/27/06	06/28/06	06/29/06	06/30/06
HHMMSS														
0	67.17	67.66	68.13	68.90	69.31	69.48	70.03	70.23	69.93	70.38	70.39	70.79	70.72	70.70
10000	66.99	67.57	68.16	68.94	69.24	69.66	70.00	70.18	70.03	70.20	70.03	70.86	70.79	70.63
20000	67.08	67.55	68.04	69.03	69.12	69.44	70.25	70.09	69.93	70.29	70.43	70.90	70.83	70.74
30000	67.24	67.28	68.00	69.01	69.28	69.42	70.18	70.27	69.80	70.30	70.75	70.99	70.77	70.74
40000	67.19	67.50	68.13	69.22	69.53	69.73	70.16	70.18	69.91	70.32	70.39	71.06	70.86	70.75
50000	67.14	67.53	68.36	69.33	69.35	69.62	70.21	70.18	69.89	70.39	70.65	70.90	70.90	70.84
60000	66.99	67.46	68.27	69.39	69.24	69.71	70.27	70.21	69.84	70.43	70.59	70.88	70.83	70.81
70000	67.21	67.46	68.27	69.42	69.33	69.87	70.45	70.25	70.14	70.59	70.93	71.04	70.86	70.93
80000	67.46	67.80	68.49	69.53	69.55	69.84	70.61	70.36	70.09	70.66	70.97	71.06	71.01	71.19
90000	67.50	67.87	68.61	69.69	69.80	69.57	70.77	70.36	70.23	70.88	70.81	71.02	71.15	71.22
100000	67.69	68.09	68.56	69.84	69.87	69.73	70.92	70.34	70.45	70.83	70.79	71.02	71.24	71.22
110000	67.59	68.04	68.47	69.84	69.84	69.84	71.40	70.39	70.32	70.90	70.68	70.99	71.44	71.31
120000	67.69	68.16	68.68	69.80	70.11	69.71	71.56	70.65	70.47	71.01	70.66	71.19	71.49	71.44
130000	67.95	68.27	68.68	69.94	70.25	70.25	71.26	70.77	70.59	70.97	70.70	71.42	71.37	71.56
140000	67.37	68.31	68.68	69.71	70.43	70.32	71.19	70.56	70.59	70.97	71.02	71.40	71.08	71.38
150000	67.51	68.27	68.92	69.78	69.91	70.52	70.95	70.39	70.43	70.88	71.11	71.35	71.42	71.38
160000	67.23	67.98	69.03	69.55	70.68	70.16	70.90	70.50	70.56	71.19	71.02	71.24	71.53	71.58
170000	67.30	67.86	68.97	69.42	71.62	69.94	70.47	70.32	70.41	71.02	70.77	71.13	71.06	71.24
180000	67.23	68.27	68.79	69.28	71.08	69.84	70.66	70.09	70.16	70.43	70.86	70.97	71.01	71.02
190000	67.80	67.95	68.68	69.33	70.12	70.03	70.48	70.20	70.36	70.52	70.77	70.97	71.01	71.11
200000	67.53	67.82	68.74	69.35	68.45	69.96	70.41	69.94	70.41	70.66	70.84	70.95	70.95	71.01
210000	67.44	68.07	68.76	69.60	69.85	69.93	70.23	70.23	70.16	70.39	70.79	70.86	70.92	70.93
220000	67.46	68.36	68.85	69.21	69.64	70.11	70.30	70.27	70.27	70.48	70.83	70.92	70.90	71.02
230000	67.42	67.84	68.81	69.24	69.33	69.93	70.21	70.12	70.27	70.41	70.88	70.88	70.86	71.10
Daily Max	67.95	68.36	69.03	69.94	71.62	70.52	71.56	70.77	70.72	71.19	71.11	71.42	71.53	71.58
Daily Min	66.99	67.28	68.00	68.90	68.45	69.42	70.00	69.94	69.80	70.20	70.03	70.79	70.72	70.63
Average	67.38	67.87	68.54	69.43	69.79	69.86	70.58	70.30	70.22	70.63	70.74	71.04	71.04	71.08

Victoria Powerhouse Tailrace Temperature Summary - July 2006

Time	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
HHMMSS	07/01/06	07/02/06	07/03/06	07/04/06	07/05/06	07/06/06	07/07/06	07/08/06	07/09/06	07/10/06	07/11/06	07/12/06	07/13/06	07/14/06	07/15/06	07/16/06
0	70.93	71.28	71.64	72.00	72.30	72.46	72.32	73.13	73.60	73.13	72.73	72.23	72.28	72.21	72.52	73.09
10000	70.88	71.53	71.69	72.07	72.34	72.43	72.34	73.22	73.62	73.20	72.66	72.16	72.16	72.34	72.63	73.09
20000	70.99	71.31	71.73	72.12	72.36	72.41	72.39	73.33	73.58	73.09	72.61	72.27	72.14	72.43	72.64	72.88
30000	70.95	71.29	71.76	72.05	72.57	72.43	72.28	73.33	73.53	73.15	72.66	72.28	72.18	72.48	72.55	73.08
40000	70.81	71.29	71.74	71.94	72.54	72.48	72.34	73.45	73.51	73.15	72.64	72.23	72.18	72.43	72.68	73.38
50000	70.88	71.44	71.83	71.98	72.61	72.52	72.37	73.27	73.47	73.04	72.59	72.14	72.19	72.39	72.70	73.09
60000	70.90	71.46	71.98	72.10	72.59	72.57	72.46	73.33	73.54	73.06	72.54	72.23	72.12	72.45	72.64	73.29
70000	70.99	71.71	72.01	72.21	72.68	72.63	72.57	73.42	73.54	73.13	72.54	72.27	72.34	72.55	72.70	73.11
80000	70.93	71.78	72.07	72.46	72.73	72.72	72.75	73.36	73.38	73.22	72.61	72.41	72.50	72.59	72.91	73.13
90000	71.06	72.03	72.05	72.52	72.90	72.86	72.99	73.71	73.15	73.31	72.64	72.50	72.59	72.84	73.06	73.42
100000	71.47	72.05	72.19	72.64	73.09	73.02	72.99	73.49	73.60	73.35	72.88	72.43	72.68	72.34	73.18	73.54
110000	72.10	72.12	72.54	72.63	73.18	73.11	73.06	73.56	73.49	73.51	72.99	72.64	72.81	72.54	73.31	73.78
120000	72.01	72.86	72.86	72.70	73.17	73.17	73.38	73.54	73.85	73.53	73.00	72.75	72.93	73.38	73.35	73.85
130000	71.73	72.09	73.00	72.99	72.86	73.27	73.69	73.69	73.74	73.63	73.04	72.75	72.66	72.63	73.45	73.83
140000	71.62	71.87	72.90	72.81	73.08	73.08	73.13	74.17	73.60	73.56	72.68	72.82	72.81	73.08	73.60	73.92
150000	72.12	72.09	72.66	72.82	73.27	73.11	73.42	74.37	73.49	73.47	72.84	72.88	72.84	72.99	73.54	74.07
160000	71.82	72.00	72.27	72.88	73.15	73.27	73.49	74.46	73.62	73.22	72.91	72.75	72.68	73.17	73.53	73.85
170000	71.42	71.98	72.16	72.70	73.04	72.79	73.26	74.43	73.36	73.13	72.73	72.46	72.73	73.09	73.36	73.40
180000	71.65	71.98	72.21	72.72	72.81	72.68	73.17	74.37	73.26	72.95	72.27	72.41	72.77	72.48	73.20	73.60
190000	71.82	71.67	72.05	72.43	72.79	72.57	73.11	74.28	73.27	72.79	72.28	72.37	72.23	72.70	72.77	73.72
200000	71.26	71.69	72.23	72.34	72.63	72.57	73.22	73.63	73.20	72.77	72.34	72.41	72.36	72.57	73.06	73.60
210000	71.38	71.69	72.09	72.43	72.48	72.50	72.95	73.72	73.18	72.73	72.27	72.30	72.63	72.73	73.42	73.54
220000	71.20	71.62	72.21	72.32	72.37	72.45	73.02	73.56	73.44	72.82	72.30	72.18	72.45	72.66	72.73	73.72
230000	71.31	71.64	72.09	72.34	72.39	72.46	73.13	73.65	73.26	72.79	72.46	72.21	72.46	72.57	72.73	73.67
Daily Max	72.12	72.86	73.00	72.99	73.27	73.27	73.69	74.46	73.85	73.63	73.04	72.88	72.93	73.38	73.60	74.07
Daily Min	70.81	71.28	71.64	71.94	72.30	72.41	72.28	73.13	73.15	72.73	72.27	72.14	72.12	72.21	72.52	72.88
Average	71.34	71.77	72.16	72.42	72.75	72.73	72.91	73.69	73.47	73.16	72.63	72.42	72.49	72.65	73.01	73.49
License Maximum Monthly Average: 68 F																
Monthly average 74.16																

