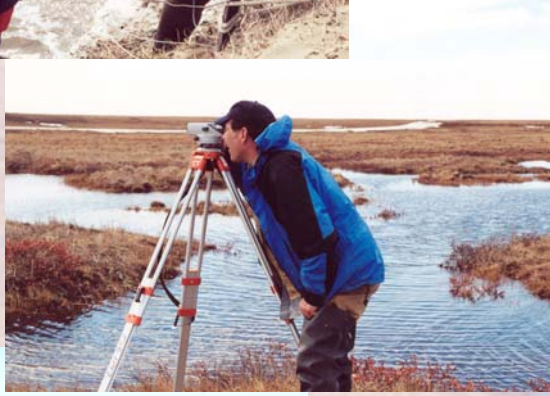


**2001 Hydrologic Assessment  
Fish Creek, Judy Creek and  
the Ublutuoch River  
North Slope, Alaska**



# 2001 Hydrologic Assessment Fish Creek, Judy Creek and the Ublutuoch River North Slope, Alaska

December, 2001



Prepared For:



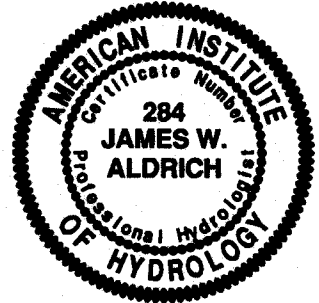
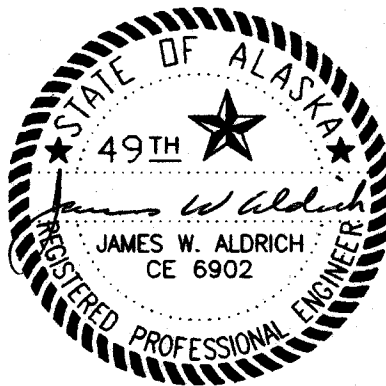
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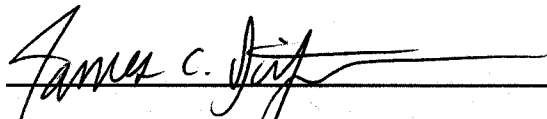


URS Corporation  
3504 Industrial Ave., Suite 125  
Fairbanks, AK 99701  
(907) 374-0303

**2001 HYDROLOGIC ASSESSMENT**  
**FISH CREEK, JUDY CREEK AND THE UBLUTUOCH RIVER**  
**NORTH SLOPE, ALASKA**

**DECEMBER 2001**



  
**James C. Dietzmann**

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**James W. Aldrich, P.E., P.H.**

Prepared by  
**URS CORPORATION**  
3504 Industrial Ave., Suite 125  
Fairbanks, AK 99701

Prepared for  
**PHILLIPS ALASKA, INC.**  
700 G Street  
Anchorage, AK 99501

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## **1.0 INTRODUCTION**

This report summarizes the 2001 monitoring effort on Fish Creek, Judy Creek, and the Ublutuoch River. The three streams are located within the National Petroleum Reserve, on the north slope of Alaska (Figure 1). These rivers were monitored to provide hydrologic and hydraulic information for engineering and environmental assessments of the rivers. The site investigations began on 21 May and concluded on 8 September.

Each of the three rivers is discussed in a separate section of the report, Sections 2.0 through 4.0. Within each section is a discussion of: the water surface elevations and discharge throughout the 2001 spring and summer seasons, the impact of ice and snow on water surface elevations, the magnitude and timing of flood peaks, the magnitude of the observed riverbed movement, and main channel hydraulic roughness. The methods used to collect the field data are summarized in Appendix A. Spring breakup water surface elevations and observations are presented in Appendix B, and summaries of the discharge measurements are presented in Appendix C. A complete listing of the water surface elevations and discharge throughout the spring and summer is presented in Appendix D, and a photographic record is presented in Appendix E. The flood-peak frequency and flood timing analyses conducted for this project are described in Appendices F through H, and summaries of the bed material gradations are presented in Appendix I. All of the elevations presented in this report are based on the British Petroleum mean sea level datum (BPMSL).

## **2.0 FISH CREEK**

### **2.1 MONITORING PROGRAM**

During spring breakup, monitoring sites were established at 6 locations along Fish Creek (Figure 2). The monitoring sites were located at River Miles 0.7, 11.7, 18.4, 25.1, 32.4, and 43.3. The monitoring consisted of recording snow and ice conditions, and water surface elevations (Appendix B). Discharge measurements were made periodically at River Miles 25.1 and 32.4 (Appendix C).

During the summer, monitoring continued at two of the sites: River Miles 25.1 and 32.4. Water surface elevation was monitored continuously at both sites (Appendix D) and discharge was measured once a month at River Mile 32.4 (Appendix C).



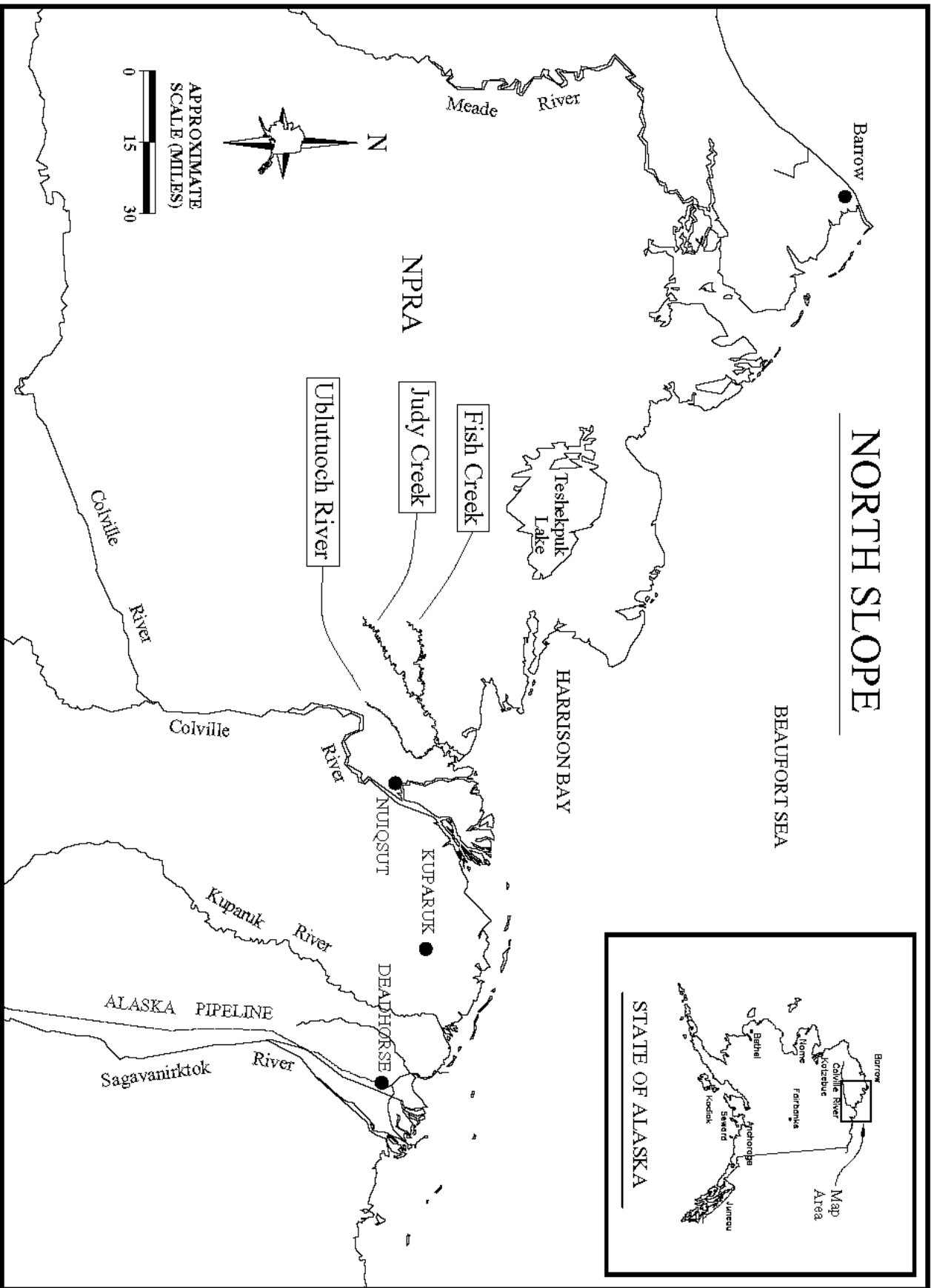
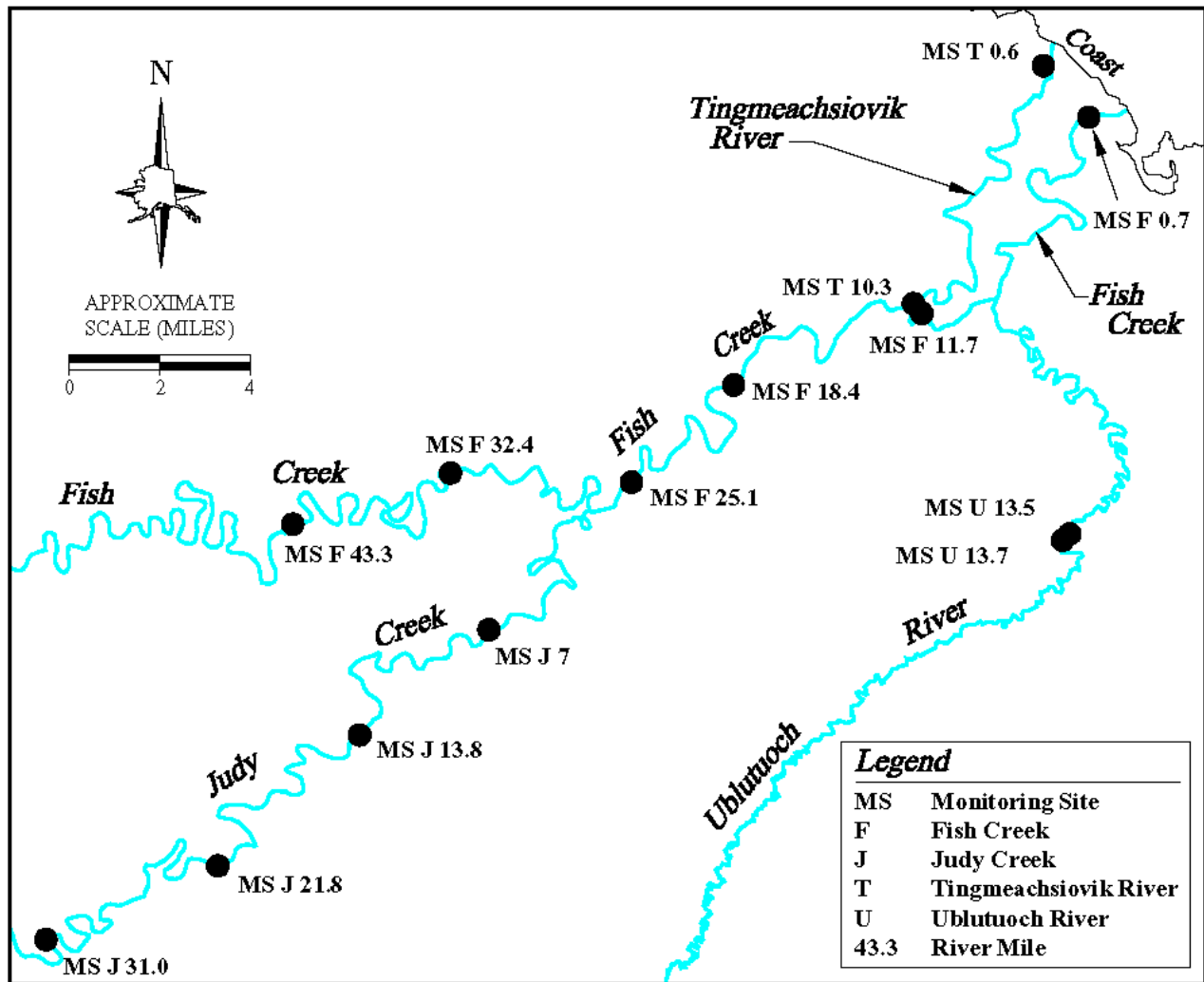


Figure 1: Site Location Map

Figure 2: Monitoring Site Locations



## 2.2 STREAM DESCRIPTION

Fish Creek lies to the west of the Colville River delta, and flows northeast into Harrison Bay. It has a drainage area of approximately 1,827 square miles, of which 22 percent is covered with lakes.

Fish Creek has a relatively low gradient and highly sinuous channel, with an average water surface slope of approximately 0.00012 feet/foot between River Mile 43.3 and the mouth. The channel banks and bed consist of sand and silt sized material. Undercut stream banks and bank sloughing are common along the outside of meander bends.

## **2.3 SPRING BREAKUP OBSERVATIONS**

### **2.3.1 Summary**

#### **2.3.1.1 River Mile 25.1**

At River Mile 25.1, the spring-peak water surface elevation was 18.92 feet (BPMSL) and occurred between 17:40 on 9 June and 19:02 on 10 June. The discharge at the time of the peak water surface elevation was approximately 6,000 cubic feet per second. Ice and snow in the channel caused the water surface elevation to be higher than it would have been if the channel had been clear. The spring-peak water surface elevation was the highest water surface elevation that occurred during 2001.

The spring-peak discharge was approximately 6,400 cubic feet per second and occurred on 15 June, at a water surface elevation of 17.20 feet (BPMSL). This is about 1.7 feet below the spring-peak water surface elevation. The spring-peak discharge was the highest discharge that occurred during 2001.

#### **2.3.1.2 River Mile 32.4**

At River Mile 32.4, the spring-peak water surface elevation was 22.25 feet (BPMSL) and occurred at approximately 16:00 on 15 June. The spring-peak discharge occurred at the same time as the peak water surface elevation, and was approximately 3,700 cubic feet per second. The channel was clear of ice and snow when the peak water surface elevation and discharge occurred. Both the spring-peak water surface elevation and discharge were the highest that occurred during 2001.

### **2.3.2 Daily Observations**

#### **4 June**

Flowing water was first observed at River Mile 56 on 4 June (Photo 1). At this time, the channel downstream of River Mile 56 contained intermittent pools of melt water on top of snow in the channel.

As the leading edge of the flowing water reached sections of the channel where the surface of the snow was particularly high, the water backed up behind the snow. Once the water surface rose to an elevation higher than the surface of the snow, the water began to flow over the snow and continue down the channel.



**PHOTO 1.** *Leading edge of the flowing water on Fish Creek at River Mile 56 on 4 June 2001.*

### **5 June - 6 June**

On 5 June, the leading edge of the flowing water was at approximately River Mile 42, immediately downstream from the uppermost monitoring site at River Mile 43.3. At this time, the channel downstream of River Mile 42 contained intermittent pools of melt water on top of the snow in the channel.

On 6 June, the leading edge of the flowing water was at approximately River Mile 21. At this time, the water flowing below the confluence (approximately River Mile 26 on Fish Creek) was from Judy Creek only. The leading edge of the flowing water on Fish Creek was at approximately River Mile 28. Sections of the channel downstream of River Mile 21 had water flowing between isolated pools of melt water. Ice floes, grounded and flowing, were observed between River Miles 43.3 and 21. Surface ice jams were observed at River Miles 36 and 42 (Photo 2).



**PHOTO 2.** *Surface ice jam located on Fish Creek at River Mile 36 on 6 June 2001.*

### **7 June – 8 June**

On Fish Creek, the leading edge of the flowing water reached the mouth of Judy Creek during the afternoon of 7 June. Water surface elevations increased at all Fish Creek monitoring sites, except at River Miles 32.4 and 43.3, where water surface elevations decreased on 7 June (Tables B-1.1 – B-1.7, Appendix B). Discharge was measured at River Mile 25.1 on 7 June (Table C-1.2, Appendix C). At this time, the average velocity in the channel was 1.48 feet per second.

On 7 June, both grounded and moving ice floes were observed in the channel between River Mile 43.3 and River Mile 11.7. Surface ice jams were observed at River Miles 36 and 23. At River Miles 43.3, 32.4, 25.1, 18.4, and 11.7, snow blocked less than 2 percent of the channel. At the mouth of Fish Creek, channel and offshore ice were still intact, and water was flowing over the channel ice and onto the offshore ice.

On 8 June, no ice jams were observed at River Miles 42 or 36. The number of grounded and moving ice floes appeared to be decreasing, and the ice jam located at River Mile 23 had shifted downstream and appeared to be breaking up. Near the mouth of Fish Creek (River Mile 0.7), water was flowing over the top of the channel ice.

On 8 June, discharge was measured at River Miles 25.1 and 32.4 (Tables C-1.3 and C-2.2, Appendix C). The average velocity in the channel at River Miles 25.1 and 32.4 was 1.88 and 0.76 feet per second, respectively.

### **9 June – 10 June**

The ice jam located at River Mile 23 was no longer present on the morning of 9 June. The peak water surface elevation occurred at River Mile 25.1 between 9 and 10 June (Table B-1.5 in Appendix B, and Table D-1.3 in Appendix D). Snow and ice blockage in the channel, at the time of the peak stage, caused the water surface elevation at River Mile 25.1 to be on the order of 2 feet higher than it would have been during open channel conditions.

On 9 June, discharge was measured at River Mile 32.4 (Table C-2.3, Appendix C). The average velocity in the channel was 0.75 feet per second.

### **11 June – 12 June**

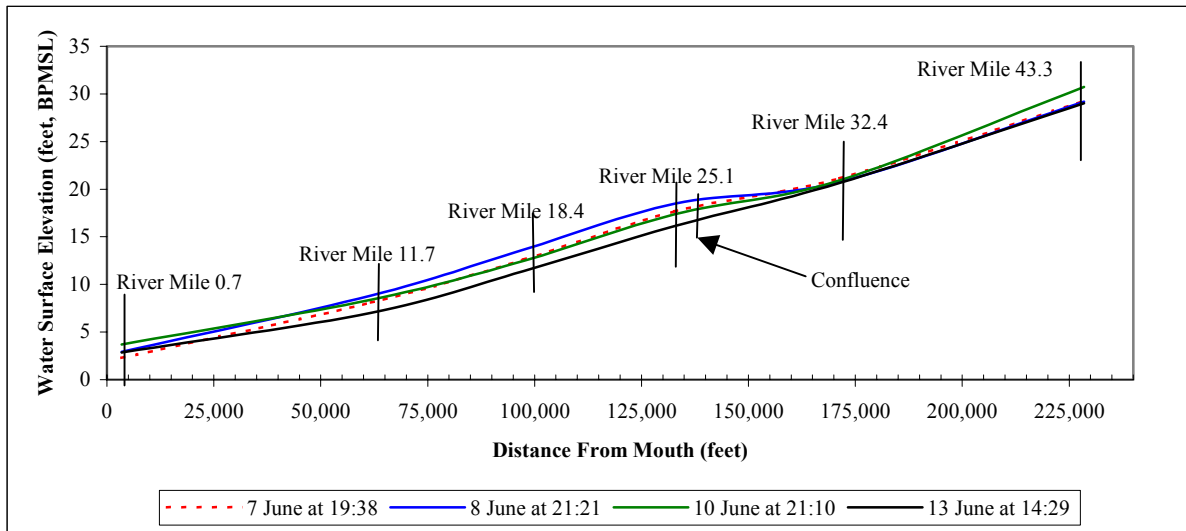
By 11 June, both ice and snow had ceased to affect water surface elevations at River Mile 25.1. The channel banks were clear of snow at all monitoring sites except River Mile 32.4, where discontinuous snow patches were still present along the stream bank. Additionally, the number of grounded and moving ice floes had decreased significantly. At River Mile 0.7, the entire delta was under water and the offshore ice was no longer adjacent to the land.

On 11 June, discharge was measured at River Miles 25.1 and 32.4 (Tables C-1.4 and C-2.4, Appendix C). The average velocity in the channel at River Miles 25.1 and 32.4 was 2.93 and 1.81 feet per second, respectively.

### **13 June – 14 June**

By 14 June, both ice and snow had ceased to affect the water surface elevation at all of the monitoring sites. The water surface profiles between River Miles 0.7 and 43.3 on 7, 8, 10, and 13 June are presented in Figure 3. On 7 and 8 June, the water surface profile was distinctly elevated downstream from River Mile 32.4. The increase in water surface elevation was probably due to the surface ice jam observed at River Mile 21 on 7 and 8 June. On 10 and 13 June, the water surface profiles did not exhibit the elevated water surface discussed above and were relatively uniform along the channel.

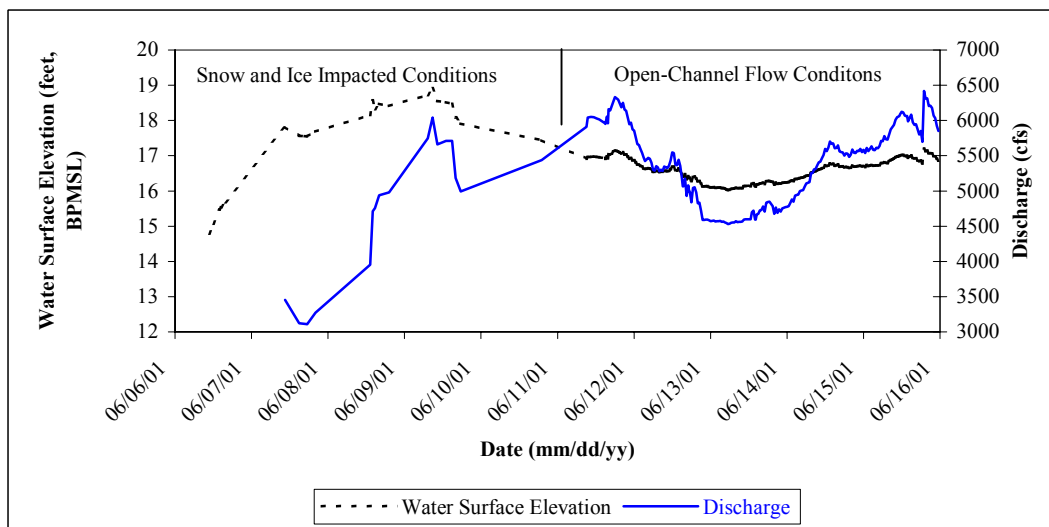
**Figure 3: Fish Creek Water Surface Profiles**



**15 June – 18 June**

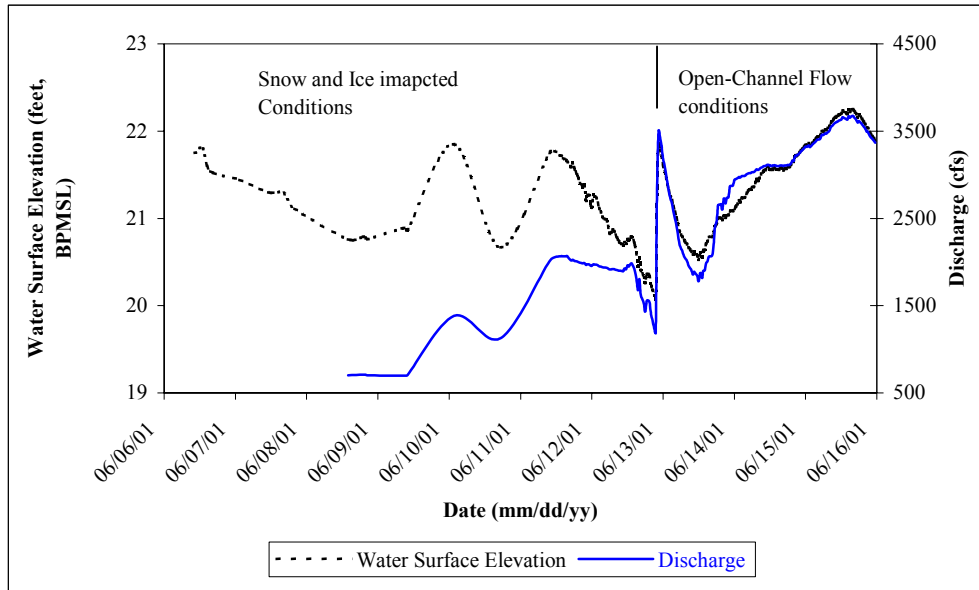
The peak discharge at River Mile 25.1 occurred on 15 June (Figure 4, Table B-1.5 in Appendix B, and Table D-1.3 in Appendix D). The peak discharge occurred after the peak water surface elevation, which occurred late on 9 June or early on 10 June. When the peak discharge occurred, snow and ice were no longer affecting water surface elevations.

**Figure 4: Water Surface Elevation and Discharge During Breakup at River Mile 25.1**



The peak discharge at River Mile 32.4 occurred on 15 June (Figure 5, Table B-1.6 in Appendix B, and Table D-2.3 in Appendix D). The peak discharge occurred at the same time as the peak water surface elevation, and both occurred during open-channel flow conditions.

**Figure 5: Water Surface Elevation and Discharge During Breakup at River Mile 32.4**



## 2.4 SUMMER OBSERVATIONS

Water surface elevations were monitored continuously between 11 June and 9 September using a pressure transducer at River Miles 25.1 and 32.4. At River Mile 32.4, discharge was measured three times during the summer (Tables C-2.7 through C-2.9, Appendix C). On those three dates, the discharge at River Mile 25.1 was calculated from the discharge measurements made at River Mile 32.4 on Fish Creek and at River Mile 7 on Judy Creek (Table C-1.1, Appendix C).

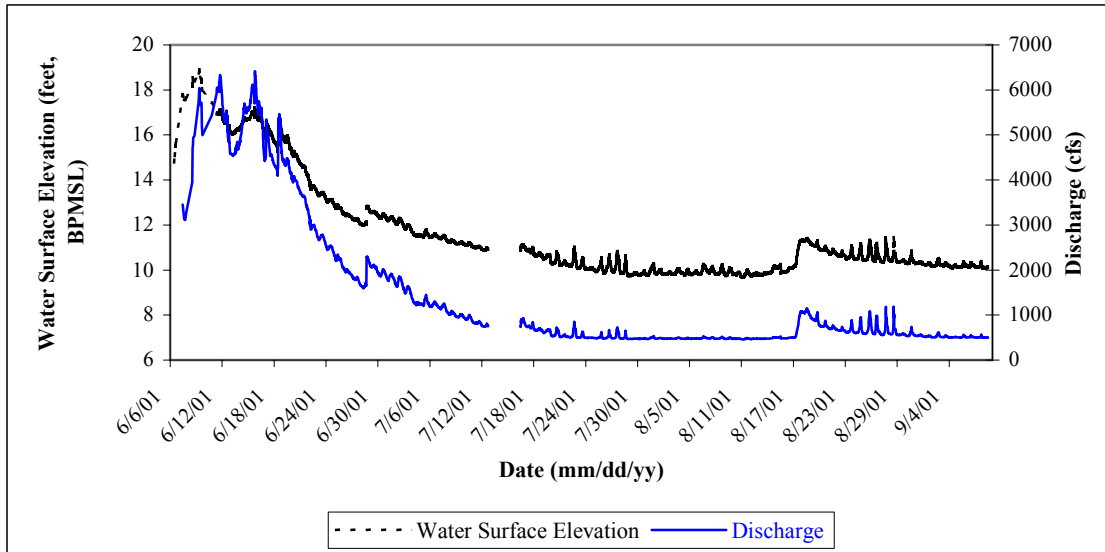
### 2.4.1 River Mile 25.1

The water surface elevation and discharge at River Mile 25.1 decreased to summer conditions by mid-July (Figure 6, and Table D-1.3 in Appendix D). Diurnal fluctuations in the water surface elevation of up to 1-foot, occurred throughout the monitoring period. On 17 August, the water surface elevation increased approximately 1-foot (Figure 6). At this time, discharge increased more than 500 cubic feet per second. An increase in the water surface elevation and discharge during this period was not observed at River Mile 32.4; however, an increase in the water surface elevation and discharge was observed on Judy Creek.

At River Mile 25.1, the average monthly discharge was approximately 3,100, 840 and 590 cubic feet per second during June, July and August, respectively.



**Figure 6: Water Surface Elevation and Discharge at River Mile 25.1, 6 June – 8 September**

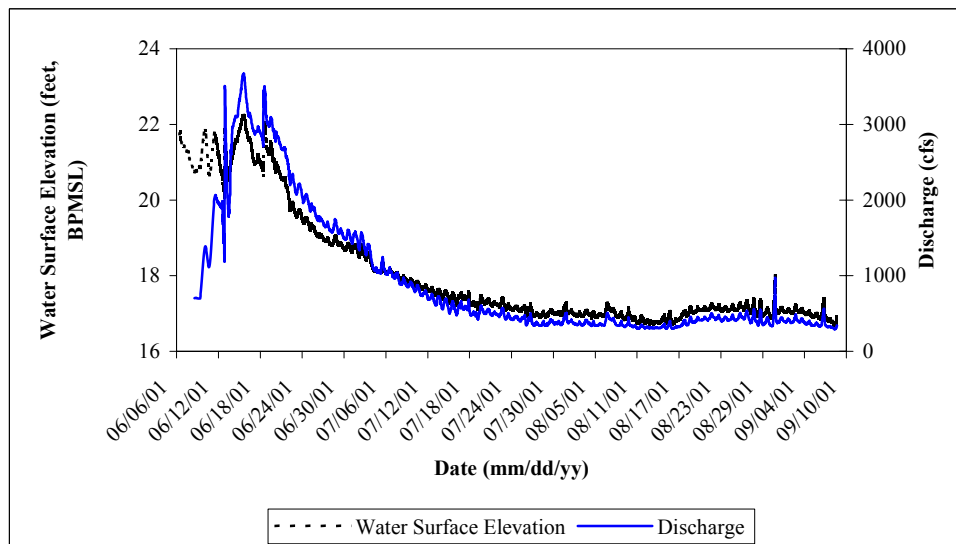


#### 2.4.2 River Mile 32.4

Water surface elevations at River Mile 32.4 decreased to summer flow levels by mid-July (Figure 7, and Table D-2.3 in Appendix D). Diurnal fluctuations in water surface elevation of up to 1-foot occurred throughout the monitoring period.

At River Mile 32.4, the average monthly discharge was approximately 1,600, 690 and 390 cubic feet per second during June, July and August, respectively.

**Figure 7: Water Surface Elevations and Discharge at River Mile 32.4, 6 June – 8 September**



## 2.5 FLOOD-PEAK DISCHARGE AND TIMING

There are no historical flood-peak discharge data on Fish Creek. Therefore, flood frequency and magnitude at River Miles 25.1 and 32.4 were estimated from historical data collected on other rivers in the region, and calibrated with 2001 data collected on Fish Creek, Judy Creek and the Ublutuoch River. The calibration was made by: (1) assuming the flood-peak discharges observed in 2001 were on the order of a 2-year event, and (2) adjusting the regional flood-frequency relationship to reflect this assumption (Appendix F). The flood-peak discharge estimates for Fish Creek are presented in Table 1.

**Table 1: Flood-Peak Discharge On Fish Creek**

Location	Drainage Area (mile <sup>2</sup> )	Flood-Peak Discharge (cfs)							
		2-Year Return Period	5-Year Return Period	10-Year Return Period	25-Year Return Period	50-Year Return Period	100-Year Return Period	200-Year Return Period	500-Year Return Period
Fish Creek at River Mile 25.1	1,461	13,582	20,498	25,212	31,767	37,002	42,103	47,588	57,750
Fish Creek at River Mile 32.4	783	7,391	11,379	14,163	18,092	21,298	24,493	27,996	34,487

These numbers represent the best estimates available at this time. However, it must be stressed that collection of 2 to 4 more years of flood-peak discharge data are desirable in order to more reliably estimate the magnitude of the 2-year flood. As additional data are acquired, the regional equations should be recalibrated.

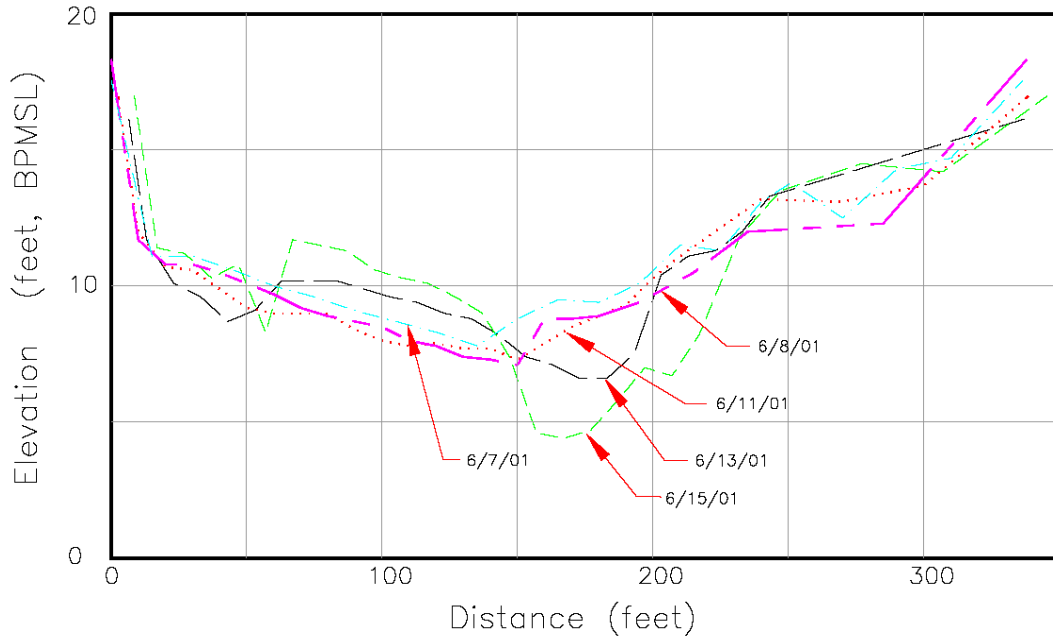
Whether discharges on the order of the 50- to 200-year flood are likely to occur as snowmelt floods or rainfall floods was assessed using data from three North Slope rivers (Appendix H). Based on the available data, it appears that discharges on the order of the 50- to 200-year flood are more likely to result from snowmelt than from rainfall. This is significant because it suggests that ice loading on structures will occur in conjunction with a high stage and discharge.

## 2.6 BED MOVEMENT

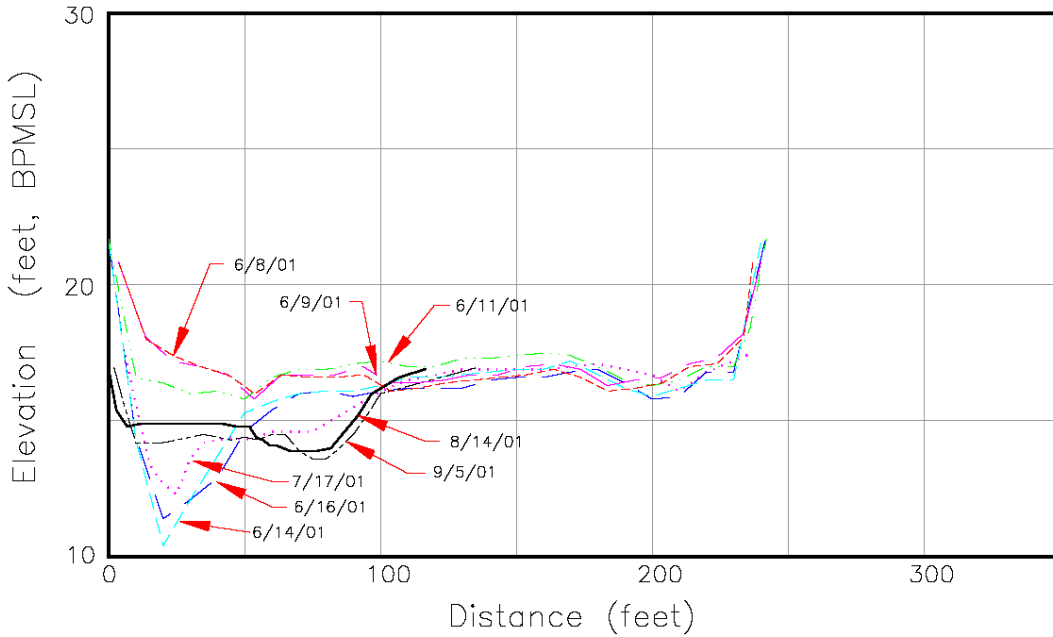
The bed material at River Miles 25.1 and 32.4 is composed of sand with some silt (Appendix I). At River Mile 25.1, the median diameter of the bed material ( $D_{50}$ ) is 0.00041 feet. At River Mile 32.4, the median diameter of the bed material ( $D_{50}$ ) is 0.00012 feet.

The Fish Creek riverbed was very mobile during breakup. The elevation of the riverbed on various dates during breakup is shown in Figures 8 and 9. Note that the riverbed elevation changed by as much as 5 and 7 feet at River Miles 25.1 and 32.4, respectively.

**Figure 8: Riverbed Elevation Over Time At River Mile 25.1**



**Figure 9: Riverbed Elevation Over Time At River Mile 32.4**



## 2.7 HYDRAULIC ROUGHNESS

### 2.7.1 River Mile 25.1

The hydraulic roughness (Manning’s “n”) at River Mile 25.1 was estimated based on: water surface elevations at River Miles 18.4 and 25.1, discharge measurements at River Mile 25.1, and

normal depth computations. As shown in Table 2, the main channel hydraulic roughness varied over the field season. The values were somewhat higher during the period when snow and ice were impacting flow in the channel (0.030 to 0.041), and somewhat lower during the period unaffected by snow and ice (0.019 to 0.020). The median value of the measurements was 0.025.

**Table 2: Hydraulic Roughness of Fish Creek at River Mile 25.1**

Date	Time	Water Surface Elevation RM 18.4 (ft)	Water Surface Elevation RM 25.1 (ft)	Discharge RM 25.1 (cfs)	Cross-Sectional Area RM 25.1 (sq ft)	Wetted Perimeter RM 25.1 (ft)	Water Surface Slope (ft/ft)	Main Channel Hydraulic Roughness
6/7/01	16:04	12.37						
6/7/01	16:43	12.42 <sup>2</sup>	17.56	3113.8	2104.9	338.5	0.00015	0.041
6/7/01	19:50	12.68						
6/8/01	13:15		18.16					
6/8/01	13:39	13.68	18.27 <sup>2</sup>					
6/8/01	14:38		18.57					
6/8/01	14:45		18.33	4756.2	2528.8	340.7	0.00013 <sup>3</sup>	0.034
6/9/01	13:01		18.52					
6/9/01	13:10	13.58	18.52 <sup>4</sup>					
6/9/01	16:05		18.08	5185	2417.8	339.9	0.00014 <sup>5</sup>	0.030
6/11/01	9:48	12.39						
6/11/01	10:32	12.39 <sup>2</sup>	16.97	6051.6	2064.8	338	0.00013	0.019
6/11/01	11:50	12.4						
6/13/01	12:59	11.4						
6/13/01	13:35	11.39 <sup>2</sup>	16.14	4598.8	1693.9	332.8	0.00013	0.019
6/13/01	14:48	11.36						
6/15/01	11:41	11.94						
6/15/01	12:27	11.94 <sup>2</sup>	16.99	6097.9	2066.5	341.1	0.00014	0.020
6/15/01	13:55	11.95						
Notes								
1. The distance, along the channel, between RM 18.4 and RM 25.1 is 35,393 feet.								
2. Interpolated water surface elevation.								
3. Assumed the water surface slope was the same at 14:45 as it had been at 13:39.								
4. Assumed water surface elevation was the same as at 13:01.								
5. Assumed the water surface slope was the same at 16:05 as it had been at 13:10.								

## 2.7.2 River Mile 32.4

The hydraulic roughness (Manning’s “n”) at River Mile 32.4 was estimated based on: water surface elevations at River Miles 25.1 and 32.4, discharge measurements at River Mile 32.4, and normal depth computations. As shown in Table 3, the main channel hydraulic roughness varied over the field season. The values were somewhat higher during the period when snow and ice

were impacting flow in the channel (0.025 to 0.038), and somewhat lower during the period unaffected by snow and ice (0.014 to 0.024). The median value of the measurements was 0.024.

**Table 3: Hydraulic Roughness of Fish Creek at River Mile 32.4**

Date	Time	Water Surface Elevation RM 25.1 (ft)	Water Surface Elevation RM 32.4 (ft)	Discharge RM 32.4 (cfs)	Cross-Sectional Area RM 32.4 (sq ft)	Wetted Perimeter RM 32.4 (ft)	Water Surface Slope (ft/ft)	Main Channel Hydraulic Roughness
6/8/01	18:57		20.79					
6/8/01	19:08	18.41	20.79 <sup>2</sup>					
6/8/01	20:24		20.76					
6/8/01	19:46		20.78	709.1	928.8	234.8	0.000062 <sup>3</sup>	0.038
6/9/01	7:20	18.73						
6/9/01	9:28	18.61 <sup>2</sup>	20.87	697.6	926.4	237.8	0.000059	0.038
6/9/01	10:20	18.56						
6/11/01	14:55	16.93						
6/11/01	15:15	16.93 <sup>2</sup>	21.67	2065.3	1142.4	244.3	0.00012	0.025
6/11/01	15:46	16.93						
6/14/01	12:55	16.73 <sup>4</sup>	21.56	3099.6	1351	244.8	0.00013	0.023
6/14/01	13:00	16.73						
6/16/01	13:00	16.68						
6/16/01	13:13	16.67 <sup>2</sup>	21.6	3115.4	1385.6	245.6	0.00013	0.024
6/16/01	13:30	16.66						
7/17/01	10:00	10.92						
7/17/01	10:16	10.91 <sup>2</sup>	17.43	577.7	324.3	230.2	0.00017	0.014
7/17/01	10:30	10.91						
8/14/01	19:00							
8/14/01	19:20	10.18 <sup>2</sup>	16.92	345.4	224	117.4	0.00018	0.020
8/14/01	19:30							
9/5/01	13:00	10.20						
9/5/01	13:25	10.24 <sup>2</sup>	16.95	348.7	269.8	133.7	0.00017	0.024
9/5/01	13:00	10.25						
Notes								
1. The distance, along the channel, between RM 25.1 and RM 32.4 is 38,534 feet.								
2. Interpolated water surface elevation.								
3. Assumed the water surface slope was the same at 19:46 as it had been at 19:08.								
4. Assumed water surface elevation was the same as at 13:00.								

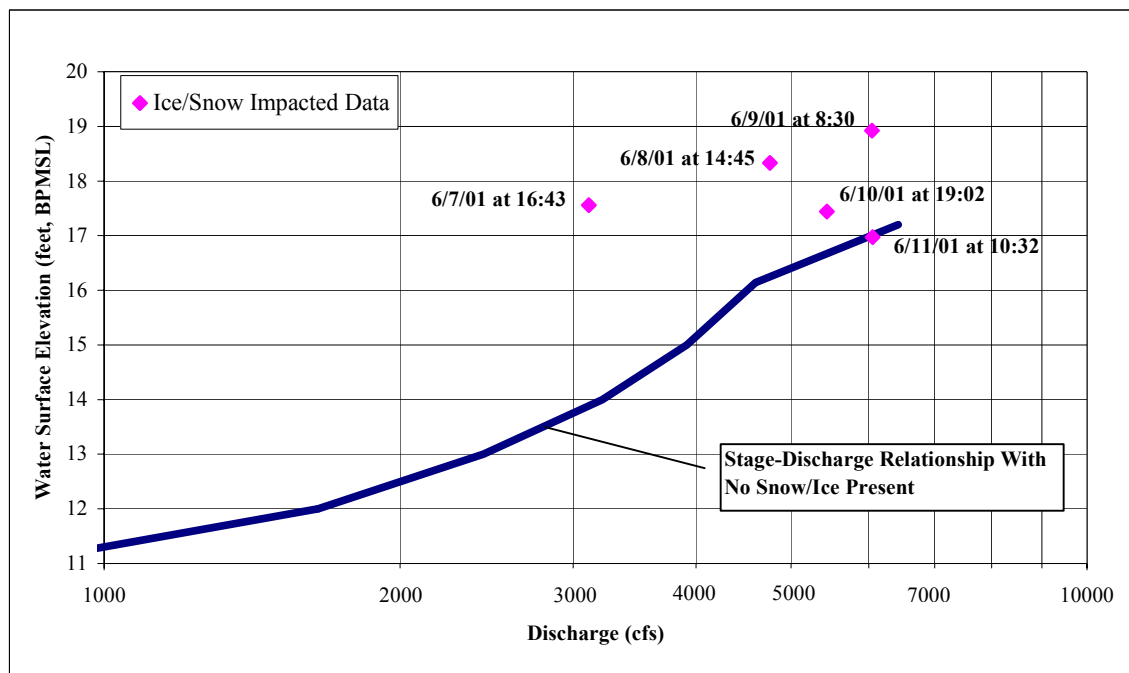
## 2.8 IMPACT OF SNOW AND ICE

### 2.8.1 River Mile 25.1

As the 2001 spring breakup began, snow and ice within the channel influenced the relationship between water surface elevation and discharge. Snow and ice influenced the shape and size of the channel cross-section, caused ice jams, and affected the hydraulic roughness. Consequently, discharges that occurred at the outset of spring breakup resulted in higher water surface elevations than similar discharges that occurred later in the summer. The magnitude of this increase gradually declined from 7 June until 11 June, when snow and ice were no longer present in the channel. It is important to note that the peak water surface elevation occurred on 9 June and was affected by snow and ice in the channel. But the water surface elevation during the peak discharge, which occurred on 15 June, was not affected by snow and ice in the channel.

The effect of snow and ice on water surface elevations during the 2001 breakup is shown in Figure 10. On 7 June, the water surface elevation was approximately 3.7 feet higher than it would have been at a similar discharge during the summer. On 8, 9 and 10 June, the difference was approximately 2.1, 1.9 and 0.8 feet, respectively. By 11 June, the observed water surface elevation was equal to that which we would expect during a similar discharge later in the summer.

**Figure 10: Effect of Snow and Ice on Fish Creek at River Mile 25.1**

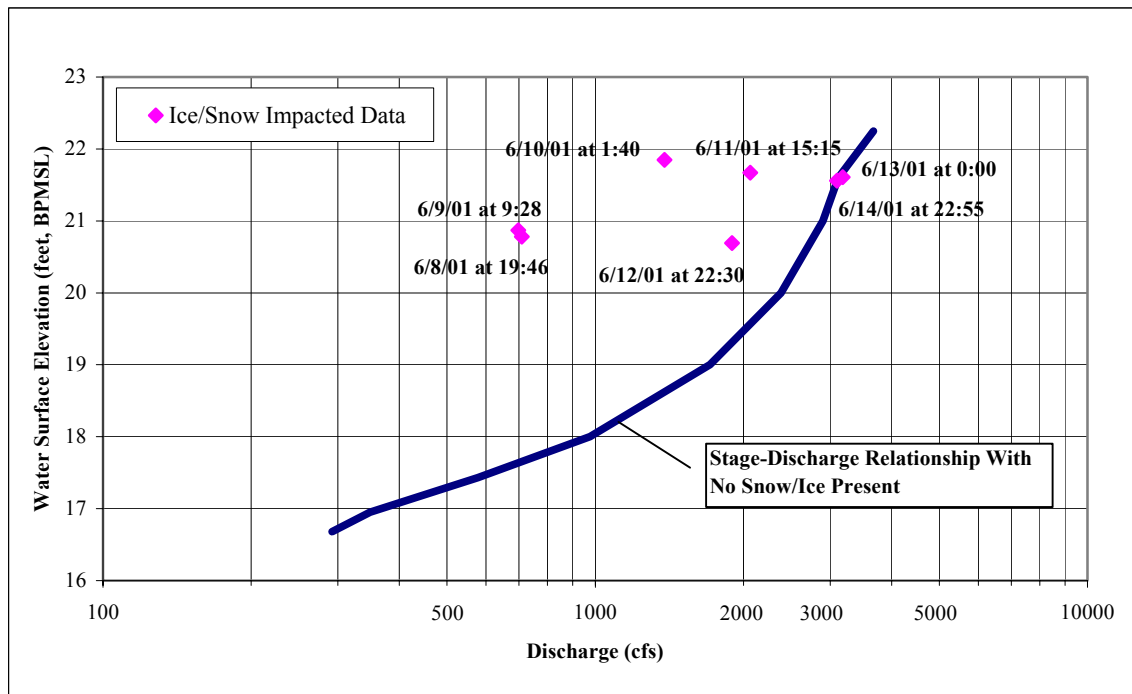


## 2.8.2 River Mile 32.4

The effect of snow and ice at River Mile 32.4 was similar to that at River Mile 25.1. Discharges that occurred at the outset of spring breakup resulted in higher water surface elevations than similar discharges that occurred later in the summer. The magnitude of this increase gradually declined from 8 June until 14 June, when snow and ice were no longer present in the channel. It is important to note that the peak water surface elevation and peak discharge occurred on 15 June and were not affected by snow and ice in the channel.

The effect of snow and ice on water surface elevations during the 2001 breakup is shown in Figure 11. From 8 June until 10 June, the water surface elevation was approximately 3.2 feet higher than it would have been at a similar discharge during the summer. On 11 and 12 June, the difference was approximately 2.2 and 0.5 feet, respectively. By 14 June, the observed water surface elevation was equal to that which we would expect during a similar discharge later in the summer.

**Figure 11: Effect of Snow and Ice on Fish Creek at River Mile 32.4**



## **3.0 JUDY CREEK**

### **3.1 MONITORING PROGRAM**

During spring breakup, monitoring sites were established at 4 locations along Judy Creek (Figure 2). River Mile 0 on Judy Creek is located at the Fish Creek/Judy Creek confluence. The monitoring sites were located at River Miles 7, 13.8, 21.8, and 31.0. The monitoring consisted of recording snow and ice conditions, and water surface elevations (Appendix B). Discharge measurements were made periodically at River Mile 7 (Appendix C).

During the summer, monitoring continued at River Mile 7. Water surface elevation was monitored continuously (Appendix D) and discharge was measured once a month (Appendix C).

### **3.2 STREAM DESCRIPTION**

Judy Creek is a tributary to Fish Creek. It enters Fish Creek approximately 26 miles upstream from the mouth of Fish Creek. It has a drainage area of approximately 666 square miles, of which 18 percent is covered by lakes. A portion of the Judy Creek headwaters is located in the foothills of the Brooks Range, while the remainder of the watershed is located on the Arctic Coastal Plain.

Judy Creek has a relatively low gradient and highly sinuous channel, with an average water surface slope of approximately 0.00025 feet/foot between River Mile 31.0 on Judy Creek and River Mile 25.1 on Fish Creek. The channel banks and bed consist of sand and silt sized material. Undercut stream banks and bank sloughing are common along the outside of meander bends.

### **3.3 SPRING BREAKUP OBSERVATIONS**

#### **3.3.1 Summary**

At River Mile 7 the spring-peak water surface elevation occurred between 9 and 10 June, was 27.11 feet (BPMSL), and was affected by snow and ice in the channel. The spring-peak discharge occurred at the same time and was approximately 5,600 cubic feet per second. The Judy Creek peaks occurred after the peak water surface elevation and prior to the peak discharge on Fish Creek at River Mile 25.1.

#### **3.3.2 Daily Observations**

##### **5 June**

Water was first observed flowing on Judy Creek at River Mile 8 on 5 June (Photo 3). At this time, the channel downstream of River Mile 8 contained intermittent pools of melt water on top of snow in the channel. As the leading edge of the flowing water reached sections of the channel



where the surface of the snow was particularly high, the water backed up behind the snow. Once the water surface rose to an elevation higher than the surface of the snow, the water began to flow over the snow and continue down the channel.



**PHOTO 3.** *Leading edge of the flowing water on Judy Creek at River Mile 8 on 5 June 2001.*

### **6 June - 7 June**

On 6 June, the leading edge of the flowing water from Judy Creek had reached approximately River Mile 21 on Fish Creek. At this time, water flowing below the confluence, located at approximately River Mile 26 on Fish Creek, was from Judy Creek only. The water surface elevations at the Judy Creek monitoring sites fluctuated between 6 and 7 June, with an overall increase in water surface elevation by the morning of 7 June. By the afternoon of 7 June, the water surface elevations appeared to be decreasing (Table B-2.1, Appendix B).

On 7 June, a surface ice jam was observed at the 2000/2001 winter ice road crossing, located at approximately River Mile 4. The ice jam included ice floes and large discontinuous sections of compacted snow that appeared to be portions of the former ice road.

On 7 June, grounded and moving ice floes were observed at River Mile 7. Snow along the channel banks had decreased significantly, and the remaining snow was discontinuous and appeared to have little effect on flow within the channel.

### **8 June - 9 June**

On 8 and 9 June, grounded and moving ice floes were observed on Judy Creek. The water surface elevation at River Mile 7 was increasing on 8 June, and steady on 9 June (Table B-2.1, Appendix B).

On 9 June discharge was measured at River Mile 7 (Table C-3.2, Appendix C), and the average velocity in the channel was 2.90 feet per second. Little snow remained along the channel banks. The ice jam located at River Mile 4 was no longer present, though remnants of the ice road were still present (Photo 4).



**PHOTO 4.** *Remnants of the ice road crossing on Judy Creek at approximately River Mile 4 on 9 June 2001*

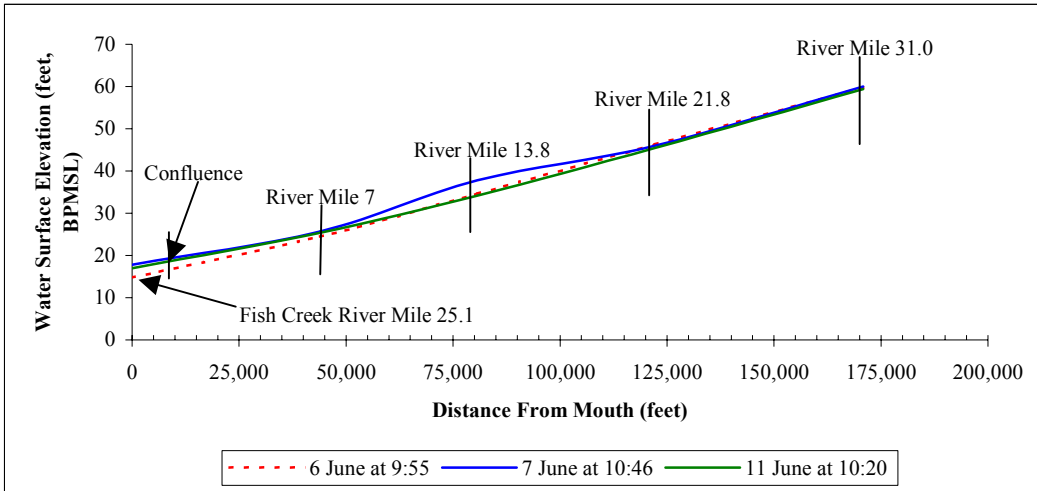
### **10 June - 11 June**

The spring-peak water surface elevation and discharge occurred at River Mile 7 between 9 and 10 June (Table B-2.1 in Appendix B, and Table D-3.3 in Appendix D). By 11 June, both ice and snow had ceased to affect water surface elevations at all of the Judy Creek monitoring sites.

Water surface profiles between River Mile 25.1 on Fish Creek and River Mile 31 on Judy Creek are presented for 6, 7, and 11 June in Figure 12. On 7 June, there is a distinct rise in the water surface elevation at River Mile 13.8. The increase in water surface elevation was probably due to the effects of the surface ice jam observed at River Mile 4 on 7 and 8 June. The water surface profiles on 6 and 11 June do not show the increase in water surface elevation present on 7 June.

No ice floes were observed moving downstream after 11 June.

**Figure 12: Judy Creek Water Surface Profiles**

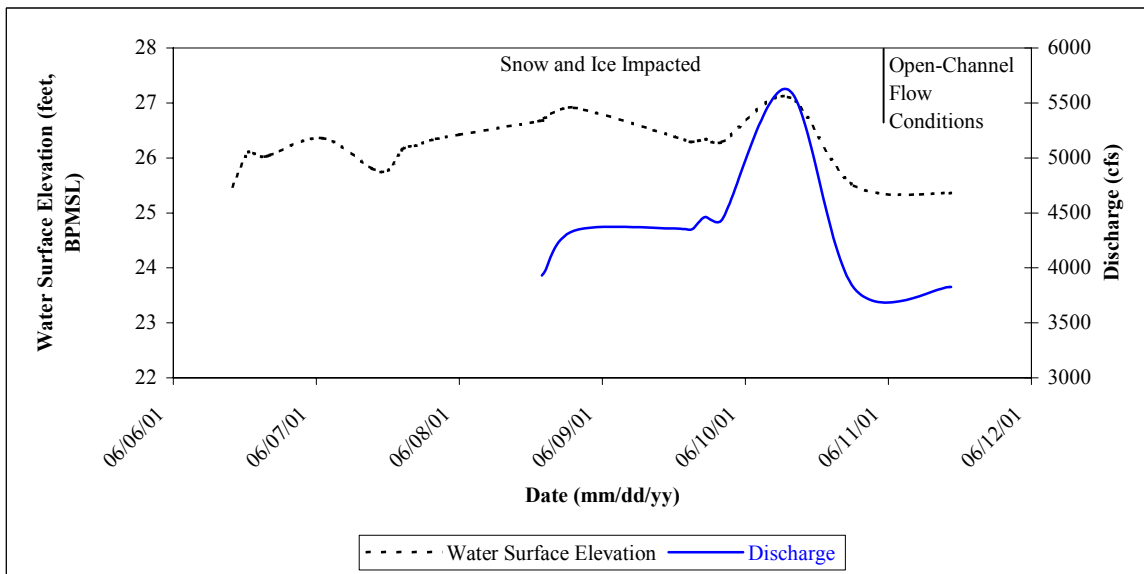


**12 June - 15 June**

Between 12 and 15 June, the water surface elevations and discharge continued to decrease on Judy Creek (Figure 13).

Discharge was measured on 12 and 15 June at River Mile 7 (Tables C-3.3 and C-3.4, Appendix C). The average velocity in the channel on 12 and 15 June was 2.89 and 2.87 feet per second, respectively.

**Figure 13: Water Surface Elevation and Discharge During Breakup at River Mile 7**



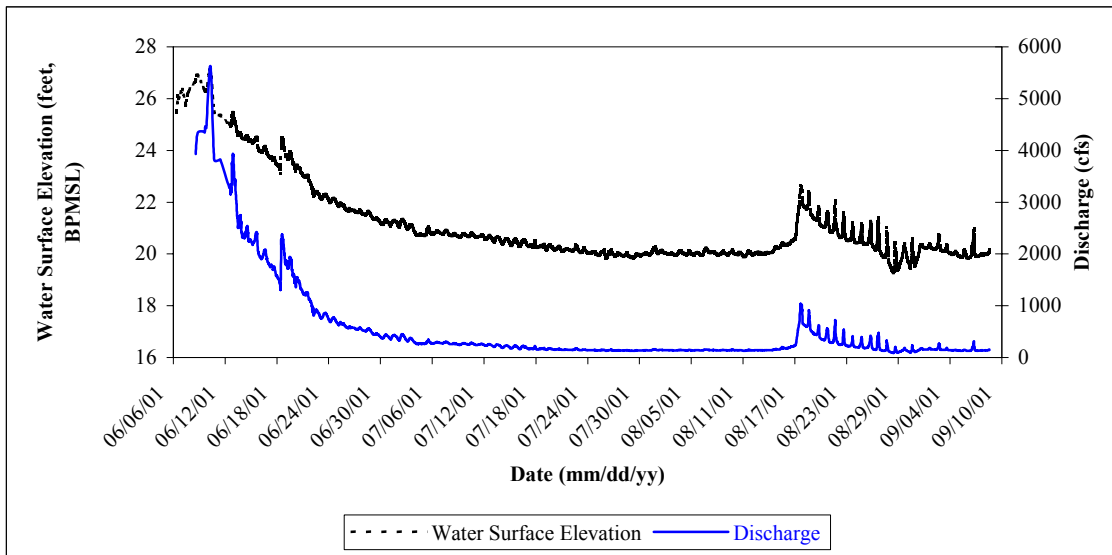
### 3.4 SUMMER OBSERVATIONS

Water surface elevations were monitored continuously between 11 June and 9 September using a pressure transducer at River Mile 7. During the summer period, discharge was measured three times at River Mile 7 (Tables C-3.5 – C-3.7, Appendix C).

The water surface elevation and discharge at River Mile 7 decreased to summer flow conditions by mid-July (Figure 14). Diurnal fluctuations in water surface elevation of up to 1-foot occurred during the monitoring period. On 17 August, the water surface elevation increased over 2-feet (Figure 14), and the discharge increased approximately 800 cubic feet per second. A similar increase in water surface elevation and discharge was observed at River Mile 25.1 on Fish Creek (Figure 6); however, the increase did not occur at River Mile 32.4 on Fish Creek. Neither the peak summer water surface elevation nor the peak summer discharge was as high as the spring peaks.

At River Mile 7, the average monthly discharge was approximately 1,600, 210 and 220 cubic feet per second during June, July and August, respectively.

**Figure 14: Water Surface Elevation and Discharge at River Mile 7, 6 June – 8 September**



### 3.5 FLOOD PEAK DISCHARGE AND TIMING

There are no historical flood-peak discharge data on Judy Creek. Therefore, flood frequency and magnitude at River Mile 7 was estimated from historical data collected on other rivers in the region, and calibrated with 2001 data collected on Fish Creek, Judy Creek and the Ublutuoch River. The calibration was made by: (1) assuming that the flood-peak discharges observed in

2001 were on the order of a 2-year event, and (2) adjusting the regional flood-frequency relationship to reflect this assumption (Appendix F). The flood-peak discharge estimates for Judy Creek are presented in Table 4.

**Table 4: Flood Peak Discharge On Judy Creek**

Location	Drainage Area (mile <sup>2</sup> )	Flood-Peak Discharge (cfs)							
		2-Year Return Period	5-Year Return Period	10-Year Return Period	25-Year Return Period	50-Year Return Period	100-Year Return Period	200-Year Return Period	500-Year Return Period
Judy Creek at River Mile 7	647	6,141	9,513	11,883	15,244	18,003	20,771	23,823	29,480

These numbers represent the best estimates available at this time. However, it must be stressed that collection of 2 to 4 more years of flood-peak discharge data are desirable in order to more reliably estimate the magnitude of the 2-year flood. As additional data are acquired, the regional equations should be recalibrated. Consideration should also be given to adding a safety factor to the discharge estimates if it is necessary to estimate flood-peak discharge for use in designing structures on Judy Creek prior to the collection of additional years of data.

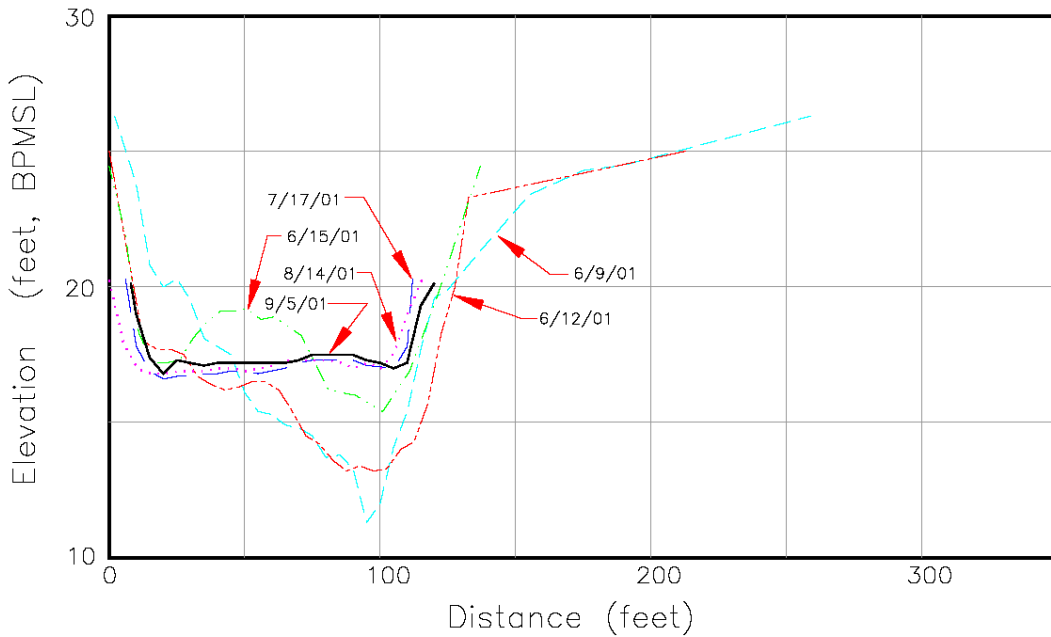
Whether discharges on the order of the 50- to 200-year flood are likely to occur as snowmelt floods or rainfall floods was assessed using data from three North Slope rivers (Appendix H). Based on the available data, it appears that discharges on the order of the 50- to 200-year flood are more likely to result from snowmelt than from rainfall. This is significant because it suggests that ice loading on structures will occur in conjunction with a high stage and discharge.

### 3.6 BED MOVEMENT

The bed material at River Mile 7 is composed of sand with some silt (Appendix I). At River Mile 7, the median diameter of the bed material ( $D_{50}$ ) is 0.00057 feet.

The Judy Creek riverbed was very mobile during breakup. The elevation of the riverbed on various dates during breakup is shown in Figure 15. Note that the riverbed elevation changed by as much as 5 feet at River Mile 7.

**Figure 15: Riverbed Elevation Over Time At River Mile 7**



### 3.7 HYDRAULIC ROUGHNESS

The hydraulic roughness (Manning's "n") on Judy Creek at River Mile 7 was estimated based on: water surface elevations on Fish Creek at River Mile 25.1 and Judy Creek at River Mile 7, discharge measurements on Judy Creek at River Mile 7, and normal depth computations. As shown in Table 5, the main channel hydraulic roughness varied over the field season. The values were somewhat lower during the period when snow and ice were impacting flow in the channel (0.020 to 0.028), and somewhat higher during the period unaffected by snow and ice (0.022 to 0.100). The median value of the measurements was 0.025.

**Table 5: Hydraulic Roughness of Judy Creek at River Mile 7**

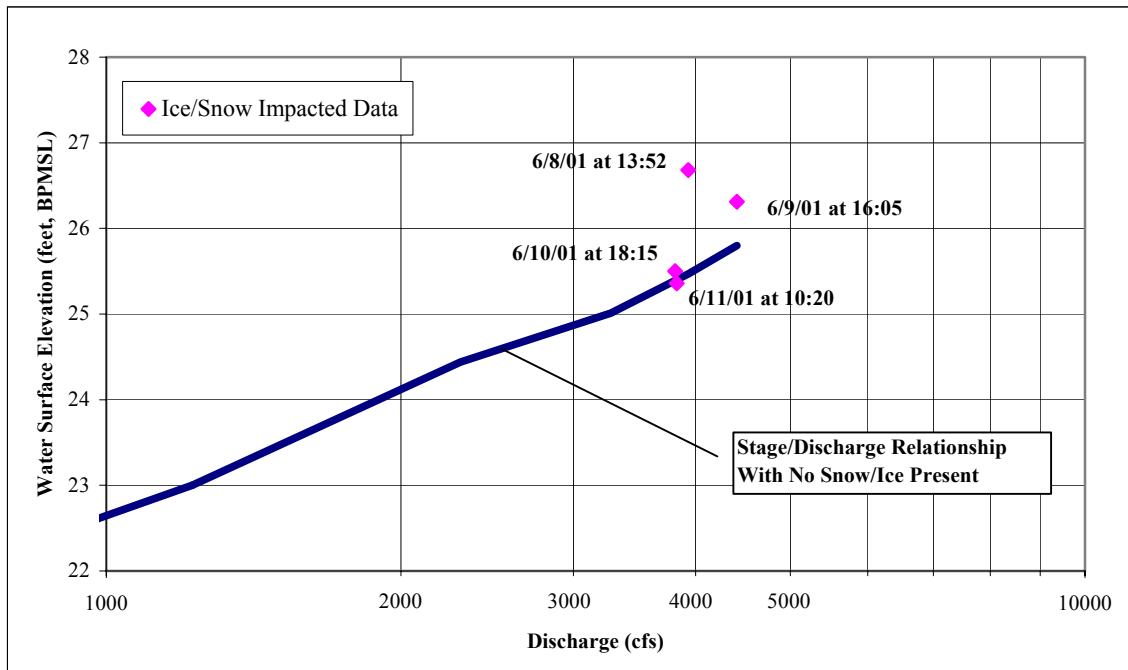
Date	Time	Water Surface Elevation RM 25.1 (ft)	Water Surface Elevation RM 7 (ft)	Discharge RM 7 (cfs)	Cross-Sectional Area RM 7 (sq ft)	Wetted Perimeter RM 7 (ft)	Water Surface Slope (ft/ft)	Main Channel Hydraulic Roughness
6/8/01	14:14		26.72	3957	1628.5	263.5	0.00019 <sup>3</sup>	0.028
6/8/01	19:08	18.41						
6/8/01	19:15	18.41 <sup>4</sup>	26.91					
6/9/01	14:54	18.47						
6/9/01	16:05	18.23 <sup>2</sup>	26.31	4410.4	1522.6	261	0.00018	0.022
6/9/01	17:40	17.91						
6/11/01	9:30	16.96						
6/11/01	10:32	16.97 <sup>2</sup>	25.36	3826	1237.6	228.8	0.00019	0.020
6/11/01	11:21	16.98						
6/12/01	15:30	16.41						
6/12/01	15:58	16.47 <sup>2</sup>	25.01	3277.5	1132.6	216.9	0.000194	0.022
6/12/01	16:00	16.47						
6/15/01	17:00	16.88						
6/15/01	17:25	16.85 <sup>2</sup>	24.44	2301.3	801.7	140.3	0.000173	0.022
6/15/01	17:30	16.84						
7/17/01	18:00	10.79						
7/17/01	18:22	10.82 <sup>2</sup>	20.3	153.9	327	108.1	0.000215	0.097
7/17/01	18:30	10.83						
8/14/01	22:30	10.14	20.25	156.9	341	116.4	0.00023	0.100
9/5/01	16:00	10.37						
9/5/01	16:25	10.37 <sup>2</sup>	20.15	157.9	303.7	113.2	0.000222	0.083
9/5/01	16:30	10.37						
Notes								
1. The distance, along the channel, between Judy Cr. RM 7 and Fish Cr. RM 25.1 is 43,995 feet.								
2. Interpolated water surface elevation.								
3. Assumed the water surface slope was the same at 14:14 as it was at 19:15.								
4. Assumed water surface elevation was the same as at 19:08.								

### 3.8 IMPACT OF SNOW AND ICE

As the 2001 spring breakup began, snow and ice within the channel influenced the relationship between water surface elevation and discharge. Snow and ice influenced the shape and size of the channel cross-section, caused ice jams, and affected the hydraulic roughness. Consequently, discharges that occurred at the outset of spring breakup resulted in higher water surface elevations than similar discharges that occurred later in the summer. The magnitude of this increase gradually declined from 8 June until 11 June, when snow and ice was no longer present in the channel. It is important to note that the peak water surface elevation occurred on 10 June and was affected by snow and ice in the channel.

The effect of snow and ice on water surface elevations during the 2001 breakup is shown in Figure 16. On 8 June, the water surface elevation was approximately 1.2 feet higher than it would have been at a similar discharge during the summer. On 9 and 10 June, the difference was approximately 0.5 and 0.1 feet, respectively. By 11 June, the observed water surface elevation was equal to that which we would expect during a similar discharge in the summer.

**Figure 16: Effect of Snow and Ice on Judy Creek at River Mile 7**





## **4.0 UBLUTUOCH RIVER**

### **4.1 MONITORING PROGRAM**

During spring breakup, monitoring sites were established at 2 locations along the Ublutuoch River (Figure 2). River Mile 0 of the Ublutuoch River is located at the Fish Creek/Ublutuoch River confluence. The monitoring sites were located at River Miles 13.5 and 13.7. The monitoring consisted of recording snow and ice conditions and water surface elevations (Appendix B). Discharge measurements were made periodically at River Mile 13.7 (Appendix C).

During the summer, monitoring continued at River Mile 13.7. Water surface elevation was monitored continuously (Appendix D) and discharge was measured once a month (Appendix C).

### **4.2 STREAM DESCRIPTION**

The Ublutuoch River is a tributary of Fish Creek. It enters Fish Creek approximately 10 miles upstream from the mouth of the main channel on the Fish Creek delta. It has a drainage area of approximately 248 square miles, of which 15 percent is covered by lakes. Both the headwaters and the mouth are located on the Arctic Coastal Plain.

The Ublutuoch River has a relatively low gradient and a sinuous channel. The channel is incised within relatively steep upper banks that are vegetated with dense brush. The lower portion of the channel has a relatively flat bench, located approximately 10 to 15 feet below the top of the upper banks. A 2- to 3-foot deep by 15- to 20-foot wide low-water channel is located in the bottom of the otherwise vegetated channel. The low-water channel has a riverbed composed of gravel and sand sized material. Bank undercutting and sloughing were not observed within the monitored section of the channel.

### **4.3 SPRING BREAKUP OBSERVATIONS**

#### **4.3.1 Summary**

At River Mile 13.7 the spring-peak water surface elevation occurred between 9 and 10 June, was 18.09 feet (BPMSL), and was affected by snow and ice in the channel. The spring-peak discharge occurred at the same time and was approximately 2,200 cubic feet per second. The peak discharge on the Ublutuoch River occurred earlier than the peak discharge on Fish Creek (River Miles 25.1 and 32.4), but at approximately the same time as the peak discharge on Judy Creek (River Mile 7).

### 4.3.2 Daily Observations

#### 29 May

On 29 May, the Ublutuoch River channel was mostly filled with snow (Photo 5). Trenches up to 10 feet deep were dug at River Miles 13.5 and 13.7 in an attempt to locate the channel bottom.



**Photo 5:** *The Ublutuoch River at River Mile 13.7 on 29 May 2001.*

#### 8 June - 10 June

Water was first observed flowing at River Mile 13.5 on 8 June. Approximately 50 to 60 percent of the channel was filled with snow below the water surface. At this time, the channel downstream of River Mile 13.5 contained intermittent pools of melt water on top of snow in the channel.

The spring-peak water surface elevation and discharge occurred at River Mile 13.7 between 9 and 10 June (Table B-3.2 in Appendix B, and Table D-4.3 in Appendix D). Snow affected water surface elevations in the channel at the time of the spring peak (Photo 6).

On 10 June, discharge was measured at River Mile 13.7 (Table C-4.2, Appendix C). Approximately 40 to 50 percent of the channel, below the water surface, was filled with snow. The average velocity in the channel was 3.82 feet per second.



**PHOTO 6.** *The Ublutuoch River at River Mile 13.7 on 10 June 2001.*

### **11 June - 13 June**

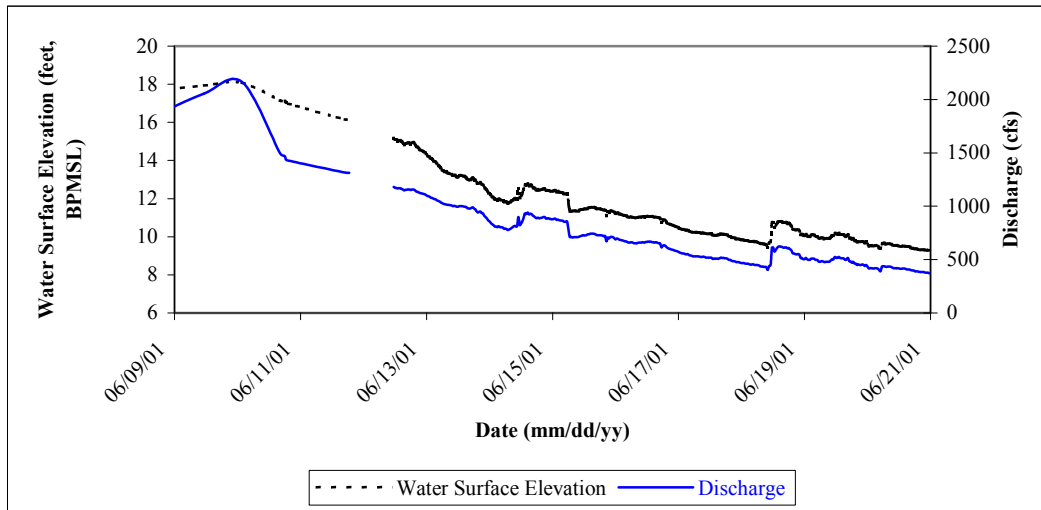
By 11 June, the water surface elevation was almost 2-feet lower than it had been on 10 June (Tables B-3.1 and B-3.2 in Appendix B, and Table D-4.3 in Appendix D), and brush was becoming exposed along the stream banks. Grounded and moving ice floes were observed at River Miles 13.5 and 13.7.

On 12 June approximately 25 to 35 percent of the channel, below the water surface, was filled with snow. Discharge measurements were made at River Mile 13.7 on 12 and 13 June (Tables C-4.3 and C-4.4, Appendix C), and the average velocity in the channel was 3.84 and 3.77 feet per second, respectively. On 13 June, the water surface elevation continued to decrease at River Miles 13.5 and 13.7.

### **14 June - 17 June**

By 14 June, the water surface elevation was almost 4 feet lower than it had been on 10 June (Figure 17). Dense brush lined the exposed stream banks. By 17 June, approximately 15 to 20 percent of the channel was filled with snow below the water surface. The water surface elevation and discharge throughout spring breakup are presented in Figure 17.

**Figure 17: Water Surface Elevation and Discharge During Breakup at River Mile 13.7**



#### 4.4 SUMMER OBSERVATIONS

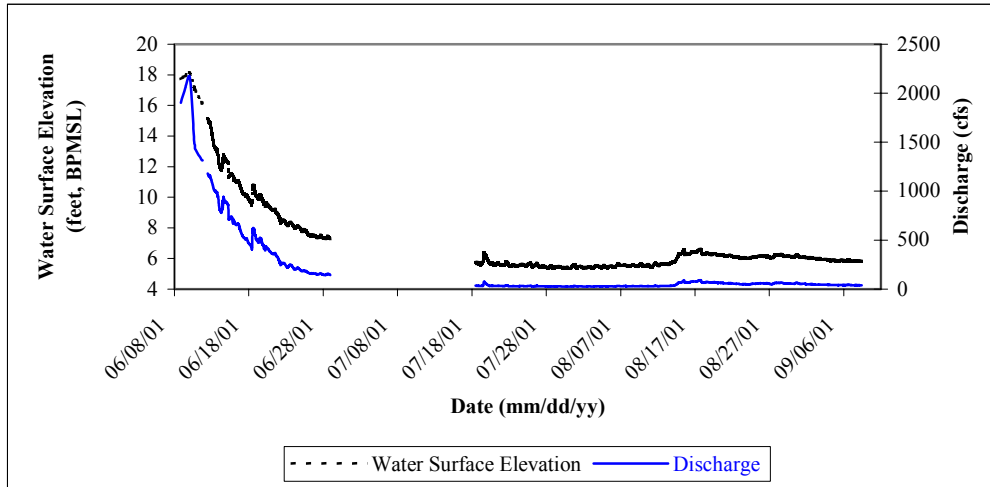
By late June (Figure 18), the water surface elevation and discharge at River Mile 13.7 had decreased to summer conditions (Photo 7). Water surface elevations were monitored continuously between 11 June and 9 September (Table D-4.3, Appendix D), and discharge was measured three times during the summer (Tables C-4.5 – C-4.7, Appendix C). Neither the peak summer water surface elevation nor the peak summer discharge was as high as the spring peaks.



**PHOTO 7.** *The Ublutuoch River at River Mile 13.7 on 18 July 2001.*

At River Mile 13.7, the average monthly discharge was approximately 510, 60 and 50 cubic feet per second during June, July and August, respectively.

**Figure 18: Water Surface Elevation and Discharge at River Mile 13.7, 11 June – 8 September**



#### 4.5 FLOOD-PEAK DISCHARGE AND TIMING

There are no historical flood-peak discharge data on the Ublutuoch River. Therefore, flood frequency and magnitude at River Mile 13.7 was estimated from historical data collected on other rivers in the region, and calibrated with 2001 data collected on Fish Creek, Judy Creek and the Ublutuoch River. The calibration was made by assuming that: (1) the flood-peak discharges observed in 2001 were on the order of a 2-year event, and (2) adjusting the regional flood-frequency relationship to reflect this assumption (Appendix F). The flood-peak discharge estimates for the Ublutuoch River are presented in Table 6.

**Table 6: Flood-Peak Discharge On the Ublutuoch River**

		Flood-Peak Discharge (cfs)							
Location	Drainage Area (mile <sup>2</sup> )	2-Year Return Period	5-Year Return Period	10-Year Return Period	25-Year Return Period	50-Year Return Period	100-Year Return Period	200-Year Return Period	500-Year Return Period
Ublutuoch River at River Mile 13.7	222	2,163	3,468	4,421	5,806	6,983	8,204	9,593	12,180

These numbers represent the best estimates available at this time. However, it must be stressed that collection of 2 to 4 more years of flood-peak discharge data are desirable in order to more reliably estimate the magnitude of the 2-year flood. As additional data are acquired, the regional equations should be recalibrated. Consideration should also be given to adding a safety factor to the discharge estimates if it is necessary to estimate flood-peak discharge for use in designing structures on the Ublutuoch River prior to the collection of additional data.

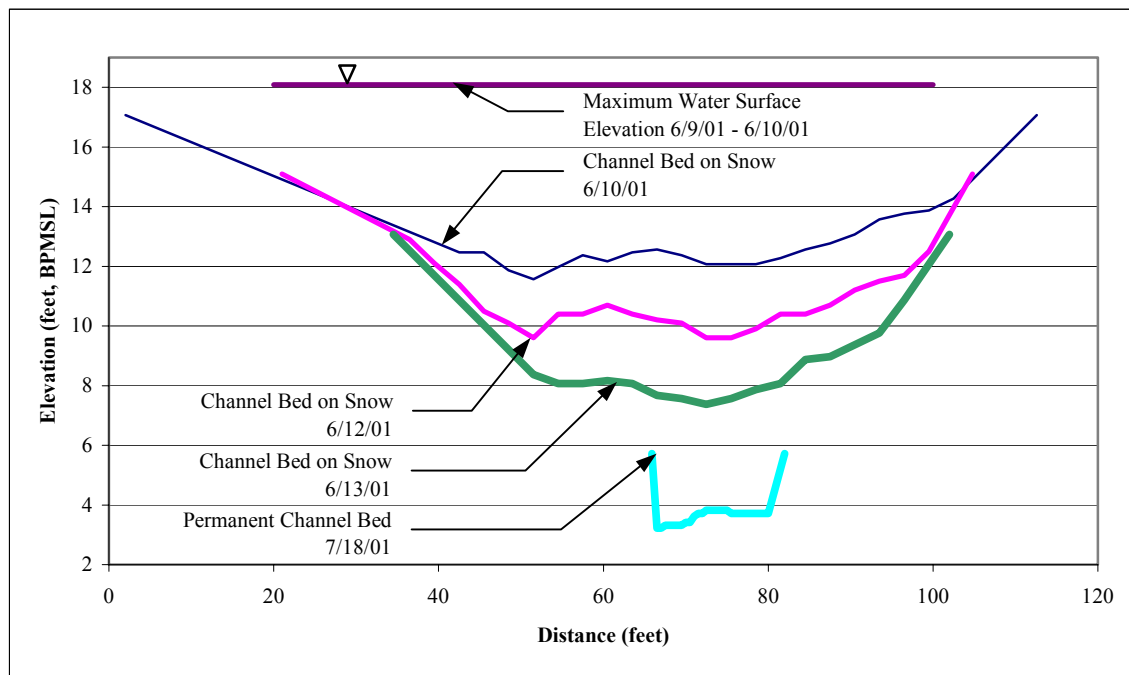
Whether discharges on the order of the 50- to 200-year flood are likely to occur as snowmelt floods or rainfall floods was assessed using data from three North Slope rivers (Appendix H). Based on the available data, it appears that discharges on the order of the 50- to 200-year flood are more likely to result from snowmelt than from rainfall. This is significant because it suggests that ice loading on structures will occur in conjunction with a high stage and discharge.

#### 4.6 BED MOVEMENT

The bed material at River Mile 13.7 is composed of gravel with some sand (Appendix I). At River Mile 13.7, the median diameter of the bed material ( $D_{50}$ ) is 0.023 feet.

The bed of the low-water channel was not mobile during breakup. At the time of the peak water surface elevation and discharge, the water was flowing on snow within the channel (Figure 19).

**Figure 19: Effect of Snow and Ice on the Channel Cross Section at River Mile 13.7**



#### **4.7 HYDRAULIC ROUGHNESS**

The hydraulic roughness (Manning's "n") at River Mile 13.7 was estimated based on: water surface elevations at River Mile 13.5 and River Mile 13.7, discharge measurements at River Mile 13.7, and normal depth computations. The main channel hydraulic roughness varied from 0.019 to 0.023 (Table 7) during the time when the water was flowing on top of the snow. The median value of the measurements was 0.019.

#### **4.8 IMPACT OF SNOW AND ICE**

At the beginning of the 2001 breakup, the channel was entirely blocked by snow and ice at River Mile 13.7. From the start of flow until 21 June, the water gradually cut through the snow and ice until it reached the permanent channel bed. During this time, the snow and ice had a dramatic impact on the channel hydraulics. The shape, size and elevation of the channel cross section, the hydraulic roughness, and the energy slope were all affected by the snow and ice. The most significant effect was the change in the elevation of the riverbed (Figure 19). During the period that snow and ice impacted the water surface elevation, the riverbed was physically higher than it was during the summer.

The peak water surface elevation and discharge occurred sometime between 9 and 10 June. At that time, flow was being conveyed on snow, approximately 8.4 feet above the permanent riverbed. As a result, the peak water surface elevation was dramatically higher than it would have been, had the same discharge occurred during the summer.

**Table 7: Hydraulic Roughness of the Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Water Surface Elevation RM 13.5 (ft)</b>	<b>Water Surface Elevation RM 13.7 (ft)</b>	<b>Discharge RM 13.7 (cfs)</b>	<b>Cross-Sectional Area RM 13.7 (sq ft)</b>	<b>Wetted Perimeter RM 13.7 (ft)</b>	<b>Water Surface Slope (ft/ft)</b>	<b>Main Channel Hydraulic Roughness</b>
10-Jun	16:37	16.94						
10-Jun	17:30	16.71						
10-Jun	18:00	16.58 <sup>3</sup>	17.11					
10-Jun	18:25		17.07	1439.9	376.7	111.5	0.00048 <sup>4</sup>	0.019
12-Jun	11:36	14.66						
12-Jun	12:16	14.61 <sup>2</sup>	15.1	1172.5	305.6	85.4	0.00044	0.019
12-Jun	12:59	14.55						
13-Jun	17:45	12.44 <sup>5</sup>	13.07	988.3	261.8	69	0.00057	0.023
13-Jun	18:08	12.44						

Notes

1. The distance, along the channel, between RM 13.5 and RM 13.7 is 1,112 feet.
2. Interpolated water surface elevation.
3. Extrapolated water surface elevation
4. Assumed the water surface slope was the same at 18:25 as it had been at 18:00.
5. Assumed water surface elevation was the same as at 18:08.



**APPENDIX A**

**FIELD MEASUREMENT METHODS**

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## **Appendix A**

### **Field Measurement Methods**

The monitoring sites were chosen using aerial photography and topographic maps. Global Positioning System (GPS) coordinates for benchmarks established at each monitoring site were provided by Lounsbury & Associates. These benchmarks were tied to the British Petroleum mean sea level (BPMSL) datum. Staff gages, which were used to monitor water surface elevations, were installed on either the right or the left edge of the channel (when looking downstream), depending upon channel and snow conditions. Second and third staff gages were installed further up the streambank to measure higher water surface elevations. All staff gages were tied by level loop survey to the closest benchmark. Temporary benchmarks were established by URS at three of the monitoring sites. Staff gages at these sites were tied by level loop survey, and were later tied to the BPMSL datum by Lounsbury & Associates.

Monitoring sites were established on Fish Creek and Judy Creek above and below exploratory drill sites in the National Petroleum Reserve of Alaska (NPR-A). On Fish Creek, 2 sites were located above the Fish Creek/Judy Creek confluence, and 5 were located below the confluence. On Judy Creek, 4 sites were located upstream of the confluence. Two monitoring sites were located on the Ublutuoch River below the 2000-2001 ice road crossing location.

Daily observations of the water surface elevation at each monitoring site were recorded either from staff gage readings or level loop surveys of the water surface. High water marks are high water surface elevations that occur between site visits. High water marks were captured using chalk on the staff gages at each of the monitoring sites. As the water surface elevation increased, the chalk was washed off the staff gage. When the water surface elevation decreased, a chalk line remained where the highest water surface elevation had occurred.

Discharge measurement stations were established at two sites on Fish Creek, one site on Judy Creek, and one site on the Ublutuoch River. Anchors were established on the right and left banks, at each discharge measurement station, such that a tag line stretched between the anchors was perpendicular to the current. The tag line provided stationing during the discharge measurements.

Discharge was measured according to U.S. Geological Survey (USGS) standard procedures (Buchanan and Somers 1984). A Price AA current meter was used to measure velocity at selected locations within the channel. One of two methods were used to suspend the current meter, depending upon the depth of water: a boat, or a wadding rod. The water surface elevation was measured at the beginning and end of each discharge measurement. The discharge was calculated from the velocity, depth, and width measurements.

Hydraulic roughness was estimated based on measurements of water surface slope and discharge, and normal depth computations.

**APPENDIX B**

**SPRING BREAKUP WATER SURFACE ELEVATIONS AND OBSERVATIONS**

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**SPRING BREAKUP WATER SURFACE ELEVATIONS AND OBSERVATIONS**

**FISH CREEK**

**Table B-1.1: Water Surface Elevations and Observations on Fish Creek at River Mile 0.7**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
04/01	-	0.3		Top of ice during April survey.
06/02/01	-			No flowing water present, water in channel is frozen and covered with snow.
06/07/01	19:38	2.27	0.00	Water flowing over ice. Channel and offshore ice cover are intact. Water surface elevation at TBM D2D North was 2.45 feet (BPMSL) at 19:28. A high water mark at TBM D2D North suggested that the water surface might have been as high as 2.81 feet (BPMSL) prior to this measurement.
06/08/01	21:21	2.91	0.00	Water flowing over ice.
06/10/01	21:10	3.69	0.01	There is no evidence that the water surface has been higher than it is at present.
06/11/01	15:32	3.97	0.02	The low water channel ice has risen but is still intact.
<b>HWM</b>	-	4.09		High water mark observed 6/12/01 at 16:17.
06/12/01	16:17	3.78	0.02	Visual observation (from helicopter) at TBM D2D suggests that water surface elevation at that site might have been between 3.0 and 3.5 feet (BPMSL).
06/12/01	18:17	3.73	0.02	Large ice floes are moving downstream.
06/13/01	14:29	2.87	0.02	Ice floes are moving downstream. Right bank is relatively flat with hummocks/small dunes approximately 1-2 feet high by 4-8 feet long by 2-4 feet wide, extending approximately 75 to 100 feet south of the right bank.
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. Water surface elevations are based on an elevation of 3.90 feet (BPMSL) for TBM D1A South, established by Lounsbury &amp; Associates in 2001.</li> <li>2. GPS coordinates for TBM D1A South are N 70° 22.296' W 151° 15.279' (NAD 83, decimal minutes).</li> <li>3. Unless noted otherwise, the measurements reported in this table were taken on the Fish Creek channel near TBM D1A. Water surface measurements made near TBM D2D were taken on a distributary of the Tingmeachsiovik River.</li> </ol>				



**Table B-1.2: Water Surface Elevations and Observations on Tingmeachsiovik River at River Mile 10.3**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
05/28/01	-			No water present. Snow accumulated along right and left banks, large sand bar extends approximately 75 feet from left bank to middle of channel.
06/05/01	11:58	2.54	0.00	Local meltwater is ponded.
06/07/01	19:00	8.34	0.05	Water in channel is flowing, snow and ice still present within channel near banks at cross-section.
06/08/01	21:00	9.08	0.04	Ice floes moving downstream. Some ice floes are grounded up and downstream of cross-section.
06/09/01	13:22	9.27	0.03	Ice floes moving downstream. Some ice floes are grounded up and downstream of cross-section.
<b>HWM</b>	-	9.62		High water mark observed 6/10/01 at 20:53.
06/10/01	20:53	8.65		
06/11/01	15:16	8.56	0.03	Occasional ice floes moving downstream. Ice floes are grounded up and downstream of cross-section.
06/12/01	16:07	7.89	0.03	
06/12/01	18:06	7.84	0.02	
06/13/01	13:23	7.41	0.02	

Notes:

1. Water surface elevations are based on an elevation of 15.09 feet (BPMSL) for TBM C3A North, established by Lounsbury & Associates in 2001.
2. GPS coordinates for TBM C3A North are N 70° 19.199' W 151° 25.942' (NAD 83, decimal minutes).

**Table B-1.3: Water Surface Elevations and Observations on Fish Creek at River Mile 11.7**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
05/28/01				No water is flowing. Snow drifts exist along channel banks. Channel ice extends from right bank to mid-channel, and large sand bar extends from mid-channel to left bank. Right bank is steep with snow drifted 4-5 feet deep. Left bank is comprised of several small vegetated sand dunes, averaging approximately 20 feet long by 10 feet wide by 4-5 feet high.
06/05/01	11:36	2.13	0.00	Local meltwater is ponded. Snow drifts remain within channel near banks.
06/07/01	19:10	8.08	0.04	Water flowing, snow drifts still remain within channel near banks.
06/08/01	20:53	8.83	0.01	Ice floes moving downstream. Some ice floes are grounded up and downstream of cross-section.
06/09/01	13:18	8.90	0.04	Ice floes moving downstream. Some ice floes are grounded up and downstream of cross-section.
06/10/01	20:58	8.39	0.00	
06/11/01	15:11	8.21	0.02	Ice floes moving downstream. Some ice floes are grounded up and downstream of cross-section.
06/12/01	16:04	7.58	0.02	
06/12/01	18:10	7.52	0.02	
06/13/01	14:17	7.03	0.01	
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. Water surface elevations are based on an elevation of 8.37 feet (BPMSL) for TBM C2A North, established by Lounsbury &amp; Associates in 2001.</li> <li>2. GPS coordinates for TBM C2A North are N 70° 19.011' W 151° 25.487' (NAD 83, decimal minutes).</li> </ol>				

**Table B-1.4: Water Surface Elevations and Observations on Fish Creek at River Mile 18.4**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
10/00	-	5.3		Top of ice during October survey.
05/23/01	-			No flowing water present.
06/05/01	11:05	6.63	0.01	Local meltwater is ponded. Channel ice extends from mid-channel to right bank, and a large sand bar extends from mid-channel to left bank. Right bank is steep and sloughing, with drifted snow. Left bank is a moderately steep sand dune slope, with several smaller dunes scattered along the main dune. The smaller dunes average 15-20 feet long by 5-10 feet wide by 4-6 feet high.
06/06/01	13:30	9.00	0.03	Local meltwater is ponded. Snow drifts remain within the channel and below the water surface on the right side of the channel. Snow drifts probably block less than 5 percent of the cross-section below water surface.
06/06/01	16:16	9.75	0.01	Local meltwater is ponded. Snow drifts remain within the channel and below the water surface on the right side of the channel. Snow drifts probably block less than 5 percent of the cross-section below water surface.
-	-	12.25		High water mark observed 6/7/01 at 11:27. Possible wind wave action.
06/07/01	11:27	11.97	0.03	Ice jam observed at approximately River Mile 23. Grounded ice floes observed at the cross-section.
06/07/01	-	12.55		High water mark observed 6/7/01 at 16:04. Possible wind wave action.
06/07/01	16:04	12.37	0.05	Grounded ice floe observed at the cross-section. Ice jam is still present at approximately River Mile 23.
06/07/01	19:50	12.68	0.04	Moving and grounded ice floes observed at cross-section. Ice jam at approximately River Mile 23 appears to be breaking up.
06/08/01	13:39	13.68	0.04	Moving and grounded ice floes observed in the vicinity of the cross-section. Ice jam at approximately River Mile 23 still present, though it appears to have shifted downstream.
06/09/01	13:10	13.58	0.04	Ice floes are grounded in vicinity of cross-section.
<b>HWM</b>	-	13.97		High water mark observed 6/10/01 at 20:34.
06/10/01	20:34	12.47		
-	-	12.60		High water mark observed 6/11/01 at 09:48. Possible wind wave action.
06/11/01	9:48	12.39	0.02	The number of grounded ice floes has decreased.
06/11/01	11:50	12.40	0.03	
06/11/01	15:03	12.38	0.02	Smaller and fewer ice floes moving in channel.
06/12/01	12:44	11.94	0.02	
06/12/01	15:54	11.84	0.05	Few ice floes moving in channel.
06/13/01	12:59	11.40	0.01	Few ice floes moving in channel.

**Table B-1.4: Continued**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
06/15/01	11:41	11.94	0.02	No ice floes moving in channel.
06/15/01	13:55	11.95	0.02	No ice floes moving in channel.
06/17/01	13:32	11.19	0.02	Stage has dropped significantly, the sand bar is exposed and extends from the left bank to about mid channel.

Notes:

1. Water surface elevations are based on an elevation of 27.82 feet (BPMSL) for TBM Line 1 North, established by Lounsbury & Associates in 2000.
2. GPS coordinates for TBM C2A North are N 70° 17.731' W 151° 36.226' (NAD 83, decimal minutes).

**Table B-1.5: Water Surface Elevations and Observations on Fish Creek at River Mile 25.1**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
10/00	-	10.6		Top of ice during October survey.
06/04/01	13:16	10.30	0.02	Local meltwater is ponded. Snow drifts remain in channel near banks.
06/05/01	10:28	10.68	0.03	Local meltwater is ponded. Snow drifts remain in channel near banks.
06/06/01	8:27	14.72	0.01	Water is now flowing.
06/06/01	10:45	14.79	0.01	Slush and ice floes moving in channel.
06/06/01	12:00	15.07	0.01	Slush and ice floes moving in channel.
06/06/01	13:55	15.48	0.04	
06/06/01	14:28	15.54	0.04	
06/06/01	15:41	15.69	0.05	
06/07/01	10:30	17.81	0.03	Ice jam located at approximately River Mile 23. Less than 2 percent of the cross-section below the water surface is blocked by snow along banks.
06/07/01	14:55	17.57	0.03	There is no snow within the channel, below the water surface. The left bank is a relatively steep sand dune slope with some bank undercutting and sloughing occurring upstream of cross-section. Right bank height is relatively low and gently sloped, and is vegetated with brush.
06/07/01	17:25	17.55	0.03	
06/07/01	20:05	17.68	0.03	
06/08/01	13:15	18.16	0.02	
06/08/01	-	18.57		High water mark observed 6/8/01 at 16:00.
06/08/01	16:00	18.47	0.03	
06/08/01	19:08	18.41	0.01	
06/09/01	7:20	18.73	0.01	
<b>HWM</b>	-	18.92		High water mark observed 6/10/01 at 19:02.
06/09/01	10:20	18.56	0.04	
06/09/01	13:01	18.52	0.03	
06/09/01	14:54	18.47	0.03	
06/09/01	17:40	17.91	0.02	
06/10/01	19:02	17.44		
06/11/01	9:04	16.92	0.01	All snow within the channel, both above and below the present water surface, is gone.
06/11/01	9:30	16.96	0.02	Few ice floes moving in channel during discharge measurement.
06/11/01	11:21	16.98	0.02	
06/11/01	12:15	16.97	0.00	

**Table B-1.5: Continued**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
06/11/01	13:05	16.96	0.02	
06/11/01	14:55	16.93	0.00	
06/11/01	15:46	16.93	0.01	
06/12/01	10:02	16.57	0.00	
06/12/01	15:16	16.41	0.00	
06/12/01	17:19	16.37	0.04	
06/13/01	12:33	16.14	0.01	
06/13/01	14:13	16.13	0.03	
06/14/01	15:38	16.73	0.03	
06/15/01	10:35	16.98	0.01	
06/15/01	11:15	16.99	0.00	
06/15/01	13:39	16.99	0.01	

Notes:

1. Water surface elevations obtained between 6/4/01 and 6/28/01 are based on an elevation of 21.44 feet (BPMSL) for TBM Line 2 South, established by Lounsbury & Associates in 2000.
2. Water surface elevations obtained between 7/16/01 and 9/08/01 are based on an elevation of 44.03 feet (BPMSL) for TBM Line 2 North, established by Lounsbury & Associates in 2000.
3. GPS coordinates for TBM Line 2 South are N 70° 15.919' W 151° 42.126' (NAD 83, decimal minutes).
4. GPS coordinates for TBM Line 2 North are N 70° 15.986' W 151° 42.245' (NAD 83, decimal minutes).

**Table B-1.6: Water Surface Elevations and Observations on Fish Creek at River Mile 32.4**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
03/01	-	16.4		Top of ice during March survey.
05/20/01	-			No water is present. The left bank has a relatively large snow drift that extends to the middle of the channel. The left bank is a relatively steep slope with bank undercutting and sloughing occurring at the cross-section. The right bank has less snow accumulated, and is a moderately steep sand dune slope vegetated with brush.
06/03/01	18:17	17.70	0.01	Local meltwater is ponded.
06/05/01	9:59	18.35	0.01	Local meltwater is ponded.
06/05/01	18:00	18.49	0.01	Local meltwater is ponded.
06/06/01	10:23	21.75	0.01	Water is flowing.
06/06/01	-	21.80		High water mark observed 6/6/01 at 15:37.
06/06/01	15:37	21.54	0.03	
-	-	21.44		High water mark observed 6/7/01 at 11:09.
06/07/01	11:09	21.30	0.02	No ice floes moving downstream. Snow remains in channel near left bank and extends below present water surface. No snow within channel near right bank.
06/07/01	16:18	21.29	0.02	Some slush and ice moving downstream. Snow remains in channel near left bank and extends below present water surface. Snow probably blocks less than 2 percent of the cross-section below the water surface.
06/07/01	20:00	21.11	0.03	
06/08/01	14:00	20.76	0.02	Slush and ice moving downstream. Snow remains in channel near left bank and extends below present water surface. Snow probably blocks less than 2 percent of the cross-section below the water surface.
06/08/01	18:57	20.79	0.02	
06/08/01	20:24	20.76	0.02	
06/09/01	8:32	20.89	0.02	
06/09/01	10:00	20.86	0.02	Ice floes grounded approximately 75 feet upstream of cross-section near center of channel, and ice floes observed moving downstream. Snow remains in channel near left bank and extends below present water surface. Snow probably blocks less than 2 percent of the cross-section below the water surface.
-	-	21.85		High water mark observed 6/10/01 at 17:19.
06/10/01	17:19	20.67	0.04	

**Table B-1.6: Continued**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
06/11/01	9:57	21.76	0.02	Ice floes grounded approximately 75 feet upstream of cross-section near center of channel, and ice floes observed moving downstream. Discontinuous snow remains in channel near left bank and does not appear to extend below present water surface.
06/11/01	13:32	21.72	0.02	
06/11/01	14:26	21.69	0.03	
06/11/01	15:46	21.65	0.02	
06/11/01	17:00	21.59	0.03	
06/12/01	10:31	20.69	0.01	
06/12/01	15:36	20.45	0.02	
06/13/01	13:14	20.56	0.02	
06/13/01	16:30	20.79	0.01	
06/14/01	11:04	21.60	0.01	
06/14/01	12:03	21.56	0.01	No snow above or below water surface remaining in channel near left bank.
06/14/01	14:02	21.56	0.01	
06/14/01	15:02	21.56	0.03	
06/15/01	10:06	22.16	0.02	
06/15/01	11:25	22.19	0.03	
06/15/01	14:02	22.20	0.02	
<b>HWM</b>	15:45	22.25		Water surface elevation based on continuous water level recorder data.
06/15/01	18:30	22.16	0.02	

Notes:

1. Water surface elevations obtained between 6/3/01 and 6/28/01 are based on an elevation of 23.37 feet (BPMSL) for TBM Line 3 South2, established by Lounsbury & Associates in 2000.
2. Water surface elevations obtained between 7/16/01 and 9/08/01 are based on an elevation of 24.37 feet (BPMSL) for TBM Line 3 North2, established by Lounsbury & Associates in 2000.
3. GPS coordinates for TBM Line 3 South2 are N 70° 16.161' W 151° 52.343' (NAD 83, decimal minutes).
4. GPS coordinates for TBM Line 3 North2 are N 70° 16.210' W 151° 52.348' (NAD 83, decimal minutes).



**Table B-1.7: Water Surface Elevations and Observations on Fish Creek at River Mile 43.3**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
03/01	-	24.8		Top of ice during March survey.
05/23/01	-			No water is present. Left bank has a relatively large deposit of snow that extends from the top of the bank to mid-channel. The right bank has considerably less snow, has several small sand dunes with a relatively gentle slope, and is brush covered. A sand bar extends from the right bank to mid-channel.
06/03/01	17:58	26.68		Local meltwater is ponded. Snow on left bank is above and below water surface.
06/05/01	9:46	29.98	0.02	Local meltwater is ponded. Snow on left bank is above and below water surface.
06/05/01	17:05	28.19	0.01	Water is now flowing. Snow on left bank is above and below water surface.
06/06/01	10:03	28.90	0.02	Snow remains in channel near left bank and extends below present water surface. Snow probably blocks less than 2 percent of the cross-section below the water surface.
06/06/01	15:30	28.98	0.03	An ice jam was observed downstream of cross-section at approximately River Mile 42.
<b>HWM</b>	-	31.63		High water mark observed on 6/7/01 at 11:02.
06/07/01	11:02	29.51	0.02	
06/07/01	17:22	29.33	0.02	Ice floes grounded approximately 100 to 200 feet upstream of staff gages.
-	-	29.76		High water mark observed on 6/8/01 at 18:58.
06/08/01	18:58	29.17	0.03	
06/09/01	7:35	29.24	0.03	
06/09/01	12:54	29.27	0.02	
-	-	31.57		High water mark observed on 6/10/01 at 17:45.
06/10/01	17:45	30.86		
06/11/01	14:45	30.14	0.01	
06/11/01	15:54	30.07	0.01	
06/12/01	11:12	28.92	0.01	Discontinuous snow patches remaining on left bank above and below water surface. Where there is snow along the left bank, it is contained within the irregularities of the bank and is having little or no impact on flow within the channel.
06/13/01	17:00	29.72	0.02	
06/17/01	11:57	29.67	0.02	

Notes:

1. Water surface elevations are based on an elevation of 35.29 feet (BPMSL) for TBM Line 4A South, established by Lounsbury & Associates in 2000.
2. GPS coordinates for TBM Line 4A South are N 70° 15.242' W 152° 01.294' (NAD 83, decimal minutes).

**SPRING BREAKUP WATER SURFACE ELEVATIONS AND OBSERVATIONS**

**JUDY CREEK**

**Table B-2.1: Water Surface Elevations and Observations on Judy Creek at River Mile 7**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
03/01		20.8		Top of ice during March survey.
05/21/01	-			No water is present. Right bank consists of a brushy vegetated sand dune slope, and the left bank consists of a steep, sloughing bank (1-5 ft. long by 1-4 feet wide by 2-3 feet thick sections) positioned between 2 sand dunes. The left bank up and downstream of the cross-section is undercut and sloughing. Snow exists within the channel along both banks, though more extensive on the left bank. A large sand bar extends from the right bank to mid-channel.
06/03/01	17:30	21.22	0.02	Local meltwater is ponded
06/05/01	9:26	21.49	0.02	Local meltwater is ponded
06/06/01	9:55	25.48	0.01	Water is now flowing. Ice floes moving downstream, and grounded ice floes are present near the cross-section.
06/06/01	-	26.10		High water mark observed 6/6/01 at 15:20. Possible wind wave action.
06/06/01	15:20	26.02		
-	-	26.36		High water mark observed 6/7/01 at 10:46. Possible wind wave action.
06/07/01	10:46	25.74		
06/07/01	14:31	26.16	0.05	Snow still present on left stream bank above and below water surface, but is probably having little affect on flow within the channel. Snow remains on right bank, above water surface. Ice jam observed downstream from JX3 at approximately River Mile 4.
06/07/01	16:34	26.22		
06/07/01	20:09	26.35		
06/08/01	13:52	26.68		
06/08/01	19:15	26.91		
06/09/01	12:09	26.39		
06/09/01	14:51	26.29		Both grounded and moving ice floes were observed in the channel during discharge measurement. No snow remains within the channel on the right bank. Snow is discontinuous within the channel along the left bank. Where there is snow along the left bank, it is contained within the irregularities of the bank and is having little or no impact on flow within the channel.
06/09/01	17:22	26.34		
06/09/01	20:06	26.29		
<b>HWM</b>	-	27.11		High water mark observed 6/10/01 at 18:15.
06/10/01	18:15	25.50		
06/11/01	10:20	25.36	0.02	

**Table B-2.1: Continued**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
06/12/01	12:00	25.02	0.01	
06/12/01	13:32	25.02	0.02	
06/12/01	15:11	25.02	0.02	No snow remains on left bank.
06/12/01	16:47	24.99	0.02	

Notes:

1. Water surface elevations obtained between 6/3/01 and 6/15/01 are based on an elevation of 36.62 feet (BPMSL) for TBM Line 3 South1, established by Lounsbury & Associates in 2000.
2. Water surface elevations obtained between 7/15/01 and 9/08/01 are based on an elevation of 33.01 feet (BPMSL) for TBM Line 3 North1, established by Lounsbury & Associates in 2000.
3. GPS coordinates for TBM Line 3 South1 are N 70° 13.162' W 151° 50.333' (NAD 83, decimal minutes).
4. GPS coordinates for TBM Line 3 North1 are N 70° 13.221' W 151° 50.323' (NAD 83, decimal minutes).

**Table B-2.2: Water Surface Elevations and Observations on Judy Creek at River Mile 13.8**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
03/01	-	30.3		Top of ice during March survey.
05/24/01	-			No water is present. Right bank has a relatively large deposit of snow extending from bank to mid-channel. Left bank has considerably less snow, and has a sand bar extending from bank to mid-channel.
06/05/01	8:48	34.14	0.00	Water is now flowing, with slush and ice floes moving downstream. Snow on right bank is above and below water surface. Snow probably blocks less than 2 percent of the cross-section below the water surface.
06/05/01	17:35	35.61	0.02	
06/06/01	9:45	34.63	0.01	
06/06/01	-	36.42		High water mark observed on 6/6/01 at 15:15.
06/06/01	15:15	35.30	0.02	
<b>HWM</b>	-	39.66		High water mark observed on 6/7/01 at 10:40.
06/07/01	10:40	37.79	0.02	
06/07/01	-	35.10		High water mark observed on 6/7/01 at 17:12. Possibly wind wave action.
06/07/01	17:12	34.93	0.03	
06/09/01	14:46	35.03	0.03	Ice floes grounded in channel up and downstream of cross-section.
06/09/01	17:31	34.86	0.04	
-	-	35.43		High water mark observed on 6/10/01 at 17:45.
06/10/01	17:45	34.24		
06/11/01	10:47	34.17	0.02	No snow remaining on left or right bank, though discontinuous patches of snow exist downstream of cross-section. Where there is snow along the left bank, it is contained within the irregularities of the bank and is having little or no impact on flow within the channel.
06/12/01	12:22	33.79	0.01	
06/12/01	15:07	33.81		
06/12/01	17:09	33.84	0.01	
06/13/01	13:52	33.57	0.01	

Notes:

1. Water surface elevations are based on an elevation of 41.12 feet (BPMSL) for TBM Line 4B North, established by Lounsbury & Associates in 2000.
2. GPS coordinates for TBM Line 4B North are N 70° 11.198' W 151° 57.718' (NAD 83, decimal minutes).

**Table B-2.3: Water Surface Elevations and Observations on Judy Creek at River Mile 21.8**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
05/28/01	-			No water present.
06/03/01	16:32	43.73	0.01	Local meltwater is ponded.
06/05/01	8:26	44.78	0.02	Water is now flowing, with slush and ice floe moving downstream. Snow on left bank is above and below water surface. Snow probably blocks less than 2 percent of the cross-section below the water surface.
06/05/01	17:20	44.91	0.01	
06/06/01	9:36	46.31	0.01	
06/06/01	-	46.36		High water mark observed on 6/6/01 at 15:07.
06/06/01	15:07	46.10	0.02	
06/07/01	10:25	45.97	0.02	Remaining snow appears to be discontinuous below water surface on left bank.
06/07/01	17:02	46.33	0.01	
06/09/01	12:44	45.89	0.01	No snow remains within channel near either bank.
<b>HWM</b>	-	47.74		High water mark observed on 6/10/01 at 21:53.
06/10/01	21:35	45.44		
06/11/01	10:56	45.45	0.02	

Notes:

1. Water surface elevations are based on an elevation of 52.66 feet (BPMSL) for TBM L01-31-7-1, established by Lounsbury & Associates in 2000.
2. GPS coordinates for TBM L01-31-7-1 are N 70° 08.746' W 152° 05.815' (NAD 83, decimal minutes).

**Table B-2.4: Water Surface Elevations and Observations on Judy Creek at River Mile 31**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
05/28/01	-			No flowing water present.
06/03/01	15:57	55.57	0.02	Local meltwater is ponded. Snow present on left bank extending from bank to mid-channel. Left bank is a steep, high bank with undercutting and sloughing. Little to no snow on right bank. A large sand bar extends from right bank to mid-channel.
06/05/01	8:07	58.81	0.01	Water is now flowing. Snow remains in channel near left bank and extends below present water surface. Snow probably blocks less than 2 percent of the cross-section below the water surface.
06/06/01	9:18	59.85	0.01	
06/06/01	14:51	59.49	0.03	
06/07/01	10:08	59.96	0.02	
06/07/01	11:47	60.07	0.01	
06/07/01	16:50	60.28	0.02	
06/08/01	14:17	60.43	0.03	
06/09/01	12:36	60.03	0.01	Some ice floes moving downstream.
06/11/01	11:20	59.39	0.01	No ice floes observed in channel. Discontinuous snow patches remain above water surface along the left bank.

Notes:

1. Water surface elevations are based on an elevation of 73.31 feet (BPMSL) for TBM Bend-A, established by Lounsbury & Associates in 2001.
2. GPS coordinates for TBM Bend-A are N 70° 07.340' W 151° 15.427' (NAD 83, decimal minutes).

**SPRING BREAKUP WATER SURFACE ELEVATIONS AND OBSERVATIONS**

**UBLUTUOCH RIVER**



**Table B-3.1: Water Surface Elevations and Observations on Ublutuouch River at River Mile 13.5**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
05/29/01	-			No flowing water present. Channel filled nearly full of snow. Snow surface at elevation xx feet (BPMSL).
06/08/01	20:32	17.56	0.02	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface.
06/09/01	11:04	17.71	0.05	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface.
<b>HWM</b>	-	17.84		High water mark surveyed 6/10/01.
06/10/01	16:37	16.94	0.01	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface. The amount of snow below the water surface in the channel appears to be decreasing.
06/10/01	17:30	16.71	0.01	
06/11/01	17:12	15.76	0.04	
06/12/01	11:36	14.66	0.01	
06/12/01	12:59	14.55	0.01	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface. The amount of snow below the water surface in the channel continues to decrease.
06/12/01	14:49	14.47	0.02	
06/13/01	18:08	12.44	0.01	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface. The amount of snow below the water surface in the channel continues to decrease.

Notes:

1. Water surface elevations are based on an elevation of 19.28 feet (BPMSL) for TBM UXAL-B, established by Lounsbury & Associates in 2001.
2. GPS coordinates for TBM UXAL are N 70° 14.728' W 151° 17.462' (NAD 83, decimal minutes).

**Table B-3.2: Water Surface Elevations and Observations on Ublutuouch River at River Mile 13.7**

Date	Time	Water Surface Elevation (feet)	Fluctuation in gage reading (+/-)	Observations
05/29/01	-			No flowing water present. Channel filled nearly full of snow. Snow surface at elevation xx feet (BPMSL).
06/08/01	20:40	17.72	0.03	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface.
06/09/01	11:18	17.94	0.02	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface.
<b>HWM</b>	-	18.09		High water mark indicators surveyed 6/10/01.
06/10/01	16:14	17.15	0.01	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface. The amount of snow below the water surface in the channel appears to be decreasing.
06/10/01	18:00	17.11	0.02	
06/10/01	19:20	16.98	0.02	
06/11/01	17:01	16.15	0.01	Ice foes grounded near cross-section approximately 4 feet by 5 feet wide by 3 feet thick.
06/11/01	18:30	16.14	0.02	
06/12/01	11:32	15.16	0.02	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface. The amount of snow below the water surface in the channel continues to decrease.
06/12/01	12:55	15.04	0.01	
06/12/01	14:17	14.99	0.01	
06/13/01	17:35	13.09	0.01	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface. The amount of snow below the water surface in the channel continues to decrease.
06/13/01	18:37	12.96	0.02	
06/14/01	10:09	11.98	0.01	
06/17/01	15:05	10.08	0.01	
06/17/01	15:48	10.11	0.01	Water is flowing on top of the snow. Dense brush protrudes through the snow along the sides of the channel, below the water surface. The amount of snow below the water surface in the channel continues to decrease.

Notes:

1. Water surface elevations are based on an elevation of 19.00 feet (BPMSL) for TBM UBXBL-B, established by Lounsbury & Associates in 2001.
2. GPS coordinates for TBM UBXBL-B are N 70° 14.611' W 151° 17.874' (NAD 83, decimal minutes).

**APPENDIX C**

**DISCHARGE MEASUREMENTS**

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### Title

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C-1.4	Discharge Measurement on Fish Creek at River Mile 25.1 on 11 June 2001
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C-2.1	Summary of Discharge Measurements on Fish Creek at River Mile 32.4
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C-3.1	Summary of Discharge Measurements on Judy Creek at River Mile 7
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**DISCHARGE MEASUREMENTS**

**ON FISH CREEK AT RIVER MILE 25.1**

**Table C-1.1: Summary of Discharge Measurements on Fish Creek  
at River Mile 25.1**

<b>Date</b>	<b>Average Time</b>	<b>Water Surface Elevation (feet)</b>	<b>Discharge (cfs)</b>	<b>Average Velocity (feet per second)</b>
6/7/2001	16:43	17.56	3110	1.48
6/8/2001	14:45	18.33	4760	1.88
6/9/2001	16:05	18.08	5185 <sup>1</sup>	-
6/11/2001	10:32	16.97	6050	2.93
6/13/2001	13:35	16.14	4600	2.71
6/15/2001	12:27	16.99	6100	2.95
7/17/2001	10:16	10.91	755 <sup>1</sup>	-
8/14/2001	19:20	10.18	511 <sup>1</sup>	-
9/5/2001	13:25	10.25	511 <sup>1</sup>	-

Notes:

1. Discharge was calculated based on discharge measurements made on Judy Creek and Fish Creek upstream of the confluence.
2. cfs = cubic feet per second.
3. Water surface elevations are based on an elevation of 21.44 feet (BPMSL) for TBM Line 2 South, established by Lounsbury & Associates in 2000.

**Table C-1.2: Discharge Measurement on Fish Creek at River Mile 25.1 on 7 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Fish Creek, approximately 25.1 river miles upstream from mouth.						
<b>Date:</b> 6/7 2001 <b>Party:</b> Mark Vania, James Dietzmann, Paul Myerchin						
<b>Width:</b> 337	<b>Area:</b> 2100	<b>Vel:</b> 1.48	<b>W.S.E. (BPMSL)</b> 17.56 ft	<b>Disch.:</b> 3110	<b>cfs</b>	
<b>No Secs.</b> 20	<b>W.S.E. change:</b> 0.01 ft. in 1.4 hrs.			<b>Susp.:</b>		
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
14:55	FX2R-B	W.S.E. =	17.57 ft BPMSL	<b>Meter:</b> 1 ft. above bottom of weight.		
16:02	Start Discharge Meas.	W.S.E. (est)=	17.56 ft BPMSL	<b>Spin before meas.</b> 3 min 75 sec <b>after</b> 3 min 25 sec		
17:24	End Discharge Meas.	W.S.E. (est)=	17.55 ft BPMSL	<b>Method:</b> Boat using sounding weight.		
17:25	FX2R-B	W.S.E.=	17.55 ft BPMSL			
<b>Weighted M.G.H.</b>			17.56 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			17.56 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> windy		<b>Air (oF):</b> 38		
<b>Gage:</b>		<b>Water (oF):</b>				
<b>Other:</b>						
<b>Record Removed:</b> N/A		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b> There is a large sand bar extending from the right bank to station 240.						
<b>Remarks</b> Snow on both channel banks above water surface. Wind waves, 0.5-2.0 feet high moving upstream						
<b>G.H. of zero flow:</b> ft.						



**Table C-1.2: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	0.0	0.0	0.0								LEW - Sand dune slope
	15.0	15.0	6.5	0.2	32	45	1.586	1.32	97.5	128.3	sandy/silty channel bottom
				0.8	21	45	1.047				
	30.0	15.0	6.5	0.2	38	45	1.880	1.64	97.5	160.3	sandy/silty channel bottom
				0.8	29	46	1.408				
	45.0	15.0	7.0	0.2	41	45	2.027	1.84	105.0	192.9	sandy/silty channel bottom
				0.8	34	46	1.647				
	60.0	15.0	7.6	0.2	46	46	2.223	1.89	114.0	215.1	sandy/silty channel bottom
				0.8	32	46	1.552				
	75.0	15.0	8.0	0.2	48	45	2.370	2.01	120.0	241.0	sandy/silty channel bottom
				0.8	34	46	1.647				
	90.0	15.0	8.5	0.2	46	45	2.272	1.90	127.5	242.8	sandy/silty channel bottom
				0.8	31	45	1.537				
	105.0	15.0	8.9	0.2	49	45	2.419	2.03	133.5	270.8	sandy/silty channel bottom
				0.8	36	49	1.638				
	120.0	15.0	9.3	0.2	48	45	2.370	2.01	139.5	280.2	sandy/silty channel bottom
				0.8	34	46	1.647				
	135.0	15.0	9.8	0.2	45	45	2.223	1.86	147.0	273.9	sandy/silty channel bottom
				0.8	31	46	1.504				
	150.0	15.0	8.8	0.2	46	46	2.223	1.83	132.0	241.6	sandy/silty channel bottom
				0.8	29	45	1.439				
	165.0	15.0	8.1	0.2	33	45	1.635	1.49	121.5	180.8	sandy/silty channel bottom
				0.8	27	45	1.341				
	180.0	15.0	8.2	0.2	30	46	1.456	1.36	123.0	167.3	sandy/silty channel bottom
				0.8	26	46	1.264				
	195.0	15.0	7.5	0.2	23	45	1.145	1.11	112.5	124.7	sandy/silty channel bottom
				0.8	22	46	1.072				
	210.0	15.0	6.1	0.2	21	45	1.047	1.04	91.5	95.1	sandy/silty channel bottom
				0.8	23	50	1.032				

Table C-1.2: Continued

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	225.0	15.0	6.3	0.2	17	46	0.833	0.82	94.5	77.2	sandy/silty channel bottom
				0.8	16	45	0.802				
	240.0	13.0	4.5	0.6	13	47	0.628	0.63	58.5	36.7	Left edge of sand bar
	251.0	15.0	3.8	0.6	15	46	0.737	0.74	57.0	42.0	sandy/silty channel bottom
	270.0	19.5	5.1	0.2	17	51	0.753	0.57	99.5	57.0	sandy/silty channel bottom
				0.8	8	47	0.393				
	290.0	20.0	3.3	0.6	15	46	0.737	0.74	66.0	48.6	sandy/silty channel bottom
	310.0	23.3	2.9	0.6	11	45	0.557	0.56	67.4	37.5	sandy/silty channel bottom
	336.5	0.0	0.0								REW - Sandy bank with brush.
Totals:		336.5							2104.9	3113.8	Page 3 of 3

**Table C-1.3: Discharge Measurement on Fish Creek at River Mile 25.1 on 8 June 2001**

DISCHARGE MEASUREMENT NOTES					
<b>LOCATION:</b> Fish Creek, approximately 25.1 river miles upstream from mouth.					
<b>Date:</b> 6/8 2001		<b>Party:</b> Mark Vania, James Dietzmann			
<b>Width:</b> 338	<b>Area:</b> 2530	<b>Vel:</b> 1.88	<b>W.S.E. (BPMSL)</b> 18.33 ft	<b>Disch.:</b> 4760	<b>cfs</b>
<b>No Sects.</b> 22	<b>W.S.E. change:</b> 0.28 ft. in 2.8 hrs.		<b>Susp.:</b>		
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS2
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA	
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory	
13:15	FX2R-B	W.S.E =	18.16 ft BPMSL	<b>Meter:</b> 1 ft. above bottom of weight.	
13:30	Start Discharge Meas.	W.S.E. (est)=	18.19 ft BPMSL	<b>Spin before meas.</b> 4 min 21 sec <b>after</b> 2 min 41 sec	
16:00	End Discharge Meas.	W.S.E =	18.47 ft BPMSL	<b>Method:</b> Boat using sounding weight.	
16:00	FX2R-B	W.S.E =	18.47 ft BPMSL		
<b>Weighted M.G.H.</b>			18.33 ft BPMSL	<b>Levels obtained</b>	
<b>G.H. corrections</b>			0.00 ft BPMSL		
<b>Correct M.G.H.</b>			18.33 ft BPMSL		
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>			
<b>Cross section:</b> Fairly Uniform					
<b>Flow:</b> Uniform		<b>Weather:</b> windy		<b>Air (oF):</b> 36	
<b>Gage:</b>		<b>Water (oF):</b>			
<b>Other:</b>					
<b>Record Removed:</b>		<b>Intake flushed:</b>			
<b>Observer</b>					
<b>Control</b>					
<b>Remarks</b> Snow on both channel banks above water surface.					
<b>G.H. of zero flow:</b> ft.					

**Table C-1.3: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	0.0	0.0	0.0								LEW - Sand Dune Slope
	10.0	10.0	6.6	0.2	40	54	1.651	1.51	66.0	99.4	sandy/silty channel bottom
				0.8	28	46	1.360				
	20.0	10.0	7.5	0.2	40	54	1.651	1.89	75.0	142.1	sandy/silty channel bottom
				0.8	50	52	2.138				
	30.0	10.0	7.5	0.2	50	50	2.223	2.10	75.0	157.8	sandy/silty channel bottom
				0.8	50	56	1.986				
	40.0	10.0	7.8	0.2	50	44	2.523	2.37	78.0	185.1	sandy/silty channel bottom
				0.8	50	50	2.223				
	50.0	10.0	8.2	0.2	60	47	2.832	2.60	82.0	213.0	sandy/silty channel bottom
				0.8	50	47	2.363				
	60.0	10.0	8.6	0.2	60	48	2.774	2.40	86.0	206.2	sandy/silty channel bottom
				0.8	40	44	2.022				
	70.0	10.0	9.1	0.2	60	45	2.958	2.54	91.0	230.9	sandy/silty channel bottom
				0.8	40	42	2.118				
	80.0	10.0	9.4	0.2	60	46	2.894	2.44	94.0	228.9	sandy/silty channel bottom
				0.8	40	45	1.978				
	90.0	10.0	9.6	0.2	60	47	2.832	2.49	96.0	238.6	sandy/silty channel bottom
				0.8	50	52	2.138				
	100.0	10.0	9.8	0.2	50	40	2.774	2.35	98.0	230.7	sandy/silty channel bottom
				0.8	40	46	1.935				
	110.0	10.0	10.3	0.2	60	45	2.958	2.32	103.0	238.9	sandy/silty channel bottom
				0.8	40	53	1.682				
	120.0	10.0	10.5	0.2	50	41	2.707	2.28	105.0	239.5	sandy/silty channel bottom
				0.8	40	48	1.855				
	130.0	10.0	10.9	0.2	60	46	2.894	2.46	109.0	267.9	sandy/silty channel bottom
				0.8	40	44	2.022				
	140.0	10.0	11.0	0.2	50	41	2.707	2.24	110.0	246.9	sandy/silty channel bottom
				0.8	40	50	1.782				

**Table C-1.3: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	150.0	10.0	11.2	0.2	50	42	2.643	2.19	112.0	245.8	sandy/silty channel bottom
				0.8	40	51	1.747				
	160.0	10.0	9.5	0.2	50	46	2.414	2.08	95.0	197.7	sandy/silty channel bottom
				0.8	40	51	1.747				
	170.0	10.0	9.5	0.2	40	47	1.894	1.86	95.0	176.3	sandy/silty channel bottom
				0.8	40	49	1.818				
	180.0	12.5	9.4	0.2	40	50	1.782	1.57	117.5	185.0	sandy/silty channel bottom
				0.8	30	49	1.368				
	195.0	17.5	8.9	0.2	30	45	1.488	1.38	155.8	215.4	sandy/silty channel bottom
				0.8	40	70	1.278				
	215.0	20.0	7.8	0.2	30	46	1.456	1.26	156.0	196.8	sandy/silty channel bottom
				0.8	20	42	1.068				
	235.0	35.0	6.3	0.2	30	49	1.368	1.15	220.5	254.0	left edge of sand bar
				0.8	20	48	0.936				
	285.0	51.5	6.0	0.2	30	47	1.425	1.16	309.0	359.2	sandy/silty channel bottom
				0.8	20	50	0.900				
	338.0	0.0	0.0								REW - Sandy, vegetated bank
Totals:		338.0							2528.8	4756.2	

**Table C-1.4: Discharge Measurement on Fish Creek at River Mile 25.1 on 11 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Fish Creek, approximately 25.1 river miles upstream from mouth.						
<b>Date:</b> 6/11 2001		<b>Party:</b> Mark Vania, James Dietzmann				
<b>Width:</b> 336	<b>Area:</b> 2060	<b>Vel:</b> 2.93	<b>W.S.E. (BPMSL)</b> 16.97 ft	<b>Disch.:</b> 6050	<b>cfs</b>	
<b>No Secs.</b> 24	<b>W.S.E. change:</b> 0.02 ft. in 1.4 hrs.			<b>Susp.:</b>		
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b>		
9:30	FX2R-B	W.S.E. =	16.96 ft BPMSL	<b>Meter:</b> 1 foot <b>ft. above bottom of weight.</b>		
9:50	Start Discharge Meas.	W.S.E. (est)=	16.96 ft BPMSL	<b>Spin before meas.</b> 3min 29sec <b>after</b> 3min 9sec		
11:13	End Discharge Meas.	W.S.E. (est)=	16.98 ft BPMSL	<b>Method:</b> Boat using sounding weight.		
11:21	FX2R-B	W.S.E.=	16.98 ft BPMSL			
<b>Weighted M.G.H.</b>			16.97 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			16.97 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> breezy		<b>Air (oF):</b> 40		
<b>Gage:</b>		<b>Water (oF):</b>				
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b> Slush and ice still flowing in channel.						
Some snow remaining on right bank above water surface, none on left bank.						
<b>G.H. of zero flow:</b> ft.						

**Table C-1.4: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	2.5	0.0	0.0								LEW - Sand Dune Slope
	10.0	8.8	5.0	0.8	40	100	0.900	1.71	43.8	74.9	sandy/silty channel bottom
				0.2	50	44	2.523				
	20.0	10.0	6.3	0.8	60	45	2.958	3.25	63.0	204.8	sandy/silty channel bottom
				0.2	80	50	3.545				
	30.0	10.0	6.4	0.8	80	46	3.852	4.14	64.0	264.9	sandy/silty channel bottom
				0.2	100	50	4.427				
	40.0	10.0	7.1	0.8	80	47	3.771	4.19	71.0	297.6	sandy/silty channel bottom
				0.2	100	48	4.611				
	50.0	10.0	7.8	0.8	80	54	3.284	4.05	78.0	315.7	sandy/silty channel bottom
				0.2	100	46	4.811				
	60.0	10.0	8.0	0.8	80	47	3.771	4.29	80.0	343.3	sandy/silty channel bottom
				0.2	100	46	4.811				
	70.0	10.0	8.0	0.8	80	44	4.027	4.42	80.0	353.5	sandy/silty channel bottom
				0.2	100	46	4.811				
	80.0	10.0	8.0	0.8	80	48	3.692	4.36	80.0	348.8	sandy/silty channel bottom
				0.2	100	44	5.029				
	90.0	10.0	8.6	0.8	100	101	2.201	3.51	86.0	301.5	sandy/silty channel bottom
				0.2	100	46	4.811				
	100.0	10.0	9.0	0.8	80	50	3.545	4.13	90.0	372.1	sandy/silty channel bottom
				0.2	111	52	4.724				
	110.0	10.0	9.2	0.8	80	52	3.410	4.06	92.0	373.5	sandy/silty channel bottom
				0.2	100	47	4.709				
	120.0	10.0	9.1	0.8	80	46	3.852	4.18	91.0	380.8	sandy/silty channel bottom
				0.2	100	49	4.517				
	130.0	10.0	9.3	0.8	80	47	3.771	4.10	93.0	381.2	sandy/silty channel bottom
				0.2	100	50	4.427				
	140.0	10.0	9.3	0.8	80	49	3.617	3.92	93.0	364.3	sandy/silty channel bottom
				0.2	80	42	4.217				

Table C-1.4: Continued

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	150.0	10.0	9.7	0.8	100	106	2.098	3.06	97.0	297.0	sandy/silty channel bottom
				0.2	80	44	4.027				
	160.0	10.0	9.1	0.8	50	42	2.643	3.09	91.0	281.6	sandy/silty channel bottom
				0.2	80	50	3.545				
	170.0	10.0	8.5	0.8	60	56	2.380	2.67	85.0	226.8	sandy/silty channel bottom
				0.2	60	45	2.958				
	180.0	10.0	8.1	0.8	60	104	1.290	1.91	81.0	154.4	sandy/silty channel bottom
				0.2	50	44	2.523				
	190.0	10.0	7.7	0.8	40	53	1.682	1.75	77.0	134.7	sandy/silty channel bottom
				0.2	40	49	1.818				
	200.0	10.0	6.7	0.8	40	101	0.891	1.11	67.0	74.4	sandy/silty channel bottom
				0.2	25	42	1.330				
	210.0	20.0	5.9	0.8	25	48	1.166	1.69	118.0	199.9	sandy/silty channel bottom
				0.2	25	25	2.223				
	240.0	30.0	3.8	0.6	15	42	0.805	0.81	114.0	91.8	Left edge of sand bar.
	270.0	30.0	3.9	0.6	15	52	0.654	0.65	117.0	76.5	sandy/silty channel bottom
	300.0	34.3	3.3	0.6	25	46	1.216	1.22	113.0	137.4	sandy/silty channel bottom
	338.5	0.0	0.0								REW - Sandy, vegetated bank
Totals:		336.0							2064.8	6051.6	



**Table C-1.5: Discharge Measurement on Fish Creek at River Mile 25.1 on 13 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Fish Creek, approximately 25.1 river miles upstream from mouth.						
<b>Date:</b> 6/13 2001		<b>Party:</b> Mark Vania, James Dietzmann				
<b>Width:</b> 331	<b>Area:</b> 1690	<b>Vel:</b> 2.71	<b>W.S.E. (BPMSL)</b> 16.14 ft	<b>Disch.:</b> 4600	<b>cfs</b>	
<b>No Sects.</b> 24	<b>W.S.E. change:</b> 0.01 ft. in 1.2 hrs.			<b>Susp.:</b>		
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b>		
12:33	Level Loop Survey	W.S.E. =	16.14 ft BPMSL	<b>Meter:</b> 1 ft. above bottom of weight.		
13:00	Start Discharge Meas.	W.S.E. (est)=	16.14 ft BPMSL	<b>Spin before meas.</b> 3 min 23 sec <b>after</b> 2 min 48 sec		
14:10	End Discharge Meas.	W.S.E. (est)=	16.13 ft BPMSL	<b>Method:</b> Boat using sounding weight.		
14:13	FX2R-A	W.S.E.=	16.13 ft BPMSL			
<b>Weighted M.G.H.</b>			16.14 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			16.14 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> breezy		<b>Air (oF):</b> 45		
<b>Gage:</b>		partly cloudy		<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b>						
<b>G.H. of zero flow:</b> ft.						

**Table C-1.5: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	6.0	0.0	0.0								REW - Sand slope with brush
	100.0	52.0	2.8	0.6	5	111	0.117	0.12	145.6	17.1	sandy/silty channel bottom
	110.0	10.0	4.1	0.6	3	44	0.168	0.17	41.0	6.9	sandy/silty channel bottom
	120.0	10.0	4.8	0.6	5	44	0.268	0.27	48.0	12.9	sandy/silty channel bottom
	130.0	10.0	5.0	0.8	18	43	0.941	0.77	50.0	38.3	sandy/silty channel bottom
				0.2	12	46	0.593				
	140.0	10.0	5.7	0.8	24	44	1.220	1.12	57.0	63.9	sandy/silty channel bottom
				0.2	20	44	1.020				
	150.0	10.0	8.6	0.8	38	45	1.880	2.20	86.0	189.3	sandy/silty channel bottom
				0.2	50	44	2.523				
	160.0	10.0	9.5	0.8	33	47	1.566	2.14	95.0	203.2	sandy/silty channel bottom
				0.2	55	45	2.713				
	170.0	10.0	9.5	0.8	53	45	2.615	2.86	95.0	271.7	sandy/silty channel bottom
				0.2	63	45	3.105				
	180.0	10.0	9.0	0.8	60	43	3.094	3.48	90.0	313.1	sandy/silty channel bottom
				0.2	75	43	3.863				
	190.0	10.0	8.7	0.8	63	45	3.105	3.35	87.0	291.4	sandy/silty channel bottom
				0.2	73	45	3.594				
	200.0	10.0	7.9	0.8	68	44	3.425	3.82	79.0	301.9	sandy/silty channel bottom
				0.2	80	42	4.217				
	210.0	10.0	7.3	0.8	68	43	3.504	3.89	73.0	284.0	sandy/silty channel bottom
				0.2	85	44	4.277				
	220.0	10.0	7.1	0.8	72	45	3.545	3.99	71.0	283.0	sandy/silty channel bottom
				0.2	86	43	4.427				
	230.0	10.0	6.7	0.8	75	45	3.692	4.11	67.0	275.4	sandy/silty channel bottom
				0.2	90	44	4.528				

**Table C-1.5: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	240.0	10.0	6.5	0.8	70	44	3.525	4.03	65.0	261.7	left edge of sand bar
				0.2	90	44	4.528				
	250.0	10.0	6.2	0.8	70	42	3.692	4.06	62.0	251.7	sandy/silty channel bottom
				0.2	90	45	4.427				
	260.0	10.0	5.9	0.8	66	42	3.482	3.85	59.0	227.1	sandy/silty channel bottom
				0.2	80	42	4.217				
	270.0	10.0	5.9	0.8	70	43	3.607	3.92	59.0	231.1	sandy/silty channel bottom
				0.2	84	44	4.227				
	280.0	10.0	5.9	0.8	63	42	3.325	3.69	59.0	217.6	sandy/silty channel bottom
				0.2	75	41	4.051				
	290.0	10.0	7.0	0.8	45	45	2.223	2.97	70.0	208.2	sandy/silty channel bottom
				0.2	74	44	3.726				
	300.0	10.0	7.4	0.8	66	43	3.402	3.61	74.0	267.4	sandy/silty channel bottom
				0.2	76	44	3.826				
	310.0	10.0	6.5	0.8	44	42	2.328	2.88	65.0	187.1	sandy/silty channel bottom
				0.2	65	42	3.430				
	320.0	10.0	6.0	0.8	36	42	1.908	2.46	60.0	147.5	sandy/silty channel bottom
				0.2	57	42	3.010				
	330.0	8.3	4.4	0.6	25	43	1.300	1.30	36.3	47.2	sandy/silty channel bottom
	336.5	0.0	0.0								LEW - Sand dune slope
Totals:		330.5							1693.9	4598.8	Page 3 of 3

**Table C-1.6: Discharge Measurement on Fish Creek at River Mile 25.1 on 15 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Fish Creek, approximately 25.1 river miles upstream from mouth.						
<b>Date:</b> 6/15 2001 <b>Party:</b> Mark Vania, Paul Myerchin						
<b>Width:</b> 337	<b>Area:</b> 2070	<b>Vel:</b> 2.95	<b>W.S.E. (BPMSL)</b> 16.99 ft	<b>Disch.:</b> 6100	<b>cfs</b>	
<b>No Secs.</b> 25	<b>W.S.E. change:</b> 0.0 ft. in 2.2 hrs.			<b>Susp.:</b>		
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
11:15	FX2R-B	W.S.E. =	16.99 ft BPMSL	<b>Meter:</b> 1 foot <b>ft. above bottom of weight.</b>		
11:20	Start Discharge Meas.	W.S.E. (est)=	16.99 ft BPMSL	<b>Spin before meas.</b> 3 min 15 sec <b>after</b> 2 min 26 sec		
13:34	End Discharge Meas.	W.S.E. (est)=	16.99 ft BPMSL	<b>Method:</b> Boat using sounding weight.		
13:39	FX2R-B	W.S.E.=	16.99 ft BPMSL			
<b>Weighted M.G.H.</b>			16.99 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			16.99 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> breezy		<b>Air (oF):</b> 45		
<b>Gage:</b>		Mostly clear		<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b> Little to no ice in current, water level appears to have risen since previous discharge measurement, moderate to heavy precipitation yesterday, current weather partly cloudy.						
<b>G.H. of zero flow:</b> ft.						

**Table C-1.6: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertival (fps)			
	1.5	0.0	0.0								REW - Sand slope with brush
	40.0	34.3	2.8	0.6	40	46	1.935	1.94	95.9	185.6	sandy/silty channel bottom
	70.0	30.0	2.5	0.6	30	84	0.805	0.81	75.0	60.4	sandy/silty channel bottom
	100.0	22.5	3.5	0.6	20	73	0.622	0.62	78.8	49.0	sandy/silty channel bottom
	115.0	15.0	5.2	0.2	40	71	1.260	1.14	78.0	88.9	sandy/silty channel bottom
				0.8	25	55	1.020				
	130.0	12.5	8.8	0.2	50	49	2.268	1.95	110.0	214.1	sandy/silty channel bottom
				0.8	35	48	1.625				
	140.0	10.0	10.3	0.2	60	46	2.894	2.34	103.0	240.8	sandy/silty channel bottom
				0.8	40	50	1.782				
	150.0	10.0	10.0	0.2	60	46	2.894	2.34	100.0	234.5	sandy/silty channel bottom
				0.8	50	62	1.796				
	160.0	10.0	11.2	0.2	60	43	3.094	2.91	112.0	325.5	sandy/silty channel bottom
				0.8	60	49	2.718				
	170.0	10.0	12.3	0.2	70	46	3.373	3.13	123.0	385.4	sandy/silty channel bottom
				0.8	60	46	2.894				
	180.0	10.0	12.6	0.2	70	42	3.692	3.26	126.0	411.1	sandy/silty channel bottom
				0.8	60	47	2.832				
	190.0	10.0	12.4	0.2	80	41	4.320	2.99	124.0	370.2	sandy/silty channel bottom
				0.8	40	54	1.651				
	200.0	10.0	9.6	0.2	80	41	4.320	4.09	96.0	392.3	sandy/silty channel bottom
				0.8	80	46	3.852				
	210.0	10.0	8.0	0.2	90	41	4.858	4.54	80.0	363.0	sandy/silty channel bottom
				0.8	80	42	4.217				
	220.0	10.0	7.4	0.2	100	47	4.709	4.41	74.0	326.7	sandy/silty channel bottom
				0.8	80	43	4.120				

**Table C-1.6: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	230.0	10.0	6.9	0.2	100	45	4.917	4.47	69.0	308.6	sandy/silty channel bottom
				0.8	80	44	4.027				
	240.0	10.0	6.7	0.2	100	48	4.611	4.24	67.0	284.3	left edge of sand bar
				0.8	70	40	3.876				
	250.0	10.0	6.4	0.2	80	40	4.427	4.06	64.0	259.8	sandy/silty channel bottom
				0.8	70	42	3.692				
	260.0	10.0	5.7	0.2	80	41	4.320	4.01	57.0	228.4	sandy/silty channel bottom
				0.8	70	42	3.692				
	270.0	10.0	5.5	0.2	80	41	4.320	4.05	55.0	222.8	sandy/silty channel bottom
				0.8	70	41	3.782				
	280.0	10.0	5.3	0.2	80	42	4.217	3.95	53.0	209.6	sandy/silty channel bottom
				0.8	70	42	3.692				
	290.0	10.0	8.7	0.2	80	46	3.852	2.56	87.0	222.6	sandy/silty channel bottom
				0.8	30	53	1.266				
	300.0	10.0	6.2	0.2	70	40	3.876	2.87	62.0	177.7	sandy/silty channel bottom
				0.8	40	48	1.855				
	310.0	10.0	6.7	0.2	70	41	3.782	3.21	67.0	215.2	sandy/silty channel bottom
				0.8	50	42	2.643				
	320.0	10.0	5.8	0.2	70	44	3.525	3.23	58.0	187.2	sandy/silty channel bottom
				0.8	70	53	2.930				
	330	9.3	5.6	0.2	60	48	2.774	2.59	51.8	134.4	LEW - Sand dune slope
				0.8	50	46	2.414				
	338.5	0.0	0.0								
Totals:		337.0							2066.5	6097.9	Page 3 of 3

**DISCHARGE MEASUREMENTS**  
**ON FISH CREEK AT RIVER MILE 32.4**

**Table C-2.1: Summary of Discharge Measurements on Fish Creek  
at River Mile 32.4**

<b>Date</b>	<b>Average Time</b>	<b>Water Surface Elevation (feet)</b>	<b>Discharge (cfs)</b>	<b>Average Velocity (feet per second)</b>
6/8/2001	19:46	20.78	709	0.76
6/9/2001	9:28	20.87	698	0.75
6/11/2001	15:15	21.67	2070	1.81
6/14/2001	12:55	21.56	3100	2.29
6/15/2001	12:27	22.23	3657 <sup>1</sup>	-
6/16/2001	13:13	21.6	3120	2.25
7/17/2001	10:16	17.43	578	1.78
8/14/2001	19:20	16.92	345	1.54
9/5/2001	13:25	16.95	349	1.29

Notes:

1. Discharge was calculated based on discharge measurements made on Judy Creek and Fish Creek downstream of the confluence.
2. cfs = cubic feet per second.
3. Water surface elevations between 6/3/01 and 6/28/01 are based on an elevation of 23.37 feet (BPMSL) for TBM Line 3 South2, established by Lounsbury & Associates in 2000.
4. Water surface elevations between 7/16/01 and 9/08/01 are based on an elevation of 24.37 feet (BPMSL) for TBM Line 3 North2, established by Lounsbury & Associates in 2000.



**Table C-2.2: Discharge Measurement on Fish Creek at River Mile 32.4 on 8 June 2001**

DISCHARGE MEASUREMENT NOTES					
<b>LOCATION:</b> Fish Creek, approximately 32.4 river miles upstream from mouth.					
<b>Date:</b> 6/8 2001 <b>Party:</b> Mark Vania, James Dietzmann, Paul Myerchin					
<b>Width:</b> 233	<b>Area:</b> 929	<b>Vel:</b> 0.76	<b>W.S.E. (BPMSL)</b> 20.78 ft	<b>Disch.:</b> 709	<b>cfs</b>
<b>No Secs.</b> 23	<b>W.S.E. change:</b> 0.03 ft. in 1.2 hrs.			<b>Susp.:</b>	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS2
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA	
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b>	
18:57	SG-FX3R-B	W.S.E. =	20.79 ft BPMSL	<b>Meter:</b> 1 <b>ft. above bottom of weight.</b>	
19:10	Start Discharge Meas.	W.S.E. (est)=	20.79 ft BPMSL	<b>Spin before meas.</b> 3 min, 17 sec. <b>after</b> 1min 48sec	
20:21	End Discharge Meas.	W.S.E. (est)=	20.76 ft BPMSL	<b>Method:</b> Boat using sounding weight.	
20:24	SG-FX3R-B	W.S.E.=	20.76 ft BPMSL		
<b>Weighted M.G.H.</b>			20.78 ft BPMSL	<b>Levels obtained</b>	
<b>G.H. corrections</b>			0.00 ft BPMSL		
<b>Correct M.G.H.</b>			20.78 ft BPMSL		
<b>Measurement rated:</b> Fair		<b>based on following conditions:</b>			
<b>Cross section:</b> Fairly Uniform					
<b>Flow:</b> Uniform		<b>Weather:</b> windy		<b>Air (oF):</b> 38	
<b>Gage:</b>		wind chop		<b>Water (oF):</b>	
<b>Other:</b>					
<b>Record Removed:</b>		<b>Intake flushed:</b>			
<b>Observer</b>					
<b>Control</b>					
<b>Remarks</b>					
<b>G.H. of zero flow:</b> ft.					

**Table C-2.2: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	3.8	0.0	0.0								LEW - brush, gentle slope
	13.8	10.0	2.8	0.6	15	50	0.679	0.68	28.0	19.0	sandy/silty channel bottom
	23.8	10.0	3.4	0.6	15	42	0.805	0.81	34.0	27.4	sandy/silty channel bottom
	33.8	10.0	3.8	0.6	20	50	0.900	0.90	38.0	34.2	sandy/silty channel bottom
	43.8	10.0	4.1	0.6	20	48	0.936	0.94	41.0	38.4	sandy/silty channel bottom
	53.8	10.0	4.8	0.6	20	49	0.918	0.46	48.0	22.0	sandy/silty channel bottom
	63.8	10.0	4.1	0.6	20	48	0.936	0.94	41.0	38.4	sandy/silty channel bottom
	73.8	10.0	4.2	0.6	20	42	1.068	1.07	42.0	44.8	sandy/silty channel bottom
	83.8	10.0	4.2	0.6	25	49	1.143	1.14	42.0	48.0	sandy/silty channel bottom
	93.8	10.0	4.1	0.6	20	43	1.043	1.04	41.0	42.8	sandy/silty channel bottom
	103.8	10.0	4.7	0.6	20	49	0.918	0.92	47.0	43.1	sandy/silty channel bottom
	113.8	10.0	4.6	0.6	20	54	0.834	0.83	46.0	38.4	sandy/silty channel bottom
	123.8	10.0	4.4	0.6	20	52	0.866	0.87	44.0	38.1	sandy/silty channel bottom
	133.8	10.0	4.3	0.6	15	47	0.721	0.72	43.0	31.0	sandy/silty channel bottom
	143.8	10.0	4.2	0.6	15	49	0.693	0.69	42.0	29.1	sandy/silty channel bottom



**Table C-2.3: Discharge Measurement on Fish Creek at River Mile 32.4 on 9 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Fish Creek, approximately 32.4 river miles upstream from mouth.						
<b>Date:</b> 6/9 2001		<b>Party:</b> Mark Vania, James Dietzmann				
<b>Width:</b> 237	<b>Area:</b> 926	<b>Vel:</b> 0.75	<b>W.S.E. (BPMSL)</b> 20.87 ft	<b>Disch.:</b> 698	<b>cfs</b>	
<b>No Sects.</b> 23	<b>W.S.E. change:</b> 0.02 ft.		<b>in</b> 0.9	<b>hrs.</b>	<b>Susp.:</b>	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
8:32	FX3R-B	W.S.E. =	20.89 ft BPMSL	<b>Meter:</b> 1 <b>ft. above bottom of weight.</b>		
9:00	Start Discharge Meas.	W.S.E. (est)=	20.88 ft BPMSL	<b>Spin before meas.</b> 2 min 3 sec. <b>after</b> 1min 41sec		
9:55	End Discharge Meas.	W.S.E. (est)=	20.86 ft BPMSL	<b>Method:</b> Boat using sounding weight.		
10:00	FX3R-B	W.S.E.=	20.86 ft BPMSL			
<b>Weighted M.G.H.</b>			20.87 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			20.87 ft BPMSL			
<b>Measurement rated:</b> Fair		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> breezy		<b>Air (oF):</b> 20F		
<b>Gage:</b>		<b>Water (oF):</b>				
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b> Windy conditions, spin test conducted in cooler.						
<b>G.H. of zero flow:</b> ft.						

**Table C-2.3: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	3.5	0.0	0.0								LEW - Steep, sand, sloughing
	13.5	10.0	2.8	0.6	15	50	0.679	0.68	28.0	19.0	
	23.5	10.0	3.7	0.6	15	50	0.679	0.68	37.0	25.1	Possible ice on bottom
	33.5	10.0	3.9	0.6	20	47	0.956	0.96	39.0	37.3	Possible ice on bottom
	43.5	10.0	4.2	0.6	15	42	0.805	0.81	42.0	33.8	Possible ice on bottom
	53.5	10.0	5.1	0.8	20	52	0.866	0.88	51.0	45.0	Sandy, silty channel bottom
	63.5	10.0	4.2	0.2	20	50	0.900				
	63.5	10.0	4.2	0.6	20	57	0.791	0.79	42.0	33.2	
	73.5	10.0	4.2	0.6	20	51	0.882	0.88	42.0	37.1	
	83.5	10.0	4.2	0.6	15	55	0.619	0.62	42.0	26.0	
	93.5	10.0	3.9	0.6	15	58	0.588	0.59	39.0	22.9	Large ice pan ~75' upstream (lodged)
	103.5	10.0	4.5	0.6	15	43	0.787	0.79	45.0	35.4	Large ice pan ~75' upstream (lodged)
	113.5	10.0	4.5	0.6	15	46	0.737	0.74	45.0	33.2	Large ice pan ~75' upstream (lodged)
	123.5	10.0	4.4	0.6	15	49	0.693	0.69	44.0	30.5	
	133.5	10.0	4.2	0.6	20	46	0.976	0.98	42.0	41.0	
	143.5	10.0	4.2	0.6	20	48	0.936	0.94	42.0	39.3	

**Table C-2.3: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	153.5	10.0	3.9	0.6	15	42	0.805	0.81	39.0	31.4	Large ice pan ~45' upstream (lodged)
	163.5	10.0	3.8	0.6	15	56	0.608	0.61	38.0	23.1	Large ice pan ~45' upstream (lodged)
	173.5	10.0	4.0	0.6	15	46	0.737	0.74	40.0	29.5	Large ice pan ~45' upstream (lodged)
	183.5	10.0	4.6	0.6	10	43	0.531	0.53	46.0	24.4	
	193.5	10.0	4.4	0.6	15	47	0.721	0.72	44.0	31.7	
	203.5	10.0	4.3	0.6	20	54	0.834	0.83	43.0	35.9	
	213.5	10.0	3.8	0.6	15	44	0.769	0.77	38.0	29.2	
	223.5	10.0	3.6	0.6	15	43	0.787	0.79	36.0	28.3	
	233.5	8.3	2.7	0.6	10	105	0.228	0.23	22.4	5.1	
	240.1		0.0								REW, steep bank, undercut, sloughing
Totals:		236.6							926.4	697.6	Page 3 of 3

**Table C-2.4: Discharge Measurement on Fish Creek at River Mile 32.4 on 11 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Fish Creek, approximately 32.4 river miles upstream from mouth.						
<b>Date:</b> 6/11 2001		<b>Party:</b> Mark Vania, James Dietzmann				
<b>Width:</b> 242	<b>Area:</b> 1140	<b>Vel:</b> 1.81	<b>W.S.E. (BPMSL)</b> 21.67 ft	<b>Disch.:</b> 2070	<b>cfs</b>	
<b>No Secs.</b> 24	<b>W.S.E. change:</b> 0.03 ft.		<b>in</b> 1	<b>hrs.</b>	<b>Susp.:</b>	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
14:26	FX3R-B	W.S.E. =	21.69 ft BPMSL	<b>Meter:</b> 1 <b>ft. above bottom of weight.</b>		
14:45	Start Discharge Meas.	W.S.E. (est)=	21.68 ft BPMSL	<b>Spin before meas.</b> 2 min 51 sec. <b>after</b> 3min 2sec		
15:45	End Discharge Meas.	W.S.E. (est)=	21.65 ft BPMSL	<b>Method:</b> Boat using sounding weight.		
15:46	FX3R-B	W.S.E.=	21.65 ft BPMSL			
<b>Weighted M.G.H.</b>			21.67 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			21.67 ft BPMSL			
<b>Measurement rated:</b> Fair		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> clear		<b>Air (oF):</b> 55		
<b>Gage:</b>		windy		<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>			<b>Intake flushed:</b>			
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b>						
<b>G.H. of zero flow:</b> ft.						

**Table C-2.4: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	0	0.0	0.0								LEW
	10.0	10.0	5.1	0.8	40	53	1.682	1.83	51.0	93.3	sandy/silty channel bottom
				0.2	40	45	1.978				
	20.0	10.0	5.3	0.8	40	47	1.894	2.13	53.0	112.8	sandy/silty channel bottom
				0.2	50	47	2.363				
	30.0	10.0	5.7	0.8	50	101	1.109	1.74	57.0	99.0	sandy/silty channel bottom
				0.2	50	47	2.363				
	40.0	10.0	5.6	0.8	40	52	1.714	2.09	56.0	117.1	sandy/silty channel bottom
				0.2	50	45	2.468				
	50.0	10.0	5.9	0.8	40	52	1.714	2.09	59.0	123.4	sandy/silty channel bottom
				0.2	50	45	2.468				
	60.0	10.0	5.1	0.8	50	58	1.918	2.22	51.0	113.3	sandy/silty channel bottom
				0.2	50	44	2.523				
	70.0	10.0	4.8	0.6	40	43	2.069	2.07	48.0	99.3	sandy/silty channel bottom
	80.0	10.0	4.8	0.6	40	41	2.169	2.17	48.0	104.1	sandy/silty channel bottom
	90.0	10.0	4.6	0.6	50	54	2.059	2.06	46.0	94.7	sandy/silty channel bottom
	100.0	10.0	4.5	0.6	50	49	2.268	2.27	45.0	102.0	sandy/silty channel bottom
	110.0	10.0	4.7	0.6	40	43	2.069	2.07	47.0	97.2	sandy/silty channel bottom
	120.0	10.0	4.7	0.6	40	46	1.935	1.94	47.0	90.9	sandy/silty channel bottom
	130.0	10.0	4.4	0.6	40	42	2.118	2.12	44.0	93.2	sandy/silty channel bottom
	140.0	10.0	4.4	0.6	40	47	1.894	1.89	44.0	83.3	large ice pan ~70' upstream (lodged)



**Table C-2.4: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertical (fps)			
	150.0	10.0	4.3	0.6	40	50	1.782	1.78	43.0	76.6	large ice pan ~70' upstream (lodged)
	160.0	10.0	4.2	0.6	40	52	1.714	1.71	42.0	72.0	large ice pan ~70' upstream (lodged)
	170.0	10.0	4.3	0.6	30	53	1.266	1.27	43.0	54.4	large ice pan ~70' upstream (lodged)
	180.0	10.0	4.7	0.6	30	41	1.631	1.63	47.0	76.7	sandy/silty channel bottom
	190.0	10.0	5.2	0.8	30	49	1.368	1.54	52.0	80.1	sandy/silty channel bottom
				0.2	40	52	1.714				
	200.0	10.0	5.4	0.8	40	103	0.874	1.29	54.0	69.9	sandy/silty channel bottom
				0.2	40	52	1.714				
	210.0	10.0	5.2	0.8	30	56	1.199	1.38	52.0	71.9	sandy/silty channel bottom
				0.2	40	57	1.565				
	220.0	10.0	4.7	0.6	30	45	1.488	1.49	47.0	69.9	sandy/silty channel bottom
	230.0	8.3	4.7	0.6	30	47	1.425	1.43	39.0	55.6	sandy/silty channel bottom
	236.0	8.3	3.3	0.6	10	43	0.531	0.53	27.4	14.5	REW, steep bank, undercut, sloughing
	242	0.0	0.0								
Totals:		242.0							1142.4	2065.3	

**Table C-2.5: Discharge Measurement on Fish Creek at River Mile 32.4 on 14 June 2001**

DISCHARGE MEASUREMENT NOTES					
<b>LOCATION:</b> Fish Creek, approximately 32.4 river miles upstream from mouth.					
<b>Date:</b> 6/14 2001 <b>Party:</b> James Dietzmann, Barbara Pape					
<b>Width:</b> 240		<b>Area:</b> 1350		<b>Vel:</b> 2.29 W.S.E. (BPMSL) 21.56 ft	
<b>No Secs.</b> 23		<b>W.S.E. change:</b> 0.0 ft. in 1.3 hrs.		<b>Disch.:</b> 3100 cfs	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b> Meter No. URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA	
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory	
12:03	Level Loop Survey	W.S.E. =	21.56 ft BPMSL	<b>Meter:</b> 1 ft. above bottom of weight.	
12:20	Start Discharge Meas.	W.S.E. (est)=	21.56 ft BPMSL	<b>Spin before meas.</b> 2 min 49 sec. <b>after</b> 2 min 49 sec	
13:30	End Discharge Meas.	W.S.E. (est)=	21.56 ft BPMSL	<b>Method:</b> Boat using sounding weight.	
14:02	Level Loop Survey	W.S.E.=	21.56 ft BPMSL		
<b>Weighted M.G.H.</b>			21.56 ft BPMSL	<b>Levels obtained</b>	
<b>G.H. corrections</b>			0.00 ft BPMSL		
<b>Correct M.G.H.</b>			21.56 ft BPMSL		
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>			
<b>Cross section:</b> Fairly Uniform					
<b>Flow:</b> Uniform		<b>Weather:</b> cloudy		<b>Air (oF):</b> 35	
<b>Gage:</b>		windy		<b>Water (oF):</b>	
<b>Other:</b>					
<b>Record Removed:</b>		<b>Intake flushed:</b>			
<b>Observer</b>					
<b>Control</b>					
<b>Remarks</b>					
<b>G.H. of zero flow:</b> ft.					

**Table C-2.5: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	240	0.0	0.0								LEW - no snow patches
	230.0	10.0	7.3	0.8	47	47	2.223	2.14	73.0	156.5	sandy/silty channel bottom
				0.2	39	42	2.065				
	220.0	10.0	11.2	0.8	30	41	1.631	2.22	112.0	248.9	sandy/silty channel bottom
				0.2	52	41	2.814				
	210.0	10.0	9.5	0.8	41	42	2.170	2.51	95.0	238.6	sandy/silty channel bottom
				0.2	54	42	2.853				
	200.0	10.0	7.9	0.8	42	43	2.171	2.58	79.0	203.9	sandy/silty channel bottom
				0.2	58	43	2.992				
	190.0	10.0	6.3	0.8	41	42	2.170	2.54	63.0	159.9	sandy/silty channel bottom
				0.2	55	42	2.905				
	180.0	10.0	5.9	0.8	40	41	2.169	2.54	59.0	149.7	sandy/silty channel bottom
				0.2	55	42	2.905				
	170.0	10.0	5.6	0.8	37	42	1.960	2.43	56.0	136.2	sandy/silty channel bottom
				0.2	55	42	2.905				
	160.0	10.0	5.5	0.8	41	43	2.120	2.49	55.0	136.7	sandy/silty channel bottom
				0.2	54	42	2.853				
	150.0	10.0	5.5	0.8	40	41	2.169	2.52	55.0	138.5	sandy/silty channel bottom
				0.2	53	41	2.868				
	140.0	10.0	5.3	0.8	43	41	2.330	2.57	53.0	136.3	sandy/silty channel bottom
				0.2	52	41	2.814				
	130.0	10.0	5.0	0.8	39	42	2.065	2.44	50.0	122.0	sandy/silty channel bottom
				0.2	52	41	2.814				
	120.0	10.0	5.0	0.8	40	42	2.118	2.51	50.0	125.6	sandy/silty channel bottom
				0.2	55	42	2.905				
	110.0	10.0	4.9	0.6	46	42	2.433	2.43	49.0	119.2	sandy/silty channel bottom
	100.0	10.0	4.8	0.6	44	41	2.384	2.38	48.0	114.4	sandy/silty channel bottom

**Table C-2.5: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertical (fps)			
	90.0	10.0	4.7	0.6	41	40	2.278	2.28	47.0	107.1	sandy/silty channel bottom
	80.0	10.0	4.7	0.6	49	47	2.316	2.32	47.0	108.9	sandy/silty channel bottom
	70.0	10.0	4.4	0.6	41	42	2.170	2.17	44.0	95.5	sandy/silty channel bottom
	60.0	10.0	4.9	0.6	36	41	1.954	1.95	49.0	95.7	sandy/silty channel bottom
	50.0	10.0	5.4	0.8	29	42	1.540	1.99	54.0	107.4	sandy/silty channel bottom
				0.2	45	41	2.438				
	40.0	10.0	5.7	0.8	30	42	1.593	1.91	57.0	108.7	sandy/silty channel bottom
				0.2	41	41	2.223				
	30.0	10.0	5.4	0.8	31	41	1.685	1.90	54.0	102.5	sandy/silty channel bottom
				0.2	38	40	2.112				
	20.0	10.0	5.1	0.8	32	41	1.739	1.88	51.0	95.7	sandy/silty channel bottom
				0.2	38	42	2.013				
	10.0	10.0	5.1	0.8	29	41	1.577	1.80	51.0	91.7	sandy/silty channel bottom
				0.2	39	43	2.018				
	0.0	0.0	0.0								REW, steep bank, undercut, sloughing
Totals:		240.0							1351.0	3099.6	

**Table C-2.6: Discharge Measurement on Fish Creek at River Mile 32.4 on 16 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Fish Creek, approximately 32.4 river miles upstream from mouth.						
<b>Date:</b> 6/16 2001		<b>Party:</b> Mark Vania, Paul Myerchin				
<b>Width:</b> 242	<b>Area:</b> 1390	<b>Vel:</b> 2.25	<b>W.S.E. (BPMSL)</b> 21.60 ft	<b>Disch.:</b> 3120	<b>cfs</b>	
<b>No Secs.</b> 23	<b>W.S.E. change:</b> 0.06 ft.		<b>in</b> 1.5	<b>hrs.</b>	<b>Susp.:</b>	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
12:20	FX3R-B	W.S.E. =	21.64 ft BPMSL	<b>Meter:</b> 1 <b>ft. above bottom of weight.</b>		
12:29	Start Discharge Meas.	W.S.E. (est)=	21.63 ft BPMSL	<b>Spin before meas.</b> 3 min 7 sec <b>after</b> 1 min 57 sec		
13:56	End Discharge Meas.	W.S.E. (est)=	21.57 ft BPMSL	<b>Method:</b> Boat using sounding weight.		
13:58	FX3R-B	W.S.E.=	21.57 ft BPMSL			
<b>Weighted M.G.H.</b>			21.60 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			21.60 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> Partly Cloud <b>Air (oF):</b> 50				
<b>Gage:</b>		windy <b>Water (oF):</b>				
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b> Water level elevation dropped since previous discharge measurement. No ice in channel.						
<b>G.H. of zero flow:</b> ft.						

**Table C-2.6: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	0	0.0	0.0								LEW - no snow patches
	10.0	10.0	7.2	0.2	40	44	2.022	1.67	72.0	120.1	sandy/silty channel bottom
				0.8	30	51	1.315				
	20.0	10.0	10.2	0.2	60	47	2.832	2.34	102.0	239.1	sandy/silty channel bottom
				0.8	40	48	1.855				
	30.0	10.0	9.5	0.2	50	40	2.774	2.36	95.0	224.5	sandy/silty channel bottom
				0.8	50	57	1.952				
	40.0	10.0	8.7	0.2	50	42	2.643	2.19	87.0	190.9	sandy/silty channel bottom
				0.8	40	51	1.747				
	50.0	10.0	7.0	0.2	50	42	2.643	2.33	70.0	163.3	sandy/silty channel bottom
				0.8	40	44	2.022				
	60.0	10.0	6.2	0.2	60	47	2.832	2.48	62.0	153.5	sandy/silty channel bottom
				0.8	40	42	2.118				
	70.0	10.0	5.6	0.2	50	40	2.774	2.40	56.0	134.3	sandy/silty channel bottom
				0.8	50	55	2.022				
	80.0	10.0	5.5	0.2	60	48	2.774	2.46	55.0	135.1	sandy/silty channel bottom
				0.8	50	52	2.138				
	90.0	10.0	5.7	0.2	60	49	2.718	2.44	57.0	139.3	sandy/silty channel bottom
				0.8	40	41	2.169				
	100.0	10.0	5.5	0.2	60	48	2.774	2.38	55.0	130.7	sandy/silty channel bottom
				0.8	40	45	1.978				
	110.0	10.0	5.4	0.2	60	49	2.718	2.54	54.0	137.2	sandy/silty channel bottom
				0.8	50	47	2.363				
	120.0	10.0	5.4	0.2	50	41	2.707	2.39	54.0	128.9	sandy/silty channel bottom
				0.8	40	43	2.069				
	130.0	10.0	5.4	0.2	50	41	2.707	2.39	54.0	128.9	sandy/silty channel bottom
				0.8	40	43	2.069				
	140.0	10.0	5.1	0.2	60	46	2.894	2.51	51.0	127.8	sandy/silty channel bottom
				0.8	40	42	2.118				

**Table C-2.6: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertical (fps)			
	150.0	10.0	5.0	0.2	60	51	2.612	2.25	50.0	112.6	sandy/silty channel bottom
				0.8	40	47	1.894				
	160.0	10.0	5.0	0.2	50	42	2.643	2.31	50.0	115.5	sandy/silty channel bottom
				0.8	40	45	1.978				
	170.0	10.0	4.8	0.6	40	43	2.069	2.07	48.0	99.3	sandy/silty channel bottom
	180.0	10.0	4.7	0.6	50	50	2.223	2.22	47.0	104.5	sandy/silty channel bottom
	190.0	10.0	5.2	0.2	40	40	2.223	1.92	52.0	99.9	sandy/silty channel bottom
				0.8	40	55	1.621				
	200.0	10.0	5.8	0.2	40	42	2.118	2.57	58.0	149.1	sandy/silty channel bottom
				0.8	60	44	3.024				
	210.0	10.0	5.7	0.2	50	54	2.059	1.86	57.0	105.7	sandy/silty channel bottom
				0.8	40	54	1.651				
	220.0	10.0	4.8	0.6	35	44	1.772	1.77	48.0	85.0	sandy/silty channel bottom
	230.0	10.8	4.8	0.6	40	51	1.747	1.75	51.6	90.1	sandy/silty channel bottom
	241.5	0.0	0.0								REW, steep bank, undercut, sloughing
Totals:		241.5							1385.6	3115.4	

**Table C-2.7: Discharge Measurement on Fish Creek at River Mile 32.4 on 17 July 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Fish Creek, approximately 32.4 river miles upstream from mouth.						
<b>Date:</b> 7/17 2001 <b>Party:</b> James Dietzmann, Barbara Pape						
<b>Width:</b> 233		<b>Area:</b> 324		<b>Vel:</b> 1.78		<b>W.S.E. (BPMSL)</b> 17.43 ft
<b>Disch.:</b> 578		<b>cfs</b>				
<b>No Sects.</b> 19		<b>W.S.E. change:</b> 0.02 ft.		<b>in</b> 1.4		<b>hrs.</b>
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>		<b>Meter No.</b> URS # 2
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
9:30	FX3L-D	W.S.E. =	17.44 ft BPMSL	<b>Meter:</b> N/A <b>ft. above bottom of weight.</b>		
9:35	Start Discharge Meas.	W.S.E. (est)=	17.44 ft BPMSL	<b>Spin before meas.</b> 3min 38 sec <b>after</b> 3 min 49 sec		
10:57	End Discharge Meas.	W.S.E. (est)=	17.42 ft BPMSL	<b>Method:</b> Boat and Wading Rod.		
11:05	FX3L-D	W.S.E.=	17.42 ft BPMSL			
<b>Weighted M.G.H.</b>			17.43 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			17.43 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> Windy		<b>Air (oF):</b> 65		
<b>Gage:</b>		Partly Cloudy		<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b>						
<b>G.H. of zero flow:</b> ft.						



**Table C-2.7: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	6	0.0	0.0								LEW - no snow patches
	15.0	7.0	4.0	0.8	5	43	0.274	1.33	28.0	37.2	sandy/silty channel bottom
				0.2	44	41	2.384				
	20.0	5.0	4.7	0.2	41	41	2.223	1.88	23.5	44.2	sandy/silty channel bottom
				0.8	29	42	1.540				
	25.0	5.0	5.1	0.2	43	42	2.275	1.76	25.5	45.0	sandy/silty channel bottom
				0.8	23	41	1.255				
	30.0	5.0	3.8	0.2	46	43	2.376	1.73	19.0	33.0	sandy/silty channel bottom
				0.8	20	41	1.093				
	35.0	5.0	3.2	0.2	48	41	2.599	2.25	16.0	36.0	sandy/silty channel bottom
				0.8	35	41	1.900				
	40.0	5.0	3.1	0.2	48	41	2.599	2.36	15.5	36.6	sandy/silty channel bottom
				0.8	40	42	2.118				
	45.0	5.0	3.0	0.2	47	43	2.428	2.35	15.0	35.3	sandy/silty channel bottom
				0.8	42	41	2.276				
	50.0	5.0	3.1	0.2	49	41	2.653	2.28	15.5	35.3	sandy/silty channel bottom
				0.8	35	41	1.900				
	55.0	5.0	3.0	0.2	48	41	2.599	2.36	15.0	35.4	sandy/silty channel bottom
				0.8	39	41	2.115				
	60.0	5.0	2.8	0.2	44	41	2.384	2.17	14.0	30.4	sandy/silty channel bottom
				0.8	36	41	1.954				
	65.0	5.0	2.8	0.2	44	42	2.328	2.09	14.0	29.2	sandy/silty channel bottom
				0.8	34	41	1.846				
	70.0	5.0	2.8	0.2	44	41	2.384	2.06	14.0	28.9	sandy/silty channel bottom
				0.8	32	41	1.739				
	75.0	5.0	2.8	0.2	44	41	2.384	2.06	14.0	28.9	sandy/silty channel bottom
				0.8	32	41	1.739				
	80.0	5.0	2.5	0.2	45	41	2.438	1.99	12.5	24.9	sandy/silty channel bottom
				0.8	29	42	1.540				

**Table C-2.7: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	85.0	5.0	2.2	0.6	30	41	1.631	1.63	11.0	17.9	sandy/silty channel bottom
	90.0	7.5	1.9	0.6	30	42	1.593	1.59	14.3	22.7	sandy/silty channel bottom
	100.0	10.0	1.3	0.6	25	42	1.330	1.33	13.0	17.3	sandy/silty channel bottom
	110.0	10.0	0.9	0.6	21	43	1.095	1.09	9.0	9.9	sandy/silty channel bottom
	120.0	10.0	0.7	0.6	19	41	1.040	1.04	7.0	7.3	left edge of sand bar, last velocity meas.
	130.0	10.0	0.5	-	-			0.9	5.0	4.5	shallow, top of sand bar velocity estimated
	140.0	15.0	0.5	-	-			0.9	7.5	6.8	shallow, top of sand bar velocity estimated
	160.0	20.0	0.5	-	-			0.9	10.0	9.0	shallow, top of sand bar velocity estimated
	180.0	20.0	0.3	-	-			0.4	6.0	2.4	shallow, top of sand bar velocity estimated
	200.0	15.0	0.7	-	-						REW
	210	10.0	1.3	-	-						pool - no flowing water
	220	12.5	0.6	-	-						pool - no flowing water
	235	0.0	0.0	-	-						REW, steep bank, undercut, sloughing
Totals:		233							324.3	577.7	

**Table C-2.8: Discharge Measurement on Fish Creek at River Mile 32.4 on 14 August 2001**

DISCHARGE MEASUREMENT NOTES				
<b>LOCATION:</b> Fish Creek, approximately 32.4 river miles upstream from mouth.				
<b>Date:</b> 8/14 2001 <b>Party:</b> Barbara Pape, Paul Myerchin				
<b>Width:</b> 117	<b>Area:</b> 224	<b>Vel:</b> 1.54	<b>W.S.E. (BPMSL)</b> 16.92 ft	<b>Disch.:</b> 345 cfs
<b>No Secs.</b> 23	<b>W.S.E. change:</b> 0.0 ft. in 1.2 hrs.		<b>Susp.:</b> Pack Rod	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b> Meter No. URS #1
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory
18:34	FX3L-D	W.S.E. =	16.92 ft BPMSL	<b>Meter:</b> ft. above bottom of weight.
18:45	Start Discharge Meas.	W.S.E. (est)=	16.92 ft BPMSL	<b>Spin before meas.</b> 3 min 7 sec <b>after</b> 3 min 10 sec
19:54	End Discharge Meas.	W.S.E. (est)=	16.92 ft BPMSL	<b>Method:</b> Chest Waders and Pack Rod
19:54	FX3L-D	W.S.E.=	16.92 ft BPMSL	
<b>Weighted M.G.H.</b>			16.92 ft BPMSL	<b>Levels obtained</b>
<b>G.H. corrections</b>			0.00 ft BPMSL	
<b>Correct M.G.H.</b>			16.92 ft BPMSL	
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>		
<b>Cross section:</b> Fairly Uniform				
<b>Flow:</b> Uniform		<b>Weather:</b> Overcast	<b>Air (oF):</b> 55	
<b>Gage:</b>		<b>Water (oF):</b>		
<b>Other:</b>				
<b>Record Removed:</b>		<b>Intake flushed:</b>		
<b>Observer</b>				
<b>Control</b> Banks are free of snow and ice.				
<b>Remarks</b> Bedload sediment transport actively observed during discharge measurement.				
<b>G.H. of zero flow:</b> ft.				

**Table C-2.8: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	0	0.0	0.0								REW
	10.0	10.0	0.4	0.6	10	43	0.531	0.53	3.5	1.9	sandy/silty channel bottom
	20.0	7.5	0.9	0.6	17	41	0.932	0.93	6.8	6.3	sandy/silty channel bottom
	25.0	5.0	1.7	0.6	21	42	1.120	1.12	8.5	9.5	sandy/silty channel bottom
	30.0	5.0	2.4	0.2	30	42	1.593	1.38	11.8	16.2	sandy/silty channel bottom
				0.8	22	42	1.173				
	35.0	5.0	2.9	0.2	32	42	1.698	1.45	14.5	21.0	sandy/silty channel bottom
				0.8	23	43	1.197				
	40.0	5.0	3.0	0.2	31	43	1.607	1.38	15.0	20.7	sandy/silty channel bottom
				0.8	21	41	1.147				
	45.0	5.0	3.0	0.2	31	42	1.645	1.45	15.0	21.7	sandy/silty channel bottom
				0.8	24	43	1.248				
	50.0	5.0	3.0	0.2	30	42	1.593	1.33	15.0	20.0	sandy/silty channel bottom
				0.8	20	42	1.068				
	55.0	3.8	2.9	0.2	31	42	1.645	1.42	10.7	15.2	sandy/silty channel bottom
				0.8	23	43	1.197				
	57.5	2.5	2.8	0.2	31	41	1.685	1.44	7.0	10.1	sandy/silty channel bottom
				0.8	23	43	1.197				
	60.0	2.5	2.6	0.2	33	42	1.750	1.46	6.5	9.5	sandy/silty channel bottom
				0.8	22	42	1.173				
	62.5	2.5	2.5	0.2	33	42	1.750	1.47	6.3	9.2	sandy/silty channel bottom
				0.8	23	43	1.197				
	65.0	3.8	2.2	0.2	36	42	1.908	1.61	8.1	13.0	sandy/silty channel bottom
				0.8	24	41	1.308				
	70.0	5.0	2.2	0.2	39	42	2.065	1.75	10.8	18.8	sandy/silty channel bottom
				0.8	27	42	1.435				

**Table C-2.8: Continued**

Angle coef.	Dist. From Initial point (ft)	Width  (ft)	Depth  (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area  (s.f.)	Discharge  (cfs)	Description
							At Point  (fps)	Mean in- vertical  (fps)			
	75.0	5.0	2.0	0.2	39	41	2.115	1.83	10.0	18.3	sandy/silty channel bottom
				0.8	29	42	1.540				
	80.0	5.0	2.0	0.2	39	43	2.018	1.75	10.0	17.5	sandy/silty channel bottom
				0.8	28	42	1.488				
	85.0	5.0	2.0	0.2	42	42	2.223	1.96	10.0	19.6	sandy/silty channel bottom
				0.8	32	42	1.698				
	90.0	5.0	2.0	0.2	43	43	2.223	1.96	10.0	19.6	sandy/silty channel bottom
				0.8	32	42	1.698				
	95.0	5.0	2.0	0.2	42	42	2.223	1.95	10.0	19.5	sandy/silty channel bottom
				0.8	31	41	1.685				
	100.0	5.0	2.0	0.2	45	42	2.380	2.12	10.0	21.2	sandy/silty channel bottom
				0.8	35	42	1.855				
	105.0	5.0	2.0	0.2	41	41	2.223	1.90	10.0	19.0	sandy/silty channel bottom
				0.8	31	44	1.571				
	110.0	4.5	2.2	0.2	35	41	1.900	1.52	9.7	14.7	sandy/silty channel bottom
				0.8	21	41	1.147				
	114.0	3.4	1.5	0.2	16	44	0.820	0.58	5.1	3.0	sandy/silty channel bottom
				0.8	7	48	0.339				
	116.8	0.0	0.0								LEW
Tables:		116.8							224.0	345.4	Page 3 of 3

**Table C-2.9: Discharge Measurement on Fish Creek at River Mile 32.4 on 5 September 2001**

DISCHARGE MEASUREMENT NOTES					
<b>LOCATION:</b> Fish Creek, approximately 32.4 river miles upstream from mouth.					
<b>Date:</b> 9/5 2001		<b>Party:</b> James Dietzmann, Mark Vania			
<b>Width:</b> 133	<b>Area:</b> 270	<b>Vel:</b> 1.29	<b>W.S.E. (BPMSL)</b> 16.95 ft	<b>Disch.:</b> 349	<b>cfs</b>
<b>No Secs.</b> 20	<b>W.S.E. change:</b> 0.0 ft.		<b>in</b> 1	<b>hrs.</b>	<b>Susp.:</b> Pack Rod
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #2
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA	
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory	
12:15	FX3L-D	W.S.E. =	16.95 ft BPMSL	<b>Meter:</b> ft. above bottom of weight.	
12:55	Start Discharge Meas.	W.S.E.=	16.95 ft BPMSL	<b>Spin before meas.</b> 2 min 2 sec <b>after</b> 2 min 38 sec	
13:55	End Discharge Meas.	W.S.E.=	16.95 ft BPMSL	<b>Method:</b> Chest Waders and Pack Rod	
13:55	FX3L-D	W.S.E.=	16.95 ft BPMSL		
<b>Weighted M.G.H.</b>			16.95 ft BPMSL	<b>Levels obtained</b>	
<b>G.H. corrections</b>			0.00 ft BPMSL		
<b>Correct M.G.H.</b>			16.95 ft BPMSL		
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>			
<b>Cross section:</b> Fairly Uniform					
<b>Flow:</b> Uniform		<b>Weather:</b> Overcast		<b>Air (oF):</b> 38	
<b>Gage:</b>		fog, breezy <b>Water (oF):</b>			
<b>Other:</b>					
<b>Record Removed:</b>		<b>Intake flushed:</b>			
<b>Observer</b>					
<b>Control</b> Sand bar extending from right bank to mid-channel.					
<b>Remarks</b>					
<b>G.H. of zero flow:</b> ft.					

**Table C-2.9: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	2	0.0	0.0								LEW
	5.0	4.0	1.2	0.6	16	47	0.768	0.77	4.8	3.7	sandy/silty channel bottom
	10.0	5.0	2.8	0.2	29	42	1.540	1.39	14.0	19.5	sandy/silty channel bottom
				0.8	24	43	1.248				
	15.0	5.0	2.8	0.2	37	43	1.915	1.70	14.0	23.8	sandy/silty channel bottom
				0.8	28	42	1.488				
	20.0	5.0	2.8	0.2	38	44	1.922	1.68	14.0	23.5	sandy/silty channel bottom
				0.8	29	45	1.439				
	25.0	5.0	2.7	0.2	45	42	2.380	2.07	13.5	27.9	sandy/silty channel bottom
				0.8	33	42	1.750				
	30.0	5.0	2.6	0.2	46	47	2.176	1.86	13.0	24.1	sandy/silty channel bottom
				0.8	31	45	1.537				
	35.0	5.0	2.5	0.2	40	42	2.118	1.84	12.5	23.0	sandy/silty channel bottom
				0.8	30	43	1.556				
	40.0	5.0	2.6	0.2	37	43	1.915	1.58	13.0	20.5	sandy/silty channel bottom
				0.8	30	54	1.243				
	45.0	5.0	2.7	0.2	34	42	1.803	1.53	13.5	20.7	sandy/silty channel bottom
				0.8	27	48	1.258				
	50.0	5.0	2.6	0.2	34	49	1.548	1.25	13.0	16.2	sandy/silty channel bottom
				0.8	19	45	0.949				
	55.0	5.0	2.7	0.2	24	41	1.308	1.01	13.5	13.6	sandy/silty channel bottom
				0.8	14	45	0.704				
	60.0	5.0	2.5	0.2	24	42	1.278	1.19	12.5	14.8	sandy/silty channel bottom
				0.8	20	41	1.093				
	65.0	5.0	2.5	0.2	25	42	1.330	1.14	12.5	14.3	sandy/silty channel bottom
				0.8	20	47	0.956				
	70.0	5.0	3.1	0.2	24	44	1.220	1.02	15.5	15.8	sandy/silty channel bottom
				0.8	16	44	0.820				

**Table C-2.9: Continued**

Angle coef.	Dist. From Initial point (ft)	Width  (ft)	Depth  (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area  (s.f.)	Discharge  (cfs)	Description
							At Point  (fps)	Mean in- vertical  (fps)			
	75.0	5.0	3.4	0.2	23	43	1.197	1.02	17.0	17.4	sandy/silty channel bottom
				0.8	17	45	0.851				
	80.0	5.0	3.4	0.2	21	42	1.120	0.94	17.0	15.9	sandy/silty channel bottom
				0.8	14	42	0.753				
	85.0	5.0	3.0	0.2	22	42	1.173	1.01	15.0	15.1	sandy/silty channel bottom
				0.8	16	43	0.838				
	90.0	5.0	2.5	0.2	21	42	1.120	0.93	12.5	11.6	sandy/silty channel bottom
				0.8	15	46	0.737				
	95.0	5.0	1.8	0.6	21	43	1.095	1.09	9.0	9.9	sandy/silty channel bottom
	100.0	20.0	1.0	0.6	19	49	0.873	0.87	20.0	17.5	sandy/silty channel bottom
	135.0	0.0	0.0								REW
Totals:		133.0							269.8	348.7	



**DISCHARGE MEASUREMENTS**  
**ON JUDY CREEK AT RIVER MILE 7**

**Table C-3.1: Summary of Discharge Measurements on Judy Creek  
at River Mile 7**

<b>Date</b>	<b>Average Time</b>	<b>Water Surface Elevation (feet)</b>	<b>Discharge (cfs)</b>	<b>Average Velocity (feet per second)</b>
6/8/2001	14:45	26.72	3957 <sup>1</sup>	-
6/9/2001	16:05	26.31	4410	2.9
6/11/2001	10:32	25.36	3826 <sup>1</sup>	-
6/12/2001	15:58	25.01	3280	2.89
6/15/2001	17:25	24.44	2300	2.87
7/17/2001	18:22	20.3	154	0.47
8/14/2001	22:30	20.25	157	0.46
9/5/2001	16:25	20.15	158	0.52

Notes:

1. Discharge was calculated based on discharge measurements made on Fish Creek at monitoring sites upstream and downstream of the Judy Creek/Fish Creek confluence.
2. cfs = cubic feet per second.
3. Water surface elevations between 6/3/01 and 6/15/01 are based on an elevation of 36.62 feet (BPMSL) for TBM Line 3 South1, established by Lounsbury & Associates in 2000.
4. Water surface elevations between 7/15/01 and 9/08/01 are based on an elevation of 33.01 feet (BPMSL) for TBM Line 3 North1, established by Lounsbury & Associates in 2000.

**Table C-3.2: Discharge Measurement on Judy Creek at River Mile 7 on 9 June 2001**

DISCHARGE MEASUREMENT NOTES					
<b>LOCATION:</b> Judy Creek, approximately 7 river miles upstream from confluence with Fish Creek.					
<b>Date:</b> 6/9 2001 <b>Party:</b> Mark Vania, James Dietzmann, Paul Myerchin					
<b>Width:</b> 257	<b>Area:</b> 1520	<b>Vel:</b> 2.90	<b>W.S.E. (BPMSL)</b> 26.31 ft	<b>Disch.:</b> 4410	<b>cfs</b>
<b>No Secs.</b> 26	<b>W.S.E. change:</b> 0.05 ft. in 2.5 hrs.			<b>Susp.:</b>	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #2
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA	
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory	
14:51	SG-JX3R-B	W.S.E. =	26.29 ft BPMSL	<b>Meter:</b> ft. above bottom of weight.	
14:50	Start Discharge Meas.	W.S.E. (est)=	26.29 ft BPMSL	<b>Spin before meas.</b> 3 min 37 sec <b>after</b> 2 min 2 sec	
17:20	End Discharge Meas.	W.S.E. (est)=	26.34 ft BPMSL	<b>Method:</b> Boat, using a sounding weight.	
17:22	SG-JX3R-B	W.S.E.=	26.34 ft BPMSL		
<b>Weighted M.G.H.</b>			26.31 ft BPMSL	<b>Levels obtained</b>	
<b>G.H. corrections</b>			0.00 ft BPMSL		
<b>Correct M.G.H.</b>			26.31 ft BPMSL		
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>			
<b>Cross section:</b> Fairly Uniform					
<b>Flow:</b> Uniform		<b>Weather:</b> mostly clear, windy		<b>Air (oF):</b> ~35F	
<b>Gage:</b>				<b>Water (oF):</b>	
<b>Other:</b>					
<b>Record Removed:</b>		<b>Intake flushed:</b>			
<b>Observer</b>					
<b>Control</b>					
<b>Remarks</b>					
<b>G.H. of zero flow:</b> ft.					

**Table C-3.2: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	2	0.0	0.0								LEW
	10	6.5	2.5	0.6	30	42	1.59	1.59	16.3	25.9	Ice pan ~70' upstream, lodged
	15	5.0	5.5	0.8	50	47	2.36	2.39	27.5	65.7	Ice pan ~70' upstream, lodged
	20	5.0	6.3	0.8	50	47	2.36	2.44	31.5	76.9	Ice pan ~70' upstream, lodged
	25	5.0	6.0	0.8	50	45	2.47	2.47	30.0	74.0	
	30	5.0	6.8	0.8	40	47	1.89	2.24	34.0	76.1	
	35	5.0	8.2	0.8	50	47	2.36	2.57	41.0	105.3	
	40	5.0	8.5	0.8	60	52	2.56	2.60	42.5	110.5	
	45	5.0	8.8	0.8	50	41	2.71	3.03	44.0	133.2	
	50	5.0	10.2	0.8	60	41	3.24	3.13	51.0	159.9	
	55	5.0	10.9	0.8	60	40	3.33	3.14	54.5	171.2	
	60	5.0	11.0	0.8	60	42	3.17	2.94	55.0	161.5	
	65	5.0	11.4	0.8	80	49	3.62	3.39	57.0	193.4	
	70	5.0	11.5	0.8	80	43	4.12	3.95	57.5	226.8	
	75	5.0	11.8	0.8	80	52	3.41	3.81	59.0	225.0	
				0.2	80	42	4.22				

**Table C-3.2: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	80	5.0	12.6	0.8	50	43	2.58	3.50	63.0	220.8	
				0.2	100	50	4.43				
	85	5.0	12.5	0.8	50	41	2.71	3.46	62.5	216.4	
				0.2	80	42	4.22				
	90	5.0	13.0	0.8	60	47	2.83	3.52	65.0	229.1	
				0.2	80	42	4.22				
	95	5.0	15.0	0.8	60	42	3.17	3.64	75.0	273.3	
				0.2	80	43	4.12				
	100	5.0	14.3	0.8	80	44	4.03	4.23	71.5	302.2	
				0.2	80	40	4.43				
	105	5.0	12.2	0.8	80	41	4.32	4.01	61.0	244.4	Hard bottom, possibly ice.
				0.2	80	48	3.69				
	110	5.0	10.9	0.8	80	50	3.55	3.36	54.5	182.9	
				0.2	80	56	3.17				
	115	5.0	8.6	0.8	60	44	3.02	3.02	43.0	130.0	
				0.2	60	44	3.02				
	120	5.0	6.7	0.8	70	44	3.53	3.12	33.5	104.4	
				0.2	50	41	2.71				
	125	7.5	6.4	0.8	40	41	2.17	2.44	48.0	117.0	
				0.2	50	41	2.71				
	135	15.0	5.2	0.8	40	45	1.98	2.17	78.0	169.3	
				0.2	50	47	2.36				
	155	92.0	2.9	0.6	30	43	1.56	1.56	266.8	415.1	
	175	-	2.0								
	190	-	1.8								
	259	-	0.0								REW
Totals:		257.0							1522.6	4410.4	Page 3 of 3

**Table C-3.3: Discharge Measurement on Judy Creek at River Mile 7 on 12 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Judy Creek, approximately 7 river miles upstream from confluence with Fish Creek.						
<b>Date:</b> 6/12 2001 <b>Party:</b> Mark Vania, James Dietzmann						
<b>Width:</b> 213	<b>Area:</b> 1130	<b>Vel:</b> 2.89	<b>W.S.E. (BPMSL)</b> 25.01 ft	<b>Disch.:</b> 3280	<b>cfs</b>	
<b>No Sects.</b> 24	<b>W.S.E. change:</b> 0.03 ft.		<b>in</b> 1.4	<b>hrs.</b>	<b>Susp.:</b>	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
15:11	TBM-SG-JX3R-A2	W.S.E. =	25.02 ft BPMSL	<b>Meter:</b> ft. above bottom of weight.		
15:15	Start Discharge Meas.	W.S.E. (est)=	25.02 ft BPMSL	<b>Spin before meas.</b> 3 min 16 sec <b>after</b> 3 min 22 sec		
16:40	End Discharge Meas.	W.S.E. (est)=	24.99 ft BPMSL	<b>Method:</b> Boat, using a sounding weight		
16:47	TBM-SG-JX3R-A2	W.S.E.=	24.99 ft BPMSL			
<b>Weighted M.G.H.</b>			25.01 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			25.01 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> mostly clear, windy		<b>Air (oF):</b> 45		
<b>Gage:</b>				<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b>						
<b>G.H. of zero flow:</b> ft.						

**Table C-3.3: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	0	0.0	0.0								REW - Sand bar exposed for 60 ft. from REW
	80	0.0	1.7								Sandy/silty channel bottom
	85	5.0	5.0	0.8	14	102	0.32	0.42	25.0	10.5	Sandy/silty channel bottom
				0.2	10	44	0.52				
	90	5.0	6.7	0.8	15	50	0.68	1.60	33.5	53.6	Sandy/silty channel bottom
				0.2	15	56	2.52				
	95	5.0	9.3	0.8	10	46	0.50	0.48	46.5	22.1	Sandy/silty channel bottom
				0.2	20	101	0.45				
	100	5.0	10.7	0.8	20	41	1.09	1.24	53.5	66.6	Sandy/silty channel bottom
				0.2	30	48	1.40				
	105	5.0	11.0	0.8	40	48	1.86	1.78	55.0	98.1	Sandy/silty channel bottom
				0.2	40	52	1.71				
	110	5.0	11.7	0.8	50	49	2.27	2.45	58.5	143.5	Sandy/silty channel bottom
				0.2	50	46	2.64				
	115	5.0	11.8	0.8	50	48	2.31	2.70	59.0	159.6	Sandy/silty channel bottom
				0.2	60	43	3.09				
	120	5.0	11.6	0.8	60	45	2.96	3.36	58.0	195.1	Sandy/silty channel bottom
				0.2	80	47	3.77				
	125	5.0	11.8	0.8	80	44	4.03	4.12	59.0	243.2	Sandy/silty channel bottom
				0.2	80	42	4.22				
	130	5.0	11.4	0.8	80	54	3.28	3.90	57.0	222.3	Sandy/silty channel bottom
				0.2	100	49	4.52				
	135	5.0	10.8	0.8	80	55	3.22	3.87	54.0	209.0	Sandy/silty channel bottom
				0.2	100	49	4.52				
	140	5.0	10.5	0.8	80	49	3.62	3.97	52.5	208.4	Sandy/silty channel bottom
				0.2	80	41	4.32				
	145	5.0	9.6	0.8	60	41	3.24	3.59	48.0	172.4	Sandy/silty channel bottom
				0.2	80	45	3.94				

**Table C-3.3: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo-lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertival (fps)			
	150	5.0	8.8	0.8	80	50	3.55	3.74	44.0	164.6	Sandy/silty channel bottom
				0.2	80	45	3.94				
	155	5.0	8.5	0.8	80	53	3.35	3.78	42.5	160.7	Sandy/silty channel bottom
				0.2	80	42	4.22				
	160	5.0	8.5	0.8	80	52	3.41	3.76	42.5	160.0	Sandy/silty channel bottom
				0.2	80	43	4.12				
	165	5.0	8.7	0.8	60	42	3.17	3.60	43.5	156.5	Sandy/silty channel bottom
				0.2	80	44	4.03				
	170	5.0	8.8	0.8	60	44	3.02	3.40	44.0	149.5	Sandy/silty channel bottom
				0.2	80	47	3.77				
	175	5.0	8.6	0.8	80	53	3.35	3.40	43.0	146.1	Sandy/silty channel bottom
				0.2	70	45	3.45				
	180	5.0	8.3	0.8	80	102	1.75	2.58	41.5	107.0	Sandy/silty channel bottom
				0.2	80	52	3.41				
	185	5.0	7.5	0.8	60	44	3.02	3.06	37.5	114.7	Sandy/silty channel bottom
				0.2	60	43	3.09				
	190	5.0	7.3	0.8	60	45	2.96	2.96	36.5	107.9	Sandy/silty channel bottom
				0.2	60	45	2.96				
	195	5.0	7.3	0.8	50	50	2.22	2.35	36.5	85.6	Sandy/silty channel bottom
				0.2	50	45	2.47				
	200	8.8	7.0	0.8	49	59	1.85	1.95	61.6	120.4	Sandy/silty channel bottom
				0.2	50	54	2.06				
	212.6	0.0	0.0								LEW
Totals:		212.6							1132.6	3277.5	Page 3 of 3



**Table C-3.4: Discharge Measurement on Judy Creek at River Mile 7 on 15 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Judy Creek, approximately 7 river miles upstream from confluence with Fish Creek.						
<b>Date:</b> 6/15 2001 <b>Party:</b> Mark Vania, Katherin Prussian						
<b>Width:</b> 137	<b>Area:</b> 802	<b>Vel:</b> 2.87	<b>W.S.E. (BPMSL)</b> 24.44 ft	<b>Disch.:</b> 2300	<b>cfs</b>	
<b>No Secs.</b> 17	<b>W.S.E. change:</b> 0.11 ft. in 1 hrs.			<b>Susp.:</b>		
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b>		
16:55	SG-JX3R-A2	W.S.E. =	24.49 ft BPMSL	<b>Meter:</b> ft. above bottom of weight.		
16:55	Start Discharge Meas.	W.S.E. =	24.49 ft BPMSL	<b>Spin before meas.</b> 3 min 8 sec <b>after</b> 3 min 5 sec		
17:55	End Discharge Meas.	W.S.E. =	24.38 ft BPMSL	<b>Method:</b> Boat, using a sounding weight		
17:55	SG-JX3R-A2	W.S.E. =	24.38 ft BPMSL			
<b>Weighted M.G.H.</b>			24.44 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			24.44 ft BPMSL			
<b>Measurement rated:</b> Fair		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> mostly clear, windy		<b>Air of@:</b> 45		
<b>Gage:</b>		<b>Water of@:</b>				
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b>						
<b>G.H. of zero flow:</b> ft.						

**Table C-3.4: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertival (fps)			
	4	0.0	0.0								REW - Sand bar exposed for 60 ft. from REW
	20	13.0	4.8	0.6	20	42	1.07	1.07	62.4	66.6	Sandy/silty channel bottom
	30	10.0	7.5	0.6	40	56	1.59	1.59	75.0	119.4	Sandy/silty channel bottom
	40	10.0	9.0	0.6	60	47	2.83	2.83	90.0	254.9	Sandy/silty channel bottom
	50	10.0	8.4	0.8	51	44	2.57	2.91	84.0	244.3	Sandy/silty channel bottom
				0.2	60	41	3.24				
	60	10.0	8.2	0.8	60	44	3.02	3.34	82.0	274.0	Sandy/silty channel bottom
				0.2	71	43	3.66				
	70	10.0	6.2	0.8	70	44	3.53	3.82	62.0	237.0	Sandy/silty channel bottom
				0.2	80	43	4.12				
	80	7.5	5.5	0.8	70	45	3.45	3.04	41.3	125.6	Sandy/silty channel bottom
				0.2	80	46	2.64				
	85	5.0	5.6	0.8	70	42	3.69	3.69	28.0	103.4	Sandy/silty channel bottom
				0.2	70	42	3.69				
	90	5.0	5.2	0.8	70	46	3.37	3.53	26.0	91.9	Sandy/silty channel bottom
				0.2	70	42	3.69				
	95	5.0	5.3	0.8	70	43	3.61	3.73	26.5	98.8	Sandy/silty channel bottom
				0.2	80	46	3.85				
	100	5.0	5.3	0.8	70	46	3.37	3.58	26.5	94.8	Sandy/silty channel bottom
				0.2	70	41	3.78				
	105	5.0	5.7	0.8	60	40	3.33	3.55	28.5	101.3	Sandy/silty channel bottom
				0.2	70	41	3.78				
	110	5.0	6.3	0.8	60	42	3.17	3.43	31.5	108.0	Sandy/silty channel bottom
				0.2	70	42	3.69				
	115	5.0	7.1	0.8	60	43	3.09	3.13	35.5	111.1	Sandy/silty channel bottom
				0.2	60	42	3.17				



**Table C-3.5: Discharge Measurement on Judy Creek at River Mile 7 on 17 July 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Judy Creek, approximately 7 river miles upstream from confluence with Fish Creek.						
<b>Date:</b> 7/17 2001 <b>Party:</b> James Dietzmann, Barbara Pape						
<b>Width:</b> 106	<b>Area:</b> 327	<b>Vel:</b> 0.47	<b>W.S.E. (BPMSL)</b> 20.30 ft	<b>Disch.:</b> 154	<b>cfs</b>	
<b>No Secs.</b> 19	<b>W.S.E. change:</b> 0.01 ft. in 1 hrs.			<b>Susp.:</b>		
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
17:52	SG-JX3L-D	W.S.E. =	20.30 ft BPMSL	<b>Meter:</b> ft. above bottom of weight.		
17:53	Start Discharge Meas.	W.S.E. (est)=	20.30 ft BPMSL	<b>Spin before meas.</b> 3 min 58 sec <b>after</b> 4 min 12 sec		
18:50	End Discharge Meas.	W.S.E. (est)=	20.31 ft BPMSL	<b>Method:</b> Wading Rod		
18:54	SG-JX3L-D	W.S.E.=	20.31 ft BPMSL			
<b>Weighted M.G.H.</b>			20.30 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			20.30 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> mostly clear		<b>Air (oF):</b> 65		
<b>Gage:</b>		breezy		<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b>						
<b>G.H. of zero flow:</b> ft.						

