



Energizing Life in Our Communities

June 29, 2020

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 – 2019 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 2019 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. Consultation documentation is included in the report's appendices.

If you have any questions on the Water Quality Monitoring Plan Annual Report for 2019, please contact Keith Binkley, Natural Resources Manager, at (425) 783-1769.

Sincerely,

/s/ Jason A. Zyskowski

Jason A. Zyskowski
Assistant General Manager of Facilities, Generation, Power, Rates and Transmission
Management
JAZyskowski@snopud.com
(425) 783-4332

Enclosed: Water Quality Monitoring Plan Annual Report for 2019

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

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.

Dated at Everett, Washington, this 29th day of June, 2020.



Dawn Presler, Sr. Environmental Coordinator
Public Utility District No. 1 of Snohomish County
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Presler, Dawn

From: Presler, Dawn
Sent: Monday, June 29, 2020 9:50 AM
To: 'mkan461@ecy.wa.gov'
Subject: JHP (FERC No. 2157) - cc: for FERC filing Water Quality Monitoring Plan 2019 Annual Report
Attachments: 20200629 Cover Letter to FERC WQMP Annual Rpt.pdf

Dawn

From: Presler, Dawn
Sent: Monday, June 29, 2020 9:49 AM
To: Andrew McDonnell <AWMcDonnell@SNOPUD.com>; Anne Savery <asavery@tulaliptribes-nsn.gov>; Brock Applegate <brock.applegate@dfw.wa.gov>; Janet Curran <janet.curran@noaa.gov>; Jen Ford <jennifer.ford@usda.gov>; Jim Miller <JMiller@everettwa.gov>; Jim Pacheco <JPAC461@ECY.WA.GOV>; Keith Binkley <KMBinkley@SNOPUD.com>; Mike Rustay <mike.rustay@co.snohomish.wa.us>; Nate Morgan <nate.morgan@ci.sultan.wa.us>; Presler Dawn (E-mail) <djpresler@snopud.com>; Tim Romanski <tim_romanski@fws.gov>; Tom O'Keefe <okeefe@americanwhitewater.org>
Subject: JHP (FERC No. 2157) - cc: for FERC filing Water Quality Monitoring Plan 2019 Annual Report

Dear ARC,

Attached is your cc of the e-filing I will be making with FERC regarding the Jackson Project's 2019 Annual Report for the Water Quality Monitoring Plan.

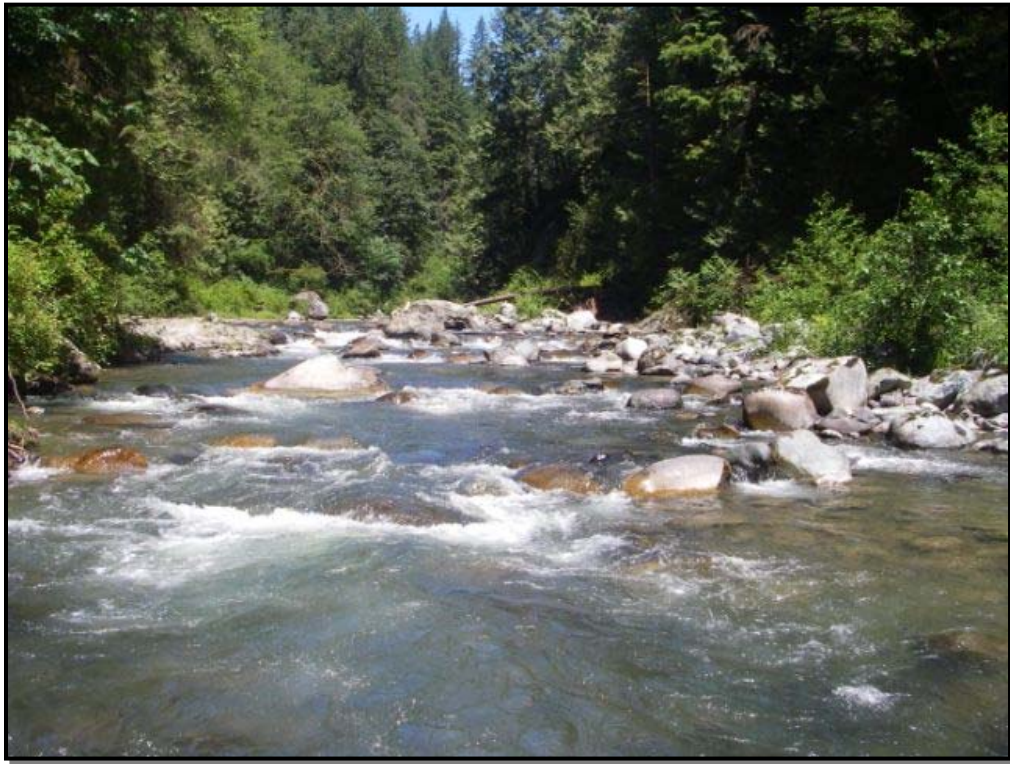
Hope you have a great week.

Dawn Presler

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 – 2019 Annual Report



Everett, WA

June 2020

Final – This document has been prepared for the District. It has been peer-reviewed by the District for accuracy and formatting based on information known at the time of its preparation and with that understanding is considered complete by the District. The document may be cited as:

District. 2020. Water Quality Monitoring Plan 2019 Annual Report, License Article 401, for the Henry M. Jackson Hydroelectric Project, FERC No. 2157. June 2020.

Table of Contents

1. INTRODUCTION	1
2. RESERVOIR MONITORING.....	4
2.1. Climatic Conditions.....	4
2.1.1. Rainfall Data	4
2.1.2. Snow Survey Measurements.....	5
2.1.3. Reservoir Inflow	6
2.2. Reservoir Operations.....	7
2.2.1 Project Outflow	7
2.2.2. Reservoir Elevation.....	8
2.3. Water Quality	9
2.3.1. Temperature	9
2.3.2. pH.....	9
2.3.3. Dissolved Oxygen.....	9
2.3.4. Turbidity	9
2.3.5. Secchi Transparency	10
2.3.6. Nutrients.....	10
2.3.7. Phytoplankton	10
2.3.8. Zooplankton	10
3. RIVER MONITORING.....	11
3.1. Background	11
3.2. Continuous Temperature Monitoring.....	13
3.3. Synoptic Measurements of Water Quality	15
4. DATA QUALITY AND COMPLIANCE	16
5. REFERENCES	16

List of Appendices

Appendix A	Monthly Reservoir Water Quality Sampling
Appendix B	Mean Daily Water Temperature Monitoring - Figures
Appendix C	Mean Daily Water Temperature Data in Tabular Format
Appendix D	Seven-Day Average of the Daily Maximum (7-DAD Max) Water Temperature in Tabular Format
Appendix E	Consultation Documentation Regarding Draft Report

List of Figures

Figure 2-1.	Snow survey data, Stickney Ridge, Sultan Watershed, 1986-2019.....	5
Figure 2-2.	Hydrograph for the South Fork Sultan River, USGS Station No. 12137290, 2019 calendar year.	6
Figure 2-3.	Daily plant generation, Jackson Hydroelectric Project, 2019.....	7
Figure 2-4.	Daily water surface elevation, Spada Lake Reservoir, 2019.	8
Figure 3-1.	Schematic of water conveyance system, Jackson Hydroelectric Project.....	12
Figure 3-2.	Locations of water temperature monitoring, Jackson Hydroelectric Project.....	14

List of Tables

Table 1-1.	Parameters to be monitored, locations, and sampling frequency.....	2
Table 2-1.	Monthly rainfall, Culmback Dam Weather Station, 2019.	4
Table 2-2.	Secchi transparency, Spada Lake Reservoir, 2019.	10
Table 3-1.	Settings for selective withdrawal panels, Spada Lake Reservoir, 2019.	13
Table 3-2.	Synoptic monthly measurements of water quality, Sultan River, 2019.....	15

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 (the District) 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). The District 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 2019. 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, 2020. Consultation documentation will be included in Appendix E; no comments were received on the draft report.

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 the District to collect water quality data in and around Spada Lake Reservoir, Sultan River between river mile (RM) 16.2 and RM 0.2, and 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 (near log boom)	Sultan River RM 16.1	Sultan River RM 9.8	Sultan River RM 9.6	Sultan River RM 4.9	Sultan River RM 4.4	Sultan River RM 0.2	Skyko. River RM 14.1	Skyko. River RM 13.2	Frequency
Water temperature	•	•	•	•	•	•	•	•	•	•	Year-round (hourly) in stream reaches. Monthly between May 1 and October 31 for lake profile.
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.
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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 2019, a total rainfall of 119.5 inches was recorded at the Culmback Dam Weather Station. The rainfall measured during 2019 was less than the historical annual average of 161.3 inches. Monthly rainfall averaged 10.0 inches and ranged between a low of 1.6 inches in August and a high of 19.6 inches in October (Table 2-1). During 2019, the highest recorded daily rainfall (5.4 inches) occurred on October 22, 2019.

Table 2-1. Monthly rainfall, Culmback Dam Weather Station, 2019.

Month	Rainfall (inches)
January	12.4
February	9.5
March	5.7
April	16.6
May	4.4
June	4.8
July	3.2
August	1.6
September	14.7
October	19.6
November	8.0
December	19.0

2.1.2. Snow Survey Measurements

Beginning in 1986, the District has conducted annual surveys of the snowpack typically during late March. Since inception, the annual mean snow and water depth at Stickney Ridge (elevation 3,600 feet) are 97.9 and 41.3 inches, respectively. During the 2019 survey (March 19), there were 54.6 inches of snow at the Stickney Ridge station (Figure 2-1) which was 56 percent of historical mean. In terms of water content, the 21.3 inches recorded equated to 52 percent of the historic mean.

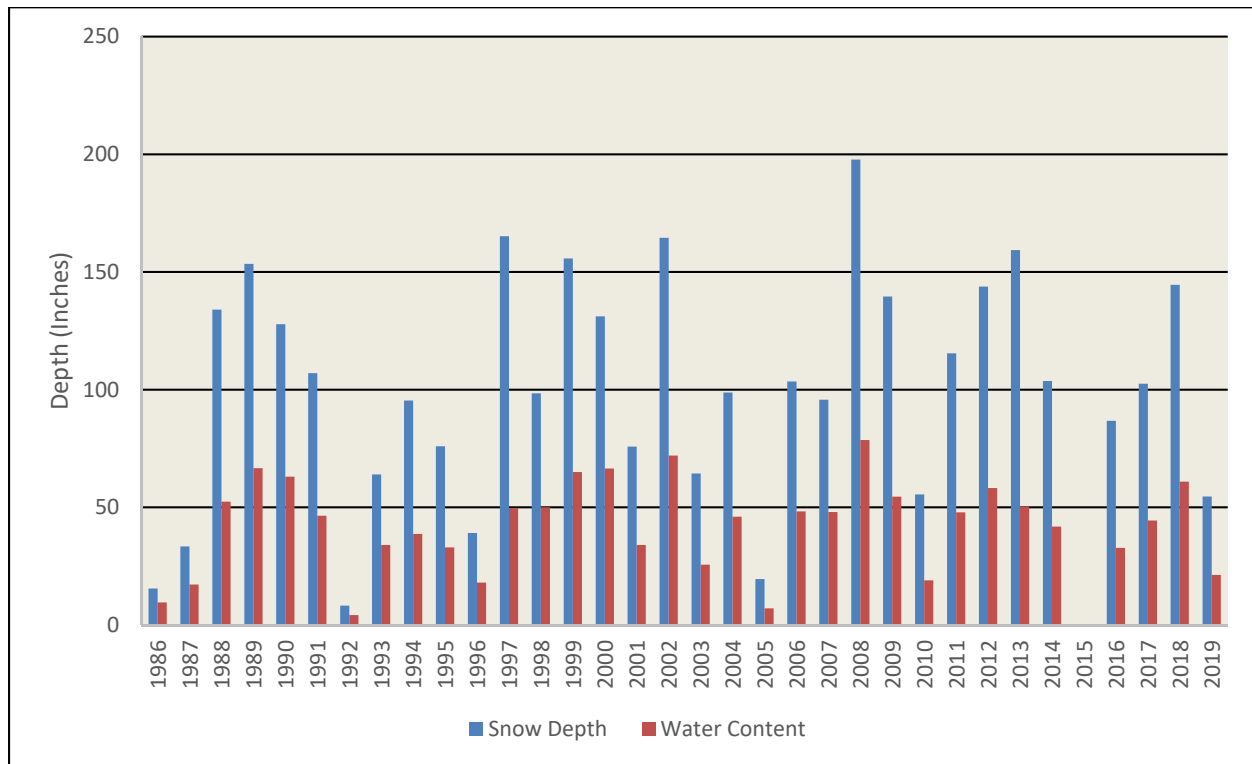


Figure 2-1. Snow survey data, Stickney Ridge, Sultan Watershed, 1986-2019.

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 conditions. The 2019 hydrograph for this station is presented in Figure 2-2. Instantaneous flow values ranged from 5.9 to 5,160 cfs. Mean daily flow during 2019 averaged 104.3 cfs and ranged between a low of 6.1 cfs and a high flow of 2,185 cfs. The average mean annual flow, based on the USGS Water Year, for this station is 131.8 cfs (Period of Record 1992-2019).

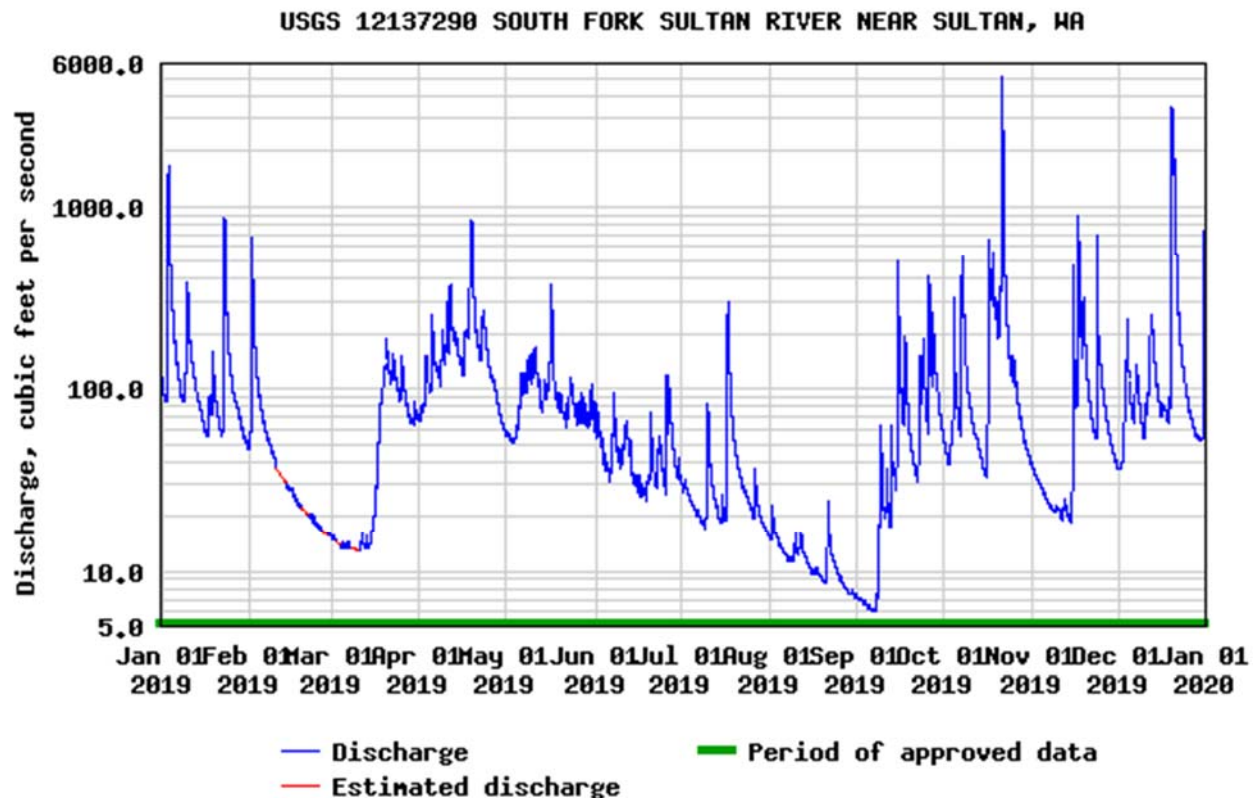


Figure 2-2. Hydrograph for the South Fork Sultan River, USGS Station No. 12137290, 2019 calendar year.

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 2019, the Project did not experience spill events. Daily plant generation during 2019 is depicted in Figure 2-3. A total of 326,760 megawatt hours were produced during 2019 equating to 78.5 percent of the historic annual average of 416,375 megawatt hours.

