

**DISSOLVED OXYGEN MONITORING AND
ENHANCEMENT PLAN
PRAIRIE DU SAC HYDROELECTRIC PROJECT
FERC Project No. 11162
PRAIRIE DU SAC, WISCONSIN**

November 20, 2007



NRC Project # 007-0076-01

DISSOLVED OXYGEN MONITORING AND ENHANCEMENT PLAN

**PRAIRIE DU SAC HYDROELECTRIC PROJECT
FERC Project No. 11162**

PRAIRIE DU SAC, WISCONSIN

November 20, 2007

Prepared For:

Ms. Mildred Godoy-Daniels
Wisconsin Power & Light Company
S9270A Dam Road
Prairie du Sac, WI 53578-9712

Prepared By:



P.O. Box 128
119 South Main Street
Cottage Grove, Wisconsin 53527-0128
phone: 608-839-1998
fax: 608-839-1995
www.nrc-inc.net

NRC Project # 007-0076-01



Rachel Veltman
Environmental Scientist/Botanist



William R. Pool
Principal Scientist

TABLE OF CONTENTS

INTRODUCTION AND OBJECTIVES	1
METHODS.....	2
RESULTS.....	3
Continuous Data Loggers	3
Manual Monitoring	5
CONCLUSIONS.....	6
STUDY SUMMARY	7

Attachments

Figure 1	Water Temperature and Dissolved Oxygen Values - Upstream
Figure 2	Water Temperature and Dissolved Oxygen Values - Downstream
Figure 3	Comparison of Upstream and Downstream Dissolved Oxygen Values
Figure 4	Comparison of Upstream and Downstream Water Temperatures
Figure 5	Daily High and Low Temperatures and Daily Precipitation
Figure 6	Comparison of Continuous Logger and Manual Logger Dissolved Oxygen Readings – Upstream
Figure 7	Comparison of Continuous Logger and Manual Logger Dissolved Oxygen Readings - Downstream
Appendix A	Data logger calibration log
Appendix B	Field sheets of upstream manual measurements
Appendix C	Field sheets of downstream manual measurements

INTRODUCTION AND OBJECTIVES

Wisconsin Power and Light Company (WP&L) operates the Prairie du Sac (PDS) hydroelectric facility on the Wisconsin River in Prairie du Sac, Columbia and Sauk Counties, Wisconsin. In accordance with Article 404 of the Federal Energy Regulatory Commission (FERC) Order Issuing Original License (June 27, 2002) for the Prairie du Sac Hydroelectric Project, FERC Project No. 11162, WP&L was required to develop and implement a dissolved oxygen monitoring and enhancement plan for this facility. Historic water quality monitoring conducted by WP&L and the Wisconsin Department of Natural Resources (WDNR) indicated that at times dissolved oxygen concentrations may be lower than the 5 mg/L Water Quality Standard as specified under Wisconsin Administrative Code Chapter NR 102. Monitoring has shown that dissolved oxygen concentrations may be as low as 2 to 3 mg/L at the intake and in the tailrace during summer months. WP&L also previously investigated the use of turbine vacuum breakers to raise dissolved oxygen levels in the turbine discharge; however the results were reportedly inconclusive.

On behalf of WP&L, Natural Resources Consulting, Inc. (NRC) developed the dissolved oxygen monitoring and enhancement plan for the PDS facility, which was filed with FERC on March 27, 2003. The *Order Approving Water Quality Monitoring Plan Under Article 404* (Order) was issued by FERC on September 11, 2003. The plan requires WP&L to monitor dissolved oxygen levels at their PDS facility during the summer low flow periods for a three-year period and re-evaluate the potential for vacuum breakers to increase dissolved oxygen levels in the tailrace. In 2004, the vacuum breakers were evaluated and proven to be ineffective at increasing dissolved oxygen concentrations ([DO]) in the tailrace, and therefore were not evaluated this year.

In 2006, NRC conducted the final year of the water quality investigation at the PDS facility according to the Order. In 2007, NRC continued the water quality investigation to provide an additional year of data to support future efforts to increase DO concentrations in the tailrace. This report summarizes the methods and results of the 2007 investigation.

METHODS

An AquaSonde 2002 dissolved oxygen and temperature data logger was installed just upstream of an operating turbine unit intake and in the tailrace associated with the same unit immediately downstream of the facility from June 27, 2007 to September 17, 2007 to monitor water quality conditions. The upstream logger was deployed midway between the bottom of the intake wall and the lake bottom, which is a depth of approximately 20 feet. The downstream logger was installed at approximately mid-depth in the turbine discharge area of the tailrace. The loggers were programmed to record dissolved oxygen and temperature at 15-minute intervals, and were downloaded and serviced (probe cleaning, recalibration, etc.) twice per week.

The data loggers were installed at Turbine Unit 2 from June 27 through September 17, 2007 (Table 1). Logger #119 on the upstream side was removed for repair on August 23 and replaced by Logger # 171 on September 1. The downstream logger #172 was deployed for the entire monitoring period.

Table 1. Summary of Data Logger Deployment		
LOCATION	PERIOD	LOGGER #
UNIT 2		
Upstream	6/27 to 8/23	119
	9/1 to 9/17	171
Downstream	6/27 to 9/17	172

The data loggers were calibrated twice per week (Appendix A). These calibration data were used to adjust DO values to account for instrument drift. The calibration data adjustment shift was determined by observing the DO readings in a water-saturated air chamber before and after calibration. This shift was applied to the data set and prorated back to a difference of 0 mg/L at the time of the last calibration. While we understand the instrument likely did not begin drifting immediately after it was replaced in the water after calibration, it is not possible to determine when the instrument actually began to drift between download periods. As such, the corrected and uncorrected values provide a likely range of the number of times DO concentrations were below 5.0 mg/L. All calculations in this report are based on corrected values unless otherwise stated.

Upstream DO readings tended to fluctuate rapidly. The upstream data set was transformed by using a 2-hr rolling average (i.e. each data point is the mean of the four data points in the preceding hour and the three data points in the subsequent forty-five minutes) for the purpose of smoothing the data for legibility and discernment of trends. The untransformed, corrected data was used for calculation of the percentage of time the DO readings were under 5 mg/L.

WP&L staff manually measured DO and water temperature with a Yellow Springs Inc. (YSI) Model 55 hand-held instrument in an upstream and downstream location every work day morning during the logger-deployment period. Upstream of the facility, measurements were taken throughout the water column at one-meter increments in front of the intake at Unit 2. The bottom measurement was normally taken around 11 meters (~36 feet). At downstream locations, measurements were taken at Unit 8 (the lock side), Unit 1 (the shore side) and at an operating unit between these areas (Unit 2, except for 6/28/07 through 7/2/07, when readings were taken at Unit 4). The downstream readings were taken at mid-depth, since minimal stratification had been observed during the 2004 monitoring period. The main intent of these manual measurements was to validate DO concentrations recorded by the data loggers.

RESULTS

Continuous Data Loggers

The relationship between temperature and DO upstream and downstream of the PDS facility from June 27 through September 17, 2007 is presented in Figures 1 and 2, respectively. A summary table of these data is presented in Table 2. During this deployment period, the data loggers were installed at Unit 2.

Table 2. Summary of Water Temperature and Dissolved Oxygen June 27 through September 17, 2007 at the Prairie du Sac Facility.

TEMPERATURE (°C)			
	Minimum	Maximum	Mean
Upstream	19.2	28.6	25.0
Downstream	18.6	27.3	24.5
DISSOLVED OXYGEN (mg/L)			
	Minimum	Maximum	Mean
Upstream (uncorrected)	0.1	17.4	6.6
Upstream (corrected)	0.08	16.8	6.6
Downstream (uncorrected)	0.5	15.0	6.0
Downstream (corrected)	0.5	15.9	6.1

The data set from the upstream data logger is incomplete. Logger #119 was removed for repairs on August 23, and a replacement logger (#171) was procured and deployed on September 1, 2007. Thus there is a gap in the upstream data from August 23 to September 1, 2007.

Figures 1 and 2 show the water temperature and DO values for the upstream and downstream monitoring locations. Figure 3 compares the water temperatures for the two locations, and Figure 4 compares the DO concentrations for the two locations. Figure 5 shows the daily maximum and minimum air temperatures and daily precipitation totals, taken from KWIPRAIR3, a local personal weather station in Prairie du Sac (lat N 43 deg. 16' 55", long 89 deg. 44' 34", elevation 780 feet, records available on www.wunderground.com).

The temperature data display a regular diurnal cycle, with peaks in the late afternoon and evening hours.

Differences between the peak and low readings ranged from 0.01°C to more than 2.5 °C. Upstream temperature peaks are typically 0.5 – 1 °C greater than downstream temperature peaks, but the low readings tend to correspond between upstream and downstream.

Dissolved oxygen concentrations tended to show peaks that correlated with the water temperature peaks, but also displayed additional peaks that indicate that other factors beside water temperature are influencing DO concentrations.

Disruption of the regular diurnal temperature cycle (and in part, the DO concentrations) tended to correspond with precipitation events (Figure 5). A large storm event which affected a large area of the upstream reach of the Wisconsin River on August 17 and the days thereafter marked the start of a week-long temperature drop from over 26 °C to slightly over 21°C. This appears to have contributed to a rise in downstream DO concentrations (upstream data set is missing for this period).

On September 10-11, night-time low air temperatures began dropping below 10 °C. This, in combination with another precipitation event on September 10, corresponds with a steady drop in water temperatures and a rise in DO upstream.

Dissolved oxygen levels upstream and downstream of Unit 2 generally followed similar trends during this monitoring period. Upstream DO levels were typically higher than downstream levels, with the exception of the following periods, when they were lower: 7/2 – 7/7, 8/18 – 8/23, and 9/10 – 9/13.

Dissolved oxygen concentrations downstream of Unit 2 dropped below 5.0 mg/L between 28.0 percent (corrected values) and 32.6 percent (uncorrected values) of the time during this monitoring period. There were twenty-five periods of non-compliance during the monitoring period, with the first period starting 06/27/07 and the last period starting 09/13/07 (Table 3). The period durations ranged from fifteen minutes to seven days. The longest periods occurred in late July and all of August. The mean temperatures for each period averaged 24.89 degrees Celsius, while the mean DO concentrations for each period averaged 4.37 mg/L.

