SNOHOMISH COUNTY PUD
PUBLIC UTILITY DISTRICT NO. 1

Energizing Life in Our Communities

June 7, 2023

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 – 2022 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 2022 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 2022, please do not hesitate to contact me.

Sincerely,

/s/ Keith Binkley

Keith Binkley
Manager, Natural Resources
(425) 783-1769
KMBinkley@snopud.com

Attached: Water Quality Monitoring Plan Annual Report for 2022

cc: Aquatic Resources Committee
Chad Brown – Ecology

CERTIFICATE OF SERVICE

I hereby certify that I have this day served via e-mail a copy of the foregoing filing upon each person on the Project's Aquatic Resource Committee in accordance with ordering paragraph K of the Project license issued by the Federal Energy Regulatory Commission on September 2, 2011.

/s/ Dawn J. Presler

Dawn J. Presler
Sr. Environmental Coordinator
Public Utility District No. 1 of
Snohomish County
2320 California Street
PO Box 1107
Everett, WA 98206-1107
Telephone: (425) 783-1709

Dated: June 7, 2023

Presler, Dawn

From: Presler, Dawn
Sent: Wednesday, June 7, 2023 10:03 AM
To: Anna Thelan; Anne Savery; Brock Applegate; Elizabeth Babcock; Jeff Garnett; Jennifer Bailey; Mike Rustay; Nate Morgan; Richard Vacirca; Scott Bohling; Tom O'Keefe
Cc: Andrew McDonnell; Keith Binkley; 'chad.brown@ecy.wa.gov'
Subject: JHP (FERC No. 2157) - cc of WQMP 2022 Annual Report to FERC
Attachments: 202300607 to FERC 2022 JHP WQMP Annual Report.pdf

Dear ARC Members,
Attached is your cc: of the Jackson Project's Water Quality Monitoring Plan 2022 Annual Report that I will be e-filing with FERC shortly. Please let us know if you have any questions on the attached.

Thanks!

Cheers,
Dawn Presler
(she, her, hers)
Sr. Environmental Coordinator
Generation – Natural Resources
Snohomish County PUD No. 1
Everett, WA

(425) 783-1709 (work)

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

License Article 401: Water Quality Monitoring Plan – 2022 Annual Report

SNOHOMISH COUNTY PUD
PUBLIC UTILITY DISTRICT NO. 1

Everett, WA

June 2023

Final – The document may be cited as:

Public Utility District No. 1 of Snohomish County (Snohomish PUD). 2023. Water Quality Monitoring Plan 2022 Annual Report, License Article 401, for the Henry M. Jackson Hydroelectric Project, FERC No. 2157. June 2023.

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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 2022. 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 28, 2023. Consultation documentation will be 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 2022, a total of 161.3 inches of rain was recorded at the Culmback Dam Weather Station. The rainfall measured during 2022 was less than the historical annual average of 161.8 inches. Monthly rainfall averaged 13.4 inches and ranged between a low of 0.5 inches in August and a high of 29.8 inches in January (Table 2-1). During 2022, the highest recorded daily rainfall (7.6 inches) occurred on November 5, 2022.

Table 2-1. Monthly rainfall, Culmback Dam Weather Station, 2022.

Month	Rainfall (inches)
January	29.80
February	18.07
March	17.47
April	12.23
May	16.65
June	11.75
July	1.87
August	0.54
September	0.81
October	13.83
November	17.33
December	20.90

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 100.3 and 42.4 inches, respectively. During the 2022 survey (March 24), there were 105.1 inches of snow at the Stickney Ridge station (Figure 2-1) which was 105 percent of historical mean. In terms of water content, the 46.1 inches recorded during the 2022 survey equated to 109 percent of the historic mean.

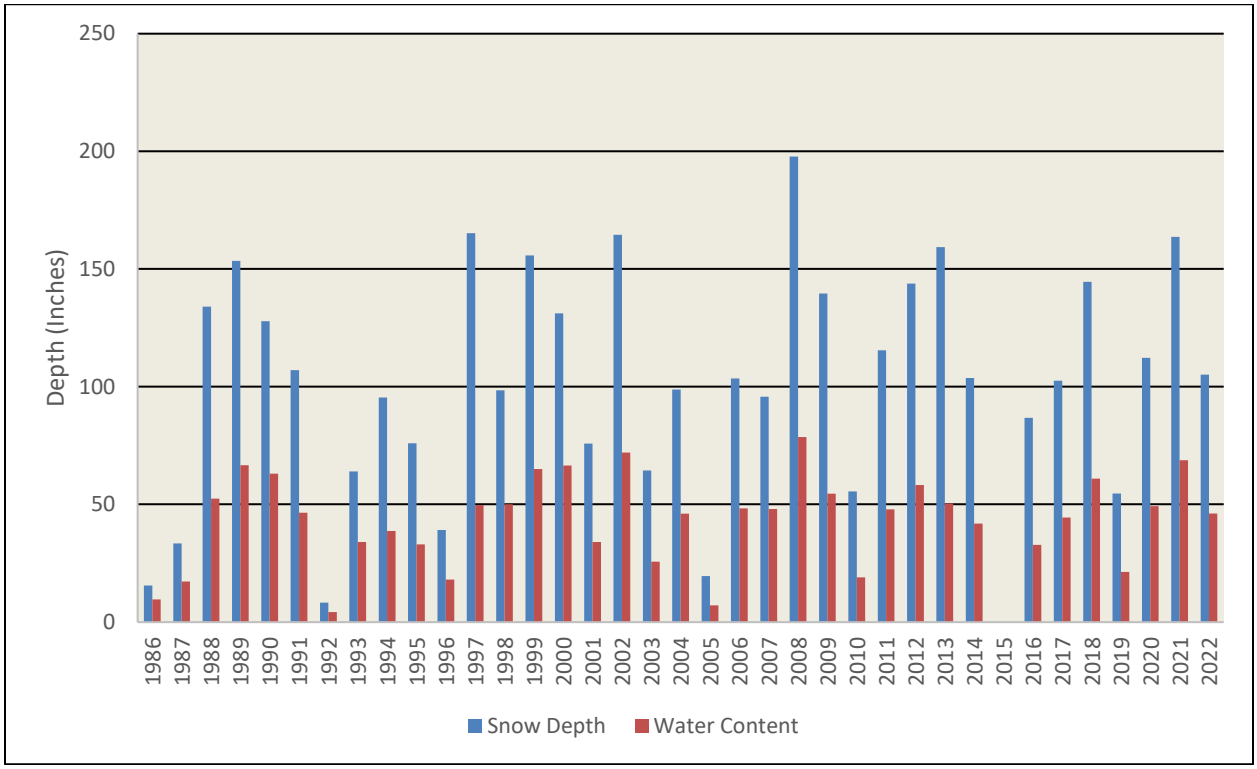


Figure 2-1. Snow survey data, Stickney Ridge, Sultan Watershed, 1986-2022.

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 2022 hydrograph for this station is presented in Figure 2-2. Instantaneous flow values ranged from 4.4 to 5,720 cfs. Mean daily flow during 2022 averaged 135 cfs and ranged between a low of 4.4 cfs and a high flow of 2,490 cfs. The average mean annual flow, based on the USGS Water Year, for this station is 133.7 cfs (Period of Record 1992-2022).

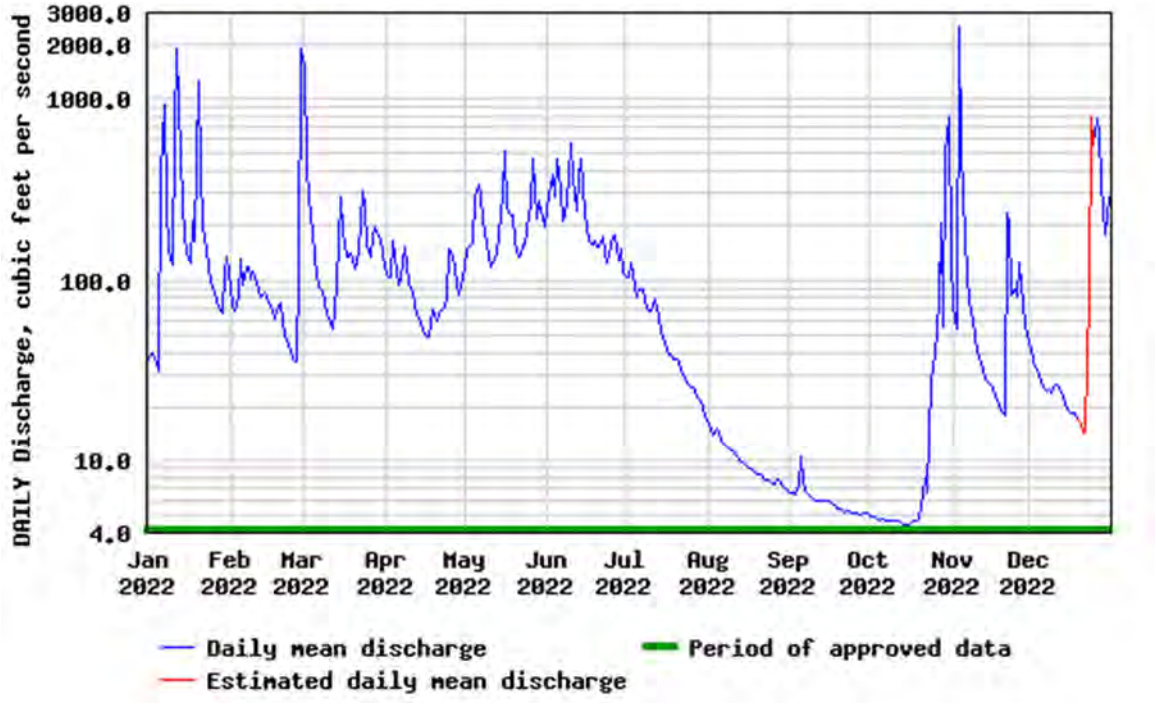


Figure 2-2. Hydrograph for the South Fork Sultan River, USGS Station No. 12137290, 2022 calendar year.

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 2022, the Project did not experience spill. Daily plant generation during 2022 is depicted in Figure 2-3. A total of 410,910 megawatt hours were produced during 2022 equating to 97.8 percent of the historic annual average of 420,133 megawatt hours.

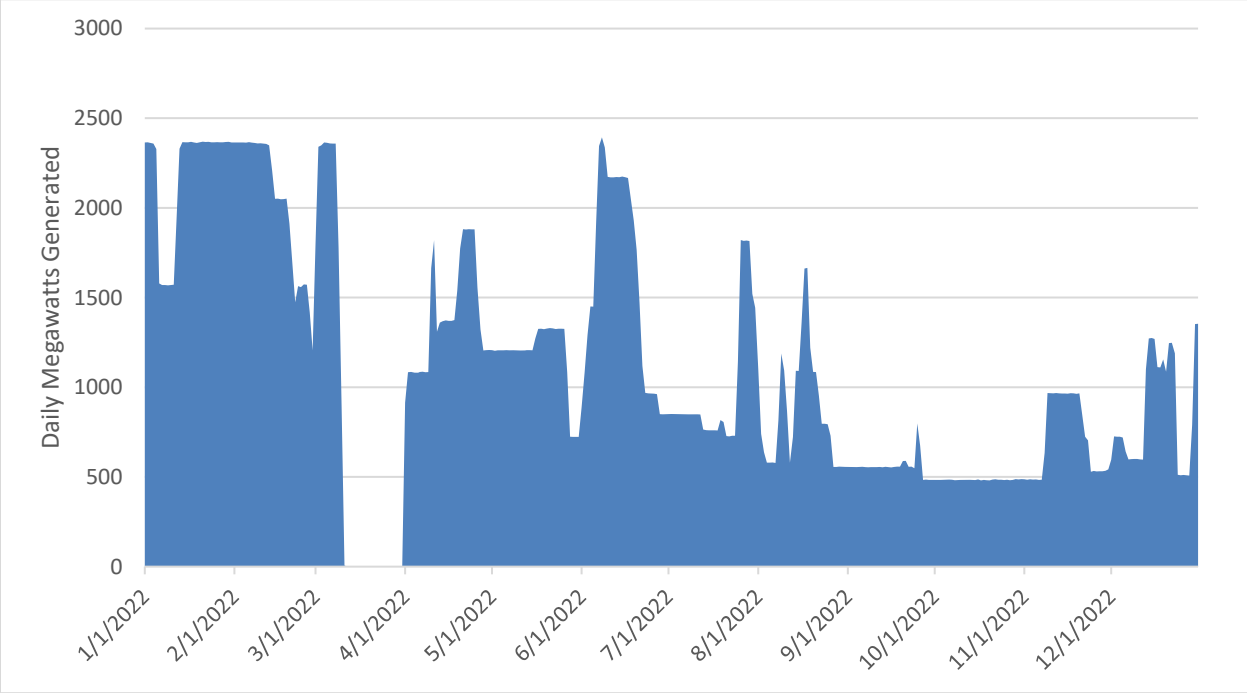


Figure 2-3. Daily plant generation, Jackson Hydroelectric Project, 2022.

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 2022, Spada Lake Reservoir was drafted and filled in accordance with the rule curves established for the Project (Figure 2-4).

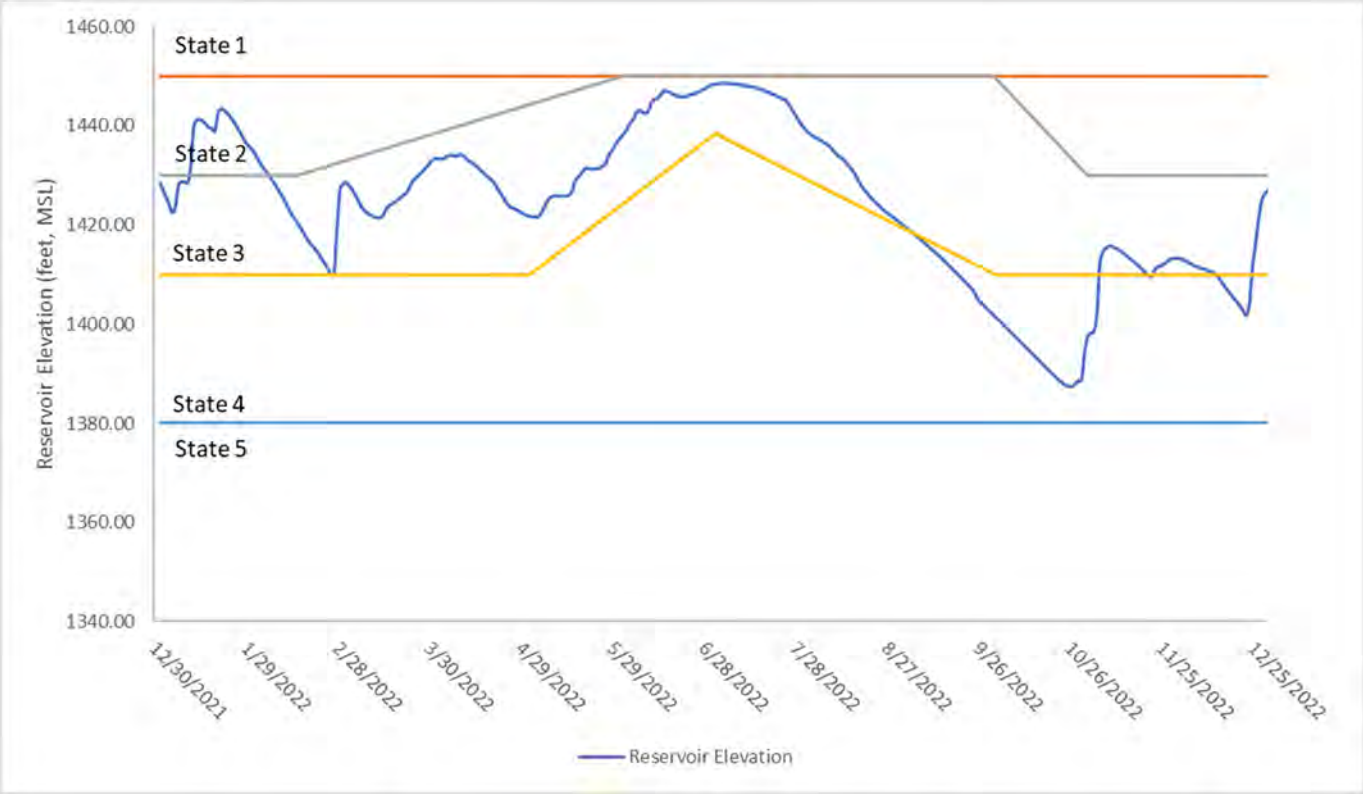


Figure 2-4. Daily water surface elevation, Spada Lake Reservoir, 2022.

2.3. Water Quality

Monthly sampling of water quality in Spada Lake Reservoir occurred on the following dates during 2022: May 5, June 15, July 28, August 8, September 7, and November 2. 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 16 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 4.6 to 22.8 °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 September; however, July and August also had a resistance to mixing. The strongest point in the thermocline dropped from 16 feet in July to 26 feet in September.

2.3.2. pH

The highest measured pH was 6.98 in June at a depth of 20 feet. The lowest pH of 6.07 was measured multiple times in November at a depth of 39 feet and was likely due to increased bacterial degradation of organic matter.

2.3.3. Dissolved Oxygen

Dissolved oxygen ranged from a low of 8.0 mg/L in November to a high of 11.8 mg/L in May. By saturation values, the maximum of 103 percent in August was likely due to increasing primary production, and the minimum of 65 percent of saturation at depth in November 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 November. 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 29 feet in July to a low of 2 feet in November (Table 2-2).

Table 2-2. Secchi transparency, Spada Lake Reservoir, 2022.

Date	Result (feet)
5/5/2022	9
6/15/2022	11
7/28/2022	29
8/8/2022	22
9/7/2022	13
11/2/2022	2

2.3.6. Nutrients

Total phosphorus concentrations were between 1.5 and 6 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 November sampling. Total nitrogen varied from 65 to 97 µg/L during the summer with an increase noted in November. Nitrate showed more variation over time and depth, with values ranging between 0.6 and 141.5 µg/L from May to November. Silica concentrations were relatively stable throughout the water column, ranging from 1,296 and 1,532 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 November. In situ chlorophyll and dissolved oxygen readings indicate that primary production took place predominantly between the surface and a depth of 40 feet, peaking in June (3.1 µg/L).

2.3.8. Zooplankton

Epischura and *Holopedium* were the dominant zooplankters in May and June, respectively. *Holopedium* peaked in July at 7 colonies per liter. The largest diversity in zooplankton species occurred in July and August. The total number of zooplankton/L ranged from 0.07 (June) to 15.5 (August) and averaged 5.6 between May and November.

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 11 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 2022 are presented in Table 3-1.