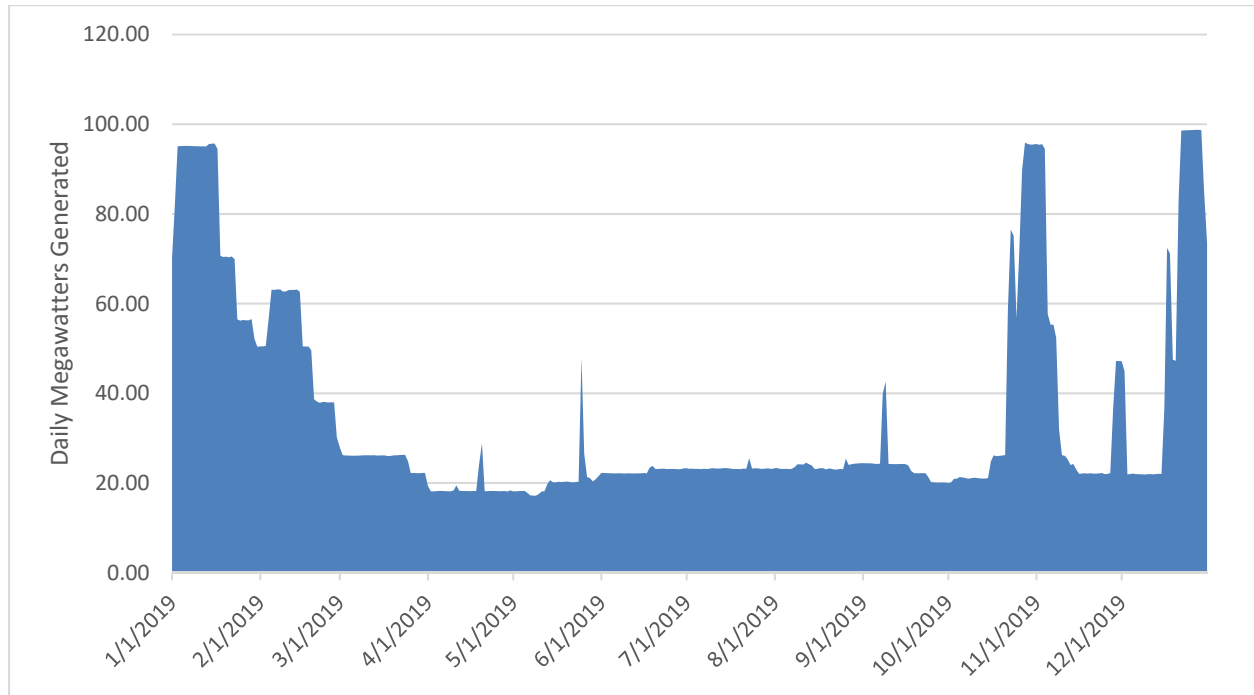


Figure 2-3. Daily plant generation, Jackson Hydroelectric Project, 2019.

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 the District 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. A fifth state (State 5) lies below reservoir elevation 1,380 feet msl, during which the Project does not operate. During 2019, Spada Lake Reservoir was drafted and filled in accordance with the rule curves established for the Project (Figure 2-4).

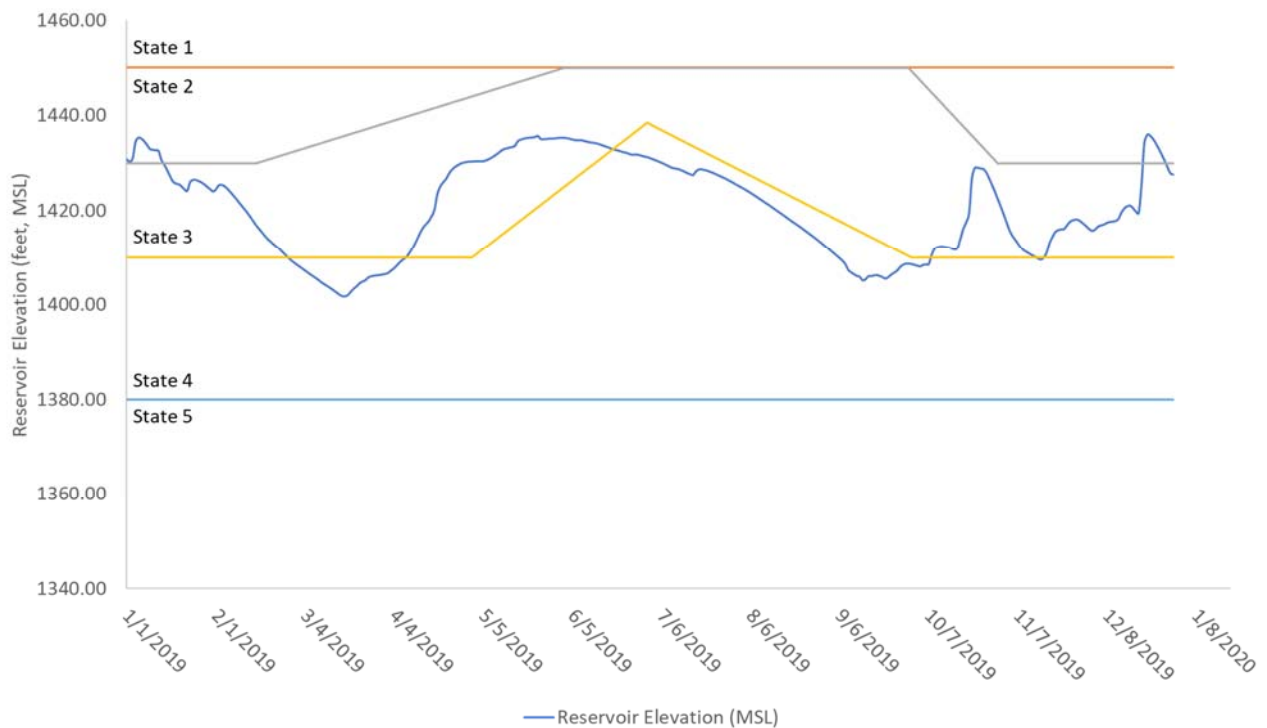


Figure 2-4. Daily water surface elevation, Spada Lake Reservoir, 2019.

2.3. Water Quality

Monthly sampling of water quality in Spada Lake Reservoir occurred on the following dates during 2019: May 23, June 20, July 18, August 15, September 26, and October 25. Sampling included profile measurements of conventional parameters including temperature, pH, dissolved oxygen, and turbidity. Additional sampling was conducted cooperatively with the City of Everett during 2019, and 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 also recorded in July. By August, the warmest water temperature was documented and the thermocline was set between 23 and 39 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 21.0 °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 August had the warmest water temperatures. The thermocline was strongest in August. June, July, and September also had a high resistance to mixing. The strongest point in the thermocline dropped from 16 feet in June to 42 feet in September. A weak thermocline extended to a depth of 95 feet in October.

2.3.2. pH

The highest measured pH was 7.3 in June near the surface. The lowest pH of 5.2 was measured in May at a depth of 75 feet and was likely due to increased bacterial degradation of organic matter.

2.3.3. Dissolved Oxygen

Dissolved oxygen ranged from a low of 8.3 mg/L in September to a high of 11.8 mg/L in May. By saturation values, the maximum of 105 percent in June was likely due to increasing primary production, and the minimum of 70 percent of saturation at depth in October 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 July (no data for June, sensor error), and further from July to August. In September, and again in October, there was a slight increase throughout the water column. 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 14 feet in August to a low of 6 feet in October (Table 2-2).

Table 2-2. Secchi transparency, Spada Lake Reservoir, 2019.

Date	Result (feet)
5/23/2019	10
6/20/2019	10
7/18/2019	11
8/15/2019	14
9/26/2019	12
10/25/2019	6

2.3.6. Nutrients

Total phosphorus concentrations were between 5.6 and 11.1 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 September sampling. Total nitrogen was also relatively constant between 66.7 and 160.2 µg/L for most of the summer with an increase noted in October. Nitrate showed more variation over time and depth, with values ranging between 3.2 and 133.2 µg/L from April through October. Silica concentrations were relatively stable throughout the water column, ranging from 1,588 and 1,940 µg/L.

2.3.7. Phytoplankton

The greatest total volume (µm³/mL) of phytoplankton occurred in the July sample, of which, *Chlorophyta* was the predominant taxon by total biovolume. *Cyanophyta*, and again, *Chlorophyta* were the predominant taxon by total volume for August and September, respectively. By October, *Chlorophyta*, *Chrysophyta*, and *Cyanophyta* decreased 98, 66, and 41 percent (µm³/mL) from July. 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 (4.0 µg/L).

2.3.8. Zooplankton

Bosmina were the dominant zooplankton in all samples collected during May and June. *Conochilus* (single) were the most abundant zooplankton during July, August, and September. *Holopedium* peaked in July at 8 colonies per liter. The largest diversity in zooplankton species occurred in June, July, and August, coinciding temporally with a peak of phytoplankton (Total Natural Units/mL) over the same time period. The total number of zooplankton/L ranged from 0.59 (October) to 71.9 (August) and averaged 23.3 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 20,362 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 the amount and 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 through 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 2019 are presented in Table 3-1.



Jackson Project Hydraulics

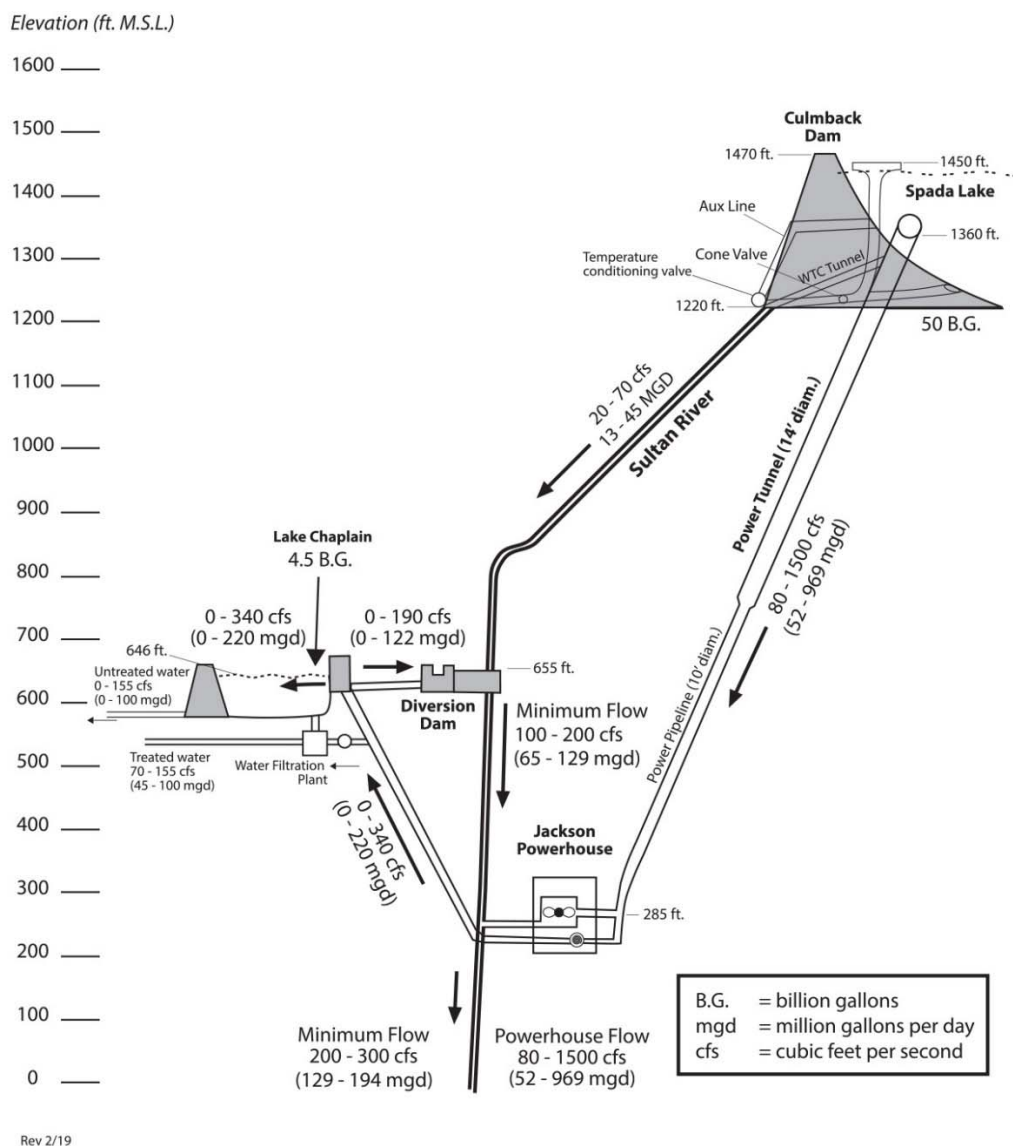


Figure 3-1. Schematic of water conveyance system, Jackson Hydroelectric Project.

Table 3-1. Settings for selective withdrawal panels, Spada Lake Reservoir, 2019.

Dates	Panel Setting	Upper Opening (elevation in feet msl)	Lower Opening (elevation in feet msl)
Beginning of year to 4/23/19	E	1,380 – 1,360	None
4/24/2019 to 6/2/19	C-D	1,417.5 – 1,392.5	None
6/3/19 to 6/6/19	D	1,405 – 1,385	None
6/7/19 to 7/1/19	C-D	1,415 – 1,395	None
7/2/19 to 8/1/19	D	1,405 – 1,385	None
8/2/19 to 8/5/19	E	1,380 – 1,360	None
8/6/19 to 8/15/19	D-E	1,405 – 1,397.5	1,370 – 1,360
8/16/19 to end of year	E	1,380 – 1,360	None

3.2. Continuous Temperature Monitoring

The District continuously monitored water temperature at 12 locations within the Project area during 2019 (Figure 3-2). 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 2019 were slightly warmer than 2018 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 2019 are presented in Appendix B. A tabulation of all mean daily temperature data for 2019 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 malfunctioning equipment or equipment lost due to vandalism.

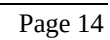


Figure 3-2. Locations of water temperature monitoring, Jackson Hydroelectric Project.

3.3. *Synoptic Measurements of Water Quality*

Synoptic measurements of water quality were collected during late spring, summer, and early fall 2019 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, 2019.

Location	Date	Temp °C	pH Units	Turb NTU	LDO mg/l
South Fork Sultan River (SF)					
	5/23/2019	7.2	6.9	0.5	11.9
	6/21/2019	9.1	7.0	0.1	11.0
	7/18/2019	9.9	6.6	0.2	10.9
	8/27/2019	12.4	7.0	0.1	10.2
	9/26/2019	10.2	6.6	0.8	10.6
Sultan River upstream of Diversion Dam (RM 9.8)					
	5/23/2019	12.3	7.2	3.4	10.8
	6/21/2019	9.3	7.0	3.0	11.3
	7/18/2019	11.9	6.6	2.9	11.0
	8/27/2019	11.7	7.4	2.4	10.9
	9/26/2019	11.2	6.6	3.2	10.8
Sultan River downstream of Powerhouse (RM 4.4)					
	5/23/2019	7.2	6.9	0.5	11.9
	6/21/2019	9.1	7.0	0.1	11.0
	7/18/2019	9.9	6.6	0.2	10.9
	8/27/2019	12.4	7.0	0.1	10.2
	9/26/2019	10.2	6.6	0.8	10.6

4. DATA QUALITY AND COMPLIANCE

Monitoring of water quality during 2019 adhered to the protocols and procedures outlined in the WQMP. All surveys 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. Between August 27 and September 9, 2019, water temperature exceeded the state water temperature criteria on 14 days at the monitoring site on the South Fork Sultan River (RM 18.2). Additionally, state temperature criteria was exceeded one day (16.1 degrees C on 7/29/2019) at one site on the Sultan River, downstream of the reservoir at RM 0.2. This exceedance was attributable to longitudinal warming in 4-mile reach downstream of the powerhouse. During summer 2019, both stations on the Skykomish River exceeded the state water temperature criteria for 76 and 71 days, respectively (Appendix D). 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.