Victoria Powerhouse Tailrace Temperature Summary - July 2006

Time	07/17/06	07/18/06	07/19/06	07/20/06	07/21/06	07/22/06	07/23/06	07/24/06	07/25/06	07/26/06	07/27/06	07/28/06	07/29/06	07/30/06	07/31/06
HHMMSS															
0	73.45	74.23	74.82	76.14	76.14	76.28	76.46	76.23	74.80	74.61	74.88	75.13	75.45	75.85	76.80
10000	73.31	74.17	74.95	76.26	76.06	76.39	76.41	76.26	74.68	74.55	74.84	75.20	75.31	75.72	76.71
20000	73.81	74.05	74.86	76.32	76.14	76.53	76.48	76.17	74.70	74.91	74.79	75.25	75.52	75.76	76.73
30000	73.71	74.10	75.02	76.28	76.17	76.55	76.48	76.26	74.66	74.41	74.80	75.24	75.58	75.70	76.77
40000	74.03	74.19	74.98	76.30	76.24	76.42	76.48	76.17	74.71	74.59	74.86	75.20	75.45	75.97	76.77
50000	73.44	74.19	75.09	76.26	76.24	76.41	76.48	75.92	74.77	75.02	74.91	75.16	75.43	75.92	76.80
60000	73.89	74.23	75.22	76.23	76.32	76.42	76.44	76.05	74.80	74.71	75.06	75.25	75.49	75.79	76.62
70000	73.87	74.39	75.20	76.24	76.39	76.48	76.50	76.01	74.91	74.82	75.06	75.27	75.54	75.97	76.69
80000	73.65	74.53	75.88	76.35	76.42	76.59	76.46	76.26	74.95	74.91	75.20	75.43	75.67	76.01	76.80
90000	73.69	74.75	75.47	76.46	76.51	76.68	76.57	76.32	75.07	74.75	75.42	75.60	75.52	76.23	76.80
100000	74.17	74.84	75.61	76.48	76.60	76.66	76.60	76.32	75.09	75.27	75.38	75.94	76.06	76.37	76.86
110000	73.92	74.93	75.83	76.60	76.69	76.86	76.59	76.51	75.27	74.98	75.45	75.85	75.85	76.42	76.98
120000	74.17	75.09	75.85	76.53	76.66	76.82	76.62	76.24	75.36	75.15	75.58	76.01	75.85	76.39	77.07
130000	74.68	74.95	76.03	76.55	76.68	76.84	76.57	75.90	75.15	75.11	75.38	75.87	76.05	76.42	77.14
140000	74.30	75.20	76.03	76.60	76.77	76.86	76.55	76.06	75.34	75.22	75.40	75.88	76.19	76.57	76.95
150000	74.57	75.15	76.39	76.60	76.66	76.80	76.48	75.96	75.22	75.33	75.18	75.61	76.24	76.89	76.73
160000	74.44	75.20	75.94	76.68	76.80	76.66	76.50	75.79	75.18	75.20	75.58	75.58	76.19	76.82	77.52
170000	74.44	74.77	76.15	76.51	76.60	76.73	76.51	75.65	75.04	74.93	75.36	75.81	75.83	76.71	78.08
180000	74.23	75.06	76.35	76.23	76.50	76.60	76.44	75.31	74.77	74.93	75.29	75.52	76.01	76.96	78.13
190000	73.87	74.89	76.57	76.24	76.41	76.50	76.44	75.11	74.75	75.06	75.38	75.54	75.90	76.68	78.21
200000	74.01	74.93	76.35	76.10	76.42	76.46	76.32	75.22	74.82	75.18	75.22	75.52	75.81	76.75	77.95
210000	74.07	74.98	76.19	76.08	76.23	76.37	76.26	74.86	74.79	74.88	75.36	75.60	75.69	76.59	77.52
220000	73.99	75.06	76.14	76.10	76.24	76.44	76.24	74.91	74.80	74.89	75.31	75.33	75.78	76.71	77.41
230000	74.01	74.93	76.06	76.01	76.24	76.59	76.17	74.77	74.95	74.95	75.24	75.60	75.81	76.69	77.22
Daily Max	74.68	75.20	76.57	76.68	76.80	76.86	76.62	76.51	75.36	75.33	75.58	76.01	76.24	76.96	78.21
Daily Min	73.31	74.05	74.82	76.01	76.06	76.28	76.17	74.77	74.66	74.41	74.79	75.13	75.31	75.70	76.62
Average	73.99	74.70	75.71	76.34	76.42	76.58	76.46	75.84	74.94	74.93	75.20	75.52	75.76	76.33	77.14

Victoria Powerhouse Tailrace Temperature Summary - August 2006

Time	08/01/06	08/02/06	08/03/06	08/04/06	08/05/06	08/06/06	08/07/06	08/08/06	08/09/06	08/10/06	08/11/06	08/12/06	08/13/06	08/14/06	08/15/06	08/16/06
HHMMSS																
0	76.84	76.82	76.39	76.69	75.31	74.57	74.30	73.26	73.18	72.82	73.00	72.46	72.12	72.30	72.43	71.85
10000	77.07	76.82	76.33	76.53	75.24	74.46	74.50	73.18	73.17	73.00	73.02	72.52	72.07	72.39	72.43	71.80
20000	76.80	76.86	76.30	76.44	75.13	74.57	74.41	73.33	73.00	73.13	72.99	72.46	72.12	72.43	72.43	71.83
30000	76.75	76.80	76.35	76.48	75.04	74.59	74.39	73.24	73.06	73.00	72.95	72.52	72.09	72.48	72.45	71.91
40000	77.04	76.77	76.39	76.37	74.98	74.28	74.32	73.24	73.09	72.91	72.99	72.46	72.01	72.41	72.39	71.96
50000	76.75	76.78	76.35	76.28	74.88	74.21	74.26	73.27	73.02	72.88	72.93	72.39	72.12	72.27	72.32	71.92
60000	76.80	76.71	76.35	76.19	74.91	74.34	74.26	73.26	73.06	72.90	72.88	72.34	72.05	72.21	72.21	71.92
70000	76.71	76.78	76.51	76.12	74.86	74.39	73.90	73.29	73.20	73.08	72.84	72.34	72.01	72.37	72.19	71.89
80000	76.82	76.78	76.55	76.06	74.88	74.48	73.83	73.40	73.18	72.99	72.90	72.43	72.10	72.46	72.32	72.00
90000	76.93	76.73	76.60	76.05	74.84	74.43	73.85	73.54	73.49	72.88	73.02	72.50	72.23	72.63	72.45	72.00
100000	76.86	76.86	76.44	76.06	74.77	74.48	73.94	73.71	73.44	73.04	73.17	72.63	72.32	72.82	72.48	72.12
110000	76.77	76.78	76.98	76.14	74.75	74.57	74.17	73.71	73.47	72.91	73.27	72.88	72.41	72.93	72.54	72.30
120000	76.71	76.93	77.25	76.17	74.79	74.55	74.23	73.85	73.81	73.09	73.42	73.02	72.30	72.97	72.59	72.37
130000	76.77	77.18	77.04	76.32	74.95	74.66	74.12	73.98	73.33	73.26	73.49	72.88	72.37	73.29	72.79	72.45
140000	76.82	77.05	77.20	76.30	74.91	74.86	74.30	73.74	73.51	73.20	73.47	72.70	72.45	73.35	72.73	72.52
150000	76.87	76.93	77.18	76.14	74.91	75.15	74.37	73.71	73.36	73.29	73.42	72.79	72.36	73.47	72.43	72.37
160000	76.73	76.69	77.29	76.05	74.75	74.95	74.23	73.58	73.18	73.22	73.36	72.81	72.32	73.51	72.32	72.27
170000	76.75	76.77	77.34	76.03	74.77	74.88	74.21	73.56	73.26	73.20	73.15	72.66	72.36	73.24	72.16	72.05
180000	76.75	76.69	77.25	75.96	74.79	74.48	74.03	73.53	73.17	73.06	72.95	72.41	72.37	73.17	72.09	72.03
190000	76.78	76.50	77.00	75.81	74.73	74.41	73.36	73.26	72.97	72.90	72.86	72.18	72.21	72.70	72.01	72.01
200000	76.66	76.57	76.93	75.65	74.64	74.16	73.45	73.04	72.93	72.95	72.73	72.32	72.27	72.52	71.98	71.83
210000	76.64	76.50	76.89	75.54	74.53	74.05	73.33	73.00	73.11	72.97	72.72	72.14	72.23	72.52	71.94	71.94
220000	76.68	76.48	76.82	75.43	74.64	74.26	73.24	73.17	73.08	72.90	72.79	72.01	72.23	72.41	72.03	71.80
230000	76.75	76.42	76.75	75.31	74.66	74.25	73.33	73.20	72.97	72.97	72.59	72.19	72.25	72.45	71.98	71.87
Daily Max	77.07	77.18	77.34	76.69	75.31	75.15	74.50	73.98	73.81	73.29	73.49	73.02	72.45	73.51	72.79	72.52
Daily Min	76.64	76.42	76.30	75.31	74.53	74.05	73.24	73.00	72.93	72.82	72.59	72.01	72.01	72.21	71.94	71.80
Average	76.79	76.76	76.77	76.09	74.86	74.50	74.01	73.42	73.21	73.02	73.04	72.50	72.22	72.72	72.32	72.04