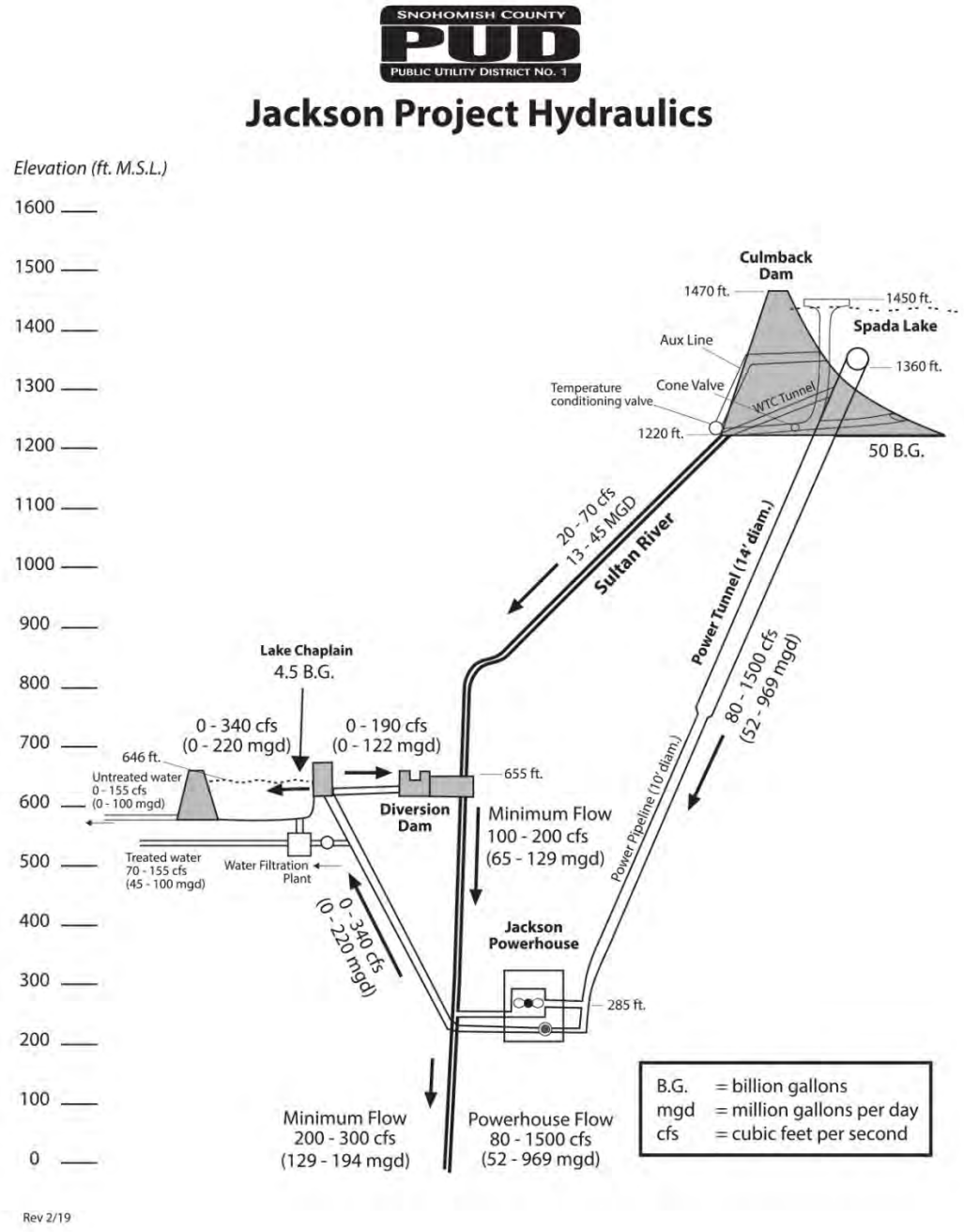


Figure 3-1. Schematic of water conveyance system, Jackson Hydroelectric Project.

Table 3-1. Settings for selective withdrawal panels, Spada Lake Reservoir, 2022.

Dates	Panel Setting	Upper Opening (elevation in feet msl)	Lower Opening (elevation in feet msl)
Beginning of year to 5/20/22	E	1,380 – 1,360	None
5/21/22 to 7/26/22	C	1,425 – 1,405	None
7/27/22 to 8/16/22	Mod C	1,422 – 1,396	None
8/17/22 to 8/17/22	Mod C	1,410 – 1,387.5	None
8/18/22 to 8/31/22	Mod C	1,412.5 – 1,390	None
9/1/22 to 9/21/22	Mod D	1,405 – 1,385	None
9/22/22 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 2022 (Figure 3-2). The RM 15.5, 14.3, and 11.3 locations were monitored from April 1 through 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 2022 were slightly warmer than 2021 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 2022 are presented in Appendix B. A tabulation of all mean daily temperature data for 2022 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.

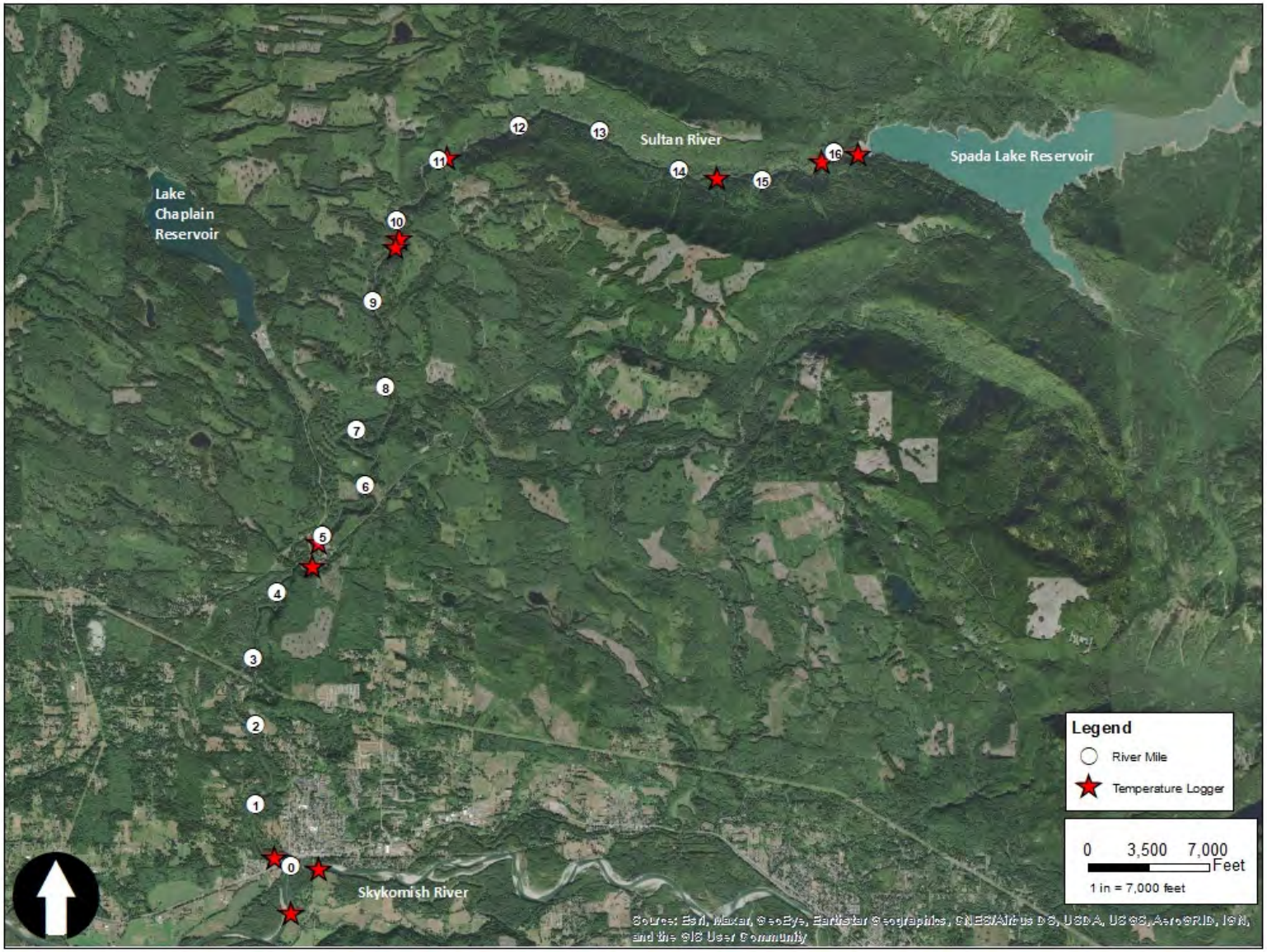


Figure 3-2. Locations of water temperature monitoring, Jackson Hydroelectric Project.

3.3. Synoptic Measurements of Water Quality

Synoptic measurements of water quality were collected during late spring, summer, and early fall 2022 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, 2022.

Location	Date	Temp ºC	pH Units	Turb NTU	LDO mg/l
South Fork Sultan River (SF)					
	5/5/2022	4.37	6.53	0.63	12.29
	6/15/2022	6.18	5.74	0.27	12.68
	*7/28/2022				
	8/8/2022	14.51	6.16	0.57	9.98
	9/7/2022	12.68	6.41	0.71	10.23
	10/5/2022	10.42	6.37	0.34	11.00
Sultan River upstream of Diversion Dam (RM 9.8)					
	5/5/2022	7.60	6.90	2.78	11.69
	6/15/2022	9.65	6.78	1.45	11.97
	**8/1/2022	12.91	6.60	1.89	10.55
	8/8/2022	14.48	6.47	1.82	10.38
	9/7/2022	12.73	6.52	1.24	10.64
	10/5/2022	11.60	6.61	1.26	10.99
Sultan River downstream of Powerhouse (RM 4.4)					
	5/5/2022	7.09	6.53	2.40	11.91
	6/15/2022	9.24	6.39	1.66	12.44
	**8/1/2022	14.32	6.09	1.26	10.44
	8/8/2022	15.10	6.24	0.79	10.51
	9/7/2022	13.77	6.47	0.96	10.74
	10/5/2022			1.08	
	10/24/2022	11.31	6.9		10.83

* Water quality equipment malfunction no data collected.

** Following repair to water quality equipment, data was collected in good faith effort to best represent July sampling conditions.

4. DATA QUALITY AND COMPLIANCE

Monitoring of water quality during 2022 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. Downstream of Culmback Dam, the Sultan River water temperature exceeded the Washington State water temperature criteria on 34 days during summer 2022. These exceedances were limited to three sites located at the lower end of each operational reach and occurred during late July and early August. Most exceedances 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 63 days during summer 2022 (Appendix D). Downstream, the Sultan River cooled the Skykomish River which resulted in the Skykomish River downstream of the Sultan to exceed the State standard on 52 days. Missing water temperature data is attributed to malfunctioning or missing equipment and related to lack of access due to snow in the upper Sultan River basin. 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
5/5/2022	1.6	0.5	1420.2	8.2	21.0	6.8	11.6	0.4	2.3
5/5/2022	3.4	1.0	1418.4	8.2	21.0	6.8	11.7	0.4	2.3
5/5/2022	6.6	2.0	1415.2	8.0	21.0	6.9	11.7	0.5	2.4
5/5/2022	9.8	3.0	1412.0	8.0	21.0	6.9	11.6	0.4	2.5
5/5/2022	13.1	4.0	1408.7	8.0	21.0	6.9	11.7	0.5	2.4
5/5/2022	16.4	5.0	1405.4	7.6	21.0	6.9	11.7	0.5	2.5
5/5/2022	19.7	6.0	1402.1	6.5	21.0	6.8	11.7	0.4	2.5
5/5/2022	23.0	7.0	1398.8	6.0	21.0	6.7	11.8	0.2	2.5
5/5/2022	26.1	8.0	1395.7	5.7	21.0	6.8	11.8	0.3	2.8
5/5/2022	29.4	9.0	1392.4	5.5	20.0	6.8	11.8	0.2	2.7
5/5/2022	32.9	10.0	1388.9	5.3	20.0	6.7	11.8	0.3	2.7
5/5/2022	36.1	11.0	1385.7	5.3	20.0	6.8	11.7	0.1	2.9
5/5/2022	39.5	12.0	1382.3	5.1	20.0	6.8	11.8	0.2	2.9
5/5/2022	42.8	13.0	1379.0	5.0	20.0	6.8	11.8	0.3	2.9
5/5/2022	45.7	14.0	1376.1	4.9	20.0	6.8	11.8	0.2	3.1
5/5/2022	49.4	15.0	1372.4	4.9	20.0	6.7	11.7	0.1	3.2
5/5/2022	55.8	17.0	1366.0	4.9	20.0	6.7	11.8	0.2	3.3
5/5/2022	62.3	19.0	1359.5	4.9	20.0	6.7	11.8	0.2	3.3
5/5/2022	68.9	21.0	1352.9	4.8	20.0	6.7	11.7	0.1	3.5
5/5/2022	75.5	23.0	1346.3	4.8	20.0	6.7	11.8	0.2	3.7
5/5/2022	82.0	25.0	1339.8	4.8	20.0	6.7	11.7	0.2	3.9
5/5/2022	88.6	27.0	1333.2	4.8	20.0	6.7	11.7	0.2	4.2
5/5/2022	95.2	29.0	1326.6	4.7	20.0	6.6	11.6	0.1	4.6
5/5/2022	101.7	31.0	1320.1	4.7	20.0	6.7	11.6	0.2	4.7
5/5/2022	111.6	34.0	1310.2	4.7	20.0	6.6	11.5	0.2	5.1
5/5/2022	121.4	37.0	1300.4	4.7	21.0	6.6	11.4	0.2	6.3
5/5/2022	131.2	40.0	1290.6	4.7	21.0	6.6	11.4	0.3	8.1
5/5/2022	141.1	43.0	1280.7	4.7	21.0	6.5	11.1	0.3	10.1
5/5/2022	150.7	46.0	1271.1	4.7	21.0	6.5	11.1	0.3	10.3

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
6/15/2022	1.6	0.5	1445.6	10.6	18.0	6.9	11.2	0.2	1.3
6/15/2022	3.3	1.0	1443.9	10.6	18.0	6.9	11.2	0.4	1.2
6/15/2022	6.6	2.0	1440.6	10.5	18.0	6.9	11.3	0.6	1.2
6/15/2022	9.8	3.0	1437.4	10.5	18.0	7.0	11.2	0.7	1.2
6/15/2022	13.2	4.0	1434.0	10.4	18.0	7.0	11.2	0.8	1.2
6/15/2022	16.4	5.0	1430.8	10.4	18.0	7.0	11.3	0.8	1.3
6/15/2022	19.6	6.0	1427.6	10.4	18.0	7.0	11.2	0.8	1.2
6/15/2022	23.0	7.0	1424.2	9.1	18.0	6.9	11.4	0.9	1.4
6/15/2022	26.2	8.0	1421.0	8.6	18.0	6.8	11.4	0.8	1.5
6/15/2022	29.6	9.0	1417.6	8.4	18.0	6.8	11.4	0.7	1.4
6/15/2022	32.9	10.0	1414.3	8.2	18.0	6.7	11.4	0.6	1.4
6/15/2022	36.1	11.0	1411.1	7.8	18.0	6.7	11.5	0.5	1.3
6/15/2022	39.5	12.0	1407.7	7.8	18.0	6.6	11.4	0.5	1.3
6/15/2022	42.8	13.0	1404.4	7.7	18.0	6.6	11.5	0.5	1.3
6/15/2022	46.0	14.0	1401.2	7.6	18.0	6.6	11.5	0.5	1.3
6/15/2022	49.2	15.0	1398.0	7.5	19.0	6.6	11.5	0.5	1.4
6/15/2022	55.8	17.0	1391.4	7.1	19.0	6.5	11.4	0.3	1.4
6/15/2022	62.4	19.0	1384.8	6.7	20.0	6.5	11.5	0.1	1.6
6/15/2022	68.8	21.0	1378.4	6.4	20.0	6.5	11.5	0.1	1.7
6/15/2022	75.6	23.0	1371.6	6.0	20.0	6.4	11.5	0.1	1.9
6/15/2022	82.0	25.0	1365.2	5.7	20.0	6.4	11.5	0.0	2.1
6/15/2022	88.6	27.0	1358.6	5.6	20.0	6.3	11.4	0.1	2.6
6/15/2022	95.3	29.0	1351.9	5.4	20.0	6.3	11.4	0.0	3.0
6/15/2022	101.7	31.0	1345.5	5.4	20.0	6.3	11.4	0.0	3.1
6/15/2022	111.6	34.0	1335.6	5.3	20.0	6.3	11.4	0.0	3.0
6/15/2022	121.4	37.0	1325.8	5.2	20.0	6.3	11.4	0.0	3.1
6/15/2022	131.3	40.0	1315.9	5.0	20.0	6.3	11.3	0.1	3.5
6/15/2022	141.0	43.0	1306.2	4.9	21.0	6.3	11.3	0.1	4.7
6/15/2022	150.8	46.0	1296.4	4.8	21.0	6.2	11.1	0.0	6.1
6/15/2022	160.9	49.0	1286.3	4.8	21.0	6.2	11.0	0.1	6.9
6/15/2022	177.3	54.0	1270.0	4.8	21.0	6.2	10.8	0.2	8.5

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
7/28/2022	1.6	0.5	1441.1	22.8	21.0	6.5	8.4	0.0	No data
7/28/2022	3.4	1.0	1439.3	22.6	21.0	6.6	8.4	0.2	No data
7/28/2022	6.6	2.0	1436.1	22.3	21.0	6.6	8.5	0.0	No data
7/28/2022	9.8	3.0	1432.9	22.3	21.0	6.6	8.4	0.1	No data
7/28/2022	13.2	4.0	1429.5	22.0	21.0	6.6	8.5	0.2	No data
7/28/2022	16.4	5.0	1426.3	19.5	21.0	6.6	8.9	0.1	No data
7/28/2022	19.6	6.0	1423.1	17.2	21.0	6.6	9.7	0.1	No data
7/28/2022	22.9	7.0	1419.8	15.1	19.0	6.7	10.3	0.1	No data
7/28/2022	26.2	8.0	1416.5	12.7	18.0	6.7	10.7	0.1	No data
7/28/2022	29.5	9.0	1413.2	10.9	18.0	6.7	11.1	0.1	No data
7/28/2022	32.8	10.0	1409.9	9.5	19.0	6.7	11.3	0.2	No data
7/28/2022	36.3	11.0	1406.4	8.6	19.0	6.6	11.3	0.1	No data
7/28/2022	39.5	12.0	1403.2	7.9	19.0	6.6	11.2	0.1	No data
7/28/2022	42.8	13.0	1399.9	7.6	19.0	6.5	11.0	0.2	No data
7/28/2022	45.8	14.0	1396.9	7.2	19.0	6.4	10.9	0.2	No data
7/28/2022	49.2	15.0	1393.5	6.8	20.0	6.4	10.9	0.1	No data
7/28/2022	55.8	17.0	1386.9	6.5	20.0	6.4	10.8	0.0	No data
7/28/2022	62.2	19.0	1380.5	6.2	20.0	6.4	10.9	0.0	No data
7/28/2022	68.9	21.0	1373.8	6.0	20.0	6.4	10.9	0.0	No data
7/28/2022	75.6	23.0	1367.1	5.9	21.0	6.4	11.0	0.0	No data
7/28/2022	82.1	25.0	1360.6	5.8	21.0	6.4	10.9	0.1	No data
7/28/2022	88.6	27.0	1354.1	5.7	21.0	6.4	10.9	0.1	No data
7/28/2022	95.1	29.0	1347.6	5.7	21.0	6.3	10.8	0.0	No data
7/28/2022	101.5	31.0	1341.2	5.6	21.0	6.4	10.9	0.0	No data
7/28/2022	111.4	34.0	1331.3	5.5	21.0	6.3	10.9	0.0	No data
7/28/2022	121.4	37.0	1321.3	5.4	21.0	6.3	10.9	0.1	No data
7/28/2022	131.4	40.0	1311.3	5.3	21.0	6.3	10.9	0.1	No data
7/28/2022	141.3	43.0	1301.4	5.2	21.0	6.3	10.8	0.0	No data
7/28/2022	150.9	46.0	1291.8	5.1	21.0	6.3	10.7	0.0	No data
7/28/2022	160.9	49.0	1281.8	5.1	21.0	6.3	10.6	0.0	No data