**Table C-3.5: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertical (fps)			
	6	0.0	0.0								LEW - Sand dune side slope, undercut and sloughing
	10	4.5	2.5	0.2	7	41	0.39	0.34	11.3	3.8	Sandy/silty channel bottom
				0.8	6	49	0.29				
	15	5.0	3.4	0.2	7	42	0.39	0.39	17.0	6.5	Sandy/silty channel bottom
				0.8	7	42	0.39				
	20	5.0	3.7	0.2	10	42	0.54	0.53	18.5	9.8	Sandy/silty channel bottom
				0.8	10	44	0.52				
	25	5.0	3.6	0.2	10	41	0.56	0.51	18.0	9.1	Sandy/silty channel bottom
				0.8	9	45	0.46				
	30	5.0	3.6	0.2	11	42	0.60	0.48	18.0	8.7	Sandy/silty channel bottom
				0.8	7	44	0.37				
	35	5.0	3.5	0.2	12	43	0.63	0.55	17.5	9.6	Sandy/silty channel bottom
				0.8	8	40	0.46				
	40	5.0	3.5	0.2	11	43	0.58	0.54	17.5	9.5	Sandy/silty channel bottom
				0.8	9	41	0.50				
	45	5.0	3.4	0.2	12	43	0.63	0.60	17.0	10.2	Sandy/silty channel bottom
				0.8	10	40	0.57				
	50	5.0	3.4	0.2	12	44	0.62	0.48	17.0	8.2	Sandy/silty channel bottom
				0.8	6	40	0.35				
	55	5.0	3.5	0.2	11	43	0.58	0.54	17.5	9.4	Sandy/silty channel bottom
				0.8	10	46	0.50				
	60	5.0	3.4	0.2	12	42	0.65	0.57	17.0	9.7	Sandy/silty channel bottom
				0.8	9	42	0.49				
	65	5.0	3.3	0.2	12	42	0.65	0.60	16.5	9.8	Sandy/silty channel bottom
				0.8	11	46	0.55				
	70	5.0	3.1	0.2	11	41	0.61	0.56	15.5	8.7	Sandy/silty channel bottom
				0.8	10	44	0.52				
	75	5.0	3.0	0.2	11	43	0.58	0.52	15.0	7.8	Sandy/silty channel bottom
				0.8	9	45	0.46				

**Table C-3.5: Continued**

Angle coef.	Dist. From Initial point (ft)	Width  (ft)	Depth  (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area  (s.f.)	Discharge  (cfs)	Description
							At Point  (fps)	Mean in- vertical  (fps)			
	80	5.0	3.0	0.2	10	43	0.53	0.49	15.0	7.4	Sandy/silty channel bottom
				0.8	9	45	0.46				
	85	5.0	3.0	0.2	8	41	0.45	0.42	15.0	6.2	Sandy/silty channel bottom
				0.8	7	42	0.39				
	90	5.0	3.0	0.2	8	44	0.42	0.34	15.0	5.0	Sandy/silty channel bottom
				0.8	5	47	0.25				
	95	7.5	3.2	0.2	7	45	0.36	0.34	24.0	8.2	Sandy/silty channel bottom
				0.8	6	44	0.32				
	105	7.5	3.3	0.2	4	43	0.22	0.25	24.8	6.1	Last velocity measurement
				0.8	5	44	0.27				
	110	3.5	2.5	-	-						Sandy/silty channel bottom
	112	0.0	0.0	-	-						REW - Adjacent to large sand bar
Totals:		106.0							327.0	153.9	Page 3 of 3

**Table C-3.6: Discharge Measurement on Judy Creek at River Mile 7 on 14 August 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Judy Creek, approximately 7 river miles upstream from confluence with Fish Creek.						
<b>Date:</b> 8/14 2001 <b>Party:</b> Paul Myerchin, Barbara Pape						
<b>Width:</b> 115	<b>Area:</b> 341	<b>Vel:</b> 0.46	<b>W.S.E. (BPMSL)</b> 20.25 ft	<b>Disch.:</b> 157	<b>cfs</b>	
<b>No Sects.</b> 22	<b>W.S.E. change:</b> 0.0 ft.		<b>in</b> 1.3	<b>hrs.</b>	<b>Susp.:</b> Wading Rod	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #1	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
21:33	SG-JX3L-D	W.S.E. =	20.25 ft BPMSL	<b>Meter:</b> ft. above bottom of weight.		
21:52	Start Discharge Meas.	W.S.E. (est)=	20.25 ft BPMSL	<b>Spin before meas.</b> 2 min 55 sec <b>after</b> 3 min 4 sec		
23:08	End Discharge Meas.	W.S.E. (est)=	20.25 ft BPMSL	<b>Method:</b> Wading rod		
23:09	SG-JX3L-D	W.S.E. =	20.25 ft BPMSL			
<b>Weighted M.G.H.</b>			20.25 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			20.25 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> Overcast		<b>Air (oF):</b> 50		
<b>Gage:</b>		& dry		<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b> Banks are clean and free of snow and ice.						
<b>Remarks</b>						
<b>G.H. of zero flow:</b> ft.						

**Table C-3.6: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	0	0.0	0.0								REW
	5	5.0	1.2	0.6	3	54	0.14	0.14	6.0	0.8	Sandy/silty channel bottom
	10	5.0	2.7	0.8	3	52	0.15	0.17	13.5	2.3	Sandy/silty channel bottom
	15	5.0	3.3	0.8	5	49	0.24	0.25	16.5	4.1	Sandy/silty channel bottom
	20	5.0	3.1	0.8	5	43	0.27	0.30	15.5	4.6	Sandy/silty channel bottom
	25	5.0	3.3	0.8	5	48	0.25	0.31	16.5	5.1	Sandy/silty channel bottom
	30	5.0	3.1	0.8	6	45	0.31	0.37	15.5	5.7	Sandy/silty channel bottom
	35	5.0	3.0	0.8	8	45	0.41	0.45	15.0	6.8	Sandy/silty channel bottom
	40	5.0	3.0	0.8	8	42	0.44	0.48	15.0	7.3	Sandy/silty channel bottom
	45	5.0	3.0	0.8	11	50	0.50	0.54	15.0	8.1	Sandy/silty channel bottom
	50	5.0	3.0	0.8	9	54	0.39	0.50	15.0	7.5	Sandy/silty channel bottom
	55	5.0	3.2	0.8	9	44	0.47	0.54	16.0	8.6	Sandy/silty channel bottom
	60	5.0	3.3	0.8	9	43	0.48	0.564	16.5	9.30	Sandy/silty channel bottom
	65	5.0	3.4	0.8	9	44	0.47	0.60	17.0	10.2	Sandy/silty channel bottom
	70	5.0	3.3	0.8	10	47	0.49	0.57	16.5	9.4	Sandy/silty channel bottom
				0.2	12	42	0.65				



**Table C-3.6: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertival (fps)			
	75	5.0	3.3	0.8	9	43	0.48	0.57	16.5	9.4	Sandy/silty channel bottom
				0.2	12	41	0.66				
	80	5.0	3.4	0.8	11	43	0.58	0.61	17.0	10.5	Sandy/silty channel bottom
				0.2	12	42	0.65				
	85	5.0	3.4	0.8	8	48	0.39	0.52	17.0	8.8	Sandy/silty channel bottom
				0.2	13	45	0.65				
	90	5.0	3.4	0.8	10	46	0.50	0.59	17.0	10.0	Sandy/silty channel bottom
				0.2	13	43	0.68				
	95	5.0	3.5	0.8	9	47	0.44	0.56	17.5	9.9	Sandy/silty channel bottom
				0.2	14	46	0.69				
	100	5.0	3.5	0.8	7	45	0.36	0.47	17.5	8.2	Sandy/silty channel bottom
				0.2	11	43	0.58				
	105	5.0	3.3	0.8	8	48	0.39	0.43	16.5	7.1	Sandy/silty channel bottom
				0.2	9	43	0.48				
	110	5.2	2.4	0.8	4	42	0.23	0.25	12.5	3.1	Sandy/silty channel bottom
				0.2	5	44	0.27				
	115.4		0.0								LEW
Totals:		115.4							341.0	156.9	Page 3 of 3

**Table C-3.7: Discharge Measurement on Judy Creek at River Mile 7 on 5 September 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Judy Creek, approximately 7 river miles upstream from confluence with Fish Creek.						
<b>Date:</b> 9/5 2001		<b>Party:</b> Mark Vania, James Dietzmann				
<b>Width:</b> 112	<b>Area:</b> 304	<b>Vel:</b> 0.52	<b>W.S.E. (BPMSL)</b> 20.15 ft	<b>Disch.:</b> 158	<b>cfs</b>	
<b>No Sects.</b> 22	<b>W.S.E. change:</b> 0.0 ft.		<b>in</b> 1	<b>hrs.</b>	<b>Susp.:</b> Wading Rod	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
15:55	JX3L-D	W.S.E. =	20.15 ft BPMSL	<b>Meter:</b> ft. above bottom of weight.		
15:55	Start Discharge Meas.	W.S.E. =	20.15 ft BPMSL	<b>Spin before meas.</b> 3 min 01 sec <b>after</b> 2 min 57 sec		
16:55	End Discharge Meas.	W.S.E. =	20.15 ft BPMSL	<b>Method:</b> Wading Rod		
16:55	JX3L-D	W.S.E. =	20.15 ft BPMSL			
<b>Weighted M.G.H.</b>			20.15 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			20.15 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> Cloudy,		<b>Air (oF):</b> 38		
<b>Gage:</b>		fog, breezy <b>Water (oF):</b>				
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b> Sand bar extending from right bank to mid-channel.						
<b>Remarks</b>						
<b>G.H. of zero flow:</b> ft.						

**Table C-3.7: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	8	0.0	0.0								LEW - Moderate bank sloughing, brushy bank
	10	3.5	1.2	0.6	6	42	0.33	0.33	4.2	1.4	Sandy/silty channel bottom
	15	5.0	2.8	0.2	11	47	0.53	0.45	14.0	6.3	Sandy/silty channel bottom
				0.8	8	50	0.37				
	20	5.0	3.4	0.2	15	44	0.77	0.69	17.0	11.7	Sandy/silty channel bottom
				0.8	12	45	0.61				
	25	5.0	2.9	0.2	14	43	0.74	0.62	14.5	9.0	Sandy/silty channel bottom
				0.8	10	45	0.51				
	30	5.0	3.0	0.2	13	42	0.70	0.60	15.0	9.1	Sandy/silty channel bottom
				0.8	10	45	0.51				
	35	5.0	3.1	0.2	14	46	0.69	0.64	15.5	9.8	Sandy/silty channel bottom
				0.8	11	43	0.58				
	40	5.0	3.0	0.2	15	43	0.79	0.71	15.0	10.7	Sandy/silty channel bottom
				0.8	12	43	0.63				
	45	5.0	3.0	0.2	14	43	0.74	0.65	15.0	9.7	Sandy/silty channel bottom
				0.8	11	45	0.56				
	50	5.0	3.0	0.2	14	43	0.74	0.65	15.0	9.7	Sandy/silty channel bottom
				0.8	12	49	0.56				
	55	5.0	3.0	0.2	13	42	0.70	0.58	15.0	8.8	Sandy/silty channel bottom
				0.8	9	44	0.47				
	60	5.0	3.0	0.2	16	45	0.80	0.70	15.0	10.6	Sandy/silty channel bottom
				0.8	12	45	0.61				
	65	5.0	3.0	0.2	12	43	0.63	0.606	15.0	9.1	Sandy/silty channel bottom
				0.8	14	55	0.58				
	70	5.0	2.9	0.2	10	43	0.53	0.50	14.5	7.3	Sandy/silty channel bottom
				0.8	9	43	0.48				
	75	5.0	2.7	0.2	11	41	0.61	0.55	13.5	7.4	Sandy/silty channel bottom
				0.8	9	42	0.49				

**Table C-3.7: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	80	5.0	2.7	0.2	10	46	0.50	0.42	13.5	5.6	LEW - Moderate bank
				0.8	8	55	0.34				sloughing, brushy
	85	5.0	2.7	0.2	11	48	0.52	0.43	13.5	5.8	Sandy/silty channel bottom
				0.8	6	42	0.33				
	90	5.0	2.7	0.2	11	45	0.56	0.46	13.5	6.2	Sandy/silty channel bottom
				0.8	7	44	0.37				
	95	5.0	2.9	0.2	7	43	0.38	0.33	14.5	4.7	Sandy/silty channel bottom
				0.8	7	60	0.28				
	100	5.0	3.0	0.2	8	47	0.39	0.33	15.0	5.0	Sandy/silty channel bottom
				0.8	5	43	0.27				
	105	5.0	3.2	0.2	7	44	0.37	0.34	16.0	5.4	Sandy/silty channel bottom
				0.8	6	46	0.31				
	110	5.0	3.0	0.2	5	47	0.25	0.24	15.0	3.6	Sandy/silty channel bottom
				0.8	5	54	0.22				
	115	5.0	0.9	0.6	5	52	0.23	0.23	4.5	1.0	Sandy/silty channel bottom
	120		0.0								REW
Totals:		112.0							303.7	157.9	Page 3 of 3

**DISCHARGE MEASUREMENTS**

**ON THE UBLUTUOCH RIVER AT RIVER MILE 13.7**

**Table C-4.1: Summary of Discharge Measurements on the Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Average Time</b>	<b>Water Surface Elevation (feet)</b>	<b>Discharge (cfs)</b>	<b>Average Velocity (feet per second)</b>
6/10/2001	18:25	17.07	1440	3.82
6/12/2001	12:16	15.1	1170	3.84
6/13/2001	17:45	13.07	988	3.77
7/18/2001	13:26	5.72	35.6	1.14
8/13/2001	21:59	5.74	33.9	1.12
9/6/2001	11:34	5.85	41.7	1.31

Notes:

1. cfs = cubic feet per second.
2. Water surface elevations are based on an elevation of 19.00 feet (BPMSL) for TBM UBXBL-B, established by Lounsbury & Associates in 2001.

**Table C-4.2: Discharge Measurement on the Ublutuoch at River Mile 13.7 on 10 June 2001**

DISCHARGE MEASUREMENT NOTES					
<b>LOCATION:</b> Ublutuoch River, approximately 13.7 river miles upstream from confluence with Fish Creek.					
<b>Date:</b> 6/10 2001		<b>Party:</b> Mark Vania, James Dietzmann			
<b>Width:</b> 111	<b>Area:</b> 377	<b>Vel:</b> 3.82	<b>W.S.E. (BPMSL)</b> 17.07 ft	<b>Disch.:</b> 1440	<b>cfs</b>
<b>No Sects.</b> 21	<b>W.S.E. change:</b> 0.18		<b>in</b> 1.7	<b>hrs.</b>	<b>Susp.:</b>
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS2
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA	
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b>	
18:00	SG-UXB-B	W.S.E. =	17.11 ft BPMSL	<b>Meter:</b> 1 <b>ft. above bottom of weight.</b>	
17:30	Start Discharge Meas.	W.S.E. (est)=	17.16 ft BPMSL	<b>Spin before meas.</b> 3min 32sec <b>after</b> 3min 27sec	
19:20	End Discharge Meas.	W.S.E. (est)=	16.98 ft BPMSL	<b>Method:</b> Boat, using a sounding weight.	
19:20	SG-UXB-B	W.S.E.=	16.98 ft BPMSL		
<b>Weighted M.G.H.</b>			17.07 ft BPMSL	<b>Levels obtained</b>	
<b>G.H. corrections</b>			0.00 ft BPMSL		
<b>Correct M.G.H.</b>			17.07 ft BPMSL		
<b>Measurement rated:</b> Fair		<b>based on following conditions:</b>			
<b>Cross section:</b> Fairly Uniform					
<b>Flow:</b> Uniform		<b>Weather:</b> breezy		<b>Air (oF):</b> 40	
<b>Gage:</b>		<b>Water (oF):</b>			
<b>Other:</b>					
<b>Record Removed:</b>		<b>Intake flushed:</b>			
<b>Observer</b>					
<b>Control</b> Snow pack continuous across channel. Water flowing over snow pack.					
<b>Remarks</b> Dense brush cover along channel banks beneath water surface preventing 0.8 observation depth measurements.					
<b>G.H. of zero flow:</b> ft.					

**Table C-4.2: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	2.0	0.0	0.0								LEW - Brush 1-2 ft. high, continuous snow pack 2-3 ft. below water surface
	42.5	21.8	4.6	0.6	50	47	2.363	2.363	100.1	236.5	snow pack on channel botom submerged brush
	45.5	3.0	4.6	0.6	50	43	2.582	2.582	13.8	35.6	snow pack on channel botom submerged brush
	48.5	3.0	5.2	0.8	50	41	2.707	3.413	15.6	53.2	snow pack on channel botom
	51.5	3.0	5.5	0.8	60	41	3.244	3.731	16.5	61.6	snow pack on channel botom
	54.5	3.0	5.1	0.8	80	51	3.476	4.093	15.3	62.6	snow pack on channel botom
	57.5	3.0	4.7	0.6	80	41	4.320	4.320	14.1	60.9	snow pack on channel botom
	60.5	3.0	4.9	0.6	100	48	4.611	4.611	14.7	67.8	snow pack on channel botom
	63.5	3.0	4.6	0.6	100	46	4.811	4.811	13.8	66.4	snow pack on channel botom
	66.5	3.0	4.5	0.6	100	45	4.917	4.917	13.5	66.4	snow pack on channel botom
	69.5	3.0	4.7	0.6	100	43	5.145	5.145	14.1	72.5	snow pack on channel botom
	72.5	3.0	4.7	0.6	100	45	4.917	4.917	14.1	69.3	snow pack on channel botom
	75.5	3.0	5.0	0.8	80	43	4.120	4.758	15.0	71.4	snow pack on channel botom
	78.5	3.0	5.0	0.8	80	42	4.217	4.806	15.0	72.1	snow pack on channel botom
	81.5	3.0	4.8	0.6	100	47	4.709	4.709	14.4	67.8	snow pack on channel botom



**Table C-4.2: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description		
							At Point (fps)	Mean in- vertical (fps)					
	84.5	3.0	4.5	0.6	100	46	4.811	4.811	13.5	64.9	snow pack on channel botom		
	87.5	3.0	4.3	0.6	100	49	4.517	4.517	12.9	58.3	snow pack on channel botom		
	90.5	3.0	4.0	0.6	100	44	5.029	5.029	12.0	60.3	snow pack on channel botom		
	93.5	3.0	3.5	0.6	100	49	4.517	4.517	10.5	47.4	snow pack on channel botom		
	96.5	3.0	3.3	0.6	100	50	4.427	4.427	9.9	43.8	snow pack on channel botom		
	99.5	3.0	3.2	0.6	80	41	4.320	4.320	9.6	41.5	snow pack on channel botom		
	102.5	6.6	2.8	0.6	60	41	3.244	3.244	18.3	59.5	snow pack on channel botom snow ends at 108 ft		
	112.6	0.0	0.0								REW - small hummocks and brush on bank		
Totals:		110.6						376.7		1439.9		Page 3 of 3	

**Table C-4.3: Discharge Measurement on the Ublutuoch at River Mile 13.7 on 12 June 2001**

DISCHARGE MEASUREMENT NOTES					
<b>LOCATION:</b> Ublutuoch River, approximately 13.7 river miles upstream from confluence with Fish Creek.					
<b>Date:</b> 6/12 2001 <b>Party:</b> Mark Vania, James Dietzmann					
<b>Width:</b> 83.8		<b>Area:</b> 306		<b>Vel:</b> 3.84	
		<b>W.S.E. (BPMSL)</b>		15.10 ft	
<b>No Secs.</b> 22		<b>W.S.E change:</b> 0.09		<b>in</b> 0.9 <b>hrs.</b>	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	
				<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA	
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory	
11:32	SG-UXBL-B	W.S.E. =	15.16 ft BPMSL	<b>Meter:</b> 1 <b>ft. above bottom of weight.</b>	
11:48	Start Discharge Meas.	W.S.E. (est)=	15.14 ft BPMSL	<b>Spin before meas.</b> 1 min 21 sec <b>after</b> 2 min 43 sec	
12:43	End Discharge Meas.	W.S.E. (est)=	15.06 ft BPMSL	<b>Method:</b> Boat, using sounding weight	
12:55	SG-UXBL-B	W.S.E.=	15.04 ft BPMSL		
<b>Weighted M.G.H.</b>			15.10 ft BPMSL	<b>Levels obtained</b>	
<b>G.H. corrections</b>			0.00 ft BPMSL		
<b>Correct M.G.H.</b>			15.10 ft BPMSL		
<b>Measurement rated:</b> Fair		<b>based on following conditions:</b>			
<b>Cross section:</b> Fairly Uniform					
<b>Flow:</b> Uniform		<b>Weather:</b> Clear		<b>Air (oF):</b> 45	
<b>Gage:</b>		windy		<b>Water (oF):</b>	
<b>Other:</b>					
<b>Record Removed:</b>		<b>Intake flushed:</b>			
<b>Observer</b>					
<b>Control</b> Snow pack continuous across channel. Water flowing over snow pack.					
<b>Remarks</b> Dense brush cover along channel banks beneath water surface preventing 0.8 observation depth measurements.					
<b>G.H. of zero flow:</b> ft.					

**Table C-4.3: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	4.5	0.0	0.0								LEW - Brush 1-2 ft. high beneath water surface
	20.0	9.3	2.2	0.2	30	48	1.396	1.23	20.4	28.4	snow pack on channel bottom brush above snow surface
	23.0	3.0	3.0	0.2	40	45	1.978	1.74	9.0	17.8	snow pack on channel bottom brush above snow surface
	26.0	3.0	3.7	0.2	40	42	2.118	1.86	11.1	11.8	snow pack on channel bottom brush above snow surface
	29.0	3.0	4.6	0.2	50	43	2.582	2.27	13.8	17.8	snow pack on channel bottom brush above snow surface
	32.0	3.0	5.0	0.6	50	44	2.523	2.523	15.0	18.9	snow pack on channel bottom
	35.0	3.0	5.5	0.8	60	50	2.664	3.345	16.5	55.2	snow pack on channel bottom
				0.2	80	44	4.027				
	38.0	3.0	4.7	0.6	90	47	4.240	4.240	14.1	59.8	snow pack on channel bottom
	41.0	3.0	4.7	0.6	100	49	4.517	4.517	14.1	63.7	snow pack on channel bottom
	44.0	3.0	4.8	0.6	100	48	4.611	4.611	14.4	66.4	snow pack on channel bottom
	47.0	3.0	4.7	0.6	100	42	5.267	5.267	14.1	74.3	snow pack on channel bottom
	50.0	3.0	4.9	0.6	100	40	5.530	5.530	14.7	81.3	snow pack on channel bottom
	53.0	3.0	5.0	0.8	100	44	5.029	5.424	15.0	81.4	snow pack on channel bottom
				0.2	150	57	5.820				
	56.0	3.0	5.5	0.8	100	50	4.427	5.175	16.5	85.4	snow pack on channel bottom
				0.2	150	56	5.924				
	59.0	3.0	5.5	0.8	100	49	4.517	5.220	16.5	86.1	snow pack on channel bottom
				0.2	150	56	5.924				

**Table C-4.3: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	62.0	3.0	5.2	0.8	100	44	5.029	5.424	15.6	84.6	snow pack on channel bottom
				0.2	150	57	5.820				
	65.0	3.0	4.7	0.6	150	104	3.198	3.198	14.1	45.1	snow pack on channel bottom
	68.0	3.0	4.7	0.6	100	44	5.029	5.029	14.1	70.9	snow pack on channel bottom
	71.0	3.0	4.4	0.6	150	106	3.138	3.138	13.2	41.4	snow pack on channel bottom
	74.0	3.0	3.9	0.6	100	44	5.029	5.029	11.7	58.8	snow pack on channel bottom
	77.0	3.0	3.6	0.6	100	47	4.709	4.709	10.8	50.9	snow pack on channel bottom
	80.0	3.0	3.4	0.6	80	43	4.120	4.120	10.2	42.0	snow pack on channel bottom
	83.0	4.2	2.6	0.6	60	47	2.832	2.832	10.8	30.6	REW - small hummocks and brush on bank
	88.3	0.0	0.0								
Totals:		83.8							305.6	1172.5	

**Table C-4.4: Discharge Measurement on the Ublutuoch at River Mile 13.7 on 13 June 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Ublutuoch River, approximately 13.7 river miles upstream from confluence with Fish Creek.						
<b>Date:</b> 6/13 2001 <b>Party:</b> Mark Vania, James Dietzmann						
<b>Width:</b> 67.5		<b>Area:</b> 262		<b>Vel:</b> 3.77		<b>W.S.E. (BPMSL)</b> 13.07 ft
<b>Disch.:</b> 988		<b>cfs</b>				
<b>No Sects.</b> 16		<b>W.S.E. change:</b> 0.19 ft.		<b>in</b> 1.5		<b>hrs.</b>
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>		<b>Meter No.</b> URS # 2
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
17:00	Start Discharge Meas.	W.S.E. (est)=	13.16 ft BPMSL	<b>Meter:</b> 1 ft. above bottom of weight.		
17:35	Level Loop Survey	W.S.E. =	13.09 ft BPMSL	<b>Spin before meas.</b> 1 min 58 sec <b>after</b> 3 min 16 sec		
18:30	End Discharge Meas.	W.S.E. (est)=	12.97 ft BPMSL	<b>Method:</b> Boat, using sounding weight		
18:37	Level Loop Survey	W.S.E.=	12.96 ft BPMSL			
<b>Weighted M.G.H.</b>			13.07 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			13.07 ft BPMSL			
<b>Measurement rated:</b> Fair		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b>		<b>Air (oF):</b> 68		
<b>Gage:</b>		Ptly Cloudy, windy		<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b> Snow pack continuous across channel. Water flowing over snow pack.						
<b>Remarks</b> Dense brush cover along channel banks beneath water surface preventing 0.8 observation depth measurements.						
<b>G.H. of zero flow:</b> ft.						

**Table C-4.4: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	4.5	0.0	0.0								REW - Brush 1-2 ft. high below water surface
	10.0	4.3	2.9	0.6	60	44	3.024	3.024	12.3	37.3	snow pack on channel bottom
	13.0	3.0	3.3	0.6	83	43	4.274	4.274	9.9	42.3	snow pack on channel bottom
	16.0	3.0	3.7	0.6	85	43	4.376	4.376	11.1	48.6	snow pack on channel bottom
	19.0	3.0	4.1	0.6	90	42	4.742	4.742	12.3	58.3	snow pack on channel bottom
	22.0	3.0	4.2	0.6	90	42	4.742	4.742	12.6	59.8	snow pack on channel bottom
	25.0	3.0	5.0	0.8	90	43	4.632	5.344	15.0	80.2	snow pack on channel bottom
				0.2	115	42	6.055				
	28.0	3.0	5.2	0.8	93	45	4.574	5.052	15.6	78.8	snow pack on channel bottom
				0.2	110	44	5.530				
	31.0	3.0	5.5	0.8	90	46	4.332	4.680	16.5	77.2	snow pack on channel bottom
				0.2	100	44	5.029				
	34.0	3.0	5.7	0.8	92	47	4.334	4.800	17.1	82.1	snow pack on channel bottom
				0.2	100	42	5.267				
	37.0	3.0	5.5	0.8	90	44	4.528	4.708	16.5	77.7	snow pack on channel bottom
				0.2	95	43	4.889				
	40.0	3.0	5.4	0.8	85	43	4.376	4.632	16.2	75.0	snow pack on channel bottom
				0.2	95	43	4.889				
	43.0	3.0	5.0	0.8	80	42	4.217	4.322	15.0	64.8	snow pack on channel bottom
				0.2	84	42	4.427				
	46.0	3.0	4.9	0.6	84	43	4.325	4.325	14.7	63.6	submerged brush
	49.0	3.0	5.0	0.8	70	42	3.692	2.958	15.0	44.4	submerged brush
				0.2	84	84	2.223				

**Table C-4.4: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revolutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in-vertical (fps)			
	52.0	3.0	5.0	0.6	50	46	2.414	2.414	15.0	36.2	submerged brush
	55.0	10.0	4.7	0.2	26	44	1.321	1.162	47.0	62.1	submerged brush
	72.0	0.0	0.0								LEW - Brush 2-3 feet high
Totals:		67.5							261.8	988.3	

**Table C-4.5: Discharge Measurement on the Ublutuoch at River Mile 13.7 on 18 July 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Ublutuoch River, approximately 13.7 river miles upstream from confluence with Fish Creek.						
<b>Date:</b> 7/18 2001 <b>Party:</b> James Dietzmann, Barbara Pape						
<b>Width:</b> 16.1	<b>Area:</b> 31.2	<b>Vel:</b> 1.14	<b>W.S.E. (BPMSL)</b> 5.72 ft	<b>Disch.:</b> 35.6	<b>cfs</b>	
<b>No Secs.</b> 26	<b>W.S.E. change:</b> 0 ft. in 1.3 hrs.		<b>Susp.:</b>			
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
12:49	UXBR-D	W.S.E. =	5.72 ft BPMSL	<b>Meter:</b> N/A <b>ft. above bottom of weight.</b>		
12:49	Start Discharge Meas.	W.S.E. (est)=	5.72 ft BPMSL	<b>Spin before meas.</b> 4 min 9 sec <b>after</b> 3 min 35 sec		
14:04	End Discharge Meas.	W.S.E. (est)=	5.72 ft BPMSL	<b>Method:</b> Wading Rod		
14:01	UXBR-D	W.S.E.=	5.72 ft BPMSL			
<b>Weighted M.G.H.</b>			5.72 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			5.72 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> breezy		<b>Air (oF):</b> 60		
<b>Gage:</b>				<b>Water (oF):</b>		
<b>Other:</b>						
<b>Record Removed:</b>		<b>Intake flushed:</b>				
<b>Observer</b>						
<b>Control</b> Channel is free of snow and ice.						
<b>Remarks</b> The flow is now confined within a relatively small, incised channel approximately 16-20 feet wide with 2-3 foot high vertical banks.						
<b>G.H. of zero flow:</b> ft.						



**Table C-4.5: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	2.9	0.0	0.0								LEW - Grass/brush bank
	3.5	0.6	2.5	0.2	9	42	0.490	0.426	1.4	0.6	gravel/sand channel bottom
				0.8	7	45	0.361				
	4.0	0.5	2.5	0.2	13	41	0.717	0.519	1.3	0.6	gravel/sand channel bottom
				0.8	7	51	0.320				
	4.5	0.5	2.4	0.2	15	43	0.787	0.612	1.2	0.7	gravel/sand channel bottom
				0.8	8	42	0.438				
	5.0	0.5	2.4	0.2	18	41	0.986	0.861	1.2	1.0	gravel/sand channel bottom
				0.8	14	43	0.736				
	5.5	0.5	2.4	0.2	22	43	1.146	0.933	1.2	1.1	gravel/sand channel bottom
				0.8	14	44	0.719				
	6.0	0.5	2.4	0.2	25	42	1.330	1.104	1.2	1.3	gravel/sand channel bottom
				0.8	16	41	0.878				
	6.5	0.5	2.4	0.2	25	42	1.330	1.251	1.2	1.5	gravel/sand channel bottom
				0.8	22	42	1.173				
	7.0	0.5	2.3	0.2	29	41	1.577	1.310	1.2	1.5	gravel/sand channel bottom
				0.8	20	43	1.043				
	7.5	0.5	2.3	0.2	29	41	1.577	1.443	1.2	1.7	gravel/sand channel bottom
				0.8	24	41	1.308				
	8.0	0.5	2.1	0.2	31	41	1.685	1.390	1.1	1.5	gravel/sand channel bottom
				0.8	22	45	1.096				
	8.5	0.5	2.0	0.2	35	41	1.900	1.677	1.0	1.7	gravel/sand channel bottom
				0.8	28	43	1.453				
	9.0	0.5	2.0	0.2	35	41	1.900	1.668	1.0	1.7	gravel/sand channel bottom
				0.8	27	42	1.435				
	9.5	0.5	1.9	0.2	36	41	1.954	1.685	1.0	1.6	gravel/sand channel bottom
				0.8	26	41	1.416				

**Table C-4.5: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	10.0	0.5	1.9	0.2	35	41	1.900	1.604	1.0	1.5	gravel/sand channel bottom
				0.8	24	41	1.308				
	10.5	0.5	1.9	0.2	33	41	1.792	1.577	1.0	1.5	gravel/sand channel bottom
				0.8	25	41	1.362				
	11.0	0.5	1.9	0.2	34	42	1.803	1.540	1.0	1.5	gravel/sand channel bottom
				0.8	24	42	1.278				
	11.5	0.5	1.9	0.2	33	41	1.792	1.550	1.0	1.5	gravel/sand channel bottom
				0.8	24	41	1.308				
	12.0	0.5	1.9	0.2	31	41	1.685	1.429	1.0	1.4	gravel/sand channel bottom
				0.8	22	42	1.173				
	12.5	0.5	2.0	0.2	32	42	1.698	1.435	1.0	1.4	gravel/sand channel bottom
				0.8	22	42	1.173				
	13.0	0.5	2.0	0.2	30	41	1.631	1.402	1.0	1.4	gravel/sand channel bottom
				0.8	22	42	1.173				
	13.5	0.5	2.0	0.2	30	41	1.631	1.335	1.0	1.3	gravel/sand channel bottom
				0.8	19	41	1.040				
	14.0	0.5	2.0	0.2	28	42	1.488	1.278	1.0	1.3	gravel/sand channel bottom
				0.8	20	42	1.068				
	14.5	0.5	2.0	0.2	26	41	1.416	1.201	1.0	1.2	gravel/sand channel bottom
				0.8	18	41	0.986				
	15	0.8	2.0	0.2	23	42	1.225	1.068	1.5	1.6	gravel/sand channel bottom
				0.8	17	42	0.910				
	16	1.0	2.0	0.2	20	44	1.020	0.929	2.0	1.9	gravel/sand channel bottom
				0.8	16	43	0.838				
	17	1.5	2.0	0.2	15	43	0.787	0.564	3.0	1.7	gravel/sand channel bottom
				0.8	6	41	0.340				
	19	0.0	0.0								REW - grass and some brush on bank above water
Totals:		16.1							31.2	35.6	Page 3 of 3

**Table C-4.6: Discharge Measurement on the Ublutuoch at River Mile 13.7 on 13 August 2001**

DISCHARGE MEASUREMENT NOTES						
<b>LOCATION:</b> Ublutuoch River, approximately 13.7 river miles upstream from confluence with Fish Creek.						
<b>Date:</b> 8/13 2001 <b>Party:</b> Barbara Pape, Paul Myerchin						
<b>Width:</b> 15.7	<b>Area:</b> 30.3	<b>Vel:</b> 1.12	<b>W.S.E. (BPMSL)</b> 5.74 ft	<b>Disch.:</b> 33.9	<b>cfs</b>	
<b>No Secs.</b> 27	<b>W.S.E. change:</b> 0.01 ft. in 1.3 hrs.		<b>Susp.:</b> Pack Rod			
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	<b>Meter No.</b> URS #1	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA		
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory		
21:16	UXBR-D	W.S.E. =	5.73 ft BPMSL	<b>Meter:</b> N/A <b>ft. above bottom of weight.</b>		
21:20	Start Discharge Meas.	W.S.E. (est)=	5.73 ft BPMSL	<b>Spin before meas.</b> 3 min 7 sec <b>after</b> 3 min 10 sec		
22:37	End Discharge Meas.	W.S.E. (est)=	5.74 ft BPMSL	<b>Method:</b> Chest Waders and USGS Pack Rod		
22:33	UXBR-D	W.S.E.=	5.74 ft BPMSL			
<b>Weighted M.G.H.</b>			5.74 ft BPMSL	<b>Levels obtained</b>		
<b>G.H. corrections</b>			0.00 ft BPMSL			
<b>Correct M.G.H.</b>			5.74 ft BPMSL			
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>				
<b>Cross section:</b> Fairly Uniform						
<b>Flow:</b> Uniform		<b>Weather:</b> Rain		<b>Air (oF):</b> 50		
<b>Gage:</b>		<b>Water (oF):</b>				
<b>Other:</b>						
<b>Record Removed:</b>			<b>Intake flushed:</b>			
<b>Observer</b>						
<b>Control</b>						
<b>Remarks</b> The flow is now confined within a relatively small, incised channel approximately 16-20 feet wide with 2-3 foot high vertical banks. Banks are clear of snow and ice, near vertical banks on both LEW and REW						
<b>G.H. of zero flow:</b>				<b>ft.</b>		

**Table C-4.6: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	0.0	0.0	0.0								LEW - Grass/brush bank
	0.5	0.5	2.0	0.2	7	42	0.385	0.314	1.0	0.3	gravel/sand channel bottom
				0.8	5	49	0.243				
	1.0	0.5	2.0	0.2	12	43	0.633	0.576	1.0	0.6	gravel/sand channel bottom
				0.8	10	44	0.519				
	1.5	0.5	2.0	0.2	12	44	0.619	0.575	1.0	0.6	gravel/sand channel bottom
				0.8	10	43	0.531				
	2.0	0.5	2.0	0.2	16	41	0.878	0.668	1.0	0.7	gravel/sand channel bottom
				0.8	9	45	0.459				
	2.5	0.5	2.0	0.2	17	42	0.910	0.814	1.0	0.8	gravel/sand channel bottom
				0.8	13	41	0.717				
	3.0	0.5	2.0	0.2	19	41	1.040	0.870	1.0	0.9	gravel/sand channel bottom
				0.8	13	42	0.700				
	3.5	0.5	2.0	0.2	20	41	1.093	1.017	1.0	1.0	gravel/sand channel bottom
				0.8	18	43	0.941				
	4.0	0.5	2.0	0.2	23	41	1.255	1.105	1.0	1.1	gravel/sand channel bottom
				0.8	20	47	0.956				
	4.5	0.5	2.0	0.2	25	42	1.330	1.239	1.0	1.2	gravel/sand channel bottom
				0.8	21	41	1.147				
	5.0	0.5	2.0	0.2	26	41	1.416	1.242	1.0	1.2	gravel/sand channel bottom
				0.8	20	42	1.068				
	5.5	0.5	2.0	0.2	28	41	1.524	1.335	1.0	1.3	gravel/sand channel bottom
				0.8	21	41	1.147				
	6.0	0.5	2.0	0.2	31	41	1.685	1.441	1.0	1.4	gravel/sand channel bottom
				0.8	23	43	1.197				
	6.5	0.5	1.9	0.2	32	41	1.739	1.429	0.9	1.3	gravel/sand channel bottom
				0.8	21	42	1.120				

**Table C-4.6: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	7.0	0.5	1.8	0.2	34	42	1.803	1.540	0.9	1.4	gravel/sand channel bottom
				0.8	24	42	1.278				
	7.5	0.5	1.8	0.2	33	42	1.750	1.566	0.9	1.4	gravel/sand channel bottom
				0.8	26	42	1.383				
	8.0	0.5	1.9	0.2	36	41	1.954	1.694	0.9	1.6	gravel/sand channel bottom
				0.8	27	42	1.435				
	8.5	0.5	1.8	0.2	33	41	1.792	1.588	0.9	1.4	gravel/sand channel bottom
				0.8	26	42	1.383				
	9.0	0.5	1.8	0.2	36	41	1.954	1.601	0.9	1.4	gravel/sand channel bottom
				0.8	24	43	1.248				
	9.5	0.5	1.9	0.2	36	42	1.908	1.662	1.0	1.6	gravel/sand channel bottom
				0.8	26	41	1.416				
	10.0	0.5	2.0	0.2	35	42	1.855	1.619	1.0	1.6	gravel/sand channel bottom
				0.8	26	42	1.383				
	10.5	0.5	2.0	0.2	34	41	1.846	1.509	1.0	1.5	gravel/sand channel bottom
				0.8	22	42	1.173				
	11.0	0.5	2.1	0.2	30	41	1.631	1.376	1.1	1.4	gravel/sand channel bottom
				0.8	21	42	1.120				
	11.5	0.5	2.1	0.2	29	41	1.577	1.336	1.1	1.4	gravel/sand channel bottom
				0.8	21	43	1.095				
	12	0.8	2.2	0.2	25	42	1.330	1.110	1.7	1.8	gravel/sand channel bottom
				0.8	17	43	0.889				
	13	1.0	2.2	0.2	21	41	1.147	1.040	2.2	2.3	gravel/sand channel bottom
				0.8	17	41	0.932				
	14	1.0	2.2	0.2	14	42	0.753	0.686	2.2	1.5	gravel/sand channel bottom
				0.8	12	44	0.619				
	15	0.9	2.2	0.2	12	42	0.648	0.583	1.9	1.1	REW - grass/small brush bank
				0.8	10	44	0.519				
	15.7		0.0								REW - grass/small brush bank
Totals:		15.7							30.3	33.9	Page 3 of 3

**Table C-4.7: Discharge Measurement on the Ublutuoch at River Mile 13.7 on 6 September 2001**

DISCHARGE MEASUREMENT NOTES					
<b>LOCATION:</b> Ublutuoch River, approximately 13.7 river miles upstream from confluence with Fish Creek.					
<b>Date:</b> 9/6 2001 <b>Party:</b> Mark Vania, James Dietzmann					
<b>Width:</b> 15.5		<b>Area:</b> 31.8		<b>Vel:</b> 1.31	
		<b>W.S.E. (BPMSL)</b>		5.85 ft	
<b>No Secs.</b> 20		<b>W.S.E. change:</b> 0.0 ft.		<b>in</b> 1 <b>hrs.</b>	
<b>Method coef.:</b>		<b>Hor. Angle coef.</b>		<b>Sus. Coef.:</b>	
				<b>Meter No.</b> URS # 2	
<b>Gage Readings</b>				<b>Type of meter:</b> Price AA	
<b>Time</b>	<b>Recorder</b>	<b>Inside</b>	<b>Outside</b>	<b>Date rated:</b> Factory	
11:05	UXBR-D	W.S.E. =	5.85 ft BPMSL	<b>Meter:</b> N/A <b>ft. above bottom of weight.</b>	
11:05	Start Discharge Meas.	W.S.E. =	5.85 ft BPMSL	<b>Spin before meas.</b> 2 min 27 sec <b>after</b> 1 min 58 sec	
12:03	End Discharge Meas.	W.S.E.=	5.85 ft BPMSL	<b>Method:</b> Chest Waders and USGS Pack Rod	
12:03	UXBR-D	W.S.E.=	5.85 ft BPMSL		
<b>Weighted M.G.H.</b>			5.85 ft BPMSL	<b>Levels obtained</b>	
<b>G.H. corrections</b>			0.00 ft BPMSL		
<b>Correct M.G.H.</b>			5.85 ft BPMSL		
<b>Measurement rated:</b> Good		<b>based on following conditions:</b>			
<b>Cross section:</b> Fairly Uniform		Flow is uniform and steady			
<b>Flow:</b> Uniform		<b>Weather:</b> Windy, cloudy		<b>Air (oF):</b> 38	
<b>Gage:</b>				<b>Water (oF):</b>	
<b>Other:</b>					
<b>Record Removed:</b>		<b>Intake flushed:</b>			
<b>Observer</b>					
<b>Control</b> Near vertical banks on both LEW and REW					
<b>Remarks</b> The flow is now confined within a relatively small, incised channel approximately 16-20 feet wide with 2-3 foot high vertical banks.					
<b>G.H. of zero flow:</b> ft.					

**Table C-4.7: Continued**

Angle coef.	Dist. From Initial point (ft)	Width (ft)	Depth (ft)	Observ. depth	Revo- lutions	Time In seconds	VELOCITY		Area (s.f.)	Discharge (cfs)	Description
							At Point (fps)	Mean in- vertical (fps)			
	62.0	0.0	0.0								LEW - Grass/brush bank
	63.0	1.0	2.4	0.2	11	43	0.582	0.607	2.4	1.5	gravel/sand channel bottom
				0.8	12	43	0.633				
	64.0	1.0	2.5	0.2	17	24	1.580	1.132	2.5	2.8	gravel/sand channel bottom
				0.8	13	43	0.684				
	65.0	1.0	2.6	0.2	27	43	1.402	1.248	2.6	3.2	gravel/sand channel bottom
				0.8	21	43	1.095				
	66.0	0.8	2.5	0.2	31	42	1.645	1.447	1.9	2.8	gravel/sand channel bottom
				0.8	24	43	1.248				
	66.5	0.5	2.5	0.2	33	41	1.792	1.418	1.3	1.8	gravel/sand channel bottom
				0.8	20	43	1.043				
	67.0	0.5	2.4	0.2	35	41	1.900	1.536	1.2	1.8	gravel/sand channel bottom
				0.8	22	42	1.173				
	67.5	0.5	2.2	0.2	40	48	1.855	1.387	1.1	1.5	gravel/sand channel bottom
				0.8	18	44	0.920				
	68.0	0.5	2.0	0.2	35	44	1.772	1.433	1.0	1.4	gravel/sand channel bottom
				0.8	21	43	1.095				
	68.5	0.5	2.0	0.2	35	42	1.855	1.603	1.0	1.6	gravel/sand channel bottom
				0.8	26	43	1.351				
	69.0	0.5	2.0	0.2	36	42	1.908	1.698	1.0	1.7	gravel/sand channel bottom
				0.8	28	42	1.488				
	69.5	0.5	2.0	0.2	40	42	2.118	1.803	1.0	1.8	gravel/sand channel bottom
				0.8	30	45	1.488				
	70.0	0.5	2.0	0.2	36	43	1.864	1.676	1.0	1.7	gravel/sand channel bottom
				0.8	28	42	1.488				
	70.5	0.5	2.0	0.2	37	41	2.007	1.739	1.0	1.7	gravel/sand channel bottom
				0.8	29	44	1.471				
	71.0	0.5	2.0	0.2	37	42	1.960	1.681	1.0	1.7	gravel/sand channel bottom
				0.8	27	43	1.402				





**APPENDIX D**

**WATER SURFACE ELEVATIONS AND DISCHARGE**

## LIST OF TABLES

<u>Table</u>	<u>Title</u>
<b>Fish Creek River Mile 25.1</b>	
D-1.1	Change in Calibration Constant During Instrument Recording Periods on Fish Creek at River Mile 25.1
D-1.2	Average Daily Water Surface Elevation and Discharge on Fish Creek at River Mile 25.1
D-1.3	Water Surface Elevation and Discharge on Fish Creek at River Mile 25.1
<b>Fish Creek River Mile 32.4</b>	
D-2.1	Change in Calibration Constant During Instrument Recording Periods on Fish Creek at River Mile 32.4
D-2.2	Average Daily Water Surface Elevation and Discharge on Fish Creek at River Mile 32.4
D-2.3	Water Surface Elevation and Discharge on Fish Creek at River Mile 32.4
<b>Judy Creek</b>	
D-3.1	Change in Calibration Constant During Instrument Recording Periods on Judy Creek at River Mile 7
D-3.2	Average Daily Water Surface Elevation and Discharge on Judy Creek at River Mile 7
D-3.3	Water Surface Elevation and Discharge on Judy Creek at River Mile 7
<b>Ublutuoch River</b>	
D-4.1	Change in Calibration Constant During Instrument Recording Periods on the Ublutuoch River at River Mile 13.7
D-4.2	Average Daily Water Surface Elevation and Discharge on the Ublutuoch River at River Mile 13.7
D-4.3	Water Surface Elevation and Discharge on the Ublutuoch River at River Mile 13.7

**WATER SURFACE ELEVATIONS AND DISCHARGE**

**ON FISH CREEK AT RIVER MILE 25.1**

**Table D-1.1: Change in Calibration Constant During Instrument Recording Periods on Fish Creek at River Mile 25.1**

Recording Period <sup>1</sup>				Change in Instrument Calibration Constant <sup>2</sup> (feet)	Comments
Start		End			
Date	Time	Date	Time		
6/11/2001	14:55	6/12/2001	10:02	-0.36	
6/12/2001	10:02	6/12/2001	15:16	-0.04	
6/12/2001	15:16	6/12/2001	17:19	-0.02	
6/12/2001	17:19	6/13/2001	11:00	+0.14 <sup>3</sup>	Instrument Downloaded.
6/13/2001	12:33	6/13/2001	14:13	-0.17	
6/13/2001	14:13	6/14/2001	15:38	+0.23	
6/14/2001	15:38	6/15/2001	10:35	-0.14	
6/15/2001	10:35	6/15/2001	11:15	-0.04	
6/15/2001	11:15	6/15/2001	13:39	-0.02	
6/15/2001	13:39	6/17/2001	13:07	-1.78	
6/17/2001	13:07	6/28/2001	16:30	-0.87 <sup>4</sup>	Instrument Downloaded.
6/28/2001	17:32	7/16/2001	11:01	-0.46	Instrument Downloaded.
7/16/2001	12:03	7/18/2001	10:42	-0.32	
7/18/2001	10:42	7/19/2001	11:59	-0.13	
7/19/2001	11:59	7/19/2001	17:22	-0.24	
7/19/2001	17:22	8/14/2001	17:40	+0.13	
8/14/2001	17:40	8/15/2001	0:11	+0.06	
8/15/2001	0:11	8/15/2001	11:32	-0.01	Instrument Downloaded.
8/15/2001	12:02	9/8/2001	11:42	+0.30	Instrument Downloaded.

Notes:

1. Water surface elevations corresponding to the recording dates and times listed above are presented in Table D-1.3, Appendix D.
2. The change in calibration constant represents the difference in the apparent instrument elevation between the start of the period and the end of the period. The apparent instrument elevation was computed by subtracting the depth of water over the instrument, as recorded by the instrument, from the measured water surface elevation. A negative change indicates that the elevation of the instrument appeared to have lowered. A positive change indicates that the elevation of the instrument appeared to have risen. The change in the apparent elevation could be due to a physical change in the instrument location due to scour or shifting, but might also be due to debris or sediment partially blocking the pressure sensor.
3. On 12 June 2001 the water level recorder was removed from the water at 11:00 to download the data. The water surface elevation was not recorded prior to the water level recorder being removed from the water. The water surface elevation was recorded when the recorder was placed back in the water at 12:33. In order to compute the approximate change in the calibration constant during the period 11 June at 14:55 to 13 June at 11:00, the water surface elevation was assumed to be the same at 11:00 and 12:33 on 13 June.
4. On 28 June 2001 the water level recorder was removed from the water at 16:30 to download the data. The water surface elevation was not recorded prior to the water level recorder being removed from the water. The water surface elevation was recorded when the recorder was placed back in the water at 17:32. In order to compute the approximate change in the calibration constant during the period 13 June at 12:33 to 28 June at 16:30, the water surface elevation was assumed to be the same at 16:30 and 17:32 on 28 June.

**Table D-1.1: Continued**

Recording Period <sup>1</sup>				Change in Instrument Calibration Constant <sup>2</sup> (feet)	Comments
Start		End			
Date	Time	Date	Time		
<p>5. The minimum standard deviation associated with each instrument reading is on the order of 0.1 percent of the instrument range. This is the standard deviation due to variances in the instrument itself and does not represent variances due to environmental factors such as instrument shifting or partial blockage of the sensor by debris or sediment. Thus, the minimum standard deviation associated with the readings collected for this project is on the order of 0.1 feet.</p> <p>6. The fluctuation in water surface elevation due to wind waves, varied from 0.01 to 0.04 feet during staff gage readings or water surface elevation surveys.</p> <p>7. At the end of a data recording period, the data were downloaded and the instrument was serviced and re-deployed, except at the end of the last recording period when the instrument data were downloaded and the instrument was taken out of the field.</p>					

**Table D-1.2: Average Daily Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
6/6/2001	15.31	
6/7/2001	17.63	3214
6/8/2001	18.39	4668
6/9/2001	18.46	5578
6/10/2001	17.44	5438
6/11/2001	17.01	6098
6/12/2001	16.50	5223
6/13/2001	16.15	4646
6/14/2001	16.58	5350
6/15/2001	16.90	5905
6/16/2001	16.51	5281
6/17/2001	16.14	4708
6/18/2001	16.00	4669
6/19/2001	15.72	4346
6/20/2001	15.07	3955
6/21/2001	14.50	3562
6/22/2001	13.69	2971
6/23/2001	13.35	2707
6/24/2001	13.05	2474
6/25/2001	12.74	2221
6/26/2001	12.43	1967
6/27/2001	12.21	1790
6/28/2001	12.27	1832
6/29/2001	12.56	2071
6/30/2001	12.38	1926
7/1/2001	12.26	1830
7/2/2001	12.13	1725
7/3/2001	11.89	1531
7/4/2001	11.56	1266
7/5/2001	11.60	1296
7/6/2001	11.51	1227
7/7/2001	11.44	1172
7/8/2001	11.27	1038
7/9/2001	11.19	976
7/10/2001	11.13	926
7/11/2001	11.00	826
7/12/2001	10.91	762
7/16/2001	11.03	852
7/17/2001	10.88	750
7/18/2001	10.68	675
7/19/2001	10.59	642
7/20/2001	10.43	587
7/21/2001	10.27	528
7/22/2001	10.42	585

**Table D-1.2: Continued**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
7/23/2001	10.21	526
7/24/2001	10.05	496
7/25/2001	10.09	507
7/26/2001	10.11	513
7/27/2001	10.21	546
7/28/2001	9.97	495
7/29/2001	9.80	473
7/30/2001	9.84	476
7/31/2001	9.97	489
8/1/2001	9.90	482
8/2/2001	9.85	477
8/3/2001	9.91	483
8/4/2001	9.88	480
8/5/2001	9.87	478
8/6/2001	9.99	491
8/7/2001	9.96	487
8/8/2001	9.94	485
8/9/2001	9.88	480
8/10/2001	9.82	474
8/11/2001	9.81	473
8/12/2001	9.80	473
8/13/2001	9.82	474
8/14/2001	9.98	489
8/15/2001	10.04	495
8/16/2001	10.01	492
8/17/2001	10.74	756
8/18/2001	11.30	1065
8/19/2001	11.11	912
8/20/2001	10.91	765
8/21/2001	10.79	712
8/22/2001	10.67	670
8/23/2001	10.65	669
8/24/2001	10.65	678
8/25/2001	10.70	716
8/26/2001	10.65	673
8/27/2001	10.62	671
8/28/2001	10.57	648
8/29/2001	10.38	567
8/30/2001	10.41	577
8/31/2001	10.31	543
9/1/2001	10.25	523
9/2/2001	10.27	536
9/3/2001	10.23	517
9/4/2001	10.15	505

**Table D-1.2: Continued**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
9/5/2001	10.19	514
9/6/2001	10.20	512
9/7/2001	10.15	507
9/8/2001	10.11	500

1. Average daily water surface elevation is the daily average of water surface elevation data presented in Table D-1.3, Appendix D.  
2. Average daily discharge is the daily average of discharge values presented in Table D-1.3, Appendix D.



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

Notes:

1. Water surface elevations in bold represent measured values from either survey or staff gage readings. Values not bold represent corrected water surface elevations measured by the pressure transducer.
2. Discharge values in bold represent measured discharges. Discharge values not bold are calculated.
3. Date and time are Alaska Daylight Savings time.
4. The time corresponds to the start of a sampling interval.
5. Combined pressure is the sum of the water and atmospheric pressures.
6. Atmospheric pressure and combined pressure are in pounds per square inch (psia), rounded to the nearest 0.01 psi.
7. Water surface elevations are based on British Petroleum Mean Sea Level, rounded to the nearest 0.01 foot.
8. Instrument located on Fish Creek at River Mile 25.1 (Figure 2).
9. It is assumed that changes in the instrument calibration constant occurred linearly over time. Corrections to the water depth and corresponding water surface elevation were calculated to account for these changes.
10. Missing data are either the result of routine instrument downloading and servicing, or environmental conditions which prevented the recorder from obtaining accurate data. Environmental conditions which caused data to be lost include physical changes in the instrument location due to scour or shifting, and/or partial blocking of the pressure sensor by debris or sediment.

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/6/2001	10:45	-	-	-	<b>14.79</b>	-
6/6/2001	12:00	-	-	-	<b>15.07</b>	-
6/6/2001	13:55	-	-	-	<b>15.48</b>	-
6/6/2001	14:28	-	-	-	<b>15.54</b>	-
6/6/2001	15:41	-	-	-	<b>15.69</b>	-
6/7/2001	10:30	-	-	-	<b>17.81</b>	3452
6/7/2001	14:55	-	-	-	<b>17.57</b>	3124
6/7/2001	16:43	-	-	-	<b>17.56</b>	<b>3113.8</b>
6/7/2001	17:25	-	-	-	<b>17.55</b>	3110
6/7/2001	20:05	-	-	-	<b>17.68</b>	3272
6/8/2001	13:15	-	-	-	<b>18.16</b>	3953
6/8/2001	-	-	-	-	<b>18.57</b>	4713
6/8/2001	14:45	-	-	-	<b>18.33</b>	<b>4756.2</b>
6/8/2001	16:00	-	-	-	<b>18.47</b>	4938
6/8/2001	19:08	-	-	-	<b>18.41</b>	4981
6/9/2001	7:20	-	-	-	<b>18.73</b>	5745
<b>HWM</b>	-	-	-	-	<b>18.92</b>	6042
6/9/2001	10:20	-	-	-	<b>18.56</b>	5661
6/9/2001	13:01	-	-	-	<b>18.52</b>	5712
6/9/2001	14:54	-	-	-	<b>18.47</b>	5711
6/9/2001	16:00	-	-	-	<b>18.08</b>	5185
6/9/2001	17:40	-	-	-	<b>17.91</b>	4993
6/10/2001	19:02	-	-	-	<b>17.44</b>	5438
6/11/2001	9:04	-	-	-	<b>16.92</b>	5911
6/11/2001	9:30	-	-	-	<b>16.96</b>	6040
6/11/2001	10:32	-	-	-	<b>16.97</b>	<b>6051.6</b>
6/11/2001	11:21	-	-	-	<b>16.98</b>	6047
6/11/2001	12:15	-	-	-	<b>16.97</b>	6030
6/11/2001	13:05	-	-	-	<b>16.96</b>	6013
6/11/2001	14:55	-	-	-	<b>16.93</b>	5961
6/11/2001	15:00	14.38	16.69	5.32	16.93	5953
6/11/2001	15:30	14.38	16.72	5.37	16.98	6056
6/11/2001	15:46	-	-	-	<b>16.93</b>	5961
6/11/2001	16:00	14.38	16.75	5.43	17.04	6158
6/11/2001	16:30	14.37	16.74	5.42	17.03	6142
6/11/2001	17:00	14.36	16.75	5.46	17.07	6205
6/11/2001	17:30	14.35	16.76	5.50	17.11	6268
6/11/2001	18:00	14.35	16.78	5.53	17.14	6331
6/11/2001	18:30	14.36	16.79	5.53	17.14	6315
6/11/2001	19:00	14.36	16.79	5.52	17.13	6298
6/11/2001	19:30	14.37	16.79	5.48	17.09	6242
6/11/2001	20:00	14.38	16.79	5.45	17.06	6186
6/11/2001	20:30	14.38	16.81	5.49	17.10	6249

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/11/2001	21:00	14.39	16.80	5.43	17.04	6154
6/11/2001	21:30	14.40	16.81	5.42	17.03	6137
6/11/2001	22:00	14.40	16.79	5.37	16.98	6042
6/11/2001	22:30	14.41	16.78	5.31	16.92	5946
6/11/2001	23:00	14.40	16.78	5.32	16.93	5969
6/11/2001	23:30	14.41	16.77	5.27	16.88	5874
6/12/2001	0:00	14.41	16.77	5.26	16.87	5857
6/12/2001	0:30	14.41	16.75	5.20	16.81	5762
6/12/2001	1:00	14.42	16.74	5.15	16.76	5666
6/12/2001	1:30	14.42	16.74	5.14	16.75	5650
6/12/2001	2:00	14.42	16.73	5.11	16.72	5593
6/12/2001	2:30	14.43	16.73	5.07	16.68	5537
6/12/2001	3:00	14.43	16.72	5.04	16.65	5481
6/12/2001	3:30	14.44	16.72	5.01	16.62	5425
6/12/2001	4:00	14.43	16.72	5.02	16.63	5449
6/12/2001	4:30	14.42	16.72	5.04	16.65	5472
6/12/2001	5:00	14.42	16.72	5.03	16.64	5456
6/12/2001	5:30	14.43	16.72	4.99	16.60	5400
6/12/2001	6:00	14.45	16.72	4.94	16.55	5304
6/12/2001	6:30	14.44	16.71	4.93	16.54	5288
6/12/2001	7:00	14.42	16.71	4.97	16.58	5351
6/12/2001	7:30	14.42	16.71	4.96	16.57	5334
6/12/2001	8:00	14.42	16.70	4.92	16.53	5278
6/12/2001	8:30	14.42	16.71	4.94	16.55	5302
6/12/2001	9:00	14.42	16.71	4.93	16.54	5285
6/12/2001	9:30	14.41	16.72	4.96	16.57	5348
6/12/2001	10:00	14.40	16.71	4.96	16.57	5332
6/12/2001	10:02	-	-	-	<b>16.57</b>	5340
6/12/2001	10:30	14.40	16.71	5.31	16.56	5326
6/12/2001	11:00	14.38	16.70	5.33	16.58	5359
6/12/2001	11:30	14.37	16.71	5.37	16.62	5432
6/12/2001	12:00	14.36	16.73	5.44	16.69	5545
6/12/2001	12:30	14.36	16.73	5.44	16.69	5539
6/12/2001	13:00	14.36	16.69	5.34	16.59	5374
6/12/2001	13:30	14.36	16.69	5.34	16.59	5368
6/12/2001	14:00	14.35	16.70	5.38	16.63	5441
6/12/2001	14:30	14.36	16.69	5.33	16.58	5355
6/12/2001	15:00	14.38	16.67	5.23	16.48	5190
6/12/2001	15:16	-	-	-	<b>16.41</b>	5064
6/12/2001	15:30	14.42	16.68	5.16	16.41	5065
6/12/2001	16:00	14.38	16.67	5.26	16.47	5175
6/12/2001	16:30	14.39	16.62	5.12	16.33	4929
6/12/2001	17:00	14.38	16.65	5.21	16.42	5079

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/12/2001	17:19	-	-	-	<b>16.37</b>	4995
6/12/2001	17:30	14.38	16.63	5.16	16.37	4991
6/12/2001	18:00	14.41	16.62	5.09	16.28	4839
6/12/2001	18:30	14.39	16.65	5.21	16.40	5044
6/12/2001	19:00	14.38	16.64	5.21	16.40	5051
6/12/2001	19:30	14.40	16.64	5.17	16.36	4979
6/12/2001	20:00	14.45	16.65	5.08	16.27	4827
6/12/2001	20:30	14.45	16.65	5.09	16.28	4834
6/12/2001	21:00	14.47	16.64	5.02	16.21	4722
6/12/2001	21:30	14.49	16.62	4.93	16.12	4589
6/12/2001	22:00	14.49	16.62	4.94	16.13	4591
6/12/2001	22:30	14.46	16.59	4.94	16.13	4593
6/12/2001	23:00	14.46	16.59	4.95	16.14	4596
6/12/2001	23:30	14.46	16.58	4.93	16.12	4585
6/13/2001	0:00	14.47	16.58	4.91	16.10	4573
6/13/2001	0:30	14.47	16.58	4.91	16.10	4576
6/13/2001	1:00	14.47	16.58	4.92	16.11	4578
6/13/2001	1:30	14.48	16.58	4.90	16.09	4567
6/13/2001	2:00	14.48	16.58	4.90	16.09	4569
6/13/2001	2:30	14.48	16.58	4.90	16.09	4571
6/13/2001	3:00	14.48	16.58	4.91	16.10	4574
6/13/2001	3:30	14.48	16.57	4.89	16.08	4562
6/13/2001	4:00	14.48	16.57	4.89	16.08	4565
6/13/2001	4:30	14.48	16.56	4.87	16.06	4553
6/13/2001	5:00	14.48	16.55	4.86	16.05	4542
6/13/2001	5:30	14.49	16.55	4.84	16.03	4531
6/13/2001	6:00	14.48	16.54	4.84	16.03	4533
6/13/2001	6:30	14.47	16.54	4.87	16.06	4549
6/13/2001	7:00	14.46	16.53	4.87	16.06	4552
6/13/2001	7:30	14.45	16.52	4.88	16.07	4554
6/13/2001	8:00	14.44	16.52	4.90	16.09	4570
6/13/2001	8:30	14.44	16.51	4.88	16.07	4559
6/13/2001	9:00	14.43	16.5	4.89	16.08	4561
6/13/2001	9:30	14.42	16.49	4.89	16.08	4564
6/13/2001	10:00	14.42	16.49	4.90	16.09	4566
6/13/2001	10:30	14.40	16.49	4.95	16.14	4596
6/13/2001	11:00	14.39	16.48	4.95	16.14	4598
6/13/2001	12:30	14.35	17.07	6.26	16.14	4598
6/13/2001	12:33	-	-	-	<b>16.14</b>	4599
6/13/2001	13:00	14.34	17.11	6.32	16.20	4697
6/13/2001	13:30	14.33	17.13	6.33	16.21	4719
6/13/2001	13:35	-	-	-	<b>16.14</b>	<b>4598.8</b>
6/13/2001	14:00	14.34	17.13	6.25	16.13	4593

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/13/2001	14:13	-	-	-	<b>16.13</b>	4593
6/13/2001	14:30	14.33	17.14	6.47	16.18	4668
6/13/2001	15:00	14.33	17.14	6.47	16.18	4676
6/13/2001	15:30	14.33	17.15	6.50	16.21	4724
6/13/2001	16:00	14.33	17.15	6.51	16.22	4731
6/13/2001	16:30	14.33	17.16	6.53	16.24	4779
6/13/2001	17:00	14.35	17.16	6.49	16.20	4707
6/13/2001	17:30	14.34	17.18	6.57	16.28	4834
6/13/2001	18:00	14.35	17.19	6.57	16.28	4842
6/13/2001	18:30	14.35	17.19	6.58	16.29	4850
6/13/2001	19:00	14.37	17.2	6.56	16.27	4818
6/13/2001	19:30	14.39	17.21	6.54	16.25	4786
6/13/2001	20:00	14.42	17.21	6.47	16.18	4675
6/13/2001	20:30	14.41	17.22	6.52	16.23	4762
6/13/2001	21:00	14.45	17.24	6.48	16.19	4690
6/13/2001	21:30	14.45	17.25	6.51	16.22	4738
6/13/2001	22:00	14.47	17.26	6.49	16.20	4706
6/13/2001	22:30	14.47	17.27	6.52	16.23	4753
6/13/2001	23:00	14.48	17.28	6.52	16.23	4761
6/13/2001	23:30	14.50	17.3	6.53	16.24	4769
6/14/2001	0:00	14.50	17.3	6.53	16.24	4776
6/14/2001	0:30	14.51	17.31	6.54	16.25	4784
6/14/2001	1:00	14.52	17.33	6.57	16.28	4832
6/14/2001	1:30	14.52	17.34	6.59	16.30	4879
6/14/2001	2:00	14.54	17.35	6.57	16.28	4847
6/14/2001	2:30	14.53	17.36	6.62	16.33	4934
6/14/2001	3:00	14.54	17.37	6.63	16.34	4942
6/14/2001	3:30	14.55	17.38	6.63	16.34	4950
6/14/2001	4:00	14.55	17.39	6.66	16.37	4997
6/14/2001	4:30	14.55	17.39	6.67	16.38	5005
6/14/2001	5:00	14.55	17.39	6.67	16.38	5013
6/14/2001	5:30	14.56	17.41	6.70	16.41	5060
6/14/2001	6:00	14.56	17.42	6.73	16.44	5108
6/14/2001	6:30	14.56	17.42	6.73	16.44	5116
6/14/2001	7:00	14.56	17.42	6.73	16.44	5123
6/14/2001	7:30	14.55	17.44	6.81	16.52	5250
6/14/2001	8:00	14.56	17.45	6.81	16.52	5258
6/14/2001	8:30	14.55	17.45	6.84	16.55	5305
6/14/2001	9:00	14.55	17.45	6.84	16.55	5313
6/14/2001	9:30	14.55	17.46	6.87	16.58	5361
6/14/2001	10:00	14.55	17.47	6.90	16.61	5408
6/14/2001	10:30	14.55	17.47	6.90	16.61	5416
6/14/2001	11:00	14.54	17.47	6.93	16.64	5463

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/14/2001	11:30	14.54	17.48	6.96	16.67	5511
6/14/2001	12:00	14.54	17.5	7.01	16.72	5598
6/14/2001	12:30	14.55	17.5	6.99	16.70	5566
6/14/2001	13:00	14.56	17.52	7.02	16.73	5613
6/14/2001	13:30	14.55	17.53	7.07	16.78	5700
6/14/2001	14:00	14.56	17.53	7.05	16.76	5669
6/14/2001	14:30	14.57	17.54	7.05	16.76	5676
6/14/2001	15:00	14.60	17.55	7.01	16.72	5605
6/14/2001	15:30	14.61	17.56	7.02	16.73	5613
6/14/2001	15:38	-	-	-	<b>16.73</b>	5616
6/14/2001	16:00	14.62	17.58	6.81	16.75	5646
6/14/2001	16:30	14.65	17.59	6.76	16.70	5560
6/14/2001	17:00	14.66	17.6	6.75	16.69	5554
6/14/2001	17:30	14.67	17.61	6.75	16.69	5547
6/14/2001	18:00	14.69	17.62	6.72	16.66	5501
6/14/2001	18:30	14.69	17.63	6.74	16.68	5535
6/14/2001	19:00	14.71	17.65	6.74	16.68	5528
6/14/2001	19:30	14.72	17.65	6.71	16.65	5482
6/14/2001	20:00	14.72	17.66	6.73	16.67	5516
6/14/2001	20:30	14.72	17.68	6.77	16.71	5589
6/14/2001	21:00	14.73	17.68	6.75	16.69	5543
6/14/2001	21:30	14.74	17.69	6.74	16.68	5536
6/14/2001	22:00	14.74	17.7	6.76	16.70	5570
6/14/2001	22:30	14.74	17.7	6.76	16.70	5563
6/14/2001	23:00	14.75	17.72	6.78	16.72	5597
6/14/2001	23:30	14.76	17.72	6.75	16.69	5551
6/15/2001	0:00	14.76	17.73	6.77	16.71	5584
6/15/2001	0:30	14.77	17.73	6.74	16.68	5538
6/15/2001	1:00	14.77	17.75	6.79	16.73	5611
6/15/2001	1:30	14.79	17.76	6.76	16.70	5565
6/15/2001	2:00	14.79	17.77	6.78	16.72	5598
6/15/2001	2:30	14.80	17.79	6.80	16.74	5632
6/15/2001	3:00	14.80	17.78	6.77	16.71	5585
6/15/2001	3:30	14.80	17.78	6.77	16.71	5579
6/15/2001	4:00	14.80	17.79	6.79	16.73	5612
6/15/2001	4:30	14.80	17.79	6.78	16.72	5606
6/15/2001	5:00	14.80	17.8	6.80	16.74	5639
6/15/2001	5:30	14.80	17.82	6.85	16.79	5712
6/15/2001	6:00	14.80	17.82	6.84	16.78	5706
6/15/2001	6:30	14.79	17.83	6.88	16.82	5779
6/15/2001	7:00	14.79	17.82	6.86	16.80	5733
6/15/2001	7:30	14.79	17.82	6.85	16.79	5727
6/15/2001	8:00	14.78	17.83	6.90	16.84	5800

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/15/2001	8:30	14.77	17.84	6.94	16.88	5873
6/15/2001	9:00	14.77	17.85	6.96	16.90	5906
6/15/2001	9:30	14.76	17.85	6.98	16.92	5939
6/15/2001	10:00	14.75	17.86	7.02	16.96	6012
6/15/2001	10:30	14.74	17.86	7.04	16.98	6046
6/15/2001	10:35	-	-	-	<b>16.98</b>	6047
6/15/2001	11:00	14.73	17.87	7.23	16.99	6056
6/15/2001	11:15	-	-	-	<b>16.99</b>	6064
6/15/2001	11:30	14.72	17.87	7.24	17.00	6089
6/15/2001	12:00	14.71	17.87	7.26	17.02	6122
6/15/2001	12:18	-	-	-	<b>16.99</b>	<b>6097.9</b>
6/15/2001	12:30	14.69	17.85	7.26	17.02	6115
6/15/2001	13:00	14.69	17.84	7.23	16.99	6068
6/15/2001	13:30	14.69	17.84	7.23	16.99	6061
6/15/2001	13:39	-	-	-	<b>16.99</b>	6064
6/15/2001	14:00	14.69	17.83	7.21	16.95	5989
6/15/2001	14:30	14.67	17.83	7.23	16.97	6036
6/15/2001	15:00	14.67	17.85	7.26	17.00	6083
6/15/2001	15:30	14.66	17.82	7.20	16.94	5972
6/15/2001	16:00	14.66	17.82	7.18	16.92	5939
6/15/2001	16:30	14.67	17.84	7.18	16.92	5947
6/15/2001	17:00	14.67	17.83	7.14	16.88	5875
6/15/2001	17:30	14.68	17.83	7.10	16.84	5803
6/15/2001	18:00	14.67	17.84	7.13	16.87	5850
6/15/2001	18:30	14.68	17.82	7.04	16.78	5698
6/15/2001	19:00	14.68	18.01	7.46	17.20	6420
6/15/2001	19:30	14.69	18	7.39	17.13	6308
6/15/2001	20:00	14.69	18.01	7.40	17.14	6316
6/15/2001	20:30	14.71	18.01	7.33	17.07	6204
6/15/2001	21:00	14.70	18.01	7.34	17.08	6211
6/15/2001	21:30	14.71	18.02	7.32	17.06	6179
6/15/2001	22:00	14.72	18.01	7.25	16.99	6067
6/15/2001	22:30	14.72	18.01	7.23	16.97	6035
6/15/2001	23:00	14.73	18	7.17	16.91	5923
6/15/2001	23:30	14.73	17.99	7.13	16.87	5852
6/16/2001	0:00	14.74	17.99	7.08	16.82	5780
6/16/2001	0:30	14.74	17.99	7.07	16.81	5747
6/16/2001	1:00	14.74	18	7.07	16.81	5755
6/16/2001	1:30	14.74	18	7.05	16.79	5722
6/16/2001	2:00	14.74	17.99	7.01	16.75	5650
6/16/2001	2:30	14.74	17.99	6.99	16.73	5618
6/16/2001	3:00	14.74	17.99	6.97	16.71	5586
6/16/2001	3:30	14.74	17.99	6.95	16.69	5553

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/16/2001	4:00	14.74	17.99	6.93	16.67	5521
6/16/2001	4:30	14.75	17.99	6.89	16.63	5449
6/16/2001	5:00	14.75	18.01	6.92	16.66	5496
6/16/2001	5:30	14.74	18.04	6.99	16.73	5623
6/16/2001	6:00	14.73	18.07	7.07	16.81	5749
6/16/2001	6:30	14.73	18.07	7.05	16.79	5717
6/16/2001	7:00	14.74	18.07	7.01	16.75	5645
6/16/2001	7:30	14.73	18.07	7.01	16.75	5652
6/16/2001	8:00	14.72	18.05	6.97	16.71	5580
6/16/2001	8:30	14.71	18.05	6.97	16.71	5587
6/16/2001	9:00	14.70	18.05	6.98	16.72	5595
6/16/2001	9:30	14.69	18.05	6.98	16.72	5602
6/16/2001	10:00	14.69	18.05	6.96	16.70	5570
6/16/2001	10:30	14.67	18.04	6.97	16.71	5577
6/16/2001	11:00	14.67	18.02	6.90	16.64	5466
6/16/2001	11:30	14.65	18.02	6.93	16.67	5513
6/16/2001	12:00	14.64	18.01	6.91	16.65	5480
6/16/2001	12:30	14.62	18.03	6.98	16.72	5607
6/16/2001	13:00	14.62	18.02	6.94	16.68	5535
6/16/2001	13:30	14.61	18.01	6.92	16.66	5502
6/16/2001	14:00	14.61	18	6.88	16.62	5430
6/16/2001	14:30	14.61	17.99	6.84	16.58	5358
6/16/2001	15:00	14.61	17.99	6.82	16.56	5326
6/16/2001	15:30	14.60	17.99	6.83	16.57	5333
6/16/2001	16:00	14.60	17.97	6.76	16.50	5222
6/16/2001	16:30	14.60	17.96	6.72	16.46	5150
6/16/2001	17:00	14.60	17.96	6.70	16.44	5118
6/16/2001	17:30	14.62	17.95	6.61	16.35	4966
6/16/2001	18:00	14.65	17.96	6.55	16.29	4855
6/16/2001	18:30	14.66	17.95	6.48	16.22	4743
6/16/2001	19:00	14.66	17.94	6.44	16.18	4671
6/16/2001	19:30	14.67	17.94	6.40	16.14	4599
6/16/2001	20:00	14.69	17.94	6.34	16.08	4560
6/16/2001	20:30	14.69	17.94	6.32	16.06	4549
6/16/2001	21:00	14.70	17.92	6.23	15.97	4496
6/16/2001	21:30	14.71	17.91	6.16	15.90	4458
6/16/2001	22:00	14.72	17.91	6.12	15.86	4433
6/16/2001	22:30	14.72	17.91	6.10	15.84	4421
6/16/2001	23:00	14.72	17.93	6.13	15.87	4438
6/16/2001	23:30	14.72	17.96	6.18	15.92	4468
6/17/2001	0:00	14.72	17.97	6.19	15.93	4470
6/17/2001	0:30	14.73	18	6.21	15.95	4487
6/17/2001	1:00	14.73	18.02	6.24	15.98	4503



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/17/2001	1:30	14.73	18.08	6.36	16.10	4574
6/17/2001	2:00	14.73	18.22	6.66	16.40	5052
6/17/2001	2:30	14.73	18.3	6.83	16.57	5337
6/17/2001	3:00	14.73	18.31	6.83	16.57	5344
6/17/2001	3:30	14.72	18.28	6.77	16.51	5233
6/17/2001	4:00	14.72	18.28	6.75	16.49	5200
6/17/2001	4:30	14.72	18.27	6.71	16.45	5128
6/17/2001	5:00	14.72	18.26	6.67	16.41	5056
6/17/2001	5:30	14.72	18.26	6.65	16.39	5024
6/17/2001	6:00	14.71	18.26	6.65	16.39	5031
6/17/2001	6:30	14.70	18.25	6.63	16.37	4999
6/17/2001	7:00	14.69	18.25	6.64	16.38	5006
6/17/2001	7:30	14.68	18.25	6.64	16.38	5014
6/17/2001	8:00	14.67	18.24	6.62	16.36	4981
6/17/2001	8:30	14.67	18.22	6.56	16.30	4870
6/17/2001	9:00	14.66	18.22	6.56	16.30	4877
6/17/2001	9:30	14.65	18.21	6.54	16.28	4845
6/17/2001	10:00	14.65	18.2	6.50	16.24	4773
6/17/2001	10:30	14.65	18.2	6.48	16.22	4741
6/17/2001	11:00	14.65	18.2	6.46	16.20	4708
6/17/2001	11:30	14.65	18.2	6.44	16.18	4676
6/17/2001	12:00	14.65	18.2	6.43	16.17	4644
6/17/2001	12:30	14.65	18.2	6.41	16.15	4611
6/17/2001	13:00	14.67	18.19	6.32	16.06	4551
6/17/2001	13:07	-	-	-	<b>16.06</b>	4551
6/17/2001	13:30	14.66	18.18	8.10	16.06	4550
6/17/2001	14:00	14.67	18.18	8.07	16.03	4535
6/17/2001	14:30	14.66	18.17	8.07	16.03	4534
6/17/2001	15:00	14.65	18.17	8.09	16.05	4547
6/17/2001	15:30	14.63	18.16	8.11	16.07	4560
6/17/2001	16:00	14.61	18.15	8.14	16.10	4572
6/17/2001	16:30	14.61	18.14	8.11	16.07	4558
6/17/2001	17:00	14.61	18.14	8.11	16.07	4557
6/17/2001	17:30	14.62	18.14	8.08	16.04	4542
6/17/2001	18:00	14.61	18.12	8.06	16.02	4527
6/17/2001	18:30	14.61	18.11	8.04	16.00	4512
6/17/2001	19:00	14.62	18.11	8.01	15.97	4498
6/17/2001	19:30	14.63	18.1	7.96	15.92	4469
6/17/2001	20:00	14.63	18.09	7.94	15.90	4454
6/17/2001	20:30	14.64	18.08	7.89	15.85	4426
6/17/2001	21:00	14.63	18.08	7.91	15.87	4439
6/17/2001	21:30	14.64	18.06	7.84	15.80	4396
6/17/2001	22:00	14.64	18.05	7.82	15.78	4382

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/17/2001	22:30	14.63	18.04	7.82	15.78	4381
6/17/2001	23:00	14.63	18.03	7.79	15.75	4366
6/17/2001	23:30	14.63	18.02	7.77	15.73	4351
6/18/2001	0:00	14.62	18.01	7.76	15.72	4350
6/18/2001	0:30	14.62	18.01	7.76	15.72	4349
6/18/2001	1:00	14.61	17.99	7.74	15.70	4335
6/18/2001	1:30	14.61	17.99	7.74	15.70	4334
6/18/2001	2:00	14.61	17.98	7.71	15.67	4319
6/18/2001	2:30	14.60	17.97	7.71	15.67	4318
6/18/2001	3:00	14.60	17.96	7.69	15.65	4303
6/18/2001	3:30	14.60	17.96	7.68	15.64	4302
6/18/2001	4:00	14.59	17.94	7.66	15.62	4287
6/18/2001	4:30	14.58	17.94	7.68	15.64	4300
6/18/2001	5:00	14.58	17.93	7.66	15.62	4285
6/18/2001	5:30	14.58	17.93	7.65	15.61	4284
6/18/2001	6:00	14.58	17.92	7.63	15.59	4270
6/18/2001	6:30	14.59	17.92	7.61	15.57	4255
6/18/2001	7:00	14.60	17.92	7.58	15.54	4240
6/18/2001	7:30	14.61	17.92	7.56	15.52	4226
6/18/2001	8:00	14.61	17.92	7.55	15.51	4225
6/18/2001	8:30	14.62	17.92	7.53	15.49	4210
6/18/2001	9:00	14.62	17.92	7.53	15.49	4209
6/18/2001	9:30	14.63	17.92	7.50	15.46	4194
6/18/2001	10:00	14.70	17.92	7.34	15.30	4097
6/18/2001	10:30	14.61	17.92	7.55	15.51	4220
6/18/2001	11:00	14.57	17.92	7.64	15.60	4274
6/18/2001	11:30	14.14	17.91	8.60	16.56	5326
6/18/2001	12:00	14.13	17.91	8.62	16.58	5363
6/18/2001	12:30	14.24	17.92	8.39	16.35	4963
6/18/2001	13:00	14.20	17.91	8.46	16.42	5079
6/18/2001	13:30	14.15	17.91	8.57	16.53	5275
6/18/2001	14:00	14.12	17.91	8.64	16.60	5391
6/18/2001	14:30	14.10	17.91	8.68	16.64	5468
6/18/2001	15:00	14.11	17.91	8.66	16.62	5425
6/18/2001	15:30	14.11	17.91	8.66	16.62	5422
6/18/2001	16:00	14.13	17.91	8.61	16.57	5340
6/18/2001	16:30	14.12	17.91	8.63	16.59	5377
6/18/2001	17:00	14.12	17.91	8.63	16.59	5374
6/18/2001	17:30	14.14	17.9	8.56	16.52	5252
6/18/2001	18:00	14.13	17.9	8.58	16.54	5289
6/18/2001	18:30	14.16	17.9	8.51	16.47	5167
6/18/2001	19:00	14.20	17.9	8.42	16.38	5006
6/18/2001	19:30	14.26	17.9	8.28	16.24	4765

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/18/2001	20:00	14.27	17.9	8.25	16.21	4723
6/18/2001	20:30	14.28	17.9	8.23	16.19	4680
6/18/2001	21:00	14.29	17.89	8.18	16.14	4599
6/18/2001	21:30	14.27	17.88	8.20	16.16	4635
6/18/2001	22:00	14.28	17.88	8.18	16.14	4597
6/18/2001	22:30	14.35	17.88	8.01	15.97	4499
6/18/2001	23:00	14.35	17.87	7.99	15.95	4484
6/18/2001	23:30	14.38	17.87	7.92	15.88	4442
6/19/2001	0:00	14.38	17.87	7.92	15.88	4441
6/19/2001	0:30	14.35	17.86	7.96	15.92	4468
6/19/2001	1:00	14.37	17.86	7.91	15.87	4439
6/19/2001	1:30	14.39	17.85	7.84	15.80	4397
6/19/2001	2:00	14.38	17.85	7.86	15.82	4410
6/19/2001	2:30	14.34	17.85	7.95	15.91	4464
6/19/2001	3:00	14.34	17.84	7.93	15.89	4449
6/19/2001	3:30	14.34	17.83	7.91	15.87	4434
6/19/2001	4:00	14.35	17.83	7.88	15.84	4420
6/19/2001	4:30	14.35	17.82	7.86	15.82	4405
6/19/2001	5:00	14.35	17.82	7.85	15.81	4404
6/19/2001	5:30	14.39	17.81	7.74	15.70	4334
6/19/2001	6:00	14.38	17.8	7.74	15.70	4333
6/19/2001	6:30	14.35	17.79	7.78	15.74	4360
6/19/2001	7:00	14.35	17.79	7.78	15.74	4359
6/19/2001	7:30	14.37	17.78	7.71	15.67	4316
6/19/2001	8:00	14.35	17.77	7.73	15.69	4329
6/19/2001	8:30	14.35	17.77	7.73	15.69	4328
6/19/2001	9:00	14.34	17.76	7.73	15.69	4327
6/19/2001	9:30	14.33	17.76	7.75	15.71	4340
6/19/2001	10:00	14.30	17.75	7.79	15.75	4367
6/19/2001	10:30	14.25	17.74	7.88	15.84	4421
6/19/2001	11:00	14.25	17.73	7.86	15.82	4406
6/19/2001	11:30	14.19	17.72	7.97	15.93	4474
6/19/2001	12:00	14.20	17.71	7.92	15.88	4445
6/19/2001	12:30	14.19	17.7	7.92	15.88	4444
6/19/2001	13:00	14.16	17.7	7.99	15.95	4485
6/19/2001	13:30	14.17	17.69	7.94	15.90	4456
6/19/2001	14:00	14.18	17.68	7.89	15.85	4428
6/19/2001	14:30	14.17	17.67	7.89	15.85	4427
6/19/2001	15:00	14.17	17.66	7.87	15.83	4412
6/19/2001	15:30	14.19	17.65	7.80	15.76	4370
6/19/2001	16:00	14.18	17.65	7.82	15.78	4383
6/19/2001	16:30	14.13	17.64	7.91	15.87	4437
6/19/2001	17:00	14.20	17.62	7.70	15.66	4312

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/19/2001	17:30	14.20	17.62	7.70	15.66	4311
6/19/2001	18:00	14.23	17.62	7.63	15.59	4269
6/19/2001	18:30	14.21	17.6	7.63	15.59	4268
6/19/2001	19:00	14.24	17.59	7.53	15.49	4212
6/19/2001	19:30	14.24	17.59	7.53	15.49	4211
6/19/2001	20:00	14.26	17.58	7.46	15.42	4168
6/19/2001	20:30	14.24	17.57	7.48	15.44	4181
6/19/2001	21:00	14.25	17.57	7.46	15.42	4166
6/19/2001	21:30	14.26	17.56	7.41	15.37	4138
6/19/2001	22:00	14.23	17.56	7.48	15.44	4178
6/19/2001	22:30	14.24	17.56	7.45	15.41	4163
6/19/2001	23:00	14.25	17.55	7.40	15.36	4135
6/19/2001	23:30	14.23	17.55	7.45	15.41	4161
6/20/2001	0:00	14.27	17.55	7.36	15.32	4105
6/20/2001	0:30	14.32	17.54	7.22	15.18	4022
6/20/2001	1:00	14.30	17.53	7.24	15.20	4035
6/20/2001	1:30	14.30	17.53	7.24	15.20	4034
6/20/2001	2:00	14.30	17.53	7.23	15.19	4033
6/20/2001	2:30	14.30	17.52	7.21	15.17	4018
6/20/2001	3:00	14.29	17.51	7.21	15.17	4017
6/20/2001	3:30	14.28	17.5	7.21	15.17	4016
6/20/2001	4:00	14.29	17.5	7.18	15.14	4001
6/20/2001	4:30	14.33	17.5	7.09	15.05	3945
6/20/2001	5:00	14.33	17.5	7.09	15.05	3944
6/20/2001	5:30	14.22	17.49	7.31	15.27	4081
6/20/2001	6:00	14.21	17.48	7.31	15.27	4080
6/20/2001	6:30	14.21	17.48	7.31	15.27	4079
6/20/2001	7:00	14.22	17.47	7.26	15.22	4050
6/20/2001	7:30	14.21	17.47	7.28	15.24	4063
6/20/2001	8:00	14.20	17.47	7.31	15.27	4076
6/20/2001	8:30	14.20	17.46	7.28	15.24	4061
6/20/2001	9:00	14.20	17.45	7.26	15.22	4047
6/20/2001	9:30	14.22	17.45	7.21	15.17	4018
6/20/2001	10:00	14.23	17.45	7.18	15.14	4003
6/20/2001	10:30	14.23	17.45	7.18	15.14	4002
6/20/2001	11:00	14.23	17.45	7.18	15.14	4001
6/20/2001	11:30	14.23	17.45	7.18	15.14	4000
6/20/2001	12:00	14.23	17.45	7.18	15.14	3999
6/20/2001	12:30	14.24	17.45	7.15	15.11	3985
6/20/2001	13:00	14.24	17.45	7.15	15.11	3984
6/20/2001	13:30	14.23	17.44	7.15	15.11	3983
6/20/2001	14:00	14.23	17.44	7.15	15.11	3982
6/20/2001	14:30	14.24	17.44	7.12	15.08	3967

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/20/2001	15:00	14.25	17.44	7.10	15.06	3952
6/20/2001	15:30	14.25	17.44	7.10	15.06	3951
6/20/2001	16:00	14.25	17.44	7.10	15.06	3950
6/20/2001	16:30	14.27	17.43	7.03	14.99	3907
6/20/2001	17:00	14.28	17.43	7.00	14.96	3889
6/20/2001	17:30	14.28	17.42	6.98	14.94	3872
6/20/2001	18:00	14.30	17.42	6.93	14.89	3838
6/20/2001	18:30	14.29	17.42	6.95	14.91	3853
6/20/2001	19:00	14.29	17.42	6.95	14.91	3852
6/20/2001	19:30	14.29	17.42	6.95	14.91	3851
6/20/2001	20:00	14.30	17.41	6.90	14.86	3818
6/20/2001	20:30	14.30	17.41	6.90	14.86	3816
6/20/2001	21:00	14.30	17.4	6.87	14.83	3799
6/20/2001	21:30	14.30	17.4	6.87	14.83	3798
6/20/2001	22:00	14.31	17.4	6.85	14.81	3781
6/20/2001	22:30	14.31	17.4	6.85	14.81	3779
6/20/2001	23:00	14.31	17.4	6.84	14.80	3778
6/20/2001	23:30	14.32	17.39	6.80	14.76	3745
6/21/2001	0:00	14.33	17.39	6.77	14.73	3727
6/21/2001	0:30	14.33	17.39	6.77	14.73	3726
6/21/2001	1:00	14.33	17.39	6.77	14.73	3725
6/21/2001	1:30	14.35	17.39	6.72	14.68	3692
6/21/2001	2:00	14.34	17.4	6.76	14.72	3723
6/21/2001	2:30	14.35	17.4	6.74	14.70	3705
6/21/2001	3:00	14.35	17.4	6.74	14.70	3704
6/21/2001	3:30	14.35	17.4	6.74	14.70	3703
6/21/2001	4:00	14.36	17.4	6.71	14.67	3686
6/21/2001	4:30	14.36	17.39	6.69	14.65	3668
6/21/2001	5:00	14.36	17.39	6.69	14.65	3667
6/21/2001	5:30	14.37	17.39	6.66	14.62	3650
6/21/2001	6:00	14.37	17.39	6.66	14.62	3649
6/21/2001	6:30	14.37	17.39	6.66	14.62	3648
6/21/2001	7:00	14.37	17.39	6.66	14.62	3647
6/21/2001	7:30	14.38	17.39	6.63	14.59	3629
6/21/2001	8:00	14.38	17.39	6.63	14.59	3628
6/21/2001	8:30	14.37	17.39	6.65	14.61	3643
6/21/2001	9:00	14.36	17.38	6.65	14.61	3642
6/21/2001	9:30	14.36	17.38	6.65	14.61	3641
6/21/2001	10:00	14.35	17.38	6.67	14.63	3656
6/21/2001	10:30	14.35	17.38	6.67	14.63	3655
6/21/2001	11:00	14.36	17.38	6.64	14.60	3637
6/21/2001	11:30	14.37	17.38	6.62	14.58	3620
6/21/2001	12:00	14.35	17.37	6.64	14.60	3635

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/21/2001	12:30	14.35	17.37	6.64	14.60	3634
6/21/2001	13:00	14.35	17.36	6.61	14.57	3617
6/21/2001	13:30	14.35	17.36	6.61	14.57	3615
6/21/2001	14:00	14.36	17.36	6.59	14.55	3598
6/21/2001	14:30	14.36	17.36	6.59	14.55	3597
6/21/2001	15:00	14.39	17.36	6.52	14.48	3547
6/21/2001	15:30	14.40	17.36	6.49	14.45	3530
6/21/2001	16:00	14.43	17.36	6.42	14.38	3480
6/21/2001	16:30	14.43	17.36	6.42	14.38	3479
6/21/2001	17:00	14.45	17.35	6.35	14.31	3429
6/21/2001	17:30	14.45	17.34	6.32	14.28	3412
6/21/2001	18:00	14.45	17.34	6.32	14.28	3411
6/21/2001	18:30	14.43	17.34	6.37	14.33	3442
6/21/2001	19:00	14.45	17.33	6.30	14.26	3392
6/21/2001	19:30	14.44	17.33	6.32	14.28	3407
6/21/2001	20:00	14.45	17.33	6.29	14.25	3390
6/21/2001	20:30	14.46	17.32	6.24	14.20	3356
6/21/2001	21:00	14.47	17.32	6.22	14.18	3339
6/21/2001	21:30	14.46	17.32	6.24	14.20	3354
6/21/2001	22:00	14.46	17.32	6.24	14.20	3353
6/21/2001	22:30	14.47	17.32	6.21	14.17	3336
6/21/2001	23:00	14.50	17.32	6.14	14.10	3286
6/21/2001	23:30	14.50	17.32	6.14	14.10	3285
6/22/2001	0:00	14.52	17.31	6.07	14.03	3235
6/22/2001	0:30	14.52	17.31	6.07	14.03	3234
6/22/2001	1:00	14.54	17.31	6.02	13.98	3199
6/22/2001	1:30	14.55	17.3	5.97	13.93	3162
6/22/2001	2:00	14.53	17.3	6.02	13.98	3196
6/22/2001	2:30	14.57	17.3	5.93	13.89	3123
6/22/2001	3:00	14.62	17.3	5.81	13.77	3032
6/22/2001	3:30	14.59	17.3	5.88	13.84	3085
6/22/2001	4:00	14.64	17.3	5.76	13.72	2994
6/22/2001	4:30	14.57	17.3	5.92	13.88	3118
6/22/2001	5:00	14.60	17.3	5.85	13.81	3063
6/22/2001	5:30	14.69	17.3	5.64	13.60	2901
6/22/2001	6:00	14.69	17.3	5.64	13.60	2899
6/22/2001	6:30	14.69	17.3	5.64	13.60	2898
6/22/2001	7:00	14.69	17.3	5.63	13.59	2897
6/22/2001	7:30	14.67	17.3	5.68	13.64	2931
6/22/2001	8:00	14.67	17.3	5.68	13.64	2930
6/22/2001	8:30	14.66	17.29	5.68	13.64	2929
6/22/2001	9:00	14.65	17.3	5.72	13.68	2963
6/22/2001	9:30	14.65	17.3	5.72	13.68	2962

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/22/2001	10:00	14.63	17.29	5.74	13.70	2979
6/22/2001	10:30	14.63	17.29	5.74	13.70	2978
6/22/2001	11:00	14.62	17.29	5.76	13.72	2994
6/22/2001	11:30	14.62	17.28	5.74	13.70	2975
6/22/2001	12:00	14.61	17.28	5.76	13.72	2992
6/22/2001	12:30	14.60	17.27	5.76	13.72	2990
6/22/2001	13:00	14.61	17.27	5.73	13.69	2971
6/22/2001	13:30	14.60	17.27	5.75	13.71	2988
6/22/2001	14:00	14.60	17.27	5.75	13.71	2987
6/22/2001	14:30	14.59	17.27	5.77	13.73	3003
6/22/2001	15:00	14.59	17.26	5.75	13.71	2984
6/22/2001	15:30	14.59	17.26	5.75	13.71	2983
6/22/2001	16:00	14.59	17.26	5.74	13.70	2982
6/22/2001	16:30	14.59	17.25	5.72	13.68	2962
6/22/2001	17:00	14.60	17.25	5.69	13.65	2943
6/22/2001	17:30	14.61	17.25	5.67	13.63	2924
6/22/2001	18:00	14.61	17.24	5.65	13.61	2905
6/22/2001	18:30	14.62	17.24	5.62	13.58	2886
6/22/2001	19:00	14.61	17.24	5.64	13.60	2902
6/22/2001	19:30	14.62	17.24	5.62	13.58	2883
6/22/2001	20:00	14.62	17.24	5.62	13.58	2882
6/22/2001	20:30	14.62	17.24	5.61	13.57	2880
6/22/2001	21:00	14.62	17.23	5.59	13.55	2861
6/22/2001	21:30	14.63	17.23	5.56	13.52	2842
6/22/2001	22:00	14.64	17.23	5.54	13.50	2823
6/22/2001	22:30	14.64	17.22	5.52	13.48	2804
6/22/2001	23:00	14.65	17.22	5.49	13.45	2784
6/22/2001	23:30	14.65	17.21	5.47	13.43	2765
6/23/2001	0:00	14.66	17.21	5.44	13.40	2746
6/23/2001	0:30	14.67	17.21	5.42	13.38	2727
6/23/2001	1:00	14.67	17.21	5.42	13.38	2726
6/23/2001	1:30	14.67	17.21	5.41	13.37	2724
6/23/2001	2:00	14.67	17.21	5.41	13.37	2723
6/23/2001	2:30	14.67	17.2	5.39	13.35	2704
6/23/2001	3:00	14.67	17.2	5.39	13.35	2703
6/23/2001	3:30	14.68	17.19	5.34	13.30	2665
6/23/2001	4:00	14.68	17.19	5.34	13.30	2664
6/23/2001	4:30	14.68	17.19	5.33	13.29	2663
6/23/2001	5:00	14.67	17.19	5.36	13.32	2680
6/23/2001	5:30	14.66	17.18	5.35	13.31	2678
6/23/2001	6:00	14.66	17.18	5.35	13.31	2677
6/23/2001	6:30	14.65	17.17	5.35	13.31	2676
6/23/2001	7:00	14.64	17.17	5.37	13.33	2692

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/23/2001	7:30	14.63	17.17	5.39	13.35	2709
6/23/2001	8:00	14.62	17.16	5.39	13.35	2708
6/23/2001	8:30	14.61	17.16	5.41	13.37	2724
6/23/2001	9:00	14.60	17.16	5.44	13.40	2741
6/23/2001	9:30	14.59	17.16	5.46	13.42	2758
6/23/2001	10:00	14.58	17.15	5.45	13.41	2757
6/23/2001	10:30	14.57	17.15	5.48	13.44	2773
6/23/2001	11:00	14.56	17.14	5.47	13.43	2772
6/23/2001	11:30	14.56	17.13	5.45	13.41	2753
6/23/2001	12:00	14.55	17.13	5.47	13.43	2769
6/23/2001	12:30	14.55	17.13	5.47	13.43	2768
6/23/2001	13:00	14.54	17.13	5.49	13.45	2785
6/23/2001	13:30	14.53	17.12	5.49	13.45	2784
6/23/2001	14:00	14.53	17.12	5.49	13.45	2782
6/23/2001	14:30	14.52	17.11	5.49	13.45	2781
6/23/2001	15:00	14.52	17.11	5.48	13.44	2780
6/23/2001	15:30	14.52	17.1	5.46	13.42	2761
6/23/2001	16:00	14.52	17.1	5.46	13.42	2759
6/23/2001	16:30	14.52	17.09	5.43	13.39	2740
6/23/2001	17:00	14.52	17.09	5.43	13.39	2739
6/23/2001	17:30	14.52	17.08	5.41	13.37	2720
6/23/2001	18:00	14.52	17.08	5.41	13.37	2718
6/23/2001	18:30	14.52	17.07	5.38	13.34	2699
6/23/2001	19:00	14.53	17.07	5.36	13.32	2680
6/23/2001	19:30	14.54	17.07	5.33	13.29	2661
6/23/2001	20:00	14.54	17.07	5.33	13.29	2659
6/23/2001	20:30	14.54	17.06	5.31	13.27	2640
6/23/2001	21:00	14.54	17.06	5.30	13.26	2639
6/23/2001	21:30	14.55	17.05	5.26	13.22	2602
6/23/2001	22:00	14.55	17.05	5.25	13.21	2601
6/23/2001	22:30	14.56	17.05	5.23	13.19	2581
6/23/2001	23:00	14.56	17.04	5.21	13.17	2562
6/23/2001	23:30	14.56	17.04	5.20	13.16	2561
6/24/2001	0:00	14.57	17.04	5.18	13.14	2542
6/24/2001	0:30	14.57	17.03	5.15	13.11	2523
6/24/2001	1:00	14.57	17.03	5.15	13.11	2521
6/24/2001	1:30	14.57	17.03	5.15	13.11	2520
6/24/2001	2:00	14.58	17.03	5.13	13.09	2501
6/24/2001	2:30	14.59	17.02	5.08	13.04	2464
6/24/2001	3:00	14.59	17.02	5.08	13.04	2462
6/24/2001	3:30	14.59	17.01	5.05	13.01	2443
6/24/2001	4:00	14.58	17.01	5.07	13.03	2460
6/24/2001	4:30	14.58	17.01	5.07	13.03	2459



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/24/2001	5:00	14.57	17.01	5.09	13.05	2475
6/24/2001	5:30	14.57	17.01	5.09	13.05	2474
6/24/2001	6:00	14.57	17.01	5.09	13.05	2473
6/24/2001	6:30	14.56	17	5.09	13.05	2471
6/24/2001	7:00	14.55	17	5.11	13.07	2488
6/24/2001	7:30	14.55	16.99	5.09	13.05	2469
6/24/2001	8:00	14.53	16.98	5.11	13.07	2486
6/24/2001	8:30	14.52	16.98	5.13	13.09	2502
6/24/2001	9:00	14.52	16.98	5.13	13.09	2501
6/24/2001	9:30	14.51	16.98	5.15	13.11	2518
6/24/2001	10:00	14.50	16.98	5.17	13.13	2534
6/24/2001	10:30	14.50	16.97	5.15	13.11	2515
6/24/2001	11:00	14.49	16.96	5.14	13.10	2514
6/24/2001	11:30	14.48	16.95	5.14	13.10	2513
6/24/2001	12:00	14.47	16.95	5.16	13.12	2529
6/24/2001	12:30	14.47	16.95	5.16	13.12	2528
6/24/2001	13:00	14.47	16.95	5.16	13.12	2527
6/24/2001	13:30	14.46	16.95	5.18	13.14	2543
6/24/2001	14:00	14.46	16.94	5.16	13.12	2524
6/24/2001	14:30	14.46	16.94	5.16	13.12	2523
6/24/2001	15:00	14.46	16.93	5.13	13.09	2504
6/24/2001	15:30	14.46	16.93	5.13	13.09	2502
6/24/2001	16:00	14.45	16.93	5.15	13.11	2519
6/24/2001	16:30	14.45	16.93	5.15	13.11	2518
6/24/2001	17:00	14.45	16.92	5.12	13.08	2499
6/24/2001	17:30	14.45	16.92	5.12	13.08	2497
6/24/2001	18:00	14.46	16.91	5.07	13.03	2460
6/24/2001	18:30	14.47	16.91	5.05	13.01	2441
6/24/2001	19:00	14.47	16.91	5.05	13.01	2440
6/24/2001	19:30	14.47	16.91	5.05	13.01	2438
6/24/2001	20:00	14.47	16.9	5.02	12.98	2419
6/24/2001	20:30	14.48	16.9	5.00	12.96	2398
6/24/2001	21:00	14.48	16.9	5.00	12.96	2397
6/24/2001	21:30	14.48	16.9	4.99	12.95	2396
6/24/2001	22:00	14.50	16.9	4.95	12.91	2357
6/24/2001	22:30	14.50	16.89	4.92	12.88	2337
6/24/2001	23:00	14.50	16.89	4.92	12.88	2335
6/24/2001	23:30	14.51	16.89	4.90	12.86	2315
6/25/2001	0:00	14.51	16.89	4.89	12.85	2314
6/25/2001	0:30	14.52	16.89	4.87	12.83	2294
6/25/2001	1:00	14.52	16.89	4.87	12.83	2292
6/25/2001	1:30	14.53	16.89	4.84	12.80	2272
6/25/2001	2:00	14.54	16.89	4.82	12.78	2252

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/25/2001	2:30	14.56	16.91	4.82	12.78	2251
6/25/2001	3:00	14.57	16.9	4.77	12.73	2212
6/25/2001	3:30	14.56	16.9	4.79	12.75	2229
6/25/2001	4:00	14.56	16.9	4.79	12.75	2228
6/25/2001	4:30	14.55	16.89	4.79	12.75	2227
6/25/2001	5:00	14.56	16.89	4.76	12.72	2206
6/25/2001	5:30	14.56	16.91	4.81	12.77	2243
6/25/2001	6:00	14.55	16.91	4.83	12.79	2260
6/25/2001	6:30	14.55	16.92	4.85	12.81	2278
6/25/2001	7:00	14.54	16.92	4.87	12.83	2295
6/25/2001	7:30	14.54	16.92	4.87	12.83	2294
6/25/2001	8:00	14.53	16.93	4.91	12.87	2330
6/25/2001	8:30	14.52	16.93	4.94	12.90	2348
6/25/2001	9:00	14.54	16.93	4.89	12.85	2309
6/25/2001	9:30	14.57	16.93	4.82	12.78	2251
6/25/2001	10:00	14.55	16.94	4.88	12.84	2306
6/25/2001	10:30	14.55	16.94	4.88	12.84	2305
6/25/2001	11:00	14.57	16.95	4.86	12.82	2285
6/25/2001	11:30	14.58	16.95	4.83	12.79	2264
6/25/2001	12:00	14.60	16.95	4.79	12.75	2225
6/25/2001	12:30	14.60	16.95	4.78	12.74	2224
6/25/2001	13:00	14.60	16.96	4.81	12.77	2242
6/25/2001	13:30	14.60	16.96	4.80	12.76	2240
6/25/2001	14:00	14.60	16.96	4.80	12.76	2239
6/25/2001	14:30	14.61	16.97	4.80	12.76	2238
6/25/2001	15:00	14.62	16.97	4.78	12.74	2217
6/25/2001	15:30	14.60	16.97	4.82	12.78	2254
6/25/2001	16:00	14.61	16.97	4.80	12.76	2234
6/25/2001	16:30	14.62	16.98	4.79	12.75	2232
6/25/2001	17:00	14.61	16.98	4.82	12.78	2250
6/25/2001	17:30	14.62	16.98	4.79	12.75	2230
6/25/2001	18:00	14.64	16.98	4.74	12.70	2191
6/25/2001	18:30	14.65	16.98	4.72	12.68	2171
6/25/2001	19:00	14.65	16.98	4.72	12.68	2169
6/25/2001	19:30	14.66	16.98	4.69	12.65	2149
6/25/2001	20:00	14.68	16.98	4.65	12.61	2110
6/25/2001	20:30	14.69	16.98	4.62	12.58	2090
6/25/2001	21:00	14.69	16.98	4.62	12.58	2089
6/25/2001	21:30	14.69	16.98	4.62	12.58	2087
6/25/2001	22:00	14.70	16.98	4.59	12.55	2067
6/25/2001	22:30	14.71	16.98	4.57	12.53	2047
6/25/2001	23:00	14.71	16.98	4.57	12.53	2046
6/25/2001	23:30	14.71	16.98	4.56	12.52	2044

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/26/2001	0:00	14.71	16.98	4.56	12.52	2043
6/26/2001	0:30	14.70	16.98	4.58	12.54	2060
6/26/2001	1:00	14.70	16.98	4.58	12.54	2059
6/26/2001	1:30	14.71	16.98	4.56	12.52	2039
6/26/2001	2:00	14.72	16.98	4.53	12.49	2019
6/26/2001	2:30	14.71	16.97	4.53	12.49	2017
6/26/2001	3:00	14.72	16.97	4.51	12.47	1997
6/26/2001	3:30	14.72	16.97	4.51	12.47	1996
6/26/2001	4:00	14.72	16.98	4.53	12.49	2013
6/26/2001	4:30	14.72	16.97	4.50	12.46	1993
6/26/2001	5:00	14.72	16.96	4.48	12.44	1973
6/26/2001	5:30	14.72	16.97	4.50	12.46	1991
6/26/2001	6:00	14.72	16.96	4.47	12.43	1971
6/26/2001	6:30	14.72	16.95	4.45	12.41	1950
6/26/2001	7:00	14.72	16.95	4.45	12.41	1949
6/26/2001	7:30	14.71	16.95	4.47	12.43	1967
6/26/2001	8:00	14.70	16.95	4.49	12.45	1984
6/26/2001	8:30	14.70	16.95	4.49	12.45	1983
6/26/2001	9:00	14.69	16.95	4.51	12.47	2000
6/26/2001	9:30	14.67	16.94	4.53	12.49	2018
6/26/2001	10:00	14.67	16.94	4.53	12.49	2016
6/26/2001	10:30	14.67	16.93	4.51	12.47	1996
6/26/2001	11:00	14.66	16.93	4.53	12.49	2014
6/26/2001	11:30	14.67	16.93	4.50	12.46	1994
6/26/2001	12:00	14.69	16.93	4.45	12.41	1955
6/26/2001	12:30	14.69	16.93	4.45	12.41	1953
6/26/2001	13:00	14.69	16.93	4.45	12.41	1952
6/26/2001	13:30	14.68	16.93	4.47	12.43	1969
6/26/2001	14:00	14.68	16.92	4.45	12.41	1949
6/26/2001	14:30	14.67	16.92	4.47	12.43	1967
6/26/2001	15:00	14.67	16.92	4.47	12.43	1965
6/26/2001	15:30	14.66	16.91	4.47	12.43	1964
6/26/2001	16:00	14.66	16.91	4.46	12.42	1963
6/26/2001	16:30	14.66	16.91	4.46	12.42	1961
6/26/2001	17:00	14.67	16.91	4.44	12.40	1941
6/26/2001	17:30	14.67	16.91	4.44	12.40	1940
6/26/2001	18:00	14.67	16.9	4.41	12.37	1920
6/26/2001	18:30	14.67	16.9	4.41	12.37	1918
6/26/2001	19:00	14.67	16.9	4.41	12.37	1917
6/26/2001	19:30	14.67	16.9	4.41	12.37	1916
6/26/2001	20:00	14.67	16.9	4.41	12.37	1914
6/26/2001	20:30	14.67	16.9	4.40	12.36	1913
6/26/2001	21:00	14.67	16.9	4.40	12.36	1912

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/26/2001	21:30	14.67	16.9	4.40	12.36	1910
6/26/2001	22:00	14.67	16.9	4.40	12.36	1909
6/26/2001	22:30	14.67	16.89	4.37	12.33	1889
6/26/2001	23:00	14.67	16.89	4.37	12.33	1888
6/26/2001	23:30	14.67	16.89	4.37	12.33	1886
6/27/2001	0:00	14.67	16.89	4.37	12.33	1885
6/27/2001	0:30	14.68	16.88	4.32	12.28	1846
6/27/2001	1:00	14.68	16.88	4.32	12.28	1845
6/27/2001	1:30	14.68	16.89	4.34	12.30	1862
6/27/2001	2:00	14.69	16.89	4.32	12.28	1842
6/27/2001	2:30	14.70	16.89	4.29	12.25	1822
6/27/2001	3:00	14.70	16.89	4.29	12.25	1821
6/27/2001	3:30	14.70	16.89	4.29	12.25	1819
6/27/2001	4:00	14.71	16.89	4.26	12.22	1799
6/27/2001	4:30	14.70	16.89	4.29	12.25	1817
6/27/2001	5:00	14.70	16.89	4.28	12.24	1815
6/27/2001	5:30	14.70	16.89	4.28	12.24	1814
6/27/2001	6:00	14.70	16.9	4.30	12.26	1831
6/27/2001	6:30	14.71	16.9	4.28	12.24	1811
6/27/2001	7:00	14.71	16.9	4.28	12.24	1810
6/27/2001	7:30	14.72	16.9	4.25	12.21	1790
6/27/2001	8:00	14.72	16.9	4.25	12.21	1788
6/27/2001	8:30	14.72	16.9	4.25	12.21	1787
6/27/2001	9:00	14.71	16.9	4.27	12.23	1805
6/27/2001	9:30	14.72	16.9	4.25	12.21	1784
6/27/2001	10:00	14.72	16.9	4.25	12.21	1783
6/27/2001	10:30	14.72	16.91	4.27	12.23	1801
6/27/2001	11:00	14.72	16.91	4.27	12.23	1799
6/27/2001	11:30	14.72	16.91	4.26	12.22	1798
6/27/2001	12:00	14.72	16.91	4.26	12.22	1797
6/27/2001	12:30	14.72	16.91	4.26	12.22	1795
6/27/2001	13:00	14.72	16.91	4.26	12.22	1794
6/27/2001	13:30	14.72	16.91	4.26	12.22	1793
6/27/2001	14:00	14.71	16.91	4.28	12.24	1810
6/27/2001	14:30	14.69	16.91	4.32	12.28	1846
6/27/2001	15:00	14.69	16.91	4.32	12.28	1845
6/27/2001	15:30	14.70	16.91	4.30	12.26	1825
6/27/2001	16:00	14.71	16.92	4.29	12.25	1824
6/27/2001	16:30	14.71	16.92	4.29	12.25	1822
6/27/2001	17:00	14.72	16.93	4.29	12.25	1821
6/27/2001	17:30	14.73	16.93	4.27	12.23	1801
6/27/2001	18:00	14.74	16.93	4.24	12.20	1781
6/27/2001	18:30	14.75	16.93	4.22	12.18	1760

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/27/2001	19:00	14.76	16.93	4.19	12.15	1740
6/27/2001	19:30	14.76	16.93	4.19	12.15	1739
6/27/2001	20:00	14.77	16.93	4.17	12.13	1719
6/27/2001	20:30	14.77	16.93	4.17	12.13	1718
6/27/2001	21:00	14.77	16.93	4.16	12.12	1716
6/27/2001	21:30	14.78	16.93	4.14	12.10	1696
6/27/2001	22:00	14.78	16.93	4.14	12.10	1695
6/27/2001	22:30	14.79	16.93	4.11	12.07	1675
6/27/2001	23:00	14.79	16.93	4.11	12.07	1673
6/27/2001	23:30	14.79	16.93	4.11	12.07	1672
6/28/2001	0:00	14.79	16.93	4.11	12.07	1671
6/28/2001	0:30	14.79	16.92	4.08	12.04	1650
6/28/2001	1:00	14.79	16.92	4.08	12.04	1649
6/28/2001	1:30	14.79	16.92	4.08	12.04	1648
6/28/2001	2:00	14.79	16.92	4.08	12.04	1646
6/28/2001	2:30	14.79	16.92	4.08	12.04	1645
6/28/2001	3:00	14.79	16.92	4.08	12.04	1644
6/28/2001	3:30	14.79	16.92	4.07	12.03	1642
6/28/2001	4:00	14.79	16.92	4.07	12.03	1641
6/28/2001	4:30	14.79	16.92	4.07	12.03	1640
6/28/2001	5:00	14.79	16.91	4.05	12.01	1620
6/28/2001	5:30	14.79	16.91	4.04	12.00	1618
6/28/2001	6:00	14.79	16.91	4.04	12.00	1617
6/28/2001	6:30	14.79	16.91	4.04	12.00	1616
6/28/2001	7:00	14.79	16.9	4.02	11.98	1596
6/28/2001	7:30	14.79	16.9	4.01	11.97	1595
6/28/2001	8:00	14.78	16.9	4.04	12.00	1612
6/28/2001	8:30	14.78	16.9	4.03	11.99	1610
6/28/2001	9:00	14.77	16.9	4.06	12.02	1628
6/28/2001	9:30	14.77	16.89	4.03	11.99	1608
6/28/2001	10:00	14.76	16.89	4.05	12.01	1625
6/28/2001	10:30	14.76	16.89	4.05	12.01	1624
6/28/2001	11:00	14.75	16.89	4.07	12.03	1641
6/28/2001	11:30	14.74	16.88	4.07	12.03	1640
6/28/2001	12:00	14.74	16.88	4.07	12.03	1639
6/28/2001	12:30	14.72	16.87	4.09	12.05	1656
6/28/2001	13:00	14.71	16.87	4.11	12.07	1674
6/28/2001	13:30	14.69	16.87	4.16	12.12	1710
6/28/2001	14:00	14.69	16.86	4.13	12.09	1690
6/28/2001	14:30	14.69	16.85	4.11	12.07	1670
6/28/2001	15:00	14.69	16.85	4.11	12.07	1668
6/28/2001	15:30	14.69	16.84	4.08	12.04	1648
6/28/2001	16:00	14.69	16.84	4.08	12.04	1647

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/28/2001	16:30	14.68	17.17	4.86	12.82	2285
6/28/2001	17:30	14.68	15.53	1.96	12.82	2282
6/28/2001	17:32	-	-	-	<b>12.82</b>	2286
6/28/2001	18:00	14.68	15.53	1.96	12.82	2282
6/28/2001	18:30	14.67	15.53	1.98	12.84	2300
6/28/2001	19:00	14.67	15.52	1.95	12.81	2281
6/28/2001	19:30	14.67	15.52	1.95	12.81	2281
6/28/2001	20:00	14.67	15.51	1.93	12.79	2261
6/28/2001	20:30	14.67	15.51	1.93	12.79	2261
6/28/2001	21:00	14.67	15.51	1.93	12.79	2261
6/28/2001	21:30	14.67	15.5	1.91	12.77	2241
6/28/2001	22:00	14.68	15.5	1.88	12.74	2222
6/28/2001	22:30	14.69	15.5	1.86	12.72	2203
6/28/2001	23:00	14.69	15.5	1.86	12.72	2202
6/28/2001	23:30	14.69	15.49	1.83	12.69	2183
6/29/2001	0:00	14.69	15.49	1.83	12.69	2183
6/29/2001	0:30	14.69	15.48	1.81	12.67	2163
6/29/2001	1:00	14.70	15.48	1.79	12.65	2144
6/29/2001	1:30	14.70	15.48	1.79	12.65	2144
6/29/2001	2:00	14.71	15.48	1.76	12.62	2124
6/29/2001	2:30	14.71	15.47	1.74	12.60	2105
6/29/2001	3:00	14.71	15.47	1.74	12.60	2105
6/29/2001	3:30	14.71	15.46	1.71	12.57	2085
6/29/2001	4:00	14.71	15.45	1.69	12.55	2066
6/29/2001	4:30	14.71	15.45	1.69	12.55	2066
6/29/2001	5:00	14.70	15.45	1.71	12.57	2084
6/29/2001	5:30	14.70	15.45	1.71	12.57	2084
6/29/2001	6:00	14.70	15.45	1.71	12.57	2083
6/29/2001	6:30	14.70	15.45	1.71	12.57	2083
6/29/2001	7:00	14.70	15.44	1.69	12.55	2063
6/29/2001	7:30	14.69	15.44	1.71	12.57	2082
6/29/2001	8:00	14.69	15.43	1.69	12.55	2063
6/29/2001	8:30	14.69	15.43	1.69	12.55	2062
6/29/2001	9:00	14.69	15.43	1.69	12.55	2062
6/29/2001	9:30	14.68	15.43	1.71	12.57	2080
6/29/2001	10:00	14.67	15.43	1.73	12.59	2098
6/29/2001	10:30	14.67	15.43	1.73	12.59	2098
6/29/2001	11:00	14.66	15.42	1.73	12.59	2098
6/29/2001	11:30	14.66	15.42	1.73	12.59	2097
6/29/2001	12:00	14.65	15.42	1.75	12.61	2116
6/29/2001	12:30	14.66	15.41	1.71	12.57	2077
6/29/2001	13:00	14.65	15.41	1.73	12.59	2096
6/29/2001	13:30	14.64	15.41	1.75	12.61	2114

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/29/2001	14:00	14.65	15.41	1.73	12.59	2095
6/29/2001	14:30	14.65	15.4	1.70	12.56	2076
6/29/2001	15:00	14.65	15.4	1.70	12.56	2075
6/29/2001	15:30	14.65	15.4	1.70	12.56	2075
6/29/2001	16:00	14.65	15.4	1.70	12.56	2074
6/29/2001	16:30	14.65	15.4	1.70	12.56	2074
6/29/2001	17:00	14.67	15.4	1.65	12.51	2036
6/29/2001	17:30	14.66	15.4	1.68	12.54	2054
6/29/2001	18:00	14.66	15.4	1.68	12.54	2054
6/29/2001	18:30	14.65	15.4	1.70	12.56	2072
6/29/2001	19:00	14.65	15.4	1.70	12.56	2072
6/29/2001	19:30	14.66	15.39	1.65	12.51	2034
6/29/2001	20:00	14.66	15.39	1.65	12.51	2033
6/29/2001	20:30	14.67	15.39	1.63	12.49	2014
6/29/2001	21:00	14.67	15.39	1.63	12.49	2013
6/29/2001	21:30	14.68	15.39	1.60	12.46	1994
6/29/2001	22:00	14.69	15.39	1.58	12.44	1975
6/29/2001	22:30	14.69	15.39	1.58	12.44	1974
6/29/2001	23:00	14.70	15.39	1.56	12.42	1955
6/29/2001	23:30	14.70	15.39	1.56	12.42	1955
6/30/2001	0:00	14.71	15.39	1.53	12.39	1936
6/30/2001	0:30	14.71	15.39	1.53	12.39	1935
6/30/2001	1:00	14.72	15.39	1.51	12.37	1916
6/30/2001	1:30	14.72	15.4	1.53	12.39	1934
6/30/2001	2:00	14.72	15.4	1.53	12.39	1934
6/30/2001	2:30	14.73	15.4	1.51	12.37	1914
6/30/2001	3:00	14.74	15.4	1.48	12.34	1895
6/30/2001	3:30	14.74	15.39	1.46	12.32	1876
6/30/2001	4:00	14.74	15.39	1.46	12.32	1876
6/30/2001	4:30	14.74	15.39	1.46	12.32	1875
6/30/2001	5:00	14.74	15.39	1.46	12.32	1875
6/30/2001	5:30	14.74	15.39	1.46	12.32	1874
6/30/2001	6:00	14.74	15.39	1.46	12.32	1874
6/30/2001	6:30	14.74	15.39	1.46	12.32	1873
6/30/2001	7:00	14.74	15.39	1.46	12.32	1873
6/30/2001	7:30	14.74	15.38	1.43	12.29	1854
6/30/2001	8:00	14.74	15.39	1.45	12.31	1872
6/30/2001	8:30	14.74	15.39	1.45	12.31	1872
6/30/2001	9:00	14.74	15.39	1.45	12.31	1871
6/30/2001	9:30	14.73	15.39	1.48	12.34	1889
6/30/2001	10:00	14.71	15.39	1.52	12.38	1927
6/30/2001	10:30	14.71	15.39	1.52	12.38	1926
6/30/2001	11:00	14.71	15.39	1.52	12.38	1926

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/30/2001	11:30	14.70	15.39	1.54	12.40	1944
6/30/2001	12:00	14.70	15.39	1.54	12.40	1944
6/30/2001	12:30	14.69	15.4	1.59	12.45	1981
6/30/2001	13:00	14.67	15.39	1.61	12.47	1999
6/30/2001	13:30	14.67	15.39	1.61	12.47	1999
6/30/2001	14:00	14.67	15.4	1.63	12.49	2017
6/30/2001	14:30	14.67	15.4	1.63	12.49	2017
6/30/2001	15:00	14.66	15.39	1.63	12.49	2016
6/30/2001	15:30	14.67	15.39	1.61	12.47	1997
6/30/2001	16:00	14.67	15.38	1.58	12.44	1978
6/30/2001	16:30	14.66	15.38	1.61	12.47	1996
6/30/2001	17:00	14.66	15.37	1.58	12.44	1977
6/30/2001	17:30	14.66	15.37	1.58	12.44	1977
6/30/2001	18:00	14.66	15.37	1.58	12.44	1976
6/30/2001	18:30	14.67	15.37	1.56	12.42	1957
6/30/2001	19:00	14.67	15.37	1.56	12.42	1956
6/30/2001	19:30	14.67	15.37	1.56	12.42	1956
6/30/2001	20:00	14.68	15.37	1.53	12.39	1937
6/30/2001	20:30	14.68	15.36	1.51	12.37	1917
6/30/2001	21:00	14.69	15.36	1.49	12.35	1898
6/30/2001	21:30	14.69	15.36	1.49	12.35	1898
6/30/2001	22:00	14.69	15.36	1.48	12.34	1897
6/30/2001	22:30	14.70	15.36	1.46	12.32	1878
6/30/2001	23:00	14.70	15.35	1.44	12.30	1859
6/30/2001	23:30	14.71	15.36	1.44	12.30	1858
7/1/2001	0:00	14.72	15.36	1.41	12.27	1839
7/1/2001	0:30	14.72	15.35	1.39	12.25	1820
7/1/2001	1:00	14.72	15.35	1.39	12.25	1819
7/1/2001	1:30	14.72	15.35	1.39	12.25	1819
7/1/2001	2:00	14.73	15.35	1.37	12.23	1800
7/1/2001	2:30	14.74	15.35	1.34	12.20	1780
7/1/2001	3:00	14.74	15.35	1.34	12.20	1780
7/1/2001	3:30	14.74	15.35	1.34	12.20	1779
7/1/2001	4:00	14.74	15.34	1.32	12.18	1760
7/1/2001	4:30	14.74	15.34	1.32	12.18	1760
7/1/2001	5:00	14.74	15.34	1.32	12.18	1759
7/1/2001	5:30	14.74	15.34	1.32	12.18	1759
7/1/2001	6:00	14.72	15.34	1.36	12.22	1796
7/1/2001	6:30	14.72	15.34	1.36	12.22	1796
7/1/2001	7:00	14.71	15.34	1.38	12.24	1814
7/1/2001	7:30	14.69	15.34	1.43	12.29	1851
7/1/2001	8:00	14.69	15.34	1.43	12.29	1851
7/1/2001	8:30	14.67	15.33	1.45	12.31	1869



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/1/2001	9:00	14.67	15.33	1.45	12.31	1869
7/1/2001	9:30	14.66	15.32	1.45	12.31	1868
7/1/2001	10:00	14.65	15.32	1.47	12.33	1887
7/1/2001	10:30	14.65	15.32	1.47	12.33	1886
7/1/2001	11:00	14.65	15.32	1.47	12.33	1886
7/1/2001	11:30	14.65	15.31	1.45	12.31	1866
7/1/2001	12:00	14.63	15.31	1.49	12.35	1904
7/1/2001	12:30	14.63	15.31	1.49	12.35	1903
7/1/2001	13:00	14.62	15.31	1.51	12.37	1922
7/1/2001	13:30	14.62	15.3	1.49	12.35	1902
7/1/2001	14:00	14.62	15.29	1.47	12.33	1883
7/1/2001	14:30	14.61	15.29	1.49	12.35	1901
7/1/2001	15:00	14.60	15.28	1.49	12.35	1901
7/1/2001	15:30	14.60	15.28	1.49	12.35	1901
7/1/2001	16:00	14.60	15.27	1.47	12.33	1881
7/1/2001	16:30	14.60	15.26	1.44	12.30	1862
7/1/2001	17:00	14.60	15.25	1.42	12.28	1843
7/1/2001	17:30	14.60	15.25	1.42	12.28	1842
7/1/2001	18:00	14.60	15.25	1.42	12.28	1842
7/1/2001	18:30	14.59	15.24	1.42	12.28	1841
7/1/2001	19:00	14.59	15.23	1.39	12.25	1822
7/1/2001	19:30	14.59	15.22	1.37	12.23	1803
7/1/2001	20:00	14.59	15.22	1.37	12.23	1802
7/1/2001	20:30	14.59	15.22	1.37	12.23	1802
7/1/2001	21:00	14.59	15.21	1.34	12.20	1783
7/1/2001	21:30	14.59	15.21	1.34	12.20	1782
7/1/2001	22:00	14.59	15.21	1.34	12.20	1782
7/1/2001	22:30	14.59	15.2	1.32	12.18	1763
7/1/2001	23:00	14.60	15.19	1.27	12.13	1725
7/1/2001	23:30	14.60	15.19	1.27	12.13	1724
7/2/2001	0:00	14.61	15.19	1.25	12.11	1705
7/2/2001	0:30	14.61	15.19	1.25	12.11	1704
7/2/2001	1:00	14.62	15.19	1.23	12.09	1685
7/2/2001	1:30	14.62	15.19	1.23	12.09	1685
7/2/2001	2:00	14.62	15.19	1.22	12.08	1684
7/2/2001	2:30	14.63	15.18	1.18	12.04	1646
7/2/2001	3:00	14.62	15.17	1.18	12.04	1646
7/2/2001	3:30	14.62	15.17	1.18	12.04	1645
7/2/2001	4:00	14.62	15.17	1.18	12.04	1645
7/2/2001	4:30	14.62	15.16	1.15	12.01	1626
7/2/2001	5:00	14.61	15.16	1.18	12.04	1644
7/2/2001	5:30	14.61	15.15	1.15	12.01	1625
7/2/2001	6:00	14.60	15.15	1.17	12.03	1643

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/2/2001	6:30	14.58	15.14	1.20	12.06	1661
7/2/2001	7:00	14.57	15.14	1.22	12.08	1680
7/2/2001	7:30	14.55	15.14	1.26	12.12	1717
7/2/2001	8:00	14.54	15.14	1.29	12.15	1735
7/2/2001	8:30	14.52	15.13	1.31	12.17	1754
7/2/2001	9:00	14.50	15.13	1.36	12.22	1791
7/2/2001	9:30	14.48	15.13	1.40	12.26	1828
7/2/2001	10:00	14.48	15.12	1.38	12.24	1809
7/2/2001	10:30	14.47	15.12	1.40	12.26	1827
7/2/2001	11:00	14.45	15.12	1.44	12.30	1865
7/2/2001	11:30	14.45	15.12	1.44	12.30	1864
7/2/2001	12:00	14.45	15.11	1.42	12.28	1845
7/2/2001	12:30	14.45	15.11	1.42	12.28	1844
7/2/2001	13:00	14.45	15.11	1.42	12.28	1844
7/2/2001	13:30	14.44	15.1	1.42	12.28	1843
7/2/2001	14:00	14.44	15.09	1.40	12.26	1824
7/2/2001	14:30	14.43	15.09	1.42	12.28	1843
7/2/2001	15:00	14.43	15.08	1.39	12.25	1823
7/2/2001	15:30	14.44	15.08	1.37	12.23	1804
7/2/2001	16:00	14.44	15.08	1.37	12.23	1804
7/2/2001	16:30	14.44	15.07	1.35	12.21	1784
7/2/2001	17:00	14.43	15.06	1.35	12.21	1784
7/2/2001	17:30	14.44	15.06	1.32	12.18	1765
7/2/2001	18:00	14.45	15.05	1.28	12.14	1727
7/2/2001	18:30	14.45	15.05	1.28	12.14	1726
7/2/2001	19:00	14.45	15.05	1.28	12.14	1726
7/2/2001	19:30	14.47	15.05	1.23	12.09	1688
7/2/2001	20:00	14.47	15.05	1.23	12.09	1687
7/2/2001	20:30	14.48	15.05	1.20	12.06	1668
7/2/2001	21:00	14.49	15.05	1.18	12.04	1649
7/2/2001	21:30	14.50	15.04	1.13	11.99	1611
7/2/2001	22:00	14.50	15.05	1.16	12.02	1629
7/2/2001	22:30	14.51	15.04	1.11	11.97	1592
7/2/2001	23:00	14.51	15.03	1.09	11.95	1573
7/2/2001	23:30	14.50	15.03	1.11	11.97	1591
7/3/2001	0:00	14.51	15.03	1.09	11.95	1572
7/3/2001	0:30	14.51	15.03	1.09	11.95	1572
7/3/2001	1:00	14.52	15.03	1.06	11.92	1553
7/3/2001	1:30	14.54	15.04	1.04	11.90	1535
7/3/2001	2:00	14.55	15.03	0.99	11.85	1498
7/3/2001	2:30	14.55	15.03	0.99	11.85	1498
7/3/2001	3:00	14.55	15.02	0.97	11.83	1479
7/3/2001	3:30	14.55	15.02	0.97	11.83	1478

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/3/2001	4:00	14.55	15.02	0.97	11.83	1478
7/3/2001	4:30	14.54	15.02	0.99	11.85	1496
7/3/2001	5:00	14.52	15.01	1.01	11.87	1514
7/3/2001	5:30	14.52	15	0.99	11.85	1495
7/3/2001	6:00	14.51	15.01	1.03	11.89	1531
7/3/2001	6:30	14.50	15	1.03	11.89	1530
7/3/2001	7:00	14.49	15	1.06	11.92	1548
7/3/2001	7:30	14.47	14.99	1.08	11.94	1566
7/3/2001	8:00	14.47	14.99	1.08	11.94	1565
7/3/2001	8:30	14.45	14.99	1.12	11.98	1601
7/3/2001	9:00	14.43	14.98	1.15	12.01	1619
7/3/2001	9:30	14.42	14.97	1.14	12.00	1619
7/3/2001	10:00	14.41	14.97	1.17	12.03	1637
7/3/2001	10:30	14.41	14.96	1.14	12.00	1618
7/3/2001	11:00	14.40	14.96	1.17	12.03	1636
7/3/2001	11:30	14.40	14.96	1.17	12.03	1636
7/3/2001	12:00	14.40	14.95	1.14	12.00	1617
7/3/2001	12:30	14.40	14.94	1.12	11.98	1598
7/3/2001	13:00	14.38	14.94	1.16	12.02	1634
7/3/2001	13:30	14.38	14.93	1.14	12.00	1615
7/3/2001	14:00	14.38	14.92	1.12	11.98	1597
7/3/2001	14:30	14.38	14.91	1.09	11.95	1578
7/3/2001	15:00	14.37	14.91	1.12	11.98	1596
7/3/2001	15:30	14.36	14.9	1.11	11.97	1595
7/3/2001	16:00	14.36	14.89	1.09	11.95	1577
7/3/2001	16:30	14.37	14.89	1.07	11.93	1558
7/3/2001	17:00	14.37	14.88	1.04	11.90	1540
7/3/2001	17:30	14.37	14.88	1.04	11.90	1539
7/3/2001	18:00	14.37	14.87	1.02	11.88	1521
7/3/2001	18:30	14.38	14.86	0.97	11.83	1484
7/3/2001	19:00	14.38	14.85	0.95	11.81	1465
7/3/2001	19:30	14.37	14.85	0.97	11.83	1483
7/3/2001	20:00	14.38	14.85	0.95	11.81	1464
7/3/2001	20:30	14.38	14.84	0.93	11.79	1446
7/3/2001	21:00	14.39	14.84	0.90	11.76	1427
7/3/2001	21:30	14.40	14.83	0.86	11.72	1391
7/3/2001	22:00	14.40	14.83	0.85	11.71	1390
7/3/2001	22:30	14.40	14.82	0.83	11.69	1371
7/3/2001	23:00	14.40	14.82	0.83	11.69	1371
7/3/2001	23:30	14.41	14.82	0.81	11.67	1352
7/4/2001	0:00	14.41	14.82	0.81	11.67	1352
7/4/2001	0:30	14.41	14.82	0.81	11.67	1352
7/4/2001	1:00	14.42	14.82	0.78	11.64	1333

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/4/2001	1:30	14.45	14.84	0.76	11.62	1314
7/4/2001	2:00	14.45	14.83	0.74	11.60	1296
7/4/2001	2:30	14.44	14.82	0.73	11.59	1295
7/4/2001	3:00	14.44	14.82	0.73	11.59	1295
7/4/2001	3:30	14.45	14.82	0.71	11.57	1276
7/4/2001	4:00	14.45	14.82	0.71	11.57	1276
7/4/2001	4:30	14.45	14.82	0.71	11.57	1276
7/4/2001	5:00	14.46	14.82	0.69	11.55	1257
7/4/2001	5:30	14.45	14.82	0.71	11.57	1275
7/4/2001	6:00	14.45	14.82	0.71	11.57	1274
7/4/2001	6:30	14.45	14.82	0.71	11.57	1274
7/4/2001	7:00	14.45	14.81	0.68	11.54	1255
7/4/2001	7:30	14.45	14.82	0.71	11.57	1273
7/4/2001	8:00	14.46	14.82	0.68	11.54	1254
7/4/2001	8:30	14.46	14.82	0.68	11.54	1254
7/4/2001	9:00	14.46	14.81	0.66	11.52	1235
7/4/2001	9:30	14.47	14.82	0.66	11.52	1235
7/4/2001	10:00	14.48	14.82	0.63	11.49	1216
7/4/2001	10:30	14.47	14.83	0.68	11.54	1252
7/4/2001	11:00	14.49	14.84	0.66	11.52	1234
7/4/2001	11:30	14.49	14.85	0.68	11.54	1251
7/4/2001	12:00	14.47	14.85	0.72	11.58	1287
7/4/2001	12:30	14.49	14.85	0.68	11.54	1251
7/4/2001	13:00	14.50	14.85	0.65	11.51	1232
7/4/2001	13:30	14.48	14.85	0.70	11.56	1268
7/4/2001	14:00	14.48	14.85	0.70	11.56	1267
7/4/2001	14:30	14.48	14.86	0.72	11.58	1285
7/4/2001	15:00	14.49	14.86	0.70	11.56	1267
7/4/2001	15:30	14.50	14.88	0.72	11.58	1284
7/4/2001	16:00	14.50	14.88	0.72	11.58	1284
7/4/2001	16:30	14.51	14.88	0.70	11.56	1265
7/4/2001	17:00	14.52	14.89	0.70	11.56	1265
7/4/2001	17:30	14.54	14.89	0.65	11.51	1228
7/4/2001	18:00	14.54	14.9	0.67	11.53	1246
7/4/2001	18:30	14.55	14.9	0.65	11.51	1227
7/4/2001	19:00	14.55	14.91	0.67	11.53	1245
7/4/2001	19:30	14.55	14.91	0.67	11.53	1245
7/4/2001	20:00	14.55	14.91	0.67	11.53	1244
7/4/2001	20:30	14.55	14.91	0.67	11.53	1244
7/4/2001	21:00	14.55	14.91	0.67	11.53	1243
7/4/2001	21:30	14.55	14.91	0.67	11.53	1243
7/4/2001	22:00	14.55	14.92	0.69	11.55	1261
7/4/2001	22:30	14.55	14.92	0.69	11.55	1260

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/4/2001	23:00	14.56	14.93	0.69	11.55	1260
7/4/2001	23:30	14.56	14.93	0.69	11.55	1259
7/5/2001	0:00	14.57	14.94	0.69	11.55	1259
7/5/2001	0:30	14.57	14.94	0.69	11.55	1259
7/5/2001	1:00	14.57	14.94	0.69	11.55	1258
7/5/2001	1:30	14.58	14.94	0.66	11.52	1240
7/5/2001	2:00	14.58	14.94	0.66	11.52	1239
7/5/2001	2:30	14.59	14.94	0.64	11.50	1221
7/5/2001	6:30	14.59	14.94	0.64	11.50	1217
7/5/2001	7:00	14.60	14.94	0.61	11.47	1199
7/5/2001	7:30	14.59	14.94	0.63	11.49	1216
7/5/2001	8:00	14.56	14.94	0.70	11.56	1270
7/5/2001	8:30	14.55	14.94	0.73	11.59	1288
7/5/2001	9:00	14.52	14.94	0.79	11.65	1342
7/5/2001	9:30	14.52	14.94	0.79	11.65	1342
7/5/2001	10:00	14.52	14.94	0.79	11.65	1341
7/5/2001	10:30	14.51	14.94	0.82	11.68	1359
7/5/2001	11:00	14.50	14.94	0.84	11.70	1377
7/5/2001	11:30	14.50	14.94	0.84	11.70	1376
7/5/2001	12:00	14.50	14.94	0.84	11.70	1376
7/5/2001	12:30	14.47	14.94	0.91	11.77	1430
7/5/2001	13:00	14.47	14.94	0.90	11.76	1429
7/5/2001	13:30	14.46	14.94	0.93	11.79	1447
7/5/2001	14:00	14.48	14.94	0.88	11.74	1410
7/5/2001	14:30	14.50	14.94	0.83	11.69	1374
7/5/2001	15:00	14.50	14.94	0.83	11.69	1373
7/5/2001	15:30	14.50	14.94	0.83	11.69	1373
7/5/2001	16:00	14.53	14.94	0.76	11.62	1318
7/5/2001	16:30	14.54	14.95	0.76	11.62	1318
7/5/2001	17:00	14.55	14.95	0.74	11.60	1299
7/5/2001	17:30	14.55	14.95	0.74	11.60	1299
7/5/2001	18:00	14.56	14.95	0.72	11.58	1280
7/5/2001	18:30	14.57	14.95	0.69	11.55	1261
7/5/2001	19:00	14.57	14.95	0.69	11.55	1261
7/5/2001	19:30	14.57	14.95	0.69	11.55	1260
7/5/2001	20:00	14.57	14.96	0.71	11.57	1278
7/5/2001	20:30	14.58	14.96	0.69	11.55	1260
7/5/2001	21:00	14.58	14.96	0.69	11.55	1259
7/5/2001	21:30	14.60	14.96	0.64	11.50	1222
7/5/2001	22:00	14.60	14.96	0.64	11.50	1222
7/5/2001	22:30	14.61	14.96	0.62	11.48	1203
7/5/2001	23:00	14.61	14.96	0.62	11.48	1203
7/5/2001	23:30	14.62	14.96	0.59	11.45	1184

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/6/2001	0:00	14.62	14.96	0.59	11.45	1184
7/6/2001	0:30	14.62	14.97	0.62	11.48	1202
7/6/2001	1:00	14.62	14.96	0.59	11.45	1183
7/6/2001	1:30	14.62	14.97	0.62	11.48	1201
7/6/2001	2:00	14.62	14.97	0.61	11.47	1200
7/6/2001	2:30	14.62	14.97	0.61	11.47	1200
7/6/2001	3:00	14.62	14.97	0.61	11.47	1200
7/6/2001	3:30	14.63	14.97	0.59	11.45	1181
7/6/2001	4:00	14.63	14.97	0.59	11.45	1181
7/6/2001	4:30	14.63	14.97	0.59	11.45	1180
7/6/2001	5:00	14.62	14.97	0.61	11.47	1198
7/6/2001	5:30	14.62	14.97	0.61	11.47	1197
7/6/2001	6:00	14.62	14.97	0.61	11.47	1197
7/6/2001	6:30	14.62	14.97	0.61	11.47	1197
7/6/2001	7:00	14.62	14.97	0.61	11.47	1196
7/6/2001	7:30	14.61	14.97	0.63	11.49	1214
7/6/2001	8:00	14.60	14.98	0.68	11.54	1250
7/6/2001	8:30	14.60	14.98	0.68	11.54	1249
7/6/2001	9:00	14.60	14.97	0.65	11.51	1231
7/6/2001	9:30	14.60	14.97	0.65	11.51	1230
7/6/2001	10:00	14.60	14.98	0.67	11.53	1248
7/6/2001	10:30	14.60	14.98	0.67	11.53	1248
7/6/2001	11:00	14.59	14.98	0.70	11.56	1265
7/6/2001	11:30	14.59	14.98	0.70	11.56	1265
7/6/2001	12:00	14.58	14.98	0.72	11.58	1283
7/6/2001	12:30	14.58	14.98	0.72	11.58	1282
7/6/2001	13:00	14.57	14.98	0.74	11.60	1300
7/6/2001	13:30	14.57	14.98	0.74	11.60	1300
7/6/2001	14:00	14.57	14.98	0.74	11.60	1299
7/6/2001	14:30	14.57	14.98	0.74	11.60	1299
7/6/2001	15:00	14.58	14.98	0.72	11.58	1280
7/6/2001	15:30	14.59	14.98	0.69	11.55	1262
7/6/2001	16:00	14.60	14.98	0.67	11.53	1243
7/6/2001	16:30	14.60	14.98	0.67	11.53	1243
7/6/2001	17:00	14.59	14.98	0.69	11.55	1260
7/6/2001	17:30	14.60	14.97	0.64	11.50	1224
7/6/2001	18:00	14.60	14.97	0.64	11.50	1223
7/6/2001	18:30	14.59	14.97	0.67	11.53	1241
7/6/2001	19:00	14.60	14.97	0.64	11.50	1222
7/6/2001	19:30	14.60	14.97	0.64	11.50	1222
7/6/2001	20:00	14.60	14.97	0.64	11.50	1221
7/6/2001	20:30	14.60	14.97	0.64	11.50	1221
7/6/2001	21:00	14.60	14.97	0.64	11.50	1221

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/6/2001	21:30	14.60	14.96	0.62	11.48	1202
7/6/2001	22:00	14.61	14.97	0.62	11.48	1202
7/6/2001	22:30	14.61	14.97	0.62	11.48	1201
7/6/2001	23:00	14.62	14.96	0.57	11.43	1164
7/6/2001	23:30	14.62	14.96	0.57	11.43	1164
7/7/2001	0:00	14.62	14.96	0.57	11.43	1164
7/7/2001	0:30	14.62	14.96	0.57	11.43	1163
7/7/2001	1:00	14.62	14.96	0.57	11.43	1163
7/7/2001	1:30	14.62	14.96	0.57	11.43	1162
7/7/2001	2:00	14.62	14.96	0.57	11.43	1162
7/7/2001	2:30	14.62	14.96	0.57	11.43	1161
7/7/2001	3:00	14.62	14.96	0.56	11.42	1161
7/7/2001	3:30	14.63	14.97	0.56	11.42	1161
7/7/2001	4:00	14.63	14.96	0.54	11.40	1142
7/7/2001	4:30	14.63	14.97	0.56	11.42	1160
7/7/2001	5:00	14.63	14.97	0.56	11.42	1159
7/7/2001	5:30	14.63	14.97	0.56	11.42	1159
7/7/2001	6:00	14.63	14.97	0.56	11.42	1158
7/7/2001	6:30	14.64	14.96	0.51	11.37	1122
7/7/2001	7:00	14.63	14.97	0.56	11.42	1158
7/7/2001	7:30	14.63	14.97	0.56	11.42	1157
7/7/2001	8:00	14.62	14.97	0.58	11.44	1175
7/7/2001	8:30	14.62	14.97	0.58	11.44	1174
7/7/2001	9:00	14.63	14.97	0.56	11.42	1156
7/7/2001	9:30	14.62	14.97	0.58	11.44	1174
7/7/2001	10:00	14.61	14.97	0.60	11.46	1191
7/7/2001	10:30	14.60	14.97	0.63	11.49	1209
7/7/2001	11:00	14.61	14.98	0.62	11.48	1209
7/7/2001	11:30	14.62	14.98	0.60	11.46	1190
7/7/2001	12:00	14.62	14.98	0.60	11.46	1190
7/7/2001	12:30	14.62	14.98	0.60	11.46	1189
7/7/2001	13:00	14.62	14.98	0.60	11.46	1189
7/7/2001	13:30	14.61	14.98	0.62	11.48	1206
7/7/2001	14:00	14.60	14.98	0.64	11.50	1224
7/7/2001	14:30	14.59	14.99	0.69	11.55	1260
7/7/2001	15:00	14.60	14.99	0.67	11.53	1242
7/7/2001	15:30	14.60	14.99	0.67	11.53	1241
7/7/2001	16:00	14.60	14.99	0.67	11.53	1241
7/7/2001	16:30	14.60	14.99	0.66	11.52	1240
7/7/2001	17:00	14.60	14.99	0.66	11.52	1240
7/7/2001	17:30	14.61	14.99	0.64	11.50	1221
7/7/2001	18:00	14.62	14.99	0.62	11.48	1203
7/7/2001	18:30	14.62	14.99	0.62	11.48	1202

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/7/2001	19:00	14.63	14.99	0.59	11.45	1184
7/7/2001	19:30	14.63	14.98	0.57	11.43	1165
7/7/2001	20:00	14.64	14.98	0.55	11.41	1146
7/7/2001	20:30	14.65	14.98	0.52	11.38	1128
7/7/2001	21:00	14.65	14.98	0.52	11.38	1127
7/7/2001	21:30	14.66	14.98	0.50	11.36	1109
7/7/2001	22:00	14.67	14.98	0.47	11.33	1090
7/7/2001	22:30	14.67	14.98	0.47	11.33	1090
7/7/2001	23:00	14.68	14.98	0.45	11.31	1071
7/7/2001	23:30	14.68	14.98	0.45	11.31	1071
7/8/2001	0:00	14.69	14.98	0.43	11.29	1052
7/8/2001	0:30	14.69	14.98	0.43	11.29	1052
7/8/2001	1:00	14.69	14.98	0.43	11.29	1051
7/8/2001	1:30	14.69	14.98	0.43	11.29	1051
7/8/2001	2:00	14.69	14.98	0.42	11.28	1051
7/8/2001	2:30	14.69	14.98	0.42	11.28	1050
7/8/2001	3:00	14.69	14.98	0.42	11.28	1050
7/8/2001	3:30	14.69	14.98	0.42	11.28	1049
7/8/2001	4:00	14.69	14.98	0.42	11.28	1049
7/8/2001	4:30	14.69	14.97	0.40	11.26	1030
7/8/2001	5:00	14.70	14.97	0.38	11.24	1012
7/8/2001	5:30	14.69	14.97	0.40	11.26	1029
7/8/2001	6:00	14.70	14.97	0.37	11.23	1011
7/8/2001	6:30	14.70	14.97	0.37	11.23	1010
7/8/2001	7:00	14.70	14.98	0.40	11.26	1028
7/8/2001	7:30	14.69	14.98	0.42	11.28	1046
7/8/2001	8:00	14.69	14.98	0.42	11.28	1045
7/8/2001	8:30	14.70	14.97	0.37	11.23	1009
7/8/2001	9:00	14.70	14.97	0.37	11.23	1008
7/8/2001	9:30	14.70	14.97	0.37	11.23	1008
7/8/2001	10:00	14.69	14.97	0.39	11.25	1026
7/8/2001	10:30	14.69	14.97	0.39	11.25	1025
7/8/2001	11:00	14.67	14.97	0.44	11.30	1061
7/8/2001	11:30	14.67	14.97	0.44	11.30	1061
7/8/2001	12:00	14.66	14.97	0.46	11.32	1078
7/8/2001	12:30	14.66	14.97	0.46	11.32	1078
7/8/2001	13:00	14.65	14.97	0.48	11.34	1096
7/8/2001	13:30	14.66	14.97	0.46	11.32	1077
7/8/2001	14:00	14.66	14.97	0.46	11.32	1077
7/8/2001	14:30	14.67	14.97	0.43	11.29	1058
7/8/2001	15:00	14.67	14.97	0.43	11.29	1058
7/8/2001	15:30	14.68	14.97	0.41	11.27	1039
7/8/2001	16:00	14.66	14.97	0.46	11.32	1075



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/8/2001	16:30	14.67	14.96	0.41	11.27	1038
7/8/2001	17:00	14.66	14.96	0.43	11.29	1056
7/8/2001	17:30	14.66	14.96	0.43	11.29	1056
7/8/2001	18:00	14.67	14.96	0.41	11.27	1037
7/8/2001	18:30	14.67	14.96	0.41	11.27	1037
7/8/2001	19:00	14.67	14.96	0.41	11.27	1036
7/8/2001	19:30	14.67	14.96	0.41	11.27	1036
7/8/2001	20:00	14.67	14.96	0.41	11.27	1035
7/8/2001	20:30	14.67	14.95	0.38	11.24	1017
7/8/2001	21:00	14.67	14.95	0.38	11.24	1016
7/8/2001	21:30	14.67	14.95	0.38	11.24	1016
7/8/2001	22:00	14.68	14.95	0.36	11.22	997
7/8/2001	22:30	14.68	14.95	0.36	11.22	997
7/8/2001	23:00	14.68	14.94	0.33	11.19	978
7/8/2001	23:30	14.68	14.94	0.33	11.19	978
7/9/2001	0:00	14.68	14.94	0.33	11.19	977
7/9/2001	0:30	14.68	14.94	0.33	11.19	977
7/9/2001	1:00	14.69	14.94	0.31	11.17	958
7/9/2001	1:30	14.69	14.94	0.31	11.17	958
7/9/2001	2:00	14.69	14.94	0.31	11.17	957
7/9/2001	2:30	14.69	14.94	0.31	11.17	957
7/9/2001	3:00	14.69	14.94	0.31	11.17	957
7/9/2001	3:30	14.69	14.94	0.30	11.16	956
7/9/2001	4:00	14.69	14.94	0.30	11.16	956
7/9/2001	4:30	14.69	14.94	0.30	11.16	955
7/9/2001	5:00	14.69	14.94	0.30	11.16	955
7/9/2001	5:30	14.69	14.94	0.30	11.16	954
7/9/2001	6:00	14.68	14.93	0.30	11.16	954
7/9/2001	6:30	14.68	14.93	0.30	11.16	954
7/9/2001	7:00	14.67	14.93	0.32	11.18	971
7/9/2001	7:30	14.67	14.93	0.32	11.18	971
7/9/2001	8:00	14.67	14.92	0.30	11.16	952
7/9/2001	8:30	14.67	14.92	0.30	11.16	952
7/9/2001	9:00	14.66	14.92	0.32	11.18	970
7/9/2001	9:30	14.66	14.92	0.32	11.18	969
7/9/2001	10:00	14.66	14.92	0.32	11.18	969
7/9/2001	10:30	14.65	14.92	0.34	11.20	987
7/9/2001	11:00	14.65	14.92	0.34	11.20	986
7/9/2001	11:30	14.64	14.92	0.37	11.23	1004
7/9/2001	12:00	14.64	14.91	0.34	11.20	985
7/9/2001	12:30	14.63	14.91	0.36	11.22	1003
7/9/2001	13:00	14.62	14.91	0.39	11.25	1021
7/9/2001	13:30	14.63	14.91	0.36	11.22	1002

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/9/2001	14:00	14.63	14.91	0.36	11.22	1002
7/9/2001	14:30	14.63	14.91	0.36	11.22	1001
7/9/2001	15:00	14.62	14.91	0.38	11.24	1019
7/9/2001	15:30	14.62	14.91	0.38	11.24	1019
7/9/2001	16:00	14.63	14.91	0.36	11.22	1000
7/9/2001	16:30	14.62	14.91	0.38	11.24	1018
7/9/2001	17:00	14.62	14.91	0.38	11.24	1017
7/9/2001	17:30	14.62	14.91	0.38	11.24	1017
7/9/2001	18:00	14.63	14.91	0.36	11.22	998
7/9/2001	18:30	14.63	14.91	0.36	11.22	998
7/9/2001	19:00	14.64	14.91	0.33	11.19	979
7/9/2001	19:30	14.63	14.9	0.33	11.19	979
7/9/2001	20:00	14.64	14.9	0.31	11.17	960
7/9/2001	20:30	14.63	14.9	0.33	11.19	978
7/9/2001	21:00	14.64	14.9	0.31	11.17	959
7/9/2001	21:30	14.64	14.9	0.31	11.17	959
7/9/2001	22:00	14.65	14.9	0.28	11.14	940
7/9/2001	22:30	14.65	14.9	0.28	11.14	940
7/9/2001	23:00	14.65	14.9	0.28	11.14	940
7/9/2001	23:30	14.65	14.9	0.28	11.14	939
7/10/2001	0:00	14.65	14.9	0.28	11.14	939
7/10/2001	0:30	14.65	14.9	0.28	11.14	938
7/10/2001	1:00	14.65	14.9	0.28	11.14	938
7/10/2001	1:30	14.65	14.9	0.28	11.14	937
7/10/2001	2:00	14.66	14.9	0.26	11.12	919
7/10/2001	2:30	14.66	14.89	0.23	11.09	900
7/10/2001	3:00	14.65	14.89	0.26	11.12	918
7/10/2001	3:30	14.66	14.89	0.23	11.09	899
7/10/2001	4:00	14.66	14.89	0.23	11.09	899
7/10/2001	4:30	14.65	14.89	0.25	11.11	917
7/10/2001	5:00	14.65	14.88	0.23	11.09	898
7/10/2001	5:30	14.65	14.88	0.23	11.09	898
7/10/2001	6:00	14.65	14.88	0.23	11.09	897
7/10/2001	6:30	14.65	14.88	0.23	11.09	897
7/10/2001	7:00	14.65	14.88	0.23	11.09	896
7/10/2001	7:30	14.65	14.88	0.23	11.09	896
7/10/2001	8:00	14.64	14.88	0.25	11.11	914
7/10/2001	8:30	14.63	14.88	0.27	11.13	931
7/10/2001	9:00	14.63	14.87	0.25	11.11	913
7/10/2001	9:30	14.62	14.87	0.27	11.13	931
7/10/2001	10:00	14.62	14.87	0.27	11.13	930
7/10/2001	10:30	14.61	14.87	0.29	11.15	948
7/10/2001	11:00	14.60	14.87	0.32	11.18	966

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/10/2001	11:30	14.59	14.87	0.34	11.20	983
7/10/2001	12:00	14.59	14.87	0.34	11.20	983
7/10/2001	12:30	14.58	14.87	0.36	11.22	1001
7/10/2001	13:00	14.58	14.87	0.36	11.22	1000
7/10/2001	13:30	14.58	14.87	0.36	11.22	1000
7/10/2001	14:00	14.57	14.86	0.36	11.22	999
7/10/2001	14:30	14.57	14.86	0.36	11.22	999
7/10/2001	15:00	14.58	14.85	0.31	11.17	962
7/10/2001	15:30	14.57	14.85	0.34	11.20	980
7/10/2001	16:00	14.58	14.85	0.31	11.17	961
7/10/2001	16:30	14.58	14.85	0.31	11.17	961
7/10/2001	17:00	14.58	14.84	0.29	11.15	942
7/10/2001	17:30	14.58	14.84	0.29	11.15	942
7/10/2001	18:00	14.58	14.84	0.29	11.15	942
7/10/2001	18:30	14.59	14.84	0.26	11.12	923
7/10/2001	19:00	14.58	14.83	0.26	11.12	923
7/10/2001	19:30	14.59	14.83	0.24	11.10	904
7/10/2001	20:00	14.59	14.83	0.24	11.10	903
7/10/2001	20:30	14.59	14.82	0.21	11.07	885
7/10/2001	21:00	14.60	14.82	0.19	11.05	866
7/10/2001	21:30	14.60	14.82	0.19	11.05	866
7/10/2001	22:00	14.60	14.82	0.19	11.05	865
7/10/2001	22:30	14.60	14.82	0.19	11.05	865
7/10/2001	23:00	14.61	14.82	0.17	11.03	846
7/10/2001	23:30	14.61	14.82	0.17	11.03	846
7/11/2001	0:00	14.62	14.82	0.14	11.00	827
7/11/2001	0:30	14.62	14.82	0.14	11.00	827
7/11/2001	1:00	14.62	14.82	0.14	11.00	827
7/11/2001	1:30	14.62	14.82	0.14	11.00	826
7/11/2001	2:00	14.62	14.82	0.14	11.00	826
7/11/2001	2:30	14.62	14.82	0.14	11.00	825
7/11/2001	3:00	14.62	14.82	0.14	11.00	825
7/11/2001	3:30	14.62	14.82	0.14	11.00	824
7/11/2001	4:00	14.62	14.82	0.14	11.00	824
7/11/2001	4:30	14.62	14.82	0.14	11.00	824
7/11/2001	5:00	14.62	14.82	0.14	11.00	823
7/11/2001	5:30	14.62	14.82	0.14	11.00	823
7/11/2001	6:00	14.62	14.81	0.11	10.97	804
7/11/2001	6:30	14.61	14.81	0.13	10.99	822
7/11/2001	7:00	14.61	14.81	0.13	10.99	821
7/11/2001	7:30	14.60	14.81	0.16	11.02	839
7/11/2001	8:00	14.60	14.8	0.13	10.99	821
7/11/2001	8:30	14.60	14.8	0.13	10.99	820

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/11/2001	9:00	14.60	14.8	0.13	10.99	820
7/11/2001	9:30	14.60	14.81	0.15	11.01	838
7/11/2001	10:00	14.60	14.8	0.13	10.99	819
7/11/2001	10:30	14.60	14.8	0.13	10.99	818
7/11/2001	11:00	14.59	14.8	0.15	11.01	836
7/11/2001	11:30	14.60	14.8	0.13	10.99	818
7/11/2001	12:00	14.60	14.8	0.13	10.99	817
7/11/2001	12:30	14.60	14.8	0.13	10.99	817
7/11/2001	13:00	14.60	14.81	0.15	11.01	835
7/11/2001	13:30	14.60	14.8	0.13	10.99	816
7/11/2001	14:00	14.60	14.8	0.13	10.99	816
7/11/2001	14:30	14.60	14.8	0.13	10.99	815
7/11/2001	15:00	14.60	14.8	0.13	10.99	815
7/11/2001	15:30	14.60	14.8	0.13	10.99	814
7/11/2001	16:00	14.57	14.8	0.19	11.05	868
7/11/2001	16:30	14.57	14.8	0.19	11.05	868
7/11/2001	17:00	14.57	14.8	0.19	11.05	867
7/11/2001	17:30	14.57	14.79	0.17	11.03	849
7/11/2001	18:00	14.57	14.79	0.17	11.03	848
7/11/2001	18:30	14.57	14.79	0.17	11.03	848
7/11/2001	19:00	14.57	14.79	0.17	11.03	848
7/11/2001	19:30	14.58	14.79	0.14	11.00	829
7/11/2001	20:00	14.58	14.79	0.14	11.00	829
7/11/2001	20:30	14.58	14.79	0.14	11.00	828
7/11/2001	21:00	14.58	14.79	0.14	11.00	828
7/11/2001	21:30	14.58	14.79	0.14	11.00	827
7/11/2001	22:00	14.59	14.79	0.12	10.98	809
7/11/2001	22:30	14.60	14.79	0.09	10.95	790
7/11/2001	23:00	14.60	14.79	0.09	10.95	790
7/11/2001	23:30	14.60	14.79	0.09	10.95	789
7/12/2001	0:00	14.61	14.79	0.07	10.93	771
7/12/2001	0:30	14.62	14.79	0.05	10.91	754
7/12/2001	1:00	14.62	14.79	0.05	10.91	754
7/12/2001	1:30	14.62	14.79	0.05	10.91	753
7/12/2001	2:00	14.62	14.79	0.04	10.90	753
7/12/2001	2:30	14.62	14.79	0.04	10.90	753
7/12/2001	3:00	14.62	14.79	0.04	10.90	753
7/12/2001	3:30	14.62	14.79	0.04	10.90	753
7/12/2001	4:00	14.62	14.79	0.04	10.90	752
7/12/2001	4:30	14.62	14.79	0.04	10.90	752
7/12/2001	5:00	14.62	14.79	0.04	10.90	752
7/12/2001	5:30	14.62	14.78	0.02	10.88	744
7/12/2001	6:30	14.62	14.78	0.02	10.88	743

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/12/2001	7:30	14.62	14.78	0.02	10.88	743
7/12/2001	8:00	14.62	14.78	0.02	10.88	743
7/12/2001	8:30	14.61	14.78	0.04	10.90	751
7/12/2001	9:00	14.61	14.78	0.04	10.90	750
7/12/2001	9:30	14.60	14.77	0.04	10.90	750
7/12/2001	10:00	14.60	14.77	0.04	10.90	750
7/12/2001	10:30	14.60	14.77	0.04	10.90	750
7/12/2001	11:00	14.60	14.77	0.03	10.89	750
7/12/2001	11:30	14.60	14.78	0.06	10.92	761
7/12/2001	12:00	14.60	14.78	0.06	10.92	760
7/12/2001	12:30	14.59	14.78	0.08	10.94	778
7/12/2001	13:00	14.59	14.78	0.08	10.94	778
7/12/2001	13:30	14.57	14.78	0.12	10.98	814
7/12/2001	14:00	14.57	14.78	0.12	10.98	813
7/12/2001	14:30	14.57	14.78	0.12	10.98	813
7/12/2001	15:00	14.57	14.77	0.10	10.96	794
7/12/2001	15:30	14.58	14.77	0.08	10.94	776
7/12/2001	16:00	14.58	14.77	0.08	10.94	775
7/12/2001	16:30	14.59	14.77	0.05	10.91	757
7/12/2001	17:00	14.58	14.77	0.07	10.93	774
7/12/2001	17:30	14.59	14.77	0.05	10.91	756
7/16/2001	10:30	14.27	14.48	0.02	10.88	746
7/16/2001	11:00	14.27	14.47	0.00	10.86	737
7/16/2001	11:01	-	-	-	<b>10.86</b>	737
7/16/2001	12:00	14.27	15.1	1.91	10.86	737
7/16/2001	12:03	-	-	-	<b>10.86</b>	737
7/16/2001	12:30	14.25	15.17	2.11	11.06	876
7/16/2001	13:00	14.26	15.17	2.09	11.04	855
7/16/2001	13:30	14.25	15.19	2.15	11.10	907
7/16/2001	14:00	14.25	15.19	2.15	11.10	904
7/16/2001	14:30	14.25	15.19	2.15	11.10	902
7/16/2001	15:00	14.26	15.2	2.14	11.09	899
7/16/2001	15:30	14.28	15.22	2.14	11.09	896
7/16/2001	16:00	14.31	15.22	2.07	11.02	839
7/16/2001	16:30	14.32	15.23	2.06	11.01	836
7/16/2001	17:00	14.3	15.23	2.11	11.06	870
7/16/2001	17:30	14.3	15.24	2.13	11.08	885
7/16/2001	18:00	14.29	15.25	2.17	11.12	919
7/16/2001	18:30	14.3	15.25	2.14	11.09	898
7/16/2001	19:00	14.28	15.25	2.18	11.13	932
7/16/2001	19:30	14.3	15.25	2.13	11.08	893
7/16/2001	20:00	14.31	15.26	2.13	11.08	890
7/16/2001	20:30	14.31	15.26	2.13	11.08	887

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/16/2001	21:00	14.33	15.27	2.10	11.05	866
7/16/2001	21:30	14.33	15.27	2.10	11.05	864
7/16/2001	22:00	14.34	15.28	2.09	11.04	861
7/16/2001	22:30	14.35	15.28	2.07	11.02	840
7/16/2001	23:00	14.36	15.28	2.04	10.99	819
7/16/2001	23:30	14.36	15.28	2.04	10.99	816
7/17/2001	0:00	14.37	15.28	2.01	10.96	796
7/17/2001	0:30	14.38	15.28	1.98	10.93	775
7/17/2001	1:00	14.38	15.28	1.98	10.93	772
7/17/2001	1:30	14.38	15.28	1.98	10.93	769
7/17/2001	2:00	14.38	15.28	1.97	10.92	766
7/17/2001	2:30	14.38	15.28	1.97	10.92	764
7/17/2001	3:00	14.39	15.28	1.94	10.89	750
7/17/2001	3:30	14.39	15.28	1.94	10.89	748
7/17/2001	4:00	14.4	15.28	1.91	10.86	739
7/17/2001	4:30	14.4	15.28	1.91	10.86	738
7/17/2001	5:00	14.4	15.28	1.91	10.86	737
7/17/2001	5:30	14.39	15.28	1.93	10.88	743
7/17/2001	6:00	14.39	15.28	1.92	10.87	742
7/17/2001	6:30	14.4	15.29	1.92	10.87	741
7/17/2001	7:00	14.4	15.28	1.89	10.84	732
7/17/2001	7:30	14.39	15.28	1.91	10.86	739
7/17/2001	8:00	14.39	15.29	1.93	10.88	746
7/17/2001	8:30	14.39	15.29	1.93	10.88	744
7/17/2001	9:00	14.39	15.3	1.95	10.90	751
7/17/2001	9:30	14.38	15.3	1.97	10.92	762
7/17/2001	10:00	14.38	15.3	1.97	10.92	759
7/17/2001	10:30	14.38	15.3	1.96	10.91	757
7/17/2001	11:00	14.4	15.31	1.94	10.89	746
7/17/2001	11:30	14.39	15.31	1.96	10.91	753
7/17/2001	12:00	14.38	15.31	1.97	10.92	767
7/17/2001	12:30	14.39	15.31	1.95	10.90	751
7/17/2001	13:00	14.4	15.31	1.92	10.87	742
7/17/2001	13:30	14.41	15.31	1.90	10.85	732
7/17/2001	14:00	14.42	15.31	1.87	10.82	723
7/17/2001	14:30	14.42	15.31	1.87	10.82	722
7/17/2001	15:00	14.43	15.31	1.84	10.79	712
7/17/2001	15:30	14.44	15.31	1.81	10.76	703
7/17/2001	16:00	14.44	15.31	1.81	10.76	702
7/17/2001	16:30	14.44	15.32	1.83	10.78	709
7/17/2001	17:00	14.43	15.32	1.85	10.80	716
7/17/2001	17:30	14.43	15.32	1.84	10.79	714
7/17/2001	18:00	14.43	15.32	1.84	10.79	713

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/17/2001	18:30	14.42	15.33	1.88	10.83	728
7/17/2001	19:00	14.42	15.33	1.88	10.83	727
7/17/2001	19:30	14.42	15.33	1.88	10.83	726
7/17/2001	20:00	14.39	15.33	1.94	10.89	749
7/17/2001	20:30	14.36	15.33	2.01	10.96	793
7/17/2001	21:00	14.34	15.34	2.07	11.02	845
7/17/2001	21:30	14.34	15.34	2.07	11.02	842
7/17/2001	22:00	14.35	15.34	2.04	10.99	821
7/17/2001	22:30	14.37	15.34	1.99	10.94	782
7/17/2001	23:00	14.38	15.34	1.97	10.92	761
7/17/2001	23:30	14.41	15.35	1.92	10.87	740
7/18/2001	0:00	14.45	15.35	1.82	10.77	707
7/18/2001	0:30	14.46	15.35	1.80	10.75	697
7/18/2001	1:00	14.48	15.36	1.77	10.72	688
7/18/2001	1:30	14.49	15.37	1.77	10.72	687
7/18/2001	2:00	14.5	15.37	1.74	10.69	677
7/18/2001	2:30	14.5	15.37	1.74	10.69	676
7/18/2001	3:00	14.5	15.37	1.73	10.68	675
7/18/2001	3:30	14.51	15.37	1.71	10.66	666
7/18/2001	4:00	14.52	15.37	1.68	10.63	656
7/18/2001	4:30	14.52	15.37	1.68	10.63	655
7/18/2001	5:00	14.52	15.37	1.67	10.62	654
7/18/2001	5:30	14.52	15.38	1.69	10.64	661
7/18/2001	6:00	14.52	15.39	1.71	10.66	668
7/18/2001	6:30	14.53	15.39	1.69	10.64	658
7/18/2001	7:00	14.53	15.39	1.68	10.63	657
7/18/2001	7:30	14.53	15.4	1.70	10.65	664
7/18/2001	8:00	14.53	15.4	1.70	10.65	663
7/18/2001	8:30	14.54	15.4	1.67	10.62	653
7/18/2001	9:00	14.53	15.4	1.69	10.64	660
7/18/2001	9:30	14.52	15.41	1.73	10.68	675
7/18/2001	10:00	14.53	15.41	1.71	10.66	666
7/18/2001	10:30	14.52	15.41	1.73	10.68	673
7/18/2001	10:42	-	-	-	<b>10.68</b>	674
7/18/2001	11:00	14.53	15.42	2.05	10.68	672
7/18/2001	11:30	14.53	15.42	2.04	10.67	671
7/18/2001	12:00	14.53	15.43	2.06	10.69	678
7/18/2001	12:30	14.53	15.43	2.06	10.69	677
7/18/2001	13:00	14.55	15.44	2.04	10.67	668
7/18/2001	13:30	14.54	15.45	2.08	10.71	684
7/18/2001	14:00	14.53	15.45	2.10	10.73	691
7/18/2001	14:30	14.52	15.46	2.14	10.77	706
7/18/2001	15:00	14.53	15.48	2.16	10.79	714

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/18/2001	15:30	14.54	15.47	2.11	10.74	696
7/18/2001	16:00	14.55	15.45	2.04	10.67	671
7/18/2001	16:30	14.55	15.45	2.04	10.67	670
7/18/2001	17:00	14.52	15.47	2.15	10.78	710
7/18/2001	17:30	14.53	15.46	2.10	10.73	693
7/18/2001	18:00	14.53	15.46	2.10	10.73	692
7/18/2001	18:30	14.52	15.46	2.12	10.75	699
7/18/2001	19:00	14.52	15.45	2.10	10.73	690
7/18/2001	19:30	14.52	15.45	2.09	10.72	689
7/18/2001	20:00	14.53	15.44	2.05	10.68	672
7/18/2001	20:30	14.54	15.44	2.02	10.65	663
7/18/2001	21:00	14.55	15.43	1.97	10.60	646
7/18/2001	21:30	14.55	15.43	1.97	10.60	645
7/18/2001	22:00	14.53	15.43	2.01	10.64	660
7/18/2001	22:30	14.51	15.43	2.06	10.69	676
7/18/2001	23:00	14.51	15.43	2.05	10.68	675
7/18/2001	23:30	14.52	15.42	2.00	10.63	658
7/19/2001	0:00	14.53	15.42	1.98	10.61	649
7/19/2001	0:30	14.54	15.42	1.95	10.58	640
7/19/2001	1:00	14.54	15.42	1.95	10.58	639
7/19/2001	1:30	14.55	15.41	1.90	10.53	621
7/19/2001	2:00	14.55	15.41	1.90	10.53	621
7/19/2001	2:30	14.55	15.41	1.90	10.53	620
7/19/2001	3:00	14.56	15.41	1.87	10.50	611
7/19/2001	3:30	14.56	15.41	1.87	10.50	610
7/19/2001	4:00	14.56	15.41	1.87	10.50	609
7/19/2001	4:30	14.56	15.4	1.84	10.47	600
7/19/2001	5:00	14.55	15.4	1.86	10.49	607
7/19/2001	5:30	14.55	15.4	1.86	10.49	606
7/19/2001	6:00	14.53	15.4	1.90	10.53	621
7/19/2001	6:30	14.52	15.39	1.90	10.53	621
7/19/2001	7:00	14.51	15.38	1.90	10.53	620
7/19/2001	7:30	14.51	15.38	1.89	10.52	619
7/19/2001	8:00	14.5	15.37	1.89	10.52	618
7/19/2001	8:30	14.49	15.37	1.91	10.54	625
7/19/2001	9:00	14.47	15.36	1.93	10.56	632
7/19/2001	9:30	14.46	15.35	1.93	10.56	631
7/19/2001	10:00	14.45	15.35	1.95	10.58	639
7/19/2001	10:30	14.44	15.35	1.97	10.60	646
7/19/2001	11:00	14.42	15.34	1.99	10.62	653
7/19/2001	11:30	14.42	15.35	2.01	10.64	660
7/19/2001	11:59	-	-	-	<b>10.62</b>	652
7/19/2001	12:00	14.42	15.34	1.99	10.62	651



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/19/2001	12:30	14.4	15.34	2.14	10.64	660
7/19/2001	13:00	14.39	15.35	2.17	10.67	668
7/19/2001	13:30	14.37	15.34	2.17	10.67	669
7/19/2001	14:00	14.37	15.35	2.17	10.67	669
7/19/2001	14:30	14.36	15.35	2.17	10.67	670
7/19/2001	15:00	14.36	15.37	2.19	10.69	678
7/19/2001	15:30	14.35	15.37	2.19	10.69	679
7/19/2001	16:00	14.36	15.38	2.17	10.67	671
7/19/2001	16:30	14.35	15.38	2.17	10.67	671
7/19/2001	17:00	14.35	15.39	2.17	10.67	672
7/19/2001	17:22	-	-	-	<b>10.65</b>	663
7/19/2001	17:30	14.35	15.39	2.15	10.65	664
7/19/2001	18:00	14.36	15.37	2.32	10.58	640
7/19/2001	18:30	14.36	15.38	2.35	10.61	648
7/19/2001	19:00	14.35	15.38	2.37	10.63	656
7/19/2001	19:30	14.35	15.39	2.39	10.65	664
7/19/2001	20:00	14.35	15.39	2.39	10.65	664
7/19/2001	20:30	14.35	15.39	2.39	10.65	664
7/19/2001	21:00	14.34	15.4	2.44	10.70	681
7/19/2001	21:30	14.34	15.39	2.42	10.68	673
7/19/2001	22:00	14.34	15.37	2.37	10.63	656
7/19/2001	22:30	14.34	15.34	2.30	10.56	632
7/19/2001	23:00	14.34	15.31	2.23	10.49	608
7/19/2001	23:30	14.35	15.28	2.14	10.40	575
7/20/2001	0:00	14.35	15.26	2.10	10.36	559
7/20/2001	0:30	14.35	15.25	2.07	10.33	551
7/20/2001	1:00	14.35	15.25	2.07	10.33	551
7/20/2001	1:30	14.36	15.25	2.05	10.31	543
7/20/2001	2:00	14.36	15.24	2.03	10.29	535
7/20/2001	2:30	14.36	15.24	2.03	10.29	535
7/20/2001	3:00	14.36	15.24	2.03	10.29	535
7/20/2001	3:30	14.36	15.24	2.03	10.29	535
7/20/2001	4:00	14.35	15.23	2.03	10.29	535
7/20/2001	4:30	14.36	15.23	2.00	10.26	527
7/20/2001	5:00	14.36	15.24	2.03	10.29	535
7/20/2001	5:30	14.36	15.24	2.03	10.29	535
7/20/2001	6:00	14.36	15.24	2.03	10.29	535
7/20/2001	6:30	14.36	15.24	2.03	10.29	535
7/20/2001	7:00	14.37	15.25	2.03	10.29	535
7/20/2001	7:30	14.36	15.25	2.05	10.31	543
7/20/2001	8:00	14.36	15.25	2.05	10.31	543
7/20/2001	8:30	14.37	15.25	2.03	10.29	535
7/20/2001	9:00	14.37	15.25	2.03	10.29	535

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/20/2001	9:30	14.37	15.25	2.03	10.29	535
7/20/2001	10:00	14.36	15.26	2.07	10.33	551
7/20/2001	10:30	14.36	15.26	2.07	10.33	551
7/20/2001	11:00	14.36	15.26	2.07	10.33	552
7/20/2001	11:30	14.35	15.26	2.10	10.36	560
7/20/2001	12:00	14.36	15.27	2.10	10.36	560
7/20/2001	12:30	14.35	15.28	2.14	10.40	576
7/20/2001	13:00	14.35	15.29	2.17	10.43	584
7/20/2001	13:30	14.35	15.31	2.21	10.47	601
7/20/2001	14:00	14.33	15.33	2.31	10.57	633
7/20/2001	14:30	14.33	15.37	2.40	10.66	666
7/20/2001	15:00	14.32	15.4	2.49	10.75	698
7/20/2001	15:30	14.32	15.4	2.49	10.75	698
7/20/2001	16:00	14.31	15.42	2.56	10.82	723
7/20/2001	16:30	14.32	15.4	2.49	10.75	698
7/20/2001	17:00	14.33	15.4	2.47	10.73	690
7/20/2001	17:30	14.31	15.35	2.40	10.66	666
7/20/2001	18:00	14.3	15.35	2.42	10.68	674
7/20/2001	18:30	14.31	15.36	2.42	10.68	674
7/20/2001	19:00	14.33	15.34	2.33	10.59	642
7/20/2001	19:30	14.31	15.36	2.42	10.68	674
7/20/2001	20:00	14.32	15.35	2.38	10.64	658
7/20/2001	20:30	14.34	15.34	2.31	10.57	634
7/20/2001	21:00	14.35	15.31	2.21	10.47	601
7/20/2001	21:30	14.35	15.32	2.24	10.50	609
7/20/2001	22:00	14.36	15.31	2.19	10.45	593
7/20/2001	22:30	14.37	15.28	2.10	10.36	560
7/20/2001	23:00	14.38	15.27	2.05	10.31	544
7/20/2001	23:30	14.38	15.26	2.03	10.29	536
7/21/2001	0:00	14.39	15.26	2.01	10.27	528
7/21/2001	0:30	14.4	15.25	1.96	10.22	512
7/21/2001	1:00	14.4	15.25	1.96	10.22	512
7/21/2001	1:30	14.4	15.25	1.96	10.22	512
7/21/2001	2:00	14.4	15.25	1.96	10.22	512
7/21/2001	2:30	14.4	15.25	1.96	10.22	512
7/21/2001	3:00	14.4	15.25	1.96	10.22	512
7/21/2001	3:30	14.4	15.25	1.96	10.22	512
7/21/2001	4:00	14.4	15.25	1.96	10.22	512
7/21/2001	4:30	14.4	15.24	1.94	10.20	509
7/21/2001	5:00	14.39	15.24	1.96	10.22	512
7/21/2001	5:30	14.39	15.24	1.96	10.22	512
7/21/2001	6:00	14.39	15.24	1.96	10.22	512
7/21/2001	6:30	14.38	15.24	1.99	10.25	520

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/21/2001	7:00	14.37	15.24	2.01	10.27	529
7/21/2001	7:30	14.37	15.24	2.01	10.27	529
7/21/2001	8:00	14.37	15.24	2.01	10.27	529
7/21/2001	8:30	14.37	15.24	2.01	10.27	529
7/21/2001	9:00	14.36	15.24	2.03	10.29	537
7/21/2001	9:30	14.36	15.24	2.03	10.29	537
7/21/2001	10:00	14.37	15.25	2.03	10.29	537
7/21/2001	10:30	14.37	15.25	2.03	10.29	537
7/21/2001	11:00	14.36	15.26	2.08	10.34	553
7/21/2001	11:30	14.36	15.25	2.06	10.32	545
7/21/2001	12:00	14.36	15.25	2.06	10.32	545
7/21/2001	12:30	14.37	15.25	2.03	10.29	537
7/21/2001	13:00	14.36	15.25	2.06	10.32	545
7/21/2001	13:30	14.36	15.26	2.08	10.34	553
7/21/2001	14:00	14.35	15.28	2.15	10.41	578
7/21/2001	14:30	14.36	15.28	2.13	10.39	570
7/21/2001	15:00	14.37	15.25	2.03	10.29	537
7/21/2001	15:30	14.38	15.25	2.01	10.27	529
7/21/2001	16:00	14.38	15.25	2.01	10.27	529
7/21/2001	16:30	14.38	15.25	2.01	10.27	529
7/21/2001	17:00	14.38	15.25	2.01	10.27	529
7/21/2001	17:30	14.38	15.25	2.01	10.27	529
7/21/2001	18:00	14.38	15.25	2.01	10.27	529
7/21/2001	18:30	14.38	15.25	2.01	10.27	529
7/21/2001	19:00	14.38	15.25	2.01	10.27	529
7/21/2001	19:30	14.39	15.25	1.99	10.25	521
7/21/2001	20:00	14.39	15.25	1.99	10.25	521
7/21/2001	20:30	14.4	15.25	1.97	10.23	513
7/21/2001	21:00	14.4	15.25	1.97	10.23	513
7/21/2001	21:30	14.4	15.26	1.99	10.25	522
7/21/2001	22:00	14.4	15.26	1.99	10.25	522
7/21/2001	22:30	14.4	15.26	1.99	10.25	522
7/21/2001	23:00	14.4	15.26	1.99	10.25	522
7/21/2001	23:30	14.41	15.26	1.97	10.23	514
7/22/2001	0:00	14.41	15.26	1.97	10.23	514
7/22/2001	0:30	14.41	15.27	1.99	10.25	522
7/22/2001	1:00	14.42	15.27	1.97	10.23	514
7/22/2001	1:30	14.42	15.27	1.97	10.23	514
7/22/2001	2:00	14.42	15.27	1.97	10.23	514
7/22/2001	2:30	14.42	15.27	1.97	10.23	514
7/22/2001	3:00	14.42	15.27	1.97	10.23	514
7/22/2001	3:30	14.42	15.26	1.94	10.20	510
7/22/2001	4:00	14.42	15.26	1.95	10.21	510

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/22/2001	4:30	14.43	15.26	1.92	10.18	508
7/22/2001	5:00	14.43	15.26	1.92	10.18	508
7/22/2001	5:30	14.43	15.25	1.90	10.16	505
7/22/2001	6:00	14.43	15.25	1.90	10.16	505
7/22/2001	6:30	14.42	15.25	1.92	10.18	508
7/22/2001	7:00	14.42	15.25	1.92	10.18	508
7/22/2001	7:30	14.42	15.25	1.92	10.18	508
7/22/2001	8:00	14.41	15.25	1.95	10.21	510
7/22/2001	8:30	14.4	15.25	1.97	10.23	514
7/22/2001	9:00	14.4	15.25	1.97	10.23	514
7/22/2001	9:30	14.39	15.25	1.99	10.25	522
7/22/2001	10:00	14.38	15.25	2.02	10.28	531
7/22/2001	10:30	14.38	15.24	1.99	10.25	522
7/22/2001	11:00	14.38	15.25	2.02	10.28	531
7/22/2001	11:30	14.37	15.25	2.04	10.30	539
7/22/2001	12:00	14.37	15.25	2.04	10.30	539
7/22/2001	12:30	14.35	15.26	2.11	10.37	563
7/22/2001	13:00	14.33	15.28	2.20	10.46	596
7/22/2001	13:30	14.3	15.34	2.41	10.67	669
7/22/2001	14:00	14.3	15.36	2.45	10.71	685
7/22/2001	14:30	14.3	15.35	2.43	10.69	677
7/22/2001	15:00	14.3	15.4	2.55	10.81	718
7/22/2001	15:30	14.3	15.43	2.61	10.87	743
7/22/2001	16:00	14.31	15.46	2.66	10.92	764
7/22/2001	16:30	14.3	15.5	2.78	11.04	854
7/22/2001	17:00	14.3	15.48	2.73	10.99	818
7/22/2001	17:30	14.29	15.41	2.59	10.85	735
7/22/2001	18:00	14.31	15.4	2.52	10.78	710
7/22/2001	18:30	14.3	15.38	2.50	10.76	702
7/22/2001	19:00	14.31	15.37	2.45	10.71	686
7/22/2001	19:30	14.32	15.39	2.48	10.74	694
7/22/2001	20:00	14.32	15.39	2.48	10.74	694
7/22/2001	20:30	14.34	15.36	2.36	10.62	653
7/22/2001	21:00	14.35	15.29	2.18	10.44	588
7/22/2001	21:30	14.35	15.27	2.13	10.39	572
7/22/2001	22:00	14.36	15.24	2.04	10.30	540
7/22/2001	22:30	14.38	15.22	1.95	10.21	510
7/22/2001	23:00	14.38	15.2	1.90	10.16	506
7/22/2001	23:30	14.39	15.2	1.88	10.14	504
7/23/2001	0:00	14.39	15.2	1.88	10.14	504
7/23/2001	0:30	14.4	15.2	1.86	10.12	502
7/23/2001	1:00	14.4	15.19	1.83	10.09	499
7/23/2001	1:30	14.4	15.2	1.86	10.12	502

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/23/2001	2:00	14.4	15.19	1.83	10.09	499
7/23/2001	2:30	14.4	15.19	1.83	10.09	499
7/23/2001	3:00	14.4	15.19	1.83	10.09	499
7/23/2001	3:30	14.4	15.19	1.83	10.09	499
7/23/2001	4:00	14.4	15.19	1.83	10.09	499
7/23/2001	4:30	14.4	15.19	1.84	10.10	500
7/23/2001	5:00	14.4	15.19	1.84	10.10	500
7/23/2001	5:30	14.4	15.2	1.86	10.12	502
7/23/2001	6:00	14.4	15.19	1.84	10.10	500
7/23/2001	6:30	14.4	15.19	1.84	10.10	500
7/23/2001	7:00	14.4	15.19	1.84	10.10	500
7/23/2001	7:30	14.39	15.19	1.86	10.12	502
7/23/2001	8:00	14.39	15.18	1.84	10.10	500
7/23/2001	8:30	14.38	15.18	1.86	10.12	502
7/23/2001	9:00	14.36	15.17	1.88	10.14	504
7/23/2001	9:30	14.35	15.17	1.91	10.17	506
7/23/2001	10:00	14.35	15.17	1.91	10.17	506
7/23/2001	10:30	14.35	15.17	1.91	10.17	506
7/23/2001	11:00	14.34	15.17	1.93	10.19	508
7/23/2001	11:30	14.32	15.17	1.97	10.23	516
7/23/2001	12:00	14.3	15.18	2.04	10.30	541
7/23/2001	12:30	14.3	15.19	2.07	10.33	549
7/23/2001	13:00	14.29	15.2	2.11	10.37	565
7/23/2001	13:30	14.29	15.21	2.14	10.40	573
7/23/2001	14:00	14.3	15.24	2.18	10.44	590
7/23/2001	14:30	14.31	15.27	2.23	10.49	606
7/23/2001	15:00	14.31	15.3	2.30	10.56	630
7/23/2001	15:30	14.34	15.32	2.27	10.53	622
7/23/2001	16:00	14.35	15.33	2.27	10.53	622
7/23/2001	16:30	14.37	15.34	2.25	10.51	614
7/23/2001	17:00	14.38	15.34	2.23	10.49	606
7/23/2001	17:30	14.39	15.34	2.21	10.47	598
7/23/2001	18:00	14.4	15.29	2.07	10.33	549
7/23/2001	18:30	14.41	15.25	1.95	10.21	510
7/23/2001	19:00	14.41	15.25	1.95	10.21	510
7/23/2001	19:30	14.42	15.25	1.93	10.19	508
7/23/2001	20:00	14.45	15.25	1.86	10.12	502
7/23/2001	20:30	14.46	15.25	1.84	10.10	500
7/23/2001	21:00	14.46	15.26	1.86	10.12	502
7/23/2001	21:30	14.47	15.27	1.86	10.12	502
7/23/2001	22:00	14.47	15.27	1.86	10.12	502
7/23/2001	22:30	14.48	15.27	1.84	10.10	500
7/23/2001	23:00	14.49	15.28	1.84	10.10	500

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/23/2001	23:30	14.5	15.28	1.82	10.08	498
7/24/2001	0:00	14.5	15.28	1.82	10.08	498
7/24/2001	0:30	14.51	15.28	1.79	10.05	496
7/24/2001	1:00	14.51	15.28	1.79	10.05	496
7/24/2001	1:30	14.51	15.28	1.79	10.05	496
7/24/2001	2:00	14.51	15.28	1.79	10.05	496
7/24/2001	2:30	14.51	15.28	1.79	10.05	496
7/24/2001	3:00	14.52	15.28	1.77	10.03	494
7/24/2001	3:30	14.52	15.28	1.77	10.03	494
7/24/2001	4:00	14.52	15.28	1.77	10.03	494
7/24/2001	4:30	14.52	15.28	1.77	10.03	494
7/24/2001	5:00	14.52	15.28	1.77	10.03	494
7/24/2001	5:30	14.52	15.28	1.77	10.03	494
7/24/2001	6:00	14.52	15.28	1.77	10.03	494
7/24/2001	6:30	14.52	15.28	1.77	10.03	494
7/24/2001	7:00	14.51	15.28	1.79	10.05	496
7/24/2001	7:30	14.52	15.28	1.77	10.03	494
7/24/2001	8:00	14.51	15.28	1.79	10.05	496
7/24/2001	8:30	14.51	15.28	1.79	10.05	496
7/24/2001	9:00	14.51	15.28	1.79	10.05	496
7/24/2001	9:30	14.52	15.29	1.80	10.06	496
7/24/2001	10:00	14.51	15.29	1.82	10.08	498
7/24/2001	10:30	14.51	15.29	1.82	10.08	498
7/24/2001	11:00	14.52	15.29	1.80	10.06	496
7/24/2001	11:30	14.52	15.29	1.80	10.06	496
7/24/2001	12:00	14.52	15.3	1.82	10.08	498
7/24/2001	12:30	14.52	15.3	1.82	10.08	498
7/24/2001	13:00	14.52	15.3	1.82	10.08	498
7/24/2001	13:30	14.52	15.3	1.82	10.08	498
7/24/2001	14:00	14.52	15.31	1.84	10.10	500
7/24/2001	14:30	14.52	15.31	1.84	10.10	500
7/24/2001	15:00	14.52	15.31	1.84	10.10	500
7/24/2001	15:30	14.53	15.31	1.82	10.08	498
7/24/2001	16:00	14.53	15.31	1.82	10.08	498
7/24/2001	16:30	14.54	15.31	1.80	10.06	496
7/24/2001	17:00	14.55	15.31	1.77	10.03	494
7/24/2001	17:30	14.55	15.31	1.77	10.03	494
7/24/2001	18:00	14.54	15.31	1.80	10.06	496
7/24/2001	18:30	14.53	15.32	1.84	10.10	500
7/24/2001	19:00	14.54	15.31	1.80	10.06	496
7/24/2001	19:30	14.54	15.31	1.80	10.06	496
7/24/2001	20:00	14.55	15.32	1.80	10.06	496
7/24/2001	20:30	14.55	15.32	1.80	10.06	496

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/24/2001	21:00	14.56	15.32	1.77	10.03	494
7/24/2001	21:30	14.57	15.32	1.75	10.01	492
7/24/2001	22:00	14.57	15.32	1.75	10.01	492
7/24/2001	22:30	14.58	15.33	1.75	10.01	492
7/24/2001	23:00	14.59	15.34	1.75	10.01	492
7/24/2001	23:30	14.59	15.34	1.75	10.01	492
7/25/2001	0:00	14.6	15.34	1.73	9.99	490
7/25/2001	0:30	14.6	15.34	1.73	9.99	490
7/25/2001	1:00	14.6	15.34	1.73	9.99	490
7/25/2001	1:30	14.61	15.35	1.73	9.99	490
7/25/2001	2:00	14.62	15.36	1.73	9.99	490
7/25/2001	2:30	14.62	15.36	1.73	9.99	490
7/25/2001	3:00	14.63	15.36	1.71	9.97	488
7/25/2001	3:30	14.64	15.37	1.71	9.97	488
7/25/2001	4:00	14.65	15.37	1.68	9.94	486
7/25/2001	4:30	14.65	15.37	1.68	9.94	486
7/25/2001	5:00	14.65	15.37	1.68	9.94	486
7/25/2001	5:30	14.66	15.37	1.66	9.92	484
7/25/2001	6:00	14.66	15.38	1.68	9.94	486
7/25/2001	6:30	14.66	15.38	1.68	9.94	486
7/25/2001	7:00	14.67	15.38	1.66	9.92	484
7/25/2001	7:30	14.67	15.38	1.66	9.92	484
7/25/2001	8:00	14.67	15.39	1.68	9.94	486
7/25/2001	8:30	14.66	15.39	1.71	9.97	488
7/25/2001	9:00	14.66	15.39	1.71	9.97	488
7/25/2001	9:30	14.66	15.39	1.71	9.97	488
7/25/2001	10:00	14.65	15.39	1.73	9.99	490
7/25/2001	10:30	14.65	15.39	1.73	9.99	490
7/25/2001	11:00	14.63	15.39	1.78	10.04	494
7/25/2001	11:30	14.64	15.4	1.78	10.04	494
7/25/2001	12:00	14.64	15.4	1.78	10.04	494
7/25/2001	12:30	14.64	15.41	1.80	10.06	496
7/25/2001	13:00	14.63	15.41	1.82	10.08	498
7/25/2001	13:30	14.62	15.42	1.87	10.13	503
7/25/2001	14:00	14.63	15.42	1.85	10.11	501
7/25/2001	14:30	14.63	15.42	1.85	10.11	501
7/25/2001	15:00	14.63	15.43	1.87	10.13	503
7/25/2001	15:30	14.62	15.43	1.89	10.15	505
7/25/2001	16:00	14.62	15.44	1.92	10.18	507
7/25/2001	16:30	14.61	15.45	1.96	10.22	512
7/25/2001	17:00	14.61	15.47	2.01	10.27	528
7/25/2001	17:30	14.61	15.48	2.03	10.29	536
7/25/2001	18:00	14.6	15.51	2.12	10.38	569

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/25/2001	18:30	14.6	15.51	2.12	10.38	569
7/25/2001	19:00	14.6	15.51	2.12	10.38	569
7/25/2001	19:30	14.57	15.55	2.29	10.55	626
7/25/2001	20:00	14.57	15.49	2.15	10.41	577
7/25/2001	20:30	14.57	15.49	2.15	10.41	577
7/25/2001	21:00	14.57	15.44	2.03	10.29	537
7/25/2001	21:30	14.56	15.37	1.89	10.15	505
7/25/2001	22:00	14.55	15.35	1.87	10.13	503
7/25/2001	22:30	14.55	15.34	1.85	10.11	501
7/25/2001	23:00	14.57	15.34	1.80	10.06	497
7/25/2001	23:30	14.58	15.33	1.76	10.02	492
7/26/2001	0:00	14.6	15.33	1.71	9.97	488
7/26/2001	0:30	14.61	15.33	1.69	9.95	486
7/26/2001	1:00	14.63	15.33	1.64	9.90	482
7/26/2001	1:30	14.64	15.33	1.62	9.88	480
7/26/2001	2:00	14.65	15.33	1.60	9.86	478
7/26/2001	2:30	14.65	15.32	1.57	9.83	475
7/26/2001	3:00	14.65	15.32	1.57	9.83	475
7/26/2001	3:30	14.64	15.31	1.57	9.83	475
7/26/2001	4:00	14.64	15.31	1.57	9.83	475
7/26/2001	4:30	14.64	15.31	1.57	9.83	475
7/26/2001	5:00	14.63	15.31	1.60	9.86	478
7/26/2001	5:30	14.62	15.31	1.62	9.88	480
7/26/2001	6:00	14.62	15.31	1.62	9.88	480
7/26/2001	6:30	14.6	15.31	1.67	9.93	484
7/26/2001	7:00	14.6	15.31	1.67	9.93	484
7/26/2001	7:30	14.6	15.31	1.67	9.93	484
7/26/2001	8:00	14.59	15.3	1.67	9.93	484
7/26/2001	8:30	14.57	15.3	1.71	9.97	488
7/26/2001	9:00	14.56	15.3	1.74	10.00	490
7/26/2001	9:30	14.55	15.3	1.76	10.02	493
7/26/2001	10:00	14.55	15.3	1.76	10.02	493
7/26/2001	10:30	14.54	15.31	1.81	10.07	497
7/26/2001	11:00	14.52	15.33	1.90	10.16	505
7/26/2001	11:30	14.52	15.33	1.90	10.16	505
7/26/2001	12:00	14.53	15.34	1.90	10.16	505
7/26/2001	12:30	14.54	15.34	1.87	10.13	503
7/26/2001	13:00	14.54	15.34	1.87	10.13	503
7/26/2001	13:30	14.54	15.34	1.87	10.13	503
7/26/2001	14:00	14.54	15.35	1.90	10.16	505
7/26/2001	14:30	14.52	15.37	1.99	10.25	522
7/26/2001	15:00	14.52	15.37	1.99	10.25	522
7/26/2001	15:30	14.51	15.39	2.06	10.32	546



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/26/2001	16:00	14.49	15.43	2.20	10.46	595
7/26/2001	16:30	14.47	15.44	2.27	10.53	619
7/26/2001	17:00	14.45	15.48	2.40	10.66	668
7/26/2001	17:30	14.44	15.4	2.24	10.50	611
7/26/2001	18:00	14.45	15.36	2.13	10.39	571
7/26/2001	18:30	14.43	15.34	2.13	10.39	571
7/26/2001	19:00	14.47	15.32	1.99	10.25	522
7/26/2001	19:30	14.49	15.39	2.11	10.37	563
7/26/2001	20:00	14.48	15.38	2.11	10.37	563
7/26/2001	20:30	14.5	15.39	2.08	10.34	555
7/26/2001	21:00	14.51	15.37	2.01	10.27	530
7/26/2001	21:30	14.5	15.34	1.97	10.23	514
7/26/2001	22:00	14.5	15.34	1.97	10.23	514
7/26/2001	22:30	14.51	15.31	1.88	10.14	503
7/26/2001	23:00	14.52	15.27	1.76	10.02	493
7/26/2001	23:30	14.52	15.25	1.72	9.98	489
7/27/2001	0:00	14.52	15.25	1.72	9.98	489
7/27/2001	0:30	14.52	15.25	1.72	9.98	489
7/27/2001	1:00	14.52	15.25	1.72	9.98	489
7/27/2001	1:30	14.52	15.24	1.69	9.95	486
7/27/2001	2:00	14.52	15.24	1.69	9.95	486
7/27/2001	2:30	14.52	15.23	1.67	9.93	484
7/27/2001	3:00	14.52	15.23	1.67	9.93	484
7/27/2001	3:30	14.52	15.22	1.65	9.91	482
7/27/2001	4:00	14.52	15.22	1.65	9.91	482
7/27/2001	4:30	14.52	15.22	1.65	9.91	482
7/27/2001	5:00	14.51	15.21	1.65	9.91	482
7/27/2001	5:30	14.51	15.21	1.65	9.91	482
7/27/2001	6:00	14.51	15.2	1.63	9.89	480
7/27/2001	6:30	14.5	15.2	1.65	9.91	482
7/27/2001	7:00	14.49	15.2	1.67	9.93	484
7/27/2001	7:30	14.48	15.2	1.69	9.95	487
7/27/2001	8:00	14.47	15.19	1.69	9.95	487
7/27/2001	8:30	14.47	15.19	1.69	9.95	487
7/27/2001	9:00	14.46	15.19	1.72	9.98	489
7/27/2001	9:30	14.45	15.2	1.76	10.02	493
7/27/2001	10:00	14.46	15.21	1.76	10.02	493
7/27/2001	10:30	14.45	15.21	1.79	10.05	495
7/27/2001	11:00	14.44	15.22	1.83	10.09	499
7/27/2001	11:30	14.43	15.23	1.88	10.14	504
7/27/2001	12:00	14.43	15.25	1.93	10.19	508
7/27/2001	12:30	14.41	15.28	2.04	10.30	540
7/27/2001	13:00	14.42	15.37	2.23	10.49	605

