292001-0001 #15235

# DEEP CREEK HYDROELECTRIC STATION
# MARYLAND DEPARTMENT of the ENVIRONMENT
# WATER APPROPRIATION PERMIT NO. GA92S009 (03)
# GARRETT COUNTY, MARYLAND

## ANNUAL REPORT for 2000

January 2001

BY

RELIANT ENERGY MARYLAND HOLDINGS, LLC

**DEEP CREEK HYDROELECTRIC STATION**
**MDE WATER APPROPRIATION PERMIT NO. GA92S009 (03)**
**ANNUAL REPORT for 2000**

## TABLE OF CONTENTS

**DEEP CREEK HYDROELECTRIC STATION**
**MDE WATER APPROPRIATION PERMIT NO. GA92S009 (03)**
**ANNUAL REPORT for 2000**

## 1.0 SUMMARY

Reliant Energy Maryland Holdings, LLC (Permittee) holds Water Appropriation Permit GA92S009(03) issued by the Maryland Department of the Environment (Department). Permit GA92S009(03) provides for the continued operation of the Deep Creek Hydroelectric Station previously owned and operated by Sithe Maryland Holdings LLC and Pennsylvania Electric Company. Operation of the facility under Sithe ownership commenced on November 24, 1999. Reliant Energy commenced operation on May 12, 2000.

Permit Condition 23 of the permit requires the Permittee to submit an annual report to the Department, including data and information as specified in Permit Conditions 15-19 and 21. This report covers operation of Deep Creek Station under both Sithe and Reliant ownership.

## 1.1 Lake Level Monitoring

Appendix A contains daily water level data and a plot depicting lake levels for 2000. Lake levels exceeded the desired end of the month Upper Rule Band by 0.2 feet in May, 0.1 feet in June and 0.1 feet in July. When viewed as a continuous rule band, Reliant maintained the reservoir level above or near the Upper Rule Band for most of June, July and August for maintenance on the emergency spillway and intake structures.

## 1.2 Temperature Monitoring

The Department approved a "Water Temperature Enhancement Plan" for Deep Creek Station on June 8, 1996. The Plan was designed to maintain river water temperatures below 25°C in the Youghiogheny River. In accordance with the Plan, the Permittee monitored water temperature in the Youghiogheny River at the Sang Run Bridge from June 1 through August 31, 2000.

The Permittee released water in accordance with the Water Temperature Enhancement Plan on eight days in 2000. Four of the releases were 2-hours and four were 1-hour in duration. River water temperatures exceeded 25°C on three days in 2000. Temperatures reached a high of 26.4°C on July 2, 26.2°C on July 8 and 26.7°C on August 2. Temperature enhancement releases occurred on July 2 and July 8 in accordance with the Plan. The Plan did not require a temperature enhancement release on August 2. Temperature data collected during 2000 and copies of the daily log sheets for the eight release days and August 2 are included in Appendix B.

## 1.3 Minimum Flow Release Monitoring

The Permittee operated the flow bypass in accordance with the "Deep Creek Station Flow Bypass Operation Protocol, May 1995". Due to adequate natural river flows, flow bypasses were not required in 2000. A record of the U.S. Geological Survey data from the Oakland gaging station is presented in Appendix C.

## 1.4 Dissolved Oxygen (DO) Monitoring

The Permittee operated the dissolved oxygen enhancement weir during 2000 in accordance with the "Dissolved Oxygen (DO) Enhancement Operations and

Monitoring Protocol" approved by the Department on January 6, 1995. Data obtained from monitoring DO in 2000 is included in Appendix D.

The Permittee operated the tailrace weir with all gates open until DO levels fell below 6.0 mg/l. This occurred on July 17 when the Permittee measured DO levels of 5.65 mg/l. As a result of the low reading, the Permittee operated the weir with two sluice gates closed and two open about one foot. No other DO measurements were below 6.0 mg/l.

## 1.5 Releases Unsuitable for Whitewater Recreation

Permit Condition 19 outlines several operating rules designed to enhance whitewater boating opportunities in the Youghiogheny River. One operating rule restricts generation during certain times of the day unless flows suitable for whitewater boating also occur. The specific criteria for this operating rule:

- apply only from April 15 through October 15,
- apply only when the lake is between the upper and lower rule bands,
- may be suspended during emergency conditions described in Condition 14, and
- prohibit releases between 1600 hours and 0800 hours of the following morning unless:
    1. a release providing 3 consecutive hours suitable for whitewater boating occurs during the 0800 to 1600 hour period immediately preceding the release.
    2. a release providing 3 consecutive hours suitable for whitewater boating occurs during the 0800 to 1600 hour period immediately following the release.

Condition 19 requires the Permittee to document "times and dates when generation releases not suitable for whitewater recreation occurred." Using the criteria above, generation releases not suitable for whitewater recreation did not occur during 2000.

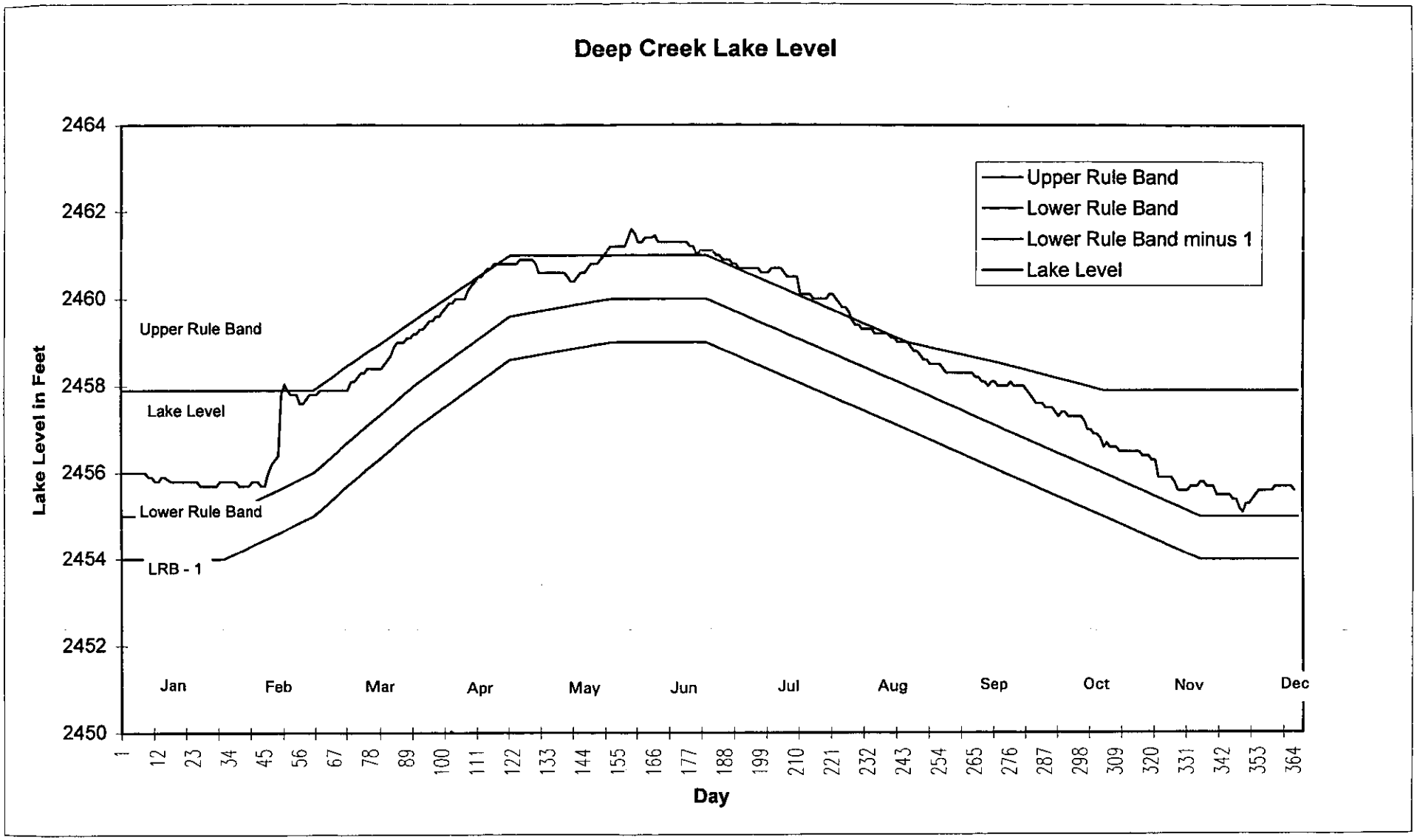
## 1.6 Zebra Mussel Monitoring

Artificial substrates placed at the station intake area during 2000 showed no signs of the zebra mussel infestation.

# APPENDIX A

# LAKE LEVEL DATA AND PLOT

# Deep Creek Lake Level



# Deep Creek Lake Level 2000

| Month | Day | Lake Level | Rain Fall | Month | Day | Lake Level | Rain Fall | Month | Day | Lake Level | Rain Fall |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | 1 | 2456 | 0 | Feb | 1 | 2455.8 | 0.11 | Mar | 1 | 2457.8 | 0.1 |
| | 2 | 2456 | 0 | | 2 | 2455.8 | 0.2 | | 2 | 2457.9 | 0 |
| | 3 | 2456 | 0 | | 3 | 2455.8 | 0.12 | | 3 | 2457.9 | 0 |
| | 4 | 2456 | 0.33 | | 4 | 2455.8 | 0.1 | | 4 | 2457.9 | 0 |
| | 5 | 2456 | 0.14 | | 5 | 2455.8 | 0.27 | | 5 | 2457.9 | 0 |
| | 6 | 2456 | 0 | | 6 | 2455.7 | 0 | | 6 | 2457.9 | 0 |
| | 7 | 2456 | 0 | | 7 | 2455.7 | 0 | | 7 | 2457.9 | 0 |
| | 8 | 2456 | 0.02 | | 8 | 2455.7 | 0 | | 8 | 2457.9 | 0 |
| | 9 | 2455.9 | 0.04 | | 9 | 2455.7 | 0 | | 9 | 2457.9 | 0.08 |
| | 10 | 2455.9 | 0.25 | | 10 | 2455.8 | 0 | | 10 | 2457.9 | 0 |
| | 11 | 2455.8 | 0.22 | | 11 | 2455.8 | 0.45 | | 11 | 2457.9 | 1.27 |
| | 12 | 2455.8 | 0 | | 12 | 2455.8 | 0 | | 12 | 2458.1 | 0.12 |
| | 13 | 2455.9 | 0.48 | | 13 | 2455.7 | 0.45 | | 13 | 2458.1 | 0 |
| | 14 | 2455.9 | 0.05 | | 14 | 2455.7 | 0.94 | | 14 | 2458.2 | 0 |
| | 15 | 2455.85 | 0 | | 15 | 2456 | 0.03 | | 15 | 2458.3 | 0 |
| | 16 | 2455.8 | 0 | | 16 | 2456.2 | 0.05 | | 16 | 2458.3 | 0.43 |
| | 17 | 2455.8 | 0 | | 17 | 2456.3 | 0.05 | | 17 | 2458.4 | 0.18 |
| | 18 | 2455.8 | 0 | | 18 | 2456.4 | 3.45 | | 18 | 2458.4 | 0 |
| | 19 | 2455.8 | 0.04 | | 19 | 2457.8 | 0.2 | | 19 | 2458.4 | 0 |
| | 20 | 2455.8 | 0.15 | | 20 | 2458.05 | 0.08 | | 20 | 2458.4 | 0.12 |
| | 21 | 2455.8 | 0.59 | | 21 | 2457.9 | 0 | | 21 | 2458.4 | 1.11 |
| | 22 | 2455.8 | 0.06 | | 22 | 2457.8 | 0 | | 22 | 2458.5 | 0.03 |
| | 23 | 2455.8 | 0.05 | | 23 | 2457.8 | 0 | | 23 | 2458.6 | 0 |
| | 24 | 2455.8 | 0.05 | | 24 | 2457.8 | 0 | | 24 | 2458.7 | 0 |
| | 25 | 2455.7 | 0 | | 25 | 2457.6 | 0 | | 25 | 2458.9 | 0.13 |
| | 26 | 2455.7 | 0.02 | | 26 | 2457.6 | 0 | | 26 | 2459 | 0 |
| | 27 | 2455.7 | 0.08 | | 27 | 2457.7 | 0.5 | | 27 | 2459 | 0.06 |
| | 28 | 2455.7 | 0.05 | | 28 | 2457.8 | 0 | | 28 | 2459 | 0.5 |
| | 29 | 2455.7 | 0 | | 29 | 2457.8 | 0 | | 29 | 2459.1 | 0.06 |
| | 30 | 2455.7 | 0.03 | | | | | | 30 | 2459.1 | 0 |
| | 31 | 2455.8 | 0.31 | | | | | | 31 | 2459.2 | 0 |
| Total | | | 2.96 | | | | 7 | | | | 4.19 |