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
8/8/2022	1.7	0.5	1434.9	21.8	22.0	6.8	8.5	-0.1	0.6
8/8/2022	3.3	1.0	1433.3	21.7	22.0	6.8	8.5	-0.1	0.6
8/8/2022	6.7	2.0	1429.9	21.7	22.0	6.8	8.5	-0.1	0.6
8/8/2022	9.8	3.0	1426.8	21.6	22.0	6.8	8.5	-0.2	0.7
8/8/2022	13.1	4.0	1423.5	21.6	22.0	6.8	8.5	0.0	0.6
8/8/2022	16.5	5.0	1420.1	21.6	22.0	6.9	8.5	0.1	0.5
8/8/2022	19.7	6.0	1416.9	19.4	22.0	6.8	9.4	0.0	0.4
8/8/2022	22.5	7.0	1414.1	17.1	21.0	6.7	10.0	0.1	0.4
8/8/2022	26.3	8.0	1410.3	14.9	19.0	6.7	10.5	0.1	0.4
8/8/2022	29.6	9.0	1407.0	13.0	19.0	6.7	10.8	0.0	0.5
8/8/2022	32.7	10.0	1403.9	10.7	19.0	6.7	11.2	0.0	0.5
8/8/2022	36.1	11.0	1400.5	9.4	19.0	6.6	11.2	0.0	0.4
8/8/2022	39.8	12.0	1396.8	7.9	19.0	6.5	10.9	0.2	0.5
8/8/2022	42.7	13.0	1393.9	7.3	19.0	6.5	10.9	0.0	0.5
8/8/2022	45.6	14.0	1391.0	7.1	20.0	6.5	10.8	0.1	0.6
8/8/2022	49.3	15.0	1387.3	6.8	20.0	6.5	10.7	0.1	0.6
8/8/2022	55.6	17.0	1381.0	6.4	20.0	6.4	10.7	0.0	1.0
8/8/2022	62.3	19.0	1374.3	6.2	20.0	6.4	10.7	0.0	1.2
8/8/2022	68.8	21.0	1367.8	6.1	21.0	6.4	10.7	0.0	1.2
8/8/2022	75.5	23.0	1361.1	5.9	21.0	6.4	10.7	0.0	1.3
8/8/2022	82.0	25.0	1354.6	5.8	21.0	6.4	10.7	-0.1	1.3
8/8/2022	88.8	27.0	1347.8	5.8	21.0	6.4	10.7	0.0	1.4
8/8/2022	95.3	29.0	1341.3	5.7	21.0	6.4	10.8	0.0	1.5
8/8/2022	101.1	31.0	1335.5	5.6	21.0	6.4	10.8	0.0	1.5
8/8/2022	111.7	34.0	1324.9	5.4	21.0	6.4	10.8	0.0	1.7
8/8/2022	121.2	37.0	1315.4	5.3	21.0	6.4	10.8	0.0	1.8
8/8/2022	131.0	40.0	1305.6	5.2	21.0	6.4	10.7	0.0	2.0
8/8/2022	141.0	43.0	1295.6	5.2	21.0	6.4	10.6	-0.1	2.3
8/8/2022	151.0	46.0	1285.6	5.1	21.0	6.3	10.4	0.0	2.4
8/8/2022	160.7	49.0	1275.9	5.1	21.0	6.3	10.4	0.0	2.4

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
9/7/2022	1.6	0.5	1415.8	20.4	24.0	6.8	8.7	0.1	1.1
9/7/2022	3.3	1.0	1414.1	20.4	24.0	6.8	8.6	0.2	1.1
9/7/2022	6.6	2.0	1410.8	20.4	24.0	6.9	8.6	0.1	1.1
9/7/2022	9.8	3.0	1407.6	20.3	24.0	6.9	8.6	0.1	1.1
9/7/2022	13.0	4.0	1404.4	20.3	24.0	6.9	8.6	0.2	1.1
9/7/2022	16.4	5.0	1401.0	20.3	24.0	6.9	8.6	0.2	1.1
9/7/2022	19.7	6.0	1397.7	20.1	25.0	6.9	8.6	0.3	1.2
9/7/2022	23.1	7.0	1394.3	17.9	23.0	6.7	9.1	0.2	1.1
9/7/2022	26.3	8.0	1391.1	12.7	20.0	6.4	9.9	0.2	1.3
9/7/2022	29.3	9.0	1388.1	10.6	20.0	6.4	10.3	0.3	1.3
9/7/2022	33.0	10.0	1384.4	8.7	20.0	6.4	10.3	0.3	1.2
9/7/2022	36.4	11.0	1381.0	7.6	20.0	6.3	10.3	0.4	1.1
9/7/2022	39.4	12.0	1378.0	7.1	20.0	6.3	10.2	0.3	1.1
9/7/2022	42.7	13.0	1374.7	6.8	21.0	6.4	10.2	0.5	1.1
9/7/2022	46.0	14.0	1371.4	6.6	21.0	6.4	10.2	0.2	1.0
9/7/2022	49.2	15.0	1368.2	6.4	21.0	6.4	10.3	0.2	1.0
9/7/2022	55.8	17.0	1361.6	6.2	21.0	6.4	10.4	0.0	0.9
9/7/2022	62.6	19.0	1354.8	6.1	21.0	6.4	10.4	0.1	1.1
9/7/2022	68.9	21.0	1348.5	5.9	21.0	6.4	10.4	0.1	1.0
9/7/2022	75.5	23.0	1341.9	5.9	21.0	6.4	10.5	0.1	1.1
9/7/2022	82.0	25.0	1335.4	5.8	21.0	6.4	10.5	0.1	1.2
9/7/2022	88.5	27.0	1328.9	5.7	21.0	6.4	10.5	0.0	1.2
9/7/2022	94.9	29.0	1322.5	5.6	21.0	6.4	10.5	0.1	1.3
9/7/2022	101.6	31.0	1315.8	5.5	21.0	6.4	10.5	0.1	1.4
9/7/2022	111.4	34.0	1306.0	5.4	21.0	6.4	10.4	0.1	1.5
9/7/2022	121.6	37.0	1295.8	5.3	22.0	6.3	10.1	0.1	1.7
9/7/2022	131.2	40.0	1286.2	5.3	22.0	6.3	10.0	0.1	1.8
9/7/2022	141.2	43.0	1276.2	5.2	22.0	6.3	9.7	0.0	2.1
9/7/2022	144.1	44.0	1273.3	5.2	22.0	6.3	9.4	0.1	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
11/2/2022	1.6	0.5	1396.7	8.8	28.0	6.3	9.3	0.3	23.5
11/2/2022	3.3	1.0	1395.0	8.8	28.0	6.3	9.2	0.3	24.1
11/2/2022	6.7	2.0	1391.6	8.8	28.0	6.3	9.2	0.3	23.1
11/2/2022	9.8	3.0	1388.5	8.8	28.0	6.3	9.2	0.3	23.1
11/2/2022	13.1	4.0	1385.2	8.8	28.0	6.3	9.2	0.3	21.9
11/2/2022	16.4	5.0	1381.9	8.8	28.0	6.3	9.1	0.4	22.3
11/2/2022	19.7	6.0	1378.6	8.8	28.0	6.3	9.2	0.4	23.9
11/2/2022	23.1	7.0	1375.2	8.8	27.0	6.3	9.1	0.3	33.9
11/2/2022	26.2	8.0	1372.1	8.8	25.0	6.2	8.9	0.4	44.6
11/2/2022	29.4	9.0	1368.9	8.5	25.0	6.2	8.9	0.4	40.5
11/2/2022	32.9	10.0	1365.4	8.1	24.0	6.1	8.7	0.4	37.3
11/2/2022	36.1	11.0	1362.2	7.9	24.0	6.1	8.5	0.4	35.0
11/2/2022	39.2	12.0	1359.1	7.7	24.0	6.1	8.3	0.2	24.5
11/2/2022	42.6	13.0	1355.7	7.5	23.0	6.1	8.1	0.2	20.7
11/2/2022	45.5	14.0	1352.8	7.2	23.0	6.1	8.0	0.1	15.0
11/2/2022	49.2	15.0	1349.1	6.8	22.0	6.1	8.1	0.0	7.8
11/2/2022	55.7	17.0	1342.6	6.4	22.0	6.2	8.9	0.1	4.8
11/2/2022	62.2	19.0	1336.1	6.2	22.0	6.2	9.0	0.1	5.4
11/2/2022	68.9	21.0	1329.4	6.0	21.0	6.2	9.1	0.1	4.9
11/2/2022	75.6	23.0	1322.7	5.9	21.0	6.2	9.3	0.1	4.1
11/2/2022	82.0	25.0	1316.3	5.8	21.0	6.2	9.3	0.1	3.8
11/2/2022	88.6	27.0	1309.7	5.9	22.0	6.2	9.1	0.0	10.3
11/2/2022	95.1	29.0	1303.2	5.8	22.0	6.2	8.8	0.1	10.5
11/2/2022	101.6	31.0	1296.7	5.7	22.0	6.2	8.7	0.2	10.4
11/2/2022	111.6	34.0	1286.7	5.7	22.0	6.2	8.6	0.1	9.0
11/2/2022	121.4	37.0	1276.9	5.6	22.0	6.2	8.5	0.1	9.9
11/2/2022	131.2	40.0	1267.1	5.6	22.0	6.2	8.4	0.2	9.2
11/2/2022	141.1	43.0	1257.2	5.6	22.0	6.2	8.2	0.2	12.6

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 2022

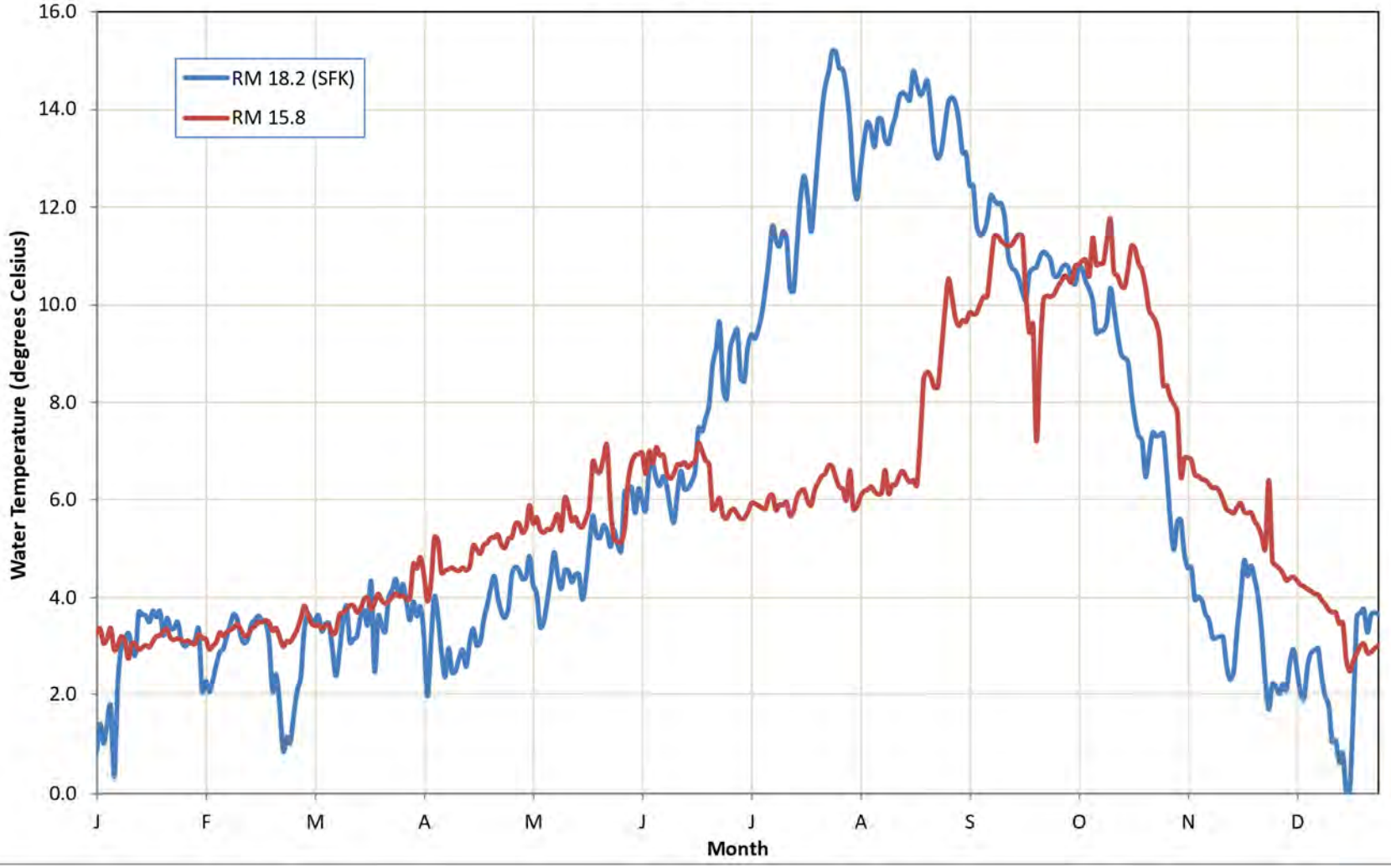


Figure B-2. Longitudinal Depiction of Mean Daily Water Temperature in the Bypass Reach (Reach 3) of the Sultan River during 2022

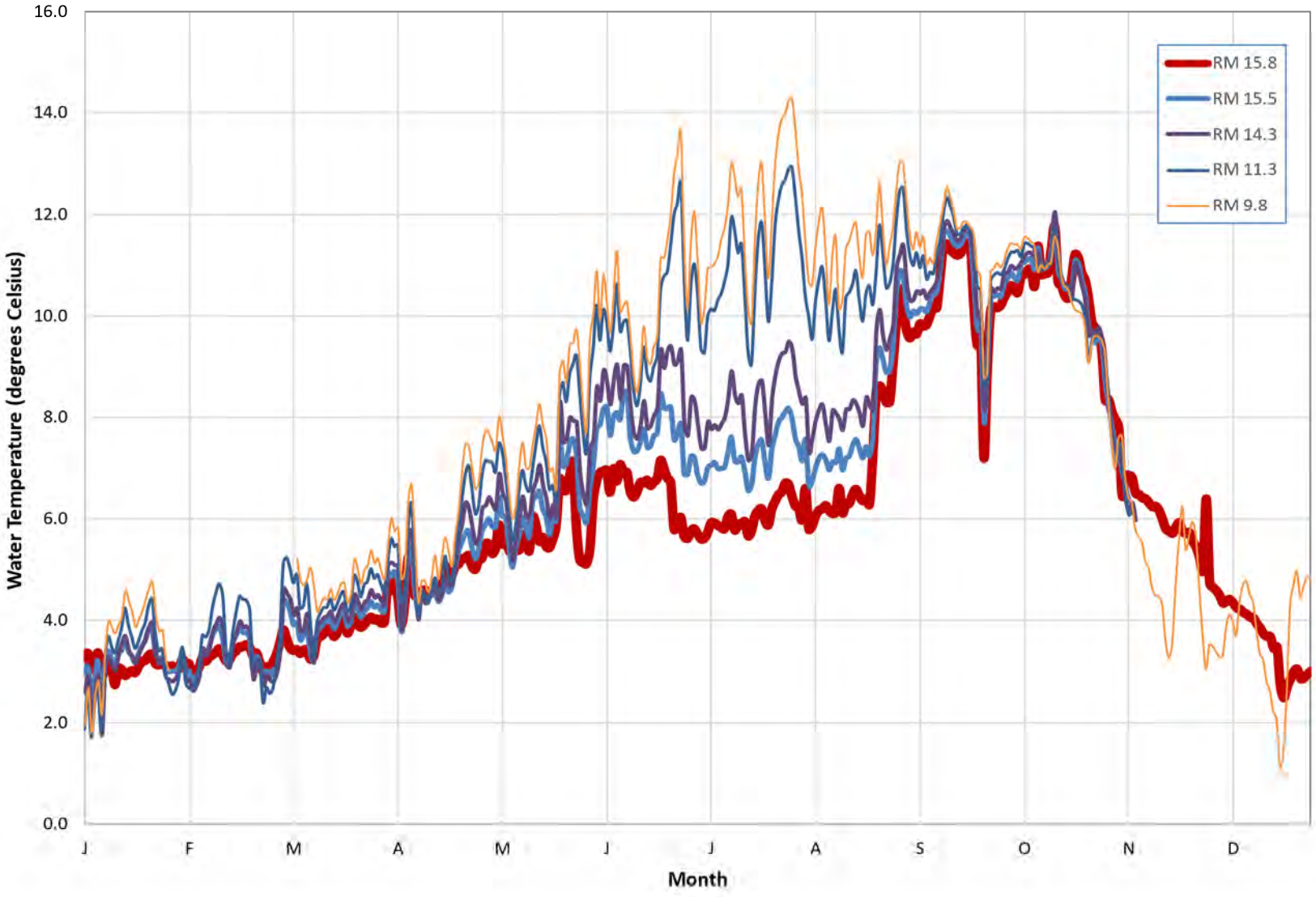


Figure B-3. Longitudinal Depiction of Mean Daily Water Temperature, Sultan River downstream of Culmback Dam, 2022