Monthly average: 73.39
License Maximum Monthly Average: 68

Victona Powerhouse Tailrace Temperature Summary - August 2006

Time	08/17/06	08/18/06	08/19/06	08/20/06	08/21/06	08/22/06	08/23/06	08/24/06	08/25/06	08/26/06	08/27/06	08/28/06	08/29/06	08/30/06	08/31/06
HHMMSS															
0	71.89	71.58	72.00	72.16	72.03	72.32	71.67	71.22	70.83	70.41	69.67	68.59	68.97	68.32	67.57
10000	71.80	71.69	72.00	72.07	71.94	72.32	71.49	71.15	70.75	70.38	69.48	68.43	68.99	68.23	67.50
20000	71.85	71.76	71.91	72.10	71.94	72.27	71.53	71.06	70.68	70.30	69.40	68.43	68.90	68.23	67.44
30000	71.80	71.78	71.89	72.16	71.92	72.16	71.47	71.01	70.61	70.23	69.33	68.49	68.90	68.23	67.41
40000	71.82	71.85	71.92	72.18	72.00	72.10	71.49	71.04	70.61	70.20	69.24	68.45	69.01	68.16	67.37
50000	71.74	71.87	71.71	72.09	71.98	72.00	71.56	71.02	70.54	70.18	69.12	68.45	68.95	68.18	67.28
60000	71.64	71.80	71.58	72.09	72.00	71.92	71.55	70.99	70.54	70.12	69.04	68.61	68.85	68.20	67.26
70000	71.73	71.85	71.74	72.05	71.98	71.94	71.47	70.97	70.50	70.11	69.01	68.72	68.81	68.14	67.21
80000	71.78	71.91	71.92	72.12	72.05	72.01	71.44	71.10	70.57	70.07	69.19	68.94	68.90	68.25	67.37
90000	71.85	71.85	71.98	72.25	72.12	72.09	71.46	71.10	70.57	70.07	69.19	68.94	68.90	68.25	67.37
100000	71.76	72.03	72.16	72.37	72.28	72.19	71.56	71.17	70.74	70.09	69.26	69.10	68.88	68.34	67.50
110000	72.07	72.28	72.25	72.43	72.41	72.19	71.71	71.19	70.70	70.14	69.37	69.08	68.76	68.36	67.59
120000	71.92	72.37	72.23	72.52	72.59	72.10	71.73	71.24	70.72	70.21	69.44	69.04	68.68	68.49	67.57
130000	71.94	72.25	72.28	72.63	72.57	72.23	71.80	71.19	70.75	70.25	69.49	69.01	68.68	68.50	67.80
140000	71.92	72.27	72.30	72.50	72.14	72.21	71.80	71.22	70.79	70.16	69.39	69.01	68.68	68.27	67.37
150000	71.98	72.30	72.28	72.39	72.34	72.12	71.76	71.19	70.74	70.07	69.31	69.06	68.67	68.41	67.48
160000	71.98	72.18	72.12	72.41	72.30	72.18	71.73	71.04	70.70	70.16	69.21	69.12	68.68	68.11	67.32
170000	71.85	71.89	72.14	72.34	72.30	71.98	71.51	70.99	70.68	70.02	69.13	69.03	68.72	68.00	67.50
180000	71.83	71.87	72.09	72.12	72.27	71.92	71.42	70.95	70.68	69.91	68.79	69.01	68.63	67.87	66.97
190000	71.71	71.98	72.09	71.96	72.10	71.94	71.35	70.79	70.61	69.80	68.85	69.01	68.63	67.87	66.97
200000	71.52	71.85	72.03	72.05	72.10	71.85	71.24	70.83	70.54	69.84	68.86	68.95	68.52	67.77	66.94
210000	71.44	72.07	72.00	72.01	72.19	71.60	71.22	70.79	70.48	69.78	68.72	68.94	68.34	67.69	66.96
220000	71.56	72.18	72.00	72.00	72.36	71.83	71.10	70.75	70.50	69.73	68.81	68.94	68.25	67.64	66.92
230000	71.60	72.01	72.09	72.09	72.39	71.83	71.13	70.70	70.50	69.73	68.65	68.94	68.29	67.62	66.88
Daily Max	72.07	72.37	72.30	72.63	72.59	72.32	71.80	71.24	70.83	70.41	69.67	69.12	69.01	68.50	67.80
Daily Min	71.44	71.58	71.58	71.96	71.92	71.60	71.10	70.70	70.48	69.73	68.65	68.43	68.25	67.62	66.88
Average	71.79	71.98	72.03	72.21	72.18	72.06	71.51	71.03	70.64	70.08	69.16	68.84	68.73	68.15	67.34

Victoria Powerhouse Tailrace Temperature Summary - September 2006

Time	09/01/06	09/02/06	09/03/06	09/04/06	09/05/06	09/06/06	09/07/06	09/08/06	09/09/06	09/10/06	09/11/06	09/12/06	09/13/06	09/14/06	09/15/06	09/16/06
HH-MM-SS																
0	66.92	67.15	67.01	66.78	66.70	66.54	66.70	67.66	67.06	65.97	64.53	63.64	62.91	62.19	61.77	61.68
10000	66.81	66.79	66.83	66.74	66.70	66.51	66.74	67.51	66.97	65.91	64.56	63.64	62.80	62.15	61.65	61.66
20000	66.88	66.79	66.92	66.72	66.67	66.63	66.88	67.44	66.92	65.75	64.60	63.57	62.71	62.11	61.66	61.74
30000	66.87	66.87	66.83	66.74	66.67	66.67	66.76	67.12	66.88	65.73	64.51	63.54	62.76	62.10	61.77	61.77
40000	66.81	66.87	66.78	66.72	66.67	66.65	66.83	67.17	66.83	65.64	64.44	63.54	62.69	62.08	61.70	61.70
50000	66.83	66.88	66.90	66.65	66.74	66.61	66.81	67.23	66.81	65.57	64.35	63.46	62.69	62.06	61.50	61.72
60000	66.81	66.87	66.87	66.76	66.81	66.58	66.69	67.01	66.76	65.52	64.24	63.43	62.67	62.01	61.57	61.66
70000	66.90	66.81	66.81	66.78	66.72	66.61	66.76	67.12	66.70	65.48	64.27	63.39	62.53	62.02	61.57	61.65
80000	67.03	66.90	66.87	66.97	66.78	66.63	66.90	66.96	66.65	65.46	64.26	63.34	62.62	62.06	61.54	61.74
90000	67.14	67.05	66.97	66.90	66.99	66.70	67.03	67.06	66.70	65.48	64.29	63.37	62.62	62.08	61.65	61.81
100000	67.32	67.08	67.10	67.03	67.08	66.76	67.15	67.32	66.81	65.57	64.35	63.34	62.65	62.20	61.74	61.84
110000	67.33	67.17	67.15	66.94	67.15	66.88	67.10	67.12	66.85	65.68	64.47	63.39	62.85	62.22	62.04	61.97
120000	67.39	67.30	67.24	67.15	67.19	67.05	67.28	67.14	66.97	65.73	64.53	63.54	62.91	62.28	62.29	62.11
130000	67.51	67.26	67.17	67.10	67.53	67.15	67.91	67.26	67.03	65.70	64.47	63.28	62.98	62.37	62.49	62.37
140000	67.55	67.35	67.24	67.23	67.28	67.19	68.23	67.19	67.08	65.80	64.40	63.21	63.07	62.44	62.24	63.00
150000	67.48	67.17	67.28	67.06	67.10	67.14	68.02	67.26	67.03	65.75	64.45	63.21	62.76	62.15	62.29	63.03
160000	67.35	67.24	66.96	67.03	66.94	67.08	68.09	67.21	66.83	65.59	64.15	63.25	62.69	62.01	62.17	62.85
170000	67.21	67.05	66.90	66.83	66.90	66.85	68.04	67.17	66.47	65.30	64.11	63.21	62.60	62.01	62.19	62.49
180000	67.17	66.72	66.88	66.81	66.70	66.65	67.95	67.15	66.31	65.08	64.00	63.07	62.38	61.88	61.90	62.24
190000	66.76	66.70	66.72	66.79	66.67	66.70	67.89	67.05	66.25	65.01	63.91	63.05	62.29	61.66	61.95	62.38
200000	66.79	66.90	66.85	66.72	66.76	66.74	67.44	67.05	66.07	64.96	63.95	62.85	62.24	61.52	61.79	62.29
210000	67.01	66.70	66.76	66.78	66.83	66.72	67.41	67.10	66.07	64.90	63.77	62.87	62.28	61.61	61.68	62.26
220000	66.90	66.79	66.88	67.01	66.61	66.74	67.44	67.08	66.07	64.76	63.73	62.91	62.24	61.70	61.61	62.33
230000	66.94	67.24	66.99	66.60	66.70	66.85	67.57	67.08	65.95	64.65	63.73	62.74	62.19	61.63	61.61	62.40
Daily Max	67.55	67.35	67.28	67.23	67.53	67.19	68.23	67.66	67.08	65.97	64.60	63.64	63.07	62.44	62.49	63.03
Daily Min	66.76	66.70	66.72	66.60	66.61	66.51	66.69	66.96	65.95	64.65	63.73	62.74	62.19	61.52	61.50	61.65
Average	67.07	66.99	66.96	66.87	66.87	66.77	67.32	67.19	66.67	65.46	64.25	63.29	62.63	62.02	61.85	62.11
Monthly average				62.37												
License Maximum Monthly Average				63 F												