# Deep Creek Lake Level 2000

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Apr | 1 | 2459.2 | 0 | May | 1 | 2460.8 | 0.25 | Jun | 1 | 2461.2 | 0 |
| | 2 | 2459.3 | 0.42 | | 2 | 2460.8 | 0.47 | | 2 | 2461.2 | 0.2 |
| | 3 | 2459.3 | 0.05 | | 3 | 2460.9 | 0 | | 3 | 2461.2 | 0 |
| | 4 | 2459.4 | 0.09 | | 4 | 2460.9 | 0 | | 4 | 2461.2 | 0 |
| | 5 | 2459.5 | 0 | | 5 | 2460.9 | 0 | | 5 | 2461.2 | 1.9 |
| | 6 | 2459.5 | 0 | | 6 | 2460.9 | 0 | | 6 | 2461.4 | 0.28 |
| | 7 | 2459.6 | 0 | | 7 | 2460.9 | 0 | | 7 | 2461.6 | 0 |
| | 8 | 2459.6 | 0.6 | | 8 | 2460.8 | 0 | | 8 | 2461.5 | 0 |
| | 9 | 2459.7 | 0.15 | | 9 | 2460.6 | 0 | | 9 | 2461.3 | 0 |
| | 10 | 2459.8 | 0 | | 10 | 2460.6 | 0 | | 10 | 2461.3 | 0 |
| | 11 | 2459.9 | 0.35 | | 11 | 2460.6 | 0 | | 11 | 2461.4 | 0 |
| | 12 | 2459.9 | 0.1 | | 12 | 2460.6 | 0 | | 12 | 2461.4 | 0.05 |
| | 13 | 2460 | 0 | | 13 | 2460.6 | 0.53 | | 13 | 2461.4 | 0.05 |
| | 14 | 2460 | 0 | | 14 | 2460.6 | 0 | | 14 | 2461.45 | 0 |
| | 15 | 2460 | 0 | | 15 | 2460.6 | 0 | | 15 | 2461.3 | 0.47 |
| | 16 | 2460 | 0 | | 16 | 2460.6 | 0 | | 16 | 2461.3 | 0 |
| | 17 | 2460.2 | 0.88 | | 17 | 2460.6 | 0 | | 17 | 2461.3 | 0.52 |
| | 18 | 2460.3 | 0.03 | | 18 | 2460.5 | 0 | | 18 | 2461.3 | 0.47 |
| | 19 | 2460.4 | 0 | | 19 | 2460.4 | 1.28 | | 19 | 2461.3 | 0.09 |
| | 20 | 2460.5 | 0.03 | | 20 | 2460.4 | 0.47 | | 20 | 2461.3 | 0 |
| | 21 | 2460.5 | 0.4 | | 21 | 2460.5 | 0.04 | | 21 | 2461.3 | 0.6 |
| | 22 | 2460.6 | 0.32 | | 22 | 2460.6 | 0.02 | | 22 | 2461.3 | 0 |
| | 23 | 2460.7 | 0.07 | | 23 | 2460.6 | 0.96 | | 23 | 2461.3 | 0 |
| | 24 | 2460.7 | 0 | | 24 | 2460.7 | 0.13 | | 24 | 2461.3 | 0 |
| | 25 | 2460.8 | 0 | | 25 | 2460.8 | 0 | | 25 | 2461.2 | 0.14 |
| | 26 | 2460.8 | 0 | | 26 | 2460.8 | 0 | | 26 | 2461.2 | 0.07 |
| | 27 | 2460.8 | 0 | | 27 | 2460.8 | 0.55 | | 27 | 2461 | 0.45 |
| | 28 | 2460.8 | 0 | | 28 | 2460.9 | 0.77 | | 28 | 2461.1 | 0.02 |
| | 29 | 2460.8 | 0 | | 29 | 2461 | 0.03 | | 29 | 2461.1 | 0.05 |
| | 30 | 2460.8 | 0 | | 30 | 2461.1 | 0 | | 30 | 2461.1 | 0 |
| | | | | | 31 | 2461.2 | 0 | | | | |
| Total | | | 3.49 | | | | 5.5 | | | | 5.36 |

# Deep Creek Lake Level 2000

| Month | Day | Lake Level | Rain Fall | Month | Day | Lake Level | Rain Fall | Month | Day | Lake Level | Rain Fall |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jul | 1 | 2461.1 | 0 | Aug | 1 | 2460.1 | 0 | Sep | 1 | 2458.9 | 0 |
| | 2 | 2461.1 | 0 | | 2 | 2460 | 0 | | 2 | 2458.8 | 0.1 |
| | 3 | 2461 | 0.25 | | 3 | 2460 | 0 | | 3 | 2458.8 | 0.05 |
| | 4 | 2461 | 0.05 | | 4 | 2460 | 0.15 | | 4 | 2458.7 | 0 |
| | 5 | 2460.9 | 0 | | 5 | 2460 | 0.15 | | 5 | 2458.6 | 0 |
| | 6 | 2460.9 | 0.02 | | 6 | 2460 | 0 | | 6 | 2458.6 | 0 |
| | 7 | 2460.9 | 0 | | 7 | 2460.1 | 1.75 | | 7 | 2458.5 | 0 |
| | 8 | 2460.8 | 0 | | 8 | 2460.1 | 0.05 | | 8 | 2458.5 | 0 |
| | 9 | 2460.8 | 0 | | 9 | 2460 | 0.5 | | 9 | 2458.5 | 0 |
| | 10 | 2460.7 | 0.55 | | 10 | 2459.9 | 0.05 | | 10 | 2458.5 | 0.5 |
| | 11 | 2460.7 | 0.05 | | 11 | 2459.8 | 0.05 | | 11 | 2458.4 | 0.05 |
| | 12 | 2460.7 | 0 | | 12 | 2459.8 | 0.05 | | 12 | 2458.3 | 0.15 |
| | 13 | 2460.7 | 0 | | 13 | 2459.7 | 0 | | 13 | 2458.3 | 0 |
| | 14 | 2460.7 | 0 | | 14 | 2459.5 | 0 | | 14 | 2458.3 | 0 |
| | 15 | 2460.7 | 0.8 | | 15 | 2459.4 | 0.05 | | 15 | 2458.3 | 0.3 |
| | 16 | 2460.7 | 0.45 | | 16 | 2459.4 | 0 | | 16 | 2458.3 | 0.15 |
| | 17 | 2460.6 | 0 | | 17 | 2459.3 | 0 | | 17 | 2458.3 | 0 |
| | 18 | 2460.6 | 0 | | 18 | 2459.3 | 0.5 | | 18 | 2458.3 | 0 |
| | 19 | 2460.6 | 1.5 | | 19 | 2459.3 | 0 | | 19 | 2458.3 | 0.15 |
| | 20 | 2460.7 | 0 | | 20 | 2459.3 | 0 | | 20 | 2458.3 | 0.15 |
| | 21 | 2460.7 | 0 | | 21 | 2459.2 | 0 | | 21 | 2458.2 | 0.05 |
| | 22 | 2460.7 | 0.05 | | 22 | 2459.2 | 0 | | 22 | 2458.2 | 0.05 |
| | 23 | 2460.7 | 0 | | 23 | 2459.2 | 0.35 | | 23 | 2458.1 | 0.05 |
| | 24 | 2460.6 | 0.18 | | 24 | 2459.2 | 0.05 | | 24 | 2458.1 | 0.25 |
| | 25 | 2460.5 | 0 | | 25 | 2459.2 | 0.05 | | 25 | 2458 | 2.15 |
| | 26 | 2460.5 | 0 | | 26 | 2459.1 | 0 | | 26 | 2458.1 | 0.2 |
| | 27 | 2460.5 | 0 | | 27 | 2459.1 | 0.1 | | 27 | 2458.1 | 0 |
| | 28 | 2460.5 | 0.1 | | 28 | 2459 | 0 | | 28 | 2458 | 0 |
| | 29 | 2460.1 | 0.05 | | 29 | 2459 | 0 | | 29 | 2458 | 0 |
| | 30 | 2460.1 | 0.1 | | 30 | 2459 | 0 | | 30 | 2458 | 0 |
| | 31 | 2460.1 | 1.6 | | 31 | 2459 | 0 | | | | |
| Total | | | 5.75 | | | | 3.85 | | | | 4.35 |

# Deep Creek Lake Level 2000

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oct | 1 | 2458 | 0 | Nov | 1 | 2456.7 | 0 | Dec | 1 | 2455.8 | 0 |
| | 2 | 2458.1 | 0 | | 2 | 2456.6 | 0 | | 2 | 2455.7 | 0 |
| | 3 | 2458 | 0 | | 3 | 2456.6 | 0 | | 3 | 2455.7 | 0 |
| | 4 | 2458 | 0 | | 4 | 2456.6 | 0 | | 4 | 2455.7 | 0 |
| | 5 | 2458 | 0 | | 5 | 2456.5 | 0 | | 5 | 2455.5 | 0.05 |
| | 6 | 2458 | 0.07 | | 6 | 2456.5 | 0 | | 6 | 2455.5 | 0 |
| | 7 | 2457.9 | 0.03 | | 7 | 2456.5 | 0 | | 7 | 2455.5 | 0.15 |
| | 8 | 2457.8 | 0 | | 8 | 2456.5 | 0.1 | | 8 | 2455.5 | 0.05 |
| | 9 | 2457.7 | 0.1 | | 9 | 2456.5 | 0.25 | | 9 | 2455.5 | 0 |
| | 10 | 2457.6 | 0.05 | | 10 | 2456.5 | 1.15 | | 10 | 2455.4 | 0 |
| | 11 | 2457.6 | 0 | | 11 | 2456.5 | 0 | | 11 | 2455.4 | 0 |
| | 12 | 2457.6 | 0 | | 12 | 2456.4 | 0 | | 12 | 2455.2 | 0.1 |
| | 13 | 2457.5 | 0 | | 13 | 2456.4 | 0.1 | | 13 | 2455.1 | 0.25 |
| | 14 | 2457.5 | 0 | | 14 | 2456.4 | 0 | | 14 | 2455.3 | 0.85 |
| | 15 | 2457.5 | 0 | | 15 | 2456.3 | 0.05 | | 15 | 2455.3 | 0 |
| | 16 | 2457.4 | 0 | | 16 | 2456.3 | 0 | | 16 | 2455.4 | 0.4 |
| | 17 | 2457.3 | 0.2 | | 17 | 2455.9 | 0 | | 17 | 2455.5 | 0.4 |
| | 18 | 2457.4 | 0.75 | | 18 | 2455.9 | 0 | | 18 | 2455.6 | 0.05 |
| | 19 | 2457.4 | 0 | | 19 | 2455.9 | 0 | | 19 | 2455.6 | 0.07 |
| | 20 | 2457.3 | 0 | | 20 | 2455.9 | 0.05 | | 20 | 2455.6 | 0.05 |
| | 21 | 2457.3 | 0 | | 21 | 2455.9 | 0 | | 21 | 2455.6 | 0 |
| | 22 | 2457.3 | 0 | | 22 | 2455.8 | 0.15 | | 22 | 2455.6 | 0 |
| | 23 | 2457.3 | 0 | | 23 | 2455.6 | 0 | | 23 | 2455.7 | 0 |
| | 24 | 2457.3 | 0.05 | | 24 | 2455.6 | 0 | | 24 | 2455.7 | 0 |
| | 25 | 2457.2 | 0 | | 25 | 2455.6 | 0.35 | | 25 | 2455.7 | 0 |
| | 26 | 2457 | 0 | | 26 | 2455.6 | 0.15 | | 26 | 2455.7 | 0 |
| | 27 | 2457 | 0 | | 27 | 2455.7 | 0.2 | | 27 | 2455.7 | 0.02 |
| | 28 | 2456.9 | 0 | | 28 | 2455.7 | 0 | | 28 | 2455.7 | 0 |
| | 29 | 2456.9 | 0 | | 29 | 2455.7 | 0.2 | | 29 | 2455.6 | 0 |
| | 30 | 2456.8 | 0 | | 30 | 2455.8 | 0.1 | | 30 | 0 | 0 |
| | 31 | 2456.6 | 0 | | | | | | 31 | 0 | 0 |
| Total | | | 1.25 | | | | 2.85 | | | | 2.44 |
| | | | | | | | | | | Year Total | 48.99 |

# APPENDIX B

# TEMPERATURE MONITORING AND RELEASE REPORTS

## MAXIMUM DAILY RIVER WATER TEMPERATURES

Daily maximum river water temperatures in the Youghiogheny River at Sang Run are presented on the following table. The data were collated and provided by Versar, Inc., consultant to the MDNR Power Plant Assessment Division (PPAD).

The column labeled "SMAX" lists the arithmetic means of the daily maximum water temperatures, in degrees C, measured by two "Tempmentors" placed in the river by the MDNR. The column labeled "PenMAX" lists the maximum water temperatures, in degrees C, measured by the Permittee's temperature monitor at the Sang Run Bridge. PPAD and Versar analyze the data to evaluate the Water Temperature Enhancement Plan used by the Permittee to determine the need and timing of daily temperature releases.

Deep Creek Power Plant made 8 temperature enhancement releases in 2000. Temperatures at Sang Run exceeded 25°C on 3 days during 2000. Copies of the temperature enhancement data sheets for these days are enclosed. The data sheets list the incorrect river flow for the day. River flows logged by the operator and used in the calculations are listed on Table B-2. Days when temperatures exceeded 25°C are listed on Table B-1. Days when temperature enhancement releases were made are summarized in Table B-2.