Table 3. Characteristics of Periods of Non-Compliance in Downstream Waters, Prairie du Sac Facility,

2007.

Period Start Date and Time	Duration (hours)	Mean DO (mg/L)	Mean Temperature (deg. C)
6/27/2007 14:58	11.75	4.47	24.57
7/5/2007 10:43	9.75	4.20	24.88
7/7/2007 14:43	38.5	2.69	24.67
7/10/2007 16:43	2.75	4.78	26.09
7/11/2007 3:43	1.5	4.87	25.95
7/11/2007 17:58	1.5	4.93	25.96
7/12/2007 18:28	1.25	4.93	25.76
7/14/2007 2:28	10.25	4.70	25.42
7/15/2007 7:13	2	4.98	25.08
7/16/2007 0:58	176	3.38	24.50
7/31/2007 5:13	82	2.57	25.80
8/4/2007 6:43	7.25	4.78	26.33
8/5/2007 13:43	73.5	3.70	25.72
8/9/2007 21:28	49.5	3.47	25.85
8/14/2007 5:43	11	4.48	26.26
8/15/2007 8:28	23.75	4.64	26.12
8/17/2007 2:15	5.5	4.76	25.95
8/20/2007 10:30	0.25	4.98	23.68
9/2/2007 13:45	6.25	4.26	22.59
9/5/2007 18:00	1.75	4.76	23.23
9/6/2007 1:15	8	4.67	23.34
9/7/2007 10:00	2	4.67	23.63
9/9/2007 21:45	10.75	4.65	24.29
9/13/2007 13:00	9.75	4.53	21.74
Mean	22.77	4.37	24.89
Maximum	176	4.98	26.33
Minimum	0.25	2.57	21.74

Manual Monitoring

Field sheets summarizing manual dissolved oxygen and water temperature measurements upstream and downstream of the facility are provided in Appendix B and C, respectively. The main intent of this manual monitoring was to validate dissolved oxygen measurements recorded by the data loggers.

A comparison of the corrected values for the continuous dissolved oxygen measurements with the manual readings are presented in Figures 6 and 7. The values for the continuous logger were taken at the same time as the manual reading. The manual measurements prior to 7/12 may not be accurate. During an instrument check on 7/12 (the first check performed by NRC), NRC noted that the instrument was assembled incorrectly and had bubbles under the membrane. Therefore, the readings prior to 7/12 are suspect and were not used. (After 7/12, the manual instrument was checked each time the continuous loggers were calibrated.) Apart from the pre-7/12 readings, the continuous and corrected dissolved oxygen measurements compared favorably with the manual measurements. The downstream corrected continuous logger measurements were within 15 percent of the manual readings over 83 percent of the time.

Although the differences between the manual and continuous values were noteworthy at times, the overall trends were similar. The manual readings were below 5.0 mg/L 48 percent of the time downstream, and 36 percent of the time upstream. The corrected logger measurements were below 5.0 mg/L 42.8 percent of the time downstream, and 44 percent upstream. All of the data was taken from the closest corresponding point in time. The dissolved oxygen readings were generally lower likely because the readings were taken in the morning, when the values are expected to be lower.

The upstream manual readings were taken at one meter intervals and showed the stratification of the upstream pool when present. The amount of stratification varied widely and from day to day. The chemocline (dramatic shift in DO concentrations) varied from six meter depths to ten meter depths.

CONCLUSIONS

Dissolved oxygen and water temperature was continuously monitored upstream and downstream of an operating turbine unit (Unit 2) at the PDS facility from June 27 through September 17, 2007. Dissolved oxygen concentrations downstream of this unit dropped below 5.0 mg/L between 28 percent (corrected values) and 32.6 percent (uncorrected values) of the time during this monitoring period.

Manual measurements of dissolved oxygen were also taken upstream and downstream of the operating turbine unit, primarily to validate data logger measurements. Differences in the data were observed between the data logger and manual measurements. The differences in the data are likely due to different measurement locations and times, as well as some equipment failures during the observation period. Although some differences were observed, the data generally trended together. However both manual and logger dissolved oxygen values were low. For the downstream monitoring location, the manual dissolved oxygen readings were below 5.0 mg/L 47.6 percent of the time and the downstream corrected logger measurements were below 5.0 mg/L 42.8 percent of the time. For the upstream monitoring location, the manual dissolved oxygen readings were below 5.0 mg/L 35.7 percent of the time and the downstream corrected logger measurements were below 5.0 mg/L 44 percent of the time.

STUDY SUMMARY

On behalf of WP&L, NRC monitored dissolved oxygen levels at their PDS facility during the summer low flow periods from 2004 to 2007. Turbine vacuum breakers were evaluated as a means of introducing dissolved oxygen in tailrace areas in 2004. Vacuum breaker evaluations were conducted at Unit 5 on two occasions and at Unit 8 on nine occasions. Results of these evaluations indicated that the vacuum breakers were ineffective at increasing dissolved oxygen levels in the tailrace, and therefore were not evaluated in subsequent years.

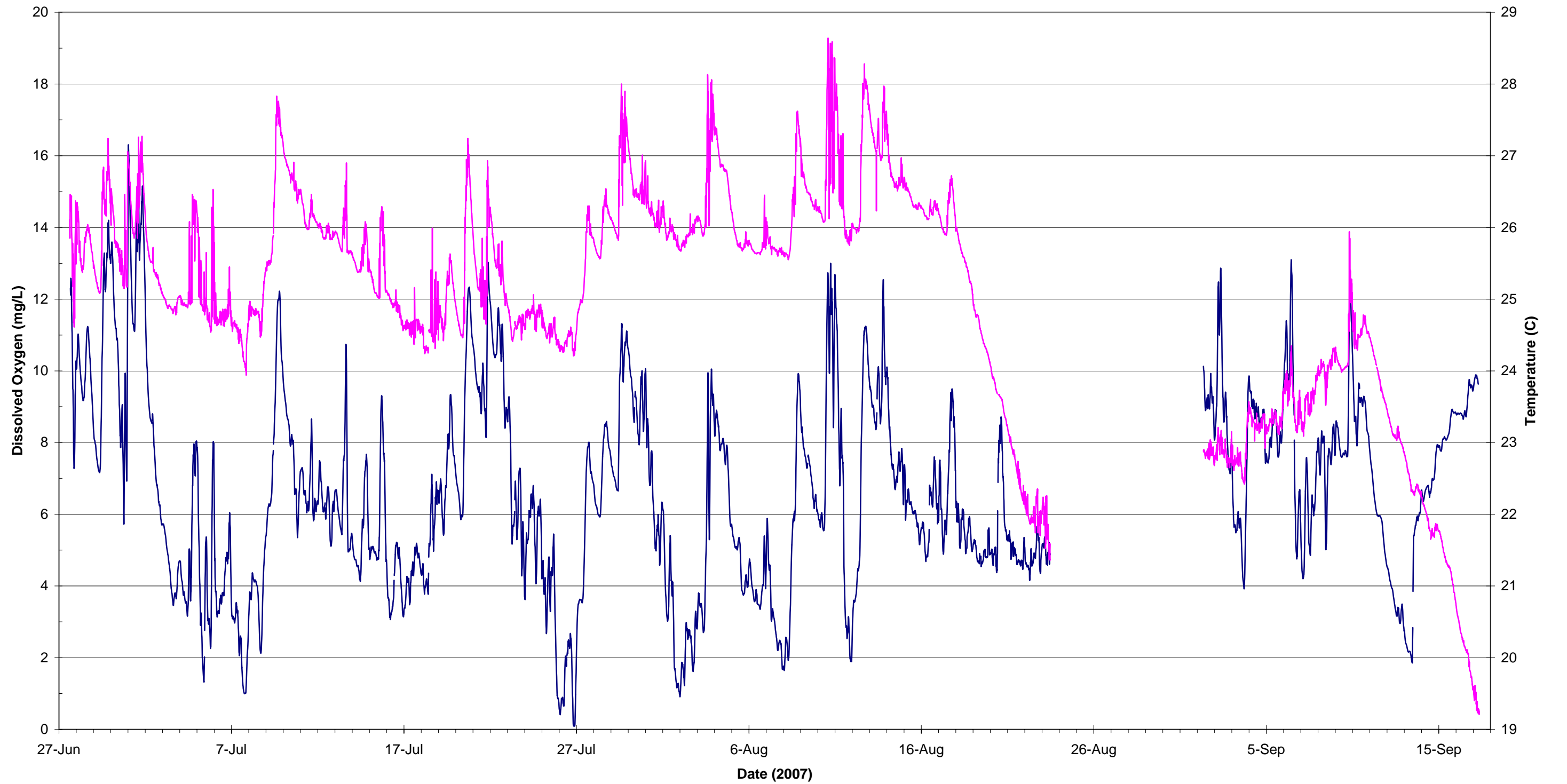
The most significant conclusion of the four-year monitoring is that DO concentrations in the tailrace drop below the 5.0 mg/L Water Quality Standard as specified under Wisconsin Administrative Code Chapter NR 102. Table 4 summarizes the non-compliance periods for the four-year monitoring period.

Table 4. Dissolved oxygen concentrations were under 5.0 mg/L during the summer periods from 2004 to 2007 downstream of running turbines at the Prairie du Sac Facility.