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/27/2001	13:30	14.42	15.39	2.27	10.53	621
7/27/2001	14:00	14.41	15.45	2.43	10.69	678
7/27/2001	14:30	14.42	15.47	2.46	10.72	686
7/27/2001	15:00	14.42	15.51	2.55	10.81	719
7/27/2001	15:30	14.42	15.52	2.57	10.83	727
7/27/2001	16:00	14.41	15.51	2.57	10.83	727
7/27/2001	16:30	14.42	15.45	2.41	10.67	670
7/27/2001	17:00	14.41	15.44	2.41	10.67	670
7/27/2001	17:30	14.41	15.43	2.39	10.65	662
7/27/2001	18:00	14.42	15.42	2.34	10.60	646
7/27/2001	18:30	14.41	15.41	2.34	10.60	646
7/27/2001	19:00	14.41	15.4	2.32	10.58	638
7/27/2001	19:30	14.41	15.38	2.27	10.53	621
7/27/2001	20:00	14.42	15.34	2.16	10.42	581
7/27/2001	20:30	14.42	15.34	2.16	10.42	581
7/27/2001	21:00	14.42	15.28	2.02	10.28	532
7/27/2001	21:30	14.43	15.23	1.88	10.14	504
7/27/2001	22:00	14.43	15.19	1.79	10.05	495
7/27/2001	22:30	14.43	15.17	1.74	10.00	491
7/27/2001	23:00	14.43	15.14	1.67	9.93	485
7/27/2001	23:30	14.43	15.13	1.65	9.91	483
7/28/2001	0:00	14.43	15.12	1.63	9.89	481
7/28/2001	0:30	14.43	15.12	1.63	9.89	481
7/28/2001	1:00	14.43	15.12	1.63	9.89	481
7/28/2001	1:30	14.43	15.11	1.61	9.87	478
7/28/2001	2:00	14.43	15.11	1.61	9.87	478
7/28/2001	2:30	14.43	15.11	1.61	9.87	478
7/28/2001	3:00	14.43	15.11	1.61	9.87	478
7/28/2001	3:30	14.43	15.11	1.61	9.87	478
7/28/2001	4:00	14.43	15.11	1.61	9.87	478
7/28/2001	4:30	14.43	15.11	1.61	9.87	479
7/28/2001	5:00	14.42	15.1	1.61	9.87	479
7/28/2001	5:30	14.42	15.1	1.61	9.87	479
7/28/2001	6:00	14.41	15.1	1.63	9.89	481
7/28/2001	6:30	14.41	15.09	1.61	9.87	479
7/28/2001	7:00	14.4	15.09	1.63	9.89	481
7/28/2001	7:30	14.4	15.08	1.61	9.87	479
7/28/2001	8:00	14.4	15.08	1.61	9.87	479
7/28/2001	8:30	14.39	15.08	1.63	9.89	481
7/28/2001	9:00	14.39	15.08	1.63	9.89	481
7/28/2001	9:30	14.38	15.08	1.65	9.91	483
7/28/2001	10:00	14.38	15.08	1.65	9.91	483
7/28/2001	10:30	14.36	15.08	1.70	9.96	487

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/28/2001	11:00	14.35	15.08	1.72	9.98	489
7/28/2001	11:30	14.35	15.09	1.75	10.01	491
7/28/2001	12:00	14.34	15.11	1.82	10.08	498
7/28/2001	12:30	14.34	15.14	1.88	10.14	504
7/28/2001	13:00	14.35	15.19	1.98	10.24	517
7/28/2001	13:30	14.35	15.23	2.07	10.33	550
7/28/2001	14:00	14.35	15.32	2.28	10.54	623
7/28/2001	14:30	14.33	15.34	2.37	10.63	655
7/28/2001	15:00	14.33	15.25	2.16	10.42	582
7/28/2001	15:30	14.35	15.25	2.12	10.38	566
7/28/2001	16:00	14.37	15.26	2.09	10.35	558
7/28/2001	16:30	14.38	15.2	1.93	10.19	508
7/28/2001	17:00	14.37	15.17	1.89	10.15	504
7/28/2001	17:30	14.38	15.13	1.77	10.03	494
7/28/2001	18:00	14.37	15.08	1.68	9.94	485
7/28/2001	18:30	14.37	15.05	1.61	9.87	479
7/28/2001	19:00	14.37	15.04	1.59	9.85	477
7/28/2001	19:30	14.37	15.03	1.56	9.82	475
7/28/2001	20:00	14.38	15.02	1.52	9.78	470
7/28/2001	20:30	14.37	15.02	1.54	9.80	472
7/28/2001	21:00	14.38	15.02	1.52	9.78	470
7/28/2001	21:30	14.38	15.01	1.50	9.76	468
7/28/2001	22:00	14.38	15	1.47	9.73	466
7/28/2001	22:30	14.37	15	1.50	9.76	468
7/28/2001	23:00	14.37	14.99	1.47	9.73	466
7/28/2001	23:30	14.36	14.99	1.50	9.76	468
7/29/2001	0:00	14.35	14.99	1.52	9.78	470
7/29/2001	0:30	14.35	14.98	1.50	9.76	468
7/29/2001	1:00	14.34	14.97	1.50	9.76	468
7/29/2001	1:30	14.34	14.97	1.50	9.76	468
7/29/2001	2:00	14.35	14.98	1.50	9.76	468
7/29/2001	2:30	14.35	14.98	1.50	9.76	468
7/29/2001	3:00	14.33	14.98	1.54	9.80	473
7/29/2001	3:30	14.34	14.99	1.54	9.80	473
7/29/2001	4:00	14.36	14.99	1.50	9.76	468
7/29/2001	4:30	14.37	14.99	1.47	9.73	466
7/29/2001	5:00	14.36	15	1.52	9.78	471
7/29/2001	5:30	14.37	15	1.50	9.76	468
7/29/2001	6:00	14.37	15	1.50	9.76	468
7/29/2001	6:30	14.37	15.01	1.52	9.78	471
7/29/2001	7:00	14.39	15.02	1.50	9.76	468
7/29/2001	7:30	14.39	15.02	1.50	9.76	468
7/29/2001	8:00	14.39	15.02	1.50	9.76	468

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/29/2001	8:30	14.39	15.02	1.50	9.76	468
7/29/2001	9:00	14.38	15.02	1.52	9.78	471
7/29/2001	9:30	14.38	15.02	1.52	9.78	471
7/29/2001	10:00	14.39	15.02	1.50	9.76	468
7/29/2001	10:30	14.39	15.03	1.52	9.78	471
7/29/2001	11:00	14.4	15.04	1.52	9.78	471
7/29/2001	11:30	14.4	15.05	1.54	9.80	473
7/29/2001	12:00	14.4	15.05	1.54	9.80	473
7/29/2001	12:30	14.4	15.05	1.54	9.80	473
7/29/2001	13:00	14.4	15.06	1.57	9.83	475
7/29/2001	13:30	14.41	15.07	1.57	9.83	475
7/29/2001	14:00	14.4	15.07	1.59	9.85	477
7/29/2001	14:30	14.41	15.08	1.59	9.85	477
7/29/2001	15:00	14.41	15.08	1.59	9.85	477
7/29/2001	15:30	14.42	15.09	1.59	9.85	477
7/29/2001	16:00	14.42	15.11	1.64	9.90	481
7/29/2001	16:30	14.42	15.11	1.64	9.90	481
7/29/2001	17:00	14.44	15.11	1.59	9.85	477
7/29/2001	17:30	14.45	15.11	1.57	9.83	475
7/29/2001	18:00	14.45	15.11	1.57	9.83	475
7/29/2001	18:30	14.45	15.12	1.59	9.85	477
7/29/2001	19:00	14.46	15.12	1.57	9.83	475
7/29/2001	19:30	14.46	15.12	1.57	9.83	475
7/29/2001	20:00	14.47	15.13	1.57	9.83	475
7/29/2001	20:30	14.47	15.13	1.57	9.83	475
7/29/2001	21:00	14.46	15.14	1.62	9.88	479
7/29/2001	21:30	14.47	15.14	1.59	9.85	477
7/29/2001	22:00	14.48	15.14	1.57	9.83	475
7/29/2001	22:30	14.49	15.14	1.55	9.81	473
7/29/2001	23:00	14.5	15.15	1.55	9.81	473
7/29/2001	23:30	14.5	15.16	1.57	9.83	475
7/30/2001	0:00	14.51	15.16	1.55	9.81	473
7/30/2001	0:30	14.52	15.17	1.55	9.81	473
7/30/2001	1:00	14.52	15.17	1.55	9.81	473
7/30/2001	1:30	14.52	15.17	1.55	9.81	473
7/30/2001	2:00	14.53	15.17	1.52	9.78	471
7/30/2001	2:30	14.53	15.18	1.55	9.81	473
7/30/2001	3:00	14.54	15.18	1.52	9.78	471
7/30/2001	3:30	14.54	15.18	1.52	9.78	471
7/30/2001	4:00	14.55	15.19	1.52	9.78	471
7/30/2001	4:30	14.55	15.19	1.52	9.78	471
7/30/2001	5:00	14.55	15.19	1.53	9.79	471
7/30/2001	5:30	14.56	15.2	1.53	9.79	471

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/30/2001	6:00	14.56	15.2	1.53	9.79	471
7/30/2001	6:30	14.56	15.21	1.55	9.81	473
7/30/2001	7:00	14.57	15.21	1.53	9.79	471
7/30/2001	7:30	14.57	15.22	1.55	9.81	473
7/30/2001	8:00	14.57	15.22	1.55	9.81	473
7/30/2001	8:30	14.57	15.22	1.55	9.81	473
7/30/2001	9:00	14.58	15.23	1.55	9.81	473
7/30/2001	9:30	14.58	15.24	1.57	9.83	475
7/30/2001	10:00	14.59	15.24	1.55	9.81	473
7/30/2001	10:30	14.59	15.25	1.57	9.83	475
7/30/2001	11:00	14.6	15.25	1.55	9.81	473
7/30/2001	11:30	14.6	15.25	1.55	9.81	473
7/30/2001	12:00	14.6	15.26	1.57	9.83	475
7/30/2001	12:30	14.6	15.26	1.57	9.83	475
7/30/2001	13:00	14.6	15.27	1.60	9.86	477
7/30/2001	13:30	14.6	15.27	1.60	9.86	477
7/30/2001	14:00	14.62	15.28	1.57	9.83	475
7/30/2001	14:30	14.61	15.28	1.60	9.86	478
7/30/2001	15:00	14.62	15.28	1.57	9.83	475
7/30/2001	15:30	14.62	15.28	1.57	9.83	475
7/30/2001	16:00	14.61	15.3	1.64	9.90	482
7/30/2001	16:30	14.61	15.3	1.64	9.90	482
7/30/2001	17:00	14.6	15.31	1.69	9.95	486
7/30/2001	17:30	14.6	15.31	1.69	9.95	486
7/30/2001	18:00	14.6	15.31	1.69	9.95	486
7/30/2001	18:30	14.59	15.31	1.71	9.97	488
7/30/2001	19:00	14.6	15.3	1.67	9.93	484
7/30/2001	19:30	14.6	15.3	1.67	9.93	484
7/30/2001	20:00	14.6	15.29	1.64	9.90	482
7/30/2001	20:30	14.6	15.28	1.62	9.88	480
7/30/2001	21:00	14.61	15.28	1.60	9.86	478
7/30/2001	21:30	14.61	15.28	1.60	9.86	478
7/30/2001	22:00	14.62	15.28	1.57	9.83	476
7/30/2001	22:30	14.62	15.27	1.55	9.81	473
7/30/2001	23:00	14.62	15.27	1.55	9.81	473
7/30/2001	23:30	14.62	15.27	1.55	9.81	473
7/31/2001	0:00	14.62	15.27	1.55	9.81	473
7/31/2001	0:30	14.63	15.26	1.51	9.77	469
7/31/2001	1:00	14.63	15.26	1.51	9.77	469
7/31/2001	1:30	14.63	15.26	1.51	9.77	469
7/31/2001	2:00	14.62	15.26	1.53	9.79	471
7/31/2001	2:30	14.62	15.26	1.53	9.79	471
7/31/2001	3:00	14.62	15.26	1.53	9.79	471

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/31/2001	3:30	14.62	15.25	1.51	9.77	469
7/31/2001	4:00	14.62	15.25	1.51	9.77	469
7/31/2001	4:30	14.62	15.25	1.51	9.77	469
7/31/2001	5:00	14.62	15.25	1.51	9.77	469
7/31/2001	5:30	14.61	15.25	1.53	9.79	471
7/31/2001	6:00	14.61	15.25	1.53	9.79	471
7/31/2001	6:30	14.61	15.25	1.53	9.79	471
7/31/2001	7:00	14.6	15.25	1.55	9.81	474
7/31/2001	7:30	14.6	15.25	1.55	9.81	474
7/31/2001	8:00	14.58	15.25	1.60	9.86	478
7/31/2001	8:30	14.57	15.24	1.60	9.86	478
7/31/2001	9:00	14.57	15.24	1.60	9.86	478
7/31/2001	9:30	14.56	15.24	1.62	9.88	480
7/31/2001	10:00	14.55	15.25	1.67	9.93	484
7/31/2001	10:30	14.55	15.25	1.67	9.93	484
7/31/2001	11:00	14.55	15.25	1.67	9.93	484
7/31/2001	11:30	14.52	15.25	1.74	10.00	491
7/31/2001	12:00	14.5	15.25	1.78	10.04	495
7/31/2001	12:30	14.5	15.25	1.78	10.04	495
7/31/2001	13:00	14.51	15.25	1.76	10.02	493
7/31/2001	13:30	14.51	15.25	1.76	10.02	493
7/31/2001	14:00	14.5	15.25	1.79	10.05	495
7/31/2001	14:30	14.49	15.25	1.81	10.07	497
7/31/2001	15:00	14.48	15.24	1.81	10.07	497
7/31/2001	15:30	14.47	15.25	1.85	10.11	501
7/31/2001	16:00	14.45	15.25	1.90	10.16	506
7/31/2001	16:30	14.43	15.24	1.92	10.18	508
7/31/2001	17:00	14.42	15.23	1.92	10.18	508
7/31/2001	17:30	14.44	15.22	1.85	10.11	501
7/31/2001	18:00	14.43	15.22	1.88	10.14	503
7/31/2001	18:30	14.42	15.22	1.90	10.16	506
7/31/2001	19:00	14.4	15.22	1.95	10.21	510
7/31/2001	19:30	14.4	15.25	2.02	10.28	531
7/31/2001	20:00	14.4	15.23	1.97	10.23	515
7/31/2001	20:30	14.39	15.22	1.97	10.23	515
7/31/2001	21:00	14.39	15.23	1.99	10.25	523
7/31/2001	21:30	14.38	15.21	1.97	10.23	515
7/31/2001	22:00	14.4	15.17	1.83	10.09	499
7/31/2001	22:30	14.42	15.15	1.74	10.00	491
7/31/2001	23:00	14.44	15.14	1.67	9.93	484
7/31/2001	23:30	14.45	15.13	1.63	9.89	480
8/1/2001	0:00	14.45	15.12	1.60	9.86	478
8/1/2001	0:30	14.45	15.11	1.58	9.84	476

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/1/2001	1:00	14.45	15.11	1.58	9.84	476
8/1/2001	1:30	14.45	15.11	1.58	9.84	476
8/1/2001	2:00	14.45	15.11	1.58	9.84	476
8/1/2001	2:30	14.45	15.11	1.58	9.84	476
8/1/2001	3:00	14.45	15.1	1.56	9.82	474
8/1/2001	3:30	14.45	15.1	1.56	9.82	474
8/1/2001	4:00	14.45	15.1	1.56	9.82	474
8/1/2001	4:30	14.45	15.1	1.56	9.82	474
8/1/2001	5:00	14.44	15.1	1.58	9.84	476
8/1/2001	5:30	14.43	15.1	1.60	9.86	478
8/1/2001	6:00	14.42	15.09	1.60	9.86	478
8/1/2001	6:30	14.42	15.09	1.60	9.86	478
8/1/2001	7:00	14.42	15.09	1.60	9.86	478
8/1/2001	7:30	14.42	15.09	1.60	9.86	478
8/1/2001	8:00	14.42	15.1	1.63	9.89	480
8/1/2001	8:30	14.42	15.1	1.63	9.89	480
8/1/2001	9:00	14.43	15.11	1.63	9.89	480
8/1/2001	9:30	14.42	15.11	1.65	9.91	483
8/1/2001	10:00	14.42	15.11	1.65	9.91	483
8/1/2001	10:30	14.42	15.11	1.65	9.91	483
8/1/2001	11:00	14.42	15.12	1.67	9.93	485
8/1/2001	11:30	14.42	15.13	1.70	9.96	487
8/1/2001	12:00	14.42	15.13	1.70	9.96	487
8/1/2001	12:30	14.42	15.13	1.70	9.96	487
8/1/2001	13:00	14.41	15.14	1.74	10.00	491
8/1/2001	13:30	14.41	15.14	1.74	10.00	491
8/1/2001	14:00	14.4	15.14	1.77	10.03	493
8/1/2001	14:30	14.41	15.14	1.74	10.00	491
8/1/2001	15:00	14.42	15.15	1.74	10.00	491
8/1/2001	15:30	14.42	15.15	1.74	10.00	491
8/1/2001	16:00	14.42	15.16	1.77	10.03	493
8/1/2001	16:30	14.42	15.15	1.74	10.00	491
8/1/2001	17:00	14.42	15.16	1.77	10.03	493
8/1/2001	17:30	14.42	15.15	1.74	10.00	491
8/1/2001	18:00	14.42	15.15	1.74	10.00	491
8/1/2001	18:30	14.42	15.14	1.72	9.98	489
8/1/2001	19:00	14.42	15.11	1.65	9.91	483
8/1/2001	19:30	14.43	15.11	1.63	9.89	481
8/1/2001	20:00	14.43	15.1	1.61	9.87	479
8/1/2001	20:30	14.43	15.09	1.58	9.84	476
8/1/2001	21:00	14.43	15.08	1.56	9.82	474
8/1/2001	21:30	14.43	15.08	1.56	9.82	474
8/1/2001	22:00	14.44	15.09	1.56	9.82	474

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/1/2001	22:30	14.44	15.09	1.56	9.82	474
8/1/2001	23:00	14.45	15.1	1.56	9.82	474
8/1/2001	23:30	14.45	15.1	1.56	9.82	474
8/2/2001	0:00	14.45	15.11	1.59	9.85	476
8/2/2001	0:30	14.46	15.11	1.56	9.82	474
8/2/2001	1:00	14.47	15.11	1.54	9.80	472
8/2/2001	1:30	14.47	15.12	1.56	9.82	474
8/2/2001	2:00	14.47	15.12	1.56	9.82	474
8/2/2001	2:30	14.47	15.13	1.59	9.85	477
8/2/2001	3:00	14.47	15.13	1.59	9.85	477
8/2/2001	3:30	14.48	15.13	1.56	9.82	474
8/2/2001	4:00	14.47	15.13	1.59	9.85	477
8/2/2001	4:30	14.47	15.13	1.59	9.85	477
8/2/2001	5:00	14.48	15.13	1.56	9.82	474
8/2/2001	5:30	14.48	15.13	1.56	9.82	474
8/2/2001	6:00	14.47	15.13	1.59	9.85	477
8/2/2001	6:30	14.47	15.13	1.59	9.85	477
8/2/2001	7:00	14.48	15.14	1.59	9.85	477
8/2/2001	7:30	14.48	15.14	1.59	9.85	477
8/2/2001	8:00	14.49	15.14	1.56	9.82	475
8/2/2001	8:30	14.49	15.14	1.56	9.82	475
8/2/2001	9:00	14.5	15.14	1.54	9.80	472
8/2/2001	9:30	14.5	15.15	1.56	9.82	475
8/2/2001	10:00	14.5	15.15	1.56	9.82	475
8/2/2001	10:30	14.5	15.16	1.59	9.85	477
8/2/2001	11:00	14.5	15.16	1.59	9.85	477
8/2/2001	11:30	14.51	15.16	1.56	9.82	475
8/2/2001	12:00	14.5	15.16	1.59	9.85	477
8/2/2001	12:30	14.5	15.16	1.59	9.85	477
8/2/2001	13:00	14.49	15.16	1.61	9.87	479
8/2/2001	13:30	14.5	15.17	1.61	9.87	479
8/2/2001	14:00	14.5	15.17	1.61	9.87	479
8/2/2001	14:30	14.5	15.17	1.61	9.87	479
8/2/2001	15:00	14.5	15.17	1.61	9.87	479
8/2/2001	15:30	14.5	15.17	1.61	9.87	479
8/2/2001	16:00	14.5	15.17	1.61	9.87	479
8/2/2001	16:30	14.5	15.18	1.63	9.89	481
8/2/2001	17:00	14.5	15.19	1.66	9.92	483
8/2/2001	17:30	14.5	15.19	1.66	9.92	483
8/2/2001	18:00	14.48	15.18	1.68	9.94	485
8/2/2001	18:30	14.5	15.18	1.63	9.89	481
8/2/2001	19:00	14.51	15.18	1.61	9.87	479
8/2/2001	19:30	14.5	15.18	1.64	9.90	481



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/2/2001	20:00	14.5	15.17	1.61	9.87	479
8/2/2001	20:30	14.51	15.17	1.59	9.85	477
8/2/2001	21:00	14.5	15.17	1.61	9.87	479
8/2/2001	21:30	14.51	15.17	1.59	9.85	477
8/2/2001	22:00	14.52	15.17	1.57	9.83	475
8/2/2001	22:30	14.52	15.17	1.57	9.83	475
8/2/2001	23:00	14.53	15.17	1.54	9.80	473
8/2/2001	23:30	14.53	15.17	1.54	9.80	473
8/3/2001	0:00	14.53	15.17	1.54	9.80	473
8/3/2001	0:30	14.54	15.18	1.54	9.80	473
8/3/2001	1:00	14.54	15.18	1.54	9.80	473
8/3/2001	1:30	14.54	15.18	1.54	9.80	473
8/3/2001	2:00	14.54	15.18	1.54	9.80	473
8/3/2001	2:30	14.54	15.18	1.54	9.80	473
8/3/2001	3:00	14.54	15.18	1.54	9.80	473
8/3/2001	3:30	14.53	15.18	1.57	9.83	475
8/3/2001	4:00	14.53	15.18	1.57	9.83	475
8/3/2001	4:30	14.53	15.18	1.57	9.83	475
8/3/2001	5:00	14.53	15.17	1.55	9.81	473
8/3/2001	5:30	14.53	15.17	1.55	9.81	473
8/3/2001	6:00	14.53	15.17	1.55	9.81	473
8/3/2001	6:30	14.53	15.17	1.55	9.81	473
8/3/2001	7:00	14.52	15.17	1.57	9.83	475
8/3/2001	7:30	14.52	15.17	1.57	9.83	475
8/3/2001	8:00	14.52	15.17	1.57	9.83	475
8/3/2001	8:30	14.52	15.17	1.57	9.83	475
8/3/2001	9:00	14.52	15.17	1.57	9.83	475
8/3/2001	9:30	14.51	15.17	1.59	9.85	477
8/3/2001	10:00	14.5	15.17	1.62	9.88	479
8/3/2001	10:30	14.5	15.17	1.62	9.88	479
8/3/2001	11:00	14.49	15.17	1.64	9.90	481
8/3/2001	11:30	14.48	15.17	1.66	9.92	484
8/3/2001	12:00	14.48	15.17	1.66	9.92	484
8/3/2001	12:30	14.47	15.17	1.68	9.94	486
8/3/2001	13:00	14.46	15.17	1.71	9.97	488
8/3/2001	13:30	14.45	15.17	1.73	9.99	490
8/3/2001	14:00	14.45	15.17	1.73	9.99	490
8/3/2001	14:30	14.44	15.17	1.75	10.01	492
8/3/2001	15:00	14.43	15.18	1.80	10.06	496
8/3/2001	15:30	14.42	15.17	1.80	10.06	496
8/3/2001	16:00	14.42	15.17	1.80	10.06	496
8/3/2001	16:30	14.42	15.17	1.80	10.06	496
8/3/2001	17:00	14.43	15.17	1.78	10.04	494

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/3/2001	17:30	14.42	15.17	1.80	10.06	496
8/3/2001	18:00	14.42	15.17	1.80	10.06	496
8/3/2001	18:30	14.41	15.15	1.78	10.04	494
8/3/2001	19:00	14.4	15.14	1.78	10.04	494
8/3/2001	19:30	14.39	15.14	1.80	10.06	496
8/3/2001	20:00	14.39	15.14	1.80	10.06	496
8/3/2001	20:30	14.4	15.13	1.76	10.02	492
8/3/2001	21:00	14.41	15.11	1.69	9.95	486
8/3/2001	21:30	14.41	15.1	1.66	9.92	484
8/3/2001	22:00	14.41	15.1	1.66	9.92	484
8/3/2001	22:30	14.41	15.1	1.66	9.92	484
8/3/2001	23:00	14.41	15.09	1.64	9.90	482
8/3/2001	23:30	14.41	15.09	1.64	9.90	482
8/4/2001	0:00	14.42	15.09	1.62	9.88	480
8/4/2001	0:30	14.41	15.08	1.62	9.88	480
8/4/2001	1:00	14.42	15.08	1.60	9.86	477
8/4/2001	1:30	14.41	15.08	1.62	9.88	480
8/4/2001	2:00	14.41	15.08	1.62	9.88	480
8/4/2001	2:30	14.41	15.08	1.62	9.88	480
8/4/2001	3:00	14.41	15.08	1.62	9.88	480
8/4/2001	3:30	14.4	15.07	1.62	9.88	480
8/4/2001	4:00	14.4	15.07	1.62	9.88	480
8/4/2001	4:30	14.4	15.07	1.62	9.88	480
8/4/2001	5:00	14.4	15.06	1.60	9.86	478
8/4/2001	5:30	14.4	15.06	1.60	9.86	478
8/4/2001	6:00	14.41	15.06	1.57	9.83	475
8/4/2001	6:30	14.41	15.06	1.57	9.83	475
8/4/2001	7:00	14.41	15.06	1.57	9.83	475
8/4/2001	7:30	14.4	15.05	1.57	9.83	475
8/4/2001	8:00	14.4	15.05	1.57	9.83	475
8/4/2001	8:30	14.4	15.05	1.57	9.83	475
8/4/2001	9:00	14.39	15.04	1.57	9.83	475
8/4/2001	9:30	14.38	15.03	1.57	9.83	475
8/4/2001	10:00	14.38	15.03	1.57	9.83	475
8/4/2001	10:30	14.38	15.03	1.57	9.83	475
8/4/2001	11:00	14.38	15.03	1.57	9.83	476
8/4/2001	11:30	14.4	15.02	1.51	9.77	469
8/4/2001	12:00	14.39	15.02	1.53	9.79	471
8/4/2001	12:30	14.39	15.02	1.53	9.79	471
8/4/2001	13:00	14.38	15.02	1.55	9.81	473
8/4/2001	13:30	14.35	15.01	1.60	9.86	478
8/4/2001	14:00	14.36	15	1.55	9.81	473
8/4/2001	14:30	14.35	15	1.58	9.84	476

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/4/2001	15:00	14.35	15	1.58	9.84	476
8/4/2001	15:30	14.33	14.99	1.60	9.86	478
8/4/2001	16:00	14.3	14.99	1.67	9.93	484
8/4/2001	16:30	14.29	14.99	1.69	9.95	486
8/4/2001	17:00	14.27	14.99	1.74	10.00	490
8/4/2001	17:30	14.27	14.99	1.74	10.00	490
8/4/2001	18:00	14.27	14.99	1.74	10.00	490
8/4/2001	18:30	14.26	14.99	1.76	10.02	493
8/4/2001	19:00	14.26	15	1.78	10.04	495
8/4/2001	19:30	14.27	15	1.76	10.02	493
8/4/2001	20:00	14.28	15.01	1.76	10.02	493
8/4/2001	20:30	14.29	15.01	1.74	10.00	491
8/4/2001	21:00	14.31	15.01	1.69	9.95	486
8/4/2001	21:30	14.33	15.01	1.65	9.91	482
8/4/2001	22:00	14.34	15.01	1.62	9.88	480
8/4/2001	22:30	14.35	15.01	1.60	9.86	478
8/4/2001	23:00	14.35	15.02	1.62	9.88	480
8/4/2001	23:30	14.36	15.02	1.60	9.86	478
8/5/2001	0:00	14.37	15.02	1.58	9.84	476
8/5/2001	0:30	14.37	15.02	1.58	9.84	476
8/5/2001	1:00	14.38	15.02	1.55	9.81	474
8/5/2001	1:30	14.38	15.03	1.58	9.84	476
8/5/2001	2:00	14.39	15.04	1.58	9.84	476
8/5/2001	2:30	14.39	15.04	1.58	9.84	476
8/5/2001	3:00	14.4	15.05	1.58	9.84	476
8/5/2001	3:30	14.4	15.05	1.58	9.84	476
8/5/2001	4:00	14.41	15.05	1.55	9.81	474
8/5/2001	4:30	14.41	15.05	1.55	9.81	474
8/5/2001	5:00	14.42	15.05	1.53	9.79	472
8/5/2001	5:30	14.42	15.06	1.56	9.82	474
8/5/2001	6:00	14.42	15.06	1.56	9.82	474
8/5/2001	6:30	14.43	15.06	1.53	9.79	472
8/5/2001	7:00	14.43	15.07	1.56	9.82	474
8/5/2001	7:30	14.43	15.07	1.56	9.82	474
8/5/2001	8:00	14.43	15.08	1.58	9.84	476
8/5/2001	8:30	14.43	15.08	1.58	9.84	476
8/5/2001	9:00	14.43	15.08	1.58	9.84	476
8/5/2001	9:30	14.43	15.08	1.58	9.84	476
8/5/2001	10:00	14.43	15.08	1.58	9.84	476
8/5/2001	10:30	14.43	15.08	1.58	9.84	476
8/5/2001	11:00	14.43	15.08	1.58	9.84	476
8/5/2001	11:30	14.43	15.08	1.58	9.84	476
8/5/2001	12:00	14.43	15.09	1.60	9.86	478

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/5/2001	12:30	14.43	15.09	1.60	9.86	478
8/5/2001	13:00	14.43	15.1	1.63	9.89	480
8/5/2001	13:30	14.44	15.11	1.63	9.89	480
8/5/2001	14:00	14.45	15.11	1.60	9.86	478
8/5/2001	14:30	14.45	15.11	1.60	9.86	478
8/5/2001	15:00	14.45	15.13	1.65	9.91	482
8/5/2001	15:30	14.45	15.13	1.65	9.91	482
8/5/2001	16:00	14.45	15.14	1.67	9.93	485
8/5/2001	16:30	14.44	15.14	1.70	9.96	487
8/5/2001	17:00	14.45	15.14	1.67	9.93	485
8/5/2001	17:30	14.45	15.14	1.67	9.93	485
8/5/2001	18:00	14.45	15.15	1.70	9.96	487
8/5/2001	18:30	14.45	15.15	1.70	9.96	487
8/5/2001	19:00	14.45	15.15	1.70	9.96	487
8/5/2001	19:30	14.45	15.16	1.72	9.98	489
8/5/2001	20:00	14.45	15.15	1.70	9.96	487
8/5/2001	20:30	14.46	15.15	1.67	9.93	485
8/5/2001	21:00	14.47	15.14	1.63	9.89	480
8/5/2001	21:30	14.47	15.14	1.63	9.89	480
8/5/2001	22:00	14.48	15.14	1.60	9.86	478
8/5/2001	22:30	14.48	15.14	1.60	9.86	478
8/5/2001	23:00	14.49	15.14	1.58	9.84	476
8/5/2001	23:30	14.49	15.14	1.58	9.84	476
8/6/2001	0:00	14.49	15.14	1.58	9.84	476
8/6/2001	0:30	14.5	15.14	1.56	9.82	474
8/6/2001	1:00	14.5	15.14	1.56	9.82	474
8/6/2001	1:30	14.5	15.14	1.56	9.82	474
8/6/2001	2:00	14.5	15.14	1.56	9.82	474
8/6/2001	2:30	14.5	15.14	1.56	9.82	474
8/6/2001	3:00	14.5	15.13	1.54	9.80	472
8/6/2001	3:30	14.5	15.14	1.56	9.82	474
8/6/2001	4:00	14.5	15.14	1.56	9.82	474
8/6/2001	4:30	14.5	15.14	1.56	9.82	474
8/6/2001	5:00	14.5	15.14	1.56	9.82	474
8/6/2001	5:30	14.5	15.14	1.56	9.82	474
8/6/2001	6:00	14.5	15.14	1.56	9.82	474
8/6/2001	6:30	14.5	15.14	1.56	9.82	474
8/6/2001	7:00	14.5	15.14	1.56	9.82	474
8/6/2001	7:30	14.5	15.15	1.58	9.84	476
8/6/2001	8:00	14.5	15.14	1.56	9.82	474
8/6/2001	8:30	14.49	15.14	1.58	9.84	476
8/6/2001	9:00	14.49	15.16	1.63	9.89	481
8/6/2001	9:30	14.48	15.16	1.65	9.91	483

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/6/2001	10:00	14.48	15.16	1.65	9.91	483
8/6/2001	10:30	14.47	15.17	1.70	9.96	487
8/6/2001	11:00	14.46	15.17	1.72	9.98	489
8/6/2001	11:30	14.45	15.18	1.77	10.03	493
8/6/2001	12:00	14.45	15.19	1.79	10.05	496
8/6/2001	12:30	14.45	15.19	1.79	10.05	496
8/6/2001	13:00	14.44	15.21	1.86	10.12	502
8/6/2001	13:30	14.43	15.22	1.91	10.17	506
8/6/2001	14:00	14.42	15.25	2.00	10.26	525
8/6/2001	14:30	14.42	15.24	1.98	10.24	517
8/6/2001	15:00	14.41	15.22	1.95	10.21	510
8/6/2001	15:30	14.4	15.21	1.95	10.21	510
8/6/2001	16:00	14.4	15.22	1.98	10.24	517
8/6/2001	16:30	14.4	15.19	1.91	10.17	506
8/6/2001	17:00	14.4	15.2	1.93	10.19	508
8/6/2001	17:30	14.4	15.19	1.91	10.17	506
8/6/2001	18:00	14.4	15.19	1.91	10.17	506
8/6/2001	18:30	14.4	15.19	1.91	10.17	506
8/6/2001	19:00	14.4	15.19	1.91	10.17	506
8/6/2001	19:30	14.42	15.18	1.84	10.10	500
8/6/2001	20:00	14.42	15.18	1.84	10.10	500
8/6/2001	20:30	14.42	15.19	1.86	10.12	502
8/6/2001	21:00	14.43	15.19	1.84	10.10	500
8/6/2001	21:30	14.43	15.19	1.84	10.10	500
8/6/2001	22:00	14.44	15.18	1.79	10.05	496
8/6/2001	22:30	14.44	15.17	1.77	10.03	494
8/6/2001	23:00	14.45	15.17	1.75	10.01	491
8/6/2001	23:30	14.45	15.17	1.75	10.01	491
8/7/2001	0:00	14.45	15.17	1.75	10.01	491
8/7/2001	0:30	14.46	15.17	1.73	9.99	489
8/7/2001	1:00	14.47	15.15	1.66	9.92	483
8/7/2001	1:30	14.47	15.15	1.66	9.92	483
8/7/2001	2:00	14.46	15.14	1.66	9.92	483
8/7/2001	2:30	14.46	15.14	1.66	9.92	483
8/7/2001	3:00	14.47	15.14	1.63	9.89	481
8/7/2001	3:30	14.47	15.14	1.63	9.89	481
8/7/2001	4:00	14.47	15.14	1.63	9.89	481
8/7/2001	4:30	14.47	15.14	1.63	9.89	481
8/7/2001	5:00	14.47	15.14	1.63	9.89	481
8/7/2001	5:30	14.47	15.14	1.63	9.89	481
8/7/2001	6:00	14.46	15.13	1.63	9.89	481
8/7/2001	6:30	14.47	15.13	1.61	9.87	479
8/7/2001	7:00	14.46	15.13	1.63	9.89	481

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/7/2001	7:30	14.46	15.13	1.63	9.89	481
8/7/2001	8:00	14.46	15.13	1.63	9.89	481
8/7/2001	8:30	14.46	15.13	1.63	9.89	481
8/7/2001	9:00	14.46	15.14	1.66	9.92	483
8/7/2001	9:30	14.46	15.14	1.66	9.92	483
8/7/2001	10:00	14.46	15.14	1.66	9.92	483
8/7/2001	10:30	14.46	15.15	1.68	9.94	485
8/7/2001	11:00	14.46	15.17	1.73	9.99	490
8/7/2001	11:30	14.46	15.19	1.77	10.03	494
8/7/2001	12:00	14.47	15.2	1.77	10.03	494
8/7/2001	12:30	14.47	15.22	1.82	10.08	498
8/7/2001	13:00	14.47	15.24	1.87	10.13	502
8/7/2001	13:30	14.48	15.25	1.87	10.13	502
8/7/2001	14:00	14.49	15.26	1.87	10.13	502
8/7/2001	14:30	14.5	15.27	1.87	10.13	502
8/7/2001	15:00	14.5	15.28	1.89	10.15	504
8/7/2001	15:30	14.51	15.3	1.91	10.17	507
8/7/2001	16:00	14.52	15.29	1.87	10.13	502
8/7/2001	16:30	14.53	15.3	1.87	10.13	502
8/7/2001	17:00	14.53	15.28	1.82	10.08	498
8/7/2001	17:30	14.55	15.28	1.77	10.03	494
8/7/2001	18:00	14.55	15.28	1.77	10.03	494
8/7/2001	18:30	14.56	15.27	1.73	9.99	490
8/7/2001	19:00	14.56	15.26	1.71	9.97	488
8/7/2001	19:30	14.57	15.26	1.68	9.94	486
8/7/2001	20:00	14.57	15.25	1.66	9.92	483
8/7/2001	20:30	14.57	15.25	1.66	9.92	483
8/7/2001	21:00	14.58	15.24	1.61	9.87	479
8/7/2001	21:30	14.58	15.24	1.61	9.87	479
8/7/2001	22:00	14.59	15.24	1.59	9.85	477
8/7/2001	22:30	14.6	15.25	1.59	9.85	477
8/7/2001	23:00	14.6	15.25	1.59	9.85	477
8/7/2001	23:30	14.61	15.25	1.57	9.83	475
8/8/2001	0:00	14.61	15.25	1.57	9.83	475
8/8/2001	0:30	14.61	15.25	1.57	9.83	475
8/8/2001	1:00	14.62	15.25	1.55	9.81	473
8/8/2001	1:30	14.62	15.25	1.55	9.81	473
8/8/2001	2:00	14.62	15.25	1.55	9.81	473
8/8/2001	2:30	14.62	15.25	1.55	9.81	473
8/8/2001	3:00	14.61	15.24	1.55	9.81	473
8/8/2001	3:30	14.61	15.24	1.55	9.81	473
8/8/2001	4:00	14.61	15.24	1.55	9.81	473
8/8/2001	4:30	14.6	15.24	1.57	9.83	475

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/8/2001	5:00	14.6	15.24	1.57	9.83	475
8/8/2001	5:30	14.6	15.24	1.57	9.83	475
8/8/2001	6:00	14.6	15.24	1.57	9.83	475
8/8/2001	6:30	14.6	15.23	1.55	9.81	473
8/8/2001	7:00	14.6	15.23	1.55	9.81	473
8/8/2001	7:30	14.6	15.23	1.55	9.81	473
8/8/2001	8:00	14.59	15.23	1.57	9.83	475
8/8/2001	8:30	14.59	15.23	1.57	9.83	475
8/8/2001	9:00	14.58	15.23	1.59	9.85	477
8/8/2001	9:30	14.57	15.23	1.62	9.88	479
8/8/2001	10:00	14.57	15.22	1.59	9.85	477
8/8/2001	10:30	14.56	15.22	1.62	9.88	479
8/8/2001	11:00	14.56	15.22	1.62	9.88	479
8/8/2001	11:30	14.57	15.22	1.59	9.85	477
8/8/2001	12:00	14.56	15.23	1.64	9.90	482
8/8/2001	12:30	14.56	15.23	1.64	9.90	482
8/8/2001	13:00	14.56	15.23	1.64	9.90	482
8/8/2001	13:30	14.55	15.24	1.69	9.95	486
8/8/2001	14:00	14.54	15.25	1.73	9.99	490
8/8/2001	14:30	14.53	15.27	1.80	10.06	496
8/8/2001	15:00	14.53	15.28	1.83	10.09	499
8/8/2001	15:30	14.52	15.28	1.85	10.11	501
8/8/2001	16:00	14.52	15.27	1.83	10.09	499
8/8/2001	16:30	14.51	15.28	1.87	10.13	503
8/8/2001	17:00	14.51	15.29	1.89	10.15	505
8/8/2001	17:30	14.5	15.31	1.96	10.22	512
8/8/2001	18:00	14.49	15.31	1.99	10.25	521
8/8/2001	18:30	14.51	15.31	1.94	10.20	509
8/8/2001	19:00	14.52	15.3	1.90	10.16	505
8/8/2001	19:30	14.51	15.28	1.87	10.13	503
8/8/2001	20:00	14.51	15.26	1.83	10.09	499
8/8/2001	20:30	14.5	15.26	1.85	10.11	501
8/8/2001	21:00	14.51	15.25	1.80	10.06	497
8/8/2001	21:30	14.51	15.24	1.78	10.04	494
8/8/2001	22:00	14.51	15.22	1.73	9.99	490
8/8/2001	22:30	14.5	15.19	1.69	9.95	486
8/8/2001	23:00	14.5	15.17	1.64	9.90	482
8/8/2001	23:30	14.5	15.16	1.62	9.88	480
8/9/2001	0:00	14.51	15.15	1.57	9.83	475
8/9/2001	0:30	14.51	15.15	1.57	9.83	475
8/9/2001	1:00	14.51	15.14	1.55	9.81	473
8/9/2001	1:30	14.51	15.14	1.55	9.81	473
8/9/2001	2:00	14.5	15.13	1.55	9.81	473

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/9/2001	2:30	14.5	15.13	1.55	9.81	473
8/9/2001	3:00	14.51	15.13	1.53	9.79	471
8/9/2001	3:30	14.51	15.13	1.53	9.79	471
8/9/2001	4:00	14.51	15.13	1.53	9.79	471
8/9/2001	4:30	14.52	15.13	1.51	9.77	469
8/9/2001	5:00	14.53	15.13	1.48	9.74	467
8/9/2001	5:30	14.53	15.14	1.51	9.77	469
8/9/2001	6:00	14.53	15.14	1.51	9.77	469
8/9/2001	6:30	14.53	15.14	1.51	9.77	469
8/9/2001	7:00	14.53	15.14	1.51	9.77	469
8/9/2001	7:30	14.53	15.14	1.51	9.77	469
8/9/2001	8:00	14.54	15.15	1.51	9.77	469
8/9/2001	8:30	14.54	15.15	1.51	9.77	469
8/9/2001	9:00	14.53	15.16	1.55	9.81	474
8/9/2001	9:30	14.52	15.16	1.58	9.84	476
8/9/2001	10:00	14.52	15.17	1.60	9.86	478
8/9/2001	10:30	14.52	15.17	1.60	9.86	478
8/9/2001	11:00	14.52	15.17	1.60	9.86	478
8/9/2001	11:30	14.52	15.18	1.62	9.88	480
8/9/2001	12:00	14.52	15.19	1.65	9.91	482
8/9/2001	12:30	14.52	15.2	1.67	9.93	484
8/9/2001	13:00	14.52	15.22	1.71	9.97	488
8/9/2001	13:30	14.51	15.24	1.78	10.04	495
8/9/2001	14:00	14.51	15.25	1.81	10.07	497
8/9/2001	14:30	14.51	15.27	1.85	10.11	501
8/9/2001	15:00	14.51	15.25	1.81	10.07	497
8/9/2001	15:30	14.5	15.21	1.74	10.00	491
8/9/2001	16:00	14.5	15.2	1.72	9.98	488
8/9/2001	16:30	14.5	15.2	1.72	9.98	488
8/9/2001	17:00	14.5	15.19	1.69	9.95	486
8/9/2001	17:30	14.48	15.19	1.74	10.00	491
8/9/2001	18:00	14.46	15.17	1.74	10.00	491
8/9/2001	18:30	14.45	15.17	1.76	10.02	493
8/9/2001	19:00	14.45	15.17	1.76	10.02	493
8/9/2001	19:30	14.44	15.17	1.79	10.05	495
8/9/2001	20:00	14.45	15.15	1.72	9.98	489
8/9/2001	20:30	14.46	15.15	1.69	9.95	486
8/9/2001	21:00	14.47	15.14	1.65	9.91	482
8/9/2001	21:30	14.47	15.14	1.65	9.91	482
8/9/2001	22:00	14.49	15.14	1.60	9.86	478
8/9/2001	22:30	14.49	15.13	1.58	9.84	476
8/9/2001	23:00	14.49	15.13	1.58	9.84	476
8/9/2001	23:30	14.49	15.12	1.56	9.82	474



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/10/2001	0:00	14.49	15.11	1.53	9.79	472
8/10/2001	0:30	14.48	15.11	1.56	9.82	474
8/10/2001	1:00	14.48	15.11	1.56	9.82	474
8/10/2001	1:30	14.47	15.1	1.56	9.82	474
8/10/2001	2:00	14.47	15.1	1.56	9.82	474
8/10/2001	2:30	14.46	15.09	1.56	9.82	474
8/10/2001	3:00	14.46	15.08	1.53	9.79	472
8/10/2001	3:30	14.46	15.08	1.53	9.79	472
8/10/2001	4:00	14.45	15.08	1.56	9.82	474
8/10/2001	4:30	14.45	15.08	1.56	9.82	474
8/10/2001	5:00	14.45	15.08	1.56	9.82	474
8/10/2001	5:30	14.45	15.08	1.56	9.82	474
8/10/2001	6:00	14.45	15.08	1.56	9.82	474
8/10/2001	6:30	14.44	15.07	1.56	9.82	474
8/10/2001	7:00	14.44	15.07	1.56	9.82	474
8/10/2001	7:30	14.44	15.06	1.53	9.79	472
8/10/2001	8:00	14.43	15.06	1.56	9.82	474
8/10/2001	8:30	14.43	15.06	1.56	9.82	474
8/10/2001	9:00	14.44	15.06	1.53	9.79	472
8/10/2001	9:30	14.44	15.06	1.53	9.79	472
8/10/2001	10:00	14.45	15.06	1.51	9.77	470
8/10/2001	10:30	14.45	15.07	1.54	9.80	472
8/10/2001	11:00	14.45	15.07	1.54	9.80	472
8/10/2001	11:30	14.45	15.08	1.56	9.82	474
8/10/2001	12:00	14.44	15.08	1.58	9.84	476
8/10/2001	12:30	14.43	15.08	1.60	9.86	478
8/10/2001	13:00	14.44	15.09	1.60	9.86	478
8/10/2001	13:30	14.44	15.09	1.60	9.86	478
8/10/2001	14:00	14.44	15.09	1.60	9.86	478
8/10/2001	14:30	14.44	15.1	1.63	9.89	480
8/10/2001	15:00	14.44	15.1	1.63	9.89	480
8/10/2001	15:30	14.44	15.1	1.63	9.89	480
8/10/2001	16:00	14.43	15.09	1.63	9.89	480
8/10/2001	16:30	14.43	15.1	1.65	9.91	483
8/10/2001	17:00	14.45	15.1	1.61	9.87	478
8/10/2001	17:30	14.45	15.1	1.61	9.87	478
8/10/2001	18:00	14.45	15.1	1.61	9.87	478
8/10/2001	18:30	14.46	15.1	1.58	9.84	476
8/10/2001	19:00	14.47	15.11	1.58	9.84	476
8/10/2001	19:30	14.47	15.11	1.58	9.84	476
8/10/2001	20:00	14.48	15.11	1.56	9.82	474
8/10/2001	20:30	14.49	15.12	1.56	9.82	474
8/10/2001	21:00	14.51	15.12	1.51	9.77	470

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/10/2001	21:30	14.52	15.13	1.51	9.77	470
8/10/2001	22:00	14.52	15.13	1.51	9.77	470
8/10/2001	22:30	14.54	15.14	1.49	9.75	468
8/10/2001	23:00	14.55	15.14	1.47	9.73	466
8/10/2001	23:30	14.56	15.14	1.45	9.71	464
8/11/2001	0:00	14.57	15.15	1.45	9.71	464
8/11/2001	0:30	14.58	15.15	1.42	9.68	462
8/11/2001	1:00	14.58	15.16	1.45	9.71	464
8/11/2001	1:30	14.58	15.16	1.45	9.71	464
8/11/2001	2:00	14.59	15.17	1.45	9.71	464
8/11/2001	2:30	14.6	15.17	1.42	9.68	462
8/11/2001	3:00	14.6	15.17	1.42	9.68	462
8/11/2001	3:30	14.6	15.17	1.42	9.68	462
8/11/2001	4:00	14.6	15.18	1.45	9.71	464
8/11/2001	4:30	14.6	15.18	1.45	9.71	464
8/11/2001	5:00	14.61	15.18	1.42	9.68	462
8/11/2001	5:30	14.6	15.18	1.45	9.71	464
8/11/2001	6:00	14.6	15.18	1.45	9.71	464
8/11/2001	6:30	14.6	15.18	1.45	9.71	464
8/11/2001	7:00	14.6	15.18	1.45	9.71	464
8/11/2001	7:30	14.59	15.18	1.47	9.73	466
8/11/2001	8:00	14.59	15.17	1.45	9.71	464
8/11/2001	8:30	14.58	15.17	1.47	9.73	466
8/11/2001	9:00	14.57	15.17	1.49	9.75	468
8/11/2001	9:30	14.56	15.17	1.52	9.78	470
8/11/2001	10:00	14.55	15.17	1.54	9.80	472
8/11/2001	10:30	14.55	15.16	1.52	9.78	470
8/11/2001	11:00	14.54	15.16	1.54	9.80	472
8/11/2001	11:30	14.53	15.16	1.56	9.82	474
8/11/2001	12:00	14.52	15.16	1.59	9.85	477
8/11/2001	12:30	14.52	15.16	1.59	9.85	477
8/11/2001	13:00	14.5	15.16	1.63	9.89	481
8/11/2001	13:30	14.49	15.16	1.66	9.92	483
8/11/2001	14:00	14.49	15.16	1.66	9.92	483
8/11/2001	14:30	14.49	15.16	1.66	9.92	483
8/11/2001	15:00	14.47	15.16	1.70	9.96	487
8/11/2001	15:30	14.48	15.16	1.68	9.94	485
8/11/2001	16:00	14.45	15.16	1.75	10.01	492
8/11/2001	16:30	14.47	15.16	1.70	9.96	487
8/11/2001	17:00	14.48	15.15	1.66	9.92	483
8/11/2001	17:30	14.48	15.15	1.66	9.92	483
8/11/2001	18:00	14.48	15.15	1.66	9.92	483
8/11/2001	18:30	14.47	15.14	1.66	9.92	483

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/11/2001	19:00	14.47	15.14	1.66	9.92	483
8/11/2001	19:30	14.47	15.14	1.66	9.92	483
8/11/2001	20:00	14.47	15.14	1.66	9.92	483
8/11/2001	20:30	14.49	15.14	1.61	9.87	479
8/11/2001	21:00	14.49	15.14	1.61	9.87	479
8/11/2001	21:30	14.49	15.13	1.59	9.85	477
8/11/2001	22:00	14.5	15.13	1.57	9.83	475
8/11/2001	22:30	14.5	15.13	1.57	9.83	475
8/11/2001	23:00	14.51	15.13	1.54	9.80	473
8/11/2001	23:30	14.52	15.13	1.52	9.78	470
8/12/2001	0:00	14.52	15.13	1.52	9.78	471
8/12/2001	0:30	14.52	15.12	1.50	9.76	468
8/12/2001	1:00	14.53	15.13	1.50	9.76	468
8/12/2001	1:30	14.53	15.13	1.50	9.76	468
8/12/2001	2:00	14.54	15.13	1.47	9.73	466
8/12/2001	2:30	14.54	15.13	1.47	9.73	466
8/12/2001	3:00	14.53	15.12	1.47	9.73	466
8/12/2001	3:30	14.54	15.12	1.45	9.71	464
8/12/2001	4:00	14.53	15.12	1.47	9.73	466
8/12/2001	4:30	14.52	15.12	1.50	9.76	468
8/12/2001	5:00	14.52	15.11	1.47	9.73	466
8/12/2001	5:30	14.5	15.11	1.52	9.78	471
8/12/2001	6:00	14.5	15.11	1.52	9.78	471
8/12/2001	6:30	14.5	15.11	1.52	9.78	471
8/12/2001	7:00	14.49	15.1	1.52	9.78	471
8/12/2001	7:30	14.48	15.1	1.54	9.80	473
8/12/2001	8:00	14.47	15.09	1.54	9.80	473
8/12/2001	8:30	14.47	15.08	1.52	9.78	471
8/12/2001	9:00	14.45	15.08	1.57	9.83	475
8/12/2001	9:30	14.45	15.07	1.54	9.80	473
8/12/2001	10:00	14.44	15.07	1.57	9.83	475
8/12/2001	10:30	14.44	15.07	1.57	9.83	475
8/12/2001	11:00	14.43	15.06	1.57	9.83	475
8/12/2001	11:30	14.42	15.06	1.59	9.85	477
8/12/2001	12:00	14.43	15.07	1.59	9.85	477
8/12/2001	12:30	14.43	15.07	1.59	9.85	477
8/12/2001	13:00	14.44	15.07	1.57	9.83	475
8/12/2001	13:30	14.45	15.07	1.55	9.81	473
8/12/2001	14:00	14.44	15.06	1.55	9.81	473
8/12/2001	14:30	14.44	15.06	1.55	9.81	473
8/12/2001	15:00	14.44	15.07	1.57	9.83	475
8/12/2001	15:30	14.44	15.07	1.57	9.83	475
8/12/2001	16:00	14.42	15.07	1.62	9.88	479

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/12/2001	16:30	14.42	15.06	1.59	9.85	477
8/12/2001	17:00	14.41	15.07	1.64	9.90	481
8/12/2001	17:30	14.42	15.06	1.59	9.85	477
8/12/2001	18:00	14.42	15.05	1.57	9.83	475
8/12/2001	18:30	14.45	15.05	1.50	9.76	469
8/12/2001	19:00	14.44	15.05	1.52	9.78	471
8/12/2001	19:30	14.44	15.05	1.52	9.78	471
8/12/2001	20:00	14.43	15.05	1.55	9.81	473
8/12/2001	20:30	14.42	15.05	1.57	9.83	475
8/12/2001	21:00	14.42	15.05	1.57	9.83	475
8/12/2001	21:30	14.43	15.06	1.57	9.83	475
8/12/2001	22:00	14.43	15.07	1.59	9.85	477
8/12/2001	22:30	14.44	15.07	1.57	9.83	475
8/12/2001	23:00	14.44	15.07	1.57	9.83	475
8/12/2001	23:30	14.45	15.08	1.57	9.83	475
8/13/2001	0:00	14.45	15.08	1.57	9.83	475
8/13/2001	0:30	14.45	15.08	1.57	9.83	475
8/13/2001	1:00	14.47	15.09	1.55	9.81	473
8/13/2001	1:30	14.47	15.09	1.55	9.81	473
8/13/2001	2:00	14.48	15.1	1.55	9.81	473
8/13/2001	2:30	14.49	15.11	1.55	9.81	473
8/13/2001	3:00	14.5	15.11	1.53	9.79	471
8/13/2001	3:30	14.5	15.11	1.53	9.79	471
8/13/2001	4:00	14.5	15.12	1.55	9.81	473
8/13/2001	4:30	14.51	15.13	1.55	9.81	473
8/13/2001	5:00	14.51	15.13	1.55	9.81	473
8/13/2001	5:30	14.51	15.13	1.55	9.81	473
8/13/2001	6:00	14.52	15.14	1.55	9.81	473
8/13/2001	6:30	14.52	15.14	1.55	9.81	473
8/13/2001	7:00	14.52	15.14	1.55	9.81	473
8/13/2001	7:30	14.52	15.14	1.55	9.81	473
8/13/2001	8:00	14.52	15.14	1.55	9.81	473
8/13/2001	8:30	14.54	15.14	1.50	9.76	469
8/13/2001	9:00	14.54	15.14	1.50	9.76	469
8/13/2001	9:30	14.54	15.14	1.50	9.76	469
8/13/2001	10:00	14.55	15.15	1.50	9.76	469
8/13/2001	10:30	14.55	15.15	1.50	9.76	469
8/13/2001	11:00	14.55	15.16	1.53	9.79	471
8/13/2001	11:30	14.54	15.16	1.55	9.81	473
8/13/2001	12:00	14.55	15.17	1.55	9.81	473
8/13/2001	12:30	14.55	15.17	1.55	9.81	473
8/13/2001	13:00	14.55	15.17	1.55	9.81	473
8/13/2001	13:30	14.55	15.17	1.55	9.81	473

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/13/2001	14:00	14.55	15.17	1.55	9.81	473
8/13/2001	14:30	14.55	15.17	1.55	9.81	473
8/13/2001	15:00	14.55	15.17	1.55	9.81	473
8/13/2001	15:30	14.54	15.18	1.60	9.86	478
8/13/2001	16:00	14.54	15.17	1.57	9.83	476
8/13/2001	16:30	14.54	15.17	1.57	9.83	476
8/13/2001	17:00	14.53	15.17	1.60	9.86	478
8/13/2001	17:30	14.52	15.17	1.62	9.88	480
8/13/2001	18:00	14.52	15.16	1.60	9.86	478
8/13/2001	18:30	14.52	15.16	1.60	9.86	478
8/13/2001	19:00	14.52	15.15	1.57	9.83	476
8/13/2001	19:30	14.52	15.15	1.58	9.84	476
8/13/2001	20:00	14.51	15.14	1.58	9.84	476
8/13/2001	20:30	14.51	15.14	1.58	9.84	476
8/13/2001	21:00	14.51	15.14	1.58	9.84	476
8/13/2001	21:30	14.5	15.14	1.60	9.86	478
8/13/2001	22:00	14.5	15.14	1.60	9.86	478
8/13/2001	22:30	14.5	15.14	1.60	9.86	478
8/13/2001	23:00	14.5	15.13	1.58	9.84	476
8/13/2001	23:30	14.5	15.14	1.60	9.86	478
8/14/2001	0:00	14.5	15.14	1.60	9.86	478
8/14/2001	0:30	14.5	15.14	1.60	9.86	478
8/14/2001	1:00	14.5	15.13	1.58	9.84	476
8/14/2001	1:30	14.5	15.13	1.58	9.84	476
8/14/2001	2:00	14.49	15.12	1.58	9.84	476
8/14/2001	2:30	14.49	15.12	1.58	9.84	476
8/14/2001	3:00	14.49	15.12	1.58	9.84	476
8/14/2001	3:30	14.48	15.12	1.60	9.86	478
8/14/2001	4:00	14.48	15.11	1.58	9.84	476
8/14/2001	4:30	14.48	15.11	1.58	9.84	476
8/14/2001	5:00	14.48	15.11	1.58	9.84	476
8/14/2001	5:30	14.47	15.11	1.60	9.86	478
8/14/2001	6:00	14.47	15.11	1.60	9.86	478
8/14/2001	6:30	14.47	15.11	1.60	9.86	478
8/14/2001	7:00	14.47	15.11	1.60	9.86	478
8/14/2001	7:30	14.47	15.11	1.60	9.86	478
8/14/2001	8:00	14.47	15.12	1.62	9.88	480
8/14/2001	8:30	14.47	15.12	1.62	9.88	480
8/14/2001	9:00	14.47	15.13	1.65	9.91	482
8/14/2001	9:30	14.47	15.13	1.65	9.91	482
8/14/2001	10:00	14.47	15.14	1.67	9.93	484
8/14/2001	10:30	14.48	15.14	1.65	9.91	482
8/14/2001	11:00	14.48	15.14	1.65	9.91	482

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/14/2001	11:30	14.48	15.15	1.67	9.93	484
8/14/2001	12:00	14.49	15.16	1.67	9.93	484
8/14/2001	12:30	14.49	15.16	1.67	9.93	484
8/14/2001	13:00	14.49	15.16	1.67	9.93	484
8/14/2001	13:30	14.48	15.17	1.72	9.98	489
8/14/2001	14:00	14.47	15.17	1.74	10.00	491
8/14/2001	14:30	14.48	15.18	1.74	10.00	491
8/14/2001	15:00	14.47	15.19	1.79	10.05	495
8/14/2001	15:30	14.47	15.19	1.79	10.05	495
8/14/2001	16:00	14.46	15.2	1.83	10.09	499
8/14/2001	16:30	14.46	15.21	1.86	10.12	501
8/14/2001	17:00	14.47	15.21	1.83	10.09	499
8/14/2001	17:30	14.47	15.22	1.86	10.12	501
8/14/2001	17:40	-	-	-	<b>10.12</b>	502
8/14/2001	18:00	14.47	15.22	1.73	10.12	502
8/14/2001	18:30	14.45	15.22	1.78	10.17	506
8/14/2001	19:00	14.45	15.22	1.79	10.18	507
8/14/2001	19:30	14.45	15.22	1.79	10.18	507
8/14/2001	20:00	14.45	15.22	1.79	10.18	508
8/14/2001	20:30	14.45	15.22	1.80	10.19	508
8/14/2001	21:00	14.46	15.22	1.78	10.17	506
8/14/2001	21:30	14.47	15.22	1.76	10.15	505
8/14/2001	22:00	14.47	15.21	1.74	10.13	503
8/14/2001	22:30	14.47	15.21	1.75	10.14	504
8/14/2001	23:00	14.47	15.21	1.75	10.14	504
8/14/2001	23:30	14.48	15.22	1.76	10.15	504
8/15/2001	0:00	14.49	15.22	1.74	10.13	503
8/15/2001	0:11	-	-	-	<b>10.13</b>	503
8/15/2001	0:30	14.5	15.22	1.66	10.11	501
8/15/2001	1:00	14.5	15.22	1.66	10.11	500
8/15/2001	1:30	14.51	15.22	1.63	10.08	498
8/15/2001	2:00	14.51	15.22	1.63	10.08	498
8/15/2001	2:30	14.51	15.22	1.63	10.08	498
8/15/2001	3:00	14.5	15.22	1.65	10.10	500
8/15/2001	3:30	14.5	15.22	1.65	10.10	500
8/15/2001	4:00	14.5	15.22	1.65	10.10	500
8/15/2001	4:30	14.5	15.22	1.65	10.10	500
8/15/2001	5:00	14.5	15.22	1.65	10.10	500
8/15/2001	5:30	14.5	15.22	1.65	10.10	500
8/15/2001	6:00	14.5	15.22	1.65	10.10	500
8/15/2001	6:30	14.5	15.22	1.65	10.10	500
8/15/2001	7:00	14.5	15.22	1.65	10.10	500
8/15/2001	7:30	14.49	15.22	1.67	10.12	502

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/15/2001	8:00	14.48	15.22	1.70	10.15	504
8/15/2001	8:30	14.47	15.22	1.72	10.17	506
8/15/2001	9:00	14.47	15.22	1.72	10.17	506
8/15/2001	9:30	14.47	15.22	1.72	10.17	506
8/15/2001	10:00	14.46	15.22	1.74	10.19	508
8/15/2001	10:30	14.45	15.22	1.76	10.21	510
8/15/2001	11:00	14.46	15.23	1.76	10.21	510
8/15/2001	11:32	-	-	-	<b>10.21</b>	510
8/15/2001	12:00	14.45	15.2	1.73	10.22	511
8/15/2001	12:02	-	-	-	<b>10.22</b>	511
8/15/2001	12:30	14.43	15.2	1.77	10.26	526
8/15/2001	13:00	14.48	15.21	1.68	10.17	506
8/15/2001	13:30	14.6	15.21	1.40	9.89	481
8/15/2001	14:00	14.62	15.22	1.38	9.87	479
8/15/2001	14:30	14.62	15.23	1.40	9.89	481
8/15/2001	15:00	14.63	15.24	1.41	9.90	481
8/15/2001	15:30	14.63	15.24	1.41	9.90	481
8/15/2001	16:00	14.62	15.24	1.43	9.92	483
8/15/2001	16:30	14.62	15.24	1.43	9.92	483
8/15/2001	17:00	14.62	15.24	1.43	9.92	483
8/15/2001	17:30	14.62	15.24	1.43	9.92	483
8/15/2001	18:00	14.62	15.25	1.45	9.94	485
8/15/2001	18:30	14.65	15.26	1.41	9.90	481
8/15/2001	19:00	14.65	15.26	1.41	9.90	481
8/15/2001	19:30	14.65	15.26	1.41	9.90	481
8/15/2001	20:00	14.65	15.27	1.43	9.92	483
8/15/2001	20:30	14.66	15.27	1.41	9.90	481
8/15/2001	21:00	14.67	15.28	1.41	9.90	481
8/15/2001	21:30	14.66	15.28	1.43	9.92	484
8/15/2001	22:00	14.67	15.28	1.41	9.90	481
8/15/2001	22:30	14.67	15.28	1.41	9.90	481
8/15/2001	23:00	14.67	15.28	1.41	9.90	481
8/15/2001	23:30	14.67	15.28	1.41	9.90	482
8/16/2001	0:00	14.67	15.29	1.43	9.92	484
8/16/2001	0:30	14.68	15.29	1.41	9.90	482
8/16/2001	1:00	14.69	15.3	1.41	9.90	482
8/16/2001	1:30	14.69	15.31	1.43	9.92	484
8/16/2001	2:00	14.69	15.31	1.43	9.92	484
8/16/2001	2:30	14.7	15.31	1.41	9.90	482
8/16/2001	3:00	14.71	15.32	1.41	9.90	482
8/16/2001	3:30	14.71	15.33	1.43	9.92	484
8/16/2001	4:00	14.71	15.33	1.43	9.92	484
8/16/2001	4:30	14.72	15.33	1.41	9.90	482

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/16/2001	5:00	14.72	15.34	1.44	9.93	484
8/16/2001	5:30	14.72	15.34	1.44	9.93	484
8/16/2001	6:00	14.72	15.34	1.44	9.93	484
8/16/2001	6:30	14.72	15.35	1.46	9.95	486
8/16/2001	7:00	14.73	15.36	1.46	9.95	486
8/16/2001	7:30	14.73	15.36	1.46	9.95	486
8/16/2001	8:00	14.73	15.37	1.48	9.97	488
8/16/2001	8:30	14.73	15.37	1.48	9.97	488
8/16/2001	9:00	14.73	15.37	1.48	9.97	488
8/16/2001	9:30	14.73	15.37	1.48	9.97	488
8/16/2001	10:00	14.73	15.38	1.51	10.00	490
8/16/2001	10:30	14.73	15.38	1.51	10.00	491
8/16/2001	11:00	14.73	15.38	1.51	10.00	491
8/16/2001	11:30	14.73	15.39	1.53	10.02	493
8/16/2001	12:00	14.72	15.39	1.55	10.04	495
8/16/2001	12:30	14.72	15.39	1.55	10.04	495
8/16/2001	13:00	14.72	15.4	1.58	10.07	497
8/16/2001	13:30	14.72	15.4	1.58	10.07	497
8/16/2001	14:00	14.71	15.4	1.60	10.09	499
8/16/2001	14:30	14.72	15.4	1.58	10.07	497
8/16/2001	15:00	14.72	15.4	1.58	10.07	497
8/16/2001	15:30	14.72	15.4	1.58	10.07	497
8/16/2001	16:00	14.72	15.41	1.60	10.09	499
8/16/2001	16:30	14.73	15.41	1.58	10.07	497
8/16/2001	17:00	14.74	15.42	1.58	10.07	497
8/16/2001	17:30	14.74	15.42	1.58	10.07	497
8/16/2001	18:00	14.73	15.42	1.60	10.09	499
8/16/2001	18:30	14.74	15.43	1.60	10.09	499
8/16/2001	19:00	14.74	15.43	1.60	10.09	499
8/16/2001	19:30	14.74	15.43	1.60	10.09	499
8/16/2001	20:00	14.74	15.44	1.63	10.12	502
8/16/2001	20:30	14.75	15.44	1.60	10.09	499
8/16/2001	21:00	14.76	15.45	1.60	10.09	499
8/16/2001	21:30	14.76	15.45	1.61	10.10	500
8/16/2001	22:00	14.77	15.46	1.61	10.10	500
8/16/2001	22:30	14.77	15.47	1.63	10.12	502
8/16/2001	23:00	14.78	15.48	1.63	10.12	502
8/16/2001	23:30	14.79	15.49	1.63	10.12	502
8/17/2001	0:00	14.79	15.5	1.65	10.14	504
8/17/2001	0:30	14.79	15.5	1.65	10.14	504
8/17/2001	1:00	14.8	15.51	1.65	10.14	504
8/17/2001	1:30	14.81	15.51	1.63	10.12	502
8/17/2001	2:00	14.81	15.52	1.65	10.14	504



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/17/2001	2:30	14.82	15.53	1.65	10.14	504
8/17/2001	3:00	14.82	15.54	1.68	10.17	506
8/17/2001	3:30	14.82	15.55	1.70	10.19	508
8/17/2001	4:00	14.83	15.55	1.68	10.17	506
8/17/2001	4:30	14.84	15.56	1.68	10.17	506
8/17/2001	5:00	14.84	15.57	1.70	10.19	508
8/17/2001	5:30	14.84	15.58	1.72	10.21	510
8/17/2001	6:00	14.84	15.59	1.75	10.24	517
8/17/2001	6:30	14.85	15.6	1.75	10.24	517
8/17/2001	7:00	14.85	15.62	1.79	10.28	534
8/17/2001	7:30	14.85	15.63	1.82	10.31	542
8/17/2001	8:00	14.85	15.66	1.89	10.38	566
8/17/2001	8:30	14.84	15.68	1.96	10.45	591
8/17/2001	9:00	14.85	15.7	1.98	10.47	599
8/17/2001	9:30	14.85	15.73	2.05	10.54	624
8/17/2001	10:00	14.84	15.75	2.12	10.61	648
8/17/2001	10:30	14.83	15.78	2.21	10.70	681
8/17/2001	11:00	14.84	15.8	2.23	10.72	689
8/17/2001	11:30	14.85	15.83	2.28	10.77	705
8/17/2001	12:00	14.86	15.85	2.30	10.79	714
8/17/2001	12:30	14.85	15.88	2.40	10.89	746
8/17/2001	13:00	14.86	15.89	2.40	10.89	746
8/17/2001	13:30	14.87	15.92	2.44	10.93	772
8/17/2001	14:00	14.85	15.93	2.51	11.00	827
8/17/2001	14:30	14.85	15.94	2.53	11.02	845
8/17/2001	15:00	14.84	15.96	2.60	11.09	900
8/17/2001	15:30	14.85	15.97	2.60	11.09	900
8/17/2001	16:00	14.85	15.99	2.65	11.14	937
8/17/2001	16:30	14.84	16	2.70	11.19	973
8/17/2001	17:00	14.85	16.01	2.70	11.19	973
8/17/2001	17:30	14.85	16.02	2.72	11.21	992
8/17/2001	18:00	14.84	16.03	2.77	11.26	1028
8/17/2001	18:30	14.85	16.04	2.77	11.26	1028
8/17/2001	19:00	14.85	16.04	2.77	11.26	1029
8/17/2001	19:30	14.84	16.05	2.81	11.30	1065
8/17/2001	20:00	14.85	16.06	2.81	11.30	1065
8/17/2001	20:30	14.84	16.06	2.84	11.33	1084
8/17/2001	21:00	14.84	16.06	2.84	11.33	1084
8/17/2001	21:30	14.85	16.06	2.81	11.30	1066
8/17/2001	22:00	14.86	16.07	2.81	11.30	1066
8/17/2001	22:30	14.87	16.07	2.79	11.28	1048
8/17/2001	23:00	14.87	16.08	2.81	11.30	1067
8/17/2001	23:30	14.87	16.08	2.82	11.31	1067

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/18/2001	0:00	14.87	16.09	2.84	11.33	1085
8/18/2001	0:30	14.88	16.09	2.82	11.31	1067
8/18/2001	1:00	14.88	16.09	2.82	11.31	1067
8/18/2001	1:30	14.88	16.09	2.82	11.31	1068
8/18/2001	2:00	14.88	16.09	2.82	11.31	1068
8/18/2001	2:30	14.89	16.09	2.79	11.28	1050
8/18/2001	3:00	14.88	16.09	2.82	11.31	1068
8/18/2001	3:30	14.88	16.09	2.82	11.31	1069
8/18/2001	4:00	14.88	16.08	2.79	11.28	1051
8/18/2001	4:30	14.88	16.08	2.79	11.28	1051
8/18/2001	5:00	14.88	16.08	2.80	11.29	1051
8/18/2001	5:30	14.87	16.08	2.82	11.31	1069
8/18/2001	6:00	14.87	16.07	2.80	11.29	1051
8/18/2001	6:30	14.87	16.07	2.80	11.29	1052
8/18/2001	7:00	14.87	16.07	2.80	11.29	1052
8/18/2001	7:30	14.87	16.06	2.77	11.26	1034
8/18/2001	8:00	14.86	16.06	2.80	11.29	1052
8/18/2001	8:30	14.85	16.06	2.82	11.31	1071
8/18/2001	9:00	14.85	16.06	2.82	11.31	1071
8/18/2001	9:30	14.84	16.06	2.84	11.33	1089
8/18/2001	10:00	14.84	16.05	2.82	11.31	1071
8/18/2001	10:30	14.83	16.05	2.84	11.33	1090
8/18/2001	11:00	14.83	16.05	2.84	11.33	1090
8/18/2001	11:30	14.82	16.04	2.84	11.33	1090
8/18/2001	12:00	14.81	16.04	2.87	11.36	1108
8/18/2001	12:30	14.79	16.04	2.91	11.40	1145
8/18/2001	13:00	14.79	16.04	2.91	11.40	1145
8/18/2001	13:30	14.79	16.03	2.89	11.38	1127
8/18/2001	14:00	14.78	16.03	2.91	11.40	1145
8/18/2001	14:30	14.78	16.02	2.89	11.38	1128
8/18/2001	15:00	14.78	16.01	2.87	11.36	1110
8/18/2001	15:30	14.78	16	2.85	11.34	1092
8/18/2001	16:00	14.77	16	2.87	11.36	1110
8/18/2001	16:30	14.77	15.99	2.85	11.34	1092
8/18/2001	17:00	14.77	15.99	2.85	11.34	1092
8/18/2001	17:30	14.77	15.98	2.82	11.31	1074
8/18/2001	18:00	14.77	15.97	2.80	11.29	1056
8/18/2001	18:30	14.77	15.97	2.80	11.29	1057
8/18/2001	19:00	14.77	15.96	2.78	11.27	1039
8/18/2001	19:30	14.77	15.96	2.78	11.27	1039
8/18/2001	20:00	14.77	15.95	2.76	11.25	1021
8/18/2001	20:30	14.77	15.94	2.73	11.22	1003
8/18/2001	21:00	14.77	15.94	2.73	11.22	1003

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/18/2001	21:30	14.77	15.94	2.73	11.22	1003
8/18/2001	22:00	14.77	15.94	2.73	11.22	1003
8/18/2001	22:30	14.77	15.93	2.71	11.20	986
8/18/2001	23:00	14.76	15.92	2.71	11.20	986
8/18/2001	23:30	14.76	15.91	2.69	11.18	968
8/19/2001	0:00	14.76	15.9	2.67	11.16	950
8/19/2001	0:30	14.76	15.89	2.64	11.13	932
8/19/2001	1:00	14.76	15.89	2.64	11.13	932
8/19/2001	1:30	14.75	15.89	2.67	11.16	950
8/19/2001	2:00	14.75	15.89	2.67	11.16	951
8/19/2001	2:30	14.75	15.88	2.65	11.14	933
8/19/2001	3:00	14.75	15.88	2.65	11.14	933
8/19/2001	3:30	14.74	15.87	2.65	11.14	933
8/19/2001	4:00	14.74	15.86	2.62	11.11	915
8/19/2001	4:30	14.74	15.86	2.62	11.11	915
8/19/2001	5:00	14.74	15.86	2.62	11.11	916
8/19/2001	5:30	14.73	15.85	2.62	11.11	916
8/19/2001	6:00	14.72	15.84	2.62	11.11	916
8/19/2001	6:30	14.72	15.83	2.60	11.09	898
8/19/2001	7:00	14.72	15.83	2.60	11.09	898
8/19/2001	7:30	14.72	15.83	2.60	11.09	898
8/19/2001	8:00	14.71	15.82	2.60	11.09	899
8/19/2001	8:30	14.7	15.81	2.60	11.09	899
8/19/2001	9:00	14.69	15.8	2.60	11.09	899
8/19/2001	9:30	14.69	15.8	2.60	11.09	899
8/19/2001	10:00	14.69	15.79	2.58	11.07	881
8/19/2001	10:30	14.68	15.79	2.60	11.09	900
8/19/2001	11:00	14.68	15.78	2.58	11.07	882
8/19/2001	11:30	14.67	15.78	2.60	11.09	900
8/19/2001	12:00	14.67	15.77	2.58	11.07	882
8/19/2001	12:30	14.67	15.77	2.58	11.07	882
8/19/2001	13:00	14.66	15.76	2.58	11.07	883
8/19/2001	13:30	14.65	15.75	2.58	11.07	883
8/19/2001	14:00	14.65	15.75	2.58	11.07	883
8/19/2001	14:30	14.65	15.74	2.56	11.05	865
8/19/2001	15:00	14.64	15.74	2.58	11.07	883
8/19/2001	15:30	14.64	15.74	2.58	11.07	884
8/19/2001	16:00	14.62	15.76	2.68	11.17	956
8/19/2001	16:30	14.62	15.78	2.72	11.21	993
8/19/2001	17:00	14.62	15.78	2.72	11.21	993
8/19/2001	17:30	14.61	15.77	2.72	11.21	993
8/19/2001	18:00	14.61	15.79	2.77	11.26	1030
8/19/2001	18:30	14.61	15.81	2.81	11.30	1066

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/19/2001	19:00	14.61	15.81	2.81	11.30	1067
8/19/2001	19:30	14.61	15.77	2.72	11.21	994
8/19/2001	20:00	14.61	15.74	2.65	11.14	940
8/19/2001	20:30	14.62	15.72	2.59	11.08	886
8/19/2001	21:00	14.62	15.7	2.54	11.03	850
8/19/2001	21:30	14.62	15.69	2.52	11.01	832
8/19/2001	22:00	14.62	15.68	2.49	10.98	814
8/19/2001	22:30	14.62	15.67	2.47	10.96	796
8/19/2001	23:00	14.62	15.66	2.45	10.94	778
8/19/2001	23:30	14.62	15.66	2.45	10.94	778
8/20/2001	0:00	14.62	15.66	2.45	10.94	778
8/20/2001	0:30	14.62	15.66	2.45	10.94	778
8/20/2001	1:00	14.62	15.66	2.45	10.94	779
8/20/2001	1:30	14.62	15.65	2.43	10.92	761
8/20/2001	2:00	14.62	15.65	2.43	10.92	761
8/20/2001	2:30	14.62	15.65	2.43	10.92	761
8/20/2001	3:00	14.62	15.64	2.40	10.89	750
8/20/2001	3:30	14.62	15.64	2.41	10.90	750
8/20/2001	4:00	14.62	15.64	2.41	10.90	750
8/20/2001	4:30	14.62	15.64	2.41	10.90	750
8/20/2001	5:00	14.62	15.64	2.41	10.90	750
8/20/2001	5:30	14.62	15.63	2.38	10.87	742
8/20/2001	6:00	14.62	15.63	2.38	10.87	742
8/20/2001	6:30	14.62	15.64	2.41	10.90	750
8/20/2001	7:00	14.63	15.65	2.41	10.90	750
8/20/2001	7:30	14.63	15.65	2.41	10.90	750
8/20/2001	8:00	14.63	15.64	2.38	10.87	742
8/20/2001	8:30	14.63	15.64	2.38	10.87	743
8/20/2001	9:00	14.63	15.64	2.39	10.88	743
8/20/2001	9:30	14.63	15.65	2.41	10.90	751
8/20/2001	10:00	14.64	15.65	2.39	10.88	743
8/20/2001	10:30	14.64	15.65	2.39	10.88	743
8/20/2001	11:00	14.64	15.66	2.41	10.90	751
8/20/2001	11:30	14.64	15.66	2.41	10.90	751
8/20/2001	12:00	14.65	15.66	2.39	10.88	743
8/20/2001	12:30	14.65	15.66	2.39	10.88	743
8/20/2001	13:00	14.65	15.66	2.39	10.88	743
8/20/2001	13:30	14.65	15.67	2.41	10.90	752
8/20/2001	14:00	14.65	15.68	2.43	10.92	766
8/20/2001	14:30	14.65	15.69	2.46	10.95	784
8/20/2001	15:00	14.65	15.71	2.50	10.99	821
8/20/2001	15:30	14.65	15.71	2.50	10.99	821
8/20/2001	16:00	14.65	15.73	2.55	11.04	857

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/20/2001	16:30	14.65	15.74	2.57	11.06	876
8/20/2001	17:00	14.65	15.74	2.57	11.06	876
8/20/2001	17:30	14.65	15.71	2.50	10.99	822
8/20/2001	18:00	14.66	15.71	2.48	10.97	804
8/20/2001	18:30	14.66	15.71	2.48	10.97	804
8/20/2001	19:00	14.67	15.7	2.44	10.93	768
8/20/2001	19:30	14.67	15.69	2.41	10.90	753
8/20/2001	20:00	14.67	15.69	2.41	10.90	753
8/20/2001	20:30	14.67	15.69	2.41	10.90	753
8/20/2001	21:00	14.68	15.69	2.39	10.88	745
8/20/2001	21:30	14.69	15.69	2.37	10.86	737
8/20/2001	22:00	14.69	15.69	2.37	10.86	737
8/20/2001	22:30	14.69	15.7	2.39	10.88	745
8/20/2001	23:00	14.69	15.69	2.37	10.86	737
8/20/2001	23:30	14.69	15.69	2.37	10.86	737
8/21/2001	0:00	14.7	15.69	2.35	10.84	729
8/21/2001	0:30	14.7	15.69	2.35	10.84	729
8/21/2001	1:00	14.7	15.68	2.32	10.81	721
8/21/2001	1:30	14.7	15.67	2.30	10.79	713
8/21/2001	2:00	14.71	15.67	2.28	10.77	705
8/21/2001	2:30	14.71	15.67	2.28	10.77	705
8/21/2001	3:00	14.71	15.67	2.28	10.77	705
8/21/2001	3:30	14.72	15.67	2.26	10.75	697
8/21/2001	4:00	14.72	15.67	2.26	10.75	697
8/21/2001	4:30	14.72	15.66	2.23	10.72	689
8/21/2001	5:00	14.72	15.66	2.23	10.72	689
8/21/2001	5:30	14.72	15.66	2.23	10.72	689
8/21/2001	6:00	14.72	15.66	2.23	10.72	690
8/21/2001	6:30	14.72	15.67	2.26	10.75	698
8/21/2001	7:00	14.72	15.66	2.24	10.73	690
8/21/2001	7:30	14.72	15.66	2.24	10.73	690
8/21/2001	8:00	14.72	15.66	2.24	10.73	690
8/21/2001	8:30	14.72	15.66	2.24	10.73	690
8/21/2001	9:00	14.71	15.67	2.28	10.77	706
8/21/2001	9:30	14.72	15.67	2.26	10.75	698
8/21/2001	10:00	14.72	15.68	2.28	10.77	707
8/21/2001	10:30	14.72	15.68	2.28	10.77	707
8/21/2001	11:00	14.72	15.69	2.31	10.80	715
8/21/2001	11:30	14.72	15.69	2.31	10.80	715
8/21/2001	12:00	14.71	15.71	2.38	10.87	739
8/21/2001	12:30	14.72	15.72	2.38	10.87	740
8/21/2001	13:00	14.72	15.74	2.42	10.91	757
8/21/2001	13:30	14.72	15.75	2.45	10.94	775

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/21/2001	14:00	14.72	15.74	2.42	10.91	757
8/21/2001	14:30	14.72	15.73	2.40	10.89	748
8/21/2001	15:00	14.71	15.72	2.40	10.89	748
8/21/2001	15:30	14.72	15.72	2.38	10.87	740
8/21/2001	16:00	14.71	15.71	2.38	10.87	740
8/21/2001	16:30	14.71	15.69	2.33	10.82	724
8/21/2001	17:00	14.71	15.68	2.31	10.80	716
8/21/2001	17:30	14.71	15.68	2.31	10.80	716
8/21/2001	18:00	14.72	15.68	2.29	10.78	708
8/21/2001	18:30	14.72	15.67	2.26	10.75	700
8/21/2001	19:00	14.72	15.69	2.31	10.80	716
8/21/2001	19:30	14.72	15.69	2.31	10.80	716
8/21/2001	20:00	14.73	15.69	2.29	10.78	708
8/21/2001	20:30	14.73	15.69	2.29	10.78	708
8/21/2001	21:00	14.74	15.69	2.27	10.76	700
8/21/2001	21:30	14.74	15.68	2.24	10.73	692
8/21/2001	22:00	14.74	15.68	2.24	10.73	692
8/21/2001	22:30	14.74	15.67	2.22	10.71	684
8/21/2001	23:00	14.74	15.67	2.22	10.71	685
8/21/2001	23:30	14.74	15.66	2.20	10.69	676
8/22/2001	0:00	14.74	15.66	2.20	10.69	677
8/22/2001	0:30	14.74	15.66	2.20	10.69	677
8/22/2001	1:00	14.74	15.66	2.20	10.69	677
8/22/2001	1:30	14.74	15.66	2.20	10.69	677
8/22/2001	2:00	14.74	15.65	2.18	10.67	669
8/22/2001	2:30	14.74	15.65	2.18	10.67	669
8/22/2001	3:00	14.74	15.65	2.18	10.67	669
8/22/2001	3:30	14.74	15.64	2.15	10.64	661
8/22/2001	4:00	14.74	15.64	2.15	10.64	661
8/22/2001	4:30	14.74	15.64	2.15	10.64	661
8/22/2001	5:00	14.74	15.63	2.13	10.62	653
8/22/2001	5:30	14.74	15.63	2.13	10.62	653
8/22/2001	6:00	14.74	15.63	2.13	10.62	653
8/22/2001	6:30	14.73	15.63	2.16	10.65	662
8/22/2001	7:00	14.72	15.62	2.16	10.65	662
8/22/2001	7:30	14.72	15.62	2.16	10.65	662
8/22/2001	8:00	14.72	15.62	2.16	10.65	662
8/22/2001	8:30	14.72	15.61	2.13	10.62	654
8/22/2001	9:00	14.71	15.61	2.16	10.65	662
8/22/2001	9:30	14.71	15.6	2.13	10.62	654
8/22/2001	10:00	14.7	15.6	2.16	10.65	662
8/22/2001	10:30	14.69	15.6	2.18	10.67	670
8/22/2001	11:00	14.69	15.59	2.16	10.65	662

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/22/2001	11:30	14.69	15.59	2.16	10.65	662
8/22/2001	12:00	14.69	15.59	2.16	10.65	663
8/22/2001	12:30	14.7	15.59	2.14	10.63	654
8/22/2001	13:00	14.7	15.59	2.14	10.63	655
8/22/2001	13:30	14.7	15.6	2.16	10.65	663
8/22/2001	14:00	14.69	15.63	2.25	10.74	695
8/22/2001	14:30	14.69	15.66	2.32	10.81	720
8/22/2001	15:00	14.67	15.66	2.37	10.86	736
8/22/2001	15:30	14.66	15.64	2.34	10.83	728
8/22/2001	16:00	14.66	15.61	2.28	10.77	704
8/22/2001	16:30	14.66	15.6	2.25	10.74	696
8/22/2001	17:00	14.65	15.58	2.23	10.72	688
8/22/2001	17:30	14.65	15.57	2.21	10.70	680
8/22/2001	18:00	14.65	15.57	2.21	10.70	680
8/22/2001	18:30	14.65	15.56	2.18	10.67	672
8/22/2001	19:00	14.65	15.56	2.19	10.68	672
8/22/2001	19:30	14.65	15.55	2.16	10.65	664
8/22/2001	20:00	14.65	15.55	2.16	10.65	664
8/22/2001	20:30	14.65	15.55	2.16	10.65	664
8/22/2001	21:00	14.65	15.55	2.16	10.65	664
8/22/2001	21:30	14.65	15.54	2.14	10.63	656
8/22/2001	22:00	14.65	15.54	2.14	10.63	656
8/22/2001	22:30	14.66	15.55	2.14	10.63	656
8/22/2001	23:00	14.66	15.55	2.14	10.63	656
8/22/2001	23:30	14.66	15.54	2.12	10.61	648
8/23/2001	0:00	14.66	15.52	2.07	10.56	632
8/23/2001	0:30	14.67	15.51	2.03	10.52	616
8/23/2001	1:00	14.67	15.51	2.03	10.52	616
8/23/2001	1:30	14.67	15.51	2.03	10.52	616
8/23/2001	2:00	14.67	15.51	2.03	10.52	616
8/23/2001	2:30	14.67	15.51	2.03	10.52	616
8/23/2001	3:00	14.66	15.51	2.05	10.54	625
8/23/2001	3:30	14.66	15.5	2.03	10.52	617
8/23/2001	4:00	14.67	15.5	2.01	10.50	609
8/23/2001	4:30	14.66	15.5	2.03	10.52	617
8/23/2001	5:00	14.66	15.5	2.03	10.52	617
8/23/2001	5:30	14.66	15.5	2.03	10.52	617
8/23/2001	6:00	14.66	15.5	2.03	10.52	617
8/23/2001	6:30	14.66	15.5	2.03	10.52	617
8/23/2001	7:00	14.65	15.5	2.05	10.54	625
8/23/2001	7:30	14.65	15.49	2.03	10.52	617
8/23/2001	8:00	14.64	15.49	2.05	10.54	626
8/23/2001	8:30	14.64	15.49	2.05	10.54	626

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/23/2001	9:00	14.63	15.49	2.08	10.57	634
8/23/2001	9:30	14.64	15.49	2.05	10.54	626
8/23/2001	10:00	14.65	15.49	2.03	10.52	618
8/23/2001	10:30	14.63	15.48	2.06	10.55	626
8/23/2001	11:00	14.62	15.48	2.08	10.57	634
8/23/2001	11:30	14.62	15.48	2.08	10.57	634
8/23/2001	12:00	14.62	15.48	2.08	10.57	634
8/23/2001	12:30	14.62	15.49	2.10	10.59	643
8/23/2001	13:00	14.62	15.5	2.13	10.62	651
8/23/2001	13:30	14.62	15.51	2.15	10.64	659
8/23/2001	14:00	14.62	15.53	2.20	10.69	675
8/23/2001	14:30	14.62	15.55	2.24	10.73	692
8/23/2001	15:00	14.62	15.58	2.31	10.80	716
8/23/2001	15:30	14.62	15.62	2.40	10.89	749
8/23/2001	16:00	14.62	15.63	2.43	10.92	760
8/23/2001	16:30	14.62	15.66	2.50	10.99	815
8/23/2001	17:00	14.62	15.69	2.56	11.05	869
8/23/2001	17:30	14.62	15.7	2.59	11.08	888
8/23/2001	18:00	14.62	15.69	2.57	11.06	870
8/23/2001	18:30	14.62	15.67	2.52	11.01	834
8/23/2001	19:00	14.62	15.65	2.47	10.96	797
8/23/2001	19:30	14.62	15.61	2.38	10.87	742
8/23/2001	20:00	14.62	15.58	2.31	10.80	717
8/23/2001	20:30	14.62	15.55	2.24	10.73	693
8/23/2001	21:00	14.63	15.52	2.15	10.64	660
8/23/2001	21:30	14.63	15.51	2.13	10.62	652
8/23/2001	22:00	14.63	15.49	2.08	10.57	636
8/23/2001	22:30	14.63	15.48	2.06	10.55	628
8/23/2001	23:00	14.64	15.48	2.04	10.53	620
8/23/2001	23:30	14.63	15.47	2.04	10.53	620
8/24/2001	0:00	14.63	15.47	2.04	10.53	620
8/24/2001	0:30	14.64	15.47	2.02	10.51	612
8/24/2001	1:00	14.64	15.47	2.02	10.51	612
8/24/2001	1:30	14.65	15.47	1.99	10.48	604
8/24/2001	2:00	14.65	15.47	1.99	10.48	604
8/24/2001	2:30	14.65	15.47	1.99	10.48	605
8/24/2001	3:00	14.65	15.47	1.99	10.48	605
8/24/2001	3:30	14.65	15.47	1.99	10.48	605
8/24/2001	4:00	14.65	15.47	2.00	10.49	605
8/24/2001	4:30	14.65	15.46	1.97	10.46	597
8/24/2001	5:00	14.65	15.47	2.00	10.49	605
8/24/2001	5:30	14.65	15.47	2.00	10.49	605
8/24/2001	6:00	14.65	15.47	2.00	10.49	605



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/24/2001	6:30	14.65	15.47	2.00	10.49	605
8/24/2001	7:00	14.65	15.47	2.00	10.49	605
8/24/2001	7:30	14.65	15.47	2.00	10.49	605
8/24/2001	8:00	14.65	15.47	2.00	10.49	606
8/24/2001	8:30	14.65	15.47	2.00	10.49	606
8/24/2001	9:00	14.65	15.48	2.02	10.51	614
8/24/2001	9:30	14.65	15.47	2.00	10.49	606
8/24/2001	10:00	14.65	15.47	2.00	10.49	606
8/24/2001	10:30	14.65	15.48	2.02	10.51	614
8/24/2001	11:00	14.65	15.48	2.02	10.51	614
8/24/2001	11:30	14.64	15.48	2.05	10.54	622
8/24/2001	12:00	14.64	15.48	2.05	10.54	623
8/24/2001	12:30	14.64	15.48	2.05	10.54	623
8/24/2001	13:00	14.63	15.49	2.09	10.58	639
8/24/2001	13:30	14.63	15.51	2.14	10.63	655
8/24/2001	14:00	14.63	15.53	2.18	10.67	672
8/24/2001	14:30	14.63	15.54	2.21	10.70	680
8/24/2001	15:00	14.63	15.57	2.28	10.77	704
8/24/2001	15:30	14.62	15.6	2.37	10.86	737
8/24/2001	16:00	14.62	15.62	2.42	10.91	753
8/24/2001	16:30	14.62	15.63	2.44	10.93	770
8/24/2001	17:00	14.62	15.67	2.53	11.02	843
8/24/2001	17:30	14.62	15.71	2.62	11.11	916
8/24/2001	18:00	14.63	15.73	2.65	11.14	934
8/24/2001	18:30	14.63	15.74	2.67	11.16	952
8/24/2001	19:00	14.63	15.74	2.67	11.16	953
8/24/2001	19:30	14.62	15.71	2.62	11.11	916
8/24/2001	20:00	14.63	15.69	2.56	11.05	862
8/24/2001	20:30	14.63	15.64	2.44	10.93	772
8/24/2001	21:00	14.63	15.59	2.33	10.82	722
8/24/2001	21:30	14.63	15.54	2.21	10.70	681
8/24/2001	22:00	14.63	15.51	2.14	10.63	657
8/24/2001	22:30	14.63	15.49	2.10	10.59	641
8/24/2001	23:00	14.63	15.47	2.05	10.54	625
8/24/2001	23:30	14.63	15.45	2.01	10.50	608
8/25/2001	0:00	14.63	15.45	2.01	10.50	608
8/25/2001	0:30	14.63	15.44	1.98	10.47	600
8/25/2001	1:00	14.63	15.44	1.98	10.47	601
8/25/2001	1:30	14.63	15.43	1.96	10.45	592
8/25/2001	2:00	14.63	15.43	1.96	10.45	593
8/25/2001	2:30	14.63	15.43	1.96	10.45	593
8/25/2001	3:00	14.63	15.43	1.96	10.45	593
8/25/2001	3:30	14.63	15.42	1.94	10.43	585

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/25/2001	4:00	14.62	15.42	1.96	10.45	593
8/25/2001	4:30	14.62	15.42	1.96	10.45	593
8/25/2001	5:00	14.62	15.42	1.96	10.45	593
8/25/2001	5:30	14.62	15.41	1.94	10.43	585
8/25/2001	6:00	14.62	15.41	1.94	10.43	585
8/25/2001	6:30	14.62	15.41	1.94	10.43	585
8/25/2001	7:00	14.62	15.41	1.94	10.43	585
8/25/2001	7:30	14.62	15.41	1.94	10.43	585
8/25/2001	8:00	14.61	15.4	1.94	10.43	586
8/25/2001	8:30	14.61	15.4	1.94	10.43	586
8/25/2001	9:00	14.61	15.4	1.94	10.43	586
8/25/2001	9:30	14.6	15.4	1.96	10.45	594
8/25/2001	10:00	14.6	15.4	1.96	10.45	594
8/25/2001	10:30	14.6	15.4	1.97	10.46	594
8/25/2001	11:00	14.6	15.4	1.97	10.46	594
8/25/2001	11:30	14.6	15.4	1.97	10.46	594
8/25/2001	12:00	14.59	15.4	1.99	10.48	603
8/25/2001	12:30	14.59	15.4	1.99	10.48	603
8/25/2001	13:00	14.58	15.41	2.04	10.53	619
8/25/2001	13:30	14.58	15.43	2.08	10.57	635
8/25/2001	14:00	14.58	15.44	2.11	10.60	644
8/25/2001	14:30	14.58	15.45	2.13	10.62	652
8/25/2001	15:00	14.58	15.48	2.20	10.69	676
8/25/2001	15:30	14.57	15.49	2.24	10.73	693
8/25/2001	16:00	14.57	15.52	2.31	10.80	717
8/25/2001	16:30	14.57	15.55	2.38	10.87	742
8/25/2001	17:00	14.56	15.6	2.52	11.01	835
8/25/2001	17:30	14.56	15.65	2.64	11.13	925
8/25/2001	18:00	14.56	15.68	2.71	11.20	980
8/25/2001	18:30	14.55	15.69	2.75	11.24	1017
8/25/2001	19:00	14.55	15.71	2.80	11.29	1053
8/25/2001	19:30	14.55	15.72	2.82	11.31	1072
8/25/2001	20:00	14.55	15.73	2.84	11.33	1090
8/25/2001	20:30	14.55	15.72	2.82	11.31	1072
8/25/2001	21:00	14.55	15.71	2.80	11.29	1054
8/25/2001	21:30	14.56	15.68	2.71	11.20	982
8/25/2001	22:00	14.56	15.66	2.66	11.15	946
8/25/2001	22:30	14.56	15.64	2.62	11.11	909
8/25/2001	23:00	14.56	15.61	2.55	11.04	855
8/25/2001	23:30	14.56	15.58	2.48	10.97	801
8/26/2001	0:00	14.56	15.56	2.43	10.92	765
8/26/2001	0:30	14.56	15.52	2.34	10.83	727
8/26/2001	1:00	14.56	15.48	2.25	10.74	694

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/26/2001	1:30	14.56	15.45	2.18	10.67	670
8/26/2001	2:00	14.56	15.43	2.13	10.62	654
8/26/2001	2:30	14.57	15.41	2.07	10.56	630
8/26/2001	3:00	14.57	15.4	2.04	10.53	622
8/26/2001	3:30	14.57	15.39	2.02	10.51	614
8/26/2001	4:00	14.57	15.38	2.00	10.49	606
8/26/2001	4:30	14.57	15.37	1.97	10.46	597
8/26/2001	5:00	14.57	15.37	1.97	10.46	598
8/26/2001	5:30	14.57	15.36	1.95	10.44	590
8/26/2001	6:00	14.57	15.37	1.98	10.47	598
8/26/2001	6:30	14.57	15.37	1.98	10.47	598
8/26/2001	7:00	14.59	15.37	1.93	10.42	582
8/26/2001	7:30	14.6	15.37	1.91	10.40	574
8/26/2001	8:00	14.6	15.37	1.91	10.40	574
8/26/2001	8:30	14.6	15.37	1.91	10.40	574
8/26/2001	9:00	14.6	15.37	1.91	10.40	574
8/26/2001	9:30	14.6	15.37	1.91	10.40	574
8/26/2001	10:00	14.6	15.37	1.91	10.40	574
8/26/2001	10:30	14.6	15.38	1.93	10.42	582
8/26/2001	11:00	14.6	15.4	1.98	10.47	599
8/26/2001	11:30	14.6	15.44	2.07	10.56	631
8/26/2001	12:00	14.6	15.5	2.21	10.70	680
8/26/2001	12:30	14.6	15.56	2.35	10.84	729
8/26/2001	13:00	14.6	15.63	2.51	11.00	825
8/26/2001	13:30	14.6	15.66	2.58	11.07	879
8/26/2001	14:00	14.6	15.71	2.69	11.18	970
8/26/2001	14:30	14.6	15.67	2.60	11.09	898
8/26/2001	15:00	14.6	15.51	2.23	10.72	689
8/26/2001	15:30	14.6	15.63	2.51	11.00	826
8/26/2001	16:00	14.57	15.69	2.72	11.21	989
8/26/2001	16:30	14.57	15.58	2.46	10.95	790
8/26/2001	17:00	14.57	15.55	2.40	10.89	746
8/26/2001	17:30	14.57	15.56	2.42	10.91	754
8/26/2001	18:00	14.57	15.5	2.28	10.77	706
8/26/2001	18:30	14.57	15.5	2.28	10.77	706
8/26/2001	19:00	14.57	15.46	2.19	10.68	673
8/26/2001	19:30	14.58	15.43	2.10	10.59	641
8/26/2001	20:00	14.59	15.42	2.05	10.54	625
8/26/2001	20:30	14.59	15.42	2.05	10.54	625
8/26/2001	21:00	14.6	15.42	2.03	10.52	617
8/26/2001	21:30	14.6	15.42	2.03	10.52	617
8/26/2001	22:00	14.6	15.43	2.05	10.54	625
8/26/2001	22:30	14.6	15.43	2.05	10.54	625

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/26/2001	23:00	14.61	15.44	2.05	10.54	625
8/26/2001	23:30	14.61	15.45	2.08	10.57	634
8/27/2001	0:00	14.62	15.44	2.03	10.52	617
8/27/2001	0:30	14.62	15.42	1.98	10.47	601
8/27/2001	1:00	14.62	15.4	1.94	10.43	585
8/27/2001	1:30	14.62	15.4	1.94	10.43	585
8/27/2001	2:00	14.62	15.4	1.94	10.43	585
8/27/2001	2:30	14.63	15.4	1.92	10.41	577
8/27/2001	3:00	14.64	15.4	1.89	10.38	569
8/27/2001	3:30	14.64	15.4	1.89	10.38	569
8/27/2001	4:00	14.64	15.4	1.89	10.38	569
8/27/2001	4:30	14.65	15.4	1.87	10.36	561
8/27/2001	5:00	14.65	15.4	1.87	10.36	561
8/27/2001	5:30	14.66	15.4	1.85	10.34	553
8/27/2001	6:00	14.65	15.4	1.87	10.36	561
8/27/2001	6:30	14.65	15.4	1.87	10.36	562
8/27/2001	7:00	14.65	15.4	1.87	10.36	562
8/27/2001	7:30	14.65	15.4	1.87	10.36	562
8/27/2001	8:00	14.65	15.4	1.87	10.36	562
8/27/2001	8:30	14.66	15.4	1.85	10.34	554
8/27/2001	9:00	14.65	15.4	1.87	10.36	562
8/27/2001	9:30	14.65	15.4	1.87	10.36	562
8/27/2001	10:00	14.65	15.4	1.87	10.36	562
8/27/2001	10:30	14.65	15.4	1.88	10.37	562
8/27/2001	11:00	14.65	15.41	1.90	10.39	571
8/27/2001	11:30	14.64	15.41	1.92	10.41	579
8/27/2001	12:00	14.62	15.42	1.99	10.48	603
8/27/2001	12:30	14.62	15.42	1.99	10.48	603
8/27/2001	13:00	14.62	15.43	2.01	10.50	612
8/27/2001	13:30	14.62	15.44	2.04	10.53	620
8/27/2001	14:00	14.62	15.46	2.08	10.57	636
8/27/2001	14:30	14.62	15.49	2.15	10.64	661
8/27/2001	15:00	14.61	15.57	2.36	10.85	734
8/27/2001	15:30	14.61	15.66	2.57	11.06	872
8/27/2001	16:00	14.62	15.76	2.78	11.27	1035
8/27/2001	16:30	14.61	15.83	2.96	11.45	1181
8/27/2001	17:00	14.61	15.76	2.80	11.29	1054
8/27/2001	17:30	14.6	15.7	2.68	11.17	963
8/27/2001	18:00	14.6	15.66	2.59	11.08	891
8/27/2001	18:30	14.6	15.68	2.64	11.13	927
8/27/2001	19:00	14.6	15.63	2.52	11.01	837
8/27/2001	19:30	14.6	15.6	2.46	10.95	783
8/27/2001	20:00	14.61	15.6	2.43	10.92	765

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/27/2001	20:30	14.61	15.6	2.43	10.92	765
8/27/2001	21:00	14.62	15.59	2.39	10.88	743
8/27/2001	21:30	14.63	15.57	2.32	10.81	719
8/27/2001	22:00	14.64	15.53	2.20	10.69	678
8/27/2001	22:30	14.64	15.48	2.09	10.58	638
8/27/2001	23:00	14.65	15.45	2.00	10.49	605
8/27/2001	23:30	14.65	15.45	2.00	10.49	605
8/28/2001	0:00	14.65	15.44	1.97	10.46	597
8/28/2001	0:30	14.65	15.44	1.97	10.46	597
8/28/2001	1:00	14.65	15.44	1.97	10.46	598
8/28/2001	1:30	14.65	15.43	1.95	10.44	589
8/28/2001	2:00	14.65	15.43	1.95	10.44	590
8/28/2001	2:30	14.65	15.43	1.95	10.44	590
8/28/2001	3:00	14.65	15.43	1.95	10.44	590
8/28/2001	3:30	14.66	15.43	1.93	10.42	582
8/28/2001	4:00	14.66	15.43	1.93	10.42	582
8/28/2001	4:30	14.67	15.44	1.93	10.42	582
8/28/2001	5:00	14.67	15.44	1.93	10.42	582
8/28/2001	5:30	14.68	15.43	1.89	10.38	566
8/28/2001	6:00	14.68	15.43	1.89	10.38	566
8/28/2001	6:30	14.68	15.43	1.89	10.38	566
8/28/2001	7:00	14.68	15.43	1.89	10.38	566
8/28/2001	7:30	14.68	15.43	1.89	10.38	566
8/28/2001	8:00	14.68	15.43	1.89	10.38	566
8/28/2001	8:30	14.67	15.43	1.91	10.40	575
8/28/2001	9:00	14.67	15.43	1.91	10.40	575
8/28/2001	9:30	14.67	15.43	1.91	10.40	575
8/28/2001	10:00	14.66	15.43	1.93	10.42	583
8/28/2001	10:30	14.66	15.43	1.93	10.42	583
8/28/2001	11:00	14.65	15.43	1.96	10.45	591
8/28/2001	11:30	14.65	15.43	1.96	10.45	591
8/28/2001	12:00	14.65	15.44	1.98	10.47	600
8/28/2001	12:30	14.64	15.47	2.07	10.56	632
8/28/2001	13:00	14.64	15.54	2.23	10.72	689
8/28/2001	13:30	14.64	15.69	2.58	11.07	881
8/28/2001	14:00	14.62	15.84	2.97	11.46	1190
8/28/2001	14:30	14.63	15.74	2.72	11.21	990
8/28/2001	15:00	14.63	15.71	2.65	11.14	936
8/28/2001	15:30	14.62	15.74	2.74	11.23	1009
8/28/2001	16:00	14.62	15.57	2.35	10.84	730
8/28/2001	16:30	14.62	15.51	2.21	10.70	682
8/28/2001	17:00	14.61	15.51	2.24	10.73	690
8/28/2001	17:30	14.61	15.51	2.24	10.73	690

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/28/2001	18:00	14.62	15.49	2.17	10.66	666
8/28/2001	18:30	14.61	15.49	2.19	10.68	674
8/28/2001	19:00	14.61	15.51	2.24	10.73	690
8/28/2001	19:30	14.61	15.49	2.19	10.68	674
8/28/2001	20:00	14.61	15.47	2.15	10.64	658
8/28/2001	20:30	14.62	15.44	2.05	10.54	626
8/28/2001	21:00	14.62	15.41	1.99	10.48	601
8/28/2001	21:30	14.62	15.39	1.94	10.43	585
8/28/2001	22:00	14.63	15.38	1.89	10.38	569
8/28/2001	22:30	14.62	15.37	1.89	10.38	569
8/28/2001	23:00	14.62	15.36	1.87	10.36	561
8/28/2001	23:30	14.62	15.36	1.87	10.36	561
8/29/2001	0:00	14.62	15.36	1.87	10.36	561
8/29/2001	0:30	14.62	15.35	1.85	10.34	553
8/29/2001	1:00	14.62	15.35	1.85	10.34	553
8/29/2001	1:30	14.62	15.35	1.85	10.34	553
8/29/2001	2:00	14.62	15.35	1.85	10.34	553
8/29/2001	2:30	14.61	15.34	1.85	10.34	553
8/29/2001	3:00	14.6	15.34	1.87	10.36	562
8/29/2001	3:30	14.6	15.34	1.87	10.36	562
8/29/2001	4:00	14.6	15.34	1.87	10.36	562
8/29/2001	4:30	14.6	15.34	1.87	10.36	562
8/29/2001	5:00	14.6	15.34	1.87	10.36	562
8/29/2001	5:30	14.6	15.33	1.85	10.34	554
8/29/2001	6:00	14.59	15.33	1.87	10.36	562
8/29/2001	6:30	14.58	15.32	1.88	10.37	562
8/29/2001	7:00	14.58	15.31	1.85	10.34	554
8/29/2001	7:30	14.58	15.31	1.85	10.34	554
8/29/2001	8:00	14.57	15.31	1.88	10.37	563
8/29/2001	8:30	14.57	15.31	1.88	10.37	563
8/29/2001	9:00	14.57	15.31	1.88	10.37	563
8/29/2001	9:30	14.56	15.3	1.88	10.37	563
8/29/2001	10:00	14.55	15.29	1.88	10.37	563
8/29/2001	10:30	14.55	15.29	1.88	10.37	563
8/29/2001	11:00	14.55	15.29	1.88	10.37	563
8/29/2001	11:30	14.54	15.28	1.88	10.37	563
8/29/2001	12:00	14.53	15.28	1.90	10.39	571
8/29/2001	12:30	14.53	15.28	1.90	10.39	572
8/29/2001	13:00	14.53	15.28	1.90	10.39	572
8/29/2001	13:30	14.52	15.28	1.92	10.41	580
8/29/2001	14:00	14.52	15.28	1.92	10.41	580
8/29/2001	14:30	14.52	15.28	1.93	10.42	580
8/29/2001	15:00	14.51	15.28	1.95	10.44	588

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/29/2001	15:30	14.51	15.28	1.95	10.44	588
8/29/2001	16:00	14.51	15.28	1.95	10.44	588
8/29/2001	16:30	14.51	15.28	1.95	10.44	589
8/29/2001	17:00	14.5	15.28	1.97	10.46	597
8/29/2001	17:30	14.5	15.28	1.97	10.46	597
8/29/2001	18:00	14.5	15.27	1.95	10.44	589
8/29/2001	18:30	14.5	15.26	1.93	10.42	581
8/29/2001	19:00	14.5	15.25	1.90	10.39	573
8/29/2001	19:30	14.51	15.25	1.88	10.37	565
8/29/2001	20:00	14.5	15.25	1.91	10.40	573
8/29/2001	20:30	14.51	15.25	1.88	10.37	565
8/29/2001	21:00	14.51	15.25	1.88	10.37	565
8/29/2001	21:30	14.5	15.24	1.88	10.37	565
8/29/2001	22:00	14.5	15.24	1.88	10.37	565
8/29/2001	22:30	14.5	15.23	1.86	10.35	557
8/29/2001	23:00	14.51	15.23	1.84	10.33	549
8/29/2001	23:30	14.51	15.23	1.84	10.33	549
8/30/2001	0:00	14.51	15.23	1.84	10.33	549
8/30/2001	0:30	14.51	15.23	1.84	10.33	549
8/30/2001	1:00	14.52	15.23	1.82	10.31	541
8/30/2001	1:30	14.52	15.23	1.82	10.31	541
8/30/2001	2:00	14.52	15.23	1.82	10.31	541
8/30/2001	2:30	14.52	15.22	1.79	10.28	533
8/30/2001	3:00	14.52	15.22	1.79	10.28	534
8/30/2001	3:30	14.52	15.22	1.79	10.28	534
8/30/2001	4:00	14.52	15.22	1.79	10.28	534
8/30/2001	4:30	14.52	15.22	1.79	10.28	534
8/30/2001	5:00	14.52	15.22	1.79	10.28	534
8/30/2001	5:30	14.52	15.22	1.79	10.28	534
8/30/2001	6:00	14.52	15.22	1.80	10.29	534
8/30/2001	6:30	14.52	15.22	1.80	10.29	534
8/30/2001	7:00	14.52	15.22	1.80	10.29	534
8/30/2001	7:30	14.52	15.22	1.80	10.29	534
8/30/2001	8:00	14.52	15.22	1.80	10.29	534
8/30/2001	8:30	14.52	15.22	1.80	10.29	535
8/30/2001	9:00	14.52	15.22	1.80	10.29	535
8/30/2001	9:30	14.51	15.22	1.82	10.31	543
8/30/2001	10:00	14.5	15.23	1.87	10.36	559
8/30/2001	10:30	14.5	15.23	1.87	10.36	559
8/30/2001	11:00	14.51	15.24	1.87	10.36	559
8/30/2001	11:30	14.48	15.25	1.96	10.45	592
8/30/2001	12:00	14.47	15.26	2.01	10.50	608
8/30/2001	12:30	14.47	15.28	2.05	10.54	625

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/30/2001	13:00	14.47	15.27	2.03	10.52	617
8/30/2001	13:30	14.46	15.26	2.03	10.52	617
8/30/2001	14:00	14.45	15.28	2.10	10.59	641
8/30/2001	14:30	14.45	15.31	2.17	10.66	666
8/30/2001	15:00	14.45	15.37	2.31	10.80	715
8/30/2001	15:30	14.45	15.4	2.38	10.87	739
8/30/2001	16:00	14.45	15.31	2.17	10.66	666
8/30/2001	16:30	14.45	15.3	2.15	10.64	658
8/30/2001	17:00	14.45	15.22	1.96	10.45	593
8/30/2001	17:30	14.45	15.22	1.96	10.45	593
8/30/2001	18:00	14.44	15.22	1.99	10.48	601
8/30/2001	18:30	14.43	15.22	2.01	10.50	610
8/30/2001	19:00	14.43	15.21	1.99	10.48	602
8/30/2001	19:30	14.44	15.21	1.96	10.45	594
8/30/2001	20:00	14.45	15.21	1.94	10.43	585
8/30/2001	20:30	14.45	15.2	1.92	10.41	577
8/30/2001	21:00	14.45	15.2	1.92	10.41	578
8/30/2001	21:30	14.46	15.2	1.90	10.39	569
8/30/2001	22:00	14.47	15.19	1.85	10.34	553
8/30/2001	22:30	14.47	15.19	1.85	10.34	553
8/30/2001	23:00	14.47	15.19	1.85	10.34	553
8/30/2001	23:30	14.47	15.19	1.85	10.34	554
8/31/2001	0:00	14.47	15.19	1.85	10.34	554
8/31/2001	0:30	14.47	15.19	1.85	10.34	554
8/31/2001	1:00	14.47	15.18	1.83	10.32	546
8/31/2001	1:30	14.47	15.18	1.83	10.32	546
8/31/2001	2:00	14.48	15.17	1.78	10.27	530
8/31/2001	2:30	14.48	15.17	1.78	10.27	530
8/31/2001	3:00	14.47	15.17	1.81	10.30	538
8/31/2001	3:30	14.47	15.17	1.81	10.30	538
8/31/2001	4:00	14.47	15.17	1.81	10.30	538
8/31/2001	4:30	14.47	15.17	1.81	10.30	538
8/31/2001	5:00	14.47	15.17	1.81	10.30	538
8/31/2001	5:30	14.47	15.17	1.81	10.30	538
8/31/2001	6:00	14.47	15.17	1.81	10.30	538
8/31/2001	6:30	14.47	15.17	1.81	10.30	539
8/31/2001	7:00	14.47	15.17	1.81	10.30	539
8/31/2001	7:30	14.47	15.17	1.81	10.30	539
8/31/2001	8:00	14.47	15.17	1.81	10.30	539
8/31/2001	8:30	14.47	15.16	1.79	10.28	531
8/31/2001	9:00	14.47	15.16	1.79	10.28	531
8/31/2001	9:30	14.47	15.16	1.79	10.28	531
8/31/2001	10:00	14.47	15.16	1.79	10.28	531



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/31/2001	10:30	14.46	15.16	1.81	10.30	539
8/31/2001	11:00	14.46	15.16	1.81	10.30	539
8/31/2001	11:30	14.46	15.16	1.81	10.30	540
8/31/2001	12:00	14.46	15.16	1.81	10.30	540
8/31/2001	12:30	14.46	15.17	1.83	10.32	548
8/31/2001	13:00	14.46	15.17	1.83	10.32	548
8/31/2001	13:30	14.45	15.17	1.86	10.35	556
8/31/2001	14:00	14.45	15.17	1.86	10.35	556
8/31/2001	14:30	14.45	15.17	1.86	10.35	556
8/31/2001	15:00	14.45	15.18	1.88	10.37	565
8/31/2001	15:30	14.45	15.18	1.88	10.37	565
8/31/2001	16:00	14.45	15.17	1.86	10.35	557
8/31/2001	16:30	14.45	15.18	1.88	10.37	565
8/31/2001	17:00	14.45	15.18	1.88	10.37	565
8/31/2001	17:30	14.45	15.18	1.88	10.37	565
8/31/2001	18:00	14.45	15.17	1.86	10.35	557
8/31/2001	18:30	14.45	15.17	1.86	10.35	557
8/31/2001	19:00	14.45	15.17	1.86	10.35	557
8/31/2001	19:30	14.46	15.16	1.81	10.30	541
8/31/2001	20:00	14.45	15.16	1.84	10.33	549
8/31/2001	20:30	14.46	15.16	1.82	10.31	541
8/31/2001	21:00	14.46	15.15	1.79	10.28	533
8/31/2001	21:30	14.46	15.15	1.79	10.28	533
8/31/2001	22:00	14.46	15.15	1.79	10.28	533
8/31/2001	22:30	14.47	15.15	1.77	10.26	525
8/31/2001	23:00	14.47	15.15	1.77	10.26	525
8/31/2001	23:30	14.47	15.15	1.77	10.26	525
9/1/2001	0:00	14.47	15.14	1.75	10.24	517
9/1/2001	0:30	14.47	15.14	1.75	10.24	517
9/1/2001	1:00	14.47	15.14	1.75	10.24	518
9/1/2001	1:30	14.47	15.14	1.75	10.24	518
9/1/2001	2:00	14.47	15.14	1.75	10.24	518
9/1/2001	2:30	14.47	15.14	1.75	10.24	518
9/1/2001	3:00	14.47	15.14	1.75	10.24	518
9/1/2001	3:30	14.47	15.14	1.75	10.24	518
9/1/2001	4:00	14.47	15.14	1.75	10.24	518
9/1/2001	4:30	14.47	15.14	1.75	10.24	518
9/1/2001	5:00	14.47	15.14	1.75	10.24	518
9/1/2001	5:30	14.47	15.14	1.75	10.24	518
9/1/2001	6:00	14.47	15.14	1.75	10.24	519
9/1/2001	6:30	14.47	15.13	1.73	10.22	511
9/1/2001	7:00	14.47	15.13	1.73	10.22	511
9/1/2001	7:30	14.47	15.14	1.75	10.24	519

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/1/2001	8:00	14.48	15.14	1.73	10.22	511
9/1/2001	8:30	14.47	15.14	1.75	10.24	519
9/1/2001	9:00	14.47	15.14	1.75	10.24	519
9/1/2001	9:30	14.47	15.14	1.75	10.24	519
9/1/2001	10:00	14.47	15.14	1.75	10.24	519
9/1/2001	10:30	14.47	15.14	1.75	10.24	519
9/1/2001	11:00	14.47	15.14	1.75	10.24	519
9/1/2001	11:30	14.47	15.14	1.75	10.24	520
9/1/2001	12:00	14.47	15.14	1.75	10.24	520
9/1/2001	12:30	14.47	15.14	1.75	10.24	520
9/1/2001	13:00	14.47	15.15	1.78	10.27	528
9/1/2001	13:30	14.48	15.16	1.78	10.27	528
9/1/2001	14:00	14.48	15.16	1.78	10.27	528
9/1/2001	14:30	14.48	15.17	1.80	10.29	536
9/1/2001	15:00	14.48	15.18	1.82	10.31	545
9/1/2001	15:30	14.48	15.18	1.83	10.32	545
9/1/2001	16:00	14.48	15.18	1.83	10.32	545
9/1/2001	16:30	14.49	15.19	1.83	10.32	545
9/1/2001	17:00	14.49	15.19	1.83	10.32	545
9/1/2001	17:30	14.49	15.19	1.83	10.32	545
9/1/2001	18:00	14.5	15.19	1.80	10.29	537
9/1/2001	18:30	14.5	15.19	1.80	10.29	537
9/1/2001	19:00	14.5	15.19	1.80	10.29	537
9/1/2001	19:30	14.5	15.19	1.80	10.29	537
9/1/2001	20:00	14.51	15.19	1.78	10.27	529
9/1/2001	20:30	14.51	15.18	1.76	10.25	521
9/1/2001	21:00	14.52	15.18	1.74	10.23	513
9/1/2001	21:30	14.52	15.18	1.74	10.23	513
9/1/2001	22:00	14.52	15.18	1.74	10.23	513
9/1/2001	22:30	14.52	15.18	1.74	10.23	513
9/1/2001	23:00	14.53	15.18	1.71	10.20	510
9/1/2001	23:30	14.54	15.18	1.69	10.18	507
9/2/2001	0:00	14.54	15.18	1.69	10.18	507
9/2/2001	0:30	14.54	15.18	1.69	10.18	507
9/2/2001	1:00	14.55	15.18	1.67	10.16	505
9/2/2001	1:30	14.55	15.18	1.67	10.16	505
9/2/2001	2:00	14.55	15.19	1.69	10.18	508
9/2/2001	2:30	14.55	15.19	1.69	10.18	508
9/2/2001	3:00	14.55	15.19	1.69	10.18	508
9/2/2001	3:30	14.56	15.19	1.67	10.16	506
9/2/2001	4:00	14.56	15.19	1.67	10.16	506
9/2/2001	4:30	14.56	15.19	1.67	10.16	506
9/2/2001	5:00	14.56	15.19	1.67	10.16	506

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/2/2001	5:30	14.56	15.19	1.67	10.16	506
9/2/2001	6:00	14.56	15.19	1.67	10.16	506
9/2/2001	6:30	14.57	15.2	1.67	10.16	506
9/2/2001	7:00	14.57	15.2	1.67	10.16	506
9/2/2001	7:30	14.57	15.2	1.67	10.16	506
9/2/2001	8:00	14.57	15.21	1.70	10.19	508
9/2/2001	8:30	14.57	15.21	1.70	10.19	508
9/2/2001	9:00	14.57	15.21	1.70	10.19	508
9/2/2001	9:30	14.57	15.21	1.70	10.19	508
9/2/2001	10:00	14.57	15.21	1.70	10.19	508
9/2/2001	10:30	14.57	15.21	1.70	10.19	508
9/2/2001	11:00	14.57	15.22	1.72	10.21	510
9/2/2001	11:30	14.57	15.22	1.72	10.21	510
9/2/2001	12:00	14.57	15.22	1.72	10.21	510
9/2/2001	12:30	14.57	15.23	1.74	10.23	516
9/2/2001	13:00	14.56	15.25	1.81	10.30	540
9/2/2001	13:30	14.57	15.25	1.79	10.28	532
9/2/2001	14:00	14.57	15.27	1.84	10.33	549
9/2/2001	14:30	14.57	15.28	1.86	10.35	557
9/2/2001	15:00	14.56	15.3	1.93	10.42	582
9/2/2001	15:30	14.56	15.31	1.95	10.44	590
9/2/2001	16:00	14.55	15.31	1.98	10.47	598
9/2/2001	16:30	14.55	15.31	1.98	10.47	598
9/2/2001	17:00	14.55	15.31	1.98	10.47	598
9/2/2001	17:30	14.55	15.31	1.98	10.47	598
9/2/2001	18:00	14.55	15.33	2.02	10.51	615
9/2/2001	18:30	14.56	15.34	2.02	10.51	615
9/2/2001	19:00	14.56	15.34	2.02	10.51	615
9/2/2001	19:30	14.56	15.32	1.98	10.47	599
9/2/2001	20:00	14.57	15.31	1.93	10.42	582
9/2/2001	20:30	14.57	15.3	1.91	10.40	574
9/2/2001	21:00	14.57	15.28	1.86	10.35	558
9/2/2001	21:30	14.58	15.27	1.82	10.31	542
9/2/2001	22:00	14.58	15.25	1.77	10.26	526
9/2/2001	22:30	14.58	15.25	1.77	10.26	526
9/2/2001	23:00	14.58	15.24	1.75	10.24	518
9/2/2001	23:30	14.58	15.24	1.75	10.24	518
9/3/2001	0:00	14.58	15.23	1.73	10.22	511
9/3/2001	0:30	14.58	15.23	1.73	10.22	511
9/3/2001	1:00	14.58	15.23	1.73	10.22	511
9/3/2001	1:30	14.58	15.23	1.73	10.22	511
9/3/2001	2:00	14.58	15.23	1.73	10.22	511
9/3/2001	2:30	14.58	15.23	1.73	10.22	511

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/3/2001	3:00	14.58	15.23	1.73	10.22	511
9/3/2001	3:30	14.58	15.23	1.73	10.22	511
9/3/2001	4:00	14.58	15.22	1.71	10.20	509
9/3/2001	4:30	14.58	15.22	1.71	10.20	509
9/3/2001	5:00	14.58	15.22	1.71	10.20	509
9/3/2001	5:30	14.57	15.22	1.73	10.22	511
9/3/2001	6:00	14.57	15.22	1.73	10.22	511
9/3/2001	6:30	14.57	15.21	1.71	10.20	509
9/3/2001	7:00	14.57	15.21	1.71	10.20	509
9/3/2001	7:30	14.57	15.21	1.71	10.20	509
9/3/2001	8:00	14.57	15.2	1.69	10.18	507
9/3/2001	8:30	14.57	15.2	1.69	10.18	507
9/3/2001	9:00	14.57	15.2	1.69	10.18	507
9/3/2001	9:30	14.57	15.2	1.69	10.18	507
9/3/2001	10:00	14.56	15.2	1.71	10.20	509
9/3/2001	10:30	14.56	15.2	1.71	10.20	509
9/3/2001	11:00	14.55	15.21	1.76	10.25	520
9/3/2001	11:30	14.55	15.22	1.78	10.27	528
9/3/2001	12:00	14.55	15.22	1.78	10.27	528
9/3/2001	12:30	14.55	15.22	1.78	10.27	529
9/3/2001	13:00	14.55	15.24	1.83	10.32	545
9/3/2001	13:30	14.55	15.24	1.83	10.32	545
9/3/2001	14:00	14.55	15.23	1.80	10.29	537
9/3/2001	14:30	14.55	15.23	1.80	10.29	537
9/3/2001	15:00	14.55	15.23	1.80	10.29	537
9/3/2001	15:30	14.55	15.23	1.80	10.29	537
9/3/2001	16:00	14.55	15.23	1.80	10.29	537
9/3/2001	16:30	14.55	15.22	1.78	10.27	529
9/3/2001	17:00	14.55	15.22	1.78	10.27	529
9/3/2001	17:30	14.55	15.22	1.78	10.27	529
9/3/2001	18:00	14.55	15.21	1.76	10.25	521
9/3/2001	18:30	14.54	15.2	1.76	10.25	522
9/3/2001	19:00	14.54	15.19	1.74	10.23	513
9/3/2001	19:30	14.54	15.19	1.74	10.23	514
9/3/2001	20:00	14.53	15.19	1.76	10.25	522
9/3/2001	20:30	14.54	15.18	1.71	10.20	510
9/3/2001	21:00	14.53	15.18	1.74	10.23	514
9/3/2001	21:30	14.54	15.18	1.72	10.21	510
9/3/2001	22:00	14.54	15.18	1.72	10.21	510
9/3/2001	22:30	14.54	15.18	1.72	10.21	510
9/3/2001	23:00	14.54	15.17	1.69	10.18	508
9/3/2001	23:30	14.53	15.17	1.72	10.21	510
9/4/2001	0:00	14.53	15.17	1.72	10.21	510

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/4/2001	0:30	14.53	15.16	1.69	10.18	508
9/4/2001	1:00	14.53	15.15	1.67	10.16	506
9/4/2001	1:30	14.52	15.14	1.67	10.16	506
9/4/2001	2:00	14.52	15.14	1.67	10.16	506
9/4/2001	2:30	14.52	15.13	1.65	10.14	504
9/4/2001	3:00	14.52	15.13	1.65	10.14	504
9/4/2001	3:30	14.52	15.12	1.63	10.12	501
9/4/2001	4:00	14.52	15.12	1.63	10.12	501
9/4/2001	4:30	14.52	15.12	1.63	10.12	502
9/4/2001	5:00	14.52	15.12	1.63	10.12	502
9/4/2001	5:30	14.52	15.11	1.60	10.09	499
9/4/2001	6:00	14.51	15.11	1.63	10.12	502
9/4/2001	6:30	14.51	15.11	1.63	10.12	502
9/4/2001	7:00	14.5	15.1	1.63	10.12	502
9/4/2001	7:30	14.5	15.1	1.63	10.12	502
9/4/2001	8:00	14.5	15.1	1.63	10.12	502
9/4/2001	8:30	14.5	15.09	1.61	10.10	500
9/4/2001	9:00	14.49	15.09	1.63	10.12	502
9/4/2001	9:30	14.48	15.08	1.63	10.12	502
9/4/2001	10:00	14.48	15.08	1.63	10.12	502
9/4/2001	10:30	14.47	15.08	1.65	10.14	504
9/4/2001	11:00	14.47	15.08	1.65	10.14	504
9/4/2001	11:30	14.46	15.08	1.68	10.17	506
9/4/2001	12:00	14.46	15.07	1.65	10.14	504
9/4/2001	12:30	14.45	15.07	1.68	10.17	506
9/4/2001	13:00	14.45	15.07	1.68	10.17	506
9/4/2001	13:30	14.45	15.07	1.68	10.17	506
9/4/2001	14:00	14.45	15.06	1.65	10.14	504
9/4/2001	14:30	14.45	15.06	1.66	10.15	504
9/4/2001	15:00	14.44	15.07	1.70	10.19	508
9/4/2001	15:30	14.44	15.07	1.70	10.19	508
9/4/2001	16:00	14.44	15.07	1.70	10.19	508
9/4/2001	16:30	14.43	15.07	1.73	10.22	511
9/4/2001	17:00	14.42	15.06	1.73	10.22	511
9/4/2001	17:30	14.42	15.07	1.75	10.24	518
9/4/2001	18:00	14.42	15.07	1.75	10.24	518
9/4/2001	18:30	14.42	15.06	1.73	10.22	511
9/4/2001	19:00	14.42	15.05	1.70	10.19	509
9/4/2001	19:30	14.42	15.04	1.68	10.17	506
9/4/2001	20:00	14.42	15.03	1.66	10.15	504
9/4/2001	20:30	14.42	15.03	1.66	10.15	504
9/4/2001	21:00	14.42	15.03	1.66	10.15	504
9/4/2001	21:30	14.43	15.03	1.64	10.13	502

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/4/2001	22:00	14.42	15.02	1.64	10.13	502
9/4/2001	22:30	14.42	15.02	1.64	10.13	502
9/4/2001	23:00	14.42	15.02	1.64	10.13	502
9/4/2001	23:30	14.42	15.02	1.64	10.13	502
9/5/2001	0:00	14.42	15.02	1.64	10.13	502
9/5/2001	0:30	14.42	15.02	1.64	10.13	502
9/5/2001	1:00	14.41	15.02	1.66	10.15	505
9/5/2001	1:30	14.41	15.01	1.64	10.13	503
9/5/2001	2:00	14.41	15.01	1.64	10.13	503
9/5/2001	2:30	14.41	15.01	1.64	10.13	503
9/5/2001	3:00	14.41	15.01	1.64	10.13	503
9/5/2001	3:30	14.41	15.01	1.64	10.13	503
9/5/2001	4:00	14.41	15.01	1.64	10.13	503
9/5/2001	4:30	14.41	15.01	1.64	10.13	503
9/5/2001	5:00	14.41	15.01	1.64	10.13	503
9/5/2001	5:30	14.41	15.01	1.64	10.13	503
9/5/2001	6:00	14.41	15	1.62	10.11	501
9/5/2001	6:30	14.4	15	1.64	10.13	503
9/5/2001	7:00	14.41	15	1.62	10.11	501
9/5/2001	7:30	14.41	15	1.62	10.11	501
9/5/2001	8:00	14.4	15	1.64	10.13	503
9/5/2001	8:30	14.4	14.99	1.62	10.11	501
9/5/2001	9:00	14.4	14.99	1.62	10.11	501
9/5/2001	9:30	14.4	14.99	1.62	10.11	501
9/5/2001	10:00	14.4	14.99	1.62	10.11	501
9/5/2001	10:30	14.4	15	1.64	10.13	503
9/5/2001	11:00	14.4	15	1.64	10.13	503
9/5/2001	11:30	14.4	15.01	1.67	10.16	505
9/5/2001	12:00	14.4	15.01	1.67	10.16	505
9/5/2001	12:30	14.4	15.02	1.69	10.18	507
9/5/2001	13:00	14.4	15.03	1.71	10.20	509
9/5/2001	13:30	14.4	15.05	1.76	10.25	521
9/5/2001	14:00	14.4	15.06	1.78	10.27	530
9/5/2001	14:30	14.4	15.07	1.81	10.30	538
9/5/2001	15:00	14.4	15.08	1.83	10.32	546
9/5/2001	15:30	14.41	15.11	1.88	10.37	562
9/5/2001	16:00	14.41	15.11	1.88	10.37	562
9/5/2001	16:30	14.41	15.11	1.88	10.37	563
9/5/2001	17:00	14.41	15.1	1.85	10.34	555
9/5/2001	17:30	14.42	15.09	1.81	10.30	538
9/5/2001	18:00	14.42	15.09	1.81	10.30	538
9/5/2001	18:30	14.42	15.08	1.78	10.27	530
9/5/2001	19:00	14.42	15.08	1.79	10.28	530

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/5/2001	19:30	14.43	15.08	1.76	10.25	522
9/5/2001	20:00	14.44	15.08	1.74	10.23	514
9/5/2001	20:30	14.44	15.08	1.74	10.23	514
9/5/2001	21:00	14.45	15.08	1.72	10.21	510
9/5/2001	21:30	14.45	15.08	1.72	10.21	510
9/5/2001	22:00	14.45	15.08	1.72	10.21	510
9/5/2001	22:30	14.46	15.08	1.69	10.18	508
9/5/2001	23:00	14.46	15.08	1.70	10.19	508
9/5/2001	23:30	14.47	15.09	1.70	10.19	508
9/6/2001	0:00	14.47	15.09	1.70	10.19	508
9/6/2001	0:30	14.47	15.1	1.72	10.21	510
9/6/2001	1:00	14.48	15.11	1.72	10.21	510
9/6/2001	1:30	14.49	15.11	1.70	10.19	508
9/6/2001	2:00	14.49	15.11	1.70	10.19	508
9/6/2001	2:30	14.49	15.11	1.70	10.19	508
9/6/2001	3:00	14.5	15.11	1.67	10.16	506
9/6/2001	3:30	14.5	15.11	1.67	10.16	506
9/6/2001	4:00	14.5	15.11	1.67	10.16	506
9/6/2001	4:30	14.5	15.11	1.67	10.16	506
9/6/2001	5:00	14.51	15.11	1.65	10.14	504
9/6/2001	5:30	14.51	15.11	1.65	10.14	504
9/6/2001	6:00	14.52	15.11	1.63	10.12	502
9/6/2001	6:30	14.52	15.12	1.65	10.14	504
9/6/2001	7:00	14.52	15.12	1.65	10.14	504
9/6/2001	7:30	14.52	15.12	1.65	10.14	504
9/6/2001	8:00	14.53	15.12	1.63	10.12	502
9/6/2001	8:30	14.53	15.13	1.65	10.14	504
9/6/2001	9:00	14.53	15.14	1.68	10.17	506
9/6/2001	9:30	14.53	15.14	1.68	10.17	506
9/6/2001	10:00	14.54	15.16	1.70	10.19	508
9/6/2001	10:30	14.54	15.18	1.75	10.24	517
9/6/2001	11:00	14.55	15.2	1.77	10.26	525
9/6/2001	11:30	14.54	15.22	1.84	10.33	550
9/6/2001	12:00	14.55	15.22	1.82	10.31	542
9/6/2001	12:30	14.53	15.21	1.84	10.33	550
9/6/2001	13:00	14.55	15.19	1.75	10.24	518
9/6/2001	13:30	14.55	15.19	1.75	10.24	518
9/6/2001	14:00	14.55	15.19	1.75	10.24	518
9/6/2001	14:30	14.56	15.19	1.73	10.22	511
9/6/2001	15:00	14.55	15.19	1.75	10.24	518
9/6/2001	15:30	14.56	15.19	1.73	10.22	511
9/6/2001	16:00	14.56	15.19	1.73	10.22	511
9/6/2001	16:30	14.55	15.19	1.75	10.24	518

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/6/2001	17:00	14.55	15.19	1.75	10.24	518
9/6/2001	17:30	14.56	15.19	1.73	10.22	511
9/6/2001	18:00	14.57	15.19	1.70	10.19	509
9/6/2001	18:30	14.57	15.2	1.73	10.22	511
9/6/2001	19:00	14.57	15.2	1.73	10.22	511
9/6/2001	19:30	14.57	15.2	1.73	10.22	511
9/6/2001	20:00	14.58	15.2	1.71	10.20	509
9/6/2001	20:30	14.59	15.21	1.71	10.20	509
9/6/2001	21:00	14.6	15.21	1.68	10.17	507
9/6/2001	21:30	14.6	15.21	1.68	10.17	507
9/6/2001	22:00	14.6	15.22	1.71	10.20	509
9/6/2001	22:30	14.61	15.22	1.68	10.17	507
9/6/2001	23:00	14.62	15.22	1.66	10.15	505
9/6/2001	23:30	14.62	15.22	1.66	10.15	505
9/7/2001	0:00	14.62	15.22	1.66	10.15	505
9/7/2001	0:30	14.62	15.22	1.66	10.15	505
9/7/2001	1:00	14.63	15.22	1.64	10.13	503
9/7/2001	1:30	14.63	15.22	1.64	10.13	503
9/7/2001	2:00	14.63	15.22	1.64	10.13	503
9/7/2001	2:30	14.63	15.23	1.66	10.15	505
9/7/2001	3:00	14.64	15.23	1.64	10.13	503
9/7/2001	3:30	14.64	15.23	1.64	10.13	503
9/7/2001	4:00	14.64	15.23	1.64	10.13	503
9/7/2001	4:30	14.65	15.23	1.62	10.11	501
9/7/2001	5:00	14.65	15.23	1.62	10.11	501
9/7/2001	5:30	14.65	15.23	1.62	10.11	501
9/7/2001	6:00	14.65	15.25	1.67	10.16	505
9/7/2001	6:30	14.65	15.25	1.67	10.16	505
9/7/2001	7:00	14.65	15.24	1.64	10.13	503
9/7/2001	7:30	14.65	15.23	1.62	10.11	501
9/7/2001	8:00	14.65	15.23	1.62	10.11	501
9/7/2001	8:30	14.65	15.23	1.62	10.11	501
9/7/2001	9:00	14.65	15.23	1.62	10.11	501
9/7/2001	9:30	14.65	15.23	1.62	10.11	501
9/7/2001	10:00	14.65	15.23	1.62	10.11	501
9/7/2001	10:30	14.65	15.24	1.64	10.13	503
9/7/2001	11:00	14.65	15.24	1.64	10.13	503
9/7/2001	11:30	14.65	15.25	1.67	10.16	505
9/7/2001	12:00	14.65	15.25	1.67	10.16	505
9/7/2001	12:30	14.66	15.25	1.65	10.14	503
9/7/2001	13:00	14.66	15.26	1.67	10.16	505
9/7/2001	13:30	14.66	15.26	1.67	10.16	505
9/7/2001	14:00	14.67	15.27	1.67	10.16	505



**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/7/2001	14:30	14.66	15.28	1.72	10.21	510
9/7/2001	15:00	14.67	15.3	1.74	10.23	514
9/7/2001	15:30	14.67	15.3	1.74	10.23	514
9/7/2001	16:00	14.67	15.3	1.74	10.23	514
9/7/2001	16:30	14.67	15.34	1.83	10.32	547
9/7/2001	17:00	14.67	15.37	1.90	10.39	571
9/7/2001	17:30	14.68	15.34	1.81	10.30	539
9/7/2001	18:00	14.68	15.32	1.76	10.25	523
9/7/2001	18:30	14.69	15.31	1.72	10.21	510
9/7/2001	19:00	14.69	15.3	1.70	10.19	508
9/7/2001	19:30	14.7	15.29	1.65	10.14	504
9/7/2001	20:00	14.7	15.29	1.65	10.14	504
9/7/2001	20:30	14.71	15.28	1.60	10.09	499
9/7/2001	21:00	14.71	15.28	1.60	10.09	499
9/7/2001	21:30	14.71	15.29	1.63	10.12	502
9/7/2001	22:00	14.72	15.29	1.60	10.09	499
9/7/2001	22:30	14.72	15.29	1.60	10.09	499
9/7/2001	23:00	14.72	15.3	1.63	10.12	502
9/7/2001	23:30	14.72	15.3	1.63	10.12	502
9/8/2001	0:00	14.72	15.3	1.63	10.12	502
9/8/2001	0:30	14.72	15.3	1.63	10.12	502
9/8/2001	1:00	14.73	15.31	1.63	10.12	502
9/8/2001	1:30	14.74	15.31	1.61	10.10	500
9/8/2001	2:00	14.74	15.31	1.61	10.10	500
9/8/2001	2:30	14.74	15.31	1.61	10.10	500
9/8/2001	3:00	14.74	15.31	1.61	10.10	500
9/8/2001	3:30	14.75	15.32	1.61	10.10	500
9/8/2001	4:00	14.75	15.32	1.61	10.10	500
9/8/2001	4:30	14.76	15.33	1.61	10.10	500
9/8/2001	5:00	14.76	15.33	1.61	10.10	500
9/8/2001	5:30	14.76	15.34	1.63	10.12	502
9/8/2001	6:00	14.77	15.34	1.61	10.10	500
9/8/2001	6:30	14.77	15.34	1.61	10.10	500
9/8/2001	7:00	14.77	15.34	1.61	10.10	500
9/8/2001	7:30	14.77	15.34	1.61	10.10	500
9/8/2001	8:00	14.77	15.34	1.61	10.10	500
9/8/2001	8:30	14.77	15.34	1.61	10.10	500
9/8/2001	9:00	14.77	15.34	1.61	10.10	500
9/8/2001	9:30	14.77	15.34	1.61	10.10	500
9/8/2001	10:00	14.77	15.34	1.61	10.10	500
9/8/2001	10:30	14.77	15.34	1.61	10.10	500
9/8/2001	11:00	14.76	15.35	1.66	10.15	504
9/8/2001	11:30	14.77	15.35	1.63	10.12	502

**Table D-1.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 25.1**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/8/2001	11:42	-	-	-	10.12	502

**WATER SURFACE ELEVATIONS AND DISCHARGE**

**ON FISH CREEK AT RIVER MILE 32.4**

**Table D-2.1: Change in Calibration Constant During Instrument Recording Periods on Fish Creek at River Mile 32.4**

Recording Period <sup>1</sup>				Change in Instrument Calibration Constant <sup>2</sup> (feet)	Comments
Start		End			
Date	Time	Date	Time		
6/11/2001	17:00	6/12/2001	10:31	-1.33	
6/12/2001	10:31	6/12/2001	15:36	-0.15	
6/12/2001	15:36	6/13/2001	13:14	-0.02	
6/13/2001	13:14	6/13/2001	15:30	+0.02 <sup>3</sup>	Instrument Downloaded.
6/13/2001	16:30	6/14/2001	11:04	-0.05	
6/14/2001	11:04	6/14/2001	12:03	-0.06	
6/14/2001	12:03	6/14/2001	14:02	0.00	Instrument Downloaded.
6/14/2001	15:02	6/15/2001	10:06	-0.09	
6/15/2001	10:06	6/15/2001	11:25	-0.04	
6/15/2001	11:25	6/15/2001	14:02	-0.06	
6/15/2001	14:02	6/15/2001	18:30	+0.01	
6/15/2001	18:30	6/16/2001	12:20	-0.06	
6/16/2001	12:20	6/16/2001	13:58	-0.03	
6/16/2001	13:58	6/17/2001	12:05	+0.22	Instrument Downloaded.
6/17/2001	12:32	6/28/2001	13:34	-2.98 <sup>4</sup>	Instrument Downloaded.
6/28/2001	15:32	7/16/2001	13:30	-0.43	Instrument Downloaded.
7/16/2001	15:33	7/16/2001	16:02	+0.04	
7/16/2001	16:02	7/17/2001	7:36	+0.09	
7/17/2001	7:36	7/17/2001	9:30	-0.06	
7/17/2001	9:30	7/17/2001	11:05	+0.03	
7/17/2001	11:05	7/19/2001	11:33	-0.30	
7/19/2001	11:33	7/19/2001	12:40	0.07	
7/19/2001	12:40	7/21/2001	11:40	-0.01	
7/21/2001	11:40	7/23/2001	17:10	-0.02	
7/23/2001	17:10	7/24/2001	13:15	+0.08	
7/24/2001	13:15	7/25/2001	12:20	-0.01	
7/25/2001	12:20	7/26/2001	14:33	-0.09	
7/26/2001	14:33	7/27/2001	12:40	-0.09	
7/27/2001	12:40	7/28/2001	11:35	+0.08	
7/28/2001	11:35	7/29/2001	10:50	+0.19	
7/29/2001	10:50	7/30/2001	11:35	-0.07	
7/30/2001	11:35	8/14/2001	18:34	-0.08	
8/14/2001	18:34	8/14/2001	19:54	-0.04	Instrument Downloaded.
8/14/2001	21:00	8/15/2001	12:00	-0.02	Instrument Serviced.
8/15/2001	13:32	8/25/2001	13:00	+0.15	
8/25/2001	13:00	8/26/2001	11:30	+0.03	
8/26/2001	11:30	8/27/2001	14:30	-0.15	
8/27/2001	14:30	8/28/2001	14:10	-0.14	
8/28/2001	14:10	8/29/2001	17:15	+0.19	
8/29/2001	17:15	8/30/2001	13:00	-0.20	
8/30/2001	13:00	8/31/2001	11:30	+0.27	

**Table D-2.1: Continued**

Recording Period <sup>1</sup>				Change in Instrument Calibration Constant <sup>2</sup> (feet)	Comments
Start		End			
Date	Time	Date	Time		
8/31/2001	11:30	9/1/2001	9:30	-0.02	
9/1/2001	9:30	9/2/2001	9:00	+0.03	
9/2/2001	9:00	9/5/2001	12:15	-0.04	
9/5/2001	12:15	9/8/2001	15:33	-0.20	Instrument Downloaded.

Notes:

1. Water surface elevations corresponding to the recording dates and times listed above are presented in Table D-2.3, Appendix D.
2. The change in calibration constant represents the difference in the apparent instrument elevation between the start of the period and the end of the period. The apparent instrument elevation was computed by subtracting the depth of water over the instrument, as recorded by the instrument, from the measured water surface elevation. A negative change indicates that the elevation of the instrument appeared to have lowered. A positive change indicates that the elevation of the instrument appeared to have risen. The change in the apparent elevation could be due to a physical change in the instrument location due to scour or shifting, but might also be due to debris or sediment partially blocking the pressure sensor.
3. On 13 June 2001 the water level recorder was removed from the water at 15:15 to download the data. The water surface elevation was not recorded prior to the water level recorder being removed from the water. The water surface elevation was recorded when the recorder was placed back in the water at 16:30. In order to compute the approximate change in the calibration constant during the period 11 June at 17:00 to 13 June at 15:15, the water surface elevation was assumed to be the same at 15:30 and 16:30 on 13 June.
4. On 16 July 2001 the water level recorder was removed from the water at 13:30 to download the data. The water surface elevation was not recorded prior to the water level recorder being removed from the water. The water surface elevation was recorded when the recorder was placed back in the water at 15:30. In order to compute the approximate change in the calibration constant during the period 28 June at 15:30 to 16 July at 13:30, the water surface elevation was assumed to be the same at 13:30 and 15:30 on 16 July.
5. The minimum standard deviation associated with each instrument reading is on the order of 0.1 percent of the instrument range. This is the standard deviation due to variances in the instrument itself and does not represent variances due to environmental factors such as instrument shifting or partial blockage of the sensor by debris or sediment. Thus, the minimum standard deviation associated with the readings collected for this project is on the order of 0.1 feet.
6. The fluctuation in water surface elevation due to wind waves, varied from 0.01 to 0.10 feet during staff gage readings or water surface elevation surveys.
7. At the end of a data recording period, the data were downloaded and the instrument was serviced and re-deployed, except at the end of the last recording period when the instrument data were downloaded and the instrument was taken out of the field.

**Table D-2.2: Average Daily Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
6/6/2001	21.70	
6/7/2001	21.29	
6/8/2001	20.77	705
6/9/2001	20.87	700
6/10/2001	21.26	1254
6/11/2001	21.49	2009
6/12/2001	20.79	1919
6/13/2001	20.91	2342
6/14/2001	21.32	1681
6/15/2001	22.07	3519
6/16/2001	21.54	3118
6/17/2001	21.04	2916
6/18/2001	21.35	3075
6/19/2001	21.29	3005
6/20/2001	20.83	2813
6/21/2001	20.48	2630
6/22/2001	19.86	2285
6/23/2001	19.64	2143
6/24/2001	19.46	2017
6/25/2001	19.25	1881
6/26/2001	19.06	1747
6/27/2001	18.93	1661
6/28/2001	18.92	1647
6/29/2001	18.81	1571
6/30/2001	18.75	1527
7/1/2001	18.72	1503
7/2/2001	18.64	1447
7/3/2001	18.48	1327
7/4/2001	18.15	1088
7/5/2001	18.64	862
7/6/2001	18.09	1042
7/7/2001	18.01	986
7/8/2001	17.91	909
7/9/2001	17.85	873
7/10/2001	17.77	818
7/11/2001	17.69	759
7/12/2001	17.61	705
7/13/2001	17.55	664
7/14/2001	17.49	624
7/15/2001	17.42	577
7/16/2001	17.40	569
7/17/2001	17.43	582
7/18/2001	17.25	494
7/19/2001	17.30	517

**Table D-2.2: Continued**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
7/20/2001	17.31	520
7/21/2001	17.25	493
7/22/2001	17.28	506
7/23/2001	17.16	451
7/24/2001	17.14	440
7/25/2001	17.12	430
7/26/2001	17.07	405
7/27/2001	16.97	360
7/28/2001	16.95	355
7/29/2001	17.02	382
7/30/2001	17.01	377
7/31/2001	17.09	416
8/1/2001	17.03	389
8/2/2001	16.97	361
8/3/2001	17.00	374
8/4/2001	16.97	362
8/5/2001	16.94	349
8/6/2001	17.07	409
8/7/2001	17.08	412
8/8/2001	16.95	353
8/9/2001	16.94	355
8/10/2001	16.86	331
8/11/2001	16.82	321
8/12/2001	16.79	314
8/13/2001	16.77	310
8/14/2001	16.83	323
8/15/2001	16.86	333
8/16/2001	16.79	316
8/17/2001	16.96	360
8/18/2001	17.03	389
8/19/2001	17.08	409
8/20/2001	17.11	427
8/21/2001	17.16	451
8/22/2001	17.15	443
8/23/2001	17.11	426
8/24/2001	17.13	434
8/25/2001	17.15	446
8/26/2001	17.20	469
8/27/2001	17.14	440
8/28/2001	17.09	415
8/29/2001	17.04	391
8/30/2001	17.18	480
8/31/2001	17.08	409
9/1/2001	17.06	403
9/2/2001	17.09	415
9/3/2001	17.07	404

**Table D-2.2: Continued**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
9/4/2001	17.00	373
9/5/2001	16.95	352
9/6/2001	17.04	400
9/7/2001	16.84	326
9/8/2001	16.75	306

1. Average daily water surface elevation is the daily average of water surface elevation data presented in Table D-2.3, Appendix D.  
2. Average daily discharge is the daily average of discharge values presented in Table D-2.3, Appendix D.



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

Notes:

1. Water surface elevations in bold represent measured values from either survey or staff gage readings. Values not bold represent corrected water surface elevations measured by the pressure transducer.
2. Discharge values in bold represent measured discharges. Discharge values not bold are calculated.
3. Date and time are Alaska Daylight Savings time.
4. The time corresponds to the start of a sampling interval.
5. Combined pressure is the sum of the water and atmospheric pressures.
6. Atmospheric pressure and combined pressure are in pounds per square inch (psia), rounded to the nearest 0.01 psi.
7. Water surface elevations are based on British Petroleum Mean Sea Level, rounded to the nearest 0.01 foot.
8. Instrument located on Fish Creek at River Mile 32.4 (Figure 2).
9. It is assumed that changes in the instrument calibration constant occurred linearly over time. Corrections to the water depth and corresponding water surface elevation were calculated to account for these changes.
10. Missing data are either the result of routine instrument downloading and servicing, or environmental conditions which prevented the recorder from obtaining accurate data. Environmental conditions which caused data to be lost include physical changes in the instrument location due to scour or shifting, and/or partial blocking of the pressure sensor by debris or sediment.

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/6/2001	10:23	-	-	-	21.75	-
-	-	-	-	-	21.80	-
6/6/2001	15:37	-	-	-	21.54	-
-	-	-	-	-	21.44	-
6/7/2001	11:09	-	-	-	21.30	-
6/7/2001	16:18	-	-	-	21.29	-
6/7/2001	20:00	-	-	-	21.11	-
6/8/2001	14:00	-	-	-	20.76	702
6/8/2001	18:57	-	-	-	20.79	708
6/8/2001	19:46	-	-	-	20.78	709.1
6/8/2001	20:24	-	-	-	20.76	702
6/9/2001	8:32	-	-	-	20.89	698
6/9/2001	9:28	-	-	-	20.87	697.6
6/9/2001	10:00	-	-	-	20.86	704
-	-	-	-	-	21.85	1382
6/10/2001	17:19	-	-	-	20.67	1126
6/11/2001	9:57	-	-	-	21.76	2019
6/11/2001	13:32	-	-	-	21.72	2067
6/11/2001	14:26	-	-	-	21.69	2065
6/11/2001	15:15	-	-	-	21.67	2065.3
6/11/2001	15:46	-	-	-	21.65	2065
6/11/2001	17:00	14.36	16.91	5.87	21.59	2017
6/11/2001	17:30	14.35	16.94	5.92	21.64	2024
6/11/2001	18:00	14.35	16.93	5.86	21.58	2016
6/11/2001	18:30	14.36	16.94	5.82	21.54	2011
6/11/2001	19:00	14.36	16.94	5.78	21.50	2005
6/11/2001	19:30	14.37	16.95	5.75	21.47	2000
6/11/2001	20:00	14.38	16.95	5.69	21.41	1992
6/11/2001	20:30	14.38	16.96	5.67	21.39	1990
6/11/2001	21:00	14.39	16.97	5.63	21.35	1985
6/11/2001	21:30	14.40	17.01	5.66	21.38	1989
6/11/2001	22:00	14.40	16.95	5.49	21.21	1965
6/11/2001	22:30	14.41	17.00	5.54	21.26	1972
6/11/2001	23:00	14.40	17.01	5.55	21.27	1974
6/11/2001	23:30	14.41	16.99	5.44	21.16	1959
6/12/2001	0:00	14.41	16.99	5.40	21.12	1954
6/12/2001	0:30	14.41	17.07	5.55	21.27	1974
6/12/2001	1:00	14.42	17.09	5.54	21.26	1972
6/12/2001	1:30	14.42	17.10	5.52	21.24	1970
6/12/2001	2:00	14.42	17.09	5.46	21.18	1961
6/12/2001	2:30	14.43	17.09	5.40	21.12	1953
6/12/2001	3:00	14.43	17.09	5.36	21.08	1948

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/12/2001	3:30	14.44	17.09	5.30	21.02	1940
6/12/2001	4:00	14.43	17.09	5.28	21.00	1938
6/12/2001	4:30	14.42	17.09	5.27	20.99	1936
6/12/2001	5:00	14.42	17.10	5.25	20.97	1934
6/12/2001	5:30	14.43	17.10	5.19	20.91	1925
6/12/2001	6:00	14.45	17.10	5.11	20.83	1914
6/12/2001	6:30	14.44	17.11	5.12	20.84	1915
6/12/2001	7:00	14.42	17.12	5.15	20.87	1919
6/12/2001	7:30	14.42	17.13	5.13	20.85	1917
6/12/2001	8:00	14.42	17.13	5.10	20.82	1912
6/12/2001	8:30	14.42	17.13	5.06	20.78	1907
6/12/2001	9:00	14.42	17.13	5.02	20.74	1902
6/12/2001	9:30	14.41	17.13	5.00	20.72	1900
6/12/2001	10:00	14.40	17.13	4.99	20.71	1898
6/12/2001	10:30	14.40	17.14	4.97	<b>20.69</b>	1896
6/12/2001	10:31	-	-	-	<b>20.69</b>	1895
6/12/2001	11:00	14.38	17.14	6.34	20.73	1927
6/12/2001	11:30	14.37	17.13	6.32	20.71	1914
6/12/2001	12:00	14.36	17.15	6.37	20.76	1963
6/12/2001	12:30	14.36	17.15	6.36	20.75	1949
6/12/2001	13:00	14.36	17.17	6.39	20.78	1977
6/12/2001	13:30	14.36	17.18	6.40	20.79	1984
6/12/2001	14:00	14.35	17.16	6.36	20.75	1950
6/12/2001	14:30	14.36	17.15	6.30	20.69	1895
6/12/2001	15:00	14.38	17.14	6.22	20.61	1819
6/12/2001	15:30	14.42	17.12	6.06	<b>20.45</b>	1680
6/12/2001	15:36	-	-	-	<b>20.45</b>	1678
6/12/2001	16:00	14.38	17.15	6.31	20.55	1805
6/12/2001	16:30	14.39	17.13	6.17	20.41	1629
6/12/2001	17:00	14.38	17.13	6.13	20.37	1573
6/12/2001	17:30	14.38	17.14	6.09	20.33	1518
6/12/2001	18:00	14.41	17.17	6.02	20.26	1432
6/12/2001	18:30	14.39	17.22	6.12	20.36	1555
6/12/2001	19:00	14.38	17.24	6.12	20.36	1559
6/12/2001	19:30	14.40	17.28	6.10	20.34	1533
6/12/2001	20:00	14.45	17.31	5.99	20.23	1387
6/12/2001	20:30	14.45	17.32	5.94	20.18	1331
6/12/2001	21:00	14.47	17.34	5.88	20.12	1246
6/12/2001	21:30	14.49	17.37	5.83	20.07	1190
6/12/2001	22:00	14.49	17.95	7.10	21.34	2839
6/12/2001	22:30	14.46	18.17	7.61	21.85	3501
6/12/2001	23:00	14.46	18.17	7.55	21.79	3415
6/12/2001	23:30	14.46	18.17	7.48	21.72	3329

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/13/2001	0:00	14.47	18.16	7.37	21.61	3183
6/13/2001	0:30	14.47	18.16	7.30	21.54	3097
6/13/2001	1:00	14.47	18.16	7.24	21.48	3012
6/13/2001	1:30	14.48	18.16	7.15	21.39	2896
6/13/2001	2:00	14.48	18.16	7.08	21.32	2810
6/13/2001	2:30	14.48	18.16	7.01	21.25	2724
6/13/2001	3:00	14.48	18.17	6.97	21.21	2668
6/13/2001	3:30	14.48	18.17	6.91	21.15	2582
6/13/2001	4:00	14.48	18.17	6.84	21.08	2496
6/13/2001	4:30	14.48	18.17	6.77	21.01	2411
6/13/2001	5:00	14.48	18.17	6.71	20.95	2325
6/13/2001	5:30	14.49	18.17	6.62	20.86	2209
6/13/2001	6:00	14.48	18.17	6.58	20.82	2153
6/13/2001	6:30	14.47	18.18	6.56	20.80	2127
6/13/2001	7:00	14.46	18.18	6.51	20.75	2071
6/13/2001	7:30	14.45	18.19	6.49	20.73	2045
6/13/2001	8:00	14.44	18.20	6.47	20.71	2019
6/13/2001	8:30	14.44	18.21	6.43	20.67	1963
6/13/2001	9:00	14.43	18.22	6.41	20.65	1937
6/13/2001	9:30	14.42	18.23	6.39	20.63	1911
6/13/2001	10:00	14.42	18.24	6.35	20.59	1855
6/13/2001	10:30	14.40	18.26	6.37	20.61	1889
6/13/2001	11:00	14.39	18.27	6.35	20.59	1863
6/13/2001	11:30	14.39	18.29	6.33	20.57	1837
6/13/2001	12:00	14.39	18.30	6.29	20.53	1781
6/13/2001	12:30	14.35	18.32	6.36	20.60	1874
6/13/2001	13:00	14.34	18.32	6.32	<b>20.56</b>	1818
6/13/2001	13:14	-	-	-	<b>20.56</b>	1821
6/13/2001	13:30	14.33	18.34	9.23	20.63	1898
6/13/2001	14:00	14.34	18.35	9.24	20.64	1903
6/13/2001	14:30	14.33	18.37	9.31	20.71	1983
6/13/2001	15:00	14.33	18.38	9.34	20.74	2012
6/13/2001	15:30	14.33	18.40	9.39	20.79	2067
6/13/2001	16:30	14.33	18.32	9.18	<b>20.79</b>	2072
6/13/2001	17:00	14.35	18.36	9.23	20.84	2203
6/13/2001	17:30	14.34	18.38	9.30	20.91	2394
6/13/2001	18:00	14.35	18.40	9.32	20.93	2461
6/13/2001	18:30	14.35	18.43	9.39	21.00	2652
6/13/2001	19:00	14.37	18.45	9.39	21.00	2655
6/13/2001	19:30	14.39	18.47	9.40	21.01	2659
6/13/2001	20:00	14.42	18.49	9.37	20.98	2600
6/13/2001	20:30	14.41	18.50	9.42	21.03	2729
6/13/2001	21:00	14.45	18.53	9.40	21.01	2670

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/13/2001	21:30	14.45	18.54	9.42	21.03	2736
6/13/2001	22:00	14.47	18.56	9.43	21.04	2740
6/13/2001	22:30	14.47	18.58	9.47	21.08	2869
6/13/2001	23:00	14.48	18.59	9.47	21.08	2872
6/13/2001	23:30	14.50	18.61	9.48	21.09	2876
6/14/2001	0:00	14.50	18.62	9.50	21.11	2941
6/14/2001	0:30	14.51	18.64	9.52	21.13	2950
6/14/2001	1:00	14.52	18.66	9.55	21.16	2959
6/14/2001	1:30	14.52	18.68	9.60	21.21	2975
6/14/2001	2:00	14.54	18.69	9.57	21.18	2968
6/14/2001	2:30	14.53	18.70	9.62	21.23	2985
6/14/2001	3:00	14.54	18.71	9.62	21.23	2985
6/14/2001	3:30	14.55	18.72	9.62	21.23	2985
6/14/2001	4:00	14.55	18.74	9.67	21.28	3002
6/14/2001	4:30	14.55	18.75	9.70	21.31	3011
6/14/2001	5:00	14.55	18.76	9.72	21.33	3020
6/14/2001	5:30	14.56	18.77	9.72	21.33	3020
6/14/2001	6:00	14.56	18.78	9.75	21.36	3029
6/14/2001	6:30	14.56	18.78	9.75	21.36	3029
6/14/2001	7:00	14.56	18.80	9.80	21.41	3046
6/14/2001	7:30	14.55	18.81	9.84	21.45	3063
6/14/2001	8:00	14.56	18.81	9.82	21.43	3055
6/14/2001	8:30	14.55	18.81	9.85	21.46	3064
6/14/2001	9:00	14.55	18.83	9.89	21.50	3081
6/14/2001	9:30	14.55	18.84	9.92	21.53	3090
6/14/2001	10:00	14.55	18.85	9.94	21.55	3098
6/14/2001	10:30	14.55	18.85	9.94	21.55	3099
6/14/2001	11:00	14.54	18.86	9.99	21.60	3116
6/14/2001	11:04	-	-	-	<b>21.60</b>	3115
6/14/2001	11:30	14.54	18.87	9.93	21.59	3113
6/14/2001	12:00	14.54	18.87	9.90	21.56	3102
6/14/2001	12:03	-	-	-	<b>21.56</b>	3101
6/14/2001	12:30	14.55	18.88	9.96	21.56	3102
6/14/2001	12:55	-	-	-	<b>21.56</b>	<b>3099.6</b>
6/14/2001	13:00	14.56	18.89	9.96	21.56	3102
6/14/2001	13:30	14.55	18.89	9.99	21.59	3111
6/14/2001	14:00	14.56	18.89	9.96	21.56	3102
6/14/2001	14:02	-	-	-	<b>21.56</b>	3101
6/14/2001	15:00	14.60	18.82	9.71	21.56	3101
6/14/2001	15:02	-	-	-	<b>21.56</b>	3101
6/14/2001	15:30	14.61	18.84	9.73	21.58	3109
6/14/2001	16:00	14.62	18.85	9.73	21.58	3108
6/14/2001	16:30	14.65	18.87	9.70	21.55	3099

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/14/2001	17:00	14.66	18.89	9.72	21.57	3106
6/14/2001	17:30	14.67	18.90	9.72	21.57	3105
6/14/2001	18:00	14.69	18.93	9.74	21.59	3113
6/14/2001	18:30	14.69	18.93	9.74	21.59	3112
6/14/2001	19:00	14.71	18.96	9.76	21.61	3124
6/14/2001	19:30	14.72	18.99	9.80	21.65	3162
6/14/2001	20:00	14.72	18.99	9.80	21.65	3160
6/14/2001	20:30	14.72	19.02	9.87	21.72	3217
6/14/2001	21:00	14.73	19.03	9.87	21.72	3215
6/14/2001	21:30	14.74	19.05	9.89	21.74	3233
6/14/2001	22:00	14.74	19.06	9.91	21.76	3251
6/14/2001	22:30	14.74	19.07	9.93	21.78	3268
6/14/2001	23:00	14.75	19.09	9.95	21.80	3286
6/14/2001	23:30	14.76	19.11	9.97	21.82	3304
6/15/2001	0:00	14.76	19.12	9.99	21.84	3321
6/15/2001	0:30	14.77	19.13	9.99	21.84	3319
6/15/2001	1:00	14.77	19.14	10.01	21.86	3337
6/15/2001	1:30	14.79	19.15	9.98	21.83	3315
6/15/2001	2:00	14.79	19.16	10.00	21.85	3333
6/15/2001	2:30	14.80	19.18	10.02	21.87	3351
6/15/2001	3:00	14.80	19.19	10.04	21.89	3369
6/15/2001	3:30	14.80	19.20	10.07	21.92	3386
6/15/2001	4:00	14.80	19.21	10.09	21.94	3404
6/15/2001	4:30	14.80	19.21	10.08	21.93	3402
6/15/2001	5:00	14.80	19.22	10.10	21.95	3420
6/15/2001	5:30	14.80	19.24	10.15	22.00	3457
6/15/2001	6:00	14.80	19.24	10.15	22.00	3455
6/15/2001	6:30	14.79	19.24	10.17	22.02	3473
6/15/2001	7:00	14.79	19.24	10.16	22.01	3471
6/15/2001	7:30	14.79	19.25	10.18	22.03	3489
6/15/2001	8:00	14.78	19.25	10.20	22.05	3507
6/15/2001	8:30	14.77	19.26	10.25	22.10	3544
6/15/2001	9:00	14.77	19.27	10.27	22.12	3562
6/15/2001	9:30	14.76	19.27	10.29	22.14	3580
6/15/2001	10:00	14.75	19.27	10.31	22.16	3597
6/15/2001	10:06	-	-	-	<b>22.16</b>	3597
6/15/2001	10:30	14.74	19.27	10.41	22.17	3606
6/15/2001	11:00	14.73	19.27	10.42	22.18	3614
6/15/2001	11:25	-	-	-	<b>22.19</b>	3623
6/15/2001	11:30	14.72	19.27	10.43	22.19	3622
6/15/2001	12:00	14.71	19.27	10.48	22.20	3632
6/15/2001	12:30	14.69	19.27	10.51	22.23	3661
6/15/2001	13:00	14.69	19.27	10.50	22.22	3651

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
6/15/2001	13:30	14.69	19.27	10.49	22.21	3640
6/15/2001	14:00	14.69	19.27	10.48	22.20	3630
6/15/2001	14:02	-	-	-	<b>22.20</b>	3631
6/15/2001	14:30	14.67	19.27	10.59	22.25	3671
6/15/2001	15:00	14.67	19.26	10.56	22.22	3652
6/15/2001	15:30	14.66	19.26	10.59	22.25	3673
6/15/2001	16:00	14.66	19.26	10.59	22.25	3674
6/15/2001	16:30	14.67	19.26	10.57	22.23	3655
6/15/2001	17:00	14.67	19.25	10.55	22.21	3636
6/15/2001	17:30	14.68	19.24	10.50	22.16	3597
6/15/2001	18:00	14.67	19.24	10.52	22.18	3618
6/15/2001	18:30	14.68	19.24	10.50	<b>22.16</b>	3599
6/15/2001	19:00	14.68	19.23	10.47	22.14	3578
6/15/2001	19:30	14.69	19.23	10.44	22.11	3557
6/15/2001	20:00	14.69	19.22	10.42	22.09	3535
6/15/2001	20:30	14.71	19.22	10.37	22.04	3494
6/15/2001	21:00	14.70	19.21	10.37	22.04	3493
6/15/2001	21:30	14.71	19.20	10.32	21.99	3452
6/15/2001	22:00	14.72	19.20	10.30	21.97	3431
6/15/2001	22:30	14.72	19.19	10.27	21.94	3410
6/15/2001	23:00	14.73	19.19	10.25	21.92	3388
6/15/2001	23:30	14.73	19.18	10.22	21.89	3367
6/16/2001	0:00	14.74	19.18	10.20	21.87	3346
6/16/2001	0:30	14.74	19.18	10.20	21.87	3344
6/16/2001	1:00	14.74	19.17	10.17	21.84	3323
6/16/2001	1:30	14.74	19.16	10.15	21.82	3302
6/16/2001	2:00	14.74	19.15	10.12	21.79	3281
6/16/2001	2:30	14.74	19.15	10.12	21.79	3279
6/16/2001	3:00	14.74	19.15	10.12	21.79	3278
6/16/2001	3:30	14.74	19.13	10.07	21.74	3237
6/16/2001	4:00	14.74	19.12	10.05	21.72	3216
6/16/2001	4:30	14.75	19.12	10.02	21.69	3195
6/16/2001	5:00	14.75	19.11	10.00	21.67	3173
6/16/2001	5:30	14.74	19.10	10.00	21.67	3172
6/16/2001	6:00	14.73	19.09	9.99	21.66	3170
6/16/2001	6:30	14.73	19.08	9.97	21.64	3149
6/16/2001	7:00	14.74	19.08	9.94	21.61	3128
6/16/2001	7:30	14.73	19.07	9.94	21.61	3127
6/16/2001	8:00	14.72	19.05	9.92	21.59	3111
6/16/2001	8:30	14.71	19.05	9.94	21.61	3124
6/16/2001	9:00	14.70	19.04	9.94	21.61	3122
6/16/2001	9:30	14.69	19.03	9.94	21.61	3121
6/16/2001	10:00	14.69	19.02	9.91	21.58	3109

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/16/2001	10:30	14.67	19.02	9.96	21.63	3138
6/16/2001	11:00	14.67	19.00	9.91	21.58	3108
6/16/2001	11:30	14.65	18.99	9.93	21.60	3115
6/16/2001	12:00	14.64	18.99	9.95	21.62	3133
6/16/2001	12:20	-	-	-	<b>21.64</b>	3150
6/16/2001	12:30	14.62	18.98	9.97	21.64	3152
6/16/2001	13:00	14.62	18.97	10.00	21.61	3123
6/16/2001	13:13	-	-	-	<b>21.60</b>	<b>3115.4</b>
6/16/2001	13:30	14.61	18.96	9.99	21.60	3115
6/16/2001	13:58	-	-	-	<b>21.57</b>	3105
6/16/2001	14:00	14.61	18.95	9.96	21.57	3103
6/16/2001	14:30	14.61	18.94	9.97	21.55	3097
6/16/2001	15:00	14.61	18.93	9.95	21.53	3091
6/16/2001	15:30	14.60	18.93	9.98	21.56	3101
6/16/2001	16:00	14.60	18.91	9.94	21.52	3086
6/16/2001	16:30	14.60	18.90	9.92	21.50	3080
6/16/2001	17:00	14.60	18.90	9.92	21.50	3081
6/16/2001	17:30	14.62	18.89	9.86	21.44	3059
6/16/2001	18:00	14.65	18.88	9.77	21.35	3028
6/16/2001	18:30	14.66	18.87	9.73	21.31	3013
6/16/2001	19:00	14.66	18.87	9.74	21.32	3015
6/16/2001	19:30	14.67	18.87	9.72	21.30	3008
6/16/2001	20:00	14.69	18.87	9.68	21.26	2994
6/16/2001	20:30	14.69	18.86	9.66	21.24	2987
6/16/2001	21:00	14.70	18.85	9.62	21.20	2973
6/16/2001	21:30	14.71	18.84	9.58	21.16	2958
6/16/2001	22:00	14.72	18.84	9.56	21.14	2952
6/16/2001	22:30	14.72	18.83	9.54	21.12	2945
6/16/2001	23:00	14.72	18.82	9.52	21.10	2939
6/16/2001	23:30	14.72	18.81	9.51	21.09	2933
6/17/2001	0:00	14.72	18.81	9.51	21.09	2934
6/17/2001	0:30	14.73	18.81	9.49	21.07	2928
6/17/2001	1:00	14.73	18.80	9.48	21.06	2921
6/17/2001	1:30	14.73	18.79	9.46	21.04	2915
6/17/2001	2:00	14.73	18.78	9.44	21.02	2909
6/17/2001	2:30	14.73	18.78	9.44	21.02	2910
6/17/2001	3:00	14.73	18.77	9.43	21.01	2904
6/17/2001	3:30	14.72	18.76	9.43	21.01	2906
6/17/2001	4:00	14.72	18.75	9.41	20.99	2898
6/17/2001	4:30	14.72	18.74	9.40	20.98	2889
6/17/2001	5:00	14.72	18.74	9.40	20.98	2892
6/17/2001	5:30	14.72	18.72	9.36	20.94	2870
6/17/2001	6:00	14.71	18.72	9.39	20.97	2885



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/17/2001	6:30	14.70	18.71	9.39	20.97	2887
6/17/2001	7:00	14.69	18.70	9.40	20.98	2890
6/17/2001	7:30	14.68	18.69	9.40	20.98	2893
6/17/2001	8:00	14.67	18.69	9.43	21.01	2905
6/17/2001	8:30	14.67	18.69	9.44	21.02	2907
6/17/2001	9:00	14.66	18.68	9.44	21.02	2909
6/17/2001	9:30	14.65	18.67	9.45	21.03	2911
6/17/2001	10:00	14.65	18.66	9.43	21.01	2904
6/17/2001	10:30	14.65	18.66	9.43	21.01	2906
6/17/2001	11:00	14.65	18.66	9.44	21.02	2908
6/17/2001	11:30	14.65	18.65	9.42	21.00	2901
6/17/2001	12:00	14.65	18.65	9.42	21.00	2903
6/17/2001	12:05	-	-	-	<b>21.00</b>	2902
6/17/2001	12:32	-	-	-	<b>21.00</b>	2902
6/17/2001	13:00	14.67	18.23	8.19	21.00	2902
6/17/2001	13:30	14.66	18.23	8.21	21.02	2910
6/17/2001	14:00	14.67	18.24	8.21	21.02	2910
6/17/2001	14:30	14.66	18.25	8.26	21.07	2926
6/17/2001	15:00	14.65	18.25	8.28	21.09	2934
6/17/2001	15:30	14.63	18.25	8.33	21.14	2950
6/17/2001	16:00	14.61	18.26	8.39	21.20	2975
6/17/2001	16:30	14.61	18.26	8.39	21.20	2975
6/17/2001	17:00	14.61	18.25	8.37	21.18	2966
6/17/2001	17:30	14.62	18.25	8.35	21.16	2958
6/17/2001	18:00	14.61	18.25	8.37	21.18	2966
6/17/2001	18:30	14.61	18.24	8.35	21.16	2957
6/17/2001	19:00	14.62	18.24	8.32	21.13	2949
6/17/2001	19:30	14.63	18.23	8.28	21.09	2932
6/17/2001	20:00	14.63	18.23	8.28	21.09	2932
6/17/2001	20:30	14.64	18.23	8.25	21.06	2924
6/17/2001	21:00	14.63	18.22	8.25	21.06	2924
6/17/2001	21:30	14.64	18.21	8.20	21.01	2907
6/17/2001	22:00	14.64	18.20	8.18	20.99	2897
6/17/2001	22:30	14.63	18.20	8.20	21.01	2907
6/17/2001	23:00	14.63	18.20	8.20	21.01	2907
6/17/2001	23:30	14.63	18.19	8.18	20.99	2896
6/18/2001	0:00	14.62	18.18	8.18	20.99	2896
6/18/2001	0:30	14.62	18.17	8.16	20.97	2884
6/18/2001	1:00	14.61	18.16	8.15	20.96	2884
6/18/2001	1:30	14.61	18.16	8.15	20.96	2883
6/18/2001	2:00	14.61	18.15	8.13	20.94	2871
6/18/2001	2:30	14.60	18.14	8.13	20.94	2871
6/18/2001	3:00	14.60	18.13	8.11	20.92	2859

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/18/2001	3:30	14.60	18.13	8.11	20.92	2858
6/18/2001	4:00	14.59	18.12	8.11	20.92	2858
6/18/2001	4:30	14.58	18.11	8.11	20.92	2858
6/18/2001	5:00	14.58	18.11	8.10	20.91	2857
6/18/2001	5:30	14.58	18.10	8.08	20.89	2845
6/18/2001	6:00	14.58	18.10	8.08	20.89	2845
6/18/2001	6:30	14.59	18.10	8.06	20.87	2833
6/18/2001	7:00	14.60	18.10	8.03	20.84	2820
6/18/2001	7:30	14.61	18.10	8.01	20.82	2808
6/18/2001	8:00	14.61	18.10	8.01	20.82	2808
6/18/2001	8:30	14.62	18.10	7.99	20.80	2796
6/18/2001	9:00	14.62	18.11	8.01	20.82	2807
6/18/2001	9:30	14.63	18.11	7.98	20.79	2795
6/18/2001	10:00	14.70	18.11	7.82	20.63	2711
6/18/2001	10:30	14.61	18.12	8.05	20.86	2830
6/18/2001	11:00	14.57	18.12	8.14	20.95	2878
6/18/2001	11:30	14.14	18.12	9.13	21.94	3410
6/18/2001	12:00	14.13	18.13	9.18	21.99	3449
6/18/2001	12:30	14.24	18.13	8.92	21.73	3231
6/18/2001	13:00	14.20	18.13	9.02	21.83	3310
6/18/2001	13:30	14.15	18.13	9.13	21.94	3408
6/18/2001	14:00	14.12	18.13	9.20	22.01	3467
6/18/2001	14:30	14.10	18.13	9.24	22.05	3506
6/18/2001	15:00	14.11	18.12	9.20	22.01	3466
6/18/2001	15:30	14.11	18.12	9.20	22.01	3466
6/18/2001	16:00	14.13	18.12	9.15	21.96	3426
6/18/2001	16:30	14.12	18.12	9.17	21.98	3445
6/18/2001	17:00	14.12	18.11	9.15	21.96	3425
6/18/2001	17:30	14.14	18.11	9.10	21.91	3385
6/18/2001	18:00	14.13	18.11	9.13	21.94	3404
6/18/2001	18:30	14.16	18.11	9.06	21.87	3344
6/18/2001	19:00	14.20	18.12	8.99	21.80	3284
6/18/2001	19:30	14.26	18.11	8.82	21.63	3145
6/18/2001	20:00	14.27	18.11	8.80	21.61	3125
6/18/2001	20:30	14.28	18.11	8.78	21.59	3111
6/18/2001	21:00	14.29	18.11	8.75	21.56	3103
6/18/2001	21:30	14.27	18.10	8.78	21.59	3111
6/18/2001	22:00	14.28	18.10	8.75	21.56	3102
6/18/2001	22:30	14.35	18.10	8.59	21.40	3045
6/18/2001	23:00	14.35	18.10	8.59	21.40	3045
6/18/2001	23:30	14.38	18.10	8.52	21.33	3020
6/19/2001	0:00	14.38	18.10	8.52	21.33	3020
6/19/2001	0:30	14.35	18.09	8.57	21.38	3036

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/19/2001	1:00	14.37	18.09	8.52	21.33	3019
6/19/2001	1:30	14.39	18.09	8.47	21.28	3003
6/19/2001	2:00	14.38	18.09	8.50	21.31	3011
6/19/2001	2:30	14.34	18.08	8.56	21.37	3035
6/19/2001	3:00	14.34	18.08	8.56	21.37	3035
6/19/2001	3:30	14.34	18.08	8.56	21.37	3035
6/19/2001	4:00	14.35	18.07	8.52	21.33	3018
6/19/2001	4:30	14.35	18.07	8.52	21.33	3018
6/19/2001	5:00	14.35	18.07	8.52	21.33	3018
6/19/2001	5:30	14.39	18.06	8.40	21.21	2977
6/19/2001	6:00	14.38	18.05	8.40	21.21	2976
6/19/2001	6:30	14.35	18.05	8.47	21.28	3001
6/19/2001	7:00	14.35	18.04	8.44	21.25	2992
6/19/2001	7:30	14.37	18.04	8.40	21.21	2976
6/19/2001	8:00	14.35	18.04	8.44	21.25	2992
6/19/2001	8:30	14.35	18.03	8.42	21.23	2984
6/19/2001	9:00	14.34	18.03	8.44	21.25	2992
6/19/2001	9:30	14.33	18.02	8.44	21.25	2991
6/19/2001	10:00	14.30	18.01	8.49	21.30	3008
6/19/2001	10:30	14.25	18.01	8.60	21.41	3048
6/19/2001	11:00	14.25	18.00	8.58	21.39	3040
6/19/2001	11:30	14.19	18.00	8.72	21.53	3089
6/19/2001	12:00	14.20	17.98	8.65	21.46	3064
6/19/2001	12:30	14.19	17.98	8.67	21.48	3072
6/19/2001	13:00	14.16	17.98	8.74	21.55	3096
6/19/2001	13:30	14.17	17.97	8.69	21.50	3080
6/19/2001	14:00	14.18	17.96	8.64	21.45	3063
6/19/2001	14:30	14.17	17.95	8.64	21.45	3063
6/19/2001	15:00	14.17	17.95	8.64	21.45	3063
6/19/2001	15:30	14.19	17.94	8.57	21.38	3038
6/19/2001	16:00	14.18	17.94	8.60	21.41	3046
6/19/2001	16:30	14.13	17.92	8.66	21.47	3071
6/19/2001	17:00	14.20	17.92	8.50	21.31	3013
6/19/2001	17:30	14.20	17.92	8.50	21.31	3013
6/19/2001	18:00	14.23	17.92	8.43	21.24	2988
6/19/2001	18:30	14.21	17.89	8.41	21.22	2980
6/19/2001	19:00	14.24	17.88	8.32	21.13	2947
6/19/2001	19:30	14.24	17.88	8.32	21.13	2947
6/19/2001	20:00	14.26	17.87	8.25	21.06	2922
6/19/2001	20:30	14.24	17.86	8.27	21.08	2930
6/19/2001	21:00	14.25	17.86	8.24	21.05	2921
6/19/2001	21:30	14.26	17.85	8.20	21.01	2905
6/19/2001	22:00	14.23	17.86	8.29	21.10	2937

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/19/2001	22:30	14.24	17.85	8.24	21.05	2921
6/19/2001	23:00	14.25	17.85	8.22	21.03	2912
6/19/2001	23:30	14.23	17.85	8.27	21.08	2929
6/20/2001	0:00	14.27	17.85	8.17	20.98	2893
6/20/2001	0:30	14.32	17.84	8.03	20.84	2821
6/20/2001	1:00	14.30	17.83	8.06	20.87	2832
6/20/2001	1:30	14.30	17.83	8.06	20.87	2832
6/20/2001	2:00	14.30	17.83	8.06	20.87	2832
6/20/2001	2:30	14.30	17.83	8.05	20.86	2832
6/20/2001	3:00	14.29	17.82	8.05	20.86	2831
6/20/2001	3:30	14.28	17.81	8.05	20.86	2831
6/20/2001	4:00	14.29	17.81	8.03	20.84	2819
6/20/2001	4:30	14.33	17.81	7.94	20.75	2771
6/20/2001	5:00	14.33	17.81	7.94	20.75	2770
6/20/2001	5:30	14.22	17.80	8.17	20.98	2890
6/20/2001	6:00	14.21	17.80	8.19	21.00	2901
6/20/2001	6:30	14.21	17.80	8.19	21.00	2901
6/20/2001	7:00	14.22	17.80	8.16	20.97	2889
6/20/2001	7:30	14.21	17.80	8.19	21.00	2900
6/20/2001	8:00	14.20	17.78	8.16	20.97	2888
6/20/2001	8:30	14.20	17.78	8.16	20.97	2888
6/20/2001	9:00	14.20	17.77	8.14	20.95	2876
6/20/2001	9:30	14.22	17.77	8.09	20.90	2852
6/20/2001	10:00	14.23	17.77	8.07	20.88	2839
6/20/2001	10:30	14.23	17.77	8.07	20.88	2839
6/20/2001	11:00	14.23	17.77	8.07	20.88	2839
6/20/2001	11:30	14.23	17.77	8.07	20.88	2838
6/20/2001	12:00	14.23	17.77	8.07	20.88	2838
6/20/2001	12:30	14.24	17.77	8.04	20.85	2826
6/20/2001	13:00	14.24	17.77	8.04	20.85	2826
6/20/2001	13:30	14.23	17.77	8.07	20.88	2837
6/20/2001	14:00	14.23	17.77	8.07	20.88	2837
6/20/2001	14:30	14.24	17.77	8.04	20.85	2825
6/20/2001	15:00	14.25	17.77	8.02	20.83	2813
6/20/2001	15:30	14.25	17.77	8.02	20.83	2812
6/20/2001	16:00	14.25	17.77	8.02	20.83	2812
6/20/2001	16:30	14.27	17.77	7.97	20.78	2788
6/20/2001	17:00	14.28	17.77	7.95	20.76	2776
6/20/2001	17:30	14.28	17.77	7.95	20.76	2775
6/20/2001	18:00	14.30	17.77	7.90	20.71	2751
6/20/2001	18:30	14.29	17.77	7.92	20.73	2763
6/20/2001	19:00	14.29	17.77	7.92	20.73	2762
6/20/2001	19:30	14.29	17.77	7.92	20.73	2762

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/20/2001	20:00	14.30	17.77	7.90	20.71	2750
6/20/2001	20:30	14.30	17.76	7.87	20.68	2738
6/20/2001	21:00	14.30	17.76	7.87	20.68	2737
6/20/2001	21:30	14.30	17.76	7.87	20.68	2737
6/20/2001	22:00	14.31	17.76	7.85	20.66	2725
6/20/2001	22:30	14.31	17.76	7.85	20.66	2725
6/20/2001	23:00	14.31	17.76	7.85	20.66	2724
6/20/2001	23:30	14.32	17.75	7.80	20.61	2700
6/21/2001	0:00	14.33	17.75	7.78	20.59	2688
6/21/2001	0:30	14.33	17.75	7.78	20.59	2688
6/21/2001	1:00	14.33	17.75	7.78	20.59	2687
6/21/2001	1:30	14.35	17.76	7.75	20.56	2675
6/21/2001	2:00	14.34	17.76	7.78	20.59	2687
6/21/2001	2:30	14.35	17.76	7.75	20.56	2675
6/21/2001	3:00	14.35	17.77	7.77	20.58	2686
6/21/2001	3:30	14.35	17.77	7.77	20.58	2686
6/21/2001	4:00	14.36	17.77	7.75	20.56	2674
6/21/2001	4:30	14.36	17.77	7.75	20.56	2673
6/21/2001	5:00	14.36	17.77	7.75	20.56	2673
6/21/2001	5:30	14.37	17.77	7.73	20.54	2661
6/21/2001	6:00	14.37	17.77	7.73	20.54	2661
6/21/2001	6:30	14.37	17.77	7.72	20.53	2660
6/21/2001	7:00	14.37	17.78	7.75	20.56	2672
6/21/2001	7:30	14.38	17.78	7.72	20.53	2660
6/21/2001	8:00	14.38	17.78	7.72	20.53	2659
6/21/2001	8:30	14.37	17.77	7.72	20.53	2659
6/21/2001	9:00	14.36	17.77	7.75	20.56	2671
6/21/2001	9:30	14.36	17.77	7.74	20.55	2671
6/21/2001	10:00	14.35	17.78	7.79	20.60	2694
6/21/2001	10:30	14.35	17.78	7.79	20.60	2694
6/21/2001	11:00	14.36	17.78	7.77	20.58	2682
6/21/2001	11:30	14.37	17.78	7.74	20.55	2669
6/21/2001	12:00	14.35	17.78	7.79	20.60	2693
6/21/2001	12:30	14.35	17.78	7.79	20.60	2693
6/21/2001	13:00	14.35	17.78	7.79	20.60	2692
6/21/2001	13:30	14.35	17.78	7.79	20.60	2692
6/21/2001	14:00	14.36	17.77	7.74	20.55	2668
6/21/2001	14:30	14.36	17.78	7.76	20.57	2680
6/21/2001	15:00	14.39	17.77	7.67	20.48	2632
6/21/2001	15:30	14.40	17.77	7.65	20.46	2619
6/21/2001	16:00	14.43	17.77	7.58	20.39	2583
6/21/2001	16:30	14.43	17.77	7.58	20.39	2583
6/21/2001	17:00	14.45	17.77	7.53	20.34	2559

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/21/2001	17:30	14.45	17.77	7.53	20.34	2558
6/21/2001	18:00	14.45	17.77	7.53	20.34	2558
6/21/2001	18:30	14.43	17.77	7.57	20.38	2582
6/21/2001	19:00	14.45	17.77	7.53	20.34	2558
6/21/2001	19:30	14.44	17.76	7.53	20.34	2557
6/21/2001	20:00	14.45	17.76	7.50	20.31	2545
6/21/2001	20:30	14.46	17.76	7.48	20.29	2533
6/21/2001	21:00	14.47	17.76	7.46	20.27	2521
6/21/2001	21:30	14.46	17.76	7.48	20.29	2532
6/21/2001	22:00	14.46	17.76	7.48	20.29	2532
6/21/2001	22:30	14.47	17.76	7.45	20.26	2520
6/21/2001	23:00	14.50	17.75	7.36	20.17	2472
6/21/2001	23:30	14.50	17.76	7.38	20.19	2483
6/22/2001	0:00	14.52	17.75	7.31	20.12	2447
6/22/2001	0:30	14.52	17.75	7.31	20.12	2447
6/22/2001	1:00	14.54	17.75	7.27	20.08	2423
6/22/2001	1:30	14.55	17.75	7.24	20.05	2411
6/22/2001	2:00	14.53	17.75	7.29	20.10	2434
6/22/2001	2:30	14.57	17.75	7.20	20.01	2386
6/22/2001	3:00	14.62	17.75	7.08	19.89	2309
6/22/2001	3:30	14.59	17.75	7.15	19.96	2355
6/22/2001	4:00	14.64	17.75	7.03	19.84	2278
6/22/2001	4:30	14.57	17.75	7.19	20.00	2385
6/22/2001	5:00	14.60	17.75	7.13	19.94	2339
6/22/2001	5:30	14.69	17.75	6.92	19.73	2199
6/22/2001	6:00	14.69	17.75	6.92	19.73	2199
6/22/2001	6:30	14.69	17.75	6.92	19.73	2198
6/22/2001	7:00	14.69	17.75	6.92	19.73	2198
6/22/2001	7:30	14.67	17.75	6.96	19.77	2229
6/22/2001	8:00	14.67	17.75	6.96	19.77	2228
6/22/2001	8:30	14.66	17.75	6.98	19.79	2243
6/22/2001	9:00	14.65	17.75	7.01	19.82	2258
6/22/2001	9:30	14.65	17.75	7.01	19.82	2258
6/22/2001	10:00	14.63	17.75	7.05	19.86	2289
6/22/2001	10:30	14.63	17.75	7.05	19.86	2288
6/22/2001	11:00	14.62	17.75	7.07	19.88	2303
6/22/2001	11:30	14.62	17.75	7.07	19.88	2303
6/22/2001	12:00	14.61	17.74	7.07	19.88	2303
6/22/2001	12:30	14.60	17.74	7.09	19.90	2318
6/22/2001	13:00	14.61	17.74	7.07	19.88	2302
6/22/2001	13:30	14.60	17.74	7.09	19.90	2317
6/22/2001	14:00	14.60	17.74	7.09	19.90	2317
6/22/2001	14:30	14.59	17.74	7.11	19.92	2332

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/22/2001	15:00	14.59	17.75	7.14	19.95	2347
6/22/2001	15:30	14.59	17.75	7.14	19.95	2347
6/22/2001	16:00	14.59	17.75	7.14	19.95	2346
6/22/2001	16:30	14.59	17.74	7.11	19.92	2330
6/22/2001	17:00	14.60	17.74	7.09	19.90	2314
6/22/2001	17:30	14.61	17.72	7.02	19.83	2268
6/22/2001	18:00	14.61	17.71	7.00	19.81	2252
6/22/2001	18:30	14.62	17.71	6.97	19.78	2236
6/22/2001	19:00	14.61	17.70	6.97	19.78	2236
6/22/2001	19:30	14.62	17.70	6.95	19.76	2220
6/22/2001	20:00	14.62	17.70	6.95	19.76	2219
6/22/2001	20:30	14.62	17.70	6.95	19.76	2219
6/22/2001	21:00	14.62	17.70	6.95	19.76	2219
6/22/2001	21:30	14.63	17.70	6.92	19.73	2203
6/22/2001	22:00	14.64	17.69	6.88	19.69	2171
6/22/2001	22:30	14.64	17.69	6.88	19.69	2171
6/22/2001	23:00	14.65	17.69	6.85	19.66	2155
6/22/2001	23:30	14.65	17.69	6.85	19.66	2155
6/23/2001	0:00	14.66	17.69	6.83	19.64	2139
6/23/2001	0:30	14.67	17.68	6.78	19.59	2108
6/23/2001	1:00	14.67	17.68	6.78	19.59	2107
6/23/2001	1:30	14.67	17.68	6.78	19.59	2107
6/23/2001	2:00	14.67	17.68	6.78	19.59	2107
6/23/2001	2:30	14.67	17.67	6.76	19.57	2091
6/23/2001	3:00	14.67	17.67	6.76	19.57	2090
6/23/2001	3:30	14.68	17.67	6.73	19.54	2074
6/23/2001	4:00	14.68	17.67	6.73	19.54	2074
6/23/2001	4:30	14.68	17.67	6.73	19.54	2074
6/23/2001	5:00	14.67	17.66	6.73	19.54	2073
6/23/2001	5:30	14.66	17.66	6.75	19.56	2088
6/23/2001	6:00	14.66	17.66	6.75	19.56	2088
6/23/2001	6:30	14.65	17.66	6.77	19.58	2103
6/23/2001	7:00	14.64	17.65	6.77	19.58	2103
6/23/2001	7:30	14.63	17.65	6.80	19.61	2118
6/23/2001	8:00	14.62	17.65	6.82	19.63	2133
6/23/2001	8:30	14.61	17.64	6.82	19.63	2133
6/23/2001	9:00	14.60	17.64	6.84	19.65	2148
6/23/2001	9:30	14.59	17.64	6.86	19.67	2163
6/23/2001	10:00	14.58	17.64	6.89	19.70	2178
6/23/2001	10:30	14.57	17.64	6.91	19.72	2193
6/23/2001	11:00	14.56	17.63	6.91	19.72	2193
6/23/2001	11:30	14.56	17.63	6.91	19.72	2192
6/23/2001	12:00	14.55	17.63	6.93	19.74	2208

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/23/2001	12:30	14.55	17.62	6.91	19.72	2192
6/23/2001	13:00	14.54	17.62	6.93	19.74	2207
6/23/2001	13:30	14.53	17.61	6.93	19.74	2206
6/23/2001	14:00	14.53	17.61	6.93	19.74	2206
6/23/2001	14:30	14.52	17.61	6.95	19.76	2221
6/23/2001	15:00	14.52	17.61	6.95	19.76	2221
6/23/2001	15:30	14.52	17.60	6.93	19.74	2205
6/23/2001	16:00	14.52	17.60	6.93	19.74	2205
6/23/2001	16:30	14.52	17.60	6.93	19.74	2204
6/23/2001	17:00	14.52	17.60	6.92	19.73	2204
6/23/2001	17:30	14.52	17.59	6.90	19.71	2188
6/23/2001	18:00	14.52	17.58	6.88	19.69	2172
6/23/2001	18:30	14.52	17.58	6.88	19.69	2172
6/23/2001	19:00	14.53	17.58	6.85	19.66	2156
6/23/2001	19:30	14.54	17.58	6.83	19.64	2140
6/23/2001	20:00	14.54	17.58	6.83	19.64	2140
6/23/2001	20:30	14.54	17.58	6.83	19.64	2139
6/23/2001	21:00	14.54	17.58	6.83	19.64	2139
6/23/2001	21:30	14.55	17.57	6.78	19.59	2108
6/23/2001	22:00	14.55	17.57	6.78	19.59	2107
6/23/2001	22:30	14.56	17.57	6.76	19.57	2091
6/23/2001	23:00	14.56	17.56	6.73	19.54	2076
6/23/2001	23:30	14.56	17.55	6.71	19.52	2060
6/24/2001	0:00	14.57	17.55	6.69	19.50	2044
6/24/2001	0:30	14.57	17.55	6.69	19.50	2044
6/24/2001	1:00	14.57	17.54	6.66	19.47	2028
6/24/2001	1:30	14.57	17.54	6.66	19.47	2027
6/24/2001	2:00	14.58	17.54	6.64	19.45	2011
6/24/2001	2:30	14.59	17.54	6.62	19.43	1996
6/24/2001	3:00	14.59	17.53	6.59	19.40	1980
6/24/2001	3:30	14.59	17.52	6.57	19.38	1964
6/24/2001	4:00	14.58	17.52	6.59	19.40	1979
6/24/2001	4:30	14.58	17.52	6.59	19.40	1979
6/24/2001	5:00	14.57	17.52	6.61	19.42	1994
6/24/2001	5:30	14.57	17.51	6.59	19.40	1978
6/24/2001	6:00	14.57	17.51	6.59	19.40	1978
6/24/2001	6:30	14.56	17.51	6.61	19.42	1993
6/24/2001	7:00	14.55	17.50	6.61	19.42	1992
6/24/2001	7:30	14.55	17.50	6.61	19.42	1992
6/24/2001	8:00	14.53	17.49	6.63	19.44	2007
6/24/2001	8:30	14.52	17.49	6.65	19.46	2022
6/24/2001	9:00	14.52	17.49	6.65	19.46	2022
6/24/2001	9:30	14.51	17.49	6.68	19.49	2037



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/24/2001	10:00	14.50	17.49	6.70	19.51	2052
6/24/2001	10:30	14.50	17.48	6.68	19.49	2036
6/24/2001	11:00	14.49	17.48	6.70	19.51	2051
6/24/2001	11:30	14.48	17.48	6.72	19.53	2066
6/24/2001	12:00	14.47	17.47	6.72	19.53	2066
6/24/2001	12:30	14.47	17.47	6.72	19.53	2066
6/24/2001	13:00	14.47	17.47	6.72	19.53	2065
6/24/2001	13:30	14.46	17.47	6.74	19.55	2080
6/24/2001	14:00	14.46	17.46	6.72	19.53	2065
6/24/2001	14:30	14.46	17.46	6.72	19.53	2064
6/24/2001	15:00	14.46	17.46	6.72	19.53	2064
6/24/2001	15:30	14.46	17.46	6.72	19.53	2063
6/24/2001	16:00	14.45	17.45	6.72	19.53	2063
6/24/2001	16:30	14.45	17.45	6.71	19.52	2063
6/24/2001	17:00	14.45	17.45	6.71	19.52	2062
6/24/2001	17:30	14.45	17.44	6.69	19.50	2047
6/24/2001	18:00	14.46	17.44	6.67	19.48	2031
6/24/2001	18:30	14.47	17.44	6.64	19.45	2015
6/24/2001	19:00	14.47	17.44	6.64	19.45	2014
6/24/2001	19:30	14.47	17.43	6.62	19.43	1999
6/24/2001	20:00	14.47	17.43	6.62	19.43	1998
6/24/2001	20:30	14.48	17.43	6.60	19.41	1982
6/24/2001	21:00	14.48	17.43	6.59	19.40	1982
6/24/2001	21:30	14.48	17.43	6.59	19.40	1982
6/24/2001	22:00	14.50	17.43	6.55	19.36	1950
6/24/2001	22:30	14.50	17.43	6.55	19.36	1950
6/24/2001	23:00	14.50	17.43	6.55	19.36	1950
6/24/2001	23:30	14.51	17.43	6.52	19.33	1934
6/25/2001	0:00	14.51	17.42	6.50	19.31	1918
6/25/2001	0:30	14.52	17.43	6.50	19.31	1917
6/25/2001	1:00	14.52	17.43	6.50	19.31	1917
6/25/2001	1:30	14.53	17.43	6.47	19.28	1901
6/25/2001	2:00	14.54	17.43	6.45	19.26	1885
6/25/2001	2:30	14.56	17.44	6.43	19.24	1870
6/25/2001	3:00	14.57	17.44	6.40	19.21	1854
6/25/2001	3:30	14.56	17.43	6.40	19.21	1853
6/25/2001	4:00	14.56	17.43	6.40	19.21	1853
6/25/2001	4:30	14.55	17.43	6.43	19.24	1868
6/25/2001	5:00	14.56	17.43	6.40	19.21	1852
6/25/2001	5:30	14.56	17.45	6.45	19.26	1883
6/25/2001	6:00	14.55	17.45	6.47	19.28	1898
6/25/2001	6:30	14.55	17.45	6.47	19.28	1898
6/25/2001	7:00	14.54	17.45	6.49	19.30	1913