# Table B-1

## Summary of Temperatures Exceeding 25 C

| Date | Start Time | Duration | Max Temp (C) |
|---|---|---|---|
| July 2 | 1540 | 2 h, 10 min | 26.4 |
| July 8 | 1600 | 1 h, 30 min | 26.2 |
| Aug 2 | 1440 | 4 h, 10 min | 26.7 |

# Table B-2

## Dates & Times of Temperature Enhancement Releases

| Date | Start Time | Duration | River Flow (cfs) |
|---|---|---|---|
| June 21 | 1100 | 2 hours | 87 |
| June 25 | 1230 | 2 hours | 94 |
| July 2 | 1530 | 1 hour | 60 |
| July 4 | 1100 | 2 hours | 73 |
| July 6 | 1200 | 1 hour | 62 |
| July 8 | 1502 | 1 hour | 36 |
| July 9 | 1230 | 2 hours | 29 |
| August 10 | 1220 | 1 hour | 99 |

**Deep Creek Station**
**Youghiogheny River Temperature Data - 2000**

| June | Smax | PenSmax | July | Smax | PenSmax | August | Smax | PenSmax |
|---|---|---|---|---|---|---|---|---|
| 1 | | | 1 | 20.4 | 21.1 | 1 | 24.3 | 24.8 |
| 2 | | | 2 | 26.3 | 26.4 | 2 | 26.3 | 26.7 |
| 3 | | | 3 | 19.7 | 19.4 | 3 | 23.1 | 23.4 |
| 4 | | | 4 | 22.1 | 22.9 | 4 | 22.0 | 22.4 |
| 5 | | | 5 | 23.7 | 24.7 | 5 | 21.5 | 22.8 |
| 6 | | | 6 | 24.5 | 23.6 | 6 | 20.0 | 20.1 |
| 7 | | | 7 | 21.8 | 22.3 | 7 | 20.8 | 20.8 |
| 8 | | 16.0 | 8 | 25.5 | 26.2 | 8 | 21.4 | 21.1 |
| 9 | | 19.4 | 9 | 24.2 | 23.8 | 9 | 24.5 | 24.2 |
| 10 | | 21.4 | 10 | 20.9 | 21.2 | 10 | 24.3 | 24.1 |
| 11 | | 22.7 | 11 | 21.5 | 21.7 | 11 | 20.5 | 20.5 |
| 12 | | 20.9 | 12 | 20.7 | 21.6 | 12 | 22.9 | 23.9 |
| 13 | | 24.0 | 13 | 21.5 | 22.3 | 13 | 21.1 | 21.4 |
| 14 | | 25.0 | 14 | 21.9 | 22.3 | 14 | 21.1 | 21.7 |
| 15 | | 22.5 | 15 | 22.0 | 22.6 | 15 | 23.5 | 23.6 |
| 16 | | 24.2 | 16 | 22.5 | 22.4 | 16 | 22.9 | 23.1 |
| 17 | | 21.4 | 17 | 21.2 | 21.8 | 17 | 19.8 | 20.0 |
| 18 | | 21.1 | 18 | 23.2 | 23.5 | 18 | 18.6 | 19.0 |
| 19 | | 21.8 | 19 | 19.8 | 20.4 | 19 | 22.0 | 22.4 |
| 20 | 24.2 | 24.7 | 20 | 18.4 | 19.1 | 20 | 22.6 | 23.6 |
| 21 | 22.3 | 21.9 | 21 | 18.2 | 19.1 | 21 | 21.4 | 22.3 |
| 22 | 23.0 | 23.4 | 22 | 20.1 | 20.7 | 22 | 23.4 | 23.9 |
| 23 | 21.3 | 21.7 | 23 | 19.8 | 19.7 | 23 | 19.6 | 20.5 |
| 24 | 24.1 | 23.4 | 24 | 17.6 | 18.2 | 24 | 21.5 | 21.6 |
| 25 | 23.6 | 23.0 | 25 | 20.8 | 20.6 | 25 | 20.6 | 20.4 |
| 26 | 21.9 | 21.5 | 26 | 19.6 | 20.1 | 26 | 23.8 | 24.4 |
| 27 | 21.4 | 21.4 | 27 | 19.1 | 19.6 | 27 | 20.8 | 21.3 |
| 28 | 23.6 | 23.4 | 28 | 20.9 | 20.2 | 28 | 20.8 | 21.6 |
| 29 | 23.3 | 23.6 | 29 | 21.4 | 21.6 | 29 | 20.4 | 20.7 |
| 30 | 20.7 | 21.6 | 30 | 23.4 | 22.9 | 30 | 21.8 | 22.1 |
| | | | 31 | 22.3 | 21.5 | 31 | 20.3 | 20.6 |

## Youghiogheny River Water Temperature Enhancement Plan

**254** = **CFS River Flow at Oakland** June 21, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 16.86 | No further predictions necessary today |
| | <=30 | 25.82 | Check again at 0900 |
| 0900 | > 30 | 17.34 | No further predictions necessary today |
| | <=30 | 26.30 | Release at 1100 for 2 hours |
| 1100 | All | -3.60 | No further predictions necessary today |
| 1200 | All | 2.37 | No further predictions necessary today |
| 1400 | All | 6.25 | No further predictions necessary today |
| 1500 | All | 4.36 | No further predictions necessary today |

Print Info for file

| | | |
|---|---|---|
| Tair | 26.11 | Air Temp, Elkins WV - Degree C |
| CCF | 1.00 | Cloud Cover Factor, Elkins WV |
| T7 | 19.24 | River Temp Sang Run @700 |
| T9 | 19.61 | River Temp Sang Run @900 |
| T11 | 0.00 | River Temp Sang Run @1100 |
| T12 | 0.00 | River Temp Sang Run @1200 |
| T14 | 0.00 | River Temp Sang Run @1400 |
| T15 | 0.00 | River Temp Sang Run @1500 |
| Q | 254.00 | River Flow at Oakland |

| | |
|---|---|
| 79 | Air Temp, Elkins WV - Degree F |
| SUNNY | Cloud Cover, Elkins WV |

## Youghiogheny River Water Temperature Enhancement Plan

88 = CFS River Flow at Oakland June 25, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 23.40 | Check again at 0900 |
| | <=30 | 25.72 | Check again at 0900 |
| 0900 | > 30 | 23.57 | Check again at 1100 |
| | <=30 | 25.89 | Check again at 1100 |
| 1100 | All | 25.72 | Release at 1230 for 2 hours |
| 1200 | All | 2.48 | No further predictions necessary today |
| 1400 | All | 6.42 | No further predictions necessary today |
| 1500 | All | 4.44 | No further predictions necessary today |

Print Info for file

| | | |
|---|---|---|
| Tair | 27.78 | Air Temp, Elkins WV - Degree C |
| CCF | 36.00 | Cloud Cover Factor, Elkins WV |
| T7 | 19.33 | River Temp Sang Run @700 |
| T9 | 19.55 | River Temp Sang Run @900 |
| T11 | 20.97 | River Temp Sang Run @1100 |
| T12 | 0.00 | River Temp Sang Run @1200 |
| T14 | 0.00 | River Temp Sang Run @1400 |
| T15 | 0.00 | River Temp Sang Run @1500 |
| Q | 88.00 | River Flow at Oakland |

| | |
|---|---|
| 82 | Air Temp, Elkins WV - Degree F |
| PTCLDY | Cloud Cover, Elkins WV |

## Youghiogheny River Water Temperature Enhancement Plan

**51** = **CFS River Flow at Oakland** July 2, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 24.40 | Check again at 0900 |
| | <=30 | 25.24 | Check again at 0900 |
| 0900 | > 30 | 24.45 | Check again at 1100 |
| | <=30 | 25.29 | Check again at 1100 |
| 1100 | All | 24.17 | Check again at 1200 |
| 1200 | All | 24.12 | Check again at 1400 |
| 1400 | All | 24.78 | Check again at 1500 |
| 1500 | All | 25.75 | Release ASAP - not later than 1530 for 1 hour |

Print Info for file

| | | |
|---|---|---|
| Tair | 26.67 | Air Temp, Elkins WV - Degree C |
| CCF | 1.00 | Cloud Cover Factor, Elkins WV |
| T7 | 17.00 | River Temp Sang Run @700 |
| T9 | 17.20 | River Temp Sang Run @900 |
| T11 | 18.40 | River Temp Sang Run @1100 |
| T12 | 19.40 | River Temp Sang Run @1200 |
| T14 | 22.21 | River Temp Sang Run @1400 |
| T15 | 24.05 | River Temp Sang Run @1500 |
| Q | 51.00 | River Flow at Oakland |

| | |
|---|---|
| 80 | Air Temp, Elkins WV - Degree F |
| SUNNY | Cloud Cover, Elkins WV |

## Youghiogheny River Water Temperature Enhancement Plan

79 = CFS River Flow at Oakland July 4, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 24.18 | Check again at 0900 |
| | <=30 | 26.14 | Check again at 0900 |
| 0900 | > 30 | 24.16 | Check again at 1100 |
| | <=30 | 26.12 | Release at 1100 for 2 hours |
| 1100 | All | -2.71 | No further predictions necessary today |
| 1200 | All | 3.03 | No further predictions necessary today |
| 1400 | All | 6.59 | No further predictions necessary today |
| 1500 | All | 4.52 | No further predictions necessary today |

Print Info for file

| | | |
|---|---|---|
| Tair | 29.44 | Air Temp, Elkins WV - Degree C |
| CCF | 36.00 | Cloud Cover Factor, Elkins WV |
| T7 | 18.96 | River Temp Sang Run @700 |
| T9 | 19.11 | River Temp Sang Run @900 |
| T11 | 0.00 | River Temp Sang Run @1100 |
| T12 | 0.00 | River Temp Sang Run @1200 |
| T14 | 0.00 | River Temp Sang Run @1400 |
| T15 | 0.00 | River Temp Sang Run @1500 |
| Q | 79.00 | River Flow at Oakland |

| | |
|---|---|
| 85 | Air Temp, Elkins WV - Degree F |
| PTCLDY | Cloud Cover, Elkins WV |

## Youghiogheny River Water Temperature Enhancement Plan

45 = CFS River Flow at Oakland July 6, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 25.03 | Check again at 0900 |
| | <=30 | 25.63 | Check again at 0900 |
| 0900 | > 30 | 24.84 | Check again at 1100 |
| | <=30 | 25.44 | Check again at 1100 |
| 1100 | All | 25.32 | Check again at 1200 |
| 1200 | All | 25.53 | Release ASAP - not later than 1230 for 1 hour |
| 1400 | All | -6.35 | No further predictions necessary today |
| 1500 | All | -2.20 | No further predictions necessary today |

Print Info for file

| | | |
|---|---|---|
| Tair | 26.67 | Air Temp, Elkins WV - Degree C |
| CCF | 1.00 | Cloud Cover Factor, Elkins WV |
| T7 | 18.14 | River Temp Sang Run @700 |
| T9 | 18.06 | River Temp Sang Run @900 |
| T11 | 19.74 | River Temp Sang Run @1100 |
| T12 | 21.10 | River Temp Sang Run @1200 |
| T14 | 0.00 | River Temp Sang Run @1400 |
| T15 | 0.00 | River Temp Sang Run @1500 |
| Q | 45.00 | River Flow at Oakland |

| | |
|---|---|
| 80 | Air Temp, Elkins WV - Degree F |
| SUNNY | Cloud Cover, Elkins WV |

## Youghiogheny River Water Temperature Enhancement Plan

**29** = **CFS River Flow at Oakland** July 8, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 24.70 | Check again at 0900 |
| | <=30 | 24.66 | Check again at 0900 |
| 0900 | > 30 | 24.88 | Check again at 1100 |
| | <=30 | 24.84 | Check again at 1100 |
| 1100 | All | 23.20 | Check again at 1200 |
| 1200 | All | 23.62 | Check again at 1400 |
| 1400 | All | 24.80 | Check again at 1500 |
| 1500 | All | 25.79 | Release ASAP - not later than 1530 for 1 hour |

Print Info for file

| | | |
|---|---|---|
| Tair | 25.56 | Air Temp, Elkins WV - Degree C |
| CCF | 1.00 | Cloud Cover Factor, Elkins WV |
| T7 | 16.33 | River Temp Sang Run @700 |
| T9 | 16.66 | River Temp Sang Run @900 |
| T11 | 17.58 | River Temp Sang Run @1100 |
| T12 | 18.93 | River Temp Sang Run @1200 |
| T14 | 22.10 | River Temp Sang Run @1400 |
| T15 | 24.00 | River Temp Sang Run @1500 |
| Q | 29.00 | River Flow at Oakland |

| | |
|---|---|
| 78 | Air Temp, Elkins WV - Degree F |
| SUNNY | Cloud Cover, Elkins WV |

## Youghiogheny River Water Temperature Enhancement Plan

**26** = **CFS River Flow at Oakland** July 9, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 25.95 | Check again at 0900 |
| | <=30 | 25.79 | Check again at 0900 |
| 0900 | > 30 | 25.87 | Check again at 1100 |
| | <=30 | 25.71 | Check again at 1100 |
| 1100 | All | 25.51 | Release at 1230 for 2 hours |
| 1200 | All | 4.60 | No further predictions necessary today |
| 1400 | All | 6.59 | No further predictions necessary today |
| 1500 | All | 4.52 | No further predictions necessary today |