Year	Percent time under 5.0 mg/L (using corrected values)
2004	16.6
2005	40.9
2006	32.5
2007	28.0

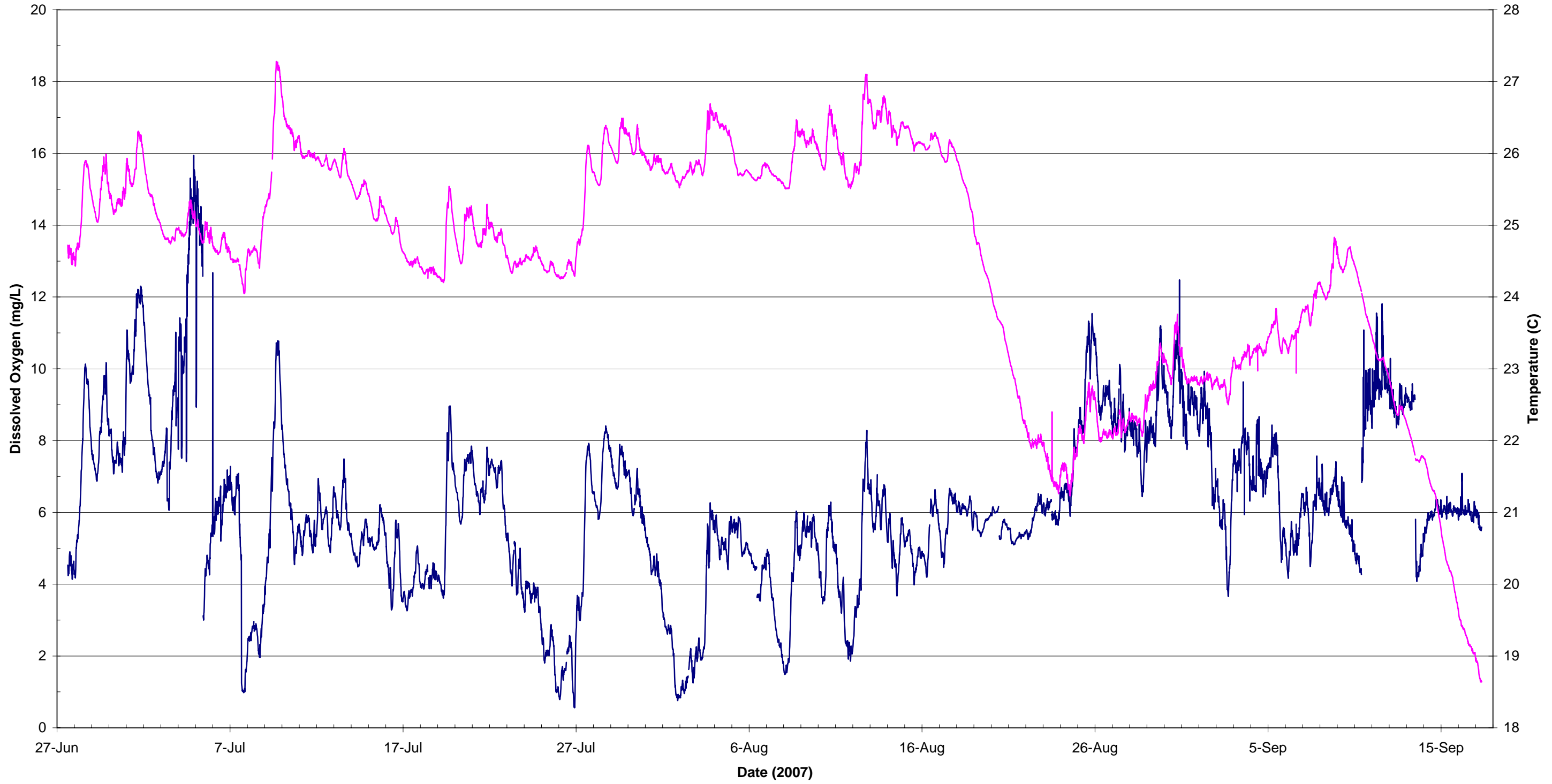
General observations of annual weather patterns, such as differences in seasonal air temperature and precipitation suggest the extent and duration of readings below the 5.0 mg/L threshold correlate to summer weather conditions.

Figure 1. Water Temperature and Dissolved Oxygen Values Upstream of Prairie du Sac Facility



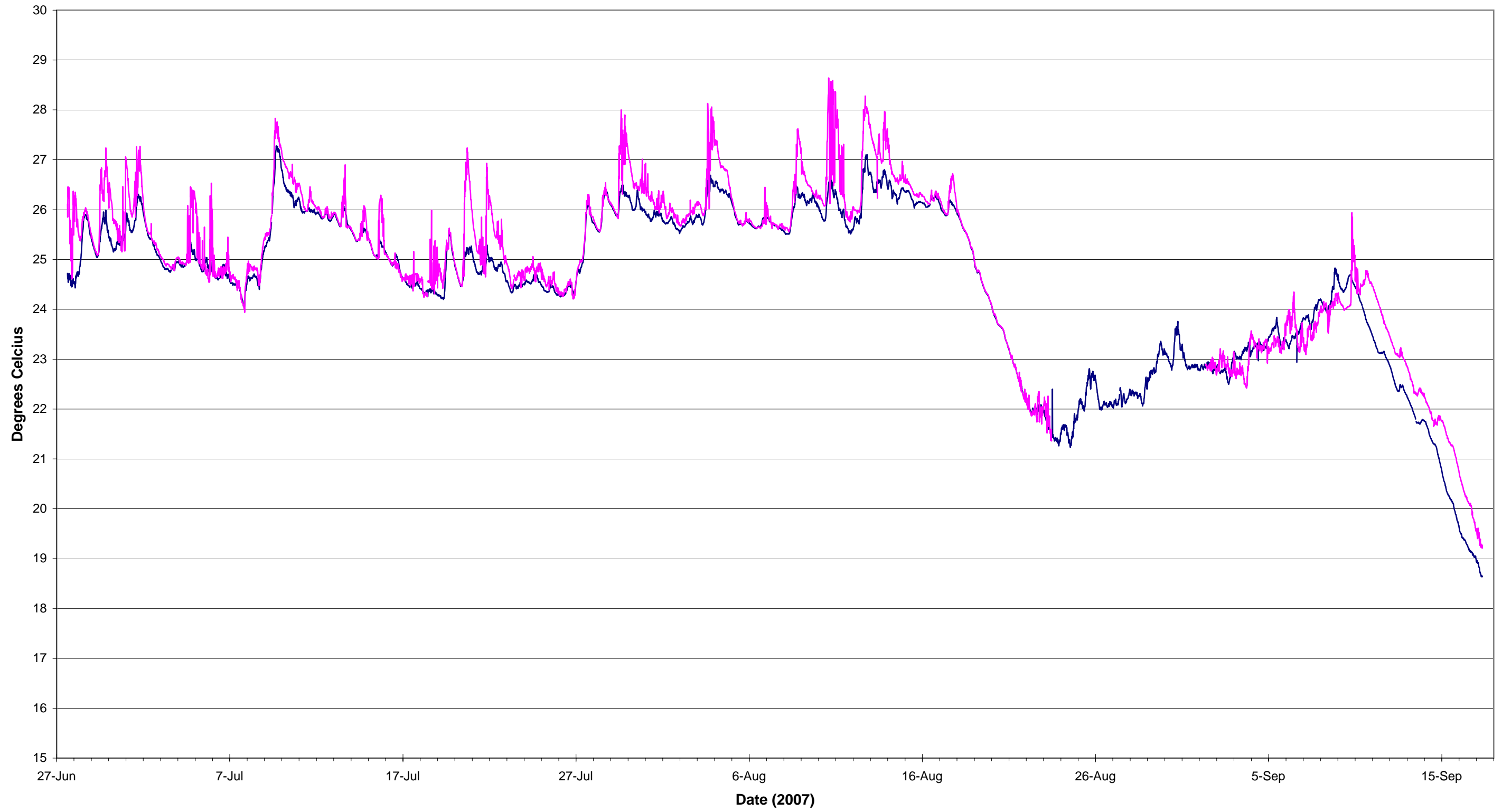
— 2-Hr Rolling Average of Corrected Dissolved Oxygen — Temperature

Figure 2. Water Temperature and Dissolved Oxygen Values Downstream of the Prairie du Sac Facility



— Corrected Dissolved Oxygen — Temperature

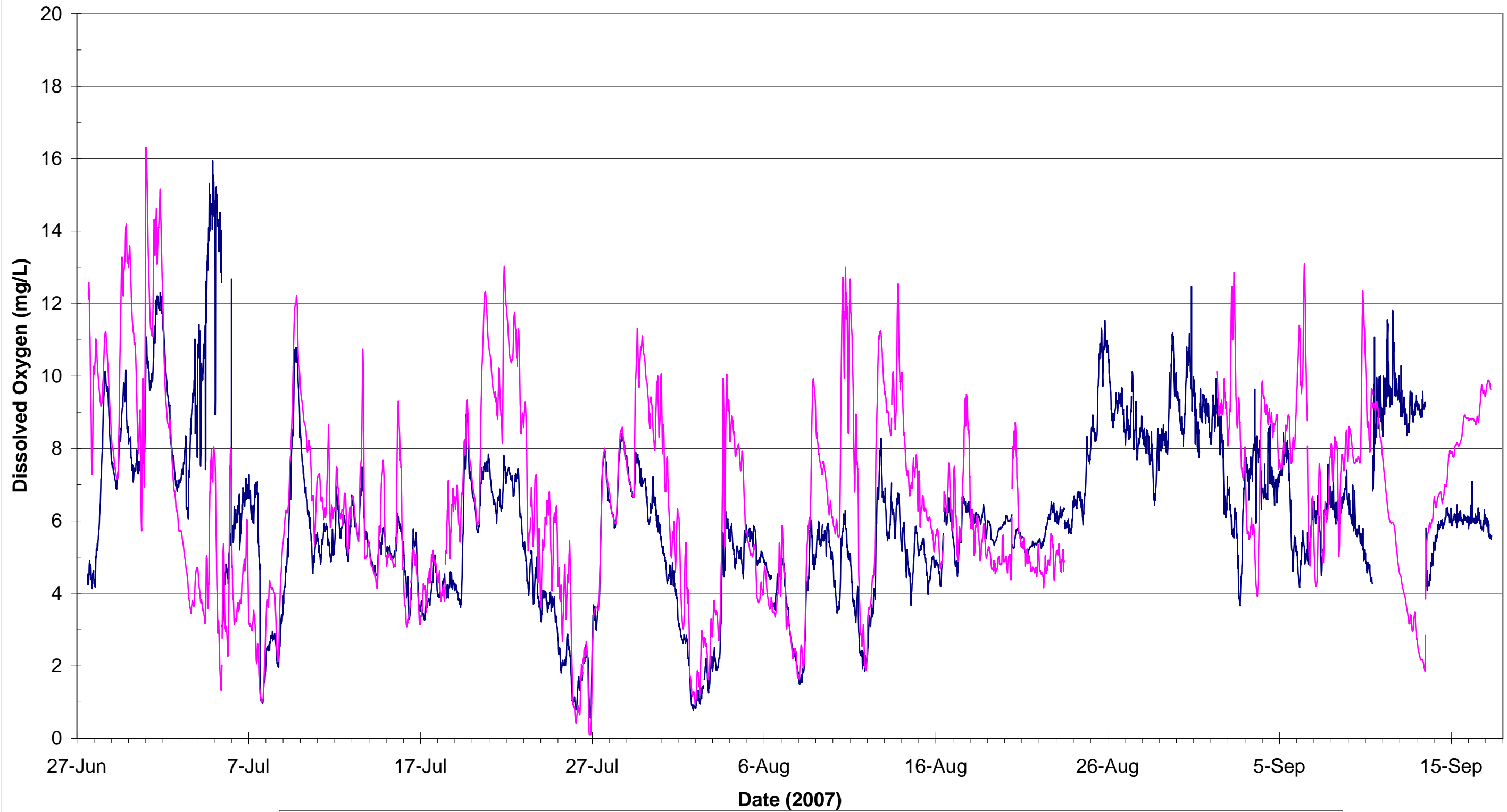
Figure 3. Comparisons of Upstream and Downstream Water Temperatures at the Prairie du Sac Facility



