



Wisconsin Public Service Corporation

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www.wisconsinpublicservice.com

December 11, 2012

FERC Project No. 2595

Ms. Kimberly D. Bose, Secretary
The Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

Dear Secretary Bose:

Re: 2012 Water Quality Monitoring Report – High Falls Hydroelectric Project

Pursuant to the Water Quality Monitoring Plan for the High Falls Hydroelectric project, Wisconsin Public Service Corporation (WPSC) is pleased to submit the results of water quality monitoring conducted during the 2012 monitoring season.

As described in the monitoring plan, water quality monitoring is conducted downstream of the powerhouse annually from June 1st through September 30th. Monitoring downstream of the powerhouse is conducted where High Falls Road crosses the Peshtigo River (NE ¼ of the SW ¼, Section 1, T32N, R18E). Monitoring upstream of the project occurs every 5 years in conjunction with water quality monitoring conducted at the Caldron Falls Hydroelectric Project. Upstream monitoring was conducted in 2011 and is scheduled to occur again in 2016.

Monitoring data for dissolved oxygen (DO), temperature, and pH was collected at one-hour intervals on a continuous basis. Data was collected using portable water quality monitoring equipment manufactured by Hydrolab, Inc. As described in the Water Quality Monitoring Plan for the project, the instrumentation was cleaned and calibrated according to manufacturer specification every 7-10 days during the monitoring period. A post deployment calibration was conducted to determine the extent of calibration drift. Raw data was adjusted assuming a linear degradation of calibration based upon a post calibration of the equipment. The water quality monitoring equipment used to monitor dissolved oxygen has an accuracy of +/- 0.1 mg/l, per the manufacturer. For compliance purposes, dissolved oxygen concentrations more than 0.1 mg/l below the applicable water quality standard, are potential deviations.

Ms. Kimberly D. Bose, Secretary

December 11, 2012

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Per the Project License, WPSC is required to ensure flow releases from the project, as measured immediately downstream from the dam, maintain the following standards, except when natural conditions prohibit attainment of the standards: (1) DO concentrations shall not be less than 5.0 milligrams per liter (mg/L) (minus the precision of the monitoring instrument) for more than 24 hours per year; (2) water temperature shall not exceed 89 degrees Fahrenheit; and (3) the pH shall be within the range of 6.0 to 9.0, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum. Natural conditions include inflows to the project less than the 95 percent exceedance flow.

No deviations from the dissolved oxygen, pH or temperature water quality standards were observed during the 2012 monitoring season. There were 5 hours of missing monitoring data due to the maintenance and calibration of the monitoring equipment, 4 hours of missing data due to an equipment malfunction, and 4 hours of missing DO data due to a sensor failure on the monitoring equipment. Water quality monitoring data is enclosed in Attachment A.

A summary of the 2012 monitoring data was provided to the Wisconsin Department of Natural Resources (WDNR) and U.S. Fish & Wildlife (FWS) for review and comment on October 4, 2012. Documentation of agency consultation is included in Attachment B. Should you have any questions or concerns, please do not hesitate to call Mr. Mark Metcalf at (920) 433-1833.

Sincerely,



Terry P. Jensky

Vice President - Generation Assets

Wisconsin Public Service Corporation

Enc: 2012 Water Quality Monitoring Data and Agency Correspondence

| | | |
|-----|------------------------------|--------------------------------|
| cc: | Mr. Gil Snyder, WPSC - D2 | Mr. Bill Bosacki, WPSC - D2 |
| | Mr. Shawn Puzen, IBS - D2 | Mr. Nick Utrup - FWS |
| | Ms. Joan Johaneck, WPSC - D2 | Ms. Cheryl Laatsch - WDNR |
| | Mr. Dave Giesler, IBS - D2 | Mr. Bill Bloczynski, WPSC MERH |
| | Mr. John Myers, IBS - D2 | Mr. Ed Brandt, WPSC - CRI |
| | Mr. John Zygaj, FERC - CRO | |

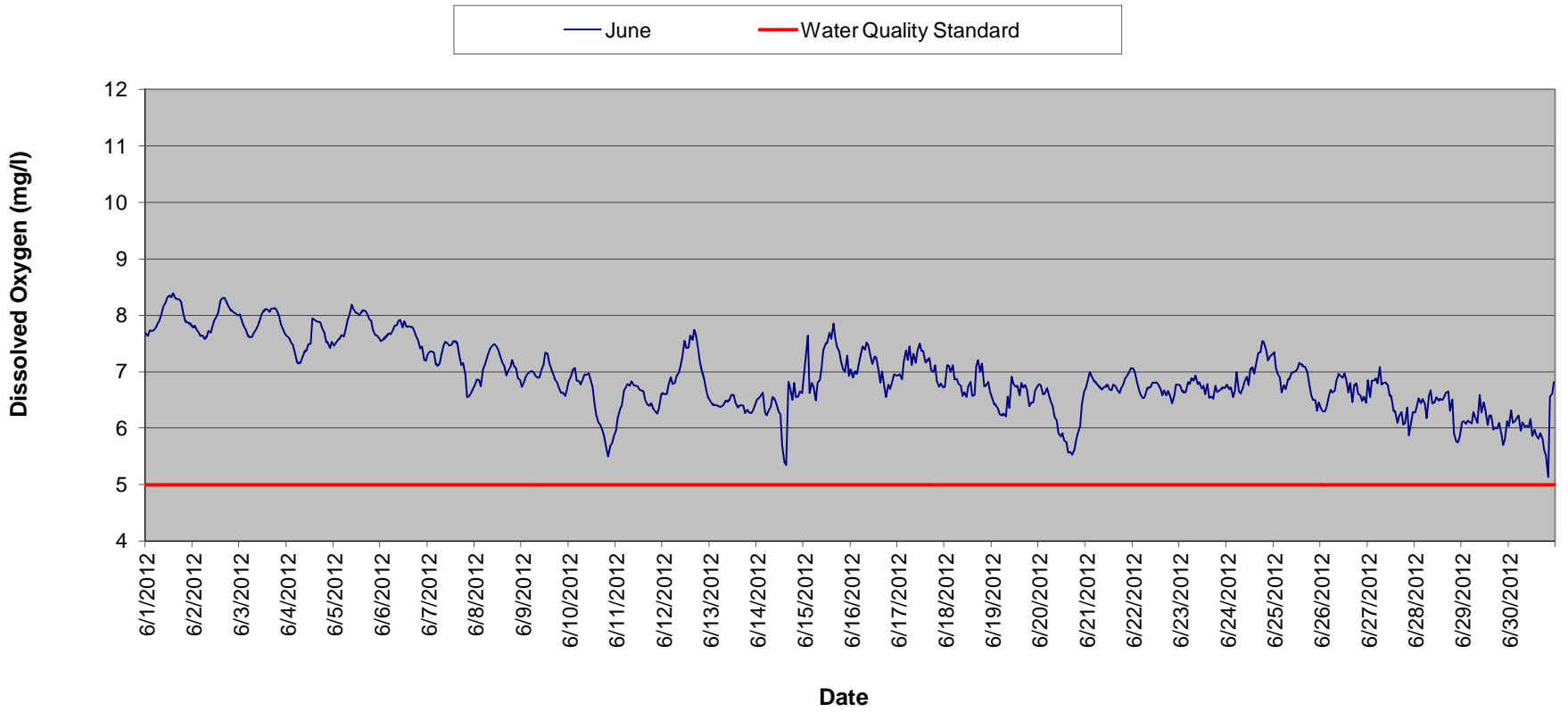
Attachment A

High Falls Hydroelectric Project

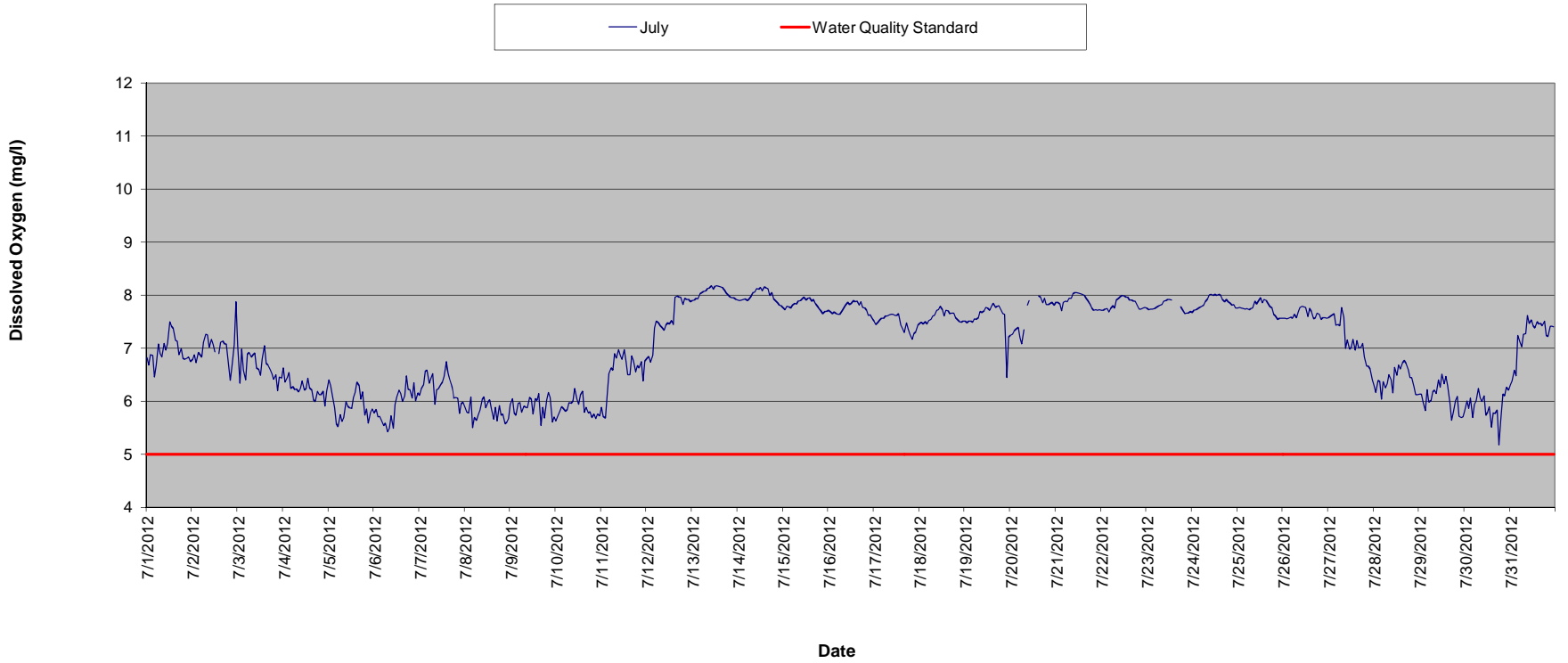
FERC No. 2595

2012 Water Quality Monitoring Data

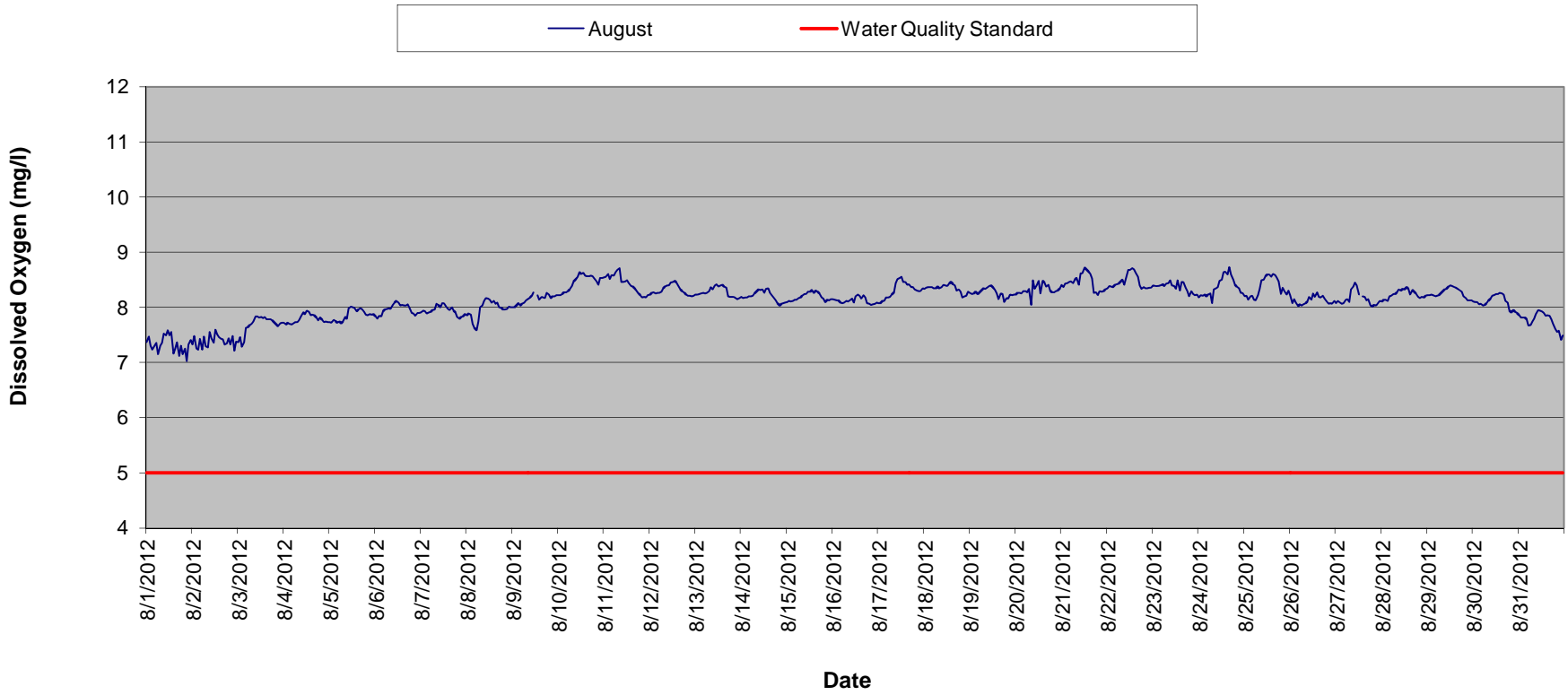
High Falls Tailrace Dissolved Oxygen - June 2012



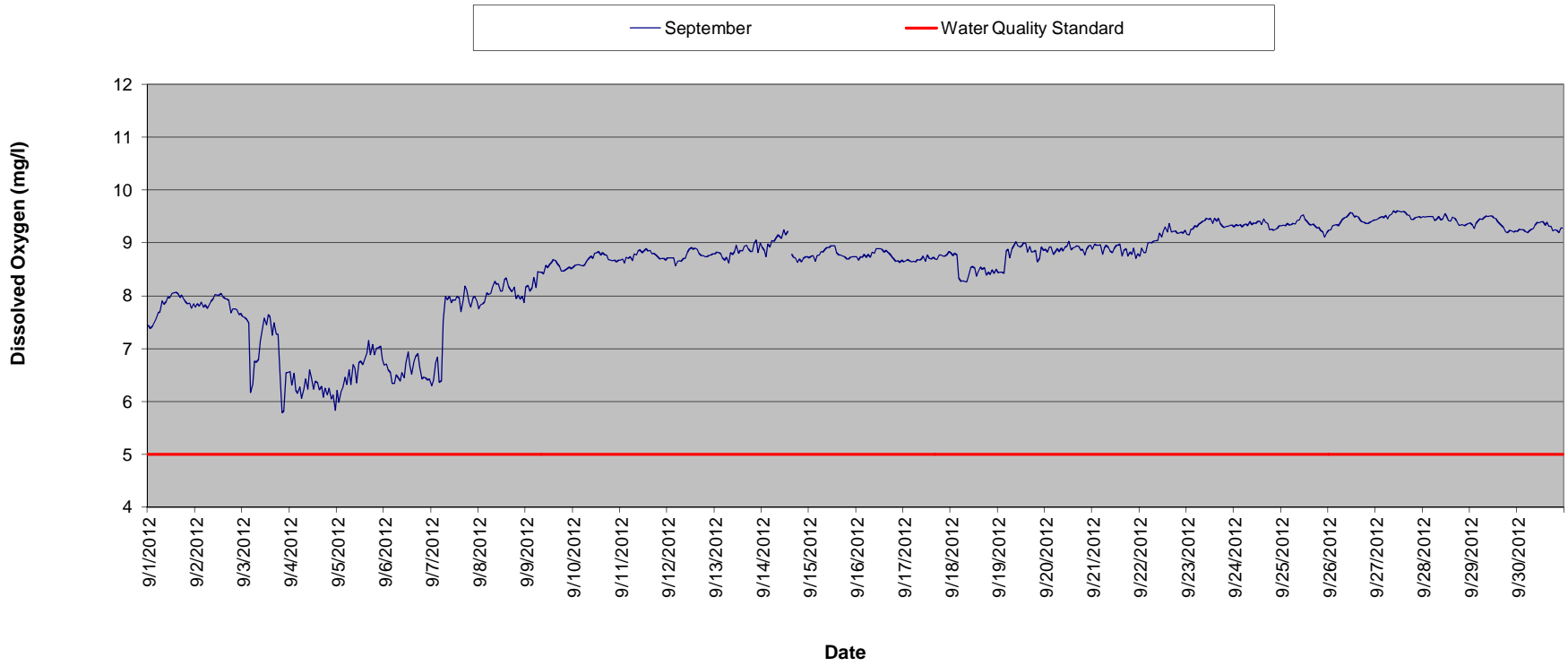
High Falls Tailrace Dissolved Oxygen - July 2012



High Falls Tailrace Dissolved Oxygen - August 2012



High Falls Tailrace Dissolved Oxygen - September 2012



High Falls Tailrace Dissolved Oxygen Summary - June 2012

| Time HHMMSS | 06/01/12 | 06/02/12 | 06/03/12 | 06/04/12 | 06/05/12 | 06/06/12 | 06/07/12 | 06/08/12 | 06/09/12 | 06/10/12 | 06/11/12 | 06/12/12 | 06/13/12 | 06/14/12 | 06/15/12 | 06/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 7.7 | 7.8 | 8.0 | 7.6 | 7.5 | 7.5 | 7.3 | 6.8 | 6.7 | 6.8 | 6.0 | 6.6 | 6.5 | 6.5 | 6.9 | 7.1 |
| 10000 | 7.6 | 7.8 | 7.9 | 7.6 | 7.5 | 7.6 | 7.4 | 6.9 | 6.8 | 6.9 | 6.2 | 6.6 | 6.4 | 6.5 | 7.3 | 6.9 |
| 20000 | 7.7 | 7.7 | 7.8 | 7.5 | 7.6 | 7.6 | 7.4 | 6.9 | 6.9 | 7.0 | 6.3 | 6.6 | 6.4 | 6.6 | 7.6 | 7.0 |
| 30000 | 7.7 | 7.7 | 7.8 | 7.5 | 7.6 | 7.6 | 7.3 | 6.7 | 7.0 | 7.1 | 6.4 | 6.8 | 6.4 | 6.6 | 6.6 | 7.0 |
| 40000 | 7.7 | 7.6 | 7.6 | 7.3 | 7.7 | 7.7 | 7.1 | 7.0 | 7.0 | 6.8 | 6.7 | 6.9 | 6.4 | 6.3 | 6.8 | 7.1 |
| 50000 | 7.8 | 7.6 | 7.6 | 7.2 | 7.6 | 7.7 | 7.1 | 7.1 | 7.0 | 6.8 | 6.7 | 6.8 | 6.4 | 6.2 | 6.7 | 7.3 |
| 60000 | 7.9 | 7.6 | 7.6 | 7.1 | 7.7 | 7.7 | 7.1 | 7.2 | 7.0 | 6.8 | 6.8 | 6.8 | 6.4 | 6.3 | 6.5 | 7.5 |
| 70000 | 7.9 | 7.6 | 7.7 | 7.2 | 7.9 | 7.8 | 7.3 | 7.4 | 6.9 | 6.9 | 6.8 | 6.9 | 6.4 | 6.4 | 6.8 | 7.4 |
| 80000 | 8.0 | 7.7 | 7.7 | 7.3 | 8.0 | 7.8 | 7.5 | 7.4 | 6.9 | 7.0 | 6.8 | 7.0 | 6.5 | 6.6 | 6.9 | 7.5 |
| 90000 | 8.2 | 7.7 | 7.8 | 7.4 | 8.2 | 7.9 | 7.5 | 7.5 | 6.9 | 6.9 | 6.8 | 7.1 | 6.5 | 6.5 | 7.1 | 7.5 |
| 100000 | 8.2 | 7.8 | 7.9 | 7.4 | 8.1 | 7.9 | 7.5 | 7.5 | 7.0 | 7.0 | 6.8 | 7.3 | 6.5 | 6.4 | 7.4 | 7.3 |
| 110000 | 8.3 | 7.9 | 8.0 | 7.5 | 8.0 | 7.8 | 7.5 | 7.4 | 7.1 | 6.9 | 6.7 | 7.6 | 6.6 | 6.3 | 7.5 | 7.1 |
| 120000 | 8.4 | 8.0 | 8.1 | 7.5 | 8.0 | 7.9 | 7.5 | 7.4 | 7.3 | 6.7 | 6.7 | 7.4 | 6.6 | 6.3 | 7.5 | 7.3 |
| 130000 | 8.3 | 8.0 | 8.1 | 7.9 | 8.0 | 7.8 | 7.5 | 7.3 | 7.3 | 6.5 | 6.7 | 7.4 | 6.5 | 5.7 | 7.7 | 7.2 |
| 140000 | 8.4 | 8.3 | 8.1 | 7.9 | 8.1 | 7.8 | 7.5 | 7.2 | 7.2 | 6.2 | 6.7 | 7.6 | 6.4 | 5.4 | 7.6 | 7.0 |
| 150000 | 8.3 | 8.3 | 8.1 | 7.9 | 8.1 | 7.8 | 7.5 | 7.1 | 7.0 | 6.1 | 6.5 | 7.6 | 6.4 | 5.4 | 7.9 | 6.8 |
| 160000 | 8.3 | 8.3 | 8.1 | 7.9 | 8.1 | 7.8 | 7.3 | 6.9 | 7.0 | 6.1 | 6.4 | 7.7 | 6.4 | 6.8 | 7.6 | 7.0 |
| 170000 | 8.3 | 8.3 | 8.1 | 7.9 | 8.0 | 7.7 | 7.1 | 7.0 | 6.9 | 6.0 | 6.4 | 7.7 | 6.4 | 6.7 | 7.4 | 6.7 |
| 180000 | 8.2 | 8.2 | 8.1 | 7.8 | 7.9 | 7.6 | 7.2 | 7.1 | 6.8 | 5.9 | 6.4 | 7.4 | 6.3 | 6.5 | 7.4 | 6.6 |
| 190000 | 8.0 | 8.1 | 8.1 | 7.7 | 7.9 | 7.6 | 7.0 | 7.2 | 6.7 | 5.6 | 6.3 | 7.2 | 6.3 | 6.8 | 7.2 | 6.8 |
| 200000 | 7.9 | 8.1 | 8.0 | 7.5 | 7.7 | 7.4 | 6.6 | 7.1 | 6.6 | 5.5 | 6.3 | 7.0 | 6.3 | 6.6 | 7.0 | 6.7 |
| 210000 | 7.9 | 8.0 | 7.8 | 7.5 | 7.7 | 7.4 | 6.6 | 7.1 | 6.6 | 5.7 | 6.3 | 6.9 | 6.3 | 6.6 | 7.0 | 6.8 |
| 220000 | 7.9 | 8.0 | 7.7 | 7.4 | 7.6 | 7.2 | 6.6 | 6.9 | 6.6 | 5.7 | 6.3 | 6.7 | 6.3 | 6.7 | 7.3 | 7.0 |
| 230000 | 7.8 | 8.0 | 7.7 | 7.5 | 7.6 | 7.2 | 6.7 | 6.9 | 6.7 | 5.8 | 6.6 | 6.6 | 6.4 | 6.6 | 6.9 | 6.9 |
| Daily Max | 8.4 | 8.3 | 8.1 | 7.9 | 8.2 | 7.9 | 7.5 | 7.5 | 7.3 | 7.1 | 6.8 | 7.7 | 6.6 | 6.8 | 7.9 | 7.5 |
| Daily Min | 7.6 | 7.6 | 7.6 | 7.1 | 7.5 | 7.2 | 6.6 | 6.7 | 6.6 | 5.5 | 6.0 | 6.6 | 6.3 | 5.4 | 6.5 | 6.6 |
| Average | 8.0 | 7.9 | 7.9 | 7.5 | 7.8 | 7.7 | 7.2 | 7.1 | 6.9 | 6.4 | 6.5 | 7.1 | 6.4 | 6.4 | 7.2 | 7.1 |