Print Info for file

| | | |
|---|---|---|
| Tair | 29.44 | Air Temp, Elkins WV - Degree C |
| CCF | 1.00 | Cloud Cover Factor, Elkins WV |
| T7 | 15.98 | River Temp Sang Run @700 |
| T9 | 16.24 | River Temp Sang Run @900 |
| T11 | 18.30 | River Temp Sang Run @1100 |
| T12 | 0.00 | River Temp Sang Run @1200 |
| T14 | 0.00 | River Temp Sang Run @1400 |
| T15 | 0.00 | River Temp Sang Run @1500 |
| Q | 26.00 | River Flow at Oakland |

| | |
|---|---|
| 85 | Air Temp, Elkins WV - Degree F |
| SUNNY | Cloud Cover, Elkins WV |

## Youghiogheny River Water Temperature Enhancement Plan

86 = **CFS River Flow at Oakland** August 2, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 23.35 | Temperature Plan not required today |
| | <=30 | 25.59 | Temperature Plan not required today |
| 0900 | > 30 | -0.79 | Temperature Plan not required today |
| | <=30 | 1.45 | Temperature Plan not required today |
| 1100 | All | 12.43 | Temperature Plan not required today |
| 1200 | All | 11.00 | Temperature Plan not required today |
| 1400 | All | 6.31 | Temperature Plan not required today |
| 1500 | All | 4.39 | Temperature Plan not required today |

Print Info for file

| | | |
|---|---|---|
| Tair | 26.67 | Air Temp, Elkins WV - Degree C |
| CCF | 36.00 | Cloud Cover Factor, Elkins WV |
| T7 | 19.98 | River Temp Sang Run @700 |
| T9 | 0.00 | River Temp Sang Run @900 |
| T11 | 0.00 | River Temp Sang Run @1100 |
| T12 | 0.00 | River Temp Sang Run @1200 |
| T14 | 0.00 | River Temp Sang Run @1400 |
| T15 | 0.00 | River Temp Sang Run @1500 |
| Q | 86.00 | River Flow at Oakland |

| | |
|---|---|
| 80 | Air Temp, Elkins WV - Degree F |
| PTCLDY | Cloud Cover, Elkins WV |

## Youghiogheny River Water Temperature Enhancement Plan

94 = CFS River Flow at Oakland August 10, 2000

| Time | Oakland Flow CFS | Predicted Maximum River Water Temperature Degree C | Deep Creek Action |
|---|---|---|---|
| 0700 | > 30 | 22.41 | No further predictions necessary today |
| | <=30 | 24.97 | Check again at 0900 |
| 0900 | > 30 | 22.67 | No further predictions necessary today |
| | <=30 | 25.23 | Check again at 1100 |
| 1100 | All | 25.14 | Check again at 1200 |
| 1200 | All | 25.61 | Release ASAP - not later than 1230 for 1 hour |
| 1400 | All | -7.10 | No further predictions necessary today |
| 1500 | All | -2.59 | No further predictions necessary today |

Print Info for file

| | | |
|---|---|---|
| Tair | 28.33 | Air Temp, Elkins WV - Degree C |
| CCF | 100.00 | Cloud Cover Factor, Elkins WV |
| T7 | 20.17 | River Temp Sang Run @700 |
| T9 | 20.53 | River Temp Sang Run @900 |
| T11 | 21.49 | River Temp Sang Run @1100 |
| T12 | 22.63 | River Temp Sang Run @1200 |
| T14 | 0.00 | River Temp Sang Run @1400 |
| T15 | 0.00 | River Temp Sang Run @1500 |
| Q | 94.00 | River Flow at Oakland |

| | |
|---|---|
| 83 | Air Temp, Elkins WV - Degree F |
| TSTRMS | Cloud Cover, Elkins WV |

# APPENDIX C

# FLOW BYPASS OPERATION RECORD

## FLOW BYPASS OPERATION

The flow bypass protocol requires the Permittee to maintain a minimum flow of 40 cfs in the Youghiogheny River immediately downstream of the tailrace. Starting June 1 and continuing through November 30, the Permittee monitors the river flows at the Oakland gage. When flows at the Oakland gage fall below 26 cfs, the Permittee may be required to open a bypass valve to release enough water to maintain 40 cfs in the river immediately below the tailrace.

The following table summarizes flow bypass data for June through November 2000, when flows in the Youghiogheny River were less than 26 cfs. Flow data were obtained from the USGS recording at the Oakland gage, direct readings from the USGS Oakland gage or from the tailrace gage at the station per guidance provided in the protocol. Valve opening was determined from Table 3 of the protocol based on station operating status.

Data from the USGS gaging station at Oakland also are provided. Data for the period of October 1, 2000 through the end of the year are provisional data. USGS data represent daily mean flows and may not agree with instantaneous data collected by the Permittee throughout the year.

**Deep Creek Station**
**Flow Bypass Operation - 2000**

| | | | Bypass Operation | |
|---|---|---|---|---|
| **Month** | **Day** | **Flow at Oakland** | **Bypass Flow** | **% Open** |
| Sept | 9 | 24 | 0 | CLOSED |
| Sept | 10 | 23 | 0 | CLOSED |
| Sept | 15 | 24 | 0 | CLOSED |
| Sept | 18 | 24 | 0 | CLOSED |
| Sept | 19 | 23 | 0 | CLOSED |
| Sept | 22 | 23 | 0 | CLOSED |
| Sept | 23 | 21 | 0 | CLOSED |
| Sept | 24 | 20 | 0 | CLOSED |
| Oct | 27 | 0 | 0 | CLOSED |

03075500 YOUGHIOGHENY RIVER NEAR OAKLAND, MD

LOCATION.--Lat 39°25'19", long 79°25'32", Garrett County, Hydrologic Unit 05020006, on left bank 200 ft downstream from Baltimore and Ohio Railroad bridge, 250 ft downstream from Little Youghioghany River, 1.2 mi northwest of Oakland, and 1.5 mi upstream from Dunkard Lick Run.

DRAINAGE AREA.--134 $mi^2$.

PERIOD OF RECORD.--August 1941 to current year.

REVISED RECORDS.--WSP 1113: 1947(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,353.61 ft above sea level. Prior to Aug. 1, 1946, nonrecording gage at bridge 200 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are poor. Town of Oakland diverted an average of 0.4 $ft^3/s$ for water supply. The diversion is returned upstream from station as sewage. U.S. Army Corps of Engineers satellite collection platform at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 15.3 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 $ft^3/s$ and maximum (*):

| Date | Time | Discharge ($ft^3/s$) | Gage height (ft) | Date | Time | Discharge ($ft^3/s$) | Gage height (ft) |
|---|---|---|---|---|---|---|---|
| Feb 14 | 2115 | 2,970 | 6.01 | Jul 11 | 1145 | 2,300 | 5.37 |
| Feb 19 | 0700 | *9,450 | *10.50 | | | | |

Minimum discharge 17 $ft^3/s$, Oct 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 44 | 19 | 175 | e85 | e72 | 289 | 220 | 125 | 222 | 63 | 171 | 32 |
| 2 | 24 | 101 | 165 | e82 | e70 | 265 | 217 | 190 | 177 | 53 | 96 | 65 |
| 3 | 18 | 647 | 131 | e95 | e66 | 224 | 261 | 157 | 172 | 48 | 149 | 60 |
| 4 | 32 | 244 | 134 | e110 | e64 | 197 | 1120 | 128 | 131 | 88 | 187 | 58 |
| 5 | 71 | 195 | 133 | e120 | e62 | 176 | 1150 | 118 | 132 | 70 | 111 | 54 |
| 6 | 52 | 172 | 123 | e110 | e60 | 154 | 742 | 110 | 1460 | 51 | 151 | 43 |
| 7 | 33 | 134 | 127 | e100 | e59 | 139 | 498 | 100 | 1320 | 39 | 166 | 33 |
| 8 | 26 | 105 | 111 | e100 | e58 | 127 | 460 | 92 | 715 | 32 | 114 | 27 |
| 9 | 23 | 87 | 106 | e95 | e57 | 120 | 580 | 97 | 407 | 28 | 92 | 24 |
| 10 | 219 | 73 | 324 | e160 | e56 | 127 | 466 | 76 | 270 | 36 | 98 | 24 |
| 11 | 205 | 67 | 574 | 276 | e170 | 172 | 431 | 66 | 208 | 1860 | 84 | 41 |
| 12 | 90 | 59 | 348 | 246 | e400 | 687 | 607 | 60 | 161 | 739 | 70 | 37 |
| 13 | 53 | 52 | 343 | e200 | e250 | 441 | 481 | 58 | 138 | 268 | 59 | 33 |
| 14 | 52 | 48 | 724 | e180 | 1850 | 344 | 387 | 58 | 114 | 175 | 53 | 27 |
| 15 | 46 | 44 | 986 | e165 | 2090 | 281 | 316 | 52 | 138 | 198 | 48 | 26 |
| 16 | 33 | 41 | 651 | e160 | 1160 | 252 | 266 | 47 | 164 | 148 | 42 | 30 |
| 17 | 27 | 39 | 428 | e160 | 1010 | 326 | 340 | 43 | 104 | 232 | 38 | 27 |
| 18 | 23 | 37 | 311 | e170 | 1910 | 275 | 350 | 41 | 115 | 144 | 67 | 24 |
| 19 | 22 | 35 | 248 | e150 | 7430 | 244 | 291 | 72 | 150 | 534 | 87 | 23 |
| 20 | 22 | 35 | 214 | e130 | 2580 | 222 | 253 | 151 | 113 | 1200 | 55 | 26 |
| 21 | 24 | 62 | 193 | e120 | 1190 | 371 | 279 | 101 | 103 | 553 | 41 | 26 |
| 22 | 23 | 54 | 166 | e130 | 786 | 696 | 340 | 88 | 257 | 307 | 37 | 22 |
| 23 | 22 | 53 | 141 | e120 | 591 | 746 | 571 | 85 | 138 | 212 | 34 | 20 |
| 24 | 31 | 49 | 119 | e110 | 480 | 641 | 478 | 289 | 104 | 174 | 50 | 22 |
| 25 | 50 | 85 | 105 | e100 | 407 | 489 | 363 | 170 | 87 | 154 | 48 | 182 |
| 26 | 40 | 658 | 98 | e90 | 336 | 371 | 286 | 121 | 83 | 121 | 38 | 1100 |
| 27 | 30 | 980 | 101 | e85 | 284 | 296 | 234 | 113 | 78 | 103 | 33 | 344 |
| 28 | 25 | 505 | 96 | 90 | 516 | 269 | 201 | 412 | 123 | 88 | 37 | 197 |
| 29 | 22 | 303 | 94 | 80 | 329 | 279 | 171 | 945 | 113 | 78 | 33 | 142 |
| 30 | 20 | 223 | 90 | e77 | --- | 290 | 146 | 509 | 80 | 76 | 31 | 111 |
| 31 | 19 | --- | e88 | e75 | --- | 254 | --- | 325 | --- | 127 | 29 | --- |
| TOTAL | 1421 | 5206 | 7627 | 3971 | 24393 | 9764 | 12525 | 4999 | 7577 | 7999 | 2349 | 2881 |
| MEAN | 45.8 | 174 | 246 | 128 | 841 | 315 | 418 | 161 | 253 | 258 | 75.8 | 96.0 |
| MAX | 219 | 980 | 986 | 276 | 7430 | 746 | 1150 | 945 | 1460 | 1860 | 187 | 1100 |
| MIN | 18 | 19 | 88 | 75 | 56 | 120 | 146 | 41 | 78 | 28 | 29 | 20 |
| CFSM | .34 | 1.30 | 1.84 | .96 | 6.28 | 2.35 | 3.12 | 1.20 | 1.88 | 1.93 | .57 | .72 |
| IN. | .39 | 1.45 | 2.12 | 1.10 | 6.77 | 2.71 | 3.48 | 1.39 | 2.10 | 2.22 | .65 | .80 |

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEAN | 114 | 241 | 403 | 434 | 504 | 610 | 450 | 330 | 204 | 162 | 130 | 86.8 |
| MAX | 608 | 1152 | 1027 | 973 | 1100 | 1477 | 879 | 995 | 730 | 629 | 586 | 600 |
| (WY) | 1955 | 1986 | 1973 | 1996 | 1986 | 1963 | 1973 | 1996 | 1981 | 1978 | 1956 | 1996 |
| MIN | 4.45 | 7.08 | 62.2 | 63.2 | 127 | 168 | 121 | 76.0 | 22.9 | 10.3 | 10.5 | 5.99 |
| (WY) | 1954 | 1954 | 1944 | 1977 | 1978 | 1990 | 1946 | 1982 | 1999 | 1953 | 1944 | 1953 |

FAX NO. 301 729 2942



UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION — STATE-24 --DIST-24

PRIMARY COMPUTATIONS OF GAGE HEIGHT AND DISCHARGE — RATINGS USED --

03075500 — DATE PROCESSED: 01-12-2001 @ 14:26 BY jeffries — STNRD 18.0 03/18/1999 (2315)