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/25/2001	7:30	14.54	17.46	6.51	19.32	1928
6/25/2001	8:00	14.53	17.46	6.54	19.35	1943
6/25/2001	8:30	14.52	17.46	6.56	19.37	1958
6/25/2001	9:00	14.54	17.46	6.51	19.32	1927
6/25/2001	9:30	14.57	17.46	6.44	19.25	1880
6/25/2001	10:00	14.55	17.47	6.51	19.32	1926
6/25/2001	10:30	14.55	17.47	6.51	19.32	1926
6/25/2001	11:00	14.57	17.48	6.49	19.30	1910
6/25/2001	11:30	14.58	17.49	6.49	19.30	1909
6/25/2001	12:00	14.60	17.49	6.44	19.25	1878
6/25/2001	12:30	14.60	17.49	6.44	19.25	1878
6/25/2001	13:00	14.60	17.49	6.44	19.25	1877
6/25/2001	13:30	14.60	17.50	6.46	19.27	1892
6/25/2001	14:00	14.60	17.51	6.48	19.29	1908
6/25/2001	14:30	14.61	17.51	6.46	19.27	1892
6/25/2001	15:00	14.62	17.51	6.44	19.25	1876
6/25/2001	15:30	14.60	17.51	6.48	19.29	1906
6/25/2001	16:00	14.61	17.52	6.48	19.29	1906
6/25/2001	16:30	14.62	17.52	6.46	19.27	1890
6/25/2001	17:00	14.61	17.52	6.48	19.29	1905
6/25/2001	17:30	14.62	17.53	6.48	19.29	1905
6/25/2001	18:00	14.64	17.53	6.43	19.24	1874
6/25/2001	18:30	14.65	17.53	6.41	19.22	1858
6/25/2001	19:00	14.65	17.54	6.43	19.24	1873
6/25/2001	19:30	14.66	17.55	6.43	19.24	1873
6/25/2001	20:00	14.68	17.55	6.39	19.20	1841
6/25/2001	20:30	14.69	17.55	6.36	19.17	1825
6/25/2001	21:00	14.69	17.55	6.36	19.17	1825
6/25/2001	21:30	14.69	17.55	6.36	19.17	1825
6/25/2001	22:00	14.70	17.55	6.34	19.15	1809
6/25/2001	22:30	14.71	17.55	6.31	19.12	1793
6/25/2001	23:00	14.71	17.55	6.31	19.12	1793
6/25/2001	23:30	14.71	17.55	6.31	19.12	1792
6/26/2001	0:00	14.71	17.54	6.29	19.10	1776
6/26/2001	0:30	14.70	17.54	6.31	19.12	1791
6/26/2001	1:00	14.70	17.54	6.31	19.12	1791
6/26/2001	1:30	14.71	17.54	6.29	19.10	1775
6/26/2001	2:00	14.72	17.54	6.26	19.07	1759
6/26/2001	2:30	14.71	17.53	6.26	19.07	1759
6/26/2001	3:00	14.72	17.53	6.24	19.05	1743
6/26/2001	3:30	14.72	17.53	6.24	19.05	1743
6/26/2001	4:00	14.72	17.53	6.24	19.05	1742
6/26/2001	4:30	14.72	17.53	6.24	19.05	1742

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/26/2001	5:00	14.72	17.53	6.24	19.05	1742
6/26/2001	5:30	14.72	17.53	6.24	19.05	1741
6/26/2001	6:00	14.72	17.52	6.21	19.02	1725
6/26/2001	6:30	14.72	17.52	6.21	19.02	1725
6/26/2001	7:00	14.72	17.52	6.21	19.02	1725
6/26/2001	7:30	14.71	17.52	6.23	19.04	1740
6/26/2001	8:00	14.70	17.52	6.26	19.07	1755
6/26/2001	8:30	14.70	17.52	6.26	19.07	1755
6/26/2001	9:00	14.69	17.51	6.26	19.07	1754
6/26/2001	9:30	14.67	17.51	6.30	19.11	1785
6/26/2001	10:00	14.67	17.50	6.28	19.09	1769
6/26/2001	10:30	14.67	17.50	6.28	19.09	1769
6/26/2001	11:00	14.66	17.50	6.30	19.11	1784
6/26/2001	11:30	14.67	17.50	6.28	19.09	1768
6/26/2001	12:00	14.69	17.50	6.23	19.04	1737
6/26/2001	12:30	14.69	17.49	6.21	19.02	1721
6/26/2001	13:00	14.69	17.49	6.21	19.02	1720
6/26/2001	13:30	14.68	17.49	6.23	19.04	1735
6/26/2001	14:00	14.68	17.49	6.23	19.04	1735
6/26/2001	14:30	14.67	17.49	6.25	19.06	1750
6/26/2001	15:00	14.67	17.49	6.25	19.06	1750
6/26/2001	15:30	14.66	17.49	6.27	19.08	1765
6/26/2001	16:00	14.66	17.49	6.27	19.08	1765
6/26/2001	16:30	14.66	17.49	6.27	19.08	1764
6/26/2001	17:00	14.67	17.49	6.25	19.06	1748
6/26/2001	17:30	14.67	17.49	6.25	19.06	1748
6/26/2001	18:00	14.67	17.49	6.25	19.06	1748
6/26/2001	18:30	14.67	17.49	6.25	19.06	1747
6/26/2001	19:00	14.67	17.49	6.25	19.06	1747
6/26/2001	19:30	14.67	17.48	6.22	19.03	1731
6/26/2001	20:00	14.67	17.48	6.22	19.03	1731
6/26/2001	20:30	14.67	17.48	6.22	19.03	1730
6/26/2001	21:00	14.67	17.48	6.22	19.03	1730
6/26/2001	21:30	14.67	17.48	6.22	19.03	1730
6/26/2001	22:00	14.67	17.48	6.22	19.03	1729
6/26/2001	22:30	14.67	17.47	6.20	19.01	1713
6/26/2001	23:00	14.67	17.47	6.19	19.00	1713
6/26/2001	23:30	14.67	17.47	6.19	19.00	1713
6/27/2001	0:00	14.67	17.47	6.19	19.00	1712
6/27/2001	0:30	14.68	17.47	6.17	18.98	1695
6/27/2001	1:00	14.68	17.47	6.17	18.98	1695
6/27/2001	1:30	14.68	17.47	6.17	18.98	1694
6/27/2001	2:00	14.69	17.47	6.15	18.96	1677

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/27/2001	2:30	14.70	17.47	6.12	18.93	1660
6/27/2001	3:00	14.70	17.47	6.12	18.93	1659
6/27/2001	3:30	14.70	17.47	6.12	18.93	1659
6/27/2001	4:00	14.71	17.48	6.12	18.93	1658
6/27/2001	4:30	14.70	17.48	6.14	18.95	1675
6/27/2001	5:00	14.70	17.48	6.14	18.95	1675
6/27/2001	5:30	14.70	17.48	6.14	18.95	1674
6/27/2001	6:00	14.70	17.48	6.14	18.95	1674
6/27/2001	6:30	14.71	17.48	6.12	18.93	1656
6/27/2001	7:00	14.71	17.48	6.12	18.93	1656
6/27/2001	7:30	14.72	17.48	6.09	18.90	1639
6/27/2001	8:00	14.72	17.48	6.09	18.90	1638
6/27/2001	8:30	14.72	17.48	6.09	18.90	1638
6/27/2001	9:00	14.71	17.48	6.11	18.92	1654
6/27/2001	9:30	14.72	17.49	6.11	18.92	1654
6/27/2001	10:00	14.72	17.49	6.11	18.92	1654
6/27/2001	10:30	14.72	17.49	6.11	18.92	1653
6/27/2001	11:00	14.72	17.49	6.11	18.92	1653
6/27/2001	11:30	14.72	17.49	6.11	18.92	1652
6/27/2001	12:00	14.72	17.50	6.13	18.94	1669
6/27/2001	12:30	14.72	17.50	6.13	18.94	1669
6/27/2001	13:00	14.72	17.50	6.13	18.94	1668
6/27/2001	13:30	14.72	17.50	6.13	18.94	1668
6/27/2001	14:00	14.71	17.50	6.16	18.97	1684
6/27/2001	14:30	14.69	17.50	6.20	19.01	1717
6/27/2001	15:00	14.69	17.50	6.20	19.01	1717
6/27/2001	15:30	14.70	17.51	6.20	19.01	1716
6/27/2001	16:00	14.71	17.51	6.18	18.99	1700
6/27/2001	16:30	14.71	17.51	6.18	18.99	1699
6/27/2001	17:00	14.72	17.52	6.18	18.99	1699
6/27/2001	17:30	14.73	17.52	6.15	18.96	1681
6/27/2001	18:00	14.74	17.52	6.13	18.94	1664
6/27/2001	18:30	14.75	17.52	6.10	18.91	1647
6/27/2001	19:00	14.76	17.53	6.10	18.91	1646
6/27/2001	19:30	14.76	17.53	6.10	18.91	1646
6/27/2001	20:00	14.77	17.53	6.08	18.89	1629
6/27/2001	20:30	14.77	17.53	6.08	18.89	1628
6/27/2001	21:00	14.77	17.53	6.08	18.89	1628
6/27/2001	21:30	14.78	17.53	6.06	18.87	1611
6/27/2001	22:00	14.78	17.53	6.05	18.86	1610
6/27/2001	22:30	14.79	17.53	6.03	18.84	1593
6/27/2001	23:00	14.79	17.53	6.03	18.84	1593
6/27/2001	23:30	14.79	17.53	6.03	18.84	1592

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/28/2001	0:00	14.79	17.54	6.05	18.86	1609
6/28/2001	0:30	14.79	17.53	6.03	18.84	1591
6/28/2001	1:00	14.79	17.53	6.03	18.84	1591
6/28/2001	1:30	14.79	17.53	6.03	18.84	1591
6/28/2001	2:00	14.79	17.53	6.03	18.84	1590
6/28/2001	2:30	14.79	17.53	6.03	18.84	1590
6/28/2001	3:00	14.79	17.53	6.03	18.84	1589
6/28/2001	3:30	14.79	17.53	6.03	18.84	1589
6/28/2001	4:00	14.79	17.53	6.03	18.84	1588
6/28/2001	4:30	14.79	17.53	6.02	18.83	1588
6/28/2001	5:00	14.79	17.53	6.02	18.83	1588
6/28/2001	5:30	14.79	17.53	6.02	18.83	1587
6/28/2001	6:00	14.79	17.53	6.02	18.83	1587
6/28/2001	6:30	14.79	17.52	6.00	18.81	1570
6/28/2001	7:00	14.79	17.52	6.00	18.81	1569
6/28/2001	7:30	14.79	17.52	6.00	18.81	1569
6/28/2001	8:00	14.78	17.52	6.02	18.83	1585
6/28/2001	8:30	14.78	17.52	6.02	18.83	1585
6/28/2001	9:00	14.77	17.52	6.04	18.85	1601
6/28/2001	9:30	14.77	17.51	6.02	18.83	1584
6/28/2001	10:00	14.76	17.51	6.04	18.85	1601
6/28/2001	10:30	14.76	17.51	6.04	18.85	1600
6/28/2001	11:00	14.75	17.51	6.06	18.87	1617
6/28/2001	11:30	14.74	17.51	6.09	18.90	1633
6/28/2001	12:00	14.74	17.50	6.06	18.87	1616
6/28/2001	12:30	14.72	17.50	6.11	18.92	1649
6/28/2001	13:00	14.71	17.49	6.11	18.92	1649
6/28/2001	13:30	14.69	17.49	6.15	18.96	1682
6/28/2001	13:34	-	-	-	<b>18.96</b>	1680
6/28/2001	15:30	14.69	17.44	6.33	18.95	1671
6/28/2001	15:32	-	-	-	<b>18.95</b>	1673
6/28/2001	16:00	14.69	17.46	6.37	18.99	1705
6/28/2001	16:30	14.68	17.47	6.42	19.04	1736
6/28/2001	17:00	14.67	17.47	6.44	19.06	1751
6/28/2001	17:30	14.68	17.47	6.42	19.04	1735
6/28/2001	18:00	14.68	17.47	6.42	19.04	1735
6/28/2001	18:30	14.67	17.46	6.42	19.04	1734
6/28/2001	19:00	14.67	17.46	6.42	19.04	1734
6/28/2001	19:30	14.67	17.46	6.42	19.04	1734
6/28/2001	20:00	14.67	17.46	6.42	19.04	1733
6/28/2001	20:30	14.67	17.45	6.39	19.01	1718
6/28/2001	21:00	14.67	17.44	6.37	18.99	1701
6/28/2001	21:30	14.67	17.44	6.37	18.99	1701

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/28/2001	22:00	14.68	17.44	6.34	18.96	1683
6/28/2001	22:30	14.69	17.43	6.30	18.92	1649
6/28/2001	23:00	14.69	17.43	6.30	18.92	1649
6/28/2001	23:30	14.69	17.43	6.30	18.92	1648
6/29/2001	0:00	14.69	17.43	6.30	18.92	1648
6/29/2001	0:30	14.69	17.43	6.30	18.92	1648
6/29/2001	1:00	14.70	17.43	6.27	18.89	1630
6/29/2001	1:30	14.70	17.42	6.25	18.87	1613
6/29/2001	2:00	14.71	17.42	6.23	18.85	1596
6/29/2001	2:30	14.71	17.42	6.22	18.84	1596
6/29/2001	3:00	14.71	17.41	6.20	18.82	1578
6/29/2001	3:30	14.71	17.41	6.20	18.82	1578
6/29/2001	4:00	14.71	17.40	6.18	18.80	1561
6/29/2001	4:30	14.71	17.40	6.18	18.80	1560
6/29/2001	5:00	14.70	17.40	6.20	18.82	1577
6/29/2001	5:30	14.70	17.40	6.20	18.82	1576
6/29/2001	6:00	14.70	17.40	6.20	18.82	1576
6/29/2001	6:30	14.70	17.40	6.20	18.82	1576
6/29/2001	7:00	14.70	17.40	6.20	18.82	1575
6/29/2001	7:30	14.69	17.39	6.20	18.82	1575
6/29/2001	8:00	14.69	17.39	6.20	18.82	1575
6/29/2001	8:30	14.69	17.38	6.17	18.79	1557
6/29/2001	9:00	14.69	17.39	6.20	18.82	1574
6/29/2001	9:30	14.68	17.38	6.19	18.81	1573
6/29/2001	10:00	14.67	17.37	6.19	18.81	1573
6/29/2001	10:30	14.67	17.37	6.19	18.81	1573
6/29/2001	11:00	14.66	17.37	6.22	18.84	1589
6/29/2001	11:30	14.66	17.37	6.22	18.84	1589
6/29/2001	12:00	14.65	17.37	6.24	18.86	1605
6/29/2001	12:30	14.66	17.37	6.21	18.83	1588
6/29/2001	13:00	14.65	17.37	6.24	18.86	1605
6/29/2001	13:30	14.64	17.37	6.26	18.88	1621
6/29/2001	14:00	14.65	17.37	6.24	18.86	1604
6/29/2001	14:30	14.65	17.36	6.21	18.83	1587
6/29/2001	15:00	14.65	17.36	6.21	18.83	1586
6/29/2001	15:30	14.65	17.36	6.21	18.83	1586
6/29/2001	16:00	14.65	17.36	6.21	18.83	1586
6/29/2001	16:30	14.65	17.36	6.21	18.83	1585
6/29/2001	17:00	14.67	17.36	6.16	18.78	1551
6/29/2001	17:30	14.66	17.36	6.19	18.81	1568
6/29/2001	18:00	14.66	17.35	6.16	18.78	1550
6/29/2001	18:30	14.65	17.35	6.19	18.81	1567
6/29/2001	19:00	14.65	17.35	6.19	18.81	1566

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/29/2001	19:30	14.66	17.34	6.14	18.76	1532
6/29/2001	20:00	14.66	17.34	6.14	18.76	1532
6/29/2001	20:30	14.67	17.34	6.11	18.73	1515
6/29/2001	21:00	14.67	17.34	6.11	18.73	1514
6/29/2001	21:30	14.68	17.35	6.11	18.73	1514
6/29/2001	22:00	14.69	17.35	6.09	18.71	1497
6/29/2001	22:30	14.69	17.35	6.09	18.71	1496
6/29/2001	23:00	14.70	17.36	6.09	18.71	1496
6/29/2001	23:30	14.70	17.37	6.11	18.73	1512
6/30/2001	0:00	14.71	17.37	6.09	18.71	1495
6/30/2001	0:30	14.71	17.37	6.09	18.71	1495
6/30/2001	1:00	14.72	17.38	6.09	18.71	1494
6/30/2001	1:30	14.72	17.38	6.09	18.71	1494
6/30/2001	2:00	14.72	17.38	6.09	18.71	1494
6/30/2001	2:30	14.73	17.39	6.09	18.71	1493
6/30/2001	3:00	14.74	17.39	6.06	18.68	1476
6/30/2001	3:30	14.74	17.39	6.06	18.68	1476
6/30/2001	4:00	14.74	17.39	6.06	18.68	1475
6/30/2001	4:30	14.74	17.39	6.06	18.68	1475
6/30/2001	5:00	14.74	17.39	6.06	18.68	1475
6/30/2001	5:30	14.74	17.39	6.06	18.68	1474
6/30/2001	6:00	14.74	17.39	6.06	18.68	1474
6/30/2001	6:30	14.74	17.39	6.06	18.68	1474
6/30/2001	7:00	14.74	17.39	6.06	18.68	1473
6/30/2001	7:30	14.74	17.40	6.08	18.70	1490
6/30/2001	8:00	14.74	17.40	6.08	18.70	1489
6/30/2001	8:30	14.74	17.40	6.08	18.70	1489
6/30/2001	9:00	14.74	17.40	6.08	18.70	1489
6/30/2001	9:30	14.73	17.40	6.10	18.72	1505
6/30/2001	10:00	14.71	17.40	6.15	18.77	1539
6/30/2001	10:30	14.71	17.40	6.15	18.77	1538
6/30/2001	11:00	14.71	17.40	6.15	18.77	1538
6/30/2001	11:30	14.70	17.40	6.17	18.79	1554
6/30/2001	12:00	14.70	17.40	6.17	18.79	1554
6/30/2001	12:30	14.69	17.40	6.19	18.81	1571
6/30/2001	13:00	14.67	17.40	6.24	18.86	1604
6/30/2001	13:30	14.67	17.40	6.24	18.86	1604
6/30/2001	14:00	14.67	17.40	6.24	18.86	1603
6/30/2001	14:30	14.67	17.40	6.23	18.85	1603
6/30/2001	15:00	14.66	17.39	6.23	18.85	1603
6/30/2001	15:30	14.67	17.39	6.21	18.83	1585
6/30/2001	16:00	14.67	17.39	6.21	18.83	1585
6/30/2001	16:30	14.66	17.39	6.23	18.85	1601

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/30/2001	17:00	14.66	17.38	6.21	18.83	1584
6/30/2001	17:30	14.66	17.38	6.21	18.83	1584
6/30/2001	18:00	14.66	17.38	6.21	18.83	1583
6/30/2001	18:30	14.67	17.38	6.18	18.80	1566
6/30/2001	19:00	14.67	17.37	6.16	18.78	1549
6/30/2001	19:30	14.67	17.37	6.16	18.78	1549
6/30/2001	20:00	14.68	17.38	6.16	18.78	1548
6/30/2001	20:30	14.68	17.37	6.14	18.76	1531
6/30/2001	21:00	14.69	17.37	6.11	18.73	1514
6/30/2001	21:30	14.69	17.37	6.11	18.73	1513
6/30/2001	22:00	14.69	17.37	6.11	18.73	1513
6/30/2001	22:30	14.70	17.37	6.09	18.71	1496
6/30/2001	23:00	14.70	17.37	6.09	18.71	1495
6/30/2001	23:30	14.71	17.37	6.06	18.68	1478
7/1/2001	0:00	14.72	17.37	6.04	18.66	1461
7/1/2001	0:30	14.72	17.38	6.06	18.68	1477
7/1/2001	1:00	14.72	17.37	6.04	18.66	1460
7/1/2001	1:30	14.72	17.37	6.04	18.66	1460
7/1/2001	2:00	14.73	17.37	6.02	18.64	1442
7/1/2001	2:30	14.74	17.37	5.99	18.61	1425
7/1/2001	3:00	14.74	17.37	5.99	18.61	1425
7/1/2001	3:30	14.74	17.37	5.99	18.61	1424
7/1/2001	4:00	14.74	17.37	5.99	18.61	1424
7/1/2001	4:30	14.74	17.37	5.99	18.61	1424
7/1/2001	5:00	14.74	17.37	5.99	18.61	1423
7/1/2001	5:30	14.74	17.37	5.99	18.61	1423
7/1/2001	6:00	14.72	17.37	6.04	18.66	1456
7/1/2001	6:30	14.72	17.37	6.03	18.65	1456
7/1/2001	7:00	14.71	17.37	6.06	18.68	1472
7/1/2001	7:30	14.69	17.37	6.10	18.72	1506
7/1/2001	8:00	14.69	17.37	6.10	18.72	1506
7/1/2001	8:30	14.67	17.36	6.12	18.74	1522
7/1/2001	9:00	14.67	17.36	6.12	18.74	1522
7/1/2001	9:30	14.66	17.36	6.15	18.77	1538
7/1/2001	10:00	14.65	17.36	6.17	18.79	1555
7/1/2001	10:30	14.65	17.35	6.15	18.77	1537
7/1/2001	11:00	14.65	17.35	6.15	18.77	1537
7/1/2001	11:30	14.65	17.35	6.14	18.76	1537
7/1/2001	12:00	14.63	17.34	6.17	18.79	1553
7/1/2001	12:30	14.63	17.34	6.17	18.79	1553
7/1/2001	13:00	14.62	17.34	6.19	18.81	1569
7/1/2001	13:30	14.62	17.34	6.19	18.81	1569
7/1/2001	14:00	14.62	17.34	6.19	18.81	1569



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/1/2001	14:30	14.61	17.33	6.19	18.81	1568
7/1/2001	15:00	14.60	17.33	6.21	18.83	1585
7/1/2001	15:30	14.60	17.32	6.19	18.81	1568
7/1/2001	16:00	14.60	17.32	6.19	18.81	1567
7/1/2001	16:30	14.60	17.31	6.16	18.78	1550
7/1/2001	17:00	14.60	17.31	6.16	18.78	1550
7/1/2001	17:30	14.60	17.30	6.14	18.76	1532
7/1/2001	18:00	14.60	17.30	6.14	18.76	1532
7/1/2001	18:30	14.59	17.29	6.14	18.76	1532
7/1/2001	19:00	14.59	17.29	6.14	18.76	1531
7/1/2001	19:30	14.59	17.28	6.11	18.73	1514
7/1/2001	20:00	14.59	17.28	6.11	18.73	1514
7/1/2001	20:30	14.59	17.28	6.11	18.73	1513
7/1/2001	21:00	14.59	17.27	6.09	18.71	1496
7/1/2001	21:30	14.59	17.27	6.09	18.71	1496
7/1/2001	22:00	14.59	17.26	6.07	18.69	1478
7/1/2001	22:30	14.59	17.26	6.06	18.68	1478
7/1/2001	23:00	14.60	17.26	6.04	18.66	1461
7/1/2001	23:30	14.60	17.25	6.02	18.64	1443
7/2/2001	0:00	14.61	17.25	5.99	18.61	1426
7/2/2001	0:30	14.61	17.24	5.97	18.59	1409
7/2/2001	1:00	14.62	17.24	5.95	18.57	1392
7/2/2001	1:30	14.62	17.24	5.95	18.57	1391
7/2/2001	2:00	14.62	17.24	5.95	18.57	1391
7/2/2001	2:30	14.63	17.23	5.90	18.52	1357
7/2/2001	3:00	14.62	17.22	5.90	18.52	1356
7/2/2001	3:30	14.62	17.22	5.90	18.52	1356
7/2/2001	4:00	14.62	17.21	5.88	18.50	1339
7/2/2001	4:30	14.62	17.21	5.87	18.49	1338
7/2/2001	5:00	14.61	17.21	5.90	18.52	1355
7/2/2001	5:30	14.61	17.20	5.87	18.49	1338
7/2/2001	6:00	14.60	17.20	5.90	18.52	1354
7/2/2001	6:30	14.58	17.20	5.94	18.56	1388
7/2/2001	7:00	14.57	17.19	5.94	18.56	1387
7/2/2001	7:30	14.55	17.19	5.99	18.61	1421
7/2/2001	8:00	14.54	17.19	6.01	18.63	1437
7/2/2001	8:30	14.52	17.18	6.03	18.65	1454
7/2/2001	9:00	14.50	17.18	6.08	18.70	1487
7/2/2001	9:30	14.48	17.18	6.12	18.74	1521
7/2/2001	10:00	14.48	17.18	6.12	18.74	1520
7/2/2001	10:30	14.47	17.18	6.14	18.76	1537
7/2/2001	11:00	14.45	17.18	6.19	18.81	1570
7/2/2001	11:30	14.45	17.18	6.19	18.81	1570

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/2/2001	12:00	14.45	17.18	6.19	18.81	1569
7/2/2001	12:30	14.45	17.17	6.17	18.79	1552
7/2/2001	13:00	14.45	17.17	6.17	18.79	1552
7/2/2001	13:30	14.44	17.16	6.16	18.78	1551
7/2/2001	14:00	14.44	17.16	6.16	18.78	1551
7/2/2001	14:30	14.43	17.15	6.16	18.78	1551
7/2/2001	15:00	14.43	17.15	6.16	18.78	1550
7/2/2001	15:30	14.44	17.15	6.14	18.76	1533
7/2/2001	16:00	14.44	17.14	6.12	18.74	1516
7/2/2001	16:30	14.44	17.14	6.12	18.74	1515
7/2/2001	17:00	14.43	17.13	6.12	18.74	1515
7/2/2001	17:30	14.44	17.13	6.09	18.71	1498
7/2/2001	18:00	14.45	17.12	6.05	18.67	1464
7/2/2001	18:30	14.45	17.12	6.04	18.66	1463
7/2/2001	19:00	14.45	17.12	6.04	18.66	1463
7/2/2001	19:30	14.47	17.12	6.00	18.62	1429
7/2/2001	20:00	14.47	17.12	6.00	18.62	1428
7/2/2001	20:30	14.48	17.12	5.97	18.59	1411
7/2/2001	21:00	14.49	17.12	5.95	18.57	1394
7/2/2001	21:30	14.50	17.12	5.93	18.55	1377
7/2/2001	22:00	14.50	17.12	5.93	18.55	1376
7/2/2001	22:30	14.51	17.12	5.90	18.52	1359
7/2/2001	23:00	14.51	17.12	5.90	18.52	1359
7/2/2001	23:30	14.50	17.12	5.92	18.54	1375
7/3/2001	0:00	14.51	17.12	5.90	18.52	1358
7/3/2001	0:30	14.51	17.12	5.90	18.52	1357
7/3/2001	1:00	14.52	17.12	5.88	18.50	1340
7/3/2001	1:30	14.54	17.12	5.83	18.45	1306
7/3/2001	2:00	14.55	17.12	5.81	18.43	1289
7/3/2001	2:30	14.55	17.12	5.81	18.43	1288
7/3/2001	3:00	14.55	17.12	5.81	18.43	1288
7/3/2001	3:30	14.55	17.11	5.78	18.40	1271
7/3/2001	4:00	14.55	17.11	5.78	18.40	1270
7/3/2001	4:30	14.54	17.10	5.78	18.40	1270
7/3/2001	5:00	14.52	17.09	5.80	18.42	1287
7/3/2001	5:30	14.52	17.09	5.80	18.42	1286
7/3/2001	6:00	14.51	17.09	5.83	18.45	1303
7/3/2001	6:30	14.50	17.09	5.85	18.47	1319
7/3/2001	7:00	14.49	17.09	5.87	18.49	1336
7/3/2001	7:30	14.47	17.08	5.89	18.51	1352
7/3/2001	8:00	14.47	17.08	5.89	18.51	1352
7/3/2001	8:30	14.45	17.07	5.92	18.54	1368
7/3/2001	9:00	14.43	17.06	5.94	18.56	1385

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/3/2001	9:30	14.42	17.06	5.96	18.58	1402
7/3/2001	10:00	14.41	17.06	5.98	18.60	1418
7/3/2001	10:30	14.41	17.06	5.98	18.60	1418
7/3/2001	11:00	14.40	17.05	5.98	18.60	1417
7/3/2001	11:30	14.40	17.04	5.96	18.58	1400
7/3/2001	12:00	14.40	17.04	5.96	18.58	1400
7/3/2001	12:30	14.40	17.03	5.93	18.55	1382
7/3/2001	13:00	14.38	17.03	5.98	18.60	1416
7/3/2001	13:30	14.38	17.03	5.98	18.60	1416
7/3/2001	14:00	14.38	17.02	5.96	18.58	1398
7/3/2001	14:30	14.38	17.01	5.93	18.55	1381
7/3/2001	15:00	14.37	17.00	5.93	18.55	1381
7/3/2001	15:30	14.36	17.00	5.95	18.57	1397
7/3/2001	16:00	14.36	16.99	5.93	18.55	1380
7/3/2001	16:30	14.37	16.99	5.91	18.53	1363
7/3/2001	17:00	14.37	16.98	5.88	18.50	1345
7/3/2001	17:30	14.37	16.97	5.86	18.48	1328
7/3/2001	18:00	14.37	16.97	5.86	18.48	1328
7/3/2001	18:30	14.38	16.97	5.84	18.46	1310
7/3/2001	19:00	14.38	16.97	5.84	18.46	1310
7/3/2001	19:30	14.37	16.95	5.81	18.43	1293
7/3/2001	20:00	14.38	16.95	5.79	18.41	1276
7/3/2001	20:30	14.38	16.94	5.77	18.39	1258
7/3/2001	21:00	14.39	16.94	5.74	18.36	1241
7/3/2001	21:30	14.40	16.94	5.72	18.34	1224
7/3/2001	22:00	14.40	16.94	5.72	18.34	1223
7/3/2001	22:30	14.40	16.93	5.69	18.31	1206
7/3/2001	23:00	14.40	16.93	5.69	18.31	1206
7/3/2001	23:30	14.41	16.92	5.65	18.27	1172
7/4/2001	0:00	14.41	16.92	5.65	18.27	1171
7/4/2001	0:30	14.41	16.92	5.65	18.27	1171
7/4/2001	1:00	14.42	16.92	5.62	18.24	1154
7/4/2001	1:30	14.45	16.94	5.60	18.22	1136
7/4/2001	2:00	14.45	16.93	5.58	18.20	1119
7/4/2001	2:30	14.44	16.92	5.58	18.20	1119
7/4/2001	3:00	14.44	16.92	5.57	18.19	1118
7/4/2001	3:30	14.45	16.93	5.57	18.19	1118
7/4/2001	4:00	14.45	16.92	5.55	18.17	1101
7/4/2001	4:30	14.45	16.92	5.55	18.17	1100
7/4/2001	5:00	14.46	16.92	5.53	18.15	1083
7/4/2001	5:30	14.45	16.92	5.55	18.17	1099
7/4/2001	6:00	14.45	16.91	5.53	18.15	1082
7/4/2001	6:30	14.45	16.91	5.53	18.15	1082

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/4/2001	7:00	14.45	16.91	5.52	18.14	1081
7/4/2001	7:30	14.45	16.92	5.55	18.17	1098
7/4/2001	8:00	14.46	16.92	5.52	18.14	1081
7/4/2001	8:30	14.46	16.92	5.52	18.14	1080
7/4/2001	9:00	14.46	16.92	5.52	18.14	1080
7/4/2001	9:30	14.47	16.93	5.52	18.14	1080
7/4/2001	10:00	14.48	16.93	5.50	18.12	1062
7/4/2001	10:30	14.47	16.94	5.54	18.16	1096
7/4/2001	11:00	14.49	16.94	5.50	18.12	1062
7/4/2001	11:30	14.49	16.94	5.50	18.12	1061
7/4/2001	12:00	14.47	16.94	5.54	18.16	1095
7/4/2001	12:30	14.49	16.95	5.52	18.14	1077
7/4/2001	13:00	14.50	16.96	5.52	18.14	1077
7/4/2001	13:30	14.48	16.96	5.56	18.18	1111
7/4/2001	14:00	14.48	16.96	5.56	18.18	1110
7/4/2001	14:30	14.48	16.96	5.56	18.18	1110
7/4/2001	15:00	14.49	16.97	5.56	18.18	1109
7/4/2001	15:30	14.50	16.97	5.54	18.16	1092
7/4/2001	16:00	14.50	16.97	5.54	18.16	1092
7/4/2001	16:30	14.51	16.98	5.54	18.16	1091
7/4/2001	17:00	14.52	16.98	5.51	18.13	1074
7/4/2001	17:30	14.54	16.99	5.49	18.11	1057
7/4/2001	18:00	14.54	16.99	5.49	18.11	1057
7/4/2001	18:30	14.55	16.99	5.47	18.09	1039
7/4/2001	19:00	14.55	17.00	5.49	18.11	1056
7/4/2001	19:30	14.55	17.00	5.49	18.11	1055
7/4/2001	20:00	14.55	17.00	5.49	18.11	1055
7/4/2001	20:30	14.55	17.00	5.49	18.11	1055
7/4/2001	21:00	14.55	17.00	5.49	18.11	1054
7/4/2001	21:30	14.55	17.00	5.49	18.11	1054
7/4/2001	22:00	14.55	17.01	5.51	18.13	1070
7/4/2001	22:30	14.55	17.01	5.51	18.13	1070
7/4/2001	23:00	14.56	17.02	5.51	18.13	1070
7/4/2001	23:30	14.56	17.02	5.51	18.13	1069
7/5/2001	0:00	14.57	17.03	5.51	18.13	1069
7/5/2001	0:30	14.57	17.03	5.51	18.13	1069
7/5/2001	1:00	14.57	17.03	5.51	18.13	1068
7/5/2001	1:30	14.58	17.03	5.48	18.10	1051
7/5/2001	2:00	14.58	17.03	5.48	18.10	1051
7/5/2001	2:30	14.59	17.03	5.46	18.08	1033
7/5/2001	6:30	14.59	17.04	5.48	18.10	1047
7/5/2001	7:00	14.60	17.04	5.45	18.07	1030
7/5/2001	7:30	14.59	17.04	5.48	18.10	1047

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/5/2001	8:00	14.56	17.05	5.57	18.19	1114
7/5/2001	8:30	14.55	17.04	5.57	18.19	1113
7/5/2001	9:00	14.52	17.04	5.64	18.26	1164
7/5/2001	9:30	14.52	17.04	5.64	18.26	1163
7/5/2001	10:00	14.52	17.04	5.64	18.26	1163
7/5/2001	10:30	14.51	17.04	5.66	18.28	1180
7/5/2001	11:00	14.50	17.04	5.68	18.30	1196
7/5/2001	11:30	14.50	17.04	5.68	18.30	1196
7/5/2001	12:00	14.50	17.04	5.68	18.30	1195
7/5/2001	12:30	14.47	17.03	5.73	18.35	1229
7/5/2001	13:00	14.47	17.03	5.73	18.35	1228
7/5/2001	13:30	14.46	17.03	5.75	18.37	1245
7/5/2001	14:00	14.48	17.03	5.70	18.32	1211
7/5/2001	14:30	14.50	17.03	5.65	18.27	1177
7/5/2001	15:00	14.50	17.03	5.65	18.27	1176
7/5/2001	15:30	14.50	17.03	5.65	18.27	1176
7/5/2001	16:00	14.53	17.04	5.61	18.23	1142
7/5/2001	16:30	14.54	17.04	5.58	18.20	1124
7/5/2001	17:00	14.55	17.04	5.56	18.18	1107
7/5/2001	17:30	14.55	17.04	5.56	18.18	1107
7/5/2001	18:00	14.56	17.04	5.54	18.16	1090
7/5/2001	18:30	14.57	17.04	5.51	18.13	1072
7/5/2001	19:00	14.57	17.05	5.53	18.15	1089
7/5/2001	19:30	14.57	17.05	5.53	18.15	1088
7/5/2001	20:00	14.57	17.05	5.53	18.15	1088
7/5/2001	20:30	14.58	17.05	5.51	18.13	1071
7/5/2001	21:00	14.58	17.05	5.51	18.13	1070
7/5/2001	21:30	14.60	17.06	5.49	18.11	1053
7/5/2001	22:00	14.60	17.06	5.49	18.11	1053
7/5/2001	22:30	14.61	17.06	5.46	18.08	1036
7/5/2001	23:00	14.61	17.06	5.46	18.08	1035
7/5/2001	23:30	14.62	17.06	5.44	18.06	1018
7/6/2001	0:00	14.62	17.06	5.44	18.06	1018
7/6/2001	0:30	14.62	17.06	5.44	18.06	1017
7/6/2001	1:00	14.62	17.06	5.44	18.06	1017
7/6/2001	1:30	14.62	17.06	5.44	18.06	1016
7/6/2001	2:00	14.62	17.06	5.44	18.06	1016
7/6/2001	2:30	14.62	17.06	5.44	18.06	1016
7/6/2001	3:00	14.62	17.07	5.46	18.08	1032
7/6/2001	3:30	14.63	17.07	5.43	18.05	1015
7/6/2001	4:00	14.63	17.07	5.43	18.05	1015
7/6/2001	4:30	14.63	17.07	5.43	18.05	1014
7/6/2001	5:00	14.62	17.07	5.46	18.08	1031

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/6/2001	5:30	14.62	17.06	5.43	18.05	1014
7/6/2001	6:00	14.62	17.07	5.45	18.07	1030
7/6/2001	6:30	14.62	17.07	5.45	18.07	1030
7/6/2001	7:00	14.62	17.07	5.45	18.07	1029
7/6/2001	7:30	14.61	17.07	5.48	18.10	1046
7/6/2001	8:00	14.60	17.07	5.50	18.12	1062
7/6/2001	8:30	14.60	17.07	5.50	18.12	1062
7/6/2001	9:00	14.60	17.06	5.47	18.09	1045
7/6/2001	9:30	14.60	17.06	5.47	18.09	1044
7/6/2001	10:00	14.60	17.07	5.50	18.12	1061
7/6/2001	10:30	14.60	17.07	5.50	18.12	1061
7/6/2001	11:00	14.59	17.07	5.52	18.14	1077
7/6/2001	11:30	14.59	17.07	5.52	18.14	1077
7/6/2001	12:00	14.58	17.07	5.54	18.16	1093
7/6/2001	12:30	14.58	17.06	5.52	18.14	1076
7/6/2001	13:00	14.57	17.06	5.54	18.16	1093
7/6/2001	13:30	14.57	17.06	5.54	18.16	1092
7/6/2001	14:00	14.57	17.07	5.56	18.18	1109
7/6/2001	14:30	14.57	17.06	5.54	18.16	1091
7/6/2001	15:00	14.58	17.06	5.51	18.13	1074
7/6/2001	15:30	14.59	17.06	5.49	18.11	1057
7/6/2001	16:00	14.60	17.06	5.47	18.09	1040
7/6/2001	16:30	14.60	17.06	5.47	18.09	1039
7/6/2001	17:00	14.59	17.06	5.49	18.11	1056
7/6/2001	17:30	14.60	17.06	5.47	18.09	1039
7/6/2001	18:00	14.60	17.06	5.47	18.09	1038
7/6/2001	18:30	14.59	17.06	5.49	18.11	1055
7/6/2001	19:00	14.60	17.06	5.46	18.08	1037
7/6/2001	19:30	14.60	17.06	5.46	18.08	1037
7/6/2001	20:00	14.60	17.06	5.46	18.08	1037
7/6/2001	20:30	14.60	17.06	5.46	18.08	1036
7/6/2001	21:00	14.60	17.06	5.46	18.08	1036
7/6/2001	21:30	14.60	17.06	5.46	18.08	1036
7/6/2001	22:00	14.61	17.06	5.44	18.06	1018
7/6/2001	22:30	14.61	17.06	5.44	18.06	1018
7/6/2001	23:00	14.62	17.05	5.39	18.01	984
7/6/2001	23:30	14.62	17.06	5.41	18.03	1000
7/7/2001	0:00	14.62	17.06	5.41	18.03	1000
7/7/2001	0:30	14.62	17.06	5.41	18.03	1000
7/7/2001	1:00	14.62	17.06	5.41	18.03	999
7/7/2001	1:30	14.62	17.06	5.41	18.03	999
7/7/2001	2:00	14.62	17.06	5.41	18.03	998
7/7/2001	2:30	14.62	17.06	5.41	18.03	998

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/7/2001	3:00	14.62	17.06	5.41	18.03	998
7/7/2001	3:30	14.63	17.06	5.39	18.01	980
7/7/2001	4:00	14.63	17.06	5.39	18.01	980
7/7/2001	4:30	14.63	17.06	5.39	18.01	980
7/7/2001	5:00	14.63	17.06	5.39	18.01	979
7/7/2001	5:30	14.63	17.06	5.39	18.01	979
7/7/2001	6:00	14.63	17.06	5.38	18.00	979
7/7/2001	6:30	14.64	17.06	5.36	17.98	962
7/7/2001	7:00	14.63	17.06	5.38	18.00	978
7/7/2001	7:30	14.63	17.06	5.38	18.00	978
7/7/2001	8:00	14.62	17.06	5.41	18.03	994
7/7/2001	8:30	14.62	17.06	5.41	18.03	994
7/7/2001	9:00	14.63	17.06	5.38	18.00	976
7/7/2001	9:30	14.62	17.06	5.40	18.02	993
7/7/2001	10:00	14.61	17.06	5.43	18.05	1009
7/7/2001	10:30	14.60	17.06	5.45	18.07	1026
7/7/2001	11:00	14.61	17.06	5.43	18.05	1009
7/7/2001	11:30	14.62	17.06	5.40	18.02	991
7/7/2001	12:00	14.62	17.07	5.42	18.04	1008
7/7/2001	12:30	14.62	17.07	5.42	18.04	1008
7/7/2001	13:00	14.62	17.06	5.40	18.02	990
7/7/2001	13:30	14.61	17.06	5.42	18.04	1007
7/7/2001	14:00	14.60	17.06	5.45	18.07	1023
7/7/2001	14:30	14.59	17.06	5.47	18.09	1040
7/7/2001	15:00	14.60	17.06	5.44	18.06	1023
7/7/2001	15:30	14.60	17.07	5.47	18.09	1039
7/7/2001	16:00	14.60	17.07	5.47	18.09	1039
7/7/2001	16:30	14.60	17.07	5.47	18.09	1039
7/7/2001	17:00	14.60	17.06	5.44	18.06	1021
7/7/2001	17:30	14.61	17.06	5.42	18.04	1004
7/7/2001	18:00	14.62	17.06	5.40	18.02	987
7/7/2001	18:30	14.62	17.06	5.40	18.02	986
7/7/2001	19:00	14.63	17.07	5.39	18.01	986
7/7/2001	19:30	14.63	17.06	5.37	17.99	969
7/7/2001	20:00	14.64	17.06	5.35	17.97	953
7/7/2001	20:30	14.65	17.06	5.32	17.94	936
7/7/2001	21:00	14.65	17.06	5.32	17.94	936
7/7/2001	21:30	14.66	17.07	5.32	17.94	936
7/7/2001	22:00	14.67	17.07	5.30	17.92	919
7/7/2001	22:30	14.67	17.06	5.28	17.90	903
7/7/2001	23:00	14.68	17.07	5.28	17.90	902
7/7/2001	23:30	14.68	17.07	5.28	17.90	902
7/8/2001	0:00	14.69	17.07	5.25	17.87	886

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/8/2001	0:30	14.69	17.07	5.25	17.87	885
7/8/2001	1:00	14.69	17.07	5.25	17.87	885
7/8/2001	1:30	14.69	17.07	5.25	17.87	885
7/8/2001	2:00	14.69	17.07	5.25	17.87	884
7/8/2001	2:30	14.69	17.07	5.25	17.87	884
7/8/2001	3:00	14.69	17.08	5.27	17.89	900
7/8/2001	3:30	14.69	17.08	5.27	17.89	899
7/8/2001	4:00	14.69	17.08	5.27	17.89	899
7/8/2001	4:30	14.69	17.08	5.27	17.89	899
7/8/2001	5:00	14.70	17.08	5.25	17.87	882
7/8/2001	5:30	14.69	17.08	5.27	17.89	898
7/8/2001	6:00	14.70	17.09	5.27	17.89	898
7/8/2001	6:30	14.70	17.08	5.25	17.87	881
7/8/2001	7:00	14.70	17.09	5.27	17.89	897
7/8/2001	7:30	14.69	17.09	5.29	17.91	913
7/8/2001	8:00	14.69	17.09	5.29	17.91	912
7/8/2001	8:30	14.70	17.09	5.27	17.89	896
7/8/2001	9:00	14.70	17.09	5.27	17.89	895
7/8/2001	9:30	14.70	17.09	5.27	17.89	895
7/8/2001	10:00	14.69	17.09	5.29	17.91	911
7/8/2001	10:30	14.69	17.09	5.29	17.91	910
7/8/2001	11:00	14.67	17.09	5.33	17.95	942
7/8/2001	11:30	14.67	17.09	5.33	17.95	942
7/8/2001	12:00	14.66	17.09	5.35	17.97	958
7/8/2001	12:30	14.66	17.09	5.35	17.97	957
7/8/2001	13:00	14.65	17.09	5.38	18.00	973
7/8/2001	13:30	14.66	17.09	5.35	17.97	956
7/8/2001	14:00	14.66	17.09	5.35	17.97	956
7/8/2001	14:30	14.67	17.09	5.33	17.95	940
7/8/2001	15:00	14.67	17.09	5.33	17.95	939
7/8/2001	15:30	14.68	17.09	5.31	17.93	923
7/8/2001	16:00	14.66	17.08	5.33	17.95	939
7/8/2001	16:30	14.67	17.08	5.30	17.92	922
7/8/2001	17:00	14.66	17.08	5.33	17.95	938
7/8/2001	17:30	14.66	17.08	5.33	17.95	938
7/8/2001	18:00	14.67	17.08	5.30	17.92	921
7/8/2001	18:30	14.67	17.07	5.28	17.90	905
7/8/2001	19:00	14.67	17.07	5.28	17.90	905
7/8/2001	19:30	14.67	17.07	5.28	17.90	904
7/8/2001	20:00	14.67	17.07	5.28	17.90	904
7/8/2001	20:30	14.67	17.06	5.25	17.87	887
7/8/2001	21:00	14.67	17.07	5.28	17.90	903
7/8/2001	21:30	14.67	17.07	5.28	17.90	903



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/8/2001	22:00	14.68	17.06	5.23	17.85	870
7/8/2001	22:30	14.68	17.06	5.23	17.85	870
7/8/2001	23:00	14.68	17.06	5.23	17.85	870
7/8/2001	23:30	14.68	17.06	5.23	17.85	869
7/9/2001	0:00	14.68	17.06	5.23	17.85	869
7/9/2001	0:30	14.68	17.06	5.23	17.85	869
7/9/2001	1:00	14.69	17.06	5.20	17.82	852
7/9/2001	1:30	14.69	17.06	5.20	17.82	852
7/9/2001	2:00	14.69	17.06	5.20	17.82	852
7/9/2001	2:30	14.69	17.06	5.20	17.82	851
7/9/2001	3:00	14.69	17.06	5.20	17.82	851
7/9/2001	3:30	14.69	17.06	5.20	17.82	850
7/9/2001	4:00	14.69	17.06	5.20	17.82	850
7/9/2001	4:30	14.69	17.06	5.20	17.82	850
7/9/2001	5:00	14.69	17.06	5.20	17.82	849
7/9/2001	5:30	14.69	17.06	5.20	17.82	849
7/9/2001	6:00	14.68	17.06	5.22	17.84	865
7/9/2001	6:30	14.68	17.06	5.22	17.84	864
7/9/2001	7:00	14.67	17.06	5.24	17.86	880
7/9/2001	7:30	14.67	17.05	5.22	17.84	864
7/9/2001	8:00	14.67	17.05	5.22	17.84	863
7/9/2001	8:30	14.67	17.05	5.22	17.84	863
7/9/2001	9:00	14.66	17.05	5.24	17.86	879
7/9/2001	9:30	14.66	17.05	5.24	17.86	878
7/9/2001	10:00	14.66	17.05	5.24	17.86	878
7/9/2001	10:30	14.65	17.04	5.24	17.86	878
7/9/2001	11:00	14.65	17.05	5.26	17.88	893
7/9/2001	11:30	14.64	17.04	5.26	17.88	893
7/9/2001	12:00	14.64	17.04	5.26	17.88	893
7/9/2001	12:30	14.63	17.04	5.28	17.90	908
7/9/2001	13:00	14.62	17.04	5.31	17.93	924
7/9/2001	13:30	14.63	17.04	5.28	17.90	908
7/9/2001	14:00	14.63	17.04	5.28	17.90	907
7/9/2001	14:30	14.63	17.03	5.26	17.88	891
7/9/2001	15:00	14.62	17.03	5.28	17.90	907
7/9/2001	15:30	14.62	17.03	5.28	17.90	906
7/9/2001	16:00	14.63	17.03	5.26	17.88	890
7/9/2001	16:30	14.62	17.03	5.28	17.90	906
7/9/2001	17:00	14.62	17.03	5.28	17.90	905
7/9/2001	17:30	14.62	17.03	5.28	17.90	905
7/9/2001	18:00	14.63	17.03	5.26	17.88	889
7/9/2001	18:30	14.63	17.03	5.26	17.88	888
7/9/2001	19:00	14.64	17.03	5.23	17.85	872

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/9/2001	19:30	14.63	17.03	5.25	17.87	887
7/9/2001	20:00	14.64	17.02	5.21	17.83	855
7/9/2001	20:30	14.63	17.02	5.23	17.85	871
7/9/2001	21:00	14.64	17.02	5.21	17.83	854
7/9/2001	21:30	14.64	17.02	5.21	17.83	854
7/9/2001	22:00	14.65	17.02	5.18	17.80	838
7/9/2001	22:30	14.65	17.02	5.18	17.80	837
7/9/2001	23:00	14.65	17.02	5.18	17.80	837
7/9/2001	23:30	14.65	17.02	5.18	17.80	837
7/10/2001	0:00	14.65	17.01	5.16	17.78	820
7/10/2001	0:30	14.65	17.01	5.16	17.78	820
7/10/2001	1:00	14.65	17.01	5.16	17.78	819
7/10/2001	1:30	14.65	17.01	5.16	17.78	819
7/10/2001	2:00	14.66	17.01	5.13	17.75	803
7/10/2001	2:30	14.66	17.01	5.13	17.75	802
7/10/2001	3:00	14.65	17.00	5.13	17.75	802
7/10/2001	3:30	14.66	17.00	5.11	17.73	786
7/10/2001	4:00	14.66	17.00	5.11	17.73	785
7/10/2001	4:30	14.65	17.00	5.13	17.75	801
7/10/2001	5:00	14.65	17.00	5.13	17.75	801
7/10/2001	5:30	14.65	17.00	5.13	17.75	800
7/10/2001	6:00	14.65	17.00	5.13	17.75	800
7/10/2001	6:30	14.65	17.00	5.13	17.75	800
7/10/2001	7:00	14.65	17.00	5.13	17.75	799
7/10/2001	7:30	14.65	17.00	5.13	17.75	799
7/10/2001	8:00	14.64	17.00	5.15	17.77	815
7/10/2001	8:30	14.63	16.99	5.15	17.77	814
7/10/2001	9:00	14.63	16.99	5.15	17.77	814
7/10/2001	9:30	14.62	16.99	5.17	17.79	830
7/10/2001	10:00	14.62	16.99	5.17	17.79	829
7/10/2001	10:30	14.61	16.99	5.19	17.81	845
7/10/2001	11:00	14.60	16.99	5.22	17.84	861
7/10/2001	11:30	14.59	16.99	5.24	17.86	876
7/10/2001	12:00	14.59	16.98	5.21	17.83	860
7/10/2001	12:30	14.58	16.98	5.24	17.86	876
7/10/2001	13:00	14.58	16.98	5.24	17.86	875
7/10/2001	13:30	14.58	16.97	5.21	17.83	859
7/10/2001	14:00	14.57	16.97	5.24	17.86	875
7/10/2001	14:30	14.57	16.97	5.24	17.86	874
7/10/2001	15:00	14.58	16.97	5.21	17.83	858
7/10/2001	15:30	14.57	16.96	5.21	17.83	857
7/10/2001	16:00	14.58	16.96	5.19	17.81	841
7/10/2001	16:30	14.58	16.96	5.19	17.81	841

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/10/2001	17:00	14.58	16.96	5.19	17.81	840
7/10/2001	17:30	14.58	16.95	5.16	17.78	824
7/10/2001	18:00	14.58	16.95	5.16	17.78	824
7/10/2001	18:30	14.59	16.95	5.14	17.76	807
7/10/2001	19:00	14.58	16.95	5.16	17.78	823
7/10/2001	19:30	14.59	16.94	5.12	17.74	791
7/10/2001	20:00	14.59	16.94	5.11	17.73	790
7/10/2001	20:30	14.59	16.94	5.11	17.73	790
7/10/2001	21:00	14.60	16.94	5.09	17.71	773
7/10/2001	21:30	14.60	16.94	5.09	17.71	773
7/10/2001	22:00	14.60	16.94	5.09	17.71	773
7/10/2001	22:30	14.60	16.94	5.09	17.71	772
7/10/2001	23:00	14.61	16.94	5.07	17.69	756
7/10/2001	23:30	14.61	16.94	5.07	17.69	756
7/11/2001	0:00	14.62	16.94	5.04	17.66	739
7/11/2001	0:30	14.62	16.95	5.06	17.68	755
7/11/2001	1:00	14.62	16.95	5.06	17.68	755
7/11/2001	1:30	14.62	16.94	5.04	17.66	738
7/11/2001	2:00	14.62	16.94	5.04	17.66	738
7/11/2001	2:30	14.62	16.94	5.04	17.66	738
7/11/2001	3:00	14.62	16.94	5.04	17.66	737
7/11/2001	3:30	14.62	16.94	5.04	17.66	737
7/11/2001	4:00	14.62	16.94	5.04	17.66	736
7/11/2001	4:30	14.62	16.94	5.04	17.66	736
7/11/2001	5:00	14.62	16.94	5.04	17.66	736
7/11/2001	5:30	14.62	16.94	5.04	17.66	735
7/11/2001	6:00	14.62	16.94	5.04	17.66	735
7/11/2001	6:30	14.61	16.94	5.06	17.68	751
7/11/2001	7:00	14.61	16.94	5.06	17.68	750
7/11/2001	7:30	14.60	16.94	5.08	17.70	766
7/11/2001	8:00	14.60	16.94	5.08	17.70	766
7/11/2001	8:30	14.60	16.94	5.08	17.70	765
7/11/2001	9:00	14.60	16.94	5.08	17.70	765
7/11/2001	9:30	14.60	16.94	5.08	17.70	765
7/11/2001	10:00	14.60	16.94	5.08	17.70	764
7/11/2001	10:30	14.60	16.94	5.08	17.70	764
7/11/2001	11:00	14.59	16.94	5.10	17.72	780
7/11/2001	11:30	14.60	16.94	5.08	17.70	763
7/11/2001	12:00	14.60	16.94	5.08	17.70	763
7/11/2001	12:30	14.60	16.94	5.08	17.70	763
7/11/2001	13:00	14.60	16.94	5.07	17.69	762
7/11/2001	13:30	14.60	16.94	5.07	17.69	762
7/11/2001	14:00	14.60	16.94	5.07	17.69	762

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/11/2001	14:30	14.60	16.94	5.07	17.69	761
7/11/2001	15:00	14.60	16.94	5.07	17.69	761
7/11/2001	15:30	14.60	16.94	5.07	17.69	761
7/11/2001	16:00	14.57	16.94	5.14	17.76	808
7/11/2001	16:30	14.57	16.94	5.14	17.76	808
7/11/2001	17:00	14.57	16.94	5.14	17.76	808
7/11/2001	17:30	14.57	16.93	5.12	17.74	791
7/11/2001	18:00	14.57	16.93	5.12	17.74	791
7/11/2001	18:30	14.57	16.93	5.12	17.74	791
7/11/2001	19:00	14.57	16.93	5.11	17.73	790
7/11/2001	19:30	14.58	16.93	5.09	17.71	774
7/11/2001	20:00	14.58	16.92	5.07	17.69	757
7/11/2001	20:30	14.58	16.92	5.07	17.69	757
7/11/2001	21:00	14.58	16.92	5.07	17.69	757
7/11/2001	21:30	14.58	16.92	5.07	17.69	756
7/11/2001	22:00	14.59	16.92	5.04	17.66	740
7/11/2001	22:30	14.60	16.92	5.02	17.64	724
7/11/2001	23:00	14.60	16.92	5.02	17.64	723
7/11/2001	23:30	14.60	16.93	5.04	17.66	739
7/12/2001	0:00	14.61	16.92	4.99	17.61	707
7/12/2001	0:30	14.62	16.93	4.99	17.61	706
7/12/2001	1:00	14.62	16.92	4.97	17.59	690
7/12/2001	1:30	14.62	16.93	4.99	17.61	705
7/12/2001	2:00	14.62	16.92	4.97	17.59	689
7/12/2001	2:30	14.62	16.92	4.97	17.59	689
7/12/2001	3:00	14.62	16.92	4.97	17.59	688
7/12/2001	3:30	14.62	16.92	4.97	17.59	688
7/12/2001	4:00	14.62	16.92	4.97	17.59	688
7/12/2001	4:30	14.62	16.93	4.99	17.61	703
7/12/2001	5:00	14.62	16.92	4.97	17.59	687
7/12/2001	5:30	14.62	16.92	4.97	17.59	687
7/12/2001	6:00	14.62	16.92	4.97	17.59	686
7/12/2001	6:30	14.62	16.92	4.97	17.59	686
7/12/2001	7:00	14.62	16.92	4.96	17.58	686
7/12/2001	7:30	14.62	16.92	4.96	17.58	685
7/12/2001	8:00	14.62	16.92	4.96	17.58	685
7/12/2001	8:30	14.61	16.92	4.99	17.61	701
7/12/2001	9:00	14.61	16.92	4.99	17.61	700
7/12/2001	9:30	14.60	16.92	5.01	17.63	716
7/12/2001	10:00	14.60	16.92	5.01	17.63	716
7/12/2001	10:30	14.60	16.92	5.01	17.63	715
7/12/2001	11:00	14.60	16.92	5.01	17.63	715
7/12/2001	11:30	14.60	16.92	5.01	17.63	715

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/12/2001	12:00	14.60	16.92	5.01	17.63	714
7/12/2001	12:30	14.59	16.92	5.03	17.65	730
7/12/2001	13:00	14.59	16.92	5.03	17.65	730
7/12/2001	13:30	14.57	16.92	5.07	17.69	761
7/12/2001	14:00	14.57	16.92	5.07	17.69	761
7/12/2001	14:30	14.57	16.92	5.07	17.69	761
7/12/2001	15:00	14.57	16.92	5.07	17.69	760
7/12/2001	15:30	14.58	16.92	5.05	17.67	744
7/12/2001	16:00	14.58	16.92	5.05	17.67	743
7/12/2001	16:30	14.59	16.92	5.02	17.64	727
7/12/2001	17:00	14.58	16.92	5.05	17.67	743
7/12/2001	17:30	14.59	16.91	5.00	17.62	710
7/12/2001	18:00	14.59	16.91	5.00	17.62	710
7/12/2001	18:30	14.60	16.91	4.98	17.60	694
7/12/2001	19:00	14.59	16.91	5.00	17.62	709
7/12/2001	19:30	14.60	16.91	4.98	17.60	693
7/12/2001	20:00	14.60	16.91	4.97	17.59	693
7/12/2001	20:30	14.60	16.91	4.97	17.59	692
7/12/2001	21:00	14.60	16.91	4.97	17.59	692
7/12/2001	21:30	14.61	16.91	4.95	17.57	675
7/12/2001	22:00	14.62	16.91	4.93	17.55	659
7/12/2001	22:30	14.62	16.92	4.95	17.57	675
7/12/2001	23:00	14.62	16.92	4.95	17.57	674
7/12/2001	23:30	14.63	16.92	4.93	17.55	658
7/13/2001	0:00	14.64	16.92	4.90	17.52	642
7/13/2001	0:30	14.64	16.92	4.90	17.52	641
7/13/2001	1:00	14.65	16.92	4.88	17.50	625
7/13/2001	1:30	14.66	16.93	4.88	17.50	625
7/13/2001	2:00	14.66	16.93	4.88	17.50	624
7/13/2001	2:30	14.66	16.93	4.88	17.50	624
7/13/2001	3:00	14.67	16.93	4.85	17.47	608
7/13/2001	3:30	14.67	16.93	4.85	17.47	607
7/13/2001	4:00	14.67	16.93	4.85	17.47	607
7/13/2001	4:30	14.67	16.93	4.85	17.47	606
7/13/2001	5:00	14.67	16.93	4.85	17.47	606
7/13/2001	5:30	14.66	16.93	4.87	17.49	622
7/13/2001	6:00	14.66	16.93	4.87	17.49	621
7/13/2001	6:30	14.65	16.92	4.87	17.49	621
7/13/2001	7:00	14.65	16.93	4.89	17.51	637
7/13/2001	7:30	14.65	16.92	4.87	17.49	620
7/13/2001	8:00	14.63	16.92	4.92	17.54	652
7/13/2001	8:30	14.61	16.92	4.96	17.58	684
7/13/2001	9:00	14.60	16.92	4.98	17.60	700

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/13/2001	9:30	14.60	16.92	4.98	17.60	699
7/13/2001	10:00	14.59	16.91	4.98	17.60	699
7/13/2001	10:30	14.58	16.91	5.01	17.63	715
7/13/2001	11:00	14.58	16.91	5.01	17.63	714
7/13/2001	11:30	14.58	16.91	5.01	17.63	714
7/13/2001	12:00	14.58	16.91	5.00	17.62	713
7/13/2001	12:30	14.57	16.91	5.03	17.65	729
7/13/2001	13:00	14.57	16.91	5.03	17.65	729
7/13/2001	13:30	14.58	16.91	5.00	17.62	712
7/13/2001	14:00	14.57	16.91	5.03	17.65	728
7/13/2001	14:30	14.57	16.91	5.03	17.65	728
7/13/2001	15:00	14.57	16.91	5.02	17.64	727
7/13/2001	15:30	14.57	16.90	5.00	17.62	711
7/13/2001	16:00	14.57	16.90	5.00	17.62	711
7/13/2001	16:30	14.57	16.90	5.00	17.62	710
7/13/2001	17:00	14.57	16.89	4.98	17.60	694
7/13/2001	17:30	14.57	16.89	4.98	17.60	694
7/13/2001	18:00	14.57	16.89	4.98	17.60	693
7/13/2001	18:30	14.57	16.89	4.98	17.60	693
7/13/2001	19:00	14.58	16.89	4.95	17.57	677
7/13/2001	19:30	14.58	16.89	4.95	17.57	676
7/13/2001	20:00	14.59	16.89	4.93	17.55	660
7/13/2001	20:30	14.59	16.89	4.93	17.55	659
7/13/2001	21:00	14.60	16.88	4.88	17.50	627
7/13/2001	21:30	14.60	16.89	4.90	17.52	643
7/13/2001	22:00	14.60	16.88	4.88	17.50	626
7/13/2001	22:30	14.61	16.88	4.86	17.48	610
7/13/2001	23:00	14.61	16.88	4.86	17.48	610
7/13/2001	23:30	14.62	16.88	4.83	17.45	593
7/14/2001	0:00	14.63	16.88	4.81	17.43	577
7/14/2001	0:30	14.63	16.88	4.81	17.43	577
7/14/2001	1:00	14.64	16.88	4.78	17.40	566
7/14/2001	1:30	14.64	16.88	4.78	17.40	565
7/14/2001	2:00	14.65	16.89	4.78	17.40	565
7/14/2001	2:30	14.65	16.89	4.78	17.40	565
7/14/2001	3:00	14.65	16.89	4.78	17.40	565
7/14/2001	3:30	14.65	16.88	4.76	17.38	553
7/14/2001	4:00	14.65	16.88	4.76	17.38	553
7/14/2001	4:30	14.65	16.88	4.76	17.38	553
7/14/2001	5:00	14.64	16.88	4.78	17.40	564
7/14/2001	5:30	14.63	16.88	4.80	17.42	574
7/14/2001	6:00	14.62	16.88	4.83	17.45	589
7/14/2001	6:30	14.62	16.88	4.83	17.45	588

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/14/2001	7:00	14.61	16.88	4.85	17.47	604
7/14/2001	7:30	14.60	16.88	4.87	17.49	620
7/14/2001	8:00	14.60	16.88	4.87	17.49	619
7/14/2001	8:30	14.59	16.88	4.89	17.51	635
7/14/2001	9:00	14.58	16.88	4.91	17.53	651
7/14/2001	9:30	14.58	16.88	4.91	17.53	650
7/14/2001	10:00	14.57	16.88	4.94	17.56	666
7/14/2001	10:30	14.56	16.88	4.96	17.58	682
7/14/2001	11:00	14.55	16.87	4.96	17.58	681
7/14/2001	11:30	14.55	16.87	4.96	17.58	681
7/14/2001	12:00	14.55	16.87	4.96	17.58	681
7/14/2001	12:30	14.55	16.87	4.96	17.58	680
7/14/2001	13:00	14.55	16.87	4.96	17.58	680
7/14/2001	13:30	14.54	16.86	4.96	17.58	680
7/14/2001	14:00	14.53	16.86	4.98	17.60	695
7/14/2001	14:30	14.53	16.85	4.96	17.58	679
7/14/2001	15:00	14.53	16.85	4.95	17.57	679
7/14/2001	15:30	14.52	16.85	4.98	17.60	694
7/14/2001	16:00	14.52	16.85	4.98	17.60	694
7/14/2001	16:30	14.52	16.84	4.95	17.57	678
7/14/2001	17:00	14.52	16.84	4.95	17.57	677
7/14/2001	17:30	14.52	16.84	4.95	17.57	677
7/14/2001	18:00	14.52	16.83	4.93	17.55	661
7/14/2001	18:30	14.53	16.83	4.91	17.53	644
7/14/2001	19:00	14.53	16.82	4.88	17.50	628
7/14/2001	19:30	14.53	16.82	4.88	17.50	627
7/14/2001	20:00	14.54	16.82	4.86	17.48	611
7/14/2001	20:30	14.54	16.82	4.86	17.48	611
7/14/2001	21:00	14.54	16.82	4.86	17.48	610
7/14/2001	21:30	14.55	16.82	4.83	17.45	594
7/14/2001	22:00	14.55	16.82	4.83	17.45	594
7/14/2001	22:30	14.55	16.81	4.81	17.43	577
7/14/2001	23:00	14.55	16.81	4.81	17.43	577
7/14/2001	23:30	14.56	16.81	4.79	17.41	566
7/15/2001	0:00	14.57	16.81	4.76	17.38	555
7/15/2001	0:30	14.57	16.80	4.74	17.36	543
7/15/2001	1:00	14.58	16.80	4.71	17.33	532
7/15/2001	1:30	14.59	16.80	4.69	17.31	521
7/15/2001	2:00	14.59	16.79	4.67	17.29	510
7/15/2001	2:30	14.59	16.79	4.67	17.29	510
7/15/2001	3:00	14.59	16.79	4.67	17.29	509
7/15/2001	3:30	14.59	16.78	4.64	17.26	498
7/15/2001	4:00	14.58	16.78	4.67	17.29	509

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/15/2001	4:30	14.57	16.78	4.69	17.31	520
7/15/2001	5:00	14.57	16.78	4.69	17.31	519
7/15/2001	5:30	14.57	16.78	4.69	17.31	519
7/15/2001	6:00	14.55	16.78	4.73	17.35	541
7/15/2001	6:30	14.55	16.78	4.73	17.35	541
7/15/2001	7:00	14.54	16.77	4.73	17.35	540
7/15/2001	7:30	14.52	16.77	4.78	17.40	562
7/15/2001	8:00	14.51	16.76	4.78	17.40	562
7/15/2001	8:30	14.50	16.75	4.78	17.40	562
7/15/2001	9:00	14.50	16.75	4.78	17.40	561
7/15/2001	9:30	14.48	16.75	4.82	17.44	586
7/15/2001	10:00	14.47	16.75	4.84	17.46	601
7/15/2001	10:30	14.45	16.74	4.87	17.49	617
7/15/2001	11:00	14.45	16.74	4.87	17.49	617
7/15/2001	11:30	14.44	16.73	4.87	17.49	616
7/15/2001	12:00	14.42	16.73	4.91	17.53	648
7/15/2001	12:30	14.42	16.72	4.89	17.51	632
7/15/2001	13:00	14.41	16.72	4.91	17.53	647
7/15/2001	13:30	14.40	16.72	4.93	17.55	663
7/15/2001	14:00	14.40	16.71	4.91	17.53	647
7/15/2001	14:30	14.39	16.71	4.93	17.55	662
7/15/2001	15:00	14.38	16.70	4.93	17.55	662
7/15/2001	15:30	14.38	16.69	4.91	17.53	646
7/15/2001	16:00	14.38	16.69	4.91	17.53	645
7/15/2001	16:30	14.38	16.69	4.91	17.53	645
7/15/2001	17:00	14.38	16.68	4.88	17.50	628
7/15/2001	17:30	14.39	16.68	4.86	17.48	612
7/15/2001	18:00	14.38	16.67	4.86	17.48	612
7/15/2001	18:30	14.38	16.67	4.86	17.48	611
7/15/2001	19:00	14.38	16.66	4.83	17.45	595
7/15/2001	19:30	14.40	16.66	4.79	17.41	567
7/15/2001	20:00	14.40	16.66	4.79	17.41	567
7/15/2001	20:30	14.39	16.66	4.81	17.43	578
7/15/2001	21:00	14.38	16.65	4.81	17.43	578
7/15/2001	21:30	14.39	16.64	4.76	17.38	555
7/15/2001	22:00	14.39	16.64	4.76	17.38	555
7/15/2001	22:30	14.40	16.64	4.74	17.36	544
7/15/2001	23:00	14.40	16.64	4.74	17.36	544
7/15/2001	23:30	14.41	16.63	4.69	17.31	522
7/16/2001	0:00	14.41	16.63	4.69	17.31	521
7/16/2001	0:30	14.41	16.63	4.69	17.31	521
7/16/2001	1:00	14.41	16.63	4.69	17.31	521
7/16/2001	1:30	14.42	16.62	4.64	17.26	499



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/16/2001	2:00	14.42	16.62	4.64	17.26	498
7/16/2001	2:30	14.42	16.61	4.62	17.24	487
7/16/2001	3:00	14.42	16.61	4.62	17.24	487
7/16/2001	3:30	14.42	16.60	4.60	17.22	476
7/16/2001	4:00	14.41	16.60	4.62	17.24	486
7/16/2001	4:30	14.41	16.60	4.62	17.24	486
7/16/2001	5:00	14.40	16.60	4.64	17.26	497
7/16/2001	5:30	14.39	16.59	4.64	17.26	497
7/16/2001	6:00	14.38	16.59	4.66	17.28	507
7/16/2001	6:30	14.38	16.59	4.66	17.28	507
7/16/2001	7:00	14.35	16.58	4.71	17.33	529
7/16/2001	7:30	14.34	16.58	4.73	17.35	540
7/16/2001	8:00	14.33	16.57	4.73	17.35	539
7/16/2001	8:30	14.32	16.57	4.75	17.37	550
7/16/2001	9:00	14.30	16.57	4.80	17.42	572
7/16/2001	9:30	14.29	16.57	4.82	17.44	585
7/16/2001	10:00	14.28	16.56	4.82	17.44	585
7/16/2001	10:16	-	-	-	<b>17.43</b>	578
7/16/2001	10:30	14.27	16.56	4.84	17.46	600
7/16/2001	11:00	14.27	16.56	4.84	17.46	600
7/16/2001	11:30	14.27	16.56	4.84	17.46	600
7/16/2001	12:00	14.27	16.56	4.84	17.46	599
7/16/2001	12:30	14.25	16.55	4.86	17.48	615
7/16/2001	13:00	14.26	16.55	4.84	17.46	598
7/16/2001	13:30	14.25	16.55	4.86	<b>17.48</b>	614
7/16/2001	14:03	-	-	-	<b>17.48</b>	613
7/16/2001	15:30	14.28	15.78	3.45	17.48	614
7/16/2001	15:33	-	-	-	<b>17.48</b>	613
7/16/2001	16:00	14.31	15.79	3.41	17.44	584
7/16/2001	16:02	-	-	-	<b>17.48</b>	613
7/16/2001	16:30	14.32	15.79	3.39	17.42	573
7/16/2001	17:00	14.30	15.79	3.44	17.47	606
7/16/2001	17:30	14.30	15.80	3.47	17.50	625
7/16/2001	18:00	14.29	15.80	3.49	17.52	644
7/16/2001	18:30	14.30	15.80	3.48	17.51	631
7/16/2001	19:00	14.28	15.80	3.53	17.56	665
7/16/2001	19:30	14.30	15.80	3.48	17.51	636
7/16/2001	20:00	14.31	15.80	3.47	17.50	623
7/16/2001	20:30	14.31	15.80	3.47	17.50	626
7/16/2001	21:00	14.33	15.80	3.43	17.46	597
7/16/2001	21:30	14.33	15.80	3.43	17.46	599
7/16/2001	22:00	14.34	15.81	3.44	17.47	602
7/16/2001	22:30	14.35	15.81	3.42	17.45	589

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/16/2001	23:00	14.36	15.81	3.40	17.43	576
7/16/2001	23:30	14.36	15.81	3.40	17.43	579
7/17/2001	0:00	14.37	15.81	3.38	17.41	569
7/17/2001	0:30	14.38	15.81	3.36	17.39	560
7/17/2001	1:00	14.38	15.81	3.37	17.40	562
7/17/2001	1:30	14.38	15.81	3.37	17.40	564
7/17/2001	2:00	14.38	15.81	3.38	17.41	566
7/17/2001	2:30	14.38	15.81	3.38	17.41	568
7/17/2001	3:00	14.39	15.81	3.36	17.39	559
7/17/2001	3:30	14.39	15.81	3.36	17.39	561
7/17/2001	4:00	14.40	15.81	3.35	17.38	552
7/17/2001	4:30	14.40	15.82	3.37	17.40	565
7/17/2001	5:00	14.40	15.82	3.38	17.41	567
7/17/2001	5:30	14.39	15.81	3.38	17.41	569
7/17/2001	6:00	14.39	15.81	3.39	17.42	571
7/17/2001	6:30	14.40	15.82	3.39	17.42	573
7/17/2001	7:00	14.40	15.82	3.39	17.42	575
7/17/2001	7:30	14.39	15.82	3.42	17.45	592
7/17/2001	7:36	-	-	-	<b>17.45</b>	592
7/17/2001	8:00	14.39	15.83	3.30	17.46	601
7/17/2001	8:30	14.39	15.83	3.29	17.45	594
7/17/2001	9:00	14.39	15.83	3.28	17.44	587
7/17/2001	9:03	-	-	-	<b>17.44</b>	585
7/17/2001	9:30	14.38	15.83	3.28	<b>17.44</b>	582
7/17/2001	10:00	14.38	15.83	3.35	17.45	589
7/17/2001	10:16	-	-	-	<b>17.43</b>	<b>577.7</b>
7/17/2001	10:30	14.38	15.83	3.36	17.46	596
7/17/2001	11:00	14.40	15.83	3.32	17.42	573
7/17/2001	11:05	-	-	-	<b>17.42</b>	573
7/17/2001	11:30	14.39	15.83	3.31	17.44	585
7/17/2001	12:00	14.38	15.83	3.33	17.46	599
7/17/2001	12:30	14.39	15.83	3.30	17.43	581
7/17/2001	13:00	14.40	15.84	3.30	17.43	578
7/17/2001	13:30	14.41	15.84	3.27	17.40	566
7/17/2001	14:00	14.42	15.85	3.27	17.40	564
7/17/2001	14:30	14.42	15.85	3.27	17.40	563
7/17/2001	15:00	14.43	15.85	3.24	17.37	550
7/17/2001	15:30	14.44	15.86	3.24	17.37	549
7/17/2001	16:00	14.44	15.86	3.24	17.37	547
7/17/2001	16:30	14.44	15.86	3.23	17.36	546
7/17/2001	17:00	14.43	15.86	3.25	17.38	555
7/17/2001	17:30	14.43	15.86	3.25	17.38	554
7/17/2001	18:00	14.43	15.86	3.25	17.38	552

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/17/2001	18:30	14.42	15.86	3.27	17.40	562
7/17/2001	19:00	14.42	15.86	3.26	17.39	561
7/17/2001	19:30	14.42	15.86	3.26	17.39	559
7/17/2001	20:00	14.39	15.86	3.33	17.46	596
7/17/2001	20:30	14.36	15.87	3.42	17.55	658
7/17/2001	21:00	14.34	15.87	3.46	17.59	688
7/17/2001	21:30	14.34	15.87	3.46	17.59	686
7/17/2001	22:00	14.35	15.87	3.43	17.56	668
7/17/2001	22:30	14.37	15.88	3.40	17.53	650
7/17/2001	23:00	14.38	15.88	3.38	17.51	632
7/17/2001	23:30	14.41	15.88	3.31	17.44	581
7/18/2001	0:00	14.45	15.88	3.21	17.34	535
7/18/2001	0:30	14.46	15.89	3.21	17.34	533
7/18/2001	1:00	14.48	15.89	3.16	17.29	510
7/18/2001	1:30	14.49	15.90	3.15	17.28	508
7/18/2001	2:00	14.50	15.90	3.13	17.26	496
7/18/2001	2:30	14.50	15.90	3.13	17.26	494
7/18/2001	3:00	14.50	15.90	3.12	17.25	493
7/18/2001	3:30	14.51	15.90	3.10	17.23	481
7/18/2001	4:00	14.52	15.91	3.09	17.22	479
7/18/2001	4:30	14.52	15.91	3.09	17.22	478
7/18/2001	5:00	14.52	15.91	3.09	17.22	476
7/18/2001	5:30	14.52	15.92	3.11	17.24	486
7/18/2001	6:00	14.52	15.93	3.13	17.26	495
7/18/2001	6:30	14.53	15.93	3.10	17.23	483
7/18/2001	7:00	14.53	15.93	3.10	17.23	481
7/18/2001	7:30	14.53	15.93	3.09	17.22	480
7/18/2001	8:00	14.53	15.93	3.09	17.22	478
7/18/2001	8:30	14.54	15.94	3.09	17.22	477
7/18/2001	9:00	14.53	15.94	3.11	17.24	486
7/18/2001	9:30	14.52	15.94	3.13	17.26	496
7/18/2001	10:00	14.53	15.94	3.10	17.23	483
7/18/2001	10:30	14.52	15.94	3.12	17.25	493
7/18/2001	11:00	14.53	15.95	3.12	17.25	491
7/18/2001	11:30	14.53	15.95	3.12	17.25	490
7/18/2001	12:00	14.53	15.96	3.14	17.27	499
7/18/2001	12:30	14.53	15.96	3.13	17.26	498
7/18/2001	13:00	14.55	15.97	3.11	17.24	485
7/18/2001	13:30	14.54	15.97	3.13	17.26	495
7/18/2001	14:00	14.53	15.98	3.17	17.30	515
7/18/2001	14:30	14.52	15.98	3.19	17.32	525
7/18/2001	15:00	14.53	15.98	3.16	17.29	512
7/18/2001	15:30	14.54	15.98	3.14	17.27	500

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/18/2001	16:00	14.55	15.98	3.11	17.24	488
7/18/2001	16:30	14.55	15.98	3.11	17.24	486
7/18/2001	17:00	14.52	15.98	3.17	17.30	518
7/18/2001	17:30	14.53	15.97	3.12	17.25	494
7/18/2001	18:00	14.53	15.97	3.12	17.25	493
7/18/2001	18:30	14.52	15.97	3.14	17.27	502
7/18/2001	19:00	14.52	15.97	3.14	17.27	501
7/18/2001	19:30	14.52	15.97	3.14	17.27	499
7/18/2001	20:00	14.53	15.97	3.11	17.24	487
7/18/2001	20:30	14.54	15.97	3.08	17.21	474
7/18/2001	21:00	14.55	15.97	3.06	17.19	462
7/18/2001	21:30	14.55	15.97	3.05	17.18	460
7/18/2001	22:00	14.53	15.97	3.10	17.23	481
7/18/2001	22:30	14.51	15.98	3.16	17.29	512
7/18/2001	23:00	14.51	15.98	3.16	17.29	511
7/18/2001	23:30	14.52	15.98	3.13	17.26	498
7/19/2001	0:00	14.53	15.98	3.11	17.24	486
7/19/2001	0:30	14.54	15.98	3.08	17.21	473
7/19/2001	1:00	14.54	15.98	3.08	17.21	472
7/19/2001	1:30	14.55	15.99	3.08	17.21	470
7/19/2001	2:00	14.55	15.99	3.07	17.20	469
7/19/2001	2:30	14.55	15.98	3.05	17.18	457
7/19/2001	3:00	14.56	15.98	3.02	17.15	444
7/19/2001	3:30	14.56	15.98	3.02	17.15	443
7/19/2001	4:00	14.56	15.97	2.99	17.12	430
7/19/2001	4:30	14.56	15.97	2.99	17.12	429
7/19/2001	5:00	14.55	15.97	3.01	17.14	438
7/19/2001	5:30	14.55	15.96	2.98	17.11	426
7/19/2001	6:00	14.53	15.96	3.02	17.15	446
7/19/2001	6:30	14.52	15.96	3.04	17.17	456
7/19/2001	7:00	14.51	15.96	3.06	17.19	465
7/19/2001	7:30	14.51	15.96	3.06	17.19	464
7/19/2001	8:00	14.50	15.96	3.08	17.21	473
7/19/2001	8:30	14.49	15.96	3.10	17.23	483
7/19/2001	9:00	14.47	15.96	3.14	17.27	503
7/19/2001	9:30	14.46	15.95	3.14	17.27	502
7/19/2001	10:00	14.45	15.94	3.14	17.27	500
7/19/2001	10:30	14.44	15.94	3.16	17.29	510
7/19/2001	11:00	14.42	15.93	3.18	17.31	519
7/19/2001	11:30	14.42	15.93	3.17	17.30	518
7/19/2001	11:33	-	-	-	<b>17.30</b>	516
7/19/2001	12:00	14.42	15.92	3.49	17.32	524
7/19/2001	12:30	14.40	15.91	3.54	17.37	551

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/19/2001	12:40	-	-	-	17.37	549
7/19/2001	13:00	14.39	15.92	3.52	17.42	573
7/19/2001	13:30	14.37	15.91	3.54	17.44	587
7/19/2001	14:00	14.37	15.91	3.54	17.44	587
7/19/2001	14:30	14.36	15.90	3.54	17.44	587
7/19/2001	15:00	14.36	15.90	3.54	17.44	587
7/19/2001	15:30	14.35	15.90	3.57	17.47	603
7/19/2001	16:00	14.36	15.90	3.54	17.44	587
7/19/2001	16:30	14.35	15.90	3.57	17.47	603
7/19/2001	17:00	14.35	15.89	3.54	17.44	586
7/19/2001	17:30	14.35	15.89	3.54	17.44	586
7/19/2001	18:00	14.36	15.88	3.50	17.40	562
7/19/2001	18:30	14.36	15.87	3.47	17.37	551
7/19/2001	19:00	14.35	15.87	3.50	17.40	562
7/19/2001	19:30	14.35	15.87	3.50	17.40	561
7/19/2001	20:00	14.35	15.87	3.50	17.40	561
7/19/2001	20:30	14.35	15.86	3.47	17.37	550
7/19/2001	21:00	14.34	15.86	3.50	17.40	561
7/19/2001	21:30	14.34	15.85	3.47	17.37	550
7/19/2001	22:00	14.34	15.84	3.45	17.35	539
7/19/2001	22:30	14.34	15.83	3.43	17.33	528
7/19/2001	23:00	14.34	15.83	3.43	17.33	528
7/19/2001	23:30	14.35	15.83	3.40	17.30	517
7/20/2001	0:00	14.35	15.83	3.40	17.30	517
7/20/2001	0:30	14.35	15.83	3.40	17.30	517
7/20/2001	1:00	14.35	15.82	3.38	17.28	506
7/20/2001	1:30	14.36	15.83	3.38	17.28	506
7/20/2001	2:00	14.36	15.82	3.36	17.26	495
7/20/2001	2:30	14.36	15.82	3.36	17.26	495
7/20/2001	3:00	14.36	15.83	3.38	17.28	506
7/20/2001	3:30	14.36	15.83	3.38	17.28	506
7/20/2001	4:00	14.35	15.82	3.38	17.28	506
7/20/2001	4:30	14.36	15.82	3.36	17.26	495
7/20/2001	5:00	14.36	15.83	3.38	17.28	506
7/20/2001	5:30	14.36	15.83	3.38	17.28	506
7/20/2001	6:00	14.36	15.83	3.38	17.28	506
7/20/2001	6:30	14.36	15.83	3.38	17.28	505
7/20/2001	7:00	14.37	15.83	3.36	17.26	494
7/20/2001	7:30	14.36	15.83	3.38	17.28	505
7/20/2001	8:00	14.36	15.83	3.38	17.28	505
7/20/2001	8:30	14.37	15.83	3.36	17.26	494
7/20/2001	9:00	14.37	15.84	3.38	17.28	505
7/20/2001	9:30	14.37	15.84	3.38	17.28	505

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/20/2001	10:00	14.36	15.84	3.40	17.30	516
7/20/2001	10:30	14.36	15.84	3.40	17.30	516
7/20/2001	11:00	14.36	15.85	3.42	17.32	527
7/20/2001	11:30	14.35	15.85	3.45	17.35	538
7/20/2001	12:00	14.36	15.85	3.42	17.32	527
7/20/2001	12:30	14.35	15.85	3.45	17.35	538
7/20/2001	13:00	14.35	15.85	3.45	17.35	538
7/20/2001	13:30	14.35	15.84	3.42	17.32	527
7/20/2001	14:00	14.33	15.84	3.47	17.37	549
7/20/2001	14:30	14.33	15.84	3.47	17.37	549
7/20/2001	15:00	14.32	15.84	3.49	17.39	560
7/20/2001	15:30	14.32	15.83	3.47	17.37	548
7/20/2001	16:00	14.31	15.83	3.49	17.39	559
7/20/2001	16:30	14.32	15.83	3.47	17.37	548
7/20/2001	17:00	14.33	15.83	3.45	17.35	537
7/20/2001	17:30	14.31	15.83	3.49	17.39	559
7/20/2001	18:00	14.30	15.82	3.49	17.39	559
7/20/2001	18:30	14.31	15.82	3.47	17.37	548
7/20/2001	19:00	14.33	15.82	3.42	17.32	526
7/20/2001	19:30	14.31	15.82	3.47	17.37	548
7/20/2001	20:00	14.32	15.83	3.47	17.37	548
7/20/2001	20:30	14.34	15.82	3.40	17.30	515
7/20/2001	21:00	14.35	15.83	3.40	17.30	515
7/20/2001	21:30	14.35	15.83	3.40	17.30	515
7/20/2001	22:00	14.36	15.83	3.38	17.28	504
7/20/2001	22:30	14.37	15.83	3.35	17.25	493
7/20/2001	23:00	14.38	15.84	3.35	17.25	493
7/20/2001	23:30	14.38	15.84	3.35	17.25	493
7/21/2001	0:00	14.39	15.85	3.35	17.25	493
7/21/2001	0:30	14.40	15.85	3.33	17.23	482
7/21/2001	1:00	14.40	15.85	3.33	17.23	482
7/21/2001	1:30	14.40	15.85	3.33	17.23	482
7/21/2001	2:00	14.40	15.85	3.33	17.23	482
7/21/2001	2:30	14.40	15.85	3.33	17.23	482
7/21/2001	3:00	14.40	15.85	3.33	17.23	481
7/21/2001	3:30	14.40	15.85	3.33	17.23	481
7/21/2001	4:00	14.40	15.84	3.31	17.21	470
7/21/2001	4:30	14.40	15.84	3.30	17.20	470
7/21/2001	5:00	14.39	15.84	3.33	17.23	481
7/21/2001	5:30	14.39	15.84	3.33	17.23	481
7/21/2001	6:00	14.39	15.83	3.30	17.20	470
7/21/2001	6:30	14.38	15.83	3.33	17.23	481
7/21/2001	7:00	14.37	15.83	3.35	17.25	492

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/21/2001	7:30	14.37	15.84	3.37	17.27	503
7/21/2001	8:00	14.37	15.83	3.35	17.25	492
7/21/2001	8:30	14.37	15.83	3.35	17.25	492
7/21/2001	9:00	14.36	15.83	3.37	17.27	503
7/21/2001	9:30	14.36	15.83	3.37	17.27	503
7/21/2001	10:00	14.37	15.84	3.37	17.27	503
7/21/2001	10:30	14.37	15.84	3.37	17.27	503
7/21/2001	11:00	14.36	15.84	3.40	17.30	514
7/21/2001	11:30	14.36	15.84	3.40	17.30	514
7/21/2001	11:40	-	-	-	<b>17.30</b>	516
7/21/2001	12:00	14.36	15.84	3.41	17.30	513
7/21/2001	12:30	14.37	15.84	3.38	17.27	502
7/21/2001	13:00	14.36	15.84	3.40	17.29	513
7/21/2001	13:30	14.36	15.84	3.40	17.29	513
7/21/2001	14:00	14.35	15.84	3.43	17.32	524
7/21/2001	14:30	14.36	15.84	3.40	17.29	513
7/21/2001	15:00	14.37	15.84	3.38	17.27	502
7/21/2001	15:30	14.38	15.84	3.36	17.25	491
7/21/2001	16:00	14.38	15.84	3.36	17.25	491
7/21/2001	16:30	14.38	15.84	3.36	17.25	491
7/21/2001	17:00	14.38	15.84	3.36	17.25	491
7/21/2001	17:30	14.38	15.84	3.36	17.25	490
7/21/2001	18:00	14.38	15.84	3.36	17.25	490
7/21/2001	18:30	14.38	15.84	3.36	17.25	490
7/21/2001	19:00	14.38	15.85	3.38	17.27	501
7/21/2001	19:30	14.39	15.85	3.36	17.25	490
7/21/2001	20:00	14.39	15.86	3.38	17.27	501
7/21/2001	20:30	14.40	15.86	3.36	17.25	490
7/21/2001	21:00	14.40	15.86	3.36	17.25	490
7/21/2001	21:30	14.40	15.86	3.36	17.25	490
7/21/2001	22:00	14.40	15.86	3.36	17.25	490
7/21/2001	22:30	14.40	15.86	3.36	17.25	490
7/21/2001	23:00	14.40	15.86	3.36	17.25	490
7/21/2001	23:30	14.41	15.86	3.33	17.22	478
7/22/2001	0:00	14.41	15.87	3.35	17.24	489
7/22/2001	0:30	14.41	15.86	3.33	17.22	478
7/22/2001	1:00	14.42	15.87	3.33	17.22	478
7/22/2001	1:30	14.42	15.87	3.33	17.22	478
7/22/2001	2:00	14.42	15.87	3.33	17.22	478
7/22/2001	2:30	14.42	15.87	3.33	17.22	478
7/22/2001	3:00	14.42	15.87	3.33	17.22	478
7/22/2001	3:30	14.42	15.87	3.33	17.22	478
7/22/2001	4:00	14.42	15.87	3.33	17.22	478

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/22/2001	4:30	14.43	15.86	3.28	17.17	456
7/22/2001	5:00	14.43	15.86	3.28	17.17	456
7/22/2001	5:30	14.43	15.86	3.28	17.17	455
7/22/2001	6:00	14.43	15.86	3.28	17.17	455
7/22/2001	6:30	14.42	15.86	3.31	17.20	466
7/22/2001	7:00	14.42	15.86	3.31	17.20	466
7/22/2001	7:30	14.42	15.86	3.31	17.20	466
7/22/2001	8:00	14.41	15.86	3.33	17.22	477
7/22/2001	8:30	14.40	15.86	3.35	17.24	488
7/22/2001	9:00	14.40	15.86	3.35	17.24	488
7/22/2001	9:30	14.39	15.85	3.35	17.24	488
7/22/2001	10:00	14.38	15.85	3.37	17.26	499
7/22/2001	10:30	14.38	15.84	3.35	17.24	487
7/22/2001	11:00	14.38	15.84	3.35	17.24	487
7/22/2001	11:30	14.37	15.84	3.37	17.26	498
7/22/2001	12:00	14.37	15.83	3.35	17.24	487
7/22/2001	12:30	14.35	15.83	3.40	17.29	509
7/22/2001	13:00	14.33	15.83	3.44	17.33	531
7/22/2001	13:30	14.30	15.83	3.51	17.40	564
7/22/2001	14:00	14.30	15.83	3.51	17.40	564
7/22/2001	14:30	14.30	15.83	3.51	17.40	564
7/22/2001	15:00	14.30	15.83	3.51	17.40	564
7/22/2001	15:30	14.30	15.83	3.51	17.40	563
7/22/2001	16:00	14.31	15.83	3.49	17.38	552
7/22/2001	16:30	14.30	15.83	3.51	17.40	563
7/22/2001	17:00	14.30	15.83	3.51	17.40	563
7/22/2001	17:30	14.29	15.83	3.53	17.42	574
7/22/2001	18:00	14.31	15.84	3.51	17.40	563
7/22/2001	18:30	14.30	15.84	3.53	17.42	574
7/22/2001	19:00	14.31	15.84	3.51	17.40	563
7/22/2001	19:30	14.32	15.83	3.46	17.35	541
7/22/2001	20:00	14.32	15.84	3.49	17.38	552
7/22/2001	20:30	14.34	15.84	3.44	17.33	530
7/22/2001	21:00	14.35	15.83	3.39	17.28	508
7/22/2001	21:30	14.35	15.83	3.39	17.28	507
7/22/2001	22:00	14.36	15.84	3.39	17.28	507
7/22/2001	22:30	14.38	15.84	3.35	17.24	485
7/22/2001	23:00	14.38	15.83	3.32	17.21	474
7/22/2001	23:30	14.39	15.83	3.30	17.19	463
7/23/2001	0:00	14.39	15.83	3.30	17.19	463
7/23/2001	0:30	14.40	15.83	3.28	17.17	452
7/23/2001	1:00	14.40	15.82	3.25	17.14	441
7/23/2001	1:30	14.40	15.82	3.25	17.14	441



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/23/2001	2:00	14.40	15.82	3.25	17.14	441
7/23/2001	2:30	14.40	15.81	3.23	17.12	430
7/23/2001	3:00	14.40	15.81	3.23	17.12	430
7/23/2001	3:30	14.40	15.81	3.23	17.12	430
7/23/2001	4:00	14.40	15.80	3.21	17.10	418
7/23/2001	4:30	14.40	15.80	3.21	17.10	418
7/23/2001	5:00	14.40	15.81	3.23	17.12	429
7/23/2001	5:30	14.40	15.81	3.23	17.12	429
7/23/2001	6:00	14.40	15.81	3.23	17.12	429
7/23/2001	6:30	14.40	15.81	3.23	17.12	429
7/23/2001	7:00	14.40	15.81	3.23	17.12	429
7/23/2001	7:30	14.39	15.80	3.23	17.12	429
7/23/2001	8:00	14.39	15.80	3.23	17.12	429
7/23/2001	8:30	14.38	15.80	3.25	17.14	440
7/23/2001	9:00	14.36	15.80	3.30	17.19	461
7/23/2001	9:30	14.35	15.80	3.32	17.21	472
7/23/2001	10:00	14.35	15.79	3.30	17.19	461
7/23/2001	10:30	14.35	15.79	3.30	17.19	461
7/23/2001	11:00	14.34	15.78	3.30	17.19	461
7/23/2001	11:30	14.32	15.78	3.34	17.23	483
7/23/2001	12:00	14.30	15.77	3.36	17.25	494
7/23/2001	12:30	14.30	15.77	3.36	17.25	494
7/23/2001	13:00	14.29	15.77	3.39	17.28	505
7/23/2001	13:30	14.29	15.77	3.39	17.28	505
7/23/2001	14:00	14.30	15.77	3.36	17.25	494
7/23/2001	14:30	14.31	15.77	3.34	17.23	482
7/23/2001	15:00	14.31	15.78	3.36	17.25	493
7/23/2001	15:30	14.34	15.79	3.32	17.21	471
7/23/2001	16:00	14.35	15.80	3.32	17.21	471
7/23/2001	16:30	14.37	15.81	3.29	17.18	460
7/23/2001	17:00	14.38	15.82	3.29	17.18	460
7/23/2001	17:10	-	-	-	<b>17.18</b>	458
7/23/2001	17:30	14.39	15.82	3.29	17.16	450
7/23/2001	18:00	14.40	15.83	3.29	17.16	451
7/23/2001	18:30	14.41	15.83	3.27	17.14	441
7/23/2001	19:00	14.41	15.84	3.30	17.17	453
7/23/2001	19:30	14.42	15.85	3.30	17.17	454
7/23/2001	20:00	14.45	15.86	3.26	17.13	433
7/23/2001	20:30	14.46	15.86	3.24	17.11	423
7/23/2001	21:00	14.46	15.87	3.26	17.13	435
7/23/2001	21:30	14.47	15.88	3.26	17.13	436
7/23/2001	22:00	14.47	15.88	3.26	17.13	437
7/23/2001	22:30	14.48	15.89	3.27	17.14	438

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/23/2001	23:00	14.49	15.89	3.25	17.12	428
7/23/2001	23:30	14.50	15.90	3.25	17.12	429
7/24/2001	0:00	14.50	15.90	3.25	17.12	430
7/24/2001	0:30	14.51	15.90	3.23	17.10	419
7/24/2001	1:00	14.51	15.90	3.23	17.10	420
7/24/2001	1:30	14.51	15.90	3.23	17.10	421
7/24/2001	2:00	14.51	15.90	3.23	17.10	422
7/24/2001	2:30	14.51	15.90	3.24	17.11	423
7/24/2001	3:00	14.52	15.90	3.22	17.09	413
7/24/2001	3:30	14.52	15.90	3.22	17.09	414
7/24/2001	4:00	14.52	15.90	3.22	17.09	415
7/24/2001	4:30	14.52	15.90	3.22	17.09	416
7/24/2001	5:00	14.52	15.90	3.22	17.09	417
7/24/2001	5:30	14.52	15.90	3.23	17.10	418
7/24/2001	6:00	14.52	15.90	3.23	17.10	419
7/24/2001	6:30	14.52	15.90	3.23	17.10	420
7/24/2001	7:00	14.51	15.90	3.25	17.12	432
7/24/2001	7:30	14.52	15.90	3.23	17.10	422
7/24/2001	8:00	14.51	15.90	3.26	17.13	434
7/24/2001	8:30	14.51	15.90	3.26	17.13	435
7/24/2001	9:00	14.51	15.91	3.29	17.16	447
7/24/2001	9:30	14.52	15.91	3.26	17.13	437
7/24/2001	10:00	14.51	15.91	3.29	17.16	449
7/24/2001	10:30	14.51	15.91	3.29	17.16	450
7/24/2001	11:00	14.52	15.91	3.27	17.14	440
7/24/2001	11:30	14.52	15.92	3.30	17.17	451
7/24/2001	12:00	14.52	15.92	3.30	17.17	452
7/24/2001	12:30	14.52	15.92	3.30	17.17	453
7/24/2001	13:00	14.52	15.92	3.30	17.17	454
7/24/2001	13:15	-	-	-	<b>17.17</b>	454
7/24/2001	13:30	14.52	15.93	3.24	17.19	465
7/24/2001	14:00	14.52	15.93	3.24	17.19	465
7/24/2001	14:30	14.52	15.93	3.24	17.19	465
7/24/2001	15:00	14.52	15.93	3.24	17.19	465
7/24/2001	15:30	14.53	15.93	3.22	17.17	454
7/24/2001	16:00	14.53	15.94	3.24	17.19	465
7/24/2001	16:30	14.54	15.94	3.22	17.17	454
7/24/2001	17:00	14.55	15.94	3.20	17.15	443
7/24/2001	17:30	14.55	15.94	3.20	17.15	442
7/24/2001	18:00	14.54	15.94	3.22	17.17	453
7/24/2001	18:30	14.53	15.94	3.24	17.19	464
7/24/2001	19:00	14.54	15.95	3.24	17.19	464
7/24/2001	19:30	14.54	15.95	3.24	17.19	464

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/24/2001	20:00	14.55	15.95	3.22	17.17	453
7/24/2001	20:30	14.55	15.95	3.22	17.17	453
7/24/2001	21:00	14.56	15.96	3.22	17.17	453
7/24/2001	21:30	14.57	15.96	3.19	17.14	442
7/24/2001	22:00	14.57	15.96	3.19	17.14	442
7/24/2001	22:30	14.58	15.96	3.17	17.12	430
7/24/2001	23:00	14.59	15.96	3.15	17.10	419
7/24/2001	23:30	14.59	15.97	3.17	17.12	430
7/25/2001	0:00	14.60	15.97	3.15	17.10	419
7/25/2001	0:30	14.60	15.98	3.17	17.12	430
7/25/2001	1:00	14.60	15.98	3.17	17.12	430
7/25/2001	1:30	14.61	15.98	3.15	17.10	419
7/25/2001	2:00	14.62	15.99	3.15	17.10	419
7/25/2001	2:30	14.62	15.99	3.15	17.10	419
7/25/2001	3:00	14.63	15.99	3.12	17.07	408
7/25/2001	3:30	14.64	15.99	3.10	17.05	396
7/25/2001	4:00	14.65	16.00	3.10	17.05	396
7/25/2001	4:30	14.65	16.00	3.10	17.05	396
7/25/2001	5:00	14.65	16.00	3.10	17.05	396
7/25/2001	5:30	14.66	16.01	3.10	17.05	396
7/25/2001	6:00	14.66	16.01	3.10	17.05	396
7/25/2001	6:30	14.66	16.01	3.10	17.05	396
7/25/2001	7:00	14.67	16.02	3.10	17.05	396
7/25/2001	7:30	14.67	16.02	3.10	17.05	396
7/25/2001	8:00	14.67	16.02	3.10	17.05	396
7/25/2001	8:30	14.66	16.02	3.12	17.07	406
7/25/2001	9:00	14.66	16.02	3.12	17.07	406
7/25/2001	9:30	14.66	16.02	3.12	17.07	406
7/25/2001	10:00	14.65	16.02	3.14	17.09	417
7/25/2001	10:30	14.65	16.02	3.14	17.09	417
7/25/2001	11:00	14.63	16.02	3.19	17.14	439
7/25/2001	11:30	14.64	16.02	3.17	17.12	428
7/25/2001	12:00	14.64	16.02	3.17	17.12	428
7/25/2001	12:20	-	-	-	<b>17.12</b>	430
7/25/2001	12:30	14.64	16.02	3.17	17.12	428
7/25/2001	13:00	14.63	16.02	3.20	17.14	438
7/25/2001	13:30	14.62	16.02	3.22	17.16	448
7/25/2001	14:00	14.63	16.02	3.19	17.13	436
7/25/2001	14:30	14.63	16.02	3.19	17.13	435
7/25/2001	15:00	14.63	16.02	3.19	17.13	434
7/25/2001	15:30	14.62	16.02	3.21	17.15	445
7/25/2001	16:00	14.62	16.02	3.21	17.15	444
7/25/2001	16:30	14.61	16.02	3.23	17.17	454

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/25/2001	17:00	14.61	16.01	3.21	17.15	442
7/25/2001	17:30	14.61	16.01	3.20	17.14	441
7/25/2001	18:00	14.60	16.01	3.23	17.17	451
7/25/2001	18:30	14.60	16.01	3.22	17.16	451
7/25/2001	19:00	14.60	16.00	3.20	17.14	439
7/25/2001	19:30	14.57	16.00	3.27	17.21	471
7/25/2001	20:00	14.57	16.00	3.26	17.20	470
7/25/2001	20:30	14.57	16.00	3.26	17.20	469
7/25/2001	21:00	14.57	15.99	3.24	17.18	457
7/25/2001	21:30	14.56	15.99	3.26	17.20	468
7/25/2001	22:00	14.55	15.99	3.28	17.22	478
7/25/2001	22:30	14.55	15.99	3.28	17.22	477
7/25/2001	23:00	14.57	15.99	3.23	17.17	454
7/25/2001	23:30	14.58	15.99	3.21	17.15	442
7/26/2001	0:00	14.60	15.98	3.14	17.08	409
7/26/2001	0:30	14.61	15.98	3.11	17.05	397
7/26/2001	1:00	14.63	15.98	3.06	17.00	374
7/26/2001	1:30	14.64	15.98	3.04	16.98	362
7/26/2001	2:00	14.65	15.98	3.01	16.95	350
7/26/2001	2:30	14.65	15.97	2.99	16.93	344
7/26/2001	3:00	14.65	15.97	2.99	16.93	344
7/26/2001	3:30	14.64	15.97	3.01	16.95	348
7/26/2001	4:00	14.64	15.97	3.01	16.95	348
7/26/2001	4:30	14.64	15.97	3.00	16.94	348
7/26/2001	5:00	14.63	15.96	3.00	16.94	347
7/26/2001	5:30	14.62	15.96	3.02	16.96	356
7/26/2001	6:00	14.62	15.96	3.02	16.96	355
7/26/2001	6:30	14.60	15.96	3.07	17.01	376
7/26/2001	7:00	14.60	15.96	3.07	17.01	375
7/26/2001	7:30	14.60	15.96	3.06	17.00	374
7/26/2001	8:00	14.59	15.96	3.08	17.02	384
7/26/2001	8:30	14.57	15.96	3.13	17.07	406
7/26/2001	9:00	14.56	15.95	3.13	17.07	405
7/26/2001	9:30	14.55	15.95	3.15	17.09	415
7/26/2001	10:00	14.55	15.95	3.15	17.09	414
7/26/2001	10:30	14.54	15.95	3.17	17.11	424
7/26/2001	11:00	14.52	15.95	3.21	17.15	445
7/26/2001	11:30	14.52	15.94	3.19	17.13	434
7/26/2001	12:00	14.53	15.94	3.16	17.10	422
7/26/2001	12:30	14.54	15.94	3.14	17.08	410
7/26/2001	13:00	14.54	15.94	3.14	17.08	409
7/26/2001	13:30	14.54	15.94	3.13	17.07	408
7/26/2001	14:00	14.54	15.94	3.13	17.07	407

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/26/2001	14:30	14.52	15.94	3.18	17.12	429
7/26/2001	14:33	-	-	-	<b>17.12</b>	430
7/26/2001	15:00	14.52	15.94	3.27	17.12	428
7/26/2001	15:30	14.51	15.93	3.26	17.11	427
7/26/2001	16:00	14.49	15.93	3.31	17.16	448
7/26/2001	16:30	14.47	15.93	3.35	17.20	469
7/26/2001	17:00	14.45	15.93	3.40	17.25	490
7/26/2001	17:30	14.44	15.93	3.42	17.27	500
7/26/2001	18:00	14.45	15.92	3.37	17.22	477
7/26/2001	18:30	14.43	15.92	3.41	17.26	498
7/26/2001	19:00	14.47	15.92	3.32	17.17	453
7/26/2001	19:30	14.49	15.92	3.27	17.12	430
7/26/2001	20:00	14.48	15.92	3.29	17.14	440
7/26/2001	20:30	14.50	15.92	3.24	17.09	417
7/26/2001	21:00	14.51	15.91	3.19	17.04	394
7/26/2001	21:30	14.50	15.91	3.22	17.07	404
7/26/2001	22:00	14.50	15.91	3.21	17.06	403
7/26/2001	22:30	14.51	15.91	3.19	17.04	391
7/26/2001	23:00	14.52	15.90	3.14	16.99	368
7/26/2001	23:30	14.52	15.90	3.14	16.99	367
7/27/2001	0:00	14.52	15.90	3.14	16.99	366
7/27/2001	0:30	14.52	15.90	3.13	16.98	365
7/27/2001	1:00	14.52	15.90	3.13	16.98	364
7/27/2001	1:30	14.52	15.90	3.13	16.98	363
7/27/2001	2:00	14.52	15.90	3.13	16.98	362
7/27/2001	2:30	14.52	15.90	3.13	16.98	361
7/27/2001	3:00	14.52	15.89	3.10	16.95	349
7/27/2001	3:30	14.52	15.89	3.10	16.95	349
7/27/2001	4:00	14.52	15.89	3.10	16.95	348
7/27/2001	4:30	14.52	15.88	3.07	16.92	343
7/27/2001	5:00	14.51	15.88	3.09	16.94	347
7/27/2001	5:30	14.51	15.87	3.07	16.92	342
7/27/2001	6:00	14.51	15.87	3.07	16.92	342
7/27/2001	6:30	14.50	15.86	3.06	16.91	341
7/27/2001	7:00	14.49	15.86	3.08	16.93	346
7/27/2001	7:30	14.48	15.86	3.11	16.96	351
7/27/2001	8:00	14.47	15.86	3.13	16.98	361
7/27/2001	8:30	14.47	15.85	3.10	16.95	350
7/27/2001	9:00	14.46	15.85	3.12	16.97	360
7/27/2001	9:30	14.45	15.85	3.14	16.99	370
7/27/2001	10:00	14.46	15.84	3.10	16.95	348
7/27/2001	10:30	14.45	15.84	3.12	16.97	357
7/27/2001	11:00	14.44	15.83	3.11	16.96	356

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/27/2001	11:30	14.43	15.83	3.14	16.99	366
7/27/2001	12:00	14.43	15.83	3.13	16.98	365
7/27/2001	12:30	14.41	15.83	3.18	17.03	386
7/27/2001	12:40	-	-	-	<b>17.03</b>	387
7/27/2001	13:00	14.42	15.83	3.25	17.01	375
7/27/2001	13:30	14.42	15.83	3.25	17.01	376
7/27/2001	14:00	14.41	15.83	3.27	17.03	388
7/27/2001	14:30	14.42	15.83	3.25	17.01	378
7/27/2001	15:00	14.42	15.82	3.23	16.99	368
7/27/2001	15:30	14.42	15.82	3.23	16.99	369
7/27/2001	16:00	14.41	15.82	3.26	17.02	380
7/27/2001	16:30	14.42	15.81	3.21	16.97	359
7/27/2001	17:00	14.41	15.81	3.24	17.00	371
7/27/2001	17:30	14.41	15.81	3.24	17.00	372
7/27/2001	18:00	14.42	15.81	3.22	16.98	362
7/27/2001	18:30	14.41	15.80	3.22	16.98	363
7/27/2001	19:00	14.41	15.80	3.22	16.98	363
7/27/2001	19:30	14.41	15.80	3.22	16.98	364
7/27/2001	20:00	14.42	15.80	3.20	16.96	354
7/27/2001	20:30	14.42	15.80	3.20	16.96	355
7/27/2001	21:00	14.42	15.80	3.20	16.96	356
7/27/2001	21:30	14.43	15.80	3.18	16.94	347
7/27/2001	22:00	14.43	15.80	3.19	16.95	348
7/27/2001	22:30	14.43	15.80	3.19	16.95	348
7/27/2001	23:00	14.43	15.79	3.17	16.93	344
7/27/2001	23:30	14.43	15.79	3.17	16.93	344
7/28/2001	0:00	14.43	15.79	3.17	16.93	344
7/28/2001	0:30	14.43	15.79	3.17	16.93	345
7/28/2001	1:00	14.43	15.78	3.15	16.91	340
7/28/2001	1:30	14.43	15.78	3.15	16.91	341
7/28/2001	2:00	14.43	15.78	3.15	16.91	341
7/28/2001	2:30	14.43	15.78	3.16	16.92	341
7/28/2001	3:00	14.43	15.78	3.16	16.92	342
7/28/2001	3:30	14.43	15.77	3.14	16.90	337
7/28/2001	4:00	14.43	15.77	3.14	16.90	338
7/28/2001	4:30	14.43	15.77	3.14	16.90	338
7/28/2001	5:00	14.42	15.77	3.16	16.92	343
7/28/2001	5:30	14.42	15.77	3.17	16.93	344
7/28/2001	6:00	14.41	15.77	3.19	16.95	349
7/28/2001	6:30	14.41	15.76	3.17	16.93	344
7/28/2001	7:00	14.40	15.76	3.19	16.95	350
7/28/2001	7:30	14.40	15.75	3.17	16.93	345
7/28/2001	8:00	14.40	15.75	3.17	16.93	345

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/28/2001	8:30	14.39	15.74	3.18	16.94	346
7/28/2001	9:00	14.39	15.74	3.18	16.94	346
7/28/2001	9:30	14.38	15.74	3.20	16.96	355
7/28/2001	10:00	14.38	15.74	3.20	16.96	355
7/28/2001	10:30	14.36	15.74	3.25	17.01	378
7/28/2001	11:00	14.35	15.73	3.25	17.01	379
7/28/2001	11:30	14.35	15.73	3.26	17.02	380
7/28/2001	11:35	-	-	-	<b>17.02</b>	382
7/28/2001	12:00	14.34	15.72	3.18	17.02	382
7/28/2001	12:30	14.34	15.72	3.18	17.02	384
7/28/2001	13:00	14.35	15.72	3.16	17.00	375
7/28/2001	13:30	14.35	15.72	3.17	17.01	377
7/28/2001	14:00	14.35	15.72	3.17	17.01	379
7/28/2001	14:30	14.33	15.72	3.22	17.06	402
7/28/2001	15:00	14.33	15.72	3.23	17.07	404
7/28/2001	15:30	14.35	15.72	3.18	17.02	384
7/28/2001	16:00	14.37	15.72	3.14	16.98	364
7/28/2001	16:30	14.38	15.71	3.10	16.94	347
7/28/2001	17:00	14.37	15.71	3.13	16.97	357
7/28/2001	17:30	14.38	15.71	3.11	16.95	348
7/28/2001	18:00	14.37	15.71	3.14	16.98	361
7/28/2001	18:30	14.37	15.70	3.12	16.96	352
7/28/2001	19:00	14.37	15.70	3.12	16.96	354
7/28/2001	19:30	14.37	15.69	3.10	16.94	347
7/28/2001	20:00	14.38	15.69	3.08	16.92	343
7/28/2001	20:30	14.37	15.68	3.09	16.93	344
7/28/2001	21:00	14.38	15.68	3.07	16.91	340
7/28/2001	21:30	14.38	15.68	3.07	16.91	341
7/28/2001	22:00	14.38	15.68	3.08	16.92	342
7/28/2001	22:30	14.37	15.67	3.08	16.92	342
7/28/2001	23:00	14.37	15.67	3.08	16.92	343
7/28/2001	23:30	14.36	15.66	3.09	16.93	344
7/29/2001	0:00	14.35	15.66	3.12	16.96	351
7/29/2001	0:30	14.35	15.65	3.10	16.94	346
7/29/2001	1:00	14.34	15.65	3.12	16.96	355
7/29/2001	1:30	14.34	15.64	3.10	16.94	348
7/29/2001	2:00	14.35	15.64	3.09	16.93	344
7/29/2001	2:30	14.35	15.64	3.09	16.93	344
7/29/2001	3:00	14.33	15.65	3.16	17.00	374
7/29/2001	3:30	14.34	15.65	3.14	16.98	365
7/29/2001	4:00	14.36	15.65	3.10	16.94	347
7/29/2001	4:30	14.37	15.65	3.08	16.92	343
7/29/2001	5:00	14.36	15.65	3.11	16.95	349

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/29/2001	5:30	14.37	15.66	3.11	16.95	351
7/29/2001	6:00	14.37	15.66	3.12	16.96	352
7/29/2001	6:30	14.37	15.67	3.14	16.98	365
7/29/2001	7:00	14.39	15.68	3.13	16.97	356
7/29/2001	7:30	14.39	15.68	3.13	16.97	358
7/29/2001	8:00	14.39	15.68	3.13	16.97	360
7/29/2001	8:30	14.39	15.68	3.14	16.98	362
7/29/2001	9:00	14.38	15.69	3.19	17.03	386
7/29/2001	9:30	14.38	15.69	3.19	17.03	388
7/29/2001	10:00	14.39	15.69	3.17	17.01	379
7/29/2001	10:30	14.39	15.69	3.18	17.02	381
7/29/2001	10:50	-	-	-	<b>17.02</b>	382
7/29/2001	11:00	14.40	15.70	3.18	17.02	383
7/29/2001	11:30	14.40	15.71	3.01	17.04	393
7/29/2001	12:00	14.40	15.71	3.01	17.04	392
7/29/2001	12:30	14.40	15.71	3.01	17.04	392
7/29/2001	13:00	14.40	15.72	3.03	17.06	402
7/29/2001	13:30	14.41	15.73	3.03	17.06	401
7/29/2001	14:00	14.40	15.74	3.07	17.10	423
7/29/2001	14:30	14.41	15.74	3.05	17.08	411
7/29/2001	15:00	14.41	15.74	3.05	17.08	410
7/29/2001	15:30	14.42	15.75	3.05	17.08	410
7/29/2001	16:00	14.42	15.75	3.05	17.08	409
7/29/2001	16:30	14.42	15.76	3.07	17.10	419
7/29/2001	17:00	14.44	15.77	3.04	17.07	407
7/29/2001	17:30	14.45	15.77	3.02	17.05	396
7/29/2001	18:00	14.45	15.77	3.02	17.05	395
7/29/2001	18:30	14.45	15.78	3.04	17.07	405
7/29/2001	19:00	14.46	15.79	3.04	17.07	405
7/29/2001	19:30	14.46	15.79	3.04	17.07	404
7/29/2001	20:00	14.47	15.79	3.01	17.04	392
7/29/2001	20:30	14.47	15.80	3.03	17.06	403
7/29/2001	21:00	14.46	15.80	3.05	17.08	413
7/29/2001	21:30	14.47	15.80	3.03	17.06	401
7/29/2001	22:00	14.48	15.80	3.01	17.04	390
7/29/2001	22:30	14.49	15.81	3.00	17.03	389
7/29/2001	23:00	14.50	15.81	2.98	17.01	377
7/29/2001	23:30	14.50	15.82	3.00	17.03	388
7/30/2001	0:00	14.51	15.83	3.00	17.03	387
7/30/2001	0:30	14.52	15.83	2.98	17.01	375
7/30/2001	1:00	14.52	15.83	2.97	17.00	375
7/30/2001	1:30	14.52	15.83	2.97	17.00	374
7/30/2001	2:00	14.53	15.84	2.97	17.00	373



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/30/2001	2:30	14.53	15.84	2.97	17.00	373
7/30/2001	3:00	14.54	15.84	2.95	16.98	361
7/30/2001	3:30	14.54	15.85	2.97	17.00	371
7/30/2001	4:00	14.55	15.85	2.94	16.97	360
7/30/2001	4:30	14.55	15.86	2.96	16.99	370
7/30/2001	5:00	14.55	15.86	2.96	16.99	369
7/30/2001	5:30	14.56	15.86	2.94	16.97	357
7/30/2001	6:00	14.56	15.87	2.96	16.99	368
7/30/2001	6:30	14.56	15.87	2.96	16.99	367
7/30/2001	7:00	14.57	15.88	2.96	16.99	366
7/30/2001	7:30	14.57	15.89	2.98	17.01	377
7/30/2001	8:00	14.57	15.89	2.98	17.01	376
7/30/2001	8:30	14.57	15.90	3.00	17.03	386
7/30/2001	9:00	14.58	15.90	2.97	17.00	375
7/30/2001	9:30	14.58	15.90	2.97	17.00	374
7/30/2001	10:00	14.59	15.90	2.95	16.98	362
7/30/2001	10:30	14.59	15.91	2.97	17.00	373
7/30/2001	11:00	14.60	15.92	2.97	17.00	372
7/30/2001	11:30	14.60	15.93	2.99	17.02	382
7/30/2001	11:35	-	-	-	<b>17.02</b>	382
7/30/2001	12:00	14.60	15.93	3.06	17.02	382
7/30/2001	12:30	14.60	15.93	3.06	17.02	382
7/30/2001	13:00	14.60	15.93	3.06	17.02	382
7/30/2001	13:30	14.60	15.93	3.06	17.02	382
7/30/2001	14:00	14.62	15.93	3.01	16.97	360
7/30/2001	14:30	14.61	15.94	3.06	17.02	382
7/30/2001	15:00	14.62	15.94	3.04	17.00	371
7/30/2001	15:30	14.62	15.94	3.04	17.00	371
7/30/2001	16:00	14.61	15.94	3.06	17.02	382
7/30/2001	16:30	14.61	15.94	3.06	17.02	382
7/30/2001	17:00	14.60	15.94	3.08	17.04	393
7/30/2001	17:30	14.60	15.94	3.08	17.04	393
7/30/2001	18:00	14.60	15.94	3.08	17.04	393
7/30/2001	18:30	14.59	15.94	3.10	17.06	403
7/30/2001	19:00	14.60	15.94	3.08	17.04	392
7/30/2001	19:30	14.60	15.94	3.08	17.04	392
7/30/2001	20:00	14.60	15.94	3.08	17.04	392
7/30/2001	20:30	14.60	15.94	3.08	17.04	392
7/30/2001	21:00	14.61	15.94	3.06	17.02	381
7/30/2001	21:30	14.61	15.94	3.06	17.02	381
7/30/2001	22:00	14.62	15.94	3.04	17.00	370
7/30/2001	22:30	14.62	15.94	3.03	16.99	370
7/30/2001	23:00	14.62	15.94	3.03	16.99	370

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/30/2001	23:30	14.62	15.93	3.01	16.97	359
7/31/2001	0:00	14.62	15.93	3.01	16.97	359
7/31/2001	0:30	14.63	15.93	2.99	16.95	348
7/31/2001	1:00	14.63	15.93	2.99	16.95	348
7/31/2001	1:30	14.63	15.93	2.99	16.95	348
7/31/2001	2:00	14.62	15.93	3.01	16.97	359
7/31/2001	2:30	14.62	15.93	3.01	16.97	359
7/31/2001	3:00	14.62	15.93	3.01	16.97	359
7/31/2001	3:30	14.62	15.93	3.01	16.97	359
7/31/2001	4:00	14.62	15.93	3.01	16.97	359
7/31/2001	4:30	14.62	15.92	2.99	16.95	348
7/31/2001	5:00	14.62	15.92	2.99	16.95	348
7/31/2001	5:30	14.61	15.92	3.01	16.97	358
7/31/2001	6:00	14.61	15.92	3.01	16.97	358
7/31/2001	6:30	14.61	15.92	3.01	16.97	358
7/31/2001	7:00	14.60	15.92	3.03	16.99	369
7/31/2001	7:30	14.60	15.91	3.01	16.97	358
7/31/2001	8:00	14.58	15.91	3.06	17.02	380
7/31/2001	8:30	14.57	15.91	3.08	17.04	391
7/31/2001	9:00	14.57	15.90	3.06	17.02	380
7/31/2001	9:30	14.56	15.90	3.08	17.04	391
7/31/2001	10:00	14.55	15.90	3.10	17.06	402
7/31/2001	10:30	14.55	15.90	3.10	17.06	402
7/31/2001	11:00	14.55	15.90	3.10	17.06	402
7/31/2001	11:30	14.52	15.89	3.15	17.11	424
7/31/2001	12:00	14.50	15.89	3.19	17.15	446
7/31/2001	12:30	14.50	15.89	3.19	17.15	446
7/31/2001	13:00	14.51	15.88	3.15	17.11	424
7/31/2001	13:30	14.51	15.88	3.15	17.11	423
7/31/2001	14:00	14.50	15.87	3.15	17.11	423
7/31/2001	14:30	14.49	15.86	3.15	17.11	423
7/31/2001	15:00	14.48	15.86	3.17	17.13	434
7/31/2001	15:30	14.47	15.86	3.19	17.15	445
7/31/2001	16:00	14.45	15.86	3.24	17.20	467
7/31/2001	16:30	14.43	15.86	3.28	17.24	489
7/31/2001	17:00	14.42	15.86	3.31	17.27	500
7/31/2001	17:30	14.44	15.85	3.24	17.20	467
7/31/2001	18:00	14.43	15.85	3.26	17.22	478
7/31/2001	18:30	14.42	15.85	3.28	17.24	489
7/31/2001	19:00	14.40	15.84	3.31	17.27	500
7/31/2001	19:30	14.40	15.84	3.31	17.27	500
7/31/2001	20:00	14.40	15.84	3.31	17.27	500
7/31/2001	20:30	14.39	15.83	3.31	17.27	500

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/31/2001	21:00	14.39	15.83	3.31	17.27	500
7/31/2001	21:30	14.38	15.83	3.33	17.29	510
7/31/2001	22:00	14.40	15.82	3.26	17.22	477
7/31/2001	22:30	14.42	15.82	3.21	17.17	455
7/31/2001	23:00	14.44	15.81	3.14	17.10	422
7/31/2001	23:30	14.45	15.80	3.10	17.06	400
8/1/2001	0:00	14.45	15.80	3.10	17.06	400
8/1/2001	0:30	14.45	15.80	3.10	17.06	400
8/1/2001	1:00	14.45	15.79	3.08	17.04	389
8/1/2001	1:30	14.45	15.79	3.08	17.04	389
8/1/2001	2:00	14.45	15.78	3.05	17.01	378
8/1/2001	2:30	14.45	15.78	3.05	17.01	378
8/1/2001	3:00	14.45	15.78	3.05	17.01	378
8/1/2001	3:30	14.45	15.77	3.03	16.99	367
8/1/2001	4:00	14.45	15.77	3.03	16.99	367
8/1/2001	4:30	14.45	15.77	3.03	16.99	367
8/1/2001	5:00	14.44	15.77	3.05	17.01	378
8/1/2001	5:30	14.43	15.77	3.07	17.03	389
8/1/2001	6:00	14.42	15.76	3.07	17.03	389
8/1/2001	6:30	14.42	15.76	3.07	17.03	389
8/1/2001	7:00	14.42	15.76	3.07	17.03	389
8/1/2001	7:30	14.42	15.77	3.10	17.06	400
8/1/2001	8:00	14.42	15.77	3.10	17.06	400
8/1/2001	8:30	14.42	15.77	3.10	17.06	400
8/1/2001	9:00	14.43	15.77	3.07	17.03	388
8/1/2001	9:30	14.42	15.77	3.10	17.06	399
8/1/2001	10:00	14.42	15.77	3.10	17.06	399
8/1/2001	10:30	14.42	15.77	3.10	17.06	399
8/1/2001	11:00	14.42	15.77	3.10	17.06	399
8/1/2001	11:30	14.42	15.77	3.10	17.06	399
8/1/2001	12:00	14.42	15.77	3.10	17.06	399
8/1/2001	12:30	14.42	15.77	3.10	17.06	399
8/1/2001	13:00	14.41	15.77	3.12	17.08	410
8/1/2001	13:30	14.41	15.77	3.12	17.08	410
8/1/2001	14:00	14.40	15.77	3.14	17.10	421
8/1/2001	14:30	14.41	15.77	3.12	17.08	410
8/1/2001	15:00	14.42	15.77	3.10	17.06	399
8/1/2001	15:30	14.42	15.77	3.10	17.06	399
8/1/2001	16:00	14.42	15.77	3.09	17.05	399
8/1/2001	16:30	14.42	15.76	3.07	17.03	388
8/1/2001	17:00	14.42	15.76	3.07	17.03	388
8/1/2001	17:30	14.42	15.76	3.07	17.03	388
8/1/2001	18:00	14.42	15.76	3.07	17.03	388

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/1/2001	18:30	14.42	15.76	3.07	17.03	388
8/1/2001	19:00	14.42	15.76	3.07	17.03	387
8/1/2001	19:30	14.43	15.76	3.05	17.01	376
8/1/2001	20:00	14.43	15.76	3.05	17.01	376
8/1/2001	20:30	14.43	15.76	3.05	17.01	376
8/1/2001	21:00	14.43	15.76	3.05	17.01	376
8/1/2001	21:30	14.43	15.76	3.05	17.01	376
8/1/2001	22:00	14.44	15.76	3.02	16.98	365
8/1/2001	22:30	14.44	15.77	3.05	17.01	376
8/1/2001	23:00	14.45	15.77	3.02	16.98	365
8/1/2001	23:30	14.45	15.77	3.02	16.98	365
8/2/2001	0:00	14.45	15.77	3.02	16.98	365
8/2/2001	0:30	14.46	15.77	3.00	16.96	354
8/2/2001	1:00	14.47	15.78	3.00	16.96	354
8/2/2001	1:30	14.47	15.79	3.02	16.98	365
8/2/2001	2:00	14.47	15.79	3.02	16.98	365
8/2/2001	2:30	14.47	15.79	3.02	16.98	365
8/2/2001	3:00	14.47	15.79	3.02	16.98	365
8/2/2001	3:30	14.48	15.79	3.00	16.96	354
8/2/2001	4:00	14.47	15.79	3.02	16.98	365
8/2/2001	4:30	14.47	15.79	3.02	16.98	365
8/2/2001	5:00	14.48	15.79	3.00	16.96	353
8/2/2001	5:30	14.48	15.80	3.02	16.98	364
8/2/2001	6:00	14.47	15.79	3.02	16.98	364
8/2/2001	6:30	14.47	15.79	3.02	16.98	364
8/2/2001	7:00	14.48	15.80	3.02	16.98	364
8/2/2001	7:30	14.48	15.80	3.02	16.98	364
8/2/2001	8:00	14.49	15.80	3.00	16.96	353
8/2/2001	8:30	14.49	15.80	3.00	16.96	353
8/2/2001	9:00	14.50	15.80	2.98	16.94	346
8/2/2001	9:30	14.50	15.80	2.98	16.94	346
8/2/2001	10:00	14.50	15.81	3.00	16.96	353
8/2/2001	10:30	14.50	15.81	3.00	16.96	353
8/2/2001	11:00	14.50	15.81	3.00	16.96	353
8/2/2001	11:30	14.51	15.81	2.98	16.94	346
8/2/2001	12:00	14.50	15.81	3.00	16.96	353
8/2/2001	12:30	14.50	15.81	3.00	16.96	353
8/2/2001	13:00	14.49	15.81	3.02	16.98	364
8/2/2001	13:30	14.50	15.82	3.02	16.98	364
8/2/2001	14:00	14.50	15.82	3.02	16.98	364
8/2/2001	14:30	14.50	15.82	3.02	16.98	363
8/2/2001	15:00	14.50	15.82	3.02	16.98	363
8/2/2001	15:30	14.50	15.82	3.02	16.98	363

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/2/2001	16:00	14.50	15.82	3.02	16.98	363
8/2/2001	16:30	14.50	15.82	3.02	16.98	363
8/2/2001	17:00	14.50	15.82	3.02	16.98	363
8/2/2001	17:30	14.50	15.82	3.02	16.98	363
8/2/2001	18:00	14.48	15.83	3.09	17.05	396
8/2/2001	18:30	14.50	15.83	3.04	17.00	374
8/2/2001	19:00	14.51	15.83	3.02	16.98	363
8/2/2001	19:30	14.50	15.83	3.04	17.00	374
8/2/2001	20:00	14.50	15.83	3.04	17.00	374
8/2/2001	20:30	14.51	15.83	3.02	16.98	363
8/2/2001	21:00	14.50	15.83	3.04	17.00	374
8/2/2001	21:30	14.51	15.83	3.02	16.98	363
8/2/2001	22:00	14.52	15.83	3.00	16.96	352
8/2/2001	22:30	14.52	15.83	3.00	16.96	352
8/2/2001	23:00	14.53	15.84	3.00	16.96	352
8/2/2001	23:30	14.53	15.84	3.00	16.96	352
8/3/2001	0:00	14.53	15.84	3.00	16.96	352
8/3/2001	0:30	14.54	15.84	2.97	16.93	345
8/3/2001	1:00	14.54	15.84	2.97	16.93	345
8/3/2001	1:30	14.54	15.84	2.97	16.93	345
8/3/2001	2:00	14.54	15.84	2.97	16.93	345
8/3/2001	2:30	14.54	15.84	2.97	16.93	345
8/3/2001	3:00	14.54	15.84	2.97	16.93	345
8/3/2001	3:30	14.53	15.84	3.00	16.96	351
8/3/2001	4:00	14.53	15.84	3.00	16.96	351
8/3/2001	4:30	14.53	15.84	2.99	16.95	351
8/3/2001	5:00	14.53	15.83	2.97	16.93	345
8/3/2001	5:30	14.53	15.83	2.97	16.93	345
8/3/2001	6:00	14.53	15.83	2.97	16.93	345
8/3/2001	6:30	14.53	15.83	2.97	16.93	345
8/3/2001	7:00	14.52	15.83	2.99	16.95	351
8/3/2001	7:30	14.52	15.83	2.99	16.95	351
8/3/2001	8:00	14.52	15.83	2.99	16.95	351
8/3/2001	8:30	14.52	15.83	2.99	16.95	351
8/3/2001	9:00	14.52	15.83	2.99	16.95	351
8/3/2001	9:30	14.51	15.83	3.02	16.98	361
8/3/2001	10:00	14.50	15.83	3.04	17.00	372
8/3/2001	10:30	14.50	15.82	3.02	16.98	361
8/3/2001	11:00	14.49	15.82	3.04	17.00	372
8/3/2001	11:30	14.48	15.82	3.06	17.02	383
8/3/2001	12:00	14.48	15.81	3.04	17.00	372
8/3/2001	12:30	14.47	15.80	3.04	17.00	372
8/3/2001	13:00	14.46	15.80	3.06	17.02	383

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/3/2001	13:30	14.45	15.80	3.08	17.04	394
8/3/2001	14:00	14.45	15.80	3.08	17.04	394
8/3/2001	14:30	14.44	15.80	3.11	17.07	405
8/3/2001	15:00	14.43	15.79	3.11	17.07	405
8/3/2001	15:30	14.42	15.79	3.13	17.09	416
8/3/2001	16:00	14.42	15.79	3.13	17.09	416
8/3/2001	16:30	14.42	15.78	3.11	17.07	405
8/3/2001	17:00	14.43	15.78	3.08	17.04	394
8/3/2001	17:30	14.42	15.78	3.11	17.07	405
8/3/2001	18:00	14.42	15.77	3.08	17.04	394
8/3/2001	18:30	14.41	15.77	3.11	17.07	404
8/3/2001	19:00	14.40	15.77	3.13	17.09	415
8/3/2001	19:30	14.39	15.76	3.13	17.09	415
8/3/2001	20:00	14.39	15.76	3.13	17.09	415
8/3/2001	20:30	14.40	15.76	3.11	17.07	404
8/3/2001	21:00	14.41	15.76	3.08	17.04	393
8/3/2001	21:30	14.41	15.75	3.06	17.02	382
8/3/2001	22:00	14.41	15.75	3.06	17.02	382
8/3/2001	22:30	14.41	15.75	3.06	17.02	382
8/3/2001	23:00	14.41	15.75	3.06	17.02	382
8/3/2001	23:30	14.41	15.75	3.06	17.02	382
8/4/2001	0:00	14.42	15.75	3.04	17.00	371
8/4/2001	0:30	14.41	15.74	3.04	17.00	371
8/4/2001	1:00	14.42	15.74	3.01	16.97	360
8/4/2001	1:30	14.41	15.74	3.04	17.00	371
8/4/2001	2:00	14.41	15.74	3.04	17.00	371
8/4/2001	2:30	14.41	15.74	3.04	17.00	371
8/4/2001	3:00	14.41	15.74	3.04	17.00	371
8/4/2001	3:30	14.40	15.74	3.06	17.02	382
8/4/2001	4:00	14.40	15.73	3.04	17.00	371
8/4/2001	4:30	14.40	15.73	3.04	17.00	371
8/4/2001	5:00	14.40	15.72	3.01	16.97	359
8/4/2001	5:30	14.40	15.72	3.01	16.97	359
8/4/2001	6:00	14.41	15.72	2.99	16.95	349
8/4/2001	6:30	14.41	15.72	2.99	16.95	349
8/4/2001	7:00	14.41	15.72	2.99	16.95	349
8/4/2001	7:30	14.40	15.71	2.99	16.95	348
8/4/2001	8:00	14.40	15.71	2.99	16.95	348
8/4/2001	8:30	14.40	15.71	2.99	16.95	348
8/4/2001	9:00	14.39	15.70	2.99	16.95	348
8/4/2001	9:30	14.38	15.70	3.01	16.97	359
8/4/2001	10:00	14.38	15.70	3.01	16.97	359
8/4/2001	10:30	14.38	15.69	2.99	16.95	348

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/4/2001	11:00	14.38	15.69	2.99	16.95	348
8/4/2001	11:30	14.40	15.68	2.92	16.88	334
8/4/2001	12:00	14.39	15.68	2.94	16.90	339
8/4/2001	12:30	14.39	15.68	2.94	16.90	339
8/4/2001	13:00	14.38	15.68	2.96	16.92	343
8/4/2001	13:30	14.35	15.67	3.01	16.97	359
8/4/2001	14:00	14.36	15.66	2.96	16.92	343
8/4/2001	14:30	14.35	15.66	2.99	16.95	348
8/4/2001	15:00	14.35	15.65	2.96	16.92	343
8/4/2001	15:30	14.33	15.65	3.01	16.97	358
8/4/2001	16:00	14.30	15.64	3.06	17.02	380
8/4/2001	16:30	14.29	15.63	3.06	17.02	380
8/4/2001	17:00	14.27	15.62	3.08	17.04	391
8/4/2001	17:30	14.27	15.62	3.08	17.04	391
8/4/2001	18:00	14.27	15.62	3.08	17.04	391
8/4/2001	18:30	14.26	15.62	3.10	17.06	402
8/4/2001	19:00	14.26	15.62	3.10	17.06	402
8/4/2001	19:30	14.27	15.62	3.08	17.04	391
8/4/2001	20:00	14.28	15.62	3.06	17.02	380
8/4/2001	20:30	14.29	15.62	3.03	16.99	369
8/4/2001	21:00	14.31	15.63	3.01	16.97	358
8/4/2001	21:30	14.33	15.64	2.99	16.95	348
8/4/2001	22:00	14.34	15.65	2.99	16.95	348
8/4/2001	22:30	14.35	15.65	2.96	16.92	343
8/4/2001	23:00	14.35	15.66	2.99	16.95	348
8/4/2001	23:30	14.36	15.67	2.99	16.95	348
8/5/2001	0:00	14.37	15.68	2.99	16.95	348
8/5/2001	0:30	14.37	15.68	2.99	16.95	348
8/5/2001	1:00	14.38	15.68	2.96	16.92	343
8/5/2001	1:30	14.38	15.68	2.96	16.92	343
8/5/2001	2:00	14.39	15.69	2.96	16.92	343
8/5/2001	2:30	14.39	15.69	2.96	16.92	343
8/5/2001	3:00	14.40	15.69	2.94	16.90	338
8/5/2001	3:30	14.40	15.69	2.94	16.90	338
8/5/2001	4:00	14.41	15.70	2.94	16.90	338
8/5/2001	4:30	14.41	15.70	2.94	16.90	338
8/5/2001	5:00	14.42	15.71	2.94	16.90	338
8/5/2001	5:30	14.42	15.71	2.94	16.90	338
8/5/2001	6:00	14.42	15.71	2.94	16.90	338
8/5/2001	6:30	14.43	15.72	2.94	16.90	338
8/5/2001	7:00	14.43	15.72	2.94	16.90	338
8/5/2001	7:30	14.43	15.73	2.96	16.92	343
8/5/2001	8:00	14.43	15.73	2.96	16.92	343

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/5/2001	8:30	14.43	15.73	2.96	16.92	343
8/5/2001	9:00	14.43	15.73	2.96	16.92	342
8/5/2001	9:30	14.43	15.73	2.96	16.92	342
8/5/2001	10:00	14.43	15.74	2.98	16.94	347
8/5/2001	10:30	14.43	15.74	2.98	16.94	347
8/5/2001	11:00	14.43	15.74	2.98	16.94	347
8/5/2001	11:30	14.43	15.74	2.98	16.94	347
8/5/2001	12:00	14.43	15.74	2.98	16.94	347
8/5/2001	12:30	14.43	15.74	2.98	16.94	347
8/5/2001	13:00	14.43	15.75	3.01	16.97	356
8/5/2001	13:30	14.44	15.75	2.98	16.94	347
8/5/2001	14:00	14.45	15.76	2.98	16.94	347
8/5/2001	14:30	14.45	15.77	3.01	16.97	356
8/5/2001	15:00	14.45	15.77	3.01	16.97	356
8/5/2001	15:30	14.45	15.77	3.01	16.97	356
8/5/2001	16:00	14.45	15.77	3.00	16.96	356
8/5/2001	16:30	14.44	15.77	3.03	16.99	367
8/5/2001	17:00	14.45	15.77	3.00	16.96	356
8/5/2001	17:30	14.45	15.77	3.00	16.96	356
8/5/2001	18:00	14.45	15.78	3.03	16.99	367
8/5/2001	18:30	14.45	15.78	3.03	16.99	367
8/5/2001	19:00	14.45	15.78	3.03	16.99	366
8/5/2001	19:30	14.45	15.78	3.03	16.99	366
8/5/2001	20:00	14.45	15.78	3.03	16.99	366
8/5/2001	20:30	14.46	15.78	3.00	16.96	355
8/5/2001	21:00	14.47	15.79	3.00	16.96	355
8/5/2001	21:30	14.47	15.79	3.00	16.96	355
8/5/2001	22:00	14.48	15.79	2.98	16.94	347
8/5/2001	22:30	14.48	15.80	3.00	16.96	355
8/5/2001	23:00	14.49	15.80	2.98	16.94	347
8/5/2001	23:30	14.49	15.80	2.98	16.94	347
8/6/2001	0:00	14.49	15.80	2.98	16.94	347
8/6/2001	0:30	14.50	15.80	2.96	16.92	342
8/6/2001	1:00	14.50	15.80	2.96	16.92	342
8/6/2001	1:30	14.50	15.80	2.96	16.92	342
8/6/2001	2:00	14.50	15.80	2.96	16.92	342
8/6/2001	2:30	14.50	15.80	2.96	16.92	342
8/6/2001	3:00	14.50	15.80	2.96	16.92	342
8/6/2001	3:30	14.50	15.80	2.96	16.92	342
8/6/2001	4:00	14.50	15.80	2.96	16.92	342
8/6/2001	4:30	14.50	15.80	2.96	16.92	342
8/6/2001	5:00	14.50	15.80	2.96	16.92	342
8/6/2001	5:30	14.50	15.80	2.96	16.92	342



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/6/2001	6:00	14.50	15.80	2.96	16.92	342
8/6/2001	6:30	14.50	15.80	2.96	16.92	342
8/6/2001	7:00	14.50	15.80	2.96	16.92	341
8/6/2001	7:30	14.50	15.81	2.98	16.94	346
8/6/2001	8:00	14.50	15.80	2.96	16.92	341
8/6/2001	8:30	14.49	15.81	3.00	16.96	354
8/6/2001	9:00	14.49	15.81	3.00	16.96	354
8/6/2001	9:30	14.48	15.81	3.02	16.98	365
8/6/2001	10:00	14.48	15.81	3.02	16.98	365
8/6/2001	10:30	14.47	15.81	3.05	17.01	376
8/6/2001	11:00	14.46	15.81	3.07	17.03	387
8/6/2001	11:30	14.45	15.81	3.09	17.05	398
8/6/2001	12:00	14.45	15.81	3.09	17.05	398
8/6/2001	12:30	14.45	15.82	3.12	17.08	409
8/6/2001	13:00	14.44	15.82	3.14	17.10	420
8/6/2001	13:30	14.43	15.82	3.16	17.12	430
8/6/2001	14:00	14.42	15.82	3.18	17.14	441
8/6/2001	14:30	14.42	15.82	3.18	17.14	441
8/6/2001	15:00	14.41	15.83	3.23	17.19	463
8/6/2001	15:30	14.40	15.83	3.25	17.21	474
8/6/2001	16:00	14.40	15.84	3.28	17.24	485
8/6/2001	16:30	14.40	15.85	3.30	17.26	496
8/6/2001	17:00	14.40	15.86	3.32	17.28	507
8/6/2001	17:30	14.40	15.86	3.32	17.28	507
8/6/2001	18:00	14.40	15.86	3.32	17.28	507
8/6/2001	18:30	14.40	15.86	3.32	17.28	507
8/6/2001	19:00	14.40	15.86	3.32	17.28	507
8/6/2001	19:30	14.42	15.86	3.28	17.24	485
8/6/2001	20:00	14.42	15.86	3.27	17.23	485
8/6/2001	20:30	14.42	15.86	3.27	17.23	485
8/6/2001	21:00	14.43	15.86	3.25	17.21	474
8/6/2001	21:30	14.43	15.86	3.25	17.21	474
8/6/2001	22:00	14.44	15.86	3.23	17.19	462
8/6/2001	22:30	14.44	15.86	3.23	17.19	462
8/6/2001	23:00	14.45	15.86	3.21	17.17	451
8/6/2001	23:30	14.45	15.86	3.21	17.17	451
8/7/2001	0:00	14.45	15.86	3.21	17.17	451
8/7/2001	0:30	14.46	15.86	3.18	17.14	440
8/7/2001	1:00	14.47	15.86	3.16	17.12	429
8/7/2001	1:30	14.47	15.86	3.16	17.12	429
8/7/2001	2:00	14.46	15.86	3.18	17.14	440
8/7/2001	2:30	14.46	15.86	3.18	17.14	440
8/7/2001	3:00	14.47	15.86	3.16	17.12	429

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/7/2001	3:30	14.47	15.86	3.16	17.12	429
8/7/2001	4:00	14.47	15.86	3.16	17.12	429
8/7/2001	4:30	14.47	15.86	3.16	17.12	429
8/7/2001	5:00	14.47	15.85	3.13	17.09	418
8/7/2001	5:30	14.47	15.85	3.13	17.09	418
8/7/2001	6:00	14.46	15.85	3.16	17.12	429
8/7/2001	6:30	14.47	15.85	3.13	17.09	418
8/7/2001	7:00	14.46	15.84	3.13	17.09	418
8/7/2001	7:30	14.46	15.84	3.13	17.09	418
8/7/2001	8:00	14.46	15.84	3.13	17.09	418
8/7/2001	8:30	14.46	15.83	3.11	17.07	407
8/7/2001	9:00	14.46	15.83	3.11	17.07	406
8/7/2001	9:30	14.46	15.83	3.11	17.07	406
8/7/2001	10:00	14.46	15.83	3.11	17.07	406
8/7/2001	10:30	14.46	15.84	3.13	17.09	417
8/7/2001	11:00	14.46	15.84	3.13	17.09	417
8/7/2001	11:30	14.46	15.85	3.16	17.12	428
8/7/2001	12:00	14.47	15.86	3.16	17.12	428
8/7/2001	12:30	14.47	15.86	3.16	17.12	428
8/7/2001	13:00	14.47	15.87	3.18	17.14	439
8/7/2001	13:30	14.48	15.88	3.18	17.14	439
8/7/2001	14:00	14.49	15.89	3.18	17.14	439
8/7/2001	14:30	14.50	15.89	3.16	17.12	428
8/7/2001	15:00	14.50	15.90	3.18	17.14	439
8/7/2001	15:30	14.51	15.90	3.16	17.12	428
8/7/2001	16:00	14.52	15.90	3.13	17.09	417
8/7/2001	16:30	14.53	15.91	3.13	17.09	417
8/7/2001	17:00	14.53	15.91	3.13	17.09	417
8/7/2001	17:30	14.55	15.91	3.09	17.05	395
8/7/2001	18:00	14.55	15.91	3.09	17.05	395
8/7/2001	18:30	14.56	15.91	3.06	17.02	384
8/7/2001	19:00	14.56	15.92	3.09	17.05	394
8/7/2001	19:30	14.57	15.92	3.06	17.02	383
8/7/2001	20:00	14.57	15.92	3.06	17.02	383
8/7/2001	20:30	14.57	15.92	3.06	17.02	383
8/7/2001	21:00	14.58	15.92	3.04	17.00	372
8/7/2001	21:30	14.58	15.92	3.04	17.00	372
8/7/2001	22:00	14.59	15.92	3.02	16.98	361
8/7/2001	22:30	14.60	15.93	3.02	16.98	361
8/7/2001	23:00	14.60	15.93	3.02	16.98	361
8/7/2001	23:30	14.61	15.93	2.99	16.95	350
8/8/2001	0:00	14.61	15.93	2.99	16.95	350
8/8/2001	0:30	14.61	15.93	2.99	16.95	350

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/8/2001	1:00	14.62	15.93	2.97	16.93	344
8/8/2001	1:30	14.62	15.93	2.97	16.93	344
8/8/2001	2:00	14.62	15.93	2.97	16.93	344
8/8/2001	2:30	14.62	15.93	2.97	16.93	344
8/8/2001	3:00	14.61	15.92	2.97	16.93	344
8/8/2001	3:30	14.61	15.92	2.97	16.93	344
8/8/2001	4:00	14.61	15.92	2.97	16.93	344
8/8/2001	4:30	14.60	15.91	2.97	16.93	344
8/8/2001	5:00	14.60	15.91	2.97	16.93	344
8/8/2001	5:30	14.60	15.90	2.95	16.91	339
8/8/2001	6:00	14.60	15.90	2.95	16.91	339
8/8/2001	6:30	14.60	15.90	2.95	16.91	339
8/8/2001	7:00	14.60	15.90	2.95	16.91	339
8/8/2001	7:30	14.60	15.90	2.95	16.91	339
8/8/2001	8:00	14.59	15.90	2.97	16.93	344
8/8/2001	8:30	14.59	15.89	2.94	16.90	339
8/8/2001	9:00	14.58	15.89	2.97	16.93	344
8/8/2001	9:30	14.57	15.89	2.99	16.95	349
8/8/2001	10:00	14.57	15.88	2.97	16.93	344
8/8/2001	10:30	14.56	15.88	2.99	16.95	349
8/8/2001	11:00	14.56	15.88	2.99	16.95	349
8/8/2001	11:30	14.57	15.88	2.97	16.93	344
8/8/2001	12:00	14.56	15.88	2.99	16.95	349
8/8/2001	12:30	14.56	15.87	2.97	16.93	344
8/8/2001	13:00	14.56	15.87	2.97	16.93	344
8/8/2001	13:30	14.55	15.87	2.99	16.95	349
8/8/2001	14:00	14.54	15.87	3.01	16.97	360
8/8/2001	14:30	14.53	15.87	3.04	17.00	370
8/8/2001	15:00	14.53	15.86	3.01	16.97	359
8/8/2001	15:30	14.52	15.86	3.04	17.00	370
8/8/2001	16:00	14.52	15.86	3.04	17.00	370
8/8/2001	16:30	14.51	15.86	3.06	17.02	381
8/8/2001	17:00	14.51	15.86	3.06	17.02	381
8/8/2001	17:30	14.50	15.86	3.08	17.04	392
8/8/2001	18:00	14.49	15.86	3.10	17.06	403
8/8/2001	18:30	14.51	15.87	3.08	17.04	392
8/8/2001	19:00	14.52	15.86	3.03	16.99	370
8/8/2001	19:30	14.51	15.85	3.03	16.99	370
8/8/2001	20:00	14.51	15.83	2.99	16.95	348
8/8/2001	20:30	14.50	15.83	3.01	16.97	359
8/8/2001	21:00	14.51	15.83	2.99	16.95	348
8/8/2001	21:30	14.51	15.83	2.99	16.95	348
8/8/2001	22:00	14.51	15.82	2.96	16.92	343

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/8/2001	22:30	14.50	15.81	2.96	16.92	343
8/8/2001	23:00	14.50	15.80	2.94	16.90	339
8/8/2001	23:30	14.50	15.80	2.94	16.90	339
8/9/2001	0:00	14.51	15.80	2.92	16.88	334
8/9/2001	0:30	14.51	15.80	2.92	16.88	334
8/9/2001	1:00	14.51	15.80	2.92	16.88	334
8/9/2001	1:30	14.51	15.80	2.92	16.88	334
8/9/2001	2:00	14.50	15.80	2.94	16.90	338
8/9/2001	2:30	14.50	15.80	2.94	16.90	338
8/9/2001	3:00	14.51	15.80	2.92	16.88	334
8/9/2001	3:30	14.51	15.80	2.92	16.88	334
8/9/2001	4:00	14.51	15.80	2.92	16.88	333
8/9/2001	4:30	14.52	15.80	2.89	16.85	329
8/9/2001	5:00	14.53	15.80	2.87	16.83	324
8/9/2001	5:30	14.53	15.80	2.87	16.83	324
8/9/2001	6:00	14.53	15.80	2.87	16.83	324
8/9/2001	6:30	14.53	15.80	2.87	16.83	324
8/9/2001	7:00	14.53	15.80	2.87	16.83	324
8/9/2001	7:30	14.53	15.80	2.87	16.83	324
8/9/2001	8:00	14.54	15.81	2.87	16.83	324
8/9/2001	8:30	14.54	15.81	2.87	16.83	324
8/9/2001	9:00	14.53	15.82	2.92	16.88	333
8/9/2001	9:30	14.52	15.82	2.94	16.90	338
8/9/2001	10:00	14.52	15.82	2.94	16.90	338
8/9/2001	10:30	14.52	15.82	2.94	16.90	338
8/9/2001	11:00	14.52	15.83	2.96	16.92	343
8/9/2001	11:30	14.52	15.83	2.96	16.92	343
8/9/2001	12:00	14.52	15.83	2.96	16.92	343
8/9/2001	12:30	14.52	15.83	2.96	16.92	343
8/9/2001	13:00	14.52	15.83	2.96	16.92	343
8/9/2001	13:30	14.51	15.83	2.98	16.94	348
8/9/2001	14:00	14.51	15.83	2.98	16.94	348
8/9/2001	14:30	14.51	15.83	2.98	16.94	348
8/9/2001	15:00	14.51	15.84	3.01	16.97	357
8/9/2001	15:30	14.50	15.84	3.03	16.99	368
8/9/2001	16:00	14.50	15.84	3.03	16.99	368
8/9/2001	16:30	14.50	15.84	3.03	16.99	368
8/9/2001	17:00	14.50	15.84	3.03	16.99	368
8/9/2001	17:30	14.48	15.85	3.10	17.06	401
8/9/2001	18:00	14.46	15.85	3.14	17.10	422
8/9/2001	18:30	14.45	15.86	3.19	17.15	444
8/9/2001	19:00	14.45	15.85	3.17	17.13	433
8/9/2001	19:30	14.44	15.85	3.19	17.15	444

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/9/2001	20:00	14.45	15.85	3.17	17.13	433
8/9/2001	20:30	14.46	15.83	3.10	17.06	400
8/9/2001	21:00	14.47	15.83	3.07	17.03	389
8/9/2001	21:30	14.47	15.83	3.07	17.03	389
8/9/2001	22:00	14.49	15.82	3.01	16.97	356
8/9/2001	22:30	14.49	15.82	3.01	16.97	356
8/9/2001	23:00	14.49	15.81	2.98	16.94	347
8/9/2001	23:30	14.49	15.80	2.96	16.92	342
8/10/2001	0:00	14.49	15.80	2.96	16.92	342
8/10/2001	0:30	14.48	15.80	2.98	16.94	347
8/10/2001	1:00	14.48	15.79	2.96	16.92	342
8/10/2001	1:30	14.47	15.77	2.94	16.90	337
8/10/2001	2:00	14.47	15.77	2.94	16.90	337
8/10/2001	2:30	14.46	15.77	2.96	16.92	342
8/10/2001	3:00	14.46	15.76	2.94	16.90	337
8/10/2001	3:30	14.46	15.76	2.94	16.90	337
8/10/2001	4:00	14.45	15.76	2.96	16.92	342
8/10/2001	4:30	14.45	15.76	2.96	16.92	342
8/10/2001	5:00	14.45	15.75	2.94	16.90	337
8/10/2001	5:30	14.45	15.74	2.91	16.87	332
8/10/2001	6:00	14.45	15.74	2.91	16.87	332
8/10/2001	6:30	14.44	15.74	2.93	16.89	337
8/10/2001	7:00	14.44	15.73	2.91	16.87	332
8/10/2001	7:30	14.44	15.72	2.89	16.85	327
8/10/2001	8:00	14.43	15.72	2.91	16.87	332
8/10/2001	8:30	14.43	15.71	2.89	16.85	327
8/10/2001	9:00	14.44	15.71	2.87	16.83	323
8/10/2001	9:30	14.44	15.71	2.87	16.83	322
8/10/2001	10:00	14.45	15.71	2.84	16.80	318
8/10/2001	10:30	14.45	15.71	2.84	16.80	318
8/10/2001	11:00	14.45	15.72	2.86	16.82	322
8/10/2001	11:30	14.45	15.72	2.86	16.82	322
8/10/2001	12:00	14.44	15.72	2.89	16.85	327
8/10/2001	12:30	14.43	15.73	2.93	16.89	337
8/10/2001	13:00	14.44	15.73	2.91	16.87	332
8/10/2001	13:30	14.44	15.73	2.91	16.87	332
8/10/2001	14:00	14.44	15.74	2.93	16.89	337
8/10/2001	14:30	14.44	15.74	2.93	16.89	337
8/10/2001	15:00	14.44	15.74	2.93	16.89	337
8/10/2001	15:30	14.44	15.74	2.93	16.89	337
8/10/2001	16:00	14.43	15.74	2.96	16.92	342
8/10/2001	16:30	14.43	15.74	2.96	16.92	341
8/10/2001	17:00	14.45	15.75	2.93	16.89	337

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/10/2001	17:30	14.45	15.75	2.93	16.89	337
8/10/2001	18:00	14.45	15.75	2.93	16.89	337
8/10/2001	18:30	14.46	15.75	2.91	16.87	332
8/10/2001	19:00	14.47	15.76	2.91	16.87	332
8/10/2001	19:30	14.47	15.76	2.91	16.87	332
8/10/2001	20:00	14.48	15.76	2.89	16.85	327
8/10/2001	20:30	14.49	15.77	2.89	16.85	327
8/10/2001	21:00	14.51	15.77	2.84	16.80	317
8/10/2001	21:30	14.52	15.77	2.82	16.78	312
8/10/2001	22:00	14.52	15.78	2.84	16.80	317
8/10/2001	22:30	14.54	15.79	2.82	16.78	312
8/10/2001	23:00	14.55	15.79	2.79	16.75	307
8/10/2001	23:30	14.56	15.80	2.79	16.75	307
8/11/2001	0:00	14.57	15.80	2.77	16.73	302
8/11/2001	0:30	14.58	15.81	2.77	16.73	302
8/11/2001	1:00	14.58	15.82	2.79	16.75	307
8/11/2001	1:30	14.58	15.82	2.79	16.75	307
8/11/2001	2:00	14.59	15.83	2.79	16.75	307
8/11/2001	2:30	14.60	15.83	2.77	16.73	302
8/11/2001	3:00	14.60	15.83	2.77	16.73	302
8/11/2001	3:30	14.60	15.83	2.77	16.73	302
8/11/2001	4:00	14.60	15.84	2.79	16.75	307
8/11/2001	4:30	14.60	15.84	2.79	16.75	307
8/11/2001	5:00	14.61	15.84	2.77	16.73	302
8/11/2001	5:30	14.60	15.84	2.79	16.75	307
8/11/2001	6:00	14.60	15.83	2.77	16.73	302
8/11/2001	6:30	14.60	15.83	2.77	16.73	302
8/11/2001	7:00	14.60	15.83	2.77	16.73	302
8/11/2001	7:30	14.59	15.83	2.79	16.75	307
8/11/2001	8:00	14.59	15.83	2.79	16.75	307
8/11/2001	8:30	14.58	15.83	2.81	16.77	312
8/11/2001	9:00	14.57	15.83	2.84	16.80	317
8/11/2001	9:30	14.56	15.82	2.84	16.80	317
8/11/2001	10:00	14.55	15.82	2.86	16.82	321
8/11/2001	10:30	14.55	15.81	2.84	16.80	317
8/11/2001	11:00	14.54	15.81	2.86	16.82	321
8/11/2001	11:30	14.53	15.80	2.86	16.82	321
8/11/2001	12:00	14.52	15.80	2.88	16.84	326
8/11/2001	12:30	14.52	15.80	2.88	16.84	326
8/11/2001	13:00	14.50	15.80	2.93	16.89	336
8/11/2001	13:30	14.49	15.80	2.95	16.91	341
8/11/2001	14:00	14.49	15.79	2.93	16.89	336
8/11/2001	14:30	14.49	15.79	2.93	16.89	336

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/11/2001	15:00	14.47	15.78	2.95	16.91	340
8/11/2001	15:30	14.48	15.78	2.93	16.89	336
8/11/2001	16:00	14.45	15.78	3.00	16.96	352
8/11/2001	16:30	14.47	15.78	2.95	16.91	340
8/11/2001	17:00	14.48	15.78	2.93	16.89	336
8/11/2001	17:30	14.48	15.78	2.93	16.89	336
8/11/2001	18:00	14.48	15.78	2.93	16.89	335
8/11/2001	18:30	14.47	15.78	2.95	16.91	340
8/11/2001	19:00	14.47	15.78	2.95	16.91	340
8/11/2001	19:30	14.47	15.78	2.95	16.91	340
8/11/2001	20:00	14.47	15.78	2.95	16.91	340
8/11/2001	20:30	14.49	15.78	2.90	16.86	331
8/11/2001	21:00	14.49	15.78	2.90	16.86	331
8/11/2001	21:30	14.49	15.78	2.90	16.86	330
8/11/2001	22:00	14.50	15.78	2.88	16.84	326
8/11/2001	22:30	14.50	15.78	2.88	16.84	326
8/11/2001	23:00	14.51	15.78	2.86	16.82	321
8/11/2001	23:30	14.52	15.78	2.83	16.79	316
8/12/2001	0:00	14.52	15.78	2.83	16.79	316
8/12/2001	0:30	14.52	15.78	2.83	16.79	316
8/12/2001	1:00	14.53	15.78	2.81	16.77	311
8/12/2001	1:30	14.53	15.78	2.81	16.77	311
8/12/2001	2:00	14.54	15.78	2.79	16.75	306
8/12/2001	2:30	14.54	15.78	2.79	16.75	306
8/12/2001	3:00	14.53	15.77	2.79	16.75	306
8/12/2001	3:30	14.54	15.77	2.76	16.72	301
8/12/2001	4:00	14.53	15.77	2.79	16.75	306
8/12/2001	4:30	14.52	15.77	2.81	16.77	311
8/12/2001	5:00	14.52	15.77	2.81	16.77	311
8/12/2001	5:30	14.50	15.76	2.83	16.79	316
8/12/2001	6:00	14.50	15.76	2.83	16.79	316
8/12/2001	6:30	14.50	15.75	2.81	16.77	311
8/12/2001	7:00	14.49	15.74	2.81	16.77	311
8/12/2001	7:30	14.48	15.74	2.83	16.79	316
8/12/2001	8:00	14.47	15.74	2.86	16.82	320
8/12/2001	8:30	14.47	15.74	2.85	16.81	320
8/12/2001	9:00	14.45	15.72	2.85	16.81	320
8/12/2001	9:30	14.45	15.72	2.85	16.81	320
8/12/2001	10:00	14.44	15.71	2.85	16.81	320
8/12/2001	10:30	14.44	15.71	2.85	16.81	320
8/12/2001	11:00	14.43	15.71	2.88	16.84	325
8/12/2001	11:30	14.42	15.70	2.88	16.84	325
8/12/2001	12:00	14.43	15.71	2.88	16.84	325

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/12/2001	12:30	14.43	15.71	2.88	16.84	325
8/12/2001	13:00	14.44	15.70	2.83	16.79	315
8/12/2001	13:30	14.45	15.70	2.81	16.77	310
8/12/2001	14:00	14.44	15.69	2.81	16.77	310
8/12/2001	14:30	14.44	15.69	2.81	16.77	310
8/12/2001	15:00	14.44	15.69	2.81	16.77	310
8/12/2001	15:30	14.44	15.69	2.81	16.77	310
8/12/2001	16:00	14.42	15.69	2.85	16.81	320
8/12/2001	16:30	14.42	15.69	2.85	16.81	320
8/12/2001	17:00	14.41	15.68	2.85	16.81	320
8/12/2001	17:30	14.42	15.68	2.83	16.79	315
8/12/2001	18:00	14.42	15.68	2.83	16.79	315
8/12/2001	18:30	14.45	15.68	2.76	16.72	301
8/12/2001	19:00	14.44	15.68	2.78	16.74	305
8/12/2001	19:30	14.44	15.68	2.78	16.74	305
8/12/2001	20:00	14.43	15.68	2.81	16.77	310
8/12/2001	20:30	14.42	15.68	2.83	16.79	315
8/12/2001	21:00	14.42	15.68	2.83	16.79	315
8/12/2001	21:30	14.43	15.69	2.83	16.79	315
8/12/2001	22:00	14.43	15.70	2.85	16.81	320
8/12/2001	22:30	14.44	15.70	2.83	16.79	315
8/12/2001	23:00	14.44	15.71	2.85	16.81	320
8/12/2001	23:30	14.45	15.71	2.83	16.79	315
8/13/2001	0:00	14.45	15.71	2.83	16.79	315
8/13/2001	0:30	14.45	15.71	2.83	16.79	315
8/13/2001	1:00	14.47	15.72	2.81	16.77	310
8/13/2001	1:30	14.47	15.73	2.83	16.79	315
8/13/2001	2:00	14.48	15.73	2.81	16.77	310
8/13/2001	2:30	14.49	15.74	2.80	16.76	310
8/13/2001	3:00	14.50	15.74	2.78	16.74	305
8/13/2001	3:30	14.50	15.74	2.78	16.74	305
8/13/2001	4:00	14.50	15.75	2.80	16.76	310
8/13/2001	4:30	14.51	15.76	2.80	16.76	310
8/13/2001	5:00	14.51	15.76	2.80	16.76	310
8/13/2001	5:30	14.51	15.77	2.83	16.79	315
8/13/2001	6:00	14.52	15.77	2.80	16.76	310
8/13/2001	6:30	14.52	15.77	2.80	16.76	310
8/13/2001	7:00	14.52	15.77	2.80	16.76	310
8/13/2001	7:30	14.52	15.78	2.83	16.79	314
8/13/2001	8:00	14.52	15.78	2.83	16.79	314
8/13/2001	8:30	14.54	15.78	2.78	16.74	305
8/13/2001	9:00	14.54	15.78	2.78	16.74	305
8/13/2001	9:30	14.54	15.78	2.78	16.74	305



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/13/2001	10:00	14.55	15.78	2.76	16.72	300
8/13/2001	10:30	14.55	15.78	2.76	16.72	300
8/13/2001	11:00	14.55	15.79	2.78	16.74	305
8/13/2001	11:30	14.54	15.79	2.80	16.76	309
8/13/2001	12:00	14.55	15.80	2.80	16.76	309
8/13/2001	12:30	14.55	15.80	2.80	16.76	309
8/13/2001	13:00	14.55	15.80	2.80	16.76	309
8/13/2001	13:30	14.55	15.80	2.80	16.76	309
8/13/2001	14:00	14.55	15.80	2.80	16.76	309
8/13/2001	14:30	14.55	15.80	2.80	16.76	309
8/13/2001	15:00	14.55	15.80	2.80	16.76	309
8/13/2001	15:30	14.54	15.80	2.83	16.79	314
8/13/2001	16:00	14.54	15.80	2.83	16.79	314
8/13/2001	16:30	14.54	15.79	2.80	16.76	309
8/13/2001	17:00	14.53	15.79	2.82	16.78	314
8/13/2001	17:30	14.52	15.78	2.82	16.78	314
8/13/2001	18:00	14.52	15.78	2.82	16.78	314
8/13/2001	18:30	14.52	15.78	2.82	16.78	314
8/13/2001	19:00	14.52	15.77	2.80	16.76	309
8/13/2001	19:30	14.52	15.77	2.80	16.76	309
8/13/2001	20:00	14.51	15.77	2.82	16.78	314
8/13/2001	20:30	14.51	15.77	2.82	16.78	314
8/13/2001	21:00	14.51	15.76	2.80	16.76	309
8/13/2001	21:30	14.50	15.76	2.82	16.78	314
8/13/2001	22:00	14.50	15.76	2.82	16.78	314
8/13/2001	22:30	14.50	15.76	2.82	16.78	314
8/13/2001	23:00	14.50	15.75	2.80	16.76	309
8/13/2001	23:30	14.50	15.75	2.80	16.76	309
8/14/2001	0:00	14.50	15.75	2.80	16.76	309
8/14/2001	0:30	14.50	15.75	2.80	16.76	309
8/14/2001	1:00	14.50	15.74	2.78	16.74	304
8/14/2001	1:30	14.50	15.74	2.78	16.74	304
8/14/2001	2:00	14.49	15.74	2.80	16.76	309
8/14/2001	2:30	14.49	15.74	2.80	16.76	309
8/14/2001	3:00	14.49	15.74	2.80	16.76	309
8/14/2001	3:30	14.48	15.73	2.80	16.76	309
8/14/2001	4:00	14.48	15.73	2.80	16.76	309
8/14/2001	4:30	14.48	15.73	2.80	16.76	309
8/14/2001	5:00	14.48	15.73	2.80	16.76	309
8/14/2001	5:30	14.47	15.72	2.80	16.76	309
8/14/2001	6:00	14.47	15.72	2.80	16.76	309
8/14/2001	6:30	14.47	15.71	2.78	16.74	304
8/14/2001	7:00	14.47	15.71	2.78	16.74	304

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/14/2001	7:30	14.47	15.72	2.80	16.76	309
8/14/2001	8:00	14.47	15.72	2.80	16.76	308
8/14/2001	8:30	14.47	15.73	2.82	16.78	313
8/14/2001	9:00	14.47	15.73	2.82	16.78	313
8/14/2001	9:30	14.47	15.73	2.82	16.78	313
8/14/2001	10:00	14.47	15.73	2.82	16.78	313
8/14/2001	10:30	14.48	15.74	2.82	16.78	313
8/14/2001	11:00	14.48	15.74	2.82	16.78	313
8/14/2001	11:30	14.48	15.74	2.82	16.78	313
8/14/2001	12:00	14.49	15.75	2.82	16.78	313
8/14/2001	12:30	14.49	15.75	2.82	16.78	313
8/14/2001	13:00	14.49	15.75	2.82	16.78	313
8/14/2001	13:30	14.48	15.76	2.87	16.83	323
8/14/2001	14:00	14.47	15.76	2.89	16.85	328
8/14/2001	14:30	14.48	15.76	2.87	16.83	323
8/14/2001	15:00	14.47	15.77	2.91	16.87	332
8/14/2001	15:30	14.47	15.77	2.91	16.87	332
8/14/2001	16:00	14.46	15.77	2.93	16.89	337
8/14/2001	16:30	14.46	15.77	2.93	16.89	337
8/14/2001	17:00	14.47	15.77	2.91	16.87	332
8/14/2001	17:30	14.47	15.77	2.91	16.87	332
8/14/2001	18:00	14.47	15.77	2.91	16.87	332
8/14/2001	18:30	14.45	15.77	2.96	16.92	342
8/14/2001	18:34	-	-	-	<b>16.92</b>	342
8/14/2001	19:00	14.45	15.77	3.02	16.90	339
8/14/2001	19:20	-	-	-	<b>16.92</b>	<b>345.4</b>
8/14/2001	19:30	14.45	15.78	3.03	16.91	341
8/14/2001	19:54	-	-	-	<b>16.92</b>	342
8/14/2001	20:00	14.45	15.79	3.04	16.92	343
8/14/2001	21:00	14.46	15.37	2.09	<b>16.93</b>	345
8/14/2001	21:30	14.47	15.40	2.14	16.98	363
8/14/2001	22:00	14.47	15.39	2.12	16.96	351
8/14/2001	22:30	14.47	15.39	2.11	16.95	351
8/14/2001	23:00	14.47	15.39	2.11	16.95	351
8/14/2001	23:30	14.48	15.38	2.07	16.91	340
8/15/2001	0:00	14.49	15.37	2.02	16.86	330
8/15/2001	0:30	14.50	15.37	2.00	16.84	325
8/15/2001	1:00	14.50	15.36	1.97	16.81	320
8/15/2001	1:30	14.51	15.35	1.93	16.77	310
8/15/2001	2:00	14.51	15.34	1.90	16.74	305
8/15/2001	2:30	14.51	15.34	1.90	16.74	305
8/15/2001	3:00	14.50	15.34	1.92	16.76	310
8/15/2001	3:30	14.50	15.33	1.90	16.74	305

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/15/2001	4:00	14.50	15.32	1.88	16.72	300
8/15/2001	4:30	14.50	15.33	1.90	16.74	305
8/15/2001	5:00	14.50	15.32	1.88	16.72	300
8/15/2001	5:30	14.50	15.33	1.90	16.74	304
8/15/2001	6:00	14.50	15.33	1.90	16.74	304
8/15/2001	6:30	14.50	15.33	1.90	16.74	304
8/15/2001	7:00	14.50	15.33	1.90	16.74	304
8/15/2001	7:30	14.49	15.33	1.92	16.76	309
8/15/2001	8:00	14.48	15.33	1.94	16.78	313
8/15/2001	8:30	14.47	15.32	1.94	16.78	313
8/15/2001	9:00	14.47	15.33	1.96	16.80	318
8/15/2001	9:30	14.47	15.33	1.96	16.80	318
8/15/2001	10:00	14.46	15.33	1.98	16.82	322
8/15/2001	10:30	14.45	15.34	2.03	16.87	332
8/15/2001	11:00	14.46	15.34	2.01	16.85	327
8/15/2001	11:30	14.45	15.35	2.05	16.89	336
8/15/2001	12:00	14.45	15.37	2.10	16.94	346
8/15/2001	12:33	-	-	-	<b>16.94</b>	347
8/15/2001	13:30	14.60	15.31	1.63	16.94	347
8/15/2001	13:32	-	-	-	<b>16.94</b>	347
8/15/2001	14:00	14.62	15.34	1.66	16.97	357
8/15/2001	14:30	14.62	15.35	1.68	16.99	368
8/15/2001	15:00	14.63	15.34	1.63	16.94	348
8/15/2001	15:30	14.63	15.36	1.68	16.99	368
8/15/2001	16:00	14.62	15.36	1.70	17.01	379
8/15/2001	16:30	14.62	15.37	1.73	17.04	391
8/15/2001	17:00	14.62	15.37	1.73	17.04	391
8/15/2001	17:30	14.62	15.38	1.75	17.06	402
8/15/2001	18:00	14.62	15.38	1.75	17.06	402
8/15/2001	18:30	14.65	15.39	1.71	17.02	380
8/15/2001	19:00	14.65	15.37	1.66	16.97	358
8/15/2001	19:30	14.65	15.37	1.66	16.97	358
8/15/2001	20:00	14.65	15.36	1.64	16.95	348
8/15/2001	20:30	14.66	15.34	1.57	16.88	334
8/15/2001	21:00	14.67	15.34	1.55	16.86	329
8/15/2001	21:30	14.66	15.32	1.52	16.83	324
8/15/2001	22:00	14.67	15.31	1.48	16.79	315
8/15/2001	22:30	14.67	15.30	1.46	16.77	310
8/15/2001	23:00	14.67	15.30	1.46	16.77	310
8/15/2001	23:30	14.67	15.30	1.46	16.77	310
8/16/2001	0:00	14.67	15.30	1.46	16.77	310
8/16/2001	0:30	14.68	15.30	1.43	16.74	305
8/16/2001	1:00	14.69	15.30	1.41	16.72	301

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/16/2001	1:30	14.69	15.31	1.43	16.74	305
8/16/2001	2:00	14.69	15.31	1.43	16.74	306
8/16/2001	2:30	14.70	15.31	1.41	16.72	301
8/16/2001	3:00	14.71	15.32	1.41	16.72	301
8/16/2001	3:30	14.71	15.33	1.44	16.75	306
8/16/2001	4:00	14.71	15.33	1.44	16.75	306
8/16/2001	4:30	14.72	15.34	1.44	16.75	306
8/16/2001	5:00	14.72	15.34	1.44	16.75	306
8/16/2001	5:30	14.72	15.34	1.44	16.75	306
8/16/2001	6:00	14.72	15.34	1.44	16.75	306
8/16/2001	6:30	14.72	15.35	1.46	16.77	311
8/16/2001	7:00	14.73	15.35	1.44	16.75	306
8/16/2001	7:30	14.73	15.35	1.44	16.75	306
8/16/2001	8:00	14.73	15.35	1.44	16.75	306
8/16/2001	8:30	14.73	15.36	1.46	16.77	311
8/16/2001	9:00	14.73	15.36	1.46	16.77	311
8/16/2001	9:30	14.73	15.36	1.46	16.77	311
8/16/2001	10:00	14.73	15.37	1.49	16.80	316
8/16/2001	10:30	14.73	15.37	1.49	16.80	316
8/16/2001	11:00	14.73	15.37	1.49	16.80	316
8/16/2001	11:30	14.73	15.37	1.49	16.80	316
8/16/2001	12:00	14.72	15.37	1.51	16.82	321
8/16/2001	12:30	14.72	15.37	1.51	16.82	321
8/16/2001	13:00	14.72	15.37	1.51	16.82	321
8/16/2001	13:30	14.72	15.37	1.51	16.82	322
8/16/2001	14:00	14.71	15.38	1.56	16.87	331
8/16/2001	14:30	14.72	15.37	1.51	16.82	322
8/16/2001	15:00	14.72	15.38	1.53	16.84	327
8/16/2001	15:30	14.72	15.37	1.51	16.82	322
8/16/2001	16:00	14.72	15.38	1.54	16.85	327
8/16/2001	16:30	14.73	15.38	1.51	16.82	322
8/16/2001	17:00	14.74	15.38	1.49	16.80	317
8/16/2001	17:30	14.74	15.39	1.51	16.82	322
8/16/2001	18:00	14.73	15.39	1.54	16.85	327
8/16/2001	18:30	14.74	15.39	1.51	16.82	322
8/16/2001	19:00	14.74	15.40	1.54	16.85	327
8/16/2001	19:30	14.74	15.40	1.54	16.85	327
8/16/2001	20:00	14.74	15.40	1.54	16.85	327
8/16/2001	20:30	14.75	15.40	1.52	16.83	322
8/16/2001	21:00	14.76	15.41	1.52	16.83	323
8/16/2001	21:30	14.76	15.42	1.54	16.85	327
8/16/2001	22:00	14.77	15.42	1.52	16.83	323
8/16/2001	22:30	14.77	15.43	1.54	16.85	328

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/16/2001	23:00	14.78	15.44	1.54	16.85	328
8/16/2001	23:30	14.79	15.44	1.52	16.83	323
8/17/2001	0:00	14.79	15.44	1.52	16.83	323
8/17/2001	0:30	14.79	15.45	1.54	16.85	328
8/17/2001	1:00	14.80	15.46	1.54	16.85	328
8/17/2001	1:30	14.81	15.47	1.54	16.85	328
8/17/2001	2:00	14.81	15.47	1.54	16.85	328
8/17/2001	2:30	14.82	15.47	1.52	16.83	323
8/17/2001	3:00	14.82	15.48	1.54	16.85	328
8/17/2001	3:30	14.82	15.49	1.57	16.88	333
8/17/2001	4:00	14.83	15.50	1.57	16.88	333
8/17/2001	4:30	14.84	15.50	1.54	16.85	328
8/17/2001	5:00	14.84	15.50	1.54	16.85	328
8/17/2001	5:30	14.84	15.51	1.57	16.88	333
8/17/2001	6:00	14.84	15.51	1.57	16.88	333
8/17/2001	6:30	14.85	15.52	1.57	16.88	333
8/17/2001	7:00	14.85	15.52	1.57	16.88	334
8/17/2001	7:30	14.85	15.53	1.59	16.90	338
8/17/2001	8:00	14.85	15.53	1.59	16.90	338
8/17/2001	8:30	14.84	15.53	1.61	16.92	343
8/17/2001	9:00	14.85	15.54	1.61	16.92	343
8/17/2001	9:30	14.85	15.54	1.62	16.93	344
8/17/2001	10:00	14.84	15.55	1.66	16.97	359
8/17/2001	10:30	14.83	15.55	1.68	16.99	370
8/17/2001	11:00	14.84	15.56	1.69	17.00	370
8/17/2001	11:30	14.85	15.56	1.66	16.97	359
8/17/2001	12:00	14.86	15.56	1.64	16.95	349
8/17/2001	12:30	14.85	15.56	1.66	16.97	360
8/17/2001	13:00	14.86	15.56	1.64	16.95	349
8/17/2001	13:30	14.87	15.57	1.64	16.95	349
8/17/2001	14:00	14.85	15.57	1.69	17.00	371
8/17/2001	14:30	14.85	15.57	1.69	17.00	371
8/17/2001	15:00	14.84	15.58	1.73	17.04	393
8/17/2001	15:30	14.85	15.58	1.71	17.02	383
8/17/2001	16:00	14.85	15.58	1.71	17.02	383
8/17/2001	16:30	14.84	15.59	1.76	17.07	405
8/17/2001	17:00	14.85	15.59	1.73	17.04	394
8/17/2001	17:30	14.85	15.59	1.74	17.05	394
8/17/2001	18:00	14.84	15.59	1.76	17.07	405
8/17/2001	18:30	14.85	15.59	1.74	17.05	394
8/17/2001	19:00	14.85	15.60	1.76	17.07	406
8/17/2001	19:30	14.84	15.59	1.76	17.07	406
8/17/2001	20:00	14.85	15.59	1.74	17.05	395

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/17/2001	20:30	14.84	15.60	1.78	17.09	417
8/17/2001	21:00	14.84	15.59	1.76	17.07	406
8/17/2001	21:30	14.85	15.59	1.74	17.05	395
8/17/2001	22:00	14.86	15.58	1.69	17.00	374
8/17/2001	22:30	14.87	15.58	1.67	16.98	363
8/17/2001	23:00	14.87	15.58	1.67	16.98	363
8/17/2001	23:30	14.87	15.58	1.67	16.98	363
8/18/2001	0:00	14.87	15.58	1.67	16.98	363
8/18/2001	0:30	14.88	15.58	1.65	16.96	352
8/18/2001	1:00	14.88	15.58	1.65	16.96	353
8/18/2001	1:30	14.88	15.58	1.65	16.96	353
8/18/2001	2:00	14.88	15.58	1.65	16.96	353
8/18/2001	2:30	14.89	15.58	1.63	16.94	346
8/18/2001	3:00	14.88	15.58	1.65	16.96	353
8/18/2001	3:30	14.88	15.57	1.63	16.94	346
8/18/2001	4:00	14.88	15.57	1.63	16.94	346
8/18/2001	4:30	14.88	15.57	1.63	16.94	346
8/18/2001	5:00	14.88	15.57	1.63	16.94	346
8/18/2001	5:30	14.87	15.57	1.65	16.96	354
8/18/2001	6:00	14.87	15.57	1.65	16.96	354
8/18/2001	6:30	14.87	15.56	1.63	16.94	346
8/18/2001	7:00	14.87	15.56	1.63	16.94	346
8/18/2001	7:30	14.87	15.56	1.63	16.94	346
8/18/2001	8:00	14.86	15.56	1.65	16.96	355
8/18/2001	8:30	14.85	15.56	1.68	16.99	366
8/18/2001	9:00	14.85	15.56	1.68	16.99	366
8/18/2001	9:30	14.84	15.56	1.70	17.01	377
8/18/2001	10:00	14.84	15.56	1.70	17.01	377
8/18/2001	10:30	14.83	15.56	1.72	17.03	388
8/18/2001	11:00	14.83	15.56	1.72	17.03	388
8/18/2001	11:30	14.82	15.55	1.72	17.03	389
8/18/2001	12:00	14.81	15.55	1.75	17.06	400
8/18/2001	12:30	14.79	15.55	1.79	17.10	422
8/18/2001	13:00	14.79	15.55	1.79	17.10	422
8/18/2001	13:30	14.79	15.56	1.82	17.13	433
8/18/2001	14:00	14.78	15.56	1.84	17.15	444
8/18/2001	14:30	14.78	15.56	1.84	17.15	444
8/18/2001	15:00	14.78	15.56	1.84	17.15	445
8/18/2001	15:30	14.78	15.56	1.84	17.15	445
8/18/2001	16:00	14.77	15.56	1.86	17.17	456
8/18/2001	16:30	14.77	15.56	1.86	17.17	456
8/18/2001	17:00	14.77	15.56	1.87	17.18	456
8/18/2001	17:30	14.77	15.55	1.84	17.15	445

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/18/2001	18:00	14.77	15.53	1.80	17.11	423
8/18/2001	18:30	14.77	15.53	1.80	17.11	424
8/18/2001	19:00	14.77	15.52	1.77	17.08	413
8/18/2001	19:30	14.77	15.51	1.75	17.06	402
8/18/2001	20:00	14.77	15.50	1.73	17.04	391
8/18/2001	20:30	14.77	15.50	1.73	17.04	391
8/18/2001	21:00	14.77	15.50	1.73	17.04	391
8/18/2001	21:30	14.77	15.50	1.73	17.04	392
8/18/2001	22:00	14.77	15.50	1.73	17.04	392
8/18/2001	22:30	14.77	15.49	1.71	17.02	381
8/18/2001	23:00	14.76	15.49	1.73	17.04	392
8/18/2001	23:30	14.76	15.49	1.73	17.04	392
8/19/2001	0:00	14.76	15.48	1.71	17.02	381
8/19/2001	0:30	14.76	15.48	1.71	17.02	381
8/19/2001	1:00	14.76	15.48	1.71	17.02	382
8/19/2001	1:30	14.75	15.47	1.71	17.02	382
8/19/2001	2:00	14.75	15.47	1.71	17.02	382
8/19/2001	2:30	14.75	15.47	1.71	17.02	382
8/19/2001	3:00	14.75	15.47	1.71	17.02	382
8/19/2001	3:30	14.74	15.47	1.73	17.04	393
8/19/2001	4:00	14.74	15.47	1.73	17.04	394
8/19/2001	4:30	14.74	15.47	1.73	17.04	394
8/19/2001	5:00	14.74	15.46	1.71	17.02	383
8/19/2001	5:30	14.73	15.46	1.73	17.04	394
8/19/2001	6:00	14.72	15.45	1.74	17.05	394
8/19/2001	6:30	14.72	15.45	1.74	17.05	394
8/19/2001	7:00	14.72	15.44	1.71	17.02	383
8/19/2001	7:30	14.72	15.44	1.71	17.02	384
8/19/2001	8:00	14.71	15.44	1.74	17.05	395
8/19/2001	8:30	14.70	15.44	1.76	17.07	406
8/19/2001	9:00	14.69	15.43	1.76	17.07	406
8/19/2001	9:30	14.69	15.43	1.76	17.07	406
8/19/2001	10:00	14.69	15.43	1.76	17.07	406
8/19/2001	10:30	14.68	15.42	1.76	17.07	406
8/19/2001	11:00	14.68	15.41	1.74	17.05	396
8/19/2001	11:30	14.67	15.42	1.78	17.09	418
8/19/2001	12:00	14.67	15.41	1.76	17.07	407
8/19/2001	12:30	14.67	15.41	1.76	17.07	407
8/19/2001	13:00	14.66	15.40	1.76	17.07	407
8/19/2001	13:30	14.65	15.40	1.79	17.10	418
8/19/2001	14:00	14.65	15.40	1.79	17.10	418
8/19/2001	14:30	14.65	15.40	1.79	17.10	419
8/19/2001	15:00	14.64	15.39	1.79	17.10	419

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/19/2001	15:30	14.64	15.40	1.81	17.12	430
8/19/2001	16:00	14.62	15.40	1.86	17.17	452
8/19/2001	16:30	14.62	15.40	1.86	17.17	452
8/19/2001	17:00	14.62	15.39	1.83	17.14	441
8/19/2001	17:30	14.61	15.39	1.86	17.17	452
8/19/2001	18:00	14.61	15.38	1.83	17.14	442
8/19/2001	18:30	14.61	15.38	1.84	17.15	442
8/19/2001	19:00	14.61	15.37	1.81	17.12	431
8/19/2001	19:30	14.61	15.37	1.81	17.12	431
8/19/2001	20:00	14.61	15.37	1.81	17.12	431
8/19/2001	20:30	14.62	15.37	1.79	17.10	420
8/19/2001	21:00	14.62	15.37	1.79	17.10	421
8/19/2001	21:30	14.62	15.36	1.77	17.08	410
8/19/2001	22:00	14.62	15.36	1.77	17.08	410
8/19/2001	22:30	14.62	15.36	1.77	17.08	410
8/19/2001	23:00	14.62	15.36	1.77	17.08	410
8/19/2001	23:30	14.62	15.36	1.77	17.08	410
8/20/2001	0:00	14.62	15.36	1.77	17.08	410
8/20/2001	0:30	14.62	15.36	1.77	17.08	411
8/20/2001	1:00	14.62	15.36	1.77	17.08	411
8/20/2001	1:30	14.62	15.36	1.77	17.08	411
8/20/2001	2:00	14.62	15.36	1.77	17.08	411
8/20/2001	2:30	14.62	15.36	1.77	17.08	411
8/20/2001	3:00	14.62	15.36	1.77	17.08	411
8/20/2001	3:30	14.62	15.36	1.77	17.08	412
8/20/2001	4:00	14.62	15.36	1.77	17.08	412
8/20/2001	4:30	14.62	15.36	1.77	17.08	412
8/20/2001	5:00	14.62	15.36	1.77	17.08	412
8/20/2001	5:30	14.62	15.36	1.77	17.08	412
8/20/2001	6:00	14.62	15.37	1.80	17.11	423
8/20/2001	6:30	14.62	15.37	1.80	17.11	423
8/20/2001	7:00	14.63	15.37	1.77	17.08	413
8/20/2001	7:30	14.63	15.37	1.77	17.08	413
8/20/2001	8:00	14.63	15.37	1.77	17.08	413
8/20/2001	8:30	14.63	15.37	1.77	17.08	413
8/20/2001	9:00	14.63	15.37	1.78	17.09	413
8/20/2001	9:30	14.63	15.38	1.80	17.11	424
8/20/2001	10:00	14.64	15.38	1.78	17.09	413
8/20/2001	10:30	14.64	15.38	1.78	17.09	414
8/20/2001	11:00	14.64	15.39	1.80	17.11	425
8/20/2001	11:30	14.64	15.39	1.80	17.11	425
8/20/2001	12:00	14.65	15.40	1.80	17.11	425
8/20/2001	12:30	14.65	15.40	1.80	17.11	425



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/20/2001	13:00	14.65	15.40	1.80	17.11	425
8/20/2001	13:30	14.65	15.40	1.80	17.11	425
8/20/2001	14:00	14.65	15.41	1.82	17.13	437
8/20/2001	14:30	14.65	15.41	1.82	17.13	437
8/20/2001	15:00	14.65	15.42	1.85	17.16	448
8/20/2001	15:30	14.65	15.43	1.87	17.18	459
8/20/2001	16:00	14.65	15.43	1.87	17.18	459
8/20/2001	16:30	14.65	15.43	1.87	17.18	459
8/20/2001	17:00	14.65	15.43	1.87	17.18	459
8/20/2001	17:30	14.65	15.43	1.87	17.18	460
8/20/2001	18:00	14.66	15.43	1.85	17.16	449
8/20/2001	18:30	14.66	15.43	1.85	17.16	449
8/20/2001	19:00	14.67	15.43	1.83	17.14	438
8/20/2001	19:30	14.67	15.43	1.83	17.14	438
8/20/2001	20:00	14.67	15.43	1.83	17.14	438
8/20/2001	20:30	14.67	15.43	1.83	17.14	439
8/20/2001	21:00	14.68	15.43	1.81	17.12	428
8/20/2001	21:30	14.69	15.44	1.81	17.12	428
8/20/2001	22:00	14.69	15.44	1.81	17.12	428
8/20/2001	22:30	14.69	15.44	1.81	17.12	428
8/20/2001	23:00	14.69	15.44	1.81	17.12	428
8/20/2001	23:30	14.69	15.44	1.81	17.12	428
8/21/2001	0:00	14.70	15.44	1.78	17.09	418
8/21/2001	0:30	14.70	15.44	1.78	17.09	418
8/21/2001	1:00	14.70	15.44	1.79	17.10	418
8/21/2001	1:30	14.70	15.44	1.79	17.10	418
8/21/2001	2:00	14.71	15.45	1.79	17.10	418
8/21/2001	2:30	14.71	15.45	1.79	17.10	418
8/21/2001	3:00	14.71	15.45	1.79	17.10	419
8/21/2001	3:30	14.72	15.45	1.76	17.07	408
8/21/2001	4:00	14.72	15.46	1.79	17.10	419
8/21/2001	4:30	14.72	15.46	1.79	17.10	419
8/21/2001	5:00	14.72	15.46	1.79	17.10	419
8/21/2001	5:30	14.72	15.46	1.79	17.10	419
8/21/2001	6:00	14.72	15.47	1.81	17.12	430
8/21/2001	6:30	14.72	15.47	1.81	17.12	431
8/21/2001	7:00	14.72	15.47	1.81	17.12	431
8/21/2001	7:30	14.72	15.47	1.81	17.12	431
8/21/2001	8:00	14.72	15.47	1.81	17.12	431
8/21/2001	8:30	14.72	15.47	1.81	17.12	431
8/21/2001	9:00	14.71	15.47	1.84	17.15	442
8/21/2001	9:30	14.72	15.47	1.81	17.12	431
8/21/2001	10:00	14.72	15.48	1.84	17.15	443

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/21/2001	10:30	14.72	15.48	1.84	17.15	443
8/21/2001	11:00	14.72	15.49	1.86	17.17	454
8/21/2001	11:30	14.72	15.49	1.86	17.17	454
8/21/2001	12:00	14.71	15.50	1.91	17.22	476
8/21/2001	12:30	14.72	15.49	1.86	17.17	454
8/21/2001	13:00	14.72	15.50	1.88	17.19	465
8/21/2001	13:30	14.72	15.50	1.88	17.19	466
8/21/2001	14:00	14.72	15.50	1.89	17.20	466
8/21/2001	14:30	14.72	15.50	1.89	17.20	466
8/21/2001	15:00	14.71	15.52	1.95	17.26	499
8/21/2001	15:30	14.72	15.52	1.93	17.24	488
8/21/2001	16:00	14.71	15.52	1.96	17.27	499
8/21/2001	16:30	14.71	15.52	1.96	17.27	499
8/21/2001	17:00	14.71	15.52	1.96	17.27	500
8/21/2001	17:30	14.71	15.52	1.96	17.27	500
8/21/2001	18:00	14.72	15.52	1.93	17.24	489
8/21/2001	18:30	14.72	15.52	1.93	17.24	489
8/21/2001	19:00	14.72	15.52	1.93	17.24	489
8/21/2001	19:30	14.72	15.52	1.93	17.24	489
8/21/2001	20:00	14.73	15.52	1.91	17.22	478
8/21/2001	20:30	14.73	15.51	1.89	17.20	468
8/21/2001	21:00	14.74	15.51	1.87	17.18	457
8/21/2001	21:30	14.74	15.51	1.87	17.18	457
8/21/2001	22:00	14.74	15.51	1.87	17.18	457
8/21/2001	22:30	14.74	15.50	1.84	17.15	446
8/21/2001	23:00	14.74	15.50	1.84	17.15	446
8/21/2001	23:30	14.74	15.50	1.85	17.16	447
8/22/2001	0:00	14.74	15.50	1.85	17.16	447
8/22/2001	0:30	14.74	15.50	1.85	17.16	447
8/22/2001	1:00	14.74	15.50	1.85	17.16	447
8/22/2001	1:30	14.74	15.50	1.85	17.16	447
8/22/2001	2:00	14.74	15.50	1.85	17.16	447
8/22/2001	2:30	14.74	15.50	1.85	17.16	447
8/22/2001	3:00	14.74	15.49	1.82	17.13	437
8/22/2001	3:30	14.74	15.49	1.82	17.13	437
8/22/2001	4:00	14.74	15.49	1.83	17.14	437
8/22/2001	4:30	14.74	15.48	1.80	17.11	426
8/22/2001	5:00	14.74	15.48	1.80	17.11	426
8/22/2001	5:30	14.74	15.48	1.80	17.11	426
8/22/2001	6:00	14.74	15.47	1.78	17.09	416
8/22/2001	6:30	14.73	15.47	1.80	17.11	427
8/22/2001	7:00	14.72	15.47	1.83	17.14	438
8/22/2001	7:30	14.72	15.47	1.83	17.14	438

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/22/2001	8:00	14.72	15.47	1.83	17.14	438
8/22/2001	8:30	14.72	15.47	1.83	17.14	438
8/22/2001	9:00	14.71	15.46	1.83	17.14	438
8/22/2001	9:30	14.71	15.46	1.83	17.14	439
8/22/2001	10:00	14.70	15.45	1.83	17.14	439
8/22/2001	10:30	14.69	15.45	1.85	17.16	450
8/22/2001	11:00	14.69	15.44	1.83	17.14	439
8/22/2001	11:30	14.69	15.44	1.83	17.14	439
8/22/2001	12:00	14.69	15.44	1.83	17.14	439
8/22/2001	12:30	14.70	15.44	1.81	17.12	429
8/22/2001	13:00	14.70	15.44	1.81	17.12	429
8/22/2001	13:30	14.70	15.44	1.81	17.12	429
8/22/2001	14:00	14.69	15.44	1.83	17.14	440
8/22/2001	14:30	14.69	15.44	1.83	17.14	440
8/22/2001	15:00	14.67	15.44	1.88	17.19	462
8/22/2001	15:30	14.66	15.44	1.90	17.21	473
8/22/2001	16:00	14.66	15.44	1.90	17.21	473
8/22/2001	16:30	14.66	15.44	1.90	17.21	474
8/22/2001	17:00	14.65	15.44	1.93	17.24	485
8/22/2001	17:30	14.65	15.44	1.93	17.24	485
8/22/2001	18:00	14.65	15.42	1.88	17.19	463
8/22/2001	18:30	14.65	15.41	1.86	17.17	452
8/22/2001	19:00	14.65	15.41	1.86	17.17	452
8/22/2001	19:30	14.65	15.40	1.83	17.14	442
8/22/2001	20:00	14.65	15.40	1.84	17.15	442
8/22/2001	20:30	14.65	15.40	1.84	17.15	442
8/22/2001	21:00	14.65	15.40	1.84	17.15	442
8/22/2001	21:30	14.65	15.40	1.84	17.15	442
8/22/2001	22:00	14.65	15.39	1.81	17.12	431
8/22/2001	22:30	14.66	15.40	1.81	17.12	432
8/22/2001	23:00	14.66	15.39	1.79	17.10	421
8/22/2001	23:30	14.66	15.39	1.79	17.10	421
8/23/2001	0:00	14.66	15.39	1.79	17.10	421
8/23/2001	0:30	14.67	15.39	1.77	17.08	410
8/23/2001	1:00	14.67	15.38	1.75	17.06	399
8/23/2001	1:30	14.67	15.39	1.77	17.08	410
8/23/2001	2:00	14.67	15.38	1.75	17.06	400
8/23/2001	2:30	14.67	15.38	1.75	17.06	400
8/23/2001	3:00	14.66	15.38	1.77	17.08	411
8/23/2001	3:30	14.66	15.38	1.77	17.08	411
8/23/2001	4:00	14.67	15.38	1.75	17.06	400
8/23/2001	4:30	14.66	15.38	1.77	17.08	411
8/23/2001	5:00	14.66	15.37	1.75	17.06	401

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/23/2001	5:30	14.66	15.37	1.75	17.06	401
8/23/2001	6:00	14.66	15.37	1.75	17.06	401
8/23/2001	6:30	14.66	15.37	1.75	17.06	401
8/23/2001	7:00	14.65	15.37	1.77	17.08	412
8/23/2001	7:30	14.65	15.37	1.77	17.08	412
8/23/2001	8:00	14.64	15.37	1.80	17.11	423
8/23/2001	8:30	14.64	15.37	1.80	17.11	424
8/23/2001	9:00	14.63	15.36	1.80	17.11	424
8/23/2001	9:30	14.64	15.36	1.77	17.08	413
8/23/2001	10:00	14.65	15.37	1.77	17.08	413
8/23/2001	10:30	14.63	15.36	1.80	17.11	424
8/23/2001	11:00	14.62	15.36	1.82	17.13	435
8/23/2001	11:30	14.62	15.36	1.82	17.13	435
8/23/2001	12:00	14.62	15.37	1.85	17.16	447
8/23/2001	12:30	14.62	15.37	1.85	17.16	447
8/23/2001	13:00	14.62	15.37	1.85	17.16	447
8/23/2001	13:30	14.62	15.37	1.85	17.16	447
8/23/2001	14:00	14.62	15.37	1.85	17.16	447
8/23/2001	14:30	14.62	15.37	1.85	17.16	447
8/23/2001	15:00	14.62	15.38	1.87	17.18	458
8/23/2001	15:30	14.62	15.37	1.85	17.16	448
8/23/2001	16:00	14.62	15.37	1.85	17.16	448
8/23/2001	16:30	14.62	15.37	1.85	17.16	448
8/23/2001	17:00	14.62	15.37	1.85	17.16	448
8/23/2001	17:30	14.62	15.37	1.85	17.16	448
8/23/2001	18:00	14.62	15.37	1.85	17.16	448
8/23/2001	18:30	14.62	15.37	1.85	17.16	448
8/23/2001	19:00	14.62	15.36	1.83	17.14	438
8/23/2001	19:30	14.62	15.36	1.83	17.14	438
8/23/2001	20:00	14.62	15.36	1.83	17.14	438
8/23/2001	20:30	14.62	15.35	1.80	17.11	427
8/23/2001	21:00	14.63	15.36	1.80	17.11	427
8/23/2001	21:30	14.63	15.36	1.80	17.11	427
8/23/2001	22:00	14.63	15.36	1.81	17.12	428
8/23/2001	22:30	14.63	15.36	1.81	17.12	428
8/23/2001	23:00	14.64	15.35	1.76	17.07	406
8/23/2001	23:30	14.63	15.35	1.78	17.09	417
8/24/2001	0:00	14.63	15.35	1.78	17.09	417
8/24/2001	0:30	14.64	15.35	1.76	17.07	406
8/24/2001	1:00	14.64	15.36	1.78	17.09	417
8/24/2001	1:30	14.65	15.36	1.76	17.07	407
8/24/2001	2:00	14.65	15.36	1.76	17.07	407
8/24/2001	2:30	14.65	15.36	1.76	17.07	407