License Minimum DO: 5.0 mg/l

High Falls Tailrace Dissolved Oxygen Summary - June 2012

| Time HHMMSS | 06/17/12 | 06/18/12 | 06/19/12 | 06/20/12 | 06/21/12 | 06/22/12 | 06/23/12 | 06/24/12 | 06/25/12 | 06/26/12 | 06/27/12 | 06/28/12 | 06/29/12 | 06/30/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 6.9 | 6.7 | 6.5 | 6.8 | 6.7 | 7.1 | 6.8 | 6.8 | 7.4 | 6.4 | 6.9 | 6.3 | 6.1 | 6.0 |
| 10000 | 7.0 | 7.1 | 6.4 | 6.8 | 6.9 | 7.0 | 6.7 | 6.7 | 7.1 | 6.3 | 6.6 | 6.4 | 6.1 | 6.3 |
| 20000 | 6.9 | 7.1 | 6.4 | 6.6 | 7.0 | 6.8 | 6.6 | 6.7 | 7.0 | 6.3 | 6.8 | 6.5 | 6.1 | 6.1 |
| 30000 | 7.2 | 7.0 | 6.4 | 6.6 | 6.9 | 6.7 | 6.6 | 6.6 | 6.9 | 6.4 | 6.8 | 6.4 | 6.1 | 6.1 |
| 40000 | 7.4 | 7.1 | 6.3 | 6.7 | 6.8 | 6.6 | 6.8 | 6.7 | 6.6 | 6.6 | 6.9 | 6.5 | 6.1 | 6.2 |
| 50000 | 7.2 | 6.9 | 6.2 | 6.6 | 6.8 | 6.5 | 6.8 | 7.0 | 6.8 | 6.7 | 6.8 | 6.4 | 6.1 | 6.2 |
| 60000 | 7.5 | 6.9 | 6.3 | 6.5 | 6.8 | 6.6 | 6.9 | 6.7 | 6.7 | 6.6 | 7.1 | 6.2 | 6.3 | 6.0 |
| 70000 | 7.1 | 6.8 | 6.2 | 6.4 | 6.7 | 6.7 | 6.8 | 6.6 | 6.9 | 6.7 | 6.8 | 6.6 | 6.2 | 6.1 |
| 80000 | 7.3 | 6.8 | 6.6 | 6.2 | 6.7 | 6.7 | 6.9 | 6.7 | 6.9 | 6.8 | 6.8 | 6.7 | 6.1 | 6.0 |
| 90000 | 7.2 | 6.6 | 6.4 | 6.1 | 6.7 | 6.7 | 6.8 | 6.8 | 7.0 | 7.0 | 6.8 | 6.4 | 6.6 | 6.0 |
| 100000 | 7.4 | 6.6 | 6.9 | 5.9 | 6.7 | 6.8 | 6.8 | 6.9 | 7.0 | 6.9 | 6.8 | 6.5 | 6.3 | 6.0 |
| 110000 | 7.5 | 6.6 | 6.8 | 5.9 | 6.8 | 6.8 | 6.7 | 6.8 | 7.0 | 6.9 | 6.6 | 6.6 | 6.5 | 6.2 |
| 120000 | 7.4 | 6.7 | 6.7 | 5.9 | 6.7 | 6.8 | 6.8 | 7.0 | 7.1 | 7.0 | 6.6 | 6.5 | 6.3 | 5.9 |
| 130000 | 7.4 | 6.8 | 6.8 | 5.8 | 6.7 | 6.8 | 6.6 | 7.1 | 7.2 | 6.9 | 6.3 | 6.5 | 6.1 | 6.0 |
| 140000 | 7.2 | 6.6 | 6.6 | 5.8 | 6.8 | 6.7 | 6.8 | 7.0 | 7.1 | 6.6 | 6.3 | 6.5 | 6.2 | 5.9 |
| 150000 | 7.2 | 6.6 | 6.8 | 5.6 | 6.7 | 6.6 | 6.5 | 7.2 | 7.1 | 6.8 | 6.1 | 6.6 | 6.2 | 5.8 |
| 160000 | 7.2 | 7.1 | 6.7 | 5.6 | 6.7 | 6.7 | 6.6 | 7.3 | 7.1 | 6.5 | 6.2 | 6.6 | 6.0 | 5.9 |
| 170000 | 7.0 | 7.2 | 6.8 | 5.5 | 6.6 | 6.6 | 6.5 | 7.4 | 7.0 | 6.8 | 6.3 | 6.7 | 6.0 | 5.8 |
| 180000 | 7.0 | 7.0 | 6.7 | 5.6 | 6.7 | 6.7 | 6.8 | 7.5 | 6.8 | 6.8 | 6.1 | 6.3 | 6.0 | 5.6 |
| 190000 | 7.1 | 7.2 | 6.4 | 5.8 | 6.8 | 6.6 | 6.6 | 7.5 | 6.6 | 6.6 | 6.1 | 6.5 | 6.1 | 5.5 |
| 200000 | 6.8 | 6.7 | 6.5 | 5.9 | 6.9 | 6.4 | 6.7 | 7.4 | 6.5 | 6.6 | 6.4 | 5.9 | 5.9 | 5.1 |
| 210000 | 6.7 | 6.8 | 6.5 | 6.0 | 6.9 | 6.6 | 6.7 | 7.2 | 6.5 | 6.5 | 5.9 | 5.8 | 5.7 | 6.6 |
| 220000 | 6.8 | 6.8 | 6.7 | 6.4 | 7.0 | 6.8 | 6.7 | 7.3 | 6.3 | 6.6 | 6.1 | 5.8 | 5.8 | 6.6 |
| 230000 | 6.7 | 6.7 | 6.7 | 6.7 | 7.1 | 6.8 | 6.7 | 7.3 | 6.5 | 6.5 | 6.3 | 5.9 | 6.1 | 6.8 |
| Daily Max | 7.5 | 7.2 | 6.9 | 6.8 | 7.1 | 7.1 | 6.9 | 7.5 | 7.4 | 7.0 | 7.1 | 6.7 | 6.6 | 6.8 |
| Daily Min | 6.7 | 6.6 | 6.2 | 5.5 | 6.6 | 6.4 | 6.5 | 6.6 | 6.3 | 6.3 | 5.9 | 5.8 | 5.7 | 5.1 |
| Average | 7.1 | 6.8 | 6.5 | 6.1 | 6.8 | 6.7 | 6.7 | 7.0 | 6.9 | 6.6 | 6.5 | 6.4 | 6.1 | 6.0 |

High Falls Tailrace Dissolved Oxygen Summary - July 2012



| Time HHMMSS | 07/01/12 | 07/02/12 | 07/03/12 | 07/04/12 | 07/05/12 | 07/06/12 | 07/07/12 | 07/08/12 | 07/09/12 | 07/10/12 | 07/11/12 | 07/12/12 | 07/13/12 | 07/14/12 | 07/15/12 | 07/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 6.8 | 6.8 | 7.0 | 6.6 | 6.4 | 5.8 | 6.1 | 5.9 | 5.9 | 5.6 | 5.9 | 6.8 | 7.9 | 7.9 | 7.8 | 7.7 |
| 10000 | 6.7 | 6.9 | 6.3 | 6.4 | 6.3 | 5.8 | 6.2 | 5.8 | 6.0 | 5.7 | 5.7 | 6.8 | 7.9 | 7.9 | 7.7 | 7.7 |
| 20000 | 6.9 | 6.7 | 7.0 | 6.4 | 6.1 | 5.7 | 6.3 | 5.8 | 5.8 | 5.8 | 5.7 | 6.7 | 7.9 | 7.9 | 7.8 | 7.7 |
| 30000 | 6.9 | 6.9 | 6.6 | 6.5 | 5.9 | 5.7 | 6.6 | 6.1 | 5.7 | 5.9 | 6.1 | 6.9 | 7.9 | 7.9 | 7.8 | 7.7 |
| 40000 | 6.5 | 6.9 | 6.4 | 6.2 | 5.6 | 5.6 | 6.6 | 5.5 | 6.0 | 5.9 | 6.5 | 7.4 | 8.0 | 7.9 | 7.8 | 7.6 |
| 50000 | 6.7 | 6.8 | 6.9 | 6.3 | 5.5 | 5.5 | 6.3 | 5.7 | 6.0 | 5.8 | 6.6 | 7.5 | 8.0 | 7.9 | 7.8 | 7.6 |
| 60000 | 7.1 | 7.1 | 6.9 | 6.2 | 5.7 | 5.6 | 6.4 | 5.6 | 5.8 | 5.8 | 6.6 | 7.5 | 8.1 | 7.9 | 7.8 | 7.6 |
| 70000 | 6.9 | 7.3 | 6.8 | 6.2 | 5.6 | 5.4 | 6.5 | 5.7 | 5.9 | 6.0 | 6.9 | 7.4 | 8.1 | 8.0 | 7.8 | 7.7 |
| 80000 | 6.8 | 7.3 | 6.9 | 6.2 | 5.7 | 5.5 | 5.9 | 5.8 | 5.9 | 6.0 | 6.8 | 7.4 | 8.1 | 8.1 | 7.9 | 7.8 |
| 90000 | 7.1 | 7.0 | 6.9 | 6.2 | 6.0 | 5.7 | 6.2 | 6.0 | 5.9 | 6.0 | 7.0 | 7.3 | 8.1 | 8.1 | 7.9 | 7.8 |
| 100000 | 7.0 | 7.2 | 6.6 | 6.4 | 5.9 | 5.5 | 6.2 | 6.1 | 6.1 | 6.2 | 6.9 | 7.4 | 8.2 | 8.1 | 7.9 | 7.9 |
| 110000 | 7.1 | 7.1 | 6.6 | 6.2 | 5.9 | 5.9 | 6.3 | 5.9 | 6.0 | 6.0 | 6.8 | 7.5 | 8.1 | 8.1 | 8.0 | 7.8 |
| 120000 | 7.5 | 6.9 | 6.5 | 6.2 | 5.9 | 6.1 | 6.4 | 6.0 | 5.8 | 5.9 | 7.0 | 7.5 | 8.2 | 8.1 | 7.9 | 7.8 |
| 130000 | 7.4 | | 6.8 | 6.4 | 6.1 | 6.2 | 6.5 | 6.0 | 6.0 | 6.1 | 6.8 | 7.5 | 8.2 | 8.1 | 7.9 | 7.9 |
| 140000 | 7.4 | 6.9 | 7.0 | 6.2 | 6.2 | 6.1 | 6.7 | 5.9 | 6.0 | 6.2 | 6.5 | 7.4 | 8.2 | 8.2 | 7.9 | 7.9 |
| 150000 | 7.1 | 7.1 | 6.7 | 6.2 | 6.4 | 6.0 | 6.5 | 5.7 | 6.1 | 5.8 | 6.5 | 8.0 | 8.2 | 8.1 | 7.9 | 7.9 |
| 160000 | 7.1 | 7.1 | 6.7 | 6.0 | 6.3 | 6.1 | 6.4 | 5.9 | 5.5 | 5.9 | 6.9 | 8.0 | 8.1 | 8.1 | 7.9 | 7.8 |
| 170000 | 6.9 | 7.1 | 6.6 | 6.0 | 6.0 | 6.5 | 6.3 | 5.6 | 5.9 | 5.8 | 6.8 | 8.0 | 8.1 | 8.0 | 7.8 | 7.9 |
| 180000 | 7.0 | 7.1 | 6.5 | 6.2 | 6.2 | 6.2 | 6.1 | 5.9 | 5.7 | 5.8 | 6.6 | 8.0 | 8.0 | 8.0 | 7.8 | 7.8 |
| 190000 | 6.8 | 6.7 | 6.4 | 6.1 | 5.7 | 6.2 | 6.1 | 5.7 | 6.0 | 5.7 | 6.7 | 7.8 | 8.0 | 7.9 | 7.7 | 7.8 |
| 200000 | 6.8 | 6.4 | 6.5 | 6.1 | 5.8 | 6.1 | 6.1 | 5.8 | 6.2 | 5.8 | 6.6 | 7.9 | 8.0 | 7.9 | 7.7 | 7.7 |
| 210000 | 6.8 | 6.7 | 6.2 | 6.2 | 5.6 | 6.4 | 5.8 | 5.6 | 6.1 | 5.7 | 6.7 | 7.9 | 7.9 | 7.8 | 7.7 | 7.6 |
| 220000 | 6.8 | 7.1 | 6.5 | 5.9 | 5.8 | 6.0 | 5.9 | 5.6 | 5.6 | 5.8 | 6.4 | 7.9 | 8.0 | 7.8 | 7.7 | 7.6 |
| 230000 | 6.7 | 7.9 | 6.4 | 6.2 | 5.9 | 6.1 | 6.0 | 5.7 | 5.7 | 5.7 | 6.8 | 7.9 | 7.9 | 7.8 | 7.7 | 7.6 |
| Daily Max | 7.5 | 7.9 | 7.0 | 6.6 | 6.4 | 6.5 | 6.7 | 6.1 | 6.2 | 6.2 | 7.0 | 8.0 | 8.2 | 8.2 | 8.0 | 7.9 |
| Daily Min | 6.5 | 6.4 | 6.2 | 5.9 | 5.5 | 5.4 | 5.8 | 5.5 | 5.5 | 5.6 | 5.7 | 6.7 | 7.9 | 7.8 | 7.7 | 7.6 |
| Average | 6.9 | 7.0 | 6.7 | 6.2 | 5.9 | 5.9 | 6.3 | 5.8 | 5.9 | 5.9 | 6.6 | 7.5 | 8.0 | 8.0 | 7.8 | 7.7 |

Missing data due to equipment maintenance.

License Minimum Dissolved Oxygen: 5.0 mg/l

High Falls Tailrace Dissolved Oxygen Summary - July 2012

| Time HHMMSS | 07/17/12 | 07/18/12 | 07/19/12 | 07/20/12 | 07/21/12 | 07/22/12 | 07/23/12 | 07/24/12 | 07/25/12 | 07/26/12 | 07/27/12 | 07/28/12 | 07/29/12 | 07/30/12 | 07/31/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 7.5 | 7.5 | 7.5 | 7.2 | 7.9 | 7.7 | 7.8 | 7.7 | 7.8 | 7.6 | 7.6 | 6.3 | 6.1 | 5.8 | 6.3 |
| 10000 | 7.4 | 7.5 | 7.5 | 7.3 | 7.9 | 7.7 | 7.7 | 7.7 | 7.8 | 7.6 | 7.6 | 6.2 | 6.1 | 6.0 | 6.4 |
| 20000 | 7.5 | 7.5 | 7.5 | 7.3 | 7.8 | 7.7 | 7.7 | 7.7 | 7.8 | 7.6 | 7.6 | 6.4 | 6.0 | 5.9 | 6.6 |
| 30000 | 7.5 | 7.5 | 7.5 | 7.4 | 7.7 | 7.8 | 7.7 | 7.7 | 7.8 | 7.6 | 7.6 | 6.4 | 5.8 | 6.1 | 6.5 |
| 40000 | 7.6 | 7.5 | 7.5 | 7.4 | 7.9 | 7.7 | 7.8 | 7.8 | 7.7 | 7.6 | 7.4 | 6.0 | 6.2 | 5.7 | 7.2 |
| 50000 | 7.6 | 7.5 | 7.6 | 7.2 | 7.9 | 7.8 | 7.8 | 7.8 | 7.7 | 7.6 | 7.4 | 6.4 | 6.0 | 5.9 | 7.1 |
| 60000 | 7.6 | 7.5 | 7.5 | 7.1 | 7.9 | 7.8 | 7.8 | 7.8 | 7.7 | 7.6 | 7.4 | 6.3 | 6.0 | 6.0 | 7.0 |
| 70000 | 7.6 | 7.6 | 7.6 | 7.4 | 7.9 | 7.8 | 7.8 | 7.9 | 7.7 | 7.6 | 7.8 | 6.3 | 6.2 | 6.2 | 7.3 |
| 80000 | 7.6 | 7.6 | 7.7 | | 7.9 | 7.9 | 7.8 | 7.9 | 7.8 | 7.7 | 7.6 | 6.5 | 6.2 | 6.1 | 7.3 |
| 90000 | 7.6 | 7.7 | 7.7 | 7.8 | 8.0 | 7.9 | 7.9 | 8.0 | 7.9 | 7.8 | 7.0 | 6.4 | 6.1 | 6.0 | 7.6 |
| 100000 | 7.6 | 7.7 | 7.7 | 7.9 | 8.1 | 8.0 | 7.9 | 8.0 | 7.8 | 7.8 | 7.2 | 6.1 | 6.4 | 6.1 | 7.5 |
| 110000 | 7.6 | 7.8 | 7.8 | | 8.1 | 8.0 | 7.9 | 8.0 | 7.9 | 7.8 | 7.0 | 6.6 | 6.3 | 5.7 | 7.5 |
| 120000 | 7.6 | 7.7 | 7.8 | | 8.0 | 8.0 | 7.9 | 8.0 | 8.0 | 7.8 | 7.0 | 6.5 | 6.5 | 5.8 | 7.4 |
| 130000 | 7.6 | 7.6 | 7.7 | | 8.0 | 8.0 | 7.9 | 8.0 | 7.9 | 7.6 | 7.2 | 6.7 | 6.3 | 5.9 | 7.4 |
| 140000 | 7.4 | 7.7 | 7.8 | | 8.0 | 8.0 | | 8.0 | 7.9 | 7.8 | 7.0 | 6.6 | 6.5 | 5.5 | 7.5 |
| 150000 | 7.4 | 7.7 | 7.8 | 8.0 | 8.0 | 7.9 | | 8.0 | 7.9 | 7.7 | 7.1 | 6.7 | 6.3 | 5.8 | 7.5 |
| 160000 | 7.3 | 7.7 | 7.8 | 8.0 | 7.9 | 7.9 | | 7.9 | 7.8 | 7.6 | 7.0 | 6.8 | 6.0 | 5.8 | 7.5 |
| 170000 | 7.5 | 7.7 | 7.8 | 7.9 | 7.9 | 7.9 | | 7.9 | 7.8 | 7.6 | 7.0 | 6.7 | 5.6 | 5.8 | 7.4 |
| 180000 | 7.4 | 7.7 | 7.8 | 7.9 | 7.8 | 7.9 | 7.8 | 7.9 | 7.8 | 7.7 | 7.1 | 6.6 | 5.8 | 5.2 | 7.5 |
| 190000 | 7.3 | 7.6 | 7.7 | 7.8 | 7.8 | 7.8 | 7.7 | 7.9 | 7.6 | 7.6 | 6.8 | 6.4 | 6.0 | 5.6 | 7.2 |
| 200000 | 7.2 | 7.5 | 7.6 | 7.8 | 7.7 | 7.7 | 7.6 | 7.8 | 7.6 | 7.5 | 6.7 | 6.4 | 6.1 | 6.1 | 7.2 |
| 210000 | 7.3 | 7.5 | 7.6 | 7.8 | 7.7 | 7.7 | 7.7 | 7.8 | 7.5 | 7.6 | 6.7 | 6.3 | 5.7 | 6.1 | 7.4 |
| 220000 | 7.3 | 7.5 | 6.4 | 7.9 | 7.7 | 7.8 | 7.7 | 7.8 | 7.6 | 7.6 | 6.6 | 6.1 | 5.7 | 6.3 | 7.4 |
| 230000 | 7.4 | 7.5 | 7.2 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.6 | 7.6 | 6.4 | 6.1 | 5.7 | 6.2 | 7.4 |
| Daily Max | 7.6 | 7.8 | 7.8 | 8.0 | 8.1 | 8.0 | 7.9 | 8.0 | 8.0 | 7.8 | 7.8 | 6.8 | 6.5 | 6.3 | 7.6 |
| Daily Min | 7.2 | 7.5 | 6.4 | 7.1 | 7.7 | 7.7 | 7.6 | 7.7 | 7.5 | 7.5 | 6.4 | 6.0 | 5.6 | 5.2 | 6.3 |
| Average | 7.5 | 7.6 | 7.6 | 7.6 | 7.9 | 7.8 | 7.8 | 7.9 | 7.8 | 7.6 | 7.2 | 6.4 | 6.1 | 5.9 | 7.2 |

 Missing data due to equipment maintenance.
 Missing data due to monitoring equipment malfunction

High Falls Tailrace Dissolved Oxygen Summary - August 2012

| Time HHMMSS | 08/01/12 | 08/02/12 | 08/03/12 | 08/04/12 | 08/05/12 | 08/06/12 | 08/07/12 | 08/08/12 | 08/09/12 | 08/10/12 | 08/11/12 | 08/12/12 | 08/13/12 | 08/14/12 | 08/15/12 | 08/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 7.4 | 7.3 | 7.4 | 7.7 | 7.7 | 7.8 | 7.9 | 7.9 | 8.0 | 8.2 | 8.5 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 |
| 10000 | 7.5 | 7.5 | 7.5 | 7.7 | 7.7 | 7.8 | 7.9 | 7.9 | 8.0 | 8.2 | 8.6 | 8.3 | 8.2 | 8.2 | 8.1 | 8.1 |
| 20000 | 7.3 | 7.3 | 7.3 | 7.7 | 7.8 | 7.8 | 7.9 | 7.9 | 8.0 | 8.2 | 8.6 | 8.3 | 8.2 | 8.2 | 8.1 | 8.1 |
| 30000 | 7.2 | 7.2 | 7.4 | 7.7 | 7.8 | 7.8 | 7.9 | 7.7 | 8.1 | 8.3 | 8.5 | 8.2 | 8.3 | 8.2 | 8.1 | 8.1 |
| 40000 | 7.3 | 7.4 | 7.6 | 7.7 | 7.7 | 7.9 | 7.9 | 7.6 | 8.0 | 8.3 | 8.6 | 8.3 | 8.3 | 8.2 | 8.1 | 8.1 |
| 50000 | 7.4 | 7.2 | 7.6 | 7.7 | 7.7 | 8.0 | 7.9 | 7.6 | 8.1 | 8.3 | 8.6 | 8.3 | 8.3 | 8.2 | 8.1 | 8.1 |
| 60000 | 7.1 | 7.5 | 7.7 | 7.7 | 7.7 | 8.0 | 7.9 | 7.7 | 8.1 | 8.3 | 8.6 | 8.3 | 8.3 | 8.2 | 8.2 | 8.1 |
| 70000 | 7.3 | 7.3 | 7.7 | 7.7 | 7.7 | 8.0 | 8.0 | 8.0 | 8.1 | 8.4 | 8.7 | 8.3 | 8.3 | 8.3 | 8.2 | 8.1 |
| 80000 | 7.4 | 7.3 | 7.7 | 7.8 | 7.8 | 8.0 | 8.1 | 8.0 | 8.1 | 8.5 | 8.7 | 8.4 | 8.4 | 8.3 | 8.2 | 8.1 |
| 90000 | 7.5 | 7.6 | 7.8 | 7.8 | 7.8 | 8.0 | 8.0 | 8.1 | 8.2 | 8.5 | 8.5 | 8.4 | 8.3 | 8.3 | 8.2 | 8.1 |
| 100000 | 7.5 | 7.4 | 7.8 | 7.9 | 8.0 | 8.1 | 8.0 | 8.2 | 8.2 | 8.6 | 8.5 | 8.4 | 8.4 | 8.3 | 8.2 | 8.2 |
| 110000 | 7.6 | 7.4 | 7.8 | 7.9 | 8.0 | 8.1 | 8.1 | 8.2 | 8.3 | 8.6 | 8.5 | 8.5 | 8.4 | 8.3 | 8.3 | 8.1 |
| 120000 | 7.5 | 7.6 | 7.8 | 7.9 | 8.0 | 8.1 | 8.1 | 8.1 | 8.3 | 8.6 | 8.5 | 8.5 | 8.4 | 8.3 | 8.3 | 8.2 |
| 130000 | 7.6 | 7.5 | 7.8 | 7.9 | 8.0 | 8.0 | 8.0 | 8.1 | 8.2 | 8.6 | 8.4 | 8.5 | 8.4 | 8.3 | 8.3 | 8.2 |
| 140000 | 7.2 | 7.5 | 7.8 | 7.9 | 7.9 | 8.0 | 8.0 | 8.1 | 8.1 | 8.6 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 |
| 150000 | 7.3 | 7.4 | 7.8 | 7.9 | 8.0 | 8.0 | 7.9 | 8.1 | 8.2 | 8.6 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 |
| 160000 | 7.4 | 7.4 | 7.8 | 7.9 | 8.0 | 8.0 | 8.0 | 8.1 | 8.2 | 8.6 | 8.4 | 8.3 | 8.4 | 8.2 | 8.3 | 8.2 |
| 170000 | 7.1 | 7.3 | 7.8 | 7.8 | 8.0 | 8.1 | 7.9 | 8.0 | 8.2 | 8.6 | 8.3 | 8.3 | 8.2 | 8.2 | 8.3 | 8.2 |
| 180000 | 7.3 | 7.4 | 7.8 | 7.8 | 7.9 | 8.0 | 7.9 | 8.0 | 8.3 | 8.6 | 8.2 | 8.3 | 8.2 | 8.1 | 8.2 | 8.1 |
| 190000 | 7.2 | 7.4 | 7.7 | 7.8 | 7.9 | 7.9 | 7.8 | 8.0 | 8.2 | 8.5 | 8.2 | 8.2 | 8.2 | 8.1 | 8.2 | 8.1 |
| 200000 | 7.3 | 7.3 | 7.7 | 7.8 | 7.9 | 7.9 | 7.8 | 8.0 | 8.2 | 8.5 | 8.2 | 8.2 | 8.2 | 8.0 | 8.1 | 8.0 |
| 210000 | 7.0 | 7.5 | 7.7 | 7.7 | 7.9 | 7.8 | 7.8 | 8.0 | 8.2 | 8.4 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 |
| 220000 | 7.3 | 7.2 | 7.7 | 7.7 | 7.9 | 7.9 | 7.8 | 8.0 | 8.2 | 8.5 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 |
| 230000 | 7.4 | 7.4 | 7.7 | 7.7 | 7.9 | 7.9 | 7.9 | 8.0 | 8.2 | 8.5 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 |
| Daily Max | 7.6 | 7.6 | 7.8 | 7.9 | 8.0 | 8.1 | 8.1 | 8.2 | 8.3 | 8.6 | 8.7 | 8.5 | 8.4 | 8.3 | 8.3 | 8.2 |
| Daily Min | 7.0 | 7.2 | 7.3 | 7.7 | 7.7 | 7.8 | 7.8 | 7.6 | 8.0 | 8.2 | 8.2 | 8.2 | 8.2 | 8.0 | 8.1 | 8.0 |
| Average | 7.3 | 7.4 | 7.7 | 7.8 | 7.9 | 8.0 | 7.9 | 8.0 | 8.1 | 8.5 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 | 8.1 |

License Minimum Dissolved Oxygen: 5.0 mg/l

Missing data due to equipment maintenance.