Victoria Powerhouse Tailrace Temperature Summary - September 2006

Time	09/17/06	09/18/06	09/19/06	09/20/06	09/21/06	09/22/06	09/23/06	09/24/06	09/25/06	09/26/06	09/27/06	09/28/06	09/29/06	09/30/06
HHMMSS														
0	62.56	62.73	62.40	61.56	60.69	59.47	58.80	58.23	58.28	58.03	57.72	56.91	56.21	55.98
10000	62.26	62.71	62.29	61.57	60.71	59.45	58.73	58.35	58.35	57.97	57.69	56.84	56.17	55.96
20000	62.33	62.60	62.40	61.48	60.60	59.50	58.80	58.30	58.35	57.85	57.61	56.80	56.19	55.92
30000	62.47	62.47	62.33	61.47	60.49	59.34	58.75	58.30	58.32	57.78	57.56	56.73	56.17	55.90
40000	62.42	62.53	62.28	61.39	60.42	59.31	58.71	58.28	58.32	57.76	57.49	56.75	56.07	55.85
50000	62.82	62.44	62.22	61.38	60.33	59.31	58.77	58.28	58.33	57.78	57.42	56.71	55.99	55.78
60000	62.67	62.47	62.11	61.34	60.13	59.20	58.75	58.30	58.42	57.78	57.31	56.66	55.96	55.67
70000	62.87	62.47	62.10	61.34	60.08	59.18	58.71	58.19	58.32	57.69	57.29	56.59	55.92	55.71
80000	62.56	62.46	62.08	61.32	60.13	59.16	58.73	58.21	58.26	57.72	57.29	56.55	55.96	55.78
90000	62.73	62.62	62.04	61.29	60.22	59.18	58.73	58.41	58.24	57.79	57.31	56.57	56.03	55.78
100000	62.65	62.76	62.10	61.30	60.30	59.18	58.73	58.39	58.42	57.79	57.29	56.68	56.17	55.83
110000	62.38	63.03	62.08	61.34	60.37	59.18	58.78	58.41	58.55	57.79	57.33	56.77	56.28	55.96
120000	62.58	63.18	62.04	61.39	60.42	59.05	58.57	58.48	58.62	57.85	57.29	56.75	56.28	56.05
130000	62.64	62.98	62.11	61.43	60.40	59.07	58.57	58.60	58.60	57.96	57.27	56.84	56.28	56.05
140000	62.60	62.87	62.06	61.36	60.42	59.00	58.46	58.69	58.59	58.10	57.20	56.82	56.37	55.94
150000	62.83	62.91	62.13	61.52	60.31	58.96	58.46	58.71	58.64	58.28	57.13	56.75	56.34	55.78
160000	63.03	62.80	62.08	61.38	60.03	58.91	58.41	58.42	58.60	58.32	57.11	56.61	56.44	55.81
170000	62.67	62.87	61.95	60.94	60.10	58.89	58.35	58.35	58.48	58.24	57.04	56.55	56.37	55.80
180000	62.46	62.92	62.01	61.02	60.01	58.86	58.37	58.46	58.48	58.12	56.95	56.52	56.19	55.78
190000	62.51	62.58	61.95	60.96	59.76	58.87	58.42	58.44	58.10	57.88	56.93	56.43	56.08	55.51
200000	62.26	62.64	61.84	60.87	59.81	58.86	58.24	58.23	58.06	57.69	56.98	56.30	56.07	55.42
210000	62.42	62.56	61.83	60.89	59.72	58.84	58.28	58.23	58.15	57.69	57.04	56.34	56.05	55.42
220000	62.40	62.42	61.75	60.89	59.61	58.80	58.35	58.32	58.26	57.67	57.02	56.34	55.94	55.49
230000	62.65	62.55	61.72	60.76	59.59	58.82	58.26	58.32	58.12	57.69	56.89	56.28	55.92	55.42
Daily Max	63.03	63.18	62.40	61.57	60.71	59.50	58.80	58.71	58.64	58.32	57.72	56.91	56.44	56.05
Daily Min	62.24	62.42	61.72	60.76	59.59	58.80	58.24	58.19	58.06	57.67	56.89	56.28	55.92	55.42
Average	62.56	62.69	62.08	61.26	60.19	59.10	58.58	58.37	58.37	57.88	57.26	56.63	56.14	55.77

APPENDIX E

DOCUMENTATION OF AGENCY CONSULTATION

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Thursday, June 15, 2006 3:34 PM
To: 'Deephouse, Bill'; 'Deloria, Christie'; 'Evans, Robert A'; 'Fedora, Mark'; 'Mensch, Gene';
 'Mistak, Jessica (mistakjl@michigan.gov)'; 'Suppnick, John'
Cc: Puzen, Shawn C; Meyers, Robert J; Waltman, Christian S
Subject: Bond Falls Water quality monitoring

Hello everyone,

Water quality monitoring at the Bond Falls Hydroelectric Project began on June 1, 2006. An equipment failure occurred at the monitoring location downstream of Bond Falls Reservoir in the Middle Branch of the Ontonagon River. No data was collected from June 1 through 14:00 on June 13.

A dissolved oxygen profile was conducted on the Bond Falls reservoir on June 14. The profile readings are as follows:

Depth (meters)	D.O. (mg/l)	Temp. (Celcius)	Temp. Fahrenheit
0.5	8.52	20.3	68.54
1.0	8.55	20.2	68.36
1.5	8.52	20.2	68.36
2.0	8.51	20.2	68.36
2.5	8.50	20.2	68.36
3.0	8.51	20.2	68.36
3.5	8.51	20.1	68.18
4.0	8.51	20.1	68.18
4.5	8.44	20.0	68.00
5.0	6.31	12.3	54.14
5.5	6.30	11.4	52.52
6.0	6.30	11.2	52.16
6.5	6.18	11.1	51.98
7.0	6.30	11.0	51.80
7.5	6.49	10.9	51.62
8.0	6.34	10.9	51.62
8.5	6.13	10.8	51.44
9.0	5.96	10.8	51.44
9.5	5.86	10.7	51.26

Since the water released from the Bond Falls Reservoir to the Middle Branch of the Ontonagon River is primarily from the top 3 meters of water (except for the flow through the bypass), I do not believe any deviations from the water quality standard (7.0 mg/l) were likely to occur during the period of missing data since the epilimnion had high D.O. levels on June 14.

Deviations from the D.O. water quality standard were also observed at the Victoria Powerhouse Tailrace. The deviations noted are as follows:

Date	Time	DO (mg/l)
6/3/2006	13:00:00	6.91
6/6/2006	0:00:00	6.94
6/6/2006	1:00:00	6.96
6/6/2006	2:00:00	6.93
6/6/2006	3:00:00	6.96
6/6/2006	4:00:00	6.94
6/6/2006	5:00:00	6.95
6/6/2006	6:00:00	6.96
6/6/2006	7:00:00	6.98
6/6/2006	12:00:00	6.98

6/6/2006	15:00:00	6.99
6/14/2006	10:00:00	4.72

Please note that the monitoring equipment has a precision of +/- 0.2 mg/l, per the manufacturer. Also, when the monitoring equipment was retrieved on 6/14, it was evident that someone had disturbed the monitor. The monitoring equipment was lying on the shoreline with just the bottom third of the monitor in the water. The disturbance may be the cause of the low reading observed at 10:00 on the 14th.

There are no other deviations or issues to note at the other monitoring locations.

If you have any questions regarding this information, feel free to give me a call.

Thanks,

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com

Metcalf, Mark W

From: John Suppnick [SUPPNICJ@michigan.gov]
Sent: Friday, June 16, 2006 6:30 AM
To: Metcalf, Mark W
Subject: Re: Bond Falls Water quality monitoring

Thanks for the update Mark.

John

John Suppnick
 Michigan Department of Environmental Quality
 Water Bureau
 517-335-4192
suppnicj@michigan.gov

>>> "Metcalf, Mark W" <MWMetcalf@wpsr.com> 6/15/2006 4:34 PM >>>

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12/27/2006

Bond Falls Water quality monitoring

Page 2 of 2

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Please note that the monitoring equipment has a precision of +/- 0.2 mg/l, per the manufacturer. Also, when the monitoring equipment was retrieved on 6/14, it was evident that someone had disturbed the monitor. The monitoring equipment was lying on the shoreline with just the bottom third of the monitor in the water. The disturbance may be the cause of the low reading observed at 10:00 on the 14th.

There are no other deviations or issues to note at the other monitoring locations.

If you have any questions regarding this information, feel free to give me a call.

Thanks,

Mark

Mark Metcalf
 Wisconsin Public Service Corp.
 (920) 433-1833
 mwmetcalf@wpsr.com

12/27/2006

Metcalf, Mark W

From: Bill Deephouse [troutkpr@up.net]
Sent: Friday, June 16, 2006 9:01 AM
To: Metcalf, Mark W
Subject: Re: Bond Falls Water quality monitoring

Thanks for the info, Mark. I will include you on an email I am sending to Shawn today regarding some temperature data I made at the spillway on Thursday, June 8. Bill Deephouse

----- Original Message -----

From: Metcalf, Mark W
To: Deephouse, Bill ; Deloria, Christie ; Evans, Robert A ; Fedora, Mark ; Mensch, Gene ; mistakjl@michigan.gov ; Supnick, John
Cc: Puzen, Shawn C ; Meyers, Robert J ; Waltman, Christian S
Sent: Thursday, June 15, 2006 4:34 PM
Subject: Bond Falls Water quality monitoring

Hello everyone,

Water quality monitoring at the Bond Falls Hydroelectric Project began on June 1, 2006. An equipment failure occurred at the monitoring location downstream of Bond Falls Reservoir in the Middle Branch of the Ontonagon River. No data was collected from June 1 through 14:00 on June 13.

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4.0	8.51	20.1	68.18
4.5	8.44	20.0	68.00
5.0	6.31	12.3	54.14
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Bond Falls Water quality monitoring

Page 2 of 2

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6/6/2006	4:00:00	6.94
6/6/2006	5:00:00	6.95
6/6/2006	6:00:00	6.96
6/6/2006	7:00:00	6.98
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If you have any questions regarding this information, feel free to give me a call.

Thanks,

Mark

Mark Metcalf
 Wisconsin Public Service Corp.
 (920) 433-1833
 mwmetcalf@wpsr.com

12/27/2006

Metcalf, Mark W

From: John Suppnick [SUPPNICJ@michigan.gov]
Sent: Friday, June 30, 2006 8:23 AM
To: Mark Fedora; Norman Nass; Spring Rosales; Christie Deloria; Steven Casey; Mitch Koetje; Jessica Mistak; Gene Mensch; Bill Deephouse; Granroth, Connie J; Melchiori, James R; Metcalf, Mark W; Meyers, Robert J; Puzen, Shawn C
Subject: Re: Bond Falls Hydroelectric Project- Water Quality Monitoring

Mark,
Thanks for the report.
John

John Suppnick
Michigan Department of Environmental Quality
Water Bureau
517-335-4192
suppnicj@michigan.gov

>>> "Metcalf, Mark W" <MWMetcalf@wpsr.com> 6/29/2006 3:22 PM >>>
Good afternoon everyone,

As you know, water quality monitoring is currently being conducted as part of the Bond Falls Hydroelectric Project water quality monitoring plan. This e-mail is to notify you of deviations from the water quality standard observed at the Victoria Powerhouse tailrace monitoring location. Monitoring data collected between June 14 and June 27 indicated several hourly readings below the water quality standard of 7.0 mg/l. A spreadsheet with the water quality monitoring data is attached for your review.