YOUGHIOGHENY RIVER NEAR OAKLAND, MD — INPUT DD: SAT-GHT

OUTPUT PARAMETER 00060 STORE STATISTIC(S) 00003

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2001 — TEST DIFF:****** — PUNCH INTERVAL: 60 MIN

Provisional

| DATE | MAX GH /DISCH <TIME> | MIN GH /DISCH <TIME> | MEAN GH | MEAN DISCH | SHIFT ADJ | DATUM CORR | STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 |
|---|---|---|---|---|---|---|---|
| 10/01/2000 | 2.36<br>99<br><0000> | 2.29<br>82<br><2400> | 2.33 | 91 | 0.00W | | 236 236 235 235 235 235 234 234 234 233 233 233<br>232 232 232 231 231 231 231 231 230 230 229 229 |
| 10/02/2000 | 2.29<br>82<br><0000> | 2.24<br>70<br><2159> | 2.27 | 77 | 0.00W | | 228 228 228 228 228 228 228 228 228 228 228 227<br>227 227 227 226 226 225 225 225 225 224 224 224 |
| 10/03/2000 | 2.24<br>70<br><0000> | 2.20<br>62<br><2259> | 2.23 | 67 | 0.00W | | 224 224 224 224 224 224 223 223 223 223 223 223<br>223 222 222 223 222 221 221 221 221 221 220 220 |
| 10/04/2000 | 2.20<br>62<br><0000> | 2.16<br>54<br><1959> | 2.18 | 59 | 0.00W | | 220 220 220 220 220 220 220 220 220 219 219 219<br>219 219 218 218 217 217 217 216 216 216 216 216 |
| 10/05/2000 | 2.22<br>66<br><0859> | 2.16<br>54<br><0000> | 2.20 | 61 | 0.00W | | 216 216 216 216 216 219 220 221 222 222 222 222<br>222 222 221 221 220 220 220 220 220 220 220 220 |
| 10/06/2000 | 2.20<br>62<br><0000> | 2.16<br>54<br><1759> | 2.18 | 58 | 0.00W | | 220 220 220 220 220 219 219 219 219 218 218 218<br>217 217 217 217 217 216 216 216 216 217 217 217 |
| 10/07/2000 | 2.17<br>56<br><0000> | 2.08<br>39<br><2159> | 2.11 | 45 | 0.00W | | 216 216 216 215 214 213 213 212 212 211 211 211<br>211 210 210 210 209 209 209 209 209 208 208 208 |
| 10/08/2000 | 2.08<br>39<br><0000> | 2.06<br>36<br><1659> | 2.07 | 38 | 0.00W | | 208 208 208 208 208 208 208 208 208 207 207 207<br>207 207 207 207 206 206 206 206 206 206 206 206 |
| 10/09/2000 | 2.07<br>38<br><0859> | 2.05<br>35<br><0559> | 2.06 | 37 | 0.00W | | 206 206 206 206 206 205 205 205 207 207 207 207<br>207 207 207 207 206 206 207 207 207 207 207 207 |
| 10/10/2000 | 2.07<br>38<br><0000> | 2.07<br>38<br><0000> | 2.07 | 38 | 0.00W | | 207 207 207 207 207 207 207 207 207 207 207 207<br>207 207 207 207 207 207 207 207 207 207 207 207 |
| 10/11/2000 | 2.07<br>38<br><0000> | 2.05<br>35<br><2400> | 2.06 | 36 | 0.00W | | 207 206 206 206 206 206 206 206 205 206 206 205<br>206 205 205 205 205 205 205 205 205 205 205 205 |
| 10/12/2000 | 2.05<br>35<br><0759> | 2.03<br>32<br><1859> | 2.04 | 33 | 0.00W | | 204 204 204 204 204 204 204 205 205 205 205 205<br>205 205 204 204 204 204 203 203 203 203 203 203 |
| 10/13/2000 | 2.03<br>32<br><0000> | 2.00<br>28<br><1859> | 2.02 | 30 | 0.00W | | 203 203 203 203 203 203 203 203 203 203 202 202<br>202 201 201 201 201 201 200 200 200 200 200 200 |
| 10/14/2000 | 2.00<br>28<br><0000> | 2.00<br>28<br><0000> | 2.00 | 28 | 0.00W | | 200 200 200 200 200 200 200 200 200 200 200 200<br>200 200 200 200 200 200 200 200 200 200 200 200 |
| 10/15/2000 | 2.00<br>28<br><0000> | 1.99<br>28<br><1359> | 2.00 | 28 | 0.00W | | 200 200 200 200 200 200 200 200 200 200 200 200<br>200 199 199 199 199 199 199 199 199 199 199 199 |

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION — STATE 24 DIST 24
PRIMARY COMPUTATIONS OF GAGE HEIGHT AND DISCHARGE — RATINGS USED --
03075500 — DATE PROCESSED: 01-12-2001 @ 14:26 BY jeffries — STNRD 18.0 03/18/1999 (2315)
YOUGHIOGHENY RIVER NEAR OAKLAND, MD — INPUT DD: SAT-GHT
OUTPUT PARAMETER 00060 STORE STATISTIC(S) 00003
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2001 — TEST DIFF:****** PUNCH INTERVAL: 60 MIN

| DATE | MAX GH /DISCH <TIME> | MIN GH /DISCH <TIME> | MEAN GH | MEAN DISCH | SHIFT ADJ | DATUM CORR | STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS: 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 / 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 |
|---|---|---|---|---|---|---|---|
| 10/16/2000 | 1.99<br>28<br><0000> | 1.98<br>27<br><0559> | 1.99 | 28 | 0.00W | | 199 199 199 199 199 198 198 199 199 199 199 199<br>199 199 199 199 199 199 199 199 199 199 199 199 |
| 10/17/2000 | 2.01<br>30<br><2400> | 1.99<br>28<br><0000> | 1.99 | 28 | 0.00W | | 199 199 199 199 199 199 199 199 199 199 199 199<br>199 199 199 199 199 200 200 200 200 200 200 201 |
| 10/18/2000 | 2.82<br>241<br><1459> | 2.01<br>30<br><0000> | 2.45 | 135 | -0.02W | | 202 205 208 211 211 211 212 215 220 228 244 264<br>276 281 282 282 280 278 276 273 269 267 263 260 |
| 10/19/2000 | 2.60<br>162<br><0000> | 2.25<br>73<br><2359> | 2.38 | 104 | -0.01W | | 257 255 252 249 247 245 243 241 240 238 237 236<br>235 233 232 231 231 229 229 228 227 227 226 225 |
| 10/20/2000 | 2.25<br>73<br><0000> | 2.16<br>54<br><2359> | 2.21 | 63 | 0.00W | | 225 224 224 224 223 223 222 222 222 221 221 220<br>220 220 219 219 219 219 218 218 217 217 217 216 |
| 10/21/2000 | 2.16<br>54<br><0000> | 2.12<br>46<br><2400> | 2.14 | 50 | 0.00W | | 216 216 216 215 215 215 215 215 215 215 215 214<br>214 213 213 213 212 212 212 212 212 212 212 212 |
| 10/22/2000 | 2.12<br>46<br><0000> | 2.09<br>41<br><2400> | 2.10 | 43 | 0.00W | | 211 211 211 211 211 210 210 210 210 210 210 210<br>210 210 210 210 210 210 210 210 209 209 209 209 |
| 10/23/2000 | 2.09<br>41<br><0559> | 2.08<br>39<br><0059> | 2.08 | 40 | 0.00W | | 208 208 208 208 208 209 209 209 209 209 209 209<br>209 209 209 209 208 208 208 208 208 208 208 208 |
| 10/24/2000 | 2.08<br>39<br><0000> | 2.07<br>38<br><0259> | 2.07 | 39 | 0.00W | | 208 208 207 207 207 207 207 207 207 208 208 208<br>208 208 208 208 208 207 207 207 207 207 207 207 |
| 10/25/2000 | 2.08<br>39<br><0459> | 2.07<br>38<br><0000> | 2.08 | 39 | 0.00W | | 207 207 207 207 208 208 208 208 208 208 208 208<br>208 208 208 208 207 207 207 207 207 208 208 207 |
| 10/26/2000 | 2.08<br>39<br><0859> | 2.07<br>38<br><0000> | 2.07 | 38 | 0.00W | | 207 207 207 207 207 207 207 207 208 208 208 208<br>208 208 208 208 207 207 207 207 207 207 207 207 |
| 10/27/2000 | 2.07<br>38<br><0000> | 2.05<br>35<br><1159> | 2.06 | 36 | 0.00W | | 207 206 206 206 206 207 207 207 207 207 207 205<br>205 205 205 205 205 205 205 205 205 205 205 205 |
| 10/28/2000 | 2.05<br>35<br><0000> | 2.05<br>35<br><0000> | 2.05 | 35 | 0.00W | | 205 205 205 205 205 205 205 205 205 205 205 205<br>205 205 205 205 205 205 205 205 205 205 205 205 |
| 10/29/2000 | 2.05<br>35<br><0000> | 2.04<br>33<br><0859> | 2.04 | 34 | 0.00W | | 205 205 205 205 205 205 205 205 204 204 204 204<br>204 204 204 204 204 204 204 204 204 204 204 204 |
| 10/30/2000 | 2.04<br>33<br><0000> | 2.03<br>32<br><0659> | 2.03 | 32 | 0.00W | | 204 204 204 204 204 204 203 203 203 203 203 203<br>203 203 203 203 203 203 203 203 203 203 203 203 |

Provisional

FAX NO. 301 729 2942



UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION — STATE 24 DIST 24

PRIMARY COMPUTATIONS OF GAGE HEIGHT AND DISCHARGE — RATINGS USED --

03075500 — DATE PROCESSED: 01-12-2001 @ 14:26 BY jeffries — STNRD 18.0 03/18/1999 (2315)

YOUGHIOGHENY RIVER NEAR OAKLAND, MD — INPUT DD: SAT-GHT

OUTPUT PARAMETER 00060 STORE STATISTIC(S) 00003

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2001 — TEST DIFF:****** — PUNCH INTERVAL: 60 MIN

| DATE | MAX GH /DISCH <TIME> | MIN GH /DISCH <TIME> | MEAN GH | MEAN DISCH | SHIFT ADJ | DATUM CORR | STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 |
|---|---|---|---|---|---|---|---|
| 10/31/2000 | 2.03 32 <0000> | 2.01 29 <0759> | 2.02 | 31 | 0.00W | | 203 203 202 202 202 202 202 201 201 201 201 201 202 202 202 202 202 202 202 202 202 203 203 203 |
| 11/01/2000 | 2.03 32 <0000> | 2.01 29 <0559> | 2.01 | 30 | 0.00W | | 202 202 202 202 202 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 |
| 11/02/2000 | 2.02 31 <0559> | 2.01 29 <0000> | 2.01 | 30 | 0.00W | | 201 201 201 201 201 202 201 201 201 202 202 202 201 201 202 201 201 201 201 201 201 201 201 201 |
| 11/03/2000 | 2.01 29 <0000> | 2.01 29 <0000> | 2.01 | 29 | 0.00W | | 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 201 |
| 11/04/2000 | 2.01 29 <0000> | 2.00 28 <0759> | 2.00 | 29 | 0.00W | | 201 201 201 201 201 201 201 200 200 200 200 200 200 200 200 200 200 200 200 200 200 201 201 201 |
| 11/05/2000 | 2.01 29 <0000> | 2.00 28 <0559> | 2.00 | 29 | 0.00W | | 201 201 201 201 201 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 |
| 11/06/2000 | 2.00 28 <0000> | 1.99 28 <2259> | 2.00 | 28 | 0.00W | | 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 199 199 199 |
| 11/07/2000 | 2.00 28 <1459> | 1.99 28 <0000> | 1.99 | 28 | 0.00W | | 199 199 199 199 199 199 199 199 199 199 199 199 199 199 199 199 199 200 200 200 200 199 199 199 |
| 11/08/2000 | 2.00 28 <0459> | 1.99 28 <0000> | 2.00 | 28 | 0.00W | | 199 199 199 199 200 200 199 199 199 200 200 200 200 200 200 200 200 200 200 200 200 200 200 200 |
| 11/09/2000 | 2.09 41 <2400> | 2.00 28 <0000> | 2.02 | 31 | 0.00W | | 200 201 201 201 201 201 201 201 201 202 202 202 202 203 203 203 203 203 203 204 204 204 207 209 |
| 11/10/2000 | 2.85 254 <2259> | 2.09 41 <0000> | 2.44 | 128 | -0.02W | | 212 212 212 213 215 217 220 224 227 229 232 236 242 250 254 259 265 272 277 281 283 284 285 285 |
| 11/11/2000 | 2.85 254 <0000> | 2.51 136 <2359> | 2.67 | 189 | -0.03W | | 285 284 283 281 279 277 275 273 272 269 268 266 264 263 261 260 259 257 256 256 254 253 252 251 |
| 11/12/2000 | 2.51 136 <0000> | 2.37 101 <2359> | 2.43 | 117 | -0.01W | | 251 249 249 248 247 246 246 245 245 244 244 243 243 242 242 241 241 240 240 239 239 238 238 237 |
| 11/13/2000 | 2.37 101 <0000> | 2.31 87 <2359> | 2.34 | 95 | 0.00W | | 237 237 236 236 236 236 235 235 235 235 235 234 234 233 233 233 233 232 232 232 232 232 232 231 |
| 11/14/2000 | 2.33 92 <1559> | 2.31 87 <0159> | 2.32 | 89 | 0.00W | | 232 231 231 231 231 232 231 231 232 232 232 232 232 232 232 233 233 232 232 233 233 233 232 233 |