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

FERC. 2011. Order Issuing New License, Project No. 2157-188. 136 FERC ¶ 62,188. September 2, 2011. Available at:
<http://www.snopud.com/Site/Content/Documents/relicensing/License/20110902LICENSE.pdf>

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
5/23/2019	1.5	0.5	1433.9	14.6	25	6.0	10.4	0.1	2.2
5/23/2019	3.3	1.0	1432.1	14.5	25	6.0	10.4	0.1	2.3
5/23/2019	6.6	2.0	1428.8	14.3	25	6.1	10.5	0.1	2.3
5/23/2019	9.6	3.0	1425.8	14.2	25	6.0	10.5	0.2	2.4
5/23/2019	12.9	4.0	1422.5	14.1	25	6.0	10.5	0.3	2.5
5/23/2019	16.4	5.0	1419.0	13.1	25	6.0	10.6	0.4	2.8
5/23/2019	19.8	6.0	1415.6	12.0	25	5.8	10.9	0.5	2.8
5/23/2019	22.7	7.0	1412.7	10.4	25	5.6	11.2	0.4	2.8
5/23/2019	26.2	8.0	1409.2	9.7	25	5.4	11.3	0.3	2.9
5/23/2019	29.6	9.0	1405.8	9.1	25	5.4	11.4	0.4	3.0
5/23/2019	32.6	10.0	1402.8	8.4	25	5.5	11.4	0.1	2.9
5/23/2019	36.2	11.0	1399.2	7.6	26	5.3	11.5	0.1	3.1
5/23/2019	39.3	12.0	1396.1	7.1	26	5.3	11.6	0.0	3.4
5/23/2019	42.5	13.0	1392.9	6.7	26	5.3	11.6	0.1	3.3
5/23/2019	45.8	14.0	1389.6	6.4	26	5.2	11.7	0.1	3.6
5/23/2019	49.3	15.0	1386.1	6.0	26	5.3	11.7	0.1	3.9
5/23/2019	55.6	17.0	1379.8	5.6	26	5.2	11.8	0.0	4.3
5/23/2019	62.2	19.0	1373.2	5.4	26	5.2	11.8	0.0	4.6
5/23/2019	68.9	21.0	1366.5	5.4	26	5.2	11.8	0.1	4.4
5/23/2019	75.5	23.0	1359.9	5.2	26	5.2	11.8	0.1	4.7
5/23/2019	82.1	25.0	1353.3	5.1	26	5.2	11.8	0.1	4.9
5/23/2019	88.6	27.0	1346.8	4.9	26	5.3	11.7	0.1	5.2
5/23/2019	94.9	29.0	1340.5	4.8	27	5.3	11.7	0.0	5.8
5/23/2019	101.7	31.0	1333.7	4.7	27	5.3	11.7	0.1	5.6
5/23/2019	111.6	34.0	1323.8	4.6	27	5.3	11.6	0.0	6.2
5/23/2019	121.4	37.0	1314.0	4.5	27	5.3	11.5	0.1	7.2
5/23/2019	131.2	40.0	1304.2	4.5	27	5.3	11.5	0.0	7.1
5/23/2019	140.8	43.0	1294.6	4.4	27	5.4	11.3	0.1	9.1
5/23/2019	150.9	46.0	1284.5	4.4	27	5.4	11.2	0.0	10.4
5/23/2019	160.7	49.0	1274.7	4.4	27	5.4	11.1	0.0	11.0
5/23/2019	153.7	47.0	1281.7	4.4	27	5.5	11.1	0.1	10.5

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
6/20/2019	1.6	0.5	1431.1	17.6	26	7.2	9.2	0.2	No data
6/20/2019	3.3	1.0	1429.4	17.6	26	7.2	9.2	0.1	No data
6/20/2019	6.6	2.0	1426.1	17.6	26	7.2	9.2	0.2	No data
6/20/2019	9.9	3.0	1422.8	17.6	26	7.2	9.2	0.2	No data
6/20/2019	13.2	4.0	1419.5	17.1	26	7.2	9.2	0.2	No data
6/20/2019	16.4	5.0	1416.3	14.8	26	7.3	10.2	0.3	No data
6/20/2019	19.7	6.0	1413.0	13.7	25	7.3	10.8	0.5	No data
6/20/2019	22.9	7.0	1409.8	12.6	25	7.2	11.2	0.7	No data
6/20/2019	26.3	8.0	1406.4	11.7	25	7.2	11.3	0.7	No data
6/20/2019	29.4	9.0	1403.3	11.0	25	7.0	11.3	0.8	No data
6/20/2019	32.8	10.0	1399.9	10.0	25	6.9	11.3	0.9	No data
6/20/2019	36.1	11.0	1396.6	9.4	25	6.9	11.3	1.1	No data
6/20/2019	39.6	12.0	1393.1	8.7	25	6.8	11.2	1.2	No data
6/20/2019	42.9	13.0	1389.8	8.0	26	6.6	10.9	0.7	No data
6/20/2019	45.9	14.0	1386.8	7.4	26	6.5	10.9	0.4	No data
6/20/2019	49.2	15.0	1383.5	6.9	26	6.5	10.9	0.2	No data
6/20/2019	55.7	17.0	1377.0	6.3	26	6.4	11.0	0.0	No data
6/20/2019	62.4	19.0	1370.3	6.0	26	6.4	11.1	0.0	No data
6/20/2019	69.0	21.0	1363.7	5.8	26	6.3	11.2	0.0	No data
6/20/2019	75.6	23.0	1357.1	5.6	26	6.3	11.2	0.0	No data
6/20/2019	82.0	25.0	1350.7	5.5	26	6.3	11.2	0.0	No data
6/20/2019	88.6	27.0	1344.1	5.4	27	6.3	11.2	0.1	No data
6/20/2019	95.1	29.0	1337.6	5.3	26	6.3	11.2	0.0	No data
6/20/2019	101.7	31.0	1331.0	5.2	27	6.3	11.3	0.1	No data
6/20/2019	111.5	34.0	1321.2	5.0	27	6.3	11.3	0.0	No data
6/20/2019	121.4	37.0	1311.3	5.0	27	6.2	11.2	0.1	No data
6/20/2019	131.4	40.0	1301.3	4.8	27	6.2	11.0	0.0	No data
6/20/2019	141.1	43.0	1291.6	4.7	27	6.2	11.0	0.0	No data
6/20/2019	150.9	46.0	1281.8	4.6	28	6.2	10.8	0.1	No data
6/20/2019	160.7	49.0	1272.0	4.6	28	6.2	10.7	-0.1	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
7/18/2019	1.6	0.5	1426.6	18.0	27	7.0	9.3	0.0	1.1
7/18/2019	3.0	1.0	1425.2	18.0	27	7.0	9.3	0.0	1.2
7/18/2019	6.6	2.0	1421.6	17.9	27	7.1	9.3	-0.1	1.3
7/18/2019	9.8	3.0	1418.4	17.6	28	7.1	9.4	0.0	1.8
7/18/2019	13.0	4.0	1415.2	17.5	27	7.0	9.6	0.0	1.2
7/18/2019	16.4	5.0	1411.8	16.8	27	7.0	9.8	0.1	1.1
7/18/2019	19.7	6.0	1408.5	16.2	27	7.0	9.9	0.2	1.1
7/18/2019	22.9	7.0	1405.3	15.4	27	6.7	9.9	0.1	1.2
7/18/2019	26.2	8.0	1402.0	15.2	27	6.5	10.0	0.0	1.2
7/18/2019	29.5	9.0	1398.7	14.4	27	6.6	10.1	0.0	1.1
7/18/2019	33.0	10.0	1395.2	13.2	26	6.4	10.3	0.1	1.2
7/18/2019	36.2	11.0	1392.0	11.6	26	6.4	10.4	0.0	1.4
7/18/2019	39.3	12.0	1388.9	9.7	26	6.4	10.5	0.0	1.3
7/18/2019	42.9	13.0	1385.3	8.2	27	6.3	10.5	0.0	1.6
7/18/2019	46.0	14.0	1382.2	7.3	28	6.4	10.6	0.1	1.7
7/18/2019	49.2	15.0	1379.0	6.6	28	6.4	10.7	0.0	2.1
7/18/2019	55.5	17.0	1372.7	6.2	28	6.5	10.8	0.0	2.5
7/18/2019	62.3	19.0	1365.9	6.0	28	6.5	10.8	0.0	2.9
7/18/2019	68.9	21.0	1359.3	5.7	28	6.5	11.0	0.1	3.1
7/18/2019	75.5	23.0	1352.7	5.5	28	6.6	11.0	0.0	3.1
7/18/2019	82.0	25.0	1346.2	5.4	28	6.6	11.2	-0.1	3.2
7/18/2019	88.7	27.0	1339.5	5.3	28	6.6	11.2	0.1	3.5
7/18/2019	95.2	29.0	1333.0	5.2	28	6.6	11.2	0.0	3.6
7/18/2019	101.7	31.0	1326.5	5.1	28	6.6	11.2	-0.1	3.8
7/18/2019	111.5	34.0	1316.7	4.9	28	6.6	11.1	0.0	4.0
7/18/2019	121.4	37.0	1306.8	4.9	28	6.6	11.0	0.0	4.2
7/18/2019	131.2	40.0	1297.0	4.8	28	6.6	10.7	0.0	4.4
7/18/2019	141.2	43.0	1287.0	4.8	29	6.6	10.6	0.0	4.5
7/18/2019	151.0	46.0	1277.2	4.7	29	6.6	10.4	0.0	4.6

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
8/15/2019	1.7	0.5	1418.3	21.0	28	6.9	8.7	0.1	1.5
8/15/2019	3.3	1.0	1416.7	21.0	28	6.9	8.7	0.0	1.5
8/15/2019	6.7	2.0	1413.3	20.8	28	7.0	8.7	0.0	1.6
8/15/2019	9.8	3.0	1410.3	20.7	28	7.0	8.7	0.0	1.6
8/15/2019	13.3	4.0	1406.7	20.7	29	7.0	8.7	0.0	1.5
8/15/2019	16.4	5.0	1403.6	20.6	29	7.0	8.7	0.2	1.5
8/15/2019	19.7	6.0	1400.3	20.5	29	7.0	8.7	0.1	1.6
8/15/2019	23.0	7.0	1397.0	19.4	29	7.1	9.1	0.2	1.4
8/15/2019	26.5	8.0	1393.5	17.8	28	6.8	9.8	0.1	1.1
8/15/2019	29.7	9.0	1390.3	16.4	27	6.4	9.8	0.2	1.1
8/15/2019	32.7	10.0	1387.3	14.7	27	6.6	9.7	0.2	1.1
8/15/2019	36.1	11.0	1383.9	12.1	27	6.3	9.6	0.0	1.3
8/15/2019	39.5	12.0	1380.5	9.0	27	6.2	9.8	0.1	1.6
8/15/2019	42.6	13.0	1377.4	7.3	27	6.0	10.2	0.0	1.7
8/15/2019	46.0	14.0	1374.0	6.7	28	6.1	10.2	0.0	2.0
8/15/2019	49.3	15.0	1370.7	6.4	28	6.0	10.2	0.0	2.4
8/15/2019	55.7	17.0	1364.3	6.0	28	6.0	10.3	0.2	2.3
8/15/2019	62.5	19.0	1357.5	5.9	28	6.0	10.4	0.0	2.4
8/15/2019	69.0	21.0	1351.1	5.8	27	6.0	10.5	0.1	2.5
8/15/2019	75.5	23.0	1344.5	5.7	27	6.0	10.6	0.1	2.6
8/15/2019	82.0	25.0	1338.0	5.5	27	6.1	10.7	0.1	2.6
8/15/2019	88.6	27.0	1331.4	5.5	27	6.1	10.8	0.1	2.7
8/15/2019	95.1	29.0	1324.9	5.4	27	6.1	10.8	0.1	2.9
8/15/2019	101.6	31.0	1318.4	5.3	27	6.1	10.8	0.1	2.9
8/15/2019	111.4	34.0	1308.6	5.2	27	6.1	10.8	0.1	3.1
8/15/2019	121.4	37.0	1298.6	5.0	28	6.1	10.7	0.1	3.3
8/15/2019	131.2	40.0	1288.8	5.0	28	6.1	10.6	0.0	3.3
8/15/2019	141.1	43.0	1278.9	4.9	28	6.0	10.4	0.1	3.6
8/15/2019	149.6	46.0	1270.4	4.9	28	6.1	10.1	0.0	3.8

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
9/26/2019	1.7	0.5	1405.5	16.0	29	6.5	9.2	0.2	1.9
9/26/2019	3.4	1.0	1403.8	15.9	29	6.6	9.1	0.2	1.8
9/26/2019	6.5	2.0	1400.7	15.9	29	6.6	9.1	0.3	1.8
9/26/2019	9.9	3.0	1397.3	15.9	29	6.6	9.1	0.3	2.0
9/26/2019	13.1	4.0	1394.1	15.9	29	6.6	9.1	0.3	1.9
9/26/2019	16.3	5.0	1390.9	15.9	29	6.6	9.0	0.3	2.1
9/26/2019	19.6	6.0	1387.6	15.6	30	6.6	8.8	0.2	2.3
9/26/2019	23.2	7.0	1384.1	15.4	30	6.5	8.7	0.2	2.8
9/26/2019	26.3	8.0	1380.9	15.0	28	6.5	8.6	0.0	3.2
9/26/2019	29.6	9.0	1377.6	14.7	28	6.3	8.6	0.1	3.5
9/26/2019	32.8	10.0	1374.4	14.2	28	6.3	8.6	0.2	3.7
9/26/2019	36.1	11.0	1371.1	13.5	28	6.1	8.7	0.2	5.4
9/26/2019	39.5	12.0	1367.7	12.9	27	6.1	8.4	0.2	3.7
9/26/2019	42.7	13.0	1364.5	10.4	26	6.1	8.3	0.1	3.0
9/26/2019	45.9	14.0	1361.3	8.1	25	5.9	8.6	0.1	2.6
9/26/2019	49.1	15.0	1358.1	6.9	25	5.8	9.0	0.1	2.5
9/26/2019	55.8	17.0	1351.4	6.2	25	5.8	9.5	0.1	2.4
9/26/2019	62.4	19.0	1344.8	6.0	25	5.8	9.7	0.1	2.3
9/26/2019	68.9	21.0	1338.3	5.8	25	5.9	9.7	0.1	2.5
9/26/2019	75.4	23.0	1331.8	5.7	25	5.9	10.3	0.2	2.2
9/26/2019	82.2	25.0	1325.0	5.6	25	5.9	10.5	0.1	2.0
9/26/2019	88.6	27.0	1318.6	5.5	25	5.9	10.4	0.1	2.5
9/26/2019	95.1	29.0	1312.1	5.4	25	5.9	10.3	0.1	2.3
9/26/2019	101.6	31.0	1305.6	5.3	25	5.9	10.3	0.2	2.6
9/26/2019	111.5	34.0	1295.7	5.2	25	5.9	10.0	0.1	3.0
9/26/2019	121.6	37.0	1285.6	5.1	26	5.9	9.6	0.2	3.1
9/26/2019	132.9	41.0	1274.3	5.1	26	5.9	9.0	0.2	4.1

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
10/24/2019	1.6	0.5	1427.3	9.6	27	6.5	10.5	0.4	3.9
10/24/2019	3.3	1.0	1425.7	9.6	27	6.5	10.5	0.2	4.0
10/24/2019	6.6	2.0	1422.3	9.6	27	6.5	10.5	0.3	3.9
10/24/2019	9.8	3.0	1419.1	9.6	27	6.5	10.5	0.3	4.1
10/24/2019	13.2	4.0	1415.8	9.6	27	6.5	10.5	0.3	4.1
10/24/2019	16.3	5.0	1412.7	9.6	27	6.5	10.4	0.2	4.1
10/24/2019	19.6	6.0	1409.3	9.6	27	6.5	10.4	0.2	4.1
10/24/2019	23.1	7.0	1405.8	9.6	27	6.5	10.4	0.3	4.1
10/24/2019	26.2	8.0	1402.8	9.6	27	6.5	10.4	0.2	4.2
10/24/2019	29.6	9.0	1399.4	9.2	26	6.5	10.4	0.2	5.4
10/24/2019	32.8	10.0	1396.2	9.0	25	6.5	10.5	0.2	5.8
10/24/2019	36.0	11.0	1393.0	8.8	25	6.4	10.4	0.3	5.1
10/24/2019	39.3	12.0	1389.6	8.6	25	6.4	10.5	0.2	4.3
10/24/2019	42.5	13.0	1386.5	8.4	26	6.4	10.5	0.2	5.0
10/24/2019	45.9	14.0	1383.1	8.4	25	6.3	10.4	0.3	5.5
10/24/2019	49.3	15.0	1379.7	8.3	25	6.3	10.4	0.2	5.4
10/24/2019	55.7	17.0	1373.3	8.0	25	6.2	10.6	0.3	4.8
10/24/2019	62.3	19.0	1366.7	8.0	25	6.2	10.5	0.2	4.7
10/24/2019	68.9	21.0	1360.0	7.8	25	6.2	10.3	0.2	4.5
10/24/2019	75.4	23.0	1353.5	7.7	24	6.2	10.3	0.2	5.0
10/24/2019	82.0	25.0	1346.9	7.4	25	6.1	9.9	0.2	4.5
10/24/2019	88.4	27.0	1340.6	7.0	25	6.1	9.3	0.1	3.9
10/24/2019	95.1	29.0	1333.8	6.3	25	6.0	9.1	0.1	2.8
10/24/2019	101.6	31.0	1327.3	6.2	25	6.0	9.2	0.1	5.8
10/24/2019	111.5	34.0	1317.5	5.7	25	5.9	9.4	0.2	4.5
10/24/2019	121.4	37.0	1307.6	5.5	25	5.9	9.6	0.0	2.9
10/24/2019	131.2	40.0	1297.8	5.5	25	5.9	9.6	0.1	6.1
10/24/2019	141.2	43.0	1287.7	5.4	25	5.9	9.6	0.1	6.4
10/24/2019	150.9	46.0	1278.1	5.5	25	5.9	9.4	0.1	10.9
10/24/2019	160.9	49.0	1268.1	5.4	25	5.9	9.0	0.2	11.7
10/24/2019	170.4	52.0	1258.6	5.5	26	5.9	8.8	0.2	18.4