Please note that at the time the monitoring equipment was retrieved from the tailrace, the dissolved oxygen readings at the monitoring location were below 7.0 mg/l. Per the water quality monitoring plan, dissolved oxygen readings were taken downstream of the monitoring location with a hand held meter to determine the downstream extent of low D.O. water. It was determined that dissolved oxygen levels were above the water quality standard approximately 200m downstream of the monitoring location. The downstream dissolved oxygen readings are also included for your review.

If you have any questions regarding this information, please feel free to contact me.

Thanks,

Mark

Mark Metcalf
Environmental Consultant
920-433-1833

6/30/2006

Metcalfe, Mark W

From: Metcalf, Mark W
Sent: Monday, July 24, 2006 12:01 PM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Melchiori, James R; Mensch, Gene; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Suppnick, John
Subject: Temperature deviations
Attachments: Victoria Temp Summary 2006.xls

Hello everyone,

I have reviewed the monthly average temperatures for the locations being monitored per the water quality monitoring plan for the Bond Falls Hydroelectric project. The monthly average temperature measured in the Victoria Powerhouse tailrace exceeds the license monthly maximum average temperature of 20 C (68 F). So far in July, all of the hourly readings recorded have been in excess of the monthly maximum average temperature as well. A summary of the temperatures recorded at the Victoria Powerhouse tailrace monitoring location is attached for your review.

There are no other temperature deviations to note at this time. If you have any questions regarding this data, please feel free to contact me.

Thanks,

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com



Victoria Temp
Summary 2006.xls..

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Friday, July 14, 2006 4:50 PM
To: 'Fedora, Mark'; 'Suppnick, John'; 'Deloria, Christie'; 'Deephouse, Bill'; 'Mistak, Jessica (mistakj)@michigan.gov'; 'Mensch, Gene'; 'Casey, Steve'; 'Norman Nass'; 'Spring Rosales'; 'Koetje, Mitch'; Meyers, Robert J; Puzen, Shawn C; Granroth, Connie J; Melchiori, James R
Subject: Bond Falls water quality monitoring
Attachments: Victoria Powerhouse 071106.xls

Hello everyone,

Water quality monitoring data collected below the Victoria Powerhouse from June 27 through July 11 has shown deviations from the State water quality standard of 7.0 mg/l. The data is attached for your review. At the time the monitoring equipment was being retrieved and calibrated on July 11, the DO at the monitoring location was observed to be below 7.0 mg/l. An additional dissolved oxygen reading was taken downstream of the monitoring location with a hand held dissolved oxygen meter. The reading was taken at approximately the same location 200 meters downstream of the monitoring location as it was on June 27. The dissolved oxygen reading at the downstream location was 7.25 mg/l (Please note: there is a section of rapids between the current monitoring location and where the hand held reading is being taken at the confluence of the powerhouse tailrace and bypass channel).

From the limited number of hand held readings taken this year, it appears that the water quality standard is being achieved downstream of the current monitoring location. This may be due to the additional aeration that the rapids downstream of the monitoring location is providing. By way of this e-mail, I would like to ask the Implementation Team if there is a desire to move the monitoring location downstream further (approximately 200 to 300 meters) to evaluate water quality below the rapids.

Please review the information in the attached spreadsheet. If you have any questions, please feel free to call or e-mail me.

Thank you for your time and input.

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com



Victoria
Powerhouse 071106.xls

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Thursday, July 20, 2006 8:15 AM
To: 'John Suppnick'; Mark Fedora; Norman Nass; Spring Rosales; Christie Deloria; Steven Casey; Mitch Koetje; Jessica Mistak; Gene Mensch; Bill Deephouse; Granroth, Connie J; Melchiori, James R; Meyers, Robert J; Puzen, Shawn C
Subject: RE: Bond Falls water quality monitoring

John,

I do not know exactly how long the tailrace is, but the downstream monitoring location I am talking about would be downstream of the confluence of the tailrace discharge and the spillway/bypass channel approximately 100 meters. Please keep in mind that there is very little to no flow via the spillway after June 15 per the License. Moving the monitor downstream would place it in the river itself, and not in the tailrace. Since there is very little discharge from the spillway after June 15, the monitor would still be collecting data primarily on the discharge from the powerhouse.

Mark

From: John Suppnick [mailto:SUPPNICJ@michigan.gov]
Sent: Tuesday, July 18, 2006 10:22 AM
To: Mark Fedora; Norman Nass; Spring Rosales; Christie Deloria; Steven Casey; Mitch Koetje; Jessica Mistak; Gene Mensch; Bill Deephouse; Granroth, Connie J; Melchiori, James R; Metcalf, Mark W; Meyers, Robert J; Puzen, Shawn C
Subject: Re: Bond Falls water quality monitoring

Does anyone know how long the tailrace is? Are the samples collected at 200 meters still in the tailrace or in the River?

John

John Suppnick
 Michigan Department of Environmental Quality
 Water Bureau
 517-335-4192
 suppnicj@michigan.gov

>>> "Metcalf, Mark W" <MWMetcalf@wpsr.com> 7/14/2006 5:50 PM >>>

Hello everyone,

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From the limited number of hand held readings taken this year, it appears that the water quality standard is

12/27/2006

Bond Falls water quality monitoring

Page 2 of 2

being achieved downstream of the current monitoring location. This may be due to the additional aeration that the rapids downstream of the monitoring location is providing. By way of this e-mail, I would like to ask the Implementation Team if there is a desire to move the monitoring location downstream further (approximately 200 to 300 meters) to evaluate water quality below the rapids.

Please review the information in the attached spreadsheet. If you have any questions, please feel free to call or e-mail me.

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Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com

<<Victoria Powerhouse 071106.xls>>

12/27/2006

Metcalf, Mark W

From: John Suppnick [SUPPNICJ@michigan.gov]**Sent:** Thursday, July 20, 2006 8:43 AM**To:** Mark Fedora; Norman Nass; Spring Rosales; Christie Deloria; Steven Casey; Mitch Koetje; Jessica Mistak; Gene Mensch; Bill Deephouse; Granroth, Connie J; Melchiori, James R; Metcalf, Mark W; Meyers, Robert J; Puzen, Shawn C**Subject:** Re: Bond Falls water quality monitoring

Hi All,

I think that the current sampling plan should continue throughout the summer and the meter should not be moved yet. From the two downstream samples collected so far at 200 meters it appears that natural reaeration in the tailrace and River causes the dissolved oxygen (DO) to recover by the time it gets to a point 200 meters downstream from the turbines. UPPCo has documented this twice so far when they have checked on their meter. If UPPCO continues to take supplemental DO and temperature grab samples at 50, 100 and 200 meters downstream during each servicing of the meter (regardless of the DO) then a reaeration coefficient could be determined from the data for the 50 meters, 100 meters and 200 meters that the water travels after leaving the turbines. This can all be done simply in a spreadsheet and we could then calculate the downstream DO at 50, 100 and 200 meters based on the reaeration coefficient and the DO as measured at the present location for the whole summer.

What UPPCo should do this summer to make this analysis possible is to continue making the downstream grab samples at 50, 100 and 200 meters whenever they service the DO meter and then create a spreadsheet that shows the paired upstream and downstream DO and temperature data. If they haven't already done so they should make sure that the upstream and downstream DO and temperature measurements are made at nearly the same time or alternatively the downstream DO and temperature samples could lag slightly by the amount of time it takes for the water to travel to the downstream sample site, so you are sampling approximately the same slug of water at the current monitoring point and the downstream monitoring points.

If they provide these data at the end of the summer I can calculate the reaeration coefficient and estimate the downstream hourly DO. I think this would give us the maximum amount of information at the end of the summer to make a decision about a final monitoring point without creating a large amount of additional work for UPPCO sampling staff.

John

John Suppnick
Michigan Department of Environmental Quality
Water Bureau
517-335-4192
suppnicj@michigan.gov

>>> "Metcalf, Mark W" <MWMetcalf@wpsr.com> 7/14/2006 5:50 PM >>>

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12/27/2006

Bond Falls water quality monitoring

Page 2 of 2

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Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com

<<Victoria Powerhouse 071106.xls>>

12/27/2006

Metcalfe, Mark W

From: Metcalfe, Mark W
Sent: Thursday, July 20, 2006 8:54 AM
To: 'John Suppnick'; Mark Fedora; Norman Nass; Spring Rosales; Christie Deloria; Steven Casey; Mitch Koetje; Jessica Mistak; Gene Mensch; Bill Deephouse; Granroth, Connie J; Melchiori, James R; Meyers, Robert J; Puzen, Shawn C
Subject: RE: Bond Falls water quality monitoring

John,

Thank you for your input. We will continue with monitoring at the current location and we will collect the additional information you have asked for.

In regards to the DO profile information, when we arrive on site a DO profile is performed at the Dam. Upon completion of the profile we travel to the downstream monitoring location to retrieve the monitor and deploy a newly calibrated one. This may take approximately 20 minutes from the time the profile is completed.

Also, the current monitoring location is not located immediately below the powerhouse. As I mentioned before, I do not know the total length of the tailrace from the powerhouse to its confluence with the spillway, but we are monitoring approximately 3/4 of the way from the powerhouse to the confluence.

Please let me know if you have any questions.