Provisional

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 24 DIST 24
PRIMARY COMPUTATIONS OF GAGE HEIGHT AND DISCHARGE RATINGS USED --
03075500 DATE PROCESSED: 01-12-2001 @ 14:26 BY jeffries STNRD 18.0 03/18/1999 (2315)
YOUGHIOGHENY RIVER NEAR OAKLAND, MD INPUT DD: SAT-GHT
OUTPUT PARAMETER 00060 STORE STATISTIC(S) 00003
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2001 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

| DATE | MAX GH /DISCH <TIME> | MIN GH /DISCH <TIME> | MEAN GH | MEAN DISCH | SHIFT ADJ | DATUM CORR | STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 |
|---|---|---|---|---|---|---|---|
| 11/15/2000 | 2.33<br>92<br><0000> | 2.27<br>78<br><2359> | 2.30 | 86 | 0.00W | | 232 232 232 232 232 232 232 232 231 231 231 231<br>231 230 230 229 229 228 228 228 228 228 228 227 |
| 11/16/2000 | 2.27<br>78<br><0000> | 2.24<br>70<br><1659> | 2.25 | 74 | 0.00W | | 227 227 227 227 227 226 226 226 226 226 226 226<br>225 225 225 225 224 224 224 224 224 224 224 224 |
| 11/17/2000 | 2.24<br>70<br><0000> | 2.23<br>68<br><2400> | 2.24 | 70 | 0.00W | | 224 224 224 224 224 224 224 224 224 224 224 224<br>224 224 223 223 223 223 223 223 223 223 223 223 |
| 11/18/2000 | 2.23<br>68<br><0000> | 2.19<br>60<br><1959> | 2.21 | 63 | 0.00W | | 222 222 222 222 222 223 222 221 221 221 221 221<br>220 220 220 220 220 220 220 219 219 219 219 219 |
| 11/19/2000 | 2.19<br>60<br><0000> | 2.16<br>54<br><2059> | 2.18 | 57 | 0.00W | | 219 219 219 219 219 218 218 218 218 218 218 217<br>217 217 217 217 217 217 217 217 216 216 216 216 |
| 11/20/2000 | 2.21<br>64<br><1259> | 2.09<br>41<br><0659> | 2.16 | 53 | 0.00W | | 216 216 215 213 212 210 209 209 212 216 217 220<br>221 221 220 219 217 217 216 216 215 215 215 215 |
| 11/21/2000 | 2.19<br>60<br><1459> | 2.12<br>46<br><0859> | 2.16 | 53 | 0.00W | | 215 215 214 214 214 214 213 213 212 213 217 217<br>218 218 219 219 219 219 218 217 216 216 215 215 |
| 11/22/2000 | 2.19<br>60<br><1759> | 2.12<br>46<br><0759> | 2.15 | 53 | 0.00W | | 214 214 214 213 213 213 213 212 212 213 215 216<br>216 217 217 218 218 219 219 218 217 217 216 216 |
| 11/23/2000 | 2.16<br>54<br><0000> | 2.14<br>50<br><0659> | 2.15 | 52 | 0.00W | | 216 216 215 215 215 215 214 214 214 215 216 216<br>216 216 216 216 216 216 215 215 215 215 215 215 |
| 11/24/2000 | 2.15<br>52<br><0000> | 2.12<br>46<br><1459> | 2.13 | 48 | 0.00W | | 215 215 215 214 214 214 213 213 213 213 215 215<br>214 213 212 212 212 212 212 212 212 212 212 212 |
| 11/25/2000 | 2.20<br>62<br><2359> | 2.12<br>46<br><0000> | 2.14 | 50 | 0.00W | | 212 212 212 212 212 212 212 212 212 213 213 213<br>213 213 213 214 215 216 216 217 217 218 219 220 |
| 11/26/2000 | 2.89<br>268<br><2400> | 2.20<br>62<br><0000> | 2.45 | 125 | -0.02W | | 220 221 223 223 224 227 228 230 232 235 238 241<br>245 248 251 253 256 258 263 267 272 277 283 289 |
| 11/27/2000 | 3.16<br>416<br><1459> | 2.89<br>268<br><0000> | 3.09 | 375 | -0.06W | | 293 297 300 303 304 306 308 309 311 312 313 313<br>315 315 316 315 315 315 314 313 312 312 311 309 |
| 11/28/2000 | 3.09<br>370<br><0000> | 2.83<br>245<br><2400> | 2.95 | 296 | -0.06W | | 308 307 305 304 303 301 300 299 297 296 296 294<br>293 292 291 290 289 288 287 286 285 285 284 283 |
| 11/29/2000 | 2.84<br>250<br><2400> | 2.73<br>207<br><1259> | 2.77 | 223 | -0.05W | | 282 281 281 280 279 279 278 277 276 276 275 274<br>273 273 273 273 274 275 275 277 279 280 283 284 |

Provisional

FAX NO. 301 729 2942



UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION — STATE 24 DIST-24

PRIMARY COMPUTATIONS OF GAGE HEIGHT AND DISCHARGE — RATINGS USED --

03075500 — DATE PROCESSED: 01-12-2001 @ 14:26 BY jeffries — STNRD 18.0 03/18/1999 (2315)

YOUGHIOGHENY RIVER NEAR OAKLAND, MD — INPUT DD: SAT-GHT

OUTPUT PARAMETER 00060 STORE STATISTIC(S) 00003

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2001 — TEST DIFF:****** — PUNCH INTERVAL: 60 MIN

| DATE | MAX GH /DISCH <TIME> | MIN GH /DISCH <TIME> | MEAN GH | MEAN DISCH | SHIFT ADJ | DATUM CORR | STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 |
|---|---|---|---|---|---|---|---|
| 11/30/2000 | 3.00 | 2.82 | 2.91 | 280 | -0.06W | | 287 291 293 295 297 299 300 300 299 298 296 295 293 292 291 289 288 287 286 285 284 284 283 282 |
| | 317 <0659> | 241 <2400> | | | | | |
| 12/01/2000 | 2.82 | 2.72 | 2.76 | 216 | -0.04W | | 281 281 280 279 279 278 277 277 276 276 276 275 275 274 273 273 273 273 272 272 272 272 272 272 |
| | 241 <0000> | 203 <2400> | | | | | |
| 12/02/2000 | 2.72 | 2.63 | 2.67 | 188 | -0.03W | | 271 271 271 270 270 270 269 269 268 268 268 268 267 267 267 266 265 265 265 264 264 264 264 263 |
| | 203 <0000> | 173 <2359> | | | | | |
| 12/03/2000 | 2.63 | 2.50 | 2.57 | 156 | -0.02W | | 263 262 262 261 260 260 258 257 256 253 251 250 250 253 257 259 259 257 256 257 258 259 260 261 |
| | 173 <0000> | 133 <1159> | | | | | |
| 12/04/2000 | 2.67 | 2.37 | 2.58 | 159 | -0.02W | | 262 264 266 267 264 261 259 259 257 246 237 246 252 256 260 263 264 264 262 260 258 256 255 254 |
| | 188 <0359> | 101 <1059> | | | | | |
| 12/05/2000 | 2.54 | 2.43 | 2.48 | 129 | -0.02W | | 253 253 252 251 251 251 250 249 249 248 248 249 248 249 249 249 248 248 244 243 243 243 243 243 |
| | 145 <0000> | 115 <1959> | | | | | |
| 12/06/2000 | 2.50 | 2.38 | 2.43 | 115 | -0.01W | | 244 244 243 242 241 240 240 240 239 238 239 243 245 248 248 250 249 248 245 243 240 240 239 239 |
| | 133 <1559> | 104 <0959> | | | | | |
| 12/07/2000 | 2.43 | 2.35 | 2.39 | 105 | 0.00W | | 239 238 238 237 236 236 235 235 235 236 236 237 239 241 242 243 243 243 241 240 240 240 240 240 |
| | 115 <1559> | 97 <0659> | | | | | |
| 12/08/2000 | 2.40 | 2.37 | 2.39 | 105 | 0.00W | | 240 240 240 240 239 239 239 239 239 239 239 240 239 239 239 239 239 238 238 238 237 237 237 237 |
| | 106 <0000> | 101 <2400> | | | | | |
| 12/09/2000 | 2.37 | 2.29 | 2.34 | 95 | 0.00W | | 236 236 236 236 235 235 235 235 235 235 235 235 235 235 235 235 234 234 233 232 231 231 230 229 |
| | 101 <0000> | 82 <2400> | | | | | |
| 12/10/2000 | 2.38 | 2.20 | 2.29 | 83 | 0.00W | | 228 227 226 224 223 221 220 220 220 220 223 226 229 233 236 238 238 238 237 236 236 235 234 232 |
| | 104 <1559> | 62 <0659> | | | | | |
| 12/11/2000 | 2.34 | 2.31 | 2.31 | 88 | 0.00W | | 232 231 231 231 231 231 231 231 231 231 231 231 231 231 231 231 232 231 232 232 232 233 233 234 |
| | 94 <2400> | 87 <0159> | | | | | |
| 12/12/2000 | 2.66 | 2.34 | 2.53 | 144 | -0.02W | | 235 236 238 239 240 241 243 244 247 250 253 256 259 261 264 265 266 266 265 265 265 263 260 258 |
| | 184 <1659> | 94 <0000> | | | | | |
| 12/13/2000 | 2.64 | 2.27 | 2.48 | 130 | -0.01W | | 255 252 247 242 237 232 229 227 227 230 235 241 247 253 257 262 264 263 261 259 257 255 254 255 |
| | 177 <1659> | 78 <0759> | | | | | |
| 12/14/2000 | 4.53 | 2.55 | 3.84 | 983 | -0.01W | | 256 260 264 271 281 299 323 352 382 424 428 449 453 452 453 452 452 449 445 441 436 430 425 419 |
| | 1470 <1259> | 149 <0000> | | | | | |

Provisional

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 24 DIST 24
PRIMARY COMPUTATIONS OF GAGE HEIGHT AND DISCHARGE RATINGS USED --
03075500 DATE PROCESSED: 01-12-2001 @ 14:26 BY jeffries STNRD 18.0 03/18/1999 (2315)
YOUGHIOGHENY RIVER NEAR OAKLAND, MD INPUT DD: SAT-GHT
OUTPUT PARAMETER 00060 STORE STATISTIC(S) 00003
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2001 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

| DATE | MAX GH /DISCH <TIME> | MIN GH /DISCH <TIME> | MEAN GH | MEAN DISCH | SHIFT ADJ | DATUM CORR | STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 |
|---|---|---|---|---|---|---|---|
| 12/15/2000 | 4.19 1230 <0000> | 3.52 727 <2400> | 3.78 | 938 | 0.00W | | 414 410 407 403 399 394 391 387 384 380 377 374 371 369 367 364 363 361 360 358 356 355 353 352 |
| 12/16/2000 | 3.52 727 <0000> | 3.34 563 <1259> | 3.40 | 614 | -0.01W | | 350 348 346 344 343 342 340 339 337 336 335 335 334 334 334 335 336 336 337 339 340 343 345 348 |
| 12/17/2000 | 3.91 1040 <1759> | 3.48 693 <0000> | 3.75 | 915P | 0.00W | | 352 386 388 390 391 390 389 387 385 383 380 |
| 12/18/2000 | 3.80 960 <0000> | 3.41 625 <2400> | 3.57 | 769 | 0.00W | | 378 375 372 371 368 366 364 362 360 359 357 356 354 352 351 350 348 347 346 345 344 343 342 341 |
| 12/19/2000 | 3.41 625 <0000> | 3.20 449 <2359> | 3.31 | 534 | -0.03W | | 340 339 338 337 336 336 335 334 333 332 332 331 331 329 329 328 327 326 325 324 323 323 321 320 |
| 12/20/2000 | 3.20 449 <0000> | 3.04 343 <1159> | 3.11 | 388 | -0.05W | | 320 319 317 316 315 314 312 310 308 307 305 304 304 305 306 306 307 310 311 313 315 316 316 315 |
| 12/21/2000 | 3.15 410 <0959> | 2.92 282 <2400> | 3.06 | 356 | -0.06W | | 314 313 312 312 312 312 313 313 314 315 305 293 295 299 303 307 308 306 304 301 298 296 293 292 |
| 12/22/2000 | 2.92 282 <0000> | 2.60 162 <2400> | 2.79 | 231 | -0.05W | | 291 289 288 287 286 285 284 283 282 281 280 280 279 279 280 279 278 276 275 272 269 264 262 260 |
| 12/23/2000 | 2.76 220 <1659> | 2.55 149 <0559> | 2.65 | 181 | -0.03W | | 258 256 257 257 257 255 257 259 259 259 259 262 265 267 271 274 276 276 276 276 275 273 272 272 |
| 12/24/2000 | 2.72 203 <0000> | 2.61 166 <2400> | 2.68 | 189 | -0.04W | | 271 271 271 271 271 271 270 268 268 267 267 267 268 269 269 270 269 267 265 264 263 262 261 261 |
| 12/25/2000 | 2.61 166 <0000> | 2.50 133 <1059> | 2.55 | 148 | -0.02W | | 260 260 260 259 257 256 255 254 252 251 250 251 253 254 256 256 256 255 255 254 253 252 251 250 |
| 12/26/2000 | 2.51 136 <1259> | 2.45 120 <0759> | 2.49 | 130 | -0.02W | | 250 249 248 247 247 246 246 245 245 245 245 248 251 251 251 251 251 251 251 251 250 249 249 249 |
| 12/27/2000 | 2.49 130 <0059> | 2.47 126 <2159> | 2.48 | 129 | -0.01W | | 248 248 248 248 248 248 248 248 248 248 248 248 248 248 248 248 248 248 248 248 248 247 247 247 |
| 12/28/2000 | 2.47 126 <0000> | 2.43 115 <2259> | 2.46 | 123 | -0.01W | | 247 247 247 246 246 246 246 246 246 246 246 247 247 247 247 247 246 245 245 244 244 244 243 243 |
| 12/29/2000 | 2.43 115 <0000> | 2.40 106 <0759> | 2.41 | 109 | -0.01W | | 243 242 242 242 241 241 241 240 240 240 241 242 242 241 241 241 241 241 241 241 241 240 240 240 |

