SNOHOMISH COUNTY PUD
PUBLIC UTILITY DISTRICT NO. 1

Energizing Life in Our Communities

April 27, 2022

VIA ELECTRONIC FILING

Kimberly D. Bose, Secretary
Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

Re: Jackson Hydroelectric Project, FERC No. 2157
Water Quality Monitoring Plan – 2021 Annual Report
License Article 401 (b)

Dear Secretary Bose:

Enclosed is Public Utility District No. 1 of Snohomish County's Water Quality Monitoring Plan Annual Report for 2021 pursuant to License Article 401 (b) for the Jackson Hydroelectric Project. The draft report was provided to the Aquatic Resources Committee for a 30-day review and comment period; no comments were received requesting changes. Consultation documentation is included in the report's appendices.

If you have any questions on the Water Quality Monitoring Plan Annual Report for 2021, please do not hesitate to contact me.

Sincerely,

/s/ Keith Binkley

Keith Binkley
Manager, Natural Resources
(425) 783-1760
KMBinkley@snopud.com

Enclosed: Water Quality Monitoring Plan Annual Report for 2021

cc: Aquatic Resources Committee
Monika Kannadaguli, Ecology Northwest Regional Office Water Quality Program

Henry M. Jackson Hydroelectric Project
(FERC No. 2157)

License Article 401: Water Quality Monitoring Plan – 2021 Annual Report

SNOHOMISH COUNTY PUD
PUBLIC UTILITY DISTRICT NO. 1

Everett, WA

April 2022

Final - The document may be cited as:

Public Utility District No. 1 of Snohomish County (Snohomish PUD). 2022. Water Quality Monitoring Plan 2021 Annual Report, License Article 401, for the Henry M. Jackson Hydroelectric Project, FERC No. 2157. April 2022.

Table of Contents

List of Appendices

List of Figures

List of Tables

List of Acronyms and Abbreviations

7-DAD Max	seven-day average of the daily maximum
ARC	Aquatic Resource Committee
District	Public Utility District No. 1 of Snohomish County
Ecology	Washington Department of Ecology
FERC	Federal Energy Regulatory Commission
Project	Henry M. Jackson Hydroelectric Project, FERC No. 2157
RM	river mile
USGS	U.S. Geological Survey
WQMP	Water Quality Monitoring Plan

1. INTRODUCTION

Public Utility District No. 1 of Snohomish County (Snohomish PUD) received a license on September 2, 2011 (License), from the Federal Energy Regulatory Commission (FERC) for the Henry M. Jackson Hydroelectric Project (Project). The FERC approved the Water Quality Monitoring Plan (WQMP) on March 30, 2012, pursuant to License Article 401(a). Snohomish PUD is to file a report with the FERC by June 30 of each year detailing the monitoring efforts of the previous calendar year, pursuant to License Article 401(b).

This WQMP Annual Report covers activities conducted in calendar year 2021. Monthly measurements of reservoir water quality are presented in Appendix A. Appendices B, C, and D present the data from continuous monitoring of water temperature in the river and tributary systems. Appendix B shows graphical data, Appendix C shows tabular data, and Appendix D shows seven-day average of the daily maximum water temperature in tabular format. This WQMP Annual Report was provided to the Aquatic Resources Committee (ARC) [consisting of the City of Everett, City of Sultan, Snohomish County, Washington Department of Ecology (Ecology), Washington Department of Fish and Wildlife, Tulalip Tribes, U.S. Forest Service, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and American Whitewater] for a 30-day review and comment period on April 27, 2022; no comments were received. Consultation documentation is included in Appendix E.

The annual report fulfills monitoring and reporting requirements as stipulated in Ecology's 401 Water Quality Certification Order (Order No. 7918, October 18, 2010). As described in the 401 Certification Order (Section 9.0, Monitoring and Reporting Requirements), the report includes summaries of the water quality data, and includes sample dates, times, locations, and results. Compliance with state water quality standards is discussed, as well. The report will be submitted to the hydropower certification manager at Ecology's Water Quality Program Northwest Regional Office, and FERC.

The WQMP requires Snohomish PUD to collect water quality data in and around Spada Lake Reservoir, the Sultan River between river mile (RM) 15.8 and RM 0.2, and the Skykomish River at RM 14.1 and RM 13.2 (Table 1-1).

Table 1-1. Parameters to be monitored, locations, and sampling frequency.

Parameter	South Fork Sultan River	Spada Lake Reservoir	Sultan River									Skykomish River		Frequency
	Upriver from bridge	Near log boom	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2	
Water temperature	●	●	●	●	●	●	●	●	●	●	●	●	●	Year-round in stream reaches at all locations except RM 15.5, 14.3, and 11.3 which are monitored from April 1-October 31 only. Lake profile is monitored between May 1 and October 31.
Dissolved oxygen	●	●					●			●				May 1 to October 31. Monthly in stream reaches. Monthly for lake profile.
Turbidity	●	●					●			●				May 1 to October 31. Monthly in stream reaches. Monthly for lake profile.
pH	●	●					●			●				May 1 to October 31. Monthly in stream reaches. Monthly for lake profile.
Secchi transparency		●												May 1 to October 31. Monthly.
Flow discharge	●		●				●	●	●	●				Year-round. Daily.
Reservoir elevation		●												Year-round. Daily.

The following sections of this report are organized and structured as water flows, beginning in the upper portion of the Sultan watershed.

2. RESERVOIR MONITORING

2.1. Climatic Conditions

2.1.1. Rainfall Data

During 2021, a total of 180.6 inches of rain was recorded at the Culmback Dam Weather Station. The rainfall measured during 2021 was greater than the historical annual average of 162.4 inches. Monthly rainfall averaged 15.1 inches and ranged between a low of 0.1 inches in July and a high of 37.0 inches in November (Table 2-1). During 2021, the highest recorded daily rainfall (6.1 inches) occurred on February 23, 2021.

Table 2-1. Monthly rainfall, Culmback Dam Weather Station, 2021.

Month	Rainfall (inches)
January	21.3
February	32.2
March	11.4
April	7.1
May	7.0
June	5.2
July	0.1
August	2.6
September	13.6
October	19.5
November	37.0
December	23.6

2.1.2. Snow Survey Measurements

Beginning in 1986, Snohomish PUD has conducted annual surveys of the snowpack, typically during late March. Since inception, the annual mean snow and water content depth at Stickney Ridge (elevation 3,600 feet) are 100.2 and 42.3 inches, respectively. During the 2021 survey (March 24), there were 163.6 inches of snow at the Stickney Ridge station (Figure 2-1) which was 163 percent of historical mean. In terms of water content, the 68.7 inches recorded during the 2021 survey equated to 162 percent of the historic mean.

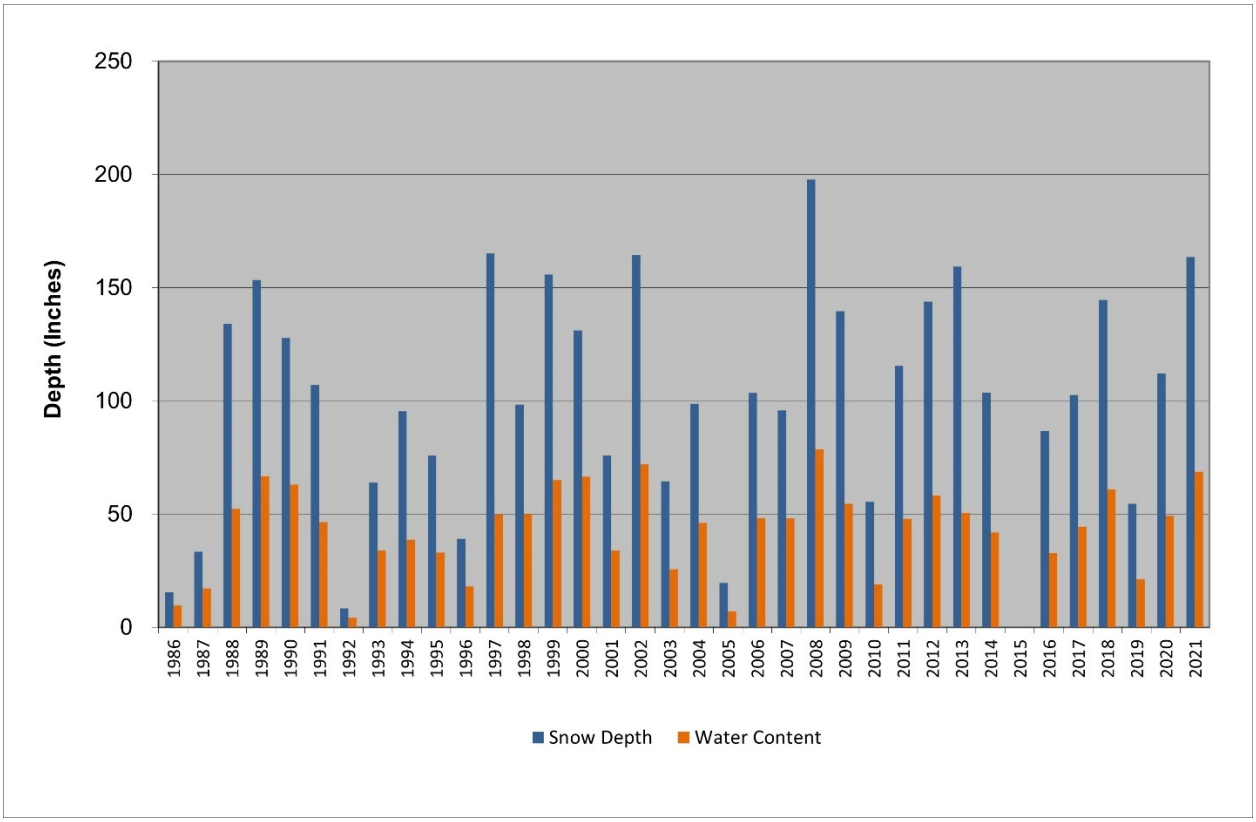


Figure 2-1. Snow survey data, Stickney Ridge, Sultan Watershed, 1986-2021.

2.1.3. Reservoir Inflow

Three tributaries feed into Spada Lake Reservoir: the South Fork Sultan River, Williamson Creek, and the mainstem Sultan River, including Elk Creek. Historically, the U.S. Geological Survey (USGS) has operated gages at several locations within the basin. Currently, the South Fork Sultan River is the only tributary that is actively gaged. At this location, the USGS operates Station No. 12137290, South Fork Sultan River near Sultan, WA, which provides real-time information for Project operations. Hydrologic modeling indicates that the South Fork Sultan River, on average, accounts for between 14 and 22 percent of total inflow into the reservoir, depending on seasonal conditions. The 2021 hydrograph for this station is presented in Figure 2-2. Instantaneous flow values ranged from 6.1 to 3,850 cfs. Mean daily flow during 2021 averaged 149 cfs and ranged between a low of 6.2 cfs and a high flow of 1,994 cfs. The average mean annual flow, based on the USGS Water Year, for this station is 135.5 cfs (Period of Record 1992-2021).

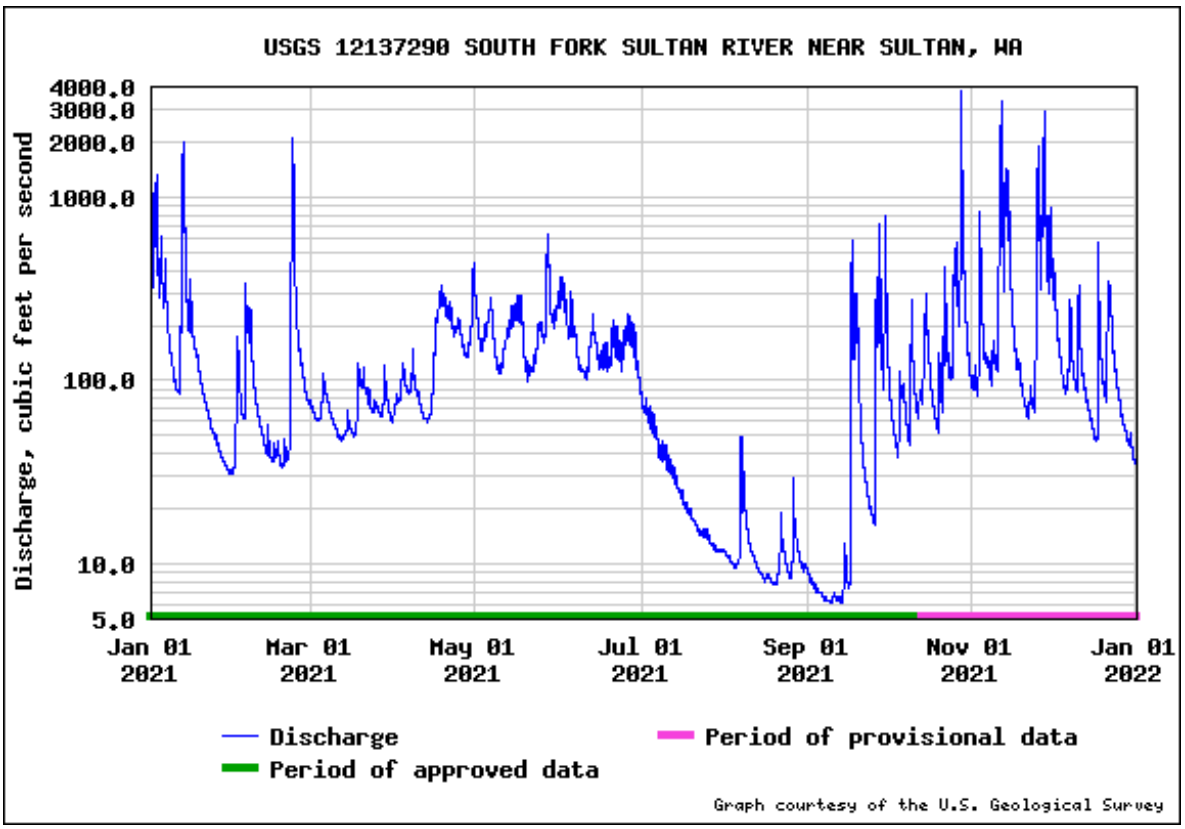


Figure 2-2. Hydrograph for the South Fork Sultan River, USGS Station No. 12137290, 2021 calendar year.

2.2. Reservoir Operations

2.2.1 Project Outflow

In the absence of reservoir spill, the vast majority of Project outflow occurs through the power tunnel, as indexed by daily plant generation. In 2021, the Project experienced two spill events. The first event occurred November 15 through November 17. The second event occurred on November 29 and had a 6-day duration with spill ceasing on December 5, 2021. Daily plant generation during 2021 is depicted in Figure 2-3. A total of 445,314 megawatt hours were produced during 2021 equating to 106.5 percent of the historic annual average of 418,189 megawatt hours.

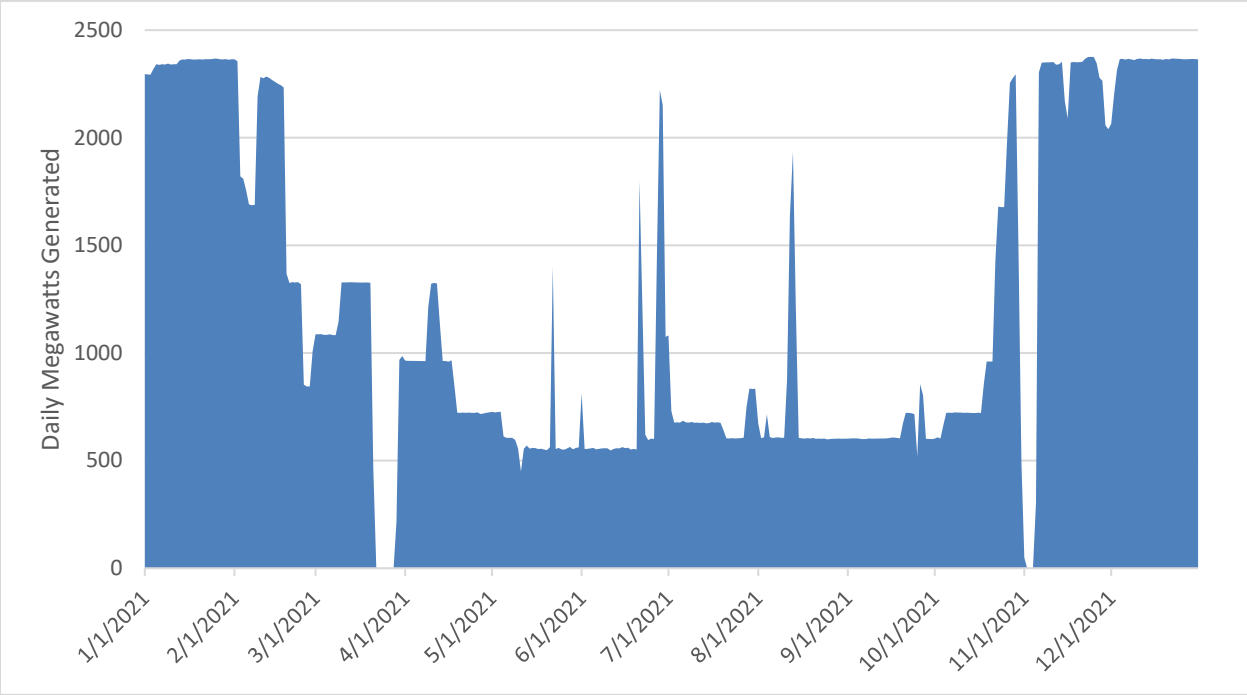


Figure 2-3. Daily plant generation, Jackson Hydroelectric Project, 2021.

2.2.2. Reservoir Elevation

Water surface elevation in Spada Lake Reservoir is partitioned into five states, which define how the Project is to be operated through the year. States 1 and 2 require full generation to withdraw 1,300 cfs for spill/flood control. State 3 is a discretionary zone, which allows Snohomish PUD to operate in a range defined by the maximum of states 1 and 2 or minimum defined by State 4. State 4 requires minimum generation to maintain the instream flows for fish and habitat protection and water supply for the City of Everett. State 5 lies below reservoir elevation 1,380 feet msl, during which the Project does not operate. During 2021, Spada Lake Reservoir was drafted and filled in accordance with the rule curves established for the Project (Figure 2-4).

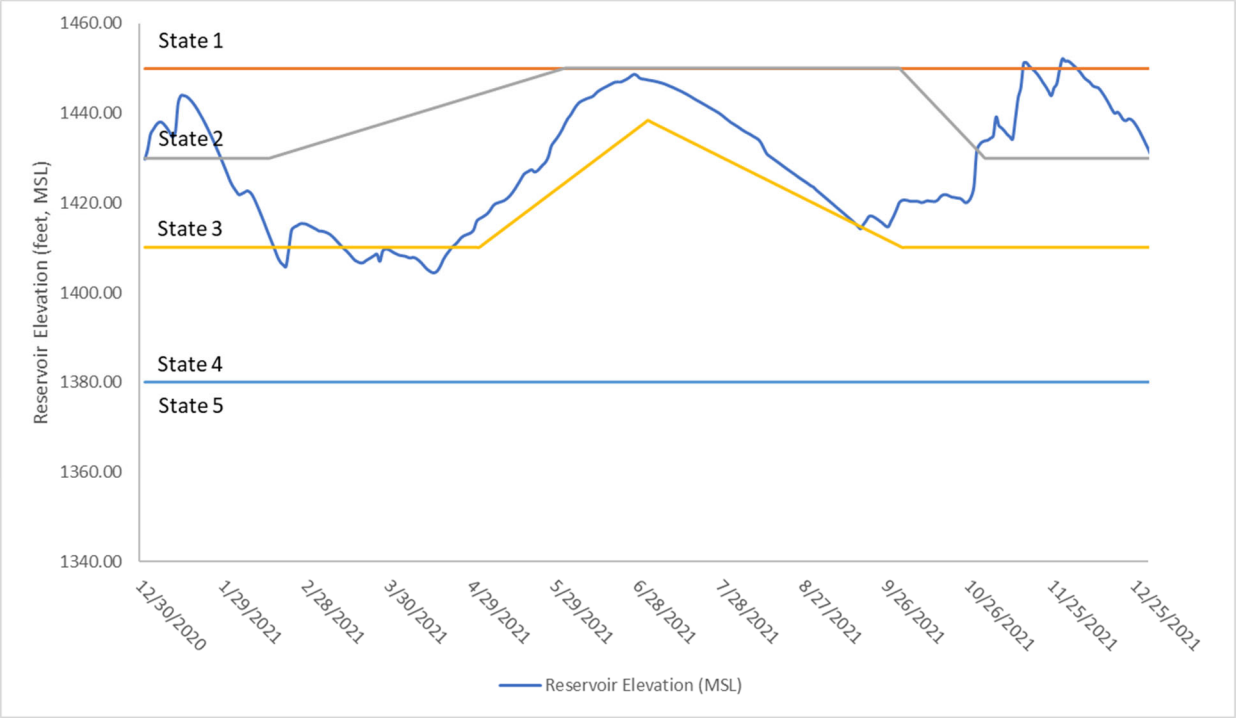


Figure 2-4. Daily water surface elevation, Spada Lake Reservoir, 2021.