Mark

From: John Suppnick [mailto:SUPPNICJ@michigan.gov]
Sent: Thursday, July 20, 2006 9:43 AM
To: Mark Fedora; Norman Nass; Spring Rosales; Christie Deloria; Steven Casey; Mitch Koetje; Jessica Mistak; Gene Mensch; Bill Deephouse; Granroth, Connie J; Melchiori, James R; Metcalfe, Mark W; Meyers, Robert J; Puzen, Shawn C
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>>> "Metcalf, Mark W" <MWMetcalf@wpsr.com> 7/14/2006 5:50 PM >>>

Hello everyone,

Water quality monitoring data collected below the Victoria Powerhouse from June 27 through July 11 has shown deviations from the State water quality standard of 7.0 mg/l. The data is attached for your review. At the time the monitoring equipment was being retrieved and calibrated on July 11, the DO at the monitoring location was observed to be below 7.0 mg/l. An additional dissolved oxygen reading was taken downstream of the monitoring location with a hand held dissolved oxygen meter. The reading was taken at approximately the same location 200 meters downstream of the monitoring location as it was on June 27. The dissolved oxygen reading at the downstream location was 7.25 mg/l (Please note: there is a section of rapids between the current monitoring location and where the hand held reading is being taken at the confluence of the powerhouse tailrace and bypass channel).

From the limited number of hand held readings taken this year, it appears that the water quality standard is being achieved downstream of the current monitoring location. This may be due to the additional aeration that the rapids downstream of the monitoring location is providing. By way of this e-mail, I would like to ask the Implementation Team if there is a desire to move the monitoring location downstream further (approximately 200 to 300 meters) to evaluate water quality below the rapids.

Please review the information in the attached spreadsheet. If you have any questions, please feel free to call or e-mail me.

Thank you for your time and input.

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com

<<Victoria Powerhouse 071106.xls>>

Metcalfe, Mark W

From: Metcalf, Mark W
Sent: Monday, July 24, 2006 12:01 PM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Melchiori, James R; Mensch, Gene; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Supnick, John
Subject: Temperature deviations
Attachments: Victoria Temp Summary 2006.xls

Hello everyone,

I have reviewed the monthly average temperatures for the locations being monitored per the water quality monitoring plan for the Bond Falls Hydroelectric project. The monthly average temperature measured in the Victoria Powerhouse tailrace exceeds the license monthly maximum average temperature of 20 C (68 F). So far in July, all of the hourly readings recorded have been in excess of the monthly maximum average temperature as well. A summary of the temperatures recorded at the Victoria Powerhouse tailrace monitoring location is attached for your review.

There are no other temperature deviations to note at this time. If you have any questions regarding this data, please feel free to contact me.

Thanks,

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com



Victoria Temp
Summary 2006.xls..

Metcalfe, Mark W

From: Metcalfe, Mark W
Sent: Tuesday, July 25, 2006 7:18 AM
To: 'John Suppnick'
Subject: RE: Temperature deviations

John,

I did not see that there were results in the spreadsheet. The results that are there are from 2005. We are using the files created last year as templates, and the September information had not been deleted yet.

Mark

From: John Suppnick [mailto:SUPPNICJ@michigan.gov]
Sent: Tuesday, July 25, 2006 7:09 AM
To: Metcalfe, Mark W
Subject: Re: Temperature deviations

Mark,
 Thanks for transmitting the preliminary results. Why do you have numbers in the September spreadsheet already?

John

John Suppnick
 Michigan Department of Environmental Quality
 Water Bureau
 517-335-4192
suppnickj@michigan.gov

>>> "Metcalfe, Mark W" <MWMetcalfe@wpsr.com> 7/24/2006 1:01 PM >>>

Hello everyone,

I have reviewed the monthly average temperatures for the locations being monitored per the water quality monitoring plan for the Bond Falls Hydroelectric project. The monthly average temperature measured in the Victoria Powerhouse tailrace exceeds the license monthly maximum average temperature of 20 C (68 F). So far in July, all of the hourly readings recorded have been in excess of the monthly maximum average temperature as well. A summary of the temperatures recorded at the Victoria Powerhouse tailrace monitoring location is attached for your review.

There are no other temperature deviations to note at this time. If you have any questions regarding this data, please feel free to contact me.

Thanks,

Mark

Mark Metcalfe
 Wisconsin Public Service Corp.

12/27/2006

Temperature deviations

Page 2 of 2

(920) 433-1833
mwmetcalf@wpsr.com

<<Victoria Temp Summary 2006.xls>>

12/27/2006

Metcalfe, Mark W

From: John Suppnick [SUPPNICJ@michigan.gov]
Sent: Wednesday, August 02, 2006 2:19 PM
To: Mark Fedora; Norman Nass; Spring Rosales; Christie Deloria; Steven Casey; Mitch Koetje; Jessica Mistak; Gene Mensch; Bill Deephouse; Granroth, Connie J; Melchiori, James R; Metcalf, Mark W; Meyers, Robert J; Puzen, Shawn C
Cc: Jim Schramm
Subject: Re: Water Quality Monitoring - July 11 through July 25

Bill,

You are correct, the dissolved oxygen standard is an instantaneous standard and the temperature standard is a monthly average standard.

John

John Suppnick
 Michigan Department of Environmental Quality
 Water Bureau
 517-335-4192
suppnicj@michigan.gov

>>> "Bill Deephouse" <troutkpr@up.net> 8/2/2006 2:42 PM >>>

Hi Mark - Thanks for the updated info. I have a question for you and for John Suppnick regarding State of Michigan water quality standards as they relate to both dissolved oxygen and temperature in streams.

I note that you are very diligent about reporting variances from the D.O. standard in coldwater streams of 7 ppm (mg/l). I think, but am not sure, that this is because the state standard is on a daily basis. However, all of the hourly data from 7-11-06 to 7-25-06 indicates that the temperature of the tailrace below the Victoria Powerhouse exceeded the state temperature standard of 68 F (20 C) for coldwater streams in July. These temperatures ranged from as high as 76.86 F (24.92 C) to a low of 72.14 F (22.3 C). Is the reason you didn't note these exceedances because of the confusing state temperature standard which is on a monthly average? I need some clarification on this matter. But there is no doubt that the water temperatures in the tailrace are way above the maximum allowed for a coldwater stream. I appreciate your input on this. Thanks, Bill D.

----- Original Message -----

From: Metcalf, Mark W
To: Casey, Steve ; Deephouse, Bill ; Deloria, Christie ; Fedora, Mark ; Granroth, Connie J ; Koetje, Mitch ; Melchiori, James R ; Mensch, Gene ; Metcalf, Mark W ; Meyers, Robert J ; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C ; Spring Rosales ; Suppnick, John
Sent: Friday, July 28, 2006 3:20 PM
Subject: Water Quality Monitoring - July 11 through July 25

Good afternoon everyone,

Dissolved oxygen concentrations below State water quality standards was observed between July 11 and July 25, 2006, at the monitoring location below the Victoria Powerhouse. The monitoring data is attached for your review. Please note that there was a significant loss of instrument calibration during this time period. The severe biofouling of the water quality monitor was observed when the monitor was retrieved for maintenance, which effected a post calibration of the monitoring equipment. Upon post calibration of the monitor, a 3.4 mg/l loss of calibration was observed. Correction for this loss would correct the monitoring data to greater than 9 mg/l D.O. Given that readings taken downstream of the monitoring location determined that dissolved oxygen concentrations were between 6.7 and 7.3 mg/l, I do not believe the corrected results are accurate, however, it

is very likely that the biofouling did bias the uncorrected monitoring results.

Also attached are the results of D.O. profiles on the Victoria reservoir. I have included the downstream dissolved oxygen concentrations as determined with a hand held meter with the profile data.

If you have any questions regarding the data, please feel free to contact me.

Thanks,

Mark

Mark Metcalf
Environmental Consultant
920-433-1833

12/27/2006

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Thursday, August 10, 2006 4:20 PM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Melchiori, James R; Mensch, Gene; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Suppnick, John
Subject: Water Quality Monitoring - Bond Falls Hydroelectric Project
Attachments: Victoria DO Profiles.xls; Victoria 080806.xls; Bergland 080806.xls; Roselawn Temp Summary 2006.xls; Bond Falls Dam Temp Summary 2006.xls; Bond Falls 080906.xls

Good afternoon everyone,

Deviations from State water quality standards has been observed at water quality monitoring locations around the Bond Falls Hydroelectric Project conducted between July 25 and August 9, 2006. At the Victoria Powerhouse tailrace monitoring location, all hourly readings from July 25 through August 8 were below the License minimum dissolved oxygen level of 7.0 mg/l. A dissolved oxygen profile of the impoundment shows that the reservoir is still stratified at approximately 7 to 8 meters. At the time the water quality monitor was retrieved for maintenance, dissolved oxygen readings were taken with a hand held D.O. meter at the monitoring site and at 3 locations downstream of the monitoring location. D.O. profile and monitoring data is attached for your review.

At the Bond Falls monitoring location, an equipment malfunction occurred on June 30 at approximately 09:00. Both temperature and D.O. monitoring data was very erratic after 9:00, and the monitor stopped logging data approximately 24 hours before it was retrieved. Dissolved oxygen and temperature data is attached for your review (please note that the Bond Falls Temperature summary file contains temperature data collected from the bypass reach which draws water from near the bottom of Bond Falls Reservoir for your review).

At the Bergland monitoring location, no deviations were observed, however, there are two hourly readings on August 8 that were abnormally higher than most hourly readings. It was noticed that the monitor had been moved since it was deployed on the 25th, indicating that the monitor was disturbed.

A deviation from the monthly maximum average temperature was observed at the Roselawn Creek monitoring location. The monthly maximum average discharge temperature in the License is 20.0 C (68F). The observed monthly average temperature was 22.17 C (71.9F).

There are no other deviations to report. If you have any questions, please feel free to contact me.