— Downstream Temperature (C)

— Upstream Temperature (C)

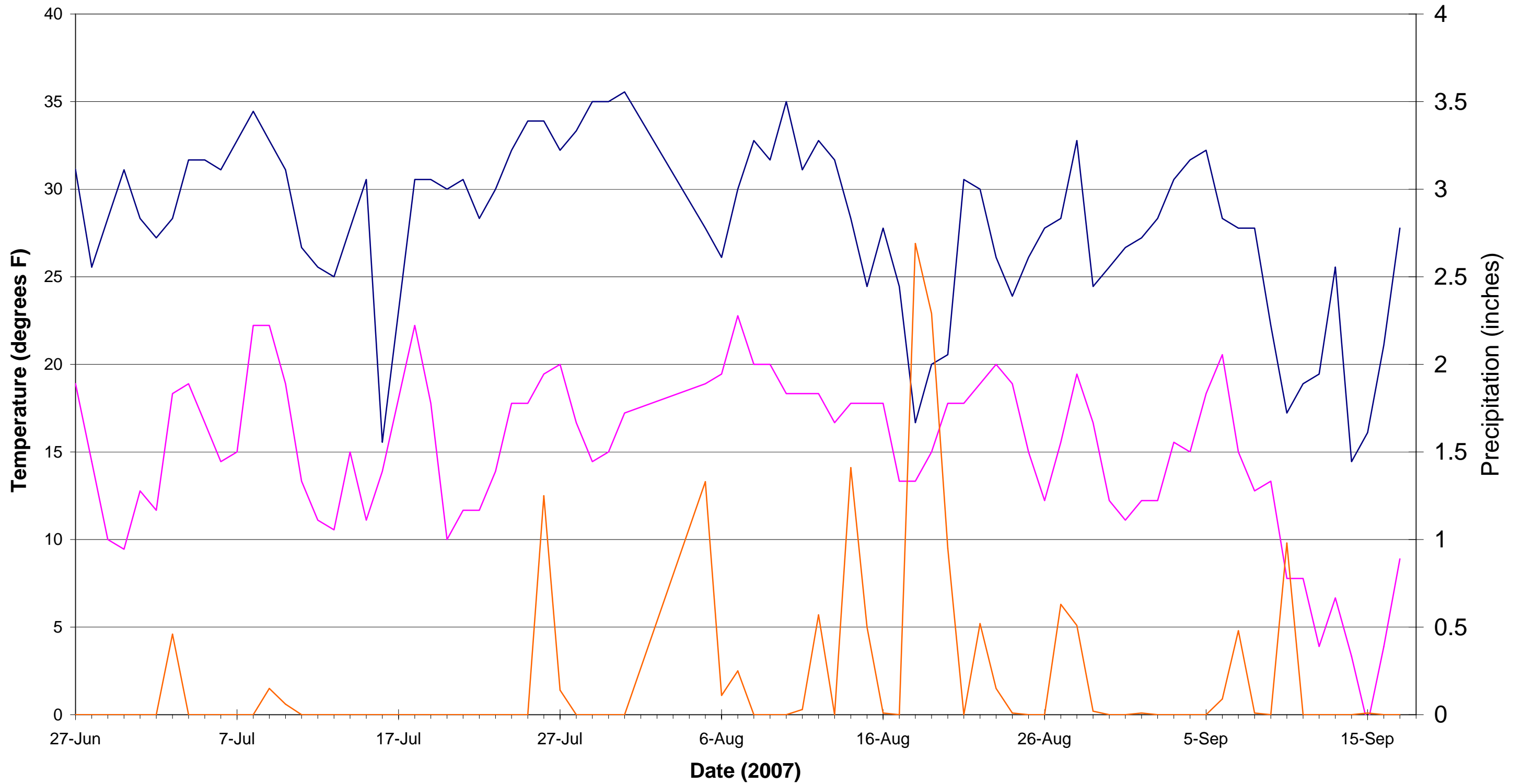
Figure 4. Comparisons of Upstream and Downstream Dissolved Oxygen Values at the Prairie du Sac Facility



— Corrected Downstream Dissolved Oxygen

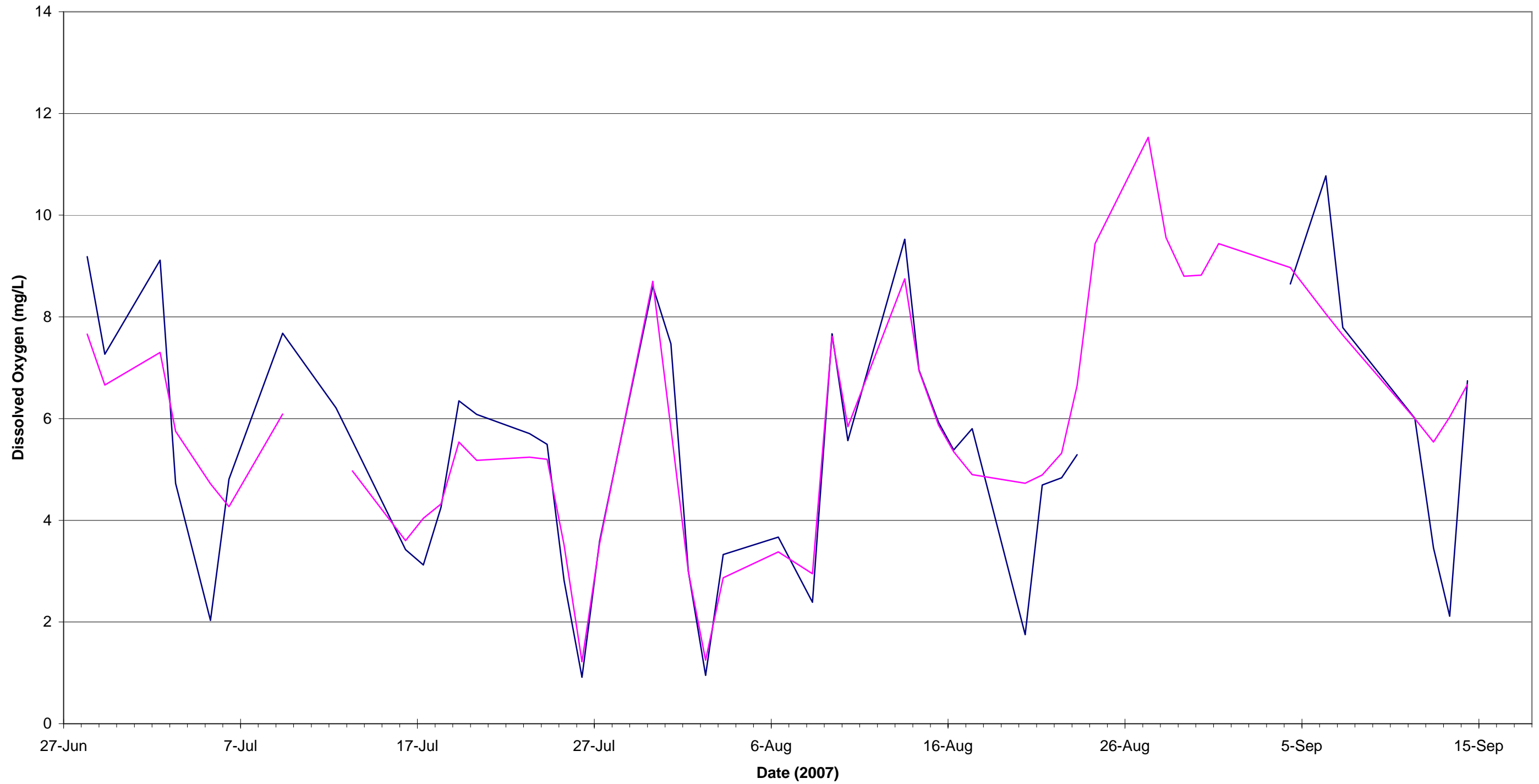
— 2-hr Rolling Average of Corrected Upstream Dissolved Oxygen

Figure 5. Daily High and Low Air Temperatures and Daily Precipitation, Prairie du Sac, Wisconsin