High Falls Tailrace Dissolved Oxygen Summary - August 2012


| Time HHMMSS | 08/17/12 | 08/18/12 | 08/19/12 | 08/20/12 | 08/21/12 | 08/22/12 | 08/23/12 | 08/24/12 | 08/25/12 | 08/26/12 | 08/27/12 | 08/28/12 | 08/29/12 | 08/30/12 | 08/31/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 8.1 | 8.3 | 8.3 | 8.2 | 8.4 | 8.4 | 8.4 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.2 | 8.1 | 7.9 |
| 10000 | 8.1 | 8.4 | 8.2 | 8.3 | 8.4 | 8.4 | 8.4 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 | 7.8 |
| 20000 | 8.1 | 8.4 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.2 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.1 | 7.8 |
| 30000 | 8.1 | 8.4 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 | 7.8 |
| 40000 | 8.2 | 8.4 | 8.2 | 8.3 | 8.5 | 8.4 | 8.4 | 8.2 | 8.2 | 8.0 | 8.1 | 8.2 | 8.2 | 8.1 | 7.8 |
| 50000 | 8.2 | 8.4 | 8.3 | 8.3 | 8.5 | 8.4 | 8.4 | 8.2 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.0 | 7.7 |
| 60000 | 8.2 | 8.4 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.3 | 8.1 | 8.0 | 8.1 | 8.2 | 8.2 | 8.0 | 7.7 |
| 70000 | 8.2 | 8.4 | 8.4 | 8.3 | 8.5 | 8.5 | 8.4 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.3 | 8.1 | 7.7 |
| 80000 | 8.3 | 8.4 | 8.3 | 8.0 | 8.5 | 8.5 | 8.4 | 8.3 | 8.3 | 8.1 | 8.2 | 8.3 | 8.3 | 8.1 | 7.8 |
| 90000 | 8.4 | 8.4 | 8.4 | 8.5 | 8.4 | 8.4 | 8.5 | 8.4 | 8.5 | 8.1 | 8.1 | 8.3 | 8.3 | 8.2 | 7.9 |
| 100000 | 8.5 | 8.4 | 8.4 | 8.3 | 8.6 | 8.6 | 8.4 | 8.4 | 8.5 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 | 8.0 |
| 110000 | 8.5 | 8.4 | 8.4 | 8.4 | 8.6 | 8.7 | 8.4 | 8.5 | 8.6 | 8.1 | 8.4 | 8.3 | 8.4 | 8.2 | 7.9 |
| 120000 | 8.6 | 8.4 | 8.4 | 8.5 | 8.7 | 8.7 | 8.3 | 8.5 | 8.6 | 8.3 | 8.5 | 8.3 | 8.4 | 8.2 | 7.9 |
| 130000 | 8.5 | 8.4 | 8.3 | 8.3 | 8.7 | 8.7 | 8.5 | 8.6 | 8.6 | 8.2 | 8.4 | 8.4 | 8.4 | 8.2 | 7.9 |
| 140000 | 8.5 | 8.5 | 8.3 | 8.5 | 8.7 | 8.7 | 8.3 | 8.7 | 8.6 | 8.3 | 8.2 | 8.3 | 8.4 | 8.3 | 7.9 |
| 150000 | 8.4 | 8.4 | 8.2 | 8.5 | 8.6 | 8.6 | 8.5 | 8.6 | 8.6 | 8.2 | 8.2 | 8.2 | 8.4 | 8.3 | 7.9 |
| 160000 | 8.4 | 8.4 | 8.3 | 8.4 | 8.5 | 8.6 | 8.5 | 8.7 | 8.6 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 | 7.9 |
| 170000 | 8.4 | 8.3 | 8.2 | 8.4 | 8.3 | 8.4 | 8.4 | 8.6 | 8.5 | 8.2 | 8.2 | 8.3 | 8.3 | 8.1 | 7.8 |
| 180000 | 8.4 | 8.3 | 8.1 | 8.3 | 8.3 | 8.3 | 8.3 | 8.5 | 8.5 | 8.2 | 8.1 | 8.3 | 8.3 | 8.1 | 7.7 |
| 190000 | 8.3 | 8.3 | 8.2 | 8.3 | 8.2 | 8.4 | 8.2 | 8.4 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 7.9 | 7.6 |
| 200000 | 8.3 | 8.2 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 | 8.4 | 8.4 | 8.1 | 8.0 | 8.2 | 8.2 | 7.9 | 7.6 |
| 210000 | 8.3 | 8.2 | 8.2 | 8.3 | 8.3 | 8.4 | 8.2 | 8.4 | 8.3 | 8.1 | 8.0 | 8.2 | 8.1 | 8.0 | 7.6 |
| 220000 | 8.3 | 8.2 | 8.2 | 8.3 | 8.3 | 8.4 | 8.2 | 8.3 | 8.2 | 8.1 | 8.1 | 8.2 | 8.1 | 7.9 | 7.4 |
| 230000 | 8.4 | 8.3 | 8.2 | 8.4 | 8.3 | 8.4 | 8.2 | 8.3 | 8.3 | 8.1 | 8.0 | 8.2 | 8.1 | 7.9 | 7.5 |
| Daily Max | 8.6 | 8.5 | 8.4 | 8.5 | 8.7 | 8.7 | 8.5 | 8.7 | 8.6 | 8.3 | 8.5 | 8.4 | 8.4 | 8.3 | 8.0 |
| Daily Min | 8.1 | 8.2 | 8.1 | 8.0 | 8.2 | 8.3 | 8.2 | 8.1 | 8.1 | 8.0 | 8.0 | 8.1 | 8.1 | 7.9 | 7.4 |
| Average | 8.3 | 8.3 | 8.3 | 8.3 | 8.5 | 8.5 | 8.4 | 8.4 | 8.4 | 8.1 | 8.2 | 8.2 | 8.3 | 8.1 | 7.8 |

Missing data due to equipment maintenance.

High Falls Tailrace Dissolved Oxygen Summary - September 2012

| Time HHMMSS | 09/01/12 | 09/02/12 | 09/03/12 | 09/04/12 | 09/05/12 | 09/06/12 | 09/07/12 | 09/08/12 | 09/09/12 | 09/10/12 | 09/11/12 | 09/12/12 | 09/13/12 | 09/14/12 | 09/15/12 | 09/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 7.4 | 7.8 | 7.6 | 6.6 | 6.2 | 6.7 | 6.3 | 7.7 | 8.2 | 8.5 | 8.7 | 8.7 | 8.8 | 8.9 | 8.7 | 8.7 |
| 10000 | 7.4 | 7.9 | 7.6 | 6.3 | 6.0 | 6.7 | 6.4 | 7.8 | 8.2 | 8.6 | 8.7 | 8.7 | 8.8 | 8.9 | 8.8 | 8.7 |
| 20000 | 7.4 | 7.8 | 7.6 | 6.5 | 6.2 | 6.6 | 6.7 | 7.9 | 8.1 | 8.6 | 8.6 | 8.7 | 8.8 | 8.7 | 8.8 | 8.7 |
| 30000 | 7.5 | 7.9 | 7.5 | 6.2 | 6.3 | 6.6 | 6.8 | 7.9 | 8.2 | 8.6 | 8.7 | 8.7 | 8.8 | 9.0 | 8.7 | 8.7 |
| 40000 | 7.6 | 7.8 | 6.2 | 6.2 | 6.5 | 6.3 | 6.4 | 8.1 | 8.3 | 8.6 | 8.7 | 8.6 | 8.7 | 8.9 | 8.8 | 8.8 |
| 50000 | 7.7 | 7.8 | 6.3 | 6.3 | 6.3 | 6.3 | 6.4 | 8.0 | 8.2 | 8.6 | 8.7 | 8.7 | 8.7 | 9.0 | 8.8 | 8.7 |
| 60000 | 7.7 | 7.8 | 6.8 | 6.1 | 6.6 | 6.5 | 7.5 | 8.0 | 8.5 | 8.6 | 8.7 | 8.7 | 8.7 | 9.0 | 8.8 | 8.8 |
| 70000 | 7.9 | 7.8 | 6.7 | 6.2 | 6.3 | 6.5 | 8.0 | 8.2 | 8.4 | 8.7 | 8.8 | 8.7 | 8.6 | 9.1 | 8.8 | 8.7 |
| 80000 | 7.8 | 7.9 | 6.8 | 6.4 | 6.7 | 6.4 | 7.9 | 8.3 | 8.5 | 8.7 | 8.8 | 8.7 | 8.8 | 9.2 | 8.9 | 8.8 |
| 90000 | 7.9 | 8.0 | 7.1 | 6.2 | 6.6 | 6.6 | 8.0 | 8.2 | 8.4 | 8.7 | 8.8 | 8.7 | 8.8 | 9.1 | 8.9 | 8.8 |
| 100000 | 8.0 | 8.0 | 7.4 | 6.6 | 6.4 | 6.5 | 7.9 | 8.2 | 8.6 | 8.7 | 8.9 | 8.8 | 8.8 | 9.1 | 8.9 | 8.9 |
| 110000 | 8.0 | 8.0 | 7.6 | 6.5 | 6.7 | 6.7 | 7.9 | 8.1 | 8.5 | 8.8 | 8.8 | 8.9 | 9.0 | 9.2 | 8.9 | 8.9 |
| 120000 | 8.1 | 8.0 | 7.5 | 6.2 | 6.8 | 6.9 | 7.9 | 8.1 | 8.6 | 8.8 | 8.8 | 8.9 | 8.8 | 9.1 | 8.9 | 8.9 |
| 130000 | 8.1 | 8.0 | 7.6 | 6.4 | 6.7 | 6.7 | 8.0 | 8.3 | 8.6 | 8.8 | 8.9 | 8.9 | 8.9 | 9.2 | 8.9 | 8.9 |
| 140000 | 8.1 | 8.0 | 7.6 | 6.4 | 6.8 | 6.5 | 8.0 | 8.3 | 8.7 | 8.8 | 8.9 | 8.9 | 8.9 | 8.8 | 8.8 | 8.8 |
| 150000 | 8.1 | 8.0 | 7.3 | 6.2 | 6.9 | 6.8 | 7.7 | 8.2 | 8.7 | 8.8 | 8.9 | 8.9 | 8.9 | 8.8 | 8.8 | 8.9 |
| 160000 | 8.0 | 7.9 | 7.5 | 6.3 | 7.2 | 6.9 | 7.9 | 8.1 | 8.6 | 8.8 | 8.8 | 8.8 | 9.0 | 8.7 | 8.8 | 8.8 |
| 170000 | 8.0 | 7.9 | 7.3 | 6.1 | 6.9 | 6.9 | 8.2 | 8.1 | 8.6 | 8.8 | 8.8 | 8.8 | 8.9 | 8.7 | 8.8 | 8.8 |
| 180000 | 8.0 | 7.7 | 7.3 | 6.3 | 7.1 | 6.7 | 8.1 | 8.2 | 8.5 | 8.7 | 8.8 | 8.8 | 8.8 | 8.6 | 8.7 | 8.7 |
| 190000 | 7.9 | 7.8 | 6.4 | 6.1 | 6.9 | 6.4 | 7.9 | 7.9 | 8.5 | 8.7 | 8.7 | 8.7 | 8.8 | 8.7 | 8.7 | 8.7 |
| 200000 | 7.9 | 7.8 | 5.8 | 6.3 | 7.0 | 6.5 | 7.8 | 8.0 | 8.5 | 8.7 | 8.7 | 8.7 | 9.0 | 8.6 | 8.7 | 8.6 |
| 210000 | 7.9 | 7.7 | 5.8 | 6.1 | 7.0 | 6.4 | 8.0 | 7.9 | 8.5 | 8.7 | 8.7 | 8.8 | 9.1 | 8.7 | 8.7 | 8.7 |
| 220000 | 7.8 | 7.6 | 6.6 | 6.1 | 7.1 | 6.4 | 8.0 | 8.0 | 8.5 | 8.6 | 8.7 | 8.8 | 8.8 | 8.7 | 8.7 | 8.6 |
| 230000 | 7.9 | 7.7 | 6.6 | 5.8 | 6.8 | 6.4 | 7.9 | 7.9 | 8.5 | 8.7 | 8.7 | 8.8 | 9.0 | 8.7 | 8.7 | 8.7 |
| Daily Max | 8.1 | 8.0 | 7.6 | 6.6 | 7.2 | 6.9 | 8.2 | 8.3 | 8.7 | 8.8 | 8.9 | 8.9 | 9.1 | 9.2 | 8.9 | 8.9 |
| Daily Min | 7.4 | 7.6 | 5.8 | 5.8 | 6.0 | 6.3 | 6.3 | 7.7 | 8.1 | 8.5 | 8.6 | 8.6 | 8.6 | 8.6 | 8.7 | 8.6 |
| Average | 7.8 | 7.9 | 7.0 | 6.3 | 6.7 | 6.6 | 7.6 | 8.1 | 8.4 | 8.7 | 8.8 | 8.8 | 8.8 | 8.9 | 8.8 | 8.8 |

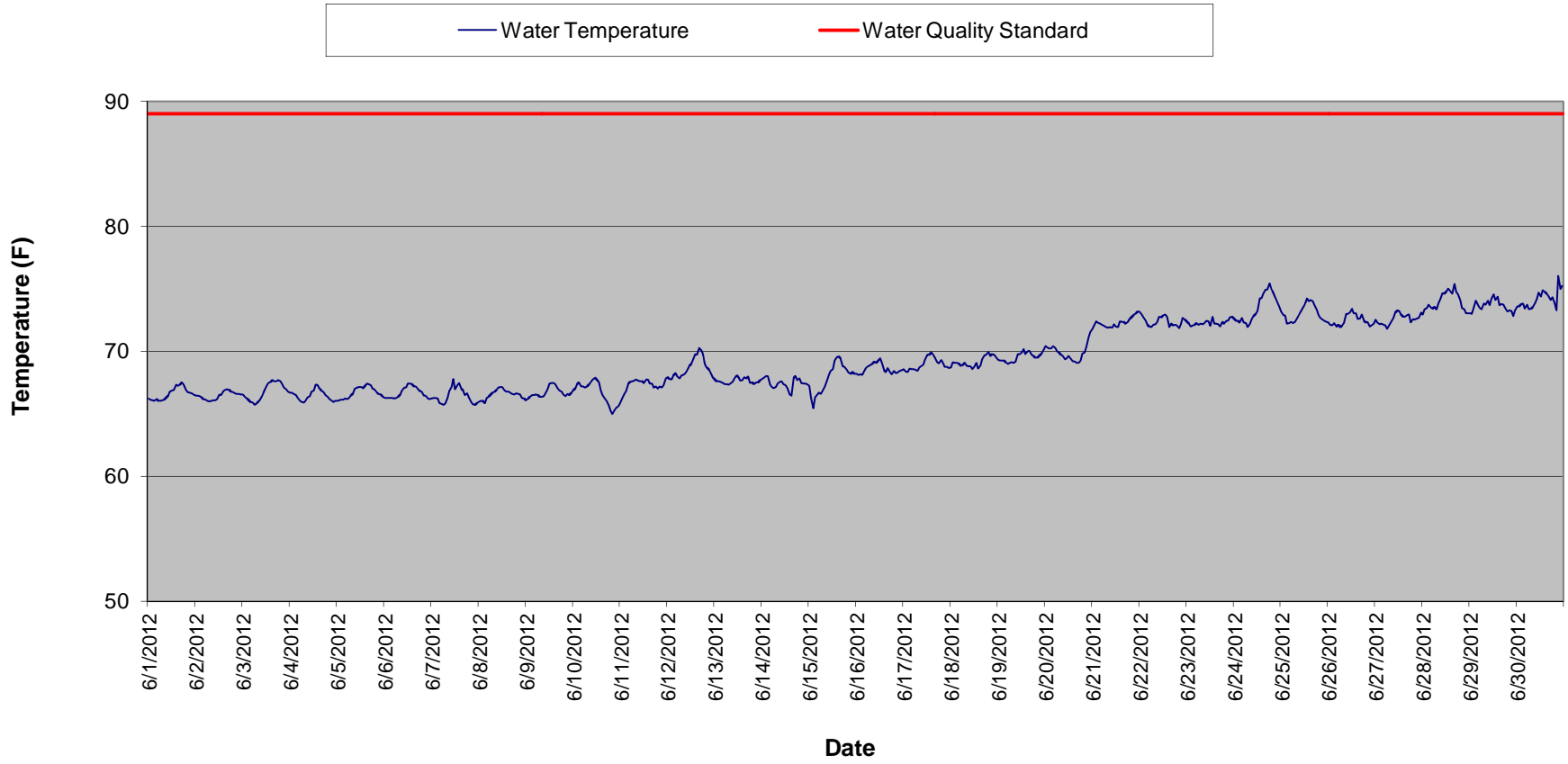
License Minimum Dissolved Oxygen: 5.0 mg/l

 Missing data due to equipment maintenance.

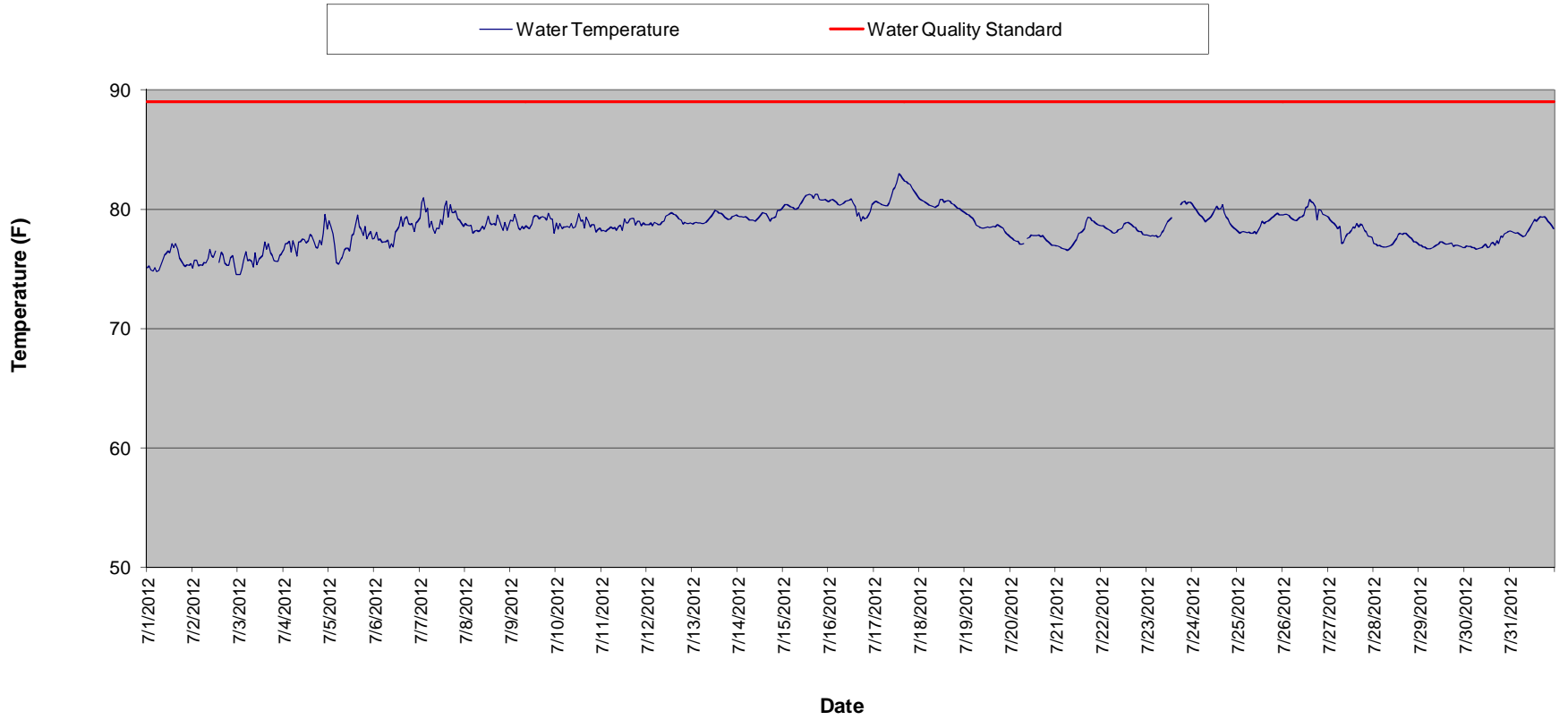
High Falls Tailrace Dissolved Oxygen Summary - September 2012