Thanks,

Mark

Mark Metcalf
Environmental Consultant
920-433-1833

12/27/2006

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Tuesday, August 15, 2006 10:51 AM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Melchiori, James R; Mensch, Gene; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Supnick, John
Subject: Temperature Data - Victoria Powerhouse Tailrace
Attachments: Victoria Temp Summary 2006.xls

Good morning everyone,

I have been reviewing the water quality monitoring data for the Victoria Powerhouse tailrace monitoring location and I have discovered that a deviation from the monthly maximum average discharge temperature occurred in June and July. The monthly maximum average discharge temperature in the License is 68 F. The observed monthly average temperature in the Victoria Powerhouse Tailrace was 69.3 F in June and 74.2 F in July. Please note that from June 1 through June 15 when the facility was in run of river operation, that the daily average discharge temperature recorded in the tailrace was in excess of 68 F for 10 of the 15 days.

I apologize for getting this information to you late. I just discovered an error in the formula used to calculate the monthly average temperatures. The temperature monitoring data is attached for your review. If you have any questions, please feel free to contact me.

Thanks,

Mark

Mark Metcalf
Environmental Consultant
920-433-1833

12/27/2006

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Tuesday, August 29, 2006 11:19 AM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Melchiori, James R; Mensch, Gene ; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Suppnick, John
Subject: Victoria water quality monitoring data
Attachments: Victoria DO Profiles.xls; Victoria Dam 082206 dev.xls

Good morning everyone,

Deviations from State water quality standards have been observed below the Victoria Power Plant from August 8 through August 22. During this time period, dissolved oxygen values ranged between 6.2 and 7.2 mg/l. At the time the monitoring equipment was retrieved, water quality readings taken with a hand held meter indicated the water was above 7.00 mg/l. Readings were taken downstream of the monitoring location to document any additional aeration of the discharge. The readings are as follows:

Direct measurements taken with YSI Model 95 D.O. meter on 8/22/06 @ 16:15CST

At monitoring site: 7.38 mg/l

50 meters downstream: 7.55 mg/l

100 meters downstream: 7.89 mg/l

200 meters downstream: 7.91 mg/l

A dissolved oxygen profile was conducted on August 22nd. The profile shows that there is stratification of the reservoir at approximately 8.5 meters. The monitoring and dissolved oxygen profile data is attached for your review. If you have any questions, please feel free to contact me.

Thanks,

Mark

12/27/2006

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Thursday, September 21, 2006 9:20 AM
To: 'Bill Deepphouse'; 'Casey, Steve'; 'Deloria, Christie'; 'Fedora, Mark'; Granroth, Connie J; 'Koetje, Mitch'; Melchiori, James R; 'Mensch, Gene'; Meyers, Robert J; 'Mistak, Jessica'; 'Norman Nass'; Puzen, Shawn C; 'Spring Rosales'; 'Suppnick, John'
Subject: RE: Victoria Tailrace monitoring data

Hi Bill,

When we deploy the datasondes with brand new batteries, the voltage is 12.2 volts. The sonde in question started at 11.2 volts which indicates to me it was previously deployed, retrieved, cleaned, and calibrated prior to being used at Victoria. We routinely have ending voltages in the 9.0 to 9.5 volt range, and the sondes are designed to operate properly down to 6.6 to 6.8 volts. Any time we retrieve a datasonde and the voltage is below 10.5 volts, we will change the batteries out because we do not want to take a chance at losing data over the cost of a few batteries. In this instance the voltage of the sonde is well within an acceptable range throughout the deployment time period. I believe that if the voltage really was the issue, we would have seen weird readings for all of the monitoring parameters.

Mark

From: Bill Deepphouse [mailto:troutkpr@up.net]
Sent: Thursday, September 21, 2006 8:22 AM
To: Metcalf, Mark W; Casey, Steve; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Melchiori, James R; Mensch, Gene; Meyers, Robert J; Mistak, Jessica; Norman Nass; Puzen, Shawn C; Spring Rosales; Suppnick, John
Subject: Re: Victoria Tailrace monitoring data

Hi Mark - Thanks for the update and raw data. It looks like the battery in this particular unit was low to begin with and when the voltage dropped below 10 volts it started giving erroneous readings. What do the battery readings look like on the other Sondes as they continue to record data? Seems like a fresh battery should give readings above 12 volts. Sometimes mine would be up around 13 or so volts. Bill D.

----- Original Message -----

From: Metcalf, Mark W
To: Casey, Steve; Deepphouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Melchiori, James R; Mensch, Gene; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica; Norman Nass; Puzen, Shawn C; Spring Rosales; Suppnick, John
Sent: Wednesday, September 20, 2006 11:56 AM
Subject: Victoria Tailrace monitoring data

Good morning everyone,

Water quality monitoring data was downloaded yesterday at the Victoria Powerhouse Tailrace monitoring location. Some dissolved oxygen monitoring data was lost beginning on 9/16/06 at 23:00 through 9/19/06 at 09:00. The dissolved oxygen monitoring probe failed during this time period, and we have not been able to determine the cause at this point in time. All other water quality monitoring parameters were collected without any problems. The monitoring data is attached for your review.

There are no other water quality monitoring deviations or issues at the other monitoring locations to report. If you have any questions, feel free to contact me.

12/27/2006

Victoria Tailrace monitoring data

Page 2 of 2

Thanks,

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com

<<Victoria 091906.xls>>

12/27/2006

Metcalfe, Mark W

From: Metcalf, Mark W
Sent: Thursday, October 05, 2006 4:03 PM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Melchiori, James R; Mensch, Gene ; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Suppnick, John
Subject: Water quality monitoring data
Attachments: Roselawn Creek 100306.xls

Good afternoon,

Water quality monitoring has been completed for the 2006 monitoring season for the Bond Falls Hydroelectric Project. The water quality monitors have been retrieved for the season, and a data problem has been observed at the Roselawn Creek monitoring location. When the monitor was retrieved, it was discovered that the housing over the batteries was cracked, which allowed water into the battery compartment and also on to the circuit board. While the temperature monitoring data looks consistent, the dissolved oxygen monitoring data is erratic. I think we will need to qualify all of the monitoring data for this monitoring period since we can not assure data validity since the circuit board did get wet. The monitoring data is attached for your review.

There are no other deviations or issues to note. A complete summary of the monitoring data collected during the 2006 monitoring season will be sent to you by October 31st for your review and comment. If you have any questions before then, feel free to contact me.

Thanks,

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com



Roselawn Creek
100306.xls (54 ...

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Monday, October 30, 2006 10:01 AM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Martini, Bob; Melchiori, James R; Mensch, Gene ; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Suppnick, John
Cc: Poissant, Kevin G
Subject: Bond Falls Water Quality Monitoring Data
Attachments: Bergland DO Summary 2006.xls; Bond Falls DO Summary 2006.xls; Bond Falls Dam DO Profiles.xls; Roselawn DO Summary 2006.xls; Victoria DO Profiles.xls; Victoria DO Summary 2006.xls

Good morning everyone,

Upper Peninsula Power Company is pleased to submit water quality monitoring data for the Bond Falls Hydroelectric Project from the 2006 monitoring season for your review and comment. Attached to this message is a cover letter and dissolved oxygen monitoring data. Due to the size and number of data files, I will follow up this message with the temperature monitoring data. If you have any questions regarding the monitoring data, please feel free to call me or contact me via e-mail.

Thank you for your time and consideration.

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com



Bergland DO
Summary 2006.xls (.Summary 2006.xls..



Bond Falls DO
Summary 2006.xls..



Bond Falls Dam DO
Profiles.xls...



Roselawn DO
Summary 2006.xls (. Profiles.xls (32 K...



Victoria DO



Victoria DO
Summary 2006.xls (. Summary 2006.xls (.

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Monday, October 30, 2006 10:04 AM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Martini, Bob; Melchiori, James R; Mensch, Gene ; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Suppnick, John
Cc: Poissant, Kevin G
Subject: Bond Falls - Temperature monitoring data
Attachments: Victoria Temp Summary 2006.xls; Roselawn Temp Summary 2006.xls; Bond Falls Dam Temp Summary 2006.xls; Bergland Dam Temp Summary 2006.xls

Please find the 2006 temperature monitoring data for the Bond Falls hydroelectric Project attached.

Thanks,

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com



Victoria Temp Summary 2006.xls.. Roselawn Temp Summary 2006.xls... Bond Falls Dam Temp Summary 2006.xls.. Bergland Dam Temp Summary 2006...

Metcalf, Mark W

From: Metcalf, Mark W
Sent: Tuesday, October 31, 2006 3:32 PM
To: Metcalf, Mark W; 'Casey, Steve'; 'Deephouse, Bill'; 'Deloria, Christie'; 'Fedora, Mark'; Granroth, Connie J; 'Koetje, Mitch'; 'Martini, Bob'; Melchiori, James R; 'Mensch, Gene'; Meyers, Robert J; 'Mistak, Jessica'; 'Norman Nass'; Puzen, Shawn C; 'Spring Rosales'; 'Suppnick, John'
Cc: Poissant, Kevin G
Subject: Bond Falls Water Quality Monitoring Data cover letter
Attachments: Bond Falls Team WQM report 2006.mwm.doc

Hello everyone,

John Suppnick pointed out to me that I did not attach a cover letter with the monitoring data submitted to you yesterday for the Bond Falls Hydroelectric Project (Thank you John). I apologize for the oversight. Please find the cover letter attached to this e-mail. If you have any questions, please feel free to contact me.

Thanks,

Mark



Bond Falls Team
WQM report 200...



Upper Peninsula Power Company

(a subsidiary of WPS Resources Corporation)

P.O. Box 19001

Green Bay, WI 54307-9001

October 27, 2006

FERC No. 1864

To: Bond Falls Implementation Team

Mr. Gene Mensch, Keweenaw Bay Indian Community
Mr. John Suppnick, Michigan Department of Environmental Quality
Mr. Steve Casey, Michigan Department of Environmental Quality
Mr. Mitch Koetje, Michigan Department of Environmental Quality
Ms. Jessica Mistak, Michigan Department of Natural Resources
Mr. Bill Deephouse, Michigan Hydro Relicensing Coalition
Mr. Robert Meyers, Upper Peninsula Power Company
Mr. Jim Melchiori, Upper Peninsula Power Company
Ms. Connie Granroth, Upper Peninsula Power Company
Ms. Christie Deloria, U.S. Fish and Wildlife Service
Ms. Spring Rosales, U.S. Forest Service
Mr. Norman Nass, U.S. Forest Service
Mr. Mark Fedora, U.S. Forest Service
Mr. Bob Martini, Wisconsin Department of Natural Resources
Mr. Shawn Puzen, Wisconsin Public Service Corp.