2.3. Water Quality

Monthly sampling of water quality in Spada Lake Reservoir occurred on the following dates during 2021: May 17, June 15, July 14, August 25, September 28, and October 27. Sampling was conducted cooperatively with the City of Everett and included profile measurements of conventional parameters including temperature, pH, dissolved oxygen, and turbidity. Additional sampling included measurements of nutrients, phytoplankton, and zooplankton.

By summary, Spada Lake Reservoir was weakly stratified and thoroughly oxygenated during May. Zooplankton, in particular *Holopedium,* had reached their summer maximum density in July. The highest phytoplankton biovolume of the year was recorded in June. The warmest water temperature was documented in July and the thermocline was set between 20 and 26 feet in depth. The effects of the thermocline on dissolved oxygen were apparent as dissolved oxygen levels below saturation persisted near the bottom of the reservoir during late summer/early fall. During the course of the year, most biological activity took place in the epi- and metalimnion. Additional water quality information is provided below by parameter.

2.3.1. Temperature

Spada Lake Reservoir temperatures ranged from 4.4 to 21.7 °C depending on month and depth (Appendix A). Temperature stratification was first evident during the May sampling session. May had the coolest water temperatures while July had the warmest water temperatures. The thermocline was strongest in July; however, August also had a resistance to mixing. The strongest point in the thermocline dropped from 20 feet in July to 56 feet in September.

2.3.2. pH

The highest measured pH was 7.4 in June at a depth of 10 feet. The lowest pH of 6.5 was measured multiple times in the August, September, and October at depths ranging from 49 to 160 feet and was likely due to increased bacterial degradation of organic matter.

2.3.3. Dissolved Oxygen

Dissolved oxygen ranged from a low of 8.6 mg/L in August to a high of 11.8 mg/L in July. By saturation values, the maximum of 112 percent in July was likely due to increasing primary production, and the minimum of 72 percent of saturation at depth in late September was likely due to limited photosynthetic oxygen production and bacterial degradation of organic matter.

2.3.4. Turbidity

In each month sampled, the surface was less turbid than at depth. Turbidity values at the surface and at depth decreased from May to August and increased from September to October. Through most of the season, the cut-off points between higher and lower turbidities can be traced to the thermal structure of the reservoir.

2.3.5. Secchi Transparency

Secchi transparency ranged from a high of 22 feet in August to a low of 9 feet in May, June, September, and October (Table 2-2).

Table 2-2. Secchi transparency, Spada Lake Reservoir, 2021.

Date	Result (feet)
5/17/2021	9
6/15/2021	9
7/14/2021	20
8/25/2021	22
9/28/2021	9
10/27/2021	9

2.3.6. Nutrients

Total phosphorus concentrations were between 5 and 6.9 µg/L for most of the summer, both at the surface and at depth. An increase in total phosphorus was noted throughout the water column during October sampling. Total nitrogen varied from 98.4 to 191 µg/L during the summer with an increase noted in October. Nitrate showed more variation over time and depth, with values ranging between 1.5 and 91.6 µg/L from May through October. Silica concentrations were relatively stable throughout the water column, ranging from 1,231 and 1,556 µg/L.

2.3.7. Phytoplankton

The greatest total volume (μm^3/mL) of phytoplankton occurred in the June sample, of which *Bacillariophyta* was the predominant taxon by total biovolume. *Cyanophyta* were the predominant taxon by total volume for September and October. In situ chlorophyll and dissolved oxygen readings indicate that primary production took place predominantly between the surface and a depth of 45 feet, peaking in June (3.8 µg/L).

2.3.8. Zooplankton

Epischura and *Holopedium* were the dominant zooplankters in May and June, respectively. *Holopedium* peaked in July at 8 colonies per liter. The largest diversity in zooplankton species occurred in July and September. The total number of zooplankton/L ranged from 0.16 (May) to 9.4 (September) and averaged 4.4 between May and October.

3. RIVER MONITORING

3.1. Background

Maintaining suitable water temperatures in the Sultan River is an important aspect of the Project operation. Water temperature influences fish behavior, especially anadromous fish during the freshwater phase of their life cycle. The Sultan River produces Chinook, coho, chum and pink salmon, and steelhead trout, plus resident fish species.

The Project's water storage and conveyance system is complex with discharge into the Sultan River occurring at three facilities – Culmback Dam, Diversion Dam, and Powerhouse (Figure 3-1). At Culmback Dam, a 10-inch cone valve is used to variably release an annual water budget of 23,831 acre-feet into Reach 3 of the Sultan River, immediately downstream of the dam. Further downstream, the additional water necessary to meet instream flow requirements (at the Diversion Dam) is routed through the Francis turbine units at the Powerhouse, then the Lake Chaplain pipeline to a former City Water diversion tunnel connected to another water line discharging into the river at the Diversion Dam at RM 9.8. Except for infrequent spill at Culmback Dam, these releases, plus tributary flows to the river, provide the instream flow for fish species throughout eleven river miles upstream from the Powerhouse. Pelton turbines, which discharge directly to the river at RM 4.5, provide additional water when needed to meet minimum instream flow requirements below the Powerhouse.

Water temperatures in Reach 3, immediately downstream of Culmback Dam, are seasonally influenced by releases through a 24-inch cone valve blended in concert with water discharged through the 10-inch cone valve. The releases are described in detail in the annual reporting for the Water Temperature Conditioning Plan for Reach 3 (District 2010). Downstream, water temperatures at the Diversion Dam are influenced by flow volume and the depth of release at Culmback Dam (whether through the intake structure, cone, or Howell-Bunger valves, or by spill), by tributary flows, and by meteorological conditions. Moveable panels at the Spada Lake Reservoir intake structure control the level and, hence, the temperature at which water is withdrawn from the reservoir to the powerhouse intake when conditions allow. When isothermal conditions exist in the reservoir, no change in water temperature can be achieved by moving the panels on the intake structure. The degree of temperature control possible by panel manipulation varies seasonally with the degree of temperature stratification in the reservoir. Panel position settings during 2021 are presented in Table 3-1.

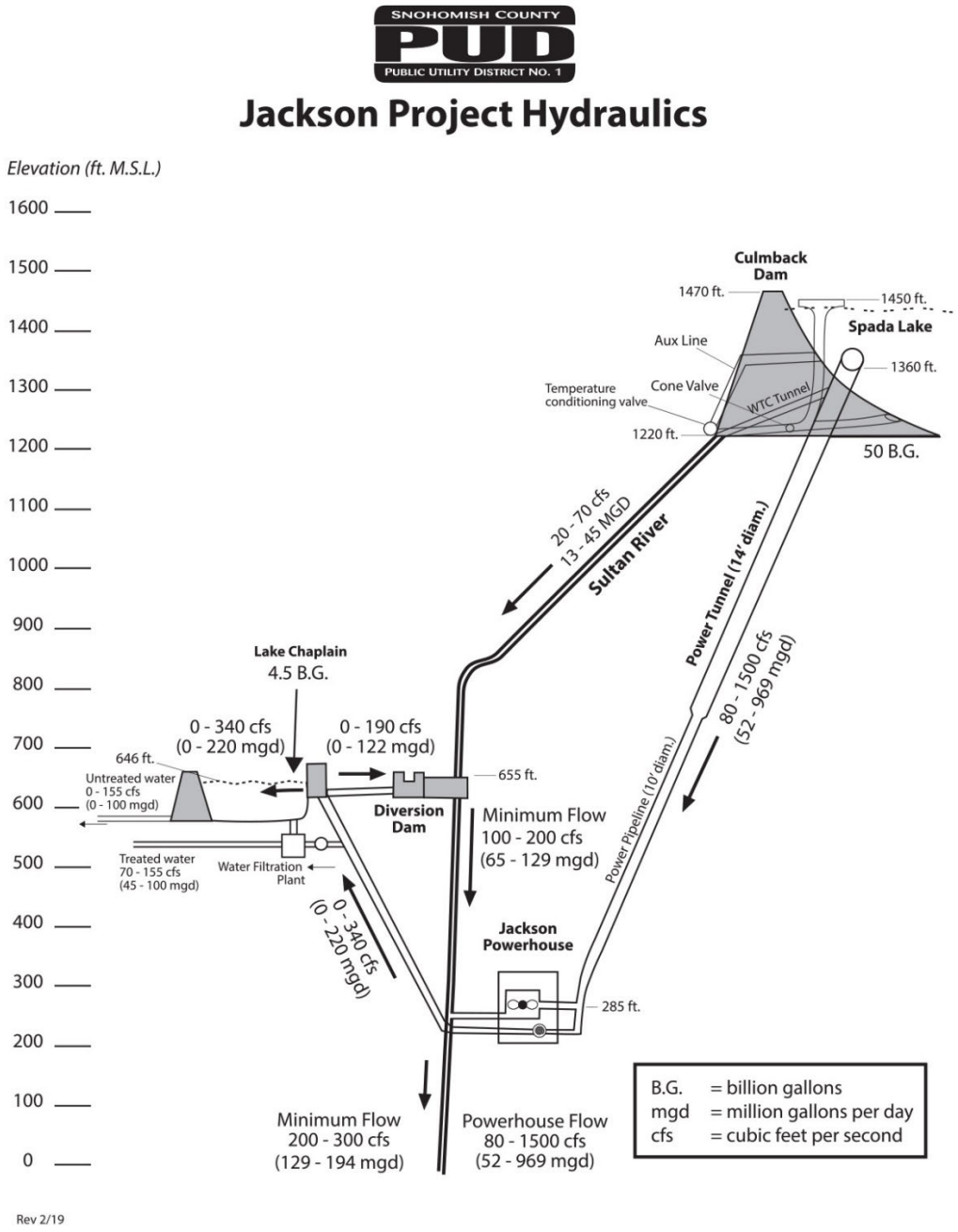


Figure 3-1. Schematic of water conveyance system, Jackson Hydroelectric Project.

Table 3-1. Settings for selective withdrawal panels, Spada Lake Reservoir, 2021.

Dates	Panel Setting	Upper Opening (elevation in feet msl)	Lower Opening (elevation in feet msl)
Beginning of year to 6/3/21	E	1,380 – 1,360	None
6/4/21 to 6/10/21	C	1,425 – 1,405	None
6/11/21 to 8/29/21	D	1,410 – 1,385	None
8/30/21 to 9/13/21	E-Mod	1,402.5 – 1,390	None
9/14/21 to end of year	E	1,380 – 1,360	None

3.2. Continuous Temperature Monitoring

Snohomish PUD monitored water temperature at 12 locations within the Project area during 2021 (Figure 3-2). The RM 15.5, 14.3, and 11.3 locations were monitored from April 1-October 31. All other sites were monitored throughout the year. These locations, in order from upstream to downstream, include:

- South Fork Sultan River, upstream of Culmback Dam, near RM 18.2;
- Sultan River, within the bypass reach immediately downstream of Culmback Dam, at RM 15.8;
- Sultan River, within the bypass reach at the base of the Sultan River Canyon Trail, at RM 15.5;
- Sultan River, within the bypass reach, near RM 14.3;
- Sultan River, within the bypass reach, near RM 11.3;
- Sultan River, within the bypass reach immediately upstream of the Diversion Dam, near RM 9.8;
- Sultan River, immediately downstream of the Diversion Dam, near RM 9.6;
- Sultan River, upstream of the Powerhouse, near RM 4.9;
- Sultan River, downstream of the Powerhouse, near RM 4.4,
- Sultan River, near the confluence with the Skykomish River, at RM 0.2;
- Skykomish River, upstream of the confluence with the Sultan River, at RM 14.1; and
- Skykomish River, downstream of the confluence with the Sultan River, at RM 13.2.

Water temperature monitoring at Sultan River RM 14.3 and 11.3, are part of the Water Temperature Conditioning Plan monitoring sites for Reach 3; the remaining 10 stations are those required for monitoring under the WQMP.

In general, water temperatures in the Sultan Basin during 2021 were slightly warmer than 2020 and consistent with those collected during 2008 and 2009 by CH2M Hill and presented in the Water Quality Final Technical Report (CH2M Hill 2009). Figures depicting water temperatures during 2021 are presented in Appendix B. A tabulation of all mean daily temperature data for 2020 is presented in Appendix C. The seven-day average of the daily maximum temperature (7-DAD Max) is presented in Appendix D. Data gaps are attributed to inaccessibility due to inclement weather conditions, malfunctioning equipment, or equipment lost due to vandalism.

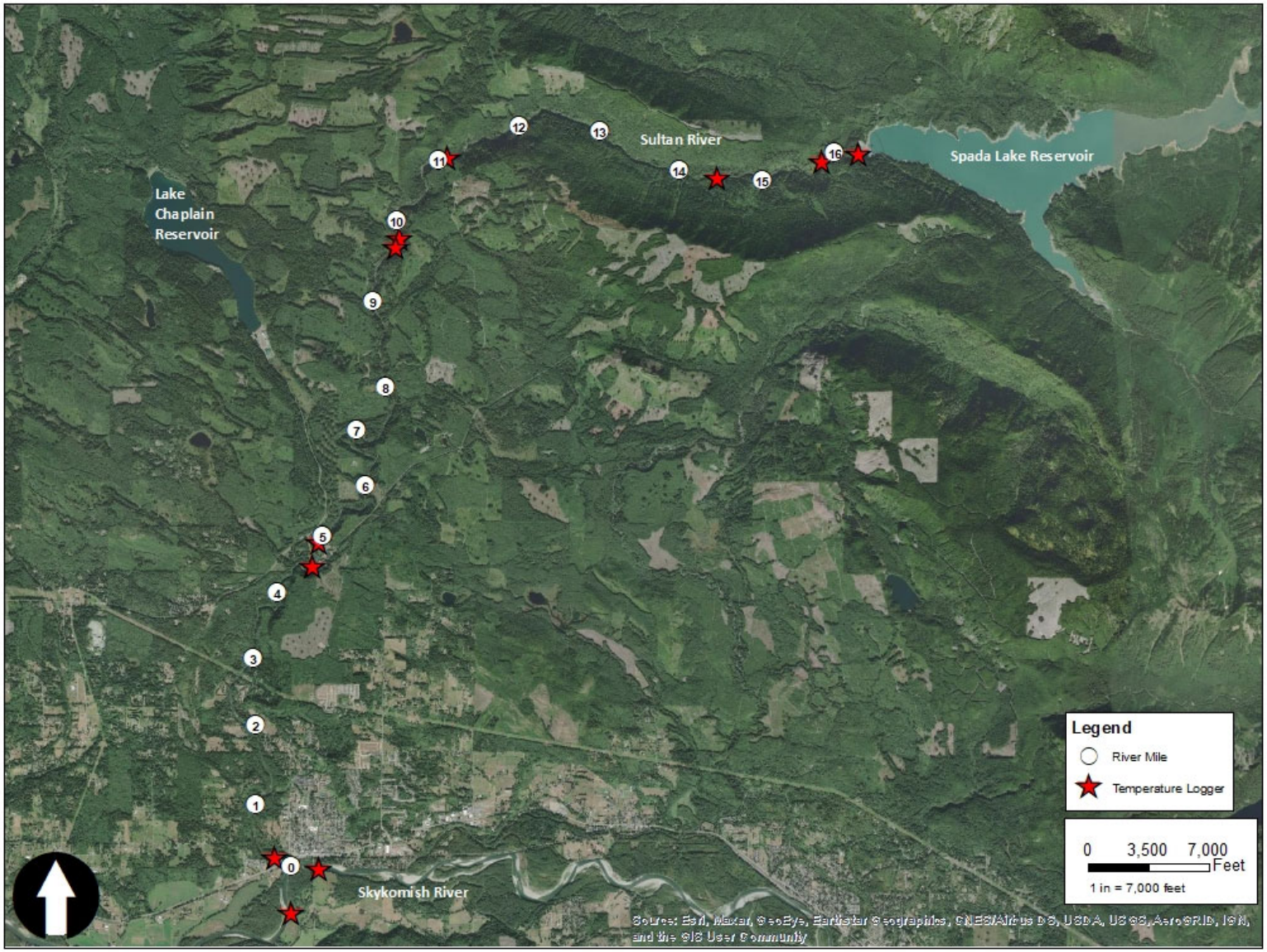


Figure 3-2. Locations of water temperature monitoring, Jackson Hydroelectric Project.

3.3. Synoptic Measurements of Water Quality

Synoptic measurements of water quality were collected during late spring, summer, and early fall 2021 at the South Fork Sultan River (tributary to Spada Lake Reservoir) and at two locations in the Sultan River downstream of Culmback Dam (Table 3-2).

Table 3-2. Synoptic monthly measurements of water quality, Sultan River, 2021.

Location	Date	Temp ºC	pH Units	Turb NTU	LDO mg/l
South Fork Sultan River (SF)					
	5/17/2021	5.76	5.92	0.55	12.07
	6/15/2021	6.96	6.25	0.51	11.69
	7/20/2021	11.60	6.56	0.67	10.31
	8/30/2021	11.49	6.39	0.58	10.32
	9/28/2021	9.07	5.97	2.88	11.00
	10/27/2021	6.98	6.13	0.54	11.85
Sultan River upstream of Diversion Dam (RM 9.8)					
	5/17/2021	10.62	6.69	2.46	11.10
	6/15/2021	11.44	6.83	1.69	10.87
	7/20/2021	11.19	6.76	1.41	10.86
	8/30/2021	11.18	6.64	1.40	10.93
	9/28/2021	10.20	6.55	2.64	10.96
	10/27/2021	9.67	6.50	1.67	11.6
Sultan River downstream of Powerhouse (RM 4.4)					
	5/17/2021	9.07	6.61	3.26	11.70
	6/15/2021	10.72	6.82	1.68	11.25
	7/20/2021	10.74	6.82	1.20	11.12
	8/30/2021	14.67	6.67	1.81	10.14
	9/28/2021	12.30	6.60	2.82	10.50
	10/27/2021	8.60	6.80	2.82	10.50

4. DATA QUALITY AND COMPLIANCE

Monitoring of water quality during 2021 adhered to the protocols and procedures outlined in the WQMP. All survey locations and parameters of measurement were consistent with those outlined in the WQMP. All data were reviewed and accepted to accurately represent conditions at the time of sampling. Sultan River water temperature exceeded the Washington State water temperature criteria on 33 days during summer 2021. While these exceedances occurred at the lower end of each operation reach, the vast majority occurred at RM 0.2, attributable to longitudinal warming. In-river thermal conditions can quickly change during summer heat waves. What results are brief periods whereby environmental conditions of low baseflow in conjunction with high air temperatures lead to excessive river warming. Occasionally, the longitudinal warming is greater than what cooling relief can be provided through the operational Project control of temperature regulation. At the water temperature station upstream of the Sultan on the Skykomish River, water temperature exceeded the state criteria on 71 days during summer 2021 (Appendix D). Due to malfunctioning equipment, water temperature data downstream of the Sultan on the Skykomish River was not available for most of August and half of September 2021; however, 31 days of temperature exceedance were recorded. Project operations were conducted in accordance with License conditions throughout the sampling period.