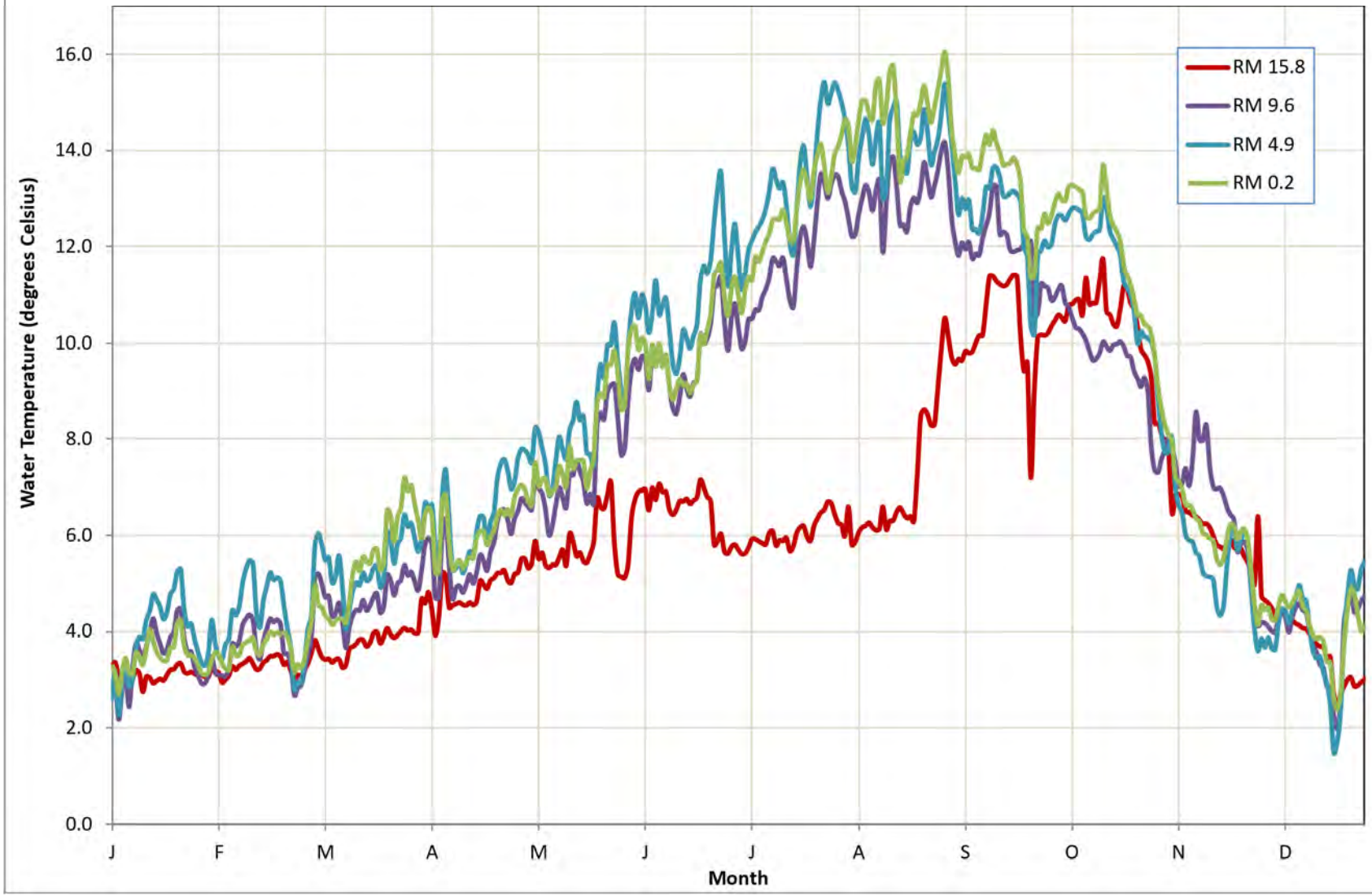
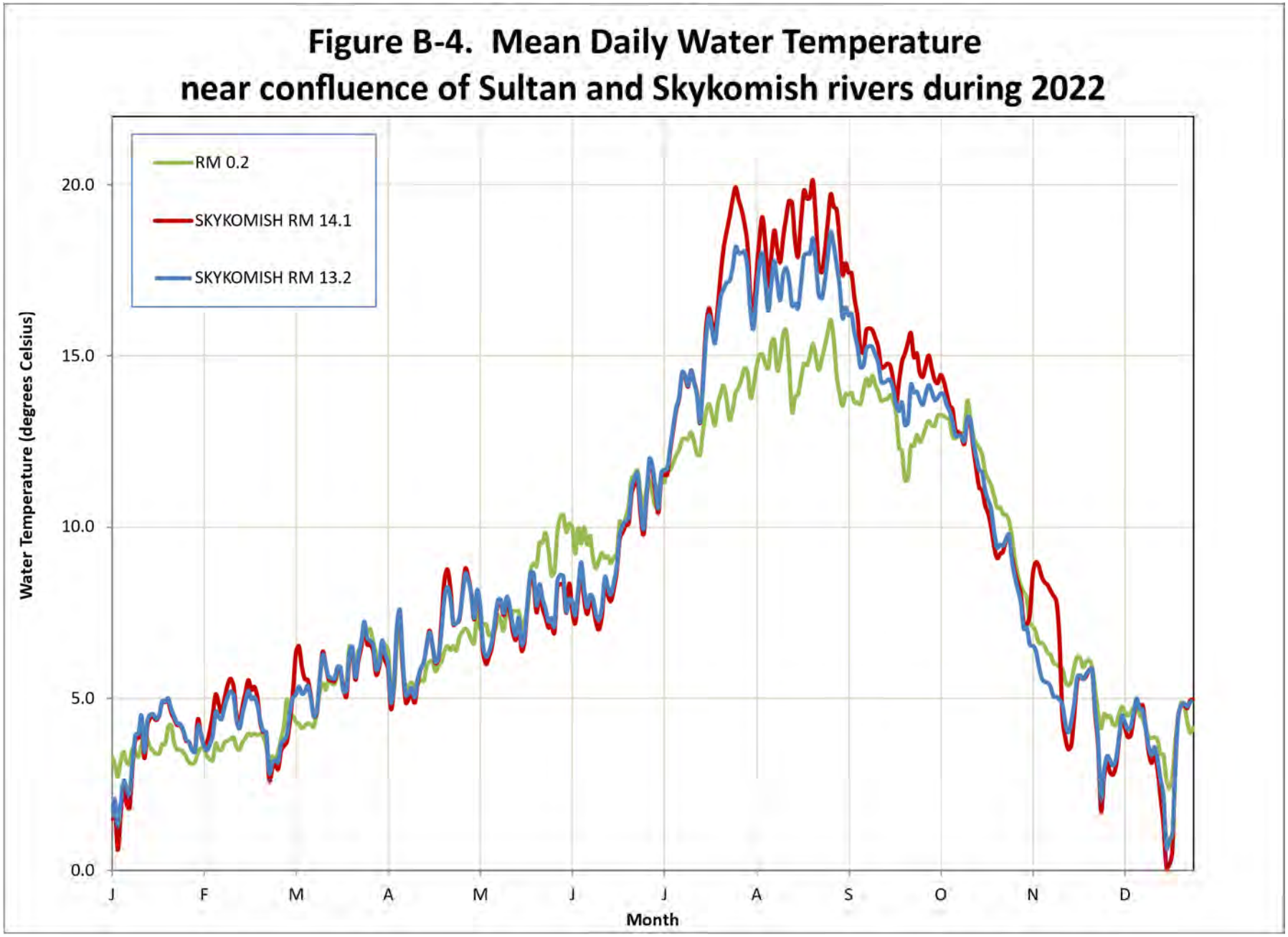


Figure B-4. Mean Daily Water Temperature near confluence of Sultan and Skykomish rivers during 2022



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	0.8	3.3	3.0	2.6	1.9	1.9	2.8	2.6	3.2	3.3	1.5	1.5
1/2	1.4	3.4	3.1	2.9	2.6	2.7	2.9	3.2	3.0	3.1	2.0	2.0
1/3	1.0	3.1	2.6	2.1	1.7	1.8	2.2	2.3	2.7	2.7	0.6	1.3
1/4	1.4	3.2	2.9	2.6	2.4	2.5	2.8	3.0	3.1	3.2	1.6	1.9
1/5	1.8	3.4	3.2	2.9	2.7	2.8	3.1	3.3	3.4	3.4	2.5	2.5
1/6	0.3	2.9	2.0	1.7	1.8	2.2	2.4	2.8	2.8	3.1	1.9	2.3
1/7	2.2	3.0	3.1	3.1	3.2	3.4	3.2	3.0	3.0	3.1	1.8	2.2
1/8	3.0	3.2	3.4	3.3	3.7	4.0	3.8	3.7	3.6	3.6	3.0	3.2
1/9	3.1	3.1	3.3	3.1	3.5	3.9	3.6	3.9	3.5	3.5	3.8	3.9
1/10	3.3	2.7	3.1	3.0	3.4	3.7	3.5	3.8	3.3	3.3	3.9	4.0
1/11	3.0	3.1	3.4	3.3	3.6	3.9	3.7	4.2	3.8	3.6	4.4	4.5
1/12	2.8	3.0	3.4	3.6	3.9	4.1	4.0	4.4	4.3	4.0	3.3	3.4
1/13	3.7	2.9	3.6	3.7	4.2	4.6	4.3	4.8	3.8	3.8	4.2	4.4
1/14	3.6	3.0	3.4	3.4	3.9	4.4	4.0	4.7	3.5	3.6	4.5	4.5
1/15	3.6	3.0	3.3	3.3	3.7	4.2	3.8	4.5	3.4	3.5	4.5	4.5
1/16	3.5	3.0	3.2	3.2	3.5	3.9	3.6	4.2	3.3	3.4	4.4	4.4
1/17	3.7	3.1	3.3	3.3	3.6	4.0	3.6	4.4	3.3	3.4	4.5	4.5
1/18	3.6	3.2	3.5	3.5	3.8	4.2	3.9	4.8	3.6	3.7	4.9	4.9
1/19	3.7	3.2	3.6	3.6	4.0	4.4	4.0	4.9	3.6	3.7	4.9	4.9
1/20	3.2	3.3	3.8	3.9	4.3	4.6	4.4	5.2	4.4	4.2	4.9	5.0
1/21	3.6	3.3	3.9	4.0	4.4	4.8	4.5	5.3	4.2	4.2	4.6	4.7
1/22	3.4	3.2	3.4	3.4	3.8	4.1	3.9	4.4	3.6	3.7	4.4	4.5
1/23	3.4	3.1	3.2	3.2	3.4	3.8	3.6	4.1	3.5	3.5	4.2	4.3
1/24	3.5	3.2	3.3	3.2	3.4	3.8	3.6	4.2	3.5	3.5	4.2	4.2
1/25	3.1	3.1	3.1	2.9	3.0	3.2	3.3	3.8	3.4	3.4	4.1	4.1
1/26	3.0	3.1	3.0	2.9	2.8	3.0	3.1	3.6	3.2	3.3	3.8	3.8
1/27	3.1	3.1	3.0	2.8	2.5		2.9	3.4	3.0	3.1	3.7	3.7
1/28	3.1	3.1	3.0	2.9	2.6		2.9	3.3	3.0	3.1	3.5	3.5
1/29	3.1	3.1	3.1	3.0	2.9		3.1	3.5	3.0	3.1	3.5	3.4
1/30	3.4	3.2	3.4	3.4	3.5		3.5	4.2	3.1	3.4	4.4	4.2
1/31	2.1	3.2	3.0	2.8	2.8		3.2	3.8	3.4	3.6	4.0	4.0

	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
2/1	2.3	3.1	3.0	2.8	2.7		3.1	3.5	3.4	3.5	3.7	3.6
2/2	2.1	2.9	2.8	2.6	2.7		3.1	3.4	3.2	3.3	3.7	3.5
2/3	2.3	3.0	2.9	2.7	2.8		3.1	3.7	2.9	3.2	4.1	3.6
2/4	2.6	3.1	3.0	2.9	3.1		3.2	3.8	2.9	3.2	4.5	3.9
2/5	2.9	3.3	3.4	3.5	3.7		3.8	4.4	3.3	3.7	5.1	4.6
2/6	2.9	3.2	3.3	3.3	3.7		3.7	4.3	3.1	3.5	4.9	4.4
2/7	3.2	3.3	3.5	3.5	3.8		3.8	4.5		3.5	4.6	4.4
2/8	3.5	3.3	3.7	3.8	4.3		4.1	5.0		3.7	5.0	4.8
2/9	3.7	3.4	3.8	4.0	4.5		4.3	5.3	3.3	3.8	5.4	5.0
2/10	3.5	3.4	3.9	4.1	4.7		4.4	5.5	3.3	3.8	5.6	5.2
2/11	3.2	3.3	3.7	3.8	4.5		4.2	5.4	3.4	3.9	5.4	5.1
2/12	3.1	3.2	3.2	3.1	3.4		3.6	4.4	3.3	3.6	4.5	4.3
2/13	3.1	3.2	3.2	3.1	3.2		3.4	4.1	3.3	3.5	4.3	4.1
2/14	3.5	3.4	3.6	3.6	3.8		3.8	4.6	3.4	3.7	4.8	4.6
2/15	3.5	3.4	3.7	3.8	4.2		4.1	4.9	3.4	3.8	5.2	4.9
2/16	3.6	3.5	3.9	4.0	4.5		4.3	5.2	3.5	4.0	5.5	5.2
2/17	3.5	3.5	3.8	3.9	4.4		4.2	5.1	3.6	3.9	5.3	5.0
2/18	3.5	3.5	3.8	3.9	4.4		4.3	5.1	3.6	4.0	5.4	5.0
2/19	3.1	3.5	3.7	3.7	4.2		4.2	5.1	3.6	3.9	5.1	4.8
2/20	2.1	3.3	3.0	2.9	3.1		3.6	4.5	3.6	4.0	4.3	4.3
2/21	2.4	3.4	3.3	3.2	3.2		3.5	4.0	3.6	3.9	4.0	4.0
2/22	1.8	3.2	3.2	3.2	3.2		3.3	3.7	3.4	3.6	4.0	4.0
2/23	0.9	3.0	2.8	2.7	2.4		2.7	2.8	3.2	3.2	2.6	2.8
2/24	1.1	3.1	3.0	2.9	2.7		2.8	3.0	3.2	3.3	2.9	3.1
2/25	1.0	3.1	2.9	2.8	2.6		2.9	2.9	3.2	3.2	3.1	3.2
2/26	1.6	3.2	3.0	2.8	2.7		3.2	3.4		3.4	2.9	3.1
2/27	2.1	3.3	3.1	3.0	3.2		3.5	4.1		3.8	3.5	3.7
2/28	2.4	3.6	3.4	3.5	3.7		3.9	4.3		4.2	3.6	3.8

	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	3.3	3.8	4.4	4.6	5.1		5.2	5.8	4.1	5.0	3.8	3.9
3/2	3.6	3.6	4.4	4.5	5.2		5.2	6.0	4.0	4.5	4.4	4.6
3/3	3.5	3.5	4.2	4.4	5.0		5.0	5.8	3.9	4.5	5.2	5.0
3/4	3.5	3.4	3.9	4.1	4.7		4.7	5.5	3.9	4.3	6.3	5.1
3/5	3.6	3.4	4.0	4.3	4.9	5.2	4.7	5.5	3.8	4.3	6.5	5.3
3/6	3.3	3.4	3.6	3.8	4.2	4.8	4.3	5.0	3.8	4.1	5.9	5.1
3/7	3.5	3.4	3.7	3.8	4.3	4.7	4.4	5.1	3.9	4.2	5.6	5.2
3/8	3.5	3.4	3.9	4.1	4.7	4.8	4.6	5.6	3.9	4.3	5.5	5.4
3/9	2.9	3.2	3.4	3.5	4.0	5.0	4.2	4.9	3.9	4.2	5.1	5.0
3/10	2.4	3.3	3.2	3.2	3.3	4.7	3.7	4.0	4.1	4.2	4.5	4.5
3/11	2.9	3.6	3.8	3.9	4.0	4.2	4.1	4.5	4.5	4.6	4.6	4.6
3/12	3.5	3.7	3.9	4.0	4.1	4.3	4.3	4.8	4.9	5.2	5.6	5.5
3/13	3.8	3.7	3.9	4.1	4.3	4.4	4.5	5.0	5.1	5.4	6.4	6.3
3/14	3.1	3.8	4.0	4.1	4.3	4.4	4.4	5.0	5.0	5.3	6.0	6.0
3/15	3.1	3.8	4.0	4.2	4.4	4.6	4.7	5.2	5.2	5.5	5.6	5.6
3/16	3.2	3.7	3.9	4.0	4.2	4.4	4.4	5.1	5.1	5.5	5.5	5.6
3/17	3.6	3.8	4.0	4.1	4.3	4.5	4.5	5.1	5.1	5.4	5.5	5.6
3/18	3.7	4.0	4.2	4.3	4.5	4.7	4.7	5.3	5.3	5.7	5.9	5.9
3/19	3.4	4.0	4.2	4.3	4.6	4.7	4.8	5.4	5.4	5.7	5.8	5.9
3/20	4.3	3.8	3.9	4.0	4.2	4.4	4.4	4.9	4.9	5.3	5.4	5.2
3/21	2.5	3.9	4.0	4.1	4.3	4.5	4.5	5.1	5.1	5.4	5.1	5.2
3/22	3.6	4.1	4.3	4.5	4.9	5.2	5.2	6.1	6.1	6.5	6.2	6.3
3/23	3.4	3.9	4.2	4.4	4.8	5.0	5.1	5.9	5.9	6.4	6.4	6.5
3/24	3.3	3.9	4.1	4.2	4.5	4.7	4.8	5.4	5.5	5.9	5.6	5.6
3/25	4.0	3.9	4.2	4.4	4.7	5.0	5.0	5.8	5.9	6.4	6.1	6.2
3/26	4.2	4.0	4.3	4.4	4.8	5.1	5.1	5.9	6.0	6.6	6.5	6.6
3/27	4.4	4.1	4.4	4.6	5.0	5.4	5.4	6.4	6.5	7.2	7.1	7.2
3/28	4.0	4.0	4.3	4.5	4.8	5.1	5.2	6.2	6.3	6.9	6.6	6.7
3/29	4.3	4.0	4.3	4.5	4.9	5.2	5.3	6.2	6.4	7.0	6.6	6.7
3/30	3.9	4.0	4.2	4.4	4.7	5.0	5.0	5.9	6.0	6.6	6.4	6.5
3/31	3.5	4.0	4.2	4.3	4.6	4.8	4.9	5.7	5.7	6.3	5.7	5.8