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/24/2001	3:00	14.65	15.36	1.76	17.07	407
8/24/2001	3:30	14.65	15.36	1.76	17.07	407
8/24/2001	4:00	14.65	15.36	1.76	17.07	407
8/24/2001	4:30	14.65	15.36	1.76	17.07	408
8/24/2001	5:00	14.65	15.36	1.76	17.07	408
8/24/2001	5:30	14.65	15.37	1.79	17.10	419
8/24/2001	6:00	14.65	15.37	1.79	17.10	419
8/24/2001	6:30	14.65	15.37	1.79	17.10	419
8/24/2001	7:00	14.65	15.37	1.79	17.10	419
8/24/2001	7:30	14.65	15.37	1.79	17.10	419
8/24/2001	8:00	14.65	15.37	1.79	17.10	420
8/24/2001	8:30	14.65	15.37	1.79	17.10	420
8/24/2001	9:00	14.65	15.37	1.79	17.10	420
8/24/2001	9:30	14.65	15.37	1.79	17.10	420
8/24/2001	10:00	14.65	15.37	1.79	17.10	420
8/24/2001	10:30	14.65	15.37	1.79	17.10	420
8/24/2001	11:00	14.65	15.37	1.79	17.10	420
8/24/2001	11:30	14.64	15.37	1.81	17.12	432
8/24/2001	12:00	14.64	15.37	1.81	17.12	432
8/24/2001	12:30	14.64	15.37	1.81	17.12	432
8/24/2001	13:00	14.63	15.38	1.86	17.17	454
8/24/2001	13:30	14.63	15.38	1.86	17.17	454
8/24/2001	14:00	14.63	15.39	1.88	17.19	465
8/24/2001	14:30	14.63	15.39	1.88	17.19	465
8/24/2001	15:00	14.63	15.39	1.88	17.19	466
8/24/2001	15:30	14.62	15.39	1.91	17.22	477
8/24/2001	16:00	14.62	15.40	1.93	17.24	488
8/24/2001	16:30	14.62	15.40	1.93	17.24	488
8/24/2001	17:00	14.62	15.40	1.93	17.24	488
8/24/2001	17:30	14.62	15.40	1.93	17.24	488
8/24/2001	18:00	14.63	15.40	1.91	17.22	477
8/24/2001	18:30	14.63	15.39	1.89	17.20	467
8/24/2001	19:00	14.63	15.38	1.86	17.17	456
8/24/2001	19:30	14.62	15.37	1.86	17.17	456
8/24/2001	20:00	14.63	15.37	1.84	17.15	445
8/24/2001	20:30	14.63	15.36	1.82	17.13	434
8/24/2001	21:00	14.63	15.36	1.82	17.13	434
8/24/2001	21:30	14.63	15.35	1.80	17.11	424
8/24/2001	22:00	14.63	15.35	1.80	17.11	424
8/24/2001	22:30	14.63	15.35	1.80	17.11	424
8/24/2001	23:00	14.63	15.34	1.77	17.08	413
8/24/2001	23:30	14.63	15.34	1.78	17.09	413
8/25/2001	0:00	14.63	15.34	1.78	17.09	413

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/25/2001	0:30	14.63	15.34	1.78	17.09	414
8/25/2001	1:00	14.63	15.34	1.78	17.09	414
8/25/2001	1:30	14.63	15.34	1.78	17.09	414
8/25/2001	2:00	14.63	15.34	1.78	17.09	414
8/25/2001	2:30	14.63	15.34	1.78	17.09	414
8/25/2001	3:00	14.63	15.34	1.78	17.09	414
8/25/2001	3:30	14.63	15.33	1.75	17.06	403
8/25/2001	4:00	14.62	15.33	1.78	17.09	415
8/25/2001	4:30	14.62	15.33	1.78	17.09	415
8/25/2001	5:00	14.62	15.33	1.78	17.09	415
8/25/2001	5:30	14.62	15.33	1.78	17.09	415
8/25/2001	6:00	14.62	15.33	1.78	17.09	415
8/25/2001	6:30	14.62	15.33	1.78	17.09	415
8/25/2001	7:00	14.62	15.33	1.78	17.09	415
8/25/2001	7:30	14.62	15.33	1.78	17.09	416
8/25/2001	8:00	14.61	15.32	1.78	17.09	416
8/25/2001	8:30	14.61	15.32	1.78	17.09	416
8/25/2001	9:00	14.61	15.33	1.80	17.11	427
8/25/2001	9:30	14.60	15.32	1.80	17.11	427
8/25/2001	10:00	14.60	15.32	1.80	17.11	427
8/25/2001	10:30	14.60	15.32	1.81	17.12	427
8/25/2001	11:00	14.60	15.32	1.81	17.12	428
8/25/2001	11:30	14.60	15.32	1.81	17.12	428
8/25/2001	12:00	14.59	15.32	1.83	17.14	439
8/25/2001	12:30	14.59	15.32	1.83	17.14	439
8/25/2001	13:00	14.58	15.32	1.85	<b>17.16</b>	450
8/25/2001	13:30	14.58	15.33	1.73	17.19	461
8/25/2001	14:00	14.58	15.33	1.73	17.19	462
8/25/2001	14:30	14.58	15.34	1.75	17.21	473
8/25/2001	15:00	14.58	15.34	1.75	17.21	473
8/25/2001	15:30	14.57	15.34	1.78	17.24	485
8/25/2001	16:00	14.57	15.34	1.78	17.24	485
8/25/2001	16:30	14.57	15.34	1.78	17.24	485
8/25/2001	17:00	14.56	15.34	1.80	17.26	497
8/25/2001	17:30	14.56	15.34	1.80	17.26	497
8/25/2001	18:00	14.56	15.34	1.80	17.26	497
8/25/2001	18:30	14.55	15.34	1.83	17.29	509
8/25/2001	19:00	14.55	15.34	1.83	17.29	509
8/25/2001	19:30	14.55	15.33	1.80	17.26	498
8/25/2001	20:00	14.55	15.32	1.78	17.24	488
8/25/2001	20:30	14.55	15.32	1.78	17.24	488
8/25/2001	21:00	14.55	15.31	1.76	17.22	477
8/25/2001	21:30	14.56	15.31	1.74	17.20	467

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/25/2001	22:00	14.56	15.30	1.71	17.17	456
8/25/2001	22:30	14.56	15.30	1.72	17.18	456
8/25/2001	23:00	14.56	15.30	1.72	17.18	457
8/25/2001	23:30	14.56	15.29	1.69	17.15	446
8/26/2001	0:00	14.56	15.30	1.72	17.18	457
8/26/2001	0:30	14.56	15.30	1.72	17.18	458
8/26/2001	1:00	14.56	15.29	1.70	17.16	447
8/26/2001	1:30	14.56	15.30	1.72	17.18	458
8/26/2001	2:00	14.56	15.30	1.72	17.18	458
8/26/2001	2:30	14.57	15.30	1.70	17.16	448
8/26/2001	3:00	14.57	15.30	1.70	17.16	448
8/26/2001	3:30	14.57	15.30	1.70	17.16	448
8/26/2001	4:00	14.57	15.30	1.70	17.16	449
8/26/2001	4:30	14.57	15.30	1.70	17.16	449
8/26/2001	5:00	14.57	15.30	1.70	17.16	449
8/26/2001	5:30	14.57	15.30	1.70	17.16	450
8/26/2001	6:00	14.57	15.30	1.70	17.16	450
8/26/2001	6:30	14.57	15.30	1.70	17.16	450
8/26/2001	7:00	14.59	15.30	1.66	17.12	429
8/26/2001	7:30	14.60	15.30	1.64	17.10	418
8/26/2001	8:00	14.60	15.30	1.64	17.10	418
8/26/2001	8:30	14.60	15.31	1.66	17.12	430
8/26/2001	9:00	14.60	15.31	1.66	17.12	430
8/26/2001	9:30	14.60	15.31	1.66	17.12	430
8/26/2001	10:00	14.60	15.31	1.66	17.12	431
8/26/2001	10:30	14.60	15.31	1.66	17.12	431
8/26/2001	11:00	14.60	15.32	1.69	17.15	442
8/26/2001	11:30	14.60	15.33	1.71	<b>17.17</b>	454
8/26/2001	12:00	14.60	15.34	1.70	17.19	463
8/26/2001	12:30	14.60	15.34	1.70	17.19	462
8/26/2001	13:00	14.60	15.36	1.74	17.23	482
8/26/2001	13:30	14.60	15.37	1.76	17.25	492
8/26/2001	14:00	14.60	15.37	1.76	17.25	491
8/26/2001	14:30	14.60	15.38	1.78	17.27	500
8/26/2001	15:00	14.60	15.38	1.78	17.27	499
8/26/2001	15:30	14.60	15.39	1.80	17.29	509
8/26/2001	16:00	14.57	15.38	1.84	17.33	529
8/26/2001	16:30	14.57	15.38	1.84	17.33	528
8/26/2001	17:00	14.57	15.39	1.86	17.35	538
8/26/2001	17:30	14.57	15.39	1.85	17.34	536
8/26/2001	18:00	14.57	15.38	1.83	17.32	524
8/26/2001	18:30	14.57	15.39	1.85	17.34	534
8/26/2001	19:00	14.57	15.39	1.85	17.34	532

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/26/2001	19:30	14.58	15.38	1.80	17.29	509
8/26/2001	20:00	14.59	15.38	1.77	17.26	497
8/26/2001	20:30	14.59	15.37	1.74	17.23	485
8/26/2001	21:00	14.60	15.37	1.72	17.21	472
8/26/2001	21:30	14.60	15.37	1.72	17.21	471
8/26/2001	22:00	14.60	15.37	1.71	17.20	470
8/26/2001	22:30	14.60	15.37	1.71	17.20	468
8/26/2001	23:00	14.61	15.37	1.68	17.17	456
8/26/2001	23:30	14.61	15.37	1.68	17.17	455
8/27/2001	0:00	14.62	15.37	1.66	17.15	442
8/27/2001	0:30	14.62	15.36	1.63	17.12	430
8/27/2001	1:00	14.62	15.36	1.63	17.12	429
8/27/2001	1:30	14.62	15.36	1.62	17.11	427
8/27/2001	2:00	14.62	15.36	1.62	17.11	426
8/27/2001	2:30	14.63	15.37	1.62	17.11	425
8/27/2001	3:00	14.64	15.37	1.59	17.08	412
8/27/2001	3:30	14.64	15.37	1.59	17.08	411
8/27/2001	4:00	14.64	15.37	1.59	17.08	410
8/27/2001	4:30	14.65	15.37	1.56	17.05	397
8/27/2001	5:00	14.65	15.37	1.56	17.05	396
8/27/2001	5:30	14.66	15.36	1.51	17.00	373
8/27/2001	6:00	14.65	15.36	1.53	17.02	383
8/27/2001	6:30	14.65	15.37	1.55	17.04	392
8/27/2001	7:00	14.65	15.37	1.55	17.04	391
8/27/2001	7:30	14.65	15.37	1.55	17.04	390
8/27/2001	8:00	14.65	15.37	1.54	17.03	388
8/27/2001	8:30	14.66	15.37	1.52	17.01	376
8/27/2001	9:00	14.65	15.37	1.54	17.03	386
8/27/2001	9:30	14.65	15.37	1.53	17.02	384
8/27/2001	10:00	14.65	15.37	1.53	17.02	383
8/27/2001	10:30	14.65	15.37	1.53	17.02	382
8/27/2001	11:00	14.65	15.37	1.53	17.02	380
8/27/2001	11:30	14.64	15.38	1.57	17.06	401
8/27/2001	12:00	14.62	15.38	1.61	17.10	422
8/27/2001	12:30	14.62	15.39	1.63	17.12	431
8/27/2001	13:00	14.62	15.39	1.63	17.12	430
8/27/2001	13:30	14.62	15.40	1.65	17.14	440
8/27/2001	14:00	14.62	15.40	1.65	17.14	438
8/27/2001	14:30	14.62	15.42	1.69	<b>17.18</b>	459
8/27/2001	15:00	14.61	15.43	1.88	17.22	479
8/27/2001	15:30	14.61	15.44	1.90	17.24	489
8/27/2001	16:00	14.62	15.46	1.92	17.26	498
8/27/2001	16:30	14.61	15.48	1.99	17.33	530



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/27/2001	17:00	14.61	15.50	2.03	17.37	551
8/27/2001	17:30	14.60	15.50	2.05	17.39	560
8/27/2001	18:00	14.60	15.50	2.05	17.39	559
8/27/2001	18:30	14.60	15.50	2.05	17.39	557
8/27/2001	19:00	14.60	15.49	2.02	17.36	545
8/27/2001	19:30	14.60	15.48	2.00	17.34	532
8/27/2001	20:00	14.61	15.47	1.95	17.29	509
8/27/2001	20:30	14.61	15.47	1.94	17.28	508
8/27/2001	21:00	14.62	15.45	1.87	17.21	473
8/27/2001	21:30	14.63	15.44	1.82	17.16	450
8/27/2001	22:00	14.64	15.43	1.77	17.11	427
8/27/2001	22:30	14.64	15.42	1.75	17.09	414
8/27/2001	23:00	14.65	15.42	1.72	17.06	402
8/27/2001	23:30	14.65	15.42	1.72	17.06	400
8/28/2001	0:00	14.65	15.42	1.72	17.06	399
8/28/2001	0:30	14.65	15.42	1.71	17.05	397
8/28/2001	1:00	14.65	15.42	1.71	17.05	396
8/28/2001	1:30	14.65	15.42	1.71	17.05	395
8/28/2001	2:00	14.65	15.43	1.73	17.07	404
8/28/2001	2:30	14.65	15.43	1.72	17.06	403
8/28/2001	3:00	14.65	15.43	1.72	17.06	401
8/28/2001	3:30	14.66	15.43	1.69	17.03	389
8/28/2001	4:00	14.66	15.44	1.71	17.05	398
8/28/2001	4:30	14.67	15.43	1.67	17.01	375
8/28/2001	5:00	14.67	15.44	1.69	17.03	385
8/28/2001	5:30	14.68	15.43	1.64	16.98	361
8/28/2001	6:00	14.68	15.43	1.63	16.97	360
8/28/2001	6:30	14.68	15.42	1.61	16.95	348
8/28/2001	7:00	14.68	15.42	1.60	16.94	348
8/28/2001	7:30	14.68	15.41	1.58	16.92	342
8/28/2001	8:00	14.68	15.41	1.58	16.92	341
8/28/2001	8:30	14.67	15.41	1.60	16.94	346
8/28/2001	9:00	14.67	15.41	1.59	16.93	345
8/28/2001	9:30	14.67	15.41	1.59	16.93	344
8/28/2001	10:00	14.66	15.41	1.61	16.95	349
8/28/2001	10:30	14.66	15.41	1.61	16.95	348
8/28/2001	11:00	14.65	15.42	1.65	16.99	368
8/28/2001	11:30	14.65	15.43	1.67	17.01	377
8/28/2001	12:00	14.65	15.44	1.69	17.03	387
8/28/2001	12:30	14.64	15.45	1.73	17.07	407
8/28/2001	13:00	14.64	15.47	1.78	17.12	428
8/28/2001	13:30	14.64	15.48	1.80	17.14	437
8/28/2001	14:00	14.62	15.50	1.88	17.22	480

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/28/2001	14:10	-	-	-	17.22	478
8/28/2001	14:30	14.63	15.53	2.07	17.27	503
8/28/2001	15:00	14.63	15.54	2.10	17.30	516
8/28/2001	15:30	14.62	15.56	2.17	17.37	551
8/28/2001	16:00	14.62	15.53	2.11	17.31	519
8/28/2001	16:30	14.62	15.54	2.13	17.33	532
8/28/2001	17:00	14.61	15.53	2.14	17.34	534
8/28/2001	17:30	14.61	15.53	2.14	17.34	536
8/28/2001	18:00	14.62	15.53	2.12	17.32	526
8/28/2001	18:30	14.61	15.52	2.13	17.33	528
8/28/2001	19:00	14.61	15.50	2.08	17.28	508
8/28/2001	19:30	14.61	15.47	2.02	17.22	476
8/28/2001	20:00	14.61	15.43	1.93	17.13	434
8/28/2001	20:30	14.62	15.41	1.86	17.06	403
8/28/2001	21:00	14.62	15.40	1.84	17.04	394
8/28/2001	21:30	14.62	15.39	1.82	17.02	384
8/28/2001	22:00	14.63	15.38	1.78	16.98	364
8/28/2001	22:30	14.62	15.37	1.79	16.99	366
8/28/2001	23:00	14.62	15.37	1.79	16.99	367
8/28/2001	23:30	14.62	15.36	1.77	16.97	358
8/29/2001	0:00	14.62	15.36	1.77	16.97	360
8/29/2001	0:30	14.62	15.35	1.75	16.95	350
8/29/2001	1:00	14.62	15.34	1.73	16.93	345
8/29/2001	1:30	14.62	15.34	1.74	16.94	346
8/29/2001	2:00	14.62	15.34	1.74	16.94	347
8/29/2001	2:30	14.61	15.34	1.77	16.97	357
8/29/2001	3:00	14.60	15.34	1.79	16.99	370
8/29/2001	3:30	14.60	15.34	1.80	17.00	371
8/29/2001	4:00	14.60	15.33	1.78	16.98	362
8/29/2001	4:30	14.60	15.33	1.78	16.98	364
8/29/2001	5:00	14.60	15.33	1.79	16.99	366
8/29/2001	5:30	14.60	15.32	1.77	16.97	356
8/29/2001	6:00	14.59	15.31	1.77	16.97	358
8/29/2001	6:30	14.58	15.31	1.80	17.00	371
8/29/2001	7:00	14.58	15.31	1.80	17.00	372
8/29/2001	7:30	14.58	15.30	1.78	16.98	363
8/29/2001	8:00	14.57	15.30	1.81	17.01	376
8/29/2001	8:30	14.57	15.30	1.81	17.01	377
8/29/2001	9:00	14.57	15.29	1.79	16.99	368
8/29/2001	9:30	14.56	15.29	1.82	17.02	381
8/29/2001	10:00	14.55	15.28	1.82	17.02	382
8/29/2001	10:30	14.55	15.28	1.82	17.02	384
8/29/2001	11:00	14.55	15.28	1.83	17.03	386

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/29/2001	11:30	14.54	15.28	1.85	17.05	398
8/29/2001	12:00	14.53	15.28	1.88	17.08	411
8/29/2001	12:30	14.53	15.28	1.88	17.08	413
8/29/2001	13:00	14.53	15.28	1.89	17.09	414
8/29/2001	13:30	14.52	15.28	1.91	17.11	427
8/29/2001	14:00	14.52	15.28	1.92	17.12	429
8/29/2001	14:30	14.52	15.28	1.92	17.12	430
8/29/2001	15:00	14.51	15.28	1.95	17.15	443
8/29/2001	15:30	14.51	15.27	1.93	17.13	434
8/29/2001	16:00	14.51	15.27	1.93	17.13	435
8/29/2001	16:30	14.51	15.27	1.94	17.14	437
8/29/2001	17:00	14.50	15.27	1.96	17.16	450
8/29/2001	17:15	-	-	-	<b>17.16</b>	449
8/29/2001	17:30	14.50	15.27	1.77	17.16	447
8/29/2001	18:00	14.50	15.26	1.74	17.13	434
8/29/2001	18:30	14.50	15.26	1.73	17.12	432
8/29/2001	19:00	14.50	15.25	1.71	17.10	418
8/29/2001	19:30	14.51	15.25	1.68	17.07	405
8/29/2001	20:00	14.50	15.25	1.70	17.09	413
8/29/2001	20:30	14.51	15.24	1.64	17.03	389
8/29/2001	21:00	14.51	15.24	1.64	17.03	387
8/29/2001	21:30	14.50	15.23	1.63	17.02	384
8/29/2001	22:00	14.50	15.23	1.63	17.02	382
8/29/2001	22:30	14.50	15.23	1.62	17.01	380
8/29/2001	23:00	14.51	15.23	1.60	16.99	366
8/29/2001	23:30	14.51	15.23	1.59	16.98	364
8/30/2001	0:00	14.51	15.23	1.59	16.98	361
8/30/2001	0:30	14.51	15.23	1.58	16.97	359
8/30/2001	1:00	14.52	15.23	1.55	16.94	347
8/30/2001	1:30	14.52	15.23	1.55	16.94	346
8/30/2001	2:00	14.52	15.23	1.54	16.93	345
8/30/2001	2:30	14.52	15.23	1.54	16.93	344
8/30/2001	3:00	14.52	15.23	1.53	16.92	343
8/30/2001	3:30	14.52	15.23	1.53	16.92	342
8/30/2001	4:00	14.52	15.23	1.52	16.91	341
8/30/2001	4:30	14.52	15.23	1.52	16.91	340
8/30/2001	5:00	14.52	15.23	1.51	16.90	339
8/30/2001	5:30	14.52	15.23	1.51	16.90	338
8/30/2001	6:00	14.52	15.23	1.50	16.89	337
8/30/2001	6:30	14.52	15.23	1.50	16.89	336
8/30/2001	7:00	14.52	15.23	1.49	16.88	335
8/30/2001	7:30	14.52	15.23	1.49	16.88	334
8/30/2001	8:00	14.52	15.23	1.48	16.87	333

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/30/2001	8:30	14.52	15.23	1.48	16.87	332
8/30/2001	9:00	14.52	15.23	1.47	16.86	331
8/30/2001	9:30	14.51	15.23	1.49	16.88	334
8/30/2001	10:00	14.50	15.23	1.51	16.90	338
8/30/2001	10:30	14.50	15.24	1.53	16.92	342
8/30/2001	11:00	14.51	15.25	1.52	16.91	341
8/30/2001	11:30	14.48	15.25	1.59	16.98	361
8/30/2001	12:00	14.47	15.27	1.65	17.04	392
8/30/2001	12:30	14.47	15.28	1.67	17.06	401
8/30/2001	13:00	14.47	15.31	1.73	<b>17.12</b>	431
8/30/2001	13:30	14.46	15.33	2.01	17.20	467
8/30/2001	14:00	14.45	15.34	2.06	17.25	492
8/30/2001	14:30	14.45	15.35	2.09	17.28	506
8/30/2001	15:00	14.45	15.38	2.16	17.35	541
8/30/2001	15:30	14.45	15.41	2.24	17.43	577
8/30/2001	16:00	14.45	15.46	2.36	17.55	661
8/30/2001	16:30	14.45	15.48	2.41	17.60	698
8/30/2001	17:00	14.45	15.51	2.49	17.68	750
8/30/2001	17:30	14.45	15.56	2.61	17.80	834
8/30/2001	18:00	14.44	15.59	2.71	17.90	903
8/30/2001	18:30	14.43	15.62	2.80	17.99	971
8/30/2001	19:00	14.43	15.62	2.81	18.00	975
8/30/2001	19:30	14.44	15.61	2.77	17.96	947
8/30/2001	20:00	14.45	15.55	2.62	17.81	839
8/30/2001	20:30	14.45	15.47	2.44	17.63	715
8/30/2001	21:00	14.45	15.38	2.24	17.43	576
8/30/2001	21:30	14.46	15.32	2.08	17.27	502
8/30/2001	22:00	14.47	15.28	1.97	17.16	450
8/30/2001	22:30	14.47	15.25	1.91	17.10	420
8/30/2001	23:00	14.47	15.23	1.87	17.06	401
8/30/2001	23:30	14.47	15.22	1.85	17.04	392
8/31/2001	0:00	14.47	15.22	1.86	17.05	395
8/31/2001	0:30	14.47	15.22	1.86	17.05	398
8/31/2001	1:00	14.47	15.21	1.85	17.04	390
8/31/2001	1:30	14.47	15.21	1.85	17.04	393
8/31/2001	2:00	14.48	15.20	1.81	17.00	374
8/31/2001	2:30	14.48	15.20	1.82	17.01	377
8/31/2001	3:00	14.47	15.19	1.82	17.01	380
8/31/2001	3:30	14.47	15.19	1.83	17.02	382
8/31/2001	4:00	14.47	15.19	1.84	17.03	385
8/31/2001	4:30	14.47	15.19	1.84	17.03	388
8/31/2001	5:00	14.47	15.19	1.85	17.04	391
8/31/2001	5:30	14.47	15.18	1.83	17.02	383

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/31/2001	6:00	14.47	15.18	1.84	17.03	386
8/31/2001	6:30	14.47	15.17	1.82	17.01	378
8/31/2001	7:00	14.47	15.17	1.83	17.02	381
8/31/2001	7:30	14.47	15.17	1.83	17.02	383
8/31/2001	8:00	14.47	15.17	1.84	17.03	386
8/31/2001	8:30	14.47	15.17	1.84	17.03	389
8/31/2001	9:00	14.47	15.16	1.83	17.02	381
8/31/2001	9:30	14.47	15.17	1.86	17.05	395
8/31/2001	10:00	14.47	15.17	1.86	17.05	398
8/31/2001	10:30	14.46	15.17	1.89	17.08	412
8/31/2001	11:00	14.46	15.17	1.90	17.09	414
8/31/2001	11:30	14.46	15.17	1.90	<b>17.09</b>	417
8/31/2001	12:00	14.46	15.17	1.63	17.09	417
8/31/2001	12:30	14.46	15.17	1.63	17.09	417
8/31/2001	13:00	14.46	15.17	1.63	17.09	417
8/31/2001	13:30	14.45	15.17	1.65	17.11	427
8/31/2001	14:00	14.45	15.18	1.68	17.14	438
8/31/2001	14:30	14.45	15.18	1.68	17.14	438
8/31/2001	15:00	14.45	15.19	1.70	17.16	449
8/31/2001	15:30	14.45	15.19	1.70	17.16	448
8/31/2001	16:00	14.45	15.19	1.70	17.16	448
8/31/2001	16:30	14.45	15.19	1.70	17.16	448
8/31/2001	17:00	14.45	15.19	1.70	17.16	448
8/31/2001	17:30	14.45	15.19	1.70	17.16	448
8/31/2001	18:00	14.45	15.19	1.70	17.16	447
8/31/2001	18:30	14.45	15.19	1.70	17.16	447
8/31/2001	19:00	14.45	15.18	1.67	17.13	436
8/31/2001	19:30	14.46	15.18	1.65	17.11	425
8/31/2001	20:00	14.45	15.18	1.67	17.13	436
8/31/2001	20:30	14.46	15.17	1.63	17.09	413
8/31/2001	21:00	14.46	15.17	1.63	17.09	413
8/31/2001	21:30	14.46	15.17	1.62	17.08	413
8/31/2001	22:00	14.46	15.17	1.62	17.08	413
8/31/2001	22:30	14.47	15.17	1.60	17.06	402
8/31/2001	23:00	14.47	15.17	1.60	17.06	401
8/31/2001	23:30	14.47	15.17	1.60	17.06	401
9/1/2001	0:00	14.47	15.17	1.60	17.06	401
9/1/2001	0:30	14.47	15.17	1.60	17.06	401
9/1/2001	1:00	14.47	15.17	1.60	17.06	400
9/1/2001	1:30	14.47	15.17	1.60	17.06	400
9/1/2001	2:00	14.47	15.17	1.60	17.06	400
9/1/2001	2:30	14.47	15.17	1.60	17.06	400
9/1/2001	3:00	14.47	15.16	1.57	17.03	389

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/1/2001	3:30	14.47	15.16	1.57	17.03	388
9/1/2001	4:00	14.47	15.17	1.60	17.06	399
9/1/2001	4:30	14.47	15.16	1.57	17.03	388
9/1/2001	5:00	14.47	15.16	1.57	17.03	388
9/1/2001	5:30	14.47	15.17	1.59	17.05	398
9/1/2001	6:00	14.47	15.16	1.57	17.03	387
9/1/2001	6:30	14.47	15.16	1.57	17.03	387
9/1/2001	7:00	14.47	15.16	1.57	17.03	387
9/1/2001	7:30	14.47	15.17	1.59	17.05	398
9/1/2001	8:00	14.48	15.17	1.57	17.03	386
9/1/2001	8:30	14.47	15.17	1.59	17.05	397
9/1/2001	9:00	14.47	15.16	1.57	17.03	386
9/1/2001	9:30	14.47	15.17	1.59	<b>17.05</b>	397
9/1/2001	10:00	14.47	15.16	1.59	17.03	386
9/1/2001	10:30	14.47	15.17	1.61	17.05	397
9/1/2001	11:00	14.47	15.17	1.61	17.05	398
9/1/2001	11:30	14.47	15.17	1.61	17.05	398
9/1/2001	12:00	14.47	15.17	1.61	17.05	398
9/1/2001	12:30	14.47	15.18	1.64	17.08	410
9/1/2001	13:00	14.47	15.19	1.66	17.10	421
9/1/2001	13:30	14.48	15.19	1.64	17.08	410
9/1/2001	14:00	14.48	15.19	1.64	17.08	410
9/1/2001	14:30	14.48	15.19	1.64	17.08	411
9/1/2001	15:00	14.48	15.20	1.66	17.10	422
9/1/2001	15:30	14.48	15.20	1.66	17.10	422
9/1/2001	16:00	14.48	15.21	1.69	17.13	434
9/1/2001	16:30	14.49	15.21	1.67	17.11	423
9/1/2001	17:00	14.49	15.21	1.67	17.11	423
9/1/2001	17:30	14.49	15.21	1.67	17.11	424
9/1/2001	18:00	14.50	15.21	1.64	17.08	413
9/1/2001	18:30	14.50	15.21	1.65	17.09	413
9/1/2001	19:00	14.50	15.22	1.67	17.11	424
9/1/2001	19:30	14.50	15.21	1.65	17.09	414
9/1/2001	20:00	14.51	15.21	1.62	17.06	403
9/1/2001	20:30	14.51	15.22	1.65	17.09	414
9/1/2001	21:00	14.52	15.22	1.63	17.07	404
9/1/2001	21:30	14.52	15.22	1.63	17.07	404
9/1/2001	22:00	14.52	15.22	1.63	17.07	404
9/1/2001	22:30	14.52	15.22	1.63	17.07	405
9/1/2001	23:00	14.53	15.22	1.60	17.04	394
9/1/2001	23:30	14.54	15.22	1.58	17.02	383
9/2/2001	0:00	14.54	15.22	1.58	17.02	384
9/2/2001	0:30	14.54	15.22	1.58	17.02	384

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
9/2/2001	1:00	14.55	15.22	1.56	17.00	373
9/2/2001	1:30	14.55	15.22	1.56	17.00	374
9/2/2001	2:00	14.55	15.23	1.59	17.03	385
9/2/2001	2:30	14.55	15.23	1.59	17.03	385
9/2/2001	3:00	14.55	15.23	1.59	17.03	385
9/2/2001	3:30	14.56	15.24	1.59	17.03	386
9/2/2001	4:00	14.56	15.24	1.59	17.03	386
9/2/2001	4:30	14.56	15.24	1.59	17.03	386
9/2/2001	5:00	14.56	15.24	1.59	17.03	387
9/2/2001	5:30	14.56	15.24	1.59	17.03	387
9/2/2001	6:00	14.56	15.24	1.59	17.03	387
9/2/2001	6:30	14.57	15.24	1.57	17.01	377
9/2/2001	7:00	14.57	15.25	1.59	17.03	388
9/2/2001	7:30	14.57	15.25	1.59	17.03	388
9/2/2001	8:00	14.57	15.25	1.59	17.03	388
9/2/2001	8:30	14.57	15.25	1.59	17.03	389
9/2/2001	9:00	14.57	15.25	1.59	<b>17.03</b>	389
9/2/2001	9:30	14.57	15.25	1.56	17.03	389
9/2/2001	10:00	14.57	15.25	1.56	17.03	389
9/2/2001	10:30	14.57	15.26	1.59	17.06	400
9/2/2001	11:00	14.57	15.26	1.59	17.06	400
9/2/2001	11:30	14.57	15.26	1.59	17.06	399
9/2/2001	12:00	14.57	15.27	1.61	17.08	410
9/2/2001	12:30	14.57	15.27	1.61	17.08	410
9/2/2001	13:00	14.56	15.28	1.65	17.12	432
9/2/2001	13:30	14.57	15.28	1.63	17.10	421
9/2/2001	14:00	14.57	15.29	1.65	17.12	432
9/2/2001	14:30	14.57	15.29	1.65	17.12	432
9/2/2001	15:00	14.56	15.29	1.68	17.15	442
9/2/2001	15:30	14.56	15.30	1.70	17.17	453
9/2/2001	16:00	14.55	15.31	1.75	17.22	475
9/2/2001	16:30	14.55	15.31	1.74	17.21	475
9/2/2001	17:00	14.55	15.31	1.74	17.21	475
9/2/2001	17:30	14.55	15.31	1.74	17.21	475
9/2/2001	18:00	14.55	15.32	1.77	17.24	486
9/2/2001	18:30	14.56	15.32	1.74	17.21	475
9/2/2001	19:00	14.56	15.32	1.74	17.21	474
9/2/2001	19:30	14.56	15.31	1.72	17.19	463
9/2/2001	20:00	14.57	15.31	1.70	17.17	452
9/2/2001	20:30	14.57	15.30	1.67	17.14	441
9/2/2001	21:00	14.57	15.29	1.65	17.12	430
9/2/2001	21:30	14.58	15.29	1.63	17.10	419
9/2/2001	22:00	14.58	15.29	1.63	17.10	419

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/2/2001	22:30	14.58	15.28	1.60	17.07	408
9/2/2001	23:00	14.58	15.28	1.60	17.07	407
9/2/2001	23:30	14.58	15.28	1.60	17.07	407
9/3/2001	0:00	14.58	15.28	1.60	17.07	407
9/3/2001	0:30	14.58	15.28	1.60	17.07	407
9/3/2001	1:00	14.58	15.28	1.60	17.07	407
9/3/2001	1:30	14.58	15.28	1.60	17.07	407
9/3/2001	2:00	14.58	15.28	1.60	17.07	407
9/3/2001	2:30	14.58	15.27	1.58	17.05	396
9/3/2001	3:00	14.58	15.27	1.58	17.05	395
9/3/2001	3:30	14.58	15.27	1.58	17.05	395
9/3/2001	4:00	14.58	15.27	1.58	17.05	395
9/3/2001	4:30	14.58	15.27	1.58	17.05	395
9/3/2001	5:00	14.58	15.26	1.55	17.02	384
9/3/2001	5:30	14.57	15.26	1.58	17.05	395
9/3/2001	6:00	14.57	15.26	1.58	17.05	395
9/3/2001	6:30	14.57	15.26	1.58	17.05	395
9/3/2001	7:00	14.57	15.26	1.58	17.05	394
9/3/2001	7:30	14.57	15.26	1.58	17.05	394
9/3/2001	8:00	14.57	15.25	1.55	17.02	383
9/3/2001	8:30	14.57	15.25	1.55	17.02	383
9/3/2001	9:00	14.57	15.25	1.55	17.02	383
9/3/2001	9:30	14.57	15.25	1.55	17.02	383
9/3/2001	10:00	14.56	15.25	1.57	17.04	394
9/3/2001	10:30	14.56	15.25	1.57	17.04	394
9/3/2001	11:00	14.55	15.25	1.60	17.07	404
9/3/2001	11:30	14.55	15.26	1.62	17.09	415
9/3/2001	12:00	14.55	15.27	1.64	17.11	426
9/3/2001	12:30	14.55	15.27	1.64	17.11	426
9/3/2001	13:00	14.55	15.27	1.64	17.11	426
9/3/2001	13:30	14.55	15.28	1.66	17.13	437
9/3/2001	14:00	14.55	15.28	1.66	17.13	437
9/3/2001	14:30	14.55	15.28	1.66	17.13	436
9/3/2001	15:00	14.55	15.28	1.66	17.13	436
9/3/2001	15:30	14.55	15.28	1.66	17.13	436
9/3/2001	16:00	14.55	15.28	1.66	17.13	436
9/3/2001	16:30	14.55	15.27	1.64	17.11	425
9/3/2001	17:00	14.55	15.27	1.64	17.11	425
9/3/2001	17:30	14.55	15.26	1.62	17.09	414
9/3/2001	18:00	14.55	15.25	1.59	17.06	403
9/3/2001	18:30	14.54	15.25	1.62	17.09	414
9/3/2001	19:00	14.54	15.24	1.59	17.06	402
9/3/2001	19:30	14.54	15.24	1.59	17.06	402



**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/3/2001	20:00	14.53	15.23	1.59	17.06	402
9/3/2001	20:30	14.54	15.23	1.57	17.04	391
9/3/2001	21:00	14.53	15.22	1.57	17.04	391
9/3/2001	21:30	14.54	15.22	1.55	17.02	380
9/3/2001	22:00	14.54	15.22	1.54	17.01	380
9/3/2001	22:30	14.54	15.22	1.54	17.01	380
9/3/2001	23:00	14.54	15.22	1.54	17.01	379
9/3/2001	23:30	14.53	15.22	1.57	17.04	390
9/4/2001	0:00	14.53	15.21	1.54	17.01	379
9/4/2001	0:30	14.53	15.21	1.54	17.01	379
9/4/2001	1:00	14.53	15.20	1.52	16.99	368
9/4/2001	1:30	14.52	15.20	1.54	17.01	379
9/4/2001	2:00	14.52	15.20	1.54	17.01	379
9/4/2001	2:30	14.52	15.19	1.52	16.99	368
9/4/2001	3:00	14.52	15.19	1.52	16.99	367
9/4/2001	3:30	14.52	15.19	1.52	16.99	367
9/4/2001	4:00	14.52	15.19	1.52	16.99	367
9/4/2001	4:30	14.52	15.18	1.50	16.97	356
9/4/2001	5:00	14.52	15.18	1.50	16.97	356
9/4/2001	5:30	14.52	15.18	1.49	16.96	356
9/4/2001	6:00	14.51	15.17	1.49	16.96	356
9/4/2001	6:30	14.51	15.17	1.49	16.96	356
9/4/2001	7:00	14.50	15.17	1.52	16.99	366
9/4/2001	7:30	14.50	15.16	1.49	16.96	355
9/4/2001	8:00	14.50	15.16	1.49	16.96	355
9/4/2001	8:30	14.50	15.16	1.49	16.96	355
9/4/2001	9:00	14.49	15.16	1.52	16.99	366
9/4/2001	9:30	14.48	15.16	1.54	17.01	377
9/4/2001	10:00	14.48	15.16	1.54	17.01	377
9/4/2001	10:30	14.47	15.16	1.56	17.03	387
9/4/2001	11:00	14.47	15.14	1.52	16.99	365
9/4/2001	11:30	14.46	15.14	1.54	17.01	376
9/4/2001	12:00	14.46	15.14	1.54	17.01	376
9/4/2001	12:30	14.45	15.14	1.56	17.03	387
9/4/2001	13:00	14.45	15.14	1.56	17.03	387
9/4/2001	13:30	14.45	15.14	1.56	17.03	387
9/4/2001	14:00	14.45	15.14	1.56	17.03	387
9/4/2001	14:30	14.45	15.14	1.56	17.03	386
9/4/2001	15:00	14.44	15.14	1.58	17.05	397
9/4/2001	15:30	14.44	15.14	1.58	17.05	397
9/4/2001	16:00	14.44	15.14	1.58	17.05	397
9/4/2001	16:30	14.43	15.13	1.58	17.05	397
9/4/2001	17:00	14.42	15.13	1.60	17.07	408

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/4/2001	17:30	14.42	15.12	1.58	17.05	397
9/4/2001	18:00	14.42	15.11	1.56	17.03	386
9/4/2001	18:30	14.42	15.11	1.56	17.03	385
9/4/2001	19:00	14.42	15.10	1.53	17.00	374
9/4/2001	19:30	14.42	15.10	1.53	17.00	374
9/4/2001	20:00	14.42	15.10	1.53	17.00	374
9/4/2001	20:30	14.42	15.10	1.53	17.00	374
9/4/2001	21:00	14.42	15.10	1.53	17.00	374
9/4/2001	21:30	14.43	15.09	1.49	16.96	352
9/4/2001	22:00	14.42	15.09	1.51	16.98	363
9/4/2001	22:30	14.42	15.08	1.49	16.96	351
9/4/2001	23:00	14.42	15.07	1.46	16.93	345
9/4/2001	23:30	14.42	15.07	1.46	16.93	345
9/5/2001	0:00	14.42	15.08	1.49	16.96	351
9/5/2001	0:30	14.42	15.07	1.46	16.93	345
9/5/2001	1:00	14.41	15.07	1.48	16.95	351
9/5/2001	1:30	14.41	15.07	1.48	16.95	351
9/5/2001	2:00	14.41	15.07	1.48	16.95	351
9/5/2001	2:30	14.41	15.06	1.46	16.93	345
9/5/2001	3:00	14.41	15.06	1.46	16.93	345
9/5/2001	3:30	14.41	15.06	1.46	16.93	345
9/5/2001	4:00	14.41	15.06	1.46	16.93	344
9/5/2001	4:30	14.41	15.05	1.44	16.91	340
9/5/2001	5:00	14.41	15.05	1.44	16.91	340
9/5/2001	5:30	14.41	15.05	1.44	16.91	339
9/5/2001	6:00	14.41	15.05	1.44	16.91	339
9/5/2001	6:30	14.40	15.05	1.46	16.93	344
9/5/2001	7:00	14.41	15.05	1.44	16.91	339
9/5/2001	7:30	14.41	15.05	1.44	16.91	339
9/5/2001	8:00	14.40	15.05	1.46	16.93	344
9/5/2001	8:30	14.40	15.04	1.43	16.90	339
9/5/2001	9:00	14.40	15.05	1.46	16.93	344
9/5/2001	9:30	14.40	15.05	1.46	16.93	344
9/5/2001	10:00	14.40	15.04	1.43	16.90	339
9/5/2001	10:30	14.40	15.05	1.46	16.93	344
9/5/2001	11:00	14.40	15.05	1.46	16.93	344
9/5/2001	11:30	14.40	15.06	1.48	16.95	348
9/5/2001	12:00	14.40	15.06	1.48	16.95	348
9/5/2001	12:15	-	-	-	<b>16.95</b>	349
9/5/2001	12:30	14.40	15.06	1.51	16.94	346
9/5/2001	12:55	-	-	-	<b>16.95</b>	349
9/5/2001	13:00	14.40	15.07	1.52	16.95	349
9/5/2001	13:25	-	-	-	<b>16.95</b>	<b>348.7</b>

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/5/2001	13:30	14.40	15.07	1.54	16.95	349
9/5/2001	14:00	14.40	15.08	1.56	16.97	359
9/5/2001	14:30	14.40	15.09	1.58	16.99	370
9/5/2001	15:00	14.40	15.09	1.58	16.99	369
9/5/2001	15:30	14.41	15.10	1.58	16.99	368
9/5/2001	16:00	14.41	15.10	1.58	16.99	368
9/5/2001	16:30	14.41	15.11	1.60	17.01	378
9/5/2001	17:00	14.41	15.11	1.60	17.01	377
9/5/2001	17:30	14.42	15.11	1.58	16.99	366
9/5/2001	18:00	14.42	15.12	1.60	17.01	376
9/5/2001	18:30	14.42	15.11	1.57	16.98	364
9/5/2001	19:00	14.42	15.12	1.59	17.00	375
9/5/2001	19:30	14.43	15.13	1.59	17.00	374
9/5/2001	20:00	14.44	15.13	1.57	16.98	362
9/5/2001	20:30	14.44	15.13	1.57	16.98	362
9/5/2001	21:00	14.45	15.13	1.54	16.95	350
9/5/2001	21:30	14.45	15.13	1.54	16.95	350
9/5/2001	22:00	14.45	15.13	1.54	16.95	349
9/5/2001	22:30	14.46	15.13	1.52	16.93	344
9/5/2001	23:00	14.46	15.13	1.51	16.92	343
9/5/2001	23:30	14.47	15.13	1.49	16.90	338
9/6/2001	0:00	14.47	15.14	1.51	16.92	343
9/6/2001	0:30	14.47	15.14	1.51	16.92	343
9/6/2001	1:00	14.48	15.14	1.49	16.90	337
9/6/2001	1:30	14.49	15.14	1.46	16.87	332
9/6/2001	2:00	14.49	15.14	1.46	16.87	332
9/6/2001	2:30	14.49	15.15	1.48	16.89	337
9/6/2001	3:00	14.50	15.15	1.46	16.87	331
9/6/2001	3:30	14.50	15.16	1.48	16.89	336
9/6/2001	4:00	14.50	15.16	1.48	16.89	336
9/6/2001	4:30	14.50	15.16	1.48	16.89	335
9/6/2001	5:00	14.51	15.16	1.45	16.86	330
9/6/2001	5:30	14.51	15.17	1.47	16.88	335
9/6/2001	6:00	14.52	15.17	1.45	16.86	330
9/6/2001	6:30	14.52	15.18	1.47	16.88	334
9/6/2001	7:00	14.52	15.18	1.47	16.88	334
9/6/2001	7:30	14.52	15.19	1.49	16.90	339
9/6/2001	8:00	14.53	15.19	1.47	16.88	334
9/6/2001	8:30	14.53	15.19	1.47	16.88	333
9/6/2001	9:00	14.53	15.19	1.46	16.87	333
9/6/2001	9:30	14.53	15.20	1.49	16.90	337
9/6/2001	10:00	14.54	15.22	1.51	16.92	342
9/6/2001	10:30	14.54	15.22	1.51	16.92	342

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/6/2001	11:00	14.55	15.24	1.53	16.94	346
9/6/2001	11:30	14.54	15.26	1.60	17.01	376
9/6/2001	12:00	14.55	15.28	1.62	17.03	386
9/6/2001	12:30	14.53	15.28	1.66	17.07	407
9/6/2001	13:00	14.55	15.30	1.66	17.07	407
9/6/2001	13:30	14.55	15.31	1.68	17.09	417
9/6/2001	14:00	14.55	15.33	1.73	17.14	438
9/6/2001	14:30	14.56	15.34	1.73	17.14	438
9/6/2001	15:00	14.55	15.35	1.77	17.18	459
9/6/2001	15:30	14.56	15.36	1.77	17.18	458
9/6/2001	16:00	14.56	15.38	1.81	17.22	480
9/6/2001	16:30	14.55	15.40	1.88	17.29	512
9/6/2001	17:00	14.55	15.43	1.95	17.36	544
9/6/2001	17:30	14.56	15.44	1.95	17.36	544
9/6/2001	18:00	14.57	15.47	1.99	17.40	565
9/6/2001	18:30	14.57	15.47	1.99	17.40	564
9/6/2001	19:00	14.57	15.47	1.99	17.40	564
9/6/2001	19:30	14.57	15.47	1.99	17.40	563
9/6/2001	20:00	14.58	15.46	1.94	17.35	540
9/6/2001	20:30	14.59	15.42	1.83	17.24	485
9/6/2001	21:00	14.60	15.39	1.73	17.14	440
9/6/2001	21:30	14.60	15.37	1.68	17.09	418
9/6/2001	22:00	14.60	15.35	1.64	17.05	395
9/6/2001	22:30	14.61	15.34	1.59	17.00	372
9/6/2001	23:00	14.62	15.33	1.54	16.95	350
9/6/2001	23:30	14.62	15.32	1.52	16.93	344
9/7/2001	0:00	14.62	15.32	1.52	16.93	344
9/7/2001	0:30	14.62	15.32	1.52	16.93	344
9/7/2001	1:00	14.63	15.32	1.49	16.90	338
9/7/2001	1:30	14.63	15.32	1.49	16.90	338
9/7/2001	2:00	14.63	15.32	1.49	16.90	338
9/7/2001	2:30	14.63	15.32	1.49	16.90	338
9/7/2001	3:00	14.64	15.32	1.46	16.87	332
9/7/2001	3:30	14.64	15.32	1.46	16.87	332
9/7/2001	4:00	14.64	15.32	1.46	16.87	332
9/7/2001	4:30	14.65	15.32	1.44	16.85	327
9/7/2001	5:00	14.65	15.32	1.43	16.84	327
9/7/2001	5:30	14.65	15.32	1.43	16.84	326
9/7/2001	6:00	14.65	15.31	1.41	16.82	321
9/7/2001	6:30	14.65	15.31	1.41	16.82	321
9/7/2001	7:00	14.65	15.31	1.41	16.82	321
9/7/2001	7:30	14.65	15.31	1.40	16.81	320
9/7/2001	8:00	14.65	15.31	1.40	16.81	320

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/7/2001	8:30	14.65	15.31	1.40	16.81	320
9/7/2001	9:00	14.65	15.31	1.40	16.81	319
9/7/2001	9:30	14.65	15.31	1.40	16.81	319
9/7/2001	10:00	14.65	15.32	1.42	16.83	324
9/7/2001	10:30	14.65	15.32	1.42	16.83	323
9/7/2001	11:00	14.65	15.33	1.44	16.85	328
9/7/2001	11:30	14.65	15.33	1.44	16.85	328
9/7/2001	12:00	14.65	15.34	1.46	16.87	332
9/7/2001	12:30	14.66	15.34	1.44	16.85	327
9/7/2001	13:00	14.66	15.34	1.44	16.85	327
9/7/2001	13:30	14.66	15.34	1.43	16.84	327
9/7/2001	14:00	14.67	15.34	1.41	16.82	321
9/7/2001	14:30	14.66	15.35	1.45	16.86	331
9/7/2001	15:00	14.67	15.35	1.43	16.84	326
9/7/2001	15:30	14.67	15.35	1.43	16.84	325
9/7/2001	16:00	14.67	15.36	1.45	16.86	330
9/7/2001	16:30	14.67	15.36	1.45	16.86	330
9/7/2001	17:00	14.67	15.37	1.47	16.88	334
9/7/2001	17:30	14.68	15.37	1.45	16.86	329
9/7/2001	18:00	14.68	15.37	1.45	16.86	329
9/7/2001	18:30	14.69	15.37	1.42	16.83	324
9/7/2001	19:00	14.69	15.37	1.42	16.83	323
9/7/2001	19:30	14.70	15.37	1.40	16.81	318
9/7/2001	20:00	14.70	15.37	1.39	16.80	318
9/7/2001	20:30	14.71	15.37	1.37	16.78	313
9/7/2001	21:00	14.71	15.37	1.37	16.78	313
9/7/2001	21:30	14.71	15.37	1.37	16.78	312
9/7/2001	22:00	14.72	15.38	1.37	16.78	312
9/7/2001	22:30	14.72	15.38	1.36	16.77	312
9/7/2001	23:00	14.72	15.39	1.39	16.80	316
9/7/2001	23:30	14.72	15.39	1.38	16.79	316
9/8/2001	0:00	14.72	15.39	1.38	16.79	316
9/8/2001	0:30	14.72	15.39	1.38	16.79	316
9/8/2001	1:00	14.73	15.40	1.38	16.79	315
9/8/2001	1:30	14.74	15.40	1.36	16.77	310
9/8/2001	2:00	14.74	15.40	1.35	16.76	310
9/8/2001	2:30	14.74	15.40	1.35	16.76	310
9/8/2001	3:00	14.74	15.40	1.35	16.76	309
9/8/2001	3:30	14.75	15.40	1.33	16.74	304
9/8/2001	4:00	14.75	15.40	1.33	16.74	304
9/8/2001	4:30	14.76	15.40	1.30	16.71	299
9/8/2001	5:00	14.76	15.40	1.30	16.71	298
9/8/2001	5:30	14.76	15.40	1.30	16.71	298

**Table D-2.3: Water Surface Elevation and Discharge  
on Fish Creek at River Mile 32.4**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/8/2001	6:00	14.77	15.40	1.28	16.69	293
9/8/2001	6:30	14.77	15.40	1.27	16.68	293
9/8/2001	7:00	14.77	15.41	1.30	16.71	297
9/8/2001	7:30	14.77	15.41	1.29	16.70	297
9/8/2001	8:00	14.77	15.41	1.29	16.70	297
9/8/2001	8:30	14.77	15.40	1.27	16.68	292
9/8/2001	9:00	14.77	15.40	1.27	16.68	291
9/8/2001	9:30	14.77	15.40	1.27	16.68	291
9/8/2001	10:00	14.77	15.41	1.29	16.70	296
9/8/2001	10:30	14.77	15.41	1.29	16.70	295
9/8/2001	11:00	14.76	15.41	1.31	16.72	300
9/8/2001	11:30	14.77	15.41	1.28	16.69	295
9/8/2001	12:00	14.77	15.42	1.31	16.72	299
9/8/2001	12:30	14.76	15.42	1.33	16.74	304
9/8/2001	13:00	14.75	15.43	1.37	16.78	313
9/8/2001	13:30	14.75	15.43	1.37	16.78	313
9/8/2001	14:00	14.75	15.44	1.39	16.80	318
9/8/2001	14:30	14.74	15.45	1.44	16.85	327
9/8/2001	15:00	14.73	15.45	1.46	16.87	331
9/8/2001	15:30	14.71	15.45	1.50	16.91	341
9/8/2001	15:33	-	-	-	<b>16.91</b>	340

**WATER SURFACE ELEVATIONS AND DISCHARGE**

**ON JUDY CREEK AT RIVER MILE 7**

**Table D-3.1: Change In Calibration Constant During Instrument Recording Periods on Judy Creek at River Mile 7**

Recording Period <sup>1</sup>				Change in Instrument Calibration Constant <sup>2</sup> (feet)	Comments
Start		End			
Date	Time	Date	Time		
6/12/2001	12:00	6/12/2001	13:32	0.00	
6/12/2001	13:32	6/12/2001	15:11	+0.02	
6/12/2001	15:11	6/12/2001	16:47	+0.04	
6/12/2001	16:47	6/13/2001	13:32	-1.16	
6/13/2001	13:32	6/14/2001	15:32	+0.24	
6/14/2001	15:32	6/15/2001	11:32	-0.07	
6/15/2001	11:32	6/15/2001	16:55	+0.01	
6/15/2001	16:55	6/15/2001	17:55	-0.10	
6/15/2001	17:55	7/17/2001	14:27	+0.02	
7/17/2001	17:52	7/17/2001	18:54	-0.03	
7/17/2001	18:54	7/18/2001	8:03	+0.07	Instrument downloaded.
7/18/2001	9:32	7/19/2001	11:46	+0.03	
7/19/2001	11:46	7/19/2001	12:54	-0.05	
7/19/2001	12:54	7/20/2001	11:20	0.00	
7/20/2001	11:20	7/21/2001	12:35	+0.01	
7/21/2001	12:35	7/23/2001	17:40	+0.02	
7/23/2001	17:40	7/24/2001	13:45	-0.04	
7/24/2001	13:45	7/25/2001	13:10	+0.01	
7/25/2001	13:10	7/26/2001	14:55	-0.05	
7/26/2001	14:55	7/26/2001	15:22	-0.02	
7/27/2001	15:22	7/30/2001	12:10	+0.20	
7/30/2001	12:10	8/14/2001	21:33	-0.09	
8/14/2001	21:33	8/14/2001	23:09	-0.02	Instrument serviced.
8/15/2001	0:00	8/15/2001	13:00	+0.02 <sup>3</sup>	Instrument downloaded.
8/15/2001	14:03	8/25/2001	14:34	-0.20	
8/25/2001	14:34	8/26/2001	12:30	-0.13	
8/26/2001	12:30	8/27/2001	15:15	-0.26	
8/27/2001	15:15	8/28/2001	15:40	-0.71	
8/28/2001	15:40	8/29/2001	18:00	+1.16	
8/29/2001	18:00	8/30/2001	15:30	-1.00	
8/30/2001	15:30	8/31/2001	13:00	+0.16	
8/31/2001	13:00	9/1/2001	10:00	0.00	
9/1/2001	10:00	9/2/2001	10:00	-0.01	
9/2/2001	10:00	9/5/2001	15:55	-0.27	
9/5/2001	15:55	9/5/2001	16:55	-0.02	
9/5/2001	16:55	9/8/2001	13:22	+0.18	Instrument downloaded.

Notes:  
1. Water surface elevations corresponding to the recording dates and times listed above are presented in Table D-3.3, Appendix D.



**Table D-3.1: Continued**

Recording Period <sup>1</sup>				Change in Instrument Calibration Constant <sup>2</sup> (feet)	Comments
Start		End			
Date	Time	Date	Time		
<p>2. The change in calibration constant represents the difference in the apparent instrument elevation between the start of the period and the end of the period. The apparent instrument elevation was computed by subtracting the depth of water over the instrument, as recorded by the instrument, from the measured water surface elevation. A negative change indicates that the elevation of the instrument appeared to have lowered. A positive change indicates that the elevation of the instrument appeared to have risen. The change in the apparent elevation could be due to a physical change in the instrument location due to scour or shifting, but might also be due to debris or sediment partially blocking the pressure sensor.</p> <p>3. On 15 August 2001 the water level recorder was removed from the water at 13:30 to download the data. The water surface elevation was not recorded prior to the water level recorder being removed from the water. The water surface elevation was recorded when the recorder was place back in the water at 14:15. In order to compute the approximate change in the calibration constant during the period 14 August at 0:00 to 15 August at 13:00, the water surface elevation was assumed to be the same at 13:00 and 14:34 on 15 June.</p> <p>4. The minimum standard deviation associated with each instrument reading is on the order of 0.1 percent of the instrument range. This is the standard deviation due to variances in the instrument itself and does not represent variances due to environmental factors such as instrument shifting or partial blockage of the sensor by debris or sediment. Thus, the minimum standard deviation associated with the readings collected for this project is on the order of 0.1 feet.</p> <p>5. The fluctuation in water surface elevation due to wind waves, varied from 0.01 to 0.10 feet during staff gage readings or water surface elevation surveys.</p> <p>6. At the end of a data recording period, the data were downloaded and the instrument was serviced and re-deployed, except at the end of the last recording period when the instrument data were downloaded and the instrument was taken out of the field.</p>					

**Table D-3.2: Average Daily Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
06/06/01	25.87	
06/07/01	26.17	
06/08/01	26.77	4076
06/09/01	26.32	4403
06/10/01	26.31	4718
06/11/01	25.36	3826
06/12/01	25.13	3450
06/13/01	24.77	2850
06/14/01	24.46	2355
06/15/01	24.33	2229
06/16/01	23.98	1954
06/17/01	23.68	1730
06/18/01	23.82	1838
06/19/01	23.73	1768
06/20/01	23.27	1427
06/21/01	22.93	1187
06/22/01	22.37	889
06/23/01	22.21	804
06/24/01	22.06	724
06/25/01	21.87	644
06/26/01	21.69	579
06/27/01	21.62	552
06/28/01	21.55	526
06/29/01	21.34	447
06/30/01	21.22	403
07/01/01	21.21	399
07/02/01	21.18	389
07/03/01	21.02	335
07/04/01	20.75	267
07/05/01	20.86	293
07/06/01	20.82	283
07/07/01	20.83	285
07/08/01	20.73	263
07/09/01	20.72	260
07/10/01	20.73	263
07/11/01	20.68	252
07/12/01	20.63	241
07/13/01	20.57	228
07/14/01	20.50	211
07/15/01	20.45	202
07/16/01	20.43	196
07/17/01	20.33	175
07/18/01	20.72	171
07/19/01	20.26	163

**Table D-3.2: Continued**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
07/20/01	20.21	155
07/21/01	20.15	150
07/22/01	20.20	156
07/23/01	20.12	147
07/24/01	20.05	143
07/25/01	20.04	142
07/26/01	19.99	139
07/27/01	19.97	137
07/28/01	19.94	135
07/29/01	19.92	134
07/30/01	19.98	138
07/31/01	20.10	146
08/01/01	20.07	144
08/02/01	20.01	140
08/03/01	20.03	141
08/04/01	20.03	141
08/05/01	20.01	140
08/06/01	20.08	145
08/07/01	20.06	143
08/08/01	20.02	140
08/09/01	20.04	142
08/10/01	20.00	139
08/11/01	19.99	139
08/12/01	20.01	140
08/13/01	20.02	141
08/14/01	20.14	150
08/15/01	20.75	176
08/16/01	20.45	200
08/17/01	21.69	611
08/18/01	21.82	631
08/19/01	21.40	470
08/20/01	21.20	397
08/21/01	21.07	361
08/22/01	20.80	288
08/23/01	20.63	244
08/24/01	20.58	233
08/25/01	20.60	237
08/26/01	20.46	213
08/27/01	20.07	158
08/28/01	19.60	113
08/29/01	19.91	135
08/30/01	19.79	127
08/31/01	20.08	149
09/01/01	20.26	161

**Table D-3.2: Continued**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
09/02/01	20.31	176
09/03/01	20.13	150
09/04/01	20.01	140
09/05/01	19.96	137
09/06/01	20.12	162
09/07/01	19.94	135
09/08/01	20.02	141

1. Average daily water surface elevation is the daily average of water surface elevation data presented in Table D-3.3, Appendix D.  
2. Average daily discharge is the daily average of discharge values presented in Table D-3.3, Appendix D.

### **Table D-3.3: Water Surface Elevation and Discharge on Judy Creek at River Mile 7**

Notes:

1. Water surface elevations in bold represent measured values from either survey or staff gage readings. Values not bold represent corrected water surface elevations measured by the pressure transducer.
2. Discharge values in bold represent measured discharges. Discharge values not bold are calculated.
3. Date and time are Alaska Daylight Savings time.
4. The time corresponds to the start of a sampling interval.
5. Combined pressure is the sum of the water and atmospheric pressures.
6. Atmospheric pressure and combined pressure are in pounds per square inch (psia), rounded to the nearest 0.01 psi.
7. Water surface elevations are based on British Petroleum Mean Sea Level, rounded to the nearest 0.01 foot.
8. Instrument was located on Judy Creek at River Mile 7 (Figure2).
9. It is assumed that changes in the instrument calibration constant occurred linearly over time. Corrections to the water depth and corresponding water surface elevation were calculated to account for these changes.
10. Missing data are either the result of routine instrument downloading and servicing, or environmental conditions which prevented the recorder from obtaining accurate data. Environmental conditions which caused data to be lost include physical changes in the instrument location due to scour or shifting, and/or partial blocking of the pressure sensor by debris or sediment.

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/6/2001	9:55	-	-	-	<b>25.48</b>	-
6/6/2001	-	-	-	-	<b>26.10</b>	-
6/6/2001	15:20	-	-	-	<b>26.02</b>	-
-	-	-	-	-	<b>26.36</b>	-
6/7/2001	10:46	-	-	-	<b>25.74</b>	-
6/7/2001	14:31	-	-	-	<b>26.16</b>	-
6/7/2001	16:34	-	-	-	<b>26.22</b>	-
6/7/2001	20:09	-	-	-	<b>26.35</b>	-
6/8/2001	13:52	-	-	-	<b>26.68</b>	3932
6/8/2001	14:14	-	-	-	<b>26.72</b>	3957
6/8/2001	19:15	-	-	-	<b>26.91</b>	4339
6/9/2001	12:09	-	-	-	<b>26.39</b>	4360
6/9/2001	14:51	-	-	-	<b>26.29</b>	4347
6/9/2001	16:05	-	-	-	<b>26.31</b>	<b>4410.4</b>
6/9/2001	17:22	-	-	-	<b>26.34</b>	4463
6/9/2001	20:06	-	-	-	<b>26.29</b>	4436
<b>HWM</b>	-	-	-	-	<b>27.11</b>	5621
6/10/2001	18:15	-	-	-	<b>25.50</b>	3814
6/11/2001	10:20	-	-	-	<b>25.36</b>	3826
6/11/2001	10:32	-	-	-	<b>25.36</b>	3826
6/12/2001	12:00	14.36	17.98	8.33	<b>25.02</b>	3279
6/12/2001	12:30	14.36	17.99	8.35	25.04	3324
6/12/2001	13:00	14.36	17.98	8.33	25.02	3291
6/12/2001	13:30	14.36	17.98	8.33	25.02	3291
6/12/2001	13:32	-	-	-	<b>25.02</b>	3279
6/12/2001	14:00	14.35	17.98	8.36	25.05	3334
6/12/2001	14:30	14.36	17.98	8.34	25.03	3310
6/12/2001	15:00	14.38	17.99	8.33	25.02	3287
6/12/2001	15:11	-	-	-	<b>25.02</b>	3279
6/12/2001	15:30	14.42	17.99	8.22	24.93	3148
6/12/2001	15:58	-	-	-	<b>25.01</b>	<b>3277.5</b>
6/12/2001	16:00	14.38	17.98	8.30	25.01	3283
6/12/2001	16:30	14.39	17.96	8.24	24.95	3183
6/12/2001	16:47	-	-	-	<b>24.99</b>	3243
6/12/2001	17:00	14.38	17.96	8.28	24.99	3239
6/12/2001	17:30	14.38	17.96	8.21	24.96	3191
6/12/2001	18:00	14.41	18.03	8.27	25.02	3296
6/12/2001	18:30	14.39	18.06	8.36	25.11	3420
6/12/2001	19:00	14.38	18.16	8.58	25.33	3742
6/12/2001	19:30	14.40	18.17	8.53	25.28	3669
6/12/2001	20:00	14.45	18.18	8.41	25.16	3497
6/12/2001	20:30	14.45	18.19	8.41	25.16	3489
6/12/2001	21:00	14.47	18.32	8.63	25.38	3811

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/12/2001	21:30	14.49	18.39	8.72	25.47	3935
6/12/2001	22:00	14.49	18.39	8.69	25.44	3895
6/12/2001	22:30	14.46	18.38	8.71	25.46	3920
6/12/2001	23:00	14.46	18.38	8.68	25.43	3880
6/12/2001	23:30	14.46	18.37	8.63	25.38	3806
6/13/2001	0:00	14.47	18.36	8.55	25.30	3700
6/13/2001	0:30	14.47	18.36	8.53	25.28	3659
6/13/2001	1:00	14.47	18.35	8.48	25.23	3586
6/13/2001	1:30	14.48	18.35	8.42	25.17	3512
6/13/2001	2:00	14.48	18.34	8.37	25.12	3439
6/13/2001	2:30	14.48	18.34	8.34	25.09	3398
6/13/2001	3:00	14.48	18.34	8.32	25.07	3358
6/13/2001	3:30	14.48	18.34	8.29	25.04	3317
6/13/2001	4:00	14.48	18.39	8.37	25.12	3441
6/13/2001	4:30	14.48	18.39	8.35	25.10	3401
6/13/2001	5:00	14.48	18.37	8.27	25.02	3294
6/13/2001	5:30	14.49	18.36	8.20	24.95	3171
6/13/2001	6:00	14.48	18.35	8.17	24.92	3122
6/13/2001	6:30	14.47	18.34	8.14	24.89	3074
6/13/2001	7:00	14.46	18.33	8.11	24.86	3025
6/13/2001	7:30	14.45	18.32	8.08	24.83	2977
6/13/2001	8:00	14.44	18.32	8.08	24.83	2968
6/13/2001	8:30	14.44	18.31	8.03	24.78	2880
6/13/2001	9:00	14.43	18.29	7.98	24.73	2792
6/13/2001	9:30	14.42	18.29	7.97	24.72	2783
6/13/2001	10:00	14.42	18.28	7.92	24.67	2695
6/13/2001	10:30	14.40	18.28	7.94	24.69	2725
6/13/2001	11:00	14.39	18.27	7.91	24.66	2677
6/13/2001	11:30	14.39	18.26	7.86	24.61	2589
6/13/2001	12:00	14.39	18.25	7.81	24.56	2501
6/13/2001	12:30	14.35	18.24	7.85	24.60	2571
6/13/2001	13:00	14.34	18.24	7.84	24.59	2562
6/13/2001	13:30	14.33	18.24	7.84	24.59	2553
6/13/2001	13:32	-	-	-	<b>24.59</b>	2558
6/13/2001	14:00	14.34	18.24	8.98	24.57	2521
6/13/2001	14:30	14.33	18.25	9.03	24.62	2608
6/13/2001	15:00	14.33	18.25	9.03	24.62	2616
6/13/2001	15:30	14.33	18.26	9.06	24.65	2663
6/13/2001	16:00	14.33	18.26	9.07	24.66	2671
6/13/2001	16:30	14.33	18.26	9.07	24.66	2679
6/13/2001	17:00	14.35	18.26	9.03	24.62	2608
6/13/2001	17:30	14.34	18.27	9.08	24.67	2695
6/13/2001	18:00	14.35	18.28	9.08	24.67	2703

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/13/2001	18:30	14.35	18.29	9.11	24.70	2750
6/13/2001	19:00	14.37	18.29	9.07	24.66	2679
6/13/2001	19:30	14.39	18.29	9.03	24.62	2608
6/13/2001	20:00	14.42	18.29	8.96	24.55	2498
6/13/2001	20:30	14.41	18.31	9.04	24.63	2624
6/13/2001	21:00	14.45	18.31	8.95	24.54	2474
6/13/2001	21:30	14.45	18.30	8.93	24.52	2443
6/13/2001	22:00	14.47	18.31	8.91	24.50	2411
6/13/2001	22:30	14.47	18.31	8.92	24.51	2419
6/13/2001	23:00	14.48	18.30	8.88	24.47	2348
6/13/2001	23:30	14.50	18.31	8.86	24.45	2317
6/14/2001	0:00	14.50	18.31	8.86	24.45	2325
6/14/2001	0:30	14.51	18.32	8.87	24.46	2333
6/14/2001	1:00	14.52	18.33	8.87	24.46	2341
6/14/2001	1:30	14.52	18.33	8.88	24.47	2349
6/14/2001	2:00	14.54	18.34	8.86	24.45	2317
6/14/2001	2:30	14.53	18.34	8.89	24.48	2364
6/14/2001	3:00	14.54	18.34	8.87	24.46	2333
6/14/2001	3:30	14.55	18.35	8.87	24.46	2341
6/14/2001	4:00	14.55	18.35	8.88	24.47	2349
6/14/2001	4:30	14.55	18.34	8.86	24.45	2317
6/14/2001	5:00	14.55	18.34	8.86	24.45	2325
6/14/2001	5:30	14.56	18.34	8.85	24.44	2298
6/14/2001	6:00	14.56	18.35	8.87	24.46	2341
6/14/2001	6:30	14.56	18.34	8.85	24.44	2309
6/14/2001	7:00	14.56	18.34	8.86	24.45	2317
6/14/2001	7:30	14.55	18.35	8.91	24.50	2404
6/14/2001	8:00	14.56	18.34	8.87	24.46	2333
6/14/2001	8:30	14.55	18.33	8.87	24.46	2341
6/14/2001	9:00	14.55	18.34	8.90	24.49	2388
6/14/2001	9:30	14.55	18.34	8.91	24.50	2396
6/14/2001	10:00	14.55	18.35	8.93	24.52	2444
6/14/2001	10:30	14.55	18.34	8.91	24.50	2412
6/14/2001	11:00	14.54	18.35	8.97	24.56	2499
6/14/2001	11:30	14.54	18.34	8.95	24.54	2467
6/14/2001	12:00	14.54	18.35	8.97	24.56	2515
6/14/2001	12:30	14.55	18.36	8.98	24.57	2522
6/14/2001	13:00	14.56	18.36	8.96	24.55	2491
6/14/2001	13:30	14.55	18.36	8.99	24.58	2538
6/14/2001	14:00	14.56	18.36	8.97	24.56	2507
6/14/2001	14:30	14.57	18.37	8.97	24.56	2515
6/14/2001	15:00	14.60	18.37	8.91	24.50	2404
6/14/2001	15:30	14.61	18.38	8.91	24.50	2412



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/14/2001	15:32	-	-	-	<b>24.50</b>	2404
6/14/2001	16:00	14.62	18.39	8.67	24.50	2409
6/14/2001	16:30	14.65	18.39	8.60	24.43	2295
6/14/2001	17:00	14.66	18.39	8.58	24.41	2277
6/14/2001	17:30	14.67	18.40	8.58	24.41	2276
6/14/2001	18:00	14.69	18.40	8.53	24.36	2240
6/14/2001	18:30	14.69	18.42	8.57	24.40	2273
6/14/2001	19:00	14.71	18.42	8.52	24.35	2237
6/14/2001	19:30	14.72	18.44	8.55	24.38	2253
6/14/2001	20:00	14.72	18.45	8.57	24.40	2269
6/14/2001	20:30	14.72	18.46	8.59	24.42	2285
6/14/2001	21:00	14.73	18.46	8.56	24.39	2267
6/14/2001	21:30	14.74	18.47	8.56	24.39	2265
6/14/2001	22:00	14.74	18.48	8.58	24.41	2281
6/14/2001	22:30	14.74	18.48	8.58	24.41	2280
6/14/2001	23:00	14.75	18.48	8.56	24.39	2261
6/14/2001	23:30	14.76	18.49	8.55	24.38	2260
6/15/2001	0:00	14.76	18.49	8.55	24.38	2259
6/15/2001	0:30	14.77	18.49	8.53	24.36	2240
6/15/2001	2:00	14.79	18.50	8.50	24.33	2219
6/15/2001	2:30	14.80	18.51	8.50	24.33	2218
6/15/2001	3:00	14.80	18.50	8.47	24.30	2199
6/15/2001	4:00	14.80	18.50	8.47	24.30	2197
6/15/2001	4:30	14.80	18.50	8.47	24.30	2195
6/15/2001	5:00	14.80	18.49	8.44	24.27	2177
6/15/2001	5:30	14.80	18.50	8.46	24.29	2193
6/15/2001	6:00	14.80	18.50	8.46	24.29	2191
6/15/2001	6:30	14.79	18.50	8.48	24.31	2207
6/15/2001	7:00	14.79	18.51	8.51	24.34	2223
6/15/2001	7:30	14.79	18.51	8.50	24.33	2222
6/15/2001	8:00	14.78	18.50	8.50	24.33	2221
6/15/2001	8:30	14.77	18.50	8.52	24.35	2236
6/15/2001	9:00	14.77	18.50	8.52	24.35	2235
6/15/2001	9:30	14.76	18.49	8.52	24.35	2234
6/15/2001	10:00	14.75	18.49	8.54	24.37	2250
6/15/2001	10:30	14.74	18.49	8.56	24.39	2266
6/15/2001	11:00	14.73	18.49	8.58	24.41	2281
6/15/2001	11:30	14.72	18.49	8.60	24.43	2297
6/15/2001	11:32	-	-	-	<b>24.43</b>	2294
6/15/2001	12:00	14.71	18.49	8.70	24.46	2333
6/15/2001	12:30	14.69	18.48	8.72	24.48	2374
6/15/2001	13:00	14.69	18.48	8.72	24.48	2376
6/15/2001	13:30	14.69	18.48	8.72	24.48	2377

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
6/15/2001	14:00	14.69	18.48	8.73	24.49	2379
6/15/2001	14:30	14.67	18.47	8.75	24.51	2420
6/15/2001	15:00	14.67	18.47	8.75	24.51	2421
6/15/2001	16:00	14.66	18.46	8.75	24.51	2425
6/15/2001	16:30	14.67	18.46	8.73	24.49	2387
6/15/2001	16:55	-	-	-	<b>24.49</b>	2387
6/15/2001	17:00	14.67	18.46	8.73	24.49	2388
6/15/2001	17:25	-	-	-	<b>24.44</b>	<b>2301.3</b>
6/15/2001	17:30	14.68	18.46	8.64	24.41	2281
6/15/2001	17:55	-	-	-	<b>24.38</b>	2256
6/15/2001	18:00	14.67	18.46	8.61	24.38	2257
6/15/2001	18:30	14.68	18.37	8.49	24.15	2085
6/15/2001	19:00	14.68	18.36	8.47	24.13	2068
6/15/2001	20:00	14.69	18.36	8.45	24.11	2051
6/15/2001	20:30	14.71	18.36	8.40	24.06	2016
6/15/2001	21:00	14.70	18.36	8.42	24.08	2034
6/15/2001	21:30	14.71	18.35	8.38	24.04	1999
6/15/2001	22:00	14.72	18.35	8.35	24.01	1982
6/15/2001	22:30	14.72	18.35	8.35	24.01	1982
6/15/2001	23:00	14.73	18.35	8.33	23.99	1965
6/16/2001	0:00	14.74	18.35	8.31	23.97	1948
6/16/2001	0:30	14.74	18.35	8.31	23.97	1948
6/16/2001	1:30	14.74	18.34	8.28	23.94	1931
6/16/2001	2:30	14.74	18.35	8.31	23.97	1948
6/16/2001	3:00	14.74	18.34	8.29	23.95	1931
6/16/2001	3:30	14.74	18.34	8.29	23.95	1931
6/16/2001	4:00	14.74	18.33	8.26	23.92	1914
6/16/2001	4:30	14.75	18.33	8.24	23.90	1897
6/16/2001	5:00	14.75	18.34	8.26	23.92	1914
6/16/2001	5:30	14.74	18.33	8.26	23.92	1914
6/16/2001	6:00	14.73	18.33	8.29	23.95	1932
6/16/2001	6:30	14.73	18.33	8.29	23.95	1932
6/16/2001	7:00	14.74	18.33	8.26	23.92	1915
6/16/2001	8:00	14.72	18.33	8.31	23.97	1949
6/16/2001	8:30	14.71	18.33	8.33	23.99	1966
6/16/2001	9:30	14.69	18.31	8.33	23.99	1967
6/16/2001	10:00	14.69	18.31	8.33	23.99	1967
6/16/2001	10:30	14.67	18.31	8.38	24.04	2001
6/16/2001	11:00	14.67	18.30	8.36	24.02	1984
6/16/2001	11:30	14.65	18.30	8.40	24.06	2018
6/16/2001	12:00	14.64	18.30	8.42	24.08	2036
6/16/2001	12:30	14.62	18.30	8.47	24.13	2070
6/16/2001	13:00	14.62	18.29	8.45	24.11	2053

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/16/2001	14:00	14.61	18.29	8.47	24.13	2070
6/16/2001	14:30	14.61	18.29	8.47	24.13	2070
6/16/2001	15:30	14.60	18.29	8.49	24.15	2088
6/16/2001	17:00	14.60	18.28	8.47	24.13	2071
6/16/2001	17:30	14.62	18.28	8.43	24.09	2036
6/16/2001	18:00	14.65	18.28	8.36	24.02	1985
6/16/2001	18:30	14.66	18.28	8.33	23.99	1968
6/16/2001	19:00	14.66	18.27	8.31	23.97	1951
6/16/2001	19:30	14.67	18.27	8.29	23.95	1933
6/16/2001	20:00	14.69	18.27	8.24	23.90	1899
6/16/2001	20:30	14.69	18.28	8.27	23.93	1916
6/16/2001	21:00	14.70	18.28	8.24	23.90	1899
6/16/2001	21:30	14.71	18.27	8.20	23.86	1865
6/16/2001	22:00	14.72	18.27	8.17	23.83	1848
6/16/2001	22:30	14.72	18.27	8.17	23.83	1848
6/16/2001	23:00	14.72	18.26	8.15	23.81	1831
6/16/2001	23:30	14.72	18.26	8.15	23.81	1831
6/17/2001	0:00	14.72	18.26	8.15	23.81	1831
6/17/2001	0:30	14.73	18.26	8.13	23.79	1814
6/17/2001	1:00	14.73	18.26	8.13	23.79	1814
6/17/2001	1:30	14.73	18.26	8.13	23.79	1814
6/17/2001	2:00	14.73	18.25	8.10	23.76	1797
6/17/2001	2:30	14.73	18.25	8.11	23.77	1797
6/17/2001	3:00	14.73	18.24	8.08	23.74	1779
6/17/2001	3:30	14.72	18.23	8.08	23.74	1780
6/17/2001	4:00	14.72	18.23	8.08	23.74	1780
6/17/2001	4:30	14.72	18.23	8.08	23.74	1780
6/17/2001	5:00	14.72	18.22	8.06	23.72	1763
6/17/2001	5:30	14.72	18.21	8.04	23.70	1745
6/17/2001	6:00	14.71	18.20	8.04	23.70	1745
6/17/2001	6:30	14.70	18.20	8.06	23.72	1763
6/17/2001	7:00	14.69	18.19	8.06	23.72	1763
6/17/2001	7:30	14.68	18.19	8.08	23.74	1780
6/17/2001	8:00	14.67	18.19	8.11	23.77	1797
6/17/2001	8:30	14.67	18.18	8.08	23.74	1780
6/17/2001	9:00	14.66	18.17	8.08	23.74	1780
6/17/2001	9:30	14.65	18.16	8.08	23.74	1780
6/17/2001	10:00	14.65	18.15	8.06	23.72	1763
6/17/2001	10:30	14.65	18.15	8.06	23.72	1763
6/17/2001	11:00	14.65	18.15	8.06	23.72	1763
6/17/2001	11:30	14.65	18.14	8.04	23.70	1746
6/17/2001	12:00	14.65	18.14	8.04	23.70	1746
6/17/2001	12:30	14.65	18.13	8.01	23.67	1729

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/17/2001	13:00	14.67	18.13	7.97	23.63	1695
6/17/2001	13:30	14.66	18.13	7.99	23.65	1712
6/17/2001	14:00	14.67	18.13	7.97	23.63	1695
6/17/2001	14:30	14.66	18.13	7.99	23.65	1712
6/17/2001	15:00	14.65	18.12	7.99	23.65	1712
6/17/2001	15:30	14.63	18.12	8.04	23.70	1747
6/17/2001	16:00	14.61	18.11	8.06	23.72	1764
6/17/2001	16:30	14.61	18.11	8.06	23.72	1764
6/17/2001	17:00	14.61	18.10	8.04	23.70	1747
6/17/2001	17:30	14.62	18.10	8.02	23.68	1730
6/17/2001	18:00	14.61	18.09	8.02	23.68	1730
6/17/2001	18:30	14.61	18.08	7.99	23.65	1713
6/17/2001	19:00	14.62	18.07	7.95	23.61	1678
6/17/2001	19:30	14.63	18.06	7.90	23.56	1644
6/17/2001	20:00	14.63	18.06	7.90	23.56	1644
6/17/2001	20:30	14.64	18.06	7.88	23.54	1627
6/17/2001	21:00	14.63	18.05	7.88	23.54	1627
6/17/2001	21:30	14.64	18.04	7.83	23.49	1593
6/17/2001	22:00	14.64	18.03	7.81	23.47	1575
6/17/2001	22:30	14.63	18.03	7.83	23.49	1593
6/17/2001	23:00	14.63	18.02	7.81	23.47	1576
6/17/2001	23:30	14.63	18.02	7.81	23.47	1576
6/18/2001	0:00	14.62	18.00	7.79	23.45	1558
6/18/2001	0:30	14.62	18.00	7.79	23.45	1559
6/18/2001	1:00	14.61	18.00	7.81	23.47	1576
6/18/2001	1:30	14.61	17.99	7.79	23.45	1559
6/18/2001	2:00	14.61	17.98	7.76	23.42	1542
6/18/2001	2:30	14.60	17.97	7.76	23.42	1542
6/18/2001	3:00	14.60	17.96	7.74	23.40	1524
6/18/2001	3:30	14.60	17.96	7.74	23.40	1525
6/18/2001	4:00	14.59	17.95	7.74	23.40	1525
6/18/2001	4:30	14.58	17.94	7.74	23.40	1525
6/18/2001	5:00	14.58	17.93	7.72	23.38	1508
6/18/2001	5:30	14.58	17.93	7.72	23.38	1508
6/18/2001	6:00	14.58	17.93	7.72	23.38	1508
6/18/2001	6:30	14.59	17.93	7.70	23.36	1491
6/18/2001	7:00	14.60	17.93	7.67	23.33	1473
6/18/2001	7:30	14.61	17.93	7.65	23.31	1456
6/18/2001	8:00	14.61	17.93	7.65	23.31	1456
6/18/2001	8:30	14.62	17.92	7.60	23.26	1422
6/18/2001	9:00	14.62	17.93	7.63	23.29	1439
6/18/2001	9:30	14.63	17.93	7.60	23.26	1422
6/18/2001	10:00	14.70	17.93	7.44	23.10	1302

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/18/2001	10:30	14.61	17.93	7.65	23.31	1457
6/18/2001	11:00	14.57	17.93	7.74	23.40	1525
6/18/2001	11:30	14.14	17.93	8.73	24.39	2265
6/18/2001	12:00	14.13	17.93	8.76	24.42	2283
6/18/2001	12:30	14.24	17.93	8.50	24.16	2093
6/18/2001	13:00	14.20	17.94	8.62	24.28	2180
6/18/2001	13:30	14.15	17.93	8.71	24.37	2248
6/18/2001	14:00	14.12	17.94	8.80	24.46	2338
6/18/2001	14:30	14.10	17.93	8.82	24.48	2377
6/18/2001	15:00	14.11	17.93	8.80	24.46	2338
6/18/2001	15:30	14.11	17.93	8.80	24.46	2338
6/18/2001	16:00	14.13	17.93	8.76	24.42	2283
6/18/2001	16:30	14.12	17.93	8.78	24.44	2300
6/18/2001	17:00	14.12	17.92	8.76	24.42	2283
6/18/2001	17:30	14.14	17.93	8.73	24.39	2266
6/18/2001	18:00	14.13	17.92	8.73	24.39	2266
6/18/2001	18:30	14.16	17.92	8.66	24.32	2215
6/18/2001	19:00	14.20	17.93	8.60	24.26	2163
6/18/2001	19:30	14.26	17.93	8.46	24.12	2060
6/18/2001	20:00	14.27	17.92	8.41	24.07	2026
6/18/2001	20:30	14.28	17.92	8.39	24.05	2008
6/18/2001	21:00	14.29	17.92	8.37	24.03	1991
6/18/2001	21:30	14.27	17.91	8.39	24.05	2009
6/18/2001	22:00	14.28	17.91	8.37	24.03	1991
6/18/2001	22:30	14.35	17.90	8.18	23.84	1854
6/18/2001	23:00	14.35	17.90	8.18	23.84	1854
6/18/2001	23:30	14.38	17.90	8.11	23.77	1802
6/19/2001	0:00	14.38	17.90	8.11	23.77	1802
6/19/2001	0:30	14.35	17.90	8.18	23.84	1854
6/19/2001	1:00	14.37	17.90	8.14	23.80	1820
6/19/2001	1:30	14.39	17.90	8.09	23.75	1785
6/19/2001	2:00	14.38	17.90	8.11	23.77	1803
6/19/2001	2:30	14.34	17.90	8.21	23.87	1872
6/19/2001	3:00	14.34	17.89	8.18	23.84	1854
6/19/2001	3:30	14.34	17.88	8.16	23.82	1837
6/19/2001	4:00	14.35	17.88	8.14	23.80	1820
6/19/2001	4:30	14.35	17.87	8.11	23.77	1803
6/19/2001	5:00	14.35	17.86	8.09	23.75	1786
6/19/2001	5:30	14.39	17.86	8.00	23.66	1717
6/19/2001	6:00	14.38	17.86	8.02	23.68	1734
6/19/2001	6:30	14.35	17.85	8.07	23.73	1769
6/19/2001	7:00	14.35	17.85	8.07	23.73	1769
6/19/2001	7:30	14.37	17.84	8.00	23.66	1717

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/19/2001	8:00	14.35	17.83	8.02	23.68	1735
6/19/2001	8:30	14.35	17.83	8.02	23.68	1735
6/19/2001	9:00	14.34	17.82	8.02	23.68	1735
6/19/2001	9:30	14.33	17.82	8.05	23.71	1752
6/19/2001	10:00	14.30	17.81	8.09	23.75	1786
6/19/2001	10:30	14.25	17.80	8.18	23.84	1855
6/19/2001	11:00	14.25	17.80	8.18	23.84	1855
6/19/2001	11:30	14.19	17.79	8.30	23.96	1942
6/19/2001	12:00	14.20	17.78	8.25	23.91	1907
6/19/2001	12:30	14.19	17.77	8.25	23.91	1907
6/19/2001	13:00	14.16	17.76	8.30	23.96	1942
6/19/2001	13:30	14.17	17.76	8.28	23.94	1925
6/19/2001	14:00	14.18	17.74	8.21	23.87	1873
6/19/2001	14:30	14.17	17.73	8.21	23.87	1873
6/19/2001	15:00	14.17	17.73	8.21	23.87	1873
6/19/2001	15:30	14.19	17.72	8.14	23.80	1822
6/19/2001	16:00	14.18	17.71	8.14	23.80	1822
6/19/2001	16:30	14.13	17.70	8.23	23.89	1891
6/19/2001	17:00	14.20	17.70	8.07	23.73	1770
6/19/2001	17:30	14.20	17.69	8.05	23.71	1753
6/19/2001	18:00	14.23	17.68	7.95	23.61	1684
6/19/2001	18:30	14.21	17.67	7.98	23.64	1702
6/19/2001	19:00	14.24	17.67	7.91	23.57	1650
6/19/2001	19:30	14.24	17.66	7.89	23.55	1633
6/19/2001	20:00	14.26	17.65	7.82	23.48	1581
6/19/2001	20:30	14.24	17.65	7.86	23.52	1616
6/19/2001	21:00	14.25	17.64	7.82	23.48	1581
6/19/2001	21:30	14.26	17.64	7.79	23.45	1564
6/19/2001	22:00	14.23	17.64	7.86	23.52	1616
6/19/2001	22:30	14.24	17.63	7.82	23.48	1582
6/19/2001	23:00	14.25	17.63	7.79	23.45	1564
6/19/2001	23:30	14.23	17.63	7.84	23.50	1599
6/20/2001	0:00	14.27	17.63	7.75	23.41	1530
6/20/2001	0:30	14.32	17.63	7.63	23.29	1444
6/20/2001	1:00	14.30	17.62	7.66	23.32	1461
6/20/2001	1:30	14.30	17.62	7.66	23.32	1462
6/20/2001	2:00	14.30	17.61	7.63	23.29	1444
6/20/2001	2:30	14.30	17.61	7.63	23.29	1444
6/20/2001	3:00	14.29	17.60	7.63	23.29	1445
6/20/2001	3:30	14.28	17.60	7.66	23.32	1462
6/20/2001	4:00	14.29	17.60	7.63	23.29	1445
6/20/2001	4:30	14.33	17.59	7.52	23.18	1359
6/20/2001	5:00	14.33	17.59	7.52	23.18	1359

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/20/2001	5:30	14.22	17.58	7.75	23.41	1531
6/20/2001	6:00	14.21	17.58	7.77	23.43	1548
6/20/2001	6:30	14.21	17.57	7.75	23.41	1531
6/20/2001	7:00	14.22	17.57	7.73	23.39	1514
6/20/2001	7:30	14.21	17.57	7.75	23.41	1531
6/20/2001	8:00	14.20	17.57	7.77	23.43	1548
6/20/2001	8:30	14.20	17.57	7.77	23.43	1548
6/20/2001	9:00	14.20	17.57	7.77	23.43	1549
6/20/2001	9:30	14.22	17.56	7.70	23.36	1497
6/20/2001	10:00	14.23	17.56	7.68	23.34	1480
6/20/2001	10:30	14.23	17.56	7.68	23.34	1480
6/20/2001	11:00	14.23	17.56	7.68	23.34	1480
6/20/2001	11:30	14.23	17.56	7.68	23.34	1480
6/20/2001	12:00	14.23	17.56	7.68	23.34	1480
6/20/2001	12:30	14.24	17.56	7.66	23.32	1463
6/20/2001	13:00	14.24	17.55	7.64	23.30	1446
6/20/2001	13:30	14.23	17.56	7.68	23.34	1480
6/20/2001	14:00	14.23	17.55	7.66	23.32	1463
6/20/2001	14:30	14.24	17.55	7.64	23.30	1446
6/20/2001	15:00	14.25	17.55	7.61	23.27	1429
6/20/2001	15:30	14.25	17.55	7.61	23.27	1429
6/20/2001	16:00	14.25	17.55	7.61	23.27	1429
6/20/2001	16:30	14.27	17.55	7.57	23.23	1395
6/20/2001	17:00	14.28	17.54	7.52	23.18	1360
6/20/2001	17:30	14.28	17.54	7.52	23.18	1360
6/20/2001	18:00	14.30	17.54	7.48	23.14	1326
6/20/2001	18:30	14.29	17.54	7.50	23.16	1343
6/20/2001	19:00	14.29	17.54	7.50	23.16	1343
6/20/2001	19:30	14.29	17.53	7.48	23.14	1326
6/20/2001	20:00	14.30	17.53	7.45	23.11	1309
6/20/2001	20:30	14.30	17.53	7.45	23.11	1309
6/20/2001	21:00	14.30	17.53	7.45	23.11	1309
6/20/2001	21:30	14.30	17.53	7.45	23.11	1309
6/20/2001	22:00	14.31	17.53	7.43	23.09	1292
6/20/2001	22:30	14.31	17.53	7.43	23.09	1292
6/20/2001	23:00	14.31	17.53	7.43	23.09	1292
6/20/2001	23:30	14.32	17.53	7.41	23.07	1275
6/21/2001	0:00	14.33	17.52	7.36	23.02	1241
6/21/2001	0:30	14.33	17.53	7.38	23.04	1258
6/21/2001	1:00	14.33	17.53	7.38	23.04	1258
6/21/2001	1:30	14.35	17.53	7.34	23.00	1224
6/21/2001	2:00	14.34	17.53	7.36	23.02	1241
6/21/2001	2:30	14.35	17.53	7.34	23.00	1224

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/21/2001	3:00	14.35	17.53	7.34	23.00	1224
6/21/2001	3:30	14.35	17.53	7.34	23.00	1224
6/21/2001	4:00	14.36	17.53	7.32	22.98	1212
6/21/2001	4:30	14.36	17.54	7.34	23.00	1224
6/21/2001	5:00	14.36	17.53	7.32	22.98	1212
6/21/2001	5:30	14.37	17.54	7.32	22.98	1212
6/21/2001	6:00	14.37	17.54	7.32	22.98	1212
6/21/2001	6:30	14.37	17.54	7.32	22.98	1212
6/21/2001	7:00	14.37	17.54	7.32	22.98	1212
6/21/2001	7:30	14.38	17.54	7.29	22.95	1200
6/21/2001	8:00	14.38	17.54	7.29	22.95	1200
6/21/2001	8:30	14.37	17.54	7.32	22.98	1212
6/21/2001	9:00	14.36	17.54	7.34	23.00	1225
6/21/2001	9:30	14.36	17.54	7.34	23.00	1225
6/21/2001	10:00	14.35	17.54	7.36	23.02	1242
6/21/2001	10:30	14.35	17.55	7.39	23.05	1259
6/21/2001	11:00	14.36	17.55	7.36	23.02	1242
6/21/2001	11:30	14.37	17.55	7.34	23.00	1225
6/21/2001	12:00	14.35	17.55	7.39	23.05	1259
6/21/2001	12:30	14.35	17.55	7.39	23.05	1260
6/21/2001	13:00	14.35	17.55	7.39	23.05	1260
6/21/2001	13:30	14.35	17.55	7.39	23.05	1260
6/21/2001	14:00	14.36	17.55	7.36	23.02	1243
6/21/2001	14:30	14.36	17.55	7.36	23.02	1243
6/21/2001	15:00	14.39	17.55	7.30	22.96	1201
6/21/2001	15:30	14.40	17.54	7.25	22.91	1176
6/21/2001	16:00	14.43	17.54	7.18	22.84	1140
6/21/2001	16:30	14.43	17.54	7.18	22.84	1140
6/21/2001	17:00	14.45	17.54	7.13	22.79	1115
6/21/2001	17:30	14.45	17.54	7.13	22.79	1115
6/21/2001	18:00	14.45	17.54	7.13	22.79	1115
6/21/2001	18:30	14.43	17.54	7.18	22.84	1140
6/21/2001	19:00	14.45	17.54	7.13	22.79	1115
6/21/2001	19:30	14.44	17.53	7.13	22.79	1115
6/21/2001	20:00	14.45	17.53	7.11	22.77	1103
6/21/2001	20:30	14.46	17.53	7.09	22.75	1091
6/21/2001	21:00	14.47	17.53	7.07	22.73	1079
6/21/2001	21:30	14.46	17.53	7.09	22.75	1091
6/21/2001	22:00	14.46	17.53	7.09	22.75	1091
6/21/2001	22:30	14.47	17.54	7.09	22.75	1091
6/21/2001	23:00	14.50	17.54	7.02	22.68	1054
6/21/2001	23:30	14.50	17.54	7.02	22.68	1054
6/22/2001	0:00	14.52	17.54	6.97	22.63	1030



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/22/2001	0:30	14.52	17.53	6.95	22.61	1018
6/22/2001	1:00	14.54	17.53	6.91	22.57	993
6/22/2001	1:30	14.55	17.53	6.88	22.54	981
6/22/2001	2:00	14.53	17.53	6.93	22.59	1006
6/22/2001	2:30	14.57	17.53	6.84	22.50	957
6/22/2001	3:00	14.62	17.53	6.72	22.38	896
6/22/2001	3:30	14.59	17.53	6.79	22.45	932
6/22/2001	4:00	14.64	17.53	6.68	22.34	871
6/22/2001	4:30	14.57	17.53	6.84	22.50	957
6/22/2001	5:00	14.60	17.53	6.77	22.43	920
6/22/2001	5:30	14.69	17.53	6.56	22.22	810
6/22/2001	6:00	14.69	17.53	6.56	22.22	810
6/22/2001	6:30	14.69	17.53	6.56	22.22	810
6/22/2001	7:00	14.69	17.53	6.56	22.22	810
6/22/2001	7:30	14.67	17.53	6.61	22.27	835
6/22/2001	8:00	14.67	17.53	6.61	22.27	835
6/22/2001	8:30	14.66	17.53	6.63	22.29	847
6/22/2001	9:00	14.65	17.53	6.65	22.31	859
6/22/2001	9:30	14.65	17.54	6.68	22.34	872
6/22/2001	10:00	14.63	17.53	6.70	22.36	884
6/22/2001	10:30	14.63	17.53	6.70	22.36	884
6/22/2001	11:00	14.62	17.53	6.72	22.38	896
6/22/2001	11:30	14.62	17.53	6.72	22.38	896
6/22/2001	12:00	14.61	17.53	6.75	22.41	909
6/22/2001	12:30	14.60	17.53	6.77	22.43	921
6/22/2001	13:00	14.61	17.52	6.72	22.38	896
6/22/2001	13:30	14.60	17.53	6.77	22.43	921
6/22/2001	14:00	14.60	17.52	6.75	22.41	909
6/22/2001	14:30	14.59	17.52	6.77	22.43	921
6/22/2001	15:00	14.59	17.51	6.75	22.41	909
6/22/2001	15:30	14.59	17.51	6.75	22.41	909
6/22/2001	16:00	14.59	17.51	6.75	22.41	909
6/22/2001	16:30	14.59	17.51	6.75	22.41	909
6/22/2001	17:00	14.60	17.51	6.72	22.38	897
6/22/2001	17:30	14.61	17.50	6.68	22.34	872
6/22/2001	18:00	14.61	17.50	6.68	22.34	872
6/22/2001	18:30	14.62	17.50	6.66	22.32	860
6/22/2001	19:00	14.61	17.50	6.68	22.34	872
6/22/2001	19:30	14.62	17.50	6.66	22.32	860
6/22/2001	20:00	14.62	17.50	6.66	22.32	860
6/22/2001	20:30	14.62	17.50	6.66	22.32	860
6/22/2001	21:00	14.62	17.50	6.66	22.32	860
6/22/2001	21:30	14.63	17.50	6.63	22.29	848

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/22/2001	22:00	14.64	17.49	6.59	22.25	824
6/22/2001	22:30	14.64	17.49	6.59	22.25	824
6/22/2001	23:00	14.65	17.49	6.56	22.22	812
6/22/2001	23:30	14.65	17.49	6.56	22.22	812
6/23/2001	0:00	14.66	17.49	6.54	22.20	799
6/23/2001	0:30	14.67	17.48	6.50	22.16	775
6/23/2001	1:00	14.67	17.48	6.50	22.16	775
6/23/2001	1:30	14.67	17.48	6.50	22.16	775
6/23/2001	2:00	14.67	17.48	6.50	22.16	775
6/23/2001	2:30	14.67	17.47	6.47	22.13	763
6/23/2001	3:00	14.67	17.47	6.47	22.13	763
6/23/2001	3:30	14.68	17.47	6.45	22.11	751
6/23/2001	4:00	14.68	17.47	6.45	22.11	751
6/23/2001	4:30	14.68	17.47	6.45	22.11	751
6/23/2001	5:00	14.67	17.46	6.45	22.11	751
6/23/2001	5:30	14.66	17.46	6.47	22.13	763
6/23/2001	6:00	14.66	17.46	6.47	22.13	763
6/23/2001	6:30	14.65	17.45	6.47	22.13	763
6/23/2001	7:00	14.64	17.45	6.50	22.16	776
6/23/2001	7:30	14.63	17.45	6.52	22.18	788
6/23/2001	8:00	14.62	17.45	6.54	22.20	800
6/23/2001	8:30	14.61	17.44	6.54	22.20	800
6/23/2001	9:00	14.60	17.44	6.57	22.23	813
6/23/2001	9:30	14.59	17.44	6.59	22.25	825
6/23/2001	10:00	14.58	17.44	6.61	22.27	837
6/23/2001	10:30	14.57	17.44	6.64	22.30	849
6/23/2001	11:00	14.56	17.43	6.64	22.30	849
6/23/2001	11:30	14.56	17.43	6.64	22.30	849
6/23/2001	12:00	14.55	17.42	6.64	22.30	850
6/23/2001	12:30	14.55	17.42	6.64	22.30	850
6/23/2001	13:00	14.54	17.41	6.64	22.30	850
6/23/2001	13:30	14.53	17.40	6.64	22.30	850
6/23/2001	14:00	14.53	17.40	6.64	22.30	850
6/23/2001	14:30	14.52	17.40	6.66	22.32	862
6/23/2001	15:00	14.52	17.40	6.66	22.32	862
6/23/2001	15:30	14.52	17.40	6.66	22.32	862
6/23/2001	16:00	14.52	17.39	6.64	22.30	850
6/23/2001	16:30	14.52	17.39	6.64	22.30	850
6/23/2001	17:00	14.52	17.38	6.61	22.27	838
6/23/2001	17:30	14.52	17.38	6.61	22.27	838
6/23/2001	18:00	14.52	17.38	6.61	22.27	838
6/23/2001	18:30	14.52	17.37	6.59	22.25	826
6/23/2001	19:00	14.53	17.37	6.57	22.23	813

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/23/2001	19:30	14.54	17.37	6.54	22.20	801
6/23/2001	20:00	14.54	17.37	6.54	22.20	801
6/23/2001	20:30	14.54	17.37	6.54	22.20	801
6/23/2001	21:00	14.54	17.36	6.52	22.18	789
6/23/2001	21:30	14.55	17.36	6.50	22.16	777
6/23/2001	22:00	14.55	17.36	6.50	22.16	777
6/23/2001	22:30	14.56	17.36	6.48	22.14	765
6/23/2001	23:00	14.56	17.35	6.45	22.11	753
6/23/2001	23:30	14.56	17.34	6.43	22.09	740
6/24/2001	0:00	14.57	17.34	6.41	22.07	728
6/24/2001	0:30	14.57	17.34	6.41	22.07	728
6/24/2001	1:00	14.57	17.34	6.41	22.07	728
6/24/2001	1:30	14.57	17.34	6.41	22.07	728
6/24/2001	2:00	14.58	17.34	6.38	22.04	716
6/24/2001	2:30	14.59	17.34	6.36	22.02	704
6/24/2001	3:00	14.59	17.33	6.34	22.00	692
6/24/2001	3:30	14.59	17.32	6.32	21.98	683
6/24/2001	4:00	14.58	17.32	6.34	22.00	692
6/24/2001	4:30	14.58	17.32	6.34	22.00	692
6/24/2001	5:00	14.57	17.31	6.34	22.00	692
6/24/2001	5:30	14.57	17.31	6.34	22.00	692
6/24/2001	6:00	14.57	17.30	6.32	21.98	684
6/24/2001	6:30	14.56	17.31	6.36	22.02	704
6/24/2001	7:00	14.55	17.30	6.36	22.02	704
6/24/2001	7:30	14.55	17.30	6.36	22.02	704
6/24/2001	8:00	14.53	17.30	6.41	22.07	729
6/24/2001	8:30	14.52	17.30	6.43	22.09	741
6/24/2001	9:00	14.52	17.30	6.43	22.09	741
6/24/2001	9:30	14.51	17.29	6.43	22.09	741
6/24/2001	10:00	14.50	17.29	6.46	22.12	754
6/24/2001	10:30	14.50	17.28	6.43	22.09	741
6/24/2001	11:00	14.49	17.28	6.46	22.12	754
6/24/2001	11:30	14.48	17.27	6.46	22.12	754
6/24/2001	12:00	14.47	17.27	6.48	22.14	766
6/24/2001	12:30	14.47	17.27	6.48	22.14	766
6/24/2001	13:00	14.47	17.27	6.48	22.14	766
6/24/2001	13:30	14.46	17.27	6.50	22.16	778
6/24/2001	14:00	14.46	17.26	6.48	22.14	766
6/24/2001	14:30	14.46	17.26	6.48	22.14	766
6/24/2001	15:00	14.46	17.25	6.46	22.12	754
6/24/2001	15:30	14.46	17.25	6.46	22.12	754
6/24/2001	16:00	14.45	17.24	6.46	22.12	754
6/24/2001	16:30	14.45	17.24	6.46	22.12	754

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/24/2001	17:00	14.45	17.24	6.46	22.12	754
6/24/2001	17:30	14.45	17.24	6.46	22.12	754
6/24/2001	18:00	14.46	17.24	6.43	22.09	742
6/24/2001	18:30	14.47	17.23	6.39	22.05	718
6/24/2001	19:00	14.47	17.23	6.39	22.05	718
6/24/2001	19:30	14.47	17.23	6.39	22.05	718
6/24/2001	20:00	14.47	17.23	6.39	22.05	718
6/24/2001	20:30	14.48	17.23	6.36	22.02	705
6/24/2001	21:00	14.48	17.22	6.34	22.00	693
6/24/2001	21:30	14.48	17.22	6.34	22.00	693
6/24/2001	22:00	14.50	17.22	6.30	21.96	676
6/24/2001	22:30	14.50	17.22	6.30	21.96	676
6/24/2001	23:00	14.50	17.22	6.30	21.96	676
6/24/2001	23:30	14.51	17.22	6.27	21.93	668
6/25/2001	0:00	14.51	17.22	6.27	21.93	668
6/25/2001	0:30	14.52	17.22	6.25	21.91	659
6/25/2001	1:00	14.52	17.22	6.25	21.91	659
6/25/2001	1:30	14.53	17.22	6.23	21.89	651
6/25/2001	2:00	14.54	17.22	6.20	21.86	642
6/25/2001	2:30	14.56	17.24	6.20	21.86	642
6/25/2001	3:00	14.57	17.24	6.18	21.84	634
6/25/2001	3:30	14.56	17.23	6.18	21.84	634
6/25/2001	4:00	14.56	17.23	6.18	21.84	634
6/25/2001	4:30	14.55	17.21	6.16	21.82	626
6/25/2001	5:00	14.56	17.23	6.18	21.84	634
6/25/2001	5:30	14.56	17.24	6.21	21.87	643
6/25/2001	6:00	14.55	17.24	6.23	21.89	651
6/25/2001	6:30	14.55	17.24	6.23	21.89	651
6/25/2001	7:00	14.54	17.24	6.25	21.91	660
6/25/2001	7:30	14.54	17.25	6.27	21.93	668
6/25/2001	8:00	14.53	17.25	6.30	21.96	677
6/25/2001	8:30	14.52	17.25	6.32	21.98	685
6/25/2001	9:00	14.54	17.26	6.30	21.96	677
6/25/2001	9:30	14.57	17.26	6.23	21.89	651
6/25/2001	10:00	14.55	17.26	6.28	21.94	668
6/25/2001	10:30	14.55	17.26	6.28	21.94	668
6/25/2001	11:00	14.57	17.27	6.25	21.91	660
6/25/2001	11:30	14.58	17.27	6.23	21.89	651
6/25/2001	12:00	14.60	17.28	6.21	21.87	643
6/25/2001	12:30	14.60	17.28	6.21	21.87	643
6/25/2001	13:00	14.60	17.28	6.21	21.87	643
6/25/2001	13:30	14.60	17.29	6.23	21.89	652
6/25/2001	14:00	14.60	17.30	6.25	21.91	660

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/25/2001	14:30	14.61	17.30	6.23	21.89	652
6/25/2001	15:00	14.62	17.30	6.21	21.87	643
6/25/2001	15:30	14.60	17.30	6.25	21.91	660
6/25/2001	16:00	14.61	17.30	6.23	21.89	652
6/25/2001	16:30	14.62	17.31	6.23	21.89	652
6/25/2001	17:00	14.61	17.31	6.25	21.91	660
6/25/2001	17:30	14.62	17.32	6.25	21.91	660
6/25/2001	18:00	14.64	17.32	6.21	21.87	643
6/25/2001	18:30	14.65	17.32	6.18	21.84	635
6/25/2001	19:00	14.65	17.33	6.21	21.87	643
6/25/2001	19:30	14.66	17.33	6.18	21.84	635
6/25/2001	20:00	14.68	17.33	6.14	21.80	618
6/25/2001	20:30	14.69	17.33	6.12	21.78	610
6/25/2001	21:00	14.69	17.33	6.12	21.78	610
6/25/2001	21:30	14.69	17.33	6.12	21.78	610
6/25/2001	22:00	14.70	17.34	6.12	21.78	610
6/25/2001	22:30	14.71	17.34	6.09	21.75	601
6/25/2001	23:00	14.71	17.33	6.07	21.73	593
6/25/2001	23:30	14.71	17.33	6.07	21.73	593
6/26/2001	0:00	14.71	17.33	6.07	21.73	593
6/26/2001	0:30	14.70	17.32	6.07	21.73	593
6/26/2001	1:00	14.70	17.32	6.07	21.73	593
6/26/2001	1:30	14.71	17.33	6.07	21.73	593
6/26/2001	2:00	14.72	17.32	6.02	21.68	576
6/26/2001	2:30	14.71	17.32	6.05	21.71	584
6/26/2001	3:00	14.72	17.32	6.02	21.68	576
6/26/2001	3:30	14.72	17.32	6.03	21.69	576
6/26/2001	4:00	14.72	17.32	6.03	21.69	576
6/26/2001	4:30	14.72	17.32	6.03	21.69	576
6/26/2001	5:00	14.72	17.31	6.00	21.66	568
6/26/2001	5:30	14.72	17.31	6.00	21.66	568
6/26/2001	6:00	14.72	17.31	6.00	21.66	568
6/26/2001	6:30	14.72	17.31	6.00	21.66	568
6/26/2001	7:00	14.72	17.30	5.98	21.64	559
6/26/2001	7:30	14.71	17.30	6.00	21.66	568
6/26/2001	8:00	14.70	17.30	6.03	21.69	576
6/26/2001	8:30	14.70	17.30	6.03	21.69	576
6/26/2001	9:00	14.69	17.30	6.05	21.71	585
6/26/2001	9:30	14.67	17.30	6.10	21.76	602
6/26/2001	10:00	14.67	17.29	6.07	21.73	593
6/26/2001	10:30	14.67	17.29	6.07	21.73	593
6/26/2001	11:00	14.66	17.29	6.10	21.76	602
6/26/2001	11:30	14.67	17.28	6.05	21.71	585

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/26/2001	12:00	14.69	17.28	6.00	21.66	568
6/26/2001	12:30	14.69	17.28	6.00	21.66	568
6/26/2001	13:00	14.69	17.28	6.00	21.66	568
6/26/2001	13:30	14.68	17.27	6.00	21.66	568
6/26/2001	14:00	14.68	17.27	6.00	21.66	568
6/26/2001	14:30	14.67	17.27	6.03	21.69	577
6/26/2001	15:00	14.67	17.27	6.03	21.69	577
6/26/2001	15:30	14.66	17.27	6.05	21.71	585
6/26/2001	16:00	14.66	17.27	6.05	21.71	585
6/26/2001	16:30	14.66	17.27	6.05	21.71	585
6/26/2001	17:00	14.67	17.27	6.03	21.69	577
6/26/2001	17:30	14.67	17.27	6.03	21.69	577
6/26/2001	18:00	14.67	17.27	6.03	21.69	577
6/26/2001	18:30	14.67	17.27	6.03	21.69	577
6/26/2001	19:00	14.67	17.27	6.03	21.69	577
6/26/2001	19:30	14.67	17.27	6.03	21.69	577
6/26/2001	20:00	14.67	17.27	6.03	21.69	577
6/26/2001	20:30	14.67	17.27	6.03	21.69	577
6/26/2001	21:00	14.67	17.27	6.03	21.69	577
6/26/2001	21:30	14.67	17.27	6.03	21.69	577
6/26/2001	22:00	14.67	17.27	6.03	21.69	577
6/26/2001	22:30	14.67	17.27	6.03	21.69	577
6/26/2001	23:00	14.67	17.27	6.03	21.69	577
6/26/2001	23:30	14.67	17.27	6.03	21.69	577
6/27/2001	0:00	14.67	17.27	6.03	21.69	577
6/27/2001	0:30	14.68	17.26	5.98	21.64	560
6/27/2001	1:00	14.68	17.26	5.98	21.64	560
6/27/2001	1:30	14.68	17.26	5.98	21.64	560
6/27/2001	2:00	14.69	17.27	5.98	21.64	560
6/27/2001	2:30	14.70	17.27	5.96	21.62	552
6/27/2001	3:00	14.70	17.27	5.96	21.62	552
6/27/2001	3:30	14.70	17.27	5.96	21.62	552
6/27/2001	4:00	14.71	17.27	5.94	21.60	544
6/27/2001	4:30	14.70	17.27	5.96	21.62	552
6/27/2001	5:00	14.70	17.27	5.96	21.62	552
6/27/2001	5:30	14.70	17.27	5.96	21.62	552
6/27/2001	6:00	14.70	17.27	5.96	21.62	552
6/27/2001	6:30	14.71	17.27	5.94	21.60	544
6/27/2001	7:00	14.71	17.27	5.94	21.60	544
6/27/2001	7:30	14.72	17.28	5.94	21.60	544
6/27/2001	8:00	14.72	17.28	5.94	21.60	544
6/27/2001	8:30	14.72	17.28	5.94	21.60	544
6/27/2001	9:00	14.71	17.28	5.96	21.62	552

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/27/2001	9:30	14.72	17.28	5.94	21.60	544
6/27/2001	10:00	14.72	17.29	5.96	21.62	552
6/27/2001	10:30	14.72	17.29	5.96	21.62	553
6/27/2001	11:00	14.72	17.30	5.98	21.64	561
6/27/2001	11:30	14.72	17.29	5.96	21.62	553
6/27/2001	12:00	14.72	17.30	5.98	21.64	561
6/27/2001	12:30	14.72	17.30	5.98	21.64	561
6/27/2001	13:00	14.72	17.30	5.98	21.64	561
6/27/2001	13:30	14.72	17.30	5.98	21.64	561
6/27/2001	14:00	14.71	17.30	6.01	21.67	570
6/27/2001	14:30	14.69	17.30	6.05	21.71	587
6/27/2001	15:00	14.69	17.30	6.05	21.71	587
6/27/2001	15:30	14.70	17.30	6.03	21.69	578
6/27/2001	16:00	14.71	17.30	6.01	21.67	570
6/27/2001	16:30	14.71	17.30	6.01	21.67	570
6/27/2001	17:00	14.72	17.31	6.01	21.67	570
6/27/2001	17:30	14.73	17.31	5.99	21.65	561
6/27/2001	18:00	14.74	17.31	5.96	21.62	553
6/27/2001	18:30	14.75	17.32	5.96	21.62	553
6/27/2001	19:00	14.76	17.32	5.94	21.60	545
6/27/2001	19:30	14.76	17.32	5.94	21.60	545
6/27/2001	20:00	14.77	17.32	5.92	21.58	536
6/27/2001	20:30	14.77	17.32	5.92	21.58	536
6/27/2001	21:00	14.77	17.32	5.92	21.58	536
6/27/2001	21:30	14.78	17.32	5.89	21.55	528
6/27/2001	22:00	14.78	17.32	5.89	21.55	528
6/27/2001	22:30	14.79	17.32	5.87	21.53	519
6/27/2001	23:00	14.79	17.32	5.87	21.53	519
6/27/2001	23:30	14.79	17.32	5.87	21.53	519
6/28/2001	0:00	14.79	17.32	5.87	21.53	519
6/28/2001	0:30	14.79	17.32	5.87	21.53	519
6/28/2001	1:00	14.79	17.32	5.87	21.53	519
6/28/2001	1:30	14.79	17.32	5.87	21.53	520
6/28/2001	2:00	14.79	17.32	5.87	21.53	520
6/28/2001	2:30	14.79	17.32	5.87	21.53	520
6/28/2001	3:00	14.79	17.32	5.87	21.53	520
6/28/2001	3:30	14.79	17.32	5.87	21.53	520
6/28/2001	4:00	14.79	17.32	5.87	21.53	520
6/28/2001	4:30	14.79	17.31	5.85	21.51	511
6/28/2001	5:00	14.79	17.31	5.85	21.51	511
6/28/2001	5:30	14.79	17.31	5.85	21.51	511
6/28/2001	6:00	14.79	17.31	5.85	21.51	511
6/28/2001	6:30	14.79	17.31	5.85	21.51	511

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/28/2001	7:00	14.79	17.30	5.83	21.49	503
6/28/2001	7:30	14.79	17.30	5.83	21.49	503
6/28/2001	8:00	14.78	17.30	5.85	21.51	511
6/28/2001	8:30	14.78	17.30	5.85	21.51	511
6/28/2001	9:00	14.77	17.30	5.87	21.53	520
6/28/2001	9:30	14.77	17.30	5.87	21.53	520
6/28/2001	10:00	14.76	17.30	5.90	21.56	529
6/28/2001	10:30	14.76	17.30	5.90	21.56	529
6/28/2001	11:00	14.75	17.29	5.90	21.56	529
6/28/2001	11:30	14.74	17.29	5.92	21.58	537
6/28/2001	12:00	14.74	17.28	5.90	21.56	529
6/28/2001	12:30	14.72	17.28	5.94	21.60	546
6/28/2001	13:00	14.71	17.27	5.94	21.60	546
6/28/2001	13:30	14.69	17.27	5.99	21.65	563
6/28/2001	14:00	14.69	17.27	5.99	21.65	563
6/28/2001	14:30	14.69	17.26	5.97	21.63	554
6/28/2001	15:00	14.69	17.26	5.97	21.63	554
6/28/2001	15:30	14.69	17.25	5.94	21.60	546
6/28/2001	16:00	14.69	17.25	5.94	21.60	546
6/28/2001	16:30	14.68	17.24	5.94	21.60	546
6/28/2001	17:00	14.67	17.24	5.97	21.63	554
6/28/2001	17:30	14.68	17.24	5.94	21.60	546
6/28/2001	18:00	14.68	17.23	5.92	21.58	538
6/28/2001	18:30	14.67	17.22	5.92	21.58	538
6/28/2001	19:00	14.67	17.22	5.92	21.58	538
6/28/2001	19:30	14.67	17.21	5.90	21.56	529
6/28/2001	20:00	14.67	17.21	5.90	21.56	529
6/28/2001	20:30	14.67	17.20	5.88	21.54	521
6/28/2001	21:00	14.67	17.20	5.88	21.54	521
6/28/2001	21:30	14.67	17.20	5.88	21.54	521
6/28/2001	22:00	14.68	17.19	5.83	21.49	504
6/28/2001	22:30	14.69	17.19	5.81	21.47	495
6/28/2001	23:00	14.69	17.19	5.81	21.47	495
6/28/2001	23:30	14.69	17.18	5.78	21.44	487
6/29/2001	0:00	14.69	17.18	5.78	21.44	487
6/29/2001	0:30	14.69	17.17	5.76	21.42	479
6/29/2001	1:00	14.70	17.17	5.74	21.40	470
6/29/2001	1:30	14.70	17.17	5.74	21.40	470
6/29/2001	2:00	14.71	17.17	5.71	21.37	462
6/29/2001	2:30	14.71	17.17	5.71	21.37	462
6/29/2001	3:00	14.71	17.17	5.72	21.38	462
6/29/2001	3:30	14.71	17.16	5.69	21.35	453
6/29/2001	4:00	14.71	17.15	5.67	21.33	445



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/29/2001	4:30	14.71	17.15	5.67	21.33	445
6/29/2001	5:00	14.70	17.15	5.69	21.35	453
6/29/2001	5:30	14.70	17.14	5.67	21.33	445
6/29/2001	6:00	14.70	17.14	5.67	21.33	445
6/29/2001	6:30	14.70	17.14	5.67	21.33	445
6/29/2001	7:00	14.70	17.14	5.67	21.33	445
6/29/2001	7:30	14.69	17.14	5.69	21.35	454
6/29/2001	8:00	14.69	17.14	5.69	21.35	454
6/29/2001	8:30	14.69	17.14	5.69	21.35	454
6/29/2001	9:00	14.69	17.13	5.67	21.33	445
6/29/2001	9:30	14.68	17.13	5.69	21.35	454
6/29/2001	10:00	14.67	17.12	5.69	21.35	454
6/29/2001	10:30	14.67	17.11	5.67	21.33	445
6/29/2001	11:00	14.66	17.11	5.69	21.35	454
6/29/2001	11:30	14.66	17.11	5.69	21.35	454
6/29/2001	12:00	14.65	17.11	5.72	21.38	462
6/29/2001	12:30	14.66	17.11	5.69	21.35	454
6/29/2001	13:00	14.65	17.11	5.72	21.38	462
6/29/2001	13:30	14.64	17.11	5.74	21.40	471
6/29/2001	14:00	14.65	17.10	5.69	21.35	454
6/29/2001	14:30	14.65	17.10	5.69	21.35	454
6/29/2001	15:00	14.65	17.10	5.69	21.35	454
6/29/2001	15:30	14.65	17.10	5.69	21.35	454
6/29/2001	16:00	14.65	17.10	5.69	21.35	454
6/29/2001	16:30	14.65	17.10	5.69	21.35	454
6/29/2001	17:00	14.67	17.10	5.65	21.31	437
6/29/2001	17:30	14.66	17.10	5.67	21.33	446
6/29/2001	18:00	14.66	17.09	5.65	21.31	437
6/29/2001	18:30	14.65	17.09	5.67	21.33	446
6/29/2001	19:00	14.65	17.08	5.65	21.31	437
6/29/2001	19:30	14.66	17.08	5.63	21.29	429
6/29/2001	20:00	14.66	17.08	5.63	21.29	429
6/29/2001	20:30	14.67	17.08	5.60	21.26	420
6/29/2001	21:00	14.67	17.08	5.60	21.26	420
6/29/2001	21:30	14.68	17.09	5.60	21.26	420
6/29/2001	22:00	14.69	17.09	5.58	21.24	412
6/29/2001	22:30	14.69	17.09	5.58	21.24	412
6/29/2001	23:00	14.70	17.09	5.56	21.22	404
6/29/2001	23:30	14.70	17.09	5.56	21.22	404
6/30/2001	0:00	14.71	17.09	5.53	21.19	395
6/30/2001	0:30	14.71	17.09	5.53	21.19	395
6/30/2001	1:00	14.72	17.10	5.53	21.19	395
6/30/2001	1:30	14.72	17.09	5.51	21.17	387

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/30/2001	2:00	14.72	17.09	5.51	21.17	387
6/30/2001	2:30	14.73	17.09	5.49	21.15	378
6/30/2001	3:00	14.74	17.10	5.49	21.15	378
6/30/2001	3:30	14.74	17.09	5.47	21.13	370
6/30/2001	4:00	14.74	17.09	5.47	21.13	370
6/30/2001	4:30	14.74	17.09	5.47	21.13	370
6/30/2001	5:00	14.74	17.09	5.47	21.13	370
6/30/2001	5:30	14.74	17.10	5.49	21.15	379
6/30/2001	6:00	14.74	17.10	5.49	21.15	379
6/30/2001	6:30	14.74	17.09	5.47	21.13	370
6/30/2001	7:00	14.74	17.09	5.47	21.13	370
6/30/2001	7:30	14.74	17.09	5.47	21.13	370
6/30/2001	8:00	14.74	17.09	5.47	21.13	370
6/30/2001	8:30	14.74	17.10	5.49	21.15	379
6/30/2001	9:00	14.74	17.10	5.49	21.15	379
6/30/2001	9:30	14.73	17.10	5.51	21.17	387
6/30/2001	10:00	14.71	17.10	5.56	21.22	404
6/30/2001	10:30	14.71	17.10	5.56	21.22	404
6/30/2001	11:00	14.71	17.11	5.58	21.24	413
6/30/2001	11:30	14.70	17.10	5.58	21.24	413
6/30/2001	12:00	14.70	17.10	5.58	21.24	413
6/30/2001	12:30	14.69	17.10	5.61	21.27	421
6/30/2001	13:00	14.67	17.10	5.65	21.31	438
6/30/2001	13:30	14.67	17.10	5.65	21.31	438
6/30/2001	14:00	14.67	17.10	5.65	21.31	438
6/30/2001	14:30	14.67	17.10	5.65	21.31	438
6/30/2001	15:00	14.66	17.10	5.68	21.34	447
6/30/2001	15:30	14.67	17.10	5.65	21.31	439
6/30/2001	16:00	14.67	17.09	5.63	21.29	430
6/30/2001	16:30	14.66	17.09	5.65	21.31	439
6/30/2001	17:00	14.66	17.09	5.65	21.31	439
6/30/2001	17:30	14.66	17.09	5.65	21.31	439
6/30/2001	18:00	14.66	17.09	5.65	21.31	439
6/30/2001	18:30	14.67	17.08	5.61	21.27	422
6/30/2001	19:00	14.67	17.08	5.61	21.27	422
6/30/2001	19:30	14.67	17.08	5.61	21.27	422
6/30/2001	20:00	14.68	17.08	5.58	21.24	413
6/30/2001	20:30	14.68	17.08	5.58	21.24	413
6/30/2001	21:00	14.69	17.08	5.56	21.22	405
6/30/2001	21:30	14.69	17.08	5.56	21.22	405
6/30/2001	22:00	14.69	17.08	5.56	21.22	405
6/30/2001	22:30	14.70	17.08	5.54	21.20	397
6/30/2001	23:00	14.70	17.08	5.54	21.20	397

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/30/2001	23:30	14.71	17.08	5.52	21.18	388
7/1/2001	0:00	14.72	17.08	5.49	21.15	380
7/1/2001	0:30	14.72	17.08	5.49	21.15	380
7/1/2001	1:00	14.72	17.08	5.49	21.15	380
7/1/2001	1:30	14.72	17.08	5.49	21.15	380
7/1/2001	2:00	14.73	17.08	5.47	21.13	371
7/1/2001	2:30	14.74	17.08	5.45	21.11	363
7/1/2001	3:00	14.74	17.07	5.42	21.08	354
7/1/2001	3:30	14.74	17.07	5.42	21.08	354
7/1/2001	4:00	14.74	17.07	5.42	21.08	354
7/1/2001	4:30	14.74	17.07	5.42	21.08	355
7/1/2001	5:00	14.74	17.08	5.45	21.11	363
7/1/2001	5:30	14.74	17.07	5.42	21.08	355
7/1/2001	6:00	14.72	17.07	5.47	21.13	372
7/1/2001	6:30	14.72	17.07	5.47	21.13	372
7/1/2001	7:00	14.71	17.07	5.49	21.15	380
7/1/2001	7:30	14.69	17.07	5.54	21.20	397
7/1/2001	8:00	14.69	17.07	5.54	21.20	397
7/1/2001	8:30	14.67	17.07	5.59	21.25	414
7/1/2001	9:00	14.67	17.06	5.56	21.22	406
7/1/2001	9:30	14.66	17.06	5.59	21.25	414
7/1/2001	10:00	14.65	17.06	5.61	21.27	423
7/1/2001	10:30	14.65	17.05	5.59	21.25	414
7/1/2001	11:00	14.65	17.05	5.59	21.25	414
7/1/2001	11:30	14.65	17.05	5.59	21.25	414
7/1/2001	12:00	14.63	17.05	5.63	21.29	431
7/1/2001	12:30	14.63	17.04	5.61	21.27	423
7/1/2001	13:00	14.62	17.04	5.63	21.29	431
7/1/2001	13:30	14.62	17.04	5.63	21.29	431
7/1/2001	14:00	14.62	17.04	5.63	21.29	431
7/1/2001	14:30	14.61	17.03	5.63	21.29	432
7/1/2001	15:00	14.60	17.03	5.66	21.32	440
7/1/2001	15:30	14.60	17.02	5.63	21.29	432
7/1/2001	16:00	14.60	17.02	5.63	21.29	432
7/1/2001	16:30	14.60	17.01	5.61	21.27	423
7/1/2001	17:00	14.60	17.01	5.61	21.27	423
7/1/2001	17:30	14.60	17.01	5.61	21.27	423
7/1/2001	18:00	14.60	17.00	5.59	21.25	415
7/1/2001	18:30	14.59	16.99	5.59	21.25	415
7/1/2001	19:00	14.59	16.99	5.59	21.25	415
7/1/2001	19:30	14.59	16.98	5.56	21.22	406
7/1/2001	20:00	14.59	16.98	5.57	21.23	406
7/1/2001	20:30	14.59	16.97	5.54	21.20	398

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/1/2001	21:00	14.59	16.97	5.54	21.20	398
7/1/2001	21:30	14.59	16.97	5.54	21.20	398
7/1/2001	22:00	14.59	16.97	5.54	21.20	398
7/1/2001	22:30	14.59	16.97	5.54	21.20	398
7/1/2001	23:00	14.60	16.96	5.50	21.16	381
7/1/2001	23:30	14.60	16.95	5.47	21.13	373
7/2/2001	0:00	14.61	16.95	5.45	21.11	364
7/2/2001	0:30	14.61	16.94	5.43	21.09	356
7/2/2001	1:00	14.62	16.95	5.43	21.09	356
7/2/2001	1:30	14.62	16.94	5.40	21.06	347
7/2/2001	2:00	14.62	16.94	5.40	21.06	347
7/2/2001	2:30	14.63	16.94	5.38	21.04	339
7/2/2001	3:00	14.62	16.94	5.41	21.07	347
7/2/2001	3:30	14.62	16.94	5.41	21.07	347
7/2/2001	4:00	14.62	16.93	5.38	21.04	339
7/2/2001	4:30	14.62	16.92	5.36	21.02	331
7/2/2001	5:00	14.61	16.92	5.38	21.04	339
7/2/2001	5:30	14.61	16.91	5.36	21.02	331
7/2/2001	6:00	14.60	16.91	5.38	21.04	339
7/2/2001	6:30	14.58	16.91	5.43	21.09	356
7/2/2001	7:00	14.57	16.91	5.45	21.11	365
7/2/2001	7:30	14.55	16.91	5.50	21.16	382
7/2/2001	8:00	14.54	16.91	5.52	21.18	390
7/2/2001	8:30	14.52	16.90	5.54	21.20	399
7/2/2001	9:00	14.50	16.90	5.59	21.25	416
7/2/2001	9:30	14.48	16.89	5.61	21.27	424
7/2/2001	10:00	14.48	16.89	5.61	21.27	424
7/2/2001	10:30	14.47	16.89	5.64	21.30	433
7/2/2001	11:00	14.45	16.89	5.68	21.34	450
7/2/2001	11:30	14.45	16.89	5.68	21.34	450
7/2/2001	12:00	14.45	16.88	5.66	21.32	441
7/2/2001	12:30	14.45	16.88	5.66	21.32	441
7/2/2001	13:00	14.45	16.87	5.64	21.30	433
7/2/2001	13:30	14.44	16.87	5.66	21.32	441
7/2/2001	14:00	14.44	16.87	5.66	21.32	441
7/2/2001	14:30	14.43	16.87	5.68	21.34	450
7/2/2001	15:00	14.43	16.86	5.66	21.32	442
7/2/2001	15:30	14.44	16.86	5.64	21.30	433
7/2/2001	16:00	14.44	16.85	5.61	21.27	425
7/2/2001	16:30	14.44	16.85	5.61	21.27	425
7/2/2001	17:00	14.43	16.84	5.61	21.27	425
7/2/2001	17:30	14.44	16.84	5.59	21.25	416
7/2/2001	18:00	14.45	16.84	5.57	21.23	408

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/2/2001	18:30	14.45	16.83	5.55	21.21	399
7/2/2001	19:00	14.45	16.83	5.55	21.21	399
7/2/2001	19:30	14.47	16.84	5.52	21.18	391
7/2/2001	20:00	14.47	16.83	5.50	21.16	382
7/2/2001	20:30	14.48	16.84	5.50	21.16	382
7/2/2001	21:00	14.49	16.84	5.48	21.14	374
7/2/2001	21:30	14.50	16.83	5.43	21.09	357
7/2/2001	22:00	14.50	16.83	5.43	21.09	357
7/2/2001	22:30	14.51	16.83	5.41	21.07	349
7/2/2001	23:00	14.51	16.83	5.41	21.07	349
7/2/2001	23:30	14.50	16.82	5.41	21.07	349
7/3/2001	0:00	14.51	16.83	5.41	21.07	349
7/3/2001	0:30	14.51	16.83	5.41	21.07	349
7/3/2001	1:00	14.52	16.83	5.39	21.05	340
7/3/2001	1:30	14.54	16.83	5.34	21.00	323
7/3/2001	2:00	14.55	16.83	5.32	20.98	318
7/3/2001	2:30	14.55	16.82	5.29	20.95	313
7/3/2001	3:00	14.55	16.82	5.29	20.95	313
7/3/2001	3:30	14.55	16.81	5.27	20.93	308
7/3/2001	4:00	14.55	16.81	5.27	20.93	308
7/3/2001	4:30	14.54	16.81	5.29	20.95	313
7/3/2001	5:00	14.52	16.80	5.32	20.98	318
7/3/2001	5:30	14.52	16.80	5.32	20.98	318
7/3/2001	6:00	14.51	16.79	5.32	20.98	318
7/3/2001	6:30	14.50	16.79	5.34	21.00	324
7/3/2001	7:00	14.49	16.79	5.36	21.02	332
7/3/2001	7:30	14.47	16.78	5.39	21.05	341
7/3/2001	8:00	14.47	16.78	5.39	21.05	341
7/3/2001	8:30	14.45	16.78	5.43	21.09	358
7/3/2001	9:00	14.43	16.77	5.46	21.12	366
7/3/2001	9:30	14.42	16.77	5.48	21.14	375
7/3/2001	10:00	14.41	16.76	5.48	21.14	375
7/3/2001	10:30	14.41	16.75	5.46	21.12	366
7/3/2001	11:00	14.40	16.75	5.48	21.14	375
7/3/2001	11:30	14.40	16.74	5.46	21.12	366
7/3/2001	12:00	14.40	16.74	5.46	21.12	366
7/3/2001	12:30	14.40	16.74	5.46	21.12	366
7/3/2001	13:00	14.38	16.73	5.48	21.14	375
7/3/2001	13:30	14.38	16.72	5.46	21.12	367
7/3/2001	14:00	14.38	16.71	5.43	21.09	358
7/3/2001	14:30	14.38	16.71	5.43	21.09	358
7/3/2001	15:00	14.37	16.71	5.46	21.12	367
7/3/2001	15:30	14.36	16.70	5.46	21.12	367

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/3/2001	16:00	14.36	16.69	5.43	21.09	358
7/3/2001	16:30	14.37	16.68	5.39	21.05	341
7/3/2001	17:00	14.37	16.68	5.39	21.05	341
7/3/2001	17:30	14.37	16.68	5.39	21.05	341
7/3/2001	18:00	14.37	16.67	5.37	21.03	333
7/3/2001	18:30	14.38	16.67	5.34	21.00	324
7/3/2001	19:00	14.38	16.66	5.32	20.98	319
7/3/2001	19:30	14.37	16.65	5.32	20.98	319
7/3/2001	20:00	14.38	16.65	5.30	20.96	314
7/3/2001	20:30	14.38	16.64	5.27	20.93	309
7/3/2001	21:00	14.39	16.64	5.25	20.91	304
7/3/2001	21:30	14.40	16.64	5.23	20.89	299
7/3/2001	22:00	14.40	16.63	5.21	20.87	294
7/3/2001	22:30	14.40	16.63	5.21	20.87	294
7/3/2001	23:00	14.40	16.63	5.21	20.87	294
7/3/2001	23:30	14.41	16.62	5.16	20.82	283
7/4/2001	0:00	14.41	16.63	5.18	20.84	288
7/4/2001	0:30	14.41	16.62	5.16	20.82	283
7/4/2001	1:00	14.42	16.64	5.18	20.84	289
7/4/2001	1:30	14.45	16.64	5.11	20.77	273
7/4/2001	2:00	14.45	16.64	5.11	20.77	273
7/4/2001	2:30	14.44	16.63	5.11	20.77	273
7/4/2001	3:00	14.44	16.63	5.11	20.77	273
7/4/2001	3:30	14.45	16.63	5.09	20.75	268
7/4/2001	4:00	14.45	16.63	5.09	20.75	268
7/4/2001	4:30	14.45	16.62	5.07	20.73	263
7/4/2001	5:00	14.46	16.62	5.05	20.71	258
7/4/2001	5:30	14.45	16.62	5.07	20.73	263
7/4/2001	6:00	14.45	16.62	5.07	20.73	263
7/4/2001	6:30	14.45	16.62	5.07	20.73	263
7/4/2001	7:00	14.45	16.62	5.07	20.73	263
7/4/2001	7:30	14.45	16.62	5.07	20.73	263
7/4/2001	8:00	14.46	16.62	5.05	20.71	258
7/4/2001	8:30	14.46	16.63	5.07	20.73	263
7/4/2001	9:00	14.46	16.63	5.07	20.73	263
7/4/2001	9:30	14.47	16.64	5.07	20.73	263
7/4/2001	10:00	14.48	16.64	5.05	20.71	258
7/4/2001	10:30	14.47	16.64	5.07	20.73	263
7/4/2001	11:00	14.49	16.65	5.05	20.71	258
7/4/2001	11:30	14.49	16.66	5.07	20.73	263
7/4/2001	12:00	14.47	16.66	5.12	20.78	274
7/4/2001	12:30	14.49	16.66	5.07	20.73	263
7/4/2001	13:00	14.50	16.67	5.07	20.73	263

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/4/2001	13:30	14.48	16.67	5.12	20.78	274
7/4/2001	14:00	14.48	16.67	5.12	20.78	274
7/4/2001	14:30	14.48	16.68	5.14	20.80	279
7/4/2001	15:00	14.49	16.68	5.12	20.78	274
7/4/2001	15:30	14.50	16.68	5.09	20.75	269
7/4/2001	16:00	14.50	16.69	5.12	20.78	274
7/4/2001	16:30	14.51	16.70	5.12	20.78	274
7/4/2001	17:00	14.52	16.70	5.09	20.75	269
7/4/2001	17:30	14.54	16.70	5.05	20.71	258
7/4/2001	18:00	14.54	16.71	5.07	20.73	264
7/4/2001	18:30	14.55	16.71	5.05	20.71	259
7/4/2001	19:00	14.55	16.71	5.05	20.71	259
7/4/2001	19:30	14.55	16.71	5.05	20.71	259
7/4/2001	20:00	14.55	16.71	5.05	20.71	259
7/4/2001	20:30	14.55	16.71	5.05	20.71	259
7/4/2001	21:00	14.55	16.72	5.07	20.73	264
7/4/2001	21:30	14.55	16.72	5.07	20.73	264
7/4/2001	22:00	14.55	16.73	5.09	20.75	269
7/4/2001	22:30	14.55	16.73	5.09	20.75	269
7/4/2001	23:00	14.56	16.73	5.07	20.73	264
7/4/2001	23:30	14.56	16.74	5.09	20.75	269
7/5/2001	0:00	14.57	16.74	5.07	20.73	264
7/5/2001	0:30	14.57	16.74	5.07	20.73	264
7/5/2001	1:00	14.57	16.74	5.07	20.73	264
7/5/2001	1:30	14.58	16.75	5.07	20.73	264
7/5/2001	2:00	14.58	16.75	5.07	20.73	264
7/5/2001	2:30	14.59	16.75	5.05	20.71	259
7/5/2001	6:30	14.59	16.77	5.10	20.76	269
7/5/2001	7:00	14.60	16.77	5.07	20.73	264
7/5/2001	7:30	14.59	16.77	5.10	20.76	269
7/5/2001	8:00	14.56	16.78	5.19	20.85	290
7/5/2001	8:30	14.55	16.78	5.21	20.87	295
7/5/2001	9:00	14.52	16.78	5.28	20.94	310
7/5/2001	9:30	14.52	16.78	5.28	20.94	310
7/5/2001	10:00	14.52	16.78	5.28	20.94	310
7/5/2001	10:30	14.51	16.78	5.30	20.96	315
7/5/2001	11:00	14.50	16.78	5.33	20.99	320
7/5/2001	11:30	14.50	16.78	5.33	20.99	320
7/5/2001	12:00	14.50	16.77	5.30	20.96	315
7/5/2001	12:30	14.47	16.77	5.37	21.03	336
7/5/2001	13:00	14.47	16.77	5.37	21.03	336
7/5/2001	13:30	14.46	16.77	5.40	21.06	344
7/5/2001	14:00	14.48	16.77	5.35	21.01	327

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/5/2001	14:30	14.50	16.76	5.28	20.94	310
7/5/2001	15:00	14.50	16.77	5.30	20.96	315
7/5/2001	15:30	14.50	16.77	5.30	20.96	316
7/5/2001	16:00	14.53	16.78	5.26	20.92	305
7/5/2001	16:30	14.54	16.78	5.24	20.90	300
7/5/2001	17:00	14.55	16.78	5.21	20.87	295
7/5/2001	17:30	14.55	16.78	5.21	20.87	295
7/5/2001	18:00	14.56	16.78	5.19	20.85	290
7/5/2001	18:30	14.57	16.78	5.17	20.83	285
7/5/2001	19:00	14.57	16.78	5.17	20.83	285
7/5/2001	19:30	14.57	16.78	5.17	20.83	285
7/5/2001	20:00	14.57	16.78	5.17	20.83	285
7/5/2001	20:30	14.58	16.78	5.14	20.80	280
7/5/2001	21:00	14.58	16.79	5.17	20.83	285
7/5/2001	21:30	14.60	16.79	5.12	20.78	275
7/5/2001	22:00	14.60	16.79	5.12	20.78	275
7/5/2001	22:30	14.61	16.79	5.10	20.76	270
7/5/2001	23:00	14.61	16.79	5.10	20.76	270
7/5/2001	23:30	14.62	16.80	5.10	20.76	270
7/6/2001	0:00	14.62	16.80	5.10	20.76	270
7/6/2001	0:30	14.62	16.80	5.10	20.76	270
7/6/2001	1:00	14.62	16.80	5.10	20.76	270
7/6/2001	1:30	14.62	16.80	5.10	20.76	270
7/6/2001	2:00	14.62	16.80	5.10	20.76	270
7/6/2001	2:30	14.62	16.80	5.10	20.76	270
7/6/2001	3:00	14.62	16.81	5.12	20.78	275
7/6/2001	3:30	14.63	16.81	5.10	20.76	270
7/6/2001	4:00	14.63	16.81	5.10	20.76	270
7/6/2001	4:30	14.63	16.81	5.10	20.76	270
7/6/2001	5:00	14.62	16.81	5.12	20.78	275
7/6/2001	5:30	14.62	16.81	5.12	20.78	275
7/6/2001	6:00	14.62	16.81	5.12	20.78	275
7/6/2001	6:30	14.62	16.81	5.12	20.78	275
7/6/2001	7:00	14.62	16.81	5.12	20.78	275
7/6/2001	7:30	14.61	16.81	5.15	20.81	280
7/6/2001	8:00	14.60	16.81	5.17	20.83	285
7/6/2001	8:30	14.60	16.81	5.17	20.83	286
7/6/2001	9:00	14.60	16.81	5.17	20.83	286
7/6/2001	9:30	14.60	16.81	5.17	20.83	286
7/6/2001	10:00	14.60	16.81	5.17	20.83	286
7/6/2001	10:30	14.60	16.81	5.17	20.83	286
7/6/2001	11:00	14.59	16.81	5.19	20.85	291
7/6/2001	11:30	14.59	16.81	5.19	20.85	291



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/6/2001	12:00	14.58	16.81	5.22	20.88	296
7/6/2001	12:30	14.58	16.81	5.22	20.88	296
7/6/2001	13:00	14.57	16.81	5.24	20.90	301
7/6/2001	13:30	14.57	16.81	5.24	20.90	301
7/6/2001	14:00	14.57	16.81	5.24	20.90	301
7/6/2001	14:30	14.57	16.81	5.24	20.90	301
7/6/2001	15:00	14.58	16.81	5.22	20.88	296
7/6/2001	15:30	14.59	16.81	5.19	20.85	291
7/6/2001	16:00	14.60	16.81	5.17	20.83	286
7/6/2001	16:30	14.60	16.81	5.17	20.83	286
7/6/2001	17:00	14.59	16.81	5.19	20.85	291
7/6/2001	17:30	14.60	16.81	5.17	20.83	286
7/6/2001	18:00	14.60	16.81	5.17	20.83	286
7/6/2001	18:30	14.59	16.81	5.19	20.85	291
7/6/2001	19:00	14.60	16.81	5.17	20.83	286
7/6/2001	19:30	14.60	16.81	5.17	20.83	286
7/6/2001	20:00	14.60	16.81	5.17	20.83	286
7/6/2001	20:30	14.60	16.81	5.17	20.83	286
7/6/2001	21:00	14.60	16.81	5.17	20.83	286
7/6/2001	21:30	14.60	16.81	5.17	20.83	286
7/6/2001	22:00	14.61	16.81	5.15	20.81	281
7/6/2001	22:30	14.61	16.81	5.15	20.81	281
7/6/2001	23:00	14.62	16.81	5.13	20.79	276
7/6/2001	23:30	14.62	16.81	5.13	20.79	276
7/7/2001	0:00	14.62	16.81	5.13	20.79	276
7/7/2001	0:30	14.62	16.81	5.13	20.79	276
7/7/2001	1:00	14.62	16.81	5.13	20.79	276
7/7/2001	1:30	14.62	16.81	5.13	20.79	276
7/7/2001	2:00	14.62	16.81	5.13	20.79	276
7/7/2001	2:30	14.62	16.81	5.13	20.79	276
7/7/2001	3:00	14.62	16.81	5.13	20.79	276
7/7/2001	3:30	14.63	16.81	5.10	20.76	271
7/7/2001	4:00	14.63	16.81	5.10	20.76	271
7/7/2001	4:30	14.63	16.82	5.13	20.79	276
7/7/2001	5:00	14.63	16.82	5.13	20.79	276
7/7/2001	5:30	14.63	16.82	5.13	20.79	276
7/7/2001	6:00	14.63	16.82	5.13	20.79	276
7/7/2001	6:30	14.64	16.82	5.10	20.76	271
7/7/2001	7:00	14.63	16.82	5.13	20.79	276
7/7/2001	7:30	14.63	16.82	5.13	20.79	276
7/7/2001	8:00	14.62	16.83	5.17	20.83	286
7/7/2001	8:30	14.62	16.83	5.17	20.83	286
7/7/2001	9:00	14.63	16.83	5.15	20.81	281

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/7/2001	9:30	14.62	16.83	5.17	20.83	286
7/7/2001	10:00	14.61	16.83	5.20	20.86	292
7/7/2001	10:30	14.60	16.83	5.22	20.88	297
7/7/2001	11:00	14.61	16.84	5.22	20.88	297
7/7/2001	11:30	14.62	16.84	5.20	20.86	292
7/7/2001	12:00	14.62	16.84	5.20	20.86	292
7/7/2001	12:30	14.62	16.84	5.20	20.86	292
7/7/2001	13:00	14.62	16.84	5.20	20.86	292
7/7/2001	13:30	14.61	16.84	5.22	20.88	297
7/7/2001	14:00	14.60	16.84	5.24	20.90	302
7/7/2001	14:30	14.59	16.84	5.27	20.93	307
7/7/2001	15:00	14.60	16.84	5.24	20.90	302
7/7/2001	15:30	14.60	16.84	5.24	20.90	302
7/7/2001	16:00	14.60	16.84	5.24	20.90	302
7/7/2001	16:30	14.60	16.84	5.24	20.90	302
7/7/2001	17:00	14.60	16.84	5.24	20.90	302
7/7/2001	17:30	14.61	16.84	5.22	20.88	297
7/7/2001	18:00	14.62	16.85	5.22	20.88	297
7/7/2001	18:30	14.62	16.85	5.22	20.88	297
7/7/2001	19:00	14.63	16.85	5.20	20.86	292
7/7/2001	19:30	14.63	16.84	5.18	20.84	287
7/7/2001	20:00	14.64	16.84	5.15	20.81	282
7/7/2001	20:30	14.65	16.84	5.13	20.79	277
7/7/2001	21:00	14.65	16.84	5.13	20.79	277
7/7/2001	21:30	14.66	16.85	5.13	20.79	277
7/7/2001	22:00	14.67	16.85	5.11	20.77	272
7/7/2001	22:30	14.67	16.85	5.11	20.77	272
7/7/2001	23:00	14.68	16.85	5.08	20.74	267
7/7/2001	23:30	14.68	16.85	5.08	20.74	267
7/8/2001	0:00	14.69	16.85	5.06	20.72	261
7/8/2001	0:30	14.69	16.85	5.06	20.72	261
7/8/2001	1:00	14.69	16.85	5.06	20.72	261
7/8/2001	1:30	14.69	16.85	5.06	20.72	262
7/8/2001	2:00	14.69	16.85	5.06	20.72	262
7/8/2001	2:30	14.69	16.85	5.06	20.72	262
7/8/2001	3:00	14.69	16.85	5.06	20.72	262
7/8/2001	3:30	14.69	16.85	5.06	20.72	262
7/8/2001	4:00	14.69	16.85	5.06	20.72	262
7/8/2001	4:30	14.69	16.85	5.06	20.72	262
7/8/2001	5:00	14.70	16.85	5.04	20.70	257
7/8/2001	5:30	14.69	16.85	5.06	20.72	262
7/8/2001	6:00	14.70	16.85	5.04	20.70	257
7/8/2001	6:30	14.70	16.85	5.04	20.70	257

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/8/2001	7:00	14.70	16.85	5.04	20.70	257
7/8/2001	7:30	14.69	16.85	5.06	20.72	262
7/8/2001	8:00	14.69	16.85	5.06	20.72	262
7/8/2001	8:30	14.70	16.85	5.04	20.70	257
7/8/2001	9:00	14.70	16.85	5.04	20.70	257
7/8/2001	9:30	14.70	16.85	5.04	20.70	257
7/8/2001	10:00	14.69	16.85	5.06	20.72	262
7/8/2001	10:30	14.69	16.85	5.06	20.72	262
7/8/2001	11:00	14.67	16.85	5.11	20.77	272
7/8/2001	11:30	14.67	16.85	5.11	20.77	272
7/8/2001	12:00	14.66	16.85	5.13	20.79	277
7/8/2001	12:30	14.66	16.85	5.13	20.79	277
7/8/2001	13:00	14.65	16.84	5.13	20.79	277
7/8/2001	13:30	14.66	16.84	5.11	20.77	272
7/8/2001	14:00	14.66	16.84	5.11	20.77	272
7/8/2001	14:30	14.67	16.84	5.09	20.75	267
7/8/2001	15:00	14.67	16.84	5.09	20.75	267
7/8/2001	15:30	14.68	16.84	5.06	20.72	262
7/8/2001	16:00	14.66	16.84	5.11	20.77	272
7/8/2001	16:30	14.67	16.84	5.09	20.75	267
7/8/2001	17:00	14.66	16.84	5.11	20.77	272
7/8/2001	17:30	14.66	16.84	5.11	20.77	272
7/8/2001	18:00	14.67	16.83	5.06	20.72	262
7/8/2001	18:30	14.67	16.83	5.06	20.72	262
7/8/2001	19:00	14.67	16.83	5.06	20.72	262
7/8/2001	19:30	14.67	16.83	5.06	20.72	262
7/8/2001	20:00	14.67	16.83	5.06	20.72	262
7/8/2001	20:30	14.67	16.82	5.04	20.70	257
7/8/2001	21:00	14.67	16.82	5.04	20.70	257
7/8/2001	21:30	14.67	16.83	5.06	20.72	262
7/8/2001	22:00	14.68	16.83	5.04	20.70	257
7/8/2001	22:30	14.68	16.82	5.02	20.68	252
7/8/2001	23:00	14.68	16.82	5.02	20.68	252
7/8/2001	23:30	14.68	16.82	5.02	20.68	252
7/9/2001	0:00	14.68	16.82	5.02	20.68	252
7/9/2001	0:30	14.68	16.82	5.02	20.68	252
7/9/2001	1:00	14.69	16.82	5.00	20.66	247
7/9/2001	1:30	14.69	16.82	5.00	20.66	247
7/9/2001	2:00	14.69	16.82	5.00	20.66	247
7/9/2001	2:30	14.69	16.82	5.00	20.66	247
7/9/2001	3:00	14.69	16.81	4.97	20.63	242
7/9/2001	3:30	14.69	16.81	4.97	20.63	242
7/9/2001	4:00	14.69	16.81	4.97	20.63	242

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/9/2001	4:30	14.69	16.81	4.97	20.63	242
7/9/2001	5:00	14.69	16.81	4.97	20.63	242
7/9/2001	5:30	14.69	16.81	4.97	20.63	242
7/9/2001	6:00	14.68	16.81	5.00	20.66	247
7/9/2001	6:30	14.68	16.81	5.00	20.66	247
7/9/2001	7:00	14.67	16.81	5.02	20.68	252
7/9/2001	7:30	14.67	16.81	5.02	20.68	252
7/9/2001	8:00	14.67	16.81	5.02	20.68	252
7/9/2001	8:30	14.67	16.81	5.02	20.68	252
7/9/2001	9:00	14.66	16.81	5.04	20.70	258
7/9/2001	9:30	14.66	16.81	5.04	20.70	258
7/9/2001	10:00	14.66	16.81	5.04	20.70	258
7/9/2001	10:30	14.65	16.81	5.07	20.73	263
7/9/2001	11:00	14.65	16.81	5.07	20.73	263
7/9/2001	11:30	14.64	16.81	5.09	20.75	268
7/9/2001	12:00	14.64	16.81	5.09	20.75	268
7/9/2001	12:30	14.63	16.81	5.11	20.77	273
7/9/2001	13:00	14.62	16.81	5.14	20.80	278
7/9/2001	13:30	14.63	16.81	5.11	20.77	273
7/9/2001	14:00	14.63	16.81	5.11	20.77	273
7/9/2001	14:30	14.63	16.81	5.11	20.77	273
7/9/2001	15:00	14.62	16.81	5.14	20.80	278
7/9/2001	15:30	14.62	16.81	5.14	20.80	278
7/9/2001	16:00	14.63	16.81	5.11	20.77	273
7/9/2001	16:30	14.62	16.81	5.14	20.80	278
7/9/2001	17:00	14.62	16.81	5.14	20.80	278
7/9/2001	17:30	14.62	16.81	5.14	20.80	278
7/9/2001	18:00	14.63	16.81	5.11	20.77	273
7/9/2001	18:30	14.63	16.81	5.11	20.77	273
7/9/2001	19:00	14.64	16.80	5.07	20.73	263
7/9/2001	19:30	14.63	16.80	5.09	20.75	268
7/9/2001	20:00	14.64	16.80	5.07	20.73	263
7/9/2001	20:30	14.63	16.80	5.09	20.75	268
7/9/2001	21:00	14.64	16.80	5.07	20.73	263
7/9/2001	21:30	14.64	16.80	5.07	20.73	263
7/9/2001	22:00	14.65	16.80	5.05	20.71	258
7/9/2001	22:30	14.65	16.80	5.05	20.71	258
7/9/2001	23:00	14.65	16.80	5.05	20.71	258
7/9/2001	23:30	14.65	16.80	5.05	20.71	258
7/10/2001	0:00	14.65	16.80	5.05	20.71	258
7/10/2001	0:30	14.65	16.80	5.05	20.71	258
7/10/2001	1:00	14.65	16.80	5.05	20.71	258
7/10/2001	1:30	14.65	16.80	5.05	20.71	258

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/10/2001	2:00	14.66	16.80	5.02	20.68	253
7/10/2001	2:30	14.66	16.80	5.02	20.68	253
7/10/2001	3:00	14.65	16.80	5.05	20.71	258
7/10/2001	3:30	14.66	16.80	5.02	20.68	253
7/10/2001	4:00	14.66	16.79	5.00	20.66	248
7/10/2001	4:30	14.65	16.79	5.02	20.68	253
7/10/2001	5:00	14.65	16.79	5.02	20.68	253
7/10/2001	5:30	14.65	16.79	5.02	20.68	253
7/10/2001	6:00	14.65	16.79	5.02	20.68	253
7/10/2001	6:30	14.65	16.79	5.02	20.68	253
7/10/2001	7:00	14.65	16.79	5.02	20.68	253
7/10/2001	7:30	14.65	16.78	5.00	20.66	248
7/10/2001	8:00	14.64	16.78	5.02	20.68	253
7/10/2001	8:30	14.63	16.78	5.05	20.71	258
7/10/2001	9:00	14.63	16.78	5.05	20.71	258
7/10/2001	9:30	14.62	16.78	5.07	20.73	264
7/10/2001	10:00	14.62	16.78	5.07	20.73	264
7/10/2001	10:30	14.61	16.78	5.09	20.75	269
7/10/2001	11:00	14.60	16.78	5.12	20.78	274
7/10/2001	11:30	14.59	16.78	5.14	20.80	279
7/10/2001	12:00	14.59	16.78	5.14	20.80	279
7/10/2001	12:30	14.58	16.78	5.16	20.82	284
7/10/2001	13:00	14.58	16.77	5.14	20.80	279
7/10/2001	13:30	14.58	16.78	5.16	20.82	284
7/10/2001	14:00	14.57	16.77	5.16	20.82	284
7/10/2001	14:30	14.57	16.77	5.16	20.82	284
7/10/2001	15:00	14.58	16.77	5.14	20.80	279
7/10/2001	15:30	14.57	16.76	5.14	20.80	279
7/10/2001	16:00	14.58	16.76	5.12	20.78	274
7/10/2001	16:30	14.58	16.76	5.12	20.78	274
7/10/2001	17:00	14.58	16.75	5.10	20.76	269
7/10/2001	17:30	14.58	16.75	5.10	20.76	269
7/10/2001	18:00	14.58	16.75	5.10	20.76	269
7/10/2001	18:30	14.59	16.74	5.05	20.71	259
7/10/2001	19:00	14.58	16.74	5.07	20.73	264
7/10/2001	19:30	14.59	16.74	5.05	20.71	259
7/10/2001	20:00	14.59	16.74	5.05	20.71	259
7/10/2001	20:30	14.59	16.74	5.05	20.71	259
7/10/2001	21:00	14.60	16.74	5.03	20.69	254
7/10/2001	21:30	14.60	16.74	5.03	20.69	254
7/10/2001	22:00	14.60	16.74	5.03	20.69	254
7/10/2001	22:30	14.60	16.74	5.03	20.69	254
7/10/2001	23:00	14.61	16.74	5.00	20.66	249

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/10/2001	23:30	14.61	16.74	5.00	20.66	249
7/11/2001	0:00	14.62	16.74	4.98	20.64	244
7/11/2001	0:30	14.62	16.74	4.98	20.64	244
7/11/2001	1:00	14.62	16.74	4.98	20.64	244
7/11/2001	1:30	14.62	16.74	4.98	20.64	244
7/11/2001	2:00	14.62	16.74	4.98	20.64	244
7/11/2001	2:30	14.62	16.74	4.98	20.64	244
7/11/2001	3:00	14.62	16.74	4.98	20.64	244
7/11/2001	3:30	14.62	16.74	4.98	20.64	244
7/11/2001	4:00	14.62	16.74	4.98	20.64	244
7/11/2001	4:30	14.62	16.74	4.98	20.64	244
7/11/2001	5:00	14.62	16.74	4.98	20.64	244
7/11/2001	5:30	14.62	16.74	4.98	20.64	244
7/11/2001	6:00	14.62	16.74	4.98	20.64	244
7/11/2001	6:30	14.61	16.74	5.01	20.67	249
7/11/2001	7:00	14.61	16.74	5.01	20.67	249
7/11/2001	7:30	14.60	16.73	5.01	20.67	249
7/11/2001	8:00	14.60	16.73	5.01	20.67	249
7/11/2001	8:30	14.60	16.73	5.01	20.67	249
7/11/2001	9:00	14.60	16.73	5.01	20.67	249
7/11/2001	9:30	14.60	16.73	5.01	20.67	249
7/11/2001	10:00	14.60	16.73	5.01	20.67	249
7/11/2001	10:30	14.60	16.73	5.01	20.67	249
7/11/2001	11:00	14.59	16.73	5.03	20.69	254
7/11/2001	11:30	14.60	16.74	5.03	20.69	254
7/11/2001	12:00	14.60	16.74	5.03	20.69	254
7/11/2001	12:30	14.60	16.74	5.03	20.69	254
7/11/2001	13:00	14.60	16.74	5.03	20.69	254
7/11/2001	13:30	14.60	16.74	5.03	20.69	254
7/11/2001	14:00	14.60	16.74	5.03	20.69	254
7/11/2001	14:30	14.60	16.74	5.03	20.69	255
7/11/2001	15:00	14.60	16.74	5.03	20.69	255
7/11/2001	15:30	14.60	16.74	5.03	20.69	255
7/11/2001	16:00	14.57	16.73	5.08	20.74	265
7/11/2001	16:30	14.57	16.73	5.08	20.74	265
7/11/2001	17:00	14.57	16.73	5.08	20.74	265
7/11/2001	17:30	14.57	16.73	5.08	20.74	265
7/11/2001	18:00	14.57	16.73	5.08	20.74	265
7/11/2001	18:30	14.57	16.73	5.08	20.74	265
7/11/2001	19:00	14.57	16.73	5.08	20.74	265
7/11/2001	19:30	14.58	16.73	5.05	20.71	260
7/11/2001	20:00	14.58	16.73	5.05	20.71	260
7/11/2001	20:30	14.58	16.72	5.03	20.69	255

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/11/2001	21:00	14.58	16.73	5.05	20.71	260
7/11/2001	21:30	14.58	16.73	5.05	20.71	260
7/11/2001	22:00	14.59	16.73	5.03	20.69	255
7/11/2001	22:30	14.60	16.73	5.01	20.67	250
7/11/2001	23:00	14.60	16.73	5.01	20.67	250
7/11/2001	23:30	14.60	16.73	5.01	20.67	250
7/12/2001	0:00	14.61	16.73	4.99	20.65	245
7/12/2001	0:30	14.62	16.73	4.96	20.62	240
7/12/2001	1:00	14.62	16.72	4.94	20.60	234
7/12/2001	1:30	14.62	16.72	4.94	20.60	234
7/12/2001	2:00	14.62	16.72	4.94	20.60	235
7/12/2001	2:30	14.62	16.72	4.94	20.60	235
7/12/2001	3:00	14.62	16.71	4.92	20.58	229
7/12/2001	3:30	14.62	16.71	4.92	20.58	229
7/12/2001	4:00	14.62	16.72	4.94	20.60	235
7/12/2001	4:30	14.62	16.72	4.94	20.60	235
7/12/2001	5:00	14.62	16.71	4.92	20.58	230
7/12/2001	5:30	14.62	16.71	4.92	20.58	230
7/12/2001	6:00	14.62	16.71	4.92	20.58	230
7/12/2001	6:30	14.62	16.71	4.92	20.58	230
7/12/2001	7:00	14.62	16.71	4.92	20.58	230
7/12/2001	7:30	14.62	16.71	4.92	20.58	230
7/12/2001	8:00	14.62	16.71	4.92	20.58	230
7/12/2001	8:30	14.61	16.71	4.94	20.60	235
7/12/2001	9:00	14.61	16.71	4.94	20.60	235
7/12/2001	9:30	14.60	16.71	4.96	20.62	240
7/12/2001	10:00	14.60	16.72	4.99	20.65	245
7/12/2001	10:30	14.60	16.71	4.96	20.62	240
7/12/2001	11:00	14.60	16.72	4.99	20.65	245
7/12/2001	11:30	14.60	16.72	4.99	20.65	245
7/12/2001	12:00	14.60	16.72	4.99	20.65	245
7/12/2001	12:30	14.59	16.72	5.01	20.67	250
7/12/2001	13:00	14.59	16.72	5.01	20.67	250
7/12/2001	13:30	14.57	16.72	5.06	20.72	260
7/12/2001	14:00	14.57	16.72	5.06	20.72	260
7/12/2001	14:30	14.57	16.72	5.06	20.72	261
7/12/2001	15:00	14.57	16.72	5.06	20.72	261
7/12/2001	15:30	14.58	16.72	5.03	20.69	255
7/12/2001	16:00	14.58	16.72	5.03	20.69	255
7/12/2001	16:30	14.59	16.72	5.01	20.67	250
7/12/2001	17:00	14.58	16.72	5.03	20.69	256
7/12/2001	17:30	14.59	16.72	5.01	20.67	250
7/12/2001	18:00	14.59	16.72	5.01	20.67	250

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/12/2001	18:30	14.60	16.72	4.99	20.65	245
7/12/2001	19:00	14.59	16.71	4.99	20.65	245
7/12/2001	19:30	14.60	16.71	4.97	20.63	240
7/12/2001	20:00	14.60	16.71	4.97	20.63	240
7/12/2001	20:30	14.60	16.71	4.97	20.63	240
7/12/2001	21:00	14.60	16.71	4.97	20.63	240
7/12/2001	21:30	14.61	16.71	4.94	20.60	235
7/12/2001	22:00	14.62	16.71	4.92	20.58	230
7/12/2001	22:30	14.62	16.71	4.92	20.58	230
7/12/2001	23:00	14.62	16.71	4.92	20.58	230
7/12/2001	23:30	14.63	16.72	4.92	20.58	230
7/13/2001	0:00	14.64	16.71	4.87	20.53	220
7/13/2001	0:30	14.64	16.71	4.87	20.53	220
7/13/2001	1:00	14.65	16.71	4.85	20.51	215
7/13/2001	1:30	14.66	16.72	4.85	20.51	215
7/13/2001	2:00	14.66	16.72	4.85	20.51	215
7/13/2001	2:30	14.66	16.71	4.83	20.49	210
7/13/2001	3:00	14.67	16.71	4.81	20.47	205
7/13/2001	3:30	14.67	16.72	4.83	20.49	210
7/13/2001	4:00	14.67	16.72	4.83	20.49	210
7/13/2001	4:30	14.67	16.71	4.81	20.47	205
7/13/2001	5:00	14.67	16.71	4.81	20.47	205
7/13/2001	5:30	14.66	16.71	4.83	20.49	210
7/13/2001	6:00	14.66	16.71	4.83	20.49	210
7/13/2001	6:30	14.65	16.71	4.85	20.51	215
7/13/2001	7:00	14.65	16.71	4.85	20.51	215
7/13/2001	7:30	14.65	16.71	4.85	20.51	215
7/13/2001	8:00	14.63	16.71	4.90	20.56	225
7/13/2001	8:30	14.61	16.71	4.94	20.60	236
7/13/2001	9:00	14.60	16.71	4.97	20.63	241
7/13/2001	9:30	14.60	16.71	4.97	20.63	241
7/13/2001	10:00	14.59	16.70	4.97	20.63	241
7/13/2001	10:30	14.58	16.70	4.99	20.65	246
7/13/2001	11:00	14.58	16.70	4.99	20.65	246
7/13/2001	11:30	14.58	16.70	4.99	20.65	246
7/13/2001	12:00	14.58	16.70	4.99	20.65	246
7/13/2001	12:30	14.57	16.70	5.01	20.67	251
7/13/2001	13:00	14.57	16.70	5.01	20.67	251
7/13/2001	13:30	14.58	16.70	4.99	20.65	246
7/13/2001	14:00	14.57	16.69	4.99	20.65	246
7/13/2001	14:30	14.57	16.69	4.99	20.65	246
7/13/2001	15:00	14.57	16.69	4.99	20.65	246
7/13/2001	15:30	14.57	16.68	4.97	20.63	241



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/13/2001	16:00	14.57	16.68	4.97	20.63	241
7/13/2001	16:30	14.57	16.68	4.97	20.63	241
7/13/2001	17:00	14.57	16.68	4.97	20.63	241
7/13/2001	17:30	14.57	16.68	4.97	20.63	241
7/13/2001	18:00	14.57	16.68	4.97	20.63	241
7/13/2001	18:30	14.57	16.68	4.97	20.63	241
7/13/2001	19:00	14.58	16.68	4.95	20.61	236
7/13/2001	19:30	14.58	16.68	4.95	20.61	236
7/13/2001	20:00	14.59	16.67	4.90	20.56	226
7/13/2001	20:30	14.59	16.67	4.90	20.56	226
7/13/2001	21:00	14.60	16.67	4.88	20.54	221
7/13/2001	21:30	14.60	16.67	4.88	20.54	221
7/13/2001	22:00	14.60	16.67	4.88	20.54	221
7/13/2001	22:30	14.61	16.67	4.86	20.52	216
7/13/2001	23:00	14.61	16.67	4.86	20.52	216
7/13/2001	23:30	14.62	16.66	4.81	20.47	206
7/14/2001	0:00	14.63	16.66	4.79	20.45	200
7/14/2001	0:30	14.63	16.66	4.79	20.45	201
7/14/2001	1:00	14.64	16.66	4.76	20.42	195
7/14/2001	1:30	14.64	16.65	4.74	20.40	190
7/14/2001	2:00	14.65	16.66	4.74	20.40	190
7/14/2001	2:30	14.65	16.66	4.74	20.40	190
7/14/2001	3:00	14.65	16.65	4.72	20.38	185
7/14/2001	3:30	14.65	16.65	4.72	20.38	185
7/14/2001	4:00	14.65	16.65	4.72	20.38	185
7/14/2001	4:30	14.65	16.65	4.72	20.38	185
7/14/2001	5:00	14.64	16.65	4.74	20.40	190
7/14/2001	5:30	14.63	16.64	4.74	20.40	190
7/14/2001	6:00	14.62	16.64	4.76	20.42	196
7/14/2001	6:30	14.62	16.65	4.79	20.45	201
7/14/2001	7:00	14.61	16.64	4.79	20.45	201
7/14/2001	7:30	14.60	16.64	4.81	20.47	206
7/14/2001	8:00	14.60	16.64	4.81	20.47	206
7/14/2001	8:30	14.59	16.64	4.83	20.49	211
7/14/2001	9:00	14.58	16.64	4.86	20.52	216
7/14/2001	9:30	14.58	16.64	4.86	20.52	216
7/14/2001	10:00	14.57	16.64	4.88	20.54	221
7/14/2001	10:30	14.56	16.64	4.90	20.56	226
7/14/2001	11:00	14.55	16.64	4.93	20.59	232
7/14/2001	11:30	14.55	16.64	4.93	20.59	232
7/14/2001	12:00	14.55	16.64	4.93	20.59	232
7/14/2001	12:30	14.55	16.63	4.90	20.56	226
7/14/2001	13:00	14.55	16.63	4.90	20.56	227

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/14/2001	13:30	14.54	16.62	4.90	20.56	227
7/14/2001	14:00	14.53	16.62	4.93	20.59	232
7/14/2001	14:30	14.53	16.62	4.93	20.59	232
7/14/2001	15:00	14.53	16.62	4.93	20.59	232
7/14/2001	15:30	14.52	16.61	4.93	20.59	232
7/14/2001	16:00	14.52	16.61	4.93	20.59	232
7/14/2001	16:30	14.52	16.61	4.93	20.59	232
7/14/2001	17:00	14.52	16.61	4.93	20.59	232
7/14/2001	17:30	14.52	16.61	4.93	20.59	232
7/14/2001	18:00	14.52	16.60	4.90	20.56	227
7/14/2001	18:30	14.53	16.60	4.88	20.54	222
7/14/2001	19:00	14.53	16.60	4.88	20.54	222
7/14/2001	19:30	14.53	16.59	4.86	20.52	217
7/14/2001	20:00	14.54	16.59	4.84	20.50	211
7/14/2001	20:30	14.54	16.59	4.84	20.50	211
7/14/2001	21:00	14.54	16.59	4.84	20.50	211
7/14/2001	21:30	14.55	16.59	4.81	20.47	206
7/14/2001	22:00	14.55	16.59	4.81	20.47	206
7/14/2001	22:30	14.55	16.58	4.79	20.45	201
7/14/2001	23:00	14.55	16.58	4.79	20.45	201
7/14/2001	23:30	14.56	16.58	4.77	20.43	196
7/15/2001	0:00	14.57	16.58	4.74	20.40	191
7/15/2001	0:30	14.57	16.58	4.74	20.40	191
7/15/2001	1:00	14.58	16.58	4.72	20.38	186
7/15/2001	1:30	14.59	16.57	4.68	20.34	176
7/15/2001	2:00	14.59	16.57	4.68	20.34	176
7/15/2001	2:30	14.59	16.57	4.68	20.34	176
7/15/2001	3:00	14.59	16.56	4.65	20.31	171
7/15/2001	3:30	14.59	16.56	4.65	20.31	171
7/15/2001	4:00	14.58	16.56	4.68	20.34	176
7/15/2001	4:30	14.57	16.55	4.68	20.34	176
7/15/2001	5:00	14.57	16.55	4.68	20.34	176
7/15/2001	5:30	14.57	16.54	4.65	20.31	171
7/15/2001	6:00	14.55	16.54	4.70	20.36	181
7/15/2001	6:30	14.55	16.54	4.70	20.36	181
7/15/2001	7:00	14.54	16.54	4.72	20.38	186
7/15/2001	7:30	14.52	16.53	4.75	20.41	191
7/15/2001	8:00	14.51	16.53	4.77	20.43	197
7/15/2001	8:30	14.50	16.52	4.77	20.43	197
7/15/2001	9:00	14.50	16.52	4.77	20.43	197
7/15/2001	9:30	14.48	16.51	4.79	20.45	202
7/15/2001	10:00	14.47	16.51	4.82	20.48	207
7/15/2001	10:30	14.45	16.51	4.86	20.52	217

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/15/2001	11:00	14.45	16.51	4.86	20.52	217
7/15/2001	11:30	14.44	16.50	4.86	20.52	217
7/15/2001	12:00	14.42	16.49	4.88	20.54	222
7/15/2001	12:30	14.42	16.49	4.88	20.54	222
7/15/2001	13:00	14.41	16.48	4.88	20.54	222
7/15/2001	13:30	14.40	16.48	4.91	20.57	227
7/15/2001	14:00	14.40	16.48	4.91	20.57	227
7/15/2001	14:30	14.39	16.48	4.93	20.59	233
7/15/2001	15:00	14.38	16.47	4.93	20.59	233
7/15/2001	15:30	14.38	16.47	4.93	20.59	233
7/15/2001	16:00	14.38	16.46	4.91	20.57	228
7/15/2001	16:30	14.38	16.45	4.89	20.55	222
7/15/2001	17:00	14.38	16.45	4.89	20.55	222
7/15/2001	17:30	14.39	16.45	4.86	20.52	217
7/15/2001	18:00	14.38	16.45	4.89	20.55	223
7/15/2001	18:30	14.38	16.44	4.86	20.52	217
7/15/2001	19:00	14.38	16.44	4.86	20.52	217
7/15/2001	19:30	14.40	16.44	4.82	20.48	207
7/15/2001	20:00	14.40	16.43	4.79	20.45	202
7/15/2001	20:30	14.39	16.43	4.82	20.48	207
7/15/2001	21:00	14.38	16.42	4.82	20.48	207
7/15/2001	21:30	14.39	16.41	4.77	20.43	197
7/15/2001	22:00	14.39	16.41	4.77	20.43	197
7/15/2001	22:30	14.40	16.41	4.75	20.41	192
7/15/2001	23:00	14.40	16.41	4.75	20.41	192
7/15/2001	23:30	14.41	16.40	4.70	20.36	182
7/16/2001	0:00	14.41	16.40	4.70	20.36	182
7/16/2001	0:30	14.41	16.39	4.68	20.34	177
7/16/2001	1:00	14.41	16.39	4.68	20.34	177
7/16/2001	1:30	14.42	16.38	4.63	20.29	167
7/16/2001	2:00	14.42	16.38	4.63	20.29	167
7/16/2001	2:30	14.42	16.38	4.63	20.29	167
7/16/2001	3:00	14.42	16.37	4.61	20.27	162
7/16/2001	3:30	14.42	16.37	4.61	20.27	162
7/16/2001	4:00	14.41	16.36	4.61	20.27	162
7/16/2001	4:30	14.41	16.36	4.61	20.27	162
7/16/2001	5:00	14.40	16.36	4.63	20.29	167
7/16/2001	5:30	14.39	16.35	4.63	20.29	167
7/16/2001	6:00	14.38	16.35	4.66	20.32	172
7/16/2001	6:30	14.38	16.35	4.66	20.32	172
7/16/2001	7:00	14.35	16.35	4.73	20.39	187
7/16/2001	7:30	14.34	16.35	4.75	20.41	192
7/16/2001	8:00	14.33	16.35	4.77	20.43	197

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/16/2001	8:30	14.32	16.35	4.80	20.46	203
7/16/2001	9:00	14.30	16.34	4.82	20.48	208
7/16/2001	9:30	14.29	16.34	4.84	20.50	213
7/16/2001	10:00	14.28	16.33	4.84	20.50	213
7/16/2001	10:30	14.27	16.33	4.87	20.53	218
7/16/2001	11:00	14.27	16.33	4.87	20.53	218
7/16/2001	11:30	14.27	16.33	4.87	20.53	218
7/16/2001	12:00	14.27	16.33	4.87	20.53	218
7/16/2001	12:30	14.25	16.33	4.91	20.57	228
7/16/2001	13:00	14.26	16.32	4.87	20.53	218
7/16/2001	13:30	14.25	16.32	4.89	20.55	223
7/16/2001	14:00	14.25	16.32	4.89	20.55	223
7/16/2001	14:30	14.25	16.32	4.89	20.55	223
7/16/2001	15:00	14.26	16.33	4.89	20.55	223
7/16/2001	15:30	14.28	16.33	4.84	20.50	213
7/16/2001	16:00	14.31	16.34	4.80	20.46	203
7/16/2001	16:30	14.32	16.34	4.77	20.43	198
7/16/2001	17:00	14.30	16.34	4.82	20.48	208
7/16/2001	17:30	14.30	16.33	4.80	20.46	203
7/16/2001	18:00	14.29	16.34	4.84	20.50	213
7/16/2001	18:30	14.30	16.34	4.82	20.48	208
7/16/2001	19:00	14.28	16.34	4.87	20.53	218
7/16/2001	19:30	14.30	16.34	4.82	20.48	208
7/16/2001	20:00	14.31	16.35	4.82	20.48	208
7/16/2001	20:30	14.31	16.34	4.80	20.46	203
7/16/2001	21:00	14.33	16.35	4.78	20.44	198
7/16/2001	21:30	14.33	16.35	4.78	20.44	198
7/16/2001	22:00	14.34	16.35	4.75	20.41	193
7/16/2001	22:30	14.35	16.35	4.73	20.39	188
7/16/2001	23:00	14.36	16.35	4.71	20.37	183
7/16/2001	23:30	14.36	16.35	4.71	20.37	183
7/17/2001	0:00	14.37	16.35	4.68	20.34	178
7/17/2001	0:30	14.38	16.35	4.66	20.32	173
7/17/2001	1:00	14.38	16.35	4.66	20.32	173
7/17/2001	1:30	14.38	16.35	4.66	20.32	173
7/17/2001	2:00	14.38	16.35	4.66	20.32	173
7/17/2001	2:30	14.38	16.35	4.66	20.32	173
7/17/2001	3:00	14.39	16.35	4.64	20.30	168
7/17/2001	3:30	14.39	16.35	4.64	20.30	168
7/17/2001	4:00	14.40	16.35	4.62	20.28	162
7/17/2001	4:30	14.40	16.35	4.62	20.28	163
7/17/2001	5:00	14.40	16.35	4.62	20.28	163
7/17/2001	5:30	14.39	16.35	4.64	20.30	168

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
7/17/2001	6:00	14.39	16.35	4.64	20.30	168
7/17/2001	6:30	14.40	16.35	4.62	20.28	163
7/17/2001	7:00	14.40	16.35	4.62	20.28	163
7/17/2001	7:30	14.39	16.35	4.64	20.30	168
7/17/2001	8:00	14.39	16.35	4.64	20.30	168
7/17/2001	8:30	14.39	16.36	4.66	20.32	173
7/17/2001	9:00	14.39	16.36	4.66	20.32	173
7/17/2001	9:30	14.38	16.36	4.69	20.35	178
7/17/2001	10:00	14.38	16.36	4.69	20.35	178
7/17/2001	10:30	14.38	16.36	4.69	20.35	178
7/17/2001	11:00	14.40	16.36	4.64	20.30	168
7/17/2001	11:30	14.39	16.36	4.66	20.32	173
7/17/2001	12:00	14.38	16.36	4.69	20.35	178
7/17/2001	12:30	14.39	16.37	4.69	20.35	178
7/17/2001	13:00	14.40	16.37	4.66	20.32	173
7/17/2001	13:30	14.41	16.37	4.64	20.30	168
7/17/2001	14:00	14.42	16.38	4.64	20.30	168
7/17/2001	14:27	-	-	-	<b>20.30</b>	168
7/17/2001	14:30	14.42	16.38	4.64	20.30	168
7/17/2001	14:37	-	-	-	<b>20.30</b>	168
7/17/2001	15:00	14.43	16.38	4.49	20.28	164
7/17/2001	15:30	14.44	16.38	4.47	20.26	159
7/17/2001	16:00	14.44	16.38	4.47	20.26	160
7/17/2001	16:30	14.44	16.38	4.48	20.27	160
7/17/2001	17:00	14.43	16.38	4.50	20.29	166
7/17/2001	17:30	14.43	16.38	4.50	20.29	167
7/17/2001	17:52	-	-	-	<b>20.30</b>	168
7/17/2001	18:00	14.43	16.38	4.51	20.30	167
7/17/2001	18:22	-	-	-	<b>20.30</b>	<b>153.9</b>
7/17/2001	18:30	14.42	16.39	4.52	20.33	174
7/17/2001	18:54	-	-	-	<b>20.31</b>	170
7/17/2001	19:00	14.42	16.39	4.50	20.31	171
7/17/2001	19:30	14.42	16.39	4.54	20.32	171
7/17/2001	20:00	14.39	16.39	4.61	20.39	187
7/17/2001	20:30	14.36	16.39	4.68	20.46	203
7/17/2001	21:00	14.34	16.39	4.73	20.51	214
7/17/2001	21:30	14.34	16.40	4.75	20.53	220
7/17/2001	22:00	14.35	16.40	4.73	20.51	215
7/17/2001	22:30	14.37	16.40	4.69	20.47	206
7/17/2001	23:00	14.38	16.41	4.69	20.47	206
7/17/2001	23:30	14.41	16.41	4.63	20.41	191
7/18/2001	0:00	14.45	16.41	4.54	20.32	172
7/18/2001	0:30	14.46	16.41	4.52	20.30	167

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/18/2001	1:00	14.48	16.42	4.50	20.28	162
7/18/2001	1:30	14.49	16.42	4.47	20.25	158
7/18/2001	2:00	14.50	16.43	4.48	20.26	159
7/18/2001	2:30	14.50	16.43	4.48	20.26	159
7/18/2001	3:00	14.50	16.43	4.48	20.26	160
7/18/2001	3:30	14.51	16.43	4.46	20.24	156
7/18/2001	4:00	14.52	16.44	4.46	20.24	157
7/18/2001	4:30	14.52	16.44	4.47	20.25	157
7/18/2001	5:00	14.52	16.44	4.47	20.25	157
7/18/2001	5:30	14.52	16.45	4.50	20.28	163
7/18/2001	6:00	14.52	16.45	4.50	20.28	163
7/18/2001	6:30	14.53	16.45	4.48	20.26	159
7/18/2001	7:00	14.53	16.46	4.50	20.28	164
7/18/2001	7:30	14.53	16.46	4.51	20.29	165
7/18/2001	8:00	14.53	16.46	4.51	20.29	165
7/18/2001	8:03	-	-	-	<b>20.29</b>	166
7/18/2001	8:30	14.54	16.47	4.51	20.29	166
7/18/2001	9:30	14.52	15.4	2.02	20.28	165
7/18/2001	9:32	-	-	-	<b>20.28</b>	164
7/18/2001	10:00	14.53	15.4	2.00	20.26	160
7/18/2001	10:30	14.52	15.4	2.03	20.29	165
7/18/2001	11:00	14.53	15.41	2.03	20.29	165
7/18/2001	11:30	14.53	15.41	2.03	20.29	165
7/18/2001	12:00	14.53	15.42	2.05	20.31	170
7/18/2001	12:30	14.53	15.42	2.05	20.31	171
7/18/2001	13:00	14.55	15.42	2.01	20.27	160
7/18/2001	13:30	14.54	15.42	2.03	20.29	166
7/18/2001	14:00	14.53	15.42	2.05	20.31	171
7/18/2001	14:30	14.52	15.42	2.08	20.34	176
7/18/2001	15:00	14.53	15.43	2.08	20.34	176
7/18/2001	15:30	14.54	15.43	2.05	20.31	171
7/18/2001	16:00	14.55	15.43	2.03	20.29	166
7/18/2001	16:30	14.55	15.43	2.03	20.29	166
7/18/2001	17:00	14.52	15.42	2.08	20.34	177
7/18/2001	17:30	14.53	15.42	2.06	20.32	172
7/18/2001	18:00	14.53	15.42	2.06	20.32	172
7/18/2001	18:30	14.52	15.42	2.08	20.34	177
7/18/2001	19:00	14.52	15.42	2.08	20.34	177
7/18/2001	19:30	14.52	15.42	2.08	20.34	177
7/18/2001	20:00	14.53	15.42	2.06	20.32	172
7/18/2001	20:30	14.54	15.42	2.04	20.30	167
7/18/2001	21:00	14.55	15.42	2.01	20.27	162
7/18/2001	21:30	14.55	15.42	2.02	20.28	163

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/18/2001	22:00	14.53	15.42	2.06	20.32	173
7/18/2001	22:30	14.51	15.42	2.11	20.37	183
7/18/2001	23:00	14.51	15.42	2.11	20.37	183
7/18/2001	23:30	14.52	15.42	2.09	20.35	178
7/19/2001	0:00	14.53	15.42	2.06	20.32	173
7/19/2001	0:30	14.54	15.42	2.04	20.30	168
7/19/2001	1:00	14.54	15.41	2.02	20.28	163
7/19/2001	1:30	14.55	15.41	2.00	20.26	158
7/19/2001	2:00	14.55	15.4	1.97	20.23	156
7/19/2001	2:30	14.55	15.39	1.95	20.21	154
7/19/2001	3:00	14.56	15.39	1.93	20.19	153
7/19/2001	3:30	14.56	15.39	1.93	20.19	153
7/19/2001	4:00	14.56	15.39	1.93	20.19	153
7/19/2001	4:30	14.56	15.37	1.89	20.15	150
7/19/2001	5:00	14.55	15.36	1.89	20.15	150
7/19/2001	5:30	14.55	15.36	1.89	20.15	150
7/19/2001	6:00	14.53	15.36	1.93	20.19	153
7/19/2001	6:30	14.52	15.35	1.93	20.19	153
7/19/2001	7:00	14.51	15.35	1.96	20.22	155
7/19/2001	7:30	14.51	15.34	1.93	20.19	153
7/19/2001	8:00	14.5	15.33	1.94	20.20	153
7/19/2001	8:30	14.49	15.33	1.96	20.22	155
7/19/2001	9:00	14.47	15.32	1.98	20.24	156
7/19/2001	9:30	14.46	15.32	2.01	20.27	160
7/19/2001	10:00	14.45	15.32	2.03	20.29	166
7/19/2001	10:30	14.44	15.31	2.03	20.29	166
7/19/2001	11:00	14.42	15.31	2.08	20.34	176
7/19/2001	11:46	-	-	-	<b>20.29</b>	166
7/19/2001	12:00	14.42	15.29	2.03	20.29	166
7/19/2001	12:30	14.4	15.29	2.02	20.31	171
7/19/2001	12:54	-	-	-	<b>20.31</b>	170
7/19/2001	13:00	14.39	15.29	2.02	20.31	170
7/19/2001	13:30	14.37	15.29	2.12	20.36	181
7/19/2001	14:00	14.37	15.28	2.09	20.33	176
7/19/2001	14:30	14.36	15.28	2.12	20.36	181
7/19/2001	15:00	14.36	15.27	2.09	20.33	176
7/19/2001	15:30	14.35	15.26	2.09	20.33	176
7/19/2001	16:00	14.36	15.26	2.07	20.31	170
7/19/2001	16:30	14.35	15.26	2.09	20.33	176
7/19/2001	17:00	14.35	15.26	2.09	20.33	176
7/19/2001	17:30	14.35	15.25	2.07	20.31	170
7/19/2001	18:00	14.36	15.25	2.05	20.29	165
7/19/2001	18:30	14.36	15.24	2.02	20.26	160

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
7/19/2001	19:00	14.35	15.23	2.02	20.26	160
7/19/2001	19:30	14.35	15.23	2.02	20.26	160
7/19/2001	20:00	14.35	15.23	2.02	20.26	160
7/19/2001	20:30	14.35	15.23	2.02	20.26	160
7/19/2001	21:00	14.34	15.23	2.05	20.29	165
7/19/2001	21:30	14.34	15.22	2.02	20.26	160
7/19/2001	22:00	14.34	15.22	2.02	20.26	160
7/19/2001	22:30	14.34	15.21	2.00	20.24	156
7/19/2001	23:00	14.34	15.21	2.00	20.24	156
7/19/2001	23:30	14.35	15.21	1.98	20.22	155
7/20/2001	0:00	14.35	15.21	1.98	20.22	155
7/20/2001	0:30	14.35	15.21	1.98	20.22	155
7/20/2001	1:00	14.35	15.21	1.98	20.22	155
7/20/2001	1:30	14.36	15.21	1.96	20.20	153
7/20/2001	2:00	14.36	15.2	1.93	20.17	151
7/20/2001	2:30	14.36	15.2	1.93	20.17	151
7/20/2001	3:00	14.36	15.2	1.93	20.17	151
7/20/2001	3:30	14.36	15.2	1.93	20.17	151
7/20/2001	4:00	14.35	15.2	1.96	20.20	153
7/20/2001	4:30	14.36	15.19	1.91	20.15	150
7/20/2001	5:00	14.36	15.2	1.93	20.17	151
7/20/2001	5:30	14.36	15.2	1.93	20.17	151
7/20/2001	6:00	14.36	15.2	1.93	20.17	151
7/20/2001	6:30	14.36	15.2	1.93	20.17	151
7/20/2001	7:00	14.37	15.2	1.91	20.15	150
7/20/2001	7:30	14.36	15.2	1.93	20.17	151
7/20/2001	8:00	14.36	15.2	1.93	20.17	151
7/20/2001	8:30	14.37	15.21	1.93	20.17	151
7/20/2001	9:00	14.37	15.21	1.93	20.17	151
7/20/2001	9:30	14.37	15.21	1.93	20.17	151
7/20/2001	10:00	14.36	15.21	1.96	20.20	153
7/20/2001	10:30	14.36	15.21	1.96	20.20	153
7/20/2001	11:00	14.36	15.22	1.98	20.22	155
7/20/2001	11:20	-	-	-	<b>20.24</b>	156
7/20/2001	11:30	14.35	15.22	2.00	20.24	156
7/20/2001	12:00	14.36	15.22	1.98	20.22	155
7/20/2001	12:30	14.35	15.22	2.00	20.24	156
7/20/2001	13:00	14.35	15.22	2.00	20.24	156
7/20/2001	13:30	14.35	15.22	2.00	20.24	156
7/20/2001	14:00	14.33	15.22	2.05	20.29	166
7/20/2001	14:30	14.33	15.22	2.05	20.29	166
7/20/2001	15:00	14.32	15.21	2.05	20.29	166
7/20/2001	15:30	14.32	15.21	2.05	20.29	166



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/20/2001	16:00	14.31	15.21	2.07	20.31	171
7/20/2001	16:30	14.32	15.2	2.03	20.27	161
7/20/2001	17:00	14.33	15.2	2.00	20.24	156
7/20/2001	17:30	14.31	15.19	2.03	20.27	161
7/20/2001	18:00	14.3	15.19	2.05	20.29	166
7/20/2001	18:30	14.31	15.19	2.03	20.27	161
7/20/2001	19:00	14.33	15.19	1.98	20.22	155
7/20/2001	19:30	14.31	15.19	2.03	20.27	161
7/20/2001	20:00	14.32	15.19	2.01	20.25	157
7/20/2001	20:30	14.34	15.19	1.96	20.20	153
7/20/2001	21:00	14.35	15.19	1.94	20.18	152
7/20/2001	21:30	14.35	15.2	1.96	20.20	153
7/20/2001	22:00	14.36	15.2	1.94	20.18	152
7/20/2001	22:30	14.37	15.2	1.91	20.15	150
7/20/2001	23:00	14.38	15.21	1.91	20.15	150
7/20/2001	23:30	14.38	15.2	1.89	20.13	149
7/21/2001	0:00	14.39	15.21	1.89	20.13	149
7/21/2001	0:30	14.4	15.21	1.87	20.11	147
7/21/2001	1:00	14.4	15.21	1.87	20.11	147
7/21/2001	1:30	14.4	15.21	1.87	20.11	147
7/21/2001	2:00	14.4	15.22	1.89	20.13	149
7/21/2001	2:30	14.4	15.21	1.87	20.11	147
7/21/2001	3:00	14.4	15.21	1.87	20.11	147
7/21/2001	3:30	14.4	15.21	1.87	20.11	147
7/21/2001	4:00	14.4	15.21	1.87	20.11	147
7/21/2001	4:30	14.4	15.2	1.85	20.09	145
7/21/2001	5:00	14.39	15.2	1.87	20.11	147
7/21/2001	5:30	14.39	15.2	1.87	20.11	147
7/21/2001	6:00	14.39	15.2	1.87	20.11	147
7/21/2001	6:30	14.38	15.2	1.89	20.13	149
7/21/2001	7:00	14.37	15.2	1.92	20.16	150
7/21/2001	7:30	14.37	15.2	1.92	20.16	150
7/21/2001	8:00	14.37	15.19	1.90	20.14	149
7/21/2001	8:30	14.37	15.2	1.92	20.16	150
7/21/2001	9:00	14.36	15.2	1.94	20.18	152
7/21/2001	9:30	14.36	15.2	1.94	20.18	152
7/21/2001	10:00	14.37	15.2	1.92	20.16	150
7/21/2001	10:30	14.37	15.21	1.94	20.18	152
7/21/2001	11:00	14.36	15.21	1.97	20.21	154
7/21/2001	11:30	14.36	15.21	1.97	20.21	154
7/21/2001	12:00	14.36	15.21	1.97	20.21	154
7/21/2001	12:30	14.37	15.21	1.94	20.18	152
7/21/2001	12:35	-	-	-	<b>20.18</b>	152

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/21/2001	13:00	14.36	15.21	1.96	20.21	154
7/21/2001	13:30	14.36	15.2	1.93	20.18	152
7/21/2001	14:00	14.35	15.21	1.98	20.23	155
7/21/2001	14:30	14.36	15.21	1.96	20.21	154
7/21/2001	15:00	14.37	15.21	1.93	20.18	152
7/21/2001	15:30	14.38	15.21	1.91	20.16	151
7/21/2001	16:00	14.38	15.21	1.91	20.16	151
7/21/2001	16:30	14.38	15.21	1.91	20.16	151
7/21/2001	17:00	14.38	15.21	1.91	20.16	151
7/21/2001	17:30	14.38	15.21	1.91	20.16	151
7/21/2001	18:00	14.38	15.21	1.91	20.16	151
7/21/2001	18:30	14.38	15.21	1.91	20.16	151
7/21/2001	19:00	14.38	15.21	1.91	20.16	151
7/21/2001	19:30	14.39	15.22	1.91	20.16	151
7/21/2001	20:00	14.39	15.22	1.91	20.16	151
7/21/2001	20:30	14.4	15.22	1.89	20.14	149
7/21/2001	21:00	14.4	15.22	1.89	20.14	149
7/21/2001	21:30	14.4	15.23	1.91	20.16	151
7/21/2001	22:00	14.4	15.23	1.91	20.16	151
7/21/2001	22:30	14.4	15.23	1.91	20.16	151
7/21/2001	23:00	14.4	15.23	1.91	20.16	151
7/21/2001	23:30	14.41	15.23	1.89	20.14	149
7/22/2001	0:00	14.41	15.23	1.89	20.14	149
7/22/2001	0:30	14.41	15.23	1.89	20.14	149
7/22/2001	1:00	14.42	15.23	1.87	20.12	148
7/22/2001	1:30	14.42	15.24	1.89	20.14	149
7/22/2001	2:00	14.42	15.24	1.89	20.14	149
7/22/2001	2:30	14.42	15.23	1.87	20.12	148
7/22/2001	3:00	14.42	15.23	1.87	20.12	148
7/22/2001	3:30	14.42	15.23	1.87	20.12	148
7/22/2001	4:00	14.42	15.23	1.87	20.12	148
7/22/2001	4:30	14.43	15.23	1.85	20.10	146
7/22/2001	5:00	14.43	15.23	1.85	20.10	146
7/22/2001	5:30	14.43	15.23	1.85	20.10	146
7/22/2001	6:00	14.43	15.22	1.82	20.07	144
7/22/2001	6:30	14.42	15.23	1.87	20.12	148
7/22/2001	7:00	14.42	15.22	1.85	20.10	146
7/22/2001	7:30	14.42	15.22	1.85	20.10	146
7/22/2001	8:00	14.41	15.22	1.87	20.12	148
7/22/2001	8:30	14.4	15.22	1.89	20.14	149
7/22/2001	9:00	14.4	15.22	1.89	20.14	149
7/22/2001	9:30	14.39	15.22	1.92	20.17	151
7/22/2001	10:00	14.38	15.21	1.92	20.17	151

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/22/2001	10:30	14.38	15.21	1.92	20.17	151
7/22/2001	11:00	14.38	15.21	1.92	20.17	151
7/22/2001	11:30	14.37	15.21	1.94	20.19	153
7/22/2001	12:00	14.37	15.21	1.94	20.19	153
7/22/2001	12:30	14.35	15.21	1.99	20.24	156
7/22/2001	13:00	14.33	15.21	2.03	20.28	164
7/22/2001	13:30	14.3	15.21	2.10	20.35	180
7/22/2001	14:00	14.3	15.21	2.10	20.35	180
7/22/2001	14:30	14.3	15.21	2.10	20.35	180
7/22/2001	15:00	14.3	15.2	2.08	20.33	175
7/22/2001	15:30	14.3	15.2	2.08	20.33	175
7/22/2001	16:00	14.31	15.19	2.04	20.29	165
7/22/2001	16:30	14.3	15.19	2.06	20.31	170
7/22/2001	17:00	14.3	15.19	2.06	20.31	170
7/22/2001	17:30	14.29	15.19	2.08	20.33	175
7/22/2001	18:00	14.31	15.19	2.04	20.29	165
7/22/2001	18:30	14.3	15.19	2.06	20.31	170
7/22/2001	19:00	14.31	15.19	2.04	20.29	165
7/22/2001	19:30	14.32	15.19	2.01	20.26	160
7/22/2001	20:00	14.32	15.19	2.01	20.26	160
7/22/2001	20:30	14.34	15.19	1.97	20.22	155
7/22/2001	21:00	14.35	15.19	1.95	20.20	153
7/22/2001	21:30	14.35	15.19	1.95	20.20	153
7/22/2001	22:00	14.36	15.19	1.92	20.17	151
7/22/2001	22:30	14.38	15.2	1.90	20.15	150
7/22/2001	23:00	14.38	15.2	1.90	20.15	150
7/22/2001	23:30	14.39	15.19	1.85	20.10	147
7/23/2001	0:00	14.39	15.19	1.85	20.10	147
7/23/2001	0:30	14.4	15.19	1.83	20.08	145
7/23/2001	1:00	14.4	15.19	1.83	20.08	145
7/23/2001	1:30	14.4	15.19	1.83	20.08	145
7/23/2001	2:00	14.4	15.19	1.83	20.08	145
7/23/2001	2:30	14.4	15.19	1.83	20.08	145
7/23/2001	3:00	14.4	15.19	1.83	20.08	145
7/23/2001	3:30	14.4	15.18	1.81	20.06	143
7/23/2001	4:00	14.4	15.18	1.81	20.06	143
7/23/2001	4:30	14.4	15.18	1.81	20.06	143
7/23/2001	5:00	14.4	15.18	1.81	20.06	143
7/23/2001	5:30	14.4	15.19	1.83	20.08	145
7/23/2001	6:00	14.4	15.18	1.81	20.06	144
7/23/2001	6:30	14.4	15.18	1.81	20.06	144
7/23/2001	7:00	14.4	15.18	1.81	20.06	144
7/23/2001	7:30	14.39	15.17	1.81	20.06	144

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/23/2001	8:00	14.39	15.17	1.81	20.06	144
7/23/2001	8:30	14.38	15.17	1.83	20.08	145
7/23/2001	9:00	14.36	15.16	1.86	20.11	147
7/23/2001	9:30	14.35	15.16	1.88	20.13	148
7/23/2001	10:00	14.35	15.16	1.88	20.13	148
7/23/2001	10:30	14.35	15.16	1.88	20.13	149
7/23/2001	11:00	14.34	15.15	1.88	20.13	149
7/23/2001	11:30	14.32	15.15	1.93	20.18	152
7/23/2001	12:00	14.3	15.15	1.97	20.22	155
7/23/2001	12:30	14.3	15.15	1.97	20.22	155
7/23/2001	13:00	14.29	15.14	1.97	20.22	155
7/23/2001	13:30	14.29	15.15	2.00	20.25	157
7/23/2001	14:00	14.3	15.16	2.00	20.25	157
7/23/2001	14:30	14.31	15.16	1.97	20.22	155
7/23/2001	15:00	14.31	15.16	1.97	20.22	155
7/23/2001	15:30	14.34	15.17	1.93	20.18	152
7/23/2001	16:00	14.35	15.19	1.95	20.20	154
7/23/2001	16:30	14.37	15.19	1.91	20.16	150
7/23/2001	17:00	14.38	15.19	1.88	20.13	149
7/23/2001	17:30	14.39	15.2	1.88	20.13	149
7/23/2001	17:40	-	-	-	<b>20.13</b>	148
7/23/2001	18:00	14.4	15.2	1.84	20.11	147
7/23/2001	18:30	14.41	15.21	1.84	20.11	147
7/23/2001	19:00	14.41	15.22	1.87	20.14	149
7/23/2001	19:30	14.42	15.23	1.87	20.14	149
7/23/2001	20:00	14.45	15.23	1.80	20.07	144
7/23/2001	20:30	14.46	15.24	1.80	20.07	144
7/23/2001	21:00	14.46	15.24	1.80	20.07	144
7/23/2001	21:30	14.47	15.25	1.80	20.07	144
7/23/2001	22:00	14.47	15.25	1.80	20.07	144
7/23/2001	22:30	14.48	15.26	1.80	20.07	145
7/23/2001	23:00	14.49	15.26	1.78	20.05	143
7/23/2001	23:30	14.5	15.26	1.76	20.03	141
7/24/2001	0:00	14.5	15.27	1.78	20.05	143
7/24/2001	0:30	14.51	15.27	1.76	20.03	142
7/24/2001	1:00	14.51	15.27	1.76	20.03	142
7/24/2001	1:30	14.51	15.27	1.76	20.03	142
7/24/2001	2:00	14.51	15.27	1.77	20.04	142
7/24/2001	2:30	14.51	15.27	1.77	20.04	142
7/24/2001	3:00	14.52	15.27	1.74	20.01	140
7/24/2001	3:30	14.52	15.27	1.75	20.02	140
7/24/2001	4:00	14.52	15.27	1.75	20.02	140
7/24/2001	4:30	14.52	15.27	1.75	20.02	140