| Time HHMMSS | 09/17/12 | 09/18/12 | 09/19/12 | 09/20/12 | 09/21/12 | 09/22/12 | 09/23/12 | 09/24/12 | 09/25/12 | 09/26/12 | 09/27/12 | 09/28/12 | 09/29/12 | 09/30/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 8.6 | 8.8 | 8.4 | 8.9 | 8.9 | 8.8 | 9.2 | 9.3 | 9.3 | 9.2 | 9.4 | 9.5 | 9.4 | 9.2 |
| 10000 | 8.7 | 8.8 | 8.4 | 8.8 | 9.0 | 8.9 | 9.1 | 9.3 | 9.3 | 9.3 | 9.5 | 9.5 | 9.3 | 9.3 |
| 20000 | 8.7 | 8.8 | 8.4 | 8.9 | 9.0 | 8.8 | 9.3 | 9.3 | 9.3 | 9.3 | 9.5 | 9.5 | 9.3 | 9.3 |
| 30000 | 8.7 | 8.8 | 8.4 | 8.9 | 9.0 | 8.8 | 9.3 | 9.3 | 9.4 | 9.3 | 9.5 | 9.5 | 9.4 | 9.3 |
| 40000 | 8.6 | 8.3 | 8.8 | 8.8 | 9.0 | 9.0 | 9.3 | 9.3 | 9.3 | 9.4 | 9.5 | 9.5 | 9.4 | 9.2 |
| 50000 | 8.7 | 8.3 | 8.9 | 8.8 | 8.8 | 9.0 | 9.3 | 9.4 | 9.4 | 9.3 | 9.5 | 9.5 | 9.5 | 9.2 |
| 60000 | 8.6 | 8.3 | 8.7 | 8.9 | 8.9 | 9.0 | 9.4 | 9.4 | 9.4 | 9.4 | 9.5 | 9.4 | 9.4 | 9.2 |
| 70000 | 8.7 | 8.3 | 8.9 | 8.8 | 9.0 | 9.0 | 9.4 | 9.3 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.3 |
| 80000 | 8.7 | 8.3 | 8.9 | 8.9 | 8.9 | 9.0 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.5 | 9.3 |
| 90000 | 8.7 | 8.4 | 9.0 | 8.8 | 8.9 | 9.0 | 9.4 | 9.3 | 9.4 | 9.5 | 9.6 | 9.4 | 9.5 | 9.3 |
| 100000 | 8.7 | 8.5 | 8.9 | 8.9 | 8.8 | 9.2 | 9.5 | 9.4 | 9.5 | 9.5 | 9.6 | 9.5 | 9.5 | 9.4 |
| 110000 | 8.6 | 8.6 | 8.9 | 8.9 | 8.9 | 9.1 | 9.4 | 9.4 | 9.5 | 9.6 | 9.6 | 9.6 | 9.5 | 9.4 |
| 120000 | 8.8 | 8.5 | 8.9 | 9.0 | 9.0 | 9.2 | 9.5 | 9.4 | 9.5 | 9.6 | 9.6 | 9.5 | 9.5 | 9.4 |
| 130000 | 8.7 | 8.4 | 9.0 | 8.9 | 9.0 | 9.3 | 9.4 | 9.4 | 9.4 | 9.5 | 9.6 | 9.4 | 9.5 | 9.4 |
| 140000 | 8.7 | 8.5 | 9.0 | 8.9 | 9.0 | 9.2 | 9.5 | 9.4 | 9.4 | 9.5 | 9.6 | 9.4 | 9.4 | 9.3 |
| 150000 | 8.7 | 8.5 | 8.8 | 8.9 | 8.8 | 9.4 | 9.4 | 9.5 | 9.3 | 9.5 | 9.6 | 9.5 | 9.4 | 9.4 |
| 160000 | 8.7 | 8.5 | 8.9 | 8.9 | 8.9 | 9.2 | 9.5 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.3 | 9.3 |
| 170000 | 8.7 | 8.5 | 8.8 | 8.9 | 8.9 | 9.2 | 9.4 | 9.4 | 9.3 | 9.4 | 9.5 | 9.4 | 9.3 | 9.3 |
| 180000 | 8.8 | 8.4 | 8.8 | 8.9 | 8.8 | 9.2 | 9.3 | 9.3 | 9.3 | 9.4 | 9.5 | 9.3 | 9.2 | 9.2 |
| 190000 | 8.8 | 8.4 | 8.9 | 8.9 | 8.8 | 9.2 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.3 | 9.2 | 9.3 |
| 200000 | 8.7 | 8.4 | 8.6 | 8.8 | 8.8 | 9.2 | 9.3 | 9.2 | 9.2 | 9.4 | 9.5 | 9.4 | 9.2 | 9.2 |
| 210000 | 8.8 | 8.5 | 8.7 | 8.9 | 8.9 | 9.2 | 9.3 | 9.3 | 9.2 | 9.4 | 9.5 | 9.3 | 9.2 | 9.2 |
| 220000 | 8.8 | 8.4 | 8.9 | 8.9 | 8.7 | 9.2 | 9.3 | 9.3 | 9.1 | 9.4 | 9.5 | 9.4 | 9.2 | 9.3 |
| 230000 | 8.8 | 8.5 | 8.9 | 9.0 | 8.8 | 9.2 | 9.3 | 9.3 | 9.2 | 9.4 | 9.5 | 9.4 | 9.2 | 9.3 |
| Daily Max | 8.8 | 8.8 | 9.0 | 9.0 | 9.0 | 9.4 | 9.5 | 9.5 | 9.5 | 9.6 | 9.6 | 9.6 | 9.5 | 9.4 |
| Daily Min | 8.6 | 8.3 | 8.4 | 8.8 | 8.7 | 8.8 | 9.1 | 9.2 | 9.1 | 9.2 | 9.4 | 9.3 | 9.2 | 9.2 |
| Average | 8.7 | 8.5 | 8.8 | 8.9 | 8.9 | 9.1 | 9.3 | 9.3 | 9.3 | 9.4 | 9.5 | 9.4 | 9.4 | 9.3 |

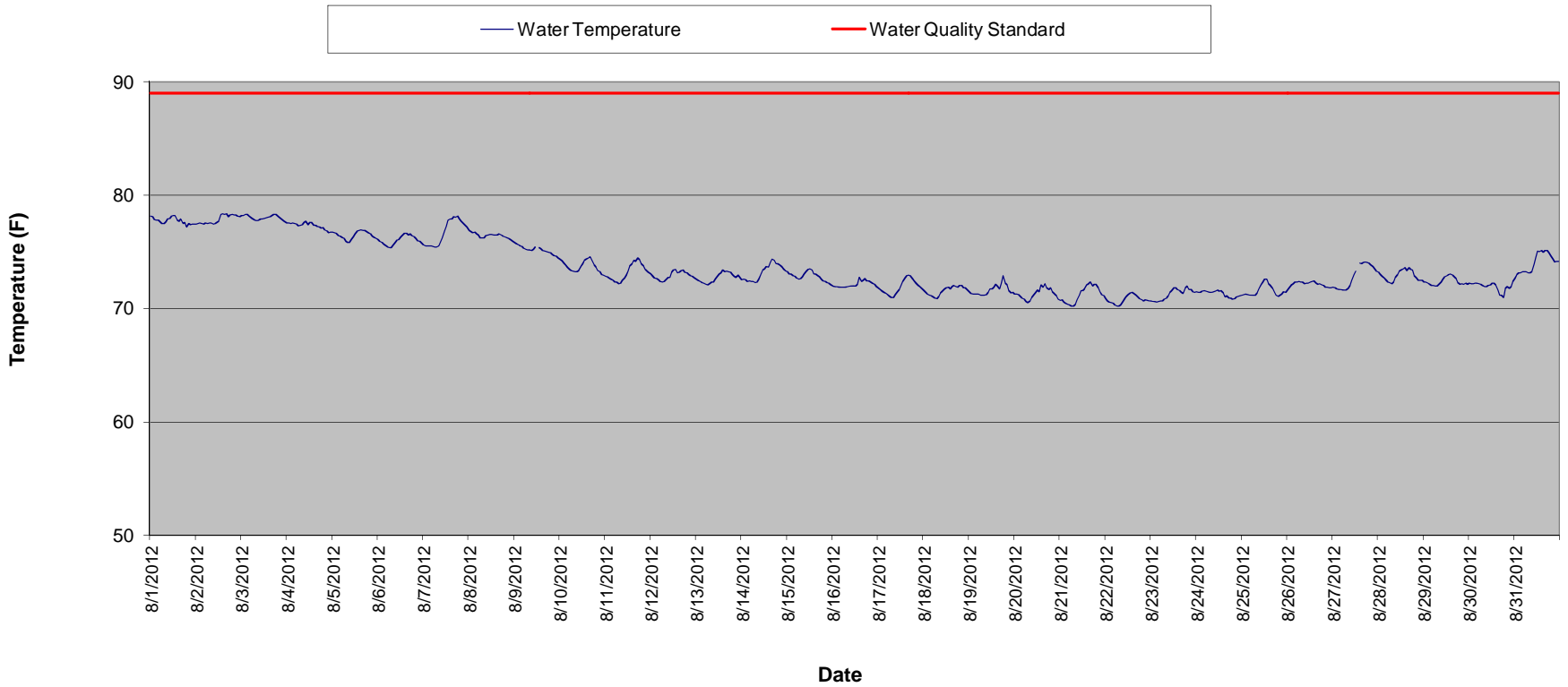
High Falls Tailrace Water Temperature - June 2012



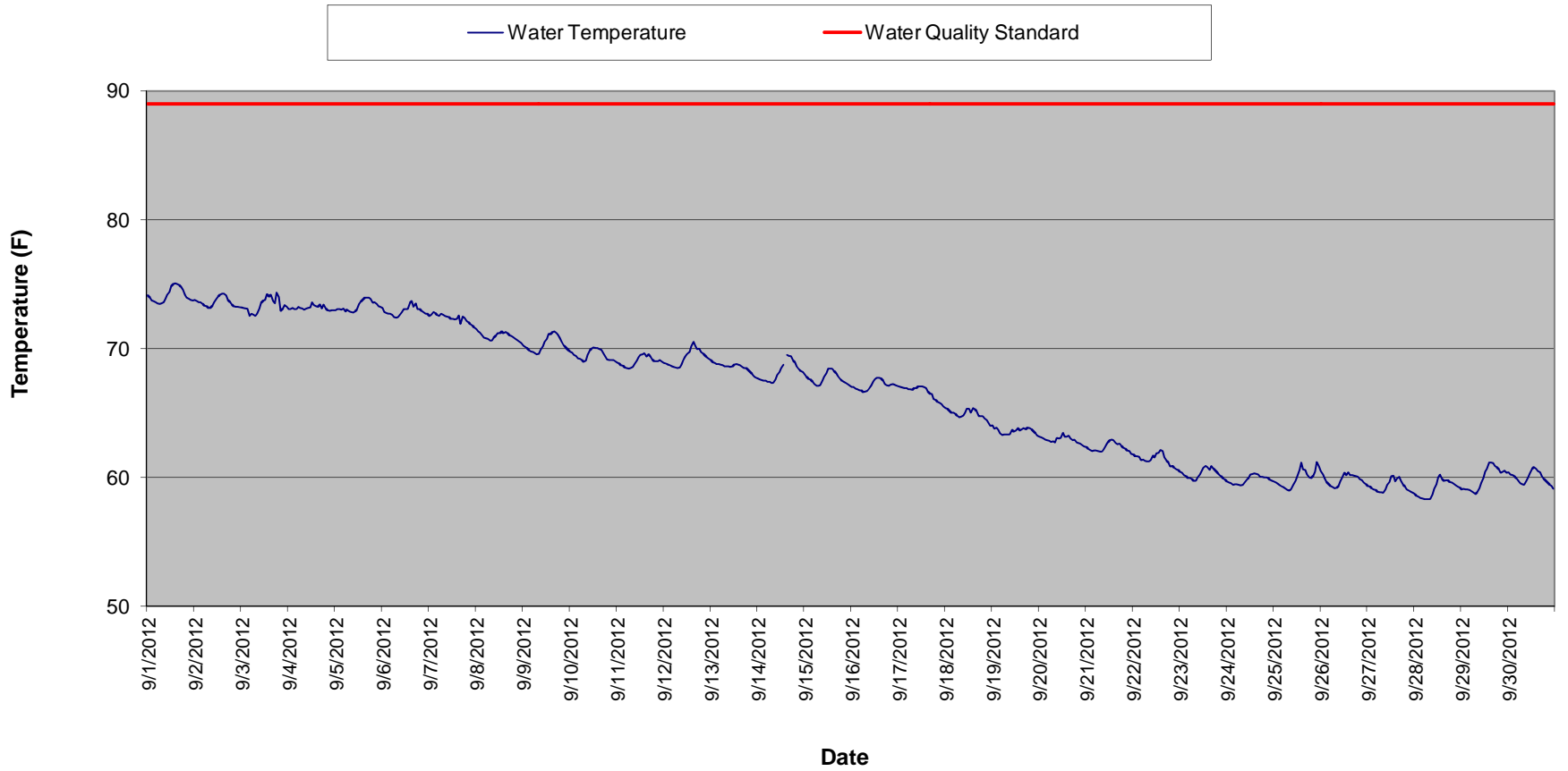
High Falls Tailrace Water Temperature - July 2012



High Falls Tailrace Water Temperature - August 2012



High Falls Tailrace Water Temperature - September 2012



High Falls Tailrace Temperature Summary - June 2012

| Time HHMMSS | 06/01/12 | 06/02/12 | 06/03/12 | 06/04/12 | 06/05/12 | 06/06/12 | 06/07/12 | 06/08/12 | 06/09/12 | 06/10/12 | 06/11/12 | 06/12/12 | 06/13/12 | 06/14/12 | 06/15/12 | 06/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 66.2 | 66.5 | 66.5 | 66.7 | 66.0 | 66.3 | 66.2 | 66.0 | 66.1 | 66.9 | 65.9 | 67.9 | 67.7 | 67.8 | 67.2 | 68.2 |
| 10000 | 66.1 | 66.5 | 66.4 | 66.7 | 66.1 | 66.3 | 66.3 | 66.0 | 66.2 | 67.1 | 66.3 | 67.8 | 67.6 | 67.9 | 66.3 | 68.1 |
| 20000 | 66.1 | 66.4 | 66.2 | 66.6 | 66.1 | 66.3 | 66.3 | 66.0 | 66.4 | 67.4 | 66.6 | 67.8 | 67.6 | 68.0 | 65.5 | 68.2 |
| 30000 | 66.0 | 66.3 | 66.1 | 66.5 | 66.1 | 66.3 | 66.2 | 65.9 | 66.5 | 67.5 | 66.8 | 68.1 | 67.6 | 68.0 | 66.3 | 68.1 |
| 40000 | 66.2 | 66.2 | 65.9 | 66.3 | 66.2 | 66.3 | 65.9 | 66.3 | 66.5 | 67.2 | 67.4 | 68.3 | 67.5 | 67.3 | 66.5 | 68.4 |
| 50000 | 66.0 | 66.1 | 65.9 | 66.0 | 66.2 | 66.2 | 65.8 | 66.4 | 66.5 | 67.2 | 67.6 | 68.0 | 67.4 | 67.1 | 66.7 | 68.7 |
| 60000 | 66.0 | 66.0 | 65.7 | 65.9 | 66.3 | 66.3 | 65.7 | 66.5 | 66.5 | 67.1 | 67.6 | 67.9 | 67.4 | 67.0 | 66.6 | 68.8 |
| 70000 | 66.1 | 66.0 | 65.8 | 65.9 | 66.4 | 66.4 | 65.8 | 66.7 | 66.4 | 67.2 | 67.6 | 68.1 | 67.3 | 67.1 | 66.9 | 68.9 |
| 80000 | 66.1 | 66.1 | 66.0 | 66.1 | 66.7 | 66.5 | 66.3 | 66.8 | 66.4 | 67.4 | 67.8 | 68.1 | 67.4 | 67.4 | 67.2 | 69.0 |
| 90000 | 66.3 | 66.1 | 66.2 | 66.3 | 67.0 | 66.8 | 66.8 | 66.9 | 66.4 | 67.6 | 67.7 | 68.2 | 67.6 | 67.6 | 67.7 | 69.2 |
| 100000 | 66.5 | 66.1 | 66.5 | 66.4 | 67.1 | 67.1 | 67.2 | 67.1 | 66.7 | 67.8 | 67.6 | 68.5 | 67.8 | 67.6 | 68.1 | 69.1 |
| 110000 | 66.8 | 66.2 | 66.9 | 66.8 | 67.2 | 67.1 | 67.8 | 67.1 | 67.0 | 67.9 | 67.6 | 68.9 | 68.1 | 67.4 | 68.4 | 69.2 |
| 120000 | 66.9 | 66.6 | 67.2 | 66.8 | 67.1 | 67.4 | 67.0 | 67.2 | 67.4 | 67.8 | 67.5 | 69.0 | 67.9 | 67.3 | 68.6 | 69.4 |
| 130000 | 66.9 | 66.5 | 67.5 | 67.4 | 67.1 | 67.4 | 67.3 | 66.8 | 67.5 | 67.5 | 67.7 | 69.3 | 67.7 | 67.1 | 69.2 | 69.1 |
| 140000 | 67.3 | 66.8 | 67.6 | 67.3 | 67.2 | 67.4 | 67.5 | 66.8 | 67.5 | 66.9 | 67.7 | 69.8 | 67.7 | 66.5 | 69.5 | 68.5 |
| 150000 | 67.2 | 66.9 | 67.7 | 67.0 | 67.4 | 67.2 | 67.0 | 66.8 | 67.4 | 66.5 | 67.4 | 69.7 | 67.9 | 66.5 | 69.6 | 68.4 |
| 160000 | 67.3 | 67.0 | 67.6 | 66.9 | 67.4 | 67.2 | 66.8 | 66.7 | 67.0 | 66.2 | 67.4 | 70.3 | 67.9 | 67.9 | 69.4 | 68.6 |
| 170000 | 67.5 | 66.9 | 67.6 | 66.7 | 67.3 | 66.9 | 66.5 | 66.6 | 66.9 | 66.0 | 67.1 | 70.1 | 68.0 | 68.0 | 68.8 | 68.4 |
| 180000 | 67.4 | 66.8 | 67.7 | 66.5 | 67.0 | 66.8 | 66.7 | 66.5 | 66.8 | 65.7 | 67.2 | 69.7 | 67.5 | 67.7 | 68.8 | 68.1 |
| 190000 | 66.9 | 66.7 | 67.6 | 66.4 | 66.9 | 66.8 | 66.3 | 66.6 | 66.5 | 65.2 | 67.0 | 69.0 | 67.5 | 67.9 | 68.5 | 68.4 |
| 200000 | 66.7 | 66.7 | 67.4 | 66.2 | 66.7 | 66.4 | 65.9 | 66.6 | 66.4 | 65.0 | 67.2 | 68.7 | 67.4 | 67.5 | 68.3 | 68.3 |
| 210000 | 66.7 | 66.6 | 67.1 | 66.1 | 66.6 | 66.5 | 65.8 | 66.5 | 66.6 | 65.3 | 67.1 | 68.5 | 67.5 | 67.4 | 68.2 | 68.3 |
| 220000 | 66.6 | 66.6 | 66.9 | 65.9 | 66.5 | 66.2 | 65.7 | 66.3 | 66.5 | 65.5 | 67.3 | 68.2 | 67.5 | 67.4 | 68.3 | 68.4 |
| 230000 | 66.5 | 66.5 | 66.8 | 66.1 | 66.4 | 66.2 | 65.8 | 66.2 | 66.7 | 65.6 | 67.9 | 67.9 | 67.7 | 67.4 | 68.2 | 68.5 |
| Daily Max | 67.5 | 67.0 | 67.7 | 67.4 | 67.4 | 67.4 | 67.8 | 67.2 | 67.5 | 67.9 | 67.9 | 70.3 | 68.1 | 68.0 | 69.6 | 69.4 |
| Daily Min | 66.0 | 66.0 | 65.7 | 65.9 | 66.0 | 66.2 | 65.7 | 65.9 | 66.1 | 65.0 | 65.9 | 67.8 | 67.3 | 66.5 | 65.5 | 68.1 |
| Average | 66.6 | 66.5 | 66.8 | 66.5 | 66.7 | 66.7 | 66.4 | 66.6 | 66.7 | 66.7 | 67.3 | 68.6 | 67.6 | 67.5 | 67.9 | 68.6 |

Monthly average Temp: 69.8
 License Maximum Temperature: 89 F

High Falls Tailrace Temperature Summary - June 2012

| Time HHMMSS | 06/17/12 | 06/18/12 | 06/19/12 | 06/20/12 | 06/21/12 | 06/22/12 | 06/23/12 | 06/24/12 | 06/25/12 | 06/26/12 | 06/27/12 | 06/28/12 | 06/29/12 | 06/30/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 68.6 | 68.7 | 69.3 | 70.4 | 71.7 | 73.2 | 72.4 | 72.6 | 73.2 | 72.3 | 72.5 | 72.9 | 73.1 | 73.6 |
| 10000 | 68.4 | 69.1 | 69.3 | 70.3 | 72.1 | 73.0 | 72.2 | 72.4 | 72.9 | 72.1 | 72.3 | 73.4 | 73.0 | 73.6 |
| 20000 | 68.3 | 69.1 | 69.3 | 70.2 | 72.4 | 72.7 | 72.0 | 72.5 | 72.9 | 72.1 | 72.2 | 73.5 | 73.6 | 73.8 |
| 30000 | 68.6 | 69.1 | 69.2 | 70.2 | 72.2 | 72.5 | 72.1 | 72.3 | 72.2 | 72.2 | 72.2 | 73.7 | 74.1 | 73.9 |
| 40000 | 68.6 | 69.0 | 69.1 | 70.4 | 72.2 | 72.1 | 72.1 | 72.7 | 72.2 | 72.0 | 72.1 | 73.5 | 73.7 | 73.4 |
| 50000 | 68.6 | 68.8 | 69.0 | 70.3 | 72.1 | 72.0 | 72.3 | 72.3 | 72.4 | 72.1 | 72.1 | 73.4 | 73.5 | 73.7 |
| 60000 | 68.5 | 68.9 | 69.1 | 70.0 | 72.0 | 72.0 | 72.1 | 72.3 | 72.3 | 71.9 | 71.8 | 73.5 | 73.4 | 73.4 |
| 70000 | 68.4 | 69.1 | 69.1 | 69.9 | 71.9 | 72.1 | 72.2 | 71.9 | 72.3 | 72.1 | 72.1 | 73.3 | 73.9 | 73.4 |
| 80000 | 68.7 | 68.8 | 69.1 | 69.7 | 71.9 | 72.2 | 72.2 | 72.2 | 72.6 | 72.3 | 72.4 | 73.8 | 73.7 | 73.5 |
| 90000 | 68.8 | 68.8 | 69.2 | 69.6 | 71.9 | 72.4 | 72.2 | 72.6 | 72.9 | 73.0 | 72.7 | 74.2 | 74.1 | 73.9 |
| 100000 | 68.9 | 68.8 | 69.8 | 69.4 | 71.9 | 72.8 | 72.4 | 72.8 | 73.2 | 73.0 | 73.1 | 74.7 | 73.7 | 74.2 |
| 110000 | 69.4 | 68.6 | 69.8 | 69.5 | 72.2 | 72.7 | 72.4 | 73.0 | 73.5 | 73.1 | 73.3 | 74.6 | 74.2 | 74.7 |
| 120000 | 69.7 | 68.8 | 69.9 | 69.7 | 72.0 | 72.9 | 72.1 | 73.2 | 73.7 | 73.4 | 73.2 | 74.8 | 74.6 | 74.4 |
| 130000 | 69.7 | 69.1 | 70.2 | 69.4 | 71.9 | 72.9 | 72.8 | 74.2 | 74.2 | 73.1 | 72.9 | 75.0 | 74.1 | 74.9 |
| 140000 | 69.9 | 68.6 | 69.8 | 69.2 | 72.4 | 72.8 | 72.2 | 74.3 | 74.0 | 73.0 | 72.8 | 74.8 | 74.4 | 74.7 |
| 150000 | 69.7 | 68.8 | 70.0 | 69.2 | 72.4 | 71.9 | 72.2 | 74.6 | 74.1 | 72.6 | 72.8 | 74.6 | 73.7 | 74.6 |
| 160000 | 69.5 | 69.4 | 70.1 | 69.1 | 72.3 | 72.2 | 72.2 | 74.9 | 74.0 | 72.6 | 72.9 | 75.4 | 73.8 | 74.4 |
| 170000 | 69.1 | 69.7 | 69.7 | 69.1 | 72.2 | 72.1 | 72.0 | 74.9 | 73.7 | 73.0 | 72.9 | 74.8 | 73.7 | 74.1 |
| 180000 | 69.0 | 69.7 | 69.6 | 69.2 | 72.4 | 72.1 | 72.4 | 75.4 | 73.3 | 72.5 | 72.3 | 74.6 | 73.5 | 74.3 |
| 190000 | 69.3 | 69.9 | 69.5 | 69.8 | 72.6 | 72.1 | 72.2 | 75.0 | 72.9 | 72.3 | 72.6 | 74.1 | 73.2 | 73.8 |
| 200000 | 69.1 | 69.6 | 69.5 | 69.9 | 72.8 | 71.8 | 72.4 | 74.7 | 72.7 | 72.4 | 72.6 | 73.5 | 73.3 | 73.3 |
| 210000 | 68.8 | 69.8 | 69.6 | 70.4 | 72.9 | 72.2 | 72.4 | 74.3 | 72.5 | 72.0 | 72.6 | 73.4 | 73.2 | 76.0 |
| 220000 | 68.7 | 69.7 | 69.8 | 71.2 | 73.1 | 72.7 | 72.7 | 74.0 | 72.4 | 72.1 | 72.7 | 73.0 | 72.8 | 75.0 |
| 230000 | 68.7 | 69.5 | 70.1 | 71.6 | 73.2 | 72.5 | 72.8 | 73.6 | 72.4 | 72.2 | 73.1 | 73.0 | 73.3 | 75.3 |
| Daily Max | 69.9 | 69.9 | 70.2 | 71.6 | 73.2 | 73.2 | 72.8 | 75.4 | 74.2 | 73.4 | 73.3 | 75.4 | 74.6 | 76.0 |
| Daily Min | 68.3 | 68.6 | 69.0 | 69.1 | 71.7 | 71.8 | 72.0 | 71.9 | 72.2 | 71.9 | 71.8 | 72.9 | 72.8 | 73.3 |
| Average | 69.0 | 69.1 | 69.5 | 69.9 | 72.3 | 72.4 | 72.3 | 73.5 | 73.0 | 72.5 | 72.6 | 74.0 | 73.6 | 74.2 |