5. REFERENCES

CH2M Hill. 2009. Water Quality Final Technical Report. Henry M. Jackson Hydroelectric Project (FERC No. 2157) Water Quality Parameter Study (RSP 1). Prepared for Public Utility District No. 1 of Snohomish County. August 2009.

FERC. 2011. Order Issuing New License, Project No. 2157-188. 136 FERC ¶ 62,188. September 2, 2011.

Snohomish PUD. 2010. Water Temperature Conditioning Plan for Reach 3. Henry M. Jackson Hydroelectric Project (FERC No. 2157). 2010.

APPENDIX A

Monthly Reservoir Water Quality Sampling

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	feet	meters	feet	degrees C	µmhos/cm		mg/L	RFU	NTU
5/17/2021	1.6	0.5	1422.9	13.5	23	6.9	10.5	0.0	2.0
5/17/2021	3.3	1.0	1421.2	13.5	23	7.0	10.5	0.1	2.0
5/17/2021	6.6	2.0	1417.9	12.9	23	7.0	10.6	0.2	2.4
5/17/2021	9.6	3.0	1414.9	11.6	23	7.0	11.0	0.2	2.3
5/17/2021	13.3	4.0	1411.2	10.5	23	7.0	11.1	0.1	2.1
5/17/2021	16.4	5.0	1408.1	9.2	23	7.0	11.3	0.3	2.0
5/17/2021	19.6	6.0	1404.9	8.4	22	6.9	11.4	0.3	2.0
5/17/2021	23.1	7.0	1401.4	8.0	22	6.9	11.4	0.3	2.1
5/17/2021	26.2	8.0	1398.3	7.6	22	6.8	11.4	0.2	2.3
5/17/2021	29.5	9.0	1395.0	7.2	22	6.9	11.4	0.1	2.5
5/17/2021	32.9	10.0	1391.6	6.8	22	6.8	11.4	0.0	2.9
5/17/2021	36.2	11.0	1388.3	6.5	22	6.8	11.4	0.0	3.1
5/17/2021	39.4	12.0	1385.1	6.3	22	6.8	11.4	0.0	3.3
5/17/2021	42.6	13.0	1381.9	6.1	22	6.8	11.4	0.0	3.5
5/17/2021	46.0	14.0	1378.5	6.0	22	6.8	11.4	0.0	3.7
5/17/2021	49.2	15.0	1375.3	5.9	22	6.8	11.5	-0.1	3.8
5/17/2021	55.7	17.0	1368.8	5.7	22	6.8	11.5	0.1	4.1
5/17/2021	62.5	19.0	1362.0	5.5	23	6.7	11.4	0.0	4.4
5/17/2021	68.9	21.0	1355.6	5.4	23	6.7	11.4	-0.1	4.8
5/17/2021	75.5	23.0	1349.0	5.1	23	6.7	11.4	-0.1	5.0
5/17/2021	82.1	25.0	1342.4	5.0	23	6.7	11.4	0.0	5.3
5/17/2021	88.7	27.0	1335.8	4.8	23	6.7	11.4	0.0	5.6
5/17/2021	95.1	29.0	1329.4	4.6	23	6.7	11.4	0.0	5.9
5/17/2021	101.8	31.0	1322.7	4.6	23	6.7	11.4	0.0	6.2
5/17/2021	111.6	34.0	1312.9	4.5	23	6.6	11.4	-0.1	6.7
5/17/2021	121.3	37.0	1303.2	4.5	23	6.6	11.3	0.0	7.0
5/17/2021	131.3	40.0	1293.2	4.5	23	6.6	11.2	0.0	7.1
5/17/2021	141.1	43.0	1283.4	4.4	23	6.6	11.2	0.0	7.4
5/17/2021	150.9	46.0	1273.6	4.4	23	6.6	11.1	0.0	8.0

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	feet	meters	feet	degrees C	µmhos/cm		mg/L	RFU	NTU
6/15/2021	1.6	0.5	1443.4	15.2	20	7.2	10.3	0.4	1.6
6/15/2021	3.3	1.0	1441.7	15.1	20	7.3	10.3	0.4	1.7
6/15/2021	6.6	2.0	1438.4	15.1	20	7.4	10.3	0.4	1.6
6/15/2021	9.7	3.0	1435.3	15.0	20	7.4	10.3	0.4	1.7
6/15/2021	13.1	4.0	1431.9	14.9	20	7.4	10.3	0.6	1.7
6/15/2021	16.3	5.0	1428.7	11.6	20	7.4	11.0	0.7	1.4
6/15/2021	19.6	6.0	1425.4	10.7	20	7.3	11.4	0.8	1.3
6/15/2021	23.0	7.0	1422.0	10.3	20	7.3	11.4	0.9	1.1
6/15/2021	26.3	8.0	1418.7	10.0	20	7.1	11.3	0.8	1.1
6/15/2021	29.7	9.0	1415.3	9.7	20	7.1	11.3	1.0	1.1
6/15/2021	32.7	10.0	1412.3	9.6	20	7.1	11.2	1.0	1.1
6/15/2021	36.2	11.0	1408.8	9.3	20	7.1	11.2	1.0	1.2
6/15/2021	39.5	12.0	1405.5	9.1	20	7.0	11.2	1.1	1.1
6/15/2021	42.8	13.0	1402.2	9.0	20	7.0	11.1	1.0	1.2
6/15/2021	45.8	14.0	1399.2	8.7	20	7.0	11.1	0.7	1.3
6/15/2021	49.3	15.0	1395.7	8.4	21	6.9	11.1	0.4	1.3
6/15/2021	55.7	17.0	1389.3	7.7	21	6.9	11.1	0.1	1.4
6/15/2021	62.4	19.0	1382.6	7.0	22	6.8	11.1	0.1	1.6
6/15/2021	69.1	21.0	1375.9	6.6	22	6.8	11.2	0.1	1.9
6/15/2021	75.6	23.0	1369.4	6.3	22	6.8	11.2	0.0	2.2
6/15/2021	82.1	25.0	1362.9	6.1	22	6.8	11.1	0.1	2.6
6/15/2021	88.6	27.0	1356.4	5.9	22	6.8	11.1	0.0	2.7
6/15/2021	95.0	29.0	1350.0	5.9	22	6.8	11.1	0.0	3.2
6/15/2021	101.6	31.0	1343.4	5.7	23	6.7	11.1	0.1	3.3
6/15/2021	111.6	34.0	1333.4	5.5	23	6.6	11.1	0.1	3.9
6/15/2021	121.5	37.0	1323.5	5.3	23	6.7	11.1	0.1	4.0
6/15/2021	131.3	40.0	1313.7	5.1	23	6.7	11.0	0.1	4.5
6/15/2021	141.2	43.0	1303.8	4.9	23	6.6	11.0	0.0	5.4
6/15/2021	150.9	46.0	1294.1	4.8	23	6.6	11.0	0.1	5.7
6/15/2021	161.0	49.0	1284.0	4.7	23	6.6	10.9	0.0	6.8
6/15/2021	172.9	53.0	1272.1	4.7	23	6.6	10.6	0.2	9.3

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	feet	meters	feet	degrees C	µmhos/cm		mg/L	RFU	NTU
7/14/2021	1.6	0.5	1443.3	21.7	22	7.1	9.1	No Data	0.5
7/14/2021	3.3	1.0	1441.6	21.7	22	7.0	9.1	No Data	0.5
7/14/2021	6.6	2.0	1438.3	21.7	22	7.0	9.2	No Data	0.5
7/14/2021	9.8	3.0	1435.1	21.3	22	7.1	9.2	No Data	0.5
7/14/2021	13.1	4.0	1431.8	21.2	22	7.0	9.2	No Data	0.7
7/14/2021	16.4	5.0	1428.5	21.0	22	7.0	9.2	No Data	0.6
7/14/2021	19.7	6.0	1425.2	18.0	20	6.9	10.6	No Data	0.5
7/14/2021	23.0	7.0	1421.9	16.2	19	7.0	11.0	No Data	0.6
7/14/2021	26.2	8.0	1418.7	14.8	19	7.0	11.2	No Data	0.6
7/14/2021	29.5	9.0	1415.4	13.7	19	7.0	11.5	No Data	0.6
7/14/2021	32.8	10.0	1412.1	12.6	19	7.0	11.6	No Data	0.6
7/14/2021	36.1	11.0	1408.8	11.6	20	7.0	11.8	No Data	0.5
7/14/2021	39.4	12.0	1405.5	10.7	20	7.0	11.8	No Data	0.4
7/14/2021	42.6	13.0	1402.3	10.1	20	6.9	11.6	No Data	0.5
7/14/2021	45.9	14.0	1399.0	9.5	20	6.9	11.5	No Data	0.6
7/14/2021	49.2	15.0	1395.7	9.0	20	6.9	11.3	No Data	0.6
7/14/2021	55.8	17.0	1389.1	8.1	21	6.8	11.3	No Data	0.8
7/14/2021	62.3	19.0	1382.6	7.5	22	6.8	11.2	No Data	1.0
7/14/2021	68.9	21.0	1376.0	7.1	22	6.8	11.1	No Data	1.4
7/14/2021	75.4	23.0	1369.5	6.8	22	6.7	11.1	No Data	1.8
7/14/2021	82.0	25.0	1362.9	6.6	22	6.7	11.1	No Data	2.1
7/14/2021	88.6	27.0	1356.3	6.5	23	6.7	11.1	No Data	2.3
7/14/2021	95.1	29.0	1349.8	6.4	23	6.7	11.1	No Data	2.5
7/14/2021	101.7	31.0	1343.2	6.4	23	6.7	11.2	No Data	2.5
7/14/2021	111.5	34.0	1333.4	6.3	23	6.7	11.2	No Data	2.7
7/14/2021	121.4	37.0	1323.5	6.2	23	6.7	11.2	No Data	2.7
7/14/2021	131.2	40.0	1313.7	6.0	23	6.7	11.3	No Data	2.9
7/14/2021	141.0	43.0	1303.9	5.7	23	6.6	11.4	No Data	2.9
7/14/2021	150.9	46.0	1294.0	5.5	23	6.6	11.4	No Data	3.3
7/14/2021	160.7	49.0	1284.2	5.3	24	6.6	11.3	No Data	3.4
7/14/2021	171.0	52.0	1273.9	5.2	24	6.6	11.0	No Data	3.6

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	feet	meters	feet	degrees C	µmhos/cm		mg/L	RFU	NTU
8/25/2021	1.7	0.5	1424.4	19.7	24	7.3	8.8	0.0	0.7
8/25/2021	3.4	1.0	1422.7	19.7	24	7.2	8.8	0.1	0.6
8/25/2021	6.6	2.0	1419.5	19.7	24	7.2	8.8	-0.1	0.7
8/25/2021	9.9	3.0	1416.2	19.6	24	7.2	8.7	0.1	0.6
8/25/2021	13.2	4.0	1412.9	19.6	24	7.2	8.8	0.0	0.7
8/25/2021	16.4	5.0	1409.7	19.6	24	7.2	8.8	0.2	0.7
8/25/2021	19.7	6.0	1406.4	19.6	24	7.2	8.7	0.1	0.6
8/25/2021	23.2	7.0	1402.9	19.6	24	7.2	8.7	0.1	0.6
8/25/2021	26.3	8.0	1399.8	19.4	25	7.1	8.7	0.2	0.7
8/25/2021	29.5	9.0	1396.6	18.8	25	6.9	8.6	0.2	1.0
8/25/2021	32.8	10.0	1393.3	17.4	22	6.8	9.2	0.2	0.6
8/25/2021	36.2	11.0	1389.9	15.9	21	6.8	9.5	0.1	0.5
8/25/2021	39.3	12.0	1386.8	13.6	20	6.7	9.8	0.2	0.7
8/25/2021	42.7	13.0	1383.4	11.5	21	6.7	10.0	0.0	0.8
8/25/2021	45.9	14.0	1380.2	9.6	21	6.6	10.0	0.0	0.8
8/25/2021	49.3	15.0	1376.8	8.5	22	6.6	10.1	0.0	0.8
8/25/2021	55.7	17.0	1370.4	7.5	23	6.6	10.1	0.0	0.9
8/25/2021	62.1	19.0	1364.0	7.1	23	6.6	10.0	0.0	1.2
8/25/2021	68.8	21.0	1357.3	6.9	23	6.6	10.1	0.0	1.1
8/25/2021	75.4	23.0	1350.7	6.8	23	6.6	10.1	0.0	1.2
8/25/2021	82.0	25.0	1344.1	6.7	23	6.6	10.2	0.0	1.1
8/25/2021	88.9	27.0	1337.2	6.6	23	6.6	10.2	0.0	1.4
8/25/2021	95.3	29.0	1330.8	6.5	23	6.6	10.2	0.1	1.4
8/25/2021	101.7	31.0	1324.4	6.4	23	6.6	10.2	0.0	1.5
8/25/2021	111.8	34.0	1314.3	6.2	23	6.6	10.3	0.0	1.6
8/25/2021	121.5	37.0	1304.6	6.0	23	6.6	10.2	-0.1	1.6
8/25/2021	131.6	40.0	1294.5	5.9	24	6.6	10.2	0.0	1.8
8/25/2021	141.0	43.0	1285.1	5.8	24	6.5	10.0	0.0	2.2

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	feet	meters	feet	degrees C	µmhos/cm		mg/L	RFU	NTU
9/28/2021	1.6	0.5	1413.9	15.8	24	7.2	9.3	0.3	2.0
9/28/2021	3.6	1.0	1411.9	15.8	24	7.2	9.3	0.3	2.0
9/28/2021	6.6	2.0	1408.9	15.8	24	7.2	9.3	0.4	2.2
9/28/2021	9.9	3.0	1405.6	15.8	24	7.2	9.3	0.5	2.1
9/28/2021	13.4	4.0	1402.1	15.6	24	7.1	9.1	0.3	2.3
9/28/2021	16.3	5.0	1399.2	15.2	23	7.0	9.0	0.3	2.2
9/28/2021	19.7	6.0	1395.8	15.0	23	6.9	8.9	0.3	2.4
9/28/2021	23.0	7.0	1392.5	14.8	23	6.8	8.9	0.3	2.6
9/28/2021	26.7	8.0	1388.8	14.1	22	6.8	9.0	0.2	3.0
9/28/2021	29.9	9.0	1385.6	13.8	22	6.8	8.9	0.2	3.2
9/28/2021	32.6	10.0	1382.9	13.6	22	6.8	8.9	0.2	3.0
9/28/2021	36.1	11.0	1379.4	13.2	22	6.7	8.9	0.2	3.1
9/28/2021	39.4	12.0	1376.1	12.7	21	6.7	8.9	0.3	3.0
9/28/2021	42.7	13.0	1372.8	12.2	21	6.6	8.9	0.2	3.1
9/28/2021	45.8	14.0	1369.7	11.7	21	6.6	8.8	0.2	3.0
9/28/2021	49.5	15.0	1366.0	10.3	21	6.5	8.7	0.2	2.1
9/28/2021	55.9	17.0	1359.6	8.2	22	6.5	8.9	0.2	1.7
9/28/2021	62.4	19.0	1353.1	7.3	22	6.6	9.2	0.2	1.7
9/28/2021	68.5	21.0	1347.0	7.0	22	6.6	9.3	0.3	1.3
9/28/2021	75.6	23.0	1339.9	6.9	22	6.6	9.7	0.2	1.3
9/28/2021	82.1	25.0	1333.4	6.7	22	6.6	9.6	0.2	1.2
9/28/2021	88.5	27.0	1327.0	6.7	22	6.7	9.6	0.2	1.2
9/28/2021	95.3	29.0	1320.2	6.6	22	6.7	9.6	0.2	1.2
9/28/2021	101.9	31.0	1313.6	6.4	22	6.7	9.7	0.2	1.4
9/28/2021	111.5	34.0	1304.0	6.3	22	6.7	9.6	0.2	1.6
9/28/2021	121.3	37.0	1294.2	6.2	22	6.6	9.6	0.2	1.8
9/28/2021	131.4	40.0	1284.1	6.1	23	6.6	9.3	0.2	2.3
9/28/2021	141.2	43.0	1274.3	6.0	23	6.6	8.9	0.2	3.0

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	feet	meters	feet	degrees C	µmhos/cm		mg/L	RFU	NTU
10/27/2021	1.6	0.5	1419.7	10.1	24	6.9	10.1	0.3	2.4
10/27/2021	3.3	1.0	1418.0	10.1	24	6.9	10.2	0.3	2.4
10/27/2021	6.6	2.0	1414.7	10.1	24	6.9	10.1	0.3	2.5
10/27/2021	9.7	3.0	1411.6	10.0	24	6.9	10.0	0.2	2.6
10/27/2021	13.2	4.0	1408.1	9.9	24	6.9	9.8	0.2	2.6
10/27/2021	16.4	5.0	1404.9	9.9	24	6.9	9.7	0.2	2.6
10/27/2021	19.6	6.0	1401.7	9.9	24	6.9	9.6	0.3	2.7
10/27/2021	23.1	7.0	1398.2	9.8	24	6.8	9.8	0.2	2.7
10/27/2021	26.3	8.0	1395.0	9.8	24	6.8	9.7	0.2	2.7
10/27/2021	29.6	9.0	1391.7	9.7	24	6.8	9.7	0.1	2.9
10/27/2021	32.9	10.0	1388.4	9.6	24	6.8	9.7	0.2	3.0
10/27/2021	36.1	11.0	1385.2	9.4	24	6.7	9.6	0.2	2.8
10/27/2021	39.3	12.0	1382.0	9.3	24	6.7	9.3	0.2	2.9
10/27/2021	42.7	13.0	1378.6	9.1	24	6.7	9.3	0.2	3.0
10/27/2021	45.8	14.0	1375.5	9.2	24	6.7	9.2	0.2	2.9
10/27/2021	49.4	15.0	1371.9	9.1	24	6.7	9.4	0.2	3.0
10/27/2021	55.9	17.0	1365.4	9.1	24	6.7	9.3	0.1	3.0
10/27/2021	62.3	19.0	1359.0	9.0	24	6.6	9.3	0.1	3.0
10/27/2021	69.0	21.0	1352.3	8.9	24	6.6	9.4	0.1	2.9
10/27/2021	75.5	23.0	1345.8	8.9	24	6.6	9.2	0.2	3.0
10/27/2021	82.1	25.0	1339.2	8.7	24	6.6	9.1	0.1	3.0
10/27/2021	88.7	27.0	1332.6	8.6	24	6.5	9.1	0.2	2.9
10/27/2021	95.1	29.0	1326.2	8.1	24	6.5	8.9	0.1	2.6
10/27/2021	101.8	31.0	1319.5	7.7	23	6.5	9.0	0.1	2.6
10/27/2021	111.5	34.0	1309.8	7.0	23	6.5	9.0	0.1	2.0
10/27/2021	121.4	37.0	1299.9	6.7	23	6.5	9.1	0.2	2.2
10/27/2021	131.3	40.0	1290.0	6.6	23	6.5	9.1	0.1	2.5
10/27/2021	141.2	43.0	1280.1	6.5	23	6.5	9.0	0.0	2.9
10/27/2021	151.1	46.0	1270.2	6.4	23	6.5	9.2	0.2	3.1
10/27/2021	160.8	49.0	1260.5	6.4	24	6.5	9.0	0.1	3.4

APPENDIX B

Mean Daily Water Temperature Monitoring – Figures

Figure B-1. Mean Daily Water Temperature in the South Fork Sultan River, upstream of Culmback Dam (RM 18.2), and in the mainstem Sultan River immediately downstream of Culmback Dam (RM 15.8) during 2021