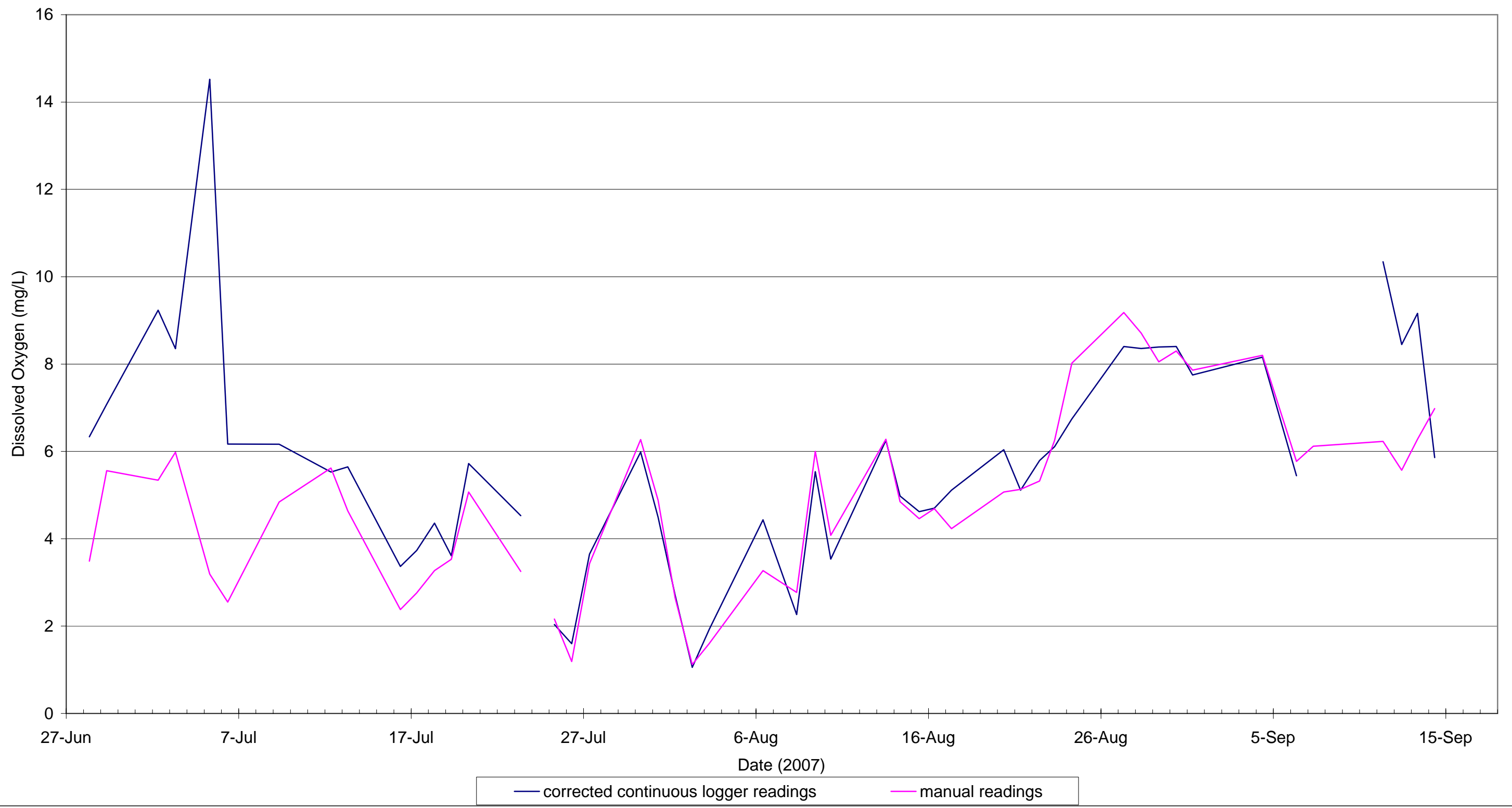
— Temperature High (Celcius) — Temperature Low (Celcius) — Precipitation

**Figure 6. Comparison of Continuous Logger and Manual Logger Dissolved Oxygen Readings
Upstream of Prairie du Sac Facility**



— corrected continuous logger readings — manual readings

**Figure 7. Comparison of Continuous Logger and Manual Logger Dissolved Oxygen Readings
Downstream of Prairie du Sac Facility**



APPENDIX A
DATA LOGGER CALIBRATION LOG

**Prairie du Sac Hydroelectric Project
2007 Calibration Log - Upstream**

Date/Time	Logger No.	Temperature			Dissolved Oxygen		
		Before	After	Difference	Before	After	Difference
		----- °C -----			----- mg/L -----		
6/27/07 14:11	119	27.44	24.84	-2.6	7.4	8.05	0.65
7/2/07 9:22	119	22.73	21.02	-1.71	8.94	8.66	-0.28
7/5/07 10:20	119	24.64	23.63	-1.01	7.1	8.23	1.13
7/9/07 10:21	119	24.56	22.97	-1.59	8.04	8.34	0.3
7/12/07 10:20	119	23.26	22.42	-0.84	8.26	8.41	0.15
7/16/07 10:14	119	22.38	21.56	-0.82	8.24	8.58	0.34
7/18/07 10:22	119	22.1	22.1	0	8.16	8.48	0.32
7/23/07 10:02	119	22.76	22.55	-0.21	8.3	8.41	0.11
7/26/07 10:40	119	22.12	22.07	-0.05	8.44	8.48	0.04
7/30/07 9:03	119	20.76	21.41	0.65	8.97	8.62	-0.35
8/2/07 11:34	119	24.52	24.16	-0.36	7.89	8.15	0.26
8/6/07 10:35	119	23.56	22.31	-1.25	7.78	8.58	0.8
8/9/07 9:52	119	24.85	23.64	-1.21	8.05	8.21	0.16
8/13/07 10:13	119	24.75	24.12	-0.63	7.64	8.14	0.5
8/16/07 10:57	119	21.96	21.56	-0.4	8.52	8.55	0.03
8/20/07 10:29	119	22.49	20.87	-1.62	7.12	8.35	1.23
8/23/07 11:30	119	21.64	21.52	-0.12	7.9	8.34	0.44
8/27/07 9:32	119	20.75	20.09	-0.66	8.33	8.76	0.43
8/31/07 8:36	171	22.79	22.24	-0.55	9.27	8.46	-0.81
9/4/07 9:59	171	20.25	20.83	0.58	8.48	8.7	0.22
9/6/07 14:47	171	22.87	22.75	-0.12	8.15	8.37	0.22
9/10/07 9:48	171	20.68	20.63	-0.05	8.53	8.74	0.21
9/13/07 11:50	171	20.55	20.51	-0.04	8.75	8.73	-0.02
9/17/07 9:02	171	17.19	17.18	-0.01	9.4	9.35	-0.05

**Prairie du Sac Hydroelectric Project
2007 Calibration Log - Downstream**

Date/Time	Logger No.	Temperature			Dissolved Oxygen		
		Before	After	Difference	Before	After	Difference
		----- °C -----			----- mg/L -----		
6/27/07 14:47	172	22.7	22.58	-0.12	8.37	8.4	0.03
7/2/07 9:57	172	23.35	22.81	-0.54	9.27	8.37	-0.9
7/5/07 10:44	172	25.93	25.09	-0.84	10.56	8.03	-2.53
7/9/07 10:50	172	24.26	20.68	-3.58	7.17	8.66	1.49
7/12/07 10:41	172	23.44	23.54	0.1	8.14	8.25	0.11
7/16/07 10:25	172	23.4	23.04	-0.36	8.06	8.33	0.27
7/18/07 10:36	172	23.28	23.21	-0.07	8.13	8.31	0.18
7/23/07 10:16	172	23.4	23.32	-0.08	8.07	8.28	0.21
7/26/07 10:53	172	23.78	23.73	-0.05	7.9	8.21	0.31
7/30/07 9:20	172	24.48	23.98	-0.5	8.42	8.19	-0.23
8/2/07 11:55	172	25.33	25.27	-0.06	7.18	7.99	0.81
8/6/07 10:52	172	24.15	23.25	-0.9	8.27	8.4	0.13
8/9/07 10:06	172	24.32	23.89	-0.43	8.46	8.19	-0.27
8/13/07 10:29	172	24.52	24.22	-0.3	8.3	8.16	-0.14
8/16/07 11:13	172	23.42	23.38	-0.04	8.35	8.27	-0.08
8/20/07 10:59	172	22.11	21.79	-0.32	8.11	8.52	0.41
8/23/07 12:13	172	22.56	22.55	-0.01	8.6	8.44	-0.16
8/27/07 9:46	172	21.02	20.42	-0.6	8.75	8.8	0.05
8/31/07 8:52	172	22	21.48	-0.52	8.08	8.6	0.52
9/4/07 10:06	172	22.96	22.79	-0.17	8.6	8.8	0.2
9/6/07 15:03	172	23.11	23.08	-0.03	7.34	8.26	0.92
9/10/07 10:04	172	21.06	20.85	-0.21	1.75	9.76	8.01
9/13/07 12:04	172	21.36	21.31	-0.05	12.19	8.62	-3.57
9/17/07 8:48	172	17.38	17.21	-0.17	6.28	9.38	3.1

APPENDIX B

FIELD SHEETS OF UPSTREAM MANUAL MEASUREMENTS

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 6-28-07

Time: 8:00

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature	
	2		63	
Surface	↓	7.62	25.3	
1		7.06	25.3	
2		7.15	25.3	
3		7.17	25.3	
4		7.65	25.4	
5		7.90	25.4	
6		7.66	25.4	
7		7.42	25.4	
8		7.38	25.4	
9		7.36	25.4	
10		7.36	25.4	
11		7.15	25.4	
12		6.71	25.3	
13				
14				
15				

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 6-29-07

Time: 8:00

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature	
	2		62°	
Surface	↓	6.06	25°C	
1		5.81	25°C	
2		5.77	25°C	
3		5.84	25°C	
4		6.14	25°C	
5		6.62	25°C	
6		6.66	25°C	
7		6.49	25°C	
8		6.51	25°C	
9		6.44	25.1°C	
10		6.42	25.0°C	
11		6.32	25°C	
12		6.42	25°C	
13				
14				
15				

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-2-07

Time: 10:55

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	7.73	26.0
1		7.40	26.1
2		7.00	25.7
3		7.40	25.4
4		7.60	25.4
5		7.67	25.4
6		7.30	25.4
7		7.40	25.4
8		7.50	25.3
9		7.51	25.3
10		7.46	25.3
11		7.15	25.3
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-3-07

Time: 0800

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	4.85	24.6
1		4.29	24.7
2		4.49	24.8
3		4.53	24.8
4		4.72	24.9
5		5.97	24.9
6		5.75	24.8
7		5.53	24.8
8		5.46	24.8
9		5.10	24.8
10		4.86	24.8
11		4.76	24.8
12			
13			
14			
15			