High Falls Tailrace Temperature Summary - July 2012



| Time HHMMSS | 07/01/12 | 07/02/12 | 07/03/12 | 07/04/12 | 07/05/12 | 07/06/12 | 07/07/12 | 07/08/12 | 07/09/12 | 07/10/12 | 07/11/12 | 07/12/12 | 07/13/12 | 07/14/12 | 07/15/12 | 07/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 75.1 | 75.1 | 74.5 | 76.6 | 79.1 | 77.6 | 79.3 | 78.8 | 79.1 | 78.9 | 78.2 | 78.7 | 78.8 | 79.4 | 80.2 | 80.6 |
| 10000 | 75.2 | 75.7 | 74.5 | 77.1 | 78.6 | 78.1 | 80.6 | 78.7 | 79.0 | 78.3 | 78.2 | 78.7 | 78.8 | 79.4 | 80.4 | 80.8 |
| 20000 | 74.9 | 75.7 | 75.0 | 77.1 | 78.0 | 77.4 | 80.9 | 78.6 | 79.6 | 78.8 | 78.1 | 78.9 | 78.9 | 79.4 | 80.4 | 80.8 |
| 30000 | 74.8 | 75.2 | 75.7 | 77.3 | 76.9 | 77.5 | 79.8 | 78.7 | 79.2 | 78.4 | 78.3 | 78.6 | 78.9 | 79.3 | 80.3 | 80.7 |
| 40000 | 75.1 | 75.3 | 76.4 | 76.4 | 75.6 | 77.2 | 80.1 | 78.0 | 78.4 | 78.5 | 78.4 | 78.9 | 78.9 | 79.4 | 80.2 | 80.6 |
| 50000 | 74.8 | 75.3 | 75.7 | 77.4 | 75.4 | 77.3 | 78.5 | 78.2 | 78.3 | 78.5 | 78.5 | 78.8 | 78.8 | 79.3 | 80.1 | 80.4 |
| 60000 | 74.9 | 75.5 | 75.8 | 76.7 | 75.7 | 77.3 | 79.0 | 78.2 | 78.5 | 78.5 | 78.4 | 78.7 | 78.8 | 79.1 | 80.0 | 80.3 |
| 70000 | 75.3 | 75.5 | 75.6 | 76.1 | 76.0 | 77.4 | 78.3 | 78.1 | 78.4 | 78.5 | 78.5 | 78.7 | 78.9 | 79.1 | 80.0 | 80.5 |
| 80000 | 75.6 | 75.9 | 75.1 | 77.3 | 76.6 | 76.7 | 78.0 | 78.2 | 78.6 | 78.8 | 78.2 | 78.9 | 79.1 | 79.1 | 80.1 | 80.5 |
| 90000 | 76.2 | 76.6 | 76.3 | 77.3 | 76.7 | 77.1 | 78.4 | 78.6 | 78.5 | 78.4 | 78.6 | 79.0 | 79.2 | 79.0 | 80.4 | 80.7 |
| 100000 | 76.3 | 76.1 | 75.3 | 77.5 | 76.7 | 76.8 | 78.4 | 78.3 | 78.4 | 78.5 | 78.7 | 79.4 | 79.4 | 79.1 | 80.6 | 80.7 |
| 110000 | 76.5 | 76.0 | 75.8 | 77.5 | 76.5 | 78.1 | 79.1 | 78.7 | 78.7 | 79.0 | 78.2 | 79.5 | 79.6 | 79.3 | 81.0 | 80.8 |
| 120000 | 76.4 | 76.5 | 76.0 | 77.2 | 77.8 | 78.3 | 78.7 | 79.4 | 79.3 | 79.6 | 79.2 | 79.6 | 79.9 | 79.5 | 81.2 | 80.9 |
| 130000 | 77.1 | | 76.1 | 77.4 | 78.0 | 78.5 | 80.3 | 78.8 | 79.5 | 79.0 | 78.8 | 79.7 | 79.8 | 79.7 | 81.2 | 80.5 |
| 140000 | 76.8 | 75.5 | 77.3 | 77.9 | 78.6 | 79.4 | 80.7 | 78.7 | 79.4 | 79.1 | 78.9 | 79.6 | 79.7 | 79.6 | 81.2 | 80.2 |
| 150000 | 77.1 | 76.4 | 76.7 | 77.8 | 79.5 | 78.6 | 79.3 | 78.8 | 79.2 | 78.4 | 79.2 | 79.5 | 79.7 | 79.6 | 81.1 | 79.4 |
| 160000 | 76.6 | 76.2 | 77.1 | 77.3 | 78.6 | 79.2 | 80.4 | 78.7 | 79.3 | 79.3 | 79.2 | 79.4 | 79.6 | 79.3 | 80.9 | 79.7 |
| 170000 | 75.9 | 75.5 | 76.3 | 76.9 | 78.3 | 79.4 | 79.7 | 79.5 | 79.4 | 78.9 | 79.3 | 79.2 | 79.3 | 79.0 | 81.2 | 79.0 |
| 180000 | 75.7 | 75.3 | 76.1 | 76.7 | 77.8 | 78.8 | 79.7 | 79.1 | 79.3 | 78.5 | 78.6 | 79.1 | 79.2 | 79.3 | 81.3 | 79.4 |
| 190000 | 75.3 | 75.3 | 75.7 | 77.4 | 78.5 | 78.7 | 79.9 | 78.5 | 79.1 | 78.7 | 79.0 | 78.8 | 79.1 | 79.3 | 80.8 | 79.2 |
| 200000 | 75.2 | 75.9 | 75.6 | 77.0 | 77.5 | 78.8 | 79.2 | 78.2 | 79.6 | 78.7 | 79.0 | 78.9 | 79.2 | 79.4 | 80.8 | 79.3 |
| 210000 | 75.4 | 76.1 | 75.6 | 78.0 | 77.8 | 78.2 | 79.1 | 78.9 | 79.2 | 78.1 | 78.6 | 78.8 | 79.4 | 79.9 | 80.8 | 79.5 |
| 220000 | 75.3 | 75.3 | 76.1 | 79.6 | 78.1 | 78.9 | 78.8 | 78.2 | 79.2 | 78.3 | 78.9 | 78.8 | 79.4 | 79.9 | 80.8 | 79.8 |
| 230000 | 75.4 | 74.5 | 76.3 | 78.3 | 77.5 | 79.0 | 78.6 | 78.7 | 78.0 | 78.4 | 78.7 | 78.8 | 79.5 | 80.0 | 80.7 | 80.4 |
| Daily Max | 77.1 | 76.6 | 77.3 | 79.6 | 79.5 | 79.4 | 80.9 | 79.5 | 79.6 | 79.6 | 79.3 | 79.7 | 79.9 | 80.0 | 81.3 | 80.9 |
| Daily Min | 74.8 | 74.5 | 74.5 | 76.1 | 75.4 | 76.7 | 78.0 | 78.0 | 78.0 | 78.1 | 78.1 | 78.6 | 78.8 | 79.0 | 80.0 | 79.0 |
| Average | 75.7 | 75.7 | 75.9 | 77.3 | 77.5 | 78.1 | 79.4 | 78.6 | 79.0 | 78.7 | 78.6 | 79.0 | 79.2 | 79.4 | 80.7 | 80.2 |

Monthly Average Temp: 78.5
 License Maximum Temperature: 89 F

Missing data due to equipment maintenance.

High Falls Tailrace Temperature Summary - July 2012

| Time HHMMSS | 07/17/12 | 07/18/12 | 07/19/12 | 07/20/12 | 07/21/12 | 07/22/12 | 07/23/12 | 07/24/12 | 07/25/12 | 07/26/12 | 07/27/12 | 07/28/12 | 07/29/12 | 07/30/12 | 07/31/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 80.6 | 80.9 | 79.7 | 77.7 | 76.9 | 78.6 | 77.8 | 80.5 | 78.2 | 79.5 | 79.3 | 77.1 | 77.0 | 76.8 | 78.2 |
| 10000 | 80.7 | 80.8 | 79.6 | 77.6 | 76.9 | 78.6 | 77.8 | 80.2 | 78.0 | 79.6 | 79.1 | 77.1 | 77.0 | 76.9 | 78.1 |
| 20000 | 80.6 | 80.7 | 79.5 | 77.4 | 76.8 | 78.5 | 77.8 | 80.0 | 78.1 | 79.6 | 78.9 | 76.9 | 76.9 | 76.9 | 78.0 |
| 30000 | 80.5 | 80.6 | 79.4 | 77.3 | 76.7 | 78.4 | 77.8 | 79.7 | 78.1 | 79.5 | 78.8 | 77.0 | 76.8 | 76.9 | 78.0 |
| 40000 | 80.4 | 80.5 | 79.2 | 77.3 | 76.7 | 78.3 | 77.7 | 79.5 | 78.1 | 79.3 | 78.6 | 76.9 | 76.7 | 76.8 | 78.0 |
| 50000 | 80.3 | 80.3 | 79.0 | 77.1 | 76.7 | 78.2 | 77.8 | 79.4 | 78.0 | 79.2 | 78.4 | 76.8 | 76.7 | 76.8 | 77.9 |
| 60000 | 80.3 | 80.3 | 78.7 | 77.1 | 76.6 | 78.0 | 77.7 | 79.2 | 78.1 | 79.1 | 78.6 | 76.9 | 76.7 | 76.6 | 77.8 |
| 70000 | 80.3 | 80.2 | 78.5 | 77.1 | 76.6 | 78.0 | 77.8 | 78.9 | 78.0 | 79.0 | 77.1 | 76.8 | 76.8 | 76.7 | 77.7 |
| 80000 | 80.5 | 80.1 | 78.5 | | 76.8 | 78.1 | 78.0 | 79.1 | 78.0 | 79.2 | 77.2 | 76.9 | 76.9 | 76.7 | 77.8 |
| 90000 | 81.1 | 80.2 | 78.4 | 77.6 | 77.0 | 78.3 | 78.2 | 79.2 | 78.1 | 79.3 | 77.7 | 77.0 | 77.0 | 76.8 | 78.1 |
| 100000 | 81.6 | 80.3 | 78.4 | 77.7 | 77.3 | 78.3 | 78.7 | 79.4 | 78.0 | 79.4 | 77.9 | 77.1 | 77.1 | 76.9 | 78.3 |
| 110000 | 81.8 | 80.8 | 78.5 | 77.8 | 77.5 | 78.4 | 78.9 | 79.6 | 78.3 | 79.5 | 78.0 | 77.3 | 77.3 | 77.1 | 78.6 |
| 120000 | 82.2 | 80.8 | 78.5 | 77.8 | 78.0 | 78.7 | 79.1 | 80.0 | 78.5 | 80.1 | 78.2 | 77.6 | 77.3 | 76.8 | 78.9 |
| 130000 | 83.0 | 80.6 | 78.5 | 77.8 | 78.0 | 78.9 | 79.3 | 80.2 | 79.0 | 80.2 | 78.5 | 77.9 | 77.2 | 76.9 | 79.1 |
| 140000 | 82.8 | 80.7 | 78.5 | 77.8 | 78.2 | 78.9 | | 80.0 | 78.8 | 80.8 | 78.4 | 78.0 | 77.1 | 77.1 | 79.0 |
| 150000 | 82.6 | 80.7 | 78.5 | 77.8 | 78.4 | 78.8 | | 80.0 | 79.0 | 80.6 | 78.8 | 77.9 | 77.1 | 77.2 | 79.2 |
| 160000 | 82.3 | 80.7 | 78.5 | 77.7 | 79.0 | 78.7 | | 80.4 | 79.0 | 80.5 | 78.5 | 78.0 | 77.1 | 77.0 | 79.4 |
| 170000 | 82.3 | 80.5 | 78.7 | 77.8 | 79.3 | 78.5 | | 79.7 | 79.1 | 80.2 | 78.8 | 78.0 | 77.2 | 77.4 | 79.3 |
| 180000 | 82.2 | 80.4 | 78.6 | 77.6 | 79.3 | 78.5 | 80.4 | 79.4 | 79.3 | 79.1 | 78.7 | 77.8 | 76.9 | 77.1 | 79.4 |
| 190000 | 82.1 | 80.2 | 78.5 | 77.4 | 79.1 | 78.2 | 80.6 | 79.1 | 79.4 | 79.9 | 78.2 | 77.7 | 77.0 | 77.8 | 79.2 |
| 200000 | 81.8 | 80.1 | 78.4 | 77.3 | 79.0 | 78.1 | 80.7 | 78.8 | 79.5 | 79.9 | 78.1 | 77.5 | 77.0 | 77.6 | 79.0 |
| 210000 | 81.5 | 80.1 | 78.2 | 77.1 | 78.8 | 78.1 | 80.4 | 78.6 | 79.6 | 79.6 | 77.8 | 77.3 | 76.9 | 78.0 | 78.8 |
| 220000 | 81.3 | 79.9 | 78.0 | 77.0 | 78.7 | 77.9 | 80.6 | 78.4 | 79.5 | 79.5 | 77.7 | 77.3 | 76.9 | 78.0 | 78.6 |
| 230000 | 81.1 | 79.8 | 77.8 | 77.0 | 78.7 | 77.9 | 80.6 | 78.3 | 79.5 | 79.4 | 77.7 | 77.2 | 76.8 | 78.1 | 78.4 |
| Daily Max | 83.0 | 80.9 | 79.7 | 77.8 | 79.3 | 78.9 | 80.7 | 80.5 | 79.6 | 80.8 | 79.3 | 78.0 | 77.3 | 78.1 | 79.4 |
| Daily Min | 80.3 | 79.8 | 77.8 | 77.0 | 76.6 | 77.9 | 77.7 | 78.3 | 78.0 | 79.0 | 77.1 | 76.8 | 76.7 | 76.6 | 77.7 |
| Average | 81.4 | 80.4 | 78.7 | 77.5 | 77.8 | 78.4 | 78.9 | 79.5 | 78.6 | 79.7 | 78.3 | 77.3 | 77.0 | 77.1 | 78.5 |

 Missing data due to equipment maintenance.
 Missing data due to equipment malfunction.

High Falls Tailrace Temperature Summary - August 2012

| Time HHMMSS | 08/01/12 | 08/02/12 | 08/03/12 | 08/04/12 | 08/05/12 | 08/06/12 | 08/07/12 | 08/08/12 | 08/09/12 | 08/10/12 | 08/11/12 | 08/12/12 | 08/13/12 | 08/14/12 | 08/15/12 | 08/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 78.2 | 77.5 | 78.2 | 77.6 | 76.7 | 76.1 | 75.6 | 76.9 | 75.8 | 74.4 | 72.9 | 73.1 | 72.6 | 72.5 | 73.3 | 72.0 |
| 10000 | 78.1 | 77.5 | 78.2 | 77.6 | 76.7 | 75.9 | 75.5 | 76.8 | 75.7 | 74.2 | 72.8 | 72.9 | 72.5 | 72.6 | 73.1 | 71.9 |
| 20000 | 77.9 | 77.5 | 78.3 | 77.5 | 76.6 | 75.8 | 75.5 | 76.7 | 75.6 | 74.0 | 72.7 | 72.7 | 72.4 | 72.5 | 73.0 | 71.9 |
| 30000 | 77.8 | 77.5 | 78.3 | 77.5 | 76.5 | 75.7 | 75.5 | 76.7 | 75.5 | 73.9 | 72.6 | 72.7 | 72.3 | 72.4 | 72.9 | 71.9 |
| 40000 | 77.8 | 77.4 | 78.2 | 77.5 | 76.4 | 75.6 | 75.5 | 76.6 | 75.5 | 73.7 | 72.5 | 72.5 | 72.2 | 72.4 | 72.8 | 71.9 |
| 50000 | 77.6 | 77.6 | 78.0 | 77.4 | 76.3 | 75.4 | 75.5 | 76.5 | 75.3 | 73.5 | 72.4 | 72.4 | 72.2 | 72.4 | 72.7 | 71.9 |
| 60000 | 77.5 | 77.5 | 77.9 | 77.3 | 76.2 | 75.4 | 75.4 | 76.2 | 75.2 | 73.3 | 72.3 | 72.3 | 72.1 | 72.4 | 72.6 | 71.9 |
| 70000 | 77.5 | 77.5 | 77.8 | 77.4 | 76.0 | 75.4 | 75.4 | 76.2 | 75.2 | 73.3 | 72.2 | 72.4 | 72.2 | 72.3 | 72.6 | 71.9 |
| 80000 | 77.6 | 77.5 | 77.8 | 77.4 | 75.8 | 75.6 | 75.5 | 76.3 | 75.2 | 73.3 | 72.2 | 72.5 | 72.3 | 72.3 | 72.8 | 72.0 |
| 90000 | 77.9 | 77.5 | 77.8 | 77.6 | 75.8 | 75.8 | 75.9 | 76.5 | 75.1 | 73.2 | 72.5 | 72.8 | 72.4 | 72.6 | 73.1 | 72.0 |
| 100000 | 77.9 | 77.5 | 77.9 | 77.7 | 76.1 | 76.0 | 76.2 | 76.5 | 75.2 | 73.4 | 72.7 | 72.7 | 72.6 | 73.0 | 73.3 | 72.0 |
| 110000 | 78.2 | 77.6 | 77.9 | 77.4 | 76.3 | 76.1 | 76.9 | 76.6 | 75.4 | 73.7 | 73.0 | 73.2 | 72.8 | 73.4 | 73.4 | 72.0 |
| 120000 | 78.2 | 77.7 | 78.0 | 77.6 | 76.6 | 76.3 | 77.2 | 76.6 | 75.4 | 74.0 | 73.3 | 73.4 | 73.1 | 73.5 | 73.5 | 72.0 |
| 130000 | 78.2 | 78.3 | 78.0 | 77.6 | 76.9 | 76.5 | 77.8 | 76.5 | 75.4 | 74.3 | 73.8 | 73.5 | 73.1 | 73.7 | 73.4 | 72.1 |
| 140000 | 77.8 | 78.4 | 78.1 | 77.4 | 76.9 | 76.6 | 77.9 | 76.5 | 75.3 | 74.4 | 74.0 | 73.1 | 73.4 | 73.7 | 73.1 | 72.7 |
| 150000 | 77.7 | 78.3 | 78.1 | 77.4 | 76.9 | 76.6 | 77.9 | 76.5 | 75.1 | 74.5 | 74.3 | 73.2 | 73.3 | 74.0 | 73.0 | 72.4 |
| 160000 | 77.9 | 78.4 | 78.2 | 77.3 | 76.9 | 76.5 | 78.1 | 76.6 | 75.1 | 74.6 | 74.2 | 73.3 | 73.3 | 74.4 | 72.9 | 72.5 |
| 170000 | 77.5 | 78.1 | 78.3 | 77.2 | 76.9 | 76.6 | 78.1 | 76.5 | 75.0 | 74.3 | 74.5 | 73.4 | 73.3 | 74.3 | 72.8 | 72.7 |
| 180000 | 77.6 | 78.2 | 78.3 | 77.1 | 76.8 | 76.4 | 78.2 | 76.4 | 75.0 | 73.9 | 74.3 | 73.2 | 73.2 | 74.0 | 72.6 | 72.5 |
| 190000 | 77.2 | 78.3 | 78.2 | 77.1 | 76.7 | 76.3 | 77.9 | 76.4 | 74.9 | 73.6 | 74.0 | 73.1 | 73.0 | 74.0 | 72.4 | 72.4 |
| 200000 | 77.5 | 78.3 | 78.0 | 76.9 | 76.6 | 76.2 | 77.7 | 76.2 | 74.8 | 73.4 | 73.8 | 73.0 | 72.8 | 73.9 | 72.4 | 72.3 |
| 210000 | 77.4 | 78.2 | 77.9 | 76.8 | 76.4 | 76.0 | 77.5 | 76.2 | 74.7 | 73.2 | 73.5 | 72.9 | 72.8 | 73.7 | 72.3 | 72.3 |
| 220000 | 77.4 | 78.2 | 77.7 | 76.7 | 76.3 | 75.9 | 77.3 | 76.1 | 74.6 | 73.0 | 73.3 | 72.9 | 73.0 | 73.5 | 72.2 | 72.1 |
| 230000 | 77.5 | 78.1 | 77.7 | 76.8 | 76.2 | 75.8 | 77.2 | 76.0 | 74.5 | 72.9 | 73.1 | 72.7 | 72.7 | 73.3 | 72.1 | 72.0 |
| Daily Max | 78.2 | 78.4 | 78.3 | 77.7 | 76.9 | 76.6 | 78.2 | 76.9 | 75.8 | 74.6 | 74.5 | 73.5 | 73.4 | 74.4 | 73.5 | 72.7 |
| Daily Min | 77.2 | 77.4 | 77.7 | 76.7 | 75.8 | 75.4 | 75.4 | 76.0 | 74.5 | 72.9 | 72.2 | 72.3 | 72.1 | 72.3 | 72.1 | 71.9 |
| Average | 77.8 | 77.9 | 78.0 | 77.3 | 76.5 | 76.0 | 76.7 | 76.5 | 75.2 | 73.7 | 73.2 | 72.9 | 72.7 | 73.2 | 72.9 | 72.1 |

Monthly Average Temp: 73.6
 License Maximum Temperature: 89 F

Missing data due to equipment maintenance.