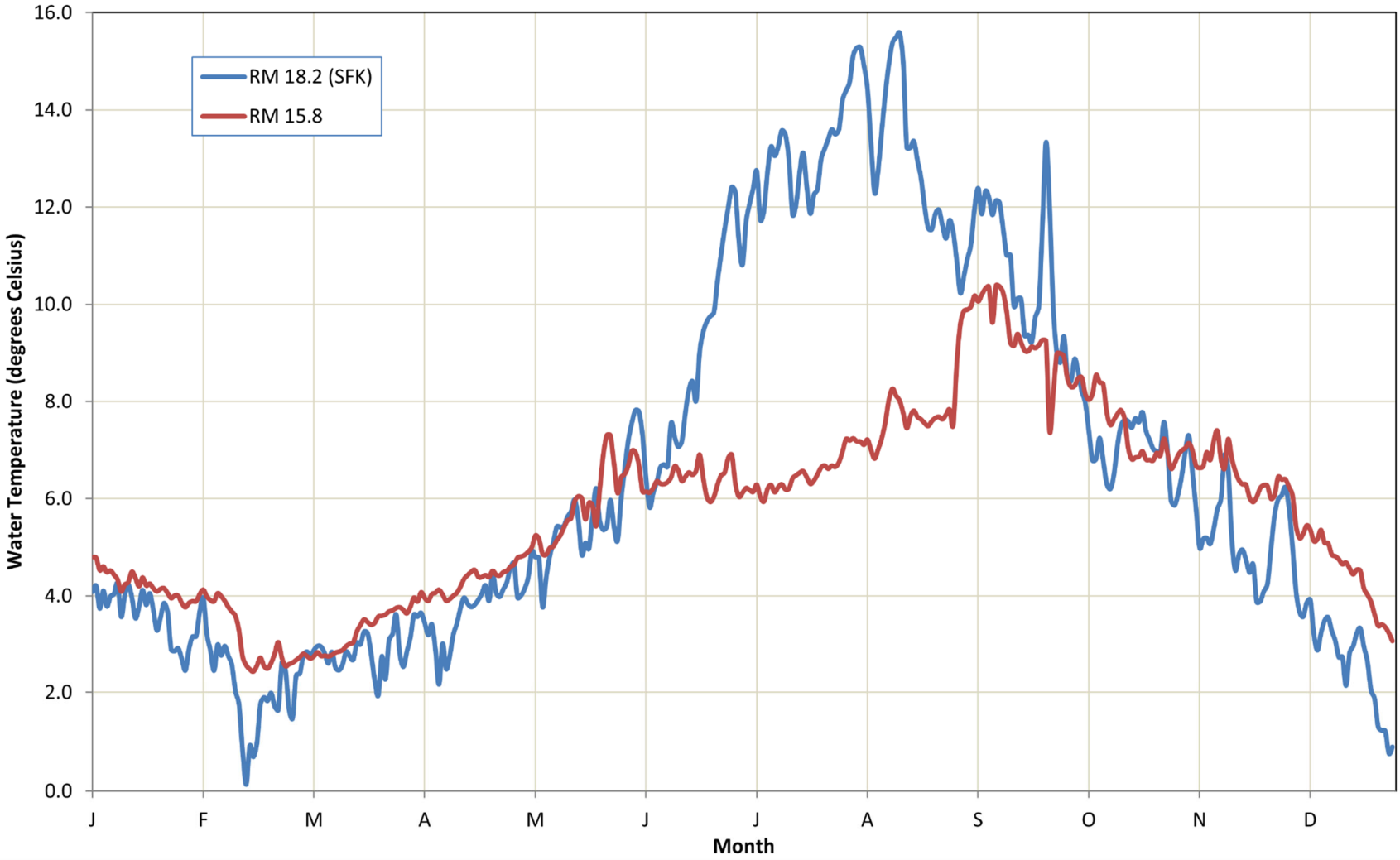


Figure B-2. Longitudinal Depiction of Mean Daily Water Temperature in the Bypass Reach (Reach 3) of the Sultan River during 2021

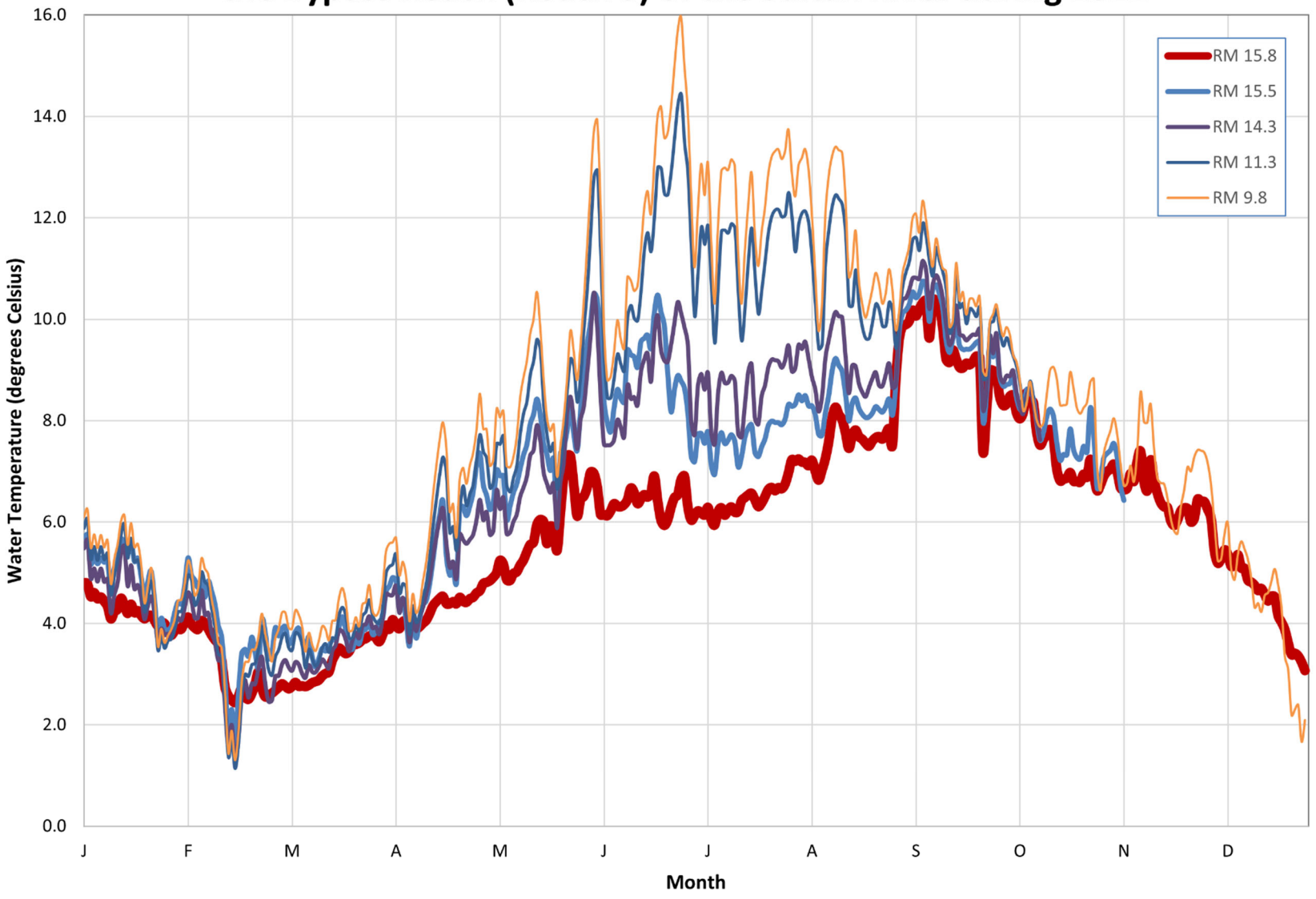


Figure B-3. Longitudinal Depiction of Mean Daily Water Temperature, Sultan River downstream of Culmback Dam, 2021

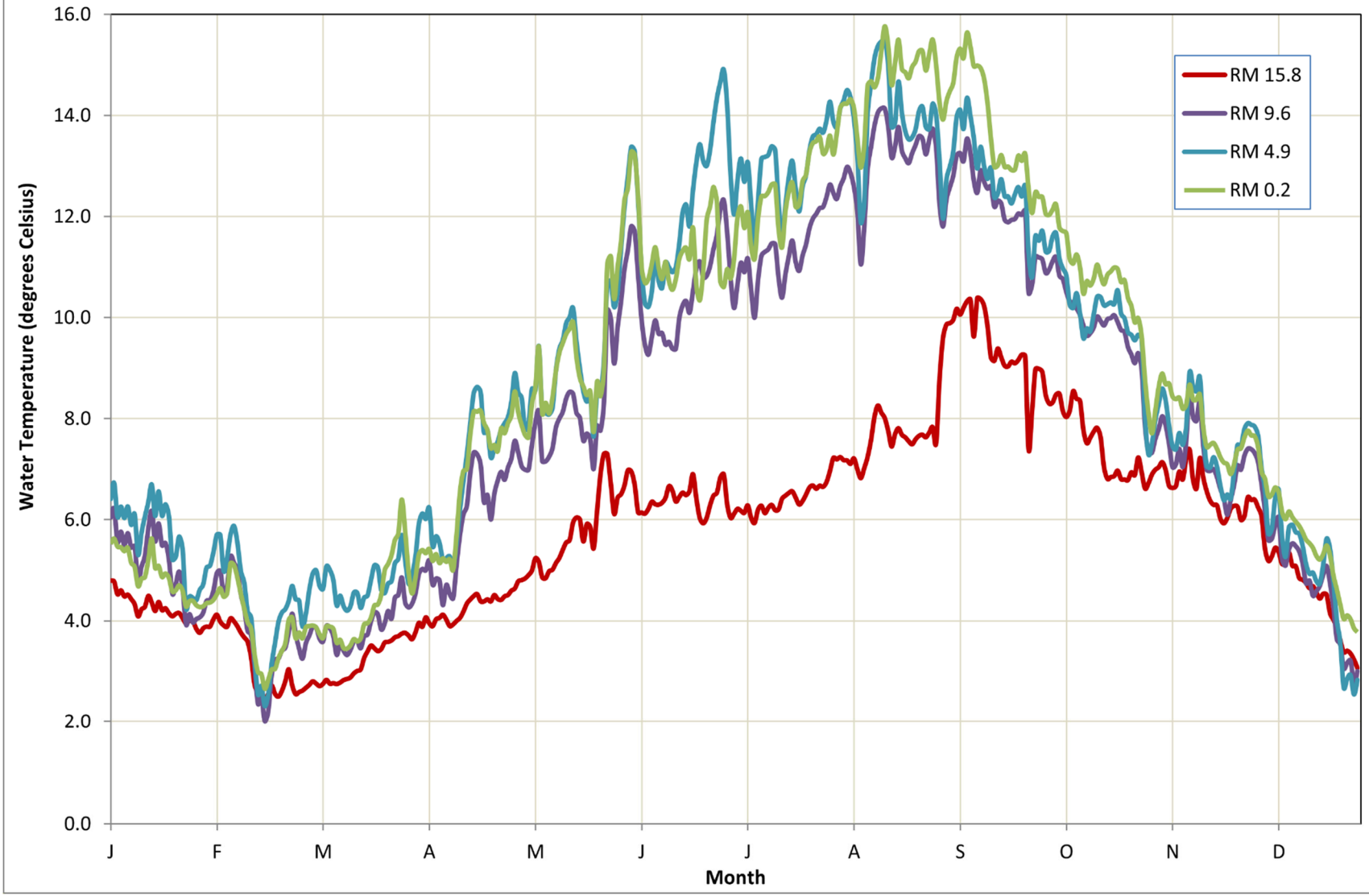
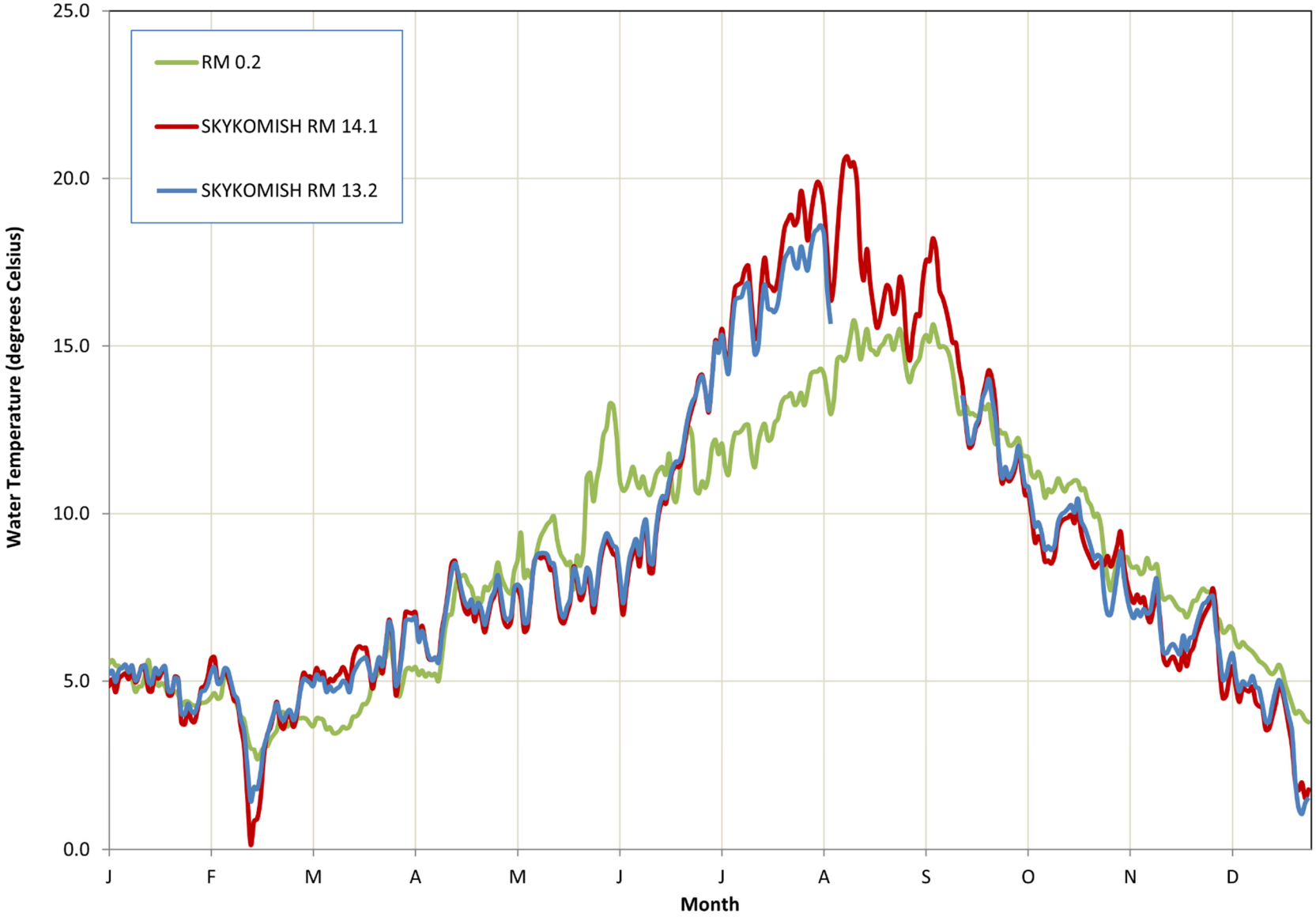


Figure B-4. Mean Daily Water Temperature near confluence of Sultan and Skykomish rivers during 2021



APPENDIX C

Mean Daily Water Temperature Data in Tabular Format

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
1/1	4.1	4.8				6.1	6.0	6.4	5.5	5.5	4.9	5.2
1/2	4.2	4.8				6.3	6.2	6.7	5.7	5.6	5.1	5.3
1/3	3.7	4.5				5.5	5.6	6.1	5.5	5.5	4.7	5.0
1/4	4.1	4.6				5.8	5.8	6.3	5.4	5.5	5.1	5.3
1/5	3.8	4.5				5.5	5.5	6.0	5.3	5.4	5.2	5.4
1/6	4.0	4.5				5.7	5.7	6.3	5.4	5.4	5.2	5.5
1/7	4.0	4.4				5.5	5.4	5.9	5.1	5.1	5.1	5.3
1/8	4.3	4.3				5.6	5.5	6.1	5.0	5.1	5.3	5.5
1/9	3.6	4.1				4.8	4.8	5.3	4.6	4.7	5.0	5.0
1/10	4.0	4.2				5.3	5.1	5.7	4.7	4.8	5.1	5.2
1/11	4.2	4.3				5.6	5.3	6.1	4.8	4.9	5.4	5.4
1/12	4.0	4.5				6.0	5.8	6.4	5.2	5.2	5.3	5.5
1/13	3.5	4.4				6.1	6.2	6.7	5.9	5.6	4.7	5.0
1/14	3.8	4.2				5.6	5.6	6.1	5.0	5.0	4.7	4.9
1/15	4.1	4.4				6.0	5.9	6.6	5.0	5.1	5.2	5.4
1/16	3.8	4.2				5.5	5.5	6.1	4.8	4.9	5.1	5.2
1/17	4.1	4.3				5.6	5.5	6.3	4.8	4.9	5.3	5.4
1/18	3.7	4.2				5.2	5.2	6.1	4.8	4.8	5.4	5.4
1/19	3.3	4.1				4.4	4.5	5.2	4.6	4.6	4.6	4.7
1/20	3.5	4.1				4.7	4.7	5.3	4.5	4.6	4.6	4.7
1/21	3.9	4.2				5.1	5.0	5.7	4.6	4.7	5.1	5.1
1/22	3.7	4.1				4.6	4.6	5.4	4.6	4.6	5.1	5.0
1/23	2.9	4.0				3.6	3.9	4.2	4.3	4.3	3.8	4.0
1/24	2.9	4.0				3.9	4.1	4.5	4.3	4.4	3.7	4.0
1/25	2.9	4.0				3.6	4.0	4.5	4.3	4.4	4.1	4.3
1/26	2.7	3.8				3.8	4.0	4.4	4.3	4.3	3.8	4.1
1/27	2.5	3.8				3.9	4.1	4.6	4.2	4.3	3.8	4.1
1/28	2.9	3.9				4.1	4.2	4.7	4.2	4.3	4.2	4.3
1/29	3.2	3.9				4.5	4.4	5.1	4.3	4.3	4.8	4.7
1/30	3.2	3.9				4.5	4.4	5.1	4.3	4.4	4.8	4.7
1/31	3.7	4.0				4.8	4.6	5.4	4.3	4.4	5.1	4.9

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
2/1	4.0	4.1				5.2	4.9	5.7	4.4	4.5	5.7	5.3
2/2	3.2	4.0				5.0	5.0	5.7	4.6	4.6	5.7	5.4
2/3	2.9	3.9				4.6	4.5	5.0	4.4	4.5	5.0	4.9
2/4	2.5	3.9				4.7	4.7	5.3	4.5	4.5	5.0	5.0
2/5	3.0	4.1				5.3	5.3	5.7	5.5	5.1	5.3	5.4
2/6	2.8	4.0				5.1	5.1	5.9	5.3	5.1	5.1	5.3
2/7	3.0	3.9				5.0	5.0	5.5	5.0	4.9	4.8	5.0
2/8	2.8	3.8				4.5	4.5	5.0	4.5	4.5	4.4	4.6
2/9	2.6	3.7				4.1	4.2	4.8	4.2	4.2	4.4	4.5
2/10	2.0	3.6				3.6	3.8	4.2	3.9	4.0	3.6	3.9
2/11	1.8	3.3				3.5	3.7	4.1	3.9	3.8	3.1	3.5
2/12	0.8	2.7				2.7	3.1	3.3	3.4	3.3	1.6	2.4
2/13	0.1	2.6				1.4	2.4	2.5	3.1	3.0	0.2	1.4
2/14	0.9	2.5				1.9	2.5	2.7	3.0	2.9	0.8	1.8
2/15	0.7	2.4				1.3	2.0	2.3	2.6	2.7	0.9	1.8
2/16	1.0	2.6				1.8	2.2	2.5	2.7	2.8	1.5	2.2
2/17	1.8	2.7				2.8	2.9	3.2	3.0	3.0	2.7	3.0
2/18	1.9	2.6				3.2	3.2	3.6	3.0	3.0	3.4	3.4
2/19	1.8	2.5				3.2	3.3	4.0	3.3	3.3	3.6	3.7
2/20	2.0	2.6				3.5	3.4	4.2	3.5	3.4	4.0	4.0
2/21	1.7	2.8				3.5	3.5	4.2	3.7	3.6	4.4	4.3
2/22	1.6	3.0				3.8	3.8	4.4	4.3	4.0	3.7	4.0
2/23	2.6	2.7				4.2	4.1	4.7	4.4	4.1	3.6	3.8
2/24	2.5	2.6				3.8	3.7	4.4	3.9	3.7	4.0	4.1
2/25	1.7	2.6				3.5	3.5	4.4	4.0	3.8	4.0	4.1
2/26	1.5	2.6				3.3	3.2	3.9	3.7	3.6	3.6	3.8
2/27	2.4	2.7				3.7	3.6	4.1	3.9	3.9	4.0	4.1
2/28	2.4	2.7				3.9	3.7	4.6	4.1	3.9	4.7	4.7