	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	3.9	4.7	5.0	5.1	5.2	5.5	5.3	5.9	5.6	5.9	5.9	6.0
4/2	3.6	4.6	4.9	5.2	5.6	6.0	5.8	6.7	6.1	6.4	6.6	6.7
4/3	3.8	4.8	5.0	5.1	5.5	5.8	5.9	6.6	6.4	6.6	6.1	6.3
4/4	3.2	4.5	4.8	5.1	5.5	5.8	5.8	6.6	6.0	6.4	5.9	6.0
4/5	2.0	3.9	3.8	3.8	4.4	4.8	4.7	5.7	5.1	5.2	4.7	4.9
4/6	3.1	4.3	4.3	4.4	4.5	5.0	4.7	5.4	5.2	5.2	5.4	5.5
4/7	4.0	5.2	5.3	5.6	5.8	6.3	6.0	6.8	6.5	6.7	7.1	7.1
4/8	3.6	5.2	5.4	5.8	6.3	6.7	6.3	7.4	6.7	6.8	7.4	7.6
4/9	2.9	4.5	4.6	4.9	5.2	5.6	5.4	6.3	5.8	5.8	5.9	6.0
4/10	2.4	4.5	4.2	4.0	4.1	4.4	4.7	5.3	5.2	5.3	4.9	5.1
4/11	3.0	4.6	4.6	4.6	4.5	4.8	4.9	5.3	5.2	5.4	5.0	5.2
4/12	2.5	4.6	4.4	4.4	4.5	4.8	5.0	5.5	5.3	5.5	5.1	5.3
4/13	2.5	4.6	4.5	4.4	4.3	4.6	4.8	5.2	5.1	5.3	4.9	5.0
4/14	2.8	4.5	4.5	4.6	4.6	4.9	5.0	5.4	5.2	5.4	5.5	5.6
4/15	2.9	4.6	4.6	4.7	4.8	5.3	5.2	5.7	5.2	5.5	5.9	5.9
4/16	2.6	4.6	4.4	4.4	4.6	4.8	5.0	5.5	5.3	5.5	6.1	6.0
4/17	3.1	4.6	4.5	4.6	4.6	5.2	5.2	6.1	5.6	5.9	6.6	6.5
4/18	3.4	5.1	4.8	4.8	5.3	5.6	5.6	6.4	6.0	6.1	7.0	6.9
4/19	3.0	5.0	4.6	4.7	4.9	5.4	5.5	6.4	5.9	6.1	6.5	6.5
4/20	3.1	4.9	4.7	4.7	4.8	5.1	5.3	5.8	5.7	5.8	6.0	6.1
4/21	3.5	5.1	5.0	5.1	5.3	5.7	5.7	6.3	5.8	6.0	6.2	6.2
4/22	3.8	5.1	5.4	5.6	5.8	6.2	5.9	6.5	5.9	6.1	7.3	7.0
4/23	4.2	5.2	5.6	5.9	6.4	6.9	6.3	7.2	6.2	6.4	8.5	7.9
4/24	4.4	5.2	5.7	6.3	6.9	7.5	6.5	7.5	6.3	6.5	8.8	8.2
4/25	4.0	5.3	5.8	6.2	7.0	7.4	6.5	7.6	6.3	6.4	8.2	7.9
4/26	3.7	5.1	5.4	5.9	6.6	7.0	6.3	7.3	6.4	6.5	7.2	7.2
4/27	3.6	5.0	5.2	5.5	6.1	6.6	6.0	7.0	6.3	6.4	7.2	7.2
4/28	3.8	5.2	5.4	5.7	6.3	6.7	6.4	7.1	6.7	6.8	7.3	7.3
4/29	4.5	5.2	5.8	6.2	6.9	7.4	6.5	7.6	6.8	7.0	8.1	8.0
4/30	4.6	5.5	5.9	6.3	7.2	7.7	6.8	7.8	7.0	7.0	8.8	8.6

	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	4.6	5.5	6.0	6.4	7.1	7.7	6.7	7.8	6.9	6.9	8.6	8.4
5/2	4.4	5.3	5.9	6.3	7.1	7.5	6.6	7.7	6.8	6.7	8.1	8.0
5/3	4.4	5.4	5.8	6.2	6.9	7.4	6.5	7.5	6.8	6.6	7.3	7.3
5/4	4.8	5.9	6.4	6.9	7.5	8.0	7.3	8.2	7.5	7.5	8.2	8.2
5/5	4.3	5.5	6.1	6.5	7.3	7.6	7.0	8.1	7.2	7.0	7.6	7.7
5/6	4.1	5.6	6.0	6.4	6.8	7.2	6.9	7.8	7.3	7.2	6.4	6.5
5/7	3.4	5.4	5.4	5.8	6.2	6.5	6.5	7.5	7.1	7.2	6.0	6.2
5/8	3.5	5.3	5.1	5.2	5.6	6.0	6.0	6.8	6.7	6.8	6.2	6.4
5/9	3.9	5.4	5.4	5.6	5.9	6.3	6.2	7.0	6.7	6.9	6.5	6.7
5/10	4.4	5.4	5.7	6.0	6.6	7.0	6.6	7.5	7.0	7.0	7.2	7.3
5/11	4.9	5.5	6.0	6.5	7.0	7.5	7.0	8.0	7.4	7.4	7.8	7.9
5/12	4.5	5.7	5.8	6.1	6.7	7.0	6.8	7.8	7.3	7.2	7.8	7.9
5/13	4.2	5.4	5.7	6.1	6.6	7.0	6.6	7.6	7.0	7.0	7.4	7.5
5/14	4.5	6.0	6.4	6.6	7.0	7.5	7.3	8.2	7.7	7.8	7.9	8.0
5/15	4.5	5.9	6.4	6.8	7.5	7.9	7.3	8.4	7.5	7.4	7.6	7.7
5/16	4.3	5.6	6.6	7.1	7.8	8.3	7.6	8.8	7.7	7.5	7.0	7.1
5/17	4.5	5.6	6.2	6.7	7.4	7.9	7.3	8.4	7.6	7.5	6.7	6.8
5/18	4.5	5.5	6.0	6.4	7.1	7.6	7.1	8.5	7.4	7.5	7.2	7.4
5/19	4.0	5.4	5.7	6.0	6.6	6.9	6.7	7.7	7.1	7.0	6.4	6.6
5/20	4.4	5.6	6.0	6.3	6.7	7.0	6.9	7.7	7.2	7.3	6.7	6.8
5/21	5.1	5.9	6.0	6.1	6.4	6.6	6.7	7.5	7.4	7.6	7.8	7.9
5/22	5.7	6.8	7.5	8.3	8.4	8.9	8.3	8.9	8.5	8.8	8.6	8.7
5/23	5.3	6.6	7.0	7.5	8.7	9.1	8.5	9.5	8.9	8.9	8.4	8.6
5/24	5.2	6.6	7.1	7.6	8.3	8.7	8.4	9.3	8.7	8.9	7.5	7.7
5/25	5.5	6.8	7.5	8.0	8.9	9.4	9.0	10.0	9.3	9.5	8.2	8.3
5/26	5.4	7.1	7.6	7.9	9.0	9.5	9.1	10.0	9.5	9.5	7.7	7.9
5/27	5.0	5.8	7.3	7.9	9.2	9.7	9.1	10.4	9.6	9.8	7.4	7.6
5/28	5.4	5.2	6.2	6.9	8.5	9.1	8.4	9.6	9.0	9.4	7.1	7.2
5/29	5.1	5.1	6.1	6.5	7.7	8.2	7.7	9.0	8.3	8.6	7.1	7.3
5/30	4.9	5.1	5.9	6.3	7.3	7.7	7.8	8.7	8.4	8.7	6.9	7.1
5/31	6.2	5.4	6.6	7.4	8.8	9.5	8.8	9.9	9.4	9.9	8.3	8.4

	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
6/1	6.2	6.4	7.1	7.6	9.3	10.0	9.5	10.7	9.8	10.3	8.3	8.6
6/2	6.3	6.8	7.8	8.6	10.2	10.9	9.7	11.0	9.7	10.3	8.3	8.6
6/3	5.7	6.9	7.9	8.3	9.5	9.9	9.5	10.5	9.7	9.9	7.5	7.5
6/4	6.2	6.9	8.2	8.9	10.1	10.8	9.7	11.0	9.9	10.1	8.4	7.9
6/5	6.0	7.0	8.2	8.7	9.9	10.3	9.7	10.8	10.0	10.0	7.6	7.8
6/6	5.8	6.5	7.7	8.3	9.3	9.7	9.0	10.2	9.1	9.2	7.2	7.4
6/7	6.6	7.0	8.0	8.7	9.8	10.4	9.8	10.6	9.7	10.0	8.0	8.2
6/8	6.7	6.7	8.1	9.0	10.6	11.3	9.7	11.3	9.2	9.5	8.8	9.0
6/9	6.4	7.1	8.0	8.4	9.7	10.1	9.8	10.6	9.9	10.0	7.9	8.2
6/10	6.3	6.9	8.5	9.0	9.9	10.2	9.6	10.8	9.4	9.5	7.5	7.7
6/11	6.5	6.9	8.5	9.0	9.9	10.3	9.7	10.9	9.5	9.7	7.8	8.0
6/12	6.3	6.5	7.6	8.2	9.3	9.6	9.1	10.3	8.9	9.1	7.7	7.9
6/13	5.8	6.4	7.3	7.7	8.5	8.8	8.6	9.6	8.7	8.8	7.2	7.4
6/14	5.5	6.5	7.3	7.6	8.2	8.5	8.5	9.4	8.9	9.0	7.0	7.3
6/15	6.1	6.7	7.5	7.9	8.6	9.0	8.9	9.7	9.0	9.2	7.4	7.7
6/16	6.6	6.7	7.8	8.3	9.4	9.8	9.4	10.3	8.9	9.1	8.4	8.5
6/17	6.2	6.8	7.4	7.8	8.9	9.2	9.1	10.1	9.0	9.1	8.0	8.2
6/18	6.2	6.7	7.4	7.8	8.7	9.0	8.9	9.9	8.8	8.9	7.9	8.0
6/19	6.4	6.7	7.6	8.1	9.0	9.4	9.2	10.1	8.9	9.1	8.2	8.4
6/20	6.6	6.8	7.7	8.2	9.2	9.6	9.2	10.4	9.0	9.2	8.7	8.9
6/21	7.5	7.2	8.5	9.3	10.5	11.1	10.2	11.3	10.0	10.1	9.7	9.8
6/22	7.4	7.0	8.2	9.0	10.8	11.1	10.0	11.6	10.1	10.0	9.9	10.0
6/23	7.7	6.8	8.2	9.3	10.9	11.5	10.1	11.4	10.3	10.3	10.1	10.2
6/24	7.9	6.7	8.2	9.4	11.4	12.0	10.4	11.7	10.6	10.6	10.1	10.2
6/25	8.8	5.8	7.6	9.1	12.0	12.8	11.2	12.5	11.4	11.4	11.0	11.1
6/26	9.1	5.9	7.7	9.1	12.2	13.2	11.2	13.2	11.6	11.5	11.2	11.4
6/27	9.6	6.0	7.9	9.3	12.6	13.6	11.4	13.5	11.7	11.6	11.4	11.6
6/28	8.3	5.7	6.9	7.8	10.8	11.4	10.4	12.2	11.0	10.9	10.4	10.6
6/29	8.1	5.6	6.9	7.6	9.5	10.2	9.8	11.2	10.4	10.6	9.8	9.9
6/30	9.1	5.8	7.2	8.4	10.6	11.5	10.5	11.9	10.8	11.1	10.8	10.9

	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
7/1	9.3	5.8	7.2	8.3	11.0	12.0	10.8	12.5	11.2	11.4	11.9	12.0
7/2	9.5	5.7	6.9	7.9	10.4	11.1	10.3	11.8	10.7	11.0	11.7	11.8
7/3	8.5	5.6	6.7	7.4	9.4	9.9	9.9	11.1	10.6	10.6	11.0	11.1
7/4	8.4	5.6	6.8	7.4	9.3	10.1	10.0	11.5	10.7	11.1	10.4	10.5
7/5	9.1	5.7	7.0	7.9	10.0	10.9	10.5	11.9	11.0	11.4	11.5	11.6
7/6	9.4	5.9	7.1	7.8	10.1	11.0	10.5	12.1	11.1	11.3	11.5	11.7
7/7	9.3	5.9	7.1	7.9	10.1	11.0	10.7	12.3	11.4	11.8	11.5	11.7
7/8	9.5	5.9	7.0	7.8	10.3	11.2	10.7	12.4	11.3	11.7	12.3	12.3
7/9	9.8	5.8	7.0	7.9	10.4	11.5	11.0	12.6	11.5	11.9	12.9	12.9
7/10	10.3	5.8	7.0	8.0	10.7	11.7	11.1	12.8	11.7	12.1	13.4	13.5
7/11	10.9	6.0	7.3	8.4	11.0	12.2	11.4	13.1	11.9	12.3	13.8	13.8
7/12	11.6	6.1	7.6	8.9	11.9	13.0	11.8	13.6	12.2	12.5	14.5	14.5
7/13	11.3	5.8	7.1	8.4	11.7	12.7	11.7	13.4	11.8	12.6	14.4	14.4
7/14	11.2	5.9	7.1	8.3	11.2	12.3	11.6	13.2	11.8	12.6	14.1	14.1
7/15	11.5	5.9	7.2	8.4	11.4	12.5	11.8	13.3	12.0	12.8	14.6	14.5
7/16	11.3	5.9	6.9	7.7	10.4	11.2	11.3	12.8	11.8	12.5	14.3	14.2
7/17	10.3	5.7	6.6	7.2	9.3	10.1	10.9	12.1	11.6	12.1	13.9	13.8
7/18	10.3	5.8	6.7	7.3	9.0	9.9	10.8	11.8	11.5	12.1	13.0	13.0
7/19	11.2	6.1	7.2	8.2	10.4	11.5	11.6	12.8	11.8	12.8	14.3	14.1
7/20	12.2	6.2	7.5	8.7	11.5	12.6	12.2	13.7	12.5	13.3	15.8	15.5
7/21	12.6	6.2	7.6	8.7	11.8	13.0	12.4	14.1	12.7	13.6	16.4	16.2
7/22	12.2	6.0	7.1	8.1	10.9	11.9	12.1	13.4	12.6	13.3	16.0	15.8
7/23	11.5	5.9	6.8	7.5	9.9	10.7	11.6	12.8	12.3	13.0	15.6	15.3
7/24	12.2	6.2	7.4	8.4	10.6	11.8	12.2	13.4	12.6	13.6	16.5	16.1
7/25	13.1	6.4	7.7	8.8	11.8	13.0	12.9	14.4	13.2	13.9	17.4	16.7
7/26	13.9	6.5	7.9	9.1	12.3	13.6	13.5	15.0	13.7	14.1	18.2	17.0
7/27	14.5	6.5	8.0	9.3	12.6	13.9	13.3	15.4	13.1	13.7	18.7	17.2
7/28	14.8	6.7	8.1	9.3	12.7	14.0	13.0	15.0	12.7	13.1	19.1	17.2
7/29	15.2	6.7	8.2	9.5	12.9	14.2	13.3	15.2	13.0	13.4	19.6	17.6
7/30	15.2	6.4	8.0	9.4	12.9	14.3	13.5	15.4	13.4	13.9	19.9	18.2
7/31	14.8	6.3	7.6	8.8	12.4	13.7	13.5	15.2	13.6	14.1	19.6	18.0

	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
8/1	14.8	6.2	7.4	8.5	11.7	12.9	13.2	15.0	14.0	14.3	19.3	18.0
8/2	14.4	6.0	7.2	8.3	11.1	12.4	13.0	14.6	13.6	14.6	18.9	18.1
8/3	13.7	6.6	7.6	8.4	10.4	11.4	12.6	14.1	13.7	14.5	18.3	17.6
8/4	12.6	5.8	6.6	7.3	10.0	10.7	12.2	13.2	13.3	13.8	16.7	16.3
8/5	12.2	5.9	6.8	7.6	9.5	10.6	12.3	13.1	13.2	14.1	16.2	15.8
8/6	12.8	6.1	7.0	8.0	10.3	11.3	12.7	13.8	13.8	14.6	17.4	16.8
8/7	13.3	6.2	7.2	8.2	10.7	11.8	13.0	14.3	14.1	15.0	18.4	17.7
8/8	13.7	6.2	7.3	8.3	11.0	12.1	13.3	14.6	14.2	15.0	19.1	18.0
8/9	13.6	6.3	7.2	7.9	10.3	11.3	13.1	14.3	14.4	14.8	18.3	17.1
8/10	13.2	6.2	7.0	7.5	9.5	10.2	12.8	13.7	14.4	14.6	17.0	16.3
8/11	13.8	6.1	7.1	8.1	10.1	11.2	13.2	14.2	14.6	15.4	17.9	17.1
8/12	13.8	6.1	7.1	8.1	10.5	11.6	13.4	14.6	14.6	15.5	18.7	17.8
8/13	13.4	6.6	7.4	8.0	9.7	10.1	11.9	13.0	13.8	14.6	18.2	17.2
8/14	13.3	6.1	7.0	7.8	9.3	10.3	12.9	13.2	14.7	14.9	17.8	16.6
8/15	13.6	6.3	7.2	8.2	10.4	11.3	13.8	14.6	15.3	15.6	18.5	17.4
8/16	13.9	6.3	7.2	8.2	10.5	11.5	13.9	14.9	15.4	15.7	19.1	17.6
8/17	14.2	6.5	7.4	8.3	10.6	11.7	13.3	15.0	13.9	14.7	19.5	17.2
8/18	14.3	6.6	7.6	8.3	10.9	11.8	12.5	13.9	13.0	13.4	19.5	16.5
8/19	14.3	6.5	7.4	8.1	10.3	11.2	12.5	13.8	13.4	13.8	18.4	16.5
8/20	14.2	6.4	7.2	7.8	9.9	10.8	12.3	13.5	13.4	13.9	17.9	16.4
8/21	14.8	6.4	7.4	8.4	10.5	11.6	12.8	14.2	13.7	14.3	19.0	17.1
8/22	14.5	6.3	7.2	8.2	10.6	11.7	13.0	14.4	14.1	14.8	19.8	17.9
8/23	14.3	7.2	7.6	8.2	10.2	11.2	12.9	14.1	14.1	14.7	19.6	18.0
8/24	14.4	8.5	9.1	9.7	10.9	11.7	13.2	14.3	14.3	15.0	19.6	18.0
8/25	14.6	8.6	9.4	10.1	11.8	12.6	13.8	14.8	14.7	15.3	20.1	18.4
8/26	14.0	8.5	9.1	9.6	11.2	11.8	13.4	14.4	14.5	15.0	19.0	17.7
8/27	13.2	8.3	8.9	9.3	10.6	11.0	13.0	13.7	14.0	14.6	17.5	16.8
8/28	13.0	8.3	8.9	9.6	10.6	11.4	13.3	14.0	14.2	14.9	17.5	16.7
8/29	13.2	9.1	9.4	9.8	11.0	11.7	13.6	14.2	14.5	15.3	18.1	17.2
8/30	13.7	9.9	10.5	11.0	11.9	12.5	14.0	14.8	14.9	15.7	18.9	17.9
8/31	14.2	10.5	10.9	11.2	12.5	13.0	14.2	15.4	15.3	16.0	19.7	18.6