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/24/2001	5:00	14.52	15.27	1.75	20.02	141
7/24/2001	5:30	14.52	15.27	1.75	20.02	141
7/24/2001	6:00	14.52	15.27	1.75	20.02	141
7/24/2001	6:30	14.52	15.27	1.75	20.02	141
7/24/2001	7:00	14.51	15.27	1.78	20.05	142
7/24/2001	7:30	14.52	15.27	1.75	20.02	141
7/24/2001	8:00	14.51	15.27	1.78	20.05	143
7/24/2001	8:30	14.51	15.27	1.78	20.05	143
7/24/2001	9:00	14.51	15.27	1.78	20.05	143
7/24/2001	9:30	14.52	15.27	1.76	20.03	141
7/24/2001	10:00	14.51	15.27	1.78	20.05	143
7/24/2001	10:30	14.51	15.28	1.81	20.08	145
7/24/2001	11:00	14.52	15.28	1.78	20.05	143
7/24/2001	11:30	14.52	15.28	1.78	20.05	143
7/24/2001	12:00	14.52	15.28	1.79	20.06	143
7/24/2001	12:30	14.52	15.28	1.79	20.06	143
7/24/2001	13:00	14.52	15.29	1.81	20.08	145
7/24/2001	13:30	14.52	15.29	1.81	20.08	145
7/24/2001	13:45	-	-	-	<b>20.08</b>	145
7/24/2001	14:00	14.52	15.29	1.77	20.08	145
7/24/2001	14:30	14.52	15.29	1.77	20.08	145
7/24/2001	15:00	14.52	15.29	1.77	20.08	145
7/24/2001	15:30	14.53	15.3	1.77	20.08	145
7/24/2001	16:00	14.53	15.3	1.77	20.08	145
7/24/2001	16:30	14.54	15.3	1.75	20.06	143
7/24/2001	17:00	14.55	15.3	1.73	20.04	142
7/24/2001	17:30	14.55	15.3	1.73	20.04	142
7/24/2001	18:00	14.54	15.31	1.77	20.08	145
7/24/2001	18:30	14.53	15.31	1.80	20.11	147
7/24/2001	19:00	14.54	15.31	1.77	20.08	145
7/24/2001	19:30	14.54	15.31	1.77	20.08	145
7/24/2001	20:00	14.55	15.32	1.77	20.08	145
7/24/2001	20:30	14.55	15.31	1.75	20.06	144
7/24/2001	21:00	14.56	15.32	1.75	20.06	144
7/24/2001	21:30	14.57	15.32	1.73	20.04	142
7/24/2001	22:00	14.57	15.32	1.73	20.04	142
7/24/2001	22:30	14.58	15.32	1.71	20.02	140
7/24/2001	23:00	14.59	15.32	1.68	19.99	139
7/24/2001	23:30	14.59	15.33	1.71	20.02	140
7/25/2001	0:00	14.6	15.33	1.68	19.99	139
7/25/2001	0:30	14.6	15.33	1.68	19.99	139
7/25/2001	1:00	14.6	15.33	1.68	19.99	139
7/25/2001	1:30	14.61	15.35	1.71	20.02	141

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/25/2001	2:00	14.62	15.35	1.69	20.00	139
7/25/2001	2:30	14.62	15.35	1.69	20.00	139
7/25/2001	3:00	14.63	15.36	1.69	20.00	139
7/25/2001	3:30	14.64	15.36	1.66	19.97	137
7/25/2001	4:00	14.65	15.36	1.64	19.95	136
7/25/2001	4:30	14.65	15.36	1.64	19.95	136
7/25/2001	5:00	14.65	15.36	1.64	19.95	136
7/25/2001	5:30	14.66	15.36	1.62	19.93	134
7/25/2001	6:00	14.66	15.37	1.64	19.95	136
7/25/2001	6:30	14.66	15.37	1.64	19.95	136
7/25/2001	7:00	14.67	15.37	1.62	19.93	134
7/25/2001	7:30	14.67	15.38	1.64	19.95	136
7/25/2001	8:00	14.67	15.38	1.64	19.95	136
7/25/2001	8:30	14.66	15.38	1.66	19.97	137
7/25/2001	9:00	14.66	15.38	1.67	19.98	137
7/25/2001	9:30	14.66	15.38	1.67	19.98	137
7/25/2001	10:00	14.65	15.38	1.69	20.00	139
7/25/2001	10:30	14.65	15.38	1.69	20.00	139
7/25/2001	11:00	14.63	15.38	1.73	20.04	142
7/25/2001	11:30	14.64	15.38	1.71	20.02	141
7/25/2001	12:00	14.64	15.39	1.74	20.05	142
7/25/2001	12:30	14.64	15.39	1.74	20.05	142
7/25/2001	13:00	14.63	15.39	1.76	20.07	144
7/25/2001	13:10	-	-	-	<b>20.07</b>	144
7/25/2001	13:30	14.62	15.39	1.77	20.09	146
7/25/2001	14:00	14.63	15.39	1.75	20.07	144
7/25/2001	14:30	14.63	15.39	1.75	20.07	144
7/25/2001	15:00	14.63	15.39	1.74	20.06	144
7/25/2001	15:30	14.62	15.39	1.77	20.09	145
7/25/2001	16:00	14.62	15.39	1.77	20.09	145
7/25/2001	16:30	14.61	15.38	1.77	20.09	145
7/25/2001	17:00	14.61	15.38	1.76	20.08	145
7/25/2001	17:30	14.61	15.38	1.76	20.08	145
7/25/2001	18:00	14.6	15.37	1.76	20.08	145
7/25/2001	18:30	14.6	15.37	1.76	20.08	145
7/25/2001	19:00	14.6	15.37	1.76	20.08	145
7/25/2001	19:30	14.57	15.37	1.83	20.15	150
7/25/2001	20:00	14.57	15.36	1.80	20.12	148
7/25/2001	20:30	14.57	15.36	1.80	20.12	148
7/25/2001	21:00	14.57	15.36	1.80	20.12	148
7/25/2001	21:30	14.56	15.36	1.82	20.14	149
7/25/2001	22:00	14.55	15.36	1.85	20.17	151
7/25/2001	22:30	14.55	15.35	1.82	20.14	149

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
7/25/2001	23:00	14.57	15.35	1.78	20.10	146
7/25/2001	23:30	14.58	15.34	1.73	20.05	143
7/26/2001	0:00	14.6	15.34	1.68	20.00	139
7/26/2001	0:30	14.61	15.34	1.66	19.98	138
7/26/2001	1:00	14.63	15.33	1.59	19.91	133
7/26/2001	1:30	14.64	15.33	1.56	19.88	131
7/26/2001	2:00	14.65	15.33	1.54	19.86	129
7/26/2001	2:30	14.65	15.32	1.52	19.84	128
7/26/2001	3:00	14.65	15.32	1.51	19.83	128
7/26/2001	3:30	14.64	15.32	1.54	19.86	129
7/26/2001	4:00	14.64	15.32	1.54	19.86	129
7/26/2001	4:30	14.64	15.32	1.53	19.85	129
7/26/2001	5:00	14.63	15.32	1.56	19.88	131
7/26/2001	5:30	14.62	15.31	1.56	19.88	130
7/26/2001	6:00	14.62	15.31	1.55	19.87	130
7/26/2001	6:30	14.6	15.31	1.60	19.92	134
7/26/2001	7:00	14.6	15.31	1.60	19.92	134
7/26/2001	7:30	14.6	15.31	1.60	19.92	133
7/26/2001	8:00	14.59	15.3	1.60	19.92	133
7/26/2001	8:30	14.57	15.3	1.64	19.96	137
7/26/2001	9:00	14.56	15.3	1.66	19.98	138
7/26/2001	9:30	14.55	15.3	1.69	20.01	140
7/26/2001	10:00	14.55	15.3	1.69	20.01	140
7/26/2001	10:30	14.54	15.3	1.71	20.03	141
7/26/2001	11:00	14.52	15.3	1.75	20.07	144
7/26/2001	11:30	14.52	15.3	1.75	20.07	144
7/26/2001	12:00	14.53	15.3	1.73	20.05	143
7/26/2001	12:30	14.54	15.3	1.70	20.02	141
7/26/2001	13:00	14.54	15.3	1.70	20.02	141
7/26/2001	13:30	14.54	15.29	1.68	20.00	139
7/26/2001	14:00	14.54	15.29	1.68	20.00	139
7/26/2001	14:30	14.52	15.29	1.72	20.04	142
7/26/2001	14:55	-	-	-	<b>20.04</b>	142
7/26/2001	15:00	14.52	15.29	1.72	20.04	142
7/26/2001	15:30	14.51	15.29	1.79	20.06	144
7/26/2001	16:00	14.49	15.28	1.82	20.09	145
7/26/2001	16:30	14.47	15.28	1.86	20.13	149
7/26/2001	17:00	14.45	15.27	1.89	20.16	150
7/26/2001	17:30	14.44	15.27	1.91	20.18	152
7/26/2001	18:00	14.45	15.27	1.88	20.15	150
7/26/2001	18:30	14.43	15.26	1.91	20.18	152
7/26/2001	19:00	14.47	15.26	1.81	20.08	145
7/26/2001	19:30	14.49	15.26	1.77	20.04	142

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/26/2001	20:00	14.48	15.26	1.79	20.06	144
7/26/2001	20:30	14.5	15.26	1.74	20.01	140
7/26/2001	21:00	14.51	15.26	1.72	19.99	139
7/26/2001	21:30	14.5	15.26	1.74	20.01	140
7/26/2001	22:00	14.5	15.26	1.74	20.01	140
7/26/2001	22:30	14.51	15.26	1.72	19.99	139
7/26/2001	23:00	14.52	15.26	1.70	19.97	137
7/26/2001	23:30	14.52	15.26	1.70	19.97	137
7/27/2001	0:00	14.52	15.26	1.70	19.97	137
7/27/2001	0:30	14.52	15.26	1.69	19.96	137
7/27/2001	1:00	14.52	15.26	1.69	19.96	137
7/27/2001	1:30	14.52	15.26	1.69	19.96	137
7/27/2001	2:00	14.52	15.26	1.69	19.96	137
7/27/2001	2:30	14.52	15.25	1.67	19.94	135
7/27/2001	3:00	14.52	15.25	1.67	19.94	135
7/27/2001	3:30	14.52	15.24	1.65	19.92	133
7/27/2001	4:00	14.52	15.24	1.65	19.92	133
7/27/2001	4:30	14.52	15.23	1.62	19.89	132
7/27/2001	5:00	14.51	15.23	1.65	19.92	133
7/27/2001	5:30	14.51	15.23	1.64	19.91	133
7/27/2001	6:00	14.51	15.23	1.64	19.91	133
7/27/2001	6:30	14.5	15.23	1.67	19.94	135
7/27/2001	7:00	14.49	15.22	1.67	19.94	135
7/27/2001	7:30	14.48	15.22	1.69	19.96	136
7/27/2001	8:00	14.47	15.21	1.69	19.96	136
7/27/2001	8:30	14.47	15.21	1.69	19.96	136
7/27/2001	9:00	14.46	15.21	1.71	19.98	138
7/27/2001	9:30	14.45	15.21	1.73	20.00	140
7/27/2001	10:00	14.46	15.2	1.69	19.96	136
7/27/2001	10:30	14.45	15.2	1.71	19.98	138
7/27/2001	11:00	14.44	15.19	1.71	19.98	138
7/27/2001	11:30	14.43	15.19	1.73	20.00	139
7/27/2001	12:00	14.43	15.19	1.73	20.00	139
7/27/2001	12:30	14.41	15.19	1.78	20.05	143
7/27/2001	13:00	14.42	15.19	1.75	20.02	141
7/27/2001	13:30	14.42	15.19	1.75	20.02	141
7/27/2001	14:00	14.41	15.18	1.75	20.02	141
7/27/2001	14:30	14.42	15.18	1.73	20.00	139
7/27/2001	15:00	14.42	15.18	1.73	20.00	139
7/27/2001	15:22	-	-	-	<b>20.00</b>	139
7/27/2001	15:30	14.42	15.18	1.73	20.00	139
7/27/2001	16:00	14.41	15.17	1.75	20.00	139
7/27/2001	16:30	14.42	15.17	1.73	19.98	138



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/27/2001	17:00	14.41	15.17	1.75	20.00	139
7/27/2001	17:30	14.41	15.17	1.75	20.00	140
7/27/2001	18:00	14.42	15.17	1.73	19.98	138
7/27/2001	18:30	14.41	15.16	1.73	19.98	138
7/27/2001	19:00	14.41	15.16	1.74	19.99	138
7/27/2001	19:30	14.41	15.16	1.74	19.99	138
7/27/2001	20:00	14.42	15.16	1.72	19.97	137
7/27/2001	20:30	14.42	15.16	1.72	19.97	137
7/27/2001	21:00	14.42	15.16	1.72	19.97	137
7/27/2001	21:30	14.43	15.16	1.70	19.95	136
7/27/2001	22:00	14.43	15.15	1.68	19.93	134
7/27/2001	22:30	14.43	15.15	1.68	19.93	134
7/27/2001	23:00	14.43	15.15	1.68	19.93	134
7/27/2001	23:30	14.43	15.15	1.68	19.93	134
7/28/2001	0:00	14.43	15.15	1.68	19.93	134
7/28/2001	0:30	14.43	15.15	1.68	19.93	135
7/28/2001	1:00	14.43	15.15	1.68	19.93	135
7/28/2001	1:30	14.43	15.14	1.66	19.91	133
7/28/2001	2:00	14.43	15.14	1.66	19.91	133
7/28/2001	2:30	14.43	15.14	1.67	19.92	133
7/28/2001	3:00	14.43	15.14	1.67	19.92	133
7/28/2001	3:30	14.43	15.14	1.67	19.92	134
7/28/2001	4:00	14.43	15.13	1.65	19.90	132
7/28/2001	4:30	14.43	15.13	1.65	19.90	132
7/28/2001	5:00	14.42	15.13	1.67	19.92	134
7/28/2001	5:30	14.42	15.13	1.67	19.92	134
7/28/2001	6:00	14.41	15.13	1.70	19.95	136
7/28/2001	6:30	14.41	15.12	1.68	19.93	134
7/28/2001	7:00	14.4	15.12	1.70	19.95	136
7/28/2001	7:30	14.4	15.11	1.68	19.93	134
7/28/2001	8:00	14.4	15.11	1.68	19.93	134
7/28/2001	8:30	14.39	15.1	1.68	19.93	135
7/28/2001	9:00	14.39	15.1	1.68	19.93	135
7/28/2001	9:30	14.38	15.1	1.71	19.96	136
7/28/2001	10:00	14.38	15.1	1.71	19.96	136
7/28/2001	10:30	14.36	15.09	1.74	19.99	138
7/28/2001	11:00	14.35	15.09	1.76	20.01	140
7/28/2001	11:30	14.35	15.09	1.76	20.01	140
7/28/2001	12:00	14.34	15.09	1.79	20.04	142
7/28/2001	12:30	14.34	15.09	1.79	20.04	142
7/28/2001	13:00	14.35	15.09	1.77	20.02	140
7/28/2001	13:30	14.35	15.09	1.77	20.02	140
7/28/2001	14:00	14.35	15.09	1.77	20.02	141

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/28/2001	14:30	14.33	15.08	1.79	20.04	142
7/28/2001	15:00	14.33	15.08	1.79	20.04	142
7/28/2001	15:30	14.35	15.09	1.77	20.02	141
7/28/2001	16:00	14.37	15.09	1.73	19.98	138
7/28/2001	16:30	14.38	15.08	1.68	19.93	135
7/28/2001	17:00	14.37	15.07	1.69	19.94	135
7/28/2001	17:30	14.38	15.07	1.66	19.91	133
7/28/2001	18:00	14.37	15.06	1.67	19.92	133
7/28/2001	18:30	14.37	15.06	1.67	19.92	133
7/28/2001	19:00	14.37	15.06	1.67	19.92	133
7/28/2001	19:30	14.37	15.06	1.67	19.92	134
7/28/2001	20:00	14.38	15.06	1.65	19.90	132
7/28/2001	20:30	14.37	15.06	1.67	19.92	134
7/28/2001	21:00	14.38	15.06	1.65	19.90	132
7/28/2001	21:30	14.38	15.05	1.63	19.88	131
7/28/2001	22:00	14.38	15.04	1.61	19.86	129
7/28/2001	22:30	14.37	15.03	1.61	19.86	129
7/28/2001	23:00	14.37	15.03	1.61	19.86	129
7/28/2001	23:30	14.36	15.03	1.64	19.89	131
7/29/2001	0:00	14.35	15.02	1.64	19.89	131
7/29/2001	0:30	14.35	15.01	1.62	19.87	130
7/29/2001	1:00	14.34	15	1.62	19.87	130
7/29/2001	1:30	14.34	15	1.62	19.87	130
7/29/2001	2:00	14.35	15	1.60	19.85	128
7/29/2001	2:30	14.35	15.01	1.62	19.87	130
7/29/2001	3:00	14.33	15.01	1.67	19.92	133
7/29/2001	3:30	14.34	15.02	1.67	19.92	134
7/29/2001	4:00	14.36	15.02	1.63	19.88	130
7/29/2001	4:30	14.37	15.02	1.60	19.85	129
7/29/2001	5:00	14.36	15.02	1.63	19.88	131
7/29/2001	5:30	14.37	15.03	1.63	19.88	131
7/29/2001	6:00	14.37	15.03	1.63	19.88	131
7/29/2001	6:30	14.37	15.03	1.63	19.88	131
7/29/2001	7:00	14.39	15.03	1.59	19.84	128
7/29/2001	7:30	14.39	15.03	1.59	19.84	128
7/29/2001	8:00	14.39	15.03	1.59	19.84	128
7/29/2001	8:30	14.39	15.04	1.62	19.87	130
7/29/2001	9:00	14.38	15.04	1.64	19.89	131
7/29/2001	9:30	14.38	15.04	1.64	19.89	132
7/29/2001	10:00	14.39	15.04	1.62	19.87	130
7/29/2001	10:30	14.39	15.05	1.64	19.89	132
7/29/2001	11:00	14.4	15.06	1.65	19.90	132
7/29/2001	11:30	14.4	15.06	1.65	19.90	132

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/29/2001	12:00	14.4	15.06	1.65	19.90	132
7/29/2001	12:30	14.4	15.07	1.67	19.92	134
7/29/2001	13:00	14.4	15.08	1.70	19.95	136
7/29/2001	13:30	14.41	15.08	1.68	19.93	134
7/29/2001	14:00	14.4	15.09	1.72	19.97	137
7/29/2001	14:30	14.41	15.09	1.70	19.95	136
7/29/2001	15:00	14.41	15.1	1.73	19.98	138
7/29/2001	15:30	14.42	15.11	1.73	19.98	138
7/29/2001	16:00	14.42	15.12	1.75	20.00	139
7/29/2001	16:30	14.42	15.13	1.78	20.03	141
7/29/2001	17:00	14.44	15.13	1.73	19.98	138
7/29/2001	17:30	14.45	15.13	1.71	19.96	136
7/29/2001	18:00	14.45	15.13	1.71	19.96	137
7/29/2001	18:30	14.45	15.14	1.74	19.99	138
7/29/2001	19:00	14.46	15.14	1.72	19.97	137
7/29/2001	19:30	14.46	15.14	1.72	19.97	137
7/29/2001	20:00	14.47	15.14	1.69	19.94	135
7/29/2001	20:30	14.47	15.15	1.72	19.97	137
7/29/2001	21:00	14.46	15.15	1.74	19.99	139
7/29/2001	21:30	14.47	15.15	1.72	19.97	137
7/29/2001	22:00	14.48	15.16	1.72	19.97	137
7/29/2001	22:30	14.49	15.16	1.70	19.95	136
7/29/2001	23:00	14.5	15.16	1.68	19.93	134
7/29/2001	23:30	14.5	15.17	1.71	19.96	136
7/30/2001	0:00	14.51	15.17	1.68	19.93	135
7/30/2001	0:30	14.52	15.18	1.69	19.94	135
7/30/2001	1:00	14.52	15.18	1.69	19.94	135
7/30/2001	1:30	14.52	15.19	1.71	19.96	136
7/30/2001	2:00	14.53	15.19	1.69	19.94	135
7/30/2001	2:30	14.53	15.19	1.69	19.94	135
7/30/2001	3:00	14.54	15.19	1.67	19.92	134
7/30/2001	3:30	14.54	15.19	1.67	19.92	134
7/30/2001	4:00	14.55	15.2	1.67	19.92	134
7/30/2001	4:30	14.55	15.21	1.70	19.95	135
7/30/2001	5:00	14.55	15.21	1.70	19.95	136
7/30/2001	5:30	14.56	15.22	1.70	19.95	136
7/30/2001	6:00	14.56	15.22	1.70	19.95	136
7/30/2001	6:30	14.56	15.23	1.73	19.98	138
7/30/2001	7:00	14.57	15.23	1.70	19.95	136
7/30/2001	7:30	14.57	15.23	1.71	19.96	136
7/30/2001	8:00	14.57	15.24	1.73	19.98	138
7/30/2001	8:30	14.57	15.24	1.73	19.98	138
7/30/2001	9:00	14.58	15.25	1.73	19.98	138

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/30/2001	9:30	14.58	15.25	1.73	19.98	138
7/30/2001	10:00	14.59	15.26	1.74	19.99	138
7/30/2001	10:30	14.59	15.26	1.74	19.99	138
7/30/2001	11:00	14.6	15.26	1.72	19.97	137
7/30/2001	11:30	14.6	15.27	1.74	19.99	139
7/30/2001	12:00	14.6	15.27	1.74	19.99	139
7/30/2001	12:10	-	-	-	<b>19.99</b>	139
7/30/2001	12:30	14.6	15.27	1.54	19.99	139
7/30/2001	13:00	14.6	15.28	1.56	20.01	140
7/30/2001	13:30	14.6	15.28	1.56	20.01	140
7/30/2001	14:00	14.62	15.29	1.54	19.99	139
7/30/2001	14:30	14.61	15.29	1.56	20.01	140
7/30/2001	15:00	14.62	15.29	1.54	19.99	139
7/30/2001	15:30	14.62	15.29	1.54	19.99	139
7/30/2001	16:00	14.61	15.29	1.56	20.01	140
7/30/2001	16:30	14.61	15.29	1.56	20.01	140
7/30/2001	17:00	14.6	15.29	1.59	20.04	142
7/30/2001	17:30	14.6	15.29	1.59	20.04	142
7/30/2001	18:00	14.6	15.29	1.59	20.04	142
7/30/2001	18:30	14.59	15.29	1.61	20.06	143
7/30/2001	19:00	14.6	15.29	1.59	20.04	142
7/30/2001	19:30	14.6	15.29	1.59	20.04	142
7/30/2001	20:00	14.6	15.29	1.59	20.04	142
7/30/2001	20:30	14.6	15.29	1.59	20.04	142
7/30/2001	21:00	14.61	15.29	1.56	20.01	140
7/30/2001	21:30	14.61	15.29	1.56	20.01	140
7/30/2001	22:00	14.62	15.29	1.54	19.99	138
7/30/2001	22:30	14.62	15.29	1.54	19.99	138
7/30/2001	23:00	14.62	15.29	1.54	19.99	138
7/30/2001	23:30	14.62	15.29	1.54	19.99	138
7/31/2001	0:00	14.62	15.29	1.54	19.99	138
7/31/2001	0:30	14.63	15.29	1.52	19.97	137
7/31/2001	1:00	14.63	15.29	1.52	19.97	137
7/31/2001	1:30	14.63	15.29	1.52	19.97	137
7/31/2001	2:00	14.62	15.28	1.52	19.97	137
7/31/2001	2:30	14.62	15.29	1.54	19.99	138
7/31/2001	3:00	14.62	15.28	1.52	19.97	137
7/31/2001	3:30	14.62	15.28	1.51	19.96	137
7/31/2001	4:00	14.62	15.28	1.51	19.96	137
7/31/2001	4:30	14.62	15.27	1.49	19.94	135
7/31/2001	5:00	14.62	15.27	1.49	19.94	135
7/31/2001	5:30	14.61	15.26	1.49	19.94	135
7/31/2001	6:00	14.61	15.27	1.51	19.96	137

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/31/2001	6:30	14.61	15.27	1.51	19.96	137
7/31/2001	7:00	14.6	15.26	1.51	19.96	137
7/31/2001	7:30	14.6	15.26	1.51	19.96	137
7/31/2001	8:00	14.58	15.26	1.56	20.01	140
7/31/2001	8:30	14.57	15.26	1.58	20.03	142
7/31/2001	9:00	14.57	15.26	1.58	20.03	142
7/31/2001	9:30	14.56	15.26	1.61	20.06	143
7/31/2001	10:00	14.55	15.26	1.63	20.08	145
7/31/2001	10:30	14.55	15.26	1.63	20.08	145
7/31/2001	11:00	14.55	15.26	1.63	20.08	145
7/31/2001	11:30	14.52	15.25	1.67	20.12	148
7/31/2001	12:00	14.5	15.25	1.72	20.17	151
7/31/2001	12:30	14.5	15.25	1.72	20.17	151
7/31/2001	13:00	14.51	15.24	1.67	20.12	148
7/31/2001	13:30	14.51	15.24	1.67	20.12	148
7/31/2001	14:00	14.5	15.23	1.67	20.12	148
7/31/2001	14:30	14.49	15.23	1.70	20.15	150
7/31/2001	15:00	14.48	15.23	1.72	20.17	151
7/31/2001	15:30	14.47	15.23	1.74	20.19	153
7/31/2001	16:00	14.45	15.22	1.76	20.21	154
7/31/2001	16:30	14.43	15.22	1.81	20.26	159
7/31/2001	17:00	14.42	15.21	1.81	20.26	159
7/31/2001	17:30	14.44	15.21	1.76	20.21	154
7/31/2001	18:00	14.43	15.2	1.76	20.21	154
7/31/2001	18:30	14.42	15.2	1.79	20.24	156
7/31/2001	19:00	14.4	15.19	1.81	20.26	159
7/31/2001	19:30	14.4	15.19	1.81	20.26	159
7/31/2001	20:00	14.4	15.18	1.79	20.24	156
7/31/2001	20:30	14.39	15.18	1.81	20.26	159
7/31/2001	21:00	14.39	15.18	1.81	20.26	159
7/31/2001	21:30	14.38	15.17	1.81	20.26	159
7/31/2001	22:00	14.4	15.17	1.76	20.21	154
7/31/2001	22:30	14.42	15.17	1.72	20.17	151
7/31/2001	23:00	14.44	15.16	1.65	20.10	146
7/31/2001	23:30	14.45	15.16	1.63	20.08	145
8/1/2001	0:00	14.45	15.16	1.62	20.07	145
8/1/2001	0:30	14.45	15.15	1.60	20.05	143
8/1/2001	1:00	14.45	15.15	1.60	20.05	143
8/1/2001	1:30	14.45	15.14	1.58	20.03	141
8/1/2001	2:00	14.45	15.14	1.58	20.03	141
8/1/2001	2:30	14.45	15.14	1.58	20.03	141
8/1/2001	3:00	14.45	15.13	1.56	20.01	140
8/1/2001	3:30	14.45	15.13	1.56	20.01	140

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/1/2001	4:00	14.45	15.13	1.55	20.00	140
8/1/2001	4:30	14.45	15.13	1.55	20.00	140
8/1/2001	5:00	14.44	15.13	1.58	20.03	141
8/1/2001	5:30	14.43	15.13	1.60	20.05	143
8/1/2001	6:00	14.42	15.13	1.62	20.07	144
8/1/2001	6:30	14.42	15.13	1.62	20.07	144
8/1/2001	7:00	14.42	15.13	1.62	20.07	144
8/1/2001	7:30	14.42	15.14	1.65	20.10	146
8/1/2001	8:00	14.42	15.14	1.65	20.10	146
8/1/2001	8:30	14.42	15.14	1.65	20.10	146
8/1/2001	9:00	14.43	15.15	1.65	20.10	146
8/1/2001	9:30	14.42	15.14	1.65	20.10	146
8/1/2001	10:00	14.42	15.15	1.67	20.12	148
8/1/2001	10:30	14.42	15.15	1.67	20.12	148
8/1/2001	11:00	14.42	15.15	1.67	20.12	148
8/1/2001	11:30	14.42	15.15	1.67	20.12	148
8/1/2001	12:00	14.42	15.16	1.69	20.14	149
8/1/2001	12:30	14.42	15.16	1.69	20.14	149
8/1/2001	13:00	14.41	15.15	1.69	20.14	149
8/1/2001	13:30	14.41	15.15	1.69	20.14	149
8/1/2001	14:00	14.4	15.14	1.69	20.14	149
8/1/2001	14:30	14.41	15.14	1.67	20.12	148
8/1/2001	15:00	14.42	15.14	1.64	20.09	146
8/1/2001	15:30	14.42	15.13	1.62	20.07	144
8/1/2001	16:00	14.42	15.14	1.64	20.09	146
8/1/2001	16:30	14.42	15.13	1.62	20.07	144
8/1/2001	17:00	14.42	15.13	1.62	20.07	144
8/1/2001	17:30	14.42	15.13	1.62	20.07	144
8/1/2001	18:00	14.42	15.13	1.62	20.07	144
8/1/2001	18:30	14.42	15.13	1.62	20.07	144
8/1/2001	19:00	14.42	15.13	1.62	20.07	144
8/1/2001	19:30	14.43	15.13	1.60	20.05	143
8/1/2001	20:00	14.43	15.13	1.60	20.05	143
8/1/2001	20:30	14.43	15.13	1.60	20.05	143
8/1/2001	21:00	14.43	15.13	1.60	20.05	143
8/1/2001	21:30	14.43	15.13	1.60	20.05	143
8/1/2001	22:00	14.44	15.13	1.57	20.02	141
8/1/2001	22:30	14.44	15.13	1.57	20.02	141
8/1/2001	23:00	14.45	15.14	1.57	20.02	141
8/1/2001	23:30	14.45	15.15	1.60	20.05	143
8/2/2001	0:00	14.45	15.15	1.60	20.05	142
8/2/2001	0:30	14.46	15.15	1.57	20.02	141
8/2/2001	1:00	14.47	15.16	1.57	20.02	141

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/2/2001	1:30	14.47	15.16	1.57	20.02	141
8/2/2001	2:00	14.47	15.16	1.57	20.02	141
8/2/2001	2:30	14.47	15.16	1.57	20.02	141
8/2/2001	3:00	14.47	15.16	1.57	20.02	141
8/2/2001	3:30	14.48	15.17	1.57	20.02	141
8/2/2001	4:00	14.47	15.16	1.57	20.02	141
8/2/2001	4:30	14.47	15.16	1.57	20.02	141
8/2/2001	5:00	14.48	15.16	1.55	20.00	139
8/2/2001	5:30	14.48	15.16	1.55	20.00	139
8/2/2001	6:00	14.47	15.16	1.57	20.02	141
8/2/2001	6:30	14.47	15.16	1.57	20.02	141
8/2/2001	7:00	14.48	15.16	1.55	20.00	139
8/2/2001	7:30	14.48	15.17	1.57	20.02	141
8/2/2001	8:00	14.49	15.17	1.55	20.00	139
8/2/2001	8:30	14.49	15.17	1.55	20.00	139
8/2/2001	9:00	14.5	15.18	1.55	20.00	139
8/2/2001	9:30	14.5	15.18	1.55	20.00	139
8/2/2001	10:00	14.5	15.18	1.55	20.00	139
8/2/2001	10:30	14.5	15.18	1.55	20.00	139
8/2/2001	11:00	14.5	15.18	1.55	20.00	139
8/2/2001	11:30	14.51	15.18	1.52	19.97	137
8/2/2001	12:00	14.5	15.19	1.57	20.02	141
8/2/2001	12:30	14.5	15.19	1.57	20.02	141
8/2/2001	13:00	14.49	15.19	1.59	20.04	142
8/2/2001	13:30	14.5	15.19	1.57	20.02	141
8/2/2001	14:00	14.5	15.19	1.57	20.02	141
8/2/2001	14:30	14.5	15.19	1.57	20.02	141
8/2/2001	15:00	14.5	15.19	1.57	20.02	141
8/2/2001	15:30	14.5	15.19	1.57	20.02	141
8/2/2001	16:00	14.5	15.19	1.57	20.02	141
8/2/2001	16:30	14.5	15.19	1.57	20.02	141
8/2/2001	17:00	14.5	15.19	1.57	20.02	141
8/2/2001	17:30	14.5	15.19	1.57	20.02	141
8/2/2001	18:00	14.48	15.19	1.61	20.06	144
8/2/2001	18:30	14.5	15.19	1.57	20.02	141
8/2/2001	19:00	14.51	15.2	1.57	20.02	141
8/2/2001	19:30	14.5	15.19	1.57	20.02	141
8/2/2001	20:00	14.5	15.19	1.57	20.02	141
8/2/2001	20:30	14.51	15.19	1.55	20.00	139
8/2/2001	21:00	14.5	15.2	1.59	20.04	142
8/2/2001	21:30	14.51	15.2	1.57	20.02	141
8/2/2001	22:00	14.52	15.2	1.54	19.99	139
8/2/2001	22:30	14.52	15.2	1.54	19.99	139

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/2/2001	23:00	14.53	15.2	1.52	19.97	137
8/2/2001	23:30	14.53	15.2	1.52	19.97	137
8/3/2001	0:00	14.53	15.2	1.52	19.97	137
8/3/2001	0:30	14.54	15.2	1.50	19.95	136
8/3/2001	1:00	14.54	15.21	1.52	19.97	137
8/3/2001	1:30	14.54	15.21	1.52	19.97	137
8/3/2001	2:00	14.54	15.21	1.52	19.97	137
8/3/2001	2:30	14.54	15.2	1.50	19.95	136
8/3/2001	3:00	14.54	15.2	1.50	19.95	136
8/3/2001	3:30	14.53	15.2	1.52	19.97	137
8/3/2001	4:00	14.53	15.2	1.52	19.97	137
8/3/2001	4:30	14.53	15.2	1.52	19.97	137
8/3/2001	5:00	14.53	15.2	1.52	19.97	137
8/3/2001	5:30	14.53	15.19	1.50	19.95	135
8/3/2001	6:00	14.53	15.19	1.50	19.95	135
8/3/2001	6:30	14.53	15.19	1.50	19.95	135
8/3/2001	7:00	14.52	15.19	1.52	19.97	137
8/3/2001	7:30	14.52	15.19	1.52	19.97	137
8/3/2001	8:00	14.52	15.19	1.52	19.97	137
8/3/2001	8:30	14.52	15.19	1.52	19.97	137
8/3/2001	9:00	14.52	15.19	1.52	19.97	137
8/3/2001	9:30	14.51	15.19	1.54	19.99	139
8/3/2001	10:00	14.5	15.19	1.56	20.01	140
8/3/2001	10:30	14.5	15.19	1.56	20.01	140
8/3/2001	11:00	14.49	15.18	1.56	20.01	140
8/3/2001	11:30	14.48	15.18	1.59	20.04	142
8/3/2001	12:00	14.48	15.18	1.59	20.04	142
8/3/2001	12:30	14.47	15.17	1.59	20.04	142
8/3/2001	13:00	14.46	15.17	1.61	20.06	143
8/3/2001	13:30	14.45	15.17	1.63	20.08	145
8/3/2001	14:00	14.45	15.16	1.61	20.06	143
8/3/2001	14:30	14.44	15.16	1.63	20.08	145
8/3/2001	15:00	14.43	15.16	1.66	20.11	147
8/3/2001	15:30	14.42	15.16	1.68	20.13	148
8/3/2001	16:00	14.42	15.16	1.68	20.13	148
8/3/2001	16:30	14.42	15.15	1.66	20.11	147
8/3/2001	17:00	14.43	15.15	1.63	20.08	145
8/3/2001	17:30	14.42	15.14	1.63	20.08	145
8/3/2001	18:00	14.42	15.14	1.63	20.08	145
8/3/2001	18:30	14.41	15.13	1.63	20.08	145
8/3/2001	19:00	14.4	15.13	1.65	20.10	147
8/3/2001	19:30	14.39	15.13	1.68	20.13	148
8/3/2001	20:00	14.39	15.13	1.68	20.13	148



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/3/2001	20:30	14.4	15.13	1.65	20.10	147
8/3/2001	21:00	14.41	15.13	1.63	20.08	145
8/3/2001	21:30	14.41	15.13	1.63	20.08	145
8/3/2001	22:00	14.41	15.13	1.63	20.08	145
8/3/2001	22:30	14.41	15.13	1.63	20.08	145
8/3/2001	23:00	14.41	15.12	1.61	20.06	143
8/3/2001	23:30	14.41	15.12	1.61	20.06	143
8/4/2001	0:00	14.42	15.12	1.58	20.03	142
8/4/2001	0:30	14.41	15.12	1.61	20.06	143
8/4/2001	1:00	14.42	15.11	1.56	20.01	140
8/4/2001	1:30	14.41	15.11	1.58	20.03	142
8/4/2001	2:00	14.41	15.11	1.58	20.03	142
8/4/2001	2:30	14.41	15.11	1.58	20.03	142
8/4/2001	3:00	14.41	15.11	1.58	20.03	142
8/4/2001	3:30	14.4	15.1	1.58	20.03	142
8/4/2001	4:00	14.4	15.1	1.58	20.03	142
8/4/2001	4:30	14.4	15.09	1.56	20.01	140
8/4/2001	5:00	14.4	15.09	1.56	20.01	140
8/4/2001	5:30	14.4	15.09	1.56	20.01	140
8/4/2001	6:00	14.41	15.09	1.54	19.99	138
8/4/2001	6:30	14.41	15.09	1.54	19.99	138
8/4/2001	7:00	14.41	15.09	1.54	19.99	138
8/4/2001	7:30	14.4	15.09	1.56	20.01	140
8/4/2001	8:00	14.4	15.09	1.56	20.01	140
8/4/2001	8:30	14.4	15.08	1.54	19.99	138
8/4/2001	9:00	14.39	15.07	1.54	19.99	138
8/4/2001	9:30	14.38	15.07	1.56	20.01	140
8/4/2001	10:00	14.38	15.07	1.56	20.01	140
8/4/2001	10:30	14.38	15.06	1.54	19.99	138
8/4/2001	11:00	14.38	15.06	1.54	19.99	138
8/4/2001	11:30	14.4	15.06	1.49	19.94	135
8/4/2001	12:00	14.39	15.06	1.51	19.96	137
8/4/2001	12:30	14.39	15.06	1.51	19.96	137
8/4/2001	13:00	14.38	15.05	1.51	19.96	137
8/4/2001	13:30	14.35	15.05	1.58	20.03	141
8/4/2001	14:00	14.36	15.04	1.53	19.98	138
8/4/2001	14:30	14.35	15.03	1.53	19.98	138
8/4/2001	15:00	14.35	15.03	1.53	19.98	138
8/4/2001	15:30	14.33	15.03	1.58	20.03	141
8/4/2001	16:00	14.3	15.02	1.63	20.08	145
8/4/2001	16:30	14.29	15.01	1.63	20.08	145
8/4/2001	17:00	14.27	15.01	1.67	20.12	148
8/4/2001	17:30	14.27	15.01	1.67	20.12	148

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/4/2001	18:00	14.27	15	1.65	20.10	146
8/4/2001	18:30	14.26	15	1.67	20.12	148
8/4/2001	19:00	14.26	15	1.67	20.12	148
8/4/2001	19:30	14.27	15	1.65	20.10	146
8/4/2001	20:00	14.28	15.01	1.65	20.10	146
8/4/2001	20:30	14.29	15.02	1.65	20.10	146
8/4/2001	21:00	14.31	15.03	1.63	20.08	145
8/4/2001	21:30	14.33	15.03	1.58	20.03	141
8/4/2001	22:00	14.34	15.04	1.58	20.03	141
8/4/2001	22:30	14.35	15.04	1.56	20.01	140
8/4/2001	23:00	14.35	15.05	1.58	20.03	141
8/4/2001	23:30	14.36	15.05	1.56	20.01	140
8/5/2001	0:00	14.37	15.05	1.53	19.98	138
8/5/2001	0:30	14.37	15.06	1.56	20.01	140
8/5/2001	1:00	14.38	15.06	1.53	19.98	138
8/5/2001	1:30	14.38	15.06	1.53	19.98	138
8/5/2001	2:00	14.39	15.07	1.53	19.98	138
8/5/2001	2:30	14.39	15.07	1.53	19.98	138
8/5/2001	3:00	14.4	15.08	1.53	19.98	138
8/5/2001	3:30	14.4	15.08	1.53	19.98	138
8/5/2001	4:00	14.41	15.09	1.53	19.98	138
8/5/2001	4:30	14.41	15.09	1.53	19.98	138
8/5/2001	5:00	14.42	15.09	1.51	19.96	136
8/5/2001	5:30	14.42	15.09	1.51	19.96	136
8/5/2001	6:00	14.42	15.09	1.51	19.96	136
8/5/2001	6:30	14.43	15.1	1.51	19.96	136
8/5/2001	7:00	14.43	15.1	1.51	19.96	136
8/5/2001	7:30	14.43	15.1	1.51	19.96	136
8/5/2001	8:00	14.43	15.11	1.53	19.98	138
8/5/2001	8:30	14.43	15.11	1.53	19.98	138
8/5/2001	9:00	14.43	15.11	1.53	19.98	138
8/5/2001	9:30	14.43	15.12	1.55	20.00	139
8/5/2001	10:00	14.43	15.12	1.55	20.00	139
8/5/2001	10:30	14.43	15.12	1.55	20.00	139
8/5/2001	11:00	14.43	15.13	1.58	20.03	141
8/5/2001	11:30	14.43	15.13	1.58	20.03	141
8/5/2001	12:00	14.43	15.13	1.58	20.03	141
8/5/2001	12:30	14.43	15.13	1.58	20.03	141
8/5/2001	13:00	14.43	15.13	1.58	20.03	141
8/5/2001	13:30	14.44	15.14	1.58	20.03	141
8/5/2001	14:00	14.45	15.15	1.58	20.03	141
8/5/2001	14:30	14.45	15.15	1.58	20.03	141
8/5/2001	15:00	14.45	15.16	1.60	20.05	143

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/5/2001	15:30	14.45	15.16	1.60	20.05	143
8/5/2001	16:00	14.45	15.16	1.60	20.05	143
8/5/2001	16:30	14.44	15.16	1.62	20.07	144
8/5/2001	17:00	14.45	15.16	1.60	20.05	143
8/5/2001	17:30	14.45	15.16	1.60	20.05	143
8/5/2001	18:00	14.45	15.16	1.60	20.05	143
8/5/2001	18:30	14.45	15.16	1.60	20.05	143
8/5/2001	19:00	14.45	15.16	1.60	20.05	143
8/5/2001	19:30	14.45	15.16	1.60	20.05	143
8/5/2001	20:00	14.45	15.16	1.60	20.05	143
8/5/2001	20:30	14.46	15.16	1.57	20.02	141
8/5/2001	21:00	14.47	15.17	1.57	20.02	141
8/5/2001	21:30	14.47	15.17	1.57	20.02	141
8/5/2001	22:00	14.48	15.17	1.55	20.00	139
8/5/2001	22:30	14.48	15.17	1.55	20.00	139
8/5/2001	23:00	14.49	15.17	1.53	19.98	138
8/5/2001	23:30	14.49	15.17	1.53	19.98	138
8/6/2001	0:00	14.49	15.17	1.53	19.98	138
8/6/2001	0:30	14.5	15.17	1.50	19.95	136
8/6/2001	1:00	14.5	15.17	1.50	19.95	136
8/6/2001	1:30	14.5	15.17	1.50	19.95	136
8/6/2001	2:00	14.5	15.17	1.50	19.95	136
8/6/2001	2:30	14.5	15.17	1.50	19.95	136
8/6/2001	3:00	14.5	15.17	1.50	19.95	136
8/6/2001	3:30	14.5	15.17	1.50	19.95	136
8/6/2001	4:00	14.5	15.17	1.50	19.95	136
8/6/2001	4:30	14.5	15.17	1.50	19.95	136
8/6/2001	5:00	14.5	15.17	1.50	19.95	136
8/6/2001	5:30	14.5	15.18	1.53	19.98	138
8/6/2001	6:00	14.5	15.17	1.50	19.95	136
8/6/2001	6:30	14.5	15.17	1.50	19.95	136
8/6/2001	7:00	14.5	15.18	1.52	19.97	137
8/6/2001	7:30	14.5	15.18	1.52	19.97	137
8/6/2001	8:00	14.5	15.18	1.52	19.97	137
8/6/2001	8:30	14.49	15.18	1.55	20.00	139
8/6/2001	9:00	14.49	15.19	1.57	20.02	141
8/6/2001	9:30	14.48	15.19	1.59	20.04	142
8/6/2001	10:00	14.48	15.19	1.59	20.04	142
8/6/2001	10:30	14.47	15.19	1.62	20.07	144
8/6/2001	11:00	14.46	15.19	1.64	20.09	146
8/6/2001	11:30	14.45	15.19	1.66	20.11	147
8/6/2001	12:00	14.45	15.19	1.66	20.11	147
8/6/2001	12:30	14.45	15.19	1.66	20.11	147

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/6/2001	13:00	14.44	15.2	1.71	20.16	150
8/6/2001	13:30	14.43	15.19	1.71	20.16	150
8/6/2001	14:00	14.42	15.19	1.73	20.18	152
8/6/2001	14:30	14.42	15.19	1.73	20.18	152
8/6/2001	15:00	14.41	15.19	1.75	20.20	154
8/6/2001	15:30	14.4	15.19	1.78	20.23	155
8/6/2001	16:00	14.4	15.19	1.78	20.23	155
8/6/2001	16:30	14.4	15.19	1.78	20.23	155
8/6/2001	17:00	14.4	15.19	1.78	20.23	155
8/6/2001	17:30	14.4	15.19	1.78	20.23	155
8/6/2001	18:00	14.4	15.19	1.78	20.23	155
8/6/2001	18:30	14.4	15.19	1.78	20.23	155
8/6/2001	19:00	14.4	15.19	1.78	20.23	155
8/6/2001	19:30	14.42	15.19	1.73	20.18	152
8/6/2001	20:00	14.42	15.19	1.73	20.18	152
8/6/2001	20:30	14.42	15.19	1.73	20.18	152
8/6/2001	21:00	14.43	15.18	1.68	20.13	149
8/6/2001	21:30	14.43	15.19	1.71	20.16	150
8/6/2001	22:00	14.44	15.19	1.68	20.13	149
8/6/2001	22:30	14.44	15.18	1.66	20.11	147
8/6/2001	23:00	14.45	15.19	1.66	20.11	147
8/6/2001	23:30	14.45	15.19	1.66	20.11	147
8/7/2001	0:00	14.45	15.19	1.66	20.11	147
8/7/2001	0:30	14.46	15.19	1.64	20.09	145
8/7/2001	1:00	14.47	15.19	1.61	20.06	144
8/7/2001	1:30	14.47	15.19	1.61	20.06	144
8/7/2001	2:00	14.46	15.19	1.64	20.09	145
8/7/2001	2:30	14.46	15.19	1.64	20.09	145
8/7/2001	3:00	14.47	15.19	1.61	20.06	144
8/7/2001	3:30	14.47	15.19	1.61	20.06	144
8/7/2001	4:00	14.47	15.18	1.59	20.04	142
8/7/2001	4:30	14.47	15.18	1.59	20.04	142
8/7/2001	5:00	14.47	15.18	1.59	20.04	142
8/7/2001	5:30	14.47	15.18	1.59	20.04	142
8/7/2001	6:00	14.46	15.18	1.61	20.06	144
8/7/2001	6:30	14.47	15.18	1.59	20.04	142
8/7/2001	7:00	14.46	15.18	1.61	20.06	144
8/7/2001	7:30	14.46	15.18	1.61	20.06	144
8/7/2001	8:00	14.46	15.18	1.61	20.06	144
8/7/2001	8:30	14.46	15.18	1.61	20.06	144
8/7/2001	9:00	14.46	15.18	1.61	20.06	144
8/7/2001	9:30	14.46	15.18	1.61	20.06	144
8/7/2001	10:00	14.46	15.18	1.61	20.06	144

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/7/2001	10:30	14.46	15.19	1.63	20.08	145
8/7/2001	11:00	14.46	15.19	1.63	20.08	145
8/7/2001	11:30	14.46	15.19	1.63	20.08	145
8/7/2001	12:00	14.47	15.2	1.63	20.08	145
8/7/2001	12:30	14.47	15.2	1.63	20.08	145
8/7/2001	13:00	14.47	15.21	1.66	20.11	147
8/7/2001	13:30	14.48	15.21	1.63	20.08	145
8/7/2001	14:00	14.49	15.23	1.66	20.11	147
8/7/2001	14:30	14.5	15.23	1.63	20.08	145
8/7/2001	15:00	14.5	15.23	1.63	20.08	145
8/7/2001	15:30	14.51	15.24	1.63	20.08	145
8/7/2001	16:00	14.52	15.25	1.63	20.08	145
8/7/2001	16:30	14.53	15.25	1.61	20.06	143
8/7/2001	17:00	14.53	15.26	1.63	20.08	145
8/7/2001	17:30	14.55	15.26	1.59	20.04	142
8/7/2001	18:00	14.55	15.26	1.59	20.04	142
8/7/2001	18:30	14.56	15.26	1.56	20.01	140
8/7/2001	19:00	14.56	15.27	1.59	20.04	142
8/7/2001	19:30	14.57	15.27	1.56	20.01	140
8/7/2001	20:00	14.57	15.28	1.58	20.03	142
8/7/2001	20:30	14.57	15.28	1.58	20.03	142
8/7/2001	21:00	14.58	15.28	1.56	20.01	140
8/7/2001	21:30	14.58	15.28	1.56	20.01	140
8/7/2001	22:00	14.59	15.29	1.56	20.01	140
8/7/2001	22:30	14.6	15.29	1.54	19.99	138
8/7/2001	23:00	14.6	15.29	1.54	19.99	138
8/7/2001	23:30	14.61	15.29	1.52	19.97	137
8/8/2001	0:00	14.61	15.29	1.51	19.96	137
8/8/2001	0:30	14.61	15.29	1.51	19.96	137
8/8/2001	1:00	14.62	15.29	1.49	19.94	135
8/8/2001	1:30	14.62	15.29	1.49	19.94	135
8/8/2001	2:00	14.62	15.29	1.49	19.94	135
8/8/2001	2:30	14.62	15.29	1.49	19.94	135
8/8/2001	3:00	14.61	15.29	1.51	19.96	137
8/8/2001	3:30	14.61	15.29	1.51	19.96	137
8/8/2001	4:00	14.61	15.29	1.51	19.96	137
8/8/2001	4:30	14.6	15.29	1.54	19.99	138
8/8/2001	5:00	14.6	15.29	1.54	19.99	138
8/8/2001	5:30	14.6	15.29	1.54	19.99	138
8/8/2001	6:00	14.6	15.29	1.54	19.99	138
8/8/2001	6:30	14.6	15.28	1.51	19.96	137
8/8/2001	7:00	14.6	15.28	1.51	19.96	137
8/8/2001	7:30	14.6	15.28	1.51	19.96	137

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/8/2001	8:00	14.59	15.28	1.54	19.99	138
8/8/2001	8:30	14.59	15.28	1.54	19.99	138
8/8/2001	9:00	14.58	15.28	1.56	20.01	140
8/8/2001	9:30	14.57	15.27	1.56	20.01	140
8/8/2001	10:00	14.57	15.27	1.56	20.01	140
8/8/2001	10:30	14.56	15.27	1.58	20.03	141
8/8/2001	11:00	14.56	15.27	1.58	20.03	141
8/8/2001	11:30	14.57	15.27	1.56	20.01	140
8/8/2001	12:00	14.56	15.27	1.58	20.03	141
8/8/2001	12:30	14.56	15.27	1.58	20.03	141
8/8/2001	13:00	14.56	15.27	1.58	20.03	141
8/8/2001	13:30	14.55	15.27	1.60	20.05	143
8/8/2001	14:00	14.54	15.26	1.60	20.05	143
8/8/2001	14:30	14.53	15.26	1.63	20.08	145
8/8/2001	15:00	14.53	15.26	1.63	20.08	145
8/8/2001	15:30	14.52	15.26	1.65	20.10	146
8/8/2001	16:00	14.52	15.26	1.65	20.10	146
8/8/2001	16:30	14.51	15.25	1.65	20.10	146
8/8/2001	17:00	14.51	15.25	1.65	20.10	146
8/8/2001	17:30	14.5	15.24	1.65	20.10	146
8/8/2001	18:00	14.49	15.24	1.67	20.12	148
8/8/2001	18:30	14.51	15.24	1.63	20.08	145
8/8/2001	19:00	14.52	15.24	1.60	20.05	143
8/8/2001	19:30	14.51	15.23	1.60	20.05	143
8/8/2001	20:00	14.51	15.23	1.60	20.05	143
8/8/2001	20:30	14.5	15.22	1.60	20.05	143
8/8/2001	21:00	14.51	15.22	1.58	20.03	141
8/8/2001	21:30	14.51	15.22	1.58	20.03	141
8/8/2001	22:00	14.51	15.21	1.56	20.01	140
8/8/2001	22:30	14.5	15.21	1.58	20.03	141
8/8/2001	23:00	14.5	15.2	1.56	20.01	140
8/8/2001	23:30	14.5	15.2	1.56	20.01	140
8/9/2001	0:00	14.51	15.21	1.56	20.01	140
8/9/2001	0:30	14.51	15.21	1.56	20.01	140
8/9/2001	1:00	14.51	15.21	1.55	20.00	140
8/9/2001	1:30	14.51	15.21	1.55	20.00	140
8/9/2001	2:00	14.5	15.2	1.55	20.00	140
8/9/2001	2:30	14.5	15.2	1.55	20.00	140
8/9/2001	3:00	14.51	15.2	1.53	19.98	138
8/9/2001	3:30	14.51	15.21	1.55	20.00	140
8/9/2001	4:00	14.51	15.21	1.55	20.00	140
8/9/2001	4:30	14.52	15.21	1.53	19.98	138
8/9/2001	5:00	14.53	15.21	1.51	19.96	136

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/9/2001	5:30	14.53	15.21	1.51	19.96	136
8/9/2001	6:00	14.53	15.21	1.51	19.96	136
8/9/2001	6:30	14.53	15.21	1.51	19.96	136
8/9/2001	7:00	14.53	15.21	1.51	19.96	136
8/9/2001	7:30	14.53	15.22	1.53	19.98	138
8/9/2001	8:00	14.54	15.22	1.51	19.96	136
8/9/2001	8:30	14.54	15.23	1.53	19.98	138
8/9/2001	9:00	14.53	15.23	1.55	20.00	139
8/9/2001	9:30	14.52	15.23	1.58	20.03	141
8/9/2001	10:00	14.52	15.23	1.58	20.03	141
8/9/2001	10:30	14.52	15.23	1.58	20.03	141
8/9/2001	11:00	14.52	15.23	1.58	20.03	141
8/9/2001	11:30	14.52	15.24	1.60	20.05	143
8/9/2001	12:00	14.52	15.24	1.60	20.05	143
8/9/2001	12:30	14.52	15.24	1.60	20.05	143
8/9/2001	13:00	14.52	15.24	1.60	20.05	143
8/9/2001	13:30	14.51	15.24	1.62	20.07	144
8/9/2001	14:00	14.51	15.24	1.62	20.07	144
8/9/2001	14:30	14.51	15.24	1.62	20.07	144
8/9/2001	15:00	14.51	15.25	1.64	20.09	146
8/9/2001	15:30	14.5	15.25	1.67	20.12	147
8/9/2001	16:00	14.5	15.24	1.64	20.09	146
8/9/2001	16:30	14.5	15.23	1.62	20.07	144
8/9/2001	17:00	14.5	15.23	1.62	20.07	144
8/9/2001	17:30	14.48	15.23	1.67	20.12	147
8/9/2001	18:00	14.46	15.23	1.71	20.16	151
8/9/2001	18:30	14.45	15.22	1.71	20.16	151
8/9/2001	19:00	14.45	15.22	1.71	20.16	151
8/9/2001	19:30	14.44	15.22	1.73	20.18	152
8/9/2001	20:00	14.45	15.21	1.69	20.14	149
8/9/2001	20:30	14.46	15.21	1.67	20.12	147
8/9/2001	21:00	14.47	15.2	1.62	20.07	144
8/9/2001	21:30	14.47	15.2	1.62	20.07	144
8/9/2001	22:00	14.49	15.2	1.57	20.02	141
8/9/2001	22:30	14.49	15.2	1.57	20.02	141
8/9/2001	23:00	14.49	15.19	1.55	20.00	139
8/9/2001	23:30	14.49	15.19	1.55	20.00	139
8/10/2001	0:00	14.49	15.19	1.55	20.00	139
8/10/2001	0:30	14.48	15.18	1.55	20.00	139
8/10/2001	1:00	14.48	15.18	1.55	20.00	139
8/10/2001	1:30	14.47	15.17	1.55	20.00	139
8/10/2001	2:00	14.47	15.16	1.53	19.98	138
8/10/2001	2:30	14.46	15.16	1.55	20.00	139

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/10/2001	3:00	14.46	15.16	1.55	20.00	139
8/10/2001	3:30	14.46	15.16	1.55	20.00	139
8/10/2001	4:00	14.45	15.16	1.57	20.02	141
8/10/2001	4:30	14.45	15.16	1.57	20.02	141
8/10/2001	5:00	14.45	15.15	1.55	20.00	139
8/10/2001	5:30	14.45	15.15	1.55	20.00	139
8/10/2001	6:00	14.45	15.15	1.55	20.00	139
8/10/2001	6:30	14.44	15.15	1.57	20.02	141
8/10/2001	7:00	14.44	15.14	1.55	20.00	139
8/10/2001	7:30	14.44	15.14	1.55	20.00	139
8/10/2001	8:00	14.43	15.13	1.55	20.00	139
8/10/2001	8:30	14.43	15.13	1.55	20.00	139
8/10/2001	9:00	14.44	15.13	1.52	19.97	137
8/10/2001	9:30	14.44	15.13	1.52	19.97	137
8/10/2001	10:00	14.45	15.13	1.50	19.95	136
8/10/2001	10:30	14.45	15.14	1.52	19.97	137
8/10/2001	11:00	14.45	15.14	1.52	19.97	137
8/10/2001	11:30	14.45	15.15	1.55	20.00	139
8/10/2001	12:00	14.44	15.15	1.57	20.02	141
8/10/2001	12:30	14.43	15.16	1.62	20.07	144
8/10/2001	13:00	14.44	15.16	1.59	20.04	142
8/10/2001	13:30	14.44	15.16	1.59	20.04	142
8/10/2001	14:00	14.44	15.16	1.59	20.04	142
8/10/2001	14:30	14.44	15.16	1.59	20.04	142
8/10/2001	15:00	14.44	15.16	1.59	20.04	142
8/10/2001	15:30	14.44	15.16	1.59	20.04	142
8/10/2001	16:00	14.43	15.16	1.61	20.06	144
8/10/2001	16:30	14.43	15.16	1.61	20.06	144
8/10/2001	17:00	14.45	15.16	1.57	20.02	141
8/10/2001	17:30	14.45	15.16	1.57	20.02	141
8/10/2001	18:00	14.45	15.16	1.57	20.02	141
8/10/2001	18:30	14.46	15.17	1.57	20.02	141
8/10/2001	19:00	14.47	15.18	1.57	20.02	140
8/10/2001	19:30	14.47	15.18	1.57	20.02	140
8/10/2001	20:00	14.48	15.19	1.57	20.02	140
8/10/2001	20:30	14.49	15.19	1.54	19.99	139
8/10/2001	21:00	14.51	15.19	1.50	19.95	136
8/10/2001	21:30	14.52	15.2	1.50	19.95	136
8/10/2001	22:00	14.52	15.21	1.52	19.97	137
8/10/2001	22:30	14.54	15.22	1.50	19.95	136
8/10/2001	23:00	14.55	15.22	1.47	19.92	134
8/10/2001	23:30	14.56	15.23	1.47	19.92	134
8/11/2001	0:00	14.57	15.23	1.45	19.90	132



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/11/2001	0:30	14.58	15.23	1.43	19.88	131
8/11/2001	1:00	14.58	15.24	1.45	19.90	132
8/11/2001	1:30	14.58	15.24	1.45	19.90	132
8/11/2001	2:00	14.59	15.25	1.45	19.90	132
8/11/2001	2:30	14.6	15.25	1.43	19.88	131
8/11/2001	3:00	14.6	15.26	1.45	19.90	132
8/11/2001	3:30	14.6	15.26	1.45	19.90	132
8/11/2001	4:00	14.6	15.26	1.45	19.90	132
8/11/2001	4:30	14.6	15.26	1.45	19.90	132
8/11/2001	5:00	14.61	15.26	1.43	19.88	131
8/11/2001	5:30	14.6	15.26	1.45	19.90	132
8/11/2001	6:00	14.6	15.26	1.45	19.90	132
8/11/2001	6:30	14.6	15.26	1.45	19.90	132
8/11/2001	7:00	14.6	15.26	1.45	19.90	132
8/11/2001	7:30	14.59	15.26	1.47	19.92	134
8/11/2001	8:00	14.59	15.26	1.47	19.92	134
8/11/2001	8:30	14.58	15.25	1.47	19.92	134
8/11/2001	9:00	14.57	15.25	1.50	19.95	135
8/11/2001	9:30	14.56	15.25	1.52	19.97	137
8/11/2001	10:00	14.55	15.25	1.54	19.99	139
8/11/2001	10:30	14.55	15.25	1.54	19.99	139
8/11/2001	11:00	14.54	15.24	1.54	19.99	139
8/11/2001	11:30	14.53	15.24	1.56	20.01	140
8/11/2001	12:00	14.52	15.24	1.59	20.04	142
8/11/2001	12:30	14.52	15.24	1.59	20.04	142
8/11/2001	13:00	14.5	15.24	1.63	20.08	145
8/11/2001	13:30	14.49	15.23	1.63	20.08	145
8/11/2001	14:00	14.49	15.23	1.63	20.08	145
8/11/2001	14:30	14.49	15.23	1.63	20.08	145
8/11/2001	15:00	14.47	15.22	1.65	20.10	147
8/11/2001	15:30	14.48	15.22	1.63	20.08	145
8/11/2001	16:00	14.45	15.22	1.70	20.15	150
8/11/2001	16:30	14.47	15.22	1.65	20.10	147
8/11/2001	17:00	14.48	15.22	1.63	20.08	145
8/11/2001	17:30	14.48	15.22	1.63	20.08	145
8/11/2001	18:00	14.48	15.22	1.63	20.08	145
8/11/2001	18:30	14.47	15.22	1.65	20.10	147
8/11/2001	19:00	14.47	15.21	1.63	20.08	145
8/11/2001	19:30	14.47	15.21	1.63	20.08	145
8/11/2001	20:00	14.47	15.21	1.63	20.08	145
8/11/2001	20:30	14.49	15.21	1.58	20.03	142
8/11/2001	21:00	14.49	15.22	1.61	20.06	143
8/11/2001	21:30	14.49	15.22	1.61	20.06	143

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/11/2001	22:00	14.5	15.22	1.58	20.03	142
8/11/2001	22:30	14.5	15.22	1.58	20.03	142
8/11/2001	23:00	14.51	15.22	1.56	20.01	140
8/11/2001	23:30	14.52	15.22	1.54	19.99	138
8/12/2001	0:00	14.52	15.22	1.54	19.99	138
8/12/2001	0:30	14.52	15.22	1.54	19.99	138
8/12/2001	1:00	14.53	15.22	1.51	19.96	137
8/12/2001	1:30	14.53	15.22	1.51	19.96	137
8/12/2001	2:00	14.54	15.23	1.51	19.96	137
8/12/2001	2:30	14.54	15.22	1.49	19.94	135
8/12/2001	3:00	14.53	15.22	1.51	19.96	137
8/12/2001	3:30	14.54	15.21	1.47	19.92	133
8/12/2001	4:00	14.53	15.21	1.49	19.94	135
8/12/2001	4:30	14.52	15.21	1.51	19.96	137
8/12/2001	5:00	14.52	15.21	1.51	19.96	137
8/12/2001	5:30	14.5	15.2	1.54	19.99	138
8/12/2001	6:00	14.5	15.2	1.54	19.99	138
8/12/2001	6:30	14.5	15.19	1.51	19.96	137
8/12/2001	7:00	14.49	15.19	1.54	19.99	138
8/12/2001	7:30	14.48	15.19	1.56	20.01	140
8/12/2001	8:00	14.47	15.19	1.58	20.03	141
8/12/2001	8:30	14.47	15.18	1.56	20.01	140
8/12/2001	9:00	14.45	15.17	1.58	20.03	141
8/12/2001	9:30	14.45	15.16	1.56	20.01	140
8/12/2001	10:00	14.44	15.16	1.58	20.03	141
8/12/2001	10:30	14.44	15.16	1.58	20.03	141
8/12/2001	11:00	14.43	15.16	1.60	20.05	143
8/12/2001	11:30	14.42	15.16	1.63	20.08	145
8/12/2001	12:00	14.43	15.16	1.60	20.05	143
8/12/2001	12:30	14.43	15.16	1.60	20.05	143
8/12/2001	13:00	14.44	15.16	1.58	20.03	141
8/12/2001	13:30	14.45	15.16	1.56	20.01	140
8/12/2001	14:00	14.44	15.15	1.56	20.01	140
8/12/2001	14:30	14.44	15.15	1.56	20.01	140
8/12/2001	15:00	14.44	15.15	1.56	20.01	140
8/12/2001	15:30	14.44	15.15	1.56	20.01	140
8/12/2001	16:00	14.42	15.15	1.60	20.05	143
8/12/2001	16:30	14.42	15.15	1.60	20.05	143
8/12/2001	17:00	14.41	15.15	1.63	20.08	145
8/12/2001	17:30	14.42	15.15	1.60	20.05	143
8/12/2001	18:00	14.42	15.15	1.60	20.05	143
8/12/2001	18:30	14.45	15.15	1.53	19.98	138
8/12/2001	19:00	14.44	15.15	1.56	20.01	140

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/12/2001	19:30	14.44	15.15	1.56	20.01	140
8/12/2001	20:00	14.43	15.15	1.58	20.03	141
8/12/2001	20:30	14.42	15.15	1.60	20.05	143
8/12/2001	21:00	14.42	15.16	1.62	20.07	145
8/12/2001	21:30	14.43	15.16	1.60	20.05	143
8/12/2001	22:00	14.43	15.16	1.60	20.05	143
8/12/2001	22:30	14.44	15.17	1.60	20.05	143
8/12/2001	23:00	14.44	15.17	1.60	20.05	143
8/12/2001	23:30	14.45	15.17	1.58	20.03	141
8/13/2001	0:00	14.45	15.18	1.60	20.05	143
8/13/2001	0:30	14.45	15.18	1.60	20.05	143
8/13/2001	1:00	14.47	15.19	1.58	20.03	141
8/13/2001	1:30	14.47	15.19	1.58	20.03	141
8/13/2001	2:00	14.48	15.19	1.55	20.00	140
8/13/2001	2:30	14.49	15.2	1.55	20.00	140
8/13/2001	3:00	14.5	15.2	1.53	19.98	138
8/13/2001	3:30	14.5	15.2	1.53	19.98	138
8/13/2001	4:00	14.5	15.21	1.55	20.00	140
8/13/2001	4:30	14.51	15.22	1.55	20.00	140
8/13/2001	5:00	14.51	15.22	1.55	20.00	139
8/13/2001	5:30	14.51	15.23	1.58	20.03	141
8/13/2001	6:00	14.52	15.23	1.55	20.00	139
8/13/2001	6:30	14.52	15.23	1.55	20.00	139
8/13/2001	7:00	14.52	15.23	1.55	20.00	139
8/13/2001	7:30	14.52	15.24	1.58	20.03	141
8/13/2001	8:00	14.52	15.24	1.58	20.03	141
8/13/2001	8:30	14.54	15.24	1.53	19.98	138
8/13/2001	9:00	14.54	15.24	1.53	19.98	138
8/13/2001	9:30	14.54	15.24	1.53	19.98	138
8/13/2001	10:00	14.55	15.25	1.53	19.98	138
8/13/2001	10:30	14.55	15.25	1.53	19.98	138
8/13/2001	11:00	14.55	15.25	1.53	19.98	138
8/13/2001	11:30	14.54	15.25	1.55	20.00	139
8/13/2001	12:00	14.55	15.26	1.55	20.00	139
8/13/2001	12:30	14.55	15.26	1.55	20.00	139
8/13/2001	13:00	14.55	15.26	1.55	20.00	139
8/13/2001	13:30	14.55	15.26	1.55	20.00	139
8/13/2001	14:00	14.55	15.26	1.55	20.00	139
8/13/2001	14:30	14.55	15.27	1.57	20.02	141
8/13/2001	15:00	14.55	15.27	1.57	20.02	141
8/13/2001	15:30	14.54	15.27	1.60	20.05	143
8/13/2001	16:00	14.54	15.27	1.60	20.05	143
8/13/2001	16:30	14.54	15.26	1.57	20.02	141

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/13/2001	17:00	14.53	15.26	1.60	20.05	143
8/13/2001	17:30	14.52	15.26	1.62	20.07	144
8/13/2001	18:00	14.52	15.26	1.62	20.07	144
8/13/2001	18:30	14.52	15.26	1.62	20.07	144
8/13/2001	19:00	14.52	15.25	1.60	20.05	143
8/13/2001	19:30	14.52	15.24	1.57	20.02	141
8/13/2001	20:00	14.51	15.24	1.60	20.05	142
8/13/2001	20:30	14.51	15.23	1.57	20.02	141
8/13/2001	21:00	14.51	15.23	1.57	20.02	141
8/13/2001	21:30	14.5	15.23	1.60	20.05	142
8/13/2001	22:00	14.5	15.23	1.60	20.05	142
8/13/2001	22:30	14.5	15.24	1.62	20.07	144
8/13/2001	23:00	14.5	15.23	1.60	20.05	142
8/13/2001	23:30	14.5	15.23	1.60	20.05	142
8/14/2001	0:00	14.5	15.23	1.59	20.04	142
8/14/2001	0:30	14.5	15.23	1.59	20.04	142
8/14/2001	1:00	14.5	15.23	1.59	20.04	142
8/14/2001	1:30	14.5	15.23	1.59	20.04	142
8/14/2001	2:00	14.49	15.22	1.59	20.04	142
8/14/2001	2:30	14.49	15.22	1.59	20.04	142
8/14/2001	3:00	14.49	15.22	1.59	20.04	142
8/14/2001	3:30	14.48	15.21	1.59	20.04	142
8/14/2001	4:00	14.48	15.21	1.59	20.04	142
8/14/2001	4:30	14.48	15.21	1.59	20.04	142
8/14/2001	5:00	14.48	15.21	1.59	20.04	142
8/14/2001	5:30	14.47	15.2	1.59	20.04	142
8/14/2001	6:00	14.47	15.2	1.59	20.04	142
8/14/2001	6:30	14.47	15.2	1.59	20.04	142
8/14/2001	7:00	14.47	15.2	1.59	20.04	142
8/14/2001	7:30	14.47	15.2	1.59	20.04	142
8/14/2001	8:00	14.47	15.21	1.62	20.07	144
8/14/2001	8:30	14.47	15.21	1.62	20.07	144
8/14/2001	9:00	14.47	15.21	1.62	20.07	144
8/14/2001	9:30	14.47	15.22	1.64	20.09	146
8/14/2001	10:00	14.47	15.22	1.64	20.09	145
8/14/2001	10:30	14.48	15.22	1.62	20.07	144
8/14/2001	11:00	14.48	15.23	1.64	20.09	145
8/14/2001	11:30	14.48	15.23	1.64	20.09	145
8/14/2001	12:00	14.49	15.24	1.64	20.09	145
8/14/2001	12:30	14.49	15.25	1.66	20.11	147
8/14/2001	13:00	14.49	15.25	1.66	20.11	147
8/14/2001	13:30	14.48	15.26	1.71	20.16	150
8/14/2001	14:00	14.47	15.26	1.73	20.18	152

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/14/2001	14:30	14.48	15.26	1.71	20.16	150
8/14/2001	15:00	14.47	15.26	1.73	20.18	152
8/14/2001	15:30	14.47	15.27	1.75	20.20	154
8/14/2001	16:00	14.46	15.27	1.78	20.23	155
8/14/2001	16:30	14.46	15.28	1.80	20.25	157
8/14/2001	17:00	14.47	15.28	1.77	20.22	155
8/14/2001	17:30	14.47	15.29	1.80	20.25	157
8/14/2001	18:00	14.47	15.29	1.80	20.25	157
8/14/2001	18:30	14.45	15.29	1.84	20.29	167
8/14/2001	19:00	14.45	15.29	1.84	20.29	167
8/14/2001	19:30	14.45	15.29	1.84	20.29	167
8/14/2001	20:00	14.45	15.29	1.84	20.29	166
8/14/2001	20:30	14.45	15.29	1.84	20.29	166
8/14/2001	21:00	14.46	15.29	1.82	20.27	161
8/14/2001	21:30	14.47	15.29	1.80	20.25	157
8/14/2001	21:33	-	-	-	<b>20.25</b>	157
8/14/2001	22:00	14.47	15.29	1.88	20.24	156
8/14/2001	22:30	-	-	-	<b>20.25</b>	<b>156.9</b>
8/14/2001	22:30	14.47	15.29	1.87	20.23	156
8/14/2001	23:00	14.47	15.3	1.89	20.25	157
8/14/2001	23:09	-	-	-	<b>20.25</b>	157
8/15/2001	0:00	14.49	15.32	1.91	<b>20.25</b>	157
8/15/2001	0:30	14.5	15.32	1.89	20.23	155
8/15/2001	1:00	14.5	15.32	1.89	20.23	155
8/15/2001	1:30	14.51	15.32	1.87	20.21	154
8/15/2001	2:00	14.51	15.32	1.87	20.21	154
8/15/2001	2:30	14.51	15.32	1.87	20.21	154
8/15/2001	3:00	14.5	15.32	1.89	20.23	156
8/15/2001	3:30	14.5	15.32	1.89	20.23	156
8/15/2001	4:00	14.5	15.32	1.89	20.23	156
8/15/2001	4:30	14.5	15.32	1.89	20.23	156
8/15/2001	5:00	14.5	15.32	1.89	20.23	156
8/15/2001	5:30	14.5	15.32	1.90	20.24	156
8/15/2001	6:00	14.5	15.32	1.90	20.24	156
8/15/2001	6:30	14.5	15.32	1.90	20.24	156
8/15/2001	7:00	14.5	15.32	1.90	20.24	156
8/15/2001	7:30	14.49	15.32	1.92	20.26	159
8/15/2001	8:00	14.48	15.32	1.95	20.29	165
8/15/2001	8:30	14.47	15.32	1.97	20.31	170
8/15/2001	9:00	14.47	15.32	1.97	20.31	170
8/15/2001	9:30	14.47	15.32	1.97	20.31	170
8/15/2001	10:00	14.46	15.32	1.99	20.33	176
8/15/2001	10:30	14.45	15.32	2.02	20.36	181

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/15/2001	11:00	14.46	15.33	2.02	20.36	181
8/15/2001	11:30	14.45	15.33	2.04	20.38	186
8/15/2001	12:00	14.45	15.33	2.04	20.38	187
8/15/2001	12:30	14.43	15.34	2.11	20.45	202
8/15/2001	13:00	14.48	15.34	2.00	20.34	177
8/15/2001	14:03	-	-	-	<b>20.34</b>	177
8/15/2001	14:30	14.62	15.36	1.70	20.34	177
8/15/2001	14:33	-	-	-	<b>20.34</b>	177
8/15/2001	15:00	14.63	15.36	1.68	20.32	172
8/15/2001	15:30	14.63	15.37	1.70	20.34	177
8/15/2001	16:00	14.62	15.37	1.72	20.36	182
8/15/2001	16:30	14.62	15.37	1.72	20.36	182
8/15/2001	17:00	14.62	15.38	1.75	20.39	187
8/15/2001	17:30	14.62	15.39	1.77	20.41	192
8/15/2001	18:00	14.62	15.39	1.77	20.41	192
8/15/2001	18:30	14.65	15.4	1.72	20.36	182
8/15/2001	19:00	14.65	15.4	1.72	20.36	182
8/15/2001	19:30	14.65	15.4	1.72	20.36	182
8/15/2001	20:00	14.65	15.4	1.72	20.36	182
8/15/2001	20:30	14.66	15.41	1.72	20.36	181
8/15/2001	21:00	14.67	15.41	1.70	20.34	176
8/15/2001	21:30	14.66	15.41	1.72	20.36	181
8/15/2001	22:00	14.67	15.42	1.72	20.36	181
8/15/2001	22:30	14.67	15.42	1.72	20.36	181
8/15/2001	23:00	14.67	15.42	1.72	20.36	181
8/15/2001	23:30	14.67	15.42	1.72	20.36	181
8/16/2001	0:00	14.67	15.42	1.72	20.36	181
8/16/2001	0:30	14.68	15.43	1.72	20.36	181
8/16/2001	1:00	14.69	15.43	1.69	20.33	176
8/16/2001	1:30	14.69	15.44	1.72	20.36	181
8/16/2001	2:00	14.69	15.45	1.74	20.38	186
8/16/2001	2:30	14.7	15.46	1.74	20.38	185
8/16/2001	3:00	14.71	15.46	1.72	20.36	180
8/16/2001	3:30	14.71	15.46	1.71	20.35	180
8/16/2001	4:00	14.71	15.46	1.71	20.35	180
8/16/2001	4:30	14.72	15.46	1.69	20.33	175
8/16/2001	5:00	14.72	15.47	1.71	20.35	180
8/16/2001	5:30	14.72	15.48	1.74	20.38	185
8/16/2001	6:00	14.72	15.48	1.74	20.38	185
8/16/2001	6:30	14.72	15.49	1.76	20.40	190
8/16/2001	7:00	14.73	15.49	1.74	20.38	185
8/16/2001	7:30	14.73	15.49	1.73	20.37	185
8/16/2001	8:00	14.73	15.49	1.73	20.37	184

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/16/2001	8:30	14.73	15.49	1.73	20.37	184
8/16/2001	9:00	14.73	15.5	1.76	20.40	189
8/16/2001	9:30	14.73	15.5	1.76	20.40	189
8/16/2001	10:00	14.73	15.51	1.78	20.42	194
8/16/2001	10:30	14.73	15.51	1.78	20.42	194
8/16/2001	11:00	14.73	15.52	1.80	20.44	199
8/16/2001	11:30	14.73	15.52	1.80	20.44	199
8/16/2001	12:00	14.72	15.52	1.82	20.46	204
8/16/2001	12:30	14.72	15.52	1.82	20.46	204
8/16/2001	13:00	14.72	15.52	1.82	20.46	204
8/16/2001	13:30	14.72	15.52	1.82	20.46	204
8/16/2001	14:00	14.71	15.53	1.87	20.51	214
8/16/2001	14:30	14.72	15.53	1.84	20.48	209
8/16/2001	15:00	14.72	15.54	1.87	20.51	214
8/16/2001	15:30	14.72	15.54	1.87	20.51	214
8/16/2001	16:00	14.72	15.55	1.89	20.53	219
8/16/2001	16:30	14.73	15.55	1.87	20.51	214
8/16/2001	17:00	14.74	15.56	1.86	20.50	213
8/16/2001	17:30	14.74	15.56	1.86	20.50	213
8/16/2001	18:00	14.73	15.56	1.89	20.53	218
8/16/2001	18:30	14.74	15.56	1.86	20.50	213
8/16/2001	19:00	14.74	15.57	1.89	20.53	218
8/16/2001	19:30	14.74	15.57	1.89	20.53	218
8/16/2001	20:00	14.74	15.58	1.91	20.55	223
8/16/2001	20:30	14.75	15.59	1.91	20.55	223
8/16/2001	21:00	14.76	15.59	1.88	20.52	218
8/16/2001	21:30	14.76	15.6	1.91	20.55	223
8/16/2001	22:00	14.77	15.61	1.91	20.55	223
8/16/2001	22:30	14.77	15.62	1.93	20.57	228
8/16/2001	23:00	14.78	15.62	1.91	20.55	223
8/16/2001	23:30	14.79	15.63	1.91	20.55	222
8/17/2001	0:00	14.79	15.64	1.93	20.57	227
8/17/2001	0:30	14.79	15.65	1.95	20.59	232
8/17/2001	1:00	14.8	15.65	1.93	20.57	227
8/17/2001	1:30	14.81	15.67	1.95	20.59	232
8/17/2001	2:00	14.81	15.69	2.00	20.64	242
8/17/2001	2:30	14.82	15.7	1.99	20.63	242
8/17/2001	3:00	14.82	15.73	2.06	20.70	258
8/17/2001	3:30	14.82	15.76	2.13	20.77	273
8/17/2001	4:00	14.83	15.8	2.20	20.84	288
8/17/2001	4:30	14.84	15.83	2.25	20.89	298
8/17/2001	5:00	14.84	15.88	2.36	21.00	324
8/17/2001	5:30	14.84	15.92	2.45	21.09	358

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/17/2001	6:00	14.84	15.95	2.52	21.16	383
8/17/2001	6:30	14.85	15.99	2.59	21.23	408
8/17/2001	7:00	14.85	16.02	2.66	21.30	433
8/17/2001	7:30	14.85	16.05	2.73	21.37	459
8/17/2001	8:00	14.85	16.08	2.80	21.44	484
8/17/2001	8:30	14.84	16.11	2.89	21.53	518
8/17/2001	9:00	14.85	16.13	2.91	21.55	526
8/17/2001	9:30	14.85	16.15	2.96	21.60	543
8/17/2001	10:00	14.84	16.18	3.05	21.69	577
8/17/2001	10:30	14.83	16.2	3.12	21.76	602
8/17/2001	11:00	14.84	16.22	3.14	21.78	610
8/17/2001	11:30	14.85	16.25	3.18	21.82	627
8/17/2001	12:00	14.86	16.27	3.21	21.85	636
8/17/2001	12:30	14.85	16.3	3.30	21.94	669
8/17/2001	13:00	14.86	16.33	3.34	21.98	686
8/17/2001	13:30	14.87	16.35	3.37	22.01	696
8/17/2001	14:00	14.85	16.41	3.55	22.19	793
8/17/2001	14:30	14.85	16.47	3.69	22.33	867
8/17/2001	15:00	14.84	16.5	3.78	22.42	915
8/17/2001	15:30	14.85	16.48	3.71	22.35	878
8/17/2001	16:00	14.85	16.53	3.82	22.46	939
8/17/2001	16:30	14.84	16.6	4.01	22.65	1037
8/17/2001	17:00	14.85	16.5	3.75	22.39	902
8/17/2001	17:30	14.85	16.48	3.71	22.35	878
8/17/2001	18:00	14.84	16.54	3.87	22.51	963
8/17/2001	18:30	14.85	16.52	3.80	22.44	926
8/17/2001	19:00	14.85	16.6	3.98	22.62	1024
8/17/2001	19:30	14.84	16.58	3.96	22.60	1011
8/17/2001	20:00	14.85	16.52	3.80	22.44	925
8/17/2001	20:30	14.84	16.49	3.75	22.39	901
8/17/2001	21:00	14.84	16.51	3.80	22.44	925
8/17/2001	21:30	14.85	16.38	3.47	22.11	753
8/17/2001	22:00	14.86	16.31	3.29	21.93	666
8/17/2001	22:30	14.87	16.3	3.24	21.88	649
8/17/2001	23:00	14.87	16.3	3.24	21.88	649
8/17/2001	23:30	14.87	16.3	3.24	21.88	649
8/18/2001	0:00	14.87	16.3	3.24	21.88	649
8/18/2001	0:30	14.88	16.3	3.22	21.86	640
8/18/2001	1:00	14.88	16.29	3.20	21.84	632
8/18/2001	1:30	14.88	16.29	3.20	21.84	631
8/18/2001	2:00	14.88	16.29	3.19	21.83	631
8/18/2001	2:30	14.89	16.29	3.17	21.81	623
8/18/2001	3:00	14.88	16.28	3.17	21.81	622



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/18/2001	3:30	14.88	16.28	3.17	21.81	622
8/18/2001	4:00	14.88	16.28	3.17	21.81	622
8/18/2001	4:30	14.88	16.27	3.15	21.79	614
8/18/2001	5:00	14.88	16.27	3.15	21.79	613
8/18/2001	5:30	14.87	16.26	3.15	21.79	613
8/18/2001	6:00	14.87	16.26	3.15	21.79	613
8/18/2001	6:30	14.87	16.25	3.12	21.76	604
8/18/2001	7:00	14.87	16.25	3.12	21.76	604
8/18/2001	7:30	14.87	16.24	3.10	21.74	596
8/18/2001	8:00	14.86	16.23	3.10	21.74	595
8/18/2001	8:30	14.85	16.23	3.12	21.76	604
8/18/2001	9:00	14.85	16.22	3.10	21.74	595
8/18/2001	9:30	14.84	16.22	3.12	21.76	604
8/18/2001	10:00	14.84	16.22	3.12	21.76	603
8/18/2001	10:30	14.83	16.21	3.12	21.76	603
8/18/2001	11:00	14.83	16.21	3.12	21.76	603
8/18/2001	11:30	14.82	16.2	3.12	21.76	603
8/18/2001	12:00	14.81	16.21	3.16	21.80	620
8/18/2001	12:30	14.79	16.22	3.23	21.87	645
8/18/2001	13:00	14.79	16.22	3.23	21.87	645
8/18/2001	13:30	14.79	16.24	3.28	21.92	662
8/18/2001	14:00	14.78	16.28	3.39	22.03	709
8/18/2001	14:30	14.78	16.35	3.55	22.19	795
8/18/2001	15:00	14.78	16.45	3.78	22.42	917
8/18/2001	15:30	14.78	16.44	3.76	22.40	905
8/18/2001	16:00	14.77	16.4	3.69	22.33	868
8/18/2001	16:30	14.77	16.32	3.50	22.14	769
8/18/2001	17:00	14.77	16.34	3.55	22.19	794
8/18/2001	17:30	14.77	16.31	3.48	22.12	757
8/18/2001	18:00	14.77	16.25	3.34	21.98	686
8/18/2001	18:30	14.77	16.13	3.07	21.71	584
8/18/2001	19:00	14.77	16.1	3.00	21.64	558
8/18/2001	19:30	14.77	16.08	2.95	21.59	541
8/18/2001	20:00	14.77	16.07	2.93	21.57	532
8/18/2001	20:30	14.77	16.06	2.90	21.54	524
8/18/2001	21:00	14.77	16.05	2.88	21.52	515
8/18/2001	21:30	14.77	16.05	2.88	21.52	515
8/18/2001	22:00	14.77	16.05	2.88	21.52	515
8/18/2001	22:30	14.77	16.04	2.86	21.50	506
8/18/2001	23:00	14.76	16.03	2.86	21.50	506
8/18/2001	23:30	14.76	16.02	2.83	21.47	497
8/19/2001	0:00	14.76	16.02	2.83	21.47	497
8/19/2001	0:30	14.76	16.02	2.83	21.47	497

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/19/2001	1:00	14.76	16.01	2.81	21.45	488
8/19/2001	1:30	14.75	16	2.81	21.45	488
8/19/2001	2:00	14.75	15.99	2.78	21.42	480
8/19/2001	2:30	14.75	15.98	2.76	21.40	471
8/19/2001	3:00	14.75	15.98	2.76	21.40	471
8/19/2001	3:30	14.74	15.98	2.78	21.42	479
8/19/2001	4:00	14.74	15.97	2.76	21.40	471
8/19/2001	4:30	14.74	15.96	2.74	21.38	462
8/19/2001	5:00	14.74	15.95	2.71	21.35	453
8/19/2001	5:30	14.73	15.95	2.73	21.37	462
8/19/2001	6:00	14.72	15.94	2.73	21.37	461
8/19/2001	6:30	14.72	15.94	2.73	21.37	461
8/19/2001	7:00	14.72	15.93	2.71	21.35	453
8/19/2001	7:30	14.72	15.92	2.69	21.33	444
8/19/2001	8:00	14.71	15.92	2.71	21.35	452
8/19/2001	8:30	14.7	15.91	2.71	21.35	452
8/19/2001	9:00	14.69	15.9	2.71	21.35	452
8/19/2001	9:30	14.69	15.89	2.69	21.33	443
8/19/2001	10:00	14.69	15.89	2.68	21.32	443
8/19/2001	10:30	14.68	15.89	2.71	21.35	452
8/19/2001	11:00	14.68	15.88	2.68	21.32	443
8/19/2001	11:30	14.67	15.87	2.68	21.32	443
8/19/2001	12:00	14.67	15.87	2.68	21.32	443
8/19/2001	12:30	14.67	15.86	2.66	21.30	434
8/19/2001	13:00	14.66	15.85	2.66	21.30	434
8/19/2001	13:30	14.65	15.85	2.68	21.32	442
8/19/2001	14:00	14.65	15.86	2.70	21.34	450
8/19/2001	14:30	14.65	15.87	2.73	21.37	459
8/19/2001	15:00	14.64	15.87	2.75	21.39	467
8/19/2001	15:30	14.64	15.89	2.80	21.44	484
8/19/2001	16:00	14.62	15.89	2.84	21.48	501
8/19/2001	16:30	14.62	15.92	2.91	21.55	526
8/19/2001	17:00	14.62	15.95	2.98	21.62	551
8/19/2001	17:30	14.61	15.96	3.02	21.66	568
8/19/2001	18:00	14.61	15.99	3.09	21.73	594
8/19/2001	18:30	14.61	16.02	3.16	21.80	619
8/19/2001	19:00	14.61	16.03	3.18	21.82	627
8/19/2001	19:30	14.61	15.98	3.07	21.71	585
8/19/2001	20:00	14.61	15.92	2.93	21.57	534
8/19/2001	20:30	14.62	15.84	2.72	21.36	457
8/19/2001	21:00	14.62	15.78	2.58	21.22	406
8/19/2001	21:30	14.62	15.75	2.51	21.15	380
8/19/2001	22:00	14.62	15.75	2.51	21.15	380

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/19/2001	22:30	14.62	15.75	2.51	21.15	380
8/19/2001	23:00	14.62	15.74	2.49	21.13	371
8/19/2001	23:30	14.62	15.74	2.49	21.13	371
8/20/2001	0:00	14.62	15.73	2.47	21.11	363
8/20/2001	0:30	14.62	15.73	2.47	21.11	362
8/20/2001	1:00	14.62	15.73	2.47	21.11	362
8/20/2001	1:30	14.62	15.72	2.44	21.08	354
8/20/2001	2:00	14.62	15.72	2.44	21.08	353
8/20/2001	2:30	14.62	15.72	2.44	21.08	353
8/20/2001	3:00	14.62	15.72	2.44	21.08	353
8/20/2001	3:30	14.62	15.72	2.44	21.08	353
8/20/2001	4:00	14.62	15.72	2.44	21.08	353
8/20/2001	4:30	14.62	15.72	2.44	21.08	353
8/20/2001	5:00	14.62	15.71	2.42	21.06	344
8/20/2001	5:30	14.62	15.71	2.42	21.06	344
8/20/2001	6:00	14.62	15.71	2.42	21.06	344
8/20/2001	6:30	14.62	15.71	2.41	21.05	344
8/20/2001	7:00	14.63	15.72	2.41	21.05	343
8/20/2001	7:30	14.63	15.72	2.41	21.05	343
8/20/2001	8:00	14.63	15.71	2.39	21.03	335
8/20/2001	8:30	14.63	15.71	2.39	21.03	334
8/20/2001	9:00	14.63	15.71	2.39	21.03	334
8/20/2001	9:30	14.63	15.72	2.41	21.05	343
8/20/2001	10:00	14.64	15.72	2.39	21.03	334
8/20/2001	10:30	14.64	15.72	2.39	21.03	334
8/20/2001	11:00	14.64	15.72	2.39	21.03	334
8/20/2001	11:30	14.64	15.73	2.41	21.05	342
8/20/2001	12:00	14.65	15.74	2.41	21.05	342
8/20/2001	12:30	14.65	15.75	2.43	21.07	350
8/20/2001	13:00	14.65	15.76	2.46	21.10	359
8/20/2001	13:30	14.65	15.78	2.50	21.14	375
8/20/2001	14:00	14.65	15.8	2.55	21.19	392
8/20/2001	14:30	14.65	15.82	2.59	21.23	409
8/20/2001	15:00	14.65	15.85	2.66	21.30	434
8/20/2001	15:30	14.65	15.88	2.73	21.37	460
8/20/2001	16:00	14.65	15.9	2.78	21.42	476
8/20/2001	16:30	14.65	15.94	2.87	21.51	510
8/20/2001	17:00	14.65	15.95	2.89	21.53	519
8/20/2001	17:30	14.65	15.97	2.93	21.57	535
8/20/2001	18:00	14.66	15.99	2.96	21.60	544
8/20/2001	18:30	14.66	16.01	3.00	21.64	561
8/20/2001	19:00	14.67	16.01	2.98	21.62	552
8/20/2001	19:30	14.67	16.01	2.98	21.62	552

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/20/2001	20:00	14.67	15.99	2.93	21.57	535
8/20/2001	20:30	14.67	15.98	2.91	21.55	526
8/20/2001	21:00	14.68	15.95	2.82	21.46	492
8/20/2001	21:30	14.69	15.89	2.66	21.30	432
8/20/2001	22:00	14.69	15.84	2.54	21.18	390
8/20/2001	22:30	14.69	15.81	2.47	21.11	364
8/20/2001	23:00	14.69	15.77	2.38	21.02	330
8/20/2001	23:30	14.69	15.74	2.31	20.95	312
8/21/2001	0:00	14.7	15.73	2.26	20.90	302
8/21/2001	0:30	14.7	15.72	2.24	20.88	296
8/21/2001	1:00	14.7	15.72	2.24	20.88	296
8/21/2001	1:30	14.7	15.72	2.24	20.88	296
8/21/2001	2:00	14.71	15.72	2.21	20.85	291
8/21/2001	2:30	14.71	15.72	2.21	20.85	291
8/21/2001	3:00	14.71	15.72	2.21	20.85	291
8/21/2001	3:30	14.72	15.72	2.19	20.83	286
8/21/2001	4:00	14.72	15.72	2.19	20.83	286
8/21/2001	4:30	14.72	15.72	2.19	20.83	286
8/21/2001	5:00	14.72	15.72	2.19	20.83	285
8/21/2001	5:30	14.72	15.72	2.19	20.83	285
8/21/2001	6:00	14.72	15.72	2.19	20.83	285
8/21/2001	6:30	14.72	15.72	2.19	20.83	285
8/21/2001	7:00	14.72	15.72	2.19	20.83	285
8/21/2001	7:30	14.72	15.72	2.19	20.83	285
8/21/2001	8:00	14.72	15.72	2.19	20.83	285
8/21/2001	8:30	14.72	15.72	2.19	20.83	285
8/21/2001	9:00	14.71	15.73	2.23	20.87	295
8/21/2001	9:30	14.72	15.73	2.21	20.85	290
8/21/2001	10:00	14.72	15.74	2.23	20.87	295
8/21/2001	10:30	14.72	15.75	2.25	20.89	300
8/21/2001	11:00	14.72	15.75	2.25	20.89	300
8/21/2001	11:30	14.72	15.77	2.30	20.94	310
8/21/2001	12:00	14.71	15.8	2.39	21.03	335
8/21/2001	12:30	14.72	15.82	2.41	21.05	343
8/21/2001	13:00	14.72	15.84	2.46	21.10	360
8/21/2001	13:30	14.72	15.88	2.55	21.19	393
8/21/2001	14:00	14.72	15.94	2.69	21.33	444
8/21/2001	14:30	14.72	16.05	2.94	21.58	537
8/21/2001	15:00	14.71	16.09	3.05	21.69	580
8/21/2001	15:30	14.72	16.14	3.15	21.79	613
8/21/2001	16:00	14.71	16.2	3.31	21.95	673
8/21/2001	16:30	14.71	16.25	3.42	22.06	725
8/21/2001	17:00	14.71	16.23	3.38	22.02	700

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/21/2001	17:30	14.71	16.04	2.94	21.58	537
8/21/2001	18:00	14.72	15.94	2.68	21.32	443
8/21/2001	18:30	14.72	15.9	2.59	21.23	409
8/21/2001	19:00	14.72	15.88	2.55	21.19	392
8/21/2001	19:30	14.72	15.86	2.50	21.14	375
8/21/2001	20:00	14.73	15.84	2.43	21.07	349
8/21/2001	20:30	14.73	15.81	2.36	21.00	323
8/21/2001	21:00	14.74	15.79	2.29	20.93	308
8/21/2001	21:30	14.74	15.79	2.29	20.93	308
8/21/2001	22:00	14.74	15.8	2.31	20.95	313
8/21/2001	22:30	14.74	15.79	2.29	20.93	308
8/21/2001	23:00	14.74	15.76	2.22	20.86	292
8/21/2001	23:30	14.74	15.74	2.17	20.81	282
8/22/2001	0:00	14.74	15.72	2.13	20.77	272
8/22/2001	0:30	14.74	15.71	2.10	20.74	266
8/22/2001	1:00	14.74	15.71	2.10	20.74	266
8/22/2001	1:30	14.74	15.7	2.08	20.72	261
8/22/2001	2:00	14.74	15.69	2.06	20.70	256
8/22/2001	2:30	14.74	15.69	2.06	20.70	256
8/22/2001	3:00	14.74	15.69	2.06	20.70	256
8/22/2001	3:30	14.74	15.69	2.06	20.70	256
8/22/2001	4:00	14.74	15.68	2.03	20.67	251
8/22/2001	4:30	14.74	15.68	2.03	20.67	250
8/22/2001	5:00	14.74	15.67	2.01	20.65	245
8/22/2001	5:30	14.74	15.67	2.01	20.65	245
8/22/2001	6:00	14.74	15.66	1.98	20.62	240
8/22/2001	6:30	14.73	15.66	2.01	20.65	245
8/22/2001	7:00	14.72	15.66	2.03	20.67	250
8/22/2001	7:30	14.72	15.65	2.01	20.65	245
8/22/2001	8:00	14.72	15.65	2.01	20.65	245
8/22/2001	8:30	14.72	15.65	2.00	20.64	245
8/22/2001	9:00	14.71	15.65	2.03	20.67	250
8/22/2001	9:30	14.71	15.64	2.00	20.64	244
8/22/2001	10:00	14.7	15.64	2.03	20.67	249
8/22/2001	10:30	14.69	15.64	2.05	20.69	254
8/22/2001	11:00	14.69	15.64	2.05	20.69	254
8/22/2001	11:30	14.69	15.64	2.05	20.69	254
8/22/2001	12:00	14.69	15.64	2.05	20.69	254
8/22/2001	12:30	14.7	15.65	2.05	20.69	254
8/22/2001	13:00	14.7	15.69	2.14	20.78	274
8/22/2001	13:30	14.7	15.74	2.25	20.89	300
8/22/2001	14:00	14.69	15.81	2.44	21.08	352
8/22/2001	14:30	14.69	15.89	2.62	21.26	420

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/22/2001	15:00	14.67	15.92	2.74	21.38	462
8/22/2001	15:30	14.66	15.92	2.76	21.40	470
8/22/2001	16:00	14.66	15.95	2.83	21.47	496
8/22/2001	16:30	14.66	16	2.94	21.58	538
8/22/2001	17:00	14.65	15.91	2.76	21.40	470
8/22/2001	17:30	14.65	15.85	2.62	21.26	419
8/22/2001	18:00	14.65	15.78	2.46	21.10	359
8/22/2001	18:30	14.65	15.72	2.32	20.96	314
8/22/2001	19:00	14.65	15.65	2.16	20.80	278
8/22/2001	19:30	14.65	15.61	2.06	20.70	258
8/22/2001	20:00	14.65	15.59	2.02	20.66	248
8/22/2001	20:30	14.65	15.57	1.97	20.61	237
8/22/2001	21:00	14.65	15.56	1.95	20.59	232
8/22/2001	21:30	14.65	15.56	1.95	20.59	232
8/22/2001	22:00	14.65	15.56	1.95	20.59	232
8/22/2001	22:30	14.66	15.56	1.92	20.56	227
8/22/2001	23:00	14.66	15.56	1.92	20.56	227
8/22/2001	23:30	14.66	15.56	1.92	20.56	226
8/23/2001	0:00	14.66	15.56	1.92	20.56	226
8/23/2001	0:30	14.67	15.56	1.90	20.54	221
8/23/2001	1:00	14.67	15.56	1.90	20.54	221
8/23/2001	1:30	14.67	15.56	1.90	20.54	221
8/23/2001	2:00	14.67	15.56	1.90	20.54	221
8/23/2001	2:30	14.67	15.56	1.90	20.54	221
8/23/2001	3:00	14.66	15.56	1.92	20.56	226
8/23/2001	3:30	14.66	15.55	1.90	20.54	221
8/23/2001	4:00	14.67	15.55	1.87	20.51	215
8/23/2001	4:30	14.66	15.55	1.90	20.54	220
8/23/2001	5:00	14.66	15.55	1.90	20.54	220
8/23/2001	5:30	14.66	15.55	1.90	20.54	220
8/23/2001	6:00	14.66	15.54	1.87	20.51	215
8/23/2001	6:30	14.66	15.54	1.87	20.51	215
8/23/2001	7:00	14.65	15.54	1.89	20.53	220
8/23/2001	7:30	14.65	15.54	1.89	20.53	220
8/23/2001	8:00	14.64	15.53	1.89	20.53	220
8/23/2001	8:30	14.64	15.53	1.89	20.53	220
8/23/2001	9:00	14.63	15.53	1.92	20.56	225
8/23/2001	9:30	14.64	15.53	1.89	20.53	220
8/23/2001	10:00	14.65	15.53	1.87	20.51	214
8/23/2001	10:30	14.63	15.52	1.89	20.53	219
8/23/2001	11:00	14.62	15.53	1.94	20.58	229
8/23/2001	11:30	14.62	15.53	1.94	20.58	229
8/23/2001	12:00	14.62	15.54	1.96	20.60	234

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/23/2001	12:30	14.62	15.55	1.98	20.62	239
8/23/2001	13:00	14.62	15.56	2.00	20.64	244
8/23/2001	13:30	14.62	15.58	2.05	20.69	255
8/23/2001	14:00	14.62	15.6	2.10	20.74	265
8/23/2001	14:30	14.62	15.62	2.14	20.78	275
8/23/2001	15:00	14.62	15.65	2.21	20.85	290
8/23/2001	15:30	14.62	15.68	2.28	20.92	305
8/23/2001	16:00	14.62	15.74	2.42	21.06	344
8/23/2001	16:30	14.62	15.79	2.53	21.17	386
8/23/2001	17:00	14.62	15.82	2.60	21.24	412
8/23/2001	17:30	14.62	15.78	2.51	21.15	377
8/23/2001	18:00	14.62	15.72	2.37	21.01	326
8/23/2001	18:30	14.62	15.65	2.21	20.85	289
8/23/2001	19:00	14.62	15.58	2.05	20.69	254
8/23/2001	19:30	14.62	15.54	1.95	20.59	233
8/23/2001	20:00	14.62	15.52	1.91	20.55	223
8/23/2001	20:30	14.62	15.52	1.91	20.55	223
8/23/2001	21:00	14.63	15.51	1.86	20.50	212
8/23/2001	21:30	14.63	15.5	1.84	20.48	207
8/23/2001	22:00	14.63	15.5	1.84	20.48	207
8/23/2001	22:30	14.63	15.5	1.84	20.48	207
8/23/2001	23:00	14.64	15.5	1.81	20.45	202
8/23/2001	23:30	14.63	15.49	1.81	20.45	202
8/24/2001	0:00	14.63	15.49	1.81	20.45	202
8/24/2001	0:30	14.64	15.5	1.81	20.45	201
8/24/2001	1:00	14.64	15.5	1.81	20.45	201
8/24/2001	1:30	14.65	15.5	1.79	20.43	196
8/24/2001	2:00	14.65	15.5	1.79	20.43	196
8/24/2001	2:30	14.65	15.5	1.79	20.43	196
8/24/2001	3:00	14.65	15.5	1.79	20.43	196
8/24/2001	3:30	14.65	15.5	1.79	20.43	196
8/24/2001	4:00	14.65	15.5	1.78	20.42	196
8/24/2001	4:30	14.65	15.5	1.78	20.42	196
8/24/2001	5:00	14.65	15.5	1.78	20.42	195
8/24/2001	5:30	14.65	15.5	1.78	20.42	195
8/24/2001	6:00	14.65	15.5	1.78	20.42	195
8/24/2001	6:30	14.65	15.5	1.78	20.42	195
8/24/2001	7:00	14.65	15.5	1.78	20.42	195
8/24/2001	7:30	14.65	15.5	1.78	20.42	195
8/24/2001	8:00	14.65	15.5	1.78	20.42	195
8/24/2001	8:30	14.65	15.5	1.78	20.42	195
8/24/2001	9:00	14.65	15.5	1.78	20.42	195
8/24/2001	9:30	14.65	15.5	1.78	20.42	195

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/24/2001	10:00	14.65	15.5	1.78	20.42	195
8/24/2001	10:30	14.65	15.51	1.80	20.44	200
8/24/2001	11:00	14.65	15.51	1.80	20.44	199
8/24/2001	11:30	14.64	15.52	1.85	20.49	210
8/24/2001	12:00	14.64	15.53	1.87	20.51	215
8/24/2001	12:30	14.64	15.53	1.87	20.51	215
8/24/2001	13:00	14.63	15.56	1.96	20.60	235
8/24/2001	13:30	14.63	15.58	2.01	20.65	245
8/24/2001	14:00	14.63	15.59	2.03	20.67	250
8/24/2001	14:30	14.63	15.6	2.05	20.69	255
8/24/2001	15:00	14.63	15.63	2.12	20.76	270
8/24/2001	15:30	14.62	15.65	2.19	20.83	285
8/24/2001	16:00	14.62	15.69	2.28	20.92	306
8/24/2001	16:30	14.62	15.73	2.37	21.01	328
8/24/2001	17:00	14.62	15.77	2.46	21.10	362
8/24/2001	17:30	14.62	15.79	2.51	21.15	379
8/24/2001	18:00	14.63	15.8	2.51	21.15	378
8/24/2001	18:30	14.63	15.82	2.55	21.19	395
8/24/2001	19:00	14.63	15.78	2.46	21.10	361
8/24/2001	19:30	14.62	15.7	2.30	20.94	310
8/24/2001	20:00	14.63	15.63	2.12	20.76	269
8/24/2001	20:30	14.63	15.55	1.93	20.57	228
8/24/2001	21:00	14.63	15.51	1.84	20.48	208
8/24/2001	21:30	14.63	15.49	1.79	20.43	198
8/24/2001	22:00	14.63	15.48	1.77	20.41	192
8/24/2001	22:30	14.63	15.48	1.77	20.41	192
8/24/2001	23:00	14.63	15.48	1.77	20.41	192
8/24/2001	23:30	14.63	15.47	1.75	20.39	187
8/25/2001	0:00	14.63	15.47	1.74	20.38	187
8/25/2001	0:30	14.63	15.47	1.74	20.38	187
8/25/2001	1:00	14.63	15.47	1.74	20.38	187
8/25/2001	1:30	14.63	15.46	1.72	20.36	181
8/25/2001	2:00	14.63	15.47	1.74	20.38	186
8/25/2001	2:30	14.63	15.47	1.74	20.38	186
8/25/2001	3:00	14.63	15.46	1.72	20.36	181
8/25/2001	3:30	14.63	15.46	1.72	20.36	181
8/25/2001	4:00	14.62	15.46	1.74	20.38	186
8/25/2001	4:30	14.62	15.46	1.74	20.38	186
8/25/2001	5:00	14.62	15.46	1.74	20.38	186
8/25/2001	5:30	14.62	15.46	1.74	20.38	186
8/25/2001	6:00	14.62	15.46	1.74	20.38	186
8/25/2001	6:30	14.62	15.46	1.74	20.38	186
8/25/2001	7:00	14.62	15.46	1.74	20.38	186



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/25/2001	7:30	14.62	15.46	1.74	20.38	185
8/25/2001	8:00	14.61	15.45	1.74	20.38	185
8/25/2001	8:30	14.61	15.45	1.74	20.38	185
8/25/2001	9:00	14.61	15.45	1.74	20.38	185
8/25/2001	9:30	14.6	15.45	1.76	20.40	190
8/25/2001	10:00	14.6	15.45	1.76	20.40	190
8/25/2001	10:30	14.6	15.45	1.76	20.40	190
8/25/2001	11:00	14.6	15.45	1.76	20.40	190
8/25/2001	11:30	14.6	15.46	1.78	20.42	195
8/25/2001	12:00	14.59	15.46	1.80	20.44	200
8/25/2001	12:30	14.59	15.47	1.83	20.47	205
8/25/2001	13:00	14.58	15.48	1.87	20.51	215
8/25/2001	13:30	14.58	15.49	1.89	20.53	220
8/25/2001	14:00	14.58	15.51	1.94	20.58	230
8/25/2001	14:30	14.58	15.53	1.99	20.63	240
8/25/2001	14:34	-	-	-	<b>20.63</b>	241
8/25/2001	15:00	14.58	15.55	2.23	20.67	250
8/25/2001	15:30	14.57	15.57	2.30	20.74	265
8/25/2001	16:00	14.57	15.61	2.38	20.82	284
8/25/2001	16:30	14.57	15.65	2.47	20.91	304
8/25/2001	17:00	14.56	15.67	2.54	20.98	319
8/25/2001	17:30	14.56	15.71	2.63	21.07	349
8/25/2001	18:00	14.56	15.75	2.72	21.16	381
8/25/2001	18:30	14.55	15.79	2.83	21.27	423
8/25/2001	19:00	14.55	15.79	2.83	21.27	422
8/25/2001	19:30	14.55	15.79	2.82	21.26	421
8/25/2001	20:00	14.55	15.77	2.77	21.21	403
8/25/2001	20:30	14.55	15.72	2.66	21.10	359
8/25/2001	21:00	14.55	15.66	2.52	20.96	314
8/25/2001	21:30	14.56	15.59	2.33	20.77	272
8/25/2001	22:00	14.56	15.54	2.21	20.65	246
8/25/2001	22:30	14.56	15.49	2.09	20.53	220
8/25/2001	23:00	14.56	15.45	2.00	20.44	199
8/25/2001	23:30	14.56	15.42	1.93	20.37	183
8/26/2001	0:00	14.56	15.41	1.90	20.34	177
8/26/2001	0:30	14.56	15.4	1.87	20.31	171
8/26/2001	1:00	14.56	15.39	1.85	20.29	165
8/26/2001	1:30	14.56	15.39	1.84	20.28	165
8/26/2001	2:00	14.56	15.39	1.84	20.28	164
8/26/2001	2:30	14.57	15.39	1.82	20.26	158
8/26/2001	3:00	14.57	15.39	1.81	20.25	158
8/26/2001	3:30	14.57	15.39	1.81	20.25	157
8/26/2001	4:00	14.57	15.39	1.81	20.25	157

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/26/2001	4:30	14.57	15.39	1.80	20.24	156
8/26/2001	5:00	14.57	15.39	1.80	20.24	156
8/26/2001	5:30	14.57	15.39	1.80	20.24	156
8/26/2001	6:00	14.57	15.39	1.80	20.24	156
8/26/2001	6:30	14.57	15.39	1.79	20.23	156
8/26/2001	7:00	14.59	15.39	1.74	20.18	152
8/26/2001	7:30	14.6	15.39	1.72	20.16	150
8/26/2001	8:00	14.6	15.39	1.71	20.15	150
8/26/2001	8:30	14.6	15.39	1.71	20.15	150
8/26/2001	9:00	14.6	15.39	1.71	20.15	150
8/26/2001	9:30	14.6	15.4	1.73	20.17	151
8/26/2001	10:00	14.6	15.4	1.73	20.17	151
8/26/2001	10:30	14.6	15.42	1.77	20.21	154
8/26/2001	11:00	14.6	15.43	1.79	20.23	155
8/26/2001	11:30	14.6	15.46	1.85	20.29	167
8/26/2001	12:00	14.6	15.5	1.94	20.38	187
8/26/2001	12:30	14.6	15.58	2.12	<b>20.56</b>	227
8/26/2001	13:00	14.6	15.68	2.48	20.79	277
8/26/2001	13:30	14.6	15.79	2.73	21.04	338
8/26/2001	14:00	14.6	15.89	2.95	21.26	421
8/26/2001	14:30	14.6	15.88	2.93	21.24	410
8/26/2001	15:00	14.6	15.81	2.76	21.07	349
8/26/2001	15:30	14.6	15.79	2.71	21.02	330
8/26/2001	16:00	14.57	15.77	2.73	21.04	337
8/26/2001	16:30	14.57	15.75	2.68	20.99	320
8/26/2001	17:00	14.57	15.79	2.76	21.07	350
8/26/2001	17:30	14.57	15.94	3.10	21.41	476
8/26/2001	18:00	14.57	15.82	2.82	21.13	372
8/26/2001	18:30	14.57	15.72	2.59	20.90	301
8/26/2001	19:00	14.57	15.66	2.44	20.75	269
8/26/2001	19:30	14.58	15.6	2.28	20.59	232
8/26/2001	20:00	14.59	15.53	2.09	20.40	190
8/26/2001	20:30	14.59	15.49	1.99	20.30	169
8/26/2001	21:00	14.6	15.45	1.87	20.18	152
8/26/2001	21:30	14.6	15.42	1.80	20.11	147
8/26/2001	22:00	14.6	15.42	1.79	20.10	147
8/26/2001	22:30	14.6	15.41	1.77	20.08	145
8/26/2001	23:00	14.61	15.41	1.74	20.05	143
8/26/2001	23:30	14.61	15.41	1.73	20.04	142
8/27/2001	0:00	14.62	15.41	1.70	20.01	140
8/27/2001	0:30	14.62	15.41	1.70	20.01	140
8/27/2001	1:00	14.62	15.41	1.70	20.01	140
8/27/2001	1:30	14.62	15.41	1.69	20.00	139

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/27/2001	2:00	14.62	15.41	1.69	20.00	139
8/27/2001	2:30	14.63	15.41	1.66	19.97	137
8/27/2001	3:00	14.64	15.41	1.63	19.94	135
8/27/2001	3:30	14.64	15.41	1.62	19.93	135
8/27/2001	4:00	14.64	15.41	1.62	19.93	134
8/27/2001	4:30	14.65	15.41	1.59	19.90	132
8/27/2001	5:00	14.65	15.41	1.59	19.90	132
8/27/2001	5:30	14.66	15.41	1.56	19.87	130
8/27/2001	6:00	14.65	15.41	1.58	19.89	131
8/27/2001	6:30	14.65	15.41	1.57	19.88	131
8/27/2001	7:00	14.65	15.41	1.57	19.88	131
8/27/2001	7:30	14.65	15.42	1.59	19.90	132
8/27/2001	8:00	14.65	15.41	1.56	19.87	130
8/27/2001	8:30	14.66	15.42	1.55	19.86	130
8/27/2001	9:00	14.65	15.42	1.57	19.88	131
8/27/2001	9:30	14.65	15.42	1.57	19.88	130
8/27/2001	10:00	14.65	15.42	1.56	19.87	130
8/27/2001	10:30	14.65	15.42	1.56	19.87	130
8/27/2001	11:00	14.65	15.42	1.55	19.86	129
8/27/2001	11:30	14.64	15.43	1.59	19.90	132
8/27/2001	12:00	14.62	15.43	1.63	19.94	135
8/27/2001	12:30	14.62	15.44	1.65	19.96	137
8/27/2001	13:00	14.62	15.46	1.69	20.00	139
8/27/2001	13:30	14.62	15.47	1.71	20.02	141
8/27/2001	14:00	14.62	15.5	1.77	20.08	145
8/27/2001	14:30	14.62	15.56	1.91	20.22	155
8/27/2001	15:00	14.61	15.68	2.20	20.51	215
8/27/2001	15:15	-	-	-	<b>20.51</b>	215
8/27/2001	15:30	14.61	15.81	2.75	20.80	278
8/27/2001	16:00	14.62	15.92	2.96	21.01	328
8/27/2001	16:30	14.61	15.82	2.74	20.79	277
8/27/2001	17:00	14.61	15.82	2.73	20.78	274
8/27/2001	17:30	14.6	15.8	2.69	20.74	265
8/27/2001	18:00	14.6	15.75	2.56	20.61	237
8/27/2001	18:30	14.6	15.72	2.48	20.53	218
8/27/2001	19:00	14.6	15.69	2.39	20.44	200
8/27/2001	19:30	14.6	15.67	2.33	20.38	186
8/27/2001	20:00	14.61	15.62	2.18	20.23	155
8/27/2001	20:30	14.61	15.54	1.98	20.03	141
8/27/2001	21:00	14.62	15.46	1.76	19.81	126
8/27/2001	21:30	14.63	15.44	1.68	19.73	120
8/27/2001	22:00	14.64	15.43	1.61	19.66	116
8/27/2001	22:30	14.64	15.42	1.58	19.63	113

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/27/2001	23:00	14.65	15.42	1.54	19.59	110
8/27/2001	23:30	14.65	15.42	1.53	19.58	109
8/28/2001	0:00	14.65	15.43	1.53	19.58	110
8/28/2001	0:30	14.65	15.43	1.52	19.57	109
8/28/2001	1:00	14.65	15.43	1.50	19.55	108
8/28/2001	1:30	14.65	15.43	1.49	19.54	107
8/28/2001	2:00	14.65	15.43	1.48	19.53	106
8/28/2001	2:30	14.65	15.44	1.48	19.53	106
8/28/2001	3:00	14.65	15.44	1.47	19.52	105
8/28/2001	3:30	14.66	15.44	1.43	19.48	103
8/28/2001	4:00	14.66	15.44	1.42	19.47	102
8/28/2001	4:30	14.67	15.45	1.40	19.45	101
8/28/2001	5:00	14.67	15.45	1.39	19.44	100
8/28/2001	5:30	14.68	15.44	1.33	19.38	95
8/28/2001	6:00	14.68	15.44	1.31	19.36	94
8/28/2001	6:30	14.68	15.44	1.30	19.35	93
8/28/2001	7:00	14.68	15.44	1.29	19.34	92
8/28/2001	7:30	14.68	15.44	1.27	19.32	91
8/28/2001	8:00	14.68	15.44	1.26	19.31	90
8/28/2001	8:30	14.67	15.44	1.26	19.31	91
8/28/2001	9:00	14.67	15.44	1.25	19.30	90
8/28/2001	9:30	14.67	15.44	1.24	19.29	89
8/28/2001	10:00	14.66	15.44	1.24	19.29	89
8/28/2001	10:30	14.66	15.44	1.23	19.28	88
8/28/2001	11:00	14.65	15.44	1.24	19.29	89
8/28/2001	11:30	14.65	15.46	1.27	19.32	91
8/28/2001	12:00	14.65	15.48	1.30	19.35	93
8/28/2001	12:30	14.64	15.5	1.36	19.41	97
8/28/2001	13:00	14.64	15.54	1.43	19.48	103
8/28/2001	13:30	14.64	15.62	1.60	19.65	115
8/28/2001	14:00	14.62	15.75	1.93	19.98	138
8/28/2001	14:30	14.63	15.88	2.20	20.25	157
8/28/2001	15:00	14.63	15.95	2.34	20.39	188
8/28/2001	15:30	14.62	15.97	2.40	20.45	200
8/28/2001	15:40	-	-	-	<b>20.45</b>	201
8/28/2001	16:00	14.62	15.83	2.81	20.15	150
8/28/2001	16:30	14.62	15.85	2.87	20.21	154
8/28/2001	17:00	14.61	15.79	2.78	20.12	148
8/28/2001	17:30	14.61	15.76	2.73	20.07	144
8/28/2001	18:00	14.62	15.75	2.71	20.05	143
8/28/2001	18:30	14.61	15.7	2.64	19.98	138
8/28/2001	19:00	14.61	15.65	2.55	19.89	131
8/28/2001	19:30	14.61	15.56	2.36	19.70	118

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/28/2001	20:00	14.61	15.47	2.18	19.52	105
8/28/2001	20:30	14.62	15.41	2.04	19.38	95
8/28/2001	21:00	14.62	15.39	2.01	19.35	94
8/28/2001	21:30	14.62	15.38	2.01	19.35	93
8/28/2001	22:00	14.63	15.38	2.01	19.35	93
8/28/2001	22:30	14.62	15.38	2.06	19.40	97
8/28/2001	23:00	14.62	15.37	2.05	19.39	96
8/28/2001	23:30	14.62	15.37	2.08	19.42	98
8/29/2001	0:00	14.62	15.37	2.10	19.44	100
8/29/2001	0:30	14.62	15.36	2.10	19.44	99
8/29/2001	1:00	14.62	15.36	2.12	19.46	101
8/29/2001	1:30	14.62	15.36	2.14	19.48	103
8/29/2001	2:00	14.62	15.36	2.16	19.50	104
8/29/2001	2:30	14.61	15.36	2.21	19.55	107
8/29/2001	3:00	14.6	15.35	2.23	19.57	109
8/29/2001	3:30	14.6	15.35	2.25	19.59	110
8/29/2001	4:00	14.6	15.35	2.27	19.61	112
8/29/2001	4:30	14.6	15.34	2.27	19.61	112
8/29/2001	5:00	14.6	15.34	2.29	19.63	113
8/29/2001	5:30	14.6	15.33	2.29	19.63	113
8/29/2001	6:00	14.59	15.32	2.31	19.65	115
8/29/2001	6:30	14.58	15.32	2.36	19.70	118
8/29/2001	7:00	14.58	15.32	2.38	19.72	120
8/29/2001	7:30	14.58	15.32	2.40	19.74	121
8/29/2001	8:00	14.57	15.32	2.45	19.79	124
8/29/2001	8:30	14.57	15.31	2.45	19.79	124
8/29/2001	9:00	14.57	15.31	2.47	19.81	126
8/29/2001	9:30	14.56	15.3	2.49	19.83	127
8/29/2001	10:00	14.55	15.29	2.51	19.85	129
8/29/2001	10:30	14.55	15.29	2.53	19.87	130
8/29/2001	11:00	14.55	15.29	2.56	19.90	132
8/29/2001	11:30	14.54	15.29	2.60	19.94	135
8/29/2001	12:00	14.53	15.29	2.65	19.99	138
8/29/2001	12:30	14.53	15.3	2.69	20.03	141
8/29/2001	13:00	14.53	15.3	2.71	20.05	143
8/29/2001	13:30	14.52	15.31	2.78	20.12	148
8/29/2001	14:00	14.52	15.31	2.80	20.14	149
8/29/2001	14:30	14.52	15.31	2.82	20.16	151
8/29/2001	15:00	14.51	15.32	2.89	20.23	156
8/29/2001	15:30	14.51	15.32	2.91	20.25	158
8/29/2001	16:00	14.51	15.32	2.94	20.28	163
8/29/2001	16:30	14.51	15.32	2.96	20.30	168
8/29/2001	17:00	14.5	15.33	3.03	20.37	183

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/29/2001	17:30	14.5	15.33	3.05	20.39	188
8/29/2001	18:00	14.5	15.32	3.05	<b>20.39</b>	187
8/29/2001	18:30	14.5	15.29	1.79	20.29	167
8/29/2001	19:00	14.5	15.27	1.73	20.23	155
8/29/2001	19:30	14.51	15.26	1.66	20.16	150
8/29/2001	20:00	14.5	15.26	1.66	20.16	150
8/29/2001	20:30	14.51	15.26	1.61	20.11	147
8/29/2001	21:00	14.51	15.25	1.56	20.06	144
8/29/2001	21:30	14.5	15.24	1.54	20.04	142
8/29/2001	22:00	14.5	15.24	1.52	20.02	140
8/29/2001	22:30	14.5	15.24	1.49	19.99	139
8/29/2001	23:00	14.51	15.24	1.45	19.95	136
8/29/2001	23:30	14.51	15.24	1.42	19.92	134
8/30/2001	0:00	14.51	15.24	1.40	19.90	132
8/30/2001	0:30	14.51	15.23	1.35	19.85	129
8/30/2001	1:00	14.52	15.24	1.33	19.83	127
8/30/2001	1:30	14.52	15.24	1.31	19.81	126
8/30/2001	2:00	14.52	15.24	1.28	19.78	124
8/30/2001	2:30	14.52	15.24	1.26	19.76	122
8/30/2001	3:00	14.52	15.23	1.22	19.72	119
8/30/2001	3:30	14.52	15.24	1.21	19.71	119
8/30/2001	4:00	14.52	15.24	1.19	19.69	117
8/30/2001	4:30	14.52	15.24	1.17	19.67	116
8/30/2001	5:00	14.52	15.24	1.15	19.65	114
8/30/2001	5:30	14.52	15.24	1.12	19.62	113
8/30/2001	6:00	14.52	15.24	1.10	19.60	111
8/30/2001	6:30	14.52	15.24	1.08	19.58	109
8/30/2001	7:00	14.52	15.23	1.03	19.53	106
8/30/2001	7:30	14.52	15.24	1.03	19.53	106
8/30/2001	8:00	14.52	15.23	0.98	19.48	103
8/30/2001	8:30	14.52	15.24	0.98	19.48	103
8/30/2001	9:00	14.52	15.24	0.96	19.46	101
8/30/2001	9:30	14.51	15.24	0.96	19.46	101
8/30/2001	10:00	14.5	15.24	0.96	19.46	101
8/30/2001	10:30	14.5	15.26	0.98	19.48	103
8/30/2001	11:00	14.51	15.27	0.96	19.46	101
8/30/2001	11:30	14.48	15.3	1.07	19.57	109
8/30/2001	12:00	14.47	15.34	1.16	19.66	116
8/30/2001	12:30	14.47	15.42	1.33	19.83	127
8/30/2001	13:00	14.47	15.48	1.44	19.94	135
8/30/2001	13:30	14.46	15.56	1.62	20.12	148
8/30/2001	14:00	14.45	15.65	1.83	20.33	175
8/30/2001	14:30	14.45	15.78	2.11	20.61	236

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/30/2001	15:00	14.45	15.76	2.04	20.54	221
8/30/2001	15:30	14.45	15.69	1.85	<b>20.35</b>	180
8/30/2001	16:00	14.45	15.63	2.74	20.24	156
8/30/2001	16:30	14.45	15.55	2.59	20.09	145
8/30/2001	17:00	14.45	15.56	2.64	20.14	149
8/30/2001	17:30	14.45	15.49	2.50	20.00	139
8/30/2001	18:00	14.44	15.48	2.53	20.03	141
8/30/2001	18:30	14.43	15.46	2.53	20.03	141
8/30/2001	19:00	14.43	15.45	2.54	20.04	142
8/30/2001	19:30	14.44	15.4	2.42	19.92	134
8/30/2001	20:00	14.45	15.37	2.36	19.86	129
8/30/2001	20:30	14.45	15.3	2.23	19.73	120
8/30/2001	21:00	14.45	15.22	2.07	19.57	109
8/30/2001	21:30	14.46	15.19	2.00	19.50	104
8/30/2001	22:00	14.47	15.19	2.01	19.51	104
8/30/2001	22:30	14.47	15.19	2.03	19.53	106
8/30/2001	23:00	14.47	15.19	2.06	19.56	108
8/30/2001	23:30	14.47	15.18	2.07	19.57	109
8/31/2001	0:00	14.47	15.18	2.09	19.59	110
8/31/2001	0:30	14.47	15.18	2.12	19.62	112
8/31/2001	1:00	14.47	15.18	2.15	19.65	114
8/31/2001	1:30	14.47	15.18	2.17	19.67	116
8/31/2001	2:00	14.48	15.18	2.18	19.68	116
8/31/2001	2:30	14.48	15.17	2.18	19.68	117
8/31/2001	3:00	14.47	15.17	2.23	19.73	120
8/31/2001	3:30	14.47	15.17	2.26	19.76	122
8/31/2001	4:00	14.47	15.17	2.29	19.79	124
8/31/2001	4:30	14.47	15.16	2.29	19.79	124
8/31/2001	5:00	14.47	15.17	2.34	19.84	128
8/31/2001	5:30	14.47	15.16	2.34	19.84	128
8/31/2001	6:00	14.47	15.16	2.37	19.87	130
8/31/2001	6:30	14.47	15.16	2.40	19.90	132
8/31/2001	7:00	14.47	15.16	2.42	19.92	134
8/31/2001	7:30	14.47	15.16	2.45	19.95	136
8/31/2001	8:00	14.47	15.16	2.48	19.98	138
8/31/2001	8:30	14.47	15.16	2.50	20.00	140
8/31/2001	9:00	14.47	15.16	2.53	20.03	141
8/31/2001	9:30	14.47	15.16	2.56	20.06	143
8/31/2001	10:00	14.47	15.16	2.59	20.09	145
8/31/2001	10:30	14.46	15.16	2.64	20.14	149
8/31/2001	11:00	14.46	15.16	2.66	20.16	151
8/31/2001	11:30	14.46	15.16	2.69	20.19	153
8/31/2001	12:00	14.46	15.16	2.72	20.22	155

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/31/2001	12:30	14.46	15.16	2.74	20.24	156
8/31/2001	13:00	14.46	15.17	2.79	<b>20.29</b>	167
8/31/2001	13:30	14.45	15.17	1.66	20.32	172
8/31/2001	14:00	14.45	15.17	1.66	20.32	172
8/31/2001	14:30	14.45	15.18	1.68	20.34	177
8/31/2001	15:00	14.45	15.19	1.70	20.36	182
8/31/2001	15:30	14.45	15.19	1.70	20.36	182
8/31/2001	16:00	14.45	15.19	1.70	20.36	182
8/31/2001	16:30	14.45	15.19	1.70	20.36	182
8/31/2001	17:00	14.45	15.18	1.68	20.34	177
8/31/2001	17:30	14.45	15.19	1.70	20.36	182
8/31/2001	18:00	14.45	15.18	1.68	20.34	177
8/31/2001	18:30	14.45	15.17	1.66	20.32	172
8/31/2001	19:00	14.45	15.16	1.63	20.29	167
8/31/2001	19:30	14.46	15.16	1.61	20.27	161
8/31/2001	20:00	14.45	15.16	1.63	20.29	167
8/31/2001	20:30	14.46	15.16	1.61	20.27	161
8/31/2001	21:00	14.46	15.15	1.59	20.25	157
8/31/2001	21:30	14.46	15.15	1.59	20.25	157
8/31/2001	22:00	14.46	15.15	1.59	20.25	157
8/31/2001	22:30	14.47	15.16	1.59	20.25	157
8/31/2001	23:00	14.47	15.16	1.59	20.25	157
8/31/2001	23:30	14.47	15.16	1.59	20.25	157
9/1/2001	0:00	14.47	15.16	1.59	20.25	157
9/1/2001	0:30	14.47	15.16	1.59	20.25	157
9/1/2001	1:00	14.47	15.16	1.59	20.25	157
9/1/2001	1:30	14.47	15.15	1.56	20.22	155
9/1/2001	2:00	14.47	15.16	1.59	20.25	157
9/1/2001	2:30	14.47	15.15	1.56	20.22	155
9/1/2001	3:00	14.47	15.16	1.59	20.25	157
9/1/2001	3:30	14.47	15.15	1.56	20.22	155
9/1/2001	4:00	14.47	15.15	1.56	20.22	155
9/1/2001	4:30	14.47	15.15	1.56	20.22	155
9/1/2001	5:00	14.47	15.15	1.56	20.22	155
9/1/2001	5:30	14.47	15.15	1.56	20.22	155
9/1/2001	6:00	14.47	15.15	1.56	20.22	155
9/1/2001	6:30	14.47	15.15	1.56	20.22	155
9/1/2001	7:00	14.47	15.15	1.56	20.22	155
9/1/2001	7:30	14.47	15.16	1.59	20.25	157
9/1/2001	8:00	14.48	15.16	1.56	20.22	155
9/1/2001	8:30	14.47	15.16	1.59	20.25	157
9/1/2001	9:00	14.47	15.16	1.59	20.25	157
9/1/2001	9:30	14.47	15.16	1.59	20.25	157



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/1/2001	10:00	14.47	15.16	1.59	<b>20.25</b>	157
9/1/2001	10:30	14.47	15.16	1.59	20.25	157
9/1/2001	11:00	14.47	15.16	1.59	20.25	157
9/1/2001	11:30	14.47	15.16	1.59	20.25	157
9/1/2001	12:00	14.47	15.16	1.59	20.25	157
9/1/2001	12:30	14.47	15.18	1.63	20.29	166
9/1/2001	13:00	14.47	15.19	1.66	20.32	171
9/1/2001	13:30	14.48	15.2	1.66	20.32	171
9/1/2001	14:00	14.48	15.2	1.66	20.32	171
9/1/2001	14:30	14.48	15.21	1.68	20.34	176
9/1/2001	15:00	14.48	15.22	1.70	20.36	181
9/1/2001	15:30	14.48	15.23	1.72	20.38	187
9/1/2001	16:00	14.48	15.23	1.72	20.38	186
9/1/2001	16:30	14.49	15.23	1.70	20.36	181
9/1/2001	17:00	14.49	15.23	1.70	20.36	181
9/1/2001	17:30	14.49	15.22	1.68	20.34	176
9/1/2001	18:00	14.5	15.22	1.65	20.31	171
9/1/2001	18:30	14.5	15.2	1.61	20.27	161
9/1/2001	19:00	14.5	15.2	1.61	20.27	161
9/1/2001	19:30	14.5	15.19	1.58	20.24	156
9/1/2001	20:00	14.51	15.19	1.56	20.22	155
9/1/2001	20:30	14.51	15.19	1.56	20.22	155
9/1/2001	21:00	14.52	15.19	1.54	20.20	153
9/1/2001	21:30	14.52	15.19	1.54	20.20	153
9/1/2001	22:00	14.52	15.2	1.56	20.22	155
9/1/2001	22:30	14.52	15.2	1.56	20.22	155
9/1/2001	23:00	14.53	15.2	1.54	20.20	153
9/1/2001	23:30	14.54	15.21	1.54	20.20	153
9/2/2001	0:00	14.54	15.21	1.54	20.20	153
9/2/2001	0:30	14.54	15.21	1.54	20.20	153
9/2/2001	1:00	14.55	15.21	1.51	20.17	151
9/2/2001	1:30	14.55	15.21	1.51	20.17	151
9/2/2001	2:00	14.55	15.22	1.54	20.20	153
9/2/2001	2:30	14.55	15.22	1.53	20.19	153
9/2/2001	3:00	14.55	15.23	1.56	20.22	155
9/2/2001	3:30	14.56	15.23	1.53	20.19	153
9/2/2001	4:00	14.56	15.23	1.53	20.19	153
9/2/2001	4:30	14.56	15.23	1.53	20.19	153
9/2/2001	5:00	14.56	15.23	1.53	20.19	153
9/2/2001	5:30	14.56	15.23	1.53	20.19	153
9/2/2001	6:00	14.56	15.23	1.53	20.19	153
9/2/2001	6:30	14.57	15.23	1.51	20.17	151
9/2/2001	7:00	14.57	15.24	1.53	20.19	153

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
9/2/2001	7:30	14.57	15.24	1.53	20.19	153
9/2/2001	8:00	14.57	15.24	1.53	20.19	153
9/2/2001	8:30	14.57	15.24	1.53	20.19	153
9/2/2001	9:00	14.57	15.24	1.53	20.19	153
9/2/2001	9:30	14.57	15.25	1.55	20.21	154
9/2/2001	10:00	14.57	15.25	1.55	<b>20.21</b>	154
9/2/2001	10:30	14.57	15.25	1.56	20.21	154
9/2/2001	11:00	14.57	15.26	1.58	20.23	156
9/2/2001	11:30	14.57	15.27	1.61	20.26	158
9/2/2001	12:00	14.57	15.28	1.63	20.28	163
9/2/2001	12:30	14.57	15.29	1.65	20.30	168
9/2/2001	13:00	14.56	15.3	1.69	20.34	177
9/2/2001	13:30	14.57	15.32	1.71	20.36	182
9/2/2001	14:00	14.57	15.33	1.73	20.38	187
9/2/2001	14:30	14.57	15.35	1.78	20.43	197
9/2/2001	15:00	14.56	15.36	1.82	20.47	207
9/2/2001	15:30	14.56	15.39	1.89	20.54	221
9/2/2001	16:00	14.55	15.42	1.98	20.63	242
9/2/2001	16:30	14.55	15.46	2.07	20.72	262
9/2/2001	17:00	14.55	15.47	2.09	20.74	266
9/2/2001	17:30	14.55	15.46	2.07	20.72	261
9/2/2001	18:00	14.55	15.47	2.09	20.74	266
9/2/2001	18:30	14.56	15.46	2.04	20.69	255
9/2/2001	19:00	14.56	15.46	2.04	20.69	255
9/2/2001	19:30	14.56	15.41	1.92	20.57	229
9/2/2001	20:00	14.57	15.32	1.69	20.34	177
9/2/2001	20:30	14.57	15.28	1.60	20.25	157
9/2/2001	21:00	14.57	15.26	1.55	20.20	153
9/2/2001	21:30	14.58	15.25	1.50	20.15	150
9/2/2001	22:00	14.58	15.25	1.50	20.15	150
9/2/2001	22:30	14.58	15.25	1.50	20.15	150
9/2/2001	23:00	14.58	15.25	1.50	20.15	150
9/2/2001	23:30	14.58	15.25	1.49	20.14	149
9/3/2001	0:00	14.58	15.25	1.49	20.14	149
9/3/2001	0:30	14.58	15.25	1.49	20.14	149
9/3/2001	1:00	14.58	15.25	1.49	20.14	149
9/3/2001	1:30	14.58	15.24	1.47	20.12	147
9/3/2001	2:00	14.58	15.24	1.46	20.11	147
9/3/2001	2:30	14.58	15.24	1.46	20.11	147
9/3/2001	3:00	14.58	15.24	1.46	20.11	147
9/3/2001	3:30	14.58	15.24	1.46	20.11	147
9/3/2001	4:00	14.58	15.24	1.46	20.11	147
9/3/2001	4:30	14.58	15.24	1.45	20.10	147

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/3/2001	5:00	14.58	15.24	1.45	20.10	147
9/3/2001	5:30	14.57	15.23	1.45	20.10	146
9/3/2001	6:00	14.57	15.23	1.45	20.10	146
9/3/2001	6:30	14.57	15.23	1.45	20.10	146
9/3/2001	7:00	14.57	15.23	1.45	20.10	146
9/3/2001	7:30	14.57	15.23	1.44	20.09	146
9/3/2001	8:00	14.57	15.24	1.47	20.12	147
9/3/2001	8:30	14.57	15.23	1.44	20.09	146
9/3/2001	9:00	14.57	15.23	1.44	20.09	146
9/3/2001	9:30	14.57	15.23	1.44	20.09	145
9/3/2001	10:00	14.56	15.23	1.46	20.11	147
9/3/2001	10:30	14.56	15.23	1.46	20.11	147
9/3/2001	11:00	14.55	15.24	1.50	20.15	150
9/3/2001	11:30	14.55	15.26	1.55	20.20	153
9/3/2001	12:00	14.55	15.26	1.54	20.19	153
9/3/2001	12:30	14.55	15.27	1.56	20.21	154
9/3/2001	13:00	14.55	15.28	1.59	20.24	156
9/3/2001	13:30	14.55	15.29	1.61	20.26	159
9/3/2001	14:00	14.55	15.32	1.67	20.32	174
9/3/2001	14:30	14.55	15.34	1.72	20.37	183
9/3/2001	15:00	14.55	15.33	1.69	20.34	178
9/3/2001	15:30	14.55	15.33	1.69	20.34	177
9/3/2001	16:00	14.55	15.32	1.67	20.32	172
9/3/2001	16:30	14.55	15.29	1.60	20.25	157
9/3/2001	17:00	14.55	15.26	1.53	20.18	152
9/3/2001	17:30	14.55	15.23	1.46	20.11	147
9/3/2001	18:00	14.55	15.23	1.45	20.10	147
9/3/2001	18:30	14.54	15.21	1.43	20.08	145
9/3/2001	19:00	14.54	15.2	1.40	20.05	143
9/3/2001	19:30	14.54	15.2	1.40	20.05	143
9/3/2001	20:00	14.53	15.2	1.42	20.07	144
9/3/2001	20:30	14.54	15.2	1.40	20.05	143
9/3/2001	21:00	14.53	15.19	1.40	20.05	143
9/3/2001	21:30	14.54	15.19	1.37	20.02	141
9/3/2001	22:00	14.54	15.19	1.37	20.02	141
9/3/2001	22:30	14.54	15.19	1.37	20.02	141
9/3/2001	23:00	14.54	15.19	1.37	20.02	140
9/3/2001	23:30	14.53	15.19	1.39	20.04	142
9/4/2001	0:00	14.53	15.19	1.39	20.04	142
9/4/2001	0:30	14.53	15.18	1.36	20.01	140
9/4/2001	1:00	14.53	15.19	1.38	20.03	142
9/4/2001	1:30	14.52	15.18	1.38	20.03	142
9/4/2001	2:00	14.52	15.18	1.38	20.03	141

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/4/2001	2:30	14.52	15.17	1.36	20.01	140
9/4/2001	3:00	14.52	15.17	1.35	20.00	140
9/4/2001	3:30	14.52	15.17	1.35	20.00	139
9/4/2001	4:00	14.52	15.17	1.35	20.00	139
9/4/2001	4:30	14.52	15.16	1.33	19.98	138
9/4/2001	5:00	14.52	15.16	1.32	19.97	137
9/4/2001	5:30	14.52	15.16	1.32	19.97	137
9/4/2001	6:00	14.51	15.16	1.34	19.99	139
9/4/2001	6:30	14.51	15.16	1.34	19.99	139
9/4/2001	7:00	14.5	15.16	1.36	20.01	140
9/4/2001	7:30	14.5	15.15	1.34	19.99	138
9/4/2001	8:00	14.5	15.15	1.34	19.99	138
9/4/2001	8:30	14.5	15.15	1.33	19.98	138
9/4/2001	9:00	14.49	15.15	1.36	20.01	140
9/4/2001	9:30	14.48	15.14	1.35	20.00	140
9/4/2001	10:00	14.48	15.14	1.35	20.00	139
9/4/2001	10:30	14.47	15.14	1.37	20.02	141
9/4/2001	11:00	14.47	15.13	1.35	20.00	139
9/4/2001	11:30	14.46	15.13	1.37	20.02	141
9/4/2001	12:00	14.46	15.13	1.37	20.02	141
9/4/2001	12:30	14.45	15.13	1.39	20.04	142
9/4/2001	13:00	14.45	15.13	1.39	20.04	142
9/4/2001	13:30	14.45	15.13	1.39	20.04	142
9/4/2001	14:00	14.45	15.13	1.38	20.03	142
9/4/2001	14:30	14.45	15.13	1.38	20.03	142
9/4/2001	15:00	14.44	15.15	1.45	20.10	146
9/4/2001	15:30	14.44	15.14	1.43	20.08	145
9/4/2001	16:00	14.44	15.13	1.40	20.05	143
9/4/2001	16:30	14.43	15.13	1.42	20.07	144
9/4/2001	17:00	14.42	15.12	1.42	20.07	144
9/4/2001	17:30	14.42	15.12	1.42	20.07	144
9/4/2001	18:00	14.42	15.11	1.39	20.04	142
9/4/2001	18:30	14.42	15.1	1.37	20.02	141
9/4/2001	19:00	14.42	15.09	1.34	19.99	139
9/4/2001	19:30	14.42	15.09	1.34	19.99	139
9/4/2001	20:00	14.42	15.09	1.34	19.99	139
9/4/2001	20:30	14.42	15.08	1.32	19.97	137
9/4/2001	21:00	14.42	15.08	1.31	19.96	137
9/4/2001	21:30	14.43	15.08	1.29	19.94	135
9/4/2001	22:00	14.42	15.07	1.29	19.94	135
9/4/2001	22:30	14.42	15.07	1.29	19.94	135
9/4/2001	23:00	14.42	15.06	1.26	19.91	133
9/4/2001	23:30	14.42	15.07	1.28	19.93	134

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
9/5/2001	0:00	14.42	15.07	1.28	19.93	134
9/5/2001	0:30	14.42	15.06	1.26	19.91	133
9/5/2001	1:00	14.41	15.06	1.28	19.93	134
9/5/2001	1:30	14.41	15.06	1.28	19.93	134
9/5/2001	2:00	14.41	15.06	1.27	19.92	134
9/5/2001	2:30	14.41	15.06	1.27	19.92	134
9/5/2001	3:00	14.41	15.06	1.27	19.92	134
9/5/2001	3:30	14.41	15.05	1.25	19.90	132
9/5/2001	4:00	14.41	15.05	1.24	19.89	132
9/5/2001	4:30	14.41	15.05	1.24	19.89	132
9/5/2001	5:00	14.41	15.05	1.24	19.89	132
9/5/2001	5:30	14.41	15.05	1.24	19.89	131
9/5/2001	6:00	14.41	15.04	1.21	19.86	130
9/5/2001	6:30	14.4	15.04	1.24	19.89	131
9/5/2001	7:00	14.41	15.04	1.21	19.86	129
9/5/2001	7:30	14.41	15.04	1.21	19.86	129
9/5/2001	8:00	14.4	15.04	1.23	19.88	131
9/5/2001	8:30	14.4	15.04	1.23	19.88	131
9/5/2001	9:00	14.4	15.04	1.23	19.88	131
9/5/2001	9:30	14.4	15.04	1.23	19.88	130
9/5/2001	10:00	14.4	15.04	1.22	19.87	130
9/5/2001	10:30	14.4	15.05	1.24	19.89	132
9/5/2001	11:00	14.4	15.06	1.27	19.92	133
9/5/2001	11:30	14.4	15.06	1.26	19.91	133
9/5/2001	12:00	14.4	15.07	1.29	19.94	135
9/5/2001	12:30	14.4	15.09	1.33	19.98	138
9/5/2001	13:00	14.4	15.1	1.35	20.00	139
9/5/2001	13:30	14.4	15.11	1.37	20.02	141
9/5/2001	14:00	14.4	15.13	1.42	20.07	144
9/5/2001	14:30	14.4	15.15	1.46	20.11	147
9/5/2001	15:00	14.4	15.16	1.48	20.13	149
9/5/2001	15:30	14.41	15.16	1.46	20.11	147
9/5/2001	15:55	-	-	-	<b>20.15</b>	150
9/5/2001	16:00	14.41	15.18	1.50	20.15	150
9/5/2001	16:25	-	-	-	<b>20.15</b>	<b>157.9</b>
9/5/2001	16:30	14.41	15.19	1.78	20.16	151
9/5/2001	16:55	-	-	-	<b>20.15</b>	150
9/5/2001	17:00	14.41	15.19	1.77	20.15	150
9/5/2001	17:30	14.42	15.18	1.75	20.11	147
9/5/2001	18:00	14.42	15.17	1.73	20.09	145
9/5/2001	18:30	14.42	15.15	1.68	20.04	142
9/5/2001	19:00	14.42	15.16	1.71	20.07	144
9/5/2001	19:30	14.43	15.15	1.66	20.02	141

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/5/2001	20:00	14.44	15.13	1.60	19.96	136
9/5/2001	20:30	14.44	15.11	1.55	19.91	133
9/5/2001	21:00	14.45	15.11	1.53	19.89	131
9/5/2001	21:30	14.45	15.1	1.51	19.87	130
9/5/2001	22:00	14.45	15.1	1.51	19.87	130
9/5/2001	22:30	14.46	15.1	1.49	19.85	128
9/5/2001	23:00	14.46	15.1	1.49	19.85	129
9/5/2001	23:30	14.47	15.11	1.49	19.85	129
9/6/2001	0:00	14.47	15.11	1.49	19.85	129
9/6/2001	0:30	14.47	15.11	1.49	19.85	129
9/6/2001	1:00	14.48	15.12	1.49	19.85	129
9/6/2001	1:30	14.49	15.13	1.50	19.86	129
9/6/2001	2:00	14.49	15.13	1.50	19.86	129
9/6/2001	2:30	14.49	15.13	1.50	19.86	129
9/6/2001	3:00	14.5	15.13	1.48	19.84	128
9/6/2001	3:30	14.5	15.13	1.48	19.84	128
9/6/2001	4:00	14.5	15.14	1.50	19.86	129
9/6/2001	4:30	14.5	15.14	1.50	19.86	130
9/6/2001	5:00	14.51	15.15	1.50	19.86	130
9/6/2001	5:30	14.51	15.15	1.51	19.87	130
9/6/2001	6:00	14.52	15.16	1.51	19.87	130
9/6/2001	6:30	14.52	15.16	1.51	19.87	130
9/6/2001	7:00	14.52	15.16	1.51	19.87	130
9/6/2001	7:30	14.52	15.16	1.51	19.87	130
9/6/2001	8:00	14.53	15.17	1.51	19.87	130
9/6/2001	8:30	14.53	15.17	1.51	19.87	130
9/6/2001	9:00	14.53	15.18	1.54	19.90	132
9/6/2001	9:30	14.53	15.19	1.56	19.92	134
9/6/2001	10:00	14.54	15.19	1.54	19.90	132
9/6/2001	10:30	14.54	15.21	1.59	19.95	136
9/6/2001	11:00	14.55	15.23	1.61	19.97	137
9/6/2001	11:30	14.54	15.25	1.68	20.04	142
9/6/2001	12:00	14.55	15.29	1.75	20.11	147
9/6/2001	12:30	14.53	15.33	1.89	20.25	157
9/6/2001	13:00	14.55	15.37	1.94	20.30	168
9/6/2001	13:30	14.55	15.4	2.01	20.37	184
9/6/2001	14:00	14.55	15.41	2.03	20.39	189
9/6/2001	14:30	14.56	15.41	2.01	20.37	184
9/6/2001	15:00	14.55	15.44	2.11	20.47	205
9/6/2001	15:30	14.56	15.46	2.13	20.49	210
9/6/2001	16:00	14.56	15.49	2.20	20.56	226
9/6/2001	16:30	14.55	15.5	2.25	20.61	236
9/6/2001	17:00	14.55	15.55	2.36	20.72	262

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
9/6/2001	17:30	14.56	15.52	2.27	20.63	242
9/6/2001	18:00	14.57	15.62	2.48	20.84	288
9/6/2001	18:30	14.57	15.67	2.60	20.96	314
9/6/2001	19:00	14.57	15.49	2.19	20.55	223
9/6/2001	19:30	14.57	15.45	2.10	20.46	202
9/6/2001	20:00	14.58	15.45	2.07	20.43	198
9/6/2001	20:30	14.59	15.39	1.91	20.27	162
9/6/2001	21:00	14.6	15.36	1.82	20.18	152
9/6/2001	21:30	14.6	15.3	1.69	20.05	143
9/6/2001	22:00	14.6	15.26	1.60	19.96	136
9/6/2001	22:30	14.61	15.26	1.57	19.93	135
9/6/2001	23:00	14.62	15.26	1.55	19.91	133
9/6/2001	23:30	14.62	15.26	1.55	19.91	133
9/7/2001	0:00	14.62	15.26	1.55	19.91	133
9/7/2001	0:30	14.62	15.26	1.56	19.92	133
9/7/2001	1:00	14.63	15.26	1.53	19.89	132
9/7/2001	1:30	14.63	15.27	1.56	19.92	134
9/7/2001	2:00	14.63	15.27	1.56	19.92	134
9/7/2001	2:30	14.63	15.27	1.56	19.92	134
9/7/2001	3:00	14.64	15.27	1.54	19.90	132
9/7/2001	3:30	14.64	15.27	1.54	19.90	132
9/7/2001	4:00	14.64	15.27	1.54	19.90	132
9/7/2001	4:30	14.65	15.28	1.54	19.90	132
9/7/2001	5:00	14.65	15.28	1.54	19.90	133
9/7/2001	5:30	14.65	15.28	1.55	19.91	133
9/7/2001	6:00	14.65	15.28	1.55	19.91	133
9/7/2001	6:30	14.65	15.28	1.55	19.91	133
9/7/2001	7:00	14.65	15.28	1.55	19.91	133
9/7/2001	7:30	14.65	15.28	1.55	19.91	133
9/7/2001	8:00	14.65	15.28	1.55	19.91	133
9/7/2001	8:30	14.65	15.28	1.55	19.91	133
9/7/2001	9:00	14.65	15.29	1.58	19.94	135
9/7/2001	9:30	14.65	15.29	1.58	19.94	135
9/7/2001	10:00	14.65	15.29	1.58	19.94	135
9/7/2001	10:30	14.65	15.29	1.58	19.94	135
9/7/2001	11:00	14.65	15.29	1.58	19.94	135
9/7/2001	11:30	14.65	15.29	1.59	19.95	135
9/7/2001	12:00	14.65	15.3	1.61	19.97	137
9/7/2001	12:30	14.66	15.3	1.59	19.95	136
9/7/2001	13:00	14.66	15.31	1.61	19.97	137
9/7/2001	13:30	14.66	15.31	1.61	19.97	137
9/7/2001	14:00	14.67	15.31	1.59	19.95	136
9/7/2001	14:30	14.66	15.32	1.64	20.00	139

**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
9/7/2001	15:00	14.67	15.32	1.62	19.98	138
9/7/2001	15:30	14.67	15.32	1.62	19.98	138
9/7/2001	16:00	14.67	15.32	1.62	19.98	138
9/7/2001	16:30	14.67	15.33	1.64	20.00	140
9/7/2001	17:00	14.67	15.33	1.65	20.01	140
9/7/2001	17:30	14.68	15.34	1.65	20.01	140
9/7/2001	18:00	14.68	15.34	1.65	20.01	140
9/7/2001	18:30	14.69	15.33	1.60	19.96	137
9/7/2001	19:00	14.69	15.33	1.60	19.96	137
9/7/2001	19:30	14.7	15.33	1.58	19.94	135
9/7/2001	20:00	14.7	15.33	1.58	19.94	135
9/7/2001	20:30	14.71	15.34	1.59	19.95	135
9/7/2001	21:00	14.71	15.34	1.59	19.95	136
9/7/2001	21:30	14.71	15.34	1.59	19.95	136
9/7/2001	22:00	14.72	15.35	1.59	19.95	136
9/7/2001	22:30	14.72	15.36	1.61	19.97	137
9/7/2001	23:00	14.72	15.36	1.62	19.98	138
9/7/2001	23:30	14.72	15.36	1.62	19.98	138
9/8/2001	0:00	14.72	15.36	1.62	19.98	138
9/8/2001	0:30	14.72	15.36	1.62	19.98	138
9/8/2001	1:00	14.73	15.37	1.62	19.98	138
9/8/2001	1:30	14.74	15.38	1.62	19.98	138
9/8/2001	2:00	14.74	15.38	1.62	19.98	138
9/8/2001	2:30	14.74	15.39	1.65	20.01	140
9/8/2001	3:00	14.74	15.39	1.65	20.01	140
9/8/2001	3:30	14.75	15.39	1.63	19.99	138
9/8/2001	4:00	14.75	15.39	1.63	19.99	138
9/8/2001	4:30	14.76	15.39	1.61	19.97	137
9/8/2001	5:00	14.76	15.4	1.63	19.99	139
9/8/2001	5:30	14.76	15.4	1.63	19.99	139
9/8/2001	6:00	14.77	15.4	1.61	19.97	137
9/8/2001	6:30	14.77	15.41	1.64	20.00	139
9/8/2001	7:00	14.77	15.41	1.64	20.00	139
9/8/2001	7:30	14.77	15.41	1.64	20.00	139
9/8/2001	8:00	14.77	15.41	1.64	20.00	139
9/8/2001	8:30	14.77	15.41	1.64	20.00	139
9/8/2001	9:00	14.77	15.41	1.64	20.00	139
9/8/2001	9:30	14.77	15.41	1.64	20.00	139
9/8/2001	10:00	14.77	15.42	1.67	20.03	141
9/8/2001	10:30	14.77	15.42	1.67	20.03	141
9/8/2001	11:00	14.76	15.42	1.69	20.05	143
9/8/2001	11:30	14.77	15.43	1.69	20.05	143
9/8/2001	12:00	14.77	15.44	1.72	20.08	145



**Table D-3.3: Water Surface Elevation and Discharge  
on Judy Creek at River Mile 7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/8/2001	12:30	14.76	15.45	1.77	20.13	148
9/8/2001	13:00	-	-	-	<b>20.17</b>	151
9/8/2001	13:22	14.75	15.46	1.81	20.17	152

**WATER SURFACE ELEVATIONS AND DISCHARGE  
ON THE UBLUTUOCH RIVER AT RIVER MILE 13.7**

**Table D-4.1: Change in Calibration Constant During Instrument Recording Periods on the Ublutuoch River at River Mile 13.7**

Recording Period <sup>1</sup>				Change in Instrument Calibration Constant <sup>2</sup> (feet)	Comments
Start		End			
Date	Time	Date	Time		
6/11/2001	18:30	6/12/2001	11:32	-3.10	Instrument on snow.
6/12/2001	11:32	6/12/2001	12:55	-0.03	Instrument on snow.
6/12/2001	12:55	6/12/2001	14:17	-0.02	Instrument on snow.
6/12/2001	14:17	6/13/2001	17:35	-1.70	Instrument on snow.
6/13/2001	17:35	6/13/2001	18:37	-0.10	Instrument on snow.
6/13/2001	18:37	6/14/2001	10:09	-1.47	Instrument on snow.
6/14/2001	10:09	6/17/2001	15:05	-0.42	Instrument downloaded.
6/17/2001	15:48	7/18/2001	11:32	Insufficient data to compute a change in the calibration constant. <sup>3</sup>	
7/18/2001	11:32	7/18/2001	12:49	+0.04 <sup>4</sup>	Instrument downloaded.
7/18/2001	12:49	7/18/2001	14:01	-0.07	
7/18/2001	14:01	7/19/2001	11:15	+0.11	
7/19/2001	11:15	7/19/2001	15:45	+0.59	
7/19/2001	15:45	7/20/2001	12:18	-0.68	
7/20/2001	12:18	7/21/2001	14:54	+0.07	
7/21/2001	14:54	7/23/2001	14:06	-0.08	
7/23/2001	14:06	7/24/2001	8:05	+0.14	
7/24/2001	8:05	7/25/2001	8:15	+0.09	
7/25/2001	8:15	7/26/2001	8:30	-0.09	
7/26/2001	8:30	7/27/2001	8:37	-0.04	
7/27/2001	8:37	7/28/2001	8:15	+0.02	
7/28/2001	8:15	7/29/2001	8:20	+0.16	
7/29/2001	8:20	7/30/2001	8:30	-0.04	
7/30/2001	8:30	8/13/2001	20:30	-0.02	
8/13/2001	20:30	8/13/2001	21:16	+0.01	
8/13/2001	21:16	8/13/2001	22:33	+0.08	Instrument downloaded.
8/13/2001	23:01	8/15/2001	19:10	+0.29	
8/15/2001	19:10	8/25/2001	10:10	+0.27	
8/25/2001	10:10	8/26/2001	15:15	0.00	
8/26/2001	15:15	8/27/2001	16:36	-0.08	
8/27/2001	16:36	8/28/2001	8:30	+0.08	
8/28/2001	8:30	8/29/2001	14:45	-0.04	
8/29/2001	14:45	8/30/2001	8:15	+0.03	
8/30/2001	8:15	8/31/2001	8:45	+0.01	
8/31/2001	8:45	9/1/2001	8:00	-0.01	
9/1/2001	8:00	9/2/2001	11:00	-0.02	
9/2/2001	11:00	9/6/2001	11:05	-0.03	
9/6/2001	11:05	9/6/2001	12:03	-0.02	
9/6/2001	12:03	9/8/2001	9:33	+0.04	Instrument downloaded.

Notes:  
1. Water surface elevations corresponding to the recording dates and times listed above are presented in Table D-4.3, Appendix D.

**Table D-4.1: Continued**

Recording Period <sup>1</sup>				Change in Instrument Calibration Constant <sup>2</sup> (feet)	Comments
Start		End			
Date	Time	Date	Time		
<p>2. The change in calibration constant represents the difference in the apparent instrument elevation between the start of the period and the end of the period. The apparent instrument elevation was computed by subtracting the depth of water over the instrument, as recorded by the instrument, from the measured water surface elevation. A negative change indicates that the elevation of the instrument appeared to have lowered. A positive change indicates that the elevation of the instrument appeared to have risen. The change in the apparent elevation could be due to a physical change in the instrument location due to scour or shifting, but might also be due to debris or sediment partially blocking the pressure sensor.</p> <p>3. Instrument was on snow on 17 June 2001 and was out of the water when inspected on 18 July. The instrument was not inspected between 17 June and 18 July; therefore, it was not possible to check for a change in instrument calibration constant during this period.</p> <p>4. On 18 July 2001 the water level recorder was no longer under water. It is unknown as to how long the instrument was not submerged prior to 18 July. The data was downloaded, and the instrument was placed back in the water.</p> <p>5. The minimum standard deviation associated with each instrument reading is on the order of 0.1 percent of the instrument range. This is the standard deviation due to variances in the instrument itself and does not represent variances due to environmental factors such as instrument shifting or partial blockage of the sensor by debris or sediment. Thus, the minimum standard deviation associated with the readings collected for this project is on the order of 0.1 feet.</p> <p>6. The fluctuation in water surface elevation due to wind waves, varied from 0.01 to 0.03 feet during staff gage readings or water surface elevation surveys.</p> <p>7. At the end of a data recording period, the data were downloaded and the instrument was serviced and re-deployed, except at the end of the last recording period when the instrument data were downloaded and the instrument was taken out of the field.</p>					

**Table D-4.2: Average Daily Water Surface Elevation and Discharge  
on the Ublutuoch River at River Mile 13.7**

Date	Average Daily Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Average Daily Discharge <sup>2</sup> (cfs)
6/8/2001	17.72	1901
6/9/2001	17.94	2057
6/10/2001	17.28	1599
6/11/2001	16.15	1315
6/12/2001	14.87	1152
6/13/2001	13.27	1000
6/14/2001	12.23	854
6/15/2001	11.65	759
6/16/2001	10.96	649
6/17/2001	10.15	519
6/18/2001	10.15	518
6/19/2001	9.96	488
6/20/2001	9.47	409
6/21/2001	9.09	351
6/22/2001	8.46	264
6/23/2001	8.24	234
6/24/2001	8.04	206
6/25/2001	7.78	183
6/26/2001	7.51	161
6/27/2001	7.42	154
6/28/2001	7.36	149
7/18/2001	5.72	35
7/19/2001	5.94	48
7/20/2001	5.73	36
7/21/2001	5.63	32
7/22/2001	5.64	33
7/23/2001	5.54	30
7/24/2001	5.57	31
7/25/2001	5.60	32
7/26/2001	5.54	30
7/27/2001	5.48	29
7/28/2001	5.42	28
7/29/2001	5.44	28
7/30/2001	5.39	27
7/31/2001	5.46	29
8/1/2001	5.44	28
8/2/2001	5.42	28
8/3/2001	5.45	28
8/4/2001	5.46	29
8/5/2001	5.45	28
8/6/2001	5.53	30
8/7/2001	5.55	30
8/8/2001	5.53	30
8/9/2001	5.55	31

**Table D-4.2: Continued**

<b>Date</b>	<b>Average Daily Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Average Daily Discharge<sup>2</sup> (cfs)</b>
8/10/2001	5.54	30
8/11/2001	5.57	31
8/12/2001	5.61	32
8/13/2001	5.68	34
8/14/2001	5.99	50
8/15/2001	6.35	73
8/16/2001	6.36	74
8/17/2001	6.48	82
8/18/2001	6.30	70
8/19/2001	6.29	68
8/20/2001	6.22	64
8/21/2001	6.17	60
8/22/2001	6.10	55
8/23/2001	6.04	50
8/24/2001	6.05	51
8/25/2001	6.14	57
8/26/2001	6.15	58
8/27/2001	6.13	57
8/28/2001	6.22	64
8/29/2001	6.14	57
8/30/2001	6.15	59
8/31/2001	6.09	54
9/1/2001	6.04	50
9/2/2001	5.98	47
9/3/2001	5.92	45
9/4/2001	5.88	43
9/5/2001	5.86	42
9/6/2001	5.87	42
9/7/2001	5.83	40
9/8/2001	5.82	40

1. Average daily water surface elevation is the daily average of water surface elevation data presented in Table D-4.3, Appendix D.

2. Average daily discharge is the daily average of discharge values presented in Table D-4.3, Appendix D.

### **Table D-4.3: Water Surface Elevation and Discharge on the Ublutuoch River at River Mile 13.7**

Notes:

1. Water surface elevations in bold represent measured values from either survey or staff gage readings. Values not bold represent corrected water surface elevations measured by the pressure transducer.
2. Discharge values in bold represent measured discharges. Discharge values not bold are calculated.
3. Date and time are Alaska Daylight Savings time.
4. The time corresponds to the start of a sampling interval.
5. Combined pressure is the sum of the water and atmospheric pressures.
6. Atmospheric pressure and combined pressure are in pounds per square inch (psia), rounded to the nearest 0.01 psi.
7. Water surface elevations are based on British Petroleum Mean Sea Level, rounded to the nearest 0.01 foot.
8. Instrument located on River Mile 13.7 on the Ublutuoch River (Figure 2).
9. It is assumed that changes in the instrument calibration constant occurred linearly over time. Corrections to the water depth and corresponding water surface elevation were calculated to account for these changes.
10. Missing data are either the result of routine instrument downloading and servicing, or environmental conditions which prevented the recorder from obtaining accurate data. Environmental conditions which caused data to be lost include physical changes in the instrument location due to scour or shifting, and/or partial blocking of the pressure sensor by debris or sediment.
11. For the period between 17 June at 15:30 and 28 June 2001 at 22:30, due to insufficient data, it is assumed that the calibration constant did not change during this period. However, based on data collected for other periods, this assumption is questionable and the water surface elevations presented for this period should be considered suspect.

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/8/2001	20:40	-	-	-	<b>17.72</b>	1901
6/9/2001	11:18	-	-	-	<b>17.94</b>	2057
<b>HWM</b>	-	-	-	-	<b>18.09</b>	2163
6/10/2001	16:14	-	-	-	<b>17.15</b>	1497
6/10/2001	18:00	-	-	-	<b>17.11</b>	1468
6/10/2001	18:25	-	-	-	<b>17.07</b>	<b>1439.9</b>
6/10/2001	19:20	-	-	-	<b>16.98</b>	1428
6/11/2001	17:01	-	-	-	<b>16.15</b>	1315
6/11/2001	18:30	14.36	14.60	0.55	<b>16.14</b>	1314
6/12/2001	11:30	14.37	15.53	-0.43	15.16	1181
6/12/2001	11:32	-	-	-	<b>15.16</b>	1181
6/12/2001	12:00	14.36	15.50	2.61	15.10	1173
6/12/2001	12:16	-	-	-	<b>15.10</b>	<b>1172.5</b>
6/12/2001	12:30	14.36	15.50	2.60	15.09	1172
6/12/2001	12:55	-	-	-	<b>15.04</b>	1168
6/12/2001	13:00	14.36	15.48	2.55	15.04	1167
6/12/2001	13:30	14.36	15.49	2.59	15.05	1169
6/12/2001	14:00	14.35	15.48	2.59	15.05	1168
6/12/2001	14:17	-	-	-	<b>14.99</b>	1163
6/12/2001	14:30	14.36	15.47	2.53	14.99	1163
6/12/2001	15:00	14.38	15.47	2.48	14.92	1156
6/12/2001	15:30	14.42	15.48	2.38	14.82	1147
6/12/2001	16:00	14.38	15.48	2.44	14.88	1153
6/12/2001	16:30	14.39	15.51	2.45	14.89	1154
6/12/2001	17:00	14.38	15.53	2.49	14.93	1157
6/12/2001	17:30	14.38	15.54	2.48	14.92	1157
6/12/2001	18:00	14.41	15.56	2.43	14.87	1152
6/12/2001	18:30	14.39	15.58	2.49	14.93	1157
6/12/2001	19:00	14.38	15.59	2.50	14.94	1158
6/12/2001	19:30	14.40	15.59	2.42	14.86	1151
6/12/2001	20:00	14.45	15.60	2.30	14.74	1140
6/12/2001	20:30	14.45	15.60	2.27	14.71	1137
6/12/2001	21:00	14.47	15.60	2.19	14.63	1130
6/12/2001	21:30	14.49	15.60	2.11	14.55	1123
6/12/2001	22:00	14.49	15.61	2.10	14.54	1122
6/12/2001	22:30	14.46	15.58	2.07	14.51	1120
6/12/2001	23:00	14.46	15.57	2.02	14.46	1115
6/12/2001	23:30	14.46	15.56	1.96	14.40	1110
6/13/2001	0:00	14.47	15.54	1.86	14.30	1100
6/13/2001	0:30	14.47	15.53	1.81	14.25	1095
6/13/2001	1:00	14.47	15.52	1.75	14.19	1091
6/13/2001	1:30	14.48	15.51	1.68	14.12	1083
6/13/2001	2:00	14.48	15.51	1.65	14.09	1081



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/13/2001	2:30	14.48	15.49	1.57	14.01	1074
6/13/2001	3:00	14.48	15.48	1.51	13.95	1069
6/13/2001	3:30	14.48	15.47	1.46	13.90	1064
6/13/2001	4:00	14.48	15.45	1.38	13.82	1057
6/13/2001	4:30	14.48	15.43	1.30	13.74	1049
6/13/2001	5:00	14.48	15.41	1.23	13.67	1042
6/13/2001	5:30	14.49	15.39	1.13	13.57	1033
6/13/2001	6:00	14.48	15.37	1.07	13.51	1028
6/13/2001	6:30	14.47	15.35	1.02	13.46	1023
6/13/2001	7:00	14.46	15.33	0.96	13.40	1018
6/13/2001	7:30	14.45	15.33	0.95	13.39	1018
6/13/2001	8:00	14.44	15.31	0.90	13.34	1013
6/13/2001	8:30	14.44	15.32	0.89	13.33	1012
6/13/2001	9:00	14.43	15.31	0.86	13.30	1009
6/13/2001	9:30	14.42	15.30	0.83	13.27	1006
6/13/2001	10:00	14.42	15.29	0.77	13.21	1001
6/13/2001	10:30	14.40	15.30	0.81	13.25	1005
6/13/2001	11:00	14.39	15.29	0.78	13.22	1002
6/13/2001	11:30	14.39	15.27	0.70	13.14	995
6/13/2001	12:00	14.39	15.28	0.69	13.13	994
6/13/2001	12:30	14.35	15.29	0.78	13.22	1001
6/13/2001	13:00	14.34	15.29	0.77	13.21	1001
6/13/2001	13:30	14.33	15.30	0.78	13.22	1002
6/13/2001	14:00	14.34	15.30	0.73	13.17	997
6/13/2001	14:30	14.33	15.30	0.72	13.16	996
6/13/2001	15:00	14.33	15.29	0.67	13.11	991
6/13/2001	15:30	14.33	15.27	0.59	13.03	984
6/13/2001	16:00	14.33	15.27	0.56	13.00	981
6/13/2001	16:30	14.33	15.27	0.53	12.97	979
6/13/2001	17:00	14.35	15.32	0.56	13.00	982
6/13/2001	17:30	14.34	15.36	0.65	13.09	990
6/13/2001	17:35	-	-	-	<b>13.09</b>	990
6/13/2001	17:45				<b>13.07</b>	<b>988.3</b>
6/13/2001	18:00	14.35	15.37	2.30	13.04	983
6/13/2001	18:30	14.35	15.36	2.22	12.96	971
6/13/2001	18:37	-	-	-	<b>12.96</b>	970
6/13/2001	19:00	14.37	15.35	2.21	12.85	952
6/13/2001	19:30	14.39	15.36	2.14	12.78	941
6/13/2001	20:00	14.42	15.43	2.18	12.82	948
6/13/2001	20:30	14.41	15.45	2.20	12.84	952
6/13/2001	21:00	14.45	15.47	2.11	12.75	937
6/13/2001	21:30	14.45	15.48	2.09	12.73	933
6/13/2001	22:00	14.47	15.46	1.95	12.59	910

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/13/2001	22:30	14.47	15.45	1.88	12.52	899
6/13/2001	23:00	14.48	15.45	1.81	12.45	888
6/13/2001	23:30	14.50	15.44	1.69	12.33	869
6/14/2001	0:00	14.50	15.43	1.62	12.26	857
6/14/2001	0:30	14.51	15.42	1.52	12.16	842
6/14/2001	1:00	14.52	15.42	1.45	12.09	831
6/14/2001	1:30	14.52	15.42	1.41	12.05	824
6/14/2001	2:00	14.54	15.42	1.31	11.95	809
6/14/2001	2:30	14.53	15.43	1.31	11.95	808
6/14/2001	3:00	14.54	15.45	1.29	11.93	804
6/14/2001	3:30	14.55	15.50	1.33	11.97	812
6/14/2001	4:00	14.55	15.50	1.28	11.92	804
6/14/2001	4:30	14.55	15.52	1.28	11.92	804
6/14/2001	5:00	14.55	15.53	1.26	11.90	800
6/14/2001	5:30	14.56	15.53	1.19	11.83	788
6/14/2001	6:00	14.56	15.56	1.21	11.85	792
6/14/2001	6:30	14.56	15.56	1.16	11.80	784
6/14/2001	7:00	14.56	15.56	1.12	11.76	777
6/14/2001	7:30	14.55	15.59	1.16	11.80	784
6/14/2001	8:00	14.56	15.63	1.18	11.82	787
6/14/2001	8:30	14.55	15.67	1.25	11.89	798
6/14/2001	9:00	14.55	15.71	1.29	11.93	805
6/14/2001	9:30	14.55	15.76	1.36	12.00	816
6/14/2001	10:00	14.55	15.77	1.34	11.98	812
6/14/2001	10:09	-	-	-	<b>11.98</b>	813
6/14/2001	10:30	14.55	15.77	2.80	11.97	812
6/14/2001	11:00	14.54	16.00	3.35	12.52	900
6/14/2001	11:30	14.54	15.80	2.89	12.06	826
6/14/2001	12:00	14.54	15.83	2.96	12.13	836
6/14/2001	12:30	14.55	15.90	3.09	12.26	858
6/14/2001	13:00	14.56	16.00	3.30	12.47	891
6/14/2001	13:30	14.55	16.10	3.55	12.72	931
6/14/2001	14:00	14.56	16.10	3.52	12.69	927
6/14/2001	14:30	14.57	16.15	3.61	12.78	942
6/14/2001	15:00	14.60	16.13	3.49	12.66	923
6/14/2001	15:30	14.61	16.16	3.54	12.71	930
6/14/2001	16:00	14.62	16.16	3.51	12.68	925
6/14/2001	16:30	14.65	16.15	3.42	12.59	910
6/14/2001	17:00	14.66	16.15	3.39	12.56	906
6/14/2001	17:30	14.67	16.13	3.32	12.49	895
6/14/2001	18:00	14.69	16.13	3.27	12.44	887
6/14/2001	18:30	14.69	16.15	3.31	12.48	894
6/14/2001	19:00	14.71	16.15	3.26	12.43	886

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/14/2001	19:30	14.72	16.17	3.28	12.45	889
6/14/2001	20:00	14.72	16.18	3.30	12.47	892
6/14/2001	20:30	14.72	16.20	3.35	12.52	899
6/14/2001	21:00	14.73	16.21	3.35	12.52	899
6/14/2001	21:30	14.74	16.18	3.25	12.42	884
6/14/2001	22:00	14.74	16.18	3.25	12.42	883
6/14/2001	22:30	14.74	16.19	3.27	12.44	886
6/14/2001	23:00	14.75	16.19	3.24	12.41	882
6/14/2001	23:30	14.76	16.19	3.22	12.39	878
6/15/2001	0:00	14.76	16.19	3.21	12.38	878
6/15/2001	0:30	14.77	16.21	3.23	12.40	881
6/15/2001	1:00	14.77	16.22	3.25	12.42	884
6/15/2001	1:30	14.79	16.21	3.18	12.35	873
6/15/2001	2:00	14.79	16.22	3.20	12.37	876
6/15/2001	2:30	14.80	16.21	3.15	12.32	868
6/15/2001	3:00	14.80	16.21	3.15	12.32	868
6/15/2001	3:30	14.80	16.21	3.15	12.32	867
6/15/2001	4:00	14.80	16.20	3.12	12.29	863
6/15/2001	4:30	14.80	16.18	3.07	12.24	855
6/15/2001	5:00	14.80	16.18	3.07	12.24	855
6/15/2001	5:30	14.80	16.19	3.09	12.26	858
6/15/2001	6:00	14.80	16.00	2.65	11.82	787
6/15/2001	6:30	14.79	15.79	2.19	11.36	713
6/15/2001	7:00	14.79	15.79	2.19	11.36	713
6/15/2001	7:30	14.79	15.78	2.16	11.33	708
6/15/2001	8:00	14.78	15.78	2.18	11.35	712
6/15/2001	8:30	14.77	15.77	2.18	11.35	711
6/15/2001	9:00	14.77	15.77	2.18	11.35	711
6/15/2001	9:30	14.76	15.76	2.17	11.34	710
6/15/2001	10:00	14.75	15.76	2.19	11.36	714
6/15/2001	10:30	14.74	15.77	2.24	11.41	721
6/15/2001	11:00	14.73	15.77	2.26	11.43	724
6/15/2001	11:30	14.72	15.77	2.28	11.45	727
6/15/2001	12:00	14.71	15.76	2.27	11.44	727
6/15/2001	12:30	14.69	15.75	2.29	11.46	730
6/15/2001	13:00	14.69	15.75	2.29	11.46	729
6/15/2001	13:30	14.69	15.77	2.34	11.51	736
6/15/2001	14:00	14.69	15.77	2.33	11.50	736
6/15/2001	14:30	14.67	15.77	2.38	11.55	743
6/15/2001	15:00	14.67	15.77	2.37	11.54	742
6/15/2001	15:30	14.66	15.76	2.37	11.54	742
6/15/2001	16:00	14.66	15.76	2.37	11.54	742
6/15/2001	16:30	14.67	15.75	2.32	11.49	734

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/15/2001	17:00	14.67	15.74	2.29	11.46	730
6/15/2001	17:30	14.68	15.75	2.29	11.46	729
6/15/2001	18:00	14.67	15.74	2.29	11.46	729
6/15/2001	18:30	14.68	15.75	2.28	11.45	728
6/15/2001	19:00	14.68	15.74	2.26	11.43	724
6/15/2001	19:30	14.69	15.74	2.23	11.40	720
6/15/2001	20:00	14.69	15.74	2.23	11.40	720
6/15/2001	20:30	14.71	15.63	1.93	11.10	671
6/15/2001	21:00	14.70	15.72	2.16	11.33	708
6/15/2001	21:30	14.71	15.71	2.11	11.28	700
6/15/2001	22:00	14.72	15.75	2.17	11.34	710
6/15/2001	22:30	14.72	15.76	2.19	11.36	714
6/15/2001	23:00	14.73	15.76	2.17	11.34	710
6/15/2001	23:30	14.73	15.74	2.12	11.29	702
6/16/2001	0:00	14.74	15.72	2.05	11.22	690
6/16/2001	0:30	14.74	15.74	2.09	11.26	697
6/16/2001	1:00	14.74	15.73	2.07	11.24	693
6/16/2001	1:30	14.74	15.71	2.02	11.19	685
6/16/2001	2:00	14.74	15.71	2.01	11.18	685
6/16/2001	2:30	14.74	15.70	1.99	11.16	681
6/16/2001	3:00	14.74	15.69	1.96	11.13	676
6/16/2001	3:30	14.74	15.68	1.94	11.11	672
6/16/2001	4:00	14.74	15.68	1.93	11.10	672
6/16/2001	4:30	14.75	15.67	1.89	11.06	664
6/16/2001	5:00	14.75	15.66	1.86	11.03	660
6/16/2001	5:30	14.74	15.65	1.86	11.03	659
6/16/2001	6:00	14.73	15.65	1.88	11.05	663
6/16/2001	6:30	14.73	15.64	1.85	11.02	659
6/16/2001	7:00	14.74	15.64	1.83	11.00	654
6/16/2001	7:30	14.73	15.63	1.82	10.99	654
6/16/2001	8:00	14.72	15.62	1.82	10.99	654
6/16/2001	8:30	14.71	15.62	1.84	11.01	657
6/16/2001	9:00	14.70	15.62	1.86	11.03	660
6/16/2001	9:30	14.69	15.61	1.86	11.03	660
6/16/2001	10:00	14.69	15.61	1.86	11.03	659
6/16/2001	10:30	14.67	15.60	1.88	11.05	662
6/16/2001	11:00	14.67	15.59	1.85	11.02	658
6/16/2001	11:30	14.65	15.59	1.89	11.06	665
6/16/2001	12:00	14.64	15.58	1.89	11.06	665
6/16/2001	12:30	14.62	15.57	1.91	11.08	668
6/16/2001	13:00	14.62	15.56	1.88	11.05	664
6/16/2001	13:30	14.61	15.56	1.91	11.08	667
6/16/2001	14:00	14.61	15.55	1.88	11.05	663

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/16/2001	14:30	14.61	15.55	1.88	11.05	663
6/16/2001	15:00	14.61	15.54	1.85	11.02	659
6/16/2001	15:30	14.60	15.54	1.87	11.04	662
6/16/2001	16:00	14.60	15.53	1.85	11.02	658
6/16/2001	16:30	14.60	15.52	1.82	10.99	654
6/16/2001	17:00	14.60	15.51	1.79	10.96	649
6/16/2001	17:30	14.62	15.44	1.58	10.75	616
6/16/2001	18:00	14.65	15.51	1.67	10.84	630
6/16/2001	18:30	14.66	15.54	1.72	10.89	637
6/16/2001	19:00	14.66	15.52	1.67	10.84	629
6/16/2001	19:30	14.67	15.50	1.60	10.77	618
6/16/2001	20:00	14.69	15.49	1.52	10.69	606
6/16/2001	20:30	14.69	15.48	1.50	10.67	602
6/16/2001	21:00	14.70	15.48	1.47	10.64	598
6/16/2001	21:30	14.71	15.48	1.45	10.62	594
6/16/2001	22:00	14.72	15.48	1.42	10.59	590
6/16/2001	22:30	14.72	15.47	1.40	10.57	585
6/16/2001	23:00	14.72	15.46	1.37	10.54	581
6/16/2001	23:30	14.72	15.45	1.34	10.51	577
6/17/2001	0:00	14.72	15.44	1.32	10.49	573
6/17/2001	0:30	14.73	15.43	1.27	10.44	565
6/17/2001	1:00	14.73	15.42	1.24	10.41	561
6/17/2001	1:30	14.73	15.41	1.22	10.39	557
6/17/2001	2:00	14.73	15.41	1.22	10.39	556
6/17/2001	2:30	14.73	15.40	1.19	10.36	552
6/17/2001	3:00	14.73	15.39	1.16	10.33	548
6/17/2001	3:30	14.72	15.39	1.18	10.35	551
6/17/2001	4:00	14.72	15.37	1.14	10.31	544
6/17/2001	4:30	14.72	15.36	1.11	10.28	539
6/17/2001	5:00	14.72	15.35	1.08	10.25	535
6/17/2001	5:30	14.72	15.34	1.06	10.23	531
6/17/2001	6:00	14.71	15.33	1.06	10.23	531
6/17/2001	6:30	14.70	15.32	1.05	10.22	530
6/17/2001	7:00	14.69	15.31	1.05	10.22	530
6/17/2001	7:30	14.68	15.30	1.05	10.22	529
6/17/2001	8:00	14.67	15.29	1.04	10.21	529
6/17/2001	8:30	14.67	15.28	1.02	10.19	525
6/17/2001	9:00	14.66	15.27	1.02	10.19	524
6/17/2001	9:30	14.65	15.27	1.04	10.21	528
6/17/2001	10:00	14.65	15.26	1.01	10.18	523
6/17/2001	10:30	14.65	15.25	0.99	10.16	519
6/17/2001	11:00	14.65	15.25	0.98	10.15	519
6/17/2001	11:30	14.65	15.25	0.98	10.15	518

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/17/2001	12:00	14.65	15.25	0.98	10.15	518
6/17/2001	12:30	14.65	15.25	0.97	10.14	518
6/17/2001	13:00	14.67	15.24	0.90	10.07	506
6/17/2001	13:30	14.66	15.24	0.92	10.09	509
6/17/2001	14:00	14.67	15.24	0.90	10.07	505
6/17/2001	14:30	14.66	15.24	0.92	10.09	508
6/17/2001	15:00	14.65	15.23	0.91	10.08	508
6/17/2001	15:05	-	-	-	<b>10.08</b>	507
6/17/2001	15:30	14.63	16.13	3.45	10.11	512
6/17/2001	15:48	-	-	-	<b>10.11</b>	512
6/17/2001	16:00	14.61	16.13	3.50	10.16	520
6/17/2001	16:30	14.61	16.12	3.47	10.13	516
6/17/2001	17:00	14.61	16.12	3.47	10.13	516
6/17/2001	17:30	14.62	16.12	3.44	10.11	512
6/17/2001	18:00	14.61	16.11	3.44	10.11	512
6/17/2001	18:30	14.61	16.10	3.42	10.09	509
6/17/2001	19:00	14.62	16.09	3.37	10.04	501
6/17/2001	19:30	14.63	16.09	3.35	10.02	498
6/17/2001	20:00	14.63	16.08	3.32	10.00	494
6/17/2001	20:30	14.64	16.07	3.27	9.95	486
6/17/2001	21:00	14.63	16.06	3.27	9.95	486
6/17/2001	21:30	14.64	16.06	3.25	9.93	483
6/17/2001	22:00	14.64	16.04	3.20	9.88	475
6/17/2001	22:30	14.63	16.03	3.20	9.88	475
6/17/2001	23:00	14.63	16.03	3.20	9.88	475
6/17/2001	23:30	14.63	16.02	3.17	9.86	472
6/18/2001	0:00	14.62	16.00	3.15	9.84	468
6/18/2001	0:30	14.62	16.00	3.14	9.84	468
6/18/2001	1:00	14.61	15.99	3.14	9.84	468
6/18/2001	1:30	14.61	15.97	3.09	9.79	461
6/18/2001	2:00	14.61	15.97	3.09	9.79	461
6/18/2001	2:30	14.60	15.96	3.09	9.79	461
6/18/2001	3:00	14.60	15.95	3.07	9.77	457
6/18/2001	3:30	14.60	15.94	3.04	9.74	453
6/18/2001	4:00	14.59	15.94	3.06	9.77	457
6/18/2001	4:30	14.58	15.93	3.06	9.77	457
6/18/2001	5:00	14.58	15.91	3.01	9.72	449
6/18/2001	5:30	14.58	15.91	3.01	9.72	449
6/18/2001	6:00	14.58	15.91	3.01	9.72	449
6/18/2001	6:30	14.59	15.91	2.99	9.70	446
6/18/2001	7:00	14.60	15.90	2.94	9.65	438
6/18/2001	7:30	14.61	15.90	2.91	9.63	435
6/18/2001	8:00	14.61	15.90	2.91	9.63	435

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/18/2001	8:30	14.62	15.90	2.89	9.61	431
6/18/2001	9:00	14.62	15.90	2.88	9.61	431
6/18/2001	9:30	14.63	15.90	2.86	9.58	427
6/18/2001	10:00	14.70	15.91	2.72	9.44	405
6/18/2001	10:30	14.61	15.91	2.93	9.65	438
6/18/2001	11:00	14.57	15.90	2.99	9.72	449
6/18/2001	11:30	14.14	15.91	4.00	10.73	612
6/18/2001	12:00	14.13	15.91	4.02	10.76	616
6/18/2001	12:30	14.24	15.91	3.77	10.50	575
6/18/2001	13:00	14.20	15.91	3.86	10.59	590
6/18/2001	13:30	14.15	15.91	3.97	10.71	609
6/18/2001	14:00	14.12	15.91	4.04	10.78	620
6/18/2001	14:30	14.10	15.90	4.06	10.80	623
6/18/2001	15:00	14.11	15.90	4.04	10.78	620
6/18/2001	15:30	14.11	15.90	4.04	10.78	620
6/18/2001	16:00	14.13	15.90	3.99	10.73	612
6/18/2001	16:30	14.12	15.90	4.01	10.76	616
6/18/2001	17:00	14.12	15.90	4.01	10.76	616
6/18/2001	17:30	14.14	15.89	3.94	10.69	605
6/18/2001	18:00	14.13	15.89	3.96	10.71	609
6/18/2001	18:30	14.16	15.89	3.89	10.64	597
6/18/2001	19:00	14.20	15.90	3.82	10.57	586
6/18/2001	19:30	14.26	15.89	3.65	10.41	560
6/18/2001	20:00	14.27	15.89	3.63	10.39	557
6/18/2001	20:30	14.28	15.89	3.60	10.36	553
6/18/2001	21:00	14.29	15.89	3.58	10.34	549
6/18/2001	21:30	14.27	15.88	3.60	10.36	553
6/18/2001	22:00	14.28	15.87	3.55	10.32	546
6/18/2001	22:30	14.35	15.86	3.37	10.13	516
6/18/2001	23:00	14.35	15.86	3.37	10.13	516
6/18/2001	23:30	14.38	15.86	3.29	10.07	505
6/19/2001	0:00	14.38	15.86	3.29	10.07	505
6/19/2001	0:30	14.35	15.86	3.36	10.13	516
6/19/2001	1:00	14.37	15.85	3.29	10.07	505
6/19/2001	1:30	14.39	15.85	3.24	10.02	498
6/19/2001	2:00	14.38	15.84	3.24	10.02	498
6/19/2001	2:30	14.34	15.83	3.31	10.09	509
6/19/2001	3:00	14.34	15.83	3.31	10.09	509
6/19/2001	3:30	14.34	15.83	3.30	10.09	509
6/19/2001	4:00	14.35	15.82	3.26	10.04	501
6/19/2001	4:30	14.35	15.81	3.23	10.02	498
6/19/2001	5:00	14.35	15.80	3.21	10.00	494
6/19/2001	5:30	14.39	15.80	3.11	9.90	479

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/19/2001	6:00	14.38	15.79	3.11	9.90	479
6/19/2001	6:30	14.35	15.78	3.15	9.95	486
6/19/2001	7:00	14.35	15.77	3.13	9.93	483
6/19/2001	7:30	14.37	15.77	3.08	9.88	475
6/19/2001	8:00	14.35	15.76	3.10	9.90	479
6/19/2001	8:30	14.35	15.76	3.10	9.90	479
6/19/2001	9:00	14.34	15.75	3.10	9.90	479
6/19/2001	9:30	14.33	15.74	3.10	9.90	479
6/19/2001	10:00	14.30	15.74	3.17	9.97	490
6/19/2001	10:30	14.25	15.73	3.26	10.07	505
6/19/2001	11:00	14.25	15.72	3.23	10.04	501
6/19/2001	11:30	14.19	15.72	3.37	10.18	523
6/19/2001	12:00	14.20	15.71	3.32	10.13	516
6/19/2001	12:30	14.19	15.70	3.32	10.13	516
6/19/2001	13:00	14.16	15.69	3.36	10.18	523
6/19/2001	13:30	14.17	15.68	3.31	10.13	516
6/19/2001	14:00	14.18	15.68	3.29	10.11	512
6/19/2001	14:30	14.17	15.67	3.29	10.11	512
6/19/2001	15:00	14.17	15.66	3.26	10.09	509
6/19/2001	15:30	14.19	15.65	3.19	10.02	498
6/19/2001	16:00	14.18	15.65	3.21	10.04	501
6/19/2001	16:30	14.13	15.64	3.30	10.13	516
6/19/2001	17:00	14.20	15.63	3.12	9.95	486
6/19/2001	17:30	14.20	15.62	3.09	9.93	483
6/19/2001	18:00	14.23	15.62	3.02	9.86	472
6/19/2001	18:30	14.21	15.62	3.07	9.90	479
6/19/2001	19:00	14.24	15.61	2.97	9.81	464
6/19/2001	19:30	14.24	15.60	2.95	9.79	461
6/19/2001	20:00	14.26	15.59	2.88	9.72	449
6/19/2001	20:30	14.24	15.59	2.92	9.77	457
6/19/2001	21:00	14.25	15.58	2.87	9.72	449
6/19/2001	21:30	14.26	15.59	2.87	9.72	449
6/19/2001	22:00	14.23	15.58	2.92	9.77	457
6/19/2001	22:30	14.24	15.57	2.87	9.72	449
6/19/2001	23:00	14.25	15.56	2.82	9.67	442
6/19/2001	23:30	14.23	15.56	2.87	9.72	449
6/20/2001	0:00	14.27	15.56	2.77	9.63	435
6/20/2001	0:30	14.32	15.56	2.66	9.51	416
6/20/2001	1:00	14.30	15.55	2.68	9.54	420
6/20/2001	1:30	14.30	15.55	2.67	9.54	420
6/20/2001	2:00	14.30	15.54	2.65	9.51	416
6/20/2001	2:30	14.30	15.54	2.65	9.51	416
6/20/2001	3:00	14.29	15.54	2.67	9.54	420



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/20/2001	3:30	14.28	15.53	2.67	9.54	420
6/20/2001	4:00	14.29	15.52	2.62	9.49	412
6/20/2001	4:30	14.33	15.52	2.53	9.40	398
6/20/2001	5:00	14.33	15.51	2.50	9.38	394
6/20/2001	5:30	14.22	15.51	2.75	9.63	435
6/20/2001	6:00	14.21	15.51	2.77	9.65	438
6/20/2001	6:30	14.21	15.51	2.77	9.65	438
6/20/2001	7:00	14.22	15.50	2.72	9.61	431
6/20/2001	7:30	14.21	15.50	2.75	9.63	435
6/20/2001	8:00	14.20	15.49	2.74	9.63	435
6/20/2001	8:30	14.20	15.49	2.74	9.63	435
6/20/2001	9:00	14.20	15.48	2.72	9.61	431
6/20/2001	9:30	14.22	15.48	2.67	9.56	424
6/20/2001	10:00	14.23	15.48	2.65	9.54	420
6/20/2001	10:30	14.23	15.48	2.64	9.54	420
6/20/2001	11:00	14.23	15.48	2.64	9.54	420
6/20/2001	11:30	14.23	15.48	2.64	9.54	420
6/20/2001	12:00	14.23	15.47	2.62	9.51	416
6/20/2001	12:30	14.24	15.47	2.59	9.49	412
6/20/2001	13:00	14.24	15.47	2.59	9.49	412
6/20/2001	13:30	14.23	15.47	2.61	9.51	416
6/20/2001	14:00	14.23	15.47	2.61	9.51	416
6/20/2001	14:30	14.24	15.47	2.58	9.49	412
6/20/2001	15:00	14.25	15.47	2.56	9.47	409
6/20/2001	15:30	14.25	15.47	2.56	9.47	409
6/20/2001	16:00	14.25	15.47	2.56	9.47	409
6/20/2001	16:30	14.27	15.47	2.51	9.42	401
6/20/2001	17:00	14.28	15.47	2.48	9.40	398
6/20/2001	17:30	14.28	15.47	2.48	9.40	398
6/20/2001	18:00	14.30	15.47	2.43	9.35	390
6/20/2001	18:30	14.29	15.46	2.43	9.35	390
6/20/2001	19:00	14.29	15.46	2.43	9.35	390
6/20/2001	19:30	14.29	15.45	2.41	9.33	387
6/20/2001	20:00	14.30	15.45	2.38	9.31	383
6/20/2001	20:30	14.30	15.45	2.38	9.31	383
6/20/2001	21:00	14.30	15.45	2.38	9.31	383
6/20/2001	21:30	14.30	15.45	2.38	9.31	383
6/20/2001	22:00	14.31	15.45	2.35	9.28	379
6/20/2001	22:30	14.31	15.45	2.35	9.28	379
6/20/2001	23:00	14.31	15.45	2.35	9.28	379
6/20/2001	23:30	14.32	15.44	2.30	9.24	372
6/21/2001	0:00	14.33	15.44	2.27	9.21	368
6/21/2001	0:30	14.33	15.44	2.27	9.21	368

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/21/2001	1:00	14.33	15.44	2.27	9.21	368
6/21/2001	1:30	14.35	15.45	2.25	9.19	365
6/21/2001	2:00	14.34	15.45	2.27	9.21	368
6/21/2001	2:30	14.35	15.45	2.24	9.19	365
6/21/2001	3:00	14.35	15.45	2.24	9.19	365
6/21/2001	3:30	14.35	15.45	2.24	9.19	365
6/21/2001	4:00	14.36	15.45	2.21	9.17	362
6/21/2001	4:30	14.36	15.45	2.21	9.17	362
6/21/2001	5:00	14.36	15.45	2.21	9.17	362
6/21/2001	5:30	14.37	15.45	2.19	9.15	358
6/21/2001	6:00	14.37	15.45	2.18	9.15	358
6/21/2001	6:30	14.37	15.45	2.18	9.15	358
6/21/2001	7:00	14.37	15.45	2.18	9.15	358
6/21/2001	7:30	14.38	15.45	2.16	9.12	355
6/21/2001	8:00	14.38	15.45	2.15	9.12	355
6/21/2001	8:30	14.37	15.45	2.18	9.15	358
6/21/2001	9:00	14.36	15.45	2.20	9.17	362
6/21/2001	9:30	14.36	15.45	2.20	9.17	362
6/21/2001	10:00	14.35	15.45	2.22	9.19	365
6/21/2001	10:30	14.35	15.45	2.22	9.19	365
6/21/2001	11:00	14.36	15.45	2.19	9.17	362
6/21/2001	11:30	14.37	15.45	2.17	9.15	358
6/21/2001	12:00	14.35	15.45	2.21	9.19	365
6/21/2001	12:30	14.35	15.46	2.23	9.21	368
6/21/2001	13:00	14.35	15.45	2.21	9.19	365
6/21/2001	13:30	14.35	15.46	2.23	9.21	368
6/21/2001	14:00	14.36	15.46	2.20	9.19	365
6/21/2001	14:30	14.36	15.46	2.20	9.19	365
6/21/2001	15:00	14.39	15.46	2.13	9.12	355
6/21/2001	15:30	14.40	15.45	2.08	9.08	349
6/21/2001	16:00	14.43	15.45	2.01	9.01	339
6/21/2001	16:30	14.43	15.45	2.01	9.01	339
6/21/2001	17:00	14.45	15.45	1.96	8.96	333
6/21/2001	17:30	14.45	15.45	1.96	8.96	333
6/21/2001	18:00	14.45	15.45	1.96	8.96	333
6/21/2001	18:30	14.43	15.45	2.00	9.01	339
6/21/2001	19:00	14.45	15.45	1.96	8.96	333
6/21/2001	19:30	14.44	15.44	1.95	8.96	333
6/21/2001	20:00	14.45	15.44	1.93	8.94	330
6/21/2001	20:30	14.46	15.44	1.90	8.91	327
6/21/2001	21:00	14.47	15.44	1.88	8.89	324
6/21/2001	21:30	14.46	15.43	1.88	8.89	324
6/21/2001	22:00	14.46	15.43	1.88	8.89	324

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/21/2001	22:30	14.47	15.43	1.85	8.87	320
6/21/2001	23:00	14.50	15.43	1.78	8.80	311
6/21/2001	23:30	14.50	15.43	1.78	8.80	311
6/22/2001	0:00	14.52	15.42	1.71	8.73	301
6/22/2001	0:30	14.52	15.42	1.71	8.73	301
6/22/2001	1:00	14.54	15.42	1.66	8.68	295
6/22/2001	1:30	14.55	15.42	1.63	8.66	292
6/22/2001	2:00	14.53	15.42	1.68	8.71	298
6/22/2001	2:30	14.57	15.42	1.58	8.62	285
6/22/2001	3:00	14.62	15.42	1.47	8.50	270
6/22/2001	3:30	14.59	15.42	1.53	8.57	279
6/22/2001	4:00	14.64	15.42	1.42	8.45	263
6/22/2001	4:30	14.57	15.42	1.58	8.62	285
6/22/2001	5:00	14.60	15.42	1.51	8.55	276
6/22/2001	5:30	14.69	15.42	1.30	8.34	247
6/22/2001	6:00	14.69	15.41	1.27	8.32	244
6/22/2001	6:30	14.69	15.41	1.27	8.32	244
6/22/2001	7:00	14.69	15.41	1.27	8.32	244
6/22/2001	7:30	14.67	15.41	1.31	8.36	250
6/22/2001	8:00	14.67	15.41	1.31	8.36	250
6/22/2001	8:30	14.66	15.40	1.31	8.36	250
6/22/2001	9:00	14.65	15.40	1.33	8.39	254
6/22/2001	9:30	14.65	15.40	1.33	8.39	254
6/22/2001	10:00	14.63	15.41	1.40	8.45	263
6/22/2001	10:30	14.63	15.41	1.40	8.45	263
6/22/2001	11:00	14.62	15.41	1.42	8.48	266
6/22/2001	11:30	14.62	15.41	1.41	8.48	266
6/22/2001	12:00	14.61	15.40	1.41	8.48	266
6/22/2001	12:30	14.60	15.40	1.43	8.50	270
6/22/2001	13:00	14.61	15.40	1.41	8.48	266
6/22/2001	13:30	14.60	15.40	1.43	8.50	270
6/22/2001	14:00	14.60	15.39	1.41	8.48	266
6/22/2001	14:30	14.59	15.39	1.43	8.50	270
6/22/2001	15:00	14.59	15.39	1.43	8.50	270
6/22/2001	15:30	14.59	15.39	1.42	8.50	270
6/22/2001	16:00	14.59	15.39	1.42	8.50	270
6/22/2001	16:30	14.59	15.39	1.42	8.50	270
6/22/2001	17:00	14.60	15.39	1.40	8.48	266
6/22/2001	17:30	14.61	15.39	1.37	8.45	263
6/22/2001	18:00	14.61	15.39	1.37	8.45	263
6/22/2001	18:30	14.62	15.39	1.34	8.43	260
6/22/2001	19:00	14.61	15.38	1.34	8.43	260
6/22/2001	19:30	14.62	15.38	1.32	8.41	257

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/22/2001	20:00	14.62	15.38	1.32	8.41	257
6/22/2001	20:30	14.62	15.38	1.31	8.41	257
6/22/2001	21:00	14.62	15.37	1.29	8.39	254
6/22/2001	21:30	14.63	15.37	1.27	8.36	250
6/22/2001	22:00	14.64	15.36	1.22	8.32	244
6/22/2001	22:30	14.64	15.36	1.22	8.32	244
6/22/2001	23:00	14.65	15.36	1.19	8.29	241
6/22/2001	23:30	14.65	15.36	1.19	8.29	241
6/23/2001	0:00	14.66	15.36	1.16	8.27	238
6/23/2001	0:30	14.67	15.36	1.14	8.25	235
6/23/2001	1:00	14.67	15.35	1.11	8.22	231
6/23/2001	1:30	14.67	15.35	1.11	8.22	231
6/23/2001	2:00	14.67	15.35	1.11	8.22	231
6/23/2001	2:30	14.67	15.34	1.09	8.20	228
6/23/2001	3:00	14.67	15.33	1.06	8.18	225
6/23/2001	3:30	14.68	15.33	1.04	8.16	222
6/23/2001	4:00	14.68	15.33	1.04	8.16	222
6/23/2001	4:30	14.68	15.32	1.01	8.13	219
6/23/2001	5:00	14.67	15.32	1.03	8.16	222
6/23/2001	5:30	14.66	15.31	1.03	8.16	222
6/23/2001	6:00	14.66	15.30	1.01	8.13	219
6/23/2001	6:30	14.65	15.30	1.03	8.16	222
6/23/2001	7:00	14.64	15.30	1.05	8.18	225
6/23/2001	7:30	14.63	15.30	1.07	8.20	228
6/23/2001	8:00	14.62	15.30	1.09	8.22	231
6/23/2001	8:30	14.61	15.29	1.09	8.22	231
6/23/2001	9:00	14.60	15.29	1.11	8.25	235
6/23/2001	9:30	14.59	15.28	1.11	8.25	235
6/23/2001	10:00	14.58	15.28	1.13	8.27	238
6/23/2001	10:30	14.57	15.28	1.15	8.29	241
6/23/2001	11:00	14.56	15.28	1.17	8.32	244
6/23/2001	11:30	14.56	15.27	1.15	8.29	241
6/23/2001	12:00	14.55	15.27	1.17	8.32	244
6/23/2001	12:30	14.55	15.27	1.17	8.32	244
6/23/2001	13:00	14.54	15.27	1.19	8.34	247
6/23/2001	13:30	14.53	15.27	1.21	8.36	250
6/23/2001	14:00	14.53	15.27	1.21	8.36	250
6/23/2001	14:30	14.52	15.26	1.21	8.36	250
6/23/2001	15:00	14.52	15.26	1.20	8.36	250
6/23/2001	15:30	14.52	15.25	1.18	8.34	247
6/23/2001	16:00	14.52	15.25	1.18	8.34	247
6/23/2001	16:30	14.52	15.24	1.15	8.32	244
6/23/2001	17:00	14.52	15.24	1.15	8.32	244