APPENDIX B

Mean Daily Water Temperature Monitoring – Figures

Figure B-1. Mean Daily Water Temperature in the South Fork Sultan (RM 18.2), and the mainstem Sultan River immediately downstream of Culmback Dam (RM 15.8) during 2019

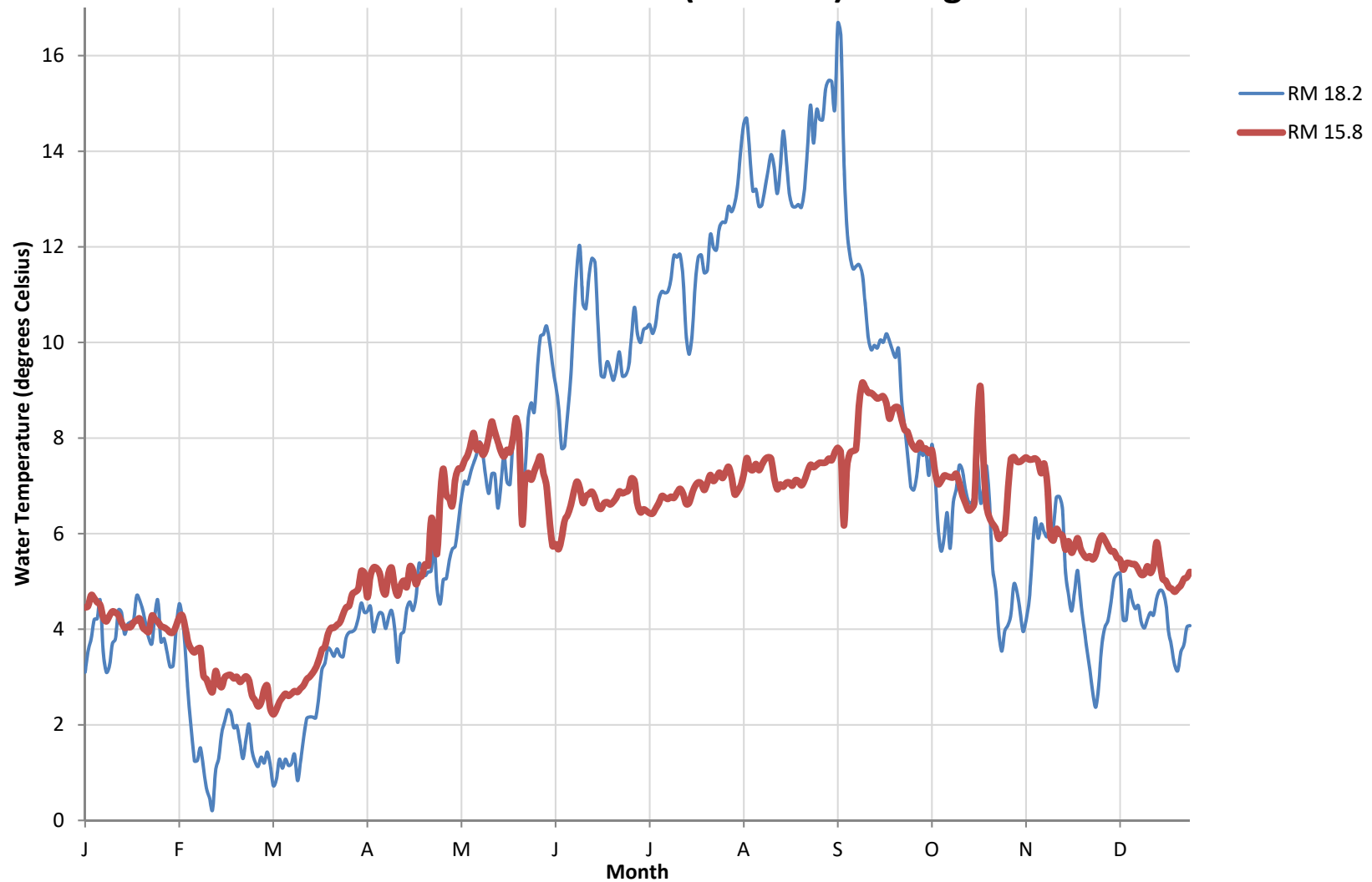


Figure B-2. Longitudinal Depiction of Mean Daily Water Temperature in the Bypass Reach (Reach 3) of the Sultan River during 2019

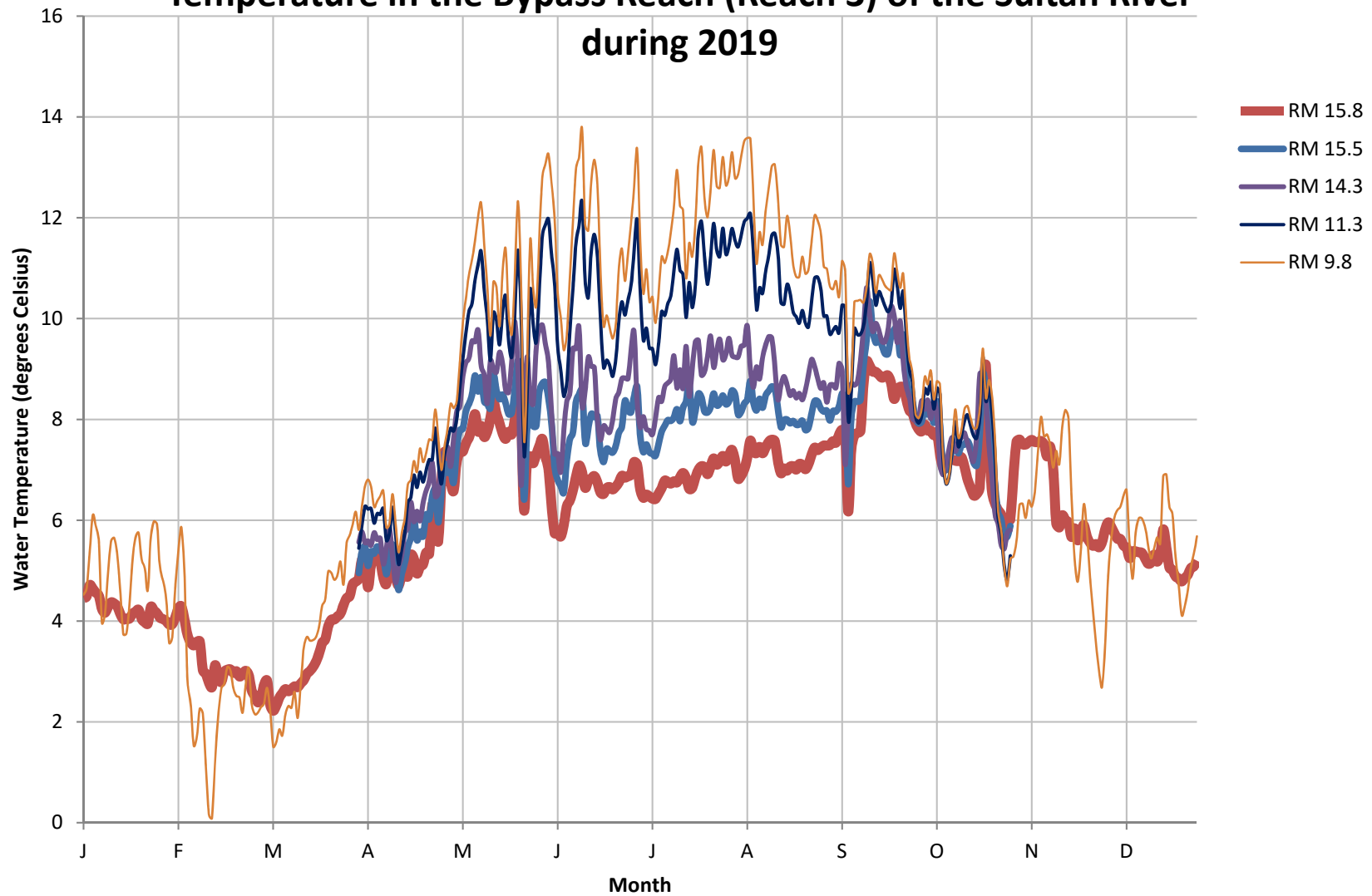
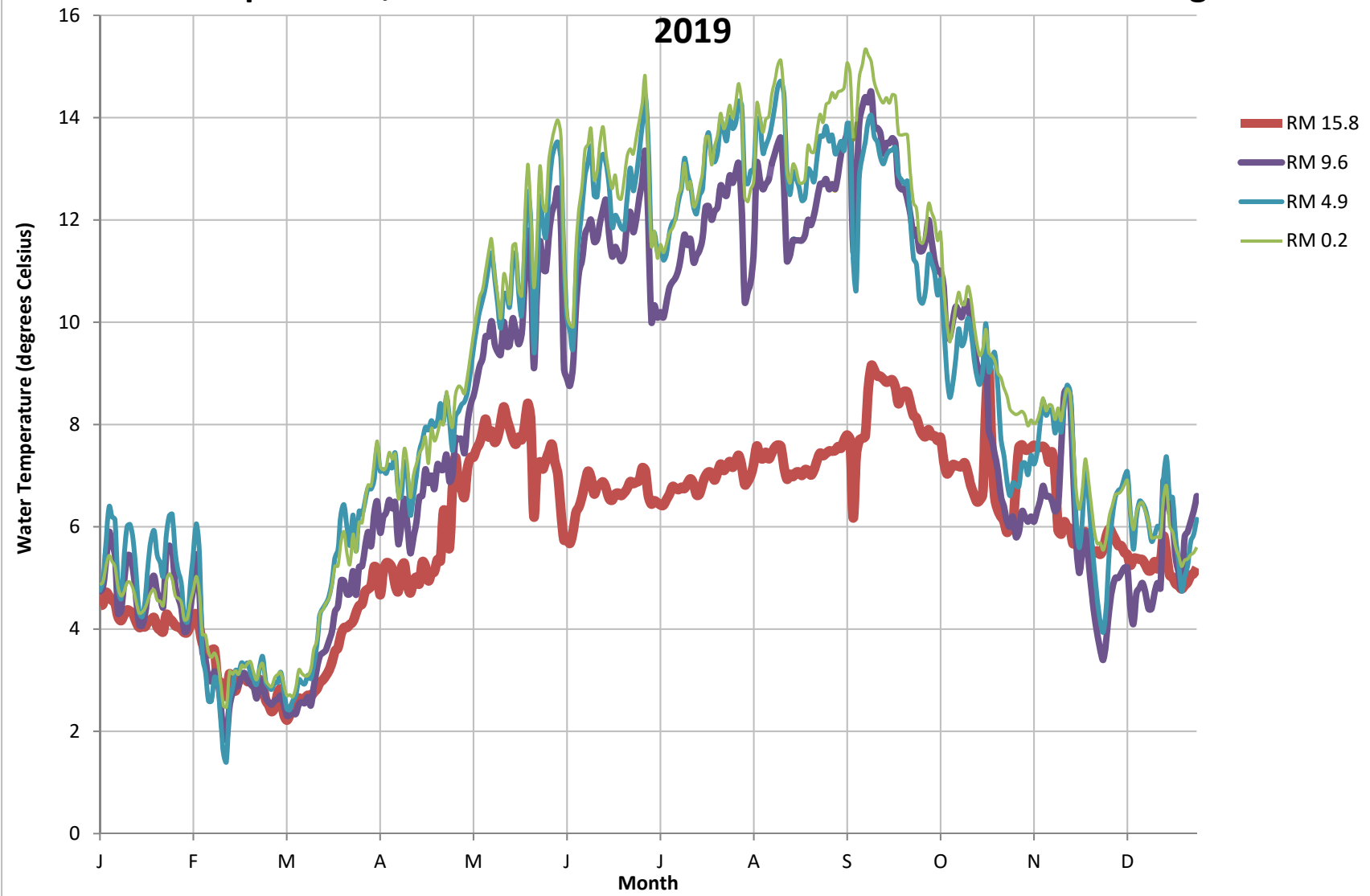
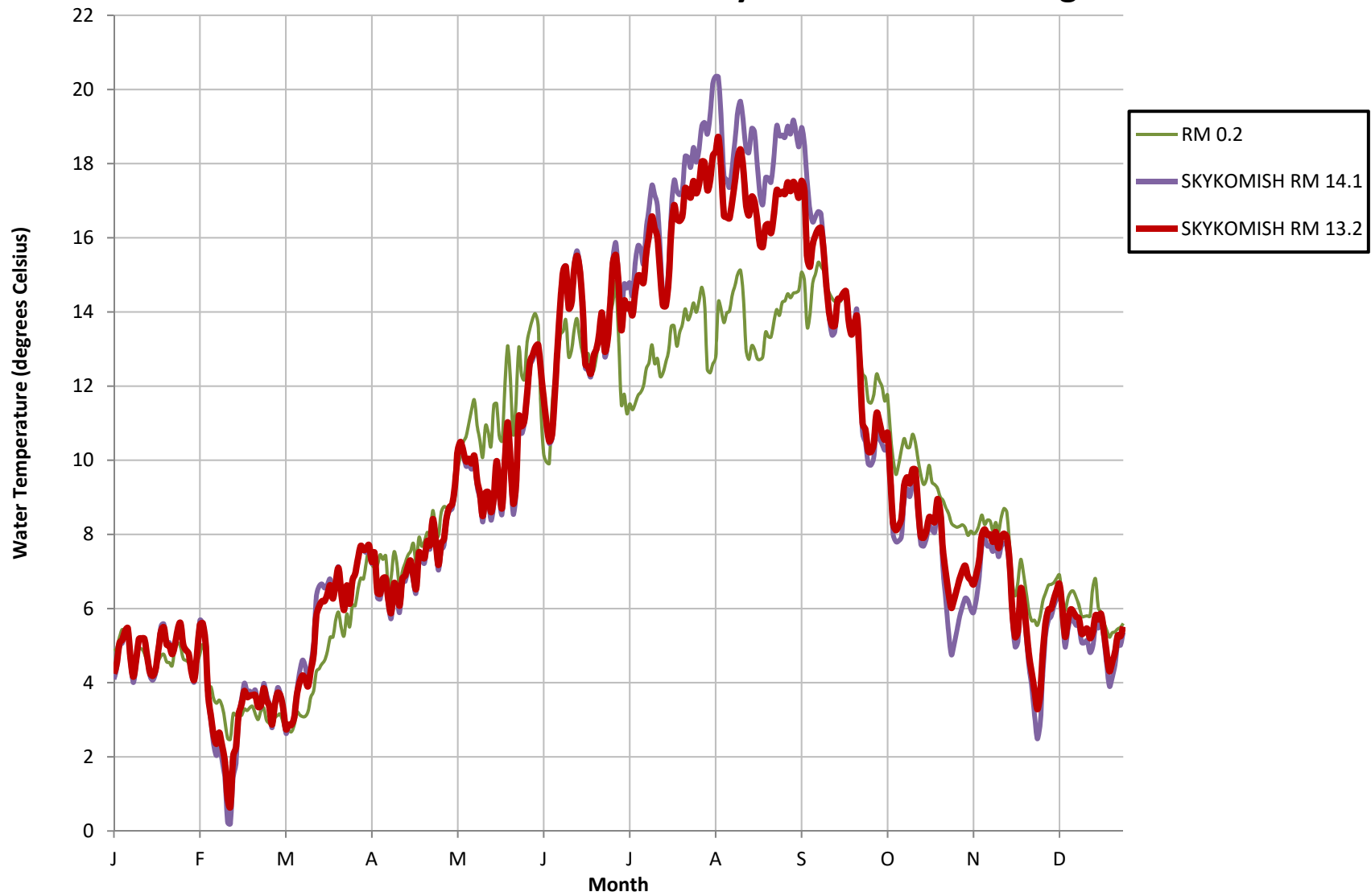