66° Cloudy

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-5-07

Time: 0710

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	6.70	25.2
1		6.70	25.3
2		6.67	25.4
3		6.90	25.4
4		7.71	25.4
5		7.74	25.4
6		4.72	24.9
7		4.19	24.8
8		3.98	24.8
9		3.89	24.8
10		3.81	24.8
11		3.77	24.8
12			
13			
14			
15			

• 39 Percip. 7/3-7/4
 @ low 67° Now
 60° Low
 Expected 87° Today

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-6-07

Time: 0820

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	5.70	25.0
1		5.50	25.1
2		5.91	25.1
3		6.03	25.1
4		4.92	25.0
5		5.72	24.8
6		4.27	24.8
7		3.05	24.5
8		1.32	24.2
9		.92	24.1
10		.40	24.1
11		.28	24.1
12			
13			
14			
15			

Yesterday 89° Clear
 Expected Today 88° 2770 AS

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7/9/07

Time: 0920

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface Lt Rain 82°	Unit 2	4.97	25.8
1	"	4.74	25.8
2		4.78	"
3		4.89	"
4		5.17	"
5		5.64	"
6		6.09	"
7		5.98	"
8		5.90	"
9		5.71	"
10		6.55	"
11		6.37	"
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Sunny NE wind

Date: *7/12/07*

Time: *0930*

Depth (meters)	Turbine Unit # <i>running # 2</i>	Dissolved Oxygen	Temperature
Surface		<i>60.1</i>	<i>25.6</i>
1		<i>61.3</i>	<i>25.9</i>
2		<i>63.5</i>	<i>25.9</i>
3		<i>65.3</i>	<i>25.9</i>
4		<i>64.7</i>	<i>25.9</i>
5		<i>59.5</i>	<i>25.8</i>
6		<i>61.7</i>	<i>25.8</i>
7		<i>60.8</i>	<i>25.7</i>
8		<i>56.8</i>	<i>25.8</i>
9		<i>55.1</i>	<i>25.8</i>
10		<i>56.9</i>	<i>25.8</i>
11		<i>46.7</i>	<i>25.7</i>
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

sunny 62° North east wind

Date: *7/13/07*

Time: *7:45*

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	<i>2</i>	<i>5.07</i>	<i>25.5</i>
1		<i>4.70</i>	<i>25.6</i>
2		<i>4.83</i>	<i>25.6</i>
3		<i>5.03</i>	<i>25.6</i>
4		<i>5.00</i>	<i>25.7</i>
5		<i>4.96</i>	<i>25.6</i>
6		<i>4.97</i>	<i>25.6</i>
7		<i>4.97</i>	<i>25.6</i>
8		<i>4.89</i>	<i>25.6</i>
9		<i>4.71</i>	<i>25.6</i>
10		<i>4.12</i>	<i>25.6</i>
11		<i>4.53</i>	<i>25.6</i>
12			
13			
14			
15			

cloudy - 64°

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7/16/07

Time: 0800

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	3.91	24.7
1		3.77	24.8
2		3.90	24.9
3		3.92	24.9
4		3.84	24.9
5		3.63	24.9
6		3.60	24.9
7		2.19	24.8
8		2.13	24.8
9		2.05	24.8
10		2.60	24.8
11		2.64	24.8
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-17-07

Time: 0800

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	4.03	24.1
1		3.85	24.5
2		4.02	24.5
3		4.12	24.6
4		4.26	24.6
5		4.27	24.6
6		4.04	24.5
7		1.87	24.4
8		1.92	24.2
9		2.02	24.2
10		1.95	24.2
11		2.13	24.2
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-18-07

Time: 8:00

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	5.24	24.7
1	↓	4.97	24.7
2		5.34	24.7
3		5.45	24.7
4		5.00	24.5
5		4.65	24.4
6		4.32	24.3
7		3.94	24.3
8		3.22	24.2
9		2.10	24.0
10		2.12	24.0
11		2.10	24.0
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Lt. North Wind

Date: 7-19-07

Time: 0815

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	5.98	24.5
1		5.92	24.7
2		6.06	24.7
3		6.20	24.7
4		6.48	24.6
5		5.26	24.5
6		5.54	24.5
7		5.01	24.5
8		4.00	24.2
9		1.26	23.8
10		1.28	23.8
11		1.19	23.8
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

2 running 62° Clear 2810 cfs
 - # 647

Date: 7/20/07

Time: 0830

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
	2		
Surface		5.44	24.3
1		4.80	24.4
2		5.01	24.4
3		5.10	24.4
4		5.34	24.4
5		5.40	24.4
6		5.18	24.4
7		4.71	24.4
8		4.57	24.4
9		4.52	24.4
10		4.50	24.4
11		4.51	24.4
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-23-07 Time: 8:00

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	6.15	24.5
1		6.10	24.5
2		6.34	24.5
3		6.77	24.4
4		6.43	24.5
5		5.15	24.4
6		5.24	24.4
7		3.18	24.3
8		3.20	24.2
9		3.26	24.5
10		2.32	24.2
11		2.22	24.4
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-24-07

Time: 0805

Depth (meters)	Turbine Unit # #2	Dissolved Oxygen	Temperature
Surface		6.38	24.6
1		6.41	24.7
2		6.24	24.8
3		6.42	24.8
4		6.60	24.8
5		6.64	24.7
6		5.20	24.7
7		4.21	24.7
8		1.69	24.3
9		1.49	24.3
10		1.48	24.3
11		1.48	24.3
12			
13			
14			
15			

Yesterday High 89
 Expected Today 85

PT. cloudy
 2610 CF

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-25-07

Time: 0700

Depth (meters)	Turbine Unit # 2	Dissolved Oxygen	Temperature	
Surface	↓	3.98	24.0	
1		3.87	24.4	
2		4.16	24.5	
3		4.20	24.5	
4		3.96	24.5	
5		3.45	24.4	
6		3.52	24.4	
7		0.75	24.3	
8		0.18	24.2	
9		0.09	23.9	
10		0.09	23.9	
11		0.09	23.9	
12				
13				
14				
15				

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-26-07

Time: 7:15

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface		2.44	24.2
1		2.14	24.3
2		2.32	24.3
3		2.41	24.3
4		2.28	24.3
5		2.27	24.3
6		1.22	24.3
7		0.14	24.2
8		0.12	23.9
9		0.12	23.9
10		0.11	23.9
11		0.12	23.9
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-27-07

Time: 7:15

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	3.47	24.5
1		3.44	24.9
2		3.49	24.9
3		3.64	24.9
4		3.59	24.9
5		3.58	24.9
6		3.54	24.9
7		3.44	24.9
8		3.45	24.9
9		2.82	24.8
10		1.19	24.4
11		1.11	24.3
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-30-07

Time: 0715

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	8.16	26.3
1		7.50	26.4
2		7.80	26.4
3		8.56	26.4
4		8.99	26.4
5		8.88	26.5
6		8.70	26.5
7		7.15	26.2
8		7.44	26.3
9		6.89	26.1
10		6.10	26.0
11		6.17	26.1
12			
13			
14			
15			

89° Yesterday
 60° Now
 92° Expected today

Clear

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 7-31-07

Time: 0800

Depth (meters)	Turbine Unit # 2	Dissolved Oxygen	Temperature 70°F
Surface		7.25	26.0°C
1		6.98	26.2
2		7.20	26.2
3		7.65	26.3
4		6.06	26.2
5		5.89	26.1
6		5.81	26.1
7		5.43	26.1
8		4.32	26.0
9		3.88	25.8
10		3.87	25.8
11		3.82	25.8
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-1-07

Time: 7:00

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	4.16	25.7
1	↓	4.01	25.9
2		4.09	25.9
3		4.50	25.9
4		4.48	25.9
5		4.07	25.9
6		2.99	25.9
7		2.03	25.8
8		2.09	25.7
9		1.92	25.7
10		1.87	25.7
11		1.99	25.7
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-2-07

Time: 0700

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	2.32	25.6
1		2.13	25.7
2		2.21	25.8
3		2.17	25.8
4		1.95	25.8
5		1.69	25.8
6		1.25	25.8
7		.16	25.7
8		.14	25.6
9		.14	25.6
10		.12	25.6
11		.12	25.6
12			
13			
14			
15			

95° Yesterday High
 91° Expected Today
 67° Now

Clear
 3160 cfs

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-3-07

Time: 0645

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	3.09	25.7
1		2.90	25.8
2		3.05	25.8
3		3.06	25.9
4		2.89	25.9
5		2.95	25.9
6		2.87	25.9
7		2.80	25.9
8		2.80	25.9
9		3.10	25.9
10		3.18	25.9
11		3.07	25.9
12			
13			
14			
15			

93° Yesterday
 88° Today
 59° Now

Clear
 2820 CF

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 08-06-07

Time: 0930

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	3.10	25.2
1		2.96	25.5
2		3.19	25.6
3		3.27	25.6
4		3.41	25.6
5		3.42	25.6
6		3.38	25.6
7		3.29	25.6
8		3.38	25.6
9		3.32	25.6
10		3.38	25.6
11		3.39	25.6
12		3.40	25.6
13		3.27	25.6
14		3.30	25.6
15	✓	3.29	25.6

69°

cloudy

3150 CFS

**Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log**

Date: 08-08-07

Time: 0800

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	3.31	25.5
1		3.06	25.6
2		3.11	25.6
3		3.01	25.6
4		3.34	25.6
5		3.23	25.6
6		2.95	25.6
7		3.04	25.6
8		3.06	25.6
9		2.90	25.5
10		3.10	25.6
11		3.09	25.6
12		3.00	25.6
13		3.15	25.6
14		3.16	25.6
15		3.15	25.6

Temp 76.0
units 2,6,7 Full load

Sunney
4720 CFS

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 08-09-07

Time: 1030

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	7.45	26.3
1		7.42	26.4
2		7.60	26.4
3		8.02	26.4
4		8.41	26.4
5		7.98	26.4
6		7.62	26.4
7		7.81	26.4
8		7.77	26.4
9		7.65	26.4
10		7.67	26.4
11		7.77	26.4
12		7.71	26.4
13		7.77	26.4
14		7.75	26.4
15	✓	7.69	26.4