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/23/2001	17:30	14.52	15.24	1.15	8.32	244
6/23/2001	18:00	14.52	15.23	1.12	8.29	241
6/23/2001	18:30	14.52	15.23	1.12	8.29	241
6/23/2001	19:00	14.53	15.23	1.10	8.27	238
6/23/2001	19:30	14.54	15.23	1.07	8.25	235
6/23/2001	20:00	14.54	15.22	1.05	8.22	231
6/23/2001	20:30	14.54	15.21	1.02	8.20	228
6/23/2001	21:00	14.54	15.21	1.02	8.20	228
6/23/2001	21:30	14.55	15.21	1.00	8.18	225
6/23/2001	22:00	14.55	15.21	1.00	8.18	225
6/23/2001	22:30	14.56	15.21	0.97	8.16	222
6/23/2001	23:00	14.56	15.21	0.97	8.16	222
6/23/2001	23:30	14.56	15.20	0.94	8.13	219
6/24/2001	0:00	14.57	15.20	0.92	8.11	216
6/24/2001	0:30	14.57	15.19	0.90	8.09	212
6/24/2001	1:00	14.57	15.19	0.89	8.09	212
6/24/2001	1:30	14.57	15.18	0.87	8.06	209
6/24/2001	2:00	14.58	15.18	0.84	8.04	206
6/24/2001	2:30	14.59	15.17	0.80	7.99	200
6/24/2001	3:00	14.59	15.17	0.79	7.99	200
6/24/2001	3:30	14.59	15.16	0.77	7.97	198
6/24/2001	4:00	14.58	15.16	0.79	7.99	200
6/24/2001	4:30	14.58	15.16	0.79	7.99	200
6/24/2001	5:00	14.57	15.15	0.79	7.99	200
6/24/2001	5:30	14.57	15.15	0.79	7.99	200
6/24/2001	6:00	14.57	15.14	0.76	7.97	198
6/24/2001	6:30	14.56	15.13	0.76	7.97	198
6/24/2001	7:00	14.55	15.13	0.78	7.99	200
6/24/2001	7:30	14.55	15.13	0.78	7.99	200
6/24/2001	8:00	14.53	15.13	0.82	8.04	206
6/24/2001	8:30	14.52	15.12	0.82	8.04	206
6/24/2001	9:00	14.52	15.12	0.82	8.04	206
6/24/2001	9:30	14.51	15.11	0.82	8.04	206
6/24/2001	10:00	14.50	15.11	0.84	8.06	209
6/24/2001	10:30	14.50	15.11	0.84	8.06	209
6/24/2001	11:00	14.49	15.11	0.86	8.09	212
6/24/2001	11:30	14.48	15.10	0.86	8.09	212
6/24/2001	12:00	14.47	15.10	0.88	8.11	216
6/24/2001	12:30	14.47	15.11	0.90	8.13	219
6/24/2001	13:00	14.47	15.10	0.87	8.11	216
6/24/2001	13:30	14.46	15.10	0.90	8.13	219
6/24/2001	14:00	14.46	15.10	0.89	8.13	219
6/24/2001	14:30	14.46	15.10	0.89	8.13	219

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/24/2001	15:00	14.46	15.09	0.87	8.11	216
6/24/2001	15:30	14.46	15.09	0.87	8.11	216
6/24/2001	16:00	14.45	15.08	0.86	8.11	216
6/24/2001	16:30	14.45	15.08	0.86	8.11	216
6/24/2001	17:00	14.45	15.07	0.84	8.09	212
6/24/2001	17:30	14.45	15.07	0.84	8.09	212
6/24/2001	18:00	14.46	15.07	0.81	8.06	209
6/24/2001	18:30	14.47	15.07	0.79	8.04	206
6/24/2001	19:00	14.47	15.06	0.76	8.02	203
6/24/2001	19:30	14.47	15.06	0.76	8.02	203
6/24/2001	20:00	14.47	15.06	0.76	8.02	203
6/24/2001	20:30	14.48	15.06	0.73	7.99	200
6/24/2001	21:00	14.48	15.06	0.73	7.99	200
6/24/2001	21:30	14.48	15.05	0.71	7.97	198
6/24/2001	22:00	14.50	15.05	0.66	7.93	194
6/24/2001	22:30	14.50	15.05	0.66	7.93	194
6/24/2001	23:00	14.50	15.05	0.66	7.93	194
6/24/2001	23:30	14.51	15.04	0.61	7.88	191
6/25/2001	0:00	14.51	15.04	0.61	7.88	191
6/25/2001	0:30	14.52	15.04	0.58	7.86	189
6/25/2001	1:00	14.52	15.04	0.58	7.86	189
6/25/2001	1:30	14.53	15.04	0.56	7.83	187
6/25/2001	2:00	14.54	15.03	0.51	7.79	183
6/25/2001	2:30	14.56	15.04	0.48	7.76	182
6/25/2001	3:00	14.57	15.05	0.48	7.76	182
6/25/2001	3:30	14.56	15.05	0.50	7.79	183
6/25/2001	4:00	14.56	15.04	0.48	7.76	182
6/25/2001	4:30	14.55	15.04	0.50	7.79	183
6/25/2001	5:00	14.56	15.04	0.47	7.76	182
6/25/2001	5:30	14.56	15.04	0.47	7.76	182
6/25/2001	6:00	14.55	15.04	0.49	7.79	183
6/25/2001	6:30	14.55	15.05	0.51	7.81	185
6/25/2001	7:00	14.54	15.05	0.54	7.83	187
6/25/2001	7:30	14.54	15.05	0.53	7.83	187
6/25/2001	8:00	14.53	15.06	0.58	7.88	191
6/25/2001	8:30	14.52	15.06	0.60	7.90	193
6/25/2001	9:00	14.54	15.07	0.58	7.88	191
6/25/2001	9:30	14.57	15.07	0.50	7.81	185
6/25/2001	10:00	14.55	15.07	0.55	7.86	189
6/25/2001	10:30	14.55	15.07	0.55	7.86	189
6/25/2001	11:00	14.57	15.07	0.50	7.81	185
6/25/2001	11:30	14.58	15.08	0.50	7.81	185
6/25/2001	12:00	14.60	15.09	0.47	7.79	183

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/25/2001	12:30	14.60	15.09	0.47	7.79	183
6/25/2001	13:00	14.60	15.10	0.49	7.81	185
6/25/2001	13:30	14.60	15.10	0.49	7.81	185
6/25/2001	14:00	14.60	15.10	0.49	7.81	185
6/25/2001	14:30	14.61	15.11	0.49	7.81	185
6/25/2001	15:00	14.62	15.11	0.46	7.79	183
6/25/2001	15:30	14.60	15.11	0.51	7.83	187
6/25/2001	16:00	14.61	15.11	0.48	7.81	185
6/25/2001	16:30	14.62	15.12	0.48	7.81	185
6/25/2001	17:00	14.61	15.12	0.50	7.83	187
6/25/2001	17:30	14.62	15.13	0.50	7.83	187
6/25/2001	18:00	14.64	15.13	0.45	7.79	183
6/25/2001	18:30	14.65	15.13	0.43	7.76	182
6/25/2001	19:00	14.65	15.13	0.43	7.76	182
6/25/2001	19:30	14.66	15.13	0.40	7.74	180
6/25/2001	20:00	14.68	15.13	0.35	7.70	176
6/25/2001	20:30	14.69	15.13	0.33	7.67	174
6/25/2001	21:00	14.69	15.13	0.33	7.67	174
6/25/2001	21:30	14.69	15.13	0.32	7.67	174
6/25/2001	22:00	14.70	15.12	0.28	7.63	170
6/25/2001	22:30	14.71	15.12	0.25	7.60	169
6/25/2001	23:00	14.71	15.12	0.25	7.60	169
6/25/2001	23:30	14.71	15.11	0.23	7.58	167
6/26/2001	0:00	14.71	15.11	0.22	7.58	167
6/26/2001	0:30	14.70	15.10	0.22	7.58	167
6/26/2001	1:00	14.70	15.10	0.22	7.58	167
6/26/2001	1:30	14.71	15.10	0.20	7.56	165
6/26/2001	2:00	14.72	15.10	0.17	7.53	163
6/26/2001	2:30	14.71	15.10	0.19	7.56	165
6/26/2001	3:00	14.72	15.10	0.17	7.53	163
6/26/2001	3:30	14.72	15.10	0.17	7.53	163
6/26/2001	4:00	14.72	15.10	0.16	7.53	163
6/26/2001	4:30	14.72	15.10	0.16	7.53	163
6/26/2001	5:00	14.72	15.09	0.14	7.51	161
6/26/2001	5:30	14.72	15.09	0.14	7.51	161
6/26/2001	6:00	14.72	15.08	0.11	7.49	159
6/26/2001	6:30	14.72	15.07	0.09	7.47	158
6/26/2001	7:00	14.72	15.07	0.08	7.47	158
6/26/2001	7:30	14.71	15.07	0.11	7.49	159
6/26/2001	8:00	14.70	15.06	0.10	7.49	159
6/26/2001	8:30	14.70	15.06	0.10	7.49	159
6/26/2001	9:00	14.69	15.06	0.12	7.51	161
6/26/2001	9:30	14.67	15.05	0.15	7.53	163

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/26/2001	10:00	14.67	15.05	0.14	7.53	163
6/26/2001	10:30	14.67	15.05	0.14	7.53	163
6/26/2001	11:00	14.66	15.05	0.16	7.56	165
6/26/2001	11:30	14.67	15.04	0.12	7.51	161
6/26/2001	12:00	14.69	15.04	0.07	7.47	158
6/26/2001	12:30	14.69	15.04	0.07	7.47	158
6/26/2001	13:00	14.69	15.04	0.06	7.47	158
6/26/2001	13:30	14.68	15.04	0.09	7.49	159
6/26/2001	14:00	14.68	15.04	0.08	7.49	159
6/26/2001	14:30	14.67	15.04	0.10	7.51	161
6/26/2001	15:00	14.67	15.04	0.10	7.51	161
6/26/2001	15:30	14.66	15.04	0.12	7.53	163
6/26/2001	16:00	14.66	15.04	0.12	7.53	163
6/26/2001	16:30	14.66	15.04	0.12	7.53	163
6/26/2001	17:00	14.67	15.04	0.10	7.51	161
6/26/2001	17:30	14.67	15.04	0.09	7.51	161
6/26/2001	18:00	14.67	15.04	0.09	7.51	161
6/26/2001	18:30	14.67	15.04	0.09	7.51	161
6/26/2001	19:00	14.67	15.03	0.07	7.49	159
6/26/2001	19:30	14.67	15.03	0.06	7.49	159
6/26/2001	20:00	14.67	15.03	0.06	7.49	159
6/26/2001	20:30	14.67	15.03	0.06	7.49	159
6/26/2001	21:00	14.67	15.03	0.06	7.49	159
6/26/2001	21:30	14.67	15.03	0.06	7.49	159
6/26/2001	22:00	14.67	15.03	0.06	7.49	159
6/26/2001	22:30	14.67	15.02	0.03	7.47	158
6/26/2001	23:00	14.67	15.02	0.03	7.47	158
6/26/2001	23:30	14.67	15.02	0.03	7.47	158
6/27/2001	0:00	14.67	15.02	0.03	7.47	158
6/27/2001	0:30	14.68	15.02	0.00	7.44	156
6/27/2001	1:00	14.68	15.02	0.00	7.44	156
6/27/2001	1:30	14.68	15.01	-0.03	7.42	154
6/27/2001	2:00	14.69	15.01	-0.05	7.40	152
6/27/2001	2:30	14.70	15.02	-0.05	7.40	152
6/27/2001	3:00	14.70	15.01	-0.08	7.37	150
6/27/2001	3:30	14.70	15.02	-0.06	7.40	152
6/27/2001	4:00	14.71	15.02	-0.08	7.37	150
6/27/2001	4:30	14.70	15.02	-0.06	7.40	152
6/27/2001	5:00	14.70	15.02	-0.06	7.40	152
6/27/2001	5:30	14.70	15.02	-0.06	7.40	152
6/27/2001	6:00	14.70	15.03	-0.04	7.42	154
6/27/2001	6:30	14.71	15.03	-0.07	7.40	152
6/27/2001	7:00	14.71	15.03	-0.07	7.40	152



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/27/2001	7:30	14.72	15.03	-0.09	7.37	150
6/27/2001	8:00	14.72	15.03	-0.09	7.37	150
6/27/2001	8:30	14.72	15.04	-0.07	7.40	152
6/27/2001	9:00	14.71	15.04	-0.05	7.42	154
6/27/2001	9:30	14.72	15.04	-0.08	7.40	152
6/27/2001	10:00	14.72	15.04	-0.08	7.40	152
6/27/2001	10:30	14.72	15.04	-0.08	7.40	152
6/27/2001	11:00	14.72	15.05	-0.06	7.42	154
6/27/2001	11:30	14.72	15.05	-0.06	7.42	154
6/27/2001	12:00	14.72	15.05	-0.06	7.42	154
6/27/2001	12:30	14.72	15.05	-0.06	7.42	154
6/27/2001	13:00	14.72	15.06	-0.04	7.44	156
6/27/2001	13:30	14.72	15.06	-0.04	7.44	156
6/27/2001	14:00	14.71	15.06	-0.02	7.47	158
6/27/2001	14:30	14.69	15.06	0.02	7.51	161
6/27/2001	15:00	14.69	15.07	0.04	7.53	163
6/27/2001	15:30	14.70	15.07	0.02	7.51	161
6/27/2001	16:00	14.71	15.07	-0.01	7.49	159
6/27/2001	16:30	14.71	15.08	0.01	7.51	161
6/27/2001	17:00	14.72	15.08	-0.01	7.49	159
6/27/2001	17:30	14.73	15.08	-0.04	7.47	158
6/27/2001	18:00	14.74	15.08	-0.06	7.44	156
6/27/2001	18:30	14.75	15.09	-0.06	7.44	156
6/27/2001	19:00	14.76	15.09	-0.09	7.42	154
6/27/2001	19:30	14.76	15.09	-0.09	7.42	154
6/27/2001	20:00	14.77	15.09	-0.11	7.40	152
6/27/2001	20:30	14.77	15.09	-0.11	7.40	152
6/27/2001	21:00	14.77	15.09	-0.12	7.40	152
6/27/2001	21:30	14.78	15.09	-0.14	7.37	150
6/27/2001	22:00	14.78	15.09	-0.14	7.37	150
6/27/2001	22:30	14.79	15.09	-0.17	7.35	148
6/27/2001	23:00	14.79	15.09	-0.17	7.35	148
6/27/2001	23:30	14.79	15.09	-0.17	7.35	148
6/28/2001	0:00	14.79	15.09	-0.17	7.35	148
6/28/2001	0:30	14.79	15.08	-0.20	7.33	147
6/28/2001	1:00	14.79	15.08	-0.20	7.33	147
6/28/2001	1:30	14.79	15.08	-0.20	7.33	147
6/28/2001	2:00	14.79	15.08	-0.20	7.33	147
6/28/2001	2:30	14.79	15.07	-0.23	7.30	145
6/28/2001	3:00	14.79	15.07	-0.23	7.30	145
6/28/2001	3:30	14.79	15.07	-0.23	7.30	145
6/28/2001	4:00	14.79	15.07	-0.23	7.30	145
6/28/2001	4:30	14.79	15.07	-0.23	7.30	145

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
6/28/2001	5:00	14.79	15.07	-0.24	7.30	145
6/28/2001	5:30	14.79	15.07	-0.24	7.30	145
6/28/2001	6:00	14.79	15.07	-0.24	7.30	145
6/28/2001	6:30	14.79	15.07	-0.24	7.30	145
6/28/2001	7:00	14.79	15.07	-0.24	7.30	145
6/28/2001	7:30	14.79	15.07	-0.24	7.30	145
6/28/2001	8:00	14.78	15.07	-0.22	7.33	147
6/28/2001	8:30	14.78	15.06	-0.25	7.30	145
6/28/2001	9:00	14.77	15.06	-0.23	7.33	147
6/28/2001	9:30	14.77	15.06	-0.23	7.33	147
6/28/2001	10:00	14.76	15.06	-0.21	7.35	148
6/28/2001	10:30	14.76	15.05	-0.23	7.33	147
6/28/2001	11:00	14.75	15.05	-0.21	7.35	148
6/28/2001	11:30	14.74	15.05	-0.19	7.37	150
6/28/2001	12:00	14.74	15.04	-0.21	7.35	148
6/28/2001	12:30	14.72	15.04	-0.17	7.40	152
6/28/2001	13:00	14.71	15.04	-0.15	7.42	154
6/28/2001	13:30	14.69	15.04	-0.10	7.47	158
6/28/2001	14:00	14.69	15.04	-0.11	7.47	158
6/28/2001	14:30	14.69	15.03	-0.13	7.44	156
6/28/2001	15:00	14.69	15.03	-0.13	7.44	156
6/28/2001	15:30	14.69	15.02	-0.16	7.42	154
6/28/2001	16:00	14.69	15.02	-0.16	7.42	154
6/28/2001	16:30	14.68	15.01	-0.16	7.42	154
6/28/2001	17:00	14.67	15.01	-0.14	7.44	156
6/28/2001	17:30	14.68	15.01	-0.16	7.42	154
6/28/2001	18:00	14.68	15.00	-0.19	7.40	152
6/28/2001	18:30	14.67	15.00	-0.17	7.42	154
6/28/2001	19:00	14.67	14.99	-0.19	7.40	152
6/28/2001	19:30	14.67	14.98	-0.22	7.37	150
6/28/2001	20:00	14.67	14.98	-0.22	7.37	150
6/28/2001	20:30	14.67	14.98	-0.22	7.37	150
6/28/2001	21:00	14.67	14.97	-0.25	7.35	148
6/28/2001	21:30	14.67	14.97	-0.25	7.35	148
6/28/2001	22:00	14.68	14.97	-0.27	7.33	147
6/28/2001	22:30	14.69	14.96	-0.32	7.28	143
7/18/2001	11:30	14.53	15.24	1.63	5.72	35
7/18/2001	11:32	-	-	-	<b>5.72</b>	35
7/18/2001	12:00	14.53	15.24	1.65	5.74	35
7/18/2001	12:30	14.53	15.24	1.66	5.75	36
7/18/2001	12:49	-	-	-	<b>5.72</b>	35
7/18/2001	13:00	14.55	15.24	1.63	5.72	35
7/18/2001	13:26	-	-	-	<b>5.72</b>	<b>35.6</b>

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/18/2001	13:30	14.54	15.25	1.60	5.73	35
7/18/2001	14:00	14.53	15.25	1.59	5.72	34
7/18/2001	14:01	-	-	-	5.72	35
7/18/2001	14:30	14.52	15.25	1.68	5.74	36
7/18/2001	15:00	14.53	15.25	1.66	5.72	35
7/18/2001	15:30	14.54	15.25	1.64	5.70	34
7/18/2001	16:00	14.55	15.25	1.62	5.68	34
7/18/2001	16:30	14.55	15.25	1.62	5.68	34
7/18/2001	17:00	14.52	15.25	1.70	5.76	36
7/18/2001	17:30	14.53	15.25	1.68	5.74	35
7/18/2001	18:00	14.53	15.25	1.68	5.74	35
7/18/2001	18:30	14.52	15.24	1.68	5.74	35
7/18/2001	19:00	14.52	15.24	1.68	5.74	36
7/18/2001	19:30	14.52	15.23	1.66	5.72	35
7/18/2001	20:00	14.53	15.23	1.64	5.70	34
7/18/2001	20:30	14.54	15.23	1.62	5.68	34
7/18/2001	21:00	14.55	15.23	1.60	5.66	33
7/18/2001	21:30	14.55	15.23	1.60	5.66	33
7/18/2001	22:00	14.53	15.22	1.63	5.69	34
7/18/2001	22:30	14.51	15.22	1.68	5.74	35
7/18/2001	23:00	14.51	15.22	1.68	5.74	35
7/18/2001	23:30	14.52	15.22	1.66	5.72	35
7/19/2001	0:00	14.53	15.22	1.64	5.70	34
7/19/2001	0:30	14.54	15.22	1.62	5.68	34
7/19/2001	1:00	14.54	15.21	1.60	5.66	33
7/19/2001	1:30	14.55	15.21	1.58	5.64	33
7/19/2001	2:00	14.55	15.21	1.58	5.64	33
7/19/2001	2:30	14.55	15.21	1.58	5.64	33
7/19/2001	3:00	14.56	15.20	1.54	5.60	32
7/19/2001	3:30	14.56	15.20	1.54	5.60	32
7/19/2001	4:00	14.56	15.20	1.55	5.61	32
7/19/2001	4:30	14.56	15.19	1.53	5.59	31
7/19/2001	5:00	14.55	15.19	1.55	5.61	32
7/19/2001	5:30	14.55	15.19	1.55	5.61	32
7/19/2001	6:00	14.53	15.18	1.58	5.64	33
7/19/2001	6:30	14.52	15.17	1.58	5.64	33
7/19/2001	7:00	14.51	15.17	1.61	5.67	33
7/19/2001	7:30	14.51	15.16	1.59	5.65	33
7/19/2001	8:00	14.50	15.16	1.61	5.67	33
7/19/2001	8:30	14.49	15.15	1.62	5.68	34
7/19/2001	9:00	14.47	15.15	1.66	5.72	35
7/19/2001	9:30	14.46	15.13	1.64	5.70	34
7/19/2001	10:00	14.45	15.13	1.67	5.73	35

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/19/2001	10:30	14.44	15.13	1.70	5.76	36
7/19/2001	11:00	14.42	15.12	1.72	5.78	38
7/19/2001	11:15	-	-	-	<b>5.68</b>	34
7/19/2001	12:00	14.42	15.10	1.64	5.81	39
7/19/2001	12:30	14.40	15.09	1.74	5.91	44
7/19/2001	13:00	14.39	15.08	1.81	5.98	47
7/19/2001	13:30	14.37	15.08	1.93	6.10	55
7/19/2001	14:00	14.37	15.07	1.98	6.15	58
7/19/2001	14:30	14.36	15.07	2.08	6.25	65
7/19/2001	15:00	14.36	15.07	2.15	6.32	71
7/19/2001	15:30	14.35	15.07	2.25	6.42	78
7/19/2001	15:45	-	-	-	<b>6.42</b>	78
7/19/2001	16:00	14.36	15.07	1.62	6.38	75
7/19/2001	16:30	14.35	15.07	1.62	6.38	75
7/19/2001	17:00	14.35	15.07	1.61	6.37	74
7/19/2001	17:30	14.35	15.06	1.57	6.33	71
7/19/2001	18:00	14.36	15.06	1.53	6.29	69
7/19/2001	18:30	14.36	15.05	1.49	6.25	66
7/19/2001	19:00	14.35	15.05	1.50	6.26	66
7/19/2001	19:30	14.35	15.04	1.46	6.22	63
7/19/2001	20:00	14.35	15.04	1.44	6.20	62
7/19/2001	20:30	14.35	15.04	1.43	6.19	61
7/19/2001	21:00	14.34	15.04	1.43	6.19	61
7/19/2001	21:30	14.34	15.04	1.42	6.18	60
7/19/2001	22:00	14.34	15.03	1.38	6.14	57
7/19/2001	22:30	14.34	15.02	1.34	6.10	55
7/19/2001	23:00	14.34	15.02	1.32	6.08	53
7/19/2001	23:30	14.35	15.02	1.28	6.04	51
7/20/2001	0:00	14.35	15.02	1.27	6.03	49
7/20/2001	0:30	14.35	15.02	1.25	6.01	48
7/20/2001	1:00	14.35	15.02	1.23	5.99	47
7/20/2001	1:30	14.36	15.02	1.19	5.95	46
7/20/2001	2:00	14.36	15.01	1.16	5.92	44
7/20/2001	2:30	14.36	15.01	1.14	5.90	44
7/20/2001	3:00	14.36	15.01	1.12	5.88	43
7/20/2001	3:30	14.36	15.01	1.11	5.87	42
7/20/2001	4:00	14.35	15.01	1.11	5.87	43
7/20/2001	4:30	14.36	15.01	1.07	5.83	41
7/20/2001	5:00	14.36	15.01	1.06	5.82	40
7/20/2001	5:30	14.36	15.01	1.04	5.80	39
7/20/2001	6:00	14.36	15.01	1.03	5.79	38
7/20/2001	6:30	14.36	15.01	1.01	5.77	37
7/20/2001	7:00	14.37	15.02	0.99	5.75	36

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/20/2001	7:30	14.36	15.02	1.00	5.76	37
7/20/2001	8:00	14.36	15.02	0.98	5.74	36
7/20/2001	8:30	14.37	15.02	0.95	5.71	34
7/20/2001	9:00	14.37	15.03	0.95	5.71	34
7/20/2001	9:30	14.37	15.03	0.94	5.70	34
7/20/2001	10:00	14.36	15.03	0.94	5.70	34
7/20/2001	10:30	14.36	15.03	0.93	5.69	34
7/20/2001	11:00	14.36	15.03	0.91	5.67	33
7/20/2001	11:30	14.35	15.03	0.92	5.68	34
7/20/2001	12:00	14.36	15.03	0.88	5.64	33
7/20/2001	12:18	-	-	-	<b>5.62</b>	32
7/20/2001	12:30	14.35	15.02	0.86	5.62	32
7/20/2001	13:00	14.35	15.03	1.57	5.65	33
7/20/2001	13:30	14.35	15.02	1.54	5.62	32
7/20/2001	14:00	14.33	15.02	1.59	5.67	33
7/20/2001	14:30	14.33	15.02	1.59	5.67	33
7/20/2001	15:00	14.32	15.02	1.62	5.70	34
7/20/2001	15:30	14.32	15.02	1.62	5.70	34
7/20/2001	16:00	14.31	15.02	1.64	5.72	35
7/20/2001	16:30	14.32	15.02	1.62	5.70	34
7/20/2001	17:00	14.33	15.01	1.58	5.66	33
7/20/2001	17:30	14.31	15.01	1.62	5.70	34
7/20/2001	18:00	14.30	15.01	1.65	5.73	35
7/20/2001	18:30	14.31	15.01	1.63	5.71	34
7/20/2001	19:00	14.33	15.01	1.58	5.66	33
7/20/2001	19:30	14.31	15.01	1.63	5.71	34
7/20/2001	20:00	14.32	15.01	1.61	5.69	34
7/20/2001	20:30	14.34	15.01	1.56	5.64	33
7/20/2001	21:00	14.35	15.01	1.54	5.62	32
7/20/2001	21:30	14.35	15.01	1.54	5.62	32
7/20/2001	22:00	14.36	15.01	1.52	5.60	32
7/20/2001	22:30	14.37	15.01	1.50	5.58	31
7/20/2001	23:00	14.38	15.03	1.52	5.60	32
7/20/2001	23:30	14.38	15.03	1.52	5.60	32
7/21/2001	0:00	14.39	15.04	1.53	5.61	32
7/21/2001	0:30	14.40	15.04	1.50	5.58	31
7/21/2001	1:00	14.40	15.04	1.51	5.59	31
7/21/2001	1:30	14.40	15.04	1.51	5.59	31
7/21/2001	2:00	14.40	15.04	1.51	5.59	31
7/21/2001	2:30	14.40	15.04	1.51	5.59	32
7/21/2001	3:00	14.40	15.04	1.51	5.59	32
7/21/2001	3:30	14.40	15.04	1.51	5.59	32
7/21/2001	4:00	14.40	15.04	1.51	5.59	32

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/21/2001	4:30	14.40	15.03	1.49	5.57	31
7/21/2001	5:00	14.39	15.03	1.52	5.60	32
7/21/2001	5:30	14.39	15.03	1.52	5.60	32
7/21/2001	6:00	14.39	15.03	1.52	5.60	32
7/21/2001	6:30	14.38	15.03	1.54	5.62	32
7/21/2001	7:00	14.37	15.02	1.54	5.62	32
7/21/2001	7:30	14.37	15.03	1.57	5.65	33
7/21/2001	8:00	14.37	15.02	1.55	5.63	32
7/21/2001	8:30	14.37	15.03	1.57	5.65	33
7/21/2001	9:00	14.36	15.03	1.60	5.68	34
7/21/2001	9:30	14.36	15.03	1.60	5.68	34
7/21/2001	10:00	14.37	15.04	1.60	5.68	34
7/21/2001	10:30	14.37	15.04	1.60	5.68	34
7/21/2001	11:00	14.36	15.04	1.62	5.70	34
7/21/2001	11:30	14.36	15.04	1.63	5.71	34
7/21/2001	12:00	14.36	15.04	1.63	5.71	34
7/21/2001	12:30	14.37	15.04	1.61	5.69	34
7/21/2001	13:00	14.36	15.04	1.63	5.71	34
7/21/2001	13:30	14.36	15.04	1.63	5.71	34
7/21/2001	14:00	14.35	15.04	1.66	5.74	35
7/21/2001	14:30	14.36	15.02	1.59	5.67	33
7/21/2001	14:54	-	-	-	<b>5.62</b>	32
7/21/2001	15:00	14.37	15.01	1.54	5.62	32
7/21/2001	15:30	14.38	15.02	1.47	5.62	32
7/21/2001	16:00	14.38	15.02	1.47	5.62	32
7/21/2001	16:30	14.38	15.02	1.47	5.62	32
7/21/2001	17:00	14.38	15.02	1.47	5.62	32
7/21/2001	17:30	14.38	15.02	1.47	5.62	32
7/21/2001	18:00	14.38	15.02	1.47	5.62	32
7/21/2001	18:30	14.38	15.02	1.47	5.62	32
7/21/2001	19:00	14.38	15.02	1.47	5.62	32
7/21/2001	19:30	14.39	15.03	1.46	5.61	32
7/21/2001	20:00	14.39	15.03	1.46	5.61	32
7/21/2001	20:30	14.40	15.03	1.44	5.59	32
7/21/2001	21:00	14.40	15.04	1.46	5.61	32
7/21/2001	21:30	14.40	15.04	1.46	5.61	32
7/21/2001	22:00	14.40	15.04	1.46	5.61	32
7/21/2001	22:30	14.40	15.04	1.46	5.61	32
7/21/2001	23:00	14.40	15.04	1.46	5.61	32
7/21/2001	23:30	14.41	15.04	1.44	5.59	31
7/22/2001	0:00	14.41	15.04	1.43	5.58	31
7/22/2001	0:30	14.41	15.04	1.43	5.58	31
7/22/2001	1:00	14.42	15.05	1.43	5.58	31

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/22/2001	1:30	14.42	15.05	1.43	5.58	31
7/22/2001	2:00	14.42	15.05	1.43	5.58	31
7/22/2001	2:30	14.42	15.05	1.43	5.58	31
7/22/2001	3:00	14.42	15.05	1.43	5.58	31
7/22/2001	3:30	14.42	15.05	1.43	5.58	31
7/22/2001	4:00	14.42	15.05	1.43	5.58	31
7/22/2001	4:30	14.43	15.05	1.40	5.55	31
7/22/2001	5:00	14.43	15.04	1.38	5.53	30
7/22/2001	5:30	14.43	15.04	1.38	5.53	30
7/22/2001	6:00	14.43	15.04	1.38	5.53	30
7/22/2001	6:30	14.42	15.04	1.40	5.55	31
7/22/2001	7:00	14.42	15.04	1.40	5.55	31
7/22/2001	7:30	14.42	15.04	1.40	5.55	31
7/22/2001	8:00	14.41	15.04	1.42	5.57	31
7/22/2001	8:30	14.40	15.04	1.44	5.59	32
7/22/2001	9:00	14.40	15.04	1.44	5.59	32
7/22/2001	9:30	14.39	15.04	1.46	5.61	32
7/22/2001	10:00	14.38	15.03	1.46	5.61	32
7/22/2001	10:30	14.38	15.03	1.46	5.61	32
7/22/2001	11:00	14.38	15.03	1.46	5.61	32
7/22/2001	11:30	14.37	15.02	1.46	5.61	32
7/22/2001	12:00	14.37	15.02	1.46	5.61	32
7/22/2001	12:30	14.35	15.02	1.51	5.66	33
7/22/2001	13:00	14.33	15.02	1.55	5.70	34
7/22/2001	13:30	14.30	15.02	1.62	5.77	37
7/22/2001	14:00	14.30	15.03	1.64	5.79	38
7/22/2001	14:30	14.30	15.02	1.62	5.77	37
7/22/2001	15:00	14.30	15.02	1.62	5.77	37
7/22/2001	15:30	14.30	15.02	1.62	5.77	37
7/22/2001	16:00	14.31	15.02	1.59	5.74	35
7/22/2001	16:30	14.30	15.03	1.64	5.79	38
7/22/2001	17:00	14.30	15.03	1.64	5.79	38
7/22/2001	17:30	14.29	15.02	1.63	5.78	38
7/22/2001	18:00	14.31	15.03	1.61	5.76	37
7/22/2001	18:30	14.30	15.03	1.63	5.78	38
7/22/2001	19:00	14.31	15.02	1.59	5.74	35
7/22/2001	19:30	14.32	15.02	1.56	5.71	34
7/22/2001	20:00	14.32	15.02	1.56	5.71	34
7/22/2001	20:30	14.34	15.02	1.51	5.66	33
7/22/2001	21:00	14.35	15.02	1.49	5.64	33
7/22/2001	21:30	14.35	15.03	1.51	5.66	33
7/22/2001	22:00	14.36	15.03	1.49	5.64	33
7/22/2001	22:30	14.38	15.02	1.42	5.57	31

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/22/2001	23:00	14.38	15.02	1.42	5.57	31
7/22/2001	23:30	14.39	15.02	1.39	5.54	30
7/23/2001	0:00	14.39	15.02	1.39	5.54	30
7/23/2001	0:30	14.40	15.02	1.37	5.52	30
7/23/2001	1:00	14.40	15.02	1.37	5.52	30
7/23/2001	1:30	14.40	15.02	1.37	5.52	30
7/23/2001	2:00	14.40	15.01	1.34	5.49	29
7/23/2001	2:30	14.40	15.01	1.34	5.49	29
7/23/2001	3:00	14.40	15.01	1.34	5.49	29
7/23/2001	3:30	14.40	15.01	1.34	5.49	29
7/23/2001	4:00	14.40	15.01	1.34	5.49	29
7/23/2001	4:30	14.40	15.01	1.34	5.49	29
7/23/2001	5:00	14.40	15.01	1.34	5.49	29
7/23/2001	5:30	14.40	15.01	1.34	5.49	29
7/23/2001	6:00	14.40	15.01	1.34	5.49	29
7/23/2001	6:30	14.40	15.01	1.34	5.49	29
7/23/2001	7:00	14.40	15.01	1.34	5.49	29
7/23/2001	7:30	14.39	15.00	1.33	5.48	29
7/23/2001	8:00	14.39	15.00	1.33	5.48	29
7/23/2001	8:30	14.38	15.00	1.36	5.51	30
7/23/2001	9:00	14.36	15.00	1.40	5.55	31
7/23/2001	9:30	14.35	14.99	1.40	5.55	31
7/23/2001	10:00	14.35	14.99	1.40	5.55	31
7/23/2001	10:30	14.35	14.98	1.38	5.53	30
7/23/2001	11:00	14.34	14.98	1.40	5.55	31
7/23/2001	11:30	14.32	14.98	1.44	5.59	32
7/23/2001	12:00	14.30	14.98	1.49	5.64	33
7/23/2001	12:30	14.30	14.98	1.49	5.64	33
7/23/2001	13:00	14.29	14.95	1.44	5.59	32
7/23/2001	13:30	14.29	14.95	1.44	5.59	32
7/23/2001	14:00	14.30	14.96	1.44	5.59	32
7/23/2001	14:06	-	-	-	<b>5.59</b>	32
7/23/2001	14:30	14.31	14.97	1.52	5.59	32
7/23/2001	15:00	14.31	14.98	1.55	5.62	32
7/23/2001	15:30	14.34	14.99	1.51	5.58	31
7/23/2001	16:00	14.35	15.00	1.51	5.58	31
7/23/2001	16:30	14.37	15.01	1.49	5.56	31
7/23/2001	17:00	14.38	15.01	1.47	5.54	30
7/23/2001	17:30	14.39	15.02	1.48	5.55	31
7/23/2001	18:00	14.40	15.02	1.46	5.53	30
7/23/2001	18:30	14.41	15.04	1.48	5.55	31
7/23/2001	19:00	14.41	15.04	1.49	5.56	31
7/23/2001	19:30	14.42	15.05	1.49	5.56	31



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/23/2001	20:00	14.45	15.06	1.45	5.52	30
7/23/2001	20:30	14.46	15.06	1.43	5.50	29
7/23/2001	21:00	14.46	15.07	1.46	5.53	30
7/23/2001	21:30	14.47	15.07	1.44	5.51	30
7/23/2001	22:00	14.47	15.07	1.44	5.51	30
7/23/2001	22:30	14.48	15.08	1.45	5.52	30
7/23/2001	23:00	14.49	15.09	1.45	5.52	30
7/23/2001	23:30	14.50	15.09	1.43	5.50	29
7/24/2001	0:00	14.50	15.10	1.46	5.53	30
7/24/2001	0:30	14.51	15.10	1.44	5.51	30
7/24/2001	1:00	14.51	15.10	1.44	5.51	30
7/24/2001	1:30	14.51	15.10	1.45	5.52	30
7/24/2001	2:00	14.51	15.10	1.45	5.52	30
7/24/2001	2:30	14.51	15.10	1.45	5.52	30
7/24/2001	3:00	14.52	15.10	1.44	5.51	30
7/24/2001	3:30	14.52	15.10	1.44	5.51	30
7/24/2001	4:00	14.52	15.10	1.44	5.51	30
7/24/2001	4:30	14.52	15.10	1.45	5.52	30
7/24/2001	5:00	14.52	15.10	1.45	5.52	30
7/24/2001	5:30	14.52	15.10	1.46	5.53	30
7/24/2001	6:00	14.52	15.10	1.46	5.53	30
7/24/2001	6:30	14.52	15.10	1.46	5.53	30
7/24/2001	7:00	14.51	15.10	1.49	5.56	31
7/24/2001	7:30	14.52	15.10	1.47	5.54	30
7/24/2001	8:00	14.51	15.10	1.50	5.57	31
7/24/2001	8:05	-	-	-	<b>5.57</b>	31
7/24/2001	8:30	14.51	15.10	1.36	5.57	31
7/24/2001	9:00	14.51	15.10	1.36	5.57	31
7/24/2001	9:30	14.52	15.10	1.34	5.55	31
7/24/2001	10:00	14.51	15.10	1.37	5.58	31
7/24/2001	10:30	14.51	15.10	1.37	5.58	31
7/24/2001	11:00	14.52	15.10	1.35	5.56	31
7/24/2001	11:30	14.52	15.11	1.37	5.58	31
7/24/2001	12:00	14.52	15.11	1.37	5.58	31
7/24/2001	12:30	14.52	15.11	1.37	5.58	31
7/24/2001	13:00	14.52	15.11	1.38	5.59	31
7/24/2001	13:30	14.52	15.12	1.40	5.61	32
7/24/2001	14:00	14.52	15.12	1.40	5.61	32
7/24/2001	14:30	14.52	15.13	1.43	5.64	33
7/24/2001	15:00	14.52	15.13	1.43	5.64	33
7/24/2001	15:30	14.53	15.13	1.41	5.62	32
7/24/2001	16:00	14.53	15.13	1.41	5.62	32
7/24/2001	16:30	14.54	15.13	1.39	5.60	32

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/24/2001	17:00	14.55	15.13	1.37	5.58	31
7/24/2001	17:30	14.55	15.13	1.37	5.58	31
7/24/2001	18:00	14.54	15.13	1.40	5.61	32
7/24/2001	18:30	14.53	15.13	1.42	5.63	32
7/24/2001	19:00	14.54	15.14	1.42	5.63	33
7/24/2001	19:30	14.54	15.13	1.40	5.61	32
7/24/2001	20:00	14.55	15.14	1.40	5.61	32
7/24/2001	20:30	14.55	15.14	1.40	5.61	32
7/24/2001	21:00	14.56	15.14	1.38	5.59	32
7/24/2001	21:30	14.57	15.14	1.36	5.57	31
7/24/2001	22:00	14.57	15.15	1.39	5.60	32
7/24/2001	22:30	14.58	15.15	1.37	5.58	31
7/24/2001	23:00	14.59	15.16	1.37	5.58	31
7/24/2001	23:30	14.59	15.16	1.37	5.58	31
7/25/2001	0:00	14.60	15.16	1.35	5.56	31
7/25/2001	0:30	14.60	15.16	1.35	5.56	31
7/25/2001	1:00	14.60	15.16	1.35	5.56	31
7/25/2001	1:30	14.61	15.16	1.33	5.54	30
7/25/2001	2:00	14.62	15.17	1.33	5.54	30
7/25/2001	2:30	14.62	15.17	1.33	5.54	30
7/25/2001	3:00	14.63	15.18	1.34	5.55	31
7/25/2001	3:30	14.64	15.19	1.34	5.55	31
7/25/2001	4:00	14.65	15.19	1.32	5.53	30
7/25/2001	4:30	14.65	15.19	1.32	5.53	30
7/25/2001	5:00	14.65	15.19	1.32	5.53	30
7/25/2001	5:30	14.66	15.19	1.30	5.51	30
7/25/2001	6:00	14.66	15.20	1.33	5.54	30
7/25/2001	6:30	14.66	15.20	1.33	5.54	30
7/25/2001	7:00	14.67	15.20	1.31	5.52	30
7/25/2001	7:30	14.67	15.21	1.33	5.54	30
7/25/2001	8:00	14.67	15.21	1.33	5.54	30
7/25/2001	8:15	-	-	-	<b>5.54</b>	30
7/25/2001	8:30	14.66	15.21	1.26	5.56	31
7/25/2001	9:00	14.66	15.21	1.26	5.56	31
7/25/2001	9:30	14.66	15.21	1.26	5.56	31
7/25/2001	10:00	14.65	15.21	1.28	5.58	31
7/25/2001	10:30	14.65	15.21	1.28	5.58	31
7/25/2001	11:00	14.63	15.21	1.32	5.62	32
7/25/2001	11:30	14.64	15.21	1.30	5.60	32
7/25/2001	12:00	14.64	15.21	1.30	5.60	32
7/25/2001	12:30	14.64	15.21	1.30	5.60	32
7/25/2001	13:00	14.63	15.21	1.32	5.62	32
7/25/2001	13:30	14.62	15.21	1.34	5.64	33

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/25/2001	14:00	14.63	15.21	1.31	5.61	32
7/25/2001	14:30	14.63	15.21	1.31	5.61	32
7/25/2001	15:00	14.63	15.21	1.31	5.61	32
7/25/2001	15:30	14.62	15.21	1.33	5.63	32
7/25/2001	16:00	14.62	15.21	1.33	5.63	32
7/25/2001	16:30	14.61	15.21	1.35	5.65	33
7/25/2001	17:00	14.61	15.20	1.32	5.62	32
7/25/2001	17:30	14.61	15.20	1.32	5.62	32
7/25/2001	18:00	14.60	15.20	1.34	5.64	33
7/25/2001	18:30	14.60	15.19	1.32	5.62	32
7/25/2001	19:00	14.60	15.19	1.32	5.62	32
7/25/2001	19:30	14.57	15.19	1.38	5.68	34
7/25/2001	20:00	14.57	15.19	1.38	5.68	34
7/25/2001	20:30	14.57	15.19	1.38	5.68	34
7/25/2001	21:00	14.57	15.19	1.38	5.68	34
7/25/2001	21:30	14.56	15.19	1.40	5.70	34
7/25/2001	22:00	14.55	15.19	1.42	5.72	35
7/25/2001	22:30	14.55	15.19	1.42	5.72	35
7/25/2001	23:00	14.57	15.18	1.35	5.65	33
7/25/2001	23:30	14.58	15.18	1.32	5.62	32
7/26/2001	0:00	14.60	15.18	1.28	5.58	31
7/26/2001	0:30	14.61	15.17	1.23	5.53	30
7/26/2001	1:00	14.63	15.17	1.18	5.48	29
7/26/2001	1:30	14.64	15.17	1.16	5.46	28
7/26/2001	2:00	14.65	15.17	1.13	5.43	28
7/26/2001	2:30	14.65	15.16	1.11	5.41	27
7/26/2001	3:00	14.65	15.16	1.10	5.40	27
7/26/2001	3:30	14.64	15.16	1.12	5.42	28
7/26/2001	4:00	14.64	15.16	1.12	5.42	28
7/26/2001	4:30	14.64	15.16	1.12	5.42	28
7/26/2001	5:00	14.63	15.16	1.14	5.44	28
7/26/2001	5:30	14.62	15.16	1.16	5.46	29
7/26/2001	6:00	14.62	15.16	1.16	5.46	29
7/26/2001	6:30	14.60	15.15	1.18	5.48	29
7/26/2001	7:00	14.60	15.15	1.18	5.48	29
7/26/2001	7:30	14.60	15.15	1.18	5.48	29
7/26/2001	8:00	14.59	15.15	1.20	5.50	29
7/26/2001	8:30	14.57	15.13	1.20	<b>5.50</b>	29
7/26/2001	9:00	14.56	15.13	1.31	5.52	30
7/26/2001	9:30	14.55	15.13	1.33	5.54	30
7/26/2001	10:00	14.55	15.12	1.31	5.52	30
7/26/2001	10:30	14.54	15.12	1.33	5.54	30
7/26/2001	11:00	14.52	15.11	1.35	5.56	31

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/26/2001	11:30	14.52	15.12	1.38	5.59	31
7/26/2001	12:00	14.53	15.12	1.35	5.56	31
7/26/2001	12:30	14.54	15.12	1.33	5.54	30
7/26/2001	13:00	14.54	15.12	1.33	5.54	30
7/26/2001	13:30	14.54	15.12	1.33	5.54	30
7/26/2001	14:00	14.54	15.12	1.33	5.54	30
7/26/2001	14:30	14.52	15.11	1.35	5.56	31
7/26/2001	15:00	14.52	15.11	1.35	5.56	31
7/26/2001	15:30	14.51	15.11	1.37	5.58	31
7/26/2001	16:00	14.49	15.10	1.39	5.60	32
7/26/2001	16:30	14.47	15.10	1.44	5.65	33
7/26/2001	17:00	14.45	15.10	1.48	5.69	34
7/26/2001	17:30	14.44	15.10	1.50	5.71	34
7/26/2001	18:00	14.45	15.09	1.46	5.67	33
7/26/2001	18:30	14.43	15.09	1.50	5.71	34
7/26/2001	19:00	14.47	15.09	1.41	5.62	32
7/26/2001	19:30	14.49	15.09	1.36	5.57	31
7/26/2001	20:00	14.48	15.10	1.41	5.62	32
7/26/2001	20:30	14.50	15.10	1.36	5.57	31
7/26/2001	21:00	14.51	15.10	1.34	5.55	31
7/26/2001	21:30	14.50	15.10	1.36	5.57	31
7/26/2001	22:00	14.50	15.10	1.36	5.57	31
7/26/2001	22:30	14.51	15.10	1.33	5.54	30
7/26/2001	23:00	14.52	15.10	1.31	5.52	30
7/26/2001	23:30	14.52	15.09	1.29	5.50	29
7/27/2001	0:00	14.52	15.09	1.29	5.50	29
7/27/2001	0:30	14.52	15.09	1.28	5.49	29
7/27/2001	1:00	14.52	15.09	1.28	5.49	29
7/27/2001	1:30	14.52	15.09	1.28	5.49	29
7/27/2001	2:00	14.52	15.09	1.28	5.49	29
7/27/2001	2:30	14.52	15.08	1.26	5.47	29
7/27/2001	3:00	14.52	15.08	1.26	5.47	29
7/27/2001	3:30	14.52	15.07	1.23	5.44	28
7/27/2001	4:00	14.52	15.07	1.23	5.44	28
7/27/2001	4:30	14.52	15.07	1.23	5.44	28
7/27/2001	5:00	14.51	15.07	1.25	5.46	29
7/27/2001	5:30	14.51	15.07	1.25	5.46	29
7/27/2001	6:00	14.51	15.06	1.23	5.44	28
7/27/2001	6:30	14.50	15.06	1.25	5.46	29
7/27/2001	7:00	14.49	15.06	1.27	5.48	29
7/27/2001	7:30	14.48	15.05	1.27	5.48	29
7/27/2001	8:00	14.47	15.05	1.30	5.51	30
7/27/2001	8:30	14.47	15.03	1.25	5.46	28

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/27/2001	8:37	-	-	-	5.46	28
7/27/2001	9:00	14.46	15.02	1.29	5.46	28
7/27/2001	9:30	14.45	15.02	1.31	5.48	29
7/27/2001	10:00	14.46	15.01	1.27	5.44	28
7/27/2001	10:30	14.45	15.01	1.29	5.46	29
7/27/2001	11:00	14.44	15.01	1.31	5.48	29
7/27/2001	11:30	14.43	15.01	1.34	5.51	30
7/27/2001	12:00	14.43	15.01	1.34	5.51	30
7/27/2001	12:30	14.41	15.01	1.38	5.55	31
7/27/2001	13:00	14.42	15.01	1.36	5.53	30
7/27/2001	13:30	14.42	15.00	1.34	5.51	30
7/27/2001	14:00	14.41	15.00	1.36	5.53	30
7/27/2001	14:30	14.42	15.00	1.34	5.51	30
7/27/2001	15:00	14.42	14.99	1.32	5.49	29
7/27/2001	15:30	14.42	14.99	1.32	5.49	29
7/27/2001	16:00	14.41	14.99	1.34	5.51	30
7/27/2001	16:30	14.42	14.99	1.32	5.49	29
7/27/2001	17:00	14.41	14.98	1.32	5.49	29
7/27/2001	17:30	14.41	14.98	1.32	5.49	29
7/27/2001	18:00	14.42	14.98	1.30	5.47	29
7/27/2001	18:30	14.41	14.98	1.32	5.49	29
7/27/2001	19:00	14.41	14.98	1.32	5.49	29
7/27/2001	19:30	14.41	14.98	1.32	5.49	29
7/27/2001	20:00	14.42	14.98	1.30	5.47	29
7/27/2001	20:30	14.42	14.98	1.30	5.47	29
7/27/2001	21:00	14.42	14.98	1.30	5.47	29
7/27/2001	21:30	14.43	14.98	1.28	5.45	28
7/27/2001	22:00	14.43	14.97	1.25	5.42	28
7/27/2001	22:30	14.43	14.97	1.25	5.42	28
7/27/2001	23:00	14.43	14.97	1.25	5.42	28
7/27/2001	23:30	14.43	14.97	1.26	5.43	28
7/28/2001	0:00	14.43	14.97	1.26	5.43	28
7/28/2001	0:30	14.43	14.97	1.26	5.43	28
7/28/2001	1:00	14.43	14.96	1.23	5.40	27
7/28/2001	1:30	14.43	14.96	1.23	5.40	27
7/28/2001	2:00	14.43	14.96	1.23	5.40	27
7/28/2001	2:30	14.43	14.96	1.23	5.40	27
7/28/2001	3:00	14.43	14.95	1.21	5.38	27
7/28/2001	3:30	14.43	14.95	1.21	5.38	27
7/28/2001	4:00	14.43	14.95	1.21	5.38	27
7/28/2001	4:30	14.43	14.95	1.21	5.38	27
7/28/2001	5:00	14.42	14.95	1.24	5.41	27
7/28/2001	5:30	14.42	14.95	1.24	5.41	27

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/28/2001	6:00	14.41	14.95	1.26	5.43	28
7/28/2001	6:30	14.41	14.94	1.24	5.41	27
7/28/2001	7:00	14.40	14.93	1.24	5.41	27
7/28/2001	7:30	14.40	14.93	1.24	5.41	27
7/28/2001	8:00	14.40	14.93	1.24	5.41	27
7/28/2001	8:15	-	-	-	<b>5.41</b>	27
7/28/2001	8:30	14.39	14.91	1.20	5.39	27
7/28/2001	9:00	14.39	14.91	1.20	5.39	27
7/28/2001	9:30	14.38	14.91	1.23	5.42	28
7/28/2001	10:00	14.38	14.90	1.21	5.40	27
7/28/2001	10:30	14.36	14.91	1.28	5.47	29
7/28/2001	11:00	14.35	14.90	1.29	5.48	29
7/28/2001	11:30	14.35	14.90	1.29	5.48	29
7/28/2001	12:00	14.34	14.89	1.29	5.48	29
7/28/2001	12:30	14.34	14.89	1.29	5.48	29
7/28/2001	13:00	14.35	14.89	1.28	5.47	29
7/28/2001	13:30	14.35	14.89	1.28	5.47	29
7/28/2001	14:00	14.35	14.89	1.28	5.47	29
7/28/2001	14:30	14.33	14.89	1.33	5.52	30
7/28/2001	15:00	14.33	14.89	1.33	5.52	30
7/28/2001	15:30	14.35	14.89	1.29	5.48	29
7/28/2001	16:00	14.37	14.89	1.25	5.44	28
7/28/2001	16:30	14.38	14.89	1.23	5.42	28
7/28/2001	17:00	14.37	14.88	1.23	5.42	28
7/28/2001	17:30	14.38	14.88	1.21	5.40	27
7/28/2001	18:00	14.37	14.88	1.24	5.43	28
7/28/2001	18:30	14.37	14.87	1.22	5.41	27
7/28/2001	19:00	14.37	14.87	1.22	5.41	27
7/28/2001	19:30	14.37	14.87	1.23	5.42	27
7/28/2001	20:00	14.38	14.86	1.18	5.37	26
7/28/2001	20:30	14.37	14.86	1.21	5.40	27
7/28/2001	21:00	14.38	14.86	1.19	5.38	27
7/28/2001	21:30	14.38	14.86	1.19	5.38	27
7/28/2001	22:00	14.38	14.86	1.20	5.39	27
7/28/2001	22:30	14.37	14.85	1.20	5.39	27
7/28/2001	23:00	14.37	14.85	1.20	5.39	27
7/28/2001	23:30	14.36	14.85	1.23	5.42	28
7/29/2001	0:00	14.35	14.84	1.23	5.42	28
7/29/2001	0:30	14.35	14.84	1.24	5.43	28
7/29/2001	1:00	14.34	14.83	1.24	5.43	28
7/29/2001	1:30	14.34	14.82	1.22	5.41	27
7/29/2001	2:00	14.35	14.82	1.20	5.39	27
7/29/2001	2:30	14.35	14.83	1.23	5.42	27

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/29/2001	3:00	14.33	14.83	1.27	5.46	29
7/29/2001	3:30	14.34	14.83	1.25	5.44	28
7/29/2001	4:00	14.36	14.84	1.24	5.43	28
7/29/2001	4:30	14.37	14.84	1.22	5.41	27
7/29/2001	5:00	14.36	14.84	1.24	5.43	28
7/29/2001	5:30	14.37	14.84	1.22	5.41	27
7/29/2001	6:00	14.37	14.85	1.25	5.44	28
7/29/2001	6:30	14.37	14.85	1.25	5.44	28
7/29/2001	7:00	14.39	14.86	1.23	5.42	28
7/29/2001	7:30	14.39	14.86	1.23	5.42	28
7/29/2001	8:00	14.39	14.86	1.24	5.43	28
7/29/2001	8:20	-	-	-	<b>5.41</b>	27
7/29/2001	8:30	14.39	14.85	1.22	5.41	27
7/29/2001	9:00	14.38	14.85	1.08	5.43	28
7/29/2001	9:30	14.38	14.86	1.10	5.45	28
7/29/2001	10:00	14.39	14.86	1.08	5.43	28
7/29/2001	10:30	14.39	14.86	1.08	5.43	28
7/29/2001	11:00	14.40	14.86	1.05	5.40	27
7/29/2001	11:30	14.40	14.87	1.08	5.43	28
7/29/2001	12:00	14.40	14.88	1.10	5.45	28
7/29/2001	12:30	14.40	14.89	1.12	5.47	29
7/29/2001	13:00	14.40	14.89	1.12	5.47	29
7/29/2001	13:30	14.41	14.89	1.10	5.45	28
7/29/2001	14:00	14.40	14.89	1.12	5.47	29
7/29/2001	14:30	14.41	14.90	1.12	5.47	29
7/29/2001	15:00	14.41	14.91	1.14	5.49	29
7/29/2001	15:30	14.42	14.91	1.12	5.47	29
7/29/2001	16:00	14.42	14.92	1.14	5.49	29
7/29/2001	16:30	14.42	14.92	1.14	5.49	29
7/29/2001	17:00	14.44	14.93	1.11	5.46	29
7/29/2001	17:30	14.45	14.93	1.09	5.44	28
7/29/2001	18:00	14.45	14.94	1.11	5.46	29
7/29/2001	18:30	14.45	14.94	1.11	5.46	29
7/29/2001	19:00	14.46	14.95	1.11	5.46	28
7/29/2001	19:30	14.46	14.95	1.11	5.46	28
7/29/2001	20:00	14.47	14.95	1.09	5.44	28
7/29/2001	20:30	14.47	14.95	1.08	5.43	28
7/29/2001	21:00	14.46	14.96	1.13	5.48	29
7/29/2001	21:30	14.47	14.96	1.11	5.46	28
7/29/2001	22:00	14.48	14.97	1.10	5.45	28
7/29/2001	22:30	14.49	14.97	1.08	5.43	28
7/29/2001	23:00	14.50	14.98	1.08	5.43	28
7/29/2001	23:30	14.50	14.98	1.08	5.43	28

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/30/2001	0:00	14.51	14.98	1.06	5.41	27
7/30/2001	0:30	14.52	14.99	1.05	5.40	27
7/30/2001	1:00	14.52	14.99	1.05	5.40	27
7/30/2001	1:30	14.52	14.99	1.05	5.40	27
7/30/2001	2:00	14.53	15.00	1.05	5.40	27
7/30/2001	2:30	14.53	15.00	1.05	5.40	27
7/30/2001	3:00	14.54	15.01	1.05	5.40	27
7/30/2001	3:30	14.54	15.01	1.05	5.40	27
7/30/2001	4:00	14.55	15.01	1.03	5.38	27
7/30/2001	4:30	14.55	15.02	1.05	5.40	27
7/30/2001	5:00	14.55	15.02	1.05	5.40	27
7/30/2001	5:30	14.56	15.03	1.05	5.40	27
7/30/2001	6:00	14.56	15.03	1.05	5.40	27
7/30/2001	6:30	14.56	15.04	1.07	5.42	28
7/30/2001	7:00	14.57	15.04	1.04	5.39	27
7/30/2001	7:30	14.57	15.04	1.04	5.39	27
7/30/2001	8:00	14.57	15.05	1.07	5.42	27
7/30/2001	8:30	14.57	15.04	1.04	<b>5.39</b>	27
7/30/2001	9:00	14.58	15.04	1.06	5.37	26
7/30/2001	9:30	14.58	15.05	1.08	5.39	27
7/30/2001	10:00	14.59	15.05	1.06	5.37	26
7/30/2001	10:30	14.59	15.06	1.08	5.39	27
7/30/2001	11:00	14.60	15.06	1.06	5.37	26
7/30/2001	11:30	14.60	15.07	1.08	5.39	27
7/30/2001	12:00	14.60	15.07	1.08	5.39	27
7/30/2001	12:30	14.60	15.07	1.08	5.39	27
7/30/2001	13:00	14.60	15.07	1.08	5.39	27
7/30/2001	13:30	14.60	15.07	1.08	5.39	27
7/30/2001	14:00	14.62	15.08	1.06	5.37	26
7/30/2001	14:30	14.61	15.08	1.08	5.39	27
7/30/2001	15:00	14.62	15.08	1.06	5.37	26
7/30/2001	15:30	14.62	15.08	1.06	5.37	26
7/30/2001	16:00	14.61	15.08	1.08	5.39	27
7/30/2001	16:30	14.61	15.08	1.08	5.39	27
7/30/2001	17:00	14.60	15.08	1.10	5.41	27
7/30/2001	17:30	14.60	15.08	1.10	5.41	27
7/30/2001	18:00	14.60	15.08	1.10	5.41	27
7/30/2001	18:30	14.59	15.08	1.13	5.44	28
7/30/2001	19:00	14.60	15.08	1.10	5.41	27
7/30/2001	19:30	14.60	15.08	1.10	5.41	27
7/30/2001	20:00	14.60	15.08	1.10	5.41	27
7/30/2001	20:30	14.60	15.08	1.10	5.41	27
7/30/2001	21:00	14.61	15.08	1.08	5.39	27



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/30/2001	21:30	14.61	15.08	1.08	5.39	27
7/30/2001	22:00	14.62	15.08	1.06	5.37	26
7/30/2001	22:30	14.62	15.08	1.06	5.37	26
7/30/2001	23:00	14.62	15.08	1.06	5.37	26
7/30/2001	23:30	14.62	15.08	1.06	5.37	26
7/31/2001	0:00	14.62	15.08	1.06	5.37	26
7/31/2001	0:30	14.63	15.08	1.03	5.34	26
7/31/2001	1:00	14.63	15.08	1.03	5.34	26
7/31/2001	1:30	14.63	15.08	1.03	5.34	26
7/31/2001	2:00	14.62	15.07	1.03	5.34	26
7/31/2001	2:30	14.62	15.07	1.03	5.34	26
7/31/2001	3:00	14.62	15.07	1.03	5.34	26
7/31/2001	3:30	14.62	15.07	1.03	5.34	26
7/31/2001	4:00	14.62	15.07	1.03	5.34	26
7/31/2001	4:30	14.62	15.07	1.03	5.34	26
7/31/2001	5:00	14.62	15.07	1.03	5.34	26
7/31/2001	5:30	14.61	15.06	1.03	5.34	26
7/31/2001	6:00	14.61	15.06	1.03	5.34	26
7/31/2001	6:30	14.61	15.06	1.03	5.34	26
7/31/2001	7:00	14.60	15.06	1.06	5.37	26
7/31/2001	7:30	14.60	15.06	1.06	5.37	26
7/31/2001	8:00	14.58	15.05	1.08	5.39	27
7/31/2001	8:30	14.57	15.05	1.10	5.41	27
7/31/2001	9:00	14.57	15.05	1.10	5.41	27
7/31/2001	9:30	14.56	15.04	1.10	5.41	27
7/31/2001	10:00	14.55	15.04	1.13	5.44	28
7/31/2001	10:30	14.55	15.04	1.13	5.44	28
7/31/2001	11:00	14.55	15.04	1.13	5.44	28
7/31/2001	11:30	14.52	15.04	1.20	5.51	30
7/31/2001	12:00	14.50	15.03	1.22	5.53	30
7/31/2001	12:30	14.50	15.02	1.20	5.51	30
7/31/2001	13:00	14.51	15.02	1.17	5.48	29
7/31/2001	13:30	14.51	15.01	1.15	5.46	28
7/31/2001	14:00	14.50	15.01	1.17	5.48	29
7/31/2001	14:30	14.49	15.01	1.20	5.51	30
7/31/2001	15:00	14.48	15.01	1.22	5.53	30
7/31/2001	15:30	14.47	15.00	1.22	5.53	30
7/31/2001	16:00	14.45	14.99	1.24	5.55	31
7/31/2001	16:30	14.43	14.99	1.29	5.60	32
7/31/2001	17:00	14.42	14.98	1.29	5.60	32
7/31/2001	17:30	14.44	14.98	1.24	5.55	31
7/31/2001	18:00	14.43	14.98	1.26	5.57	31
7/31/2001	18:30	14.42	14.98	1.29	5.60	32

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
7/31/2001	19:00	14.40	14.97	1.31	5.62	32
7/31/2001	19:30	14.40	14.97	1.31	5.62	32
7/31/2001	20:00	14.40	14.96	1.29	5.60	32
7/31/2001	20:30	14.39	14.96	1.31	5.62	32
7/31/2001	21:00	14.39	14.95	1.29	5.60	32
7/31/2001	21:30	14.38	14.95	1.31	5.62	32
7/31/2001	22:00	14.40	14.95	1.26	5.57	31
7/31/2001	22:30	14.42	14.95	1.22	5.53	30
7/31/2001	23:00	14.44	14.95	1.17	5.48	29
7/31/2001	23:30	14.45	14.95	1.15	5.46	28
8/1/2001	0:00	14.45	14.94	1.13	5.44	28
8/1/2001	0:30	14.45	14.94	1.13	5.44	28
8/1/2001	1:00	14.45	14.94	1.13	5.44	28
8/1/2001	1:30	14.45	14.93	1.10	5.41	27
8/1/2001	2:00	14.45	14.93	1.10	5.41	27
8/1/2001	2:30	14.45	14.92	1.08	5.39	27
8/1/2001	3:00	14.45	14.92	1.08	5.39	27
8/1/2001	3:30	14.45	14.92	1.08	5.39	27
8/1/2001	4:00	14.45	14.92	1.08	5.39	27
8/1/2001	4:30	14.45	14.92	1.08	5.39	27
8/1/2001	5:00	14.44	14.92	1.10	5.41	27
8/1/2001	5:30	14.43	14.92	1.13	5.44	28
8/1/2001	6:00	14.42	14.92	1.15	5.46	28
8/1/2001	6:30	14.42	14.92	1.15	5.46	28
8/1/2001	7:00	14.42	14.92	1.15	5.46	28
8/1/2001	7:30	14.42	14.92	1.15	5.46	28
8/1/2001	8:00	14.42	14.92	1.15	5.46	28
8/1/2001	8:30	14.42	14.92	1.15	5.46	28
8/1/2001	9:00	14.43	14.93	1.15	5.46	28
8/1/2001	9:30	14.42	14.93	1.17	5.48	29
8/1/2001	10:00	14.42	14.93	1.17	5.48	29
8/1/2001	10:30	14.42	14.93	1.17	5.48	29
8/1/2001	11:00	14.42	14.93	1.17	5.48	29
8/1/2001	11:30	14.42	14.93	1.17	5.48	29
8/1/2001	12:00	14.42	14.93	1.17	5.48	29
8/1/2001	12:30	14.42	14.93	1.17	5.48	29
8/1/2001	13:00	14.41	14.92	1.17	5.48	29
8/1/2001	13:30	14.41	14.92	1.17	5.48	29
8/1/2001	14:00	14.40	14.92	1.19	5.50	30
8/1/2001	14:30	14.41	14.92	1.17	5.48	29
8/1/2001	15:00	14.42	14.92	1.15	5.46	28
8/1/2001	15:30	14.42	14.92	1.15	5.46	28
8/1/2001	16:00	14.42	14.92	1.15	5.46	28

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/1/2001	16:30	14.42	14.92	1.15	5.46	28
8/1/2001	17:00	14.42	14.92	1.15	5.46	28
8/1/2001	17:30	14.42	14.92	1.15	5.46	28
8/1/2001	18:00	14.42	14.92	1.15	5.46	28
8/1/2001	18:30	14.42	14.91	1.13	5.44	28
8/1/2001	19:00	14.42	14.91	1.13	5.44	28
8/1/2001	19:30	14.43	14.92	1.13	5.44	28
8/1/2001	20:00	14.43	14.92	1.13	5.44	28
8/1/2001	20:30	14.43	14.91	1.10	5.41	27
8/1/2001	21:00	14.43	14.91	1.10	5.41	27
8/1/2001	21:30	14.43	14.91	1.10	5.41	27
8/1/2001	22:00	14.44	14.91	1.08	5.39	27
8/1/2001	22:30	14.44	14.92	1.10	5.41	27
8/1/2001	23:00	14.45	14.92	1.08	5.39	27
8/1/2001	23:30	14.45	14.92	1.08	5.39	27
8/2/2001	0:00	14.45	14.93	1.10	5.41	27
8/2/2001	0:30	14.46	14.94	1.10	5.41	27
8/2/2001	1:00	14.47	14.94	1.08	5.39	27
8/2/2001	1:30	14.47	14.95	1.10	5.41	27
8/2/2001	2:00	14.47	14.95	1.10	5.41	27
8/2/2001	2:30	14.47	14.95	1.10	5.41	27
8/2/2001	3:00	14.47	14.95	1.10	5.41	27
8/2/2001	3:30	14.48	14.96	1.10	5.41	27
8/2/2001	4:00	14.47	14.95	1.10	5.41	27
8/2/2001	4:30	14.47	14.95	1.10	5.41	27
8/2/2001	5:00	14.48	14.95	1.08	5.39	27
8/2/2001	5:30	14.48	14.96	1.10	5.41	27
8/2/2001	6:00	14.47	14.95	1.10	5.41	27
8/2/2001	6:30	14.47	14.95	1.10	5.41	27
8/2/2001	7:00	14.48	14.95	1.08	5.39	27
8/2/2001	7:30	14.48	14.96	1.10	5.41	27
8/2/2001	8:00	14.49	14.96	1.08	5.39	27
8/2/2001	8:30	14.49	14.97	1.10	5.41	27
8/2/2001	9:00	14.50	14.97	1.08	5.39	27
8/2/2001	9:30	14.50	14.98	1.10	5.41	27
8/2/2001	10:00	14.50	14.98	1.10	5.41	27
8/2/2001	10:30	14.50	14.98	1.10	5.41	27
8/2/2001	11:00	14.50	14.98	1.10	5.41	27
8/2/2001	11:30	14.51	14.98	1.08	5.39	27
8/2/2001	12:00	14.50	14.98	1.10	5.41	27
8/2/2001	12:30	14.50	14.98	1.10	5.41	27
8/2/2001	13:00	14.49	14.98	1.13	5.44	28
8/2/2001	13:30	14.50	14.98	1.10	5.41	27

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/2/2001	14:00	14.50	14.99	1.13	5.44	28
8/2/2001	14:30	14.50	14.99	1.13	5.44	28
8/2/2001	15:00	14.50	14.99	1.13	5.44	28
8/2/2001	15:30	14.50	14.99	1.13	5.44	28
8/2/2001	16:00	14.50	14.99	1.13	5.44	28
8/2/2001	16:30	14.50	14.99	1.13	5.44	28
8/2/2001	17:00	14.50	14.99	1.13	5.44	28
8/2/2001	17:30	14.50	14.99	1.13	5.44	28
8/2/2001	18:00	14.48	14.99	1.17	5.48	29
8/2/2001	18:30	14.50	15.00	1.15	5.46	28
8/2/2001	19:00	14.51	15.00	1.13	5.44	28
8/2/2001	19:30	14.50	14.99	1.13	5.44	28
8/2/2001	20:00	14.50	14.99	1.13	5.44	28
8/2/2001	20:30	14.51	15.00	1.13	5.44	28
8/2/2001	21:00	14.50	15.00	1.15	5.46	28
8/2/2001	21:30	14.51	15.01	1.15	5.46	28
8/2/2001	22:00	14.52	15.01	1.13	5.44	28
8/2/2001	22:30	14.52	15.01	1.13	5.44	28
8/2/2001	23:00	14.53	15.01	1.10	5.41	27
8/2/2001	23:30	14.53	15.01	1.10	5.41	27
8/3/2001	0:00	14.53	15.01	1.10	5.41	27
8/3/2001	0:30	14.54	15.01	1.08	5.39	27
8/3/2001	1:00	14.54	15.01	1.08	5.39	27
8/3/2001	1:30	14.54	15.01	1.08	5.39	27
8/3/2001	2:00	14.54	15.01	1.08	5.39	27
8/3/2001	2:30	14.54	15.01	1.08	5.39	27
8/3/2001	3:00	14.54	15.01	1.08	5.39	27
8/3/2001	3:30	14.53	15.01	1.10	5.41	27
8/3/2001	4:00	14.53	15.00	1.08	5.39	27
8/3/2001	4:30	14.53	15.00	1.08	5.39	27
8/3/2001	5:00	14.53	15.00	1.08	5.39	27
8/3/2001	5:30	14.53	15.00	1.08	5.39	27
8/3/2001	6:00	14.53	15.00	1.08	5.39	27
8/3/2001	6:30	14.53	15.00	1.08	5.39	27
8/3/2001	7:00	14.52	15.00	1.10	5.41	27
8/3/2001	7:30	14.52	15.00	1.10	5.41	27
8/3/2001	8:00	14.52	15.00	1.10	5.41	27
8/3/2001	8:30	14.52	14.99	1.08	5.39	27
8/3/2001	9:00	14.52	14.99	1.08	5.39	27
8/3/2001	9:30	14.51	14.99	1.10	5.41	27
8/3/2001	10:00	14.50	14.99	1.12	5.43	28
8/3/2001	10:30	14.50	14.98	1.10	5.41	27
8/3/2001	11:00	14.49	14.98	1.12	5.43	28

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/3/2001	11:30	14.48	14.98	1.15	5.46	28
8/3/2001	12:00	14.48	14.98	1.15	5.46	28
8/3/2001	12:30	14.47	14.98	1.17	5.48	29
8/3/2001	13:00	14.46	14.97	1.17	5.48	29
8/3/2001	13:30	14.45	14.97	1.19	5.50	30
8/3/2001	14:00	14.45	14.96	1.17	5.48	29
8/3/2001	14:30	14.44	14.96	1.19	5.50	30
8/3/2001	15:00	14.43	14.95	1.19	5.50	30
8/3/2001	15:30	14.42	14.95	1.22	5.53	30
8/3/2001	16:00	14.42	14.95	1.22	5.53	30
8/3/2001	16:30	14.42	14.95	1.22	5.53	30
8/3/2001	17:00	14.43	14.95	1.19	5.50	30
8/3/2001	17:30	14.42	14.94	1.19	5.50	30
8/3/2001	18:00	14.42	14.94	1.19	5.50	30
8/3/2001	18:30	14.41	14.93	1.19	5.50	30
8/3/2001	19:00	14.40	14.92	1.19	5.50	30
8/3/2001	19:30	14.39	14.92	1.22	5.53	30
8/3/2001	20:00	14.39	14.92	1.22	5.53	30
8/3/2001	20:30	14.40	14.92	1.19	5.50	30
8/3/2001	21:00	14.41	14.92	1.17	5.48	29
8/3/2001	21:30	14.41	14.92	1.17	5.48	29
8/3/2001	22:00	14.41	14.92	1.17	5.48	29
8/3/2001	22:30	14.41	14.92	1.17	5.48	29
8/3/2001	23:00	14.41	14.92	1.17	5.48	29
8/3/2001	23:30	14.41	14.92	1.17	5.48	29
8/4/2001	0:00	14.42	14.92	1.15	5.46	28
8/4/2001	0:30	14.41	14.92	1.17	5.48	29
8/4/2001	1:00	14.42	14.92	1.15	5.46	28
8/4/2001	1:30	14.41	14.92	1.17	5.48	29
8/4/2001	2:00	14.41	14.92	1.17	5.48	29
8/4/2001	2:30	14.41	14.92	1.17	5.48	29
8/4/2001	3:00	14.41	14.92	1.17	5.48	29
8/4/2001	3:30	14.40	14.91	1.17	5.48	29
8/4/2001	4:00	14.40	14.91	1.17	5.48	29
8/4/2001	4:30	14.40	14.90	1.15	5.46	28
8/4/2001	5:00	14.40	14.90	1.15	5.46	28
8/4/2001	5:30	14.40	14.90	1.15	5.46	28
8/4/2001	6:00	14.41	14.89	1.10	5.41	27
8/4/2001	6:30	14.41	14.90	1.12	5.43	28
8/4/2001	7:00	14.41	14.90	1.12	5.43	28
8/4/2001	7:30	14.40	14.89	1.12	5.43	28
8/4/2001	8:00	14.40	14.89	1.12	5.43	28
8/4/2001	8:30	14.40	14.89	1.12	5.43	28

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/4/2001	9:00	14.39	14.88	1.12	5.43	28
8/4/2001	9:30	14.38	14.88	1.15	5.46	28
8/4/2001	10:00	14.38	14.88	1.15	5.46	28
8/4/2001	10:30	14.38	14.87	1.12	5.43	28
8/4/2001	11:00	14.38	14.87	1.12	5.43	28
8/4/2001	11:30	14.40	14.86	1.05	5.36	26
8/4/2001	12:00	14.39	14.86	1.08	5.39	27
8/4/2001	12:30	14.39	14.86	1.08	5.39	27
8/4/2001	13:00	14.38	14.86	1.10	5.41	27
8/4/2001	13:30	14.35	14.86	1.17	5.48	29
8/4/2001	14:00	14.36	14.85	1.12	5.43	28
8/4/2001	14:30	14.35	14.84	1.12	5.43	28
8/4/2001	15:00	14.35	14.84	1.12	5.43	28
8/4/2001	15:30	14.33	14.83	1.15	5.46	28
8/4/2001	16:00	14.30	14.82	1.19	5.50	30
8/4/2001	16:30	14.29	14.81	1.19	5.50	29
8/4/2001	17:00	14.27	14.81	1.24	5.55	31
8/4/2001	17:30	14.27	14.80	1.22	5.53	30
8/4/2001	18:00	14.27	14.80	1.22	5.53	30
8/4/2001	18:30	14.26	14.80	1.24	5.55	31
8/4/2001	19:00	14.26	14.80	1.24	5.55	31
8/4/2001	19:30	14.27	14.80	1.22	5.53	30
8/4/2001	20:00	14.28	14.80	1.19	5.50	29
8/4/2001	20:30	14.29	14.81	1.19	5.50	29
8/4/2001	21:00	14.31	14.82	1.17	5.48	29
8/4/2001	21:30	14.33	14.83	1.15	5.46	28
8/4/2001	22:00	14.34	14.84	1.15	5.46	28
8/4/2001	22:30	14.35	14.84	1.12	5.43	28
8/4/2001	23:00	14.35	14.85	1.15	5.46	28
8/4/2001	23:30	14.36	14.86	1.15	5.46	28
8/5/2001	0:00	14.37	14.86	1.12	5.43	28
8/5/2001	0:30	14.37	14.86	1.12	5.43	28
8/5/2001	1:00	14.38	14.86	1.10	5.41	27
8/5/2001	1:30	14.38	14.86	1.10	5.41	27
8/5/2001	2:00	14.39	14.87	1.10	5.41	27
8/5/2001	2:30	14.39	14.88	1.12	5.43	28
8/5/2001	3:00	14.40	14.88	1.10	5.41	27
8/5/2001	3:30	14.40	14.89	1.12	5.43	28
8/5/2001	4:00	14.41	14.89	1.10	5.41	27
8/5/2001	4:30	14.41	14.89	1.10	5.41	27
8/5/2001	5:00	14.42	14.90	1.10	5.41	27
8/5/2001	5:30	14.42	14.89	1.08	5.39	27
8/5/2001	6:00	14.42	14.90	1.10	5.41	27

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/5/2001	6:30	14.43	14.91	1.10	5.41	27
8/5/2001	7:00	14.43	14.91	1.10	5.41	27
8/5/2001	7:30	14.43	14.92	1.12	5.43	28
8/5/2001	8:00	14.43	14.92	1.12	5.43	28
8/5/2001	8:30	14.43	14.92	1.12	5.43	28
8/5/2001	9:00	14.43	14.92	1.12	5.43	28
8/5/2001	9:30	14.43	14.92	1.12	5.43	28
8/5/2001	10:00	14.43	14.92	1.12	5.43	28
8/5/2001	10:30	14.43	14.93	1.15	5.46	28
8/5/2001	11:00	14.43	14.93	1.15	5.46	28
8/5/2001	11:30	14.43	14.93	1.15	5.46	28
8/5/2001	12:00	14.43	14.94	1.17	5.48	29
8/5/2001	12:30	14.43	14.94	1.17	5.48	29
8/5/2001	13:00	14.43	14.95	1.19	5.50	29
8/5/2001	13:30	14.44	14.95	1.17	5.48	29
8/5/2001	14:00	14.45	14.95	1.15	5.46	28
8/5/2001	14:30	14.45	14.95	1.15	5.46	28
8/5/2001	15:00	14.45	14.96	1.17	5.48	29
8/5/2001	15:30	14.45	14.96	1.17	5.48	29
8/5/2001	16:00	14.45	14.96	1.17	5.48	29
8/5/2001	16:30	14.44	14.96	1.19	5.50	29
8/5/2001	17:00	14.45	14.96	1.17	5.48	29
8/5/2001	17:30	14.45	14.96	1.17	5.48	29
8/5/2001	18:00	14.45	14.97	1.19	5.50	29
8/5/2001	18:30	14.45	14.97	1.19	5.50	29
8/5/2001	19:00	14.45	14.97	1.19	5.50	29
8/5/2001	19:30	14.45	14.97	1.19	5.50	29
8/5/2001	20:00	14.45	14.97	1.19	5.50	29
8/5/2001	20:30	14.46	14.97	1.17	5.48	29
8/5/2001	21:00	14.47	14.98	1.17	5.48	29
8/5/2001	21:30	14.47	14.98	1.17	5.48	29
8/5/2001	22:00	14.48	14.98	1.15	5.46	28
8/5/2001	22:30	14.48	14.98	1.15	5.46	28
8/5/2001	23:00	14.49	14.98	1.12	5.43	28
8/5/2001	23:30	14.49	14.98	1.12	5.43	28
8/6/2001	0:00	14.49	14.98	1.12	5.43	28
8/6/2001	0:30	14.50	14.98	1.10	5.41	27
8/6/2001	1:00	14.50	14.98	1.10	5.41	27
8/6/2001	1:30	14.50	14.98	1.10	5.41	27
8/6/2001	2:00	14.50	14.98	1.10	5.41	27
8/6/2001	2:30	14.50	14.98	1.10	5.41	27
8/6/2001	3:00	14.50	14.98	1.10	5.41	27
8/6/2001	3:30	14.50	14.98	1.10	5.41	27

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/6/2001	4:00	14.50	14.98	1.10	5.41	27
8/6/2001	4:30	14.50	14.98	1.10	5.41	27
8/6/2001	5:00	14.50	14.98	1.10	5.41	27
8/6/2001	5:30	14.50	14.98	1.10	5.41	27
8/6/2001	6:00	14.50	14.98	1.10	5.41	27
8/6/2001	6:30	14.50	14.98	1.10	5.41	27
8/6/2001	7:00	14.50	14.99	1.12	5.43	28
8/6/2001	7:30	14.50	14.99	1.12	5.43	28
8/6/2001	8:00	14.50	14.99	1.12	5.43	28
8/6/2001	8:30	14.49	14.99	1.15	5.46	28
8/6/2001	9:00	14.49	15.00	1.17	5.48	29
8/6/2001	9:30	14.48	15.00	1.19	5.50	29
8/6/2001	10:00	14.48	15.00	1.19	5.50	29
8/6/2001	10:30	14.47	15.00	1.21	5.52	30
8/6/2001	11:00	14.46	15.00	1.24	5.55	31
8/6/2001	11:30	14.45	15.00	1.26	5.57	31
8/6/2001	12:00	14.45	15.00	1.26	5.57	31
8/6/2001	12:30	14.45	15.00	1.26	5.57	31
8/6/2001	13:00	14.44	15.00	1.28	5.59	32
8/6/2001	13:30	14.43	15.00	1.31	5.62	32
8/6/2001	14:00	14.42	15.00	1.33	5.64	33
8/6/2001	14:30	14.42	15.00	1.33	5.64	33
8/6/2001	15:00	14.41	15.00	1.35	5.66	33
8/6/2001	15:30	14.40	15.00	1.38	5.69	34
8/6/2001	16:00	14.40	14.99	1.35	5.66	33
8/6/2001	16:30	14.40	14.99	1.35	5.66	33
8/6/2001	17:00	14.40	14.99	1.35	5.66	33
8/6/2001	17:30	14.40	14.99	1.35	5.66	33
8/6/2001	18:00	14.40	14.99	1.35	5.66	33
8/6/2001	18:30	14.40	14.99	1.35	5.66	33
8/6/2001	19:00	14.40	14.99	1.35	5.66	33
8/6/2001	19:30	14.42	14.99	1.31	5.62	32
8/6/2001	20:00	14.42	14.99	1.31	5.62	32
8/6/2001	20:30	14.42	14.99	1.31	5.62	32
8/6/2001	21:00	14.43	14.99	1.28	5.59	32
8/6/2001	21:30	14.43	14.98	1.26	5.57	31
8/6/2001	22:00	14.44	14.98	1.24	5.55	31
8/6/2001	22:30	14.44	14.98	1.24	5.55	31
8/6/2001	23:00	14.45	14.99	1.24	5.55	31
8/6/2001	23:30	14.45	14.99	1.24	5.55	31
8/7/2001	0:00	14.45	14.99	1.24	5.55	31
8/7/2001	0:30	14.46	15.00	1.24	5.55	31
8/7/2001	1:00	14.47	15.00	1.21	5.52	30



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/7/2001	1:30	14.47	15.00	1.21	5.52	30
8/7/2001	2:00	14.46	14.99	1.21	5.52	30
8/7/2001	2:30	14.46	14.99	1.21	5.52	30
8/7/2001	3:00	14.47	15.00	1.21	5.52	30
8/7/2001	3:30	14.47	15.01	1.24	5.55	31
8/7/2001	4:00	14.47	15.00	1.21	5.52	30
8/7/2001	4:30	14.47	15.00	1.21	5.52	30
8/7/2001	5:00	14.47	15.00	1.21	5.52	30
8/7/2001	5:30	14.47	15.00	1.21	5.52	30
8/7/2001	6:00	14.46	15.00	1.24	5.55	31
8/7/2001	6:30	14.47	15.00	1.21	5.52	30
8/7/2001	7:00	14.46	15.00	1.24	5.55	31
8/7/2001	7:30	14.46	15.00	1.24	5.55	31
8/7/2001	8:00	14.46	15.00	1.24	5.55	31
8/7/2001	8:30	14.46	15.00	1.24	5.55	31
8/7/2001	9:00	14.46	15.00	1.24	5.55	31
8/7/2001	9:30	14.46	15.01	1.26	5.57	31
8/7/2001	10:00	14.46	15.01	1.26	5.57	31
8/7/2001	10:30	14.46	15.01	1.26	5.57	31
8/7/2001	11:00	14.46	15.01	1.26	5.57	31
8/7/2001	11:30	14.46	15.01	1.26	5.57	31
8/7/2001	12:00	14.47	15.02	1.26	5.57	31
8/7/2001	12:30	14.47	15.03	1.28	5.59	32
8/7/2001	13:00	14.47	15.03	1.28	5.59	32
8/7/2001	13:30	14.48	15.04	1.28	5.59	32
8/7/2001	14:00	14.49	15.04	1.26	5.57	31
8/7/2001	14:30	14.50	15.05	1.26	5.57	31
8/7/2001	15:00	14.50	15.05	1.26	5.57	31
8/7/2001	15:30	14.51	15.06	1.26	5.57	31
8/7/2001	16:00	14.52	15.07	1.26	5.57	31
8/7/2001	16:30	14.53	15.07	1.24	5.55	31
8/7/2001	17:00	14.53	15.08	1.26	5.57	31
8/7/2001	17:30	14.55	15.08	1.21	5.52	30
8/7/2001	18:00	14.55	15.10	1.26	5.57	31
8/7/2001	18:30	14.56	15.10	1.24	5.55	31
8/7/2001	19:00	14.56	15.10	1.24	5.55	31
8/7/2001	19:30	14.57	15.10	1.21	5.52	30
8/7/2001	20:00	14.57	15.10	1.21	5.52	30
8/7/2001	20:30	14.57	15.10	1.21	5.52	30
8/7/2001	21:00	14.58	15.10	1.19	5.50	29
8/7/2001	21:30	14.58	15.11	1.21	5.52	30
8/7/2001	22:00	14.59	15.12	1.21	5.52	30
8/7/2001	22:30	14.60	15.12	1.19	5.50	29

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/7/2001	23:00	14.60	15.13	1.21	5.52	30
8/7/2001	23:30	14.61	15.13	1.19	5.50	29
8/8/2001	0:00	14.61	15.13	1.19	5.50	29
8/8/2001	0:30	14.61	15.13	1.19	5.50	29
8/8/2001	1:00	14.62	15.13	1.17	5.48	29
8/8/2001	1:30	14.62	15.13	1.17	5.48	29
8/8/2001	2:00	14.62	15.13	1.17	5.48	29
8/8/2001	2:30	14.62	15.13	1.17	5.48	29
8/8/2001	3:00	14.61	15.13	1.19	5.50	29
8/8/2001	3:30	14.61	15.12	1.17	5.48	29
8/8/2001	4:00	14.61	15.12	1.17	5.48	29
8/8/2001	4:30	14.60	15.12	1.19	5.50	29
8/8/2001	5:00	14.60	15.12	1.19	5.50	29
8/8/2001	5:30	14.60	15.12	1.19	5.50	29
8/8/2001	6:00	14.60	15.12	1.19	5.50	29
8/8/2001	6:30	14.60	15.12	1.19	5.50	29
8/8/2001	7:00	14.60	15.12	1.19	5.50	29
8/8/2001	7:30	14.60	15.12	1.19	5.50	29
8/8/2001	8:00	14.59	15.11	1.19	5.50	29
8/8/2001	8:30	14.59	15.11	1.19	5.50	29
8/8/2001	9:00	14.58	15.11	1.21	5.52	30
8/8/2001	9:30	14.57	15.10	1.21	5.52	30
8/8/2001	10:00	14.57	15.10	1.21	5.52	30
8/8/2001	10:30	14.56	15.10	1.24	5.55	31
8/8/2001	11:00	14.56	15.10	1.24	5.55	31
8/8/2001	11:30	14.57	15.10	1.21	5.52	30
8/8/2001	12:00	14.56	15.10	1.24	5.55	31
8/8/2001	12:30	14.56	15.10	1.24	5.55	31
8/8/2001	13:00	14.56	15.10	1.24	5.55	31
8/8/2001	13:30	14.55	15.10	1.26	5.57	31
8/8/2001	14:00	14.54	15.09	1.26	5.57	31
8/8/2001	14:30	14.53	15.09	1.28	5.59	32
8/8/2001	15:00	14.53	15.08	1.26	5.57	31
8/8/2001	15:30	14.52	15.08	1.28	5.59	32
8/8/2001	16:00	14.52	15.07	1.26	5.57	31
8/8/2001	16:30	14.51	15.07	1.28	5.59	32
8/8/2001	17:00	14.51	15.07	1.28	5.59	32
8/8/2001	17:30	14.50	15.07	1.31	5.62	32
8/8/2001	18:00	14.49	15.06	1.31	5.62	32
8/8/2001	18:30	14.51	15.06	1.26	5.57	31
8/8/2001	19:00	14.52	15.06	1.24	5.55	31
8/8/2001	19:30	14.51	15.05	1.24	5.55	31
8/8/2001	20:00	14.51	15.04	1.21	5.52	30

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/8/2001	20:30	14.50	15.04	1.24	5.55	31
8/8/2001	21:00	14.51	15.04	1.21	5.52	30
8/8/2001	21:30	14.51	15.04	1.21	5.52	30
8/8/2001	22:00	14.51	15.04	1.21	5.52	30
8/8/2001	22:30	14.50	15.03	1.21	5.52	30
8/8/2001	23:00	14.50	15.02	1.19	5.50	29
8/8/2001	23:30	14.50	15.02	1.19	5.50	29
8/9/2001	0:00	14.51	15.02	1.17	5.48	29
8/9/2001	0:30	14.51	15.03	1.19	5.50	29
8/9/2001	1:00	14.51	15.03	1.19	5.50	29
8/9/2001	1:30	14.51	15.03	1.19	5.50	29
8/9/2001	2:00	14.50	15.02	1.19	5.50	29
8/9/2001	2:30	14.50	15.02	1.19	5.50	29
8/9/2001	3:00	14.51	15.03	1.19	5.50	29
8/9/2001	3:30	14.51	15.03	1.19	5.50	29
8/9/2001	4:00	14.51	15.03	1.19	5.50	29
8/9/2001	4:30	14.52	15.03	1.17	5.48	29
8/9/2001	5:00	14.53	15.03	1.14	5.45	28
8/9/2001	5:30	14.53	15.04	1.17	5.48	29
8/9/2001	6:00	14.53	15.04	1.17	5.48	29
8/9/2001	6:30	14.53	15.04	1.17	5.48	29
8/9/2001	7:00	14.53	15.04	1.17	5.48	29
8/9/2001	7:30	14.53	15.04	1.17	5.48	29
8/9/2001	8:00	14.54	15.04	1.14	5.45	28
8/9/2001	8:30	14.54	15.04	1.14	5.45	28
8/9/2001	9:00	14.53	15.05	1.19	5.50	29
8/9/2001	9:30	14.52	15.05	1.21	5.52	30
8/9/2001	10:00	14.52	15.05	1.21	5.52	30
8/9/2001	10:30	14.52	15.06	1.24	5.55	30
8/9/2001	11:00	14.52	15.06	1.24	5.55	30
8/9/2001	11:30	14.52	15.06	1.24	5.55	30
8/9/2001	12:00	14.52	15.06	1.24	5.55	30
8/9/2001	12:30	14.52	15.07	1.26	5.57	31
8/9/2001	13:00	14.52	15.07	1.26	5.57	31
8/9/2001	13:30	14.51	15.07	1.28	5.59	32
8/9/2001	14:00	14.51	15.07	1.28	5.59	32
8/9/2001	14:30	14.51	15.07	1.28	5.59	32
8/9/2001	15:00	14.51	15.07	1.28	5.59	32
8/9/2001	15:30	14.50	15.07	1.30	5.61	32
8/9/2001	16:00	14.50	15.06	1.28	5.59	32
8/9/2001	16:30	14.50	15.07	1.30	5.61	32
8/9/2001	17:00	14.50	15.06	1.28	5.59	32
8/9/2001	17:30	14.48	15.06	1.33	5.64	33

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/9/2001	18:00	14.46	15.06	1.37	5.68	34
8/9/2001	18:30	14.45	15.05	1.37	5.68	34
8/9/2001	19:00	14.45	15.05	1.37	5.68	34
8/9/2001	19:30	14.44	15.04	1.37	5.68	34
8/9/2001	20:00	14.45	15.04	1.35	5.66	33
8/9/2001	20:30	14.46	15.04	1.33	5.64	33
8/9/2001	21:00	14.47	15.04	1.30	5.61	32
8/9/2001	21:30	14.47	15.03	1.28	5.59	32
8/9/2001	22:00	14.49	15.03	1.24	5.55	30
8/9/2001	22:30	14.49	15.02	1.21	5.52	30
8/9/2001	23:00	14.49	15.02	1.21	5.52	30
8/9/2001	23:30	14.49	15.01	1.19	5.50	29
8/10/2001	0:00	14.49	15.01	1.19	5.50	29
8/10/2001	0:30	14.48	15.01	1.21	5.52	30
8/10/2001	1:00	14.48	15.01	1.21	5.52	30
8/10/2001	1:30	14.47	15.01	1.24	5.55	30
8/10/2001	2:00	14.47	15.00	1.21	5.52	30
8/10/2001	2:30	14.46	14.99	1.21	5.52	30
8/10/2001	3:00	14.46	14.99	1.21	5.52	30
8/10/2001	3:30	14.46	14.98	1.19	5.50	29
8/10/2001	4:00	14.45	14.98	1.21	5.52	30
8/10/2001	4:30	14.45	14.98	1.21	5.52	30
8/10/2001	5:00	14.45	14.98	1.21	5.52	30
8/10/2001	5:30	14.45	14.98	1.21	5.52	30
8/10/2001	6:00	14.45	14.98	1.21	5.52	30
8/10/2001	6:30	14.44	14.98	1.24	5.55	30
8/10/2001	7:00	14.44	14.98	1.24	5.55	30
8/10/2001	7:30	14.44	14.97	1.21	5.52	30
8/10/2001	8:00	14.43	14.97	1.23	5.54	30
8/10/2001	8:30	14.43	14.97	1.23	5.54	30
8/10/2001	9:00	14.44	14.97	1.21	5.52	30
8/10/2001	9:30	14.44	14.97	1.21	5.52	30
8/10/2001	10:00	14.45	14.97	1.19	5.50	29
8/10/2001	10:30	14.45	14.97	1.19	5.50	29
8/10/2001	11:00	14.45	14.97	1.19	5.50	29
8/10/2001	11:30	14.45	14.98	1.21	5.52	30
8/10/2001	12:00	14.44	14.98	1.23	5.54	30
8/10/2001	12:30	14.43	14.98	1.26	5.57	31
8/10/2001	13:00	14.44	14.99	1.26	5.57	31
8/10/2001	13:30	14.44	14.99	1.26	5.57	31
8/10/2001	14:00	14.44	14.99	1.26	5.57	31
8/10/2001	14:30	14.44	15.00	1.28	5.59	32
8/10/2001	15:00	14.44	15.00	1.28	5.59	32

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/10/2001	15:30	14.44	15.00	1.28	5.59	32
8/10/2001	16:00	14.43	15.00	1.30	5.61	32
8/10/2001	16:30	14.43	15.00	1.30	5.61	32
8/10/2001	17:00	14.45	15.01	1.28	5.59	32
8/10/2001	17:30	14.45	15.01	1.28	5.59	32
8/10/2001	18:00	14.45	15.01	1.28	5.59	32
8/10/2001	18:30	14.46	15.01	1.26	5.57	31
8/10/2001	19:00	14.47	15.02	1.26	5.57	31
8/10/2001	19:30	14.47	15.02	1.26	5.57	31
8/10/2001	20:00	14.48	15.03	1.26	5.57	31
8/10/2001	20:30	14.49	15.04	1.26	5.57	31
8/10/2001	21:00	14.51	15.04	1.21	5.52	30
8/10/2001	21:30	14.52	15.04	1.19	5.50	29
8/10/2001	22:00	14.52	15.05	1.21	5.52	30
8/10/2001	22:30	14.54	15.06	1.19	5.50	29
8/10/2001	23:00	14.55	15.07	1.19	5.50	29
8/10/2001	23:30	14.56	15.07	1.17	5.48	29
8/11/2001	0:00	14.57	15.07	1.14	5.45	28
8/11/2001	0:30	14.58	15.08	1.14	5.45	28
8/11/2001	1:00	14.58	15.09	1.17	5.48	29
8/11/2001	1:30	14.58	15.09	1.17	5.48	29
8/11/2001	2:00	14.59	15.10	1.17	5.48	29
8/11/2001	2:30	14.60	15.10	1.14	5.45	28
8/11/2001	3:00	14.60	15.10	1.14	5.45	28
8/11/2001	3:30	14.60	15.10	1.14	5.45	28
8/11/2001	4:00	14.60	15.10	1.14	5.45	28
8/11/2001	4:30	14.60	15.11	1.17	5.48	29
8/11/2001	5:00	14.61	15.11	1.14	5.45	28
8/11/2001	5:30	14.60	15.11	1.17	5.48	29
8/11/2001	6:00	14.60	15.10	1.14	5.45	28
8/11/2001	6:30	14.60	15.10	1.14	5.45	28
8/11/2001	7:00	14.60	15.10	1.14	5.45	28
8/11/2001	7:30	14.59	15.10	1.17	5.48	29
8/11/2001	8:00	14.59	15.10	1.17	5.48	29
8/11/2001	8:30	14.58	15.10	1.19	5.50	29
8/11/2001	9:00	14.57	15.10	1.21	5.52	30
8/11/2001	9:30	14.56	15.10	1.23	5.54	30
8/11/2001	10:00	14.55	15.10	1.26	5.57	31
8/11/2001	10:30	14.55	15.09	1.23	5.54	30
8/11/2001	11:00	14.54	15.09	1.26	5.57	31
8/11/2001	11:30	14.53	15.09	1.28	5.59	32
8/11/2001	12:00	14.52	15.08	1.28	5.59	32
8/11/2001	12:30	14.52	15.08	1.28	5.59	32

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/11/2001	13:00	14.50	15.08	1.33	5.64	33
8/11/2001	13:30	14.49	15.08	1.35	5.66	33
8/11/2001	14:00	14.49	15.07	1.33	5.64	33
8/11/2001	14:30	14.49	15.07	1.33	5.64	33
8/11/2001	15:00	14.47	15.07	1.37	5.68	34
8/11/2001	15:30	14.48	15.07	1.35	5.66	33
8/11/2001	16:00	14.45	15.07	1.42	5.73	35
8/11/2001	16:30	14.47	15.07	1.37	5.68	34
8/11/2001	17:00	14.48	15.07	1.35	5.66	33
8/11/2001	17:30	14.48	15.07	1.35	5.66	33
8/11/2001	18:00	14.48	15.07	1.35	5.66	33
8/11/2001	18:30	14.47	15.07	1.37	5.68	34
8/11/2001	19:00	14.47	15.07	1.37	5.68	34
8/11/2001	19:30	14.47	15.07	1.37	5.68	34
8/11/2001	20:00	14.47	15.07	1.37	5.68	34
8/11/2001	20:30	14.49	15.07	1.33	5.64	33
8/11/2001	21:00	14.49	15.07	1.33	5.64	33
8/11/2001	21:30	14.49	15.07	1.33	5.64	33
8/11/2001	22:00	14.50	15.07	1.30	5.61	32
8/11/2001	22:30	14.50	15.07	1.30	5.61	32
8/11/2001	23:00	14.51	15.07	1.28	5.59	32
8/11/2001	23:30	14.52	15.07	1.26	5.57	31
8/12/2001	0:00	14.52	15.07	1.26	5.57	31
8/12/2001	0:30	14.52	15.07	1.26	5.57	31
8/12/2001	1:00	14.53	15.07	1.23	5.54	30
8/12/2001	1:30	14.53	15.07	1.23	5.54	30
8/12/2001	2:00	14.54	15.07	1.21	5.52	30
8/12/2001	2:30	14.54	15.07	1.21	5.52	30
8/12/2001	3:00	14.53	15.07	1.23	5.54	30
8/12/2001	3:30	14.54	15.07	1.21	5.52	30
8/12/2001	4:00	14.53	15.07	1.23	5.54	30
8/12/2001	4:30	14.52	15.07	1.26	5.57	31
8/12/2001	5:00	14.52	15.07	1.26	5.57	31
8/12/2001	5:30	14.50	15.06	1.28	5.59	32
8/12/2001	6:00	14.50	15.06	1.28	5.59	32
8/12/2001	6:30	14.50	15.06	1.28	5.59	32
8/12/2001	7:00	14.49	15.05	1.28	5.59	32
8/12/2001	7:30	14.48	15.04	1.28	5.59	32
8/12/2001	8:00	14.47	15.04	1.30	5.61	32
8/12/2001	8:30	14.47	15.04	1.30	5.61	32
8/12/2001	9:00	14.45	15.03	1.33	5.64	33
8/12/2001	9:30	14.45	15.02	1.30	5.61	32
8/12/2001	10:00	14.44	15.02	1.33	5.64	33

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/12/2001	10:30	14.44	15.01	1.30	5.61	32
8/12/2001	11:00	14.43	15.01	1.33	5.64	33
8/12/2001	11:30	14.42	15.01	1.35	5.66	33
8/12/2001	12:00	14.43	15.01	1.33	5.64	33
8/12/2001	12:30	14.43	15.01	1.33	5.64	33
8/12/2001	13:00	14.44	15.01	1.30	5.61	32
8/12/2001	13:30	14.45	15.01	1.28	5.59	32
8/12/2001	14:00	14.44	15.01	1.30	5.61	32
8/12/2001	14:30	14.44	15.01	1.30	5.61	32
8/12/2001	15:00	14.44	15.01	1.30	5.61	32
8/12/2001	15:30	14.44	15.01	1.30	5.61	32
8/12/2001	16:00	14.42	15.01	1.35	5.66	33
8/12/2001	16:30	14.42	15.01	1.35	5.66	33
8/12/2001	17:00	14.41	15.01	1.37	5.68	34
8/12/2001	17:30	14.42	15.00	1.33	5.64	33
8/12/2001	18:00	14.42	15.01	1.35	5.66	33
8/12/2001	18:30	14.45	15.01	1.28	5.59	32
8/12/2001	19:00	14.44	15.01	1.30	5.61	32
8/12/2001	19:30	14.44	15.01	1.30	5.61	32
8/12/2001	20:00	14.43	15.01	1.33	5.64	33
8/12/2001	20:30	14.42	15.01	1.35	5.66	33
8/12/2001	21:00	14.42	15.01	1.35	5.66	33
8/12/2001	21:30	14.43	15.02	1.35	5.66	33
8/12/2001	22:00	14.43	15.02	1.35	5.66	33
8/12/2001	22:30	14.44	15.03	1.35	5.66	33
8/12/2001	23:00	14.44	15.03	1.35	5.66	33
8/12/2001	23:30	14.45	15.04	1.35	5.66	33
8/13/2001	0:00	14.45	15.04	1.35	5.66	33
8/13/2001	0:30	14.45	15.04	1.35	5.66	33
8/13/2001	1:00	14.47	15.05	1.33	5.64	33
8/13/2001	1:30	14.47	15.06	1.35	5.66	33
8/13/2001	2:00	14.48	15.07	1.35	5.66	33
8/13/2001	2:30	14.49	15.07	1.33	5.64	33
8/13/2001	3:00	14.50	15.07	1.30	5.61	32
8/13/2001	3:30	14.50	15.08	1.33	5.64	33
8/13/2001	4:00	14.50	15.09	1.35	5.66	33
8/13/2001	4:30	14.51	15.09	1.33	5.64	33
8/13/2001	5:00	14.51	15.09	1.33	5.64	33
8/13/2001	5:30	14.51	15.10	1.35	5.66	33
8/13/2001	6:00	14.52	15.10	1.33	5.64	33
8/13/2001	6:30	14.52	15.10	1.32	5.63	33
8/13/2001	7:00	14.52	15.10	1.32	5.63	33
8/13/2001	7:30	14.52	15.11	1.35	5.66	33

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/13/2001	8:00	14.52	15.11	1.35	5.66	33
8/13/2001	8:30	14.54	15.11	1.30	5.61	32
8/13/2001	9:00	14.54	15.11	1.30	5.61	32
8/13/2001	9:30	14.54	15.12	1.32	5.63	33
8/13/2001	10:00	14.55	15.12	1.30	5.61	32
8/13/2001	10:30	14.55	15.12	1.30	5.61	32
8/13/2001	11:00	14.55	15.13	1.32	5.63	33
8/13/2001	11:30	14.54	15.13	1.35	5.66	33
8/13/2001	12:00	14.55	15.13	1.32	5.63	33
8/13/2001	12:30	14.55	15.14	1.35	5.66	33
8/13/2001	13:00	14.55	15.14	1.35	5.66	33
8/13/2001	13:30	14.55	15.14	1.35	5.66	33
8/13/2001	14:00	14.55	15.14	1.35	5.66	33
8/13/2001	14:30	14.55	15.15	1.37	5.68	34
8/13/2001	15:00	14.55	15.14	1.35	5.66	33
8/13/2001	15:30	14.54	15.14	1.37	5.68	34
8/13/2001	16:00	14.54	15.14	1.37	5.68	34
8/13/2001	16:30	14.54	15.14	1.37	5.68	34
8/13/2001	17:00	14.53	15.14	1.39	5.70	34
8/13/2001	17:30	14.52	15.14	1.42	5.73	35
8/13/2001	18:00	14.52	15.14	1.42	5.73	35
8/13/2001	18:30	14.52	15.13	1.39	5.70	34
8/13/2001	19:00	14.52	15.13	1.39	5.70	34
8/13/2001	19:30	14.52	15.13	1.39	5.70	34
8/13/2001	20:00	14.51	15.13	1.42	5.73	35
8/13/2001	20:30	14.51	15.13	1.42	<b>5.72</b>	35
8/13/2001	21:00	14.51	15.13	1.42	5.73	35
8/13/2001	21:16	-	-	-	<b>5.73</b>	35
8/13/2001	21:30	14.50	15.13	1.45	5.75	36
8/13/2001	21:59	-	-	-	<b>5.74</b>	<b>33.9</b>
8/13/2001	22:00	14.50	15.13	1.44	5.74	36
8/13/2001	22:30	14.50	15.13	1.44	5.74	35
8/13/2001	22:33	-	-	-	<b>5.74</b>	35
8/13/2001	22:37	-	-	-	<b>5.74</b>	35
8/13/2001	23:00	14.50	15.14	1.47	5.74	36
8/13/2001	23:01	-	-	-	<b>5.74</b>	35
8/13/2001	23:30	14.50	15.15	1.50	5.77	37
8/14/2001	0:00	14.50	15.15	1.50	5.77	37
8/14/2001	0:30	14.50	15.15	1.51	5.78	37
8/14/2001	1:00	14.50	15.14	1.49	5.76	36
8/14/2001	1:30	14.50	15.13	1.47	5.74	35
8/14/2001	2:00	14.49	15.13	1.49	5.76	37
8/14/2001	2:30	14.49	15.13	1.50	5.77	37



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/14/2001	3:00	14.49	15.12	1.48	5.75	36
8/14/2001	3:30	14.48	15.12	1.50	5.77	37
8/14/2001	4:00	14.48	15.12	1.51	5.78	37
8/14/2001	4:30	14.48	15.12	1.51	5.78	38
8/14/2001	5:00	14.48	15.11	1.49	5.76	36
8/14/2001	5:30	14.47	15.11	1.52	5.79	38
8/14/2001	6:00	14.47	15.11	1.52	5.79	38
8/14/2001	6:30	14.47	15.11	1.52	5.79	38
8/14/2001	7:00	14.47	15.11	1.53	5.80	39
8/14/2001	7:30	14.47	15.12	1.55	5.82	40
8/14/2001	8:00	14.47	15.12	1.55	5.82	40
8/14/2001	8:30	14.47	15.13	1.58	5.85	42
8/14/2001	9:00	14.47	15.13	1.58	5.85	42
8/14/2001	9:30	14.47	15.13	1.59	5.86	42
8/14/2001	10:00	14.47	15.14	1.61	5.88	43
8/14/2001	10:30	14.48	15.15	1.62	5.89	43
8/14/2001	11:00	14.48	15.16	1.64	5.91	44
8/14/2001	11:30	14.48	15.16	1.65	5.92	44
8/14/2001	12:00	14.49	15.17	1.65	5.92	44
8/14/2001	12:30	14.49	15.18	1.68	5.95	45
8/14/2001	13:00	14.49	15.19	1.70	5.97	46
8/14/2001	13:30	14.48	15.19	1.73	6.00	47
8/14/2001	14:00	14.47	15.20	1.78	6.05	51
8/14/2001	14:30	14.48	15.21	1.78	6.05	51
8/14/2001	15:00	14.47	15.22	1.83	6.10	55
8/14/2001	15:30	14.47	15.23	1.86	6.13	57
8/14/2001	16:00	14.46	15.23	1.88	6.15	59
8/14/2001	16:30	14.46	15.24	1.91	6.18	61
8/14/2001	17:00	14.47	15.24	1.89	6.16	59
8/14/2001	17:30	14.47	15.25	1.92	6.19	61
8/14/2001	18:00	14.47	15.26	1.94	6.21	63
8/14/2001	18:30	14.45	15.26	1.99	6.26	67
8/14/2001	19:00	14.45	15.27	2.02	6.29	68
8/14/2001	19:30	14.45	15.27	2.02	6.29	69
8/14/2001	20:00	14.45	15.27	2.03	6.30	69
8/14/2001	20:30	14.45	15.27	2.03	6.30	69
8/14/2001	21:00	14.46	15.27	2.01	6.28	68
8/14/2001	21:30	14.47	15.28	2.01	6.28	68
8/14/2001	22:00	14.47	15.27	1.99	6.26	67
8/14/2001	22:30	14.47	15.28	2.02	6.29	68
8/14/2001	23:00	14.47	15.28	2.02	6.29	69
8/14/2001	23:30	14.48	15.28	2.00	6.27	67
8/15/2001	0:00	14.49	15.29	2.01	6.28	67

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/15/2001	0:30	14.50	15.30	2.01	6.28	68
8/15/2001	1:00	14.50	15.30	2.01	6.28	68
8/15/2001	1:30	14.51	15.30	1.99	6.26	67
8/15/2001	2:00	14.51	15.30	2.00	6.27	67
8/15/2001	2:30	14.51	15.30	2.00	6.27	67
8/15/2001	3:00	14.50	15.30	2.03	6.30	69
8/15/2001	3:30	14.50	15.30	2.03	6.30	69
8/15/2001	4:00	14.50	15.30	2.03	6.30	69
8/15/2001	4:30	14.50	15.30	2.04	6.31	70
8/15/2001	5:00	14.50	15.31	2.06	6.33	72
8/15/2001	5:30	14.50	15.31	2.06	6.33	72
8/15/2001	6:00	14.50	15.31	2.07	6.34	72
8/15/2001	6:30	14.50	15.31	2.07	6.34	72
8/15/2001	7:00	14.50	15.31	2.07	6.34	73
8/15/2001	7:30	14.49	15.31	2.10	6.37	74
8/15/2001	8:00	14.48	15.31	2.13	6.40	76
8/15/2001	8:30	14.47	15.32	2.18	6.45	80
8/15/2001	9:00	14.47	15.32	2.18	6.45	80
8/15/2001	9:30	14.47	15.32	2.18	6.45	80
8/15/2001	10:00	14.46	15.33	2.23	6.50	84
8/15/2001	10:30	14.45	15.33	2.26	6.53	86
8/15/2001	11:00	14.46	15.33	2.24	6.51	85
8/15/2001	11:30	14.45	15.33	2.27	6.54	86
8/15/2001	12:00	14.45	15.34	2.29	6.56	88
8/15/2001	12:30	14.43	15.34	2.34	6.61	92
8/15/2001	13:00	14.48	15.35	2.25	6.52	85
8/15/2001	13:30	14.60	15.36	2.00	6.27	67
8/15/2001	14:00	14.62	15.37	1.98	6.25	66
8/15/2001	14:30	14.62	15.38	2.01	6.28	68
8/15/2001	15:00	14.63	15.39	2.01	6.28	68
8/15/2001	15:30	14.63	15.39	2.02	6.29	68
8/15/2001	16:00	14.62	15.39	2.04	6.31	70
8/15/2001	16:30	14.62	15.39	2.05	6.32	70
8/15/2001	17:00	14.62	15.39	2.05	6.32	71
8/15/2001	17:30	14.62	15.40	2.07	6.34	73
8/15/2001	18:00	14.62	15.40	2.08	6.35	73
8/15/2001	18:30	14.65	15.41	2.04	6.31	70
8/15/2001	19:00	14.65	15.42	2.06	6.33	72
8/15/2001	19:10	-	-	-	<b>6.33</b>	71
8/15/2001	19:30	14.65	15.42	1.77	6.33	72
8/15/2001	20:00	14.65	15.42	1.77	6.33	72
8/15/2001	20:30	14.66	15.42	1.75	6.31	70
8/15/2001	21:00	14.67	15.42	1.73	6.29	68

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/15/2001	21:30	14.66	15.42	1.75	6.31	70
8/15/2001	22:00	14.67	15.42	1.73	6.29	68
8/15/2001	22:30	14.67	15.42	1.73	6.29	69
8/15/2001	23:00	14.67	15.42	1.73	6.29	69
8/15/2001	23:30	14.67	15.42	1.73	6.29	69
8/16/2001	0:00	14.67	15.42	1.73	6.29	69
8/16/2001	0:30	14.68	15.42	1.71	6.27	67
8/16/2001	1:00	14.69	15.42	1.69	6.25	65
8/16/2001	1:30	14.69	15.43	1.71	6.27	67
8/16/2001	2:00	14.69	15.43	1.71	6.27	67
8/16/2001	2:30	14.70	15.44	1.71	6.27	67
8/16/2001	3:00	14.71	15.45	1.71	6.27	67
8/16/2001	3:30	14.71	15.45	1.71	6.27	67
8/16/2001	4:00	14.71	15.45	1.71	6.27	67
8/16/2001	4:30	14.72	15.45	1.69	6.25	66
8/16/2001	5:00	14.72	15.45	1.69	6.25	66
8/16/2001	5:30	14.72	15.48	1.76	6.32	71
8/16/2001	6:00	14.72	15.48	1.76	6.32	71
8/16/2001	6:30	14.72	15.48	1.76	6.32	71
8/16/2001	7:00	14.73	15.48	1.74	6.30	69
8/16/2001	7:30	14.73	15.48	1.74	6.30	69
8/16/2001	8:00	14.73	15.49	1.76	6.32	71
8/16/2001	8:30	14.73	15.49	1.76	6.32	71
8/16/2001	9:00	14.73	15.50	1.79	6.35	73
8/16/2001	9:30	14.73	15.50	1.79	6.35	73
8/16/2001	10:00	14.73	15.50	1.79	6.35	73
8/16/2001	10:30	14.73	15.51	1.81	6.37	75
8/16/2001	11:00	14.73	15.51	1.81	6.37	75
8/16/2001	11:30	14.73	15.51	1.81	6.37	75
8/16/2001	12:00	14.72	15.51	1.84	6.40	76
8/16/2001	12:30	14.72	15.51	1.84	6.40	76
8/16/2001	13:00	14.72	15.51	1.84	6.40	76
8/16/2001	13:30	14.72	15.52	1.86	6.42	78
8/16/2001	14:00	14.71	15.52	1.89	6.45	80
8/16/2001	14:30	14.72	15.52	1.86	6.42	78
8/16/2001	15:00	14.72	15.52	1.86	6.42	78
8/16/2001	15:30	14.72	15.52	1.86	6.42	78
8/16/2001	16:00	14.72	15.52	1.87	6.43	78
8/16/2001	16:30	14.73	15.53	1.87	6.43	78
8/16/2001	17:00	14.74	15.53	1.84	6.40	77
8/16/2001	17:30	14.74	15.53	1.84	6.40	77
8/16/2001	18:00	14.73	15.54	1.89	6.45	80
8/16/2001	18:30	14.74	15.54	1.87	6.43	79

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/16/2001	19:00	14.74	15.54	1.87	6.43	79
8/16/2001	19:30	14.74	15.54	1.87	6.43	79
8/16/2001	20:00	14.74	15.54	1.87	6.43	79
8/16/2001	20:30	14.75	15.54	1.85	6.41	77
8/16/2001	21:00	14.76	15.55	1.85	6.41	77
8/16/2001	21:30	14.76	15.55	1.85	6.41	77
8/16/2001	22:00	14.77	15.56	1.85	6.41	77
8/16/2001	22:30	14.77	15.56	1.85	6.41	77
8/16/2001	23:00	14.78	15.57	1.85	6.41	77
8/16/2001	23:30	14.79	15.58	1.85	6.41	77
8/17/2001	0:00	14.79	15.58	1.85	6.41	77
8/17/2001	0:30	14.79	15.59	1.88	6.44	79
8/17/2001	1:00	14.80	15.59	1.85	6.41	77
8/17/2001	1:30	14.81	15.60	1.85	6.41	78
8/17/2001	2:00	14.81	15.60	1.85	6.41	78
8/17/2001	2:30	14.82	15.61	1.85	6.41	78
8/17/2001	3:00	14.82	15.61	1.86	6.42	78
8/17/2001	3:30	14.82	15.62	1.88	6.44	79
8/17/2001	4:00	14.83	15.62	1.86	6.42	78
8/17/2001	4:30	14.84	15.62	1.83	6.39	76
8/17/2001	5:00	14.84	15.63	1.86	6.42	78
8/17/2001	5:30	14.84	15.64	1.88	6.44	80
8/17/2001	6:00	14.84	15.64	1.88	6.44	80
8/17/2001	6:30	14.85	15.65	1.88	6.44	80
8/17/2001	7:00	14.85	15.65	1.88	6.44	80
8/17/2001	7:30	14.85	15.65	1.88	6.44	80
8/17/2001	8:00	14.85	15.66	1.91	6.47	81
8/17/2001	8:30	14.84	15.66	1.93	6.49	83
8/17/2001	9:00	14.85	15.67	1.93	6.49	83
8/17/2001	9:30	14.85	15.67	1.93	6.49	83
8/17/2001	10:00	14.84	15.68	1.98	6.54	87
8/17/2001	10:30	14.83	15.68	2.00	6.56	88
8/17/2001	11:00	14.84	15.68	1.98	6.54	87
8/17/2001	11:30	14.85	15.68	1.96	6.52	85
8/17/2001	12:00	14.86	15.69	1.96	6.52	85
8/17/2001	12:30	14.85	15.69	1.98	6.54	87
8/17/2001	13:00	14.86	15.70	1.98	6.54	87
8/17/2001	13:30	14.87	15.70	1.96	6.52	85
8/17/2001	14:00	14.85	15.70	2.01	6.57	89
8/17/2001	14:30	14.85	15.70	2.01	6.57	89
8/17/2001	15:00	14.84	15.70	2.03	6.59	90
8/17/2001	15:30	14.85	15.70	2.01	6.57	89
8/17/2001	16:00	14.85	15.70	2.01	6.57	89

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/17/2001	16:30	14.84	15.70	2.03	6.59	91
8/17/2001	17:00	14.85	15.70	2.01	6.57	89
8/17/2001	17:30	14.85	15.70	2.01	6.57	89
8/17/2001	18:00	14.84	15.70	2.03	6.59	91
8/17/2001	18:30	14.85	15.70	2.01	6.57	89
8/17/2001	19:00	14.85	15.71	2.03	6.59	91
8/17/2001	19:30	14.84	15.71	2.06	6.62	92
8/17/2001	20:00	14.85	15.70	2.01	6.57	89
8/17/2001	20:30	14.84	15.59	1.78	6.34	72
8/17/2001	21:00	14.84	15.60	1.81	6.37	74
8/17/2001	21:30	14.85	15.60	1.78	6.34	73
8/17/2001	22:00	14.86	15.60	1.76	6.32	71
8/17/2001	22:30	14.87	15.59	1.72	6.28	68
8/17/2001	23:00	14.87	15.60	1.74	6.30	69
8/17/2001	23:30	14.87	15.60	1.74	6.30	69
8/18/2001	0:00	14.87	15.60	1.74	6.30	69
8/18/2001	0:30	14.88	15.60	1.72	6.28	68
8/18/2001	1:00	14.88	15.60	1.72	6.28	68
8/18/2001	1:30	14.88	15.60	1.72	6.28	68
8/18/2001	2:00	14.88	15.59	1.70	6.26	66
8/18/2001	2:30	14.89	15.59	1.68	6.24	65
8/18/2001	3:00	14.88	15.59	1.70	6.26	66
8/18/2001	3:30	14.88	15.59	1.70	6.26	66
8/18/2001	4:00	14.88	15.59	1.70	6.26	66
8/18/2001	4:30	14.88	15.59	1.70	6.26	66
8/18/2001	5:00	14.88	15.59	1.70	6.26	66
8/18/2001	5:30	14.87	15.59	1.73	6.29	68
8/18/2001	6:00	14.87	15.58	1.70	6.26	67
8/18/2001	6:30	14.87	15.58	1.70	6.26	67
8/18/2001	7:00	14.87	15.57	1.68	6.24	65
8/18/2001	7:30	14.87	15.57	1.68	6.24	65
8/18/2001	8:00	14.86	15.57	1.71	6.27	67
8/18/2001	8:30	14.85	15.56	1.71	6.27	67
8/18/2001	9:00	14.85	15.56	1.71	6.27	67
8/18/2001	9:30	14.84	15.56	1.73	6.29	69
8/18/2001	10:00	14.84	15.56	1.73	6.29	69
8/18/2001	10:30	14.83	15.56	1.75	6.31	70
8/18/2001	11:00	14.83	15.56	1.75	6.31	70
8/18/2001	11:30	14.82	15.56	1.78	6.34	72
8/18/2001	12:00	14.81	15.55	1.78	6.34	72
8/18/2001	12:30	14.79	15.55	1.83	6.39	75
8/18/2001	13:00	14.79	15.54	1.80	6.36	74
8/18/2001	13:30	14.79	15.54	1.80	6.36	74

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/18/2001	14:00	14.78	15.54	1.83	6.39	76
8/18/2001	14:30	14.78	15.54	1.83	6.39	76
8/18/2001	15:00	14.78	15.53	1.81	6.37	74
8/18/2001	15:30	14.78	15.53	1.81	6.37	74
8/18/2001	16:00	14.77	15.52	1.81	6.37	74
8/18/2001	16:30	14.77	15.52	1.81	6.37	74
8/18/2001	17:00	14.77	15.51	1.78	6.34	73
8/18/2001	17:30	14.77	15.51	1.79	6.35	73
8/18/2001	18:00	14.77	15.51	1.79	6.35	73
8/18/2001	18:30	14.77	15.50	1.76	6.32	71
8/18/2001	19:00	14.77	15.50	1.76	6.32	71
8/18/2001	19:30	14.77	15.49	1.74	6.30	69
8/18/2001	20:00	14.77	15.49	1.74	6.30	69
8/18/2001	20:30	14.77	15.49	1.74	6.30	69
8/18/2001	21:00	14.77	15.48	1.72	6.28	68
8/18/2001	21:30	14.77	15.48	1.72	6.28	68
8/18/2001	22:00	14.77	15.48	1.72	6.28	68
8/18/2001	22:30	14.77	15.48	1.72	6.28	68
8/18/2001	23:00	14.76	15.48	1.75	6.31	70
8/18/2001	23:30	14.76	15.48	1.75	6.31	70
8/19/2001	0:00	14.76	15.47	1.72	6.28	68
8/19/2001	0:30	14.76	15.47	1.72	6.28	68
8/19/2001	1:00	14.76	15.47	1.72	6.28	68
8/19/2001	1:30	14.75	15.46	1.73	6.29	68
8/19/2001	2:00	14.75	15.46	1.73	6.29	68
8/19/2001	2:30	14.75	15.46	1.73	6.29	68
8/19/2001	3:00	14.75	15.45	1.70	6.26	67
8/19/2001	3:30	14.74	15.45	1.73	6.29	68
8/19/2001	4:00	14.74	15.45	1.73	6.29	68
8/19/2001	4:30	14.74	15.45	1.73	6.29	68
8/19/2001	5:00	14.74	15.44	1.71	6.27	67
8/19/2001	5:30	14.73	15.44	1.73	6.29	69
8/19/2001	6:00	14.72	15.43	1.73	6.29	69
8/19/2001	6:30	14.72	15.43	1.73	6.29	69
8/19/2001	7:00	14.72	15.42	1.71	6.27	67
8/19/2001	7:30	14.72	15.42	1.71	6.27	67
8/19/2001	8:00	14.71	15.42	1.73	6.29	69
8/19/2001	8:30	14.70	15.41	1.73	6.29	69
8/19/2001	9:00	14.69	15.41	1.76	6.32	71
8/19/2001	9:30	14.69	15.40	1.73	6.29	69
8/19/2001	10:00	14.69	15.40	1.74	6.30	69
8/19/2001	10:30	14.68	15.39	1.74	6.30	69
8/19/2001	11:00	14.68	15.39	1.74	6.30	69

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/19/2001	11:30	14.67	15.39	1.76	6.32	71
8/19/2001	12:00	14.67	15.39	1.76	6.32	71
8/19/2001	12:30	14.67	15.38	1.74	6.30	69
8/19/2001	13:00	14.66	15.37	1.74	6.30	69
8/19/2001	13:30	14.65	15.37	1.76	6.32	71
8/19/2001	14:00	14.65	15.36	1.74	6.30	69
8/19/2001	14:30	14.65	15.36	1.74	6.30	69
8/19/2001	15:00	14.64	15.36	1.76	6.32	71
8/19/2001	15:30	14.64	15.35	1.74	6.30	69
8/19/2001	16:00	14.62	15.34	1.77	6.33	71
8/19/2001	16:30	14.62	15.33	1.74	6.30	69
8/19/2001	17:00	14.62	15.33	1.74	6.30	70
8/19/2001	17:30	14.61	15.33	1.77	6.33	71
8/19/2001	18:00	14.61	15.32	1.74	6.30	70
8/19/2001	18:30	14.61	15.32	1.75	6.31	70
8/19/2001	19:00	14.61	15.32	1.75	6.31	70
8/19/2001	19:30	14.61	15.32	1.75	6.31	70
8/19/2001	20:00	14.61	15.31	1.72	6.28	68
8/19/2001	20:30	14.62	15.31	1.70	6.26	66
8/19/2001	21:00	14.62	15.30	1.68	6.24	65
8/19/2001	21:30	14.62	15.30	1.68	6.24	65
8/19/2001	22:00	14.62	15.30	1.68	6.24	65
8/19/2001	22:30	14.62	15.30	1.68	6.24	65
8/19/2001	23:00	14.62	15.30	1.68	6.24	65
8/19/2001	23:30	14.62	15.30	1.68	6.24	65
8/20/2001	0:00	14.62	15.30	1.68	6.24	65
8/20/2001	0:30	14.62	15.30	1.68	6.24	65
8/20/2001	1:00	14.62	15.30	1.68	6.24	65
8/20/2001	1:30	14.62	15.29	1.66	6.22	64
8/20/2001	2:00	14.62	15.30	1.69	6.25	65
8/20/2001	2:30	14.62	15.29	1.66	6.22	64
8/20/2001	3:00	14.62	15.30	1.69	6.25	65
8/20/2001	3:30	14.62	15.29	1.66	6.22	64
8/20/2001	4:00	14.62	15.29	1.66	6.22	64
8/20/2001	4:30	14.62	15.29	1.66	6.22	64
8/20/2001	5:00	14.62	15.29	1.67	6.23	64
8/20/2001	5:30	14.62	15.29	1.67	6.23	64
8/20/2001	6:00	14.62	15.29	1.67	6.23	64
8/20/2001	6:30	14.62	15.29	1.67	6.23	64
8/20/2001	7:00	14.63	15.30	1.67	6.23	64
8/20/2001	7:30	14.63	15.30	1.67	6.23	64
8/20/2001	8:00	14.63	15.30	1.67	6.23	64
8/20/2001	8:30	14.63	15.30	1.67	6.23	64

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/20/2001	9:00	14.63	15.30	1.67	6.23	64
8/20/2001	9:30	14.63	15.30	1.67	6.23	64
8/20/2001	10:00	14.64	15.30	1.65	6.21	63
8/20/2001	10:30	14.64	15.30	1.65	6.21	63
8/20/2001	11:00	14.64	15.31	1.67	6.23	64
8/20/2001	11:30	14.64	15.31	1.67	6.23	64
8/20/2001	12:00	14.65	15.31	1.65	6.21	63
8/20/2001	12:30	14.65	15.31	1.65	6.21	63
8/20/2001	13:00	14.65	15.31	1.65	6.21	63
8/20/2001	13:30	14.65	15.31	1.65	6.21	63
8/20/2001	14:00	14.65	15.31	1.65	6.21	63
8/20/2001	14:30	14.65	15.31	1.65	6.21	63
8/20/2001	15:00	14.65	15.31	1.65	6.21	63
8/20/2001	15:30	14.65	15.32	1.68	6.24	65
8/20/2001	16:00	14.65	15.32	1.68	6.24	65
8/20/2001	16:30	14.65	15.32	1.68	6.24	65
8/20/2001	17:00	14.65	15.32	1.68	6.24	65
8/20/2001	17:30	14.65	15.32	1.68	6.24	65
8/20/2001	18:00	14.66	15.32	1.66	6.22	63
8/20/2001	18:30	14.66	15.33	1.68	6.24	65
8/20/2001	19:00	14.67	15.33	1.66	6.22	63
8/20/2001	19:30	14.67	15.33	1.66	6.22	63
8/20/2001	20:00	14.67	15.33	1.66	6.22	63
8/20/2001	20:30	14.67	15.33	1.66	6.22	63
8/20/2001	21:00	14.68	15.33	1.64	6.20	62
8/20/2001	21:30	14.69	15.33	1.62	6.18	60
8/20/2001	22:00	14.69	15.33	1.62	6.18	60
8/20/2001	22:30	14.69	15.33	1.62	6.18	60
8/20/2001	23:00	14.69	15.33	1.62	6.18	60
8/20/2001	23:30	14.69	15.33	1.62	6.18	60
8/21/2001	0:00	14.70	15.33	1.60	6.16	59
8/21/2001	0:30	14.70	15.33	1.60	6.16	59
8/21/2001	1:00	14.70	15.33	1.60	6.16	59
8/21/2001	1:30	14.70	15.33	1.60	6.16	59
8/21/2001	2:00	14.71	15.34	1.60	6.16	59
8/21/2001	2:30	14.71	15.34	1.60	6.16	59
8/21/2001	3:00	14.71	15.34	1.60	6.16	59
8/21/2001	3:30	14.72	15.34	1.58	6.14	57
8/21/2001	4:00	14.72	15.34	1.58	6.14	57
8/21/2001	4:30	14.72	15.34	1.58	6.14	57
8/21/2001	5:00	14.72	15.34	1.58	6.14	58
8/21/2001	5:30	14.72	15.34	1.58	6.14	58
8/21/2001	6:00	14.72	15.34	1.58	6.14	58



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/21/2001	6:30	14.72	15.34	1.58	6.14	58
8/21/2001	7:00	14.72	15.34	1.58	6.14	58
8/21/2001	7:30	14.72	15.34	1.58	6.14	58
8/21/2001	8:00	14.72	15.34	1.58	6.14	58
8/21/2001	8:30	14.72	15.34	1.58	6.14	58
8/21/2001	9:00	14.71	15.34	1.61	6.17	60
8/21/2001	9:30	14.72	15.35	1.61	6.17	60
8/21/2001	10:00	14.72	15.35	1.61	6.17	60
8/21/2001	10:30	14.72	15.35	1.61	6.17	60
8/21/2001	11:00	14.72	15.35	1.61	6.17	60
8/21/2001	11:30	14.72	15.35	1.61	6.17	60
8/21/2001	12:00	14.71	15.35	1.63	6.19	61
8/21/2001	12:30	14.72	15.35	1.61	6.17	60
8/21/2001	13:00	14.72	15.35	1.61	6.17	60
8/21/2001	13:30	14.72	15.36	1.63	6.19	62
8/21/2001	14:00	14.72	15.35	1.61	6.17	60
8/21/2001	14:30	14.72	15.35	1.61	6.17	60
8/21/2001	15:00	14.71	15.36	1.66	6.22	63
8/21/2001	15:30	14.72	15.36	1.64	6.20	62
8/21/2001	16:00	14.71	15.36	1.66	6.22	63
8/21/2001	16:30	14.71	15.36	1.66	6.22	64
8/21/2001	17:00	14.71	15.36	1.66	6.22	64
8/21/2001	17:30	14.71	15.36	1.66	6.22	64
8/21/2001	18:00	14.72	15.36	1.64	6.20	62
8/21/2001	18:30	14.72	15.36	1.64	6.20	62
8/21/2001	19:00	14.72	15.36	1.64	6.20	62
8/21/2001	19:30	14.72	15.36	1.64	6.20	62
8/21/2001	20:00	14.73	15.36	1.62	6.18	60
8/21/2001	20:30	14.73	15.36	1.62	6.18	60
8/21/2001	21:00	14.74	15.36	1.60	6.16	59
8/21/2001	21:30	14.74	15.36	1.60	6.16	59
8/21/2001	22:00	14.74	15.36	1.60	6.16	59
8/21/2001	22:30	14.74	15.36	1.60	6.16	59
8/21/2001	23:00	14.74	15.35	1.58	6.14	57
8/21/2001	23:30	14.74	15.35	1.58	6.14	57
8/22/2001	0:00	14.74	15.35	1.58	6.14	57
8/22/2001	0:30	14.74	15.35	1.58	6.14	57
8/22/2001	1:00	14.74	15.35	1.58	6.14	58
8/22/2001	1:30	14.74	15.35	1.58	6.14	58
8/22/2001	2:00	14.74	15.35	1.58	6.14	58
8/22/2001	2:30	14.74	15.34	1.56	6.12	56
8/22/2001	3:00	14.74	15.34	1.56	6.12	56
8/22/2001	3:30	14.74	15.34	1.56	6.12	56

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/22/2001	4:00	14.74	15.33	1.54	6.10	54
8/22/2001	4:30	14.74	15.33	1.54	6.10	54
8/22/2001	5:00	14.74	15.33	1.54	6.10	55
8/22/2001	5:30	14.74	15.33	1.54	6.10	55
8/22/2001	6:00	14.74	15.33	1.54	6.10	55
8/22/2001	6:30	14.73	15.32	1.54	6.10	55
8/22/2001	7:00	14.72	15.32	1.56	6.12	56
8/22/2001	7:30	14.72	15.32	1.56	6.12	56
8/22/2001	8:00	14.72	15.31	1.54	6.10	55
8/22/2001	8:30	14.72	15.31	1.54	6.10	55
8/22/2001	9:00	14.71	15.30	1.54	6.10	55
8/22/2001	9:30	14.71	15.30	1.54	6.10	55
8/22/2001	10:00	14.70	15.30	1.57	6.13	57
8/22/2001	10:30	14.69	15.29	1.57	6.13	57
8/22/2001	11:00	14.69	15.29	1.57	6.13	57
8/22/2001	11:30	14.69	15.28	1.55	6.11	55
8/22/2001	12:00	14.69	15.28	1.55	6.11	55
8/22/2001	12:30	14.70	15.27	1.50	6.06	52
8/22/2001	13:00	14.70	15.27	1.50	6.06	52
8/22/2001	13:30	14.70	15.27	1.50	6.06	52
8/22/2001	14:00	14.69	15.27	1.53	6.09	54
8/22/2001	14:30	14.69	15.26	1.50	6.06	52
8/22/2001	15:00	14.67	15.26	1.55	6.11	55
8/22/2001	15:30	14.66	15.25	1.55	6.11	55
8/22/2001	16:00	14.66	15.25	1.55	6.11	55
8/22/2001	16:30	14.66	15.25	1.55	6.11	55
8/22/2001	17:00	14.65	15.24	1.55	6.11	56
8/22/2001	17:30	14.65	15.24	1.55	6.11	56
8/22/2001	18:00	14.65	15.24	1.55	6.11	56
8/22/2001	18:30	14.65	15.24	1.55	6.11	56
8/22/2001	19:00	14.65	15.24	1.55	6.11	56
8/22/2001	19:30	14.65	15.24	1.55	6.11	56
8/22/2001	20:00	14.65	15.24	1.56	6.12	56
8/22/2001	20:30	14.65	15.23	1.53	6.09	54
8/22/2001	21:00	14.65	15.23	1.53	6.09	54
8/22/2001	21:30	14.65	15.23	1.53	6.09	54
8/22/2001	22:00	14.65	15.22	1.51	6.07	53
8/22/2001	22:30	14.66	15.22	1.49	6.05	51
8/22/2001	23:00	14.66	15.23	1.51	6.07	53
8/22/2001	23:30	14.66	15.22	1.49	6.05	51
8/23/2001	0:00	14.66	15.22	1.49	6.05	51
8/23/2001	0:30	14.67	15.22	1.47	6.03	49
8/23/2001	1:00	14.67	15.21	1.45	6.01	48

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/23/2001	1:30	14.67	15.22	1.47	6.03	50
8/23/2001	2:00	14.67	15.21	1.45	6.01	48
8/23/2001	2:30	14.67	15.21	1.45	6.01	48
8/23/2001	3:00	14.66	15.21	1.47	6.03	50
8/23/2001	3:30	14.66	15.21	1.47	6.03	50
8/23/2001	4:00	14.67	15.21	1.45	6.01	48
8/23/2001	4:30	14.66	15.21	1.47	6.03	50
8/23/2001	5:00	14.66	15.21	1.47	6.03	50
8/23/2001	5:30	14.66	15.21	1.47	6.03	50
8/23/2001	6:00	14.66	15.20	1.45	6.01	48
8/23/2001	6:30	14.66	15.20	1.45	6.01	48
8/23/2001	7:00	14.65	15.20	1.48	6.04	50
8/23/2001	7:30	14.65	15.19	1.45	6.01	48
8/23/2001	8:00	14.64	15.19	1.48	6.04	50
8/23/2001	8:30	14.64	15.19	1.48	6.04	50
8/23/2001	9:00	14.63	15.19	1.50	6.06	52
8/23/2001	9:30	14.64	15.19	1.48	6.04	50
8/23/2001	10:00	14.65	15.19	1.46	6.02	49
8/23/2001	10:30	14.63	15.19	1.50	6.06	52
8/23/2001	11:00	14.62	15.18	1.50	6.06	52
8/23/2001	11:30	14.62	15.18	1.50	6.06	52
8/23/2001	12:00	14.62	15.18	1.50	6.06	52
8/23/2001	12:30	14.62	15.18	1.51	6.07	52
8/23/2001	13:00	14.62	15.18	1.51	6.07	52
8/23/2001	13:30	14.62	15.17	1.48	6.04	51
8/23/2001	14:00	14.62	15.17	1.48	6.04	51
8/23/2001	14:30	14.62	15.17	1.48	6.04	51
8/23/2001	15:00	14.62	15.17	1.49	6.05	51
8/23/2001	15:30	14.62	15.17	1.49	6.05	51
8/23/2001	16:00	14.62	15.17	1.49	6.05	51
8/23/2001	16:30	14.62	15.17	1.49	6.05	51
8/23/2001	17:00	14.62	15.17	1.49	6.05	51
8/23/2001	17:30	14.62	15.17	1.49	6.05	51
8/23/2001	18:00	14.62	15.17	1.49	6.05	51
8/23/2001	18:30	14.62	15.17	1.49	6.05	51
8/23/2001	19:00	14.62	15.16	1.47	6.03	49
8/23/2001	19:30	14.62	15.16	1.47	6.03	49
8/23/2001	20:00	14.62	15.17	1.49	6.05	51
8/23/2001	20:30	14.62	15.16	1.47	6.03	49
8/23/2001	21:00	14.63	15.17	1.47	6.03	50
8/23/2001	21:30	14.63	15.17	1.47	6.03	50
8/23/2001	22:00	14.63	15.16	1.45	6.01	48
8/23/2001	22:30	14.63	15.17	1.47	6.03	50

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/23/2001	23:00	14.64	15.16	1.43	5.99	47
8/23/2001	23:30	14.63	15.16	1.45	6.01	48
8/24/2001	0:00	14.63	15.16	1.45	6.01	48
8/24/2001	0:30	14.64	15.17	1.45	6.01	48
8/24/2001	1:00	14.64	15.17	1.45	6.01	48
8/24/2001	1:30	14.65	15.17	1.43	5.99	47
8/24/2001	2:00	14.65	15.17	1.43	5.99	47
8/24/2001	2:30	14.65	15.17	1.43	5.99	47
8/24/2001	3:00	14.65	15.17	1.43	5.99	47
8/24/2001	3:30	14.65	15.18	1.45	6.01	48
8/24/2001	4:00	14.65	15.17	1.43	5.99	47
8/24/2001	4:30	14.65	15.17	1.43	5.99	47
8/24/2001	5:00	14.65	15.18	1.46	6.02	49
8/24/2001	5:30	14.65	15.18	1.46	6.02	49
8/24/2001	6:00	14.65	15.18	1.46	6.02	49
8/24/2001	6:30	14.65	15.18	1.46	6.02	49
8/24/2001	7:00	14.65	15.18	1.46	6.02	49
8/24/2001	7:30	14.65	15.18	1.46	6.02	49
8/24/2001	8:00	14.65	15.18	1.46	6.02	49
8/24/2001	8:30	14.65	15.18	1.46	6.02	49
8/24/2001	9:00	14.65	15.18	1.46	6.02	49
8/24/2001	9:30	14.65	15.18	1.46	6.02	49
8/24/2001	10:00	14.65	15.18	1.46	6.02	49
8/24/2001	10:30	14.65	15.18	1.46	6.02	49
8/24/2001	11:00	14.65	15.18	1.46	6.02	49
8/24/2001	11:30	14.64	15.18	1.49	6.05	51
8/24/2001	12:00	14.64	15.18	1.49	6.05	51
8/24/2001	12:30	14.64	15.18	1.49	6.05	51
8/24/2001	13:00	14.63	15.18	1.51	6.07	53
8/24/2001	13:30	14.63	15.18	1.51	6.07	53
8/24/2001	14:00	14.63	15.18	1.51	6.07	53
8/24/2001	14:30	14.63	15.18	1.51	6.07	53
8/24/2001	15:00	14.63	15.18	1.51	6.07	53
8/24/2001	15:30	14.62	15.18	1.54	6.10	54
8/24/2001	16:00	14.62	15.18	1.54	6.10	55
8/24/2001	16:30	14.62	15.18	1.54	6.10	55
8/24/2001	17:00	14.62	15.18	1.54	6.10	55
8/24/2001	17:30	14.62	15.18	1.54	6.10	55
8/24/2001	18:00	14.63	15.17	1.49	6.05	51
8/24/2001	18:30	14.63	15.19	1.54	6.10	55
8/24/2001	19:00	14.63	15.19	1.54	6.10	55
8/24/2001	19:30	14.62	15.19	1.56	6.12	56
8/24/2001	20:00	14.63	15.19	1.54	6.10	55

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/24/2001	20:30	14.63	15.19	1.54	6.10	55
8/24/2001	21:00	14.63	15.19	1.54	6.10	55
8/24/2001	21:30	14.63	15.19	1.54	6.10	55
8/24/2001	22:00	14.63	15.19	1.54	6.10	55
8/24/2001	22:30	14.63	15.19	1.55	6.11	55
8/24/2001	23:00	14.63	15.19	1.55	6.11	55
8/24/2001	23:30	14.63	15.19	1.55	6.11	55
8/25/2001	0:00	14.63	15.19	1.55	6.11	55
8/25/2001	0:30	14.63	15.19	1.55	6.11	55
8/25/2001	1:00	14.63	15.19	1.55	6.11	55
8/25/2001	1:30	14.63	15.19	1.55	6.11	55
8/25/2001	2:00	14.63	15.19	1.55	6.11	55
8/25/2001	2:30	14.63	15.19	1.55	6.11	55
8/25/2001	3:00	14.63	15.18	1.53	6.09	54
8/25/2001	3:30	14.63	15.18	1.53	6.09	54
8/25/2001	4:00	14.62	15.18	1.55	6.11	56
8/25/2001	4:30	14.62	15.18	1.55	6.11	56
8/25/2001	5:00	14.62	15.18	1.55	6.11	56
8/25/2001	5:30	14.62	15.18	1.55	6.11	56
8/25/2001	6:00	14.62	15.18	1.55	6.11	56
8/25/2001	6:30	14.62	15.18	1.55	6.11	56
8/25/2001	7:00	14.62	15.17	1.53	6.09	54
8/25/2001	7:30	14.62	15.17	1.53	6.09	54
8/25/2001	8:00	14.61	15.17	1.56	6.12	56
8/25/2001	8:30	14.61	15.17	1.56	6.12	56
8/25/2001	9:00	14.61	15.17	1.56	6.12	56
8/25/2001	9:30	14.60	15.17	1.58	6.14	58
8/25/2001	10:00	14.60	15.17	1.58	6.14	58
8/25/2001	10:10	-	-	-	<b>6.14</b>	58
8/25/2001	10:30	14.60	15.16	1.29	6.12	56
8/25/2001	11:00	14.60	15.16	1.29	6.12	56
8/25/2001	11:30	14.60	15.16	1.29	6.12	56
8/25/2001	12:00	14.59	15.16	1.31	6.14	58
8/25/2001	12:30	14.59	15.16	1.31	6.14	58
8/25/2001	13:00	14.58	15.16	1.33	6.16	59
8/25/2001	13:30	14.58	15.15	1.31	6.14	58
8/25/2001	14:00	14.58	15.16	1.33	6.16	59
8/25/2001	14:30	14.58	15.16	1.33	6.16	59
8/25/2001	15:00	14.58	15.16	1.33	6.16	59
8/25/2001	15:30	14.57	15.15	1.33	6.16	59
8/25/2001	16:00	14.57	15.15	1.33	6.16	59
8/25/2001	16:30	14.57	15.15	1.33	6.16	59
8/25/2001	17:00	14.56	15.14	1.33	6.16	59

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/25/2001	17:30	14.56	15.14	1.33	6.16	59
8/25/2001	18:00	14.56	15.14	1.33	6.16	59
8/25/2001	18:30	14.55	15.14	1.36	6.19	61
8/25/2001	19:00	14.55	15.14	1.36	6.19	61
8/25/2001	19:30	14.55	15.14	1.36	6.19	61
8/25/2001	20:00	14.55	15.13	1.33	6.16	59
8/25/2001	20:30	14.55	15.13	1.33	6.16	59
8/25/2001	21:00	14.55	15.13	1.33	6.16	59
8/25/2001	21:30	14.56	15.13	1.31	6.14	58
8/25/2001	22:00	14.56	15.13	1.31	6.14	58
8/25/2001	22:30	14.56	15.13	1.31	6.14	58
8/25/2001	23:00	14.56	15.13	1.31	6.14	58
8/25/2001	23:30	14.56	15.13	1.31	6.14	58
8/26/2001	0:00	14.56	15.13	1.31	6.14	58
8/26/2001	0:30	14.56	15.13	1.31	6.14	58
8/26/2001	1:00	14.56	15.13	1.31	6.14	58
8/26/2001	1:30	14.56	15.13	1.31	6.14	58
8/26/2001	2:00	14.56	15.14	1.33	6.16	59
8/26/2001	2:30	14.57	15.14	1.31	6.14	58
8/26/2001	3:00	14.57	15.14	1.31	6.14	58
8/26/2001	3:30	14.57	15.15	1.33	6.16	59
8/26/2001	4:00	14.57	15.15	1.33	6.16	59
8/26/2001	4:30	14.57	15.15	1.33	6.16	59
8/26/2001	5:00	14.57	15.15	1.33	6.16	59
8/26/2001	5:30	14.57	15.15	1.33	6.16	59
8/26/2001	6:00	14.57	15.15	1.33	6.16	59
8/26/2001	6:30	14.57	15.16	1.36	6.19	61
8/26/2001	7:00	14.59	15.16	1.31	6.14	58
8/26/2001	7:30	14.60	15.16	1.29	6.12	56
8/26/2001	8:00	14.60	15.16	1.29	6.12	56
8/26/2001	8:30	14.60	15.16	1.29	6.12	56
8/26/2001	9:00	14.60	15.16	1.29	6.12	56
8/26/2001	9:30	14.60	15.16	1.29	6.12	56
8/26/2001	10:00	14.60	15.16	1.29	6.12	56
8/26/2001	10:30	14.60	15.16	1.29	6.12	56
8/26/2001	11:00	14.60	15.17	1.31	6.14	58
8/26/2001	11:30	14.60	15.17	1.31	6.14	58
8/26/2001	12:00	14.60	15.18	1.33	6.16	59
8/26/2001	12:30	14.60	15.18	1.33	6.16	59
8/26/2001	13:00	14.60	15.18	1.33	6.16	59
8/26/2001	13:30	14.60	15.19	1.36	6.19	61
8/26/2001	14:00	14.60	15.19	1.36	6.19	61
8/26/2001	14:30	14.60	15.19	1.36	6.19	61

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/26/2001	15:00	14.60	15.16	1.29	6.12	56
8/26/2001	15:15	-	-	-	<b>6.12</b>	56
8/26/2001	15:30	14.60	15.16	1.29	6.12	56
8/26/2001	16:00	14.57	15.16	1.35	6.18	61
8/26/2001	16:30	14.57	15.16	1.35	6.18	61
8/26/2001	17:00	14.57	15.16	1.35	6.18	61
8/26/2001	17:30	14.57	15.16	1.35	6.18	61
8/26/2001	18:00	14.57	15.16	1.35	6.18	60
8/26/2001	18:30	14.57	15.16	1.35	6.18	60
8/26/2001	19:00	14.57	15.16	1.35	6.18	60
8/26/2001	19:30	14.58	15.16	1.32	6.15	58
8/26/2001	20:00	14.59	15.16	1.30	6.13	57
8/26/2001	20:30	14.59	15.16	1.29	6.12	56
8/26/2001	21:00	14.60	15.16	1.27	6.10	55
8/26/2001	21:30	14.60	15.16	1.27	6.10	55
8/26/2001	22:00	14.60	15.17	1.29	6.12	56
8/26/2001	22:30	14.60	15.17	1.29	6.12	56
8/26/2001	23:00	14.61	15.17	1.26	6.09	54
8/26/2001	23:30	14.61	15.18	1.28	6.11	56
8/27/2001	0:00	14.62	15.18	1.26	6.09	54
8/27/2001	0:30	14.62	15.18	1.26	6.09	54
8/27/2001	1:00	14.62	15.18	1.26	6.09	54
8/27/2001	1:30	14.62	15.19	1.28	6.11	55
8/27/2001	2:00	14.62	15.19	1.28	6.11	55
8/27/2001	2:30	14.63	15.19	1.25	6.08	53
8/27/2001	3:00	14.64	15.19	1.23	6.06	52
8/27/2001	3:30	14.64	15.20	1.25	6.08	53
8/27/2001	4:00	14.64	15.20	1.25	6.08	53
8/27/2001	4:30	14.65	15.19	1.20	6.03	50
8/27/2001	5:00	14.65	15.19	1.20	6.03	49
8/27/2001	5:30	14.66	15.20	1.20	6.03	49
8/27/2001	6:00	14.65	15.20	1.22	6.05	51
8/27/2001	6:30	14.65	15.20	1.22	6.05	51
8/27/2001	7:00	14.65	15.20	1.22	6.05	51
8/27/2001	7:30	14.65	15.20	1.21	6.04	51
8/27/2001	8:00	14.65	15.20	1.21	6.04	50
8/27/2001	8:30	14.66	15.21	1.21	6.04	50
8/27/2001	9:00	14.65	15.21	1.23	6.06	52
8/27/2001	9:30	14.65	15.21	1.23	6.06	52
8/27/2001	10:00	14.65	15.21	1.23	6.06	52
8/27/2001	10:30	14.65	15.21	1.23	6.06	52
8/27/2001	11:00	14.65	15.21	1.23	6.06	51
8/27/2001	11:30	14.64	15.21	1.25	6.08	53

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/27/2001	12:00	14.62	15.21	1.29	6.12	56
8/27/2001	12:30	14.62	15.21	1.29	6.12	56
8/27/2001	13:00	14.62	15.21	1.29	6.12	56
8/27/2001	13:30	14.62	15.22	1.31	6.14	58
8/27/2001	14:00	14.62	15.22	1.31	6.14	57
8/27/2001	14:30	14.62	15.22	1.31	6.14	57
8/27/2001	15:00	14.61	15.22	1.33	6.16	59
8/27/2001	15:30	14.61	15.22	1.33	6.16	59
8/27/2001	16:00	14.62	15.24	1.35	6.18	60
8/27/2001	16:30	14.61	15.24	1.37	6.20	62
8/27/2001	16:36	-	-	-	<b>6.20</b>	62
8/27/2001	17:00	14.61	15.24	1.45	6.20	62
8/27/2001	17:30	14.60	15.25	1.50	6.25	66
8/27/2001	18:00	14.60	15.25	1.50	6.25	66
8/27/2001	18:30	14.60	15.25	1.51	6.26	66
8/27/2001	19:00	14.60	15.25	1.51	6.26	66
8/27/2001	19:30	14.60	15.25	1.51	6.26	66
8/27/2001	20:00	14.61	15.25	1.49	6.24	65
8/27/2001	20:30	14.61	15.25	1.49	6.24	65
8/27/2001	21:00	14.62	15.26	1.50	6.25	65
8/27/2001	21:30	14.63	15.26	1.47	6.22	64
8/27/2001	22:00	14.64	15.26	1.45	6.20	62
8/27/2001	22:30	14.64	15.27	1.48	6.23	64
8/27/2001	23:00	14.65	15.27	1.46	6.21	63
8/27/2001	23:30	14.65	15.27	1.46	6.21	63
8/28/2001	0:00	14.65	15.27	1.46	6.21	63
8/28/2001	0:30	14.65	15.27	1.47	6.22	63
8/28/2001	1:00	14.65	15.27	1.47	6.22	63
8/28/2001	1:30	14.65	15.27	1.47	6.22	64
8/28/2001	2:00	14.65	15.27	1.47	6.22	64
8/28/2001	2:30	14.65	15.28	1.50	6.25	66
8/28/2001	3:00	14.65	15.28	1.50	6.25	66
8/28/2001	3:30	14.66	15.28	1.48	6.23	64
8/28/2001	4:00	14.66	15.29	1.51	6.26	66
8/28/2001	4:30	14.67	15.29	1.49	6.24	65
8/28/2001	5:00	14.67	15.29	1.49	6.24	65
8/28/2001	5:30	14.68	15.29	1.47	6.22	63
8/28/2001	6:00	14.68	15.29	1.47	6.22	64
8/28/2001	6:30	14.68	15.29	1.47	6.22	64
8/28/2001	7:00	14.68	15.29	1.48	6.23	64
8/28/2001	7:30	14.68	15.29	1.48	6.23	64
8/28/2001	8:00	14.68	15.29	1.48	6.23	64
8/28/2001	8:30	14.67	15.27	1.46	<b>6.21</b>	63



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/28/2001	9:00	14.67	15.26	1.36	6.19	61
8/28/2001	9:30	14.67	15.26	1.36	6.19	61
8/28/2001	10:00	14.66	15.26	1.38	6.21	63
8/28/2001	10:30	14.66	15.26	1.38	6.21	63
8/28/2001	11:00	14.65	15.26	1.40	6.23	64
8/28/2001	11:30	14.65	15.26	1.40	6.23	64
8/28/2001	12:00	14.65	15.26	1.40	6.23	64
8/28/2001	12:30	14.64	15.26	1.42	6.25	66
8/28/2001	13:00	14.64	15.26	1.42	6.25	66
8/28/2001	13:30	14.64	15.25	1.40	6.23	64
8/28/2001	14:00	14.62	15.25	1.44	6.27	67
8/28/2001	14:30	14.63	15.25	1.42	6.25	66
8/28/2001	15:00	14.63	15.25	1.42	6.25	65
8/28/2001	15:30	14.62	15.24	1.42	6.25	65
8/28/2001	16:00	14.62	15.24	1.42	6.25	65
8/28/2001	16:30	14.62	15.24	1.42	6.25	65
8/28/2001	17:00	14.61	15.24	1.44	6.27	67
8/28/2001	17:30	14.61	15.23	1.41	6.24	65
8/28/2001	18:00	14.62	15.24	1.41	6.24	65
8/28/2001	18:30	14.61	15.23	1.41	6.24	65
8/28/2001	19:00	14.61	15.23	1.41	6.24	65
8/28/2001	19:30	14.61	15.22	1.39	6.22	63
8/28/2001	20:00	14.61	15.22	1.39	6.22	63
8/28/2001	20:30	14.62	15.22	1.36	6.19	62
8/28/2001	21:00	14.62	15.21	1.34	6.17	60
8/28/2001	21:30	14.62	15.21	1.34	6.17	60
8/28/2001	22:00	14.63	15.21	1.32	6.15	58
8/28/2001	22:30	14.62	15.21	1.34	6.17	60
8/28/2001	23:00	14.62	15.21	1.34	6.17	60
8/28/2001	23:30	14.62	15.20	1.31	6.14	58
8/29/2001	0:00	14.62	15.21	1.34	6.17	60
8/29/2001	0:30	14.62	15.20	1.31	6.14	58
8/29/2001	1:00	14.62	15.20	1.31	6.14	58
8/29/2001	1:30	14.62	15.19	1.29	6.12	56
8/29/2001	2:00	14.62	15.19	1.29	6.12	56
8/29/2001	2:30	14.61	15.19	1.31	6.14	58
8/29/2001	3:00	14.60	15.19	1.33	6.16	59
8/29/2001	3:30	14.60	15.19	1.33	6.16	59
8/29/2001	4:00	14.60	15.18	1.31	6.14	58
8/29/2001	4:30	14.60	15.18	1.31	6.14	57
8/29/2001	5:00	14.60	15.17	1.28	6.11	56
8/29/2001	5:30	14.60	15.17	1.28	6.11	56
8/29/2001	6:00	14.59	15.16	1.28	6.11	56

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/29/2001	6:30	14.58	15.16	1.31	6.14	57
8/29/2001	7:00	14.58	15.16	1.30	6.13	57
8/29/2001	7:30	14.58	15.16	1.30	6.13	57
8/29/2001	8:00	14.57	15.16	1.33	6.16	59
8/29/2001	8:30	14.57	15.15	1.30	6.13	57
8/29/2001	9:00	14.57	15.15	1.30	6.13	57
8/29/2001	9:30	14.56	15.14	1.30	6.13	57
8/29/2001	10:00	14.55	15.13	1.30	6.13	57
8/29/2001	10:30	14.55	15.13	1.30	6.13	57
8/29/2001	11:00	14.55	15.13	1.30	6.13	57
8/29/2001	11:30	14.54	15.13	1.32	6.15	58
8/29/2001	12:00	14.53	15.13	1.34	6.17	60
8/29/2001	12:30	14.53	15.12	1.32	6.15	58
8/29/2001	13:00	14.53	15.12	1.32	6.15	58
8/29/2001	13:30	14.52	15.12	1.34	6.17	60
8/29/2001	14:00	14.52	15.11	1.32	6.15	58
8/29/2001	14:30	14.52	15.11	1.32	6.15	58
8/29/2001	14:45	-	-	-	<b>6.15</b>	58
8/29/2001	15:00	14.51	15.10	1.36	6.15	58
8/29/2001	15:30	14.51	15.10	1.36	6.15	58
8/29/2001	16:00	14.51	15.10	1.36	6.15	58
8/29/2001	16:30	14.51	15.09	1.34	6.13	57
8/29/2001	17:00	14.50	15.09	1.36	6.15	58
8/29/2001	17:30	14.50	15.09	1.36	6.15	59
8/29/2001	18:00	14.50	15.08	1.34	6.13	57
8/29/2001	18:30	14.50	15.08	1.34	6.13	57
8/29/2001	19:00	14.50	15.08	1.34	6.13	57
8/29/2001	19:30	14.51	15.08	1.32	6.11	55
8/29/2001	20:00	14.50	15.08	1.34	6.13	57
8/29/2001	20:30	14.51	15.08	1.32	6.11	56
8/29/2001	21:00	14.51	15.08	1.32	6.11	56
8/29/2001	21:30	14.50	15.08	1.35	6.14	57
8/29/2001	22:00	14.50	15.08	1.35	6.14	57
8/29/2001	22:30	14.50	15.07	1.33	6.12	56
8/29/2001	23:00	14.51	15.08	1.33	6.12	56
8/29/2001	23:30	14.51	15.08	1.33	6.12	56
8/30/2001	0:00	14.51	15.08	1.33	6.12	56
8/30/2001	0:30	14.51	15.08	1.33	6.12	56
8/30/2001	1:00	14.52	15.08	1.31	6.10	54
8/30/2001	1:30	14.52	15.08	1.31	6.10	55
8/30/2001	2:00	14.52	15.08	1.31	6.10	55
8/30/2001	2:30	14.52	15.08	1.31	6.10	55
8/30/2001	3:00	14.52	15.08	1.31	6.10	55

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/30/2001	3:30	14.52	15.08	1.31	6.10	55
8/30/2001	4:00	14.52	15.08	1.31	6.10	55
8/30/2001	4:30	14.52	15.08	1.31	6.10	55
8/30/2001	5:00	14.52	15.09	1.34	6.13	57
8/30/2001	5:30	14.52	15.09	1.34	6.13	57
8/30/2001	6:00	14.52	15.08	1.32	6.11	55
8/30/2001	6:30	14.52	15.08	1.32	6.11	55
8/30/2001	7:00	14.52	15.08	1.32	6.11	55
8/30/2001	7:30	14.52	15.08	1.32	6.11	55
8/30/2001	8:00	14.52	15.08	1.32	6.11	55
8/30/2001	8:15	-	-	-	<b>6.11</b>	55
8/30/2001	8:30	14.52	15.07	1.27	6.09	54
8/30/2001	9:00	14.52	15.08	1.29	6.11	55
8/30/2001	9:30	14.51	15.07	1.29	6.11	55
8/30/2001	10:00	14.50	15.07	1.31	6.13	57
8/30/2001	10:30	14.50	15.07	1.31	6.13	57
8/30/2001	11:00	14.51	15.07	1.29	6.11	55
8/30/2001	11:30	14.48	15.07	1.36	6.18	60
8/30/2001	12:00	14.47	15.07	1.38	6.20	62
8/30/2001	12:30	14.47	15.07	1.38	6.20	62
8/30/2001	13:00	14.47	15.07	1.38	6.20	62
8/30/2001	13:30	14.46	15.07	1.41	6.23	64
8/30/2001	14:00	14.45	15.07	1.43	6.25	66
8/30/2001	14:30	14.45	15.07	1.43	6.25	66
8/30/2001	15:00	14.45	15.07	1.43	6.25	66
8/30/2001	15:30	14.45	15.06	1.41	6.23	64
8/30/2001	16:00	14.45	15.06	1.41	6.23	64
8/30/2001	16:30	14.45	15.06	1.41	6.23	64
8/30/2001	17:00	14.45	15.05	1.38	6.20	62
8/30/2001	17:30	14.45	15.05	1.38	6.20	62
8/30/2001	18:00	14.44	15.05	1.41	6.23	64
8/30/2001	18:30	14.43	15.04	1.41	6.23	64
8/30/2001	19:00	14.43	15.04	1.41	6.23	64
8/30/2001	19:30	14.44	15.04	1.39	6.21	62
8/30/2001	20:00	14.45	15.04	1.36	6.18	61
8/30/2001	20:30	14.45	15.04	1.36	6.18	61
8/30/2001	21:00	14.45	15.04	1.36	6.18	61
8/30/2001	21:30	14.46	15.04	1.34	6.16	59
8/30/2001	22:00	14.47	15.04	1.32	6.14	57
8/30/2001	22:30	14.47	15.04	1.32	6.14	57
8/30/2001	23:00	14.47	15.03	1.29	6.11	56
8/30/2001	23:30	14.47	15.03	1.29	6.11	56
8/31/2001	0:00	14.47	15.03	1.30	6.12	56

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
8/31/2001	0:30	14.47	15.03	1.30	6.12	56
8/31/2001	1:00	14.47	15.02	1.27	6.09	54
8/31/2001	1:30	14.47	15.03	1.30	6.12	56
8/31/2001	2:00	14.48	15.02	1.25	6.07	52
8/31/2001	2:30	14.48	15.02	1.25	6.07	53
8/31/2001	3:00	14.47	15.02	1.27	6.09	54
8/31/2001	3:30	14.47	15.02	1.27	6.09	54
8/31/2001	4:00	14.47	15.02	1.27	6.09	54
8/31/2001	4:30	14.47	15.01	1.25	6.07	53
8/31/2001	5:00	14.47	15.01	1.25	6.07	53
8/31/2001	5:30	14.47	15.01	1.25	6.07	53
8/31/2001	6:00	14.47	15.01	1.25	6.07	53
8/31/2001	6:30	14.47	15.01	1.25	6.07	53
8/31/2001	7:00	14.47	15.01	1.25	6.07	53
8/31/2001	7:30	14.47	15.01	1.25	6.07	53
8/31/2001	8:00	14.47	15.01	1.25	6.07	53
8/31/2001	8:30	14.47	15.01	1.25	6.07	53
8/31/2001	8:45	-	-	-	<b>6.07</b>	53
8/31/2001	9:00	14.47	15.00	1.22	6.05	51
8/31/2001	9:30	14.47	15.00	1.22	6.05	51
8/31/2001	10:00	14.47	15.01	1.24	6.07	53
8/31/2001	10:30	14.46	15.01	1.26	6.09	54
8/31/2001	11:00	14.46	15.01	1.26	6.09	54
8/31/2001	11:30	14.46	15.01	1.26	6.09	54
8/31/2001	12:00	14.46	15.01	1.26	6.09	54
8/31/2001	12:30	14.46	15.01	1.26	6.09	54
8/31/2001	13:00	14.46	15.01	1.26	6.09	54
8/31/2001	13:30	14.45	15.01	1.29	6.12	56
8/31/2001	14:00	14.45	15.01	1.29	6.12	56
8/31/2001	14:30	14.45	15.01	1.29	6.12	56
8/31/2001	15:00	14.45	15.01	1.29	6.12	56
8/31/2001	15:30	14.45	15.01	1.29	6.12	56
8/31/2001	16:00	14.45	15.01	1.29	6.12	56
8/31/2001	16:30	14.45	15.01	1.29	6.12	56
8/31/2001	17:00	14.45	15.01	1.28	6.11	56
8/31/2001	17:30	14.45	15.01	1.28	6.11	56
8/31/2001	18:00	14.45	15.01	1.28	6.11	56
8/31/2001	18:30	14.45	15.01	1.28	6.11	56
8/31/2001	19:00	14.45	15.01	1.28	6.11	56
8/31/2001	19:30	14.46	15.00	1.24	6.07	52
8/31/2001	20:00	14.45	15.00	1.26	6.09	54
8/31/2001	20:30	14.46	15.00	1.24	6.07	52
8/31/2001	21:00	14.46	15.00	1.24	6.07	52

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

Date	Time	Atmos. Pressure (psi)	Combined Pressure (psia)	Corrected Water Depth (feet)	Calculated Water Surface Elevation <sup>1</sup> (feet, BPMSL)	Discharge <sup>2</sup> (cfs)
8/31/2001	21:30	14.46	15.00	1.24	6.07	52
8/31/2001	22:00	14.46	15.00	1.24	6.07	52
8/31/2001	22:30	14.47	15.00	1.21	6.04	51
8/31/2001	23:00	14.47	15.01	1.24	6.07	52
8/31/2001	23:30	14.47	15.01	1.24	6.07	52
9/1/2001	0:00	14.47	15.00	1.21	6.04	51
9/1/2001	0:30	14.47	15.00	1.21	6.04	51
9/1/2001	1:00	14.47	15.00	1.21	6.04	50
9/1/2001	1:30	14.47	15.00	1.21	6.04	50
9/1/2001	2:00	14.47	15.00	1.21	6.04	50
9/1/2001	2:30	14.47	15.00	1.21	6.04	50
9/1/2001	3:00	14.47	15.00	1.21	6.04	50
9/1/2001	3:30	14.47	15.00	1.21	6.04	50
9/1/2001	4:00	14.47	15.00	1.21	6.04	50
9/1/2001	4:30	14.47	15.00	1.21	6.04	50
9/1/2001	5:00	14.47	15.00	1.21	6.04	50
9/1/2001	5:30	14.47	15.00	1.21	6.04	50
9/1/2001	6:00	14.47	15.00	1.21	6.04	50
9/1/2001	6:30	14.47	15.00	1.21	6.04	50
9/1/2001	7:00	14.47	15.00	1.21	6.04	50
9/1/2001	7:30	14.47	15.00	1.21	6.04	50
9/1/2001	8:00	14.48	15.00	1.19	<b>6.02</b>	49
9/1/2001	8:30	14.47	15.00	1.22	6.04	50
9/1/2001	9:00	14.47	15.00	1.22	6.04	50
9/1/2001	9:30	14.47	15.00	1.22	6.04	50
9/1/2001	10:00	14.47	15.00	1.22	6.04	50
9/1/2001	10:30	14.47	15.00	1.22	6.04	50
9/1/2001	11:00	14.47	15.01	1.24	6.06	52
9/1/2001	11:30	14.47	15.01	1.24	6.06	52
9/1/2001	12:00	14.47	15.01	1.24	6.06	52
9/1/2001	12:30	14.47	15.01	1.24	6.06	52
9/1/2001	13:00	14.47	15.01	1.24	6.06	52
9/1/2001	13:30	14.48	15.01	1.22	6.04	50
9/1/2001	14:00	14.48	15.01	1.22	6.04	50
9/1/2001	14:30	14.48	15.02	1.24	6.06	52
9/1/2001	15:00	14.48	15.02	1.24	6.06	52
9/1/2001	15:30	14.48	15.02	1.24	6.06	52
9/1/2001	16:00	14.48	15.02	1.24	6.06	52
9/1/2001	16:30	14.49	15.03	1.24	6.06	52
9/1/2001	17:00	14.49	15.03	1.24	6.06	51
9/1/2001	17:30	14.49	15.03	1.24	6.06	51
9/1/2001	18:00	14.50	15.03	1.21	6.03	50
9/1/2001	18:30	14.50	15.03	1.21	6.03	50

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/1/2001	19:00	14.50	15.04	1.23	6.05	51
9/1/2001	19:30	14.50	15.04	1.23	6.05	51
9/1/2001	20:00	14.51	15.04	1.21	6.03	50
9/1/2001	20:30	14.51	15.04	1.21	6.03	50
9/1/2001	21:00	14.52	15.04	1.19	6.01	48
9/1/2001	21:30	14.52	15.04	1.19	6.01	48
9/1/2001	22:00	14.52	15.04	1.19	6.01	48
9/1/2001	22:30	14.52	15.04	1.19	6.01	48
9/1/2001	23:00	14.53	15.05	1.19	6.01	48
9/1/2001	23:30	14.54	15.05	1.16	5.98	47
9/2/2001	0:00	14.54	15.05	1.16	5.98	47
9/2/2001	0:30	14.54	15.06	1.18	6.00	48
9/2/2001	1:00	14.55	15.06	1.16	5.98	47
9/2/2001	1:30	14.55	15.06	1.16	5.98	47
9/2/2001	2:00	14.55	15.06	1.16	5.98	47
9/2/2001	2:30	14.55	15.07	1.18	6.00	48
9/2/2001	3:00	14.55	15.07	1.18	6.00	48
9/2/2001	3:30	14.56	15.07	1.16	5.98	47
9/2/2001	4:00	14.56	15.07	1.16	5.98	47
9/2/2001	4:30	14.56	15.07	1.16	5.98	47
9/2/2001	5:00	14.56	15.07	1.16	5.98	47
9/2/2001	5:30	14.56	15.07	1.16	5.98	47
9/2/2001	6:00	14.56	15.07	1.16	5.98	47
9/2/2001	6:30	14.57	15.08	1.16	5.98	47
9/2/2001	7:00	14.57	15.08	1.16	5.98	47
9/2/2001	7:30	14.57	15.08	1.16	5.98	46
9/2/2001	8:00	14.57	15.08	1.16	5.98	46
9/2/2001	8:30	14.57	15.08	1.16	5.98	46
9/2/2001	9:00	14.57	15.09	1.18	6.00	47
9/2/2001	9:30	14.57	15.09	1.18	6.00	47
9/2/2001	10:00	14.57	15.09	1.18	6.00	47
9/2/2001	10:30	14.57	15.09	1.18	6.00	47
9/2/2001	11:00	14.57	15.07	1.13	<b>5.95</b>	46
9/2/2001	11:30	14.57	15.07	1.15	5.95	46
9/2/2001	12:00	14.57	15.07	1.15	5.95	46
9/2/2001	12:30	14.57	15.08	1.17	5.97	46
9/2/2001	13:00	14.56	15.08	1.20	6.00	47
9/2/2001	13:30	14.57	15.08	1.17	5.97	46
9/2/2001	14:00	14.57	15.08	1.17	5.97	46
9/2/2001	14:30	14.57	15.08	1.17	5.97	46
9/2/2001	15:00	14.56	15.08	1.20	6.00	47
9/2/2001	15:30	14.56	15.08	1.20	6.00	47
9/2/2001	16:00	14.55	15.08	1.22	6.02	49

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/2/2001	16:30	14.55	15.08	1.22	6.02	49
9/2/2001	17:00	14.55	15.08	1.22	6.02	49
9/2/2001	17:30	14.55	15.08	1.22	6.02	49
9/2/2001	18:00	14.55	15.08	1.22	6.02	49
9/2/2001	18:30	14.56	15.08	1.19	5.99	47
9/2/2001	19:00	14.56	15.08	1.19	5.99	47
9/2/2001	19:30	14.56	15.08	1.19	5.99	47
9/2/2001	20:00	14.57	15.08	1.17	5.97	46
9/2/2001	20:30	14.57	15.08	1.17	5.97	46
9/2/2001	21:00	14.57	15.08	1.17	5.97	46
9/2/2001	21:30	14.58	15.08	1.15	5.95	45
9/2/2001	22:00	14.58	15.08	1.15	5.95	45
9/2/2001	22:30	14.58	15.07	1.12	5.92	45
9/2/2001	23:00	14.58	15.07	1.12	5.92	45
9/2/2001	23:30	14.58	15.07	1.12	5.92	44
9/3/2001	0:00	14.58	15.07	1.12	5.92	44
9/3/2001	0:30	14.58	15.07	1.12	5.92	44
9/3/2001	1:00	14.58	15.07	1.12	5.92	44
9/3/2001	1:30	14.58	15.07	1.12	5.92	44
9/3/2001	2:00	14.58	15.07	1.12	5.92	44
9/3/2001	2:30	14.58	15.07	1.12	5.92	44
9/3/2001	3:00	14.58	15.07	1.12	5.92	44
9/3/2001	3:30	14.58	15.07	1.12	5.92	44
9/3/2001	4:00	14.58	15.07	1.12	5.92	44
9/3/2001	4:30	14.58	15.07	1.12	5.92	44
9/3/2001	5:00	14.58	15.07	1.12	5.92	44
9/3/2001	5:30	14.57	15.07	1.14	5.94	45
9/3/2001	6:00	14.57	15.07	1.14	5.94	45
9/3/2001	6:30	14.57	15.07	1.14	5.94	45
9/3/2001	7:00	14.57	15.07	1.14	5.94	45
9/3/2001	7:30	14.57	15.07	1.14	5.94	45
9/3/2001	8:00	14.57	15.07	1.14	5.94	45
9/3/2001	8:30	14.57	15.06	1.12	5.92	44
9/3/2001	9:00	14.57	15.06	1.12	5.92	44
9/3/2001	9:30	14.57	15.06	1.12	5.92	44
9/3/2001	10:00	14.56	15.05	1.12	5.92	44
9/3/2001	10:30	14.56	15.05	1.12	5.92	44
9/3/2001	11:00	14.55	15.05	1.14	5.94	45
9/3/2001	11:30	14.55	15.05	1.14	5.94	45
9/3/2001	12:00	14.55	15.05	1.14	5.94	45
9/3/2001	12:30	14.55	15.05	1.14	5.94	45
9/3/2001	13:00	14.55	15.05	1.14	5.94	45
9/3/2001	13:30	14.55	15.05	1.14	5.94	45

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/3/2001	14:00	14.55	15.05	1.14	5.94	45
9/3/2001	14:30	14.55	15.04	1.12	5.92	44
9/3/2001	15:00	14.55	15.04	1.12	5.92	44
9/3/2001	15:30	14.55	15.04	1.12	5.92	44
9/3/2001	16:00	14.55	15.04	1.12	5.92	44
9/3/2001	16:30	14.55	15.04	1.12	5.92	44
9/3/2001	17:00	14.55	15.04	1.12	5.92	44
9/3/2001	17:30	14.55	15.04	1.12	5.92	44
9/3/2001	18:00	14.55	15.04	1.12	5.92	44
9/3/2001	18:30	14.54	15.04	1.14	5.94	45
9/3/2001	19:00	14.54	15.03	1.12	5.92	44
9/3/2001	19:30	14.54	15.03	1.12	5.92	44
9/3/2001	20:00	14.53	15.03	1.14	5.94	45
9/3/2001	20:30	14.54	15.02	1.09	5.89	43
9/3/2001	21:00	14.53	15.02	1.12	5.92	44
9/3/2001	21:30	14.54	15.02	1.09	5.89	43
9/3/2001	22:00	14.54	15.02	1.09	5.89	43
9/3/2001	22:30	14.54	15.02	1.09	5.89	43
9/3/2001	23:00	14.54	15.02	1.09	5.89	43
9/3/2001	23:30	14.53	15.02	1.12	5.92	44
9/4/2001	0:00	14.53	15.01	1.09	5.89	43
9/4/2001	0:30	14.53	15.01	1.09	5.89	43
9/4/2001	1:00	14.53	15.01	1.09	5.89	43
9/4/2001	1:30	14.52	15.01	1.12	5.92	44
9/4/2001	2:00	14.52	15.01	1.12	5.92	44
9/4/2001	2:30	14.52	15.01	1.12	5.92	44
9/4/2001	3:00	14.52	15.00	1.09	5.89	43
9/4/2001	3:30	14.52	14.99	1.07	5.87	42
9/4/2001	4:00	14.52	14.99	1.07	5.87	42
9/4/2001	4:30	14.52	14.99	1.07	5.87	42
9/4/2001	5:00	14.52	14.99	1.07	5.87	42
9/4/2001	5:30	14.52	14.98	1.05	5.85	41
9/4/2001	6:00	14.51	14.98	1.07	5.87	42
9/4/2001	6:30	14.51	14.98	1.07	5.87	42
9/4/2001	7:00	14.50	14.98	1.09	5.89	43
9/4/2001	7:30	14.50	14.98	1.09	5.89	43
9/4/2001	8:00	14.50	14.98	1.09	5.89	43
9/4/2001	8:30	14.50	14.97	1.07	5.87	42
9/4/2001	9:00	14.49	14.96	1.07	5.87	42
9/4/2001	9:30	14.48	14.96	1.09	5.89	43
9/4/2001	10:00	14.48	14.95	1.07	5.87	42
9/4/2001	10:30	14.47	14.95	1.09	5.89	43
9/4/2001	11:00	14.47	14.95	1.09	5.89	43



**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/4/2001	11:30	14.46	14.95	1.11	5.91	44
9/4/2001	12:00	14.46	14.94	1.09	5.89	43
9/4/2001	12:30	14.45	14.94	1.11	5.91	44
9/4/2001	13:00	14.45	14.94	1.11	5.91	44
9/4/2001	13:30	14.45	14.93	1.09	5.89	43
9/4/2001	14:00	14.45	14.93	1.09	5.89	43
9/4/2001	14:30	14.45	14.92	1.07	5.87	42
9/4/2001	15:00	14.44	14.92	1.09	5.89	43
9/4/2001	15:30	14.44	14.92	1.09	5.89	43
9/4/2001	16:00	14.44	14.92	1.09	5.89	43
9/4/2001	16:30	14.43	14.92	1.11	5.91	44
9/4/2001	17:00	14.42	14.91	1.11	5.91	44
9/4/2001	17:30	14.42	14.91	1.11	5.91	44
9/4/2001	18:00	14.42	14.91	1.11	5.91	44
9/4/2001	18:30	14.42	14.90	1.09	5.89	43
9/4/2001	19:00	14.42	14.90	1.09	5.89	43
9/4/2001	19:30	14.42	14.90	1.09	5.89	43
9/4/2001	20:00	14.42	14.90	1.09	5.89	43
9/4/2001	20:30	14.42	14.90	1.09	5.89	43
9/4/2001	21:00	14.42	14.89	1.06	5.86	42
9/4/2001	21:30	14.43	14.89	1.04	5.84	41
9/4/2001	22:00	14.42	14.89	1.06	5.86	42
9/4/2001	22:30	14.42	14.89	1.06	5.86	42
9/4/2001	23:00	14.42	14.89	1.06	5.86	42
9/4/2001	23:30	14.42	14.89	1.06	5.86	42
9/5/2001	0:00	14.42	14.89	1.06	5.86	42
9/5/2001	0:30	14.42	14.89	1.06	5.86	42
9/5/2001	1:00	14.41	14.88	1.06	5.86	42
9/5/2001	1:30	14.41	14.88	1.06	5.86	42
9/5/2001	2:00	14.41	14.88	1.06	5.86	42
9/5/2001	2:30	14.41	14.88	1.06	5.86	42
9/5/2001	3:00	14.41	14.87	1.04	5.84	41
9/5/2001	3:30	14.41	14.87	1.04	5.84	41
9/5/2001	4:00	14.41	14.87	1.04	5.84	41
9/5/2001	4:30	14.41	14.87	1.04	5.84	41
9/5/2001	5:00	14.41	14.87	1.04	5.84	41
9/5/2001	5:30	14.41	14.87	1.04	5.84	41
9/5/2001	6:00	14.41	14.86	1.01	5.81	40
9/5/2001	6:30	14.40	14.86	1.04	5.84	41
9/5/2001	7:00	14.41	14.87	1.04	5.84	41
9/5/2001	7:30	14.41	14.86	1.01	5.81	40
9/5/2001	8:00	14.40	14.86	1.04	5.84	41
9/5/2001	8:30	14.40	14.86	1.04	5.84	41

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/5/2001	9:00	14.40	14.86	1.04	5.84	41
9/5/2001	9:30	14.40	14.86	1.04	5.84	41
9/5/2001	10:00	14.40	14.86	1.04	5.84	41
9/5/2001	10:30	14.40	14.86	1.04	5.84	41
9/5/2001	11:00	14.40	14.87	1.06	5.86	42
9/5/2001	11:30	14.40	14.87	1.06	5.86	42
9/5/2001	12:00	14.40	14.87	1.06	5.86	42
9/5/2001	12:30	14.40	14.88	1.08	5.88	43
9/5/2001	13:00	14.40	14.88	1.08	5.88	43
9/5/2001	13:30	14.40	14.88	1.08	5.88	43
9/5/2001	14:00	14.40	14.88	1.08	5.88	43
9/5/2001	14:30	14.40	14.88	1.08	5.88	43
9/5/2001	15:00	14.40	14.89	1.10	5.90	44
9/5/2001	15:30	14.41	14.89	1.08	5.88	43
9/5/2001	16:00	14.41	14.89	1.08	5.88	43
9/5/2001	16:30	14.41	14.89	1.08	5.88	43
9/5/2001	17:00	14.41	14.89	1.08	5.88	43
9/5/2001	17:30	14.42	14.89	1.06	5.86	42
9/5/2001	18:00	14.42	14.90	1.08	5.88	43
9/5/2001	18:30	14.42	14.90	1.08	5.88	43
9/5/2001	19:00	14.42	14.91	1.10	5.90	44
9/5/2001	19:30	14.43	14.91	1.08	5.88	43
9/5/2001	20:00	14.44	14.92	1.08	5.88	43
9/5/2001	20:30	14.44	14.92	1.08	5.88	43
9/5/2001	21:00	14.45	14.92	1.06	5.86	42
9/5/2001	21:30	14.45	14.92	1.06	5.86	42
9/5/2001	22:00	14.45	14.92	1.06	5.86	42
9/5/2001	22:30	14.46	14.92	1.03	5.83	41
9/5/2001	23:00	14.46	14.93	1.06	5.86	42
9/5/2001	23:30	14.47	14.93	1.03	5.83	41
9/6/2001	0:00	14.47	14.94	1.05	5.85	42
9/6/2001	0:30	14.47	14.95	1.08	5.88	43
9/6/2001	1:00	14.48	14.95	1.05	5.85	42
9/6/2001	1:30	14.49	14.95	1.03	5.83	41
9/6/2001	2:00	14.49	14.95	1.03	5.83	41
9/6/2001	2:30	14.49	14.96	1.05	5.85	42
9/6/2001	3:00	14.50	14.96	1.03	5.83	41
9/6/2001	3:30	14.50	14.97	1.05	5.85	42
9/6/2001	4:00	14.50	14.97	1.05	5.85	42
9/6/2001	4:30	14.50	14.97	1.05	5.85	42
9/6/2001	5:00	14.51	14.98	1.05	5.85	42
9/6/2001	5:30	14.51	14.98	1.05	5.85	42
9/6/2001	6:00	14.52	14.98	1.03	5.83	41

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/6/2001	6:30	14.52	14.99	1.05	5.85	42
9/6/2001	7:00	14.52	14.99	1.05	5.85	42
9/6/2001	7:30	14.52	14.99	1.05	5.85	42
9/6/2001	8:00	14.53	15.00	1.05	5.85	42
9/6/2001	8:30	14.53	15.00	1.05	5.85	42
9/6/2001	9:00	14.53	15.01	1.08	5.88	43
9/6/2001	9:30	14.53	15.01	1.07	5.87	43
9/6/2001	10:00	14.54	15.01	1.05	5.85	42
9/6/2001	10:30	14.54	15.02	1.07	5.87	43
9/6/2001	11:00	14.55	15.02	1.05	5.85	42
9/6/2001	11:05	-	-	-	<b>5.85</b>	42
9/6/2001	11:30	14.54	15.03	1.12	5.89	43
9/6/2001	11:34	-	-	-	<b>5.85</b>	<b>41.7</b>
9/6/2001	12:00	14.55	15.03	1.08	5.85	42
9/6/2001	12:03	-	-	-	<b>5.85</b>	42
9/6/2001	12:30	14.53	15.04	1.17	5.92	45
9/6/2001	13:00	14.55	15.04	1.13	5.88	43
9/6/2001	13:30	14.55	15.04	1.13	5.88	43
9/6/2001	14:00	14.55	15.04	1.13	5.88	43
9/6/2001	14:30	14.56	15.05	1.13	5.88	43
9/6/2001	15:00	14.55	15.05	1.15	5.90	44
9/6/2001	15:30	14.56	15.06	1.15	5.90	44
9/6/2001	16:00	14.56	15.06	1.15	5.90	44
9/6/2001	16:30	14.55	15.06	1.18	5.93	45
9/6/2001	17:00	14.55	15.06	1.18	5.93	45
9/6/2001	17:30	14.56	15.07	1.18	5.93	45
9/6/2001	18:00	14.57	15.07	1.16	5.91	44
9/6/2001	18:30	14.57	15.07	1.16	5.91	44
9/6/2001	19:00	14.57	15.07	1.16	5.91	44
9/6/2001	19:30	14.57	15.07	1.16	5.91	44
9/6/2001	20:00	14.58	15.07	1.13	5.88	43
9/6/2001	20:30	14.59	15.07	1.11	5.86	42
9/6/2001	21:00	14.60	15.08	1.11	5.86	42
9/6/2001	21:30	14.60	15.08	1.11	5.86	42
9/6/2001	22:00	14.60	15.08	1.11	5.86	42
9/6/2001	22:30	14.61	15.08	1.09	5.84	41
9/6/2001	23:00	14.62	15.08	1.07	5.82	40
9/6/2001	23:30	14.62	15.09	1.09	5.84	41
9/7/2001	0:00	14.62	15.09	1.09	5.84	41
9/7/2001	0:30	14.62	15.09	1.09	5.84	41
9/7/2001	1:00	14.63	15.10	1.09	5.84	41
9/7/2001	1:30	14.63	15.10	1.09	5.84	41
9/7/2001	2:00	14.63	15.10	1.09	5.84	41

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/7/2001	2:30	14.63	15.10	1.09	5.84	41
9/7/2001	3:00	14.64	15.10	1.07	5.82	40
9/7/2001	3:30	14.64	15.10	1.07	5.82	40
9/7/2001	4:00	14.64	15.10	1.07	5.82	40
9/7/2001	4:30	14.65	15.10	1.05	5.80	39
9/7/2001	5:00	14.65	15.10	1.05	5.80	39
9/7/2001	5:30	14.65	15.10	1.05	5.80	39
9/7/2001	6:00	14.65	15.10	1.05	5.80	39
9/7/2001	6:30	14.65	15.10	1.05	5.80	39
9/7/2001	7:00	14.65	15.10	1.05	5.80	39
9/7/2001	7:30	14.65	15.10	1.05	5.80	39
9/7/2001	8:00	14.65	15.10	1.05	5.80	39
9/7/2001	8:30	14.65	15.10	1.05	5.80	39
9/7/2001	9:00	14.65	15.10	1.05	5.80	39
9/7/2001	9:30	14.65	15.11	1.08	5.83	40
9/7/2001	10:00	14.65	15.11	1.08	5.83	40
9/7/2001	10:30	14.65	15.11	1.08	5.83	40
9/7/2001	11:00	14.65	15.11	1.08	5.83	40
9/7/2001	11:30	14.65	15.11	1.08	5.83	40
9/7/2001	12:00	14.65	15.12	1.10	5.85	42
9/7/2001	12:30	14.66	15.12	1.08	5.83	41
9/7/2001	13:00	14.66	15.12	1.08	5.83	41
9/7/2001	13:30	14.66	15.13	1.10	5.85	42
9/7/2001	14:00	14.67	15.13	1.08	5.83	41
9/7/2001	14:30	14.66	15.13	1.10	5.85	42
9/7/2001	15:00	14.67	15.13	1.08	5.83	41
9/7/2001	15:30	14.67	15.13	1.08	5.83	41
9/7/2001	16:00	14.67	15.13	1.08	5.83	41
9/7/2001	16:30	14.67	15.13	1.08	5.83	41
9/7/2001	17:00	14.67	15.14	1.11	5.86	42
9/7/2001	17:30	14.68	15.14	1.08	5.83	41
9/7/2001	18:00	14.68	15.15	1.11	5.86	42
9/7/2001	18:30	14.69	15.15	1.09	5.84	41
9/7/2001	19:00	14.69	15.15	1.09	5.84	41
9/7/2001	19:30	14.70	15.15	1.06	5.81	40
9/7/2001	20:00	14.70	15.16	1.09	5.84	41
9/7/2001	20:30	14.71	15.16	1.06	5.81	40
9/7/2001	21:00	14.71	15.16	1.06	5.81	40
9/7/2001	21:30	14.71	15.16	1.06	5.81	40
9/7/2001	22:00	14.72	15.17	1.07	5.82	40
9/7/2001	22:30	14.72	15.17	1.07	5.82	40
9/7/2001	23:00	14.72	15.17	1.07	5.82	40
9/7/2001	23:30	14.72	15.17	1.07	5.82	40

**Table D-4.3: Water Surface Elevation and Discharge on the  
Ublutuoch River at River Mile 13.7**

<b>Date</b>	<b>Time</b>	<b>Atmos. Pressure (psi)</b>	<b>Combined Pressure (psia)</b>	<b>Corrected Water Depth (feet)</b>	<b>Calculated Water Surface Elevation<sup>1</sup> (feet, BPMSL)</b>	<b>Discharge<sup>2</sup> (cfs)</b>
9/8/2001	0:00	14.72	15.18	1.09	5.84	41
9/8/2001	0:30	14.72	15.18	1.09	5.84	41
9/8/2001	1:00	14.73	15.19	1.09	5.84	41
9/8/2001	1:30	14.74	15.19	1.07	5.82	40
9/8/2001	2:00	14.74	15.19	1.07	5.82	40
9/8/2001	2:30	14.74	15.19	1.07	5.82	40
9/8/2001	3:00	14.74	15.20	1.09	5.84	41
9/8/2001	3:30	14.75	15.20	1.07	5.82	40
9/8/2001	4:00	14.75	15.20	1.07	5.82	40
9/8/2001	4:30	14.76	15.21	1.07	5.82	40
9/8/2001	5:00	14.76	15.21	1.07	5.82	40
9/8/2001	5:30	14.76	15.21	1.07	5.82	40
9/8/2001	6:00	14.77	15.21	1.05	5.80	39
9/8/2001	6:30	14.77	15.21	1.05	5.80	39
9/8/2001	7:00	14.77	15.22	1.07	5.82	40
9/8/2001	7:30	14.77	15.22	1.07	5.82	40
9/8/2001	8:00	14.77	15.22	1.07	5.82	40
9/8/2001	8:30	14.77	15.22	1.07	5.82	40
9/8/2001	9:00	14.77	15.22	1.08	5.83	40
9/8/2001	9:30	14.77	15.22	1.08	5.83	40
9/8/2001	9:33	-	-	-	<b>5.83</b>	41

**APPENDIX E**

**PHOTOGRAPHIC RECORD**

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<u>Photo</u>	<u>Title</u>
<b>Fish Creek</b>	
E-1.1	Leading edge of flowing water at approximately River Mile 56 on 5 June 2001.
E-1.2	Looking south at monitoring site at River Mile 0.7, mouth of Fish Creek on 1 June 2001.
E-1.3	River mile 0.7 on 11 June 2001. Note: orange snow pole in water.
E-1.4	Looking south across monitoring site at River Mile 11.7 on 5 June 2001.
E-1.5	Monitoring site at River Mile 11.7 on 11 June 2001.
E-1.6	Looking south across monitoring site at River Mile 18.4 on 21 May 2001.
E-1.7	Looking south across monitoring site at River Mile 18.4 on 7 June 2001.
E-1.8	Looking south across monitoring site at River Mile 18.1 on 11 June 2001.
E-1.9	Ice jam located on Fish Creek at River Mile 23 on 7 June 2001.
E-1.10	Looking north across monitoring site at River Mile 25.1 on 6 June, 2001.
E-1.11	Looking downstream at River Mile 25.1 on 11 June 2001.
E-1.12	Portion of ice jam located above the confluence of Fish Creek and Judy Creek at approximately River Mile 28 on 7 June 2001.
E-1.13	Grounded ice at approximately River Mile 27 on 7 June 2001.
E-1.14	Looking north across monitoring site at River Mile 32.4 on 5 June 2001.
E-1.15	Looking northwest across monitoring site at River Mile 32.4 on 7 June 2001.
E-1.16	Ice jam located at approximately River Mile 37 on 6 June 2001.
E-1.17	Ice jam located at approximately River Mile 37 on 6 June 2001.
E-1.18	Looking upstream at River Mile 32.4 on 11 June 2001.
E-1.19	Leading edge of flowing water immediately downstream from River Mile 43.3 on 6 June 2001.
E-1.20	Looking northwest across monitoring site at River Mine 43.3 on 3 June 2001.
E-1.21	Looking upstream at River Mile 43.3 on 5 June 2001.
E-1.22	Looking north across monitoring site at River Mile 43.3 on 6 June 2001.
E-1.23	Looking downstream at River Mile 43.3 on 11 June 2001.

## LIST OF PHOTOGRAPHS (Continued)

Photo

Title

### **Judy Creek**

- |        |   |
|--------|---|
| E-2.1  | Leading edge of flowing water on Judy Creek at approximately River Mile 8 on 5 June 2001. |
| E-2.2  | Looking downstream at River Mile 7 on 7 of June 2001.                                     |
| E-2.3  | Looking downstream at River Mile 7 on 11 June 2001.                                       |
| E-2.4  | Looking across monitoring site at River Mile 13.8 on 3 June 2001.                         |
| E-2.5  | Looking across channel at River Mile 13.8 on 6 June 2001.                                 |
| E-2.6  | Looking upstream at River Mile 13.8 on 11 June 2001.                                      |
| E-2.7  | Looking downstream at River Mile 21.8 on 3 June 2001.                                     |
| E-2.8  | Looking upstream at River Mile 21.8 on 11 June 2001.                                      |
| E-2.9  | Looking across channel at River Mile 31 on 28 May 2001.                                   |
| E-2.10 | Looking across channel at River Mile 31 on 11 June 2001.                                  |

### **Ublutuoch River**

- |       |   |
|-------|---|
| E-3.1 | Looking east across Ublutuoch River at River Mile 13.5 on 29 May 2001.      |
| E-3.2 | Looking upstream at ice road crossing from River Mile 13.4 on 10 June 2001. |
| E-3.3 | Looking upstream at ice road crossing from River Mile 13.7 on 10 June 2001. |
| E-3.4 | Looking across channel at River Mile 13.7 on 18 July 2001.                  |



**PHOTOGRAPHIC RECORD**

**FISH CREEK**



E-1.1 Leading edge of flowing water at approximately River Mile 56 on 5 June 2001.



E-1.2 Looking south at monitoring site at River Mile 0.7, mouth of Fish Creek on 1 June 2001.



E-1.3 River mile 0.7 on 11 June 2001. Note: orange snow pole in water.



E-1.4 Looking south across monitoring site at River Mile 11.7 on 5 June 2001.



E-1.5 Monitoring site at River Mile 11.7 on 11 June 2001.



E-1.6 Looking south across monitoring site at River Mile 18.4 on 21 May 2001.



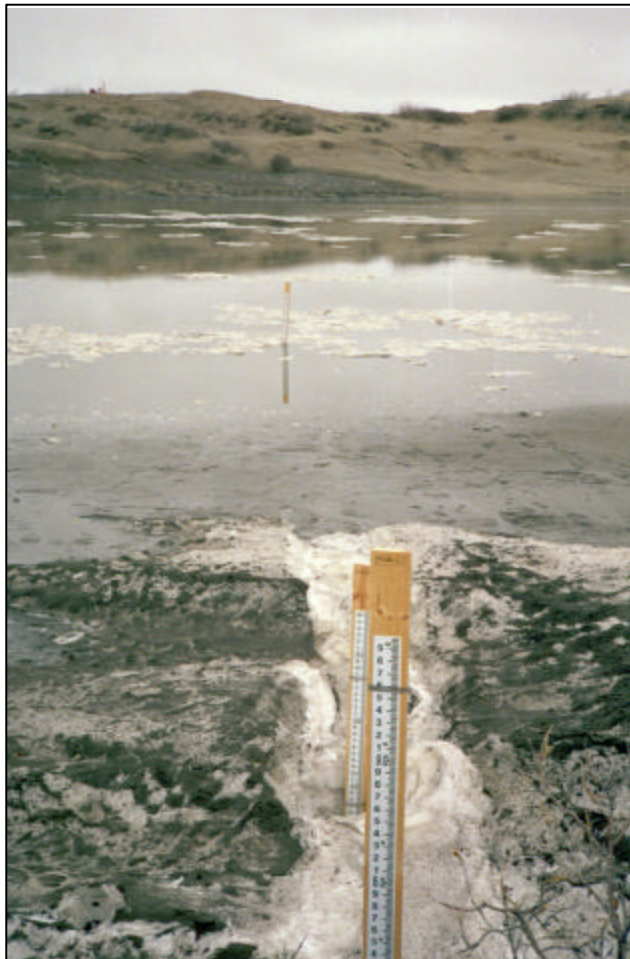
E-1.7 Looking south across monitoring site at River Mile 18.4 on 7 June 2001.



E-1.8 Looking south across monitoring site at River Mile 18.1 on 11 June 2001.



E-1.9 Ice jam located on Fish Creek at River Mile 23 on 7 June 2001.



E-1.10  
Looking north across  
monitoring site at River  
Mile 25.1 on 6 June, 2001.



E-1.11 Looking downstream at River Mile 25.1 on 11 June 2001.



E-1.12 Portion of ice jam located above the confluence of Fish Creek and Judy Creek at approximately River Mile 28 on 7 June 2001.



E-1.13 Grounded ice at approximately River Mile 27 on 7 June 2001.



E-1.14 Looking north across monitoring site at River Mile 32.4 on 5 June 2001.





E-1.15 Looking northwest across monitoring site at River Mile 32.4 on 7 June 2001.



E-1.16 Ice jam located at approximately River Mile 37 on 6 June 2001.



E-1.17 Ice jam located at approximately River Mile 37 on 6 June 2001.



E-1.18 Looking upstream at River Mile 32.4 on 11 June 2001.



E-1.19 Leading edge of flowing water immediately downstream from River Mile 43.3 on 6 June 2001.



E-1.20 Looking northwest across monitoring site at River Mile 43.3 on 3 June 2001.



E-1.21 Looking upstream at River Mile 43.3 on 5 June 2001.