High Falls Tailrace Temperature Summary - August 2012

| Time HHMMSS | 08/17/12 | 08/18/12 | 08/19/12 | 08/20/12 | 08/21/12 | 08/22/12 | 08/23/12 | 08/24/12 | 08/25/12 | 08/26/12 | 08/27/12 | 08/28/12 | 08/29/12 | 08/30/12 | 08/31/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 71.9 | 71.6 | 71.5 | 71.3 | 70.7 | 70.9 | 70.7 | 71.5 | 71.2 | 71.6 | 71.9 | 73.2 | 72.4 | 72.2 | 72.7 |
| 10000 | 71.7 | 71.4 | 71.3 | 71.3 | 70.8 | 70.7 | 70.6 | 71.4 | 71.2 | 71.8 | 71.8 | 73.0 | 72.3 | 72.2 | 73.0 |
| 20000 | 71.5 | 71.3 | 71.3 | 71.2 | 70.6 | 70.6 | 70.6 | 71.4 | 71.3 | 72.1 | 71.7 | 72.9 | 72.2 | 72.2 | 73.1 |
| 30000 | 71.4 | 71.2 | 71.3 | 71.1 | 70.5 | 70.5 | 70.6 | 71.5 | 71.2 | 72.2 | 71.7 | 72.7 | 72.2 | 72.3 | 73.2 |
| 40000 | 71.3 | 71.1 | 71.3 | 70.9 | 70.4 | 70.5 | 70.6 | 71.6 | 71.2 | 72.3 | 71.7 | 72.5 | 72.1 | 72.3 | 73.2 |
| 50000 | 71.2 | 71.0 | 71.3 | 70.8 | 70.3 | 70.3 | 70.7 | 71.5 | 71.2 | 72.3 | 71.7 | 72.3 | 72.0 | 72.2 | 73.3 |
| 60000 | 71.1 | 70.9 | 71.2 | 70.6 | 70.2 | 70.2 | 70.7 | 71.5 | 71.2 | 72.4 | 71.7 | 72.3 | 72.0 | 72.1 | 73.2 |
| 70000 | 71.0 | 70.9 | 71.2 | 70.5 | 70.2 | 70.2 | 70.8 | 71.4 | 71.2 | 72.4 | 71.7 | 72.2 | 72.0 | 72.1 | 73.1 |
| 80000 | 71.0 | 71.1 | 71.2 | 70.7 | 70.4 | 70.3 | 70.9 | 71.4 | 71.4 | 72.3 | 71.8 | 72.4 | 72.1 | 71.9 | 73.1 |
| 90000 | 71.2 | 71.4 | 71.2 | 71.0 | 70.8 | 70.6 | 71.1 | 71.5 | 71.8 | 72.2 | 72.1 | 72.7 | 72.3 | 71.9 | 73.3 |
| 100000 | 71.4 | 71.6 | 71.4 | 71.2 | 71.2 | 70.9 | 71.5 | 71.5 | 72.1 | 72.3 | 72.5 | 73.0 | 72.6 | 72.1 | 73.9 |
| 110000 | 71.7 | 71.7 | 71.7 | 71.4 | 71.6 | 71.1 | 71.6 | 71.6 | 72.3 | 72.3 | 73.0 | 73.3 | 72.8 | 72.1 | 74.5 |
| 120000 | 72.0 | 71.8 | 71.8 | 71.6 | 71.6 | 71.2 | 71.8 | 71.5 | 72.6 | 72.3 | 73.3 | 73.4 | 72.9 | 72.2 | 75.1 |
| 130000 | 72.4 | 71.9 | 71.9 | 71.5 | 71.8 | 71.4 | 71.9 | 71.6 | 72.6 | 72.4 | | 73.5 | 73.0 | 72.2 | 75.0 |
| 140000 | 72.7 | 71.8 | 72.1 | 72.1 | 72.1 | 71.4 | 71.7 | 71.4 | 72.2 | 72.5 | 74.0 | 73.6 | 73.1 | 72.1 | 75.1 |
| 150000 | 72.9 | 71.9 | 72.0 | 71.9 | 72.2 | 71.3 | 71.6 | 71.0 | 72.0 | 72.3 | 74.0 | 73.4 | 73.0 | 71.7 | 75.0 |
| 160000 | 73.0 | 72.0 | 71.8 | 72.2 | 72.4 | 71.2 | 71.4 | 71.2 | 71.8 | 72.1 | 74.1 | 73.6 | 72.8 | 71.2 | 75.1 |
| 170000 | 72.9 | 71.9 | 72.2 | 71.9 | 72.0 | 71.0 | 71.3 | 70.9 | 71.5 | 72.2 | 74.1 | 73.5 | 72.6 | 71.2 | 75.1 |
| 180000 | 72.6 | 71.9 | 72.9 | 71.7 | 72.1 | 70.9 | 71.9 | 70.9 | 71.2 | 72.1 | 74.0 | 73.4 | 72.3 | 71.0 | 74.9 |
| 190000 | 72.4 | 72.1 | 72.3 | 71.8 | 72.1 | 70.8 | 72.0 | 70.8 | 71.1 | 72.0 | 74.0 | 72.9 | 72.2 | 71.8 | 74.7 |
| 200000 | 72.2 | 72.1 | 72.1 | 71.5 | 71.8 | 70.7 | 71.7 | 70.9 | 71.2 | 71.9 | 73.9 | 72.7 | 72.2 | 71.9 | 74.4 |
| 210000 | 72.0 | 71.9 | 71.6 | 71.3 | 71.5 | 70.8 | 71.7 | 71.0 | 71.3 | 71.9 | 73.7 | 72.5 | 72.1 | 71.8 | 74.1 |
| 220000 | 71.9 | 71.9 | 71.4 | 71.1 | 71.2 | 70.7 | 71.5 | 71.1 | 71.5 | 71.8 | 73.5 | 72.5 | 72.3 | 71.9 | 74.2 |
| 230000 | 71.8 | 71.7 | 71.5 | 70.8 | 71.1 | 70.7 | 71.5 | 71.1 | 71.4 | 71.8 | 73.3 | 72.5 | 72.2 | 72.4 | 74.2 |
| Daily Max | 73.0 | 72.1 | 72.9 | 72.2 | 72.4 | 71.4 | 72.0 | 71.6 | 72.6 | 72.5 | 74.1 | 73.6 | 73.1 | 72.4 | 75.1 |
| Daily Min | 71.0 | 70.9 | 71.2 | 70.5 | 70.2 | 70.2 | 70.6 | 70.8 | 71.1 | 71.6 | 71.7 | 72.2 | 72.0 | 71.0 | 72.7 |
| Average | 71.9 | 71.6 | 71.6 | 71.3 | 71.2 | 70.8 | 71.3 | 71.3 | 71.6 | 72.1 | 72.8 | 72.9 | 72.4 | 72.0 | 74.0 |

Missing data due to equipment maintenance.

High Falls Tailrace Temperature Summary - September 2012

| Time HHMMSS | 09/01/12 | 09/02/12 | 09/03/12 | 09/04/12 | 09/05/12 | 09/06/12 | 09/07/12 | 09/08/12 | 09/09/12 | 09/10/12 | 09/11/12 | 09/12/12 | 09/13/12 | 09/14/12 | 09/15/12 | 09/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 74.1 | 73.8 | 73.2 | 73.1 | 73.0 | 73.1 | 72.5 | 71.5 | 70.2 | 69.8 | 69.0 | 68.9 | 69.1 | 67.7 | 68.0 | 67.0 |
| 10000 | 73.9 | 73.7 | 73.1 | 73.1 | 73.1 | 72.8 | 72.6 | 71.3 | 70.1 | 69.7 | 68.8 | 68.8 | 68.9 | 67.6 | 67.8 | 67.0 |
| 20000 | 73.7 | 73.6 | 73.1 | 73.2 | 73.1 | 72.8 | 72.8 | 71.2 | 70.1 | 69.5 | 68.7 | 68.8 | 68.9 | 67.6 | 67.7 | 66.9 |
| 30000 | 73.7 | 73.6 | 73.1 | 73.1 | 73.0 | 72.7 | 72.8 | 71.0 | 69.9 | 69.4 | 68.7 | 68.7 | 68.8 | 67.5 | 67.6 | 66.8 |
| 40000 | 73.6 | 73.5 | 72.5 | 73.1 | 73.1 | 72.7 | 72.6 | 70.9 | 69.8 | 69.3 | 68.5 | 68.6 | 68.8 | 67.5 | 67.4 | 66.8 |
| 50000 | 73.5 | 73.3 | 72.7 | 73.3 | 72.9 | 72.6 | 72.6 | 70.8 | 69.7 | 69.2 | 68.5 | 68.6 | 68.7 | 67.4 | 67.2 | 66.7 |
| 60000 | 73.5 | 73.3 | 72.6 | 73.1 | 73.0 | 72.4 | 72.7 | 70.7 | 69.7 | 69.1 | 68.5 | 68.5 | 68.7 | 67.4 | 67.1 | 66.6 |
| 70000 | 73.5 | 73.2 | 72.6 | 73.1 | 72.9 | 72.4 | 72.6 | 70.6 | 69.6 | 69.0 | 68.5 | 68.5 | 68.6 | 67.3 | 67.1 | 66.7 |
| 80000 | 73.6 | 73.2 | 72.7 | 73.0 | 72.9 | 72.5 | 72.5 | 70.6 | 69.6 | 69.1 | 68.6 | 68.5 | 68.6 | 67.3 | 67.2 | 66.7 |
| 90000 | 73.9 | 73.3 | 73.1 | 73.1 | 72.8 | 72.7 | 72.5 | 70.9 | 69.9 | 69.5 | 68.8 | 68.8 | 68.6 | 67.6 | 67.5 | 66.9 |
| 100000 | 74.2 | 73.6 | 73.5 | 73.2 | 72.9 | 72.8 | 72.5 | 71.0 | 70.2 | 69.9 | 69.1 | 69.1 | 68.6 | 67.9 | 67.8 | 67.1 |
| 110000 | 74.4 | 73.9 | 73.7 | 73.2 | 73.0 | 73.1 | 72.3 | 71.2 | 70.5 | 70.0 | 69.3 | 69.4 | 68.6 | 68.2 | 68.1 | 67.5 |
| 120000 | 74.8 | 74.0 | 73.8 | 73.6 | 73.5 | 73.1 | 72.3 | 71.2 | 70.8 | 70.1 | 69.5 | 69.6 | 68.8 | 68.5 | 68.4 | 67.7 |
| 130000 | 75.0 | 74.2 | 74.2 | 73.4 | 73.7 | 73.1 | 72.3 | 71.3 | 71.2 | 70.1 | 69.6 | 69.7 | 68.8 | 68.8 | 68.4 | 67.7 |
| 140000 | 75.1 | 74.2 | 74.1 | 73.3 | 73.8 | 73.5 | 72.3 | 71.2 | 71.1 | 70.1 | 69.6 | 70.2 | 68.8 | | 68.4 | 67.7 |
| 150000 | 75.0 | 74.3 | 74.2 | 73.3 | 74.0 | 73.7 | 72.6 | 71.3 | 71.3 | 70.0 | 69.4 | 70.5 | 68.7 | 69.5 | 68.3 | 67.7 |
| 160000 | 74.9 | 74.1 | 73.7 | 73.4 | 73.9 | 73.2 | 71.9 | 71.2 | 71.3 | 69.9 | 69.5 | 70.2 | 68.6 | 69.4 | 68.1 | 67.5 |
| 170000 | 74.8 | 73.8 | 73.5 | 73.1 | 73.9 | 73.5 | 72.5 | 71.0 | 71.2 | 69.6 | 69.4 | 69.9 | 68.5 | 69.4 | 67.9 | 67.3 |
| 180000 | 74.5 | 73.6 | 74.4 | 73.4 | 73.9 | 73.1 | 72.4 | 71.0 | 71.0 | 69.4 | 69.2 | 70.0 | 68.5 | 69.1 | 67.7 | 67.2 |
| 190000 | 74.2 | 73.4 | 74.0 | 73.1 | 73.6 | 73.1 | 72.1 | 70.9 | 70.8 | 69.2 | 69.0 | 69.7 | 68.4 | 68.9 | 67.5 | 67.1 |
| 200000 | 74.0 | 73.3 | 73.0 | 73.0 | 73.6 | 73.0 | 72.1 | 70.7 | 70.4 | 69.1 | 69.0 | 69.6 | 68.2 | 68.6 | 67.4 | 67.2 |
| 210000 | 73.9 | 73.2 | 73.1 | 73.0 | 73.5 | 72.9 | 71.9 | 70.7 | 70.2 | 69.1 | 69.0 | 69.5 | 68.0 | 68.4 | 67.4 | 67.2 |
| 220000 | 73.8 | 73.3 | 73.4 | 73.0 | 73.3 | 72.7 | 71.8 | 70.5 | 70.1 | 69.1 | 69.1 | 69.3 | 67.9 | 68.3 | 67.2 | 67.2 |
| 230000 | 73.7 | 73.2 | 73.3 | 73.0 | 73.3 | 72.7 | 71.7 | 70.4 | 69.9 | 69.0 | 69.0 | 69.2 | 67.7 | 68.2 | 67.1 | 67.1 |
| Daily Max | 75.1 | 74.3 | 74.4 | 73.6 | 74.0 | 73.7 | 72.8 | 71.5 | 71.3 | 70.1 | 69.6 | 70.5 | 69.1 | 69.5 | 68.4 | 67.7 |
| Daily Min | 73.5 | 73.2 | 72.5 | 73.0 | 72.8 | 72.4 | 71.7 | 70.4 | 69.6 | 69.0 | 68.5 | 68.5 | 67.7 | 67.3 | 67.1 | 66.6 |
| Average | 74.1 | 73.6 | 73.4 | 73.2 | 73.3 | 72.9 | 72.4 | 71.0 | 70.4 | 69.5 | 69.0 | 69.3 | 68.6 | 68.2 | 67.7 | 67.1 |

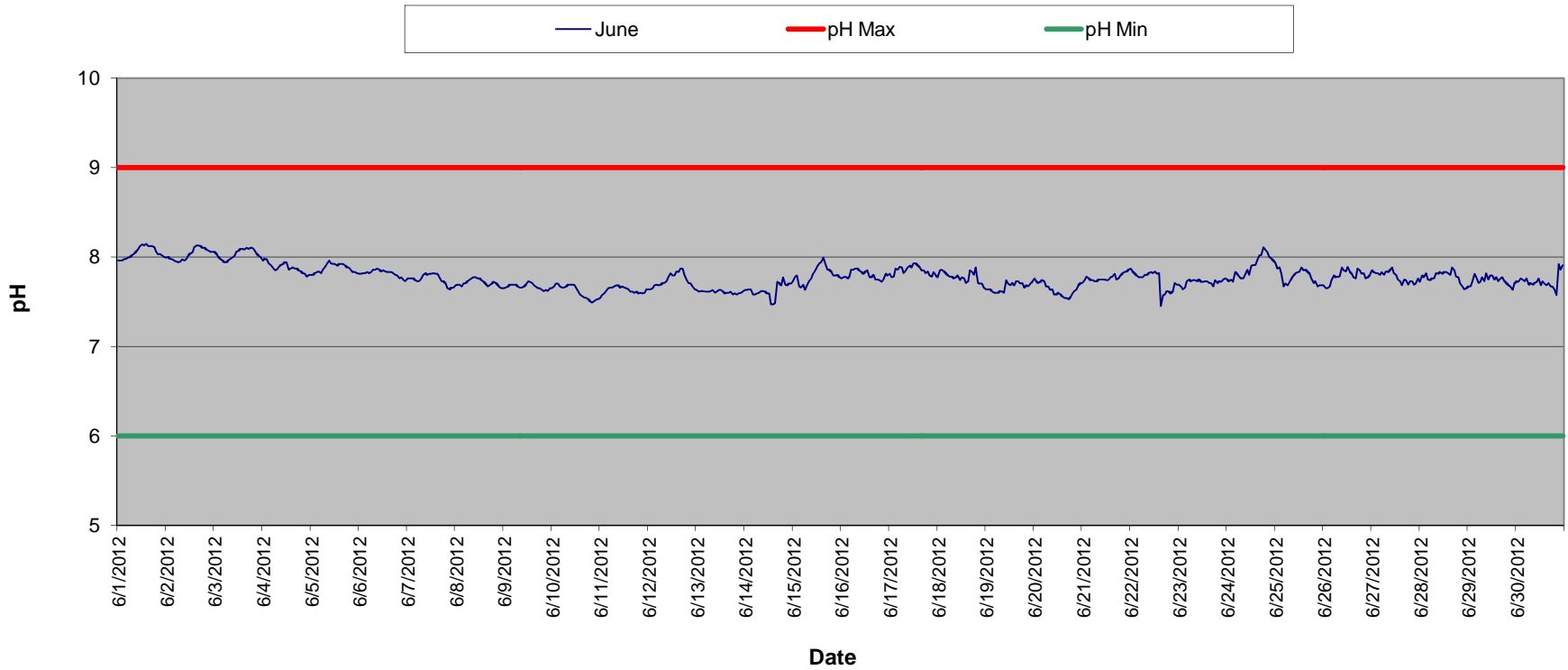
Monthly Average Temp: 66.5
 License Maximum Temperature: 89 F

Missing data due to equipment maintenance.

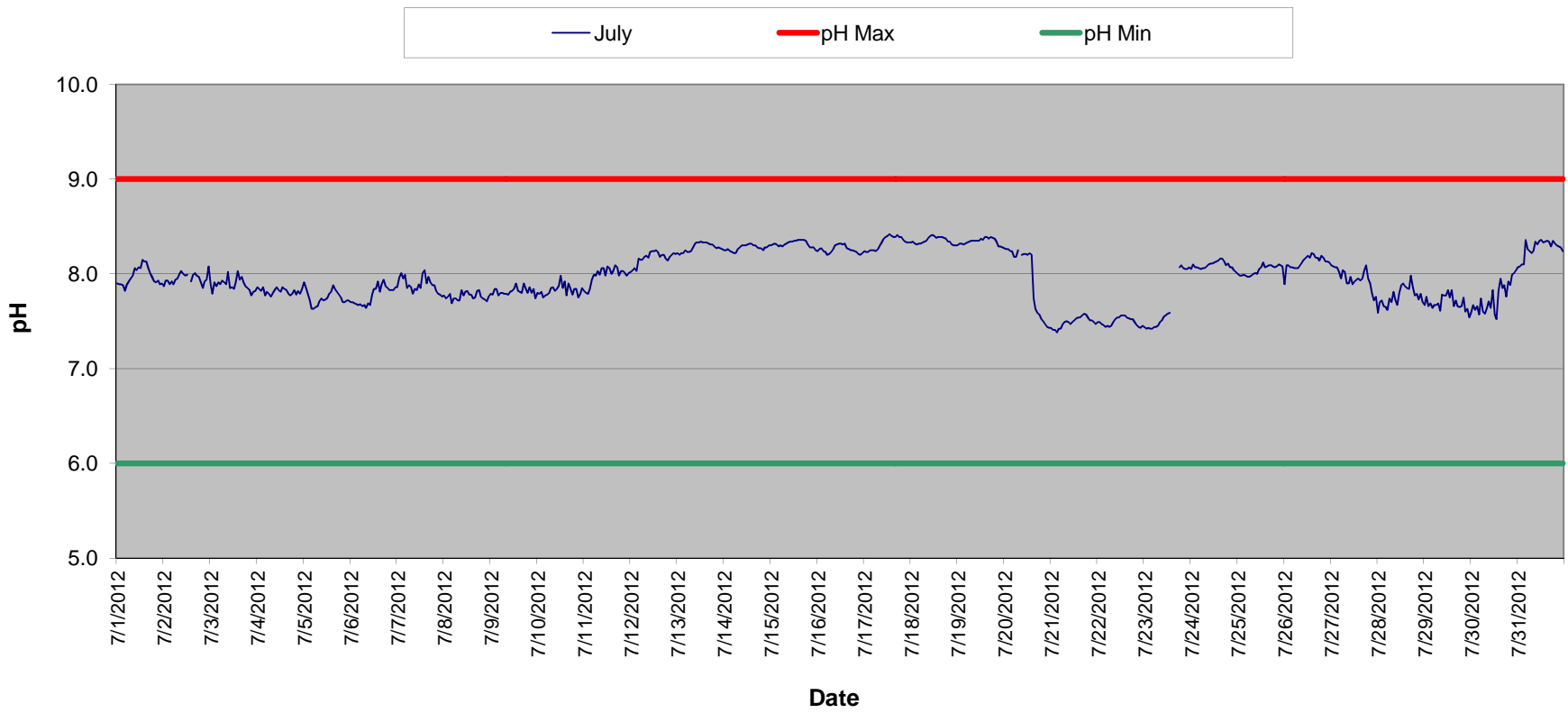
High Falls Tailrace Temperature Summary - September 2012

| Time HHMMSS | 09/17/12 | 09/18/12 | 09/19/12 | 09/20/12 | 09/21/12 | 09/22/12 | 09/23/12 | 09/24/12 | 09/25/12 | 09/26/12 | 09/27/12 | 09/28/12 | 09/29/12 | 09/30/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 67.1 | 65.4 | 64.1 | 63.2 | 62.3 | 61.8 | 60.4 | 59.7 | 59.7 | 60.5 | 59.3 | 58.7 | 59.1 | 60.4 |
| 10000 | 67.0 | 65.3 | 63.8 | 63.1 | 62.2 | 61.7 | 60.4 | 59.6 | 59.6 | 60.2 | 59.3 | 58.6 | 59.1 | 60.2 |
| 20000 | 67.0 | 65.2 | 63.9 | 63.0 | 62.2 | 61.6 | 60.2 | 59.5 | 59.5 | 59.9 | 59.1 | 58.5 | 59.1 | 60.2 |
| 30000 | 67.0 | 65.0 | 63.7 | 62.9 | 62.1 | 61.6 | 60.1 | 59.5 | 59.4 | 59.7 | 59.1 | 58.4 | 59.1 | 60.1 |
| 40000 | 66.9 | 65.0 | 63.4 | 62.9 | 62.1 | 61.4 | 60.0 | 59.5 | 59.3 | 59.5 | 59.0 | 58.4 | 59.0 | 59.9 |
| 50000 | 66.9 | 65.0 | 63.3 | 62.9 | 62.1 | 61.4 | 60.0 | 59.5 | 59.3 | 59.4 | 58.9 | 58.3 | 58.9 | 59.7 |
| 60000 | 66.9 | 64.8 | 63.4 | 62.7 | 62.0 | 61.3 | 59.9 | 59.4 | 59.1 | 59.3 | 58.9 | 58.3 | 58.9 | 59.6 |
| 70000 | 66.8 | 64.7 | 63.3 | 62.8 | 62.0 | 61.2 | 59.8 | 59.4 | 59.0 | 59.2 | 58.8 | 58.3 | 58.7 | 59.5 |
| 80000 | 66.9 | 64.7 | 63.3 | 62.7 | 62.0 | 61.3 | 59.7 | 59.5 | 59.0 | 59.2 | 58.8 | 58.3 | 58.9 | 59.4 |
| 90000 | 66.9 | 64.8 | 63.3 | 63.1 | 62.2 | 61.4 | 60.0 | 59.6 | 59.2 | 59.4 | 59.1 | 58.7 | 59.2 | 59.7 |
| 100000 | 67.1 | 65.0 | 63.7 | 63.0 | 62.5 | 61.7 | 60.2 | 59.8 | 59.4 | 59.7 | 59.4 | 59.1 | 59.6 | 60.0 |
| 110000 | 67.1 | 65.3 | 63.6 | 63.1 | 62.7 | 61.6 | 60.5 | 60.0 | 59.7 | 60.1 | 59.7 | 59.5 | 60.0 | 60.3 |
| 120000 | 67.1 | 65.4 | 63.7 | 63.5 | 62.9 | 61.9 | 60.7 | 60.2 | 60.1 | 60.4 | 60.1 | 60.0 | 60.5 | 60.7 |
| 130000 | 67.0 | 65.0 | 63.8 | 63.2 | 62.9 | 61.9 | 60.9 | 60.3 | 60.6 | 60.2 | 60.2 | 60.2 | 60.7 | 60.8 |
| 140000 | 66.9 | 65.4 | 63.6 | 63.2 | 62.9 | 62.2 | 60.8 | 60.3 | 61.2 | 60.4 | 59.7 | 59.9 | 61.2 | 60.7 |
| 150000 | 66.7 | 65.3 | 63.7 | 63.2 | 62.7 | 62.1 | 60.6 | 60.3 | 60.6 | 60.2 | 59.9 | 59.8 | 61.1 | 60.5 |
| 160000 | 66.5 | 65.1 | 63.8 | 63.0 | 62.6 | 61.6 | 60.9 | 60.2 | 60.6 | 60.2 | 60.0 | 59.8 | 61.1 | 60.4 |
| 170000 | 66.5 | 64.7 | 63.8 | 62.9 | 62.6 | 61.3 | 60.7 | 60.1 | 60.2 | 60.1 | 59.7 | 59.8 | 60.9 | 60.1 |
| 180000 | 66.1 | 64.8 | 63.9 | 62.9 | 62.5 | 61.1 | 60.5 | 60.1 | 60.0 | 60.1 | 59.4 | 59.7 | 60.8 | 59.9 |
| 190000 | 66.0 | 64.7 | 63.8 | 62.7 | 62.3 | 60.9 | 60.4 | 60.0 | 60.0 | 60.0 | 59.3 | 59.6 | 60.6 | 59.7 |
| 200000 | 65.9 | 64.6 | 63.8 | 62.7 | 62.2 | 60.9 | 60.2 | 60.0 | 60.1 | 59.9 | 59.1 | 59.5 | 60.4 | 59.6 |
| 210000 | 65.8 | 64.4 | 63.6 | 62.6 | 62.1 | 60.7 | 60.1 | 60.0 | 60.5 | 59.8 | 59.0 | 59.4 | 60.5 | 59.5 |
| 220000 | 65.7 | 64.2 | 63.4 | 62.5 | 62.0 | 60.6 | 59.9 | 59.8 | 61.2 | 59.6 | 58.9 | 59.3 | 60.5 | 59.3 |
| 230000 | 65.5 | 64.0 | 63.3 | 62.4 | 61.8 | 60.6 | 59.8 | 59.7 | 60.9 | 59.5 | 58.8 | 59.2 | 60.4 | 59.1 |
| Daily Max | 67.1 | 65.4 | 64.1 | 63.5 | 62.9 | 62.2 | 60.9 | 60.3 | 61.2 | 60.5 | 60.2 | 60.2 | 61.2 | 60.8 |
| Daily Min | 65.5 | 64.0 | 63.3 | 62.4 | 61.8 | 60.6 | 59.7 | 59.4 | 59.0 | 59.2 | 58.8 | 58.3 | 58.7 | 59.1 |
| Average | 66.6 | 64.9 | 63.6 | 62.9 | 62.3 | 61.4 | 60.3 | 59.8 | 59.9 | 59.8 | 59.3 | 59.1 | 59.9 | 60.0 |