Figure B-3. Longitudinal Depiction of Mean Daily Water Temperature, Sultan River downstream of Culmback Dam during



**Figure B-4. Mean Daily Water Temperature
near confluence of Sultan and Skykomish rivers during 2019**



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	3.1	4.5				4.5	4.7	4.8	4.8	4.9	4.1	4.2
1/2	3.6	4.5				4.6	4.8	4.9	4.8	4.9	4.4	4.5
1/3	3.8	4.7				5.4	5.3	5.7	5.1	5.2	5.0	5.1
1/4	4.2	4.6				6.1	5.9	6.4	5.4	5.4	5.1	5.2
1/5	4.2	4.6				5.9	5.6	6.2	5.2	5.3	5.3	5.4
1/6	4.6	4.5				5.6	5.4	6.1	5.1	5.2	5.4	5.5
1/7	3.5	4.2				4.0	4.3	4.9	4.7	4.8	4.5	4.6
1/8	3.1	4.2				4.1	4.4	4.6	4.5	4.7	4.0	4.2
1/9	3.2	4.3				5.0	4.9	5.4	4.6	4.7	4.5	4.6
1/10	3.7	4.4				5.6	5.4	6.0	4.8	4.9	5.1	5.2
1/11	3.8	4.3				5.7	5.4	6.0	4.8	4.9	5.2	5.2
1/12	4.4	4.3				5.3	5.2	5.8	4.6	4.8	5.2	5.2
1/13	4.4	4.1				4.6	4.6	5.1	4.4	4.5	4.7	4.7
1/14	3.9	4.0				3.7	4.1	4.3	4.3	4.3	4.2	4.3
1/15	4.1	4.0				3.7	4.1	4.2	4.2	4.3	4.1	4.2
1/16	4.2	4.0				4.3	4.3	4.6	4.2	4.4	4.3	4.3
1/17	4.2	4.1				5.2	4.7	5.3	4.4	4.6	5.0	4.9
1/18	4.7	4.2				5.7	4.9	5.8	4.6	4.7	5.5	5.4
1/19	4.6	4.2				5.7	5.0	5.9	4.7	4.8	5.6	5.5
1/20	4.4	4.0				5.2	4.7	5.4	4.5	4.6	5.1	5.0
1/21	4.1	4.0				5.1	4.6	5.3	4.5	4.5	5.1	5.0
1/22	3.8	3.9				4.6	4.4	5.0	4.4	4.5	4.8	4.8
1/23	3.7	4.3				5.7	5.5	5.8	5.0	4.9	5.0	5.0
1/24	4.3	4.2				6.0	5.6	6.2	5.3	5.1	5.4	5.4
1/25	4.6	4.2				5.9	5.5	6.2	5.1	5.0	5.6	5.6
1/26	3.7	4.1				5.1	4.9	5.5	4.7	4.6	5.0	5.0
1/27	3.8	4.0				4.8	4.6	5.1	4.6	4.6	4.9	4.9
1/28	3.5	4.0				4.5	4.4	4.9	4.5	4.5	4.8	4.8
1/29	3.2	3.9				3.6	4.0	4.2	4.2	4.2	4.2	4.3
1/30	3.2	3.9				3.7	4.0	4.1	4.1	4.2	4.0	4.1
1/31	4.0	4.1				4.7	4.4	4.9	4.3	4.5	4.9	4.8

	Sultan River										Skykomish River	
	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	4.5	4.2				5.4	4.8	5.5	4.4	4.8	5.7	5.6
2/2	4.3	4.3				5.9	5.5	6.1	4.7	5.0	5.6	5.6
2/3	3.6	4.0				4.9	4.7	5.5	4.5	4.7	5.1	5.1
2/4	2.6	3.7				2.8	3.5	3.5	4.0	3.9	3.6	3.7
2/5	1.9	3.6				2.4	3.4	3.2	3.9	3.9	2.9	3.1
2/6	1.3	3.5				1.5	3.0	2.6	3.5	3.6	2.3	2.6
2/7	1.3	3.6				1.7	3.0	2.6	3.4	3.4	2.0	2.4
2/8	1.5	3.6				2.3	3.2	3.1	3.5	3.5	2.4	2.7
2/9	1.1	3.0				2.2	3.0	3.0	3.3	3.4	1.9	2.3
2/10	0.7	3.0				1.1	2.6	2.3	3.0	3.0	1.4	1.9
2/11	0.5	2.8				0.2	1.9	1.6	2.5	2.5	0.2	0.9
2/12	0.2	2.7				0.1	1.8	1.4	2.4	2.5	0.2	0.7
2/13	1.0	3.1				1.2	2.5	2.6	3.0	3.2	1.4	2.0
2/14	1.3	2.9				2.1	2.7	2.8	3.0	3.1	1.8	2.3
2/15	1.8	2.8				2.7	2.9	3.2	3.0	3.2	3.1	3.2
2/16	2.1	3.0				2.8	2.9	3.1	3.0	3.1	3.5	3.4
2/17	2.3	3.0				3.1	3.1	3.3	3.2	3.3	4.0	3.8
2/18	2.3	3.0				3.0	3.1	3.3	3.2	3.3	3.8	3.6
2/19	1.9	3.0				2.7	3.0	3.3	3.2	3.3	3.8	3.7
2/20	2.0	3.0				2.5	2.9	3.1	3.2	3.4	3.7	3.7
2/21	1.6	2.9				2.5	2.9	3.0	3.0	3.2	3.8	3.7
2/22	1.3	3.0				2.2	2.6	2.9	2.9	3.0	3.4	3.3
2/23	1.7	3.0				2.7	2.9	3.2	3.1	3.2	3.3	3.4
2/24	2.0	2.9				3.1	3.0	3.5	3.1	3.3	4.0	3.8
2/25	1.5	2.6				2.3	2.7	3.0	2.9	3.0	3.7	3.5
2/26	1.2	2.5				2.2	2.6	2.9	2.8	2.9	3.4	3.4
2/27	1.1	2.4				2.2	2.5	2.8	2.7	2.9	2.8	2.9
2/28	1.3	2.5				2.3	2.6	3.0	2.9	3.0	3.4	3.4

	Sultan River										Skykomish River	
	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	1.2	2.7				2.4	2.6	3.0	3.0	3.1	3.9	3.7
3/2	1.4	2.8				2.7	2.7	3.2	3.0	3.2	3.7	3.7
3/3	1.2	2.3				2.2	2.5	2.8	2.9	2.9	3.3	3.3
3/4	0.7	2.2				1.5	2.3	2.4	2.7	2.7	2.6	2.8
3/5	0.8	2.3				1.6	2.3	2.4	2.7	2.7	2.8	2.9
3/6	1.3	2.5				1.9	2.4	2.6	2.7	2.7	2.8	2.9
3/7	1.1	2.6				1.7	2.3	2.7	2.8	2.9	3.0	3.1
3/8	1.3	2.6				2.1	2.5	3.0	3.0	3.2	3.8	3.7
3/9	1.2	2.6				2.3	2.6	3.0	3.0	3.1	4.3	4.0
3/10	1.2	2.7				2.3	2.6	2.9	2.9	3.1	4.6	4.2
3/11	1.4	2.7				2.6	2.7	3.1	3.0	3.1	4.4	4.1
3/12	0.8	2.7				2.1	2.5	3.0	3.1	3.2	4.0	3.9
3/13	1.2	2.8				2.7	2.9	3.3	3.3	3.6	4.5	4.3
3/14	1.7	2.8				3.5	3.2	3.7	3.5	3.8	5.1	4.7
3/15	2.1	3.0				3.7	3.5	4.3	3.9	4.3	6.3	5.8
3/16	2.2	3.0				3.6	3.5	4.4	4.1	4.4	6.6	6.1
3/17	2.2	3.1				3.6	3.6	4.5	4.2	4.5	6.7	6.2
3/18	2.1	3.2				3.7	3.8	4.6	4.2	4.6	6.6	6.2
3/19	2.6	3.3				3.9	4.0	4.9	4.5	4.9	6.7	6.4
3/20	3.1	3.6				4.3	4.3	5.4	4.8	5.2	6.8	6.6
3/21	3.3	3.6				4.4	4.5	5.6	5.0	5.2	6.3	6.3
3/22	3.6	3.9				5.0	4.9	6.3	5.4	5.7	6.7	6.7
3/23	3.5	4.0				5.0	4.9	6.4	5.5	5.9	7.1	7.1
3/24	3.4	4.0				4.8	4.7	6.0	5.2	5.5	6.4	6.4
3/25	3.6	4.1				4.9	4.7	5.6	5.1	5.3	6.0	6.0
3/26	3.5	4.1				5.2	5.1	6.2	5.6	5.9	6.6	6.6
3/27	3.4	4.3				4.7	4.7	5.5	5.3	5.5	6.1	6.1
3/28	3.8	4.5				5.5	5.2	6.3	5.8	6.1	6.7	6.8
3/29	3.9	4.5				5.7	5.2	6.2	5.8	6.1	6.9	6.9
3/30	3.9	4.7				5.9	5.6	6.5	6.1	6.5	7.3	7.3
3/31	4.0	4.8				6.2	5.9	6.8	6.4	6.8	7.7	7.7

	Sultan River										Skykomish River	
	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	4.4	4.8	5.0	5.6	5.4	5.8	5.6	6.7	6.4	6.8	7.6	7.6
4/2	4.5	5.2	5.4	5.8	5.9	6.3	6.2	6.9	6.8	7.2	7.5	7.6
4/3	4.4	5.2	5.5	5.6	6.3	6.7	6.5	7.6	7.1	7.7	7.6	7.7
4/4	4.4	4.7	5.1	5.6	6.2	6.8	5.9	7.1	6.5	7.2	7.2	7.3
4/5	4.5	5.1	5.4	5.5	6.2	6.7	6.2	7.1	6.8	7.1	7.4	7.5
4/6	4.0	5.3	5.3	5.8	5.9	6.3	6.3	7.0	6.8	7.2	6.3	6.4
4/7	4.2	5.3	5.5	5.6	6.1	6.4	6.5	7.2	7.0	7.5	6.3	6.4
4/8	4.3	5.2	5.4	5.6	6.1	6.5	6.4	7.2	6.9	7.3	6.7	6.8
4/9	4.3	4.9	5.3	5.1	6.2	6.6	6.5	7.4	7.0	7.4	6.7	6.8
4/10	4.0	4.7	4.9	5.4	5.6	5.9	5.7	6.7	6.3	6.6	6.1	6.2
4/11	4.3	5.2	5.3	5.8	5.7	5.9	6.0	6.6	6.5	6.9	5.7	5.9
4/12	4.4	5.3	5.5	5.3	6.3	6.5	6.5	7.3	7.1	7.5	6.5	6.7
4/13	4.0	4.9	5.0	4.8	5.7	6.0	6.1	7.0	6.9	7.2	6.4	6.6
4/14	3.3	4.7	4.6	5.1	5.1	5.4	5.5	6.2	6.1	6.6	5.9	6.1
4/15	3.9	4.9	4.9	5.3	5.4	5.7	5.8	6.6	6.5	7.0	6.7	6.8
4/16	4.0	5.0	5.2	5.7	5.8	6.0	6.1	7.0	6.8	7.2	6.7	6.9
4/17	4.4	4.9	5.5	5.8	6.3	6.7	6.6	7.5	7.0	7.4	7.0	7.1
4/18	4.6	5.3	5.7	6.4	6.5	6.8	6.6	7.7	7.3	7.5	7.2	7.3
4/19	4.4	5.2	6.0	6.0	6.9	7.2	7.1	7.9	7.5	7.8	6.7	6.9
4/20	4.7	4.9	5.6	6.2	6.6	7.0	6.9	7.9	7.2	7.2	6.4	6.5
4/21	5.4	5.1	5.8	6.0	7.0	7.4	7.0	8.1	7.5	7.9	7.4	7.5
4/22	5.2	5.1	5.7	6.3	6.8	7.2	6.7	8.0	7.4	7.7	7.3	7.4
4/23	5.1	5.4	6.1	6.6	7.0	7.3	7.2	8.1	7.6	7.8	7.2	7.4
4/24	5.2	5.3	6.0	6.8	7.2	7.6	7.1	8.4	7.6	8.1	7.8	7.8
4/25	5.2	6.3	6.5	7.1	7.2	7.6	7.1	8.1	7.6	8.0	7.6	7.7
4/26	5.7	6.1	6.6	6.5	7.8	8.2	7.4	8.6	8.0	8.6	8.3	8.4
4/27	4.8	5.6	6.0	6.5	7.1	7.6	6.9	8.1	7.5	8.2	7.7	7.9
4/28	4.5	6.8	6.6	7.2	6.7	7.0	7.0	7.5	7.4	8.0	7.0	7.2
4/29	5.0	7.4	7.1	7.4	7.3	7.5	7.7	8.2	8.1	8.6	7.6	7.7
4/30	5.1	6.8	6.9	7.5	7.6	7.8	7.7	8.3	8.0	8.7	7.7	7.9

	Sultan River										Skykomish River	
	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	5.4	6.7	7.0	7.1	7.8	8.3	7.7	8.4	8.1	8.7	8.4	8.5
5/2	5.7	6.6	6.7	7.6	7.8	8.2	7.4	8.4	7.9	8.6	8.6	8.7
5/3	5.7	7.2	7.4	8.2	8.0	8.4	8.0	8.6	8.3	8.9	8.7	8.8
5/4	6.3	7.4	7.8	8.3	8.6	9.1	8.4	9.0	8.7	9.4	9.2	9.3
5/5	6.7	7.4	7.8	8.8	9.2	9.9	8.6	9.5	9.0	9.8	10.2	10.3
5/6	7.1	7.5	8.2	9.1	9.7	10.4	8.8	9.9	9.3	10.1	10.4	10.5
5/7	7.0	7.6	8.3	9.2	10.1	10.9	9.1	10.2	9.6	10.5	10.1	10.2
5/8	7.3	7.9	8.5	9.6	10.3	11.2	9.3	10.4	9.8	10.6	9.8	10.0
5/9	7.5	8.1	8.9	9.5	10.8	11.6	9.7	10.7	10.2	11.0	9.9	10.0
5/10	7.7	7.8	8.6	9.8	11.1	12.0	9.7	11.1	10.3	11.4	9.8	9.9
5/11	7.9	7.9	8.8	9.1	11.3	12.3	10.0	11.4	10.6	11.6	10.0	10.1
5/12	7.7	7.7	8.4	8.9	10.6	11.5	9.6	10.9	10.2	10.9	9.3	9.4
5/13	7.2	7.8	8.3	8.3	10.0	10.6	9.4	10.3	9.9	10.5	8.9	9.1
5/14	6.8	8.0	8.2	9.2	9.2	9.7	9.4	9.9	9.6	10.1	8.3	8.5
5/15	7.2	8.3	8.9	9.0	10.1	10.7	10.0	10.5	10.3	10.9	9.0	9.1
5/16	7.2	8.1	8.6	8.9	10.0	10.6	9.5	10.6	10.0	10.7	9.0	9.1
5/17	6.5	7.9	8.4	9.3	9.5	9.8	9.5	10.3	9.9	10.4	8.4	8.6
5/18	7.0	7.7	8.5	9.1	10.1	10.9	10.1	11.2	10.6	11.5	8.8	9.0
5/19	7.6	7.6	8.3	8.6	10.4	11.4	9.8	11.4	10.6	11.5	9.8	10.0
5/20	7.1	7.8	8.1	8.5	9.5	10.1	9.6	10.6	10.1	10.6	9.0	9.2
5/21	7.0	7.7	8.1	9.2	9.2	9.7	9.8	10.2	10.0	10.5	8.6	8.7
5/22	8.0	8.0	8.6	9.9	10.1	10.9	10.8	11.5	11.3	12.0	9.8	10.0
5/23	8.4	8.4	9.2	9.0	11.4	12.3	11.8	12.6	12.2	13.1	10.8	11.0
5/24	7.5	8.1	8.5	6.7	10.2	10.8	11.1	11.9	11.7	12.1	9.7	10.0
5/25	7.0	6.2	6.4	8.1	7.3	7.6	9.1	9.4	10.0	10.7	8.5	8.8
5/26	7.4	7.2	7.8	9.2	8.5	9.1	10.5	10.6	10.9	11.6	9.1	9.3
5/27	8.4	7.3	8.3	8.4	10.6	11.6	11.6	12.4	12.1	13.0	11.0	11.2
5/28	8.7	7.1	7.9	8.3	9.9	10.6	11.1	12.0	11.6	12.3	10.7	10.9
5/29	8.5	7.3	7.9	9.4	9.5	10.2	11.0	11.7	11.5	12.2	10.9	11.1
5/30	9.4	7.5	8.5	9.8	10.6	11.6	11.7	12.6	12.2	13.2	11.7	11.8
5/31	10.1	7.6	8.7	9.9	11.6	12.8	12.1	13.2	12.7	13.5	12.5	12.6