Temp. 76°
 Unit 2 Full
 Unit 6 50%

overcast
 CFS 2360

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 08-10-07

Time: 0800

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	5.73	25.9
1		5.69	26.0
2		5.59	26.0
3		5.85	26.0
4		5.96	26.1
5		6.09	26.0
6		5.84	26.0
7		5.44	26.0
8		4.97	26.0
9		4.89	26.0
10		4.74	26.0
11		3.85	25.9
12		3.51	25.9
13		3.43	25.9
14		3.70	25.9
15	↓	4.69	26.0

Temp 77

Sunny and calm

unit 2 full unit 6 60%

CFD 2540

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-13-07

Time: 1300 hrs

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	8.84	27.6
1		8.45	27.7
2		8.72	27.6
3		9.02	27.7
4		10.11	27.9
5		9.75	27.9
6		8.75	27.1
7		6.32	27.1
8		5.21	26.5
9		.62	25.8
10		.95	25.4
11		.12	25.5
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-14-07 Time: 0830

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	6.02	26.3
1		6.00	26.5
2		6.13	26.6
3		6.22	26.6
4		7.11	26.6
5		6.95	26.6
6		6.94	26.6
7		6.57	26.6
8		5.50	26.4
9		5.44	26.5
10		5.46	26.4
11		5.65	26.5
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-15-07

Time: 1100

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	5.41	26.0
1		5.22	26.2
2		5.41	26.3
3		5.41	26.3
4		5.82	26.3
5		5.84	26.3
6		5.87	26.3
7		5.79	26.3
8		5.70	26.3
9		5.65	26.3
10		5.72	26.3
11		5.45	26.3
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-16-07

Time: 07:30

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	5.31	25.9
1		5.00	25.9
2		4.85	26
3		5.01	26
4		5.19	26.1
5		5.09	26.1
6		5.35	26.1
7		5.54	26.1
8		5.79	26
9		5.75	26
10		3.98	25.9
11	↓	3.33	25.9
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-17-07

Time: 0815

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	4.82	25.5
1		4.48	25.7
2		4.54	25.8
3		4.83	25.8
4		4.99	25.8
5		4.95	25.8
6		4.90	25.8
7		4.90	25.8
8		4.95	25.8
9		4.90	25.8
10		2.04	25.8
11		2.67	25.7
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-20

Time: 8:30

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	4.71	23.6
1		4.61	23.6
2		4.61	23.6
3		4.87	23.6
4		4.77	23.6
5		4.72	23.6
6		4.73	23.6
7		4.72	23.6
8		4.79	23.6
9		4.76	23.6
10		4.75	23.6
11		4.74	23.6
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 9-21-07

Time: 7:45

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature	
Surface	2 ↓	4.64	22.8	
1		4.65	22.8	
2		4.58	22.8	
3		4.77	22.8	
4		4.77	22.8	
5		4.86	22.8	
6		4.89	22.8	
7		4.91	22.8	
8		4.95	22.8	
9		4.99	22.8	
10		4.98	22.7	
11		4.98	22.7	
12				
13				
14				
15				

**Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log**

Date: 8-22-07

Time: 10:00

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	4.99	22.0
1		5.14	22.0
2		5.13	22.1
3		5.36	22.0
4		5.51	22.1
5		5.38	22.0
6		5.32	21.9
7		5.23	21.9
8		5.10	21.8
9		5.11	21.8
10		5.16	21.8
11		5.09	21.8
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-23-07

Time: 7:00

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	7.02	22.5
1		7.70	22.5
2		7.21	22.5
3		7.77	22.5
4		7.87	22.4
5		7.00	22.0
6		6.65	21.7
7		6.46	21.7
8		5.36	21.2
9		5.34	21.3
10		5.55	21.3
11	↓	5.30	21.3
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-24-07

Time: 0710

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	9.13	22.6
1		8.90	22.7
2		9.35	22.7
3		9.57	22.7
4		9.54	22.7
5		10.03	22.7
6		9.44	22.6
7		8.86	22.5
8		7.86	21.8
9		6.63	21.2
10		6.33	21.0
11		6.40	21.1
12			
13			
14			
15			

Cloudy
 82° Yesterday High
 81 Expected Today

0.8 Precip
 7670 cfs

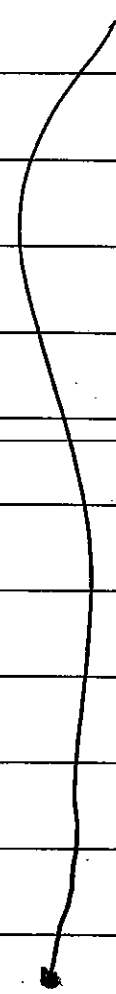
Now 63°

15.98 Precip
 in 21 Days

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-22-07

Time: 0730

Depth (meters)	Turbine Unit # #2	Dissolved Oxygen	Temperature	
Surface		10.76	22.3	
1		10.40	22.4	
2		10.68	22.4	
3		11.15	22.4	
4		11.71	22.5	
5		11.75	22.5	
6		11.53	22.3	
7		8.68	22.1	
8		7.47	21.9	
9		5.68	21.6	
10		5.36	21.6	
11		5.25	21.5	
12				
13				
14				
15				

80° Yesterday High

65° Now

Cloudy Expected Rain from Noon

9360 GS

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-28-07

Time: 07:30

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	9.04	22.3
1		9.02	22.4
2		9.13	22.4
3		9.84	22.4
4		9.83	22.4
5		9.80	22.4
6		9.96	22.4
7		9.95	22.3
8		9.33	22.3
9		8.02	22.3
10		5.44	21.9
11		5.55	21.8
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-29-07 Time: 8:00

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	8.64	23
1		8.50	23
2		8.36	23
3		8.34	23
4		8.77	23
5		8.80	23
6		8.80	23
7		8.79	23
8		8.56	22.8
9		6.46	22.8
10		7.11	22.5
11		7.37	22.7
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-30-07

Time: 0725

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	7.83	22.8
1		8.35	23.0
2		8.42	23.0
3		8.68	23.0
4		8.81	23.0
5		8.85	23.0
6		8.82	23.0
7		8.71	23.0
8		8.92	22.9
9		8.08	22.9
10		8.41	22.9
11		8.46	22.8
12			
13			
14			
15			

clear Expecto today 78°
 Yesterday 80°

~~8540 cfs~~

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 8-31-07

Time: 0705

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	8.46	22.8
1		8.71	22.9
2		8.24	22.9
3		8.77	22.9
4		9.52	22.9
5		9.57	22.9
6		9.44	22.9
7		7.74	22.8
8		7.41	22.7
9		7.37	22.7
10		7.19	22.7
11		7.20	22.7
12			
13			
14			
15			

75° Yesterday

53° Now

78° Expected today

8030 ft

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 9-4-07

Time: 0815

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	10.81	23.6
1		10.93	23.7
2		11.10	23.8
3		11.38	23.8
4		11.57	23.7
5		11.20	23.7
6		8.97	23.4
7		8.71	23.3
8		8.49	23.3
9		7.88	23.3
10		7.82	23.2
11		8.14	23.3
12			
13			
14			
15			

90° Yesterday
 88° Expected Today
 50° Low

6070 CS
 Clear

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 9-6-07

Time: 0830

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	7.72	23.6
1		7.48	23.6
2		7.56	23.6
3		7.78	23.6
4		8.31	23.6
5		7.91	23.6
6		8.06	23.6
7		4.97	23.6
8		4.08	23.1
9		2.44	22.9
10		2.41	22.8
11	✓	2.50	22.9
12			
13			
14			
15			

CFS

71°

overcast

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 090207

Time: 0730

Depth (meters)	Turbine Unit # <i>2</i>	Dissolved Oxygen	Temperature	
Surface	 	6.93	24.0	
1		6.85	24.0	
2		6.98	24.0	
3		7.10	24.0	
4		7.75	24.0	
5		7.81	24.1	
6		7.64	24.1	
7		6.55	23.9	
8		4.50	23.5	
9		4.02	23.3	
10		3.41	23.1	
11		3.46	23.3	
12				
13				
14				
15				

67°

Rance

CFS 3230

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 9/11/07

Time: 0930

Depth (meters)	Turbine Unit # # 2	Dissolved Oxygen	Temperature
Surface		5.58	22.7
1		5.62	23.0
2		5.82	23.1
3		5.95	23.1
4		5.91	23.1
5		5.92	23.1
6		6.00	23.0
7		6.11	23.0
8		6.07	23.0
9		6.11	23.0
10		6.18	23.0
11		6.20	23.0
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 9/12/07

Time: 1030

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	5.88	21.9
1		6.00	22.6
2		6.00	22.6
3		6.34	22.6
4		5.66	22.4
5		5.52	22.3
6		5.54	22.3
7		5.53	22.3
8		5.60	22.3
9		5.64	22.3
10		5.61	22.3
11		5.54	22.3
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 9/13/07

Time: 0830

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	5.86	21.6
1		5.58	21.7
2		5.81	21.9
3		5.95	21.8
4		6.12	21.8
5		6.11	21.9
6		6.03	21.9
7		6.07	21.9
8		6.07	21.8
9		5.92	21.8
10		5.88	21.8
11		5.90	21.8
12			
13			
14			
15			

Prairie du Sac Hydroelectric Project
2007 DO/Temp. Upstream Daily Profile Log

Date: 9/14/07

Time: 0830

Depth (meters)	Turbine Unit #	Dissolved Oxygen	Temperature
Surface	2	6.50	21.1
1		6.48	21.3
2		6.23	21.3
3		6.50	21.3
4		6.66	21.3
5		6.69	21.3
6		6.67	21.4
7		6.78	21.3
8		6.81	21.3
9		6.98	21.3
10		7.00	21.3
11		6.96	21.3
12			
13			
14			
15			

APPENDIX C

FIELD SHEETS OF DOWNSTREAM MANUAL MEASUREMENTS

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 6-28-07			Time: 8:15			
Depth (m)	Shore Side Unit # 1		Mid Unit # 4		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	24.6	4.78	24.8	3.99	23.2	2.57
Notes 63° sunny 3 units running						