	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
9/1	14.2	10.1	10.8	11.4	12.5	13.0	13.6	14.8	14.5	15.5	19.4	18.2
9/2	14.1	9.7	10.2	10.6	11.7	12.3	12.6	14.1	13.6	14.4	19.3	17.7
9/3	13.7	9.6	10.0	10.3	11.2	11.6	12.1	13.4	13.2	13.9	18.4	17.1
9/4	13.1	9.7	10.1	10.3	11.0	11.3	11.8	12.7	12.9	13.5	17.4	16.1
9/5	13.1	9.6	10.0	10.5	11.2	11.6	12.1	13.0	13.2	13.9	17.7	16.4
9/6	12.4	9.8	10.1	10.4	10.9	11.3	11.9	12.8	13.2	13.9	17.5	16.2
9/7	12.4	9.8	10.1	10.5	11.2	11.6	12.1	13.0	13.2	13.9	17.4	16.2
9/8	11.6	9.8	10.1	10.3	10.7	11.0	11.8	12.4	13.0	13.6	16.7	15.6
9/9	11.4	10.0	10.3	10.5	10.9	11.1	11.9	12.4	13.1	13.6	16.2	15.3
9/10	11.5	10.2	10.4	10.6	10.8	11.0	11.8	12.3	13.2	13.6	15.2	14.7
9/11	11.7	10.2	10.5	10.7	11.2	11.5	12.2	12.7	13.4	14.0	15.1	14.7
9/12	12.2	10.8	10.9	11.0	11.5	11.8	12.4	13.2	13.6	14.3	15.8	15.2
9/13	12.1	11.4	11.6	11.7	12.0	12.2	12.7	13.2	13.6	14.1	15.8	15.3
9/14	12.1	11.4	11.7	11.9	12.3	12.5	13.3	13.6	13.9	14.4	15.8	15.2
9/15	12.1	11.3	11.6	11.7	12.2	12.3	13.3	13.6	13.8	14.1	15.5	15.0
9/16	11.8	11.2	11.4	11.6	12.0	12.1	12.3	13.4	13.6	14.0	15.3	14.8
9/17	11.0	11.2	11.4	11.5	11.6	11.7	12.3	13.1	13.4	13.7	14.7	14.2
9/18	10.8	11.2	11.4	11.5	11.6	11.7	12.3	13.0	13.4	13.7	14.7	14.2
9/19	10.7	11.3	11.5	11.7	11.7	11.9	11.9	13.1	13.4	13.7	14.8	14.3
9/20	10.5	11.4	11.6	11.8	11.8	11.8	11.9	13.1	13.5	13.8	14.7	14.3
9/21	10.3	11.4	11.5	11.6	11.7	11.7	11.9	13.1	13.5	13.7	14.3	14.0
9/22	10.1	10.2	10.7	11.0	11.5	11.6	12.0	13.0	13.0	13.3	13.6	13.6
9/23	10.6	9.4	9.7	10.0	10.6	10.9	12.1	12.0	11.8	12.3	14.3	13.4
9/24	10.7	9.6	9.9	10.1	10.5	10.8	12.0	11.8	11.7	12.2	14.8	13.6
9/25	10.8	7.2	7.9	8.2	8.6	8.8	12.1	10.3	10.8	11.4	15.1	13.0
9/26	11.0	9.0	9.0	8.9	8.7	8.8	10.6	10.2	10.8	11.4	15.4	13.0
9/27	11.1	10.1	10.3	10.5	10.7	10.8	10.6	11.8	11.9	12.4	15.7	14.1
9/28	11.0	10.2	10.4	10.5	10.8	10.9	11.2	11.9	12.0	12.4	15.0	13.9
9/29	10.9	10.2	10.4	10.5	10.9	11.0	11.2	12.1	12.2	12.7	15.1	13.9
9/30	10.6	10.2	10.4	10.5	10.8	10.9	11.2	12.0	12.1	12.5	14.5	13.7

	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
10/1	10.6	10.4	10.6	10.8	10.9	11.1	10.9	12.0	12.3	12.6	14.4	13.6
10/2	10.7	10.5	10.7	10.9	11.1	11.3	11.0	12.5	12.6	12.9	14.7	13.9
10/3	10.8	10.6	10.8	11.0	11.2	11.4	11.1	12.6	12.7	13.1	15.0	14.1
10/4	10.8	10.5	10.7	10.9	11.3	11.4	11.2	12.6	12.7	13.0	14.6	13.9
10/5	10.5	10.5	10.7	11.0	11.3	11.4	10.8	12.5	12.7	13.0	14.3	13.7
10/6	10.4	10.8	11.0	11.1	11.2	11.3	10.7	12.7	13.0	13.2	14.2	13.8
10/7	10.8	10.8	11.0	11.2	11.4	11.5	10.5	12.8	13.0	13.3	14.4	13.9
10/8	10.7	10.9	11.1	11.2	11.4	11.5	10.3	12.8	13.0	13.2	14.3	13.8
10/9	10.5	10.9	11.1	11.2	11.4	11.5	10.3	12.8	13.0	13.2	13.9	13.6
10/10	10.3	10.6	10.9	11.2	11.3	11.4	10.2	12.7	12.9	13.1	13.6	13.4
10/11	10.1	11.4	11.3	11.3	10.9	10.9	10.1	12.2	12.6	12.6	13.4	13.1
10/12	9.4	10.8	10.9	10.9	11.0	11.0	9.8	12.1	12.6	12.6	12.8	12.7
10/13	9.5	10.8	10.9	11.0	10.9	10.9	9.7	12.2	12.7	12.7	12.8	12.6
10/14	9.5	10.8	11.0	11.1	11.0	11.0	9.7	12.3	12.7	12.7	12.6	12.6
10/15	9.6	11.3	11.3	11.2	11.0	11.0	9.8	12.3	12.9	12.8	12.4	12.5
10/16	10.3	11.7	12.0	12.0	11.7	11.6	10.0	13.0	13.7	13.7	13.2	13.2
10/17	9.9	10.7	10.9	11.1	11.4	11.4	9.9	12.8	13.0	13.2	13.0	13.1
10/18	9.4	10.6	10.7	10.7	10.8	10.8	9.9	12.3	12.7	12.6	12.3	12.5
10/19	9.0	10.4	10.5	10.6	10.6	10.6	10.0	12.1	12.5	12.4	11.7	12.0
10/20	8.9	10.4	10.5	10.6	10.5	10.5	10.0	12.0	12.4	12.3	11.2	11.7
10/21	8.8	10.7	10.4	10.3	10.3	10.3	10.0	11.8	12.1	12.1	11.1	11.6
10/22	8.2	11.2	11.1	11.0	10.3	10.1	9.9	11.3	11.6	11.6	10.6	11.1
10/23	7.6	11.1	11.0	10.9	10.3	10.1	9.7	11.1	11.5	11.4	10.4	10.8
10/24	7.3	10.8	10.7	10.6	10.2	10.0	9.7	11.0	11.2	11.2	10.0	10.5
10/25	7.2	10.7	10.4	10.3	10.0	9.8	9.4	10.7	11.0	10.9	9.4	9.9
10/26	6.5	10.3	9.8	9.6	9.1	9.1	9.3	10.0	10.3	10.6	9.1	9.4
10/27	6.9	9.9	9.6	9.7	9.5	9.4	9.1	10.2	10.4	10.6	9.2	9.5
10/28	7.4	9.8	9.5	9.6	9.6	9.6	9.3	10.1	10.2	10.4	9.3	9.4
10/29	7.3	9.6	9.6	9.8	9.6	9.6	9.0	10.1	10.2	10.3	9.6	9.6
10/30	7.3	9.3	9.4	9.5	9.5	9.5	7.8	10.0	10.0	10.2	9.7	9.8
10/31	7.4	8.3	8.7	8.9	9.2	9.3	7.4	9.7	9.6	9.7	9.2	9.0

	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	6.6	8.3	8.2	8.3	8.4	8.3	7.3	8.9	8.9	9.0	8.7	8.5
11/2	5.6	8.1	7.8	7.7	7.5	7.5	7.6	8.1	8.5	8.6	8.4	8.2
11/3	5.0	8.0	7.5	7.3	7.0	7.0	7.8	7.7	8.3	8.3	8.0	7.8
11/4	5.6	7.8	7.3	7.3	7.4	7.6	8.0	7.7	7.9	8.1	7.2	7.0
11/5	5.6	6.5	6.9	7.0	7.5	7.6	7.9	8.0	7.9	8.0	7.2	7.1
11/6	4.9	6.8	6.6	6.4	6.5	6.8	7.5	7.0	7.1	7.2	7.4	6.6
11/7	4.6	6.9	6.4	6.1	6.1	6.4	7.0	6.6	6.9	7.1	8.6	6.5
11/8	4.6	6.8		6.3	6.1	6.3	7.1	6.5	6.8	7.0	9.0	6.4
11/9	4.0	6.5		6.0		5.8	7.4	6.0	6.8	6.6	8.9	6.0
11/10	4.0	6.5				5.6	7.0	5.9	6.8	6.6	8.6	5.6
11/11	3.9	6.4				5.6	7.6	5.9	6.8	6.5	8.4	5.5
11/12	3.7	6.4				5.2	8.6	5.6	6.7	6.3	8.3	5.5
11/13	3.5	6.3				5.0	8.0	5.6	6.6	6.3	8.2	5.3
11/14	3.2	6.2				4.6	8.0	5.2	6.5	6.0	8.0	5.0
11/15	3.2	6.2				4.5	8.3	5.2	6.4	6.0	7.8	5.0
11/16	3.2	6.2				4.5	7.4	5.1	6.3	5.9	6.8	4.9
11/17	3.2	6.0				4.3	7.0	5.1	6.3	5.9	4.5	4.8
11/18	2.6	5.8				3.6	7.0	4.5	6.0	5.5	3.9	4.3
11/19	2.3	5.8				3.3	7.0	4.3	5.9	5.4	3.5	4.0
11/20	2.5	5.7				3.6	6.8	4.5	5.8	5.5	3.7	4.3
11/21	3.3	5.8				4.7	6.6	5.4	6.0	5.9	4.6	4.9
11/22	4.0	5.9				5.6	6.4	6.0	6.1	6.2	5.5	5.6
11/23	4.8	5.8				6.2	6.3	6.2	6.2	6.2	5.6	5.7
11/24	4.4	5.7				5.4	5.7	5.7	6.0	5.9	5.6	5.6
11/25	4.6	5.7				5.7	5.8	5.9	6.0	6.1	5.7	5.7
11/26	4.4	5.6				5.9	5.9	6.0	6.1	6.1	5.8	5.8
11/27	4.0	5.4				5.7	5.7	5.9	6.1	5.9	5.9	5.8
11/28	3.3	5.2				4.7	4.9	4.9	5.5	5.3	4.6	4.7
11/29	2.3	5.0				3.7	4.4	4.0	5.0	4.6	3.6	3.8
11/30	1.7	6.4				3.0	4.1	3.6	4.6	4.1	1.7	2.1

	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
12/1	2.2	4.7				3.5	4.2	3.8	4.8	4.5	2.7	2.9
12/2	2.2	4.7				3.5	4.2	3.7	4.8	4.4	3.2	3.3
12/3	2.0	4.6				3.4	4.1	3.9	4.7	4.5	2.9	3.2
12/4	2.2	4.5				3.3	4.0	3.6	4.6	4.3	2.8	3.0
12/5	2.1	4.3				3.3	4.0	3.6	4.5	4.2	3.0	3.2
12/6	2.7	4.4				3.9	4.3	4.2	4.6	4.5	3.8	3.8
12/7	2.9	4.4				4.1	4.4	4.5	4.7	4.8	4.5	4.5
12/8	2.5	4.3				4.0	4.3	4.4	4.7	4.6	4.2	4.3
12/9	2.0	4.3				3.7	4.0	4.2	4.5	4.5	3.9	4.1
12/10	1.9	4.2				4.4	4.3	4.5	4.6	4.6	3.9	4.2
12/11	2.6	4.2				4.7	4.5	4.7	4.7	4.7	4.5	4.6
12/12	2.9	4.1				4.8	4.6	5.0	4.8	4.8	5.0	5.0
12/13	2.9	4.1				4.5	4.5	4.7	4.7	4.5	4.7	4.7
12/14	2.9	4.1				4.4	4.4	4.6	4.6	4.4	4.8	4.7
12/15	2.4	3.9				3.8	4.0	4.1	4.4	4.1	4.2	4.2
12/16	2.0	3.9				3.4	3.7	3.6	4.2	3.9	3.5	3.6
12/17	1.8	3.7				3.2	3.6	3.4	4.0	3.8	3.1	3.3
12/18	1.0	3.7				2.8	3.3	3.5	4.0	3.9	3.4	3.6
12/19	1.1	3.7				2.6	3.3	3.1	3.9	3.8	2.9	3.2
12/20	0.6	3.5				2.2	2.9	2.9	3.6	3.4	2.1	2.6
12/21	0.8	3.5				2.1	2.8	2.5	3.6	3.4	1.3	2.1
12/22	0.0	2.7				1.1	2.3	1.5	3.1	2.6	0.1	0.6
12/23	0.1	2.5				1.4	2.0	1.7	2.6	2.4	0.2	0.9
12/24	1.7	2.7				2.6	2.5	2.3	2.6	2.7	0.6	1.0
12/25	3.6	2.9				4.3	4.2	3.9	3.8	3.7	3.1	2.9
12/26	3.7	3.0				4.7	4.6	4.7	4.6	4.4	4.5	4.5
12/27	3.8	3.0				5.0	4.9	5.3	5.1	4.9	4.8	4.8
12/28	3.3	2.9				4.5	4.4	4.9	4.9	4.8	4.8	4.8
12/29	3.6	2.9				4.7	4.5	4.9	4.5	4.3	4.7	4.8
12/30	3.7	2.9				4.9	4.6	5.3	4.4	4.0	4.9	4.9
12/31	3.7	3.0				4.8	4.7	5.4	4.6	4.1	5.0	4.9

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
1/1	1.4	3.5	3.2	3.0	2.5	2.6	3.1	3.1	3.6	3.6	2.0
1/2	1.5	3.4	3.2	3.0	2.5	2.6	3.0	3.1	3.5	3.5	2.1
1/3	1.5	3.4	3.2	3.0	2.6	2.7	3.0	3.2	3.4	3.4	2.3
1/4	1.7	3.3	3.2	3.0	2.8	2.9	3.1	3.3	3.3	3.4	2.2
1/5	2.0	3.3	3.2	3.1	3.0	3.1	3.3	3.4	3.4	3.4	2.5
1/6	2.2	3.3	3.2	3.1	3.1	3.3	3.3	3.5	3.5	3.5	2.7
1/7	2.5	3.2	3.3	3.2	3.3	3.5	3.5	3.7	3.5	3.6	3.2
1/8	2.7	3.2	3.3	3.3	3.4	3.7	3.6	3.9	3.7	3.6	3.5
1/9	2.9	3.2	3.4	3.4	3.6	3.9	3.7	4.0	3.8	3.7	3.6
1/10	3.3	3.1	3.5	3.5	3.9	4.2	3.9	4.3	3.9	3.7	3.9
1/11	3.5	3.1	3.5	3.5	3.9	4.3	4.0	4.5	3.9	3.8	4.3
1/12	3.6	3.1	3.5	3.5	3.9	4.3	4.0	4.5	3.8	3.7	4.4
1/13	3.6	3.1	3.5	3.5	3.9	4.3	4.0	4.6	3.8	3.7	4.5
1/14	3.7	3.1	3.6	3.6	3.9	4.4	4.0	4.7	3.8	3.7	4.5
1/15	3.8	3.1	3.6	3.6	4.0	4.4	4.1	4.8	3.7	3.7	4.6
1/16	3.9	3.1	3.6	3.6	4.0	4.5	4.1	4.9	3.6	3.7	4.8
1/17	3.8	3.2	3.6	3.7	4.0	4.5	4.1	4.9	3.8	3.7	4.9
1/18	3.8	3.3	3.7	3.7	4.1	4.6	4.2	5.0	3.9	3.8	4.9
1/19	3.8	3.3	3.7	3.8	4.1	4.6	4.2	5.1	3.9	3.9	4.9
1/20	3.8	3.3	3.7	3.8	4.1	4.6	4.2	5.0	4.0	3.9	4.9
1/21	3.7	3.3	3.7	3.7	4.1	4.5	4.2	4.9	4.0	3.9	4.8
1/22	3.7	3.3	3.6	3.7	4.0	4.4	4.1	4.8	3.9	3.9	4.7
1/23	3.6	3.3	3.5	3.5	3.8	4.2	4.0	4.6	3.8	3.8	4.6
1/24	3.5	3.2	3.4	3.4	3.6		3.7	4.4	3.7	3.7	4.4
1/25	3.4	3.2	3.3	3.2	3.3		3.5	4.1	3.5	3.5	4.3
1/26	3.4	3.2	3.2	3.2	3.2		3.4	4.0	3.4	3.4	4.2
1/27	3.5	3.2	3.3	3.2	3.2		3.4	4.0	3.4	3.4	4.3
1/28	3.3	3.2	3.2	3.2	3.1		3.4	4.0	3.4	3.4	4.3
1/29	3.2	3.2	3.2	3.1	3.1		3.3	3.9	3.5	3.5	4.2
1/30	3.1	3.2	3.2	3.1	3.1		3.3	3.9	3.5	3.5	4.1
1/31	2.9	3.2	3.2	3.1	3.1		3.4	4.0	3.5	3.5	4.2

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
2/1	2.9	3.2	3.2	3.1	3.2		3.4	4.0	3.3	3.5	4.3	4.1
2/2	2.8	3.2	3.3	3.2	3.3		3.5	4.1	3.3	3.6	4.5	4.2
2/3	2.7	3.2	3.3	3.2	3.4		3.5	4.2	3.3	3.6	4.6	4.3
2/4	2.9	3.2	3.3	3.3	3.5		3.6	4.3		3.6	4.7	4.3
2/5	3.1	3.3	3.5	3.5	3.7		3.8	4.5		3.6	4.9	4.5
2/6	3.3	3.3	3.6	3.6	4.0		4.0	4.8		3.7	5.1	4.7
2/7	3.5	3.4	3.8	3.9	4.3		4.2	5.0		3.8	5.4	4.9
2/8	3.6	3.4	3.9	4.0	4.5		4.3	5.2		3.9	5.5	5.1
2/9	3.6	3.4	3.8	3.9	4.4		4.3	5.2		3.9	5.4	5.1
2/10	3.6	3.5	3.8	3.9	4.4		4.3	5.2		3.9	5.4	5.1
2/11	3.7	3.5	3.8	3.9	4.4		4.3	5.3		3.9	5.4	5.1
2/12	3.7	3.5	3.8	3.9	4.4		4.2	5.2	3.4	3.9	5.4	5.1
2/13	3.7	3.5	3.8	3.9	4.4		4.2	5.2	3.5	4.0	5.4	5.2
2/14	3.7	3.5	3.8	3.9	4.3		4.2	5.1	3.5	4.0	5.4	5.1
2/15	3.7	3.5	3.8	3.9	4.3		4.2	5.1	3.5	4.0	5.4	5.1
2/16	3.7	3.5	3.9	3.9	4.3		4.2	5.2	3.6	4.0	5.5	5.2
2/17	3.6	3.5	3.9	4.0	4.4		4.3	5.2	3.6	4.1	5.5	5.2
2/18	3.5	3.5	3.8	4.0	4.3		4.3	5.2	3.6	4.1	5.4	5.2
2/19	3.3	3.5	3.8	3.9	4.2		4.2	5.0	3.6	4.1	5.3	5.1
2/20	2.9	3.4	3.6	3.7	3.9		3.9	4.7	3.6	4.0	4.9	4.7
2/21	2.6	3.4	3.5	3.6	3.7		3.8	4.4	3.5	4.0	4.7	4.6
2/22	2.2	3.3	3.4	3.4	3.4		3.6	4.1	3.5	3.9	4.4	4.3
2/23	2.1	3.3	3.3	3.3	3.2		3.5	4.0		3.8	4.1	4.1
2/24	2.0	3.3	3.3	3.3	3.2		3.5	3.9		3.8	4.0	4.0
2/25	2.0	3.4	3.3	3.3	3.3		3.6	4.0		3.9	3.8	3.9
2/26	2.2	3.4	3.5	3.6	3.6		3.9	4.3		4.1	3.8	3.9
2/27	2.6	3.5	3.8	3.8	4.0		4.2	4.7		4.2	4.0	4.1
2/28	2.9	3.6	3.9	4.0	4.3		4.5	5.1		4.4	4.3	4.3