Provisional

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATE 24 DIST 24
PRIMARY COMPUTATIONS OF GAGE HEIGHT AND DISCHARGE RATINGS USED --
03075500 DATE PROCESSED: 01-12-2001 @ 14:26 BY jeffries STNRD 18.0 03/18/1999 (2315)
YOUGHIOGHENY RIVER NEAR OAKLAND, MD INPUT DD: SAT-GHT
OUTPUT PARAMETER 00060 STORE STATISTIC(S) 00003
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2001 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

Provisional

| DATE | MAX GH /DISCH <TIME> | MIN GH /DISCH <TIME> | MEAN GH | MEAN DISCH | SHIFT ADJ | DATUM CORR | STAGE, IN HUNDREDTHS OF FEET, AT INDICATED HOURS 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 / 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 |
|---|---|---|---|---|---|---|---|
| 12/30/2000 | 2.40 | 2.37 | 2.39 | 105 | 0.00W | | 240 240 240 240 240 240 239 239 239 239 239 239 |
| | 106 | 101 | | | | | 239 239 239 239 239 238 238 238 237 237 237 237 |
| | <0000> | <2059> | | | | | |
| 12/31/2000 | 2.37 | 2.35 | 2.36 | 99 | 0.00W | | 237 237 237 237 236 236 236 236 236 236 236 236 |
| | 101 | 97 | | | | | 236 236 236 236 236 236 236 236 235 235 235 235 |
| | <0000> | <2059> | | | | | |
| PERIOD | 4.53 | 1.98 | | | | | |
| | 1470 | 27 | | | | | |

TIME CORRECTION 0.0

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
W - SHIFT VARIES BY TIME AND VALUE - V SHIFT

# APPENDIX D

# RECORD OF
# DISSOLVED OXYGEN MONITORING

DISSOLVED OXYGEN MONITORING LOG

(Instrument Calibrated to 2000 ft. MSL)

| DATE | INSTRUMENT CALIBRATION CAL. READINGS | | | DO MEASUREMENTS DOWNSTREAM FROM WEIR | | | NO. UNITS GENERATING | TIMES OF GENERATION | SLUICE GATE POSITION | NON-OPERATING TAILRACE ELEV | OPERATI TAILRAC ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TIME | TEMP °C | DO (mg/l) | TIME | TEMP °C | DO (mg/l) | | | | | |
| 6-1-00 | — | — | — | — | — | — | 1 @ 100% | 12:21 To 12:27 | ALL OPEN | 2022.6 | 2028. |
| | | | | | | | 2 @ 100% | 13:57 To 19:47 | | | |
| 6-2 | 10:25 | 26.8 | 7.04 | 10:30 | 14.0 | 8.97 | 2 @ 100% | 10:00 To 13:00<br>13:30/13:41 - 14:02/20:10 | " | 2022.3 | 2028. |
| 6-3 | < | STATION NOT | ATTENDED | | | > | 2 @ 100% | UNScheduled<br>10:00 - 13:00 | " | — | — |
| 6-4 | < | " | " | " | | > | | | " | — | — |
| 6-5 | 10:25 | 22.2 | 7.89 | 10:30 | 15.0 | 8.82 | 2 @ 100% | 10:00 To 24:00<br>UNScheduled | " | 2022.1 | 2028. |
| 6-6 | — | — | — | — | — | — | 2 @ 100% | UNScheduled<br>0000 - 24000 | " | — | 2028.1 |
| 6-7 | — | — | — | — | — | — | 2 @ 100% | UNScheduled<br>0000 - 2400 | " | — | 2028.1 |
| 6-8 | — | — | — | — | — | — | 2 @ 100% | UNScheduled<br>0000 - 2400 | " | — | 2028.1 |
| 6-9 | — | — | — | — | — | — | 2 @ 100% | 0000 - 0706 Unscheduled<br>10:00 - 13:00 Scheduled Unscheduled | " | 2023.1 | 2028.1 |
| 6-10 | < | STATION | NOT | ATTENDED | | > | — | NONE | " | 2023.1 | — |
| 6-11 | < | | | | | > | 2 @ 100% | 16:10 - 19:10 Unscheduled<br>20:45 - 22:00 | " | 2023.1 | 2028.1 |
| 6-12 | 10:25 | 28.8 | 7.05 | 10:30 | 15.1 | 7.82 | 2 @ 100% | 10:00 - 13:00 | " | 2022.3 | 2028.1 |
| 6-13 | — | — | — | — | — | — | — | NONE | " | 2022.3 | — |
| 6-14 | — | — | — | — | — | — | 2 @ 100% | 17:50 - 24:00<br>UNScheduled | " | 2022.3 | 2028. |
| 6-15 | — | — | — | — | — | — | 2 @ 100% | 24:00 - 07:00<br>21:07 - 21:24 Unscheduled | " | 2022.3 | 2028.1 |
| 6-16 | 10:25 | 29.3 | 6.95 | 10:30 | 15.4 | 7.68 | 2 @ 100% | 10:00 - 13:00 | " | 2022.3 | 2028. |
| 6-17 | < | STATION | NOT | ATTENDED | | > | 2 @ 100% | 11:03 - 13:03<br>UNScheduled | " | 2022.3 | 2028.1 |
| 6-18 | < | | | | | > | 2 @ 100% | 15:00 - 17:00<br>UNScheduled | " | 2022.3 | 2028.1 |
| 6-19 | 10:25 | 7.52 | 25.2 | 10:30 | 15.6 | .07 | 2 @ 100% | 10:00 - 13:00 | " | 2022.3 | 2028. |
| 6-20 | | | | | | | 2 @ 100% | UNScheduled Both Units<br>16:48 - 17:00 | " | 2022.2 | 2028.1 |

(Instrument Calibrated to 2000 ft. MSL) **JUN 21 2000** DISSOLVED OXYGEN MONITORING LOG **JUL 10 2000**

| DATE | INSTRUMENT CALIBRATION CAL. READINGS | | | DO MEASUREMENTS DOWNSTREAM FROM WEIR | | | NO. UNITS GENERATING | TIMES OF GENERATION | SLUICE GATE POSITION | NON-OPERATING TAILRACE ELEV | OPERATI TAILRAC ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TIME | TEMP °C | DO (mg/l) | TIME | TEMP °C | DO (mg/l) | | | | | |
| 6-21 | — | — | — | — | — | — | 2 @ 100% | 11:00 - 18:00 unscheduled | All open | 2022.2 | 2028.1 |
| 6-22 | — | — | — | — | — | — | — | NONE | All open | 2022.2 | — |
| 6-23 | 10:25 | 26.5 | 7.44 | 10:35 | 15.6 | 7.17 | 2 @ 100% | 10:00 - 13:00 | All open | 2022.2 | 2028.1 |
| 6-24 | < | STATION | | NOT ATTENDED | | > | 2 @ 100% | 13:00 - 15:20 unscheduled | All open | 2022.2 | 2028.1 |
| 6-25 | < | | | | | > | 2@ 100% | 12:30 - 14:30 unscheduled | All open | 2022.2 | 2028.1 |
| 6-26 | 10:25 | 27.4 | 7.55 | 10:35 | 15.8 | 6.68 | 2@ 100% | 10:00 - | All open | 2022.1 | 2028.1 |
| 6-27 | — | — | — | — | — | — | — | None | All open | 2022.0 | — |
| 6-28 | — | — | — | — | — | — | — | NONE | All open | 2022.1 | — |
| 6-29 | — | — | — | — | — | — | — | NONE | All open | 2022.1 | — |
| 6-30 | 10:25 | 23.9 | 7.81 | 10:35 | 15.5 | 6.31 | 2@100% | 10:00 - 13:00 | All open | 2022.0 | 2028.1 |
| 7-1 | < | STATION | UNATTENDED | | | > | 2@100% | 10:00 - 1300 | All open | 2022.0 | — |
| 7-2 | < | | | | | > | 2@100% | 15:30 - 16:33 unscheduled | All open | 2022.0 | — |
| 7-3 | 10:25 | 26.5 | 7.33 | 10:30 | 15.8 | 6.39 | 2@100% | 10:00 - 1300 | All open | 2021.8 | 2028.1 |
| 7-4 | — | — | — | — | — | — | 2@ 100% | 1100 To 1300 unscheduled | All open | 2021.8 | 2028. |
| 7-5 | — | — | — | — | — | — | 2@100% | 1106 - 1149 unscheduled | All open | 2021.8 | 2028.1 |
| 7-6 | — | — | — | — | — | — | 2@ 100% | 1200 - 1300 unscheduled | All open | 2021.8 | 2028.1 |
| 7-7 | 10:25 | 23.0 | 7.48 | 10:33 | 16.2 | 6.58 | 2@100% | 1000 - 1300 1330 - 1353 unsched | All open | 2021.8 | 2028.1 |
| 7-8 | < | STATION | UNATTENDED | | | > | 2@100% | 1500 - 1600 unscheduled | All open | 2021.8 | 2028.1 |
| 7-9 | < | | | | | > | 2@ 100% | 1230 - 1430 unscheduled | All open | 2021.8 | 2028.1 |
| 7-10 | 10:25 | 24.9 | 7:52 | 1030 | 15.9 | 6.02 | 2@100% | 1000 - 1300 | All open | 2021.7 | 2028.1 |

DISSOLVED OXYGEN MONITORING LOG

(Instrument Calibrated to 2000 ft. MSL)

| TE | INSTRUMENT CALIBRATION CAL. READINGS | | | DO MEASUREMENTS DOWNSTREAM FROM WEIR | | | NO. UNITS GENERATING | TIMES OF GENERATION | SLUICE GATE POSITION | NON-OPERATING TAILRACE ELEV | OPERATING TAILRACE ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TIME | TEMP °C | DO (mg/l) | TIME | TEMP °C | DO (mg/l) | | | | | |
| 7-11 | — | — | — | — | — | — | — | — | All open | 2024.9 | — |
| 7-12 | — | — | — | — | — | — | — | — | All open | 2023.5 | — |
| 7-13 | — | — | — | — | — | — | 2 @ 100% | 1038-1101 1304-1339 2038-2135 | All open | 2022.6 | 2028.1 |
| 7-14 | 10:25 | 22.0 | 8.07 | 10:30 | 16.2 | 6.02 | 2 @ 100% | 1000 - 1300 | All open | 2022.2 | 2028.1 |
| 7-15 | | | Station | Not Attended | | | | — | All open | — | — |
| 7-16 | | | | | | | | — | All open | — | — |
| 7-17 | 10:25 | 20.8 | 8.31 | 10:30 | 16.5 | 5.65 | 2 @ 100% | 10:00 13:05 20:45 21:00 | All open / 1 closed gates | 2022.2 | 2028.1 |
| 7-18 | — | — | — | — | — | — | — | — | 2 closed 2 open 1 FT | 2022.1 | — |
| 7-19 | — | — | — | — | — | — | — | — | 2 closed 2 open 1 FT | 2022.0 | — |
| 7-20 | — | — | — | — | — | — | — | — | 2 closed 2 open 1 FT | 2022.9 | — |
| 7-21 | 10:15 | 18.8 | 8.61 | 10:25 | 16.6 | 7.22 | 2 @ 100% Unscheduled | 09:25 — 15:15 | 2 closed 2 OPN 1 FT | 2023.0 | 2028.5 |
| 7-22 | | | Station | Unattended | | | | — | 2 closed 2 open 1 FT | — | — |
| 7-23 | | | | | | | | — | 2 closed 2 open 1 FT | — | — |
| 7-24 | 10:30 | 22.0 | 8.11 | 10:35 | 16.9 | 7.07 | 2 @ 100% | 10:00 - 13:00 | 2 closed 2 open 1 FT | 2022.2 | 2028.5 |
| 7-25 | — | — | — | — | — | — | — | — | 2 closed 2 open 1 FT | 2022.1 | — |
| 7-26 | — | — | — | — | — | — | 2 @ 100% | 0805 - 08:13 Unscheduled | 2 closed 2 open 1 FT | 2022.1 | 2028.5 |
| 7-27 | — | — | — | — | — | — | 2 @ 100% | 0816 - 2200 Unscheduled | 2 closed 2 open 1 FT | 2022.0 | 2028.5 |
| 7-28 | 10:30 | 22.8 | 8.31 | 10:35 | 17.3 | 6.85 | 2 @ 100% | 10:00 — 13:00 Sched. 13:00 — unsch. | 2 closed 2 open 1 FT | 2022.0 | 2028.5 |
| 7-29 | | | Station | Unattended | | | | | 2 closed 2 open 1 FT | | |
| 7-30 | | | | | | | | | 2 closed 2 open 1 FT | | |