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
3/1	2.8	2.8				4.2	3.9	4.9	4.2	3.9	5.2	5.1
3/2	2.9	2.8				4.2	3.9	5.0	4.2	3.9	5.1	5.0
3/3	2.8	2.7				3.9	3.6	4.7	4.0	3.7	5.1	4.9
3/4	2.9	2.8				3.9	3.6	4.6	3.9	3.7	5.0	4.9
3/5	3.0	2.8				4.3	3.9	5.1	4.2	3.9	5.4	5.2
3/6	3.0	2.8				4.2	3.8	5.0	4.2	3.9	5.2	5.0
3/7	2.8	2.8				3.9	3.7	4.8	4.0	3.8	5.3	5.1
3/8	2.6	2.8				3.4	3.3	4.3	3.7	3.6	4.8	4.7
3/9	2.8	2.8				3.8	3.6	4.5	3.7	3.6	5.1	4.8
3/10	2.5	2.8				3.6	3.4	4.3	3.5	3.5	5.0	4.7
3/11	2.5	2.9				3.5	3.3	4.2	3.5	3.4	5.1	4.8
3/12	2.6	2.9				3.7	3.4	4.3	3.5	3.5	5.2	4.8
3/13	2.9	3.0				3.9	3.6	4.6	3.7	3.6	5.4	5.0
3/14	2.8	3.0				3.9	3.6	4.6	3.7	3.6	5.2	4.9
3/15	2.7	3.0				3.7	3.5	4.3	3.7	3.6	4.9	4.7
3/16	3.0	3.3				4.1	3.7	4.5	3.9	3.9	5.6	5.2
3/17	3.0	3.4				4.1	3.7	4.5	3.9	3.9	5.9	5.4
3/18	3.3	3.5				4.5	4.0	4.8	4.1	4.1	6.0	5.6
3/19	3.2	3.5				4.7	4.2	5.1	4.4	4.3	6.0	5.7
3/20	2.8	3.4				4.4	4.1	5.1	4.4	4.3	6.0	5.7
3/21	2.3	3.4				3.9	3.8	4.6	4.4	4.5	5.4	5.3
3/22	1.9	3.6				3.9	3.9	4.6	4.6	5.0	4.8	5.0
3/23	2.8	3.6				4.1	4.2	4.7	4.8	5.1	5.3	5.3
3/24	2.3	3.6				3.9	4.0	4.8	4.8	5.3	5.6	5.7
3/25	3.1	3.7				4.4	4.5	5.1	5.2	5.6	5.2	5.4
3/26	3.2	3.7				4.4	4.5	5.2	5.3	5.7	6.0	6.1
3/27	3.6	3.8				4.8	4.9	5.7	5.8	6.4	6.8	6.8
3/28	2.8	3.8				4.2	4.4	5.2	5.2	5.8	6.3	6.5
3/29	2.5	3.7				4.2	4.3	4.7	4.7	5.0	4.6	4.9
3/30	2.9	3.6				4.3	4.3	4.9	4.5	4.5	5.2	5.1
3/31	3.2	3.8				4.7	4.5	5.3	4.8	4.9	6.1	5.9

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
4/1	3.6	4.0	4.6	4.6	5.0	5.4	4.9	5.9	5.0	5.3	7.1	6.8
4/2	3.6	3.9	4.7	4.6	5.1	5.6	5.0	6.1	5.0	5.4	7.0	6.8
4/3	3.7	4.1	4.9	4.6	5.2	5.6	5.0	6.0	4.9	5.3	7.0	6.8
4/4	3.4	4.0	4.8	4.7	5.4	5.7	5.2	6.2	5.1	5.4	7.1	6.9
4/5	3.2	3.9	4.3	4.2	4.6	5.0	4.7	5.5	4.8	5.2	6.2	6.2
4/6	3.4	4.0	4.5	4.5	4.8	5.2	4.8	5.7	4.9	5.3	6.7	6.5
4/7	2.9	4.1	4.1	4.2	4.7	4.9	4.8	5.5	5.0	5.1	6.2	6.2
4/8	2.2	4.1	3.6	3.6	3.8	4.1	4.3	5.2	4.9	5.2	5.7	5.8
4/9	3.0	4.0	4.2	4.1	4.3	4.6	4.7	5.2	5.0	5.2	5.6	5.6
4/10	2.5	3.9	3.7	3.9	4.0	4.2	4.5	5.3	4.8	5.2	5.7	5.7
4/11	2.8	3.9	4.1	4.1	4.2	4.4	4.4	5.1	4.7	5.0	5.6	5.6
4/12	3.2	4.0	4.4	4.3	4.5	4.8	5.1	5.6	5.5	5.7	6.5	6.3
4/13	3.4	4.1	4.5	4.6	4.8	5.2	5.7	6.2	6.2	6.6	7.1	7.0
4/14	3.7	4.2	4.8	4.9	5.3	5.8	6.1	6.8	6.5	7.0	7.7	7.6
4/15	4.0	4.3	5.2	5.3	5.9	6.5	6.3	7.3	6.5	7.0	8.5	8.3
4/16	3.8	4.4	5.8	5.7	6.4	7.1	6.9	7.9	7.2	7.7	8.6	8.5
4/17	3.8	4.5	6.1	6.1	6.9	7.6	7.3	8.5	7.4	8.1	8.1	8.2
4/18	3.8	4.5	6.4	6.3	7.3	8.0	7.3	8.6	7.6	8.1	7.5	7.7
4/19	3.9	4.4	5.3	5.6	7.0	7.5	7.1	8.5	7.7	8.2	7.1	7.4
4/20	4.0	4.4	5.0	5.1	5.8	6.2	6.3	7.7	7.2	7.9	7.0	7.2
4/21	4.2	4.4	5.1	5.2	5.9	6.4	6.5	7.8	7.2	7.8	7.3	7.4
4/22	3.9	4.4	4.8	4.9	5.4	5.7	6.0	7.2	7.0	7.4	6.8	7.0
4/23	4.4	4.5	6.3	5.8	6.2	6.9	6.5	7.4	6.9	7.5	7.3	7.3
4/24	4.1	4.4	6.3	5.7	6.7	7.1	6.8	7.6	7.1	7.4	6.9	7.2
4/25	4.0	4.4	6.1	5.6	6.3	6.8	6.9	7.8	7.5	7.8	6.5	6.7
4/26	4.1	4.5	6.3	5.7	6.6	7.1	6.8	7.9	7.2	7.7	6.9	7.1
4/27	4.3	4.5	6.6	5.8	6.7	7.4	7.0	8.0	7.6	7.9	7.4	7.5
4/28	4.6	4.6	7.1	6.0	7.2	7.8	7.2	8.3	7.8	8.1	7.6	7.7
4/29	4.7	4.6	7.4	6.4	7.7	8.5	7.6	8.9	8.2	8.5	8.1	8.2
4/30	4.0	4.8	6.7	6.0	7.4	7.8	7.3	8.5	8.0	8.1	7.3	7.6

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
5/1	4.0	4.8	6.5	6.2	7.3	7.8	7.1	8.4	7.7	7.9	6.8	7.0
5/2	4.1	4.8	6.2	5.8	6.7	7.1	7.0	7.8	7.5	7.7	6.6	6.8
5/3	4.4	4.9	6.4	5.8	6.8	7.2	7.0	7.9	7.5	7.6	6.8	7.0
5/4	4.9	5.0	7.0	6.6	7.5	8.2	7.5	8.6	7.7	8.3	7.8	7.8
5/5	4.8	5.2	6.9	6.3	7.5	8.1	7.9	8.6	8.4	8.6	7.7	7.9
5/6	4.8	5.2	6.9	6.5	7.7	8.2	8.1	9.4	8.6	9.4	7.5	7.7
5/7	3.8	4.9	6.1	5.8	6.7	7.1	7.2	8.1	7.7	8.1	6.5	6.7
5/8	4.4	4.8	6.3	5.8	6.6	7.1	7.2	8.1	7.6	8.3	6.6	6.8
5/9	4.8	5.0	6.6	6.0	6.9	7.3	7.2	8.1	7.6	8.1	7.5	7.6
5/10	5.1	5.0	6.8	6.2	7.1	7.7	7.4	8.2	7.7	8.4	8.6	8.5
5/11	5.4	5.1	7.0	6.5	7.7	8.4	7.8	9.0	8.3	8.9	8.7	8.8
5/12	5.4	5.2	7.3	6.7	8.1	8.9	8.0	9.4	8.5	9.3	8.7	8.8
5/13	5.4	5.4	7.5	6.9	8.4	9.2	8.1	9.6	8.6	9.5	8.7	8.8
5/14	5.6	5.6	7.9	7.3	8.9	9.7	8.4	9.9	8.9	9.7	8.6	8.8
5/15	5.7	5.6	8.1	7.4	9.2	10.0	8.5	10.0	9.1	9.8	8.3	8.5
5/16	6.0	5.9	8.4	7.9	9.6	10.5	8.5	10.2	9.2	9.9	8.3	8.5
5/17	5.6	6.0	8.1	7.6	9.4	9.8	8.1	9.5	8.7	9.2	7.5	7.8
5/18	4.8	6.0	7.5	7.0	8.3	8.8	8.0	9.0	8.5	8.8	6.8	7.1
5/19	5.1	5.6	7.3	6.8	7.7	8.1	7.6	8.5	8.0	8.6	6.7	6.9
5/20	5.0	5.9	7.0	6.6	7.4	7.8	7.7	8.3	8.0	8.5	7.0	7.2
5/21	5.6	5.9	7.2	6.8	7.5	7.9	7.6	8.4	8.0	8.5	7.4	7.5
5/22	6.2	5.4	6.1	5.9	6.7	6.9	7.0	7.6	7.5	7.7	8.4	8.4
5/23	5.5	6.2	7.3	6.8	7.1	7.5	7.9	8.5	8.2	8.7	8.0	8.1
5/24	5.4	6.9	7.5	7.2	7.8	8.0	7.8	8.5	8.1	8.4	7.4	7.6
5/25	5.4	7.3	7.8	8.1	8.6	8.8	8.3	9.1	8.6	8.9	7.6	7.8
5/26	6.0	7.3	8.3	8.5	9.2	9.8	10.1	10.7	10.2	11.1	8.3	8.4
5/27	5.4	6.7	7.7	8.0	9.1	9.4	10.0	10.7	10.5	11.2	7.8	8.2
5/28	5.1	6.1	7.4	7.4	8.4	8.8	9.1	10.2	9.8	10.4	7.0	7.3
5/29	6.0	6.4	8.2	8.0	8.9	9.5	9.8	10.5	10.2	11.0	7.7	7.8
5/30	6.6	6.5	8.9	8.3	9.8	10.4	10.3	11.4	10.8	11.5	8.5	8.7
5/31	7.2	6.7	9.5	9.0	10.6	11.5	11.0	12.2	11.3	12.3	9.0	9.1

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
6/1	7.6	7.0	9.9	9.7	11.7	12.6	11.3	12.8	11.5	12.6	9.2	9.4
6/2	7.8	7.0	10.5	10.5	12.8	13.7	11.8	13.4	12.2	13.3	9.0	9.3
6/3	7.8	6.7	10.4	9.8	12.9	13.9	11.7	13.3	12.2	13.2	8.8	9.0
6/4	7.3	6.1	9.5	8.5	11.3	12.2	10.8	12.3	11.5	12.4	8.7	9.0
6/5	6.4	6.1	8.4	7.5	9.3	9.8	10.0	11.0	10.6	11.0	7.8	8.2
6/6	5.8	6.1	8.0	7.5	8.5	8.8	9.5	10.3	10.2	10.7	7.0	7.3
6/7	6.1	6.2	7.8	7.5	8.5	8.9	9.3	10.2	10.1	10.8	7.8	8.0
6/8	6.3	6.4	8.2	7.6	8.8	9.3	9.6	10.5	10.3	11.1	8.4	8.7
6/9	6.6	6.3	8.6	8.0	9.3	10.0	9.9	11.2	10.6	11.4	8.8	9.0
6/10	6.7	6.3	8.4	7.9	9.1	9.6	9.7	10.7	10.3	11.0	9.0	9.2
6/11	6.7	6.3	8.4	7.7	9.0	9.4	9.7	10.6	10.2	10.8	8.4	8.8
6/12	7.6	6.4	9.4	8.7	10.0	10.8	9.5	11.1	10.2	11.1	9.5	9.5
6/13	7.3	6.7	9.3	8.4	10.3	10.8	9.5	11.0	10.2	10.7	9.5	9.8
6/14	7.1	6.6	9.3	8.5	10.0	10.6	9.4	10.9	10.0	10.5	8.3	8.6
6/15	7.2	6.4	9.0	8.3	10.0	10.7	9.4	11.0	10.1	10.8	8.2	8.5
6/16	7.8	6.5	9.6	9.0	10.6	11.4	10.0	11.5	10.3	11.2	9.4	9.5
6/17	8.2	6.5	9.6	9.2	11.4	12.2	10.2	12.1	10.6	11.3	10.1	10.2
6/18	8.4	6.5	9.7	9.3	11.7	12.5	10.3	12.2	10.7	11.4	10.4	10.5
6/19	8.0	6.6	9.4	8.8	11.3	12.1	10.1	11.8	10.4	11.2	10.3	10.5
6/20	9.0	6.9	10.1	9.7	12.0	13.1	10.5	12.5	10.8	11.8	10.9	11.0
6/21	9.4	6.4	10.5	10.1	13.0	14.0	11.0	13.1	9.9	10.6	11.3	11.3
6/22	9.6	6.0	10.1	9.4	13.0	14.2	11.1	13.4	10.1	10.3	11.4	11.5
6/23	9.8	5.9	9.9	9.2	12.5	13.6	10.8	13.1	11.0	10.9	11.4	11.6
6/24	9.8	6.0	8.9	9.2	12.5	13.7	10.8	13.0	11.5	11.9	11.6	11.8
6/25	10.5	6.3	8.2	9.5	12.9	14.2	11.0	13.3	11.8	12.2	12.3	12.5
6/26	11.0	6.5	8.6	9.9	13.6	15.0	11.4	13.9	12.1	12.6	12.8	13.0
6/27	11.5	6.5	8.9	10.3	14.2	15.7	11.6	14.3	11.5	12.3	13.2	13.3
6/28	12.0	6.8	8.8	10.1	14.4	16.0	12.1	14.7	10.3	10.7	13.5	13.5
6/29	12.4	6.9	8.6	9.8	13.5	15.0	12.3	14.9	10.3	10.6	14.0	13.9
6/30	12.3	6.3	8.2	9.5	12.9	14.1	11.7	14.2	10.9	11.0	14.1	14.1

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
7/1	11.3	6.0	7.3	8.0	11.4	12.5	10.8	12.8	10.8	10.8	13.7	13.7
7/2	10.8	6.1	7.2	7.7	10.1	11.0	10.2	12.0	10.9	11.2	13.0	13.1
7/3	11.7	6.2	7.7	8.7	10.9	12.1	10.7	12.7	11.4	12.0	14.0	14.0
7/4	12.1	6.2	7.7	8.9	11.8	13.1	11.1	13.2	11.7	12.2	15.2	15.1
7/5	12.4	6.1	7.6	8.6	11.5	12.5	10.9	12.7	11.5	11.8	14.9	14.8
7/6	12.7	6.3	7.8	8.9	11.8	13.1	11.2	13.1	11.7	12.1	15.5	15.3
7/7	11.7	6.0	7.1	7.8	10.6	11.5	10.5	12.2	11.2	11.4	14.8	14.7
7/8	11.9	5.9	6.9	7.5	9.5	10.3	10.0	11.5	10.7	11.2	14.4	14.2
7/9	12.7	6.2	7.5	8.5	10.7	11.8	10.7	12.3	11.3	12.0	15.8	15.4
7/10	13.2	6.3	7.8	8.9	11.7	12.9	11.2	13.1	11.9	12.4	16.7	16.4
7/11	13.1	6.1	7.5	8.7	11.8	13.0	11.3	13.2	11.9	12.4	16.8	16.4
7/12	13.2	6.2	7.6	8.8	11.7	12.9	11.3	13.2	12.0	12.5	16.9	16.5
7/13	13.6	6.3	7.7	8.9	11.9	13.2	11.5	13.4	12.1	12.6	17.3	16.8
7/14	13.5	6.2	7.6	8.8	11.8	13.0	11.5	13.3	12.1	12.6	17.4	16.9
7/15	13.0	6.2	7.1	7.7	10.5	11.3	10.8	12.3	11.4	11.8	16.3	15.8
7/16	11.9	6.4	7.3	7.7	9.6	10.3	10.4	11.5	11.0	11.4	15.2	14.7
7/17	12.1	6.5	7.7	8.3	10.2	11.3	10.9	12.2	11.4	12.1	15.4	15.0
7/18	12.7	6.5	7.9	9.0	11.1	12.2	11.2	12.8	11.9	12.5	16.9	16.2
7/19	13.1	6.6	7.9	9.1	11.8	12.9	11.5	13.1	12.1	12.7	17.6	16.8
7/20	12.4	6.4	7.4	8.1	10.9	11.7	11.1	12.5	11.4	12.2	16.9	16.1
7/21	11.9	6.3	7.3	7.9	10.1	11.1	10.9	12.1	11.2	12.2	16.8	16.1
7/22	12.3	6.4	7.5	8.5	10.6	11.7	11.2	12.6	11.5	12.7	16.7	16.0
7/23	12.4	6.5	7.6	8.7	11.2	12.2	11.4	12.8	11.6	12.8	17.0	16.3
7/24	13.0	6.6	7.9	9.1	11.7	12.9	11.8	13.3	11.9	13.3	17.8	17.0
7/25	13.2	6.7	8.0	9.2	12.0	13.2	12.0	13.6	12.1	13.4	18.5	17.6
7/26	13.4	6.6	8.0	9.2	12.2	13.3	12.1	13.6	12.2	13.5	18.8	17.8
7/27	13.6	6.7	8.0	9.2	12.2	13.4	12.2	13.7	12.3	13.6	18.9	17.9
7/28	13.5	6.7	7.9	9.0	12.0	13.2	12.2	13.7	12.3	13.2	18.6	17.4
7/29	13.6	6.7	8.0	9.2	12.1	13.3	12.4	13.9	12.4	13.3	18.8	17.3
7/30	14.2	7.0	8.3	9.5	12.5	13.7	12.6	14.3	12.7	13.6	19.6	18.0
7/31	14.4	7.2	8.3	9.0	12.0	12.9	12.5	13.9	12.6	13.2	19.1	17.6