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
3/1	3.2	3.6	4.1	4.2	4.6		4.7	5.4		4.5	4.7	4.6
3/2	3.5	3.6	4.2	4.4	5.0		5.0	5.7		4.6	5.1	4.9
3/3	3.7	3.7	4.3	4.6	5.2		5.2	5.9		4.7	5.5	5.1
3/4	3.9	3.6	4.3	4.6	5.2		5.2	6.0	3.9	4.7	5.9	5.4
3/5	4.0	3.6	4.3	4.5	5.2		5.1	5.9	3.9	4.6	6.1	5.6
3/6	3.9	3.5	4.2	4.4	5.0		5.0	5.8	4.0	4.6	6.2	5.7
3/7	3.8	3.5	4.1	4.3	4.8		4.9	5.6	4.0	4.6	6.1	5.6
3/8	3.7	3.6	4.0	4.2	4.7	5.5	4.8	5.5	4.2	4.7	5.8	5.5
3/9	3.7	3.6	4.0	4.2	4.6	5.4	4.7	5.4	4.4	4.9	5.8	5.6
3/10	3.8	3.6	4.0	4.2	4.5	5.2	4.7	5.4	4.7	5.1	5.9	5.8
3/11	3.7	3.7	4.0	4.1	4.4	5.1	4.7	5.3	4.8	5.2	5.9	5.9
3/12	3.6	3.7	3.9	4.1	4.4	5.0	4.7	5.2	5.1	5.4	5.9	5.9
3/13	3.7	3.8	4.0	4.1	4.4	4.9	4.7	5.2	5.2	5.6	6.0	6.0
3/14	3.8	3.8	4.0	4.2	4.5	4.7	4.7	5.4	5.4	5.7	6.1	6.1
3/15	3.9	3.9	4.1	4.3	4.5	4.8	4.8	5.5	5.5	5.9	6.3	6.3
3/16	3.8	3.9	4.1	4.3	4.6	4.8	4.8	5.5	5.5	5.9	6.2	6.2
3/17	6.7	3.9	4.1	4.3	4.5	4.8	4.8	5.4	5.5	5.8	6.6	6.0
3/18	6.6	4.0	4.1	4.3	4.6	4.8	4.8	5.5	5.5	5.9	6.4	5.9
3/19	6.8	4.0	4.2	4.4	4.7	5.0	5.0	5.7	5.7	6.1	6.6	6.1
3/20	6.8	4.0	4.3	4.4	4.8	5.0	5.0	5.8	5.8	6.2	6.7	6.2
3/21	6.8	4.0	4.3	4.5	4.8	5.1	5.1	5.9	5.9	6.3	6.7	6.3
3/22	6.9	4.0	4.3	4.5	4.9	5.2	5.2	6.0	6.0	6.5	6.8	6.4
3/23	7.0	4.0	4.3	4.6	5.0	5.3	5.3	6.2	6.2	6.6	6.9	6.5
3/24	4.3	4.0	4.4	4.7	5.1	5.5	5.5	6.5	6.5	7.0	6.7	6.9
3/25	4.5	4.1	4.4	4.7	5.2	5.6	5.5	6.6	6.6	7.2	7.1	7.2
3/26	4.6	4.0	4.4	4.7	5.2	5.5	5.5	6.6	6.6	7.3	7.1	7.2
3/27	4.6	4.0	4.4	4.7	5.2	5.6	5.5	6.6	6.6	7.3	7.1	7.2
3/28	4.6	4.1	4.4	4.7	5.1	5.6	5.6	6.6	6.6	7.4	7.1	7.2
3/29	4.6	4.2	4.6	4.9	5.3	5.7	5.6	6.6	6.6	7.3	7.0	7.2
3/30	4.5	4.3	4.7	5.1	5.4	5.9	5.7	6.7	6.5	7.3	7.1	7.2
3/31	4.4	4.4	4.8	5.1	5.4	5.8	5.7	6.6	6.4	7.1	6.9	7.0

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
4/1	4.3	4.5	4.9	5.2	5.5	6.0	5.8	6.7	6.4	7.1	6.7	6.8
4/2	4.0	4.5	4.8	5.1	5.5	5.9	5.8	6.6	6.2	6.7	6.4	6.5
4/3	4.0	4.6	4.9	5.3	5.6	6.1	5.8	6.6	6.1	6.6	6.4	6.5
4/4	4.2	4.9	5.2	5.6	5.9	6.4	6.0	6.9	6.3	6.8	6.7	6.8
4/5	4.1	5.0	5.2	5.6	6.0	6.6	6.2	7.1	6.4	7.0	6.9	7.1
4/6	3.9	4.9	5.1	5.5	5.9	6.5	6.1	7.0	6.4	6.8	6.8	7.0
4/7	3.7	4.9	5.1	5.4	5.8	6.5	6.0	6.9	6.2	6.7	6.7	6.8
4/8	3.8	4.9	5.1	5.4	5.7	6.4	5.9	6.8	6.1	6.5	6.6	6.7
4/9	3.8	5.0	5.2	5.5	5.7	6.4	5.9	6.7	6.1	6.5	6.6	6.7
4/10	3.6	4.9	5.1	5.4	5.6	6.2	5.9	6.6	6.0	6.5	6.5	6.6
4/11	3.4	4.8	5.0	5.1	5.3	6.0	5.7	6.3	5.7	6.2	6.2	6.3
4/12	3.4	4.7	4.9	5.1	5.3	5.9	5.6	6.2	5.5	6.0	6.0	6.1
4/13	3.4	4.7	4.9	5.0	5.2	5.8	5.5	6.1	5.4	6.0	6.1	6.2
4/14	3.7	4.7	5.0	5.3	5.4	6.0	5.7	6.3	5.5	6.2	6.5	6.5
4/15	3.7	4.8	5.0	5.2	5.5	6.0	5.7	6.4	5.6	6.3	6.8	6.8
4/16	3.8	4.9	5.1	5.3	5.6	6.3	5.9	6.6	5.7	6.4	7.0	7.0
4/17	3.9	4.9	5.1	5.4	5.6	6.3	5.9	6.6	5.8	6.4	7.2	7.1
4/18	4.0	5.0	5.2	5.4	5.8	6.4	6.0	6.8	5.9	6.5	7.3	7.2
4/19	4.1	5.1	5.3	5.6	5.9	6.5	6.1	6.9	6.0	6.5	7.5	7.3
4/20	4.4	5.2	5.6	5.9	6.3	7.0	6.3	7.2	6.1	6.6	7.9	7.7
4/21	4.6	5.3	5.7	6.2	6.6	7.3	6.5	7.4	6.2	6.7	8.2	7.9
4/22	4.7	5.3	5.9	6.4	6.9	7.6	6.7	7.6	6.3	6.8	8.4	8.1
4/23	4.8	5.3	6.0	6.5	7.1	7.7	6.7	7.7	6.4	6.8	8.5	8.1
4/24	4.9	5.3	6.1	6.7	7.3	8.0	6.8	7.9	6.5	7.0	8.7	8.3
4/25	4.9	5.4	6.2	6.7	7.4	8.1	6.9	8.0	6.6	7.2	8.8	8.5
4/26	5.0	5.4	6.3	6.9	7.7	8.4	7.0	8.3	6.8	7.3	8.9	8.7
4/27	5.0	5.4	6.2	6.8	7.7	8.5	7.1	8.3	6.9	7.5	8.9	8.8
4/28	4.9	5.4	6.2	6.7	7.6	8.4	7.0	8.2	7.0	7.5	8.7	8.7
4/29	5.0	5.5	6.2	6.7	7.6	8.3	7.0	8.2	7.0	7.5	8.7	8.7
4/30	5.1	5.5	6.2	6.8	7.6	8.4	7.1	8.2	7.1	7.5	8.6	8.6

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	5.4	5.7	6.5	7.0	7.9	8.6	7.3	8.4	7.3	7.7	8.8	8.8
5/2	5.4	5.8	6.5	7.1	8.0	8.7	7.4	8.5	7.4	7.7	9.0	8.9
5/3	5.2	5.9	6.5	7.1	7.8	8.5	7.4	8.5	7.5	7.7	8.6	8.6
5/4	5.0	5.9	6.5	7.0	7.6	8.2	7.3	8.4	7.5	7.6	8.1	8.1
5/5	4.9	5.9	6.3	6.8	7.4	8.0	7.3	8.3	7.6	7.6	7.8	7.9
5/6	4.9	5.8	6.3	6.8	7.4	7.9	7.3	8.3	7.6	7.7	7.6	7.8
5/7	4.9	5.8	6.3	6.8	7.5	8.0	7.4	8.4	7.7	7.8	7.7	7.8
5/8	4.9	5.7	6.3	6.8	7.5	8.0	7.5	8.4	7.7	7.8	7.6	7.8
5/9	5.0	5.8	6.3	6.7	7.4	7.9	7.5	8.3	7.7	7.9	7.5	7.7
5/10	5.2	5.8	6.2	6.7	7.4	8.0	7.4	8.4	7.7	7.9	7.8	7.9
5/11	5.3	5.9	6.3	6.8	7.5	8.2	7.6	8.5	7.7	8.0	8.1	8.2
5/12	5.4	6.0	6.5	7.0	7.7	8.3	7.6	8.6	7.8	8.0	8.2	8.3
5/13	5.4	6.0	6.6	7.2	7.9	8.6	7.8	8.9	7.9	8.1	8.2	8.3
5/14	5.3	6.1	6.7	7.2	8.0	8.6	7.8	9.0	8.0	8.2	8.1	8.2
5/15	5.1	6.0	6.6	7.1	7.8	8.4	7.7	9.0	7.9	8.2	8.0	8.1
5/16	5.0	6.0	6.6	7.1	7.8	8.5	7.7	8.9	7.9	8.1	7.8	8.0
5/17	4.9	5.9	6.6	7.1	7.8	8.4	7.7	8.9	7.9	8.1	7.6	7.8
5/18	5.1	6.1	6.6	7.1	7.6	8.2	7.5	8.8	7.9	8.2	7.7	7.9
5/19	5.5	6.2	6.9	7.5	8.1	8.6	7.9	9.1	8.1	8.6	8.0	8.2
5/20	5.6	6.4	7.0	7.5	8.1	8.7	8.1	9.2	8.3	8.8	8.3	8.4
5/21	5.8	6.6	7.1	7.7	8.3	8.8	8.3	9.3	8.5	9.0	8.4	8.5
5/22	6.0	6.8	7.4	8.0	8.7	9.3	8.6	9.6	8.8	9.4	8.5	8.7
5/23	6.3	7.0	7.7	8.3	9.0	9.6	9.0	10.0	9.1	9.7	8.8	9.0
5/24	6.3	7.2	7.9	8.5	9.4	10.0	9.3	10.4	9.5	10.1	8.8	9.0
5/25	6.3	6.9	7.8	8.6	9.7	10.4	9.7	10.7	9.7	10.2	8.6	8.8
5/26	5.9	6.6	7.5	8.1	9.4	10.0	9.4	10.5	9.6	10.1	8.3	8.5
5/27	5.9	6.3	7.3	7.9	9.1	9.8	9.3	10.4	9.5	10.0	8.1	8.3
5/28	6.2	6.2	7.3	8.1	9.5	10.2	9.5	10.7	9.8	10.4	8.4	8.6
5/29	6.3	6.2	7.3	7.9	9.5	10.3	9.5	10.8	9.8	10.4	8.4	8.6
5/30	6.5	6.2	7.3	8.1	9.9	10.7	9.6	11.0	9.8	10.6	8.4	8.6
5/31	6.7	6.2	7.3	8.2	9.9	10.7	9.7	10.9	9.8	10.6	9.2	8.8

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	6.9	6.4	7.7	8.6	10.3	11.1	9.9	11.3	9.9	10.8	11.0	8.9
6/2	7.0	6.7	8.1	8.9	10.6	11.4	10.2	11.5	10.1	11.0	11.1	9.0
6/3	7.1	6.9	8.3	9.2	10.9	11.7	10.3	11.6	10.2	11.0	11.1	9.0
6/4	7.1	7.2	8.5	9.4	11.0	11.7	10.4	11.7	10.3	10.9	11.0	8.9
6/5	7.2	7.1	8.6	9.6	11.3	11.9	10.4	11.8	10.2	10.7	11.1	8.9
6/6	7.0	7.2	8.8	9.5	11.0	11.5	10.4	11.6	10.3	10.7	11.1	8.9
6/7	7.1	7.2	8.8	9.6	11.0	11.6	10.5	11.7	10.3	10.7	10.3	8.8
6/8	7.1	7.1	8.8	9.5	10.8	11.3	10.4	11.6	10.1	10.5	8.7	8.9
6/9	7.1	7.1	8.7	9.5	10.7	11.3	10.3	11.5	10.0	10.3	8.7	8.9
6/10	7.1	7.0	8.7	9.4	10.6	11.1	10.2	11.4	9.9	10.2	8.7	8.9
6/11	6.7	6.9	8.4	9.0	10.1	10.6	9.9	11.1	9.6	10.0	8.4	8.6
6/12	6.5	6.9	8.3	8.8	9.7	10.1	9.7	10.8	9.6	9.9	8.2	8.4
6/13	6.6	6.8	8.2	8.8	9.7	10.2	9.7	10.8	9.3	9.6	8.3	8.5
6/14	6.6	6.8	8.0	8.6	9.6	10.0	9.6	10.7	9.2	9.6	8.4	8.6
6/15	6.5	6.7	7.8	8.4	9.4	9.7	9.4	10.4	9.1	9.4	8.3	8.5
6/16	6.5	6.8	7.8	8.4	9.3	9.7	9.4	10.4	9.1	9.4	8.3	8.5
6/17	6.7	6.8	7.9	8.5	9.5	9.9	9.5	10.6	9.1	9.5	8.7	8.8
6/18	7.2	6.9	8.2	9.0	10.1	10.5	10.0	11.1	9.4	9.8	9.3	9.4
6/19	7.4	7.0	8.3	9.2	10.4	10.8	10.1	11.4	9.5	9.9	9.6	9.8
6/20	7.6	7.0	8.5	9.5	10.8	11.2	10.3	11.6	9.9	10.3	9.9	10.0
6/21	8.1	7.1	8.8	10.0	11.6	12.0	10.8	12.1	10.2	10.8	10.3	10.4
6/22	8.7	7.0	9.0	10.5	12.4	12.9	11.3	12.7	10.8	11.4	10.8	11.0
6/23	9.4	6.9	9.2	10.9	13.2	13.8	11.7	13.4	11.4	11.9	11.4	11.5
6/24	10.0	6.9	9.4	11.3	14.0	14.7	12.2	14.0	11.9	12.5	11.8	11.9
6/25	10.0	6.6	9.0	10.9	13.8	14.6	12.1	14.0	12.0	12.5	11.9	12.1
6/26	10.1	6.4	8.8	10.7	13.7	14.5	12.1	13.9	12.0	12.5	11.8	12.0
6/27	10.3	6.3	8.7	10.6	13.7	14.5	12.1	14.0	12.1	12.6	12.0	12.1
6/28	10.5	6.1	8.5	10.4	13.5	14.5	12.1	14.1	12.1	12.7	12.2	12.4
6/29	10.6	6.0	8.2	10.1	13.1	14.0	11.8	13.8	11.8	12.5	12.3	12.4
6/30	10.3	6.0	7.9	9.5	12.3	13.2	11.5	13.4	11.6	12.2	12.3	12.4