	Sultan River										Skykomish River	
	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	10.2	7.3	8.7	9.5	11.9	13.1	12.3	13.4	12.9	13.8	12.7	12.8
6/2	10.3	7.0	8.4	9.1	12.0	13.3	12.6	13.5	13.1	13.9	12.9	13.1
6/3	10.0	6.3	7.9	8.1	11.3	12.7	11.9	13.2	12.4	13.6	13.0	13.1
6/4	9.5	5.7	7.1	7.3	10.7	12.0	9.1	11.2	10.2	11.3	12.4	12.4
6/5	9.1	5.8	6.8	7.3	9.4	10.5	8.9	10.1	9.4	10.2	11.7	11.7
6/6	8.7	5.7	6.7	7.0	9.0	10.0	8.8	9.8	9.3	10.0	11.0	11.0
6/7	7.8	5.9	6.6	7.8	8.5	9.4	9.1	9.5	9.4	9.9	10.5	10.5
6/8	7.8	6.3	7.2	8.4	8.7	9.7	10.3	10.9	10.8	11.5	10.6	10.7
6/9	8.5	6.4	7.6	8.5	9.8	10.8	11.0	11.7	11.4	12.2	11.7	11.8
6/10	9.3	6.6	7.7	9.4	10.6	11.9	11.2	12.2	11.8	12.7	13.1	13.1
6/11	10.5	6.9	8.4	9.4	11.5	13.0	11.7	12.9	12.3	13.4	14.3	14.2
6/12	11.5	7.1	8.5	9.8	11.8	13.2	11.9	13.1	12.5	13.5	15.2	15.1
6/13	12.0	7.0	8.6	8.3	12.3	13.8	12.0	13.4	12.7	13.8	15.2	15.2
6/14	10.8	6.6	7.5	8.6	10.7	11.9	11.6	12.5	12.1	12.8	14.1	14.1
6/15	10.7	6.8	7.8	9.2	10.4	11.7	11.6	12.5	12.1	12.9	14.3	14.2
6/16	11.4	6.8	8.1	9.1	11.3	12.7	12.0	13.1	12.6	13.5	15.3	15.2
6/17	11.8	6.9	8.0	9.0	11.7	13.1	12.2	13.3	12.8	13.8	15.7	15.5
6/18	11.7	6.7	8.1	8.0	11.2	12.7	12.4	13.1	12.6	13.3	15.3	15.1
6/19	10.4	6.6	7.4	7.6	10.0	11.0	11.7	12.7	12.4	12.9	14.2	14.2
6/20	9.3	6.5	7.2	7.9	9.0	9.9	11.3	11.9	11.9	12.6	12.5	12.6
6/21	9.3	6.6	7.4	7.8	9.2	10.1	11.5	12.1	12.1	12.9	12.4	12.5
6/22	9.6	6.7	7.4	7.7	9.1	9.8	11.3	12.0	12.0	12.4	12.3	12.3
6/23	9.4	6.6	7.3	8.0	8.9	9.6	11.2	11.8	11.9	12.4	12.9	12.8
6/24	9.2	6.7	7.5	8.4	9.2	9.9	11.3	11.8	11.9	12.8	13.0	13.0
6/25	9.4	6.7	7.7	8.5	9.9	11.0	12.0	12.4	12.4	13.3	13.4	13.4
6/26	9.8	6.9	7.9	8.8	10.3	11.4	12.2	13.0	12.8	13.4	14.0	14.0
6/27	9.3	6.8	8.4	8.8	10.1	10.7	11.8	12.6	12.6	13.3	12.8	12.9
6/28	9.3	6.9	8.2	8.8	10.4	11.3	12.0	12.9	12.7	13.6	13.1	13.2
6/29	9.5	6.9	8.1	9.4	10.7	11.9	12.4	13.3	13.0	13.9	14.3	14.2
6/30	10.1	7.2	8.5	9.7	11.3	12.6	12.8	13.9	13.4	14.3	15.5	15.4

	Sultan River										Skykomish River	
	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	10.7	7.1	8.6	8.3	12.0	13.4	13.3	14.4	13.8	14.8	15.9	15.5
7/2	10.2	6.6	7.7	7.8	10.5	11.5	11.9	13.5	12.6	13.3	14.9	14.8
7/3	10.0	6.4	7.4	8.1	9.6	10.5	10.0	11.6	10.7	11.5	13.8	13.5
7/4	10.3	6.5	7.5	7.8	9.8	11.0	10.3	11.7	10.9	11.8	14.8	14.3
7/5	10.3	6.5	7.3	7.8	9.4	10.3	10.1	11.4	10.7	11.3	14.6	14.1
7/6	10.4	6.4	7.3	7.7	9.4	10.4	10.2	11.5	10.8	11.5	14.8	14.2
7/7	10.2	6.4	7.3	8.0	9.1	9.9	10.1	11.2	10.6	11.4	14.4	13.9
7/8	10.4	6.5	7.5	8.4	9.5	10.5	10.4	11.3	10.8	11.5	15.3	14.5
7/9	10.9	6.6	7.8	8.4	10.1	11.2	10.7	11.7	10.9	11.7	15.8	15.0
7/10	11.1	6.8	7.9	8.7	10.1	11.1	10.8	11.9	11.1	11.8	15.7	15.0
7/11	11.0	6.8	8.0	8.7	10.3	11.3	10.9	12.0	11.2	12.0	15.3	14.8
7/12	11.1	6.7	8.0	8.8	10.5	11.7	11.0	12.4	11.3	12.5	16.3	15.6
7/13	11.3	6.8	8.0	9.3	10.9	12.2	11.4	12.6	11.6	12.6	16.8	16.1
7/14	11.8	6.7	8.2	8.6	11.4	12.9	11.7	13.2	11.9	13.1	17.4	16.6
7/15	11.8	6.9	8.0	9.0	11.0	12.2	11.5	12.9	11.9	12.6	17.2	16.3
7/16	11.8	6.9	8.2	8.6	10.9	12.1	11.6	12.7	11.8	12.7	16.9	16.0
7/17	11.4	6.8	8.4	9.4	10.0	10.8	11.2	12.3	11.7	12.3	15.7	15.0
7/18	10.2	6.6	8.7	8.5	10.7	11.5	11.3	12.1	11.6	12.3	14.4	14.2
7/19	9.8	6.6	8.0	9.0	10.2	11.2	11.4	12.5	11.9	12.6	14.4	14.2
7/20	10.2	6.8	8.2	9.5	10.6	11.9	11.6	12.6	12.0	12.9	15.1	14.8
7/21	11.2	7.0	8.5	9.6	11.7	13.1	12.2	13.4	12.5	13.6	16.7	16.2
7/22	11.8	7.1	8.4	8.9	11.9	13.4	12.3	13.7	12.6	13.6	17.5	16.9
7/23	11.8	7.0	8.2	8.9	11.2	12.4	12.0	13.2	12.4	13.1	17.3	16.5
7/24	11.5	6.9	8.1	9.2	10.7	12.0	12.2	13.1	12.6	13.4	17.2	16.5
7/25	11.5	7.1	8.2	9.7	11.2	12.6	12.3	13.3	12.7	13.7	17.3	16.6
7/26	12.3	7.2	8.5	9.0	11.9	13.3	12.7	13.9	13.0	14.1	18.2	17.3
7/27	12.0	7.1	8.3	9.4	11.4	12.6	12.5	13.7	13.0	13.8	18.2	17.3
7/28	11.9	7.2	8.3	9.6	11.2	12.6	12.5	13.6	12.9	13.9	17.9	17.1
7/29	12.4	7.3	8.5	9.2	11.8	13.2	12.9	14.0	13.3	14.2	18.4	17.5
7/30	12.5	7.2	8.3	9.3	11.3	12.6	12.7	13.8	13.1	14.0	18.0	17.2
7/31	12.5	7.3	8.4	9.6	11.4	12.8	12.9	13.9	13.4	14.3	18.4	17.4

	Sultan River										Skykomish River	
	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	12.8	7.4	8.6	9.3	11.8	13.3	13.1	14.3	13.6	14.7	19.0	18.0
8/2	12.7	7.2	8.5	9.2	11.5	12.8	12.2	14.2	13.0	14.3	19.1	18.0
8/3	12.9	6.8	8.1	9.2	11.4	12.9	10.4	12.7	11.2	12.4	18.8	17.3
8/4	13.3	6.9	8.2	9.5	11.7	13.2	10.6	12.7	11.2	12.4	19.3	17.5
8/5	14.0	7.0	8.3	9.5	11.9	13.5	10.8	13.0	11.4	12.6	20.2	18.2
8/6	14.6	7.2	8.4	9.9	12.0	13.6	11.4	13.0	11.9	12.8	20.4	18.3
8/7	14.7	7.6	8.8	9.0	12.1	13.6	13.1	14.0	13.4	14.3	20.3	18.7
8/8	13.9	7.4	8.3	8.6	11.3	12.4	12.8	14.0	13.4	14.0	19.2	17.8
8/9	13.2	7.3	8.2	9.0	10.2	11.1	12.6	13.3	13.1	13.7	17.7	16.6
8/10	13.2	7.5	8.4	8.8	10.6	11.7	12.7	13.5	13.2	14.0	17.6	16.6
8/11	12.9	7.3	8.2	9.2	10.5	11.5	12.8	13.6	13.3	14.0	17.4	16.5
8/12	12.9	7.4	8.5	9.5	10.9	12.1	13.1	13.9	13.6	14.5	17.9	17.0
8/13	13.2	7.6	8.6	9.6	11.2	12.6	13.3	14.2	13.8	14.7	18.7	17.5
8/14	13.6	7.6	8.7	9.6	11.6	13.0	13.5	14.6	14.1	15.0	19.4	18.2
8/15	13.9	7.6	8.6	9.1	11.7	13.1	13.6	14.7	14.2	15.1	19.7	18.4
8/16	13.7	7.2	8.2	8.4	11.3	12.4	12.7	14.5	13.5	14.4	19.1	17.8
8/17	13.1	6.9	7.8	8.7	10.3	11.5	11.2	13.0	12.0	13.0	18.4	16.9
8/18	13.6	7.0	8.0	8.9	10.3	11.4	11.3	12.5	11.8	12.7	18.3	16.6
8/19	14.4	7.0	8.0	8.7	10.7	12.0	11.6	12.9	12.1	13.1	18.9	17.1
8/20	13.8	7.1	7.9	8.5	10.5	11.7	11.6	12.8	12.1	13.0	18.9	17.0
8/21	13.1	7.1	8.0	8.6	10.1	11.1	11.6	12.6	12.1	12.7	18.0	16.5
8/22	12.9	7.0	7.9	8.4	10.0	10.8	11.6	12.4	12.1	12.7	17.1	15.8
8/23	12.8	7.1	7.9	8.5	9.9	10.8	11.7	12.4	12.2	12.8	16.9	15.8
8/24	12.9	7.1	8.0	8.4	10.2	11.2	12.0	13.0	12.6	13.5	17.6	16.3
8/25	12.8	7.0	7.8	8.6	9.9	10.9	11.9	12.9	12.5	13.3	17.6	16.4
8/26	13.2	7.1	7.8	8.9	9.8	11.0	12.1	12.7	12.6	13.3	17.5	16.1
8/27	14.1	7.3	8.1	9.2	10.3	11.5	12.4	13.2	12.9	13.7	18.2	16.6
8/28	15.0	7.4	8.4	9.1	10.8	12.0	12.7	13.6	13.2	14.1	19.0	17.3
8/29	14.2	7.4	8.4	8.8	10.8	11.9	12.7	13.6	13.2	13.9	18.8	17.2
8/30	14.9	7.4	8.2	8.6	10.6	11.7	12.8	13.8	13.4	14.3	18.8	17.2
8/31	14.7	7.5	8.2	8.7	10.1	11.0	12.6	13.5	13.5	14.3	18.7	17.2

	Sultan River										Skykomish River	
	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	14.7	7.5	8.2	8.3	10.1	11.0	12.7	13.7	13.6	14.5	19.0	17.5
9/2	15.3	7.5	8.0	8.7	9.7	10.6	12.6	13.3	13.5	14.4	18.8	17.3
9/3	15.5	7.6	8.2	8.7	9.8	10.6	12.9	13.4	13.7	14.5	19.2	17.5
9/4	15.5	7.5	8.2	8.6	9.8	10.7	13.3	13.5	13.8	14.5	18.8	17.4
9/5	14.9	7.7	8.3	9.1	9.7	10.4	13.5	13.4	14.0	14.6	18.5	17.1
9/6	16.7	7.8	8.5	9.0	10.3	11.1	13.7	13.9	14.2	15.1	19.0	17.5
9/7	16.4	7.7	8.4	7.1	10.2	10.9	13.8	13.9	14.3	14.9	18.5	17.3
9/8	13.8	6.2	6.7	8.2	8.0	8.5	11.4	11.2	12.7	13.6	17.5	15.5
9/9	12.4	7.4	8.0	8.7	8.6	8.7	12.5	10.6	13.4	13.9	16.8	15.2
9/10	11.8	7.7	8.4	8.7	9.8	10.3	13.9	12.8	14.0	14.8	16.4	15.8
9/11	11.5	7.7	8.4	8.7	9.7	10.4	14.2	13.2	14.2	15.0	16.6	16.1
9/12	11.6	7.8	8.4	9.2	9.7	10.4	14.4	13.5	14.5	15.3	16.7	16.2
9/13	11.6	8.7	9.1	9.8	9.8	10.3	14.3	13.9	14.6	15.2	16.6	16.3
9/14	11.5	9.1	9.6	10.6	10.3	10.6	14.5	14.0	14.5	15.1	15.8	15.6
9/15	10.8	9.1	10.3	10.1	11.1	11.3	13.8	13.6	14.1	14.7	14.7	14.6
9/16	10.1	9.0	9.8	9.7	10.8	11.1	13.8	13.5	14.0	14.5	13.8	13.9
9/17	9.8	8.9	9.5	9.9	10.3	10.5	13.7	13.2	13.9	14.4	13.4	13.6
9/18	9.9	8.9	9.6	9.8	10.5	10.9	13.3	13.1	13.6	14.3	13.5	13.6
9/19	9.9	8.8	9.5	9.6	10.4	10.8	13.5	13.3	13.7	14.4	14.3	14.3
9/20	10.0	8.9	9.3	9.5	10.3	10.7	13.5	13.3	13.7	14.3	14.3	14.4
9/21	10.0	8.9	9.3	9.8	10.1	10.6	13.6	13.4	13.8	14.5	14.5	14.5
9/22	10.2	8.7	9.6	10.2	10.3	10.6	13.5	13.4	13.8	14.4	14.5	14.6
9/23	10.0	8.4	9.8	10.1	11.0	11.3	12.7	12.9	13.1	13.7	13.9	13.7
9/24	9.8	8.6	9.8	9.5	10.7	10.9	12.6	12.8	13.1	13.7	13.4	13.4
9/25	9.7	8.6	9.3	10.0	10.2	10.6	12.6	12.7	13.0	13.7	13.7	13.7
9/26	9.9	8.6	9.7	9.1	10.5	10.9	12.4	12.8	13.0	13.7	14.0	13.9
9/27	8.8	8.4	8.9	8.6	9.7	10.0	12.1	12.0	12.4	12.9	12.5	12.6
9/28	8.2	8.2	8.5	8.5	9.0	9.2	11.7	11.3	11.8	12.3	10.7	11.0
9/29	7.7	8.1	8.3	8.0	8.7	8.9	11.8	11.1	11.8	12.2	10.5	10.8
9/30	7.0	7.9	8.0	8.0	8.1	8.1	11.4	10.5	11.2	11.6	9.9	10.2