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
8/1	14.6	7.2	8.3	9.0	11.3	12.4	12.3	13.8	12.7	13.6	18.1	17.3
8/2	15.1	7.2	8.5	9.5	11.9	13.0	12.6	14.1	12.9	14.2	18.9	17.9
8/3	15.3	7.2	8.4	9.4	12.1	13.2	12.8	14.3	13.1	14.2	19.5	18.4
8/4	15.3	7.2	8.5	9.6	12.1	13.4	13.0	14.5	13.2	14.2	19.9	18.5
8/5	14.9	7.1	8.3	9.2	11.9	13.0	12.9	14.4	13.3	14.3	19.7	18.6
8/6	14.4	7.2	8.3	8.9	11.2	12.1	12.6	13.9	13.1	14.1	19.1	18.3
8/7	13.3	7.0	8.1	8.6	10.3	10.9	12.1	13.2	12.9	13.5	17.7	16.6
8/8	12.3	6.8	7.7	8.2	9.4	9.8	11.1	11.9	12.1	13.0	16.4	15.7
8/9	12.8	7.0	7.7	8.5	9.5	10.3	11.8	12.3	12.7	13.4	16.9	
8/10	13.6	7.2	8.1	9.2	11.1	12.0	12.9	14.0	13.6	14.6	18.3	
8/11	14.3	7.6	8.5	9.6	11.8	12.8	13.4	14.6	13.9	14.7	19.6	
8/12	15.0	8.0	9.0	9.9	12.2	13.2	13.8	15.1	14.1	14.6	20.5	
8/13	15.4	8.3	9.2	10.1	12.5	13.4	14.1	15.4	14.5	14.7	20.7	
8/14	15.5	8.1	9.1	10.1	12.4	13.3	14.1	15.5	14.9	15.3	20.4	
8/15	15.6	8.0	9.0	10.0	12.3	13.3	14.1	15.5	15.1	15.8	20.5	
8/16	15.0	7.8	8.5	9.3	11.7	12.4	13.8	15.0	14.8	15.4	19.8	
8/17	13.2	7.5	8.0	8.5	10.3	10.8	13.2	13.8	14.1	14.6	17.7	
8/18	13.2	7.7	8.3	9.1	10.3	11.0	13.4	13.8	14.3	15.0	17.0	
8/19	13.4	7.8	8.4	9.1	11.0	11.8	13.8	14.7	14.8	15.5	17.9	
8/20	13.0	7.7	8.2	8.7	10.3	10.8	13.3	14.1	14.4	14.9	16.9	
8/21	12.6	7.6	8.1	8.6	9.8	10.3	13.2	13.7	14.2	14.9	16.2	
8/22	12.0	7.6	8.1	8.5	9.6	10.0	13.1	13.5	14.1	14.7	15.6	
8/23	11.6	7.5	8.1	8.7	9.6	10.3	13.3	13.6	14.2	15.0	15.8	
8/24	11.5	7.6	8.1	8.8	9.9	10.6	13.4	13.7	14.3	15.1	16.4	
8/25	11.9	7.7	8.3	9.0	10.3	10.9	13.6	14.1	14.6	15.3	16.8	
8/26	11.9	7.7	8.2	8.7	10.2	10.7	13.5	14.2	14.7	15.3	16.7	
8/27	11.6	7.6	8.2	8.7	9.9	10.3	13.2	13.8	14.5	14.9	16.0	
8/28	11.4	7.7	8.3	8.9	9.9	10.5	13.5	13.7	14.6	15.2	16.2	
8/29	11.7	7.8	8.4	9.1	10.3	11.0	13.7	14.2	14.9	15.5	17.1	
8/30	11.5	7.5	8.1	8.6	10.1	10.6	13.4	14.0	14.5	15.0	16.6	
8/31	10.9	8.8	8.7	8.7	9.4	9.8	12.2	13.1	13.8	14.3	15.2	

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
9/1	10.2	9.6	9.8	10.0	10.0	10.2	11.8	12.0	13.3	13.9	14.6	
9/2	10.6	9.9	10.1	10.4	10.7	10.9	12.3	12.7	13.7	14.3	15.4	
9/3	10.9	9.9	10.2	10.4	10.9	11.2	12.6	13.0	13.9	14.5	15.9	
9/4	11.2	10.0	10.3	10.6	11.2	11.4	12.8	13.3	14.1	14.6	15.9	
9/5	12.0	10.2	10.5	10.8	11.6	12.0	13.2	14.0	14.5	15.2	17.0	
9/6	12.4	10.1	10.4	10.8	11.6	12.1	13.3	14.1	14.6	15.3	17.6	
9/7	11.9	10.2	10.5	10.8	11.4	11.7	13.1	13.7	14.5	15.1	17.5	
9/8	12.3	10.3	10.7	11.2	11.9	12.3	13.5	14.4	14.9	15.6	18.2	
9/9	12.2	10.4	10.7	11.0	11.6	12.0	13.3	14.0	14.7	15.4	17.9	
9/10	11.8	9.6	10.0	10.2	11.1	11.5	12.7	13.6	14.4	15.0	16.7	
9/11	12.1	10.4	10.6	10.7	10.9	11.0	12.5	13.0	14.2	15.0	16.4	
9/12	12.1	10.4	10.7	10.9	11.4	11.6	12.9	13.4	14.4	14.9	16.1	
9/13	11.6	10.2	10.5	10.7	11.1	11.3	12.7	13.0	14.2	14.7	15.6	
9/14	11.0	9.8	10.2	10.4	10.9	11.0	12.6	12.7	13.7	14.2	15.1	
9/15	11.0	9.2	9.6	9.9	10.6	10.9	12.6	13.0	13.1	13.5	15.1	
9/16	10.0	9.1	9.3	9.5	9.7	9.9	12.2	12.4	12.7	13.0	14.4	
9/17	10.1	9.4	9.6	9.7	9.9	10.0	12.3	12.5	12.8	13.0	13.8	13.5
9/18	10.1	9.2	9.9	10.3	10.9	11.1	12.3	12.7	12.9	13.2	12.7	12.8
9/19	9.4	9.1	9.5	9.7	10.2	10.4	11.9	12.4	12.6	13.0	12.0	12.1
9/20	9.4	9.0	9.4	9.7	10.3	10.5	11.9	12.4	12.6	13.0	12.1	12.1
9/21	9.2	9.1	9.4	9.6	9.9	10.1	11.9	12.3	12.7	12.9	12.5	12.6
9/22	9.7	9.1	9.4	9.6	10.2	10.4	11.9	12.4	12.6	12.9	12.8	12.8
9/23	10.0	9.2	9.5	9.7	10.2	10.4	12.1	12.6	12.8	13.2	13.4	13.4
9/24	11.7	9.3	9.5	9.7	10.1	10.3	12.0	12.4	12.9	13.1	13.9	13.7
9/25	13.3	9.2	9.6	9.8	10.2	10.4	12.1	12.6	12.9	13.2	14.3	14.0
9/26	12.0	7.4	8.0	8.2	8.8	9.0	10.5	11.3	12.8	12.5	14.0	13.4
9/27	10.0	8.1	8.5	8.6	8.8	8.9	10.6	10.8	12.7	12.1	13.2	12.8
9/28	9.0	9.0	9.5	9.7	9.9	9.9	11.2	11.6	12.7	12.5	11.7	11.8
9/29	8.8	9.0	9.3	9.3	10.0	10.1	11.2	11.5	12.5	12.4	10.9	11.1
9/30	9.3	8.9	9.5	9.7	10.2	10.3	11.1	11.7	12.3	12.4	11.2	11.4

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
10/1	8.5	8.5	8.9	8.9	9.7	9.9	10.9	11.3	12.1	12.0	11.0	11.1
10/2	8.4	8.3	8.7	8.8	9.5	9.7	10.9	11.3	12.0	12.0	11.1	11.2
10/3	8.9	8.3	8.7	8.9	9.6	9.8	11.1	11.6	11.9	12.1	11.4	11.5
10/4	8.6	8.5	8.7	8.9	9.5	9.7	11.2	11.7	12.0	12.2	11.9	12.0
10/5	8.2	8.5	8.8	9.0	9.3	9.3	10.8	11.2	11.8	11.8	11.2	11.4
10/6	8.0	8.2	8.4	8.6	9.1	9.2	10.8	11.0	11.9	11.7	10.6	10.8
10/7	7.4	8.0	8.2	8.3	8.7	8.8	10.5	10.8	11.7	11.7	10.6	10.8
10/8	6.8	8.2	8.2	8.1	8.2	8.2	10.3	10.3	11.6	11.2	9.9	10.2
10/9	6.8	8.5	8.6	8.5	8.4	8.3	10.3	10.2	11.5	11.1	9.1	9.6
10/10	7.2	8.4	8.6	8.6	8.8	8.8	10.2	10.5	11.3	11.2	9.3	9.7
10/11	6.8	8.4	8.4	8.4	8.4	8.4	10.1	10.1	11.3	11.0	9.1	9.4
10/12	6.3	7.8	8.0	8.0		8.0	9.8	9.6	11.0	10.5	8.6	8.9
10/13	6.2	7.5	7.6	7.6		7.9	9.6	9.8	11.0	10.7	8.6	9.0
10/14	6.5	7.6	7.8			8.0	9.7	9.7	11.0	10.6	8.5	8.9
10/15	7.1	7.7	8.1			8.5	9.8	10.1	10.8	10.8	8.8	9.1
10/16	7.5	7.8	8.2			9.0	10.0	10.4	10.9	11.0	9.5	9.7
10/17	7.6	7.6	8.1			9.1	9.9	10.4	10.5	10.8	9.8	10.0
10/18	7.6	7.0	7.6			8.8	9.8	10.2	10.4	10.7	9.8	10.0
10/19	7.5	6.8	7.2			8.3	10.0	10.3	10.7	10.8	9.9	10.1
10/20	7.7	6.8	7.3			8.3	10.0	10.3	10.7	10.9	10.0	10.3
10/21	7.6	6.9	7.3			8.3	10.0	10.3	10.8	11.0	9.7	10.0
10/22	7.8	7.0	7.8			9.0	9.9	10.5	10.6	11.0	10.1	10.4
10/23	7.4	6.8	7.4			8.6	9.8	10.1	10.6	10.7	9.5	9.8
10/24	7.2	6.8	7.3			8.3	9.7	10.0	10.6	10.7	9.1	9.6
10/25	7.0	6.8	7.2			8.1	9.4	9.7	10.2	10.4	8.8	9.3
10/26	7.0	6.9	7.5			8.3	9.3	9.7	10.0	10.2	8.6	9.0
10/27	6.9	6.9	7.4			8.4	9.1	9.6	9.6	9.9	8.4	8.7
10/28	7.6	7.2	8.3			8.8	9.3	9.7	9.6	10.0	8.5	8.8
10/29	7.0	6.9	7.7			8.8	9.0	9.6	9.2	9.6	8.6	8.7
10/30	6.0	6.6	6.7			7.1	7.8	8.0	8.9	8.8	8.5	7.6
10/31	5.9	6.7	6.8			6.6	7.3	7.3	8.5	8.1	8.7	7.0

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
11/1	6.1	6.9	7.3			7.3	7.3	7.5	7.4	7.7	8.4	7.0
11/2	6.5	7.0	7.4			7.6	7.6	8.0	7.7	8.2	8.7	7.6
11/3	7.0	7.0	7.4			7.8	7.8	8.3	8.1	8.6	9.1	8.2
11/4	7.3	7.1	7.5			8.1	8.0	8.6	8.4	8.9	9.5	8.9
11/5	6.5	7.0	7.3			7.7	7.9	8.4	8.3	8.7	8.5	8.1
11/6	5.8	6.7	6.7			7.2	7.5	7.9	8.5	8.7	7.9	7.5
11/7	5.0	6.6	6.4			6.7	7.0	7.5	8.2	8.4	7.5	7.1
11/8	5.2	6.7				6.8	7.1	7.4	8.2	8.4	7.3	6.9
11/9	5.2	7.0				7.1	7.4	7.7	8.1	8.4	7.6	7.1
11/10	5.1	6.8				6.8	7.0	7.5	7.9	8.2	7.3	6.9
11/11	5.4	7.2				7.4	7.5	7.8	7.9	8.3	7.5	7.1
11/12	5.8	7.4				8.6	8.5	8.9	8.2	8.7	7.0	7.0
11/13	6.0	6.8				8.0	8.0	8.6	7.9	8.4	6.8	7.1
11/14	6.9	6.6				8.0	8.0	8.5	7.7	8.4	7.2	7.7
11/15	6.6	7.2				8.3	8.3	8.8	7.9	8.5	7.7	8.0
11/16	5.2	6.8				7.5	7.5	7.8	7.4	7.8	6.8	6.6
11/17	4.5	6.6				6.9	7.0	7.1	7.3	7.4	5.7	5.9
11/18	4.8	6.4				6.8	7.0	7.0	7.3	7.5	5.5	5.8
11/19	4.9	6.3				6.8	7.0	7.2	7.2	7.5	5.6	6.0
11/20	4.7	6.3				6.5	6.8	7.0	7.1	7.4	5.7	6.1
11/21	4.5	6.0				6.1	6.6	6.7	7.0	7.2	5.5	5.9
11/22	4.6	5.9				5.8	6.4	6.4	7.0	7.1	5.4	5.8
11/23	3.9	6.0				5.8	6.1	6.5	6.8	7.1	5.9	6.4
11/24	3.9	6.2				6.3	6.4	6.4	6.7	6.9	5.4	5.9
11/25	4.1	6.3				6.6	6.7	7.0	6.8	7.1	5.8	6.3
11/26	4.2	6.3				7.1	7.1	7.5	6.9	7.4	6.0	6.3
11/27	5.0	6.0				7.0	7.0	7.5	6.9	7.4	6.4	6.7
11/28	5.7	6.1				7.3	7.3	7.8	6.9	7.6	6.7	7.0
11/29	6.0	6.4				7.4	7.4	7.9	6.9	7.8	6.9	7.3
11/30	6.1	6.4				7.4	7.4	7.9	6.8	7.7	7.1	7.4

	Sultan River										Skykomish River	
DATE	RM 18.2 (SFK)	RM 15.8	RM 15.5	RM 14.3	RM 11.3	RM 9.8	RM 9.6	RM 4.9	RM 4.4	RM 0.2	RM 14.1	RM 13.2
12/1	6.2	6.4				7.4	7.3	7.8	6.8	7.7	7.3	7.5
12/2	5.8	6.2				7.2	7.1	7.7	6.8	7.4	7.8	7.5
12/3	5.0	6.1				6.7	6.7	7.0	6.6	6.9	7.0	6.5
12/4	4.1	5.4				6.0	6.2	6.6	6.5	6.8	5.4	5.8
12/5	3.7	5.2				5.2	5.6	5.7	6.3	6.5	4.5	5.0
12/6	3.6	5.3				5.3	5.6	5.8	6.3	6.5	4.6	5.1
12/7	3.9	5.4				5.8	5.9	6.4	6.3	6.6	5.1	5.6
12/8	3.9	5.4				6.0	6.0	6.6	6.2	6.5	5.4	5.8
12/9	3.2	5.1				5.1	5.2	5.7	5.9	6.1	4.8	5.1
12/10	2.9	5.2				4.9	5.1	5.3	5.9	6.0	4.4	4.7
12/11	3.2	5.4				5.4	5.4	5.9	6.0	6.2	4.8	5.0
12/12	3.5	5.1				5.6	5.5	5.9	6.0	6.0	4.7	4.9
12/13	3.6	5.1				5.5	5.5	5.8	5.9	6.0	4.7	4.9
12/14	3.3	4.9				5.3	5.4	5.7	5.8	5.9	4.8	5.2
12/15	3.1	4.8				4.9	5.1	5.5	5.7	5.7	4.4	4.8
12/16	2.7	4.8				4.3	4.7	5.1	5.5	5.6	4.3	4.8
12/17	2.7	4.6				4.4	4.8	4.9	5.4	5.5	4.2	4.3
12/18	2.1	4.7				4.2	4.5	5.0	5.3	5.4	3.6	3.8
12/19	2.8	4.6				4.6	4.6	4.8	5.2	5.3	3.6	3.8
12/20	3.0	4.4				4.6	4.7	4.7	5.1	5.2	3.9	4.3
12/21	3.2	4.5				4.8	4.9	5.1	5.2	5.3	4.3	4.7
12/22	3.3	4.5				5.1	5.1	5.6	5.4	5.5	4.8	5.0
12/23	3.0	4.2				4.8	4.7	5.4	5.2	5.3	4.7	4.8
12/24	2.6	4.0				4.3	4.3	4.8	4.8	4.9	4.2	4.4
12/25	2.0	3.9				3.4	3.6	4.0	4.5	4.6	3.7	3.9
12/26	1.9	3.6				3.1	3.5	3.6	4.3	4.3	3.0	3.5
12/27	1.3	3.4				2.2	3.1	2.7	4.1	4.0	2.0	2.0
12/28	1.2	3.4				2.3	3.2	2.9	4.1	4.1	1.7	1.2
12/29	1.2	3.4				2.4	3.2	2.9	4.1	4.0	2.0	1.0
12/30	0.8	3.2				1.7	2.8	2.5	3.8	3.8	1.5	1.4
12/31	0.9	3.1				2.1	3.0	2.8	3.8	3.8	1.8	1.5

APPENDIX D

Seven-Day Average of the Daily Maximum (7-DAD Max) Water Temperature in Tabular Format

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
1/1	4.0	4.7				5.7	5.7	6.1	5.5	5.4	4.8	5.1
1/2	4.1	4.7				5.9	5.9	6.3	5.6	5.5	4.9	5.2
1/3	4.2	4.7				6.0	6.0	6.5	5.6	5.6	5.1	5.4
1/4	4.2	4.7				6.0	6.0	6.5	5.6	5.5	5.2	5.5
1/5	4.2	4.6				5.9	5.9	6.4	5.5	5.5	5.3	5.5
1/6	4.2	4.5				5.8	5.7	6.3	5.3	5.3	5.3	5.5
1/7	4.2	4.5				5.8	5.6	6.2	5.2	5.3	5.4	5.5
1/8	4.2	4.4				5.7	5.6	6.2	5.1	5.2	5.4	5.5
1/9	4.2	4.4				5.9	5.7	6.3	5.1	5.2	5.4	5.5
1/10	4.2	4.5				6.0	5.8	6.4	5.3	5.2	5.4	5.5
1/11	4.2	4.4				6.0	5.8	6.4	5.3	5.2	5.4	5.5
1/12	4.2	4.4				6.1	5.9	6.5	5.3	5.2	5.4	5.5
1/13	4.2	4.5				6.1	6.0	6.6	5.3	5.3	5.3	5.5
1/14	4.2	4.5				6.1	6.0	6.6	5.3	5.3	5.3	5.5
1/15	4.2	4.5				6.1	6.0	6.7	5.3	5.3	5.3	5.5
1/16	4.1	4.4				5.8	5.8	6.5	5.2	5.2	5.3	5.4
1/17	4.0	4.3				5.6	5.5	6.3	4.9	5.0	5.2	5.3
1/18	4.0	4.3				5.5	5.5	6.2	4.8	4.9	5.3	5.4
1/19	4.0	4.2				5.3	5.3	6.1	4.8	4.9	5.3	5.3
1/20	3.8	4.2				5.0	5.0	5.9	4.7	4.8	5.1	5.2
1/21	3.7	4.2				4.8	4.9	5.6	4.6	4.7	4.9	5.0
1/22	3.5	4.1				4.6	4.6	5.4	4.5	4.7	4.8	4.9
1/23	3.4	4.1				4.5	4.6	5.2	4.5	4.6	4.7	4.7
1/24	3.3	4.0				4.4	4.5	5.0	4.4	4.6	4.6	4.7
1/25	3.1	4.0				4.2	4.3	4.9	4.4	4.5	4.5	4.6
1/26	3.1	4.0				4.2	4.3	4.8	4.3	4.5	4.4	4.5
1/27	3.2	4.0				4.4	4.4	4.9	4.3	4.5	4.6	4.6
1/28	3.3	4.0				4.5	4.4	5.0	4.3	4.5	4.8	4.7
1/29	3.4	4.0				4.7	4.6	5.2	4.3	4.5	5.0	4.8
1/30	3.6	4.0				4.9	4.7	5.4	4.4	4.5	5.2	5.0
1/31	3.6	4.0				5.0	4.8	5.5	4.4	4.6	5.4	5.1