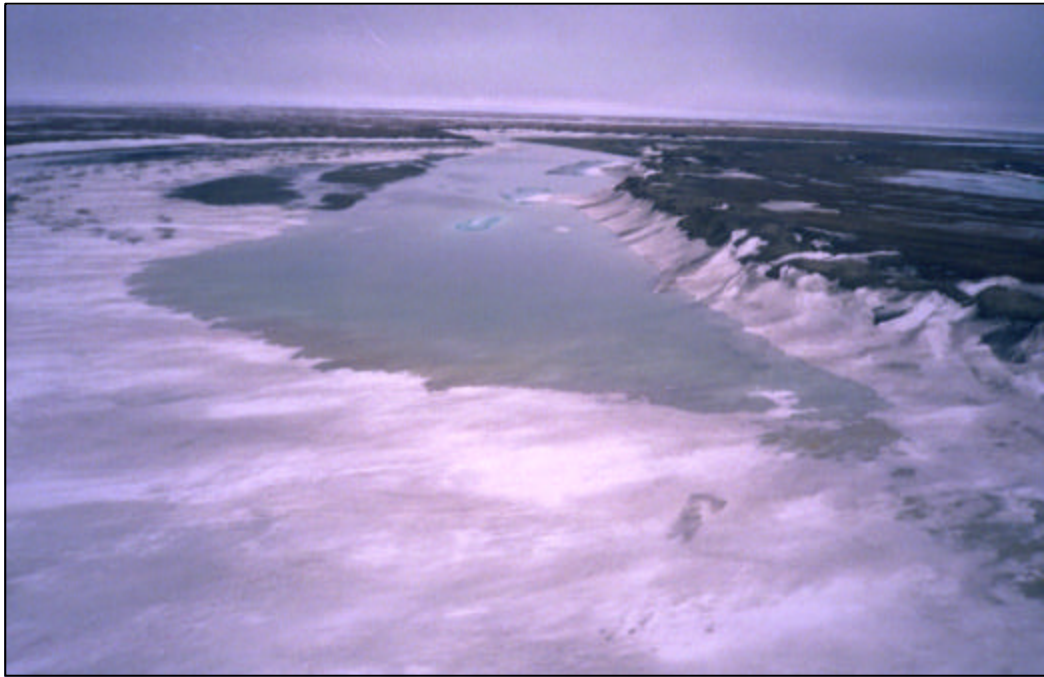
E-1.22 Looking north across monitoring site at River Mile 43.3 on 6 June 2001.



E-1.23 Looking downstream at River Mile 43.3 on 11 June 2001.

**PHOTOGRAPHIC RECORD**

**JUDY CREEK**



E-2.1 Leading edge of flowing water on Judy Creek at approximately River Mile 8 on 5 June 2001.



E-2.2 Looking downstream at River Mile 7 on 7 of June 2001.



E-2.3 Looking downstream at River Mile 7 on 11 June 2001.



E-2.4 Looking across monitoring site at River Mile 13.8 on 3 June 2001.





E-2.5 Looking across channel at River Mile 13.8 on 6 June 2001.



E-2.6 Looking upstream at River Mile 13.8 on 11 June 2001.



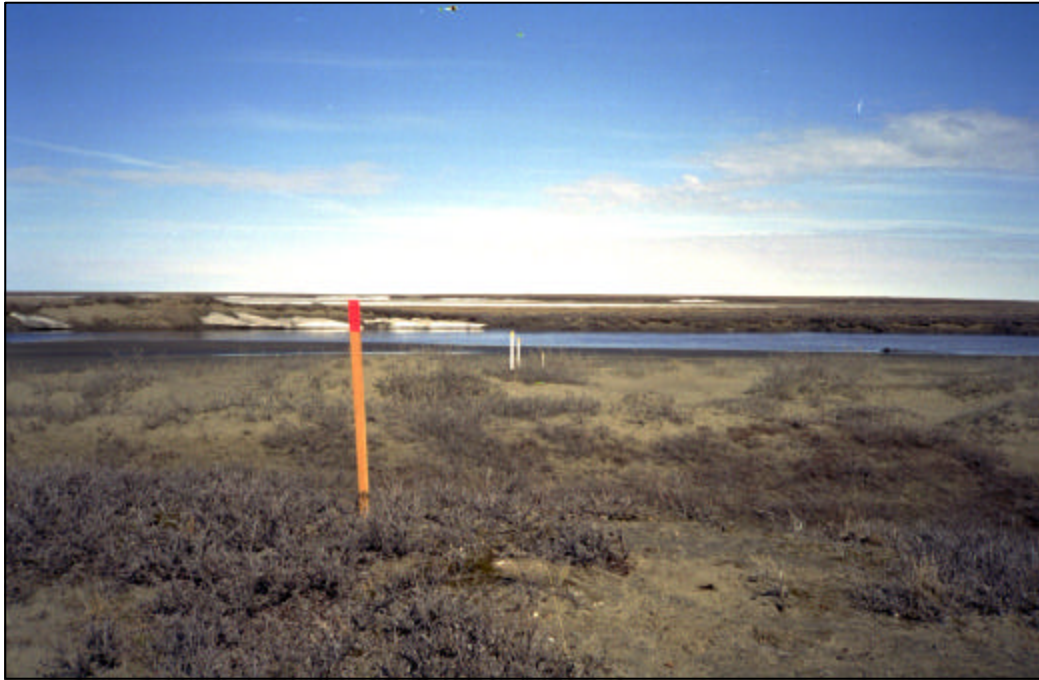
E-2.7 Looking downstream at River Mile 21.8 on 3 June 2001.



E-2.8 Looking upstream at River Mile 21.8 on 11 June 2001.



E-2.9 Looking across channel at River Mile 31 on 28 May 2001.



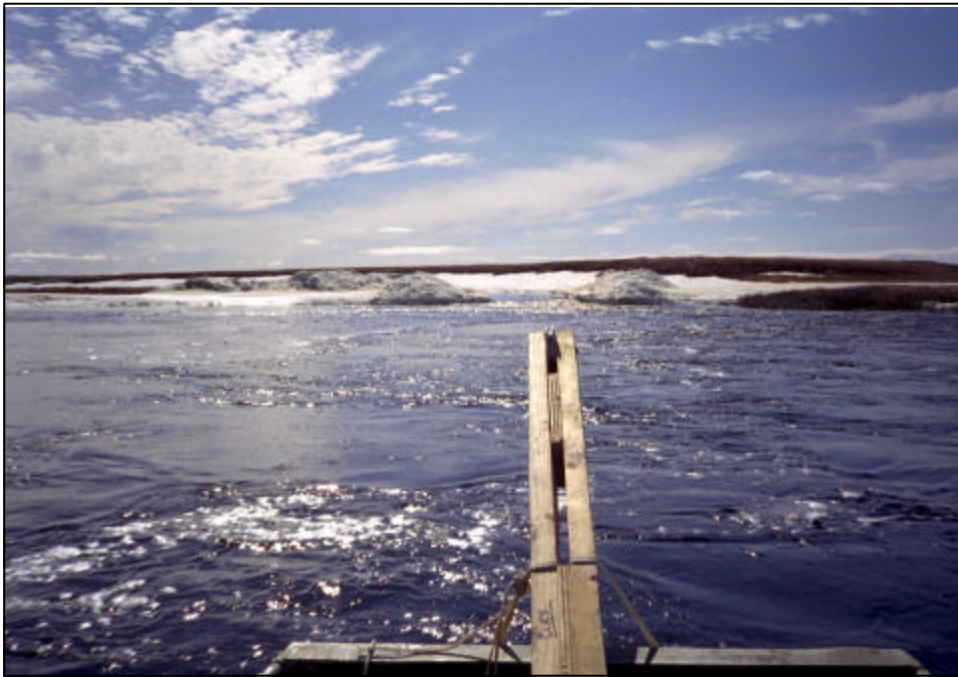
E-2.10 Looking across channel at River Mile 31 on 11 June 2001.

**PHOTOGRAPHIC RECORD**

**UBLUTUOCH RIVER**



E-3.1 Looking east across Ublutuoch River at River Mile 13.5 on 29 May 2001.



E-3.2 Looking upstream at ice road crossing from River Mile 13.4 on 10 June 2001.



E-3.3 Looking upstream at ice road crossing from River Mile 13.7 on 10 June 2001.



E-3.4 Looking across channel at River Mile 13.7 on 18 July 2001.

**APPENDIX F**

**FLOOD FREQUENCY ANALYSIS**

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## **Appendix F**

### **Flood-Frequency Analysis**

#### **F.1 Introduction**

The purpose of this analysis is to determine the magnitude and frequency of flood events on three streams in the National Petroleum Reserve of Alaska (NPR-A): Fish Creek, Judy Creek, and the Ublutuoch River. There are no historical flood-peak data on these drainages. Therefore, flood-peak discharge must be estimated from data collected on other drainages in the region.

Two sets of regression equations have been developed for this purpose: one by the United States Geological Survey (USGS, 1994), and one by Shannon & Wilson, Inc. (1997). The USGS equations are based on data from as far south as the Alaska Range, and appear to systematically underestimate the discharges on three North Slope rivers for which there is a long record length: Kuparuk River, Putuligayuk River, and Nunavak Creek.

The second set of equations was developed for the Tarn Project (Shannon & Wilson, 1997). Although these equations were developed specifically to estimate flood-peak discharge on the North Slope, additional data have become available since the equations were developed.

Therefore, new regression equations were developed using all of the available flood-peak data for watersheds draining the foothills and/or the coastal plain of the North Slope. The equations were then used to estimate the flood-peak magnitude and frequency relationship on Fish Creek, Judy Creek and the Ublutuoch River. The locations of the stream gage stations used in these analyses are presented in Figure F-1.

#### **F.2 Single-Station Analysis**

Single-station flood-frequency analyses were performed, using annual peak discharge data available for eleven watersheds draining the foothills of the Brooks Range and/or the coastal plain of the North Slope. The analyses were based on the methods developed by the Interagency Advisory Committee On Water Data (1982), and performed using the U.S. Army Corps of Engineer's Flood Frequency Program HEC-FFA (USACE, 1992). A weighted skew, based on

the station skew and a regional skew, was used in the computations. The magnitude of the regional skew (0.13) and the standard error of the regional skew (1.15) were obtained from Jones and Fahl (1994). The discharge associated with both the base curve and the expected probability were computed.

When the record length is relatively short, the base curve tends to underestimate the average exceedance probability associated with a specified discharge (Beard, 1974). Thus, the expected probability values, which have been shown to produce an unbiased estimate of the average exceedance probability (Beard, 1974), were used in this analysis.

A brief explanation of expected probability is presented in Appendix G. The annual peak discharge data used in the single-station flood-frequency analyses is presented in Table F-1. A summary of the flood-peak discharge estimates produced by the single-station flood-frequency analyses are presented in Table F-3, and the detailed results of the analyses are presented in Tables F-4 through F-14 and Figures F-2 through F-12.

### **F.3 Regression Analysis**

A separate regression equation was developed to predict the magnitude of the flood-peak discharge associated with each of the following average return periods: 2-, 5-, 10-, 25-, 50-, 100-, 200-, and 500-year. The equations were developed from the results of the single-station flood-frequency analyses and the associated drainage basin characteristics, using the Minitab Statistical Software (Minitab Inc., Release 12). The data that were used in the development of these equations is summarized in Tables F-2 and F-3.

Based on a stepwise regression analysis, *drainage area* was shown to be the most significant variable in predicting the discharge. A correlation test was then performed to determine which of the other drainage basin variables might be strongly correlated to *drainage area*, and the variables with a correlation coefficient greater than 0.9 were discarded. Using only those variables not highly correlated with *drainage area*, a best subset regression analysis was conducted. From this analysis, two multi-variable equations were identified as having a significantly lower mean square error than the single variable equation. These equations

included *percent area of lakes* or *gage elevation* in addition to *drainage area*. However, the sign on the exponent associated with *percent area of lakes* was positive, and the sign on the exponent associated with *gage elevation* was negative. This suggests that as the number of lakes increases the unit runoff increases, and as the gage elevation increases the unit runoff decreases. Based on the physical processes involved, this is the opposite of what we would expect. These results are most likely due to the small data set used to develop the regression equations. For these reasons, drainage area was selected as the sole predictor variable.

To develop the final equations, record length was used as a weight variable. This was done because the record length of the streams used in the analysis varies from 6 to 30 years, and because the record length significantly affects the expected probability estimate. Thus, equations in the form of:

$$Q_T = a(\text{Drainage Area})^y$$

were developed to predict the T-year discharge. The detailed results of the weighted regression analyses are presented in Tables F-15 through F-22. The equations developed from the analyses are listed below:

$$Q_2 = 17.78(\text{Drainage Area})^{0.975}$$

$$Q_5 = 33.88(\text{Drainage Area})^{0.943}$$

$$Q_{10} = 47.86(\text{Drainage Area})^{0.924}$$

$$Q_{25} = 70.79(\text{Drainage Area})^{0.902}$$

$$Q_{50} = 93.33(\text{Drainage Area})^{0.868}$$

$$Q_{200} = 154.9(\text{Drainage Area})^{0.850}$$

$$Q_{500} = 223.9(\text{Drainage Area})^{0.826}$$

where  $Q_T$  denotes flood peak discharge in cfs, for the T-year event; and *Drainage Area* denotes drainage basin area in square miles.

#### **F.4 Application of the Regression Equations**

An analysis of the flood-peak discharges on 6 gaged watersheds across the North Slope indicates that flood events during the 2001 season had return periods of between 1.75 and 6 years (Table F-23). Thus, one would expect the return period of the flood-peak discharges in the project area to be within a similar range.

The observed 2001 annual flood-peak discharge on Judy Creek (River Mile 7), the Ublutuoch River (River Mile 13.7), and two locations on Fish Creek (River Miles 25.1 and 32.4) was 5621, 2163, 6420, and 3674 cfs, respectively. The magnitude of the 2-year flood peak discharge, based on the regression equations discussed above, is estimated to be 9785, 3450, 21650 and 11785 cfs, respectively. These estimates are up to 340 percent greater than the observed 2001 flood-peak discharges. This may indicate that the hydrologic responses of Fish Creek, Judy Creek, and the Ublutuoch River are significantly different from drainages located east of the Colville River, where the majority of the hydrologic data have been collected.

With only one year of data from which to draw conclusions, it is impossible to state conclusively that the regression equations developed from the available North Slope data overestimate flood-peak discharge within the project area. However, the magnitude of the difference in discharge is substantial enough, and the drainage basin characteristics<sup>1</sup> appear to be different enough, to justify such a conclusion for the present.

Therefore, for the purposes of this assessment, the regression equations described above were adjusted to better reflect the apparent conditions within the project area. A correction factor<sup>2</sup> was developed based on the assumption that the observed 2001 flood-peak discharge has a 2-year return period. A separate correction factor was developed for each of the 4 sites described above, and the most conservative correction factor was then applied to the regression equations developed for this project. Thus, the equations that will be used to predict flood-peak discharge on Fish Creek, Judy Creek, and the Ublutuoch River are as follows:

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<sup>1</sup> The drainage basin characteristics that appear to be different include: percent area of lakes, mean annual precipitation, mean basin elevation and geology. The watersheds used in the regression analysis, which have drainage basin areas closest in size to the project streams, are the Putuligayuk River and Kuparuk River. These rivers have 8 and 2 percent of their drainage basin covered by lakes, 8 and 9 inches of mean annual precipitation, and mean basin elevations of 135 feet and 900 feet, respectively. The project rivers, at the locations where discharge measurements were made, have the following characteristics: 15 to 28 percent of their drainage basins covered by lakes, mean annual precipitation ranging from 6.5 to 6.8 inches, and mean basin elevations ranging from 119 to 218 feet. The geology of the majority of the rivers used in the regression analysis is gravel covered by silt and peat. The geology of the project streams is primarily sand covered by peat, due to a historic sand dune field in this area.

<sup>2</sup> The correction factor was calculated as the observed 2001 flood-peak discharge in cfs divided by the calculated 2-year flood-peak discharge in cfs. The correction factors for Fish Creek at River Mile 25.1, Fish Creek at River Mile 32.4, Judy Creek at River Mile 7 and the Ublutuoch River at River Mile 13.7 are 0.296536, 0.31138, 0.57445 and 0.62732, respectively.

$$\begin{aligned}
Q_2 &= 11.15(\text{Drainage Area})^{0.975} \\
Q_5 &= 21.25(\text{Drainage Area})^{0.943} \\
Q_{10} &= 30.02(\text{Drainage Area})^{0.924} \\
Q_{25} &= 44.41(\text{Drainage Area})^{0.902} \\
Q_{50} &= 58.55(\text{Drainage Area})^{0.885} \\
Q_{100} &= 75.40(\text{Drainage Area})^{0.868} \\
Q_{200} &= 97.17(\text{Drainage Area})^{0.850} \\
Q_{500} &= 140.5 (\text{Drainage Area})^{0.826}
\end{aligned}$$

where  $Q_T$  denotes flood peak discharge in cfs, for the T-year event, and *Drainage Area* denotes drainage basin area in square miles.

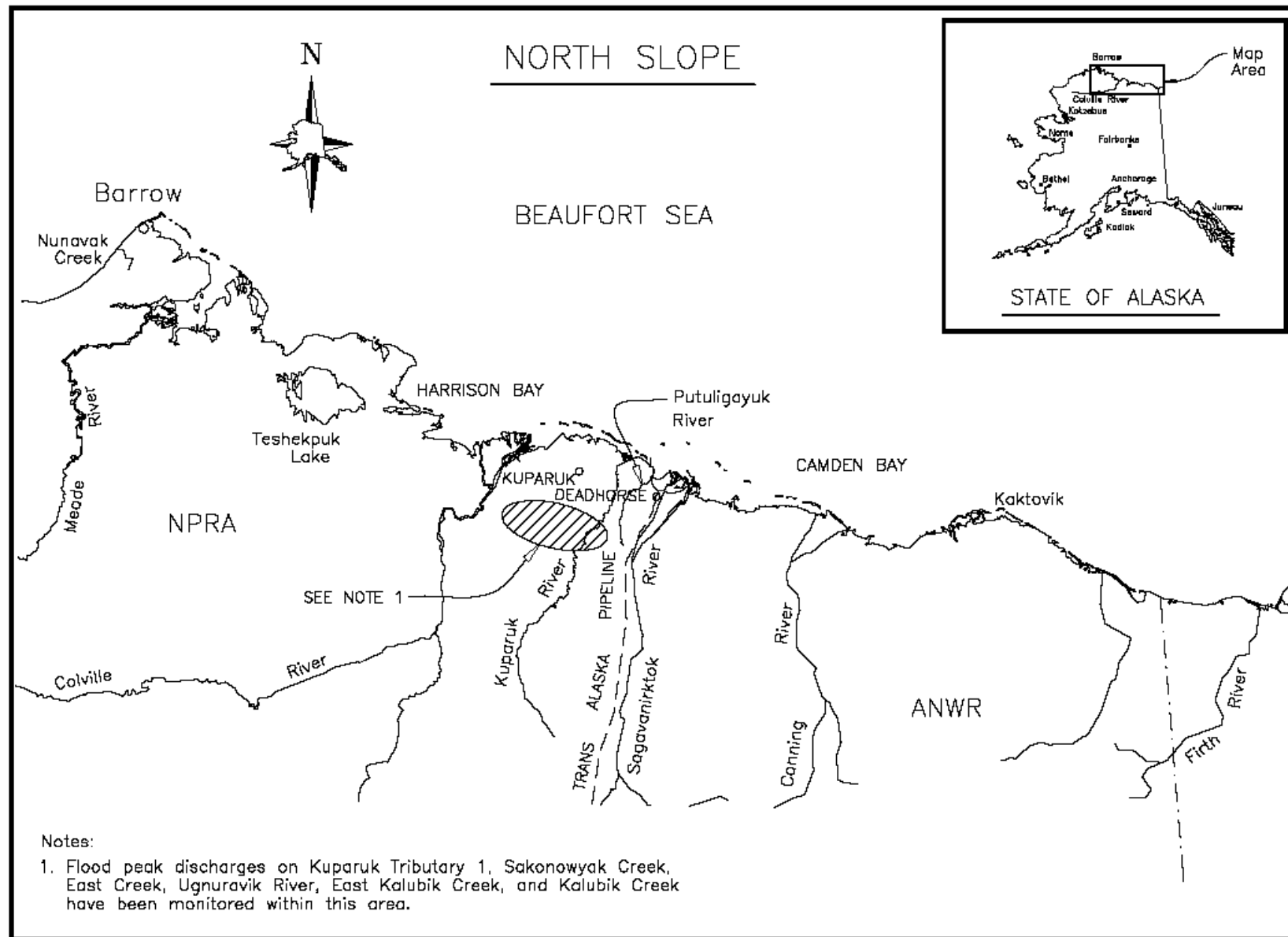
At the present time, it is felt that the above equations provide the most reliable estimate of flood magnitude and frequency on Fish Creek, Judy Creek, and the Ublutuoch River. However, it must be stressed that collection of 2 to 4 more years of flood-peak discharge data are desirable in order to more reliably estimate the magnitude of the 2-year flood. As additional data are acquired, the regression equations should be recalibrated. If it is necessary to estimate flood-peak discharge for use in designing structures on Judy Creek or the Ublutuoch River, prior to the collection of 2 to 4 more years of data, consideration should be given to adding a safety factor to the discharge estimates.

## **F.5 References**

- Beard, L. 1974. *Flood Flow Frequency Techniques*. Center for Research in Water Resources, The University of Texas at Austin.
- Interagency Advisory Committee on Water Data. 1982. *Guidelines for Determining Flood Flow Frequency*. U.S. Geological Survey, Office of Water Data Coordination, Washington D.C. Bulletin 17B.
- Jones and Fahl. 1994. *Magnitude and Frequency of Floods in Alaska and Conterminous Basins of Canada*. US Geological Survey. Water-Resources Investigations Report 93-4179. Anchorage, Alaska.
- Shannon and Wilson, Inc. 1997. *1997 Spring Breakup and Hydrologic Assessment, Tarn Access Corridor, North Slope, Alaska*. Prepared for Alaska Anvil, Inc., Anchorage, Alaska.



**Figure F-1: Locations of North Slope Watersheds Used in the Analysis**



**Table F-1: Summary Of Annual Peak Discharge Data for Streams Used In The Regression Analyses**

Annual Instantaneous Peak Discharge (cfs)											
Year	Kalubik Creek (17.1 sq mi) [6]	East Kalubik Creek (25.4 sq mi) [6]	Ugnuravik River (26.9 sq mi) [6]	East Creek (43.4 sq mi) [6]	Sakonowiak Creek (49.5 sq mi) [6]	Kuparuk River Tributary 1 (92.3 sq mi) [6]	Sagavanirktok River Tributary Near Deadhorse (12 sq mi) [6]	Kuparuk River (3130 sq mi) [6]	Putuligayuk River (176 sq mi) [6]	Nunavak River (2.79 sq mi) [6]	Firth River (2200 sq mi) [1]
1970									1900		
1971								77000	4980		
1972								45800	4500	22	21500
1973								82000	4000	55	9600
1974								24000	2000	66	
1975								22600	2000	22	33600 [8]
1976								55000	3130	21	30400 [8]
1977								66800	1800	21	47000
1978			470	530	1900			118000	4630	16	26500 [8]
1979			310	150	260	1600		24300	1100	16	23900
1980			2320	2890	1500	6300		40500	5800	131	27500 [8]
1981	375	500	850	1020	1200	3150		27500		72	21200
1982	320	540	1640	325	980	3500		104000	2290	28	12450 [8]
1983	400	1000	1000	1100	1500	3700		68400	3130	15	12800 [8]
1984	528	650	540	574	750	2600		56800	1640	66	30100
1985								34500	2800	22	28530
1986							6.8	42600 [7]	5440	31	21750 [8]
1987								15500	3120	117	15200 [8]
1988							8.8	38700	3990	79	24350
1989							140	75400	4950	96	20900 [8]
1990							135	78400 [7]	769	28	11750 [8]
1991							89	37100	4640	25	9400 [8]
1992							48	30800	2500	16	24400 [8]
1993							44	52300	2990	93	16150 [8]
1994							41	36500	2900	115	14940
1995							63	20600	5700	98	
1996							142 [1]	60500 [1][7]		32 [1]	

**Table F-1: (Continued)**

Annual Instantaneous Peak Discharge (cfs)											
Year	Kalubik Creek (17.1 sq mi) [6]	East Kalubik Creek (25.4 sq mi) [6]	Ugnuravik River (26.9 sq mi) [6]	East Creek (43.4 sq mi) [6]	Sakonowiak Creek (49.5 sq mi) [6]	Kuparuk River Tributary 1 (92.3 sq mi) [6]	Sagavanirktok River Tributary Near Deadhorse (12 sq mi) [6]	Kuparuk River (3130 sq mi) [6]	Putuligayuk River (176 sq mi) [6]	Nunavak River (2.79 sq mi) [6]	Firth River (2200 sq mi) [1]
1997	351	996	1030				105 [1]	62700 [1]		24 [1]	
1998							85 [1]	51700 [1]		25 [1]	
1999							46 [1]	22400 [1]		98 [1]	
2000		1060 [2]	1060 [2]				128 [1]	88100 [1]		68 [1]	
2001	482 [3][5]		800 [3]	920 [4]							

Notes:

1. Data Provided by the U.S. Geological Survey, Water Resources Division, Fairbanks, Alaska.
2. Data obtained from a report titled *2000 Spring Breakup and Hydrologic Assessment, Meltwater Access Corridor*. The report was prepared by Michael Baker Jr., Inc. (2000), for Phillips Alaska, Inc.
3. Data obtained by personal communication with Caryn Rea (Phillips Alaska Inc., 2001).
4. Data obtained from a draft report titled *2001 Spring Breakup and Hydrologic Assessment, East Creek Drill Site 1M, North Slope, Alaska*. The report was prepared by URS (2001), for Phillips Alaska Inc.
5. A peak discharge of 1700 cfs was measured by Michael Baker Jr. Inc. at a location with a drainage area of approximately 61 square miles. Using the equation  $Q=28.919 (\text{Drainage Area})^{0.991}$ , the peak discharge at this location was computed. The exponent in the equation was obtained from the 2-yr flood-peak discharge equation developed for the Tarn project (Shannon And Wilson, 1997). The coefficient of 28.919 was developed from the 2001 spring peak discharge measurement.
6. Data obtained from a report titled *1997 Spring Breakup and Hydrologic Assessment, Tarn Access Corridor, North Slope, Alaska*. This report was prepared by Shannon and Wilson, Inc. (1997), for Alaska Anvil, Inc.
7. Only average daily discharge data were available from the USGS for this year. The average daily discharge value for this year was multiplied by 1.12 to estimate the instantaneous peak discharge. The coefficient (1.12) is the average ratio of the instantaneous peak discharge to the average daily discharge for all years in which both values were collected, and the flood peak was caused by snowmelt. The reason only snowmelt events were used is that the peak discharge in this year occurred during snowmelt.
8. Only average daily discharge data were available from the USGS for this year. The average daily discharge value for this year was multiplied by 1.232 to estimate the instantaneous peak discharge. The coefficient (1.232) is the average ratio of the instantaneous peak discharge to the average daily discharge for all years in which both values were collected, and the flood peak was caused by snowmelt. The reason only snowmelt events were used is that the peak discharge in this year occurred during snowmelt.

**Table F-2: Drainage Basin Characteristics of Streams Used in the Analysis**

Station	Record Length (years)	Drainage Area (sq. miles)	Gage Elevation (ft)	Maximum Elevation (ft)	Total Relief (ft)	Mean Basin Elevation (ft)	Area Of Lakes and Ponds (%)	Main Channel Length (mi)	Mean Annual Precipitation (in)	Mean Minimum January Temp. (deg F)
East Creek	8	43.4	47.5	280	233	137	14.9	20.2	7.5	-20.2
East Kalubik Creek	6	25.4	95.0	305	210	172	11.2	13.3	7.4	-20.3
Firth River	22	2200	330	5808	5478	2630	0	123	18	-22.0
Kalubik Creek	6	17.1	51.4	180	129	118	18.0	14.6	7.3	-20.4
Kuparuk River	30	3130	20.2	5005	4985	900	2.0	180	9.0	-18.0
Kuparuk Trib 1	6	92.3	14.2	369	355	195	13.4	39.7	7.6	-20.1
Nunavak Creek	29	2.79	26.0	66	40	40	22.0	2.5	5.0	-23.0
Putuligayuk River	25	176	20.8	260	239	135	8.0	20.4	8.0	-18.0
Sagavanirktok River Tributary Near Deadhorse	14	12 [2]	190 [2]	269 [2]	79 [2]	223	8.3 [2]	9.1 [2]	8.0	-20.0
Sakonowyak Creek	7	49.5	36.6	369	332	169	16.7	32.4	7.6	-20.2
Ugnuraik River	10	26.9	53.7	303	249	174	6.4	18.6	7.4	-20.3

Notes:

1. Unless otherwise specified, data were obtained from a report titled *1997 Spring Breakup and Hydrologic Assessment, Tarn Access Corridor, North Slope, Alaska*. This report was prepared by Shannon and Wilson, Inc. (1997), for Alaska Anvil, Inc.
2. Data obtained from USGS map Sagavanirktok (D-3), Alaska.

**Table F-3: Summary of Single-Station Expected-Probability Flood-Peak Discharge Estimates**

Station	Years of Data	Drainage Area (sq. mile)	Instantaneous Peak Discharge (cfs) (Expected-Probability Curve)							
			2-Year Return Period	5-Year Return Period	10-Year Return Period	25-Year Return Period	50-Year Return Period	100-Year Return Period	200-Year Return Period	500-Year Return Period
East Creek	8	43.4	684	1570	2530	4490	6840	10500	16200	30200
East Kalubik Creek	6	25.4	758	1060	1290	1650	2000	2450	3060	4270
Firth River	22	2200	20500	29500	35600	43700	50000	56600	63500	73400
Kalubik Creek	6	17.1	399	487	555	663	770	914	1110	1470
Kuparuk River	30	3130	46400	72500	91300	117000	137000	159000	182000	216000
Kuparuk Trib 1	6	92.3	3200	5000	6550	9280	12200	16400	22700	37000
Nunavak Creek	29	2.79	40	76	110	166	220	288	373	520
Putuligayuk River	25	176	3130	4570	5510	6700	7580	8460	9360	10600
Sagavanirktok River Tributary Near Deadhorse	14	12	69	134	177	229	263	294	322	351
Sakonowyak Creek	7	49.5	1170	1670	2020	2520	2950	3440	4010	5010
Ugnuraik River	10	26.9	862	1490	2020	2890	3750	4850	6280	8940

Notes:

1. Peak discharges were estimated using the methods presented by the Interagency Advisory Committee on Water Data, in the 1982 publication *Guidelines for Determining Flood Flow Frequency*. U.S. Geological Survey, Office of Water Data Coordination, Washington D. C. Bulletin 17B.

**Table F-4: Single-Station Flood-Frequency Analysis for East Creek**

```
*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
*   VERSION: 3.1         *
* RUN DATE AND TIME:     *
*   08 OCT 01   13:37:25 *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
*   609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
*   (916) 756-1104 *
*                         *
*****
```

INPUT FILE NAME: EAST.TXT  
 OUTPUT FILE NAME: EAST.OUT  
 DSS FILE NAME: EAST.DSS

-----DSS---ZOPEN: Existing File Opened, File: EAST.DSS  
 Unit: 71; DSS Version: 6-JB

**\*\*TITLE RECORD(S)\*\***

TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM  
 TT JONES AND FAHL (1994)

**\*\*JOB RECORD(S)\*\***

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0
	A	B	CLIMIT	NDSSCV	IEXT				
J2	.00	.00	.05	0	0				

**\*\*FREQUENCY ARRAY\*\***

FR	13	.200	.500	1.000	2.000	4.000	5.000	10.000	20.000	50.000
FR	80.000	90.000	95.000	99.000						

**\*\*STATION IDENTIFICATION\*\***

ID EAST CREEK, ALASKA DA=43.4 SQ MI 1978-84,00

**\*\*GENERALIZED SKEW\*\***

	ISTN	GGMSE	SKEW
GS	EAST	1.150	.13

**\*\*HP PLOT \*\***

	HP PLOT FILE	IHPCV	KLIMIT	IPER	BAREA
HP	EAST.PCL	0	0	0	43.4 SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

**\*\*SYSTEMATIC EVENTS\*\***

8 EVENTS TO BE ANALYZED

**\*\*END OF INPUT DATA\*\***

ED +++++  
 +++++  
 \* \* \* WARNING - LESS THAN TEN EVENTS FOR ANALYSIS  
 BULLETIN 17-B PROCEDURES NOT APPLICABLE.

**Table F-4: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- EAST CREEK, ALASKA DA=43.4 SQ MI

EVENTS ANALYZED				ORDERED EVENTS			
MON	DAY	YEAR	FLOW CFS	RANK	YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1978	530.	1	1980	2890.	11.11
0	0	1979	150.	2	1983	1100.	22.22
0	0	1980	2890.	3	1981	1020.	33.33
0	0	1981	1020.	4	2001	925.	44.44
0	0	1982	325.	5	1984	574.	55.56
0	0	1983	1100.	6	1978	530.	66.67
0	0	1984	574.	7	1982	325.	77.78
0	0	2001	920.	8	1979	150.	88.89

-OUTLIER TESTS -

-----  
LOW OUTLIER TEST

BASED ON 8 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.909

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 124.7

-----  
HIGH OUTLIER TEST

BASED ON 8 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.909

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 3683.

-----  
-SKEW WEIGHTING -

BASED ON 8 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .589  
DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150

**Table F-4: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- EAST CREEK, ALASKA DA=43.4 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
8140.	30200.	.20	64400.	3390.
6320.	16200.	.50	41400.	2810.
5120.	10500.	1.00	28800.	2400.
4070.	6840.	2.00	19400.	2010.
3140.	4490.	4.00	12500.	1650.
2870.	3920.	5.00	10700.	1530.
2100.	2530.	10.00	6390.	1190.
1430.	1570.	20.00	3470.	848.
684.	684.	50.00	1220.	386.
322.	292.	80.00	544.	134.
216.	177.	90.00	384.	71.
155.	111.	95.00	293.	41.
83.	37.	99.00	180.	14.
----- SYSTEMATIC STATISTICS -----				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	2.8310	HISTORIC EVENTS	0	
STANDARD DEV	.3851	HIGH OUTLIERS	0	
COMPUTED SKEW	-.1592	LOW OUTLIERS	0	
REGIONAL SKEW	.1300	ZERO OR MISSING	0	
ADOPTED SKEW	-.0613	SYSTEMATIC EVENTS	8	

HP PLOT WRITTEN TO THE FILE: EAST.PCL

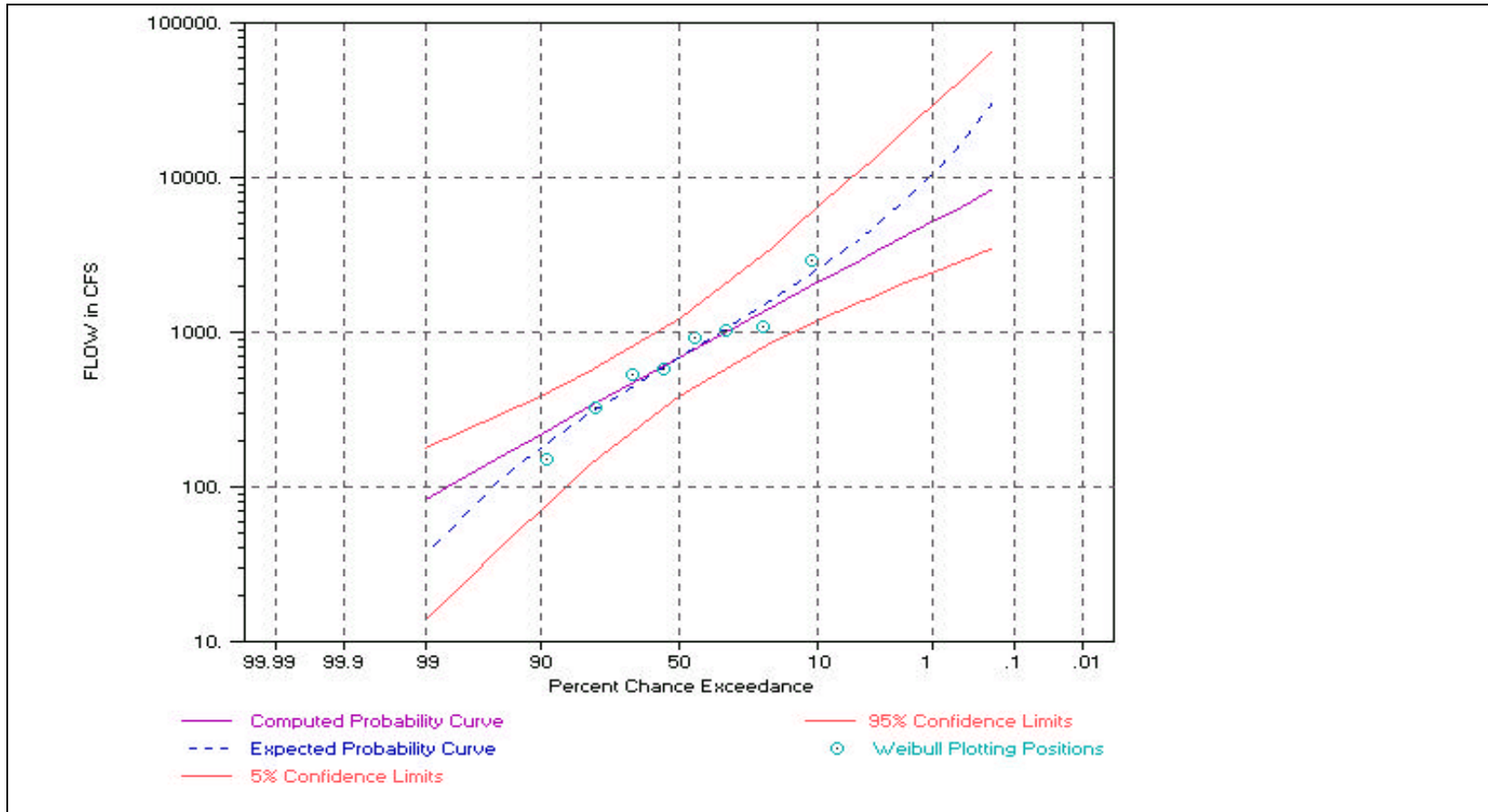
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+ END OF RUN +  
+ NORMAL STOP IN FFA +  
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**Figure F-2:** East Creek Single-Station Flood-Frequency Relationship

BASIN AREA = 43.4 SQ MI

WATER YEARS IN RECORD: 1978-84,01



**Table F-5: Single-Station Flood-Frequency Analysis for the East Kalubik Creek**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
*   14 SEP 01   13:36:19 *
*                         *
*****

*****
*           *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*           *
*****

INPUT FILE NAME: EKAL.TXT
OUTPUT FILE NAME: EKAL.OUT
DSS FILE NAME: EKAL.DSS

-----DSS---ZOPEN: New File Opened, File: EKAL.DSS
                   Unit: 71; DSS Version: 6-JB

**TITLE RECORD(S)**
TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM
TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM
TT JONES AND FAHL (1994)

**JOB RECORD(S)**
      IPPC   ISKFX   IPROUT   IFMT   IWYR   IUNIT   ISMRY   IPNCH   IREG
J1      0      2      32      0      0      0      0      0      0

      A      B   CLIMIT   NDSSCV   IEXT
J2   .00   .00   .05      0      0

**FREQUENCY ARRAY**
FR   13   .200   .500   1.000   2.000   4.000   5.000  10.000  20.000  50.000
FR80.000 90.000 95.000 99.000

**STATION IDENTIFICATION**
ID   EAST KALUBIK CREEK, ALASKA   DA=25.4 SQ MI   1981-84,97,00

**GENERALIZED SKEW**
      ISTN   GGMSE   SKEW
GS   EKAL   1.150   .13

**HP PLOT **
      HP PLOT FILE           IHPCV   KLIMIT   IPER   BAREA
HP   EKAL.PCL               0       0       0     25.4 SQ MI

      SELECTED CURVES ON HP PLOT
      EXPECTED PROBABILITY CURVE
      CONFIDENCE LIMITS

**SYSTEMATIC EVENTS**
      6 EVENTS TO BE ANALYZED

**END OF INPUT DATA**
ED *****
*****
* * * * * WARNING - LESS THAN TEN EVENTS FOR ANALYSIS
      BULLETIN 17-B PROCEDURES NOT APPLICABLE.

```

**Table F-5: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- EAST KALUBIK CREEK, ALASKA DA=25.4 SQ MI

EVENTS ANALYZED				ORDERED EVENTS			
MON	DAY	YEAR	FLOW CFS	RANK	YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1981	500.	1	2000	1060.	14.29
0	0	1982	540.	2	1983	1000.	28.57
0	0	1983	1000.	3	1997	996.	42.86
0	0	1984	650.	4	1984	650.	57.14
0	0	1997	996.	5	1982	540.	71.43
0	0	2000	1060.	6	1981	500.	85.71

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 6 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.729

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 420.0

HIGH OUTLIER TEST

BASED ON 6 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.729

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 1357.

-SKEW WEIGHTING -

BASED ON 6 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .765  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150

**Table F-5: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- EAST KALUBIK CREEK, ALASKA DA=25.4 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
1940.	4270.	.20	5680.	1330.
1760.	3060.	.50	4680.	1250.
1630.	2450.	1.00	3990.	1180.
1490.	2000.	2.00	3350.	1100.
1350.	1650.	4.00	2760.	1030.
1310.	1550.	5.00	2580.	999.
1160.	1290.	10.00	2050.	908.
1010.	1060.	20.00	1570.	799.
758.	758.	50.00	992.	582.
568.	539.	80.00	715.	366.
487.	437.	90.00	625.	275.
429.	355.	95.00	564.	214.
336.	208.	99.00	470.	132.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	2.8780	HISTORIC EVENTS	0	
STANDARD DEV	.1473	HIGH OUTLIERS	0	
COMPUTED SKEW	-.2196	LOW OUTLIERS	0	
REGIONAL SKEW	.1300	ZERO OR MISSING	0	
ADOPTED SKEW	-.0800	SYSTEMATIC EVENTS	6	

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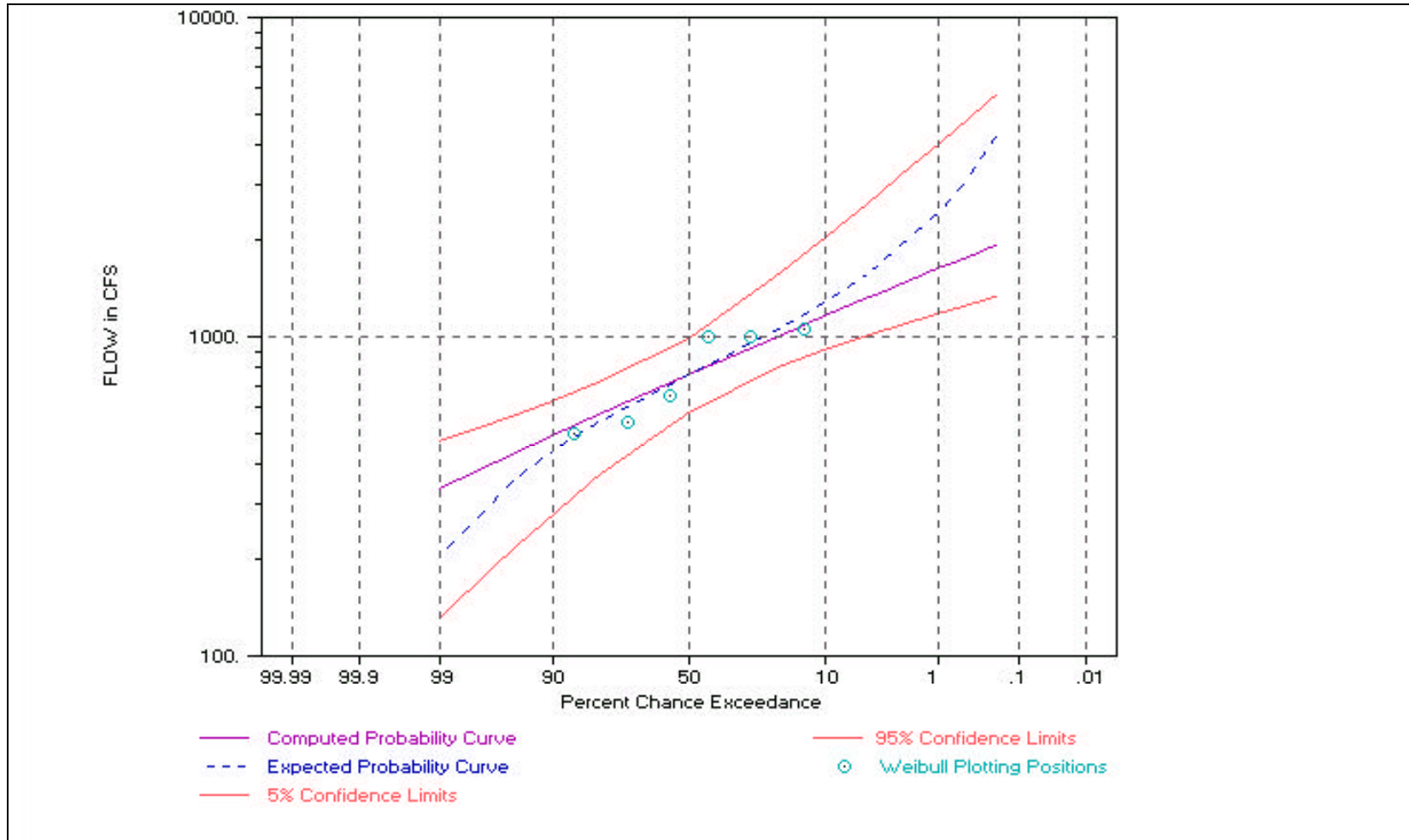
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+ END OF RUN +  
+ NORMAL STOP IN FFA +  
++++



**Figure F-3:** East Kalubik Creek Single-Station Flood-Frequency Relationship

BASIN AREA = 25.4 SQ MI

WATER YEARS IN RECORD: 1981-84,97,00





**Table F-6: Single-Station Flood-Frequency Analysis for the Firth River**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 01 OCT 01 10:41:24    *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*                         *
*****

```

INPUT FILE NAME: FIRTH.TXT  
 OUTPUT FILE NAME: FIRTH.OUT  
 DSS FILE NAME: FIRTH.DSS

-----DSS---ZOPEN: New File Opened, File: FIRTH.DSS  
 Unit: 71; DSS Version: 6-JB

\*\*TITLE RECORD(S)\*\*  
 TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM  
 TT JONES AND FAHL (1994)

\*\*JOB RECORD(S)\*\*

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0

	A	B	CLIMIT	NDSSCV	IEXT
J2	.00	.00	.05	0	0

\*\*FREQUENCY ARRAY\*\*

FR	13	.200	.500	1.000	2.000	4.000	5.000	10.000	20.000	50.000
FR80.000	90.000	95.000	99.000							

\*\*STATION IDENTIFICATION\*\*  
 ID FIRTH RIVER, CANADA DA=2200 SQ MI 1972-94

\*\*DSS WRITE PATHNAME\*\*  
 ZW /NPRA HYDRO/FIRTH RIVER/FREQ-FLOW//1981-1984,97,00/USGS ANNUAL PEAKS/

\*\*GENERALIZED SKEW\*\*

	ISTN	GGMSE	SKEW
GS	FIRT	1.150	.13

\*\*HP PLOT \*\*

	HP PLOT FILE	IHPCV	KLIMIT	IPER	BAREA
HP	FIRTH.PCL	0	0	0	2200 SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

\*\*SYSTEMATIC EVENTS\*\*  
 22 EVENTS TO BE ANALYZED

\*\*END OF INPUT DATA\*\*  
 ED +++++  
 +++++



**Table F-6: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- FIRTH RIVER, CANADA                      DA=2200 SQ MI

EVENTS ANALYZED				ORDERED EVENTS			
MON	DAY	YEAR	FLOW CFS	RANK	YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1972	21500.	1	1977	47000.	4.35
0	0	1973	9600.	2	1975	33600.	8.70
0	0	1975	33600.	3	1976	30400.	13.04
0	0	1976	30400.	4	1984	30100.	17.39
0	0	1977	47000.	5	1985	28530.	21.74
0	0	1978	26500.	6	1980	27500.	26.09
0	0	1979	23900.	7	1978	26500.	30.43
0	0	1980	27500.	8	1988	24350.	34.78
0	0	1981	21200.	9	1992	24350.	39.13
0	0	1982	12400.	10	1979	23900.	43.48
0	0	1983	12800.	11	1986	21750.	47.83
0	0	1984	30100.	12	1972	21500.	52.17
0	0	1985	28530.	13	1981	21200.	56.52
0	0	1986	21750.	14	1989	20900.	60.87
0	0	1987	15200.	15	1993	16150.	65.22
0	0	1988	24350.	16	1987	15200.	69.57
0	0	1989	20900.	17	1994	14940.	73.91
0	0	1990	11750.	18	1983	12800.	78.26
0	0	1991	9400.	19	1982	12400.	82.61
0	0	1992	24350.	20	1990	11750.	86.96
0	0	1993	16150.	21	1973	9600.	91.30
0	0	1994	14940.	22	1991	9400.	95.65

-OUTLIER TESTS -

-----  
 LOW OUTLIER TEST  
 -----

BASED ON 22 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.429

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 7204.2

-----  
 HIGH OUTLIER TEST  
 -----

BASED ON 22 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.429

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 56856.

-SKEW WEIGHTING -

-----  
 BASED ON 22 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .244  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150  
 -----

**Table F-6: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- FIRTH RIVER, CANADA DA=2200 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 FLOW IN CFS	.95 FLOW IN CFS
63200.	73400.	.20	96400.	48400.
56600.	63500.	.50	83600.	44200.
51600.	56600.	1.00	74100.	40900.
46600.	50000.	2.00	65000.	37600.
41600.	43700.	4.00	56000.	34000.
39900.	41700.	5.00	53100.	32900.
34600.	35600.	10.00	44400.	29100.
29000.	29500.	20.00	35700.	24800.
20500.	20500.	50.00	23900.	17600.
14200.	14000.	80.00	16600.	11600.
11700.	11300.	90.00	13900.	9050.
9860.	9350.	95.00	12000.	7320.
7140.	6340.	99.00	9170.	4820.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	4.3062	HISTORIC EVENTS	0	
STANDARD DEV	.1847	HIGH OUTLIERS	0	
COMPUTED SKEW	-.2303	LOW OUTLIERS	0	
REGIONAL SKEW	.1300	ZERO OR MISSING	0	
ADOPTED SKEW	-.1673	SYSTEMATIC EVENTS	22	

--ZWRITE: /NPRA HYDRO/FIRTH RIVER/FREQ-FLOW/MAX EVENTS/1981-1984,97,00/USGS ANNUAL PEAKS/

--ZWRITE: /NPRA HYDRO/FIRTH RIVER/FREQ-FLOW/MAX ANALYTICAL/1981-1984,97,00/USGS ANNUAL PE/

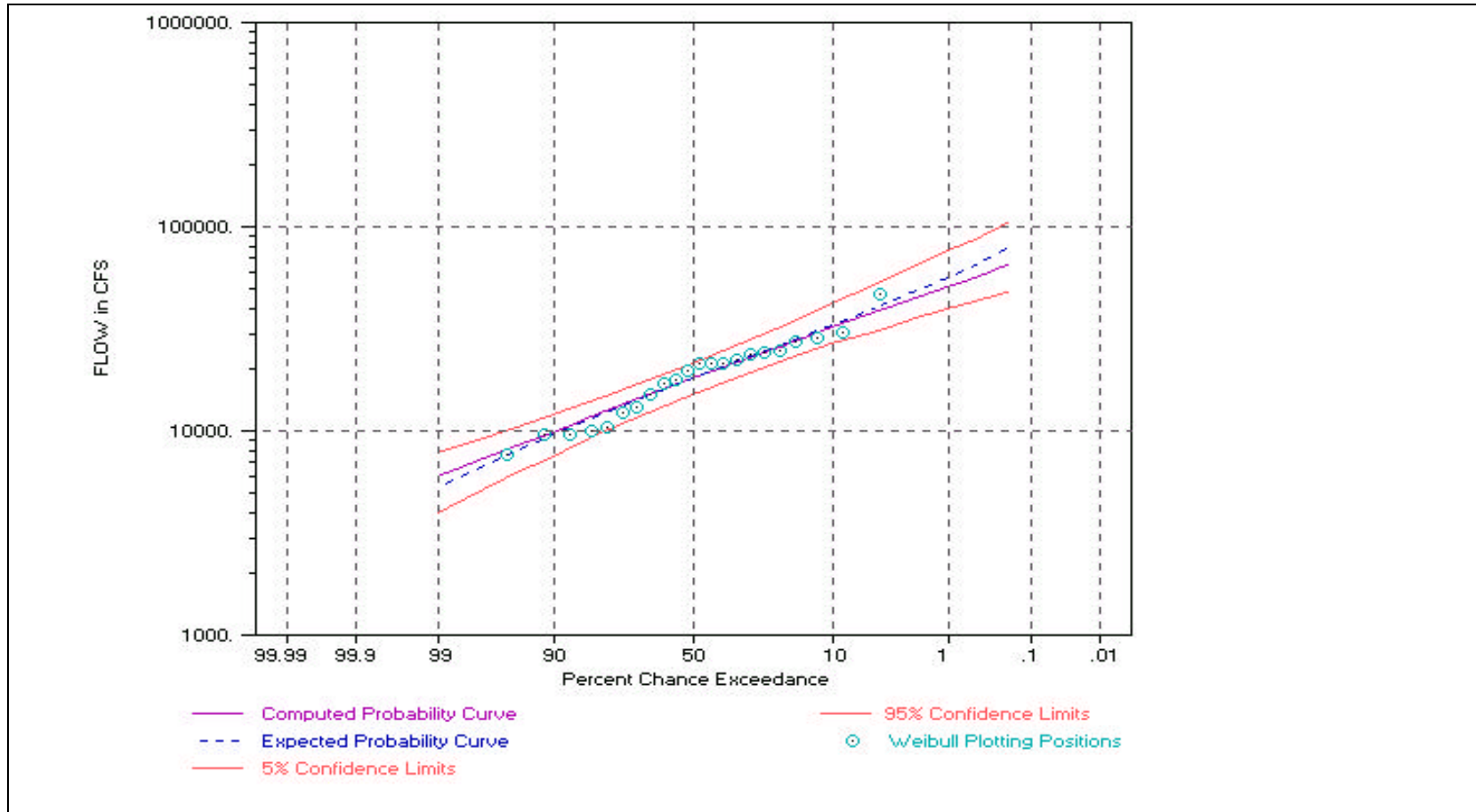
HP PLOT WRITTEN TO THE FILE: FIRTH.PCL

++++  
+ END OF RUN +  
+ NORMAL STOP IN FFA +  
++++

**Figure F-4:** Firth River Single-Station Flood-Frequency Relationship

BASIN AREA = 2200 SQ MI

WATER YEARS IN RECORD: 1972-73,75-94



**Table F-7: Single-Station Flood-Frequency Analysis for Kalubik Creek**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 18 SEP 01 08:49:30    *
*                         *
*****

*****
*           *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*           *
*****

INPUT FILE NAME: KALU.TXT
OUTPUT FILE NAME: KALU.OUT
DSS FILE NAME: KALU.DSS

-----DSS---ZOPEN: Existing File Opened, File: KALU.DSS
Unit: 71; DSS Version: 6-JB

**TITLE RECORD(S)**
TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM
TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM
TT JONES AND FAHL (1994)

**JOB RECORD(S)**
J1  IPPC  ISKFX  IPROUT  IFMT  IWYR  IUNIT  ISMRY  IPNCH  IREG
    0    2    32    0    0    0    0    0    0
J2  A    B  CLIMIT  NDSSCV  IEXT
    .00 .00  .05    0    0

**FREQUENCY ARRAY**
FR 13 .200 .500 1.000 2.000 4.000 5.000 10.000 20.000 50.000
FR80.000 90.000 95.000 99.000

**STATION IDENTIFICATION**
ID KALUBIK CREEK, ALASKA DA=17.1 SQ MI 1981-84,97,01

**GENERALIZED SKEW**
GS KALU 1.150 .13

**HP PLOT **
HP PLOT FILE IHPCV KLIMIT IPER BAREA
HP KALU.PCL 0 0 0 17.1 SQ MI

SELECTED CURVES ON HP PLOT
EXPECTED PROBABILITY CURVE
CONFIDENCE LIMITS

**SYSTEMATIC EVENTS**
6 EVENTS TO BE ANALYZED

**END OF INPUT DATA**
ED ++++++
+++++
* * * * WARNING - LESS THAN TEN EVENTS FOR ANALYSIS
BULLETIN 17-B PROCEDURES NOT APPLICABLE.

```

**Table F-7: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- KALUBIK CREEK, ALASKA DA=17.1 SQ MI

EVENTS ANALYZED				ORDERED EVENTS			
MON	DAY	YEAR	FLOW CFS	RANK	YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1981	375.	1	1984	528.	14.29
0	0	1982	320.	2	2001	482.	28.57
0	0	1983	400.	3	1983	400.	42.86
0	0	1984	528.	4	1981	375.	57.14
0	0	1997	351.	5	1997	351.	71.43
0	0	2001	482.	6	1982	320.	85.71

-OUTLIER TESTS -

-----  
HIGH OUTLIER TEST  
-----

BASED ON 6 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.729

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 561.

-----  
LOW OUTLIER TEST  
-----

BASED ON 6 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.729

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 289.7

-SKEW WEIGHTING -

-----  
BASED ON 6 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .773  
DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150  
-----

**Table F-7: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- KALUBIK CREEK, ALASKA DA=17.1 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
751.	1470.	.20	1510.	592.
697.	1110.	.50	1300.	562.
656.	914.	1.00	1150.	539.
616.	770.	2.00	1010.	514.
574.	663.	4.00	879.	488.
561.	634.	5.00	838.	479.
518.	555.	10.00	717.	450.
472.	487.	20.00	603.	415.
399.	399.	50.00	462.	342.
342.	334.	80.00	390.	267.
318.	302.	90.00	365.	232.
300.	276.	95.00	348.	207.
270.	226.	99.00	321.	169.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	2.6054	HISTORIC EVENTS	0	
STANDARD DEV	.0830	HIGH OUTLIERS	0	
COMPUTED SKEW	.4341	LOW OUTLIERS	0	
REGIONAL SKEW	.1300	ZERO OR MISSING	0	
ADOPTED SKEW	.3119	SYSTEMATIC EVENTS	6	

HP PLOT WRITTEN TO THE FILE: KALU.PCL

```

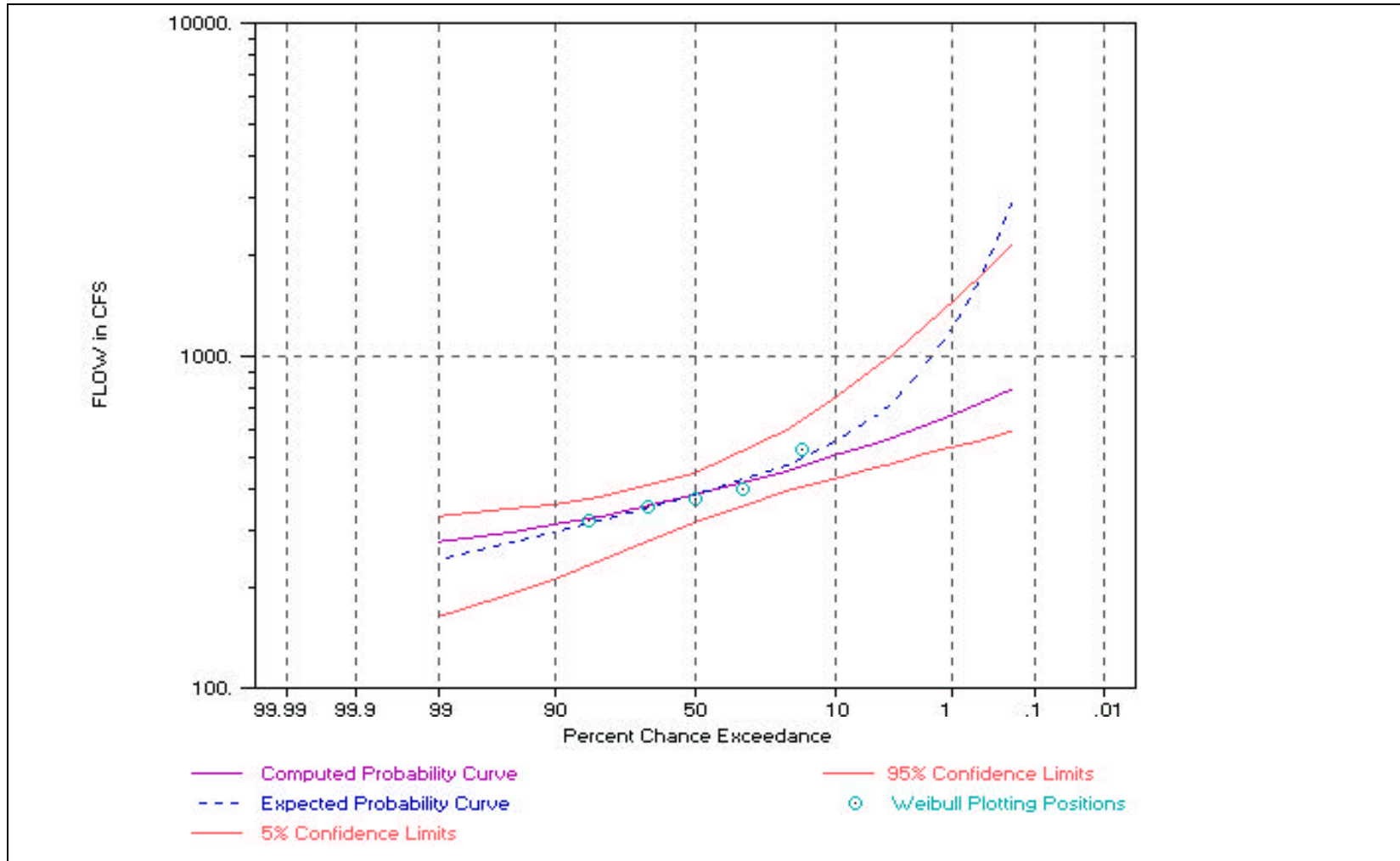
+++++++
+ END OF RUN +
+ NORMAL STOP IN FFA +
+++++++

```

**Figure F-5:** Kalubik Creek Single-Station Flood-Frequency Relationship

BASIN AREA = 17.1 SQ MI

WATER YEARS IN RECORD: 1981-84,97



**Table F-8: Single-Station Flood-Frequency Analysis for the Kuparuk River**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 01 OCT 01 10:41:05    *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*                         *
*****

```

INPUT FILE NAME: KUPA.TXT  
 OUTPUT FILE NAME: KUPA.OUT  
 DSS FILE NAME: KUPA.DSS

-----DSS---ZOPEN: Existing File Opened, File: KUPA.DSS  
 Unit: 71; DSS Version: 6-JB

\*\*TITLE RECORD(S)\*\*  
 TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM  
 TT JONES AND FAHL (1994)

\*\*JOB RECORD(S)\*\*

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0

	A	B	CLIMIT	NDSSCV	IEXT
J2	.00	.00	.05	0	0

\*\*FREQUENCY ARRAY\*\*

FR	13	.200	.500	1.000	2.000	4.000	5.000	10.000	20.000	50.000
FR80.000	90.000	95.000	99.000							

\*\*STATION IDENTIFICATION\*\*

ID	KAPARUK RIVER, ALASKA	DA=3130 SQ MI	1971-2000
----	-----------------------	---------------	-----------

\*\*GENERALIZED SKEW\*\*

ISTN	GGMSE	SKEW
GS KUPA	1.150	.13

\*\*HP PLOT \*\*

HP PLOT FILE	IHPCV	KLIMIT	IPER	BAREA
HP KUPA.PCL	0	0	03130	SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

\*\*SYSTEMATIC EVENTS\*\*  
 30 EVENTS TO BE ANALYZED

\*\*END OF INPUT DATA\*\*  
 ED +++++  
 +++++



**Table F-8: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- KAPARUK RIVER, ALASKA DA=3130 SQ MI

EVENTS ANALYZED				ORDERED EVENTS			
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1971	77000.	1	1978	118000.	3.23
0	0	1972	45800.	2	1982	104000.	6.45
0	0	1973	82000.	3	2000	88100.	9.68
0	0	1974	24000.	4	1973	82000.	12.90
0	0	1975	22600.	5	1990	78400.	16.13
0	0	1976	55000.	6	1971	77000.	19.35
0	0	1977	66800.	7	1989	75400.	22.58
0	0	1978	118000.	8	1983	68400.	25.81
0	0	1979	24300.	9	1977	66800.	29.03
0	0	1980	40500.	10	1997	62700.	32.26
0	0	1981	27500.	11	1996	60500.	35.48
0	0	1982	104000.	12	1984	56800.	38.71
0	0	1983	68400.	13	1976	55000.	41.94
0	0	1984	56800.	14	1993	52300.	45.16
0	0	1985	34500.	15	1998	51700.	48.39
0	0	1986	42600.	16	1972	45800.	51.61
0	0	1987	15500.	17	1986	42600.	54.84
0	0	1988	38700.	18	1980	40500.	58.06
0	0	1989	75400.	19	1988	38700.	61.29
0	0	1990	78400.	20	1991	37100.	64.52
0	0	1991	37100.	21	1994	36500.	67.74
0	0	1992	30800.	22	1985	34500.	70.97
0	0	1993	52300.	23	1992	30800.	74.19
0	0	1994	36500.	24	1981	27500.	77.42
0	0	1995	20600.	25	1979	24300.	80.65
0	0	1996	60500.	26	1974	24000.	83.87
0	0	1997	62700.	27	1975	22600.	87.10
0	0	1998	51700.	28	1999	22400.	90.32
0	0	1999	22400.	29	1995	20600.	93.55
0	0	2000	88100.	30	1987	15500.	96.77

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 30 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.563

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 11902.4

HIGH OUTLIER TEST

BASED ON 30 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.563

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 176309.

-SKEW WEIGHTING -

BASED ON 30 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .183  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150

**Table F-8: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- KAPARUK RIVER, ALASKA DA=3130 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS	
			.05 FLOW IN CFS	.95 FLOW IN CFS
189000.	216000.	.20	289000.	141000.
164000.	182000.	.50	244000.	126000.
147000.	159000.	1.00	211000.	114000.
129000.	137000.	2.00	181000.	102000.
112000.	117000.	4.00	151000.	90100.
106000.	111000.	5.00	142000.	86200.
89000.	91300.	10.00	115000.	73700.
71600.	72500.	20.00	88500.	60400.
46400.	46400.	50.00	54600.	39500.
29600.	29100.	80.00	35000.	23900.
23200.	22500.	90.00	28000.	17900.
18900.	18000.	95.00	23400.	14000.
12700.	11400.	99.00	16600.	8550.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	4.6610	HISTORIC EVENTS	0	
STANDARD DEV	.2284	HIGH OUTLIERS	0	
COMPUTED SKEW	-.2003	LOW OUTLIERS	0	
REGIONAL SKEW	.1300	ZERO OR MISSING	0	
ADOPTED SKEW	-.1549	SYSTEMATIC EVENTS	30	

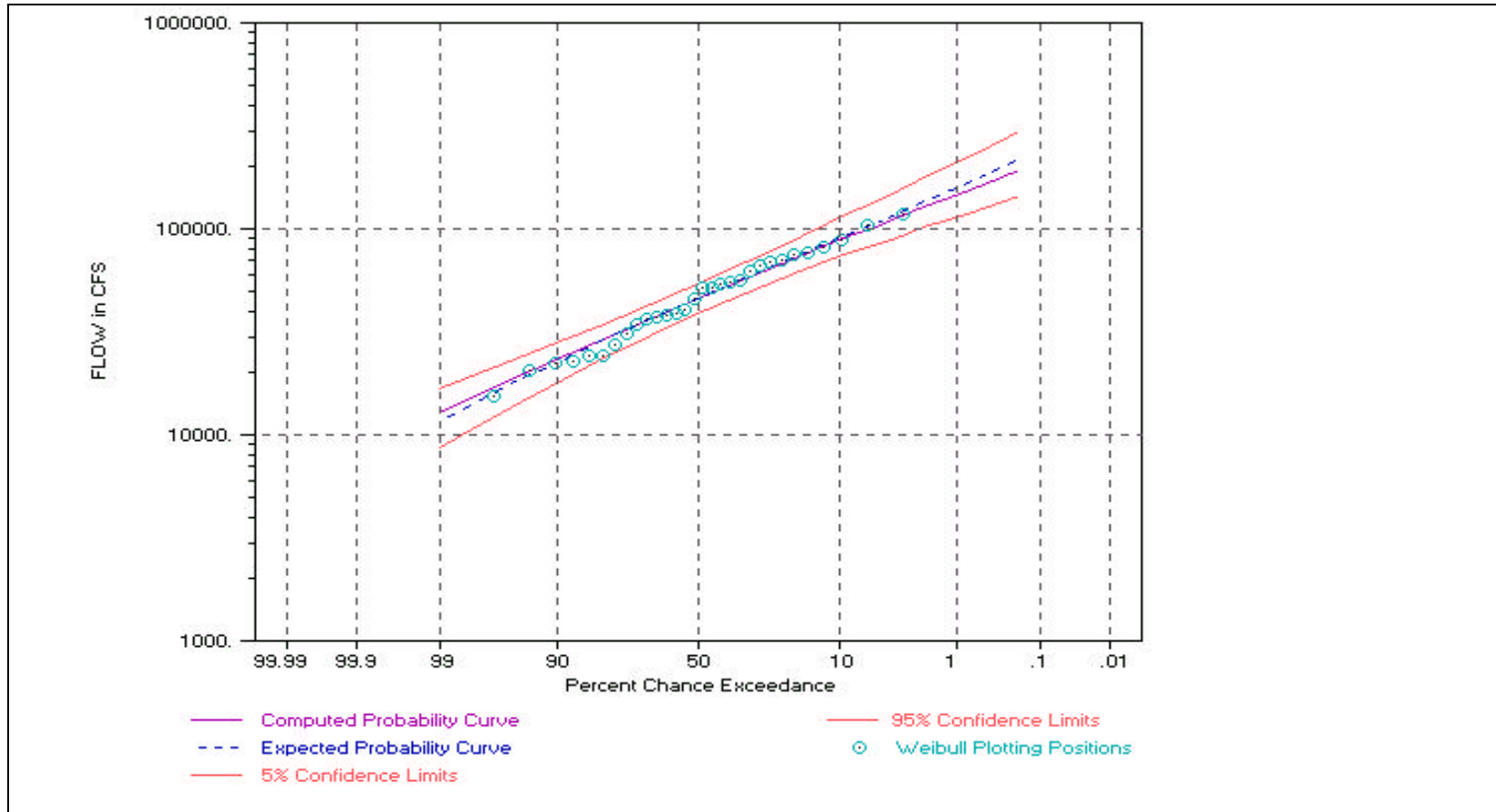
HP PLOT WRITTEN TO THE FILE: KUPA.PCL

++++  
+ END OF RUN +  
+ NORMAL STOP IN FFA +  
++++

**Figure F-6:** Kuparuk River Single-Station Flood-Frequency Relationship

BASIN AREA = 3130 SQ MI

WATER YEARS IN RECORD: 1971-00



**Table F-9: Single-Station Flood-Frequency Analysis for the Kuparuk River  
Tributary 1**

```
*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 14 SEP 01 13:39:18    *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*                         *
*****
```

INPUT FILE NAME: KUP1.TXT  
 OUTPUT FILE NAME: KUP1.OUT  
 DSS FILE NAME: KUP1.DSS

-----DSS---ZOPEN: Existing File Opened, File: KUP1.DSS  
 Unit: 71; DSS Version: 6-JB

\*\*TITLE RECORD(S)\*\*  
 TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM  
 TT JONES AND FAHL (1994)

\*\*JOB RECORD(S)\*\*

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0

	A	B	CLIMIT	NDSSCV	IEXT
J2	.00	.00	.05	0	0

\*\*FREQUENCY ARRAY\*\*  
 FR 13 .200 .500 1.000 2.000 4.000 5.000 10.000 20.000 50.000  
 FR80.000 90.000 95.000 99.000

\*\*STATION IDENTIFICATION\*\*  
 ID KUPARUK TRIBUTARY 1, ALASKA DA=92.3 SQ MI 1979-84

\*\*GENERALIZED SKEW\*\*  
 ISTN GGMSE SKEW  
 GS KUP1 1.150 .13

\*\*HP PLOT \*\*  
 HP PLOT FILE IHPCV KLIMIT IPER BAREA  
 HP KUP1.PCL 0 0 0 92.3 SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

\*\*SYSTEMATIC EVENTS\*\*  
 6 EVENTS TO BE ANALYZED  
 \*\*END OF INPUT DATA\*\*

ED +++++  
 +++++  
 \* \* \* WARNING - LESS THAN TEN EVENTS FOR ANALYSIS  
 BULLETIN 17-B PROCEDURES NOT APPLICABLE.

**Table F-9: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- KUPARUK TRIBUTARY 1, ALASKA DA=92.3 SQ MI

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1979	1600.	1	1980	6300.	14.29
0	0	1980	6300.	2	1983	3700.	28.57
0	0	1981	3150.	3	1982	3500.	42.86
0	0	1982	3500.	4	1981	3150.	57.14
0	0	1983	3700.	5	1984	2600.	71.43
0	0	1984	2600.	6	1979	1600.	85.71

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 6 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.729

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 1469.1

HIGH OUTLIER TEST

BASED ON 6 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.729

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 6960.

-SKEW WEIGHTING -

BASED ON 6 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .759

DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150

**Table F-9: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- KUPARUK TRIBUTARY 1, ALASKA DA=92.3 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
11700.	37000.	.20	50800.	7020.
10200.	22700.	.50	38500.	6380.
9110.	16400.	1.00	30700.	5880.
8060.	12200.	2.00	24000.	5370.
7030.	9280.	4.00	18300.	4850.
6700.	8520.	5.00	16700.	4670.
5690.	6550.	10.00	12100.	4100.
4670.	5000.	20.00	8380.	3440.
3200.	3200.	50.00	4550.	2240.
2190.	2050.	80.00	2970.	1220.
1800.	1560.	90.00	2500.	844.
1530.	1200.	95.00	2190.	615.
1120.	624.	99.00	1740.	334.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	3.5048	HISTORIC EVENTS	0	
STANDARD DEV	.1954	HIGH OUTLIERS	0	
COMPUTED SKEW	-.0829	LOW OUTLIERS	0	
REGIONAL SKEW	.1300	ZERO OR MISSING	0	
ADOPTED SKEW	.0017	SYSTEMATIC EVENTS	6	

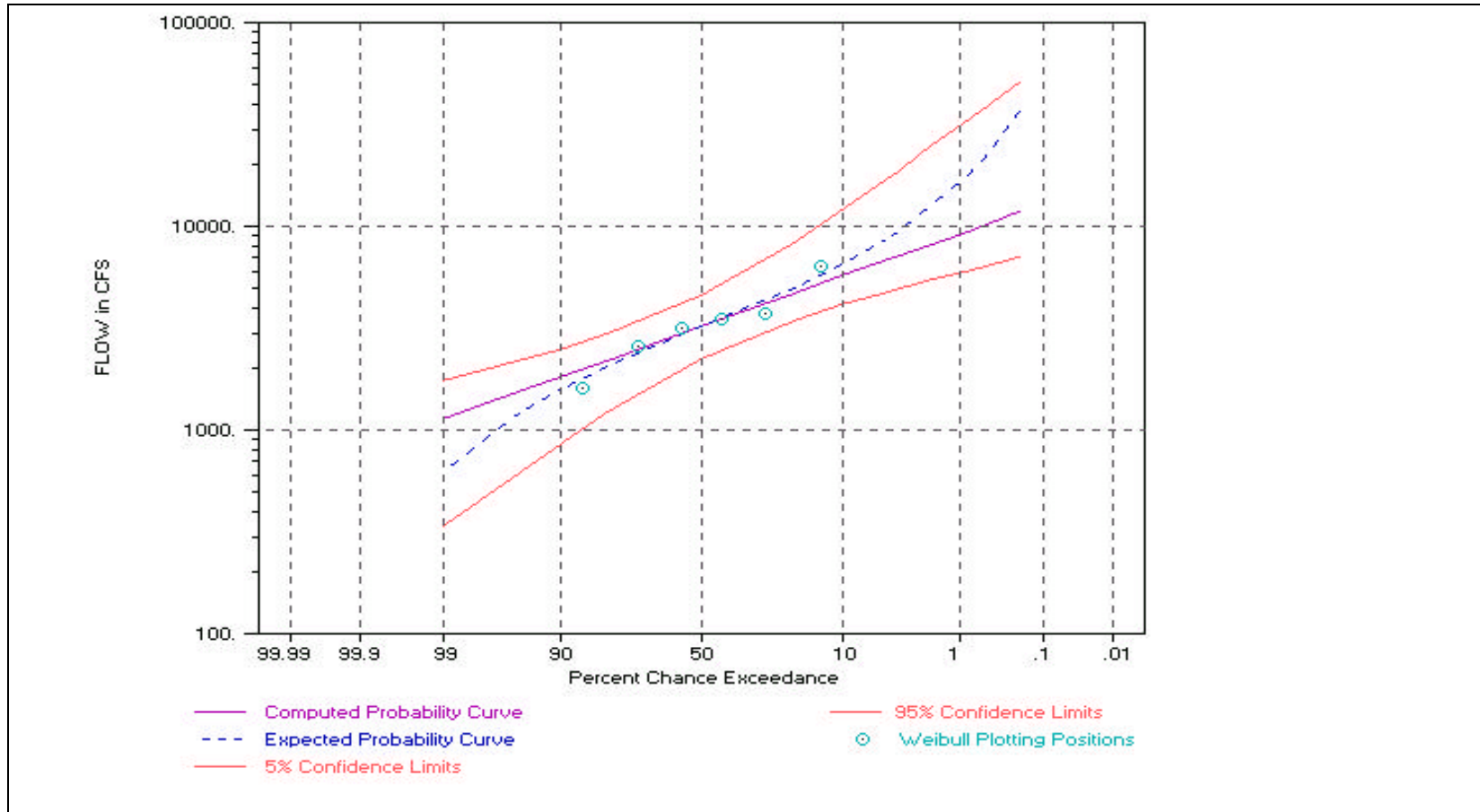
HP PLOT WRITTEN TO THE FILE: KUP1.PCL

++++  
+ END OF RUN +  
+ NORMAL STOP IN FFA +  
++++

**Figure F-7:** Kuparuk River Tributary 1 Single-Station Flood-Frequency Relationship

BASIN AREA = 92.3 SQ MI

WATER YEARS IN RECORD: 1979-84



**Table F-10: Single-Station Flood-Frequency Analysis for Nunavak Creek**

```
*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 14 SEP 01 13:40:03    *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*                         *
*****
```

INPUT FILE NAME: NUNA.TXT  
 OUTPUT FILE NAME: NUNA.OUT  
 DSS FILE NAME: NUNA.DSS

-----DSS---ZOPEN: Existing File Opened, File: NUNA.DSS  
 Unit: 71; DSS Version: 6-JB

**\*\*TITLE RECORD(S)\*\***

TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM  
 TT JONES AND FAHL (1994)

**\*\*JOB RECORD(S)\*\***

J1	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0
J2	A	B	CLIMIT	NDSSCV	IEXT				
J2	.00	.00	.05	0	0				

**\*\*FREQUENCY ARRAY\*\***

FR	13	.200	.500	1.000	2.000	4.000	5.000	10.000	20.000	50.000
FR80.000	90.000	95.000	99.000							

**\*\*STATION IDENTIFICATION\*\***

ID NUNAVAK RIVER, ALASKA DA=2.79 SQ MI 1972-2000

**\*\*GENERALIZED SKEW\*\***

GS	ISTN	GGMSE	SKEW
GS	NUNA	1.150	.13

**\*\*HP PLOT \*\***

HP	HP PLOT FILE	IHPCV	KLIMIT	IPER	BAREA
HP	NUNA.PCL	0	0	0	2.79 SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

**\*\*SYSTEMATIC EVENTS\*\***

29 EVENTS TO BE ANALYZED

**\*\*END OF INPUT DATA\*\***

ED +++++  
 +++++



**Table F-10: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- NUNAVAK RIVER, ALASKA DA=2.79 SQ MI

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1972	22.	1	1980	131.	3.33
0	0	1973	55.	2	1987	117.	6.67
0	0	1974	66.	3	1994	115.	10.00
0	0	1975	22.	4	1995	98.	13.33
0	0	1976	21.	5	1999	98.	16.67
0	0	1977	21.	6	1989	96.	20.00
0	0	1978	16.	7	1993	93.	23.33
0	0	1979	16.	8	1988	79.	26.67
0	0	1980	131.	9	1981	72.	30.00
0	0	1981	72.	10	2000	68.	33.33
0	0	1982	28.	11	1984	66.	36.67
0	0	1983	15.	12	1974	66.	40.00
0	0	1984	66.	13	1973	55.	43.33
0	0	1985	22.	14	1996	32.	46.67
0	0	1986	31.	15	1986	31.	50.00
0	0	1987	117.	16	1982	28.	53.33
0	0	1988	79.	17	1990	28.	56.67
0	0	1989	96.	18	1991	25.	60.00
0	0	1990	28.	19	1998	25.	63.33
0	0	1991	25.	20	1997	24.	66.67
0	0	1992	16.	21	1975	22.	70.00
0	0	1993	93.	22	1985	22.	73.33
0	0	1994	115.	23	1972	22.	76.67
0	0	1995	98.	24	1977	21.	80.00
0	0	1996	32.	25	1976	21.	83.33
0	0	1997	24.	26	1992	16.	86.67
0	0	1998	25.	27	1979	16.	90.00
0	0	1999	98.	28	1978	16.	93.33
0	0	2000	68.	29	1983	15.	96.67

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 29 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.549

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 6.3

HIGH OUTLIER TEST

BASED ON 29 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.549

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 261.

-SKEW WEIGHTING -

BASED ON 29 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .189  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150

**Table F-10: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- NUNAVAK RIVER, ALASKA DA=2.79 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS	
			.05 FLOW IN CFS	.95 FLOW IN CFS
395.	520.	.20	787.	250.
305.	373.	.50	566.	201.
247.	288.	1.00	434.	168.
196.	220.	2.00	327.	138.
153.	166.	4.00	240.	112.
140.	151.	5.00	216.	104.
105.	110.	10.00	151.	80.
75.	76.	20.00	101.	59.
40.	40.	50.00	50.	32.
22.	22.	80.00	28.	16.
16.	16.	90.00	21.	11.
13.	12.	95.00	17.	8.
8.	7.	99.00	12.	5.

SYSTEMATIC STATISTICS			
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS	
MEAN	1.6094	HISTORIC EVENTS	0
STANDARD DEV	.3168	HIGH OUTLIERS	0
COMPUTED SKEW	.2076	LOW OUTLIERS	0
REGIONAL SKEW	.1300	ZERO OR MISSING	0
ADOPTED SKEW	.1966	SYSTEMATIC EVENTS	29

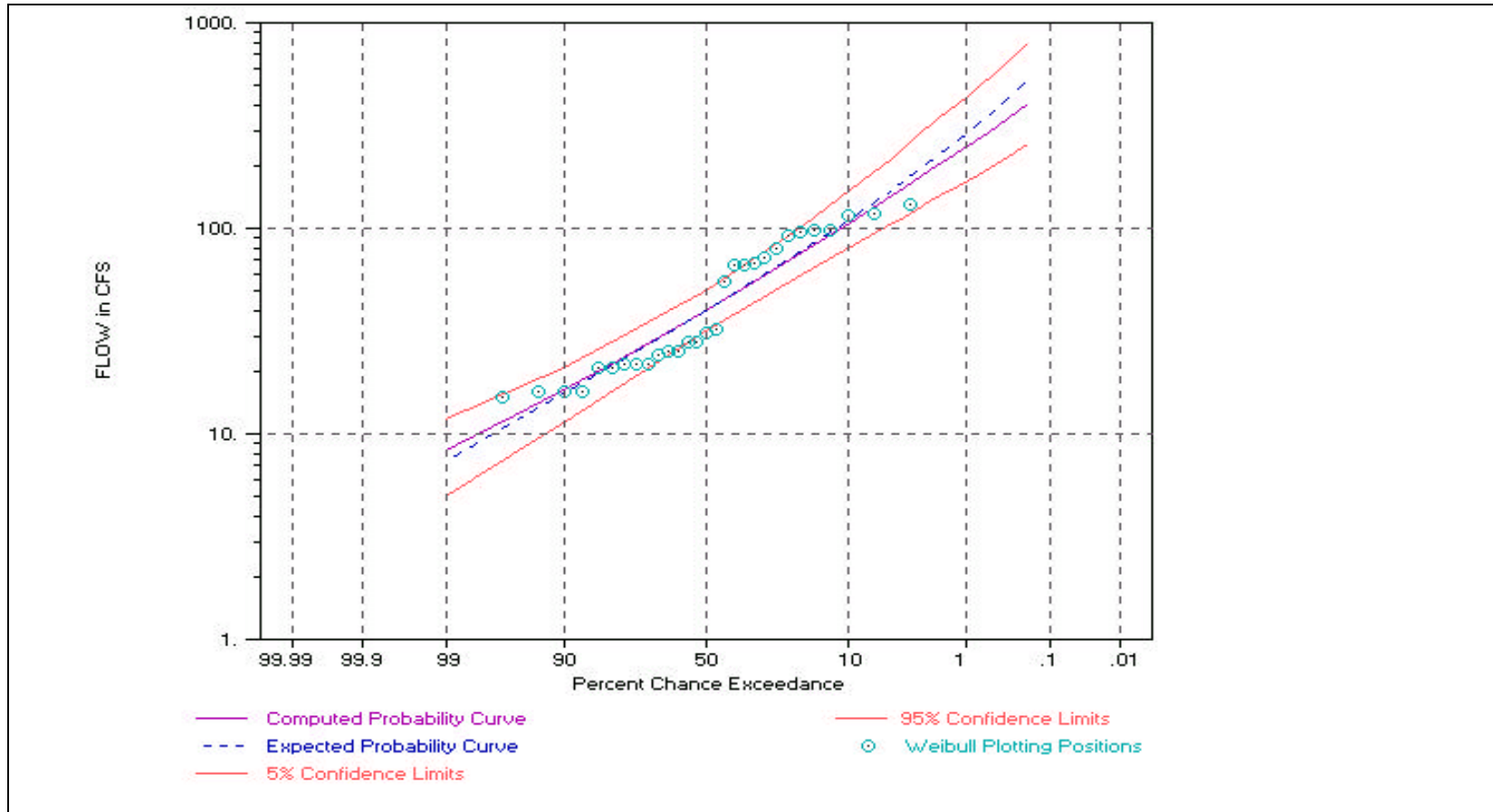
HP PLOT WRITTEN TO THE FILE: NUNA.PCL

++++  
+ END OF RUN +  
+ NORMAL STOP IN FFA +  
++++

**Figure F-8:** Nunavak Creek Single-Station Flood-Frequency Relationship

BASIN AREA = 2.79 SQ MI

WATER YEARS IN RECORD: 1972-00



**Table F-11: Single-Station Flood-Frequency Analysis for the Putuligayuk River**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 14 SEP 01 13:39:45    *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*                         *
*****

```

INPUT FILE NAME: PUTU.TXT  
 OUTPUT FILE NAME: PUTU.OUT  
 DSS FILE NAME: PUTY.DSS

-----DSS---ZOPEN: New File Opened, File: PUTY.DSS  
 Unit: 71; DSS Version: 6-JB

\*\*TITLE RECORD(S)\*\*  
 TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM  
 TT JONES AND FAHL (1994)

\*\*JOB RECORD(S)\*\*

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0

	A	B	CLIMIT	NDSSCV	IEXT
J2	.00	.00	.05	0	0

\*\*FREQUENCY ARRAY\*\*

FR	13	.200	.500	1.000	2.000	4.000	5.000	10.000	20.000	50.000
FR80.000	90.000	95.000	99.000							

\*\*STATION IDENTIFICATION\*\*  
 ID PUTULIGAYUK RIVER, ALASKA DA=176 SQ MI 1970-1995

\*\*GENERALIZED SKEW\*\*

GS	PUTU	1.150	.13

\*\*HP PLOT \*\*

HP	PUTU.PCL	IHPCV	KLIMIT	IPER	BAREA
		0	0	0	176 SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

\*\*SYSTEMATIC EVENTS\*\*  
 25 EVENTS TO BE ANALYZED

\*\*END OF INPUT DATA\*\*

ED ++++++  
 ++++++

**Table F-11: (Continued)**

-----PRELIMINARY RESULTS -----

-SKEW WEIGHTING -

-----  
 BASED ON 25 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .277  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150  
 -----

PRELIMINARY RESULTS

-FREQUENCY CURVE- PUTULIGAYUK RIVER, ALASKA DA=176 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
9060.	9870.	.20	13500.	6950.
8390.	9000.	.50	12300.	6500.
7820.	8310.	1.00	11200.	6130.
7210.	7560.	2.00	10100.	5710.
6530.	6780.	4.00	8940.	5240.
6300.	6520.	5.00	8540.	5080.
5510.	5640.	10.00	7250.	4520.
4610.	4670.	20.00	5850.	3840.
3110.	3110.	50.00	3730.	2610.
1940.	1900.	80.00	2330.	1540.
1470.	1410.	90.00	1810.	1100.
1150.	1070.	95.00	1460.	810.
695.	585.	99.00	955.	426.
----- SYSTEMATIC STATISTICS -----				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	3.4697	HISTORIC EVENTS	0	
STANDARD DEV	.2268	HIGH OUTLIERS	0	
COMPUTED SKEW	-.7968	LOW OUTLIERS	0	
REGIONAL SKEW	.1300	ZERO OR MISSING	0	
ADOPTED SKEW	-.6170	SYSTEMATIC EVENTS	25	

**Table F-11: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- PUTULIGAYUK RIVER, ALASKA DA=176 SQ MI

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1970	1900.	1	1980	5800.	3.85
0	0	1971	4980.	2	1995	5700.	7.69
0	0	1972	4000.	3	1986	5440.	11.54
0	0	1972	4500.	4	1971	4980.	15.38
0	0	1974	2000.	5	1989	4950.	19.23
0	0	1975	2000.	6	1991	4640.	23.08
0	0	1976	3130.	7	1978	4630.	26.92
0	0	1977	1800.	8	1972	4500.	30.77
0	0	1978	4630.	9	1972	4000.	34.62
0	0	1979	1100.	10	1988	3990.	38.46
0	0	1980	5800.	11	1983	3130.	42.31
0	0	1982	2290.	12	1976	3130.	46.15
0	0	1983	3130.	13	1987	3120.	50.00
0	0	1984	1640.	14	1993	2990.	53.85
0	0	1985	2800.	15	1994	2900.	57.69
0	0	1986	5440.	16	1985	2800.	61.54
0	0	1987	3120.	17	1992	2500.	65.38
0	0	1988	3990.	18	1982	2290.	69.23
0	0	1989	4950.	19	1974	2000.	73.08
0	0	1990	769.	20	1975	2000.	76.92
0	0	1991	4640.	21	1970	1900.	80.77
0	0	1992	2500.	22	1977	1800.	84.62
0	0	1993	2990.	23	1984	1640.	88.46
0	0	1994	2900.	24	1979	1100.	92.31
0	0	1995	5700.	25	1990	769.	96.15

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 25 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.486

1 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 804.9

STATISTICS AND FREQUENCY CURVE ADJUSTED FOR 1 LOW OUTLIER(S)

HIGH OUTLIER TEST

BASED ON 24 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.467

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 9475.

-SKEW WEIGHTING -

BASED ON 25 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .239  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150

**Table F-11: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- PUTULIGAYUK RIVER, ALASKA DA=176 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
9440.	10600.	.20	14000.	7300.
8560.	9360.	.50	12300.	6730.
7880.	8460.	1.00	11100.	6270.
7170.	7580.	2.00	9840.	5780.
6430.	6700.	4.00	8580.	5260.
6180.	6410.	5.00	8170.	5090.
5380.	5510.	10.00	6880.	4500.
4510.	4570.	20.00	5550.	3840.
3130.	3130.	50.00	3660.	2680.
2090.	2050.	80.00	2450.	1700.
1660.	1610.	90.00	2000.	1290.
1370.	1300.	95.00	1680.	1010.
930.	819.	99.00	1210.	619.

SYNTHETIC STATISTICS

LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS	
MEAN	3.4835	HISTORIC EVENTS	0
STANDARD DEV	.1997	HIGH OUTLIERS	0
COMPUTED SKEW	-.4476	LOW OUTLIERS	1
REGIONAL SKEW	.1300	ZERO OR MISSING	0
ADOPTED SKEW	-.3483	SYSTEMATIC EVENTS	25

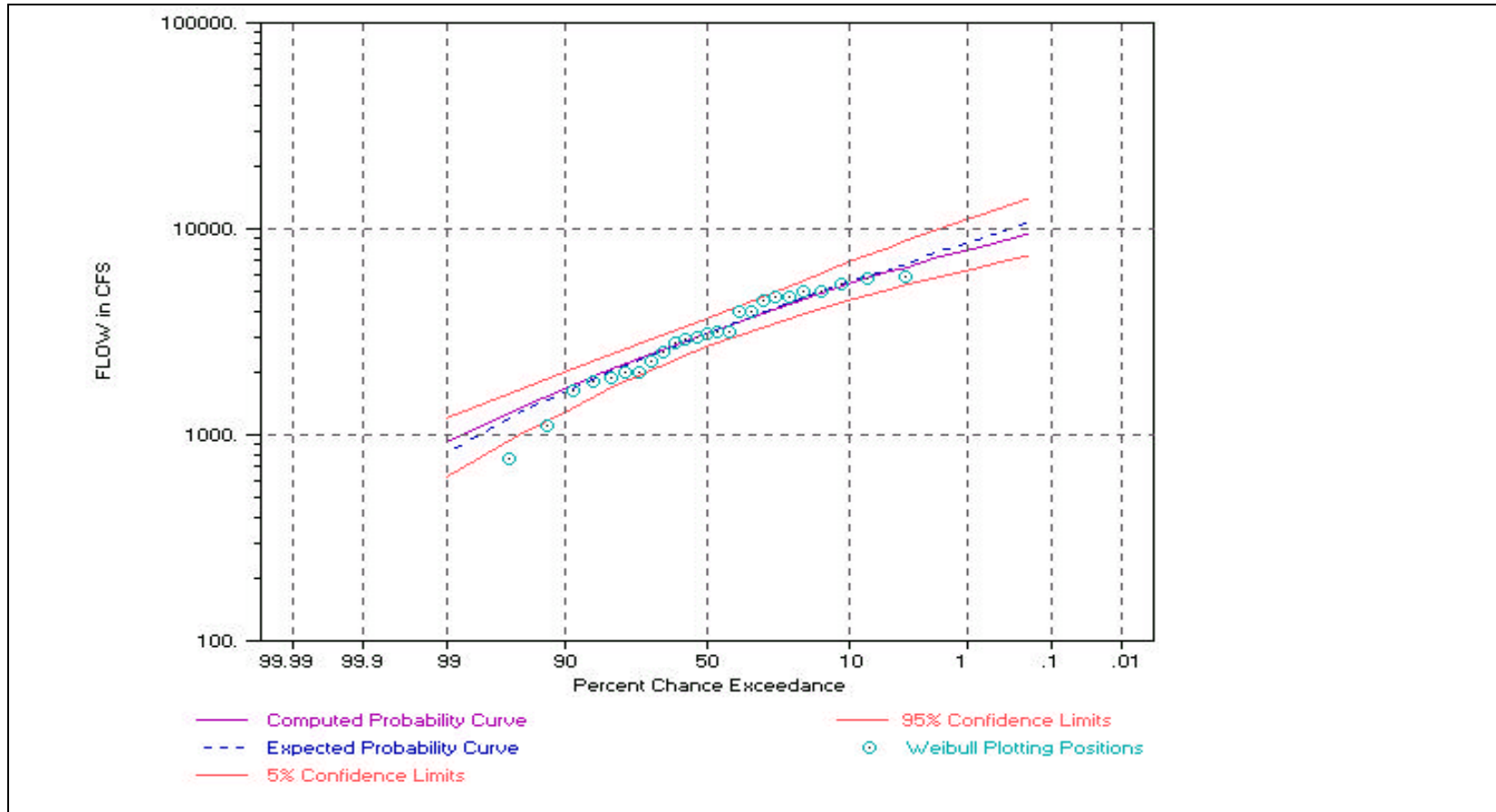
HP PLOT WRITTEN TO THE FILE: PUTU.PCL

++++  
+ END OF RUN +  
+ NORMAL STOP IN FFA +  
++++

**Figure F-9:** Putuligayuk River Single-Station Flood-Frequency Relationship

BASIN AREA = 176 SQ MI

WATER YEARS IN RECORD: 1970-80,82-95







**Table F-12: Single-Station Flood-Frequency Analysis for the Sagavanirktok River Tributary near Deadhorse**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 14 SEP 01 13:38:42    *
*                         *
*****

*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*                         *
*****

INPUT FILE NAME: SAG1.TXT
OUTPUT FILE NAME: SAG1.OUT
DSS FILE NAME: SAG1.DSS

-----DSS---ZOPEN: Existing File Opened, File: SAG1.DSS
Unit: 71; DSS Version: 6-JB

**TITLE RECORD(S)**
TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM
TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM
TT JONES AND FAHL (1994)

**JOB RECORD(S)**
      IPPC  ISKFX  IPROUT  IFMT  IWYR  IUNIT  ISMRY  IPNCH  IREG
J1    0     2     32     0     0     0     0     0     0

      A     B  CLIMIT  NDSSCV  IEXT
J2   .00   .00   .05     0     0

**FREQUENCY ARRAY**
FR 13 .200 .500 1.000 2.000 4.000 5.000 10.000 20.000 50.000
FR80.000 90.000 95.000 99.000

**STATION IDENTIFICATION**
ID SAGAVANIRKTOK RIVER TRIB NR DEADHORSE,DA=12 SQ MI 1971-2000

**GENERALIZED SKEW**
      ISTN  GGMSE  SKEW
GS SAG1  1.150  .13

**HP PLOT **
      HP PLOT FILE           IHPCV  KLIMIT  IPER  BAREA
HP SAG1.PCL                 0      0      012  SQ MI

      SELECTED CURVES ON HP PLOT
      EXPECTED PROBABILITY CURVE
      CONFIDENCE LIMITS

**SYSTEMATIC EVENTS**
      14 EVENTS TO BE ANALYZED

**END OF INPUT DATA**
ED ++++++
+++++

```

**Table F-12: (Continued)**

-----PRELIMINARY RESULTS -----

-SKEW WEIGHTING -

BASED ON 14 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .626  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150

PRELIMINARY RESULTS

-FREQUENCY CURVE- SAGAVANIRKTOK RIVER TRIB NR DEADHORSE,DA=12

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
365.	441.	.20	1010.	203.
329.	391.	.50	872.	186.
299.	348.	1.00	761.	172.
265.	303.	2.00	645.	156.
229.	254.	4.00	525.	138.
216.	238.	5.00	485.	131.
175.	187.	10.00	364.	109.
131.	136.	20.00	246.	84.
65.	65.	50.00	104.	42.
27.	25.	80.00	42.	15.
16.	14.	90.00	26.	7.
10.	7.	95.00	17.	4.
3.	2.	99.00	8.	1.

SYSTEMATIC STATISTICS

LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS	
MEAN	1.7580	HISTORIC EVENTS	0
STANDARD DEV	.4180	HIGH OUTLIERS	0
COMPUTED SKEW	-1.3432	LOW OUTLIERS	0
REGIONAL SKEW	.1300	ZERO OR MISSING	0
ADOPTED SKEW	-.8239	SYSTEMATIC EVENTS	14

----- FINAL RESULTS -----

-PLOTING POSITIONS- SAGAVANIRKTOK RIVER TRIB NR DEADHORSE,DA=12

EVENTS ANALYZED				ORDERED EVENTS			
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1986	7.	1	1996	142.	6.67
0	0	1988	9.	2	1989	140.	13.33
0	0	1989	140.	3	1990	135.	20.00
0	0	1990	135.	4	2000	128.	26.67
0	0	1991	89.	5	1997	105.	33.33
0	0	1992	48.	6	1991	89.	40.00
0	0	1993	44.	7	1998	85.	46.67
0	0	1994	41.	8	1995	63.	53.33
0	0	1995	63.	9	1992	48.	60.00
0	0	1996	142.	10	1999	46.	66.67
0	0	1997	105.	11	1993	44.	73.33
0	0	1998	85.	12	1994	41.	80.00
0	0	1999	46.	13	1988	9.	86.67
0	0	2000	128.	14	1986	7.	93.33

## Table F-12: (Continued)

-OUTLIER TESTS -

-----  
 LOW OUTLIER TEST  
 -----

BASED ON 14 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.213

1 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 6.8

STATISTICS AND FREQUENCY CURVE ADJUSTED FOR 1 LOW OUTLIER(S)

-----  
 HIGH OUTLIER TEST  
 -----

BASED ON 13 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.175

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 362.

-----  
 -SKEW WEIGHTING -  
 -----

BASED ON 14 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .767

DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150  
 -----

FINAL RESULTS

-FREQUENCY CURVE- SAGAVANIRKTOK RIVER TRIB NR DEADHORSE, DA=12

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS	
			.05 FLOW IN CFS	.95
305.	351.	.20	749.	180.
281.	322.	.50	669.	169.
261.	294.	1.00	601.	159.
237.	263.	2.00	526.	146.
209.	229.	4.00	443.	132.
200.	217.	5.00	415.	127.
167.	177.	10.00	325.	108.
129.	134.	20.00	231.	86.
69.	69.	50.00	107.	47.
31.	29.	80.00	46.	18.
19.	16.	90.00	29.	9.
12.	9.	95.00	20.	5.
4.	2.	99.00	9.	1.

SYNTHETIC STATISTICS			
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS	
MEAN	1.7835	HISTORIC EVENTS	0
STANDARD DEV	.3841	HIGH OUTLIERS	0
COMPUTED SKEW	-1.6180	LOW OUTLIERS	1
REGIONAL SKEW	.1300	ZERO OR MISSING	0
ADOPTED SKEW	-.9184	SYSTEMATIC EVENTS	14

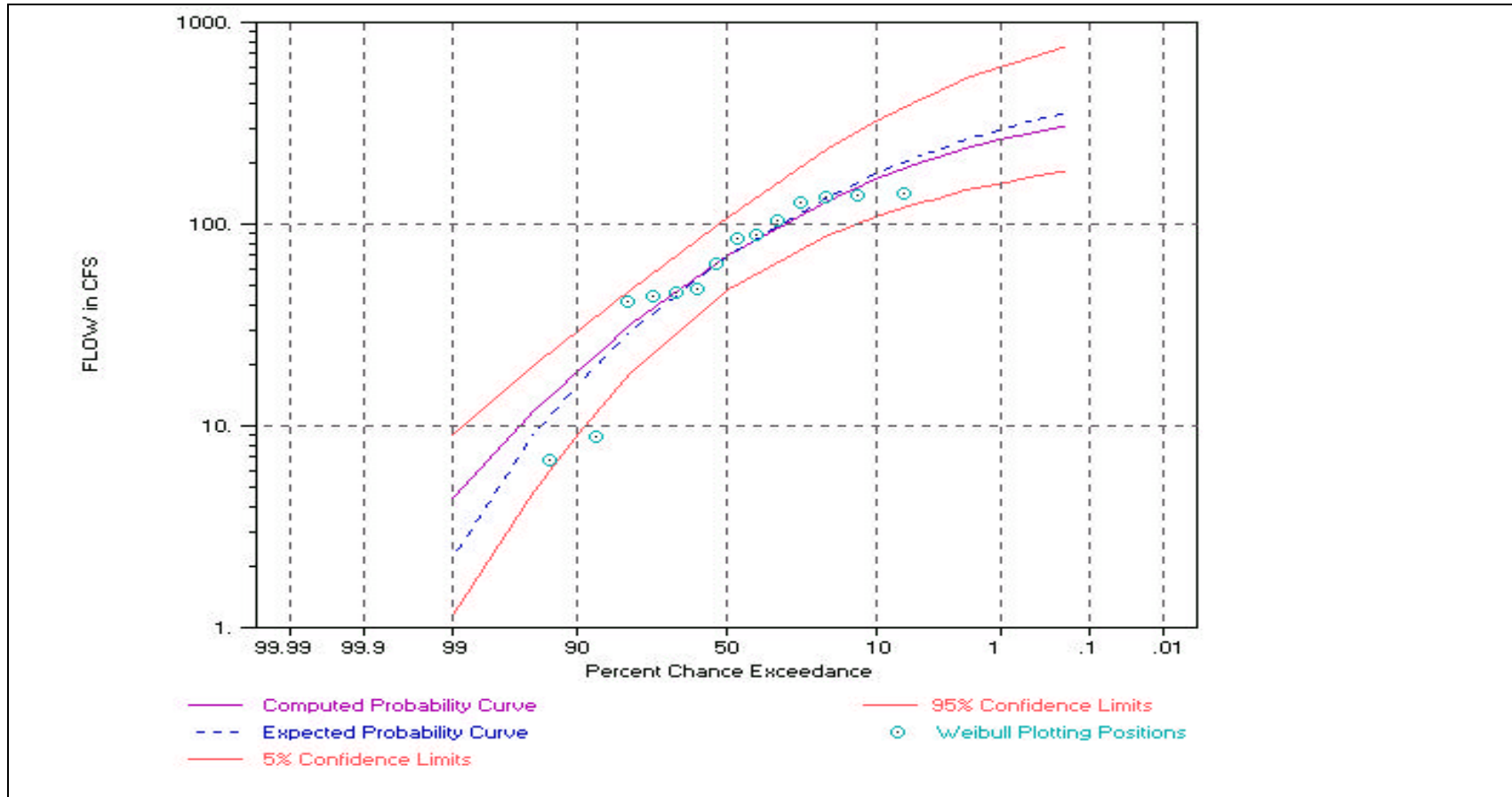
HP PLOT WRITTEN TO THE FILE: SAG1.PCL

++++  
 + END OF RUN +  
 + NORMAL STOP IN FFA +  
 ++++

**Figure F-10:** Sagavanirktok River Tributary near Deadhorse Single-Station Flood-Frequency Relationship

BASIN AREA = 12 SQ MI

WATER YEARS IN RECORD: 1986,88-00



**Table F-13: Single-Station Flood-Frequency Analysis for Sakonowak Creek**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:    *
* 14 SEP 01 13:37:48   *
*                       *
*****
*****
*           *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*           *
*****

```

INPUT FILE NAME: SAKO.TXT  
 OUTPUT FILE NAME: SAKO.OUT  
 DSS FILE NAME: SAKO.DSS

-----DSS---ZOPEN: Existing File Opened, File: SAKO.DSS  
 Unit: 71; DSS Version: 6-JB

\*\*TITLE RECORD(S)\*\*  
 TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM  
 TT JONES AND FAHL (1994)

\*\*JOB RECORD(S)\*\*

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0

	A	B	CLIMIT	NDSSCV	IEXT
J2	.00	.00	.05	0	0

\*\*FREQUENCY ARRAY\*\*  
 FR 13 .200 .500 1.000 2.000 4.000 5.000 10.000 20.000 50.000  
 FR80.000 90.000 95.000 99.000

\*\*STATION IDENTIFICATION\*\*  
 ID SAKONOWIAK CREEK, ALASKA DA=49.5 SQ MI 1978-84

\*\*GENERALIZED SKEW\*\*  
 ISTN GGMSE SKEW  
 GS SAKO 1.150 .13

\*\*HP PLOT \*\*  
 HP PLOT FILE IHPCV KLIMIT IPER BAREA  
 HP SAKO1.PCL 0 0 0 49.5 SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

\*\*SYSTEMATIC EVENTS\*\*  
 7 EVENTS TO BE ANALYZED

\*\*END OF INPUT DATA\*\*  
 ED +++++  
 +++++  
 \* \* \* WARNING - LESS THAN TEN EVENTS FOR ANALYSIS  
 BULLETIN 17-B PROCEDURES NOT APPLICABLE.

**Table F-13: (Continued)**

-----PRELIMINARY RESULTS -----  
 -SKEW WEIGHTING -  
 -----  
 BASED ON 7 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = 1.112  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150  
 -----

PRELIMINARY RESULTS

-FREQUENCY CURVE- SAKONOWIAK CREEK, ALASKA DA=49.5 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS	
			.05	.95
3790.	5590.	.20	14400.	2170.
3500.	4740.	.50	12400.	2040.
3250.	4220.	1.00	10900.	1930.
2970.	3710.	2.00	9230.	1800.
2660.	3160.	4.00	7580.	1650.
2550.	2990.	5.00	7040.	1590.
2180.	2440.	10.00	5380.	1400.
1770.	1880.	20.00	3750.	1160.
1080.	1080.	50.00	1780.	691.
591.	531.	80.00	897.	287.
409.	324.	90.00	650.	153.
294.	192.	95.00	499.	85.
148.	44.	99.00	300.	24.

SYSTEMATIC STATISTICS

LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS	
MEAN	2.9988	HISTORIC EVENTS	0
STANDARD DEV	.2898	HIGH OUTLIERS	0
COMPUTED SKEW	-1.6033	LOW OUTLIERS	0
REGIONAL SKEW	.1300	ZERO OR MISSING	0
ADOPTED SKEW	-.7511	SYSTEMATIC EVENTS	7

----- FINAL RESULTS -----

-PLOTING POSITIONS- SAKONOWIAK CREEK, ALASKA DA=49.5 SQ MI

EVENTS ANALYZED				ORDERED EVENTS			
MON	DAY	YEAR	FLOW CFS	RANK	YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1978	1900.	1	1978	1900.	12.50
0	0	1979	260.	2	1980	1500.	25.00
0	0	1980	1500.	3	1983	1500.	37.50
0	0	1981	1200.	4	1981	1200.	50.00
0	0	1982	980.	5	1982	980.	62.50
0	0	1983	1500.	6	1984	750.	75.00
0	0	1984	750.	7	1979	260.	87.50

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 7 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.828

1 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 294.4

STATISTICS AND FREQUENCY CURVE ADJUSTED FOR 1 LOW OUTLIER(S)

# Table F-13: (Continued)

-----  
HIGH OUTLIER TEST  
-----

BASED ON 6 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 1.729  
0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 2229.  
-----

-SKEW WEIGHTING -

-----  
BASED ON 7 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .689  
DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150  
-----

## FINAL RESULTS

-FREQUENCY CURVE- SAKONOWIAK CREEK, ALASKA DA=49.5 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS	
			.05 FLOW IN CFS	.95 FLOW IN CFS
3020.	5010.	.20	7670.	2090.
2770.	4010.	.50	6560.	1960.
2580.	3440.	1.00	5740.	1850.
2380.	2950.	2.00	4940.	1740.
2160.	2520.	4.00	4170.	1620.
2090.	2390.	5.00	3930.	1580.
1860.	2020.	10.00	3180.	1430.
1600.	1670.	20.00	2460.	1250.
1170.	1170.	50.00	1550.	899.
838.	794.	80.00	1070.	547.
695.	620.	90.00	906.	398.
592.	485.	95.00	796.	299.
432.	257.	99.00	627.	168.

### SYNTHETIC STATISTICS

LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS	
MEAN	3.0608	HISTORIC EVENTS	0
STANDARD DEV	.1671	HIGH OUTLIERS	0
COMPUTED SKEW	-.5679	LOW OUTLIERS	1
REGIONAL SKEW	.1300	ZERO OR MISSING	0
ADOPTED SKEW	-.3064	SYSTEMATIC EVENTS	7

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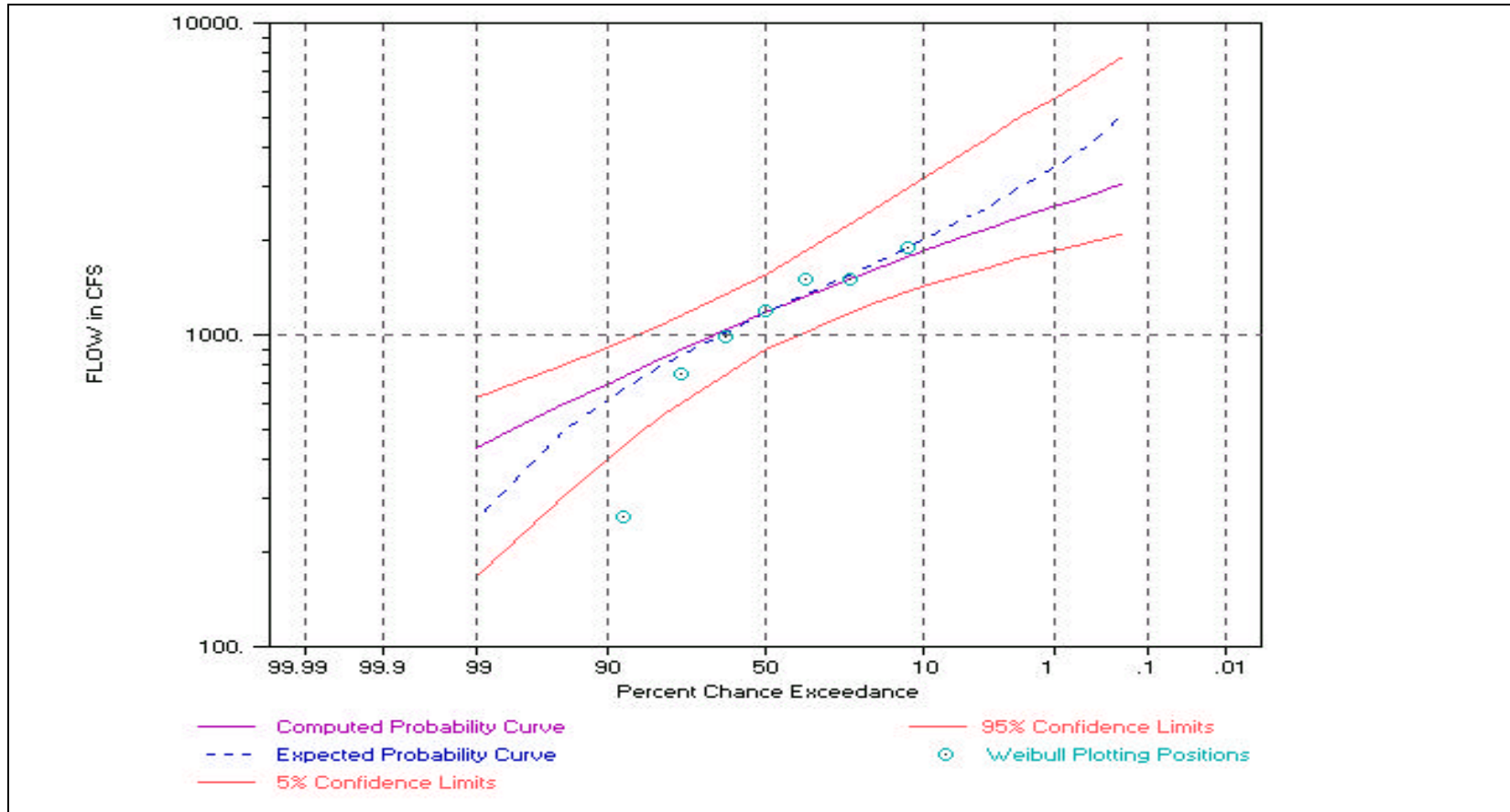
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+ END OF RUN +  
+ NORMAL STOP IN FFA +  
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**Figure F-11:** Sakonowiak Creek Single-Station Flood-Frequency Relationship

BASIN AREA = 49.5 SQ MI

WATER YEARS IN RECORD: 1978-84



**Table F-14: Single-Station Flood-Frequency Analysis for the Ugnuravik River**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 18 SEP 01 08:51:03    *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*                         *
*****

```

INPUT FILE NAME: UGNU.TXT  
 OUTPUT FILE NAME: UGNU.OUT  
 DSS FILE NAME: UGNU.DSS

-----DSS---ZOPEN: Existing File Opened, File: UGNU.DSS  
 Unit: 71; DSS Version: 6-JB

\*\*TITLE RECORD(S)\*\*  
 TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW OBTAINED FROM  
 TT JONES AND FAHL (1994)

\*\*JOB RECORD(S)\*\*

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0

	A	B	CLIMIT	NDSSCV	IEXT
J2	.00	.00	.05	0	0

\*\*FREQUENCY ARRAY\*\*

FR	13	.200	.500	1.000	2.000	4.000	5.000	10.000	20.000	50.000
FR80.000	90.000	95.000	99.000							

\*\*STATION IDENTIFICATION\*\*

ID	UGNURAVIK RIVER, ALASKA	DA=26.9 SQ MI	1978-84,97,00-01
----	-------------------------	---------------	------------------

\*\*GENERALIZED SKEW\*\*

ISTN	GGMSE	SKEW
GS UGNU	1.150	.13

\*\*HP PLOT \*\*

HP PLOT FILE	IHPCV	KLIMIT	IPER	BAREA
HP UGNU.PCL	0	0	0	26.9 SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

\*\*SYSTEMATIC EVENTS\*\*  
 10 EVENTS TO BE ANALYZED

\*\*END OF INPUT DATA\*\*  
 ED +++++  
 +++++

**Table F-14: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- UGNURAVIK RIVER, ALASKA DA=26.9 SQ MI

EVENTS ANALYZED				ORDERED EVENTS			
MON	DAY	YEAR	FLOW CFS	RANK	YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1978	470.	1	1980	2320.	9.09
0	0	1979	310.	2	1982	1640.	18.18
0	0	1980	2320.	3	2000	1060.	27.27
0	0	1981	850.	4	1997	1030.	36.36
0	0	1982	1640.	5	1983	1000.	45.45
0	0	1983	1000.	6	1981	850.	54.55
0	0	1984	540.	7	2001	800.	63.64
0	0	1997	1030.	8	1984	540.	72.73
0	0	2000	1060.	9	1978	470.	81.82
0	0	2001	800.	10	1979	310.	90.91

-OUTLIER TESTS -

-----  
LOW OUTLIER TEST  
-----

BASED ON 10 EVENTS, 10 PERCENT OUTLIER TEST VALUE  $K(N) = 2.036$

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 259.0

-----  
HIGH OUTLIER TEST  
-----

BASED ON 10 EVENTS, 10 PERCENT OUTLIER TEST VALUE  $K(N) = 2.036$

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 2858.

-SKEW WEIGHTING -

-----  
BASED ON 10 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .475  
DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = 1.150  
-----

**Table F-14: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- UGNURAVIK RIVER, ALASKA DA=26.9 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
4630.	8940.	.20	14400.	2700.
3880.	6280.	.50	10900.	2360.
3360.	4850.	1.00	8650.	2110.
2870.	3750.	2.00	6750.	1870.
2400.	2890.	4.00	5130.	1620.
2260.	2660.	5.00	4660.	1540.
1830.	2020.	10.00	3370.	1300.
1410.	1490.	20.00	2310.	1030.
862.	862.	50.00	1200.	618.
524.	498.	80.00	718.	321.
404.	365.	90.00	570.	219.
325.	275.	95.00	477.	157.
216.	148.	99.00	345.	83.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	2.9347	HISTORIC EVENTS	0	
STANDARD DEV	.2561	HIGH OUTLIERS	0	
COMPUTED SKEW	-.0835	LOW OUTLIERS	0	
REGIONAL SKEW	.1300	ZERO OR MISSING	0	
ADOPTED SKEW	-.0211	SYSTEMATIC EVENTS	10	

HP PLOT WRITTEN TO THE FILE: UGNU.PCL

```

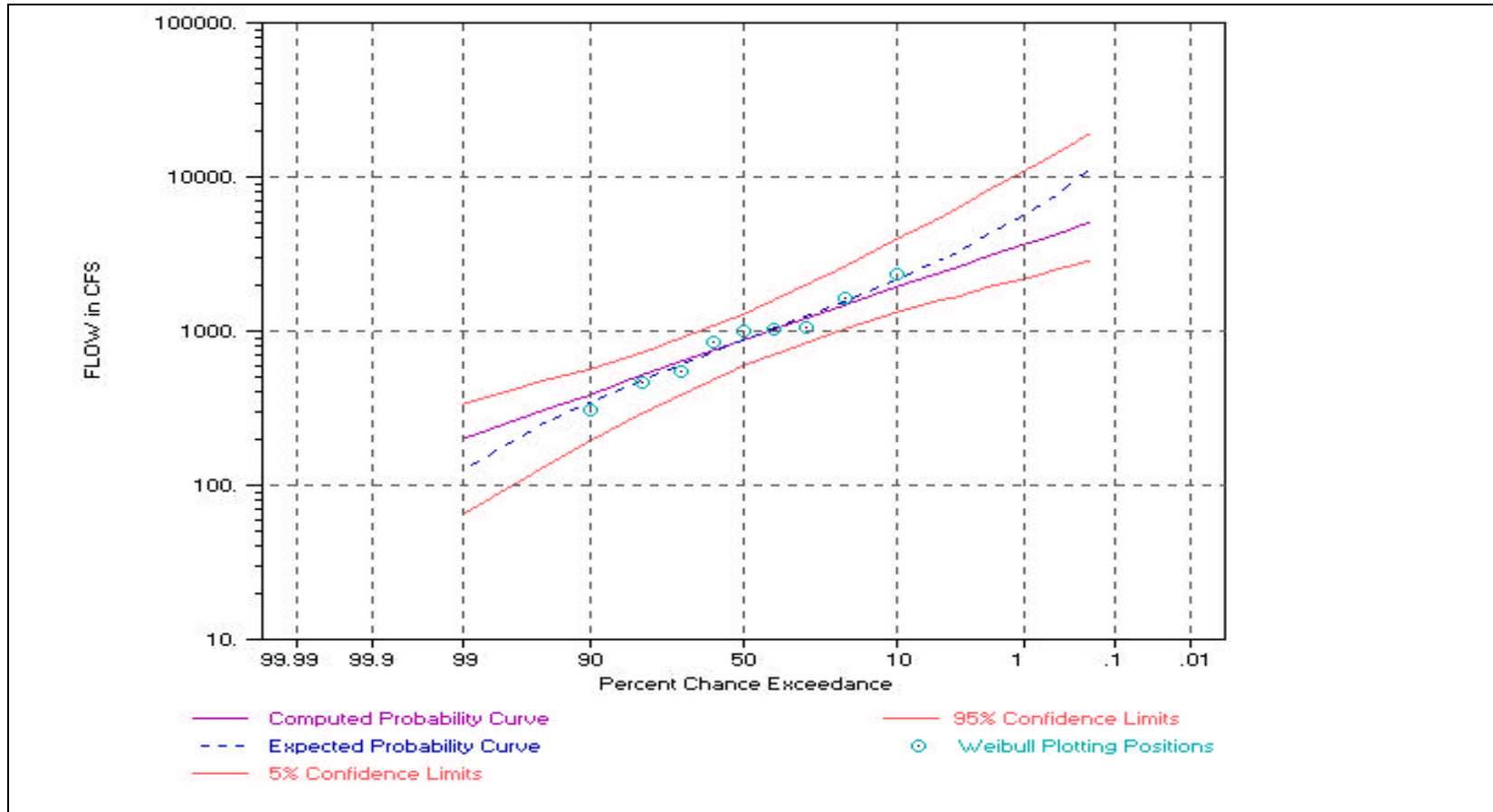
+++++
+ END OF RUN +
+ NORMAL STOP IN FFA +
+++++

```

**Figure F-12:** Ugnuravik River Single-Station Flood-Frequency Relationship

BASIN AREA = 26.9 SQ MI

WATER YEARS IN RECORD: 1978-84,97,00



### Table F-15: Regression Analysis, 2 Year Recurrence Interval

Weighted analysis using weights in Record Length (years)

The regression equation is

$$2\text{-Year (Log10) } Q = 1.25 + 0.975 \text{ Drainage Area (Log10)}$$

Predictor	Coef	StDev	T	P
Constant	1.2531	0.1365	9.18	0.000
Drainage	0.97461	0.05964	16.34	0.000

S = 0.8493    R-Sq = 96.7%    R-Sq(adj) = 96.4%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	192.61	192.61	267.05	0.000
Residual Error	9	6.49	0.72		
Total	10	199.10			

Unusual Observations

Obs	Drainage	2-Year (	Fit	StDev Fit	Residual	St Resid
9	1.10	1.839	2.325	0.085	-0.486	-2.31R

R denotes an observation with a large standardized residual

**Table F-16:** Regression Analysis, 5 Year Recurrence Interval

Weighted analysis using weights in Record Length (years)

The regression equation is

$$5\text{-Year (Log10) Q} = 1.53 + 0.943 \text{ Drainage Area (Log10)}$$

Predictor	Coef	StDev	T	P
Constant	1.5266	0.1251	12.20	0.000
Drainage	0.94342	0.05466	17.26	0.000

S = 0.7783    R-Sq = 97.1%    R-Sq(adj) = 96.7%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	180.47	180.47	297.93	0.000
Residual Error	9	5.45	0.61		
Total	10	185.92			

Unusual Observations

Obs	Drainage	5-Year (	Fit	StDev Fit	Residual	St Resid
9	1.10	2.127	2.564	0.078	-0.437	-2.27R

R denotes an observation with a large standardized residual

**Table F-17:** Regression Analysis, 10 Year Recurrence Interval

Weighted analysis using weights in Record Length (years)

The regression equation is

$$10\text{-Year (Log10) } Q = 1.68 + 0.924 \text{ Drainage Area (Log10)}$$

Predictor	Coef	StDev	T	P
Constant	1.6775	0.1293	12.98	0.000
Drainage	0.92406	0.05647	16.36	0.000

S = 0.8041    R-Sq = 96.7%    R-Sq(adj) = 96.4%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	173.14	173.14	267.76	0.000
Residual Error	9	5.82	0.65		
Total	10	178.96			

Unusual Observations

Obs	Drainage	10-Year	Fit	StDev Fit	Residual	St Resid
9	1.10	2.248	2.694	0.081	-0.446	-2.24R

R denotes an observation with a large standardized residual



**Table F-18:** Regression Analysis, 25 Year Recurrence Interval

Weighted analysis using weights in Record Length (years)

The regression equation is

$$25\text{-Year (Log10) Q} = 1.85 + 0.902 \text{ Drainage Area (Log10)}$$

Predictor	Coef	StDev	T	P
Constant	1.8470	0.1429	12.93	0.000
Drainage	0.90158	0.06241	14.45	0.000

S = 0.8887    R-Sq = 95.9%    R-Sq(adj) = 95.4%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	164.82	164.82	208.68	0.000
Residual Error	9	7.11	0.79		
Total	10	171.93			

Unusual Observations

Obs	Drainage	25-Year	Fit	StDev Fit	Residual	St Resid
9	1.10	2.360	2.839	0.089	-0.479	-2.18R

R denotes an observation with a large standardized residual

### Table F-19: Regression Analysis, 50 Year Recurrence Interval

Weighted analysis using weights in Record Length (years)

The regression equation is

$$50\text{-Year (Log10) } Q = 1.97 + 0.885 \text{ Drainage Area (Log10)}$$

Predictor	Coef	StDev	T	P
Constant	1.9651	0.1578	12.45	0.000
Drainage	0.88471	0.06893	12.83	0.000

S = 0.9816    R-Sq = 94.8%    R-Sq(adj) = 94.2%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	158.71	158.71	164.73	0.000
Residual Error	9	8.67	0.96		
Total	10	167.38			

Unusual Observations

Obs	Drainage	50-Year	Fit	StDev Fit	Residual	St Resid
9	1.10	2.420	2.938	0.099	-0.518	-2.13R

R denotes an observation with a large standardized residual

**Table F-20:** Regression Analysis, 100 Year Recurrence Interval

Weighted analysis using weights in Record Length (years)

The regression equation is

$$100\text{-Year (Log10) } Q = 2.08 + 0.868 \text{ Drainage Area (Log10)}$$

Predictor	Coef	StDev	T	P
Constant	2.0798	0.1758	11.83	0.000
Drainage	0.86784	0.07681	11.30	0.000

S = 1.094    R-Sq = 93.4%    R-Sq(adj) = 92.7%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	152.72	152.72	127.66	0.000
Residual Error	9	10.77	1.20		
Total	10	163.48			

Unusual Observations

Obs	Drainage	100-Year	Fit	StDev Fit	Residual	St Resid
9	1.10	2.468	3.034	0.110	-0.566	-2.09R

R denotes an observation with a large standardized residual

## Table F-21: Regression Analysis, 200 Year Recurrence Interval

Weighted analysis using weights in Record Length (years)

The regression equation is

$$200\text{-Year (Log10) } Q = 2.19 + 0.850 \text{ Drainage Area (Log10)}$$

Predictor	Coef	StDev	T	P
Constant	2.1936	0.1964	11.17	0.000
Drainage	0.85018	0.08578	9.91	0.000

S = 1.221    R-Sq = 91.6%    R-Sq(adj) = 90.7%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	146.56	146.56	98.24	0.000
Residual Error	9	13.43	1.49		
Total	10	159.99			

Unusual Observations

Obs	Drainage	200-Year	Fit	StDev Fit	Residual	St Resid
9	1.10	2.508	3.129	0.123	-0.621	-2.05R

R denotes an observation with a large standardized residual

**Table F-22:** Regression Analysis, 500 Year Recurrence Interval

Weighted analysis using weights in Record Length (years)

The regression equation is

$$500\text{-Year (Log10) Q} = 2.35 + 0.826 \text{ Drainage Area (Log10)}$$

Predictor	Coef	StDev	T	P
Constant	2.3451	0.2294	10.22	0.000
Drainage	0.8263	0.1002	8.25	0.000

S = 1.427    R-Sq = 88.3%    R-Sq(adj) = 87.0%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	138.46	138.46	68.02	0.000
Residual Error	9	18.32	2.04		
Total	10	156.78			

Unusual Observations

Obs	Drainage	500-Year	Fit	StDev Fit	Residual	St Resid
9	1.10	2.545	3.254	0.144	-0.709	-2.01R

R denotes an observation with a large standardized residual

**Table F-23: 2001 Peak Discharge Data for Streams on the North Slope**

<b>Stream</b>	<b>Discharge</b>	<b>Return Period</b>
Colville River [1]	300,000	4
Kalubik Creek [1]	1,700	2.5
Kuparuk River [2]	42,700	1.75
Nunavak Creek [2]	84	6
Ugnuravik River [1]	800	2
Upper East Creek [3]	920	4

Notes:

1. Data obtained by personal communication with Caryn Rea (Phillips Alaska Inc., 2001).
2. Data Provided by the U.S. Geological Survey, Water Resources Division, Fairbanks, Alaska.  
These data were not finalized as of 05/Dec/2001, but are the best estimate available at this time.  
The final discharge numbers could be slightly larger.
3. Data obtained by URS, during spring discharge measurements on East Creek for PAI.

**APPENDIX G**

**EXPECTED PROBABILITY**

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G-1	Exceedance Frequency in Percent



## **Appendix G**

### **Expected Probability**

#### **G.1 What is Expected Probability?**

The base curve of a flood frequency analysis is the average discharge associated with a given exceedance probability.<sup>1</sup> In other words, the base curve presents the average discharge that will be exceeded X or more times per 100 events. However, once a structure is built, the discharge that the structure can safely accommodate is fixed. We are not interested in the average discharge the structure can safely accommodate. Instead, we need to know the average number of times the design discharge will be exceeded per 100 events. Unfortunately, the average number of times the discharge is likely to be exceeded per 100 events is usually not the same as the exceedance probability associated with the base curve. The average exceedance probability is referred to as the expected probability. The following example will help clarify the difference between the base curve and the expected probability curve, and demonstrate the need to use the expected probability curve in the design of water resources structures.

Based on the base curve (0.50) in Figure G-1, a discharge of 1,140 cfs will be exceeded an average of 5 times per 100 events. If we build a structure based on a design discharge of 1,140 cfs, what is the average number of times the design discharge is likely to be exceeded per 100 events? Your first answer might be that the design event will be exceeded an average of 5 times per 100 events. But is that correct?

The average number of times the design discharge will be exceeded per 100 events is computed from the confidence limits on the base curve. For example, at a design discharge of 1,140 cfs there is a 5 percent chance that the design discharge will be exceeded 23 or more times per 100 events (Figure G-1). There is a 10 percent chance that the design discharge will be exceeded 17 or more times per 100 events, and a 25 percent chance that the design discharge will be exceeded 10 or more times per 100 events. Similarly, there is a 50, 75, 90, and 95 percent chance that the design discharge will be exceeded 5, 2.4, 1.0, 0.6, or more times per 100 events, respectively.

---

<sup>1</sup> Exceedance Probability is the number of times a discharge will be equaled or exceeded per 100 events.

The average of the number of times the design discharge will be exceeded is the average exceedance probability (or expected probability). As shown in Table G-1, the design discharge will be exceeded an average of 8.4 times per 100 events, not 5 times per 100 events as one might have expected.

If the acceptable risk for which the structure was designed is 5 times per 100 events, the structure was under designed. In order for the average number of exceedances to be 5 times per 100 events, the design discharge would have to be greater than 1,140 cfs. Use of the mathematically derived expected probability curve will provide an estimate of the discharge for which the average number of exceedances per 100 events is 5. Based on Figure G1, and the expected probability curve, the discharge with an average number of exceedances of 5 per 100 events is 1,260 cfs. This can be confirmed by following the procedure that is described in the paragraph above, using a discharge of 1,260 cfs. The results of conducting such an analysis are presented in Table G-2. Finally, it should be noted that as the number of years of record increases, the confidence limits on the base curve get tighter, and the expected probability curve approaches the base curve.

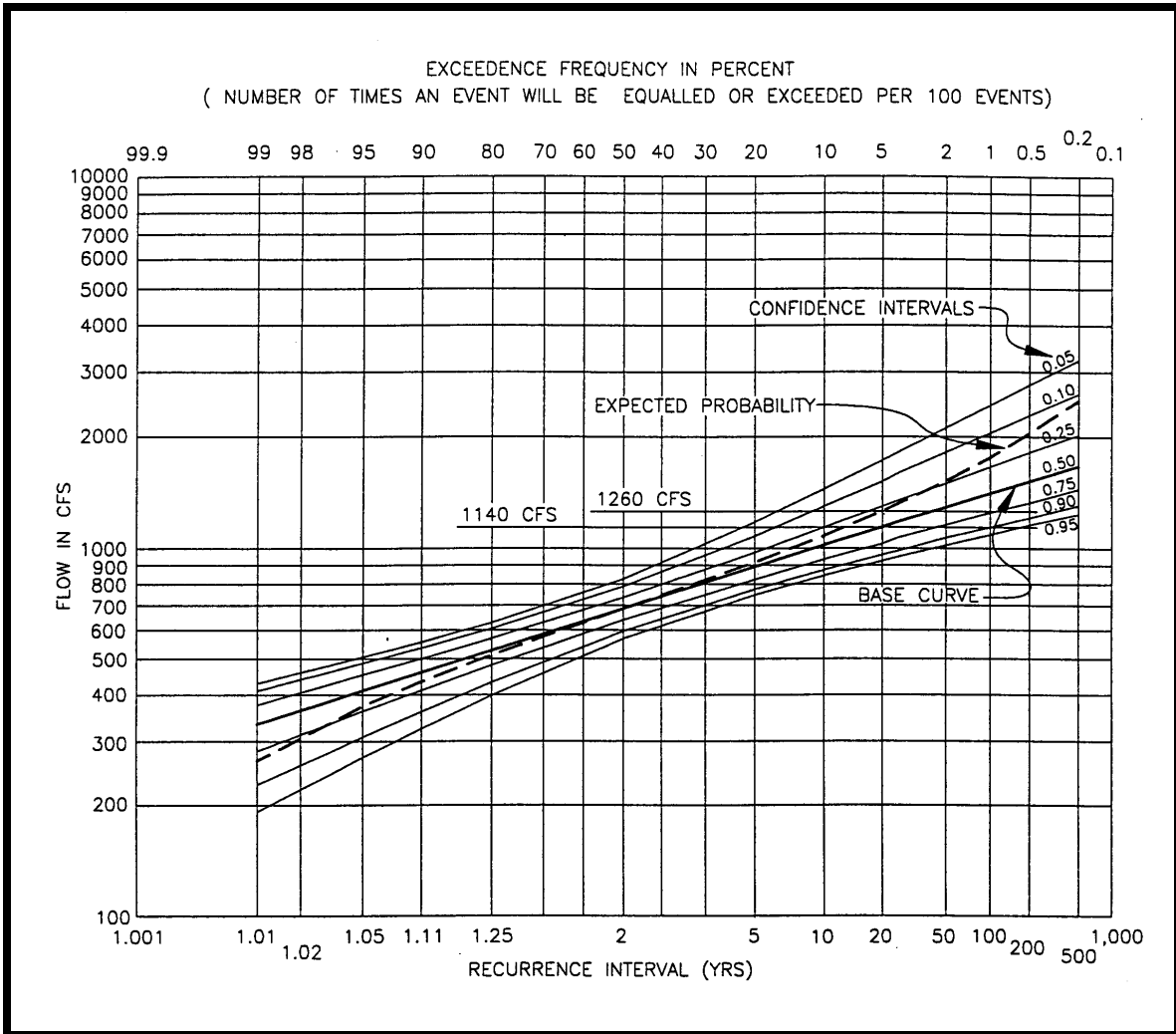
**TABLE G-1:** Exceedance Per 100 Events Based on the  
Confidence Intervals Shown on Figure G-1  
Design Flow = 1,140 cfs

Confidence Interval	Exceedance Per 100 Events
0.05	23.0
0.10	17.0
0.25	10.0
0.50	5.0
0.75	2.4
0.90	1.0
0.95	0.6
Average = 0.50	Average = 8.4

**TABLE G-2:** Exceedance Per 100 Events Based on the  
Confidence Intervals Shown on Figure G-1  
Design Flow = 1,260 cfs

Confidence Interval	Exceedance Per 100 Events
0.05	15.9
0.10	10.4
0.25	5.6
0.50	2.3
0.75	0.7
0.90	0.3
0.95	0.1
Average = 0.50	Average = 5.0

**Figure G-1: Exceedance Frequency in Percent**



## **APPENDIX H**

### **TIMING FOR LARGE FLOODS**

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H-4	Snowmelt Flood-Frequency on the Kugaruk River
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H-3	Nunavak Creek Hydrographs, and Snowmelt and Rainfall Flood-Frequency Relationships

## **Appendix H**

### **Timing Of Large Floods**

#### **H.1 Introduction**

On rivers originating in the Brooks Range, the foothills of the Brooks Range or the coastal plain of the North Slope, the annual flood-peak discharge usually results from snowmelt (i.e. the 2- to 5- year floods). However, on at least one of the rivers originating in the Brooks Range (the Sagavanirktok River), the two largest floods of record have occurred as a result of rainfall. In general, the designers of the oil field facilities on the North Slope have assumed that the 50- to 200-year flood peak discharges also result from rainfall events. Thus, it has often been assumed that during a 50- to 200-year flood event there will be no ice load on the structures crossing the rivers. During the recent design of the Alpine Facility it was determined that the 50- to 200-year floods were most likely snowmelt events. Thus, the purpose of this assessment is to estimate the likelihood that 50- to 200-year floods<sup>1</sup> on Fish Creek, Judy Creek, and the Ublutuoch River will result from snowmelt.

#### **H.2 Methodology**

The rivers in the project area, specifically Fish Creek, Judy Creek, and the Ublutuoch River, have drainage areas of 1,827, 666, and 248 square miles, respectively. The drainage areas of these rivers lie predominantly on the coastal plain. Only a small fraction of Judy Creek, less than 10 percent, lies in the foothills.

There are only three rivers that drain the foothills of the Brooks Range and/or the coastal plain of the North Slope with a continuous open-water discharge record, which is required for an analysis of flood peak timing. They are the Kuparuk River, Putuligayuk River and Nunavak Creek. The Kuparuk River, with a drainage area of 3,130 square miles, has 30 years of record. The Putuligayuk River, with a drainage area of 176 square miles, has 15 years of record, and Nunavak Creek, with a drainage area of 2.76 square miles, has 29 years of record. For each river

---

<sup>1</sup> Oil facility pads, roads and pipelines are usually designed for a flood with an average return period between 50 and 200 years. The return period used is selected based on the acceptable level of risk over the life of the project.

and each year of record, the largest discharge associated with snowmelt and the largest discharge associated with rainfall were identified. A summary of the annual snowmelt and rainfall peak discharges for each river is presented in Tables H-1, H-2 and H-3.

A single-station flood-frequency analysis was then performed on each of the 6 data sets to determine the magnitude of the flood-peak discharge associated with specific return periods (i.e. the T-year flood), on a particular river and for a particular type of event (i.e. snowmelt or rainfall). The analyses were based on the methods developed by the Interagency Advisory Committee On Water Data (1982), and performed using the U.S. Army Corps of Engineer's Flood Frequency Program HEC-FFA (USACE, 1992). The station skew was used in the computations, and the discharge associated with the expected probability computed. A brief explanation of expected probability is presented in Appendix G.

The flood-peak discharges for the Kuparuk River, Putuligayuk River, and Nunavak Creek were plotted against expected probability (i.e. expected return period). These plots were then overlaid on a hydrograph of all the seasonal discharge data available for each river. The result is presented in Figures H-1, H-2 and H-3, respectively.

### **H.3 Results and Discussion**

Based on the flood-frequency curves presented in Figures H-1, H-2 and H-3, the following can be stated. For a given return period, the annual-peak discharge associated with snowmelt events is greater than the annual-peak discharge associated with rainfall events. Similarly, for a given magnitude of annual-peak discharge, it is more likely that the flood-peak will occur as the result of snowmelt than it is that the flood-peak will occur as the result of rainfall.

The rivers used in this analysis are typical of rivers draining the foothills of the Brooks Range and the coastal plain of the North Slope. Both size and location of a drainage basin is likely to control whether the large return period floods are more likely to be produced by snowmelt or rainfall. Basins like the Sagavanirktok River, that primarily drain the Brooks Range, may be more likely to have large return period floods produced by rainfall. Very large basins, like the Colville River, may be more likely to have large return period floods produced by snowmelt.



Based on this assessment, it appears that small to large river basins draining primarily the foothills and coastal plain are more likely to have large return period floods generated by snowmelt.

The geographical locations of the rivers used in this analysis fall both east and west of the project area. The sizes of the drainage basins used in the analysis bound the size of the drainage basins being considered in the project area. Therefore, although the available data is limited, it seems likely that discharges on the order of the 50- to 200-year flood on Fish Creek, Judy Creek, and the Ublutuoch River are more likely to result from snowmelt than from rainfall.

#### **H.4 References**

Interagency Advisory Committee on Water Data. *Guidelines for Determining Flood Flow Frequency*. U.S. Geological Survey, Office of Water Data Coordination, Washington D.C. Bulletin 17B.

**Table H-1: Annual Snowmelt and Rainfall Peak Discharges on the Kuparuk River**

Snowmelt Events		Rainfall Events	
Date	Discharge (cfs)	Date	Discharge (cfs)
6/5/1971	77000	8/9/1971	944
6/11/1972	44300	9/4/1972	6040
6/8/1973	78000	6/26/1973	8880
6/10/1974	22000	8/22/1974	3250
6/13/1975	20000	9/4/1975	1610
6/15/1976	51200	9/15/1976	325
6/6/1977	60000	6/27/1977	10700
6/7/1978	100000	7/11/1978	888
6/1/1979	22600	8/6/1979	6250
6/11/1980	36900	8/11/1980	6150
6/10/1981	25900	7/11/1981	5800
6/8/1982	93200	9/14/1982	500
6/3/1983	62800	9/17/1983	3260
6/11/1984	53900	8/25/1984	9400
6/1/1985	30000	9/12/1985	3680
6/8/1986	38000	8/4/1986	2670
6/4/1987	15000	8/31/1987	9860
6/12/1988	31600	9/9/1988	1980
6/5/1989	70000	8/22/1989	9990
5/20/1990	70000	9/10/1990	4540
6/5/1991	37100	6/16/1991	10500
6/2/1992	26000	8/29/1992	24000
6/3/1993	48000	9/7/1993	5080
6/8/1994	34300	8/28/1994	11300
5/31/1995	20000	7/23/1995	8380
5/28/1996	54000	9/6/1996	7660
6/7/1997	57600	9/4/1997	14200
5/29/1998	44900	9/2/1998	2350
6/4/1999	19900	7/20/1999	17600
6/13/2000	78000	7/7/2000	7130

Notes:  
1. Data obtained from the USGS Water Resources Data Report--Alaska, 1970-2000.

**Table H-2: Annual Snowmelt and Rainfall Peak Discharges on the Putuligayuk River**

Snowmelt Events		Rainfall Events	
Date	Discharge(cfs)	Date	Discharge (cfs)
6/8/1970	1300	8/1/1970	14
6/6/1971	4320	8/14/1971	2
6/13/1972	4000	9/3/1972	103
6/9/1973	4000	7/24/1973	30
6/10/1974	2000	9/3/1974	1.9
6/13/1975	1600	9/1/1975	10
6/18/1976	2670	9/12/1976	2.9
6/10/1977	1750	9/31/1977	20
6/11/1978	4230	9/26/1978	5
5/31/1979	1100	9/7/1979	74
xxxxx	xxxxx	xxxxx	xxxxx
xxxxx	xxxxx	xxxxx	xxxxx
6/14/1982	2220	8/8/1982	19
6/5/1983	2800	8/6/1983	1
6/10/1984	1500	8/28/1984	139
6/3/1985	2310	8/25/1985	0.85
6/17/1986	4490	08/24/196	25

Notes:  
1. Data obtained from the USGS Water Resources Data Report--Alaska, 1970-1986.

**Table H-3: Annual Snowmelt and Rainfall Peak Discharges on Nunavak Creek**

Snowmelt Events		Rainfall Events	
Date	Discharge (cfs)	Date	Discharge (cfs)
6/16/1972	17	8/29/1972	0.84
6/15/1973	42	8/22/1973	7.5
6/23/1974	61	7/30/1974	4.2
6/22/1975	20	7/10/1975	2.2
6/21/1976	15	8/22/1976	0.1
6/13/1977	18	8/19/1977	0.62
6/12/1978	16	9/26/1978	10
6/10/1979	16	7/12/1979	6
6/11/1980	80	7/12/1980	0.46
6/12/1981	70	7/17/1981	21
6/16/1982	25	7/7/1982	0.59
6/19/1983	10	7/13/1983	0.08
6/13/1984	46	8/19/1984	3.4
6/4/1985	18	7/4/1985	14
6/22/1986	29	9/21/1986	24
6/20/1987	100	7/22/1987	8.1
6/20/1988	78	8/18/1988	9.4
6/6/1989	86	7/25/1989	15
5/27/1990	22	7/21/1990	2.2
6/17/1991	24	7/20/1991	0.79
6/10/1992	14	8/13/1992	0.13
6/13/1993	37	9/19/1993	50
6/14/1994	110	8/23/1994	21
6/11/1995	85	7/19/1995	4.8
5/31/1996	28	7/16/1996	1.6
6/15/1997	20	9/16/1997	8.1
6/2/1998	25	9/26/1998	0.76
6/14/1999	87	7/1/1999	8.9
6/16/2000	52	8/11/2000	14

Notes:  
1. Data obtained from the USGS Water Resources Data Report--Alaska, 1971-2000.

**Table H-4: Snowmelt Flood-Frequency on the Kuparuk River**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
*   VERSION: 3.1         *
* RUN DATE AND TIME:     *
*   07 NOV 01   14:04:48 *
*                         *
*****
*****
*           *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
*   609 SECOND STREET *
*   DAVIS, CALIFORNIA 95616 *
*   (916) 756-1104 *
*           *
*****

```

INPUT FILE NAME: KUPASM.TXT  
 OUTPUT FILE NAME: KUPASM.OUT  
 DSS FILE NAME: KUPASM.DSS

-----DSS---ZOPEN: Existing File Opened, File: KUPASM.DSS  
 Unit: 71; DSS Version: 6-JB

\*\*TITLE RECORD(S)\*\*  
 TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM. RUN BY DEREK HELMERICKS  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW SET TO COMPUTED  
 TT VALUES. STATION SKEW WEIGHTED AT 100%

\*\*JOB RECORD(S)\*\*

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0

	A	B	CLIMIT	NDSSCV	IEXT
J2	.00	.00	.05	0	0

\*\*FREQUENCY ARRAY\*\*  
 FR 13 .200 .500 1.000 2.000 4.000 5.000 10.000 20.000 50.000  
 FR80.000 90.000 95.000 99.000

\*\*STATION IDENTIFICATION\*\*  
 ID KAPARUK RIVER, SPRING EVENTS, DA=3130 SQ MI 1971-2000

\*\*GENERALIZED SKEW\*\*  
 ISTN GGMSE SKEW  
 GS KUPA .182 -.19

\*\*HP PLOT \*\*  
 HP PLOT FILE IHPCV KLIMIT IPER BAREA  
 HP KUPA.PCL 0 0 03130 SQ MI

SELECTED CURVES ON HP PLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

\*\*SYSTEMATIC EVENTS\*\*  
 30 EVENTS TO BE ANALYZED

\*\*END OF INPUT DATA\*\*  
 ED +++++  
 +++++

**Table H-4: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- KAPARUK RIVER, SPRING EVENTS, DA=3130 SQ MI

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1971	77000.	1	1978	100000.	3.23
0	0	1972	44300.	2	1982	93200.	6.45
0	0	1973	78000.	3	1973	78000.	9.68
0	0	1974	22000.	4	2000	78000.	12.90
0	0	1975	20000.	5	1971	77000.	16.13
0	0	1976	51200.	6	1989	70000.	19.35
0	0	1977	60000.	7	1990	70000.	22.58
0	0	1978	100000.	8	1983	62800.	25.81
0	0	1979	22600.	9	1977	60000.	29.03
0	0	1980	36900.	10	1997	57600.	32.26
0	0	1981	25900.	11	1996	54000.	35.48
0	0	1982	93200.	12	1984	53900.	38.71
0	0	1983	62800.	13	1976	51200.	41.94
0	0	1984	53900.	14	1993	48000.	45.16
0	0	1985	30000.	15	1998	44900.	48.39
0	0	1986	38000.	16	1972	44300.	51.61
0	0	1987	15000.	17	1986	38000.	54.84
0	0	1988	31600.	18	1991	37100.	58.06
0	0	1989	70000.	19	1980	36900.	61.29
0	0	1990	70000.	20	1994	34300.	64.52
0	0	1991	37100.	21	1988	31600.	67.74
0	0	1992	26000.	22	1985	30000.	70.97
0	0	1993	48000.	23	1992	26000.	74.19
0	0	1994	34300.	24	1981	25900.	77.42
0	0	1995	20000.	25	1979	22600.	80.65
0	0	1996	54000.	26	1974	22000.	83.87
0	0	1997	57600.	27	1975	20000.	87.10
0	0	1998	44900.	28	1995	20000.	90.32
0	0	1999	19900.	29	1999	19900.	93.55
0	0	2000	78000.	30	1987	15000.	96.77

-OUTLIER TESTS -

-----  
 LOW OUTLIER TEST  
 -----

BASED ON 30 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.563

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 10997.6

-----  
 HIGH OUTLIER TEST  
 -----

BASED ON 30 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.563

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 159236.

-SKEW WEIGHTING -

-----  
 BASED ON 30 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .182  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = .182  
 -----

**Table H-4: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- KAPARUK RIVER, SPRING EVENTS, DA=3130 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
166000.	189000.	.20	253000.	125000.
146000.	161000.	.50	215000.	112000.
131000.	141000.	1.00	187000.	102000.
116000.	123000.	2.00	161000.	91800.
101000.	105000.	4.00	136000.	81400.
95800.	99500.	5.00	128000.	77900.
80700.	82700.	10.00	104000.	67000.
65200.	66000.	20.00	80500.	55100.
42600.	42600.	50.00	50000.	36300.
27100.	26700.	80.00	32100.	22000.
21200.	20600.	90.00	25700.	16500.
17300.	16500.	95.00	21400.	12800.
11600.	10400.	99.00	15100.	7790.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	4.6217	HISTORIC EVENTS	0	
STANDARD DEV	.2264	HIGH OUTLIERS	0	
COMPUTED SKEW	-.1924	LOW OUTLIERS	0	
REGIONAL SKEW	-.1924	ZERO OR MISSING	0	
ADOPTED SKEW	-.1924	SYSTEMATIC EVENTS	30	

HP PLOT WRITTEN TO THE FILE: KUPA.PCL

```

+++++
+ END OF RUN          +
+ NORMAL STOP IN FFA  +
+++++

```

**Table H-5: Rainfall Flood-Frequency on the Kuparuk River**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
* 07 NOV 01 14:12:19    *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*                         *
*****

```

INPUT FILE NAME: KUPARF.TXT  
 OUTPUT FILE NAME: KUPARF.OUT  
 DSS FILE NAME: KUPARF.DSS

-----DSS---ZOPEN: New File Opened, File: KUPARF.DSS  
 Unit: 71; DSS Version: 6-JB

\*\*TITLE RECORD(S)\*\*  
 TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM. RUN BY DEREK HELMERICKS  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW SET TO NULL  
 TT VALUES. STATION SKEW WEIGHTED AT 100%

\*\*JOB RECORD(S)\*\*

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0
	A	B	CLIMIT	NDSSCV	IEXT				
J2	.00	.00	.05	0	0				

\*\*FREQUENCY ARRAY\*\*  
 FR 13 .200 .500 1.000 2.000 4.000 5.000 10.000 20.000 50.000  
 FR80.000 90.000 95.000 99.000

\*\*STATION IDENTIFICATION\*\*  
 ID KAPARUK RIVER, FALL EVENTS, DA=3130 SQ MI 1971-2000

\*\*GENERALIZED SKEW\*\*  
 ISTN GGMSE SKEW  
 GS KUPA .243 -.80

\*\*HP PLOT \*\*  
 HP PLOT FILE IHPCV KLIMIT IPER BAREA  
 HP KUPA.PCL 0 0 03130 SQ MI

SELECTED CURVES ON HPLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

\*\*SYSTEMATIC EVENTS\*\*  
 30 EVENTS TO BE ANALYZED

\*\*END OF INPUT DATA\*\*  
 ED ++++++  
 ++++++



**Table H-5: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- KAPARUK RIVER, FALL EVENTS, DA=3130 SQ MI

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1971	994.	1	1992	24000.	3.23
0	0	1972	6040.	2	1999	17600.	6.45
0	0	1973	8880.	3	1997	14200.	9.68
0	0	1974	3250.	4	1994	11300.	12.90
0	0	1975	1610.	5	1977	10700.	16.13
0	0	1976	325.	6	1991	10500.	19.35
0	0	1977	10700.	7	1989	9990.	22.58
0	0	1978	888.	8	1987	9860.	25.81
0	0	1979	6250.	9	1984	9400.	29.03
0	0	1980	6150.	10	1973	8880.	32.26
0	0	1981	5800.	11	1995	8380.	35.48
0	0	1982	500.	12	1996	7660.	38.71
0	0	1983	3260.	13	2000	7130.	41.94
0	0	1984	9400.	14	1979	6250.	45.16
0	0	1985	3680.	15	1980	6150.	48.39
0	0	1986	2670.	16	1972	6040.	51.61
0	0	1987	9860.	17	1981	5800.	54.84
0	0	1988	1980.	18	1993	5080.	58.06
0	0	1989	9990.	19	1990	4540.	61.29
0	0	1990	4540.	20	1985	3680.	64.52
0	0	1991	10500.	21	1983	3260.	67.74
0	0	1992	24000.	22	1974	3250.	70.97
0	0	1993	5080.	23	1986	2670.	74.19
0	0	1994	11300.	24	1998	2350.	77.42
0	0	1995	8380.	25	1988	1980.	80.65
0	0	1996	7660.	26	1975	1610.	83.87
0	0	1997	14200.	27	1971	994.	87.10
0	0	1998	2350.	28	1978	888.	90.32
0	0	1999	17600.	29	1982	500.	93.55
0	0	2000	7130.	30	1976	325.	96.77

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 30 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.563

1 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 326.5

STATISTICS AND FREQUENCY CURVE ADJUSTED FOR 1 LOW OUTLIER(S)

HIGH OUTLIER TEST

BASED ON 29 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.549

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 53310.

-SKEW WEIGHTING -

BASED ON 30 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .243  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = .243

**Table H-5: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- KAPARUK RIVER, FALL EVENTS, DA=3130 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS	
			.05 FLOW IN CFS	.95 FLOW IN CFS
30800.	33700.	.20	56100.	20200.
27700.	30000.	.50	49300.	18500.
25100.	26900.	1.00	43700.	17000.
22300.	23600.	2.00	37700.	15300.
19200.	20100.	4.00	31500.	13400.
18100.	19000.	5.00	29400.	12700.
14700.	15100.	10.00	22800.	10600.
11000.	11200.	20.00	16100.	8080.
5520.	5520.	50.00	7440.	4140.
2320.	2250.	80.00	3130.	1600.
1370.	1280.	90.00	1940.	853.
848.	756.	95.00	1270.	476.
312.	235.	99.00	542.	137.

SYNTHETIC STATISTICS

LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS	
MEAN	3.6868	HISTORIC EVENTS	0
STANDARD DEV	.4123	HIGH OUTLIERS	0
COMPUTED SKEW	-.8043	LOW OUTLIERS	1
REGIONAL SKEW	-.8043	ZERO OR MISSING	0
ADOPTED SKEW	-.8043	SYSTEMATIC EVENTS	30

HP PLOT WRITTEN TO THE FILE: KUPA.PCL

```

+++++
+ END OF RUN +
+ NORMAL STOP IN FFA +
+++++

```

**Table H-6: Snowmelt Flood-Frequency on the Putuligayuk River**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
*   07 NOV 01   14:12:57 *
*                         *
*****

*****
*           *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
*   609 SECOND STREET *
*   DAVIS, CALIFORNIA 95616 *
*   (916) 756-1104 *
*           *
*****

INPUT FILE NAME: PUTUSM.TXT
OUTPUT FILE NAME: PUTUSM.OUT
DSS FILE NAME: PUTUSM.DSS

-----DSS---ZOPEN: New File Opened, File: PUTUSM.DSS
Unit: 71; DSS Version: 6-JB

**TITLE RECORD(S)**
TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM. RUN BY DEREK HELMERICKS
TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW SET TO NULL
TT VALUES. STATION SKEW WEIGHTED AT 100%

**JOB RECORD(S)**
      IPPC  ISKFX  IPROUT  IFMT  IWYR  IUNIT  ISMRY  IPNCH  IREG
J1     0     2     32     0     0     0     0     0     0

      A     B  CLIMIT  NDSSCV  IEXT
J2   .00   .00   .05     0     0

**FREQUENCY ARRAY**
FR   13   .200   .500   1.000   2.000   4.000   5.000  10.000  20.000  50.000
FR80.000 90.000 95.000 99.000

**STATION IDENTIFICATION**
ID   PUTULIGAYUK RIVER, SPRING EVENT DA=176 SQ MI           1970-1986

**GENERALIZED SKEW**
      ISTN  GGMSE  SKEW
GS   PUTU   .328  -.09

**HP PLOT **
      HP PLOT FILE           IHPCV  KLIMIT  IPER  BAREA
HP   PUTU.PCL                0       0       0   176 SQ MI

      SELECTED CURVES ON HPLOT
      EXPECTED PROBABILITY CURVE
      CONFIDENCE LIMITS

**SYSTEMATIC EVENTS**
      15 EVENTS TO BE ANALYZED

**END OF INPUT DATA**
ED *****
*****

```

**Table H-6: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- PUTULIGAYUK RIVER, SPRING EVENT DA=176 SQ MI

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1970	1300.	1	1986	4490.	6.25
0	0	1971	4320.	2	1971	4320.	12.50
0	0	1972	4000.	3	1978	4320.	18.75
0	0	1972	4000.	4	1972	4000.	25.00
0	0	1974	2000.	5	1972	4000.	31.25
0	0	1975	1600.	6	1983	2800.	37.50
0	0	1976	2670.	7	1976	2670.	43.75
0	0	1977	1750.	8	1985	2310.	50.00
0	0	1978	4320.	9	1982	2220.	56.25
0	0	1979	1100.	10	1974	2000.	62.50
0	0	1982	2220.	11	1977	1750.	68.75
0	0	1983	2800.	12	1975	1600.	75.00
0	0	1984	1500.	13	1984	1500.	81.25
0	0	1985	2310.	14	1970	1300.	87.50
0	0	1986	4490.	15	1979	1100.	93.75

-OUTLIER TESTS -

-----  
LOW OUTLIER TEST  
-----

BASED ON 15 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.247

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 838.1

-----  
HIGH OUTLIER TEST  
-----

BASED ON 15 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.247

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 7060.

-SKEW WEIGHTING -

-----  
BASED ON 15 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .328

DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = .328  
-----

**Table H-6: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- PUTULIGAYUK RIVER, SPRING EVENT DA=176 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY FLOW IN CFS	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS	
			.05 FLOW IN CFS	.95 FLOW IN CFS
9040.	12100.	.20	17100.	6320.
7920.	9840.	.50	14200.	5690.
7100.	8400.	1.00	12200.	5210.
6290.	7140.	2.00	10300.	4720.
5500.	6010.	4.00	8520.	4220.
5240.	5670.	5.00	7980.	4050.
4450.	4670.	10.00	6380.	3520.
3630.	3730.	20.00	4880.	2940.
2450.	2450.	50.00	3030.	1980.
1640.	1590.	80.00	2020.	1220.
1320.	1250.	90.00	1670.	916.
1100.	1010.	95.00	1430.	717.
782.	643.	99.00	1080.	444.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	3.3860	HISTORIC EVENTS	0	
STANDARD DEV	.2059	HIGH OUTLIERS	0	
COMPUTED SKEW	-.0906	LOW OUTLIERS	0	
REGIONAL SKEW	-.0906	ZERO OR MISSING	0	
ADOPTED SKEW	-.0906	SYSTEMATIC EVENTS	15	

HP PLOT WRITTEN TO THE FILE: PUTU.PCL

```

+++++
+ END OF RUN +
+ NORMAL STOP IN FFA +
+++++

```

**Table H-7: Rainfall Flood-Frequency on the Putuligayuk River**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
*   07 NOV 01   14:13:24 *
*                         *
*****
*****
*                         *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET           *
* DAVIS, CALIFORNIA 95616    *
* (916) 756-1104           *
*                         *
*****

```

INPUT FILE NAME: PUTURF.TXT  
 OUTPUT FILE NAME: PUTURF.OUT  
 DSS FILE NAME: PUTURF.DSS

-----DSS---ZOPEN: New File Opened, File: PUTURF.DSS  
 Unit: 71; DSS Version: 6-JB

**\*\*TITLE RECORD(S)\*\***

TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM. RUN BY DEREK HELMERICKS  
 TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW SET TO NULL  
 TT VALUES. STATION SKEW WEIGHTED AT 100%

**\*\*JOB RECORD(S)\*\***

	IPPC	ISKFX	IPROUT	IFMT	IWYR	IUNIT	ISMRY	IPNCH	IREG
J1	0	2	32	0	0	0	0	0	0

	A	B	CLIMIT	NDSSCV	IEXT
J2	.00	.00	.05	0	0

**\*\*FREQUENCY ARRAY\*\***

FR 13 .200 .500 1.000 2.000 4.000 5.000 10.000 20.000 50.000  
 FR80.000 90.000 95.000 99.000

**\*\*STATION IDENTIFICATION\*\***

ID PUTULIGAYUK RIVER,FALL EVENTS DA=176 SQ MI 1970-1986

**\*\*GENERALIZED SKEW\*\***

ISTN GGMSE SKEW  
 GS PUTU .322 -.03

**\*\*HP PLOT \*\***

HP PLOT FILE IHPCV KLIMIT IPER BAREA  
 HP PUTU.PCL 0 0 0 176 SQ MI

SELECTED CURVES ON HPLOT  
 EXPECTED PROBABILITY CURVE  
 CONFIDENCE LIMITS

**\*\*SYSTEMATIC EVENTS\*\***

15 EVENTS TO BE ANALYZED

**\*\*END OF INPUT DATA\*\***

ED +++++  
 +++++

**Table H-7: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- PUTULIGAYUK RIVER,FALL EVENTS DA=176 SQ MI

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1970	14.	1	1984	139.	6.25
0	0	1971	2.	2	1972	103.	12.50
0	0	1972	103.	3	1979	74.	18.75
0	0	1972	30.	4	1972	30.	25.00
0	0	1974	2.	5	1986	25.	31.25
0	0	1975	10.	6	1977	20.	37.50
0	0	1976	3.	7	1982	19.	43.75
0	0	1977	20.	8	1970	14.	50.00
0	0	1978	5.	9	1975	10.	56.25
0	0	1979	74.	10	1978	5.	62.50
0	0	1982	19.	11	1976	3.	68.75
0	0	1983	1.	12	1971	2.	75.00
0	0	1984	139.	13	1974	2.	81.25
0	0	1985	1.	14	1983	1.	87.50
0	0	1986	25.	15	1985	1.	93.75

-OUTLIER TESTS -

-----  
LOW OUTLIER TEST  
-----

BASED ON 15 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.247

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF .3

-----  
HIGH OUTLIER TEST  
-----

BASED ON 15 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.247

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 427.

-SKEW WEIGHTING -

-----  
BASED ON 15 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .322  
DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = .322  
-----

**Table H-7: (Continued)**

FINAL RESULTS

-FREQUENCY CURVE- PUTULIGAYUK RIVER,FALL EVENTS DA=176 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 FLOW IN CFS	.95
1140.	3320.	.20	11100.	318.
700.	1560.	.50	5560.	216.
468.	868.	1.00	3160.	157.
302.	477.	2.00	1700.	110.
185.	255.	4.00	862.	73.
156.	206.	5.00	680.	64.
86.	103.	10.00	304.	38.
42.	46.	20.00	118.	20.
11.	11.	50.00	22.	5.
3.	2.	80.00	5.	1.
1.	1.	90.00	3.	0.
1.	1.	95.00	2.	0.
0.	0.	99.00	1.	0.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	1.0198	HISTORIC EVENTS	0	
STANDARD DEV	.7168	HIGH OUTLIERS	0	
COMPUTED SKEW	-.0314	LOW OUTLIERS	0	
REGIONAL SKEW	-.0314	ZERO OR MISSING	0	
ADOPTED SKEW	-.0314	SYSTEMATIC EVENTS	15	

HP PLOT WRITTEN TO THE FILE: PUTU.PCL

++++  
+ END OF RUN +  
+ NORMAL STOP IN FFA +  
++++



**Table H-8: Snowmelt Flood-Frequency on Nunavak Creek**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
*   03 DEC 01   08:02:08 *
*                         *
*****

*****
*           *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*           *
*****

INPUT FILE NAME: NUNASM.TXT
OUTPUT FILE NAME: NUNASM.OUT
DSS FILE NAME: NUNASM.DSS

-----DSS---ZOPEN: Existing File Opened, File: NUNASM.DSS
Unit: 71; DSS Version: 6-JB

**TITLE RECORD(S)**
TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM. RUN BY DEREK HELMERICKS
TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW SET TO STATION
TT VALUES. STATION SKEW EFFECTIVLY WEIGHTED AT 100%

**JOB RECORD(S)**
      IPPC   ISKFX  IPROUT   IFMT   IWYR   IUNIT   ISMRY   IPNCH   IREG
J1      0      2      32      0      0      0      0      0      0

      A      B  CLIMIT  NDSSCV   IEXT
J2   .00   .00   .05      0      0

**FREQUENCY ARRAY**
FR   13   .200   .500   1.000   2.000   4.000   5.000  10.000  20.000  50.000
FR80.000 90.000 95.000 99.000

**STATION IDENTIFICATION**
ID   NUNAVAK CREEK, SNOWMELT EVENT DA=2.76 SQ MI           1972-2000

**GENERALIZED SKEW**
      ISTN   GGMSE   SKEW
GS   NUNA   .191   .22

**HP PLOT **
      HP PLOT FILE           IHPCV  KLIMIT   IPER   BAREA
HP   NUNA.PCL                0      0      0   2.76 SQ MI

      SELECTED CURVES ON HP PLOT
      EXPECTED PROBABILITY CURVE
      CONFIDENCE LIMITS

**SYSTEMATIC EVENTS**
      29 EVENTS TO BE ANALYZED

**END OF INPUT DATA**
ED +++++
+++++

```

**Table H-8: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- NUNAVAK CREEK, SNOWMELT EVENT DA=2.76 SQ M

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1972	17.	1	1994	110.	3.33
0	0	1973	42.	2	1987	100.	6.67
0	0	1974	61.	3	1999	87.	10.00
0	0	1975	20.	4	1989	86.	13.33
0	0	1976	15.	5	1995	85.	16.67
0	0	1977	18.	6	1980	80.	20.00
0	0	1978	16.	7	1988	78.	23.33
0	0	1979	16.	8	1981	70.	26.67
0	0	1980	80.	9	1974	61.	30.00
0	0	1981	70.	10	2000	52.	33.33
0	0	1982	25.	11	1984	46.	36.67
0	0	1983	10.	12	1973	42.	40.00
0	0	1984	46.	13	1993	37.	43.33
0	0	1985	18.	14	1986	29.	46.67
0	0	1986	29.	15	1996	28.	50.00
0	0	1987	100.	16	1982	25.	53.33
0	0	1988	78.	17	1998	25.	56.67
0	0	1989	86.	18	1991	24.	60.00
0	0	1990	22.	19	1990	22.	63.33
0	0	1991	24.	20	1975	20.	66.67
0	0	1992	14.	21	1997	20.	70.00
0	0	1993	37.	22	1985	18.	73.33
0	0	1994	110.	23	1977	18.	76.67
0	0	1995	85.	24	1972	17.	80.00
0	0	1996	28.	25	1978	16.	83.33
0	0	1997	20.	26	1979	16.	86.67
0	0	1998	25.	27	1976	15.	90.00
0	0	1999	87.	28	1992	14.	93.33
0	0	2000	52.	29	1983	10.	96.67

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 29 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.549

0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF 5.5

HIGH OUTLIER TEST

BASED ON 29 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.549

0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 208.

**Table H-8: (Continued)**

-SKEW WEIGHTING -

-----  
 BASED ON 29 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .191  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = .191  
 -----

FINAL RESULTS

-FREQUENCY CURVE- NUNAVAK CREEK, SNOWMELT EVENT DA=2.76 SQ M

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS	
			.05 FLOW IN CFS	.95 FLOW IN CFS
320.	421.	.20	631.	204.
247.	302.	.50	454.	164.
200.	233.	1.00	348.	137.
159.	178.	2.00	262.	113.
124.	134.	4.00	193.	91.
114.	122.	5.00	174.	85.
86.	89.	10.00	122.	66.
61.	62.	20.00	82.	48.
33.	33.	50.00	41.	26.
18.	18.	80.00	23.	14.
14.	13.	90.00	18.	10.
11.	10.	95.00	15.	7.
7.	7.	99.00	10.	4.
SYSTEMATIC STATISTICS				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	1.5290	HISTORIC EVENTS	0	
STANDARD DEV	.3097	HIGH OUTLIERS	0	
COMPUTED SKEW	.2247	LOW OUTLIERS	0	
REGIONAL SKEW	.2247	ZERO OR MISSING	0	
ADOPTED SKEW	.2247	SYSTEMATIC EVENTS	29	

HP PLOT WRITTEN TO THE FILE: NUNA.PCL

++++  
 + END OF RUN +  
 + NORMAL STOP IN FFA +  
 ++++

**Table H-9: Rainfall Flood-Frequency on Nunavak Creek**

```

*****
*           FFA           *
* FLOOD FREQUENCY ANALYSIS *
* PROGRAM DATE: FEB 1995  *
* VERSION: 3.1           *
* RUN DATE AND TIME:     *
*   03 DEC 01   08:02:36 *
*                         *
*****

*****
*           *
* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
*   609 SECOND STREET *
*   DAVIS, CALIFORNIA 95616 *
*   (916) 756-1104 *
*           *
*****

INPUT FILE NAME: NUNARF.TXT
OUTPUT FILE NAME: NUNARF.OUT
DSS FILE NAME: NUNARF.DSS

-----DSS---ZOPEN: Existing File Opened, File: NUNARF.DSS
Unit: 71; DSS Version: 6-JB

**TITLE RECORD(S)**
TT FLOOD FLOW FREQUENCY ANALYSIS PROGRAM. RUN BY DEREK HELMERICKS
TT GENERALIZED SKEW AND STANDARD ERROR OF GENERALIZED SKEW SET TO STATION
TT VALUES. STATION SKEW WEIGHTED AT 100%

**JOB RECORD(S)**
      IPPC  ISKFX  IPROUT   IFMT   IWYR   IUNIT   ISMRY   IPNCH   IREG
J1     0     2     32      0     0     0     0     0     0
      A      B  CLIMIT  NDSSCV   IEXT
J2   .00   .00   .05     0     0

**FREQUENCY ARRAY**
FR   13   .200   .500   1.000   2.000   4.000   5.000  10.000  20.000  50.000
FR80.000 90.000 95.000 99.000

**STATION IDENTIFICATION**
ID   NUNAVAK CREEK, RAINFALL EVENT DA=2.76 SQ MI           1972-2000

**GENERALIZED SKEW**
      ISTN  GGMSE  SKEW
GS   NUNA   .228  -.62

**HP PLOT **
      HP PLOT FILE           IHPCV  KLIMIT   IPER   BAREA
HP   NUNA.PCL                0      0       0  2.76 SQ MI

      SELECTED CURVES ON HP PLOT
      EXPECTED PROBABILITY CURVE
      CONFIDENCE LIMITS

**SYSTEMATIC EVENTS**
      29 EVENTS TO BE ANALYZED

**END OF INPUT DATA**
ED *****
*****

```

**Table H-9: (Continued)**

----- FINAL RESULTS -----

-PLOTTING POSITIONS- NUNAVAK CREEK, RAINFALL EVENT DA=2.76 SQ MI

EVENTS ANALYZED			ORDERED EVENTS				
MON	DAY	YEAR	FLOW CFS	RANK	WATER YEAR	FLOW CFS	WEIBULL PLOT POS
0	0	1972	1.	1	1993	50.	3.33
0	0	1973	8.	2	1986	24.	6.67
0	0	1974	4.	3	1981	21.	10.00
0	0	1975	2.	4	1994	21.	13.33
0	0	1976	0.	5	1989	15.	16.67
0	0	1977	1.	6	1985	14.	20.00
0	0	1978	10.	7	2000	14.	23.33
0	0	1979	6.	8	1978	10.	26.67
0	0	1980	0.	9	1988	9.	30.00
0	0	1981	21.	10	1999	9.	33.33
0	0	1982	1.	11	1987	8.	36.67
0	0	1983	0.	12	1997	8.	40.00
0	0	1984	3.	13	1973	8.	43.33
0	0	1985	14.	14	1979	6.	46.67
0	0	1986	24.	15	1995	5.	50.00
0	0	1987	8.	16	1974	4.	53.33
0	0	1988	9.	17	1984	3.	56.67
0	0	1989	15.	18	1990	2.	60.00
0	0	1990	2.	19	1975	2.	63.33
0	0	1991	1.	20	1996	2.	66.67
0	0	1992	0.	21	1972	1.	70.00
0	0	1993	50.	22	1991	1.	73.33
0	0	1994	21.	23	1998	1.	76.67
0	0	1995	5.	24	1977	1.	80.00
0	0	1996	2.	25	1982	1.	83.33
0	0	1997	8.	26	1980	0.	86.67
0	0	1998	1.	27	1992	0.	90.00
0	0	1999	9.	28	1976	0.	93.33
0	0	2000	14.	29	1983	0.	96.67

-OUTLIER TESTS -

LOW OUTLIER TEST

BASED ON 29 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.549  
 0 LOW OUTLIER(S) IDENTIFIED BELOW TEST VALUE OF .0

HIGH OUTLIER TEST

BASED ON 29 EVENTS, 10 PERCENT OUTLIER TEST VALUE K(N) = 2.549  
 0 HIGH OUTLIER(S) IDENTIFIED ABOVE TEST VALUE OF 255.

**Table H-9: (Continued)**

-SKEW WEIGHTING -

-----  
 BASED ON 29 EVENTS, MEAN-SQUARE ERROR OF STATION SKEW = .228  
 DEFAULT OR INPUT MEAN-SQUARE ERROR OF GENERALIZED SKEW = .228  
 -----

FINAL RESULTS

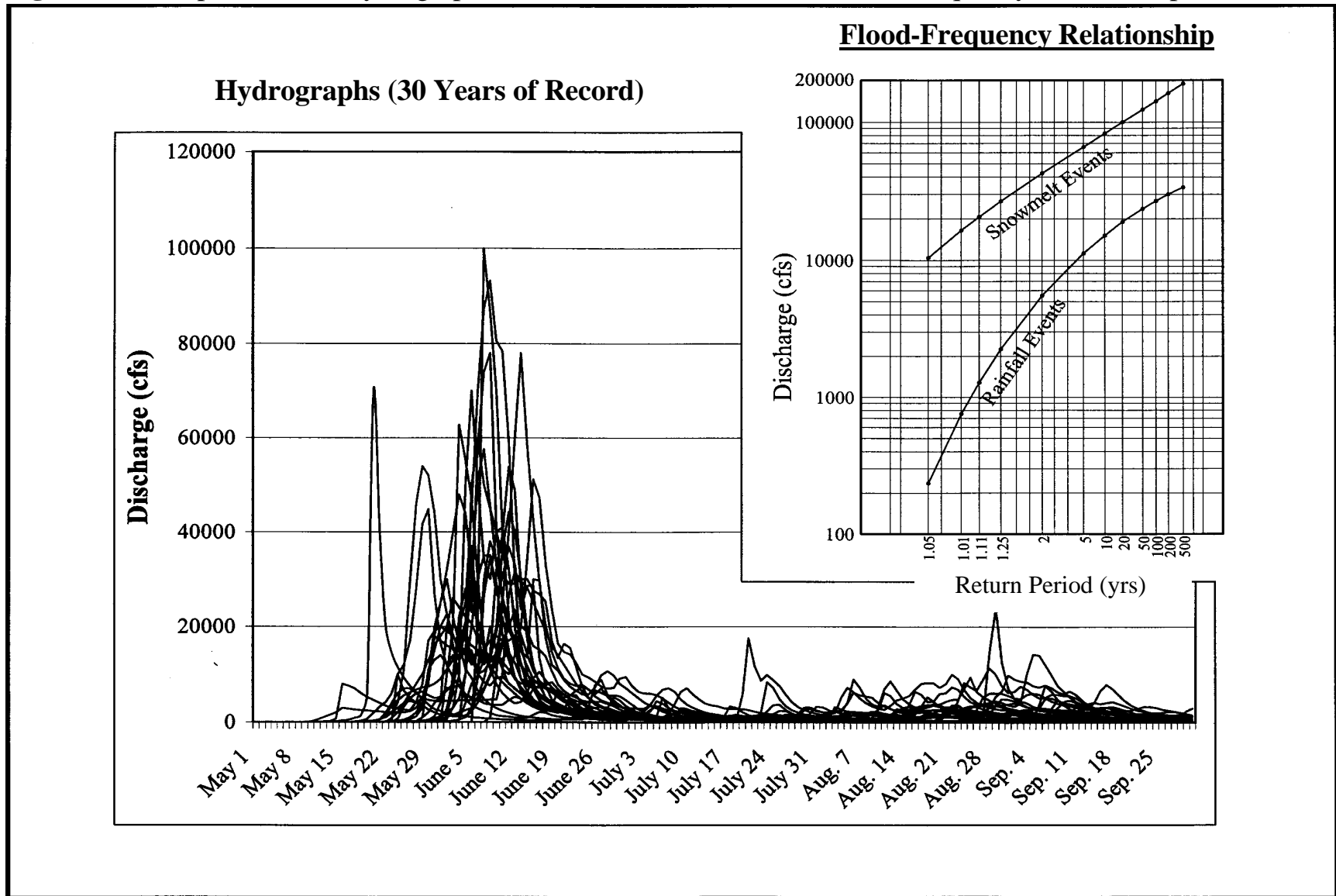
-FREQUENCY CURVE- NUNAVAK CREEK, RAINFALL EVENT DA=2.76 SQ MI

COMPUTED CURVE FLOW IN CFS	EXPECTED PROBABILITY	PERCENT CHANCE EXCEEDANCE	CONFIDENCE LIMITS .05 .95 FLOW IN CFS	
128.	163.	.20	426.	56.
99.	121.	.50	310.	45.
79.	93.	1.00	233.	37.
60.	69.	2.00	166.	29.
43.	48.	4.00	111.	22.
38.	42.	5.00	96.	20.
25.	26.	10.00	56.	13.
14.	14.	20.00	28.	8.
4.	4.	50.00	6.	2.
1.	1.	80.00	1.	0.
0.	0.	90.00	1.	0.
0.	0.	95.00	0.	0.
0.	0.	99.00	0.	0.
----- SYSTEMATIC STATISTICS -----				
LOG TRANSFORM: FLOW, CFS		NUMBER OF EVENTS		
MEAN	.4916	HISTORIC EVENTS	0	
STANDARD DEV	.7512	HIGH OUTLIERS	0	
COMPUTED SKEW	-.6166	LOW OUTLIERS	0	
REGIONAL SKEW	-.6166	ZERO OR MISSING	0	
ADOPTED SKEW	-.6166	SYSTEMATIC EVENTS	29	

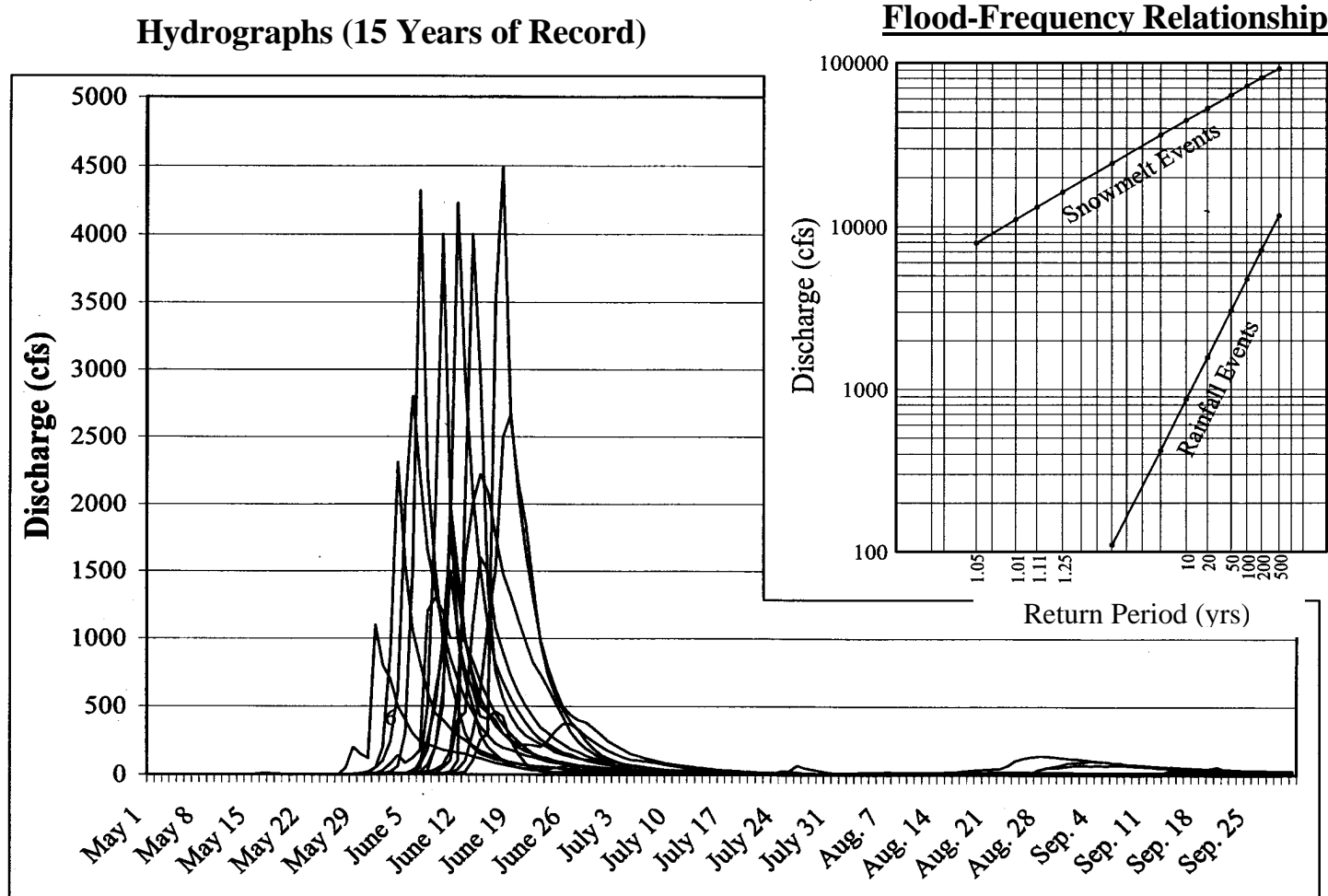
HP PLOT WRITTEN TO THE FILE: NUNA.PCL

++++  
 + END OF RUN +  
 + NORMAL STOP IN FFA +  
 ++++

**Figure H.1:** Kuparuk River Hydrographs, and Snowmelt and Rainfall Flood-Frequency Relationships

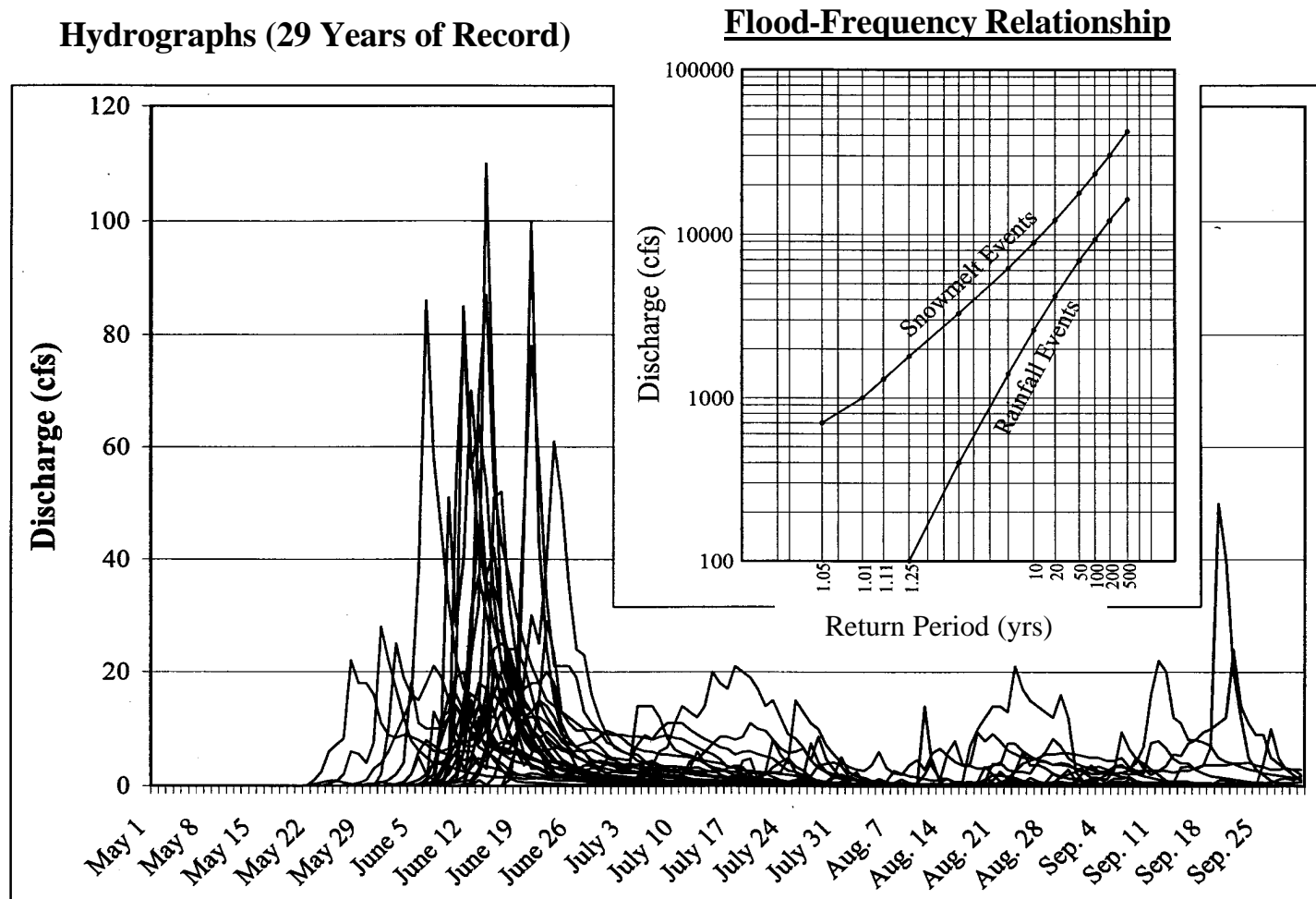


**Figure H.2:** Putuligayuk River Hydrographs, and Snowmelt and Rainfall Flood-Frequency Relationships





**Figure H.3:** Nunavak Creek Hydrographs, and Snowmelt and Rainfall Flood-Frequency Relationships



**APPENDIX I**

**RIVER BED GRADATION**

## LIST OF TABLES AND FIGURES

Table or Figure

Title

### **Fish Creek River Mile 25.1**

Table I-1.1 Grain-Size Classification on Fish Creek at River Mile 25.1

Figure I-1.1 Grain-Size Classification on Fish Creek at River Mile 25.1

### **Fish Creek River Mile 32.4**

Table I-2.1 Grain-Size Classification on Fish Creek at River Mile 32.4

Figure I-2.1 Grain-Size Classification on Fish Creek at River Mile 32.4

### **Judy Creek**

Table I-3.1 Grain-Size Classification on Judy Creek at River Mile 7

Figure I-3.1 Grain-Size Classification on Judy Creek at River Mile 7

### **Ublutuoch River**

Table I-4.1 Grain-Size Classification on Ublutuoch River at River Mile 13.7

Figure I-4.1 Grain-Size Classification on Ublutuoch River at River Mile 13.7

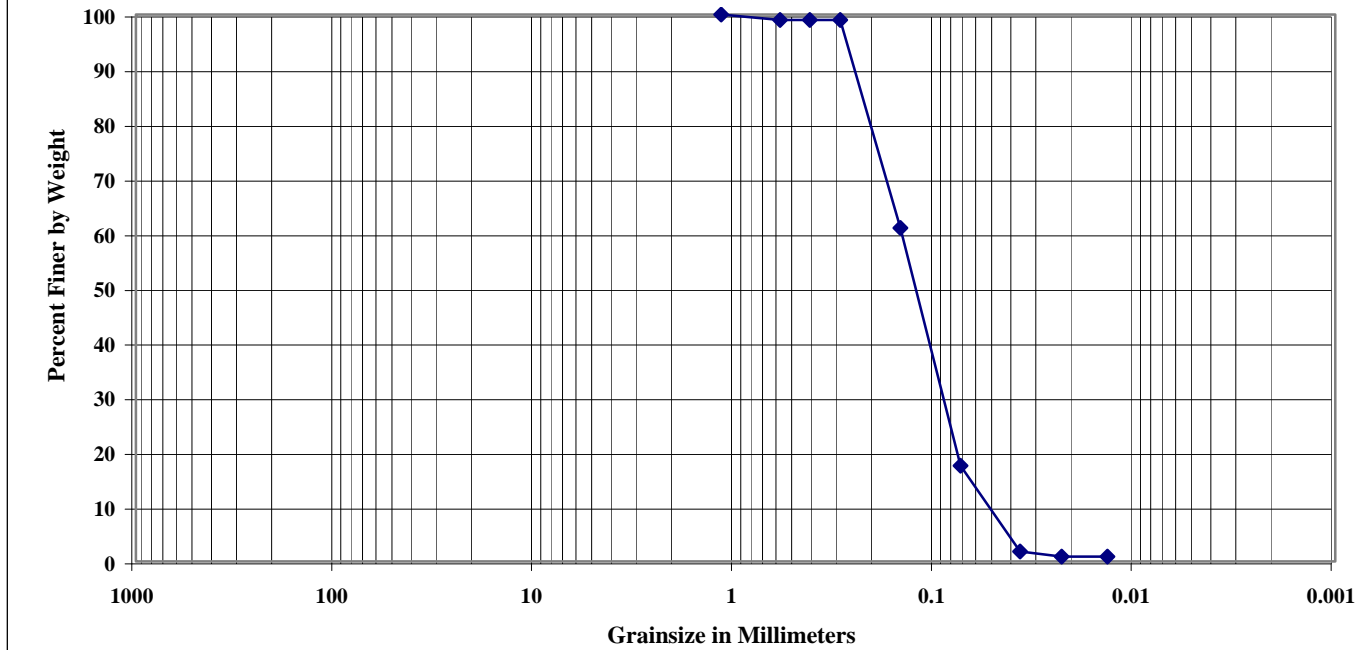
**RIVER BED GRADATION**

**ON FISH CREEK AT RIVER MILE 25.1**

**Table I-1.1**  
**Grain-size Classification**  
**on Fish Creek at River Mile 25.1**

Sieve (mm)	Percent Passing
75.00	
63.50	
37.50	
25.00	
19.00	
12.50	
9.50	
4.75	
2.00	
1.18	100
0.600	99
0.425	99
0.300	99
0.150	61
0.075	17.5
0.0377	1.8
0.0234	0.9
0.0138	0.9
Notes:	
1. mm = millimeter	
2. The grain-size classification was performed in accordance with ASTM D 422.	
3. The specific gravity of the material passing the 2.00 mm sieve was 2.66.	
4. The sample was dispersed with a Type A Stirring apparatus for a 1 minute period.	

**Figure I-1.1**  
**Grain-Size Classification on Fish Creek at River Mile 25.1**



**RIVER BED GRADATION**

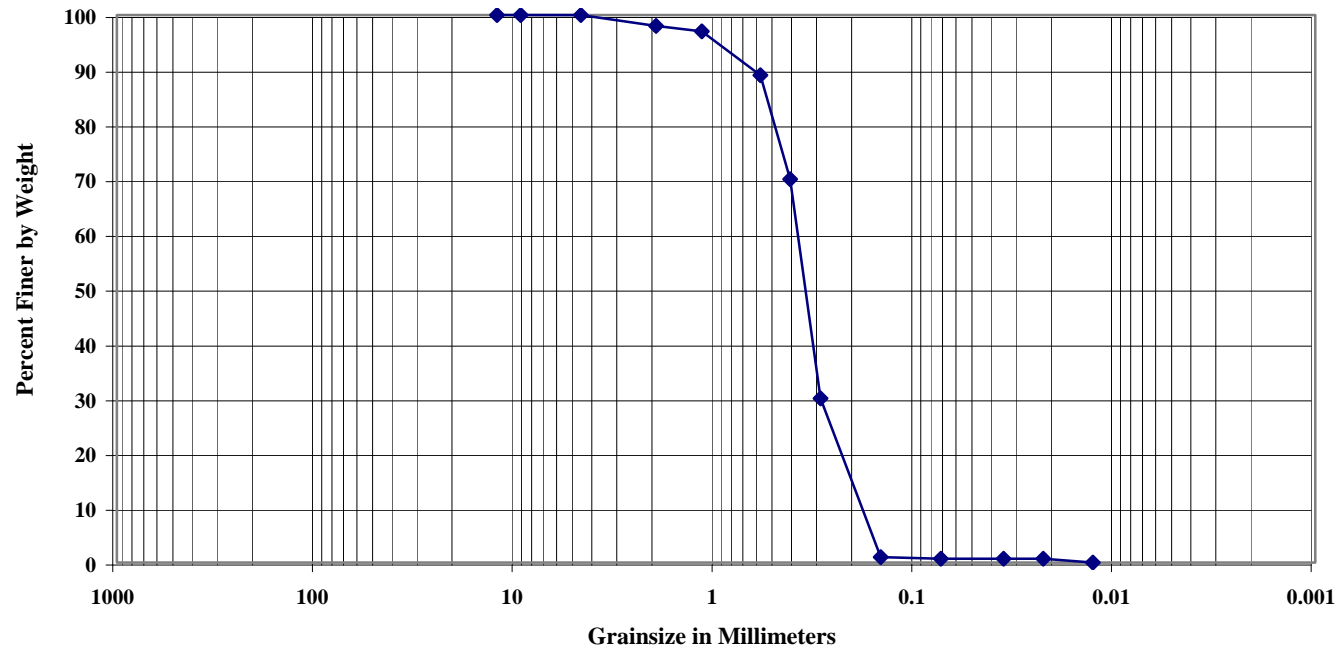
**ON FISH CREEK AT RIVER MILE 32.4**

**Table I-2.1**  
**Grain-size Classification**  
**on Fish Creek at River Mile 32.4**

Sieve (mm)	Percent Passing
75.00	
63.50	
37.50	
25.00	
19.00	
12.50	100
9.50	100
4.75	100
2.00	98
1.18	97
0.600	89
0.425	70
0.300	30
0.150	1
0.075	0.7
0.0364	0.7
0.0230	0.7
0.0130	0
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. mm = millimeter</li> <li>2. The grain-size classification was performed in accordance with ASTM D 422.</li> <li>3. The specific gravity of the material passing the 2.00 mm sieve was 2.66.</li> <li>4. The sample was dispersed with a Type A Stirring apparatus for a 1 minute period.</li> <li>5. Some organics and shells were observed in the sample.</li> </ol>	



**Figure I-2.1**  
**Grain-Size Classification on Fish Creek at River Mile 32.4**



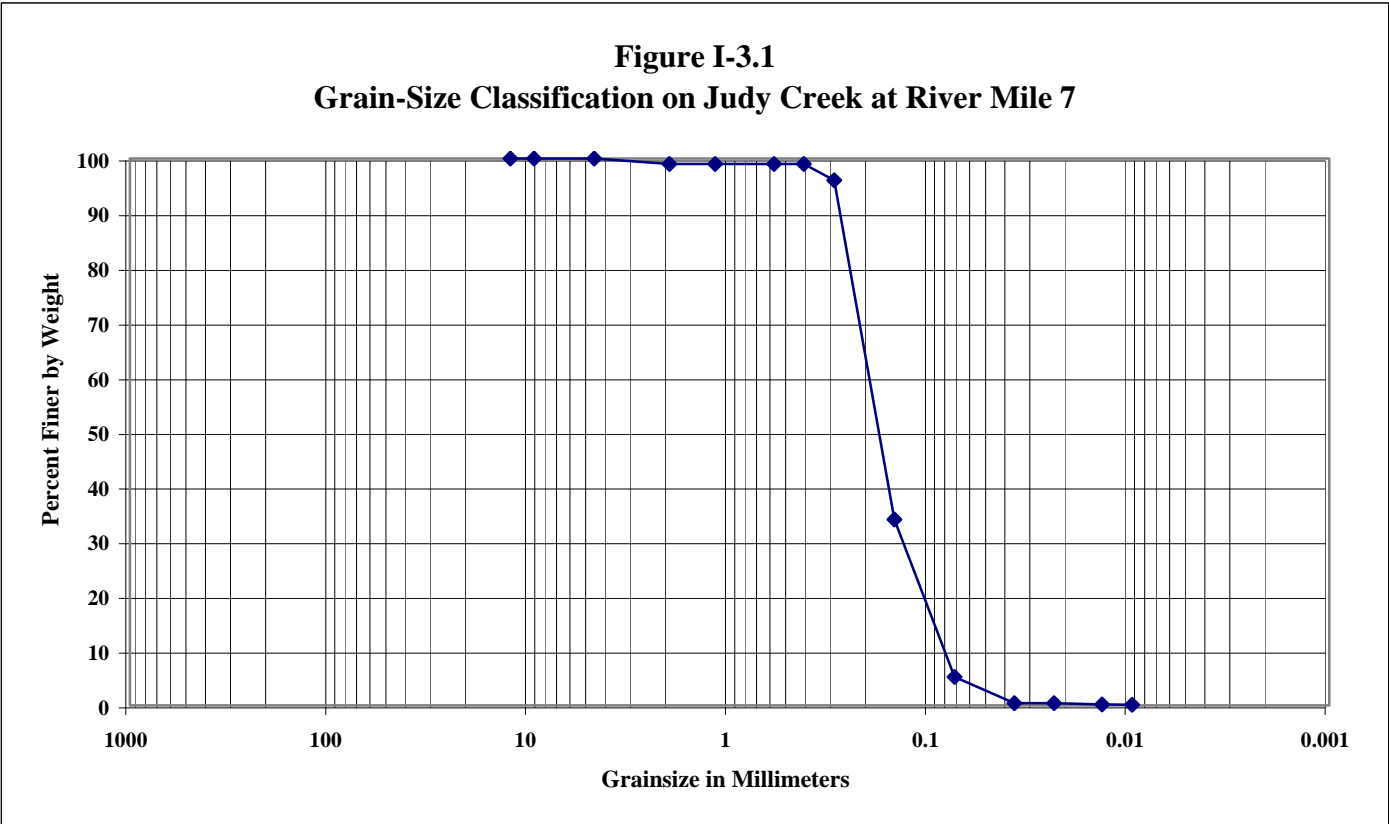
**RIVER BED GRADATION**

**ON JUDY CREEK AT RIVER MILE 7**

**Table I-3.1**  
**Grain-size Classification**  
**on Judy Creek at River Mile 7**

Sieve (mm)	Percent Passing
75.00	
63.50	
37.50	
25.00	
19.00	
12.50	100
9.50	100
4.75	100
2.00	99
1.18	99
0.600	99
0.425	99
0.300	96
0.150	34
0.075	5.2
0.0376	0.4
0.0238	0.4
0.0137	0.2
0.0097	0.1
Notes: 1. mm = millimeter 2. The grain-size classification was performed in accordance with ASTM D 422. 3. The specific gravity of the material passing the 2.00 mm sieve was 2.68. 4. The sample was dispersed with a Type A Stirring apparatus for a 1 minute period.	

**Figure I-3.1**  
**Grain-Size Classification on Judy Creek at River Mile 7**



**RIVER BED GRADATION**

**ON THE UBLUTUOCH RIVER AT RIVER MILE 13.7**

**Table I-4.1**  
**Grain-size Classification**  
**on Ublutuoch River at River Mile 13.7**

Sieve (mm)	Percent Passing
75.00	100
63.50	99
37.50	99
25.00	97
19.00	90
12.50	71
9.50	60
4.75	39
2.00	20
1.18	13
0.600	9
0.425	7
0.300	5
0.150	2
0.075	0.8
0.0363	0.6
0.0231	0.3
0.0133	0.2

Notes:

1. mm = millimeter
2. The grain-size classification was performed in accordance with ASTM D 422.
3. The specific gravity of the material passing the 2.00 mm sieve was 2.65.
4. The sample was dispersed with a Type A Stirring apparatus for a 1 minute period.
5. The course material was well rounded and composed of durable aggregate.

**Figure I-4.1**  
**Grain-Size Classification on Ublutuoch River at River Mile 13.7**