	Sultan River										Skykomish River	
	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	6.9	7.8	7.9	8.0	7.9	8.0	11.4	10.4	11.2	11.5	9.9	10.2
10/2	7.2	7.8	8.0	8.4	8.1	8.2	11.6	10.6	11.3	11.8	10.1	10.4
10/3	7.8	7.9	8.2	8.2	8.6	8.8	12.0	11.3	11.9	12.3	10.8	11.3
10/4	7.6	7.8	8.1	8.4	8.5	8.7	11.6	11.2	11.7	12.1	10.6	11.1
10/5	7.7	7.8	8.2	8.0	8.7	9.0	11.2	11.0	11.5	12.0	10.4	10.7
10/6	7.2	7.7	7.9	8.4	8.2	8.4	11.0	10.5	11.1	11.6	10.3	10.5
10/7	7.9	7.7	8.4	8.1	8.6	8.8	11.0	10.8	11.3	11.8	10.4	10.7
10/8	7.3	7.3	7.8	7.1	8.5	8.7	10.7	10.0	10.4	10.7	9.3	9.6
10/9	6.2	7.0	7.0	6.9	7.2	7.3	9.7	9.1	9.7	10.1	8.0	8.3
10/10	5.6	7.1	7.0	7.1	6.7	6.7	9.7	8.5	9.3	9.6	7.8	8.1
10/11	5.9	7.2	7.2	7.4	6.9	6.9	10.0	8.8	9.5	9.9	7.8	8.2
10/12	6.4	7.2	7.4	7.6	7.4	7.5	10.3	9.3	9.9	10.3	7.9	8.4
10/13	5.7	7.2	7.5	7.4	8.0	8.2	10.2	9.9	10.1	10.6	8.9	9.3
10/14	6.6	7.2	7.3	7.5	7.5	7.6	10.1	9.5	10.0	10.4	9.2	9.5
10/15	6.9	7.3	7.5	7.6	7.7	7.8	10.3	9.7	10.0	10.4	9.0	9.4
10/16	7.4	7.1	7.5	7.7	8.0	8.2	10.4	10.1	10.4	10.7	9.3	9.8
10/17	7.3	6.8	7.6	7.5	8.1	8.3	10.0	9.9	10.1	10.5	9.4	9.7
10/18	6.9	6.6	7.4	7.3	7.9	8.0	9.6	9.3	9.6	10.0	8.5	8.8
10/19	6.7	6.5	7.1	7.2	7.7	7.8	9.2	9.0	9.3	9.6	7.7	7.9
10/20	6.6	6.5	7.1	7.7	7.6	7.8	9.0	8.8	9.1	9.3	7.7	7.9
10/21	6.8	6.6	7.7	8.9	8.0	8.2	8.9	9.1	9.2	9.5	7.9	8.1
10/22	7.5	8.3	8.9	8.5	9.2	9.4	9.5	10.0	9.8	9.9	8.2	8.5
10/23	6.6	9.1	8.6	8.4	8.4	8.4	7.9	9.0	9.2	9.4	8.1	8.4
10/24	7.0	7.5	8.1	7.5	8.6	8.8	7.7	9.2	9.2	9.3	8.1	8.3
10/25	7.4	6.6	7.2	6.8	8.1	8.5	7.4	9.4	9.1	9.2	8.7	9.0
10/26	6.6	6.3	6.7	6.1	7.3	7.6	7.1	8.7	8.9	9.0	8.4	8.6
10/27	5.3	6.2	6.2	5.9	6.1	6.2	6.6	7.7	8.8	8.9	7.0	7.6
10/28	4.9	6.1	6.0	5.5	5.8	5.8	6.4	7.4	8.6	8.7	6.2	7.0
10/29	3.9	5.9	5.7	5.4	5.1	5.1	6.1	6.9	8.5	8.6	5.4	6.4
10/30	3.5	6.0	5.7	5.8	4.8	4.7	6.0	6.6	8.2	8.3	4.8	6.0
10/31	4.0	6.0	5.9	5.8	5.3	5.2	6.2	6.9	8.1	8.2	5.0	6.3

	Sultan River										Skykomish River	
	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	4.1	6.9				5.3	5.8	6.8	8.1	8.2	5.4	6.5
11/2	4.3	7.6				5.6	5.9	6.8	8.1	8.2	5.8	6.8
11/3	4.9	7.6				6.3	6.3	7.2	8.2	8.3	6.1	7.0
11/4	4.8	7.5				6.3	6.2	7.2	8.1	8.2	6.3	7.2
11/5	4.4	7.5				6.0	6.1	7.0	7.8	8.0	6.2	6.9
11/6	4.0	7.6				6.4	6.2	7.4	7.9	8.1	6.0	6.8
11/7	4.2	7.6				6.3	6.1	7.2	7.9	8.0	5.9	6.7
11/8	4.6	7.6				6.6	6.3	7.4	7.9	8.1	6.2	6.9
11/9	5.5	7.6				7.3	6.5	8.0	8.0	8.3	6.8	7.3
11/10	6.3	7.6				8.0	6.8	8.5	8.2	8.5	7.7	8.0
11/11	5.9	7.5				7.7	6.6	8.2	8.1	8.3	7.9	8.1
11/12	6.2	7.3				7.7	6.6	8.3	8.2	8.4	7.7	8.0
11/13	6.0	7.5				7.5	6.5	8.3	8.1	8.4	7.7	8.0
11/14	5.9	7.0				7.0	6.3	7.8	7.9	8.1	7.5	7.8
11/15	6.2	5.9				7.4	6.4	8.2	8.1	8.3	7.8	8.1
11/16	6.2	5.9				7.1	7.5	7.8	7.8	8.1	7.4	7.6
11/17	6.8	6.1				7.9	8.6	8.4	8.3	8.5	7.7	7.9
11/18	6.8	6.0				8.2	8.7	8.8	8.6	8.7	7.8	8.0
11/19	6.5	6.0				8.0	8.5	8.6	8.4	8.6	7.7	7.9
11/20	5.2	5.7				6.5	7.1	7.5	7.5	7.7	7.1	7.3
11/21	4.7	5.8				5.2	5.7	6.1	6.6	6.7	5.7	5.9
11/22	4.4	5.6				4.8	5.1	5.6	6.3	6.3	5.0	5.2
11/23	4.8	5.7				5.4	5.5	6.1	6.6	6.7	5.1	5.4
11/24	5.2	5.9				6.3	5.9	7.1	7.1	7.3	6.3	6.5
11/25	4.6	5.7				5.8	5.4	6.7	6.8	7.0	6.0	6.2
11/26	4.1	5.6				4.9	4.8	5.9	6.3	6.4	5.3	5.5
11/27	3.6	5.5				4.2	4.3	5.2	5.8	5.9	4.4	4.7
11/28	3.2	5.5				3.6	3.9	4.6	5.9	5.7	3.9	4.3
11/29	2.7	5.5				3.0	3.6	4.1	6.0	5.7	3.1	3.8
11/30	2.4	5.6				2.7	3.4	3.9	5.9	5.5	2.5	3.3

	Sultan River										Skykomish River	
	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	2.9	5.8				3.5	3.8	4.5	5.9	5.8	2.8	3.6
12/2	3.7	6.0				4.9	4.4	5.5	6.1	6.2	4.2	4.8
12/3	4.0	5.9				5.6	4.8	6.2	6.2	6.4	5.3	5.6
12/4	4.2	5.7				6.1	5.0	6.6	6.4	6.6	5.7	6.0
12/5	4.6	5.6				6.2	5.0	6.7	6.5	6.7	5.8	6.0
12/6	5.0	5.6				6.3	5.1	6.8	6.5	6.7	6.1	6.3
12/7	5.2	5.5				6.5	5.2	7.0	6.7	6.8	6.3	6.5
12/8	5.2	5.5				6.6	5.2	7.1	6.8	6.9	6.5	6.7
12/9	4.2	5.2				5.5	4.4	6.3	6.2	6.3	5.8	6.0
12/10	4.2	5.4				4.8	4.1	5.6	5.7	5.9	5.0	5.2
12/11	4.8	5.4				5.8	4.7	6.2	6.1	6.3	5.4	5.7
12/12	4.6	5.4				6.0	4.8	6.5	6.3	6.4	5.7	6.0
12/13	4.4	5.4				6.0	4.9	6.5	6.3	6.5	5.7	5.9
12/14	4.5	5.3				5.9	4.7	6.3	6.2	6.3	5.5	5.8
12/15	4.1	5.1				5.5	4.4	6.1	6.0	6.1	5.5	5.7
12/16	4.0	5.2				5.2	4.4	5.7	5.7	5.8	5.1	5.3
12/17	4.2	5.3				5.4	4.7	5.8	5.7	5.8	5.1	5.4
12/18	4.3	5.2				5.7	4.9	6.0	5.7	5.8	5.1	5.5
12/19	4.3	5.3				5.5	4.8	6.0	5.7	5.8	4.8	5.2
12/20	4.6	5.8				6.9	6.9	6.9	6.7	6.6	5.0	5.4
12/21	4.8	5.5				6.9	6.8	7.4	7.0	6.8	5.5	5.8
12/22	4.8	5.1				6.3	6.3	6.6	5.9	6.0	5.5	5.7
12/23	4.6	5.0				6.1	6.1	6.6	5.8	5.9	5.7	5.9
12/24	3.9	4.9				5.3	5.4	5.8	5.5	5.6	5.2	5.4
12/25	3.6	4.8				4.7	5.1	5.3	5.4	5.4	4.5	4.8
12/26	3.2	4.8				4.1	4.8	4.7	5.2	5.2	3.9	4.3
12/27	3.1	4.9				4.3	5.8	5.0	5.2	5.3	4.1	4.6
12/28	3.5	4.9				4.6	5.9	5.2	5.2	5.4	4.5	4.8
12/29	3.7	5.0				5.1	6.1	5.7	5.3	5.5	5.0	5.3
12/30	4.0	5.1				5.3	6.3	5.8	5.4	5.5	5.0	5.3
12/31	4.1	5.2				5.7	6.6	6.1	5.5	5.6	5.4	5.5

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	4.8	5.1	5.1	5.4	5.6	5.6	5.9	5.5	5.5	4.9	5.1
1/2	4.1	4.7	5.1	5.1	5.4	5.6	5.5	5.9	5.3	5.4	4.9	5.1
1/3	4.2	4.7	5.1	5.0	5.4	5.6	5.5	5.9	5.2	5.3	5.0	5.1
1/4	4.2	4.6	5.0	4.9	5.3	5.5	5.4	5.9	5.1	5.3	5.1	5.2
1/5	4.1	4.6	5.0	4.9	5.2	5.4	5.4	5.9	5.1	5.2	5.1	5.2
1/6	4.1	4.6	5.0	4.9	5.3	5.5	5.4	5.9	5.0	5.2	5.1	5.2
1/7	4.0	4.5	4.9	4.8	5.3	5.5	5.4	6.0	5.0	5.1	5.1	5.2
1/8	3.9	4.5	4.9	4.8	5.2	5.4	5.3	5.9	4.9	5.1	5.2	5.2
1/9	3.9	4.4	4.8	4.7	5.2	5.4	5.3	5.9	4.8	5.0	5.2	5.2
1/10	4.0	4.3	4.7	4.6	5.0	5.2	5.2	5.8	4.7	4.9	5.1	5.1
1/11	4.2	4.3	4.6	4.6	5.0	5.2	5.1	5.7	4.7	4.8	5.0	5.0
1/12	4.3	4.3	4.7	4.6	5.0	5.2	5.1	5.7	4.6	4.8	5.0	5.0
1/13	4.3	4.3	4.6	4.6	4.9	5.1	5.0	5.5	4.6	4.8	5.0	5.0
1/14	4.4	4.2	4.5	4.6	4.8	5.0	4.9	5.4	4.5	4.7	5.0	5.0
1/15	4.4	4.2	4.5	4.5	4.8	5.0	4.8	5.4	4.5	4.7	5.0	5.0
1/16	4.4	4.2	4.5	4.6	4.8	5.1	4.7	5.4	4.5	4.7	5.1	5.0
1/17	4.5	4.2	4.5	4.6	4.9	5.1	4.7	5.4	4.5	4.7	5.1	5.1
1/18	4.5	4.2	4.6	4.7	5.1	5.3	4.8	5.5	4.5	4.7	5.3	5.2
1/19	4.4	4.2	4.6	4.7	5.1	5.4	4.8	5.6	4.5	4.7	5.4	5.3
1/20	4.3	4.2	4.8	4.9	5.3	5.6	5.0	5.8	4.7	4.8	5.4	5.3
1/21	4.3	4.2	4.9	4.9	5.4	5.7	5.2	5.9	4.8	4.9	5.5	5.4
1/22	4.3	4.2	4.9	5.0	5.5	5.7	5.3	6.0	4.9	5.0	5.5	5.4
1/23	4.3	4.2	4.8	4.9	5.5	5.7	5.3	6.0	5.0	4.9	5.4	5.4
1/24	4.4	4.2	4.8	4.9	5.4	5.6	5.3	5.9	5.0	4.9	5.3	5.3
1/25	4.4	4.2	4.8	4.9	5.4	5.6	5.3	5.9	5.0	4.9	5.3	5.3
1/26	4.3	4.2	4.7	4.8	5.3	5.5	5.2	5.8	5.0	4.9	5.3	5.3
1/27	4.2	4.1	4.5	4.6	5.0	5.2	5.0	5.6	4.8	4.9	5.2	5.2
1/28	4.0	4.1	4.4	4.5	4.8	5.1	4.8	5.4	4.7	4.8	5.2	5.1
1/29	4.0	4.2	4.5	4.5	4.8	5.0	4.7	5.3	4.6	4.8	5.2	5.1
1/30	4.1	4.2	4.6	4.6	4.8	5.1	4.8	5.3	4.5	4.8	5.2	5.2
1/31	4.1	4.2	4.6	4.6	4.9	5.2	4.9	5.5	4.5	4.9	5.3	5.3

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
2/1	4.0	4.2	4.5	4.5	4.7	4.9	4.7	5.3	4.5	4.8	5.2	5.1
2/2	3.8	4.1	4.5	4.4	4.5	4.8	4.7	5.1	4.4	4.7	5.0	5.0
2/3	3.5	4.0	4.3	4.1	4.3	4.4	4.5	4.9	4.3	4.6	4.7	4.8
2/4	3.1	4.0	4.1	3.9	3.9	4.0	4.3	4.6	4.2	4.5	4.3	4.4
2/5	2.7	3.9	3.8	3.6	3.5	3.6	4.0	4.3	4.1	4.3	3.9	4.0
2/6	2.2	3.7	3.5	3.2	3.0	3.1	3.7	3.8	3.9	4.1	3.4	3.6
2/7	1.8	3.5	3.2	2.8	2.5	2.5	3.3	3.4	3.7	3.8	2.9	3.1
2/8	1.5	3.4	3.0	2.6	2.1	2.1	3.1	3.0	3.5	3.7	2.4	2.7
2/9	1.3	3.3	2.9	2.4	1.8	1.8	2.9	2.8	3.3	3.5	2.0	2.4
2/10	1.3	3.3	2.9	2.5	1.8	1.8	2.8	2.8	3.2	3.4	2.0	2.4
2/11	1.2	3.2	2.8	2.4	1.8	1.8	2.8	2.8	3.1	3.3	1.9	2.3
2/12	1.3	3.0	2.7	2.4	1.9	1.9	2.7	2.8	3.1	3.3	2.1	2.5
2/13	1.4	3.1	2.8	2.5	1.9	1.9	2.7	2.9	3.0	3.3	2.3	2.6
2/14	1.7	3.1	2.9	2.6	2.1	2.2	2.8	3.0	3.0	3.3	2.7	2.9
2/15	1.9	3.1	3.0	2.8	2.5	2.6	2.9	3.2	3.1	3.4	3.2	3.3
2/16	2.1	3.1	3.1	3.0	2.8	3.0	3.1	3.4	3.2	3.5	3.7	3.6
2/17	2.2	3.1	3.1	3.1	3.0	3.2	3.2	3.5	3.2	3.6	4.0	3.8
2/18	2.3	3.0	3.1	3.1	3.1	3.3	3.2	3.5	3.2	3.6	4.3	4.1
2/19	2.2	3.1	3.1	3.0	3.0	3.2	3.2	3.4	3.2	3.6	4.2	4.0
2/20	2.2	3.1	3.1	3.0	3.0	3.2	3.2	3.4	3.2	3.6	4.2	4.0
2/21	2.2	3.0	3.1	3.0	3.0	3.2	3.2	3.5	3.2	3.7	4.3	4.1
2/22	2.1	3.0	3.0	3.0	2.9	3.1	3.1	3.5	3.2	3.7	4.3	4.1
2/23	2.0	3.0	3.0	2.9	2.8	3.1	3.1	3.4	3.2	3.7	4.4	4.2
2/24	1.9	2.9	2.9	2.8	2.8	3.0	3.0	3.4	3.1	3.6	4.3	4.1
2/25	1.8	2.8	2.9	2.8	2.7	3.0	3.0	3.4	3.1	3.6	4.3	4.1
2/26	1.8	2.8	2.9	2.8	2.8	3.2	3.1	3.5	3.1	3.8	4.5	4.3
2/27	1.8	2.8	2.9	2.9	2.9	3.3	3.1	3.5	3.1	3.8	4.6	4.4
2/28	1.6	2.7	2.8	2.8	2.7	3.2	3.0	3.4	3.1	3.9	4.6	4.4