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
2/1	3.6	4.0				5.1	4.9	5.5	4.5	4.6	5.5	5.2
2/2	3.5	4.1				5.2	5.0	5.7	4.7	4.7	5.5	5.3
2/3	3.5	4.1				5.3	5.2	5.8	4.9	4.8	5.5	5.4
2/4	3.4	4.1				5.3	5.2	5.8	5.0	4.9	5.5	5.4
2/5	3.2	4.0				5.2	5.2	5.8	5.0	5.0	5.3	5.3
2/6	3.1	4.0				5.1	5.1	5.6	5.0	4.9	5.1	5.2
2/7	3.0	3.9				5.0	5.0	5.5	4.9	4.8	4.9	5.0
2/8	2.9	3.9				4.9	4.9	5.4	4.8	4.7	4.7	4.8
2/9	2.6	3.7				4.5	4.5	5.0	4.5	4.5	4.2	4.5
2/10	2.2	3.5				3.9	4.1	4.5	4.2	4.2	3.5	3.9
2/11	1.9	3.3				3.5	3.8	4.1	3.8	3.9	3.0	3.5
2/12	1.6	3.1				3.1	3.4	3.7	3.6	3.6	2.5	3.1
2/13	1.4	2.9				2.7	3.1	3.4	3.4	3.4	2.1	2.8
2/14	1.4	2.8				2.6	3.0	3.3	3.2	3.3	2.1	2.8
2/15	1.4	2.7				2.6	2.9	3.2	3.1	3.2	2.2	2.7
2/16	1.6	2.6				2.6	2.9	3.3	3.1	3.2	2.5	2.9
2/17	1.8	2.7				2.9	3.1	3.6	3.2	3.3	3.1	3.3
2/18	1.9	2.7				3.2	3.2	3.8	3.3	3.4	3.5	3.7
2/19	2.1	2.8				3.5	3.5	4.0	3.5	3.6	4.0	4.0
2/20	2.3	2.8				3.8	3.8	4.3	3.8	3.8	4.3	4.3
2/21	2.4	2.8				3.9	3.9	4.5	3.9	3.8	4.4	4.4
2/22	2.5	2.8				4.0	3.9	4.6	4.1	3.9	4.5	4.5
2/23	2.4	2.8				4.0	3.9	4.6	4.1	3.9	4.4	4.4
2/24	2.5	2.8				4.0	3.9	4.6	4.2	4.0	4.4	4.4
2/25	2.6	2.8				4.1	4.0	4.7	4.3	4.1	4.5	4.5
2/26	2.7	2.8				4.2	4.0	4.8	4.3	4.1	4.7	4.7
2/27	2.8	2.8				4.2	4.0	4.9	4.2	4.1	4.9	4.8
2/28	2.9	2.8				4.3	4.0	5.0	4.3	4.1	5.1	5.0

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
3/1	3.0	2.8				4.4	4.1	5.1	4.3	4.2	5.3	5.1
3/2	3.1	2.9				4.5	4.1	5.2	4.3	4.2	5.5	5.3
3/3	3.2	2.9				4.6	4.2	5.3	4.3	4.2	5.7	5.4
3/4	3.2	2.9				4.6	4.2	5.3	4.3	4.2	5.8	5.5
3/5	3.2	2.9				4.5	4.1	5.2	4.2	4.2	5.7	5.5
3/6	3.3	2.9				4.5	4.1	5.1	4.2	4.2	5.8	5.5
3/7	3.2	2.9				4.5	4.1	5.1	4.1	4.2	5.8	5.5
3/8	3.2	2.9				4.5	4.1	5.0	4.0	4.2	5.9	5.5
3/9	3.2	2.9				4.5	4.1	5.0	4.0	4.2	6.0	5.6
3/10	3.3	3.0				4.6	4.1	5.0	3.9	4.2	6.1	5.7
3/11	3.3	3.0				4.6	4.1	5.0	3.9	4.2	6.1	5.6
3/12	3.3	3.1				4.6	4.1	4.9	3.9	4.1	6.1	5.6
3/13	3.3	3.1				4.7	4.1	4.9	3.9	4.2	6.3	5.7
3/14	3.5	3.3				4.8	4.1	5.0	4.0	4.3	6.4	5.8
3/15	3.6	3.3				4.9	4.2	5.1	4.1	4.4	6.5	5.8
3/16	3.6	3.4				5.0	4.2	5.2	4.2	4.4	6.5	5.9
3/17	3.6	3.5				4.9	4.2	5.2	4.3	4.5	6.5	5.9
3/18	3.5	3.5				4.9	4.2	5.2	4.4	4.6	6.5	6.0
3/19	3.4	3.6				5.0	4.4	5.3	4.6	4.9	6.5	6.0
3/20	3.4	3.6				4.9	4.5	5.3	4.8	5.1	6.4	6.0
3/21	3.2	3.6				4.8	4.4	5.3	4.9	5.2	6.2	6.0
3/22	3.2	3.6				4.7	4.5	5.4	5.1	5.4	6.1	6.0
3/23	3.2	3.6				4.6	4.6	5.4	5.3	5.6	6.0	6.0
3/24	3.4	3.7				4.7	4.8	5.5	5.5	6.0	6.3	6.3
3/25	3.4	3.7				4.8	4.9	5.7	5.7	6.3	6.5	6.5
3/26	3.5	3.7				4.8	4.9	5.7	5.7	6.4	6.6	6.6
3/27	3.6	3.8				4.9	5.0	5.8	5.6	6.3	6.6	6.6
3/28	3.8	3.8				5.2	5.1	5.9	5.7	6.4	6.8	6.8
3/29	3.9	3.9				5.4	5.2	6.1	5.6	6.4	7.2	7.0
3/30	4.0	3.9				5.7	5.4	6.3	5.5	6.4	7.4	7.2
3/31	4.0	4.0				5.9	5.3	6.3	5.4	6.2	7.4	7.1

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
4/1	4.1	4.0	5.5	5.1	5.4	6.1	5.5	6.4	5.3	6.1	7.4	7.1
4/2	4.3	4.1	5.6	5.3	5.5	6.4	5.6	6.5	5.2	6.1	7.6	7.3
4/3	4.4	4.2	5.7	5.4	5.7	6.6	5.7	6.7	5.3	6.3	7.9	7.5
4/4	4.3	4.2	5.6	5.3	5.7	6.4	5.6	6.6	5.3	6.2	7.8	7.5
4/5	4.0	4.2	5.4	5.2	5.5	6.2	5.4	6.5	5.2	6.1	7.4	7.2
4/6	3.9	4.2	5.3	5.1	5.3	5.9	5.3	6.3	5.2	6.0	7.2	7.0
4/7	3.7	4.2	5.0	5.0	5.2	5.7	5.3	6.2	5.3	6.0	7.0	6.8
4/8	3.7	4.2	5.0	5.0	5.1	5.7	5.2	6.1	5.3	6.0	6.9	6.8
4/9	3.8	4.2	5.1	5.1	5.1	5.6	5.3	6.2	5.5	6.0	7.0	6.8
4/10	3.8	4.2	5.2	5.1	5.1	5.7	5.4	6.3	5.7	6.2	7.1	7.0
4/11	4.1	4.2	5.5	5.4	5.4	6.1	5.8	6.6	5.9	6.6	7.5	7.3
4/12	4.4	4.3	5.9	5.7	5.8	6.7	6.2	7.0	6.2	7.0	8.1	7.8
4/13	4.6	4.4	6.3	6.1	6.3	7.2	6.7	7.5	6.5	7.6	8.6	8.3
4/14	4.9	4.5	6.8	6.6	6.8	7.9	7.2	8.1	6.9	8.1	9.0	8.7
4/15	5.1	4.6	7.2	6.9	7.3	8.6	7.7	8.6	7.3	8.7	9.1	9.0
4/16	5.1	4.6	7.2	7.0	7.7	9.1	8.1	9.0	7.7	9.1	9.1	9.0
4/17	5.2	4.6	7.1	7.0	7.8	9.1	8.3	9.2	7.8	9.3	9.0	9.0
4/18	5.2	4.7	7.0	6.9	7.9	9.2	8.5	9.4	8.0	9.4	8.9	8.9
4/19	5.1	4.6	6.7	6.7	7.7	8.8	8.3	9.3	8.1	9.4	8.6	8.6
4/20	5.1	4.6	6.8	6.6	7.6	8.8	8.3	9.3	8.0	9.3	8.3	8.4
4/21	5.1	4.6	6.6	6.4	7.4	8.4	8.1	9.0	8.0	9.1	8.2	8.3
4/22	5.0	4.5	6.4	6.2	7.2	8.1	8.1	8.8	7.9	9.0	8.0	8.1
4/23	4.9	4.5	6.5	6.1	7.0	7.9	7.8	8.7	7.8	8.8	7.9	8.0
4/24	4.9	4.6	6.8	6.2	7.1	8.0	7.8	8.7	7.8	8.8	7.9	8.0
4/25	4.9	4.6	7.2	6.4	7.3	8.2	7.8	8.7	7.9	8.8	7.9	8.0
4/26	5.1	4.6	7.7	6.8	7.8	8.8	8.1	8.9	8.1	9.0	8.0	8.1
4/27	4.9	4.7	7.6	6.7	7.8	8.7	8.1	9.0	8.2	9.1	8.1	8.2
4/28	5.0	4.8	7.7	6.8	7.9	9.0	8.1	9.1	8.3	9.1	8.0	8.1
4/29	5.0	4.9	7.7	6.8	7.9	9.0	8.1	9.1	8.3	9.1	8.0	8.1
4/30	5.1	4.9	7.7	6.9	8.0	9.0	8.2	9.1	8.3	9.1	8.0	8.1

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
5/1	5.2	5.0	7.8	7.1	8.2	9.2	8.3	9.3	8.3	9.2	8.1	8.2
5/2	5.3	5.1	7.8	7.1	8.2	9.3	8.5	9.4	8.6	9.4	8.2	8.3
5/3	5.2	5.2	7.6	7.0	8.1	9.1	8.5	9.4	8.7	9.4	8.1	8.2
5/4	5.2	5.2	7.5	6.9	8.0	9.0	8.5	9.3	8.6	9.4	7.9	8.0
5/5	5.3	5.2	7.5	6.9	7.9	8.9	8.5	9.2	8.6	9.6	7.9	8.0
5/6	5.4	5.2	7.5	6.9	7.9	9.0	8.5	9.2	8.6	9.6	8.1	8.2
5/7	5.6	5.2	7.7	7.0	8.1	9.2	8.6	9.4	8.6	9.9	8.5	8.5
5/8	5.7	5.3	7.7	7.0	8.2	9.3	8.7	9.5	8.8	10.0	8.6	8.6
5/9	5.8	5.3	7.8	7.1	8.3	9.4	8.8	9.5	8.7	10.1	8.7	8.7
5/10	6.0	5.3	8.0	7.3	8.6	9.8	8.9	9.7	8.6	10.4	9.0	9.0
5/11	6.4	5.4	8.5	7.8	9.1	10.5	9.3	10.1	8.9	10.9	9.3	9.3
5/12	6.7	5.5	8.8	8.2	9.7	11.1	9.6	10.6	9.2	11.2	9.6	9.6
5/13	7.0	5.7	9.3	8.7	10.3	11.9	9.9	11.1	9.6	11.7	9.8	9.7
5/14	7.1	5.9	9.4	8.9	10.6	12.1	9.9	11.2	9.7	11.7	9.6	9.7
5/15	6.8	6.1	9.2	8.8	10.4	11.9	9.7	11.2	9.6	11.5	9.3	9.4
5/16	6.8	6.2	9.2	8.7	10.3	11.7	9.6	11.0	9.5	11.3	9.1	9.1
5/17	6.6	6.2	8.9	8.5	10.0	11.2	9.3	10.8	9.4	11.0	8.8	8.8
5/18	6.6	6.3	8.7	8.2	9.6	10.6	9.0	10.5	9.2	10.6	8.6	8.7
5/19	6.7	6.3	8.2	7.8	9.1	9.9	8.5	9.9	8.8	10.0	8.6	8.6
5/20	6.5	6.4	7.9	7.4	8.4	9.1	8.4	9.6	8.6	9.6	8.5	8.5
5/21	6.3	6.5	7.7	7.3	8.1	8.7	8.2	9.3	8.5	9.4	8.3	8.3
5/22	6.4	6.7	7.8	7.5	8.2	8.7	8.4	9.2	8.5	9.4	8.4	8.4
5/23	6.6	6.9	8.1	7.9	8.5	9.1	8.7	9.6	8.9	9.8	8.6	8.6
5/24	6.7	7.1	8.1	8.1	8.7	9.3	9.1	9.9	9.2	10.2	8.8	8.8
5/25	6.4	7.1	8.2	8.1	8.8	9.4	9.3	10.1	9.4	10.5	8.6	8.6
5/26	6.3	7.2	8.7	8.6	9.3	10.1	9.9	10.7	9.9	11.2	8.7	8.7
5/27	6.6	7.2	9.0	8.9	9.8	10.6	10.3	11.1	10.3	11.6	8.7	8.8
5/28	7.1	7.1	9.5	9.4	10.5	11.6	11.0	11.9	10.8	12.5	9.1	9.2
5/29	7.6	7.1	10.0	9.9	11.3	12.5	11.5	12.6	11.2	13.3	9.4	9.5
5/30	7.9	7.0	10.4	10.3	12.0	13.2	11.8	13.0	11.5	13.7	9.6	9.7
5/31	8.4	7.0	10.9	10.7	12.8	14.3	12.2	13.6	11.9	14.1	9.8	9.8

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
6/1	8.8	7.0	11.2	10.9	13.2	14.8	12.5	14.0	12.1	14.5	10.1	10.1
6/2	8.6	6.9	11.0	10.6	13.1	14.5	12.3	13.9	12.1	14.3	10.0	10.1
6/3	8.4	6.9	10.7	10.3	12.8	14.1	12.1	13.6	12.0	14.0	9.7	9.8
6/4	8.1	6.8	10.3	9.9	12.3	13.6	11.8	13.2	11.8	13.7	9.6	9.7
6/5	7.8	6.6	10.0	9.4	11.7	12.9	11.5	12.8	11.6	13.3	9.3	9.5
6/6	7.4	6.5	9.6	8.8	11.0	12.1	11.2	12.4	11.3	12.9	9.3	9.4
6/7	7.1	6.4	9.2	8.5	10.3	11.2	10.7	11.9	11.0	12.4	9.2	9.3
6/8	7.1	6.4	9.1	8.4	9.9	10.8	10.6	11.5	10.7	12.1	9.1	9.3
6/9	7.4	6.5	9.3	8.8	10.2	11.2	10.7	11.7	10.7	12.3	9.4	9.5
6/10	7.6	6.5	9.5	8.9	10.5	11.5	10.7	11.8	10.7	12.3	9.9	10.0
6/11	7.7	6.6	9.7	9.0	10.6	11.6	10.6	11.9	10.7	12.1	9.8	9.9
6/12	8.0	6.6	9.8	9.1	10.7	11.8	10.5	11.9	10.7	12.0	9.8	9.9
6/13	8.2	6.6	10.0	9.4	11.0	12.1	10.6	12.0	10.7	12.1	9.9	10.1
6/14	8.6	6.6	10.3	9.8	11.6	12.8	10.8	12.3	10.8	12.3	10.2	10.3
6/15	9.1	6.6	10.6	10.3	12.2	13.5	11.0	12.7	10.9	12.7	10.5	10.6
6/16	9.1	6.7	10.5	10.2	12.3	13.5	11.0	12.8	10.9	12.6	10.5	10.7
6/17	9.6	6.7	10.8	10.7	12.9	14.3	11.2	13.2	11.0	13.0	10.8	10.9
6/18	10.2	6.8	11.1	11.2	13.7	15.2	11.6	13.7	11.1	13.1	11.4	11.4
6/19	10.6	6.8	11.3	11.6	14.3	15.9	11.9	14.1	11.2	13.0	11.9	11.9
6/20	10.9	6.7	11.3	11.6	14.6	16.3	11.9	14.3	11.3	12.8	12.2	12.2
6/21	11.1	6.7	11.2	11.6	14.8	16.5	11.9	14.4	11.5	12.8	12.4	12.4
6/22	11.4	6.7	11.0	11.6	15.0	16.8	11.9	14.6	11.7	12.9	12.7	12.8
6/23	12.0	6.7	11.0	12.0	15.5	17.4	12.2	15.0	12.0	13.2	13.1	13.2
6/24	12.3	6.6	10.8	12.0	15.8	17.8	12.3	15.2	12.1	13.3	13.4	13.5
6/25	12.7	6.7	10.5	12.0	15.9	18.0	12.5	15.4	12.1	13.4	13.7	13.8
6/26	13.1	6.8	10.3	12.0	15.9	18.1	12.8	15.6	12.1	13.4	14.1	14.2
6/27	13.5	6.9	10.0	12.1	16.0	18.2	12.9	15.7	12.1	13.4	14.5	14.5
6/28	13.5	6.8	9.6	11.7	15.6	17.6	12.8	15.6	11.9	13.1	14.7	14.7
6/29	13.3	6.8	9.3	11.1	14.8	16.7	12.6	15.2	11.7	12.7	14.7	14.6
6/30	13.3	6.7	9.1	10.9	14.4	16.3	12.5	15.0	11.6	12.7	15.0	14.9

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
7/1	13.3	6.7	8.9	10.7	14.0	15.9	12.4	14.9	11.6	12.5	15.2	15.1
7/2	13.4	6.5	8.7	10.4	13.6	15.2	12.0	14.5	11.8	12.7	15.4	15.3
7/3	13.4	6.4	8.6	10.3	13.4	15.0	11.8	14.3	12.1	13.1	15.6	15.5
7/4	13.2	6.4	8.3	9.9	12.9	14.3	11.6	14.0	12.1	12.9	15.7	15.6
7/5	13.5	6.4	8.3	9.9	12.6	14.0	11.5	13.7	12.0	13.0	15.7	15.6
7/6	14.0	6.4	8.5	10.3	13.1	14.6	11.7	14.0	12.2	13.3	16.3	16.1
7/7	14.3	6.4	8.5	10.3	13.2	14.7	11.8	14.0	12.2	13.4	16.6	16.4
7/8	14.5	6.5	8.5	10.3	13.2	14.7	11.8	14.1	12.3	13.4	16.9	16.6
7/9	14.6	6.5	8.5	10.4	13.3	14.9	11.9	14.2	12.4	13.6	17.3	17.0
7/10	14.8	6.5	8.5	10.3	13.3	14.8	11.9	14.3	12.4	13.7	17.6	17.2
7/11	15.2	6.5	8.7	10.7	13.6	15.4	12.1	14.5	12.5	14.0	18.0	17.6
7/12	15.3	6.6	8.7	10.7	13.8	15.5	12.2	14.7	12.7	14.0	18.3	17.9
7/13	15.0	6.6	8.5	10.3	13.3	14.9	12.0	14.4	12.6	13.7	18.0	17.6
7/14	14.7	6.6	8.4	10.0	13.0	14.6	11.9	14.2	12.5	13.6	17.9	17.4
7/15	14.7	6.7	8.5	10.0	13.0	14.6	11.9	14.1	12.5	13.7	18.0	17.5
7/16	14.7	6.7	8.5	10.1	13.0	14.6	11.9	14.1	12.5	13.7	18.2	17.6
7/17	14.4	6.7	8.4	9.7	12.6	14.1	11.8	13.8	12.4	13.5	18.0	17.4
7/18	14.0	6.7	8.2	9.4	12.2	13.6	11.6	13.5	12.3	13.3	17.8	17.2
7/19	13.9	6.7	8.4	9.7	12.5	14.0	11.8	13.7	12.2	13.7	18.0	17.4
7/20	14.1	6.8	8.6	10.1	13.1	14.6	12.0	14.1	12.3	14.1	18.5	17.8
7/21	14.3	6.8	8.7	10.4	13.4	15.0	12.2	14.3	12.3	14.4	18.9	18.1
7/22	13.4	6.8	8.7	10.4	13.5	15.0	12.3	14.4	12.3	14.5	19.1	18.3
7/23	13.4	6.8	8.7	10.4	13.6	15.1	12.3	14.5	12.2	14.7	19.3	18.4
7/24	13.7	6.9	8.9	10.7	14.0	15.6	12.6	14.8	12.3	15.0	19.7	18.9
7/25	14.0	6.9	9.1	11.0	14.5	16.1	12.8	15.1	12.4	15.3	20.1	19.1
7/26	14.3	7.0	9.2	11.2	14.7	16.4	13.0	15.3	12.6	15.3	20.5	19.3
7/27	14.7	7.1	9.3	11.3	14.9	16.6	13.1	15.5	12.8	15.4	20.9	19.5
7/28	14.9	7.1	9.2	11.0	14.6	16.2	13.1	15.4	12.9	15.1	20.9	19.4
7/29	15.0	7.2	9.1	10.8	14.3	15.9	13.1	15.3	13.0	15.1	20.7	19.3
7/30	15.3	7.3	9.2	10.9	14.2	15.8	13.2	15.3	13.1	15.1	20.8	19.3
7/31	15.5	7.3	9.2	10.8	14.0	15.7	13.3	15.3	13.2	15.2	20.8	19.3