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
7/1	10.0	5.9	7.6	9.0	11.7	12.5	11.2	13.1	11.4	12.0	12.2	12.3
7/2	10.3	5.9	7.7	9.1	11.7	12.7	11.3	13.1	11.3	12.2	12.2	12.3
7/3	10.5	6.0	7.8	9.2	11.8	12.8	11.5	13.3	11.4	12.4	12.5	12.6
7/4	10.3	6.0	7.7	8.9	11.6	12.6	11.4	13.3	11.5	12.4	12.5	12.6
7/5	10.2	5.9	7.5	8.7	11.4	12.3	11.2	13.1	11.5	12.3	12.5	12.6
7/6	10.2	5.9	7.6	8.6	11.5	12.5	11.4	13.3	11.6	12.5	12.7	12.8
7/7	10.6	6.0	7.7	8.9	12.0	13.1	11.7	13.7	11.7	12.8	13.0	13.2
7/8	11.1	6.1	7.9	9.3	12.4	13.6	12.0	13.9	11.9	13.1	13.5	13.6
7/9	11.4	6.2	8.0	9.5	12.8	14.0	12.2	14.2	12.0	13.3	14.0	14.1
7/10	11.9	6.2	8.1	9.7	13.3	14.5	12.4	14.5	12.2	13.6	14.5	14.6
7/11	12.3	6.2	8.2	10.0	13.7	14.9	12.7	14.7	12.2	13.8	14.9	15.0
7/12	12.8	6.2	8.4	10.3	13.9	15.2	12.9	14.9	12.4	14.1	15.3	15.3
7/13	13.0	6.3	8.3	10.2	13.7	14.8	12.8	14.8	12.4	14.0	15.4	15.4
7/14	12.8	6.2	8.1	9.9	13.2	14.2	12.6	14.6	12.4	13.9	15.3	15.3
7/15	12.6	6.1	8.0	9.5	12.7	13.7	12.4	14.2	12.3	13.8	15.2	15.2
7/16	12.6	6.1	7.9	9.5	12.5	13.5	12.4	14.1	12.2	13.8	15.2	15.2
7/17	12.8	6.2	8.0	9.5	12.6	13.5	12.4	14.2	12.3	14.0	15.5	15.4
7/18	13.0	6.2	8.0	9.6	12.7	13.6	12.6	14.3	12.5	14.1	15.9	15.8
7/19	13.1	6.2	7.9	9.4	12.4	13.4	12.5	14.2	12.5	14.0	16.0	15.8
7/20	13.0	6.3	7.9	9.4	12.4	13.4	12.5	14.2	12.6	14.1	16.3	16.0
7/21	13.6	6.4	8.2	9.9	13.0	14.0	12.9	14.6	12.8	14.5	16.8	16.6
7/22	14.1	6.5	8.4	10.2	13.6	14.7	13.3	15.2	13.1	14.9	17.5	17.2
7/23	14.4	6.6	8.5	10.3	13.8	14.9	13.5	15.5	13.3	14.9	18.1	17.5
7/24	14.8	6.6	8.5	10.4	13.9	15.1	13.6	15.7	13.5	14.8	18.5	17.6
7/25	15.0	6.7	8.6	10.4	14.0	15.3	13.7	15.8	13.6	14.6	18.9	17.7
7/26	15.5	6.9	8.8	10.8	14.4	15.8	14.0	16.2	13.7	14.6	19.6	18.0
7/27	16.2	6.9	9.0	11.2	15.2	16.6	14.4	16.7	13.9	14.8	20.3	18.6
7/28	16.5	6.9	9.0	11.2	15.3	16.8	14.5	16.9	14.0	14.8	20.8	18.8
7/29	16.7	6.9	8.9	11.1	15.1	16.6	14.5	17.0	14.1	14.8	21.0	18.9
7/30	16.7	6.8	8.8	11.0	14.9	16.4	14.4	16.9	14.2	15.0	21.0	19.1
7/31	16.5	7.0	8.8	10.9	14.4	16.0	14.3	16.8	14.2	15.3	21.0	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	16.0	6.7	8.5	10.5	13.8	15.1	14.2	16.4	14.3	15.3	20.5	19.2
8/2	15.5	6.6	8.3	10.2	13.3	14.5	14.1	16.1	14.3	15.6	20.1	19.0
8/3	15.2	6.6	8.2	10.0	12.9	14.1	14.0	15.8	14.3	15.9	19.8	18.9
8/4	15.0	6.6	8.1	9.9	12.7	13.8	13.9	15.7	14.4	16.1	19.7	19.0
8/5	14.9	6.6	8.1	9.9	12.7	13.8	14.0	15.7	14.5	16.4	19.8	19.1
8/6	14.6	6.6	8.1	9.7	12.4	13.4	14.0	15.5	14.6	16.3	19.6	18.8
8/7	14.4	6.3	7.7	9.2	12.1	13.0	13.9	15.2	14.6	16.1	19.3	18.5
8/8	14.7	6.4	7.9	9.5	12.3	13.4	14.1	15.5	14.8	16.5	19.7	18.7
8/9	14.9	6.5	7.9	9.5	12.4	13.5	14.2	15.7	14.9	16.6	20.0	19.0
8/10	14.8	6.8	8.1	9.5	12.0	13.0	14.1	15.5	15.0	16.5	19.9	18.9
8/11	14.7	6.8	8.1	9.5	11.8	12.8	14.1	15.4	15.2	16.4	19.7	18.8
8/12	14.7	6.8	8.0	9.5	11.7	12.6	14.1	15.4	15.3	16.4	19.7	18.6
8/13	14.8	6.8	8.1	9.6	11.9	12.8	14.4	15.6	15.4	16.6	19.9	18.8
8/14	15.1	6.9	8.3	9.9	12.4	13.3	14.5	15.9	15.6	16.8	20.5	18.9
8/15	15.0	7.0	8.3	9.8	12.2	13.2	14.3	15.7	15.4	16.4	20.5	18.6
8/16	15.0	7.0	8.2	9.6	12.0	12.9	14.0	15.4	15.3	16.0	20.2	18.2
8/17	15.1	6.6	7.9	9.4	12.0	13.1	13.9	15.3	15.2	15.7	20.2	18.0
8/18	15.3	6.6	8.0	9.4	12.1	13.2	13.9	15.4	15.1	15.6	20.4	18.1
8/19	15.4	6.6	7.9	9.4	12.1	13.2	13.8	15.3	14.9	15.5	20.5	18.2
8/20	15.4	6.9	8.1	9.3	12.0	13.1	13.6	15.2	14.7	15.4	20.5	18.3
8/21	15.4	7.2	8.3	9.5	12.0	13.1	13.7	15.0	14.5	15.5	20.5	18.5
8/22	15.5	7.5	8.6	9.9	12.3	13.3	14.0	15.3	14.8	15.9	20.8	19.0
8/23	15.5	7.8	8.8	10.1	12.4	13.4	14.1	15.4	14.9	16.0	21.0	19.2
8/24	15.3	8.1	9.1	10.3	12.5	13.4	14.3	15.4	15.0	16.1	20.9	19.2
8/25	15.0	8.4	9.3	10.5	12.5	13.3	14.3	15.4	15.0	16.2	20.7	19.1
8/26	14.8	8.9	9.6	10.7	12.5	13.3	14.3	15.4	15.0	16.3	20.4	19.0
8/27	14.7	9.2	10.0	11.1	12.7	13.4	14.5	15.5	15.1	16.5	20.4	19.0
8/28	14.6	9.6	10.2	11.2	12.7	13.5	14.6	15.7	15.3	16.7	20.3	19.0
8/29	14.6	9.9	10.4	11.4	12.8	13.5	14.6	15.6	15.3	16.8	20.1	19.0
8/30	14.7	10.1	10.6	11.6	13.0	13.8	14.7	15.6	15.2	16.9	20.1	19.0
8/31	14.8	10.3	10.8	11.8	13.0	13.9	14.5	15.6	15.1	16.8	20.3	19.0

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
9/1	14.7	10.5	10.9	11.8	12.9	13.7	14.2	15.3	14.9	16.5	20.2	18.8
9/2	14.7	10.6	11.0	11.8	12.8	13.6	14.0	15.0	14.7	16.3	20.0	18.7
9/3	14.5	10.6	10.9	11.7	12.6	13.3	13.8	14.7	14.4	16.0	19.8	18.3
9/4	14.2	10.4	10.7	11.5	12.4	13.1	13.5	14.3	14.1	15.7	19.4	18.0
9/5	13.8	10.3	10.6	11.4	12.1	12.8	13.2	13.9	13.8	15.4	19.1	17.6
9/6	13.4	10.3	10.6	11.4	12.0	12.6	13.1	13.6	13.7	15.2	18.6	17.2
9/7	13.1	10.4	10.6	11.4	11.9	12.5	13.1	13.4	13.7	15.2	18.1	16.8
9/8	12.9	10.4	10.7	11.5	12.0	12.6	13.2	13.4	13.7	15.3	17.8	16.7
9/9	12.7	10.6	10.9	11.5	12.0	12.6	13.1	13.5	13.8	15.2	17.5	16.4
9/10	12.5	10.8	11.0	11.5	12.0	12.6	13.1	13.4	13.8	15.0	17.1	16.2
9/11	12.4	11.0	11.2	11.6	12.1	12.6	13.1	13.5	13.9	14.9	16.8	15.9
9/12	12.4	11.2	11.4	11.7	12.2	12.7	13.2	13.6	13.9	14.8	16.5	15.8
9/13	12.4	11.4	11.6	11.8	12.3	12.7	13.2	13.7	14.0	14.8	16.3	15.6
9/14	12.3	11.6	11.8	12.0	12.4	12.8	13.2	13.8	14.0	14.8	16.2	15.5
9/15	12.2	11.9	12.0	12.2	12.4	12.9	13.2	13.9	14.0	14.8	16.2	15.5
9/16	12.0	11.9	12.0	12.3	12.5	12.9	13.1	13.9	14.0	14.7	16.1	15.4
9/17	11.8	11.9	12.1	12.4	12.5	12.9	13.0	14.0	14.1	14.8	16.0	15.4
9/18	11.8	11.9	12.1	12.4	12.4	12.9	12.8	13.9	14.0	14.8	15.8	15.3
9/19	11.8	11.9	12.0	12.4	12.3	12.8	12.6	13.8	13.8	14.7	15.6	15.1
9/20	11.8	11.6	11.8	12.1	12.2	12.6	12.6	13.7	13.7	14.5	15.5	15.0
9/21	11.8	11.4	11.5	11.9	12.0	12.5	12.6	13.5	13.6	14.3	15.6	14.9
9/22	11.7	11.1	11.3	11.5	11.7	12.2	12.5	13.1	13.5	13.9	15.6	14.7
9/23	11.6	10.9	11.0	11.3	11.4	11.8	12.5	12.8	13.4	13.6	15.7	14.6
9/24	11.5	10.7	10.8	11.1	11.3	11.6	12.4	12.6	13.2	13.4	15.8	14.6
9/25	11.3	10.5	10.6	10.9	11.1	11.4	12.3	12.4	13.1	13.1	15.9	14.5
9/26	11.2	10.3	10.5	10.8	11.0	11.4	12.2	12.2	13.1	13.0	16.2	14.6
9/27	11.0	10.5	10.6	10.8	11.0	11.4	12.0	12.3	13.0	13.1	16.2	14.7
9/28	10.9	10.6	10.7	11.0	11.1	11.4	11.8	12.3	13.0	13.1	16.1	14.6
9/29	10.9	10.7	10.9	11.2	11.3	11.7	11.6	12.5	12.9	13.4	16.1	14.8
9/30	11.0	10.7	11.0	11.3	11.5	11.9	11.5	12.8	12.9	13.6	16.0	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
10/1	11.2	10.8	11.0	11.3	11.5	12.0	11.5	12.9	13.0	13.6	15.8	14.8
10/2	11.1	10.9	11.0	11.4	11.7	12.1	11.4	13.0	12.9	13.7	15.6	14.7
10/3	11.1	11.0	11.1	11.5	11.7	12.1	11.4	13.0	13.0	13.8	15.4	14.6
10/4	11.1	11.0	11.2	11.5	11.8	12.2	11.3	13.1	13.1	13.9	15.4	14.7
10/5	11.1	11.0	11.2	11.5	11.8	12.2	11.2	13.2	13.2	13.9	15.3	14.6
10/6	11.1	11.1	11.3	11.6	11.9	12.2	11.1	13.3	13.3	13.9	15.2	14.6
10/7	11.0	11.1	11.3	11.6	11.9	12.2	11.0	13.3	13.3	13.9	14.9	14.4
10/8	10.9	11.4	11.6	11.8	11.9	12.1	10.8	13.2	13.3	13.9	14.8	14.3
10/9	10.7	11.4	11.6	11.8	11.8	12.0	10.7	13.2	13.3	13.9	14.6	14.2
10/10	10.5	11.4	11.5	11.8	11.8	11.9	10.5	13.2	13.3	13.8	14.4	14.1
10/11	10.3	11.4	11.5	11.7	11.7	11.8	10.3	13.1	13.3	13.8	14.1	13.9
10/12	10.2	11.6	11.6	11.7	11.6	11.7	10.2	13.1	13.3	13.7	13.9	13.7
10/13	10.2	11.7	11.7	11.9	11.7	11.8	10.2	13.1	13.4	13.8	13.8	13.7
10/14	10.1	11.8	11.7	11.9	11.7	11.8	10.1	13.1	13.4	13.8	13.8	13.7
10/15	10.0	11.5	11.4	11.6	11.7	11.8	10.1	13.1	13.4	13.8	13.5	13.5
10/16	10.0	11.4	11.4	11.5	11.6	11.7	10.1	13.1	13.3	13.7	13.3	13.4
10/17	9.9	11.3	11.3	11.5	11.5	11.6	10.1	13.0	13.3	13.6	13.0	13.2
10/18	9.8	11.4	11.3	11.4	11.4	11.5	10.2	12.9	13.1	13.4	12.7	13.0
10/19	9.5	11.3	11.2	11.3	11.3	11.3	10.3	12.7	12.9	13.2	12.4	12.7
10/20	9.1	11.2	11.1	11.1	11.1	11.1	10.2	12.4	12.6	12.9	12.0	12.3
10/21	8.8	11.3	11.1	11.0	10.9	10.9	10.2	12.1	12.3	12.5	11.5	11.8
10/22	8.4	11.3	11.1	10.9	10.7	10.7	10.1	11.8	12.0	12.2	11.0	11.4
10/23	8.1	11.3	11.0	10.8	10.5	10.4	10.0	11.5	11.7	11.9	10.6	11.0
10/24	7.8	11.3	10.9	10.7	10.4	10.2	9.9	11.2	11.4	11.6	10.3	10.7
10/25	7.6	11.0	10.6	10.6	10.2	10.1	9.8	11.0	11.1	11.3	10.1	10.4
10/26	7.4	10.7	10.4	10.4	10.1	10.0	9.6	10.8	10.9	11.2	10.0	10.2
10/27	7.4	10.4	10.2	10.2	9.9	9.9	9.4	10.6	10.7	11.0	9.8	10.1
10/28	7.4	10.2	9.9	10.0	9.8	9.8	9.1	10.5	10.5	10.8	9.7	9.9
10/29	7.4	9.8	9.5	9.7	9.6	9.6	8.8	10.2	10.2	10.5	9.6	9.7
10/30	7.2	9.5	9.2	9.4	9.3	9.4	8.6	9.9	9.9	10.3	9.5	9.5
10/31	7.0	9.2	8.9	9.0	9.0	9.1	8.4	9.5	9.6	9.9	9.3	9.3

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
11/1	6.9	8.9	8.7	8.8	8.9	8.9	8.2	9.4	9.4	9.7	9.0	9.0
11/2	6.6	8.4	8.4	8.5	8.7	8.7	8.0	9.1	9.2	9.4	8.6	8.5
11/3	6.3	8.0	8.0	8.1	8.2	8.3	7.9	8.7	8.7	8.9	8.3	8.1
11/4	5.8	7.7	7.6	7.6	7.8	7.9	7.8	8.2	8.3	8.5	8.2	7.7
11/5	5.6	7.4		7.3	7.4	7.6	7.7	7.9	8.0	8.2	8.3	7.4
11/6	5.3	7.2		7.1		7.3	7.7	7.6	7.8	7.9	8.3	7.1
11/7	5.2	7.0				7.1	7.7	7.4	7.6	7.7	8.4	6.8
11/8	4.8	6.7				6.8	7.6	7.0	7.3	7.4	8.5	6.6
11/9	4.5	6.7				6.3	7.7	6.5	7.0	7.1	8.7	6.4
11/10	4.3	6.6				6.1	7.9	6.3	6.9	7.0	8.7	6.2
11/11	4.1	6.5				5.8	8.0	6.1	6.8	6.9	8.6	6.0
11/12	3.9	6.4				5.6	8.3	6.0	6.7	6.8	8.5	5.9
11/13	3.8	6.4				5.4	8.2	5.8	6.7	6.7	8.5	5.8
11/14	3.6	6.3				5.2	8.3	5.7	6.6	6.6	8.0	5.7
11/15	3.4	6.2				4.9	8.1	5.5	6.5	6.4	7.4	5.5
11/16	3.2	6.2				4.6	7.9	5.3	6.4	6.3	6.8	5.3
11/17	3.1	6.1				4.4	7.7	5.1	6.3	6.2	6.2	8.0
11/18	3.1	6.0				4.4	7.5	5.2	6.2	6.2	5.8	8.0
11/19	3.3	6.0				4.6	7.1	5.3	6.2	6.1	5.5	8.0
11/20	3.5	5.9				4.9	7.0	5.5	6.1	6.2	5.0	8.2
11/21	3.7	5.9				5.0	6.8	5.6	6.1	6.2	5.1	8.3
11/22	4.1	5.9				5.3	6.6	5.8	6.1	6.2	5.3	8.4
11/23	4.4	5.8				5.7	6.5	6.0	6.1	6.3	5.6	8.6
11/24	4.6	5.8				6.0	6.3	6.2	6.2	6.3	5.9	6.0
11/25	4.6	5.7				5.9	6.1	6.1	6.1	6.2	5.9	6.0
11/26	4.3	5.6				5.7	5.8	5.9	6.0	6.0	5.6	5.7
11/27	3.9	5.5				5.3	5.4	5.5	5.8	5.7	5.1	5.2
11/28	3.6	5.3				5.0	5.2	5.2	5.6	5.5	4.7	4.8
11/29	3.2	5.2				4.7	5.0	4.9	5.7	5.3	4.3	4.5
11/30	2.8	5.0				4.3	4.7	4.6	5.8	5.1	4.0	4.1

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
12/1	2.6	4.9				4.0	4.5	4.3	5.9	4.8	3.5	3.7
12/2	2.4	4.7				3.8	4.4	4.1	5.9	4.7	3.3	3.5
12/3	2.4	4.7				3.8	4.3	4.1	6.1	4.7	3.3	3.5
12/4	2.6	4.6				3.9	4.4	4.2	6.3	4.8	3.7	3.8
12/5	2.7	4.5				4.0	4.4	4.2	6.5	4.8	3.9	4.0
12/6	2.7	4.5				4.0	4.3	4.3	6.4	4.8	3.9	4.1
12/7	2.7	4.4				4.1	4.4	4.4	6.1	4.8	4.1	4.2
12/8	2.7	4.3				4.3	4.4	4.5	5.8	4.8	4.3	4.5
12/9	2.8	4.3				4.5	4.5	4.7	5.6	4.9	4.6	4.7
12/10	2.8	4.3				4.6	4.5	4.7	5.4	4.8	4.7	4.8
12/11	2.8	4.2				4.6	4.5	4.8	5.2	4.8	4.7	4.7
12/12	2.8	4.2				4.6	4.5	4.7	4.9	4.7	4.7	4.7
12/13	2.8	4.1				4.5	4.5	4.7	4.7	4.6	4.7	4.7
12/14	2.7	4.0				4.4	4.4	4.6	4.6	4.5	4.5	4.5
12/15	2.6	4.0				4.2	4.2	4.4	4.5	4.4	4.4	4.4
12/16	2.3	3.9				3.8	4.0	4.1	4.3	4.3	4.1	4.1
12/17	2.0	3.8				3.5	3.8	3.9	4.2	4.1	3.8	3.9
12/18	1.7	3.8				3.2	3.6	3.6	4.1	4.0	3.3	3.5
12/19	1.3	3.7				2.8	3.4	3.2	3.9	3.8	2.7	3.1
12/20	1.0	3.5				2.6	3.1	3.0	3.7	3.6	2.2	2.8
12/21	1.2	3.3				2.6	3.1	2.9	3.5	3.5	1.9	2.5
12/22	1.5	3.2				2.8	3.2	3.0	3.5	3.5	1.9	2.5
12/23	1.9	3.1				3.1	3.4	3.2	3.7	3.6	2.2	2.7
12/24	2.3	3.1				3.4	3.7	3.6	3.9	3.8	2.5	2.9
12/25	2.7	3.0				3.7	3.9	3.9	4.1	4.0	2.9	3.3
12/26	3.2	2.9				4.2	4.2	4.4	4.3	4.2	3.6	3.8
12/27	3.7	3.0				4.7	4.6	4.8	4.6	4.4	4.3	4.3
12/28	3.8	3.0				4.8	4.7	5.2	4.8	4.5	4.9	4.8
12/29	3.8	3.0				4.9	4.8	5.3	4.8	4.6	5.0	5.0
12/30	3.8	3.0				4.8	4.7	5.3	4.7	4.4	5.0	4.9
12/31	3.7	3.0				4.7	4.6	5.2	4.5	4.2	4.9	4.9

APPENDIX E

Consultation Documentation Regarding Draft Report

Presler, Dawn

From: Presler, Dawn
Sent: Friday, April 28, 2023 7:33 AM
To: Anne Savery; Brock Applegate; Jeff Garnett; Jennifer Bailey; Mike Rustay; Monica Kannadaguli; Nate Morgan; Richard Vacirca; Tom O'Keefe; Anna Thelen; elizabeth.babcock@noaa.gov
Cc: Brown, Chad (ECY); Andrew McDonnell; Keith Binkley; Legare, Kyle; Tengs, Hayley
Subject: JHP (FERC No. 2157) - draft WQ Annual Rpt for your 30-day review
Attachments: DRAFT JHP WQMP Annual Report 2022.docx

Dear ARC,
Attached is the Water Quality Monitoring Plan Draft 2022 Annual Report for the Jackson Project for your 30-day review and comment period. Please provide comments, if any, back to me by Monday May 29. If you have any questions on the attached, feel free to reach out to Andrew. Thanks.

Cheers,
Dawn Presler
(she, her, hers)
Sr. Environmental Coordinator
Generation – Natural Resources
Snohomish County PUD No. 1
Everett, WA

(425) 783-1709 (work)