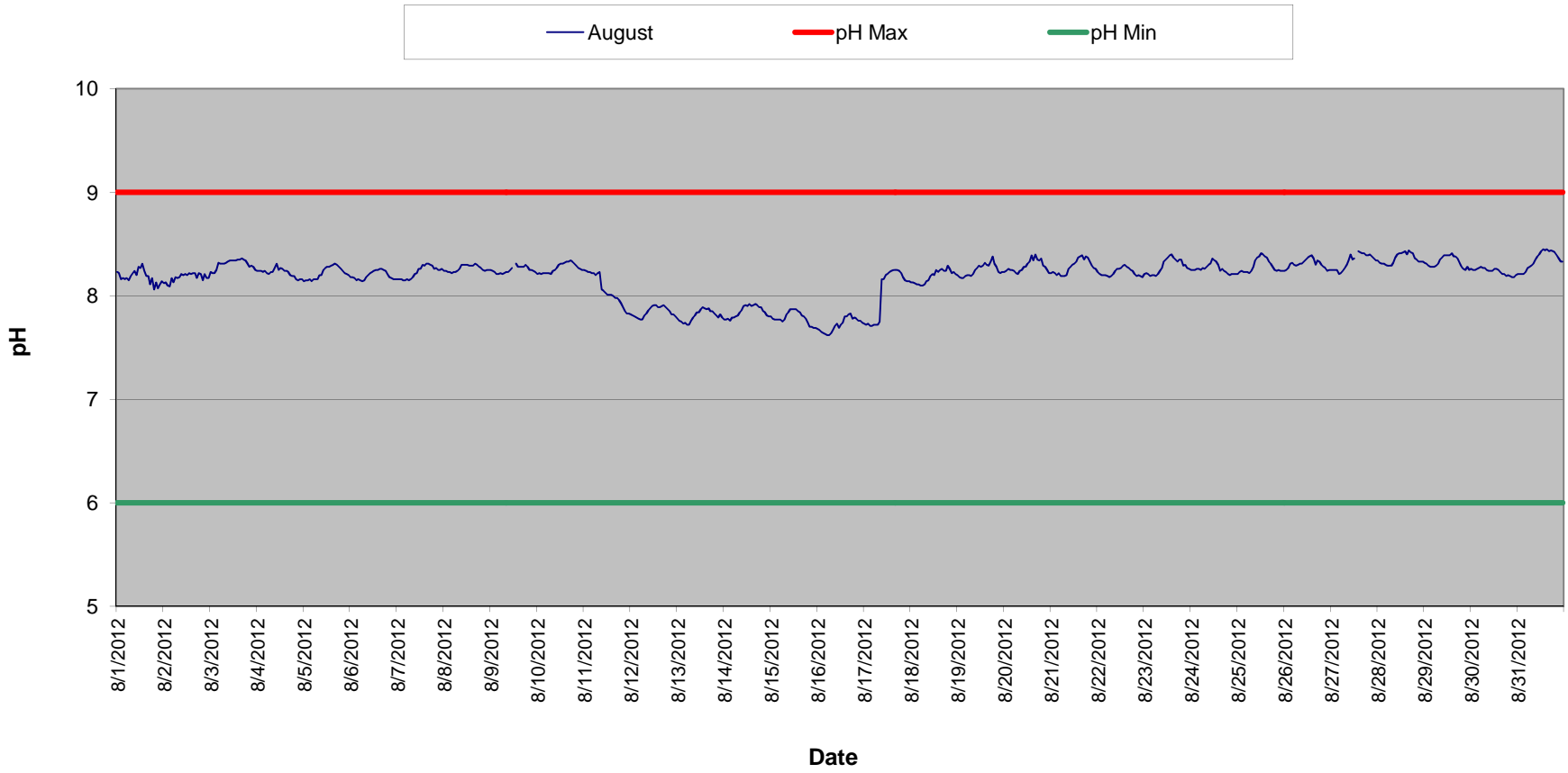
High Falls Tailrace pH Summary - June 2012



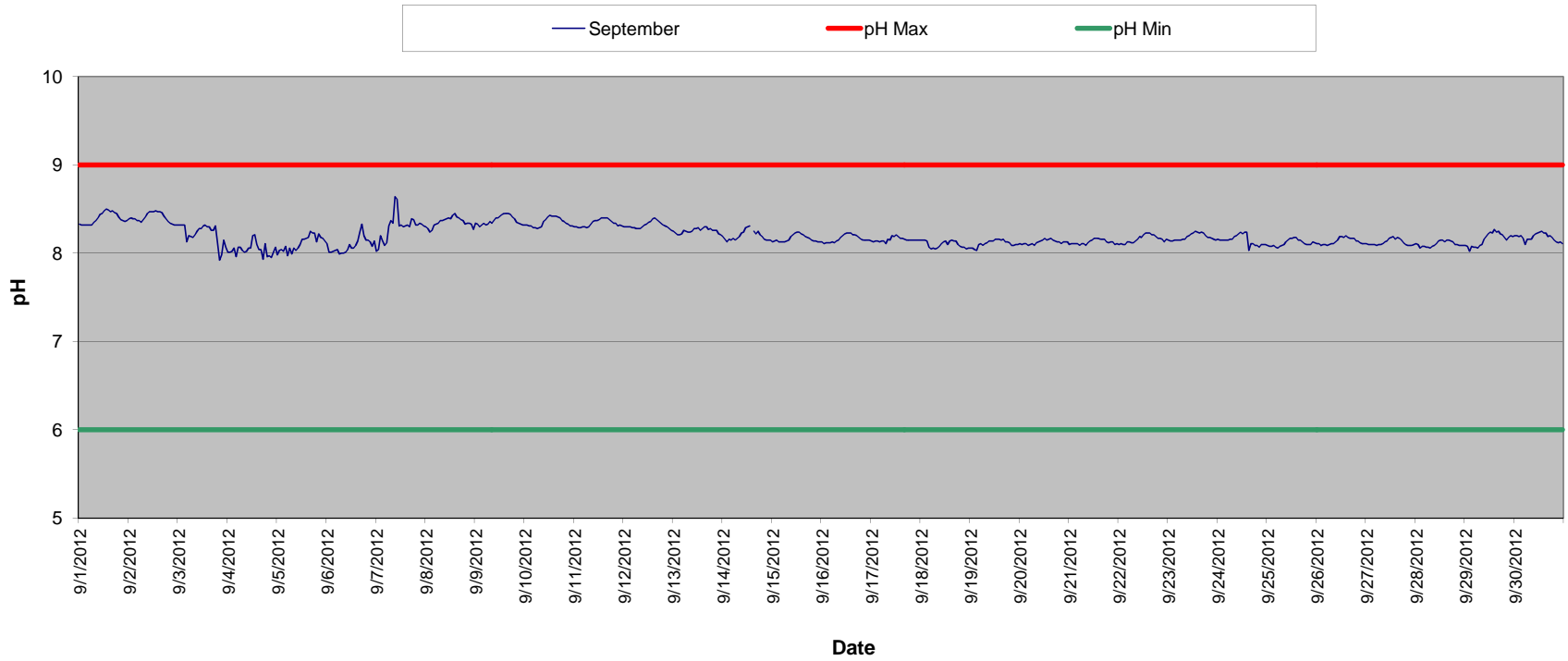
High Falls Tailrace pH Summary - July 2012



High Falls Tailrace pH Summary - August 2012



High Falls Tailrace pH Summary - September 2012



High Falls Tailrace pH Summary - June 2012

| Time HHMMSS | 06/01/12 | 06/02/12 | 06/03/12 | 06/04/12 | 06/05/12 | 06/06/12 | 06/07/12 | 06/08/12 | 06/09/12 | 06/10/12 | 06/11/12 | 06/12/12 | 06/13/12 | 06/14/12 | 06/15/12 | 06/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 8.0 | 8.0 | 8.1 | 8.0 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.5 | 7.6 | 7.6 | 7.6 | 7.7 | 7.8 |
| 10000 | 8.0 | 8.0 | 8.0 | 8.0 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.6 | 7.6 | 7.8 | 7.8 |
| 20000 | 8.0 | 8.0 | 8.0 | 8.0 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.6 | 7.7 | 7.6 | 7.6 | 7.8 | 7.8 |
| 30000 | 8.0 | 8.0 | 8.0 | 7.9 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.6 | 7.7 | 7.6 | 7.6 | 7.7 | 7.8 |
| 40000 | 8.0 | 8.0 | 8.0 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.8 |
| 50000 | 8.0 | 8.0 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.9 |
| 60000 | 8.0 | 7.9 | 7.9 | 7.9 | 7.9 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.6 | 7.9 |
| 70000 | 8.0 | 8.0 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.9 |
| 80000 | 8.0 | 8.0 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.9 |
| 90000 | 8.1 | 8.0 | 8.0 | 7.9 | 8.0 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.8 | 7.9 |
| 100000 | 8.1 | 8.0 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.8 | 7.6 | 7.6 | 7.8 | 7.8 |
| 110000 | 8.1 | 8.0 | 8.1 | 7.9 | 7.9 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.8 | 7.6 | 7.6 | 7.9 | 7.8 |
| 120000 | 8.1 | 8.0 | 8.1 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.8 | 7.6 | 7.6 | 7.9 | 7.8 |
| 130000 | 8.1 | 8.1 | 8.1 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.6 | 7.7 | 7.8 | 7.6 | 7.5 | 7.9 | 7.9 |
| 140000 | 8.2 | 8.1 | 8.1 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.6 | 7.6 | 7.8 | 7.6 | 7.5 | 7.9 | 7.8 |
| 150000 | 8.1 | 8.1 | 8.1 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.6 | 7.6 | 7.8 | 7.6 | 7.5 | 8.0 | 7.8 |
| 160000 | 8.1 | 8.1 | 8.1 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.6 | 7.6 | 7.9 | 7.6 | 7.7 | 7.9 | 7.8 |
| 170000 | 8.1 | 8.1 | 8.1 | 7.9 | 7.9 | 7.8 | 7.7 | 7.7 | 7.7 | 7.5 | 7.6 | 7.9 | 7.6 | 7.7 | 7.9 | 7.8 |
| 180000 | 8.1 | 8.1 | 8.1 | 7.9 | 7.9 | 7.8 | 7.7 | 7.7 | 7.7 | 7.5 | 7.6 | 7.8 | 7.6 | 7.7 | 7.9 | 7.8 |
| 190000 | 8.1 | 8.1 | 8.1 | 7.8 | 7.9 | 7.8 | 7.7 | 7.7 | 7.6 | 7.5 | 7.6 | 7.7 | 7.6 | 7.8 | 7.8 | 7.7 |
| 200000 | 8.0 | 8.1 | 8.1 | 7.8 | 7.9 | 7.8 | 7.7 | 7.7 | 7.6 | 7.5 | 7.6 | 7.7 | 7.6 | 7.7 | 7.8 | 7.7 |
| 210000 | 8.0 | 8.1 | 8.0 | 7.8 | 7.8 | 7.8 | 7.6 | 7.7 | 7.6 | 7.5 | 7.6 | 7.7 | 7.6 | 7.7 | 7.8 | 7.8 |
| 220000 | 8.0 | 8.1 | 8.0 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.6 | 7.5 | 7.6 | 7.7 | 7.6 | 7.7 | 7.8 | 7.8 |
| 230000 | 8.0 | 8.1 | 8.0 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.5 | 7.6 | 7.6 | 7.6 | 7.7 | 7.8 | 7.8 |
| Daily Max | 8.2 | 8.1 | 8.1 | 8.0 | 8.0 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.9 | 7.6 | 7.8 | 8.0 | 7.9 |
| Daily Min | 8.0 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.6 | 7.7 | 7.6 | 7.5 | 7.5 | 7.6 | 7.6 | 7.5 | 7.6 | 7.7 |
| Average | 8.0 | 8.0 | 8.0 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | 7.8 | 7.8 |

License maximum pH: 9

License minimum pH: 6

High Falls Tailrace pH Summary - June 2012

| Time HHMMSS | 06/17/12 | 06/18/12 | 06/19/12 | 06/20/12 | 06/21/12 | 06/22/12 | 06/23/12 | 06/24/12 | 06/25/12 | 06/26/12 | 06/27/12 | 06/28/12 | 06/29/12 | 06/30/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 7.8 | 7.8 | 7.6 | 7.8 | 7.7 | 7.9 | 7.7 | 7.8 | 7.9 | 7.7 | 7.9 | 7.7 | 7.7 | 7.7 |
| 10000 | 7.8 | 7.9 | 7.6 | 7.7 | 7.7 | 7.8 | 7.7 | 7.7 | 7.9 | 7.7 | 7.8 | 7.8 | 7.7 | 7.7 |
| 20000 | 7.8 | 7.9 | 7.6 | 7.7 | 7.8 | 7.8 | 7.6 | 7.8 | 7.9 | 7.7 | 7.8 | 7.8 | 7.7 | 7.8 |
| 30000 | 7.9 | 7.8 | 7.6 | 7.7 | 7.8 | 7.8 | 7.7 | 7.7 | 7.8 | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 |
| 40000 | 7.9 | 7.8 | 7.6 | 7.7 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 | 7.8 | 7.8 | 7.8 | 7.7 |
| 50000 | 7.9 | 7.8 | 7.6 | 7.7 | 7.7 | 7.8 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 7.7 | 7.7 | 7.8 |
| 60000 | 7.9 | 7.8 | 7.6 | 7.7 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 |
| 70000 | 7.8 | 7.8 | 7.6 | 7.7 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 |
| 80000 | 7.9 | 7.8 | 7.6 | 7.6 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 |
| 90000 | 7.9 | 7.8 | 7.6 | 7.6 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 |
| 100000 | 7.9 | 7.8 | 7.7 | 7.6 | 7.8 | 7.8 | 7.8 | 7.9 | 7.8 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 |
| 110000 | 7.9 | 7.7 | 7.7 | 7.6 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 |
| 120000 | 7.9 | 7.8 | 7.7 | 7.6 | 7.7 | 7.8 | 7.7 | 7.9 | 7.8 | 7.9 | 7.8 | 7.8 | 7.8 | 7.7 |
| 130000 | 7.9 | 7.8 | 7.7 | 7.6 | 7.7 | 7.8 | 7.7 | 7.9 | 7.9 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 |
| 140000 | 7.9 | 7.7 | 7.7 | 7.6 | 7.8 | 7.8 | 7.7 | 7.9 | 7.9 | 7.8 | 7.7 | 7.8 | 7.8 | 7.7 |
| 150000 | 7.9 | 7.7 | 7.7 | 7.5 | 7.8 | 7.5 | 7.7 | 8.0 | 7.9 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 |
| 160000 | 7.9 | 7.9 | 7.7 | 7.5 | 7.8 | 7.6 | 7.7 | 8.0 | 7.8 | 7.8 | 7.8 | 7.9 | 7.8 | 7.7 |
| 170000 | 7.9 | 7.8 | 7.7 | 7.5 | 7.8 | 7.6 | 7.7 | 8.0 | 7.8 | 7.9 | 7.7 | 7.9 | 7.8 | 7.7 |
| 180000 | 7.8 | 7.8 | 7.7 | 7.6 | 7.8 | 7.6 | 7.7 | 8.1 | 7.8 | 7.9 | 7.7 | 7.8 | 7.7 | 7.7 |
| 190000 | 7.8 | 7.9 | 7.7 | 7.6 | 7.8 | 7.6 | 7.7 | 8.1 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.6 |
| 200000 | 7.8 | 7.7 | 7.7 | 7.6 | 7.8 | 7.6 | 7.7 | 8.1 | 7.7 | 7.8 | 7.7 | 7.7 | 7.7 | 7.6 |
| 210000 | 7.8 | 7.7 | 7.7 | 7.6 | 7.8 | 7.6 | 7.7 | 8.0 | 7.7 | 7.8 | 7.7 | 7.7 | 7.7 | 7.9 |
| 220000 | 7.8 | 7.7 | 7.7 | 7.7 | 7.8 | 7.7 | 7.8 | 8.0 | 7.7 | 7.8 | 7.7 | 7.6 | 7.6 | 7.9 |
| 230000 | 7.8 | 7.7 | 7.7 | 7.7 | 7.9 | 7.7 | 7.8 | 8.0 | 7.7 | 7.8 | 7.8 | 7.7 | 7.7 | 7.9 |
| Daily Max | 7.9 | 7.9 | 7.7 | 7.8 | 7.9 | 7.9 | 7.8 | 8.1 | 7.9 | 7.9 | 7.9 | 7.9 | 7.8 | 7.9 |
| Daily Min | 7.8 | 7.7 | 7.6 | 7.5 | 7.7 | 7.5 | 7.6 | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.6 |
| Average | 7.8 | 7.8 | 7.7 | 7.6 | 7.8 | 7.7 | 7.7 | 7.9 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 |

High Falls Tailrace pH Summary - July 2012



| Time HHMMSS | 07/01/12 | 07/02/12 | 07/03/12 | 07/04/12 | 07/05/12 | 07/06/12 | 07/07/12 | 07/08/12 | 07/09/12 | 07/10/12 | 07/11/12 | 07/12/12 | 07/13/12 | 07/14/12 | 07/15/12 | 07/16/12 |
|----------------|----------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.7 | 7.9 | 7.8 | 7.8 | 7.8 | 7.8 | 8.0 | 8.2 | 8.3 | 8.3 | 8.2 |
| 10000 | 7.9 | 7.9 | 7.8 | 7.8 | 7.9 | 7.7 | 8.0 | 7.7 | 7.8 | 7.8 | 7.8 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 |
| 20000 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 8.0 | 7.8 | 7.8 | 7.8 | 7.8 | 8.1 | 8.2 | 8.3 | 8.3 | 8.3 |
| 30000 | 7.9 | 7.9 | 7.9 | 7.9 | 7.7 | 7.7 | 8.0 | 7.8 | 7.8 | 7.8 | 7.8 | 8.0 | 8.2 | 8.2 | 8.3 | 8.2 |
| 40000 | 7.8 | 7.9 | 7.9 | 7.8 | 7.6 | 7.7 | 8.0 | 7.7 | 7.8 | 7.8 | 7.9 | 8.2 | 8.3 | 8.2 | 8.3 | 8.2 |
| 50000 | 7.9 | 7.9 | 7.9 | 7.8 | 7.6 | 7.7 | 7.9 | 7.7 | 7.8 | 7.8 | 8.0 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 |
| 60000 | 7.9 | 7.9 | 7.9 | 7.8 | 7.7 | 7.7 | 7.9 | 7.7 | 7.8 | 7.8 | 8.0 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 |
| 70000 | 8.0 | 8.0 | 7.9 | 7.8 | 7.7 | 7.7 | 7.9 | 7.7 | 7.8 | 7.9 | 8.0 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 |
| 80000 | 8.0 | 8.0 | 7.9 | 7.8 | 7.7 | 7.6 | 7.8 | 7.7 | 7.8 | 7.9 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 |
| 90000 | 8.1 | 8.0 | 8.0 | 7.8 | 7.7 | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 | 8.1 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 |
| 100000 | 8.0 | 8.0 | 7.9 | 7.9 | 7.7 | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 | 8.1 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 |
| 110000 | 8.1 | 8.0 | 7.9 | 7.8 | 7.7 | 7.8 | 7.9 | 7.8 | 7.8 | 7.9 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 |
| 120000 | 8.1 | 8.0 | 7.8 | 7.8 | 7.7 | 7.8 | 7.9 | 7.8 | 7.8 | 8.0 | 8.1 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 |
| 130000 | 8.2 | Missing data due to equipment maintenance. | 7.9 | 7.9 | 7.8 | 7.8 | 8.0 | 7.8 | 7.9 | 7.9 | 8.1 | 8.3 | 8.3 | 8.3 | 8.4 | 8.3 |
| 140000 | 8.1 | 7.9 | 8.0 | 7.8 | 7.8 | 7.9 | 8.0 | 7.8 | 7.8 | 7.9 | 8.0 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 |
| 150000 | 8.1 | 8.0 | 7.9 | 7.8 | 7.9 | 7.8 | 7.9 | 7.7 | 7.8 | 7.8 | 8.0 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 |
| 160000 | 8.1 | 8.0 | 8.0 | 7.8 | 7.8 | 7.9 | 8.0 | 7.8 | 7.8 | 7.9 | 8.1 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 |
| 170000 | 8.0 | 8.0 | 7.9 | 7.8 | 7.8 | 7.9 | 7.9 | 7.8 | 7.9 | 7.8 | 8.1 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 |
| 180000 | 8.0 | 8.0 | 7.9 | 7.8 | 7.8 | 7.9 | 7.9 | 7.8 | 7.8 | 7.8 | 8.0 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 |
| 190000 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 | 7.9 | 7.9 | 7.8 | 7.8 | 7.8 | 8.0 | 8.1 | 8.3 | 8.3 | 8.3 | 8.2 |
| 200000 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 7.7 | 7.9 | 7.8 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 |
| 210000 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 |
| 220000 | 7.9 | 7.9 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 7.7 | 7.8 | 7.8 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 |
| 230000 | 7.9 | 8.1 | 7.8 | 7.8 | 7.7 | 7.9 | 7.8 | 7.8 | 7.7 | 7.9 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 |
| Daily Max | 8.2 | 8.1 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 7.8 | 7.9 | 8.0 | 8.1 | 8.3 | 8.3 | 8.3 | 8.4 | 8.3 |
| Daily Min | 7.8 | 7.9 | 7.8 | 7.8 | 7.6 | 7.6 | 7.8 | 7.7 | 7.7 | 7.8 | 7.8 | 8.0 | 8.2 | 8.2 | 8.3 | 8.2 |
| Average | 8.0 | 8.0 | 7.9 | 7.8 | 7.7 | 7.8 | 7.9 | 7.8 | 7.8 | 7.8 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 |

License maximum pH: 9
License minimum pH: 6

Missing data due to equipment maintenance.

High Falls Tailrace pH Summary - July 2012

| Time HHMMSS | 07/17/12 | 07/18/12 | 07/19/12 | 07/20/12 | 07/21/12 | 07/22/12 | 07/23/12 | 07/24/12 | 07/25/12 | 07/26/12 | 07/27/12 | 07/28/12 | 07/29/12 | 07/30/12 | 07/31/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 8.2 | 8.3 | 8.3 | 8.3 | 7.4 | 7.5 | 7.4 | 8.1 | 8.0 | 7.9 | 8.1 | 7.6 | 7.7 | 7.6 | 8.1 |
| 10000 | 8.2 | 8.3 | 8.3 | 8.3 | 7.4 | 7.5 | 7.4 | 8.1 | 8.0 | 8.1 | 8.1 | 7.7 | 7.8 | 7.7 | 8.1 |
| 20000 | 8.2 | 8.3 | 8.3 | 8.3 | 7.4 | 7.5 | 7.4 | 8.1 | 8.0 | 8.1 | 8.1 | 7.7 | 7.7 | 7.6 | 8.1 |
| 30000 | 8.3 | 8.3 | 8.3 | 8.2 | 7.4 | 7.5 | 7.4 | 8.1 | 8.0 | 8.1 | 8.1 | 7.7 | 7.7 | 7.7 | 8.1 |
| 40000 | 8.3 | 8.3 | 8.3 | 8.2 | 7.4 | 7.4 | 7.4 | 8.1 | 8.0 | 8.1 | 8.0 | 7.7 | 7.6 | 7.6 | 8.4 |
| 50000 | 8.3 | 8.3 | 8.3 | 8.2 | 7.4 | 7.5 | 7.4 | 8.1 | 8.0 | 8.1 | 8.0 | 7.6 | 7.7 | 7.7 | 8.3 |
| 60000 | 8.2 | 8.3 | 8.3 | 8.2 | 7.5 | 7.4 | 7.4 | 8.1 | 8.0 | 8.1 | 8.0 | 7.7 | 7.7 | 7.6 | 8.2 |
| 70000 | 8.3 | 8.3 | 8.4 | 8.3 | 7.5 | 7.5 | 7.5 | 8.1 | 8.0 | 8.1 | 8.0 | 7.7 | 7.7 | 7.6 | 8.2 |
| 80000 | 8.3 | 8.4 | 8.4 | 8.2 | 7.5 | 7.5 | 7.5 | 8.1 | 8.0 | 8.1 | 7.9 | 7.8 | 7.6 | 7.6 | 8.2 |
| 90000 | 8.3 | 8.4 | 8.4 | 8.2 | 7.5 | 7.5 | 7.5 | 8.1 | 8.0 | 8.1 | 7.9 | 7.7 | 7.8 | 7.7 | 8.3 |
| 100000 | 8.4 | 8.4 | 8.4 | 8.2 | 7.5 | 7.5 | 7.6 | 8.1 | 8.0 | 8.2 | 8.0 | 7.7 | 7.8 | 7.6 | 8.3 |
| 110000 | 8.4 | 8.4 | 8.4 | 8.2 | 7.5 | 7.5 | 7.6 | 8.1 | 8.1 | 8.2 | 7.9 | 7.8 | 7.8 | 7.8 | 8.4 |
| 120000 | 8.4 | 8.4 | 8.4 | 8.2 | 7.5 | 7.6 | 7.6 | 8.1 | 8.1 | 8.2 | 7.9 | 7.9 | 7.8 | 7.6 | 8.4 |
| 130000 | 8.4 | 8.4 | 8.4 | 8.2 | 7.5 | 7.6 | 7.6 | 8.1 | 8.1 | 8.2 | 7.9 | 7.9 | 7.8 | 7.5 | 8.3 |
| 140000 | 8.4 | 8.4 | 8.4 | 8.2 | 7.5 | 7.6 | 8.1 | 8.1 | 8.2 | 8.0 | 7.9 | 7.8 | 7.8 | 7.8 | 8.3 |
| 150000 | 8.4 | 8.4 | 8.4 | 7.7 | 7.5 | 7.5 | 8.2 | 8.1 | 8.2 | 7.9 | 7.9 | 7.7 | 7.7 | 8.0 | 8.4 |
| 160000 | 8.4 | 8.4 | 8.4 | 7.6 | 7.6 | 7.5 | 8.2 | 8.1 | 8.2 | 8.0 | 7.8 | 7.7 | 7.7 | 7.9 | 8.3 |
| 170000 | 8.4 | 8.4 | 8.4 | 7.6 | 7.6 | 7.5 | 8.1 | 8.1 | 8.2 | 8.0 | 8.0 | 7.7 | 7.7 | 7.9 | 8.3 |
| 180000 | 8.4 | 8.4 | 8.4 | 7.6 | 7.6 | 7.5 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 7.9 | 7.7 | 7.8 | 8.4 |
| 190000 | 8.4 | 8.3 | 8.4 | 7.5 | 7.5 | 7.5 | 8.1 | 8.1 | 8.1 | 8.2 | 8.0 | 7.8 | 7.7 | 7.9 | 8.3 |
| 200000 | 8.4 | 8.3 | 8.3 | 7.5 | 7.5 | 7.5 | 8.1 | 8.1 | 8.1 | 8.2 | 7.9 | 7.8 | 7.8 | 7.9 | 8.3 |
| 210000 | 8.3 | 8.3 | 8.3 | 7.5 | 7.5 | 7.4 | 8.1 | 8.1 | 8.1 | 8.1 | 7.8 | 7.7 | 7.6 | 8.0 | 8.3 |
| 220000 | 8.3 | 8.3 | 8.3 | 7.4 | 7.5 | 7.4 | 8.1 | 8.0 | 8.1 | 8.1 | 7.7 | 7.8 | 7.6 | 8.0 | 8.3 |
| 230000 | 8.3 | 8.3 | 8.3 | 7.4 | 7.5 | 7.5 | 8.1 | 8.0 | 8.1 | 8.1 | 7.8 | 7.7 | 7.5 | 8.0 | 8.2 |
| Daily Max | 8.4 | 8.4 | 8.4 | 8.3 | 7.6 | 7.6 | 8.1 | 8.2 | 8.1 | 8.2 | 8.1 | 8.0 | 7.8 | 8.0 | 8.4 |
| Daily Min | 8.2 | 8.3 | 8.3 | 7.4 | 7.4 | 7.4 | 7.4 | 8.0 | 8.0 | 7.9 | 7.7 | 7.6 | 7.5 | 7.5 | 8.1 |
| Average | 8.3 | 8.4 | 8.3 | 8.0 | 7.5 | 7.5 | 7.7 | 8.1 | 8.0 | 8.1 | 8.0 | 7.8 | 7.7 | 7.8 | 8.3 |

 Missing data due to equipment maintenance.
 Missing data due to equipment malfunction.