Re: Bond Falls Hydroelectric Project – 2006 Water Quality Monitoring Results

As per the Order Modifying and Approving Water Quality Monitoring Plan Under Article 409, dated March 22, 2006, Upper Peninsula Power Company (UPPCO) is pleased to submit water quality-monitoring data from the 2006 monitoring year for your review and comment.

Per the water quality-monitoring plan for the Bond Falls Hydroelectric Project, dissolved oxygen (D.O.) and temperature were monitored at four locations within the project: downstream of the Bond Falls Flowage in Roselawn Creek, downstream of the Bond Falls Flowage in the Middle Branch of the Ontonagon River, in the West Branch of the Ontonagon River below the Bergland Dam, and in the West Branch of the Ontonagon River below the Victoria Powerhouse. In addition, temperature monitoring was conducted in a bypass reach of the Middle branch of the Ontonagon River. Monitoring was conducted hourly during the months of June through September. Also, D.O. and temperature profiles were conducted at the Victoria Dam and Bond Falls Dam during the monitoring periods. Copies of the D.O., temperature, and profile data are attached for your review.

Deviations from the State dissolved oxygen water quality standard was observed at the Victoria Powerhouse tailrace and in Roselawn Creek. One hourly reading was below the water quality standard in Roselawn Creek on September 1st. At the Victoria Powerhouse monitoring location, 47.4% of the hourly readings were below 7.0 mg/l. Please note that additional dissolved oxygen readings taken downstream of the monitoring location with a hand held D.O. meter showed D.O. levels were above the State water quality standard within 200 meters of the monitoring location. Downstream water quality readings taken can be found with D.O. profile data for the Victoria Reservoir.

Deviations from the License maximum monthly average water temperature were observed at the Bond Falls monitoring location in August, the Roselawn Creek monitoring location in July and August, and Victoria Powerhouse tailrace monitoring location during the months of June, July, and August. Per the water quality monitoring plan, temperature monitoring did occur in the bypass reach of the Middle Branch of the Ontonagon River. Water discharged from the Bond Falls Reservoir via a bypass line is withdrawn from the hypolimnion of the reservoir. A graphical comparison of the temperature monitoring data is attached for your review. In general, the temperature in the bypass reach was slightly cooler in June and July, and nearly the same or slightly warmer in August and September. All monitoring data for the five temperature monitoring locations is attached.

Please review the enclosed data and make any comments you may have as soon as possible, but within 30 days of this letter. Should you have any questions or concerns, please do not hesitate to call me at (920) 433-1833. Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads "Mark Metcalf". The signature is written in a cursive, flowing style.

Mark W. Metcalf
Environmental Consultant
Telephone: (920) 433-1833

Attach.

cc: Mr. Kevin Poissant, UVD

Metcalfe, Mark W

From: Metcalf, Mark W
Sent: Monday, November 06, 2006 9:33 AM
To: Casey, Steve; Deephouse, Bill; Deloria, Christie; Fedora, Mark; Granroth, Connie J; Koetje, Mitch; Martini, Bob; Melchiori, James R; Mensch, Gene ; Metcalf, Mark W; Meyers, Robert J; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C; Spring Rosales ; Suppnick, John
Cc: Poissant, Kevin G
Subject: Water quality monitoring data

Attachments: Bond Falls Dam Temp Summary 2006.xls

Good morning everyone,

Bill Deephouse contacted me regarding an error in the spreadsheet used to calculate the difference between the temperature observed at the Bond Falls monitoring location and the temperature observed in the bypass reach. The difference was not calculated the same in June and July as it was in August and September (the cell locations were reversed). Attached is an updated spreadsheet containing the temperature monitoring data for Bond Falls for your review. (Bill - Thank you for pointing out this error to me.)

As a side note, Bill also inquired about the temperature readings and how the bypass temperatures could be the same or higher than downstream. If you recall, temperature monitoring in the bypass section was conducted this year to assess whether additional flow from the bypass would possibly help mitigate downstream temperature levels. We performed a quick comparison of the monitors used during the 2006 season to see if there were significant differences in temperature readings between instruments. We placed a datasonde and a HOBO logger in a bucket of water and ran a program to see the difference in temperature between the two instruments. What we observed was a 0.1 to 0.3 C (0.2 to 0.5F) difference in temperature readings. This is not a significant difference, but please keep in mind this was just a quick check of 2 pieces of equipment. When you are evaluating the data, please keep in mind that there is some variability in the equipment, however, I think it is more important to look at the data as a whole rather than on an individual reading basis.

The graphical comparison of the monitoring data shows that the temperature of water in the bypass channel is generally cooler than the downstream water temperature (by roughly 3 degrees F) in June and July. The temperature difference decreases in August and September. The bypass in place has a capacity of approximately 63 cfs when the reservoir is full (reservoir elevation of 1475' msl, 140' local datum). The bypass has been discharging approximately 40 to 45 cfs for the past 3 months. The question that needs to be addressed is if this information is sufficient to determine whether additional cooling water flow from the bypass would help mitigate downstream water temperature increases.

Please let me know if you have any questions.

Thanks,

Mark

Mark Metcalf
Wisconsin Public Service Corp.
(920) 433-1833
mwmetcalf@wpsr.com



Bond Falls Dam
Temp Summary 20..

Metcalfe, Mark W

From: Bill Deepphouse [troutkpr@up.net]
Sent: Saturday, November 11, 2006 12:05 PM
To: Metcalfe, Mark W
Cc: Christie Deloria; Jessica Mistak; Robert A. Evans; Mark Fedora
Subject: Re: Water quality monitoring data

Hi Mark - Recently Jessica Mistak shared with me some your comments and ideas regarding the estimated volume of the hypolimnion in the Bond Falls Reservoir and that you didn't think there was any good hydrographic contour information with which to make a reasonably accurate depth contour map. In the STS Consultants "Bond Falls Erosion Study Report" prepared for the BFIT team this past summer there is an IR aerial photo of the entire reservoir with microscopically small depths listed all over the water surface. There must be several hundred depth measurements shown. Some of these measurements in the south end of the reservoir indicate depths of well over 20 feet. I think a fairly accurate map of the depth contours of the reservoir could be made with this info. It is in Appendix B of the above report and Shawn should have a copy available for you to take a look at.

Also, an engineer friend of mine did some calculations on the maximum discharge of the 24" pipe under the dam and he came up with a maximum flow under 25 feet of head of 53 CFS. Whatever the correct discharge turns out to be, it surely won't be constant since the elevation of the reservoir varies downward throughout the summer and thus the head declines, reducing the total flow volume. This is something we have to look at very carefully and try to figure out, number one, how much volume of cold water is in the hypolimnion at various times in the summer and how will effect the temperature of the M.Br. of the Ontonagon River downstream.

I am off for deer season from Sunday Nov 12 to the following Sunday, Nov 19. So I won't be able to communicate with you or other members of the team for awhile. I will be able to talk with you when I return.

Bill D.

----- Original Message -----

From: Metcalfe, Mark W
To: Casey, Steve ; Deepphouse, Bill ; Deloria, Christie ; Fedora, Mark ; Granroth, Connie J ; Koetje, Mitch ; Martini, Bob ; Melchiori, James R ; Mensch, Gene ; Metcalfe, Mark W ; Meyers, Robert J ; Mistak, Jessica ; Norman Nass ; Puzen, Shawn C ; Spring Rosales ; Supnick, John
Cc: Poissant, Kevin G
Sent: Monday, November 06, 2006 10:33 AM
Subject: Water quality monitoring data

Good morning everyone,

Bill Deepphouse contacted me regarding an error in the spreadsheet used to calculate the difference between the temperature observed at the Bond Falls monitoring location and the temperature observed in the bypass reach. The difference was not calculated the same in June and July as it was in August and September (the cell locations were reversed). Attached is an updated spreadsheet containing the temperature monitoring data for Bond Falls for your review. (Bill - Thank you for pointing out this error to me.)

As a side note, Bill also inquired about the temperature readings and how the bypass temperatures could be the same or higher than downstream. If you recall, temperature monitoring in the bypass section was conducted this year to assess whether additional flow from the bypass would possibly help mitigate downstream temperature levels. We performed a quick comparison of the monitors used during the 2006 season to see if there were significant differences in temperature readings between instruments. We placed a datasonde and a HOBO logger in a bucket of water and ran a program to see the difference in temperature between the two instruments. What we observed was a 0.1 to 0.3 C (0.2 to 0.5F) difference in temperature readings. This is not a significant difference, but please keep in mind this was just a quick check of 2 pieces of equipment. When you are evaluating the data, please keep in mind that there is some variability in the equipment, however, I think

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it is more important to look at the data as a whole rather than on an individual reading basis.

The graphical comparison of the monitoring data shows that the temperature of water in the bypass channel is generally cooler than the downstream water temperature (by roughly 3 degrees F) in June and July. The temperature difference decreases in August and September. The bypass in place has a capacity of approximately 63 cfs when the reservoir is full (reservoir elevation of 1475' msl, 140' local datum). The bypass has been discharging approximately 40 to 45 cfs for the past 3 months. The question that needs to be addressed is if this information is sufficient to determine whether additional cooling water flow from the bypass would help mitigate downstream water temperature increases.

Please let me know if you have any questions.

Thanks,

Mark

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<<Bond Falls Dam Temp Summary 2006.xls>>