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
8/1	15.6	7.4	9.3	10.9	14.0	15.7	13.5	15.4	13.4	15.3	21.1	19.6
8/2	15.7	7.4	9.2	10.9	13.8	15.5	13.5	15.4	13.5	15.4	21.1	19.7
8/3	17.2	7.4	9.1	10.5	13.3	14.9	13.4	15.2	13.6	15.3	20.9	19.8
8/4	16.0	7.4	9.1	10.5	13.1	14.5	13.3	15.1	13.6	15.4	20.6	19.7
8/5	15.5	7.4	9.1	10.3	12.7	14.0	13.3	14.8	13.7	15.2	20.2	19.4
8/6	15.2	7.4	9.0	10.2	12.3	13.5	13.2	14.6	13.7	15.2	20.0	
8/7	15.0	7.4	8.9	10.2	12.2	13.4	13.3	14.6	13.8	15.3	19.8	
8/8	14.8	7.5	8.9	10.2	12.2	13.3	13.4	14.7	13.9	15.3	19.8	
8/9	14.9	7.6	9.0	10.3	12.2	13.4	13.5	14.8	14.0	15.3	20.0	
8/10	15.1	7.8	9.2	10.6	12.4	13.7	13.8	15.0	14.1	15.3	20.3	
8/11	15.5	7.9	9.4	10.9	12.9	14.3	14.2	15.4	14.4	15.6	20.7	
8/12	16.2	8.0	9.5	11.3	13.4	15.1	14.6	15.9	14.7	16.1	21.4	
8/13	16.4	8.1	9.5	11.2	13.5	15.1	14.6	16.2	15.0	16.2	21.7	
8/14	16.2	8.1	9.4	10.9	13.2	14.6	14.6	16.0	15.1	16.0	21.5	
8/15	16.0	8.1	9.3	10.8	12.9	14.3	14.6	15.9	15.1	16.1	21.0	
8/16	15.7	8.0	9.2	10.5	12.6	14.0	14.5	15.7	15.2	16.3	20.6	
8/17	15.2	7.9	9.0	10.2	12.2	13.4	14.3	15.5	15.2	16.2	20.0	
8/18	14.7	7.9	8.8	9.8	11.7	12.7	14.1	15.2	15.0	16.1	19.3	
8/19	14.0	7.8	8.6	9.4	11.1	12.0	13.8	14.8	14.8	15.8	18.4	
8/20	13.5	7.8	8.6	9.4	10.9	11.8	13.8	14.6	14.7	15.8	18.0	
8/21	13.4	7.8	8.6	9.6	11.0	12.0	13.9	14.7	14.8	16.1	17.9	
8/22	13.1	7.8	8.6	9.5	10.9	12.0	14.0	14.7	14.8	16.0	17.7	
8/23	12.9	7.8	8.6	9.4	10.8	11.7	13.9	14.6	14.8	16.0	17.5	
8/24	12.7	7.8	8.6	9.5	10.8	11.7	14.0	14.5	14.8	16.0	17.3	
8/25	12.6	7.8	8.7	9.7	11.0	12.0	14.1	14.6	14.9	16.3	17.5	
8/26	12.7	7.8	8.8	10.0	11.3	12.4	14.4	14.9	15.1	16.5	17.9	
8/27	12.6	7.9	8.8	9.8	11.3	12.4	14.4	14.9	15.1	16.4	17.9	
8/28	12.4	8.1	8.9	9.8	11.0	12.0	14.1	14.7	15.0	16.1	17.6	
8/29	12.1	8.4	9.1	9.9	10.9	11.9	13.9	14.4	14.8	15.9	17.3	
8/30	12.0	8.8	9.4	10.3	11.1	12.1	13.8	14.3	14.7	15.9	17.3	
8/31	12.0	9.1	9.7	10.6	11.2	12.3	13.8	14.2	14.6	16.0	17.4	

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
9/1	12.0	9.4	10.0	10.7	11.3	12.3	13.7	14.1	14.5	15.8	17.2	
9/2	11.9	9.7	10.2	10.8	11.3	12.3	13.6	14.0	14.4	15.6	17.1	
9/3	12.1	10.1	10.6	11.2	11.6	12.6	13.7	14.0	14.4	15.8	17.3	
9/4	12.3	10.2	10.7	11.5	12.0	13.0	13.9	14.1	14.5	16.1	17.7	
9/5	12.5	10.3	10.8	11.6	12.2	13.2	14.1	14.5	14.7	16.3	18.1	
9/6	12.7	10.3	10.9	11.7	12.3	13.3	14.2	14.6	14.8	16.4	18.4	
9/7	12.7	10.4	10.9	11.6	12.3	13.2	14.2	14.6	14.9	16.3	18.5	
9/8	12.8	10.4	10.9	11.6	12.3	13.1	14.2	14.6	14.9	16.3	18.6	
9/9	12.8	10.5	10.9	11.6	12.2	13.0	14.0	14.5	14.9	16.2	18.4	
9/10	12.6	10.5	10.9	11.5	12.1	12.8	13.9	14.3	14.9	16.1	18.1	
9/11	12.4	10.5	10.9	11.4	12.0	12.5	13.8	14.2	14.8	15.9	17.7	
9/12	12.2	10.3	10.7	11.2	11.7	12.3	13.6	13.9	14.5	15.4	17.2	
9/13	11.9	10.2	10.5	11.0	11.4	12.0	13.5	13.6	14.2	15.1	16.7	
9/14	11.7	10.1	10.4	10.8	11.2	11.8	13.3	13.4	14.0	14.8	16.3	
9/15	11.5	9.9	10.4	10.7	11.1	11.7	13.2	13.4	13.8	14.5	15.7	
9/16	11.0	9.7	10.2	10.6	10.9	11.5	13.2	13.2	13.5	14.2	15.1	
9/17	10.7	9.5	10.0	10.4	10.8	11.3	13.0	13.1	13.3	13.9	14.5	
9/18	10.9	9.4	9.9	10.3	10.7	11.3	12.9	13.1	13.1	13.8	14.2	
9/19	11.0	9.4	9.9	10.2	10.6	11.1	12.7	13.0	13.0	13.7	13.9	
9/20	11.2	9.4	9.9	10.2	10.7	11.2	12.6	13.0	13.0	13.7	13.8	13.7
9/21	11.3	9.4	9.9	10.3	10.8	11.4	12.6	13.1	13.0	13.8	13.8	13.8
9/22	11.3	9.4	9.8	10.2	10.7	11.3	12.6	13.0	13.0	13.9	14.1	14.0
9/23	11.4	9.4	9.8	10.2	10.7	11.3	12.5	13.0	13.1	13.9	14.5	14.3
9/24	11.5	9.4	9.8	10.1	10.5	11.0	12.5	12.9	13.1	13.7	14.5	14.3
9/25	11.0	9.4	9.7	10.1	10.5	10.9	12.4	12.7	13.1	13.6	14.3	14.1
9/26	10.6	9.3	9.7	10.0	10.4	10.7	12.3	12.6	13.1	13.5	14.0	13.8
9/27	10.3	9.3	9.7	10.0	10.3	10.6	12.2	12.4	13.0	13.3	13.5	13.3
9/28	9.9	9.2	9.6	9.8	10.2	10.5	12.0	12.2	12.9	13.1	13.0	12.9
9/29	9.6	9.1	9.5	9.7	10.1	10.3	11.8	12.0	12.7	12.8	12.4	12.4
9/30	9.4	8.9	9.4	9.6	10.1	10.3	11.6	11.9	12.6	12.7	12.0	12.0

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
10/1	9.3	8.9	9.3	9.5	10.1	10.4	11.5	12.0	12.5	12.8	11.9	12.0
10/2	9.2	8.8	9.2	9.4	10.0	10.3	11.5	11.9	12.3	12.7	11.8	11.9
10/3	9.0	8.7	9.1	9.3	9.8	10.2	11.4	11.8	12.2	12.5	11.7	11.9
10/4	8.7	8.5	8.9	9.1	9.6	10.0	11.3	11.7	12.1	12.5	11.8	11.9
10/5	8.5	8.5	8.8	9.0	9.4	9.8	11.3	11.6	12.1	12.4	11.6	11.8
10/6	8.3	8.5	8.7	8.9	9.3	9.5	11.2	11.4	12.0	12.2	11.3	11.5
10/7	8.0	8.6	8.8	8.9	9.1	9.4	11.1	11.2	12.0	12.1	11.0	11.3
10/8	7.7	8.5	8.7	8.8	9.0	9.2	10.9	11.0	11.8	11.9	10.6	10.8
10/9	7.5	8.4	8.6	8.7		9.1	10.8	10.8	11.7	11.7	10.2	10.5
10/10	7.2	8.3	8.5	8.5		8.9	10.7	10.6	11.6	11.5	9.9	10.2
10/11	7.1	8.3	8.4			8.7	10.5	10.4	11.4	11.3	9.5	9.8
10/12	7.1	8.2	8.4			8.7	10.4	10.3	11.3	11.2	9.2	9.6
10/13	7.1	8.1	8.3			8.8	10.2	10.3	11.2	11.2	9.4	9.7
10/14	7.2	7.9	8.2			8.8	10.2	10.3	11.1	11.1	9.4	9.7
10/15	7.3	7.8	8.1			8.9	10.1	10.3	10.9	11.1	9.5	9.8
10/16	7.4	7.6	8.0			8.9	10.1	10.4	10.9	11.1	9.7	10.0
10/17	7.6	7.5	7.9			9.0	10.1	10.5	10.9	11.1	10.0	10.2
10/18	7.8	7.4	7.9			9.1	10.1	10.7	10.9	11.3	10.2	10.4
10/19	7.9	7.3	7.8			9.2	10.2	10.7	10.9	11.3	10.4	10.6
10/20	7.9	7.2	7.7			9.1	10.3	10.7	10.9	11.2	10.3	10.6
10/21	7.8	7.0	7.6			8.9	10.2	10.6	10.9	11.2	10.2	10.5
10/22	7.7	7.0	7.6			8.8	10.2	10.5	10.9	11.1	10.0	10.3
10/23	7.6	7.0	7.6			8.7	10.1	10.4	10.8	11.0	9.8	10.1
10/24	7.5	7.0	7.6			8.7	10.0	10.2	10.6	10.8	9.5	9.8
10/25	7.6	7.1	7.9			8.8	9.8	10.1	10.4	10.6	9.3	9.6
10/26	7.5	7.1	8.0			8.9	9.7	10.0	10.1	10.4	9.0	9.3
10/27	7.3	7.1	7.9			8.7	9.6	9.8	9.9	10.1	8.9	9.1
10/28	7.1	7.1	7.8			8.5	9.4	9.4	9.6	9.8	8.8	8.7
10/29	7.0	7.1	7.8			8.4	9.3	9.2	9.3	9.5	8.8	8.4
10/30	6.9	7.1	7.8			8.3	9.0	9.0	8.9	9.2	8.8	8.2
10/31	6.9	7.1	7.8			8.3	8.7	8.8	8.8	9.0	8.9	8.2

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
11/1	6.8	7.1	7.5			8.0	8.5	8.6	8.6	8.9	9.0	8.2
11/2	6.7	7.1	7.4			7.8	8.2	8.4	8.5	8.7	9.0	8.2
11/3	6.7	7.1	7.4			7.7	7.9	8.3	8.4	8.7	8.9	8.1
11/4	6.6	7.1	7.3			7.7	7.9	8.3	8.4	8.7	8.8	8.1
11/5	6.4	7.2				7.6	7.8	8.2	8.4	8.8	8.6	8.1
11/6	6.3	7.2				7.6	7.7	8.2	8.5	8.8	8.5	8.0
11/7	6.0	7.2				7.4	7.7	8.1	8.5	8.7	8.2	7.7
11/8	5.7	7.2				7.4	7.7	8.0	8.2	8.6	7.9	7.5
11/9	5.6	7.3				7.5	7.6	8.1	8.2	8.6	7.7	7.4
11/10	5.7	7.3				7.7	7.7	8.3	8.1	8.6	7.5	7.3
11/11	6.0	7.3				7.9	7.9	8.4	8.1	8.6	7.5	7.5
11/12	6.2	7.4				8.2	8.0	8.7	8.0	8.6	7.5	7.6
11/13	6.2	7.3				8.2	8.2	8.7	7.9	8.6	7.5	7.6
11/14	6.1	7.2				8.2	8.3	8.6	7.8	8.4	7.4	7.5
11/15	6.0	7.1				8.1	8.3	8.5	7.7	8.3	7.1	7.3
11/16	5.9	7.0				7.8	8.2	8.2	7.6	8.1	6.8	7.1
11/17	5.8	6.9				7.6	7.9	7.9	7.4	8.0	6.7	7.0
11/18	5.4	6.8				7.3	7.7	7.7	7.3	7.8	6.4	6.7
11/19	5.1	6.5				6.9	7.5	7.3	7.2	7.6	6.2	6.4
11/20	4.9	6.4				6.7	7.2	7.1	7.1	7.5	6.0	6.3
11/21	4.8	6.3				6.6	7.0	7.1	7.0	7.4	5.9	6.3
11/22	4.7	6.3				6.6	6.9	7.1	7.0	7.3	5.9	6.3
11/23	4.6	6.3				6.7	6.8	7.1	7.0	7.3	6.0	6.4
11/24	4.7	6.2				6.7	6.8	7.2	6.9	7.3	6.1	6.5
11/25	4.8	6.3				7.0	6.8	7.4	6.9	7.4	6.2	6.6
11/26	5.0	6.4				7.1	6.9	7.6	6.9	7.5	6.4	6.8
11/27	5.2	6.4				7.3	7.1	7.7	6.9	7.6	6.6	6.9
11/28	5.5	6.4				7.4	7.3	7.9	7.0	7.7	6.8	7.1
11/29	5.8	6.4				7.5	7.4	8.0	6.9	7.7	7.1	7.3
11/30	5.9	6.4				7.4	7.5	7.9	6.9	7.6	7.2	7.4

DATE	RM 18.2 (SFK) 7 Day Avg Max	RM 15.8 7 Day Avg Max	RM 15.5 7 Day Avg Max	RM 14.3 7 Day Avg Max	RM 11.3 7 Day Avg Max	RM 9.8 7 Day Avg Max	RM 9.6 7 Day Avg Max	RM 4.9 7 Day Avg Max	RM 4.4 7 Day Avg Max	RM 0.2 7 Day Avg Max	Skykomish Above 7 Day Avg Max	Skykomish Below 7 Day Avg Max
12/1	5.9	6.4				7.3	7.4	7.8	6.8	7.6	7.1	7.3
12/2	5.6	6.2				7.0	7.3	7.5	6.7	7.4	6.8	7.0
12/3	5.2	6.0				6.7	7.0	7.2	6.6	7.2	6.5	6.7
12/4	4.9	5.9				6.5	6.7	7.0	6.5	7.0	6.2	6.5
12/5	4.6	5.7				6.3	6.5	6.8	6.4	6.9	5.9	6.2
12/6	4.2	5.6				6.1	6.2	6.6	6.4	6.7	5.5	5.9
12/7	3.9	5.5				5.8	6.0	6.4	6.3	6.6	5.2	5.6
12/8	3.7	5.4				5.7	5.8	6.2	6.2	6.5	5.0	5.4
12/9	3.7	5.4				5.7	5.8	6.2	6.1	6.4	5.1	5.4
12/10	3.7	5.4				5.7	5.8	6.2	6.1	6.4	5.1	5.4
12/11	3.6	5.3				5.6	5.7	6.1	6.0	6.3	5.0	5.3
12/12	3.5	5.2				5.5	5.6	5.9	5.9	6.1	4.9	5.2
12/13	3.4	5.1				5.4	5.5	5.8	5.9	6.0	4.8	5.1
12/14	3.4	5.0				5.3	5.5	5.8	5.8	6.0	4.8	5.2
12/15	3.2	4.9				5.1	5.4	5.6	5.7	5.9	4.7	5.1
12/16	3.1	4.9				5.0	5.3	5.5	5.6	5.7	4.6	5.0
12/17	3.1	4.8				4.9	5.1	5.3	5.5	5.6	4.5	4.9
12/18	3.0	4.7				4.8	5.0	5.3	5.4	5.6	4.4	4.8
12/19	3.1	4.7				4.8	5.0	5.3	5.4	5.5	4.5	4.8
12/20	3.2	4.7				4.8	4.9	5.3	5.4	5.5	4.5	4.8
12/21	3.2	4.6				4.8	5.0	5.3	5.3	5.4	4.5	4.7
12/22	3.1	4.4				4.7	4.9	5.2	5.2	5.3	4.5	4.7
12/23	3.0	4.3				4.6	4.8	5.1	5.1	5.1	4.4	4.6
12/24	2.8	4.1				4.3	4.6	4.8	4.9	5.0	4.2	4.4
12/25	2.5	4.0				3.9	4.4	4.5	4.7	4.8	3.8	3.9
12/26	2.2	3.8				3.5	4.2	4.1	4.6	4.6	3.4	3.3
12/27	1.8	3.6				3.1	3.9	3.7	4.4	4.4	3.0	2.9
12/28	1.6	3.5				2.8	3.6	3.4	4.2	4.2	2.7	2.8
12/29	1.4	3.4				2.6	3.4	3.2	4.0	4.0	2.3	2.4
12/30	1.3	3.3				2.5	3.3	3.1	3.8	3.9	2.2	2.1
12/31	1.3	3.2				2.5	3.1	3.0	3.7	3.7	2.0	1.8

APPENDIX E

Consultation Documentation Regarding Draft Report

From:	Presler, Dawn
To:	Anne Savery; Brock Applegate; Jeff Garnett; Jennifer Bailey; Mike Rustay; Monica Kannadaguli; Nate Morgan; Richard Vacirca; Tom O"Keefe; "elizabeth.babcock@noaa.gov"
Cc:	Andrew McDonnell; Keith Binkley
Subject:	JHP (FERC No. 2157) - draft WQMP for your 30-day review
Date:	Wednesday, April 27, 2022 8:45:00 AM
Attachments:	JHP Draft WQMP 2021 Annual Report for ARC.pdf

Dear ARC,
Attached is the draft Water Quality Monitoring Plan 2021 Annual Report for your 30-day review. Please send comments, if any, back to me by May 27, 2022. Comments stating you concur or have no questions with the report are greatly appreciated too!

Cheers,
Dawn Presler
Sr. Environmental Coordinator
Generation – Natural Resources
Snohomish County PUD No. 1
Everett, WA

(425) 783-1709 (work)