(Instrument Calibrated to 2000 ft. MSL)

DISSOLVED OXYGEN MONITORING LOG

| DATE | INSTRUMENT CALIBRATION CAL. READINGS | | | DO MEASUREMENTS DOWNSTREAM FROM WEIR | | | NO. UNITS GENERATING | TIMES OF GENERATION | SLUICE GATE POSITION | NON-OPERATING TAILRACE ELEV | OPERATIN TAILRACE ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TIME | TEMP °C | DO (mg/l) | TIME | TEMP °C | DO (mg/l) | | | | | |
| 7-31 | 10:25 | 26.7 | 7.44 | 10:30 | 17.6 | 6.83 | 2@ 100% | 10:00 - 19:29 9hrs 29min | 2closed 2 open 1FT | 2022.1 | 2028.5 |
| 8-1 | — | — | — | — | — | — | — | — | 2closed 2 open 1FT | 2022.4 | — |
| 8-2 | — | — | — | — | — | — | — | — | 2closed 2 open 1FT. | 2022.1 | — |
| 8-3 | — | — | — | — | — | — | — | — | 2closed 2 open 1FT. | 2021.7 | — |
| 8-4 | 10:25 | 25.5 | 7.59 | 10:30 | 17.3 | 6.54 | 2@ 100% | 10:00 - 13:00 | 2closed 2 open 1FT. | 2022.5 | 2028.5 |
| 8-5 | | | STATION | | | | 2@ 100% | 10:00 - 13:00 | 2closed 2 open 1FT. | — | — |
| 8-6 | | | UN | ATTended | | | — | — | 2closed 2 open 1FT. | — | — |
| 8-7 | 10:25 | 26.9 | 7.38 | 10:30 | 17.0 | 6.37 | 2@ 100% | 08:17 - 17:06 21:35 - 21:50 | 2closed 2 open 1FT | 2022.6 | 2028.5 |
| 8-8 | — | — | — | — | — | — | 2@ 100% | 08:40 - 19:06 UNscheduled | 2 closed 2 open 1FT | 2022.2 | 2028.5 |
| 8-9 | — | — | — | — | — | — | 2@ 100% | 13:30 - 22:20 UNscheduled | 2 closed 2 open 1FT | 2022.0 | 2028.5 |
| 8-10 | — | — | — | — | — | — | 2@ 100% | 1220 - 1835 UNscheduled | 2 closed 2 open 1FT | 2022.1 | 2028.5 |
| 8-11 | 10:20 | 23.2 | 7.86 | 10:25 | 17.8 | 6.68 | 2@ 100% | 0817 - 1223 2014 - 21:30 UNscheduled | 2closed 2 open 1FT | 2022.0 | 2028.5 |
| 8-12 | | | STATION | | | | 2@ 100% | 0821 - 0830 0901 - 1105 | 2closed 2 open 1FT | — | 2028.5 |
| 8-13 | | | UN | ATTended | | | — | — | 2closed 2 open 1FT | — | 2028.5 |
| 8-14 | 10:25 | 21.3 | 8.06 | 10:30 | 18.3 | 6.16 | 2@ 100% | 1000 - 1300 | 2closed 2 open 1FT | 2021.9 | 2028.5 |
| 8-15 | — | — | — | — | — | — | 2@ 100% | 13:43 : 18:50 UNscheduled | 2 closed 2 open 1FT | 2021.8 | 2028.5 |
| 8-16 | — | — | — | — | — | — | 2@ 100% | 08:21 - 11:00 13:00 - 16:00 | 2 closed 2 open 1FT | 2021.8 | 2028.5 |
| 8-17 | — | — | — | — | — | — | — | — | 2closed 2 open 1FT | 2021.8 | — |
| 8-18 | 10:25 | 24.7 | 7.28 | 10:30 | 18.8 | 6.49 | | | 2 closed 2 open 1FT | 2021.8 | 2028.5 |
| 8-19 | — | — | STATION | UNATTended | — | — | — | — | — | — | — |

JUL 31 2000

AUG 1 9 2000

DEEP CREEK STATION
DISSOLVED OXYGEN MONITORING LOG

(Instrument Calibrated to 2000 ft. MSL)

| DATE | INSTRUMENT CALIBRATION CAL. READINGS TIME | TEMP °C | DO (mg/l) | DO MEASUREMENTS DOWNSTREAM FROM WEIR TIME | TEMP °C | DO (mg/l) | NO. UNITS GENERATING | TIMES OF GENERATION | SLUICE GATE POSITION | NON-OPERATING TAILRACE ELEV | OPERATI TAILRAC ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-20 | — | — | — | — | — | — | 2@ 100% | 20:23 - 20:28 UNScheduled | 2closed 2 open IFT | 2021.8 | 2028.5 |
| 8-21 | 10:25 | 22.8 | 7.95 | 10:30 | 18.7 | 6.77 | 2@ 100% | 10:00 - 1300 | 2 closed 2 open IFT | 2021.8 | 2028.5 |
| 8-22 | — | — | — | — | — | — | — | — | 2Closed 2 open IFT | 2021.7 | — |
| 8-23 | — | — | — | — | — | — | 2@ 100% | 14:00 14:17 UNScheduled | 2 closed 2 open IFT | 2021.7 | — |
| 8-24 | — | — | — | — | — | — | — | — | 2Closed 2 OPEN IFT | 2021.8 | — |
| 8-25 | 10:25 | 21.8 | 7.74 | 10:30 | 18.6 | 6.51 | 2@ 100% | 10:00 - 18:00 | 2Closed 2open IFT | 2021.8 | 2028.5 |
| 8-26 | | | Station | | | | | 17:15 - 18:15 UNScheduled | 2closed 2 open IFT | 2021.8 | 2028.5 |
| 8-27 | | | UNattended | | | | — | — | 2closed 2 open IFT | — | — |
| 8-28 | 10:25 | 22.4 | 8.04 | 10:30 | 18.9 | 6.86 | 2@ 100% | 10:00 - 13:10 | 2closed 2 open IFT | 2021.7 | 2028.5 |
| 8-29 | — | — | — | — | — | — | — | — | 2closed 2open IFT | 2021.7 | |
| 8-30 | — | — | — | — | — | — | — | — | 2Closed 2 open IFT | 2021.7 | |
| 8-31 | 0925 | 25.5 | 7.56 | 09:30 | 17.7 | 6.70 | 2@100% | 0900 - 1500 Scheduled | 2closed 2 open IFT | 2021.7 | 2028.5 |
| 9-1 | 10:25 | 24.3 | 7.75 | 10:30 | 17.5 | 6.56 | 2@100% | 1000 - 13:00 UNScheduled 1300-1600 | 2Closed 2 open IFT | 2021.7 | 2028.5 |
| 9-2 | | | | STATION | | | 2@ 100% | 1000 - 1600 | 2Closed 2 open IFT | 2021.7 | 2028.5 |
| 9-3 | | | UN | ATTEND | ED | | 2@ 100% | 1200 - 16:20 UNScheduled | 2Closed 2 open IFT | 2021.7 | 2028.5 |
| 9-4 | | | | | | | 2@ 100% | 1000 - 1500 | 2Closed 2 open IFT | 2021.7 | 2028.5 |
| 9-5 | — | — | — | — | — | — | — | — | 2closed 2 open IFT | 2021.8 | — |
| 9-6 | — | — | — | — | — | — | — | — | 2Closed 2 open IFT | 2021.8 | — |
| 9-7 | — | — | — | — | — | — | 2@100% | 19:38 - 20:17 UNScheduled | 2Closed 2 open IFT | 2021.8 | 2028.5 |
| 9-8 | 10:25 | 24.6 | 7.81 | 10:30 | 17.6 | 6.59 | 2@ 100% | 10:00 - 13:00 | 2Closed 2open IFT | 2021.8 | 2028.5 |

AUG 2 0 2000

SEP 0 8 2000

DEEP CREEK STATION

DISSOLVED OXYGEN MONITORING LOG

(Instrument Calibrated to 2000 ft. MSL)

| DATE | INSTRUMENT CALIBRATION CAL. READINGS TIME | TEMP °C | DO (mg/l) | DO MEASUREMENTS DOWNSTREAM FROM WEIR TIME | TEMP °C | DO (mg/l) | NO. UNITS GENERATING | TIMES OF GENERATION | SLUICE GATE POSITION | NON-OPERATING TAILRACE ELEV | OPERATIN TAILRACE ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9-9 | | | STATION NOT | | | | — | — | 2closed 2open 1FT | 2021.8 | — |
| 9-10 | | | ATTENDED | | | | — | — | 2closed 2 open 1FT | — | — |
| 9-11 | 10:25 | 25.6 | 7.58 | 10:30 | 19.1 | 7.41 | 2@100% | 10:00 – 13:00 sched; 13:00 – 14:00 unsched | 2 closed 2 open 1FT | 2021.8 | 2028.5 |
| 9-12 | — | — | — | — | — | — | 2@100% | 10:26 – 10:40 12:56 – 16:00 unscheduled | 2closed 2open 1FT | 2021.8 | 2028.5 |
| 9-13 | — | — | — | — | — | — | — | — | 2closed 2open 1FT | 2021.8 | — |
| 9-14 | — | — | — | — | — | — | — | — | 2closed 2 open 1FT | 2021.7 | — |
| 9-15 | 10:25 | 20.2 | 8.30 | 10:30 | 18.8 | 7.48 | 2@100% | 10:00 — 1300 | 2closed 2open 1FT | 2021.7 | 2028.5 |
| 9-16 | | | station | | | | — | — | 2closed 2 open 1FT | — | — |
| 9-17 | | | UN | Attended | | | — | — | 2closed 2 open 1FT | — | — |
| 9-18 | 10:40 | 19.6 | 8.46 | 10:45 | 18.1 | 7.60 | 2@100% | 1005 – 1300 | 2closed 2 open 1FT | 2021.7 | 2028.5 |
| 9-19 | — | — | — | — | — | — | 2@100% | 19815 – 19:55 Unscheduled | 2 closed 2 open 1FT | 2021.7 | 2028.5 |
| 9-20 | — | — | — | — | — | — | 2@100% | 10:00 – 13:00 15:25 19:25 Unscheduled | 2closed 2 open 1FT | 2021.7 | 2028.5 |
| 9-21 | — | — | — | — | — | — | — | — | 2 closed 2 open 1FT | 2021.7 | — |
| 9-22 | 10:25 | 20.8 | 8.26 | 10:30 | 17.9 | 7.70 | 2@100% | 09:55 – 13:00 | 2closed 2 open 1FT | 2021.6 | 2028.5 |
| 9-23 | | | station | NOT | | | — | — | 2closed 2open 1FT | — | — |
| 9-24 | | | ATTended | | | | | 14:10 – 15:00 1650-1710 18:55 – 20:00 | 2closed 2 open 1FT | — | 2028.5 |
| 9-25 | 10:25 | 23.5 | 7.86 | 10:30 | 18.1 | 8.42 | 2@100% | 10:00 — 13:00 19:00 20:00 | 2 open 1FT 2 closed | 2021.6 | 2028.5 |
| 9-26 | — | — | — | — | — | — | — | — | 2closed 2 open 1FT | 2024.0 | — |
| 9-27 | — | — | — | — | — | — | 2@100% | 14:48 – 15:20 | 2closed 2 open 1FT | 2023.0 | 2028.5 |
| 9-28 | — | — | — | — | — | — | — | — | 2closed 2 open 1FT | 2022.5 | — |

SEP 0 9 2000

SEP 2 8 2000

DISSOLVED OXYGEN MONITORING LOG

(Instrument Calibrated to 2000 ft. MSL)

| ATE | INSTRUMENT CALIBRATION CAL. READINGS | | | DO MEASUREMENTS DOWNSTREAM FROM WEIR | | | NO. UNITS GENERATING | TIMES OF GENERATION | SLUICE GATE POSITION | NON-OPERATING TAILRACE ELEV | OPERATING TAILRACE ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TIME | TEMP °C | DO (mg/l) | TIME | TEMP °C | DO (mg/l) | | | | | |
| 9-29 | 10:25 | 22.2 | 7.89 | 10:30 | 16.7 | 7.64 | 2@100% | 10:00 - 13:00 | 2 closed 2 open 1ft | 2022.3 | 2025.5 |
| 9-30 | — | — | — | — | — | — | — | — | — | — | — |

SEP 2000