Date: 6-29-07			Time:			
Depth (m)	Shore Side Unit # 1		Mid Unit # 4		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25° 6.29		24.8	5.56	24.7	5.31
Notes 63° sunny 3 unit running						

Date: 7-2-07			Time:			
Depth (m)	Shore Side Unit # 1		Mid Unit # 4		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.4	2.77	25.4	3.34	23.6	4.15
Notes sunny						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 7-3-07			Time: 0800					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	24.8	5.26	24.7	5.98	24.6	4.10		
Notes: # 2 Running								

Date: 7-5-07			Time: 0740					
	Shore Side Unit #			Mid Unit # #2			Lock Side Unit #	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	24.8	4.51	24.7	3.19	24.6	3.02		
Notes: # 2 only unit ON line 1330 off								

Date: 7-6-07			Time: 0845					
	Shore Side Unit #			Mid Unit # 2			Lock Side Unit #	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	24.6	3.73	24.5	2.55	24.3	1.95		
Notes: # 2 Running								

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: <i>7/9/07</i>			Time: <i>0830</i>			
Depth (m)	Shore Side Unit # <i>1</i>		Mid Unit # <i>2</i>		Lock Side Unit # <i>8</i>	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	<i>25.6</i>	<i>4.76</i>	<i>25.6</i>	<i>4.84</i>	<i>25.2</i>	<i>3.30</i>
Notes: <i>Units 2, 6, 7 running cloudy</i>						

Date:			Time:			
Depth (m)	Shore Side Unit #		Mid Unit #		Lock Side Unit #	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth						
Notes						

Date:			Time:			
Depth (m)	Shore Side Unit #		Mid Unit #		Lock Side Unit #	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth						
Notes						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 7/12/07			Time: 0830			
Depth (m)	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.8	56.7	25.7	56.2	25.5	53.9
Notes	Sunny 68° Gen #2 + 6 running					5.62

Date: 7/13/07			Time: 7:45			
Depth (m)	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.6	5.32	25.6	4.64	25.4	4.84
Notes	Sunny 62° Gen # 2, 6 + 7 running					

Date: 7/16/07			Time: 0850			
Depth (m)	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	24.8	3.29	24.8	2.3.8	24.8	2.47
Notes	cloudy 64° units 2+6 running					

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 7-17-07			Time: 7:45			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	24.4	3.87	24.3	2.76	24.2	1.85
Notes	Gen #2 & 6 running overcast and 70°					

Date: 7-18-07			Time: 8:30			
	Shore Side Unit # 2		Mid Unit # 2		Lock Side Unit # 2	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	24.3	5.08	24.2	3.27	24.3	4.00
Notes	3 UNITS running cloudy					

Date: 7-19-07			Time: 0800			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	24.0	4.02	24.2	3.53	23.6	2.47
Notes	Gen # 2 & 6 running Sunny 70°					

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 7-20-07			Time: 0800					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
	Water		Water		Water			
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)		
Mid-depth	24.4	5.35	24.4	5.07	27.4	3.61		
Notes	Slight north wind 62° - clear Gen # 1, 6 + 7 running							

Date: 7-23-07			Time: 0830					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
	Water		Water		Water			
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)		
Mid-depth	24.4	4.79	24.2	3.25	24.1	3.18		
Notes	Sunny 3 units Running 2, 6 + 7							

Date: 7-24-07			Time: 0820					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
	Water		Water		Water			
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)		
Mid-depth	24.4	4.50	24.5	3.51	24.1	2.22		
Notes	PT Cloudy # 2 + 6 Running 2200 cfs							

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 7-25-07			Time: 07:30			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	24.1	3.80	24.3	2.16	24.1	1.63
Notes Over cast 65° 2 units running						

Date: 7-26-07			Time: 7:30			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	24.2	3.25	24.2	1.19	24.0	1.65
Notes Over cast 2 units running						

Date: 7-27-07			Time: 8:20			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	24.9	4.61	24.8	3.43	24.7	3.16
Notes Cloudy slight Rain 2 units Running						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 7-30-07			Time: 0735			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 3	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.9	5.50	26.0	6.27	25.6	4.66
Notes						

Date: 7-31-07			Time: 0740			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.7	4.42	25.8	4.88	25.3	2.42
Notes Sunny 70° Gen # 2 & 6 running						

Date: 8-1-07			Time: 7:30			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.7	3.41	25.7	2.65	25.0	2.72
Notes						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 8-2-07			Time: 0715			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit #	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.7	3.05	25.6	1.12	25.5	1.39
Notes: #2 + #6 Running Full Load 3160 cfs						

Date: 8-3-07			Time: 0700			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.7	3.47	25.6	1.60	25.3	1.70
Notes: #2 + #6 Running Full Load 2820						

Date: 08-06-07			Time: 0945			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.6	4.39	25.6	3.27	25.5	3.19
Notes: 2+6 running Full load 3160 cfs						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 08-08-07			Time: 0830					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)		
Mid-depth	25.6	3.57	25.5	3.17	25.4	2.04		
Notes 2,6,7 Full load Sunny Temp 76° 4720 CFS								

Date: 08-09-07			Time: 1030					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)		
Mid-depth	26.2	6.11	26.2	6.00	25.7	3.90		
Notes Temp 76° overcast unit 2 Full unit 5 50% 2360 CFS								

Date: 08-10-07			Time: 0800					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)		
Mid-depth	25.8	4.71	25.7	4.08	25.3	2.31		
Notes Temp 77 Sunny and calm unit 2 Full unit 6 60% 2540 CFS								

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 8-13-07			Time: 1245			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	26.5	5.76	26.6	6.28	25.6	2.57
Notes	# 2, 3 & 6 running Sunny					

Date: 8-14-07			Time: 0830			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	26.4	5.47	26.3	4.85	25.8	2.63
Notes	ft Cloudy, 70°, 1.19 inches of rain last night # 2 running					

Date: 8/15/07			Time: 7100			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	25.8	5.40	26.1	4.46	25.7	3.02
Notes	cloudy rained all morning NE wind #2 running					

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 8-16-07 Time: 08:15

Depth (m)	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	26	5.43	26.9	4.69	25.8	3.94
Notes	2-units running cloudy					

Date: 8-17-07 Time: 0800

Depth (m)	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	25.5	5.48	25.8	4.23	25.5	3.39
Notes	Gen #2 + 6 running, clear 65°					

Date: 8-20-07 Time: 850

Depth (m)	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	23.6	4.93	23.6	5.07	23.6	4.90
Notes						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 8-21-07			Time: 8:15			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	22.8	4.86	22.8	5.13	22.7	5.08
Notes: 5 UNITS ON Cloudy						

Date: 8-22-07			Time: 10:30			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	21.9	5.26	21.8	5.32	21.8	4.68
Notes: Cloudy						

Date: 8-23-07			Time: 7:30			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water		Water		Water	
Depth (m)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)	Temp. (°C)	D.O. (ppm)
Mid-depth	21.8	6.79	21.6	6.25	21.5	5.24
Notes: 6 UNITS running Rain						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 8-24-07			Time: 0730			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	21.4	6.84	21.7	8.02	21.5	7.02
Notes	✕ Not online #1 #2 + #8 on line					

Date: 8-26-07			Time: 0745			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	22.0	8.17	22.1	9.18	22.2	10.25
Notes	#1 off line ← Running →					

Date: 8-28-07			Time: 8:00			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	22.3	8.32	22.2	8.71	22.1	7.77
Notes	OVER CAST SLUICES running					

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 8-29-07			Time: 8:30					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	22.8	7.46	22.7	8.05	22.5	7.05		
Notes cloudy & rain								

Date: 8-30-07			Time: 0845					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	22.9	7.71	22.8	8.30	22.8	8.41		
Notes #2 + #8 ON LINE								

Date: 8-31-07			Time: 0725					
	Shore Side Unit # 1			Mid Unit # 2			Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	22.7	7.33	22.7	7.86	22.8	8.84		
Notes #2 + #8 ON LINE								

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 9-4-07			Time: 0845			
Depth (m)	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	23.3	7.22	23.2	8.20	23.2	6.81
Notes #1 + #3 OFF LINE #2 - #3 ON LINE						

Date: 9-6-07			Time: 0800			
Depth (m)	Shore Side Unit # 1		Mid Unit # 0800 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	23.2	5.70	23.3	5.77	23.1	4.12
Notes #2 running Pt. Cloudy 71°						

Date: 09-07-07			Time: 0730			
Depth (m)	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	23.9	7.08	23.8	6.12	23.5	4.86
Notes Rain 67° CFS 3270						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: 9/11/07			Time:			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	23°	6.57	23.0	6.23	22.8	5.77
Notes Pt Cloudy 62° # 2+7 running						

Date: 9/12/07			Time: 1030			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	22.3	5.76	22.3	5.57	22.3	5.56
Notes Clear 60° # 1, 2, 5, 6+7 running						

Date: 9/13/07			Time: 0830			
	Shore Side Unit # 1		Mid Unit # 2		Lock Side Unit # 8	
Depth (m)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	21.9	6.40	21.9	6.28	21.7	5.44
Notes Clear 50° Gen 1, 2, 6+7 running						

Prairie du Sac Hydroelectric Project
2007 Downstream Daily Dissolved Oxygen / Water Temperature Monitoring

Date: <i>9/14/07</i>			Time: <i>0830</i>			
Depth (m)	Shore Side Unit # <i>1</i>		Mid Unit # <i>2</i>		Lock Side Unit # <i>8</i>	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth	<i>21.4</i>	<i>7.12</i>	<i>21.3</i>	<i>6.98</i>	<i>21.3</i>	<i>6.40</i>
Notes	<i>47° Clear units 1, 2, + 8 running</i>					

Date:			Time:			
Depth (m)	Shore Side Unit #		Mid Unit #		Lock Side Unit #	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth						
Notes						

Date:			Time:			
Depth (m)	Shore Side Unit #		Mid Unit #		Lock Side Unit #	
	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)	Water Temp. (°C)	D.O. (ppm)
Mid-depth						
Notes						