High Falls Tailrace pH Summary - August 2012


| Time HHMMSS | 08/01/12 | 08/02/12 | 08/03/12 | 08/04/12 | 08/05/12 | 08/06/12 | 08/07/12 | 08/08/12 | 08/09/12 | 08/10/12 | 08/11/12 | 08/12/12 | 08/13/12 | 08/14/12 | 08/15/12 | 08/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 8.2 | 8.1 | 8.2 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 |
| 10000 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 |
| 20000 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 |
| 30000 | 8.2 | 8.1 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 7.8 | 7.7 | 7.8 | 7.8 | 7.6 |
| 40000 | 8.2 | 8.2 | 8.3 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 7.8 | 7.7 | 7.8 | 7.8 | 7.6 |
| 50000 | 8.2 | 8.1 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 7.8 | 7.7 | 7.8 | 7.8 | 7.6 |
| 60000 | 8.2 | 8.2 | 8.3 | 8.2 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 7.8 | 7.7 | 7.8 | 7.8 | 7.6 |
| 70000 | 8.2 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 7.8 | 7.8 | 7.8 | 7.8 | 7.6 |
| 80000 | 8.2 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 |
| 90000 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.1 | 7.9 | 7.8 | 7.9 | 7.8 | 7.7 |
| 100000 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.1 | 7.9 | 7.8 | 7.9 | 7.9 | 7.7 |
| 110000 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.0 | 7.9 | 7.8 | 7.9 | 7.9 | 7.7 |
| 120000 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.0 | 7.9 | 7.9 | 7.9 | 7.9 | 7.7 |
| 130000 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.0 | 7.9 | 7.9 | 7.9 | 7.9 | 7.7 |
| 140000 | 8.2 | 8.2 | 8.4 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.0 | 7.9 | 7.9 | 7.9 | 7.9 | 7.8 |
| 150000 | 8.2 | 8.2 | 8.4 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 |
| 160000 | 8.2 | 8.2 | 8.4 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 |
| 170000 | 8.1 | 8.2 | 8.4 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 |
| 180000 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.8 |
| 190000 | 8.1 | 8.2 | 8.3 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 7.9 | 7.9 | 7.8 | 7.9 | 7.7 | 7.8 |
| 200000 | 8.1 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 7.9 | 7.9 | 7.8 | 7.9 | 7.7 | 7.8 |
| 210000 | 8.1 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 7.9 | 7.8 | 7.8 | 7.8 | 7.7 | 7.8 |
| 220000 | 8.1 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 | 8.3 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 | 7.8 |
| 230000 | 8.1 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 | 8.3 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 |
| Daily Max | 8.3 | 8.2 | 8.4 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 7.9 | 7.9 | 7.9 | 7.9 | 7.8 |
| Daily Min | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 7.8 | 7.8 | 7.7 | 7.8 | 7.7 | 7.6 |
| Average | 8.2 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.1 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 |

License maximum pH: 9
License minimum pH: 6

Missing data due to equipment maintenance.

High Falls Tailrace pH Summary - August 2012

| Time HHMMSS | 08/17/12 | 08/18/12 | 08/19/12 | 08/20/12 | 08/21/12 | 08/22/12 | 08/23/12 | 08/24/12 | 08/25/12 | 08/26/12 | 08/27/12 | 08/28/12 | 08/29/12 | 08/30/12 | 08/31/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 7.7 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 |
| 10000 | 7.7 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 |
| 20000 | 7.7 | 8.1 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 |
| 30000 | 7.7 | 8.1 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 |
| 40000 | 7.7 | 8.1 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 |
| 50000 | 7.7 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 |
| 60000 | 7.7 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 |
| 70000 | 7.7 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 80000 | 7.8 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.3 | 8.3 |
| 90000 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.2 | 8.4 |
| 100000 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.3 | 8.4 | 8.4 | 8.4 | 8.2 | 8.4 |
| 110000 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.2 | 8.4 |
| 120000 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.4 |
| 130000 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.5 |
| 140000 | 8.2 | 8.2 | 8.3 | 8.4 | 8.4 | 8.3 | 8.4 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.4 |
| 150000 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.3 | 8.4 | 8.2 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.2 | 8.5 |
| 160000 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.3 | 8.4 | 8.3 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.2 | 8.4 |
| 170000 | 8.3 | 8.2 | 8.3 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.2 | 8.4 |
| 180000 | 8.2 | 8.2 | 8.4 | 8.3 | 8.4 | 8.2 | 8.4 | 8.2 | 8.3 | 8.3 | 8.4 | 8.4 | 8.3 | 8.2 | 8.4 |
| 190000 | 8.2 | 8.3 | 8.3 | 8.4 | 8.4 | 8.2 | 8.4 | 8.2 | 8.3 | 8.3 | 8.4 | 8.4 | 8.3 | 8.2 | 8.4 |
| 200000 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.3 | 8.2 | 8.2 | 8.3 | 8.4 | 8.4 | 8.3 | 8.2 | 8.4 |
| 210000 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 | 8.3 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 | 8.3 | 8.2 | 8.4 |
| 220000 | 8.1 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.4 | 8.3 | 8.3 | 8.2 | 8.3 |
| 230000 | 8.1 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.3 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.3 |
| Daily Max | 8.3 | 8.3 | 8.4 | 8.4 | 8.4 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.5 |
| Daily Min | 7.7 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 | 8.2 |
| Average | 8.0 | 8.2 | 8.2 | 8.3 | 8.3 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.4 | 8.3 | 8.2 | 8.3 |

 Missing data due to equipment maintenance.

High Falls Tailrace pH Summary - September 2012

| Time HHMMSS | 09/01/12 | 09/02/12 | 09/03/12 | 09/04/12 | 09/05/12 | 09/06/12 | 09/07/12 | 09/08/12 | 09/09/12 | 09/10/12 | 09/11/12 | 09/12/12 | 09/13/12 | 09/14/12 | 09/15/12 | 09/16/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 8.3 | 8.4 | 8.3 | 8.0 | 8.0 | 8.1 | 8.0 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.1 | 8.1 |
| 10000 | 8.3 | 8.4 | 8.3 | 8.0 | 8.0 | 8.0 | 8.0 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.1 | 8.1 |
| 20000 | 8.3 | 8.4 | 8.3 | 8.0 | 8.0 | 8.0 | 8.2 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.1 | 8.2 | 8.1 |
| 30000 | 8.3 | 8.4 | 8.3 | 8.1 | 8.0 | 8.0 | 8.1 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.1 | 8.1 |
| 40000 | 8.3 | 8.4 | 8.1 | 8.0 | 8.1 | 8.0 | 8.1 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.1 | 8.1 |
| 50000 | 8.3 | 8.4 | 8.2 | 8.1 | 8.0 | 8.0 | 8.1 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.1 | 8.1 |
| 60000 | 8.3 | 8.4 | 8.2 | 8.1 | 8.1 | 8.0 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.1 | 8.1 |
| 70000 | 8.4 | 8.4 | 8.2 | 8.0 | 8.0 | 8.0 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.1 | 8.1 |
| 80000 | 8.4 | 8.4 | 8.2 | 8.0 | 8.1 | 8.0 | 8.3 | 8.4 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 |
| 90000 | 8.4 | 8.5 | 8.3 | 8.0 | 8.0 | 8.0 | 8.6 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 | 8.2 |
| 100000 | 8.4 | 8.5 | 8.3 | 8.1 | 8.1 | 8.0 | 8.6 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 | 8.2 |
| 110000 | 8.5 | 8.5 | 8.3 | 8.1 | 8.1 | 8.1 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 |
| 120000 | 8.5 | 8.5 | 8.3 | 8.2 | 8.2 | 8.1 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 |
| 130000 | 8.5 | 8.5 | 8.3 | 8.2 | 8.2 | 8.1 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 |
| 140000 | 8.5 | 8.5 | 8.3 | 8.1 | 8.2 | 8.1 | 8.3 | 8.5 | 8.5 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 |
| 150000 | 8.5 | 8.5 | 8.3 | 8.0 | 8.2 | 8.1 | 8.3 | 8.4 | 8.5 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 |
| 160000 | 8.5 | 8.5 | 8.3 | 8.0 | 8.3 | 8.2 | 8.3 | 8.4 | 8.5 | 8.4 | 8.4 | 8.4 | 8.3 | 8.2 | 8.2 | 8.2 |
| 170000 | 8.5 | 8.4 | 8.3 | 7.9 | 8.2 | 8.3 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 |
| 180000 | 8.5 | 8.4 | 8.3 | 8.1 | 8.2 | 8.2 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 | 8.2 |
| 190000 | 8.4 | 8.4 | 8.1 | 8.0 | 8.1 | 8.2 | 8.3 | 8.3 | 8.4 | 8.4 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.2 |
| 200000 | 8.4 | 8.3 | 7.9 | 8.0 | 8.2 | 8.2 | 8.3 | 8.3 | 8.4 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.1 | 8.2 |
| 210000 | 8.4 | 8.3 | 8.0 | 8.0 | 8.2 | 8.1 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.1 | 8.2 |
| 220000 | 8.4 | 8.3 | 8.2 | 8.0 | 8.2 | 8.1 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.1 | 8.2 |
| 230000 | 8.4 | 8.3 | 8.1 | 8.1 | 8.1 | 8.1 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.1 | 8.2 |
| Daily Max | 8.5 | 8.5 | 8.3 | 8.2 | 8.3 | 8.3 | 8.6 | 8.5 | 8.5 | 8.4 | 8.4 | 8.4 | 8.3 | 8.3 | 8.2 | 8.2 |
| Daily Min | 8.3 | 8.3 | 7.9 | 7.9 | 8.0 | 8.0 | 8.0 | 8.2 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.1 | 8.1 | 8.1 |
| Average | 8.4 | 8.4 | 8.2 | 8.0 | 8.1 | 8.1 | 8.3 | 8.4 | 8.4 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.2 | 8.2 |

License maximum pH: 9
License minimum pH: 6

Missing data due to equipment maintenance.

High Falls Tailrace pH Summary - September 2012

| Time HHMMSS | 09/17/12 | 09/18/12 | 09/19/12 | 09/20/12 | 09/21/12 | 09/22/12 | 09/23/12 | 09/24/12 | 09/25/12 | 09/26/12 | 09/27/12 | 09/28/12 | 09/29/12 | 09/30/12 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 8.1 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 |
| 10000 | 8.1 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 |
| 20000 | 8.1 | 8.2 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.0 | 8.2 |
| 30000 | 8.1 | 8.1 | 8.0 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 |
| 40000 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 |
| 50000 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 |
| 60000 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 |
| 70000 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 |
| 80000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 |
| 90000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 |
| 100000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 |
| 110000 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.1 | 8.2 | 8.2 |
| 120000 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 |
| 130000 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 |
| 140000 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.1 | 8.3 | 8.2 |
| 150000 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.0 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 |
| 160000 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.1 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 |
| 170000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.2 | 8.2 |
| 180000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 |
| 190000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 |
| 200000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 |
| 210000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 |
| 220000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 |
| 230000 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.1 |
| Daily Max | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.3 | 8.3 |
| Daily Min | 8.1 | 8.1 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.0 | 8.1 | 8.1 | 8.1 | 8.1 | 8.0 | 8.1 |
| Average | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.2 | 8.2 |

Attachment B

High Falls Hydroelectric Project

FERC No. 2595

Documentation of Agency Consultation

Metcalfe, Mark W

From: Metcalf, Mark W
Sent: Thursday, October 04, 2012 2:10 PM
To: Laatsch, Cheryl - DNR; Utrup, Nick
Cc: Puzen, Shawn C; Brandt, Edward S; Bosacki, William K
Subject: High Falls Hydroelectric Project - Water quality monitoring report
Attachments: 20121004 HF WQ report.pdf; High Falls Bridge Temp Summary 2012.xlsx; High Falls Bridge DO Summary 2012.xlsx; High Falls Bridge pH Summary 2012.xlsx

Good afternoon,

Attached for your review and comment are the results of water quality monitoring conducted at the High Falls Hydroelectric Project in 2012. Should you have any questions, please feel free to contact me.

Thanks,
Mark

Mark Metcalf

Environmental Consultant - Air & Water | Integrys Business Support, LLC

920-433-1833 (Green Bay)

920-617-6046 (De Pere)

920-606-8432 *cell*

920-433-4916 *fax*

mwmetcalf@integrysgroup.com

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Providing support for Integrys Energy Group, Integrys Energy Services, Integrys Transportation Fuels, Michigan Gas Utilities, Minnesota Energy Resources, North Shore Gas, Peoples Gas, Upper Peninsula Power Company and Wisconsin Public Service.



Wisconsin Public Service Corporation

700 North Adams Street
P.O. Box 19001
Green Bay, WI 54307-9001

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October 4, 2012

FERC Project No. 2595

Ms. Cheryl Laatsch
Wisconsin Department of Natural Resources
Office of Energy, Water Mgmt Specialist
101 S. Webster St.
Madison, WI 53703

Mr. Nicholas Utrup
U.S. Fish & Wildlife Service
Wisconsin Ecological Services Office
2661 Scott Tower Drive
New Franken, WI 54229

Dear Ms. Laatsch and Mr. Utrup:

Re: 2012 Water Quality Monitoring Report – High Falls Hydroelectric Project

Pursuant to the water quality monitoring plan for the High Falls Hydroelectric project, Wisconsin Public Service Corporation (WPSC) is submitting water quality monitoring data collected during the 2012 monitoring season for your review and comment.

As described in the monitoring plan, water quality monitoring is conducted downstream of the powerhouse annually from June 1st through September 30th. Monitoring downstream of the powerhouse is conducted where High Falls Road crosses the Peshtigo River. Monitoring upstream of the project occurs every 5 years in conjunction with water quality monitoring conducted at the Caldron Falls Hydroelectric Project. Upstream monitoring was conducted in 2011 and is scheduled to occur again in 2016.

Monitoring data for dissolved oxygen (DO), temperature, and pH is collected at one-hour intervals on a continuous basis. Data was collected using portable water quality monitoring equipment manufactured by Hydrolab, Inc. As described in the water quality monitoring plan for the project, the instrumentation was cleaned and calibrated according to manufacturer specification every 7-10 days during the monitoring period. A post deployment calibration was conducted to determine the extent of calibration drift. Raw data was adjusted assuming a linear degradation of calibration based upon a post calibration of the equipment. The water quality monitoring equipment used to monitor dissolved oxygen has an accuracy of +/- 0.1 mg/l, per the manufacturer. For compliance purposes, dissolved oxygen concentrations more than 0.1 mg/l below the applicable water quality standard are potential deviations.

October 4, 2012
Ms. Laatsch and Mr, Utrup
Page 2 of 2

Per the Project License, WPSC is required to ensure flow releases from the project, as measured immediately downstream from the dam, maintain the following standards, except when natural conditions prohibit attainment of the standards: (1) DO concentrations shall not be less than 5.0 milligrams per liter (mg/L) (minus the precision of the monitoring instrument) for more than 24 hours per year; (2) water temperature shall not exceed 89 degrees Fahrenheit; and (3) the pH shall be within the range of 6.0 to 9.0, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum. Natural conditions include inflows to the project less than the 95 percent exceedance flow.

No deviations from the dissolved oxygen, pH or temperature water quality standards were observed during the 2012 monitoring season. There were 5 hours of missing monitoring data due to the maintenance and calibration of the monitoring equipment, 4 hours of missing data due to an equipment malfunction, and 4 hours of missing DO data due to a sensor failure on the monitoring equipment.

Enclosed with this report are excel spreadsheets containing the monitoring data, in both tabular and graphical format, with the periods of missing data identified. Please review the enclosed data and provide any comments you may have as soon as possible, but by no later than November 5th, 2012. Should you have any questions or concerns, please do not hesitate to call me at (920) 433-1833.

Sincerely,



Mark Metcalf
Environmental Consultant – Air & Water
Integrays Business Support, LLC
mwmetcalf@integraysgroup.com

Enc.

Cc: Mr. Shawn Puzen – IBS
Mr. Ed Brandt – WPSC
Mr. William Bosacki – WPSC

Metcalfe, Mark W

From: Laatsch, Cheryl - DNR [Cheryl.Laatsch@Wisconsin.gov]
Sent: Tuesday, October 23, 2012 1:50 PM
To: Metcalfe, Mark W; Puzen, Shawn C
Cc: Sevener, Gregory A - DNR
Subject: WDNR comments for High Falls WQ report, 2012

We appreciate timely submittal of the required monitoring data and information and are pleased to see no water quality standard violations in this year's Water Quality Report. In future years, please remember to explain any deviations from license requirements for monitoring or deviations from water quality standards written in the license. Please notify Greg Sevener within 48 hours if deviations from water quality standards are detected during the monitoring period. We look forward to further cooperation on your water quality monitoring and reporting.

Cheryl Laatsch, Water Mgt Specialist,
WDNR, Office of Energy, GEF2, 7th Floor
101 S Webster St Madison WI 53707-7921
Madison office phone: (608) 264-8943

OR

Cheryl Laatsch, Horicon DNR
N7725 HIGHWAY 28
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(920) 387-7869
(920) 485-3028 (Fax)

e-mail: Cheryl.laatsch@wisconsin.gov
Website: dnr.wi.gov
www.facebook.com/WIDNR

Metcalfe, Mark W

From: Sevener, Gregory A - DNR [Gregory.Sevener@wisconsin.gov]
Sent: Wednesday, October 24, 2012 3:13 PM
To: Laatsch, Cheryl - DNR; Metcalfe, Mark W; Puzen, Shawn C
Cc: Hudak, Andrew J - DNR; McLennan, Robin - DNR
Subject: RE: WDNR comments for High Falls WQ report, 2012

Hello All,

I would just like to say that my name should be replaced with Andy Hudak for future notifications.

Gregory A. Sevener

WI. DNR Peshtigo Service Center
101 N. Ogden Road Suite A
Peshtigo, WI. 54157
Phone : 715-582-5013
Email: gregory.sevener@wisconsin.gov
Find us at <http://dnr.wi.gov> and www.facebook.com/WIDNR

From: Laatsch, Cheryl - DNR
Sent: Tuesday, October 23, 2012 1:50 PM
To: Metcalfe, Mark W (MWMetcalfe@integrysgroup.com); Puzen, Shawn C (SCPuzen@integrysgroup.com)
Cc: Sevener, Gregory A - DNR
Subject: WDNR comments for High Falls WQ report, 2012

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Website: dnr.wi.gov
www.facebook.com/WIDNR

Metcalfe, Mark W

From: Metcalf, Mark W
Sent: Thursday, October 25, 2012 8:40 AM
To: 'Sevener, Gregory A - DNR'; Laatsch, Cheryl - DNR; Puzen, Shawn C
Cc: Hudak, Andrew J - DNR; McLennan, Robin - DNR
Subject: RE: WDNR comments for High Falls WQ report, 2012

Greg - Thank you for the notification.

Cheryl and Andy – Thank you for the response on the 2012 water quality monitoring report. With regards to notification of potential deviations from the water quality standards, the reporting requirement in the water quality monitoring plan is as follows: “When the Energy Supply and Control Desk identifies a period of non-compliance with state standards and the calibration of the instrument is verified, the WDNR will be notified within five working days.”

WPSC will report potential deviations from water quality standards as expeditiously as possible, but within 5 working days of observation of a period of non-compliance as identified in the monitoring plan.

Mark

Mark Metcalf

Environmental Consultant - Air & Water | Integrys Business Support, LLC

920-433-1833 (Green Bay)

920-617-6046 (De Pere)

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Providing support for Integrys Energy Group, Integrys Energy Services, Integrys Transportation Fuels, Michigan Gas Utilities, Minnesota Energy Resources, North Shore Gas, Peoples Gas, Upper Peninsula Power Company and Wisconsin Public Service.

From: Sevener, Gregory A - DNR [<mailto:Gregory.Sevener@wisconsin.gov>]
Sent: Wednesday, October 24, 2012 3:13 PM
To: Laatsch, Cheryl - DNR; Metcalf, Mark W; Puzen, Shawn C
Cc: Hudak, Andrew J - DNR; McLennan, Robin - DNR
Subject: RE: WDNR comments for High Falls WQ report, 2012

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Sent: Tuesday, October 23, 2012 1:50 PM

To: Metcalf, Mark W (MWMcCalf@integrysgroup.com); Puzen, Shawn C (SCPuzen@integrysgroup.com)

Cc: Sevener, Gregory A - DNR

Subject: WDNR comments for High Falls WQ report, 2012

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e-mail: Cheryl.laatsch@wisconsin.gov

Website: dnr.wi.gov

www.facebook.com/WIDNR

Response to Comments from the Wisconsin Department of Natural Resources on the 2012 High Falls Water Quality Monitoring Report:

Comment: “We appreciate timely submittal of the required monitoring data and information and are pleased to see no water quality standard violations in this year’s Water Quality Report. In future years, please remember to explain any deviations from license requirements for monitoring or deviations from water quality standards written in the license. Please notify Greg Sevenser within 48 hours if deviations from water quality standards are detected during the monitoring period. We look forward to further cooperation on your water quality monitoring and reporting.”

Response: Comment Noted. With regards to notification of potential deviations from the water quality standards, the reporting requirement in the water quality monitoring plan is as follows: “When the Energy Supply and Control Desk identifies a period of non-compliance with state standards and the calibration of the instrument is verified, the WDNR will be notified within five working days.” WPSC will report potential deviations from water quality standards as expeditiously as possible, but within 5 working days of observation of a period of non-compliance as identified in the monitoring plan.

Document Content(s)

20121211 HF FERC WQ report.PDF.....1-48