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
3/1	1.5	2.6	2.7	2.7	2.6	3.1	3.0	3.3	3.1	3.9	4.5	4.4
3/2	1.5	2.6	2.7	2.7	2.6	3.1	3.0	3.3	3.1	3.9	4.5	4.4
3/3	1.5	2.6	2.7	2.7	2.6	3.0	2.9	3.2	3.1	3.9	4.5	4.3
3/4	1.4	2.6	2.7	2.6	2.5	2.9	2.9	3.2	3.0	3.8	4.3	4.2
3/5	1.4	2.6	2.7	2.6	2.4	2.9	2.9	3.2	3.1	3.8	4.3	4.2
3/6	1.4	2.6	2.6	2.5	2.4	2.8	2.8	3.2	3.0	3.8	4.5	4.3
3/7	1.4	2.6	2.7	2.6	2.4	2.8	2.9	3.2	3.1	3.8	4.7	4.4
3/8	1.5	2.7	2.8	2.7	2.6	3.0	2.9	3.3	3.1	3.8	4.8	4.5
3/9	1.5	2.7	2.8	2.7	2.6	2.9	2.8	3.4	3.2	3.8	4.9	4.6
3/10	1.5	2.8	2.9	2.8	2.7	3.1	3.0	3.5	3.3	4.0	5.3	4.9
3/11	1.7	2.8	3.0	3.0	3.0	3.4	3.1	3.7	3.4	4.1	5.7	5.2
3/12	1.8	2.9	3.1	3.2	3.2	3.6	3.3	3.9	3.6	4.3	6.1	5.5
3/13	2.0	2.9	3.3	3.3	3.3	3.8	3.5	4.1	3.8	4.5	6.4	5.8
3/14	2.2	3.0	3.3	3.4	3.5	4.0	3.7	4.4	4.0	4.7	6.7	6.1
3/15	2.4	3.1	3.4	3.6	3.6	4.2	4.0	4.7	4.2	5.0	7.1	6.5
3/16	2.7	3.2	3.6	3.8	3.9	4.5	4.3	5.1	4.5	5.3	7.6	7.0
3/17	3.0	3.3	3.7	4.0	4.1	4.8	4.6	5.4	4.8	5.6	7.8	7.4
3/18	3.2	3.4	3.8	4.1	4.2	4.9	4.8	5.7	5.0	5.8	7.9	7.5
3/19	3.5	3.6	3.9	4.2	4.4	5.1	5.1	6.0	5.2	6.0	7.9	7.6
3/20	3.7	3.7	4.0	4.3	4.6	5.2	5.3	6.3	5.4	6.2	7.9	7.7
3/21	3.8	3.8	4.1	4.4	4.7	5.3	5.4	6.4	5.5	6.3	7.7	7.6
3/22	3.9	3.9	4.3	4.5	4.9	5.5	5.4	6.5	5.6	6.3	7.5	7.4
3/23	4.0	4.1	4.4	4.6	5.1	5.7	5.5	6.6	5.7	6.4	7.4	7.4
3/24	4.1	4.2	4.5	4.7	5.2	5.7	5.5	6.6	5.7	6.4	7.3	7.3
3/25	4.2	4.3	4.6	4.9	5.3	5.9	5.6	6.7	5.8	6.6	7.4	7.4
3/26	4.2	4.4	4.7	5.0	5.5	6.1	5.6	6.6	5.9	6.6	7.5	7.5
3/27	4.4	4.5	4.9	5.3	5.7	6.3	5.7	6.7	6.0	6.8	7.6	7.6
3/28	4.6	4.6	5.1	5.5	6.0	6.6	6.0	6.9	6.2	7.2	7.9	7.9
3/29	4.8	4.7	5.2	5.7	6.0	6.7	6.1	7.1	6.4	7.6	8.2	8.2
3/30	5.0	4.9	5.4	5.9	6.2	7.0	6.2	7.2	6.6	7.8	8.3	8.3
3/31	5.0	5.1	5.6	6.0	6.4	7.1	6.5	7.4	6.8	8.1	8.4	8.5

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	5.1	5.2	5.7	6.3	6.6	7.3	6.5	7.5	6.9	8.3	8.5	8.6
4/2	5.2	5.3	5.7	6.2	6.6	7.4	6.6	7.6	7.1	8.4	8.5	8.6
4/3	5.1	5.4	5.8	6.2	6.6	7.3	6.7	7.6	7.2	8.3	8.2	8.3
4/4	5.0	5.4	5.8	6.3	6.6	7.2	6.7	7.6	7.2	8.3	7.8	8.0
4/5	5.0	5.5	5.8	6.1	6.7	7.3	6.8	7.6	7.2	8.3	7.7	7.8
4/6	4.8	5.4	5.8	6.0	6.7	7.2	6.8	7.6	7.2	8.1	7.5	7.6
4/7	4.8	5.3	5.6	5.9	6.6	7.0	6.6	7.5	7.1	7.9	7.2	7.4
4/8	4.7	5.4	5.6	5.9	6.4	6.8	6.6	7.4	7.1	7.7	6.9	7.1
4/9	4.6	5.4	5.6	5.9	6.5	6.8	6.7	7.5	7.2	7.8	6.8	7.0
4/10	4.7	5.3	5.6	5.8	6.5	6.8	6.7	7.6	7.2	7.7	6.8	7.0
4/11	4.5	5.2	5.5	5.8	6.3	6.6	6.5	7.4	7.1	7.5	6.7	6.9
4/12	4.5	5.2	5.4	5.8	6.3	6.6	6.5	7.4	7.1	7.5	6.8	7.0
4/13	4.5	5.2	5.4	5.9	6.2	6.5	6.5	7.4	7.1	7.5	6.9	7.0
4/14	4.6	5.1	5.6	6.0	6.4	6.7	6.7	7.5	7.2	7.7	7.1	7.2
4/15	4.6	5.2	5.6	6.0	6.4	6.8	6.7	7.7	7.3	7.8	7.3	7.4
4/16	4.6	5.2	5.7	6.1	6.5	6.8	6.8	7.7	7.3	7.8	7.3	7.4
4/17	4.7	5.2	5.8	6.4	6.6	6.9	6.9	7.8	7.3	7.8	7.3	7.5
4/18	5.1	5.2	6.0	6.4	7.0	7.4	7.2	8.1	7.6	8.2	7.7	7.8
4/19	5.2	5.2	6.0	6.6	7.0	7.5	7.2	8.2	7.6	8.2	7.7	7.8
4/20	5.3	5.3	6.2	6.8	7.2	7.7	7.4	8.4	7.7	8.3	7.7	7.8
4/21	5.5	5.4	6.3	7.1	7.4	7.9	7.5	8.5	7.8	8.5	7.9	8.0
4/22	5.7	5.6	6.5	7.3	7.7	8.2	7.7	8.7	7.9	8.7	8.0	8.1
4/23	6.0	5.7	6.7	7.4	7.9	8.5	7.8	8.8	8.0	9.0	8.3	8.4
4/24	6.0	5.8	6.7	7.5	8.1	8.7	7.8	8.9	8.1	9.2	8.5	8.6
4/25	5.9	6.1	6.9	7.7	8.1	8.6	7.8	8.8	8.1	9.3	8.5	8.6
4/26	5.9	6.5	7.2	8.0	8.3	8.7	8.0	8.9	8.2	9.6	8.5	8.7
4/27	6.0	6.7	7.4	8.2	8.5	9.0	8.1	9.0	8.3	10.0	8.7	8.9
4/28	6.1	6.9	7.6	8.2	8.7	9.2	8.2	9.1	8.5	10.2	8.8	9.0
4/29	6.1	7.0	7.6	8.2	8.7	9.2	8.1	9.1	8.5	10.2	9.0	9.2
4/30	6.1	7.2	7.7	8.6	8.8	9.2	8.2	9.1	8.6	10.2	9.2	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
5/1	6.4	7.5	8.1	8.9	9.2	9.6	8.5	9.4	8.8	10.5	9.5	9.7
5/2	6.8	7.6	8.2	9.3	9.6	10.1	8.8	9.7	9.0	10.7	10.0	10.1
5/3	7.2	7.7	8.5	9.7	10.1	10.7	9.1	10.0	9.2	11.0	10.4	10.6
5/4	7.6	7.9	8.9	10.0	10.6	11.2	9.4	10.2	9.5	11.3	10.7	10.8
5/5	7.8	8.2	9.2	10.7	10.9	11.6	9.7	10.5	9.7	11.6	10.9	11.0
5/6	8.2	8.5	9.6	11.2	11.6	12.3	10.2	11.0	10.2	12.2	11.1	11.2
5/7	8.6	8.6	10.0	11.6	12.2	12.9	10.6	11.4	10.5	12.6	11.1	11.3
5/8	8.9	8.7	10.2	11.7	12.6	13.4	10.9	11.7	10.7	13.0	11.2	11.3
5/9	9.0	8.8	10.2	11.6	12.7	13.5	11.0	11.9	10.9	13.1	11.0	11.2
5/10	8.9	8.9	10.1	11.3	12.5	13.4	11.1	12.0	10.9	13.1	10.7	10.9
5/11	8.7	8.9	9.9	11.1	12.2	12.9	11.0	12.0	10.9	12.8	10.4	10.6
5/12	8.7	9.0	9.8	10.7	12.2	12.8	11.1	12.0	11.0	12.8	10.3	10.5
5/13	8.5	8.9	9.6	10.3	11.8	12.5	10.9	11.8	10.9	12.5	10.1	10.3
5/14	8.2	8.9	9.4	10.1	11.3	11.9	10.7	11.5	10.7	12.1	9.8	10.0
5/15	8.0	8.8	9.3	10.1	11.1	11.8	10.6	11.5	10.7	12.0	9.7	9.9
5/16	8.0	8.7	9.3	9.9	11.3	11.9	10.7	11.5	10.8	12.2	9.8	10.0
5/17	8.0	8.7	9.2	10.0	11.2	11.7	10.7	11.5	10.8	12.0	9.8	10.1
5/18	8.1	8.6	9.2	10.0	11.2	11.8	10.7	11.5	10.9	12.1	9.9	10.1
5/19	8.1	8.4	9.2	10.3	11.1	11.7	10.8	11.6	11.0	12.3	10.1	10.3
5/20	8.4	8.5	9.4	10.4	11.7	12.3	11.1	12.1	11.4	12.9	10.5	10.7
5/21	8.6	8.5	9.4	10.0	11.9	12.5	11.4	12.5	11.7	13.1	10.9	11.1
5/22	8.4	8.5	9.3	9.9	11.5	12.0	11.5	12.3	11.7	12.8	10.6	10.9
5/23	8.4	8.4	9.1	10.2	11.1	11.7	11.5	12.3	11.8	12.8	10.6	10.8
5/24	8.7	8.2	9.2	10.2	11.5	12.2	11.8	12.7	12.1	13.5	11.0	11.2
5/25	9.0	8.1	9.2	9.9	11.7	12.3	12.0	12.9	12.3	13.6	11.4	11.6
5/26	9.0	7.9	9.0	9.9	11.5	12.2	12.0	12.9	12.3	13.6	11.4	11.7
5/27	9.2	7.8	8.9	10.3	11.3	12.0	11.9	12.9	12.3	13.6	11.5	11.7
5/28	9.7	7.6	9.1	10.8	11.7	12.5	12.1	13.1	12.4	14.0	11.9	12.1
5/29	10.4	7.6	9.3	11.1	12.4	13.3	12.4	13.7	12.8	14.7	12.6	12.8
5/30	10.9	7.6	9.4	11.0	12.9	13.9	12.8	14.2	13.1	15.1	13.1	13.2
5/31	11.0	7.5	9.4	11.1	12.8	13.9	12.9	14.1	13.2	15.1	13.2	13.4

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
6/1	11.2	7.3	9.4	10.9	13.1	14.4	12.6	14.1	13.1	15.2	13.5	13.6
6/2	11.3	7.0	9.2	10.4	13.1	14.4	12.3	13.9	12.7	14.8	13.6	13.7
6/3	11.0	6.8	8.9	9.8	12.7	14.0	12.0	13.4	12.3	14.3	13.4	13.5
6/4	10.4	6.6	8.4	9.3	12.0	13.3	11.6	12.8	11.8	13.5	13.0	13.1
6/5	10.0	6.4	8.1	9.1	11.4	12.8	11.2	12.3	11.4	13.1	12.7	12.8
6/6	9.8	6.3	8.0	9.0	11.1	12.5	11.0	12.0	11.2	12.9	12.6	12.7
6/7	9.6	6.3	7.9	9.3	11.2	12.5	10.8	12.0	11.1	12.8	12.7	12.8
6/8	9.9	6.5	8.2	9.8	11.4	12.7	11.2	12.3	11.4	13.2	13.1	13.2
6/9	10.4	6.7	8.5	10.3	11.8	13.2	11.6	12.8	11.9	13.9	13.7	13.7
6/10	11.0	6.9	8.8	10.6	12.5	13.9	11.9	13.4	12.4	14.5	14.4	14.4
6/11	11.5	6.9	9.0	10.7	12.9	14.3	12.1	13.7	12.7	14.9	15.0	15.0
6/12	12.0	7.0	9.1	10.9	13.2	14.6	12.3	14.0	12.9	15.0	15.5	15.6
6/13	12.4	7.0	9.1	10.9	13.5	14.9	12.4	14.2	13.1	15.2	16.0	16.0
6/14	12.8	7.1	9.2	10.7	13.6	15.0	12.5	14.4	13.2	15.4	16.4	16.3
6/15	12.8	7.1	9.0	10.4	13.4	14.8	12.5	14.3	13.2	15.1	16.3	16.3
6/16	12.5	7.0	8.8	9.8	13.0	14.3	12.6	14.2	13.2	15.0	16.1	16.0
6/17	12.0	7.0	8.5	9.7	12.3	13.5	12.4	13.8	13.0	14.6	15.6	15.5
6/18	11.7	6.9	8.5	9.5	12.0	13.3	12.4	13.7	13.0	14.7	15.3	15.3
6/19	11.5	6.9	8.3	9.0	11.6	12.7	12.3	13.5	12.9	14.4	14.8	14.8
6/20	11.0	6.9	8.1	8.7	10.9	12.0	12.2	13.2	12.7	14.0	14.4	14.4
6/21	10.5	6.9	7.9	8.6	10.3	11.4	12.1	12.9	12.6	13.7	14.0	14.0
6/22	10.2	6.9	7.9	8.8	10.3	11.3	12.0	12.8	12.6	14.0	13.9	13.9
6/23	10.3	6.9	8.0	9.0	10.4	11.5	12.2	12.9	12.6	14.1	13.9	14.0
6/24	10.3	6.9	8.2	9.2	10.5	11.6	12.2	13.0	12.8	14.2	14.0	14.0
6/25	10.3	6.9	8.4	9.6	10.8	11.9	12.4	13.2	12.8	14.4	14.2	14.2
6/26	10.4	7.0	8.7	10.0	11.4	12.5	12.6	13.6	13.0	14.9	14.7	14.8
6/27	10.7	7.1	9.0	10.5	12.1	13.2	13.0	14.0	13.3	15.4	15.3	15.4
6/28	11.1	7.1	9.2	10.4	12.7	13.9	13.3	14.4	13.6	15.7	15.8	15.9
6/29	11.1	7.2	9.1	10.2	12.7	13.8	13.3	14.6	13.7	15.6	15.9	16.0
6/30	11.0	7.1	9.0	10.0	12.4	13.5	12.9	14.4	13.4	15.2	15.8	15.8

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
7/1	11.2	7.0	8.8	9.8	12.5	13.6	12.7	14.3	13.2	15.1	16.3	16.2
7/2	11.3	7.0	8.6	9.5	12.2	13.3	12.3	14.0	12.9	14.6	16.4	16.2
7/3	11.4	6.9	8.4	9.0	11.8	12.9	11.9	13.7	12.5	14.1	16.4	16.1
7/4	11.2	6.8	8.0	8.5	11.1	12.1	11.4	13.2	12.1	13.4	16.0	15.6
7/5	11.0	6.7	7.8	8.6	10.5	11.5	10.9	12.7	11.6	12.8	15.8	15.3
7/6	11.1	6.7	7.8	8.7	10.4	11.5	10.6	12.4	11.2	12.6	16.0	15.4
7/7	11.2	6.7	7.9	8.8	10.5	11.6	10.8	12.4	11.2	12.6	16.2	15.5
7/8	11.3	6.7	8.0	9.0	10.5	11.6	10.9	12.4	11.3	12.5	16.1	15.4
7/9	11.5	6.8	8.2	9.3	10.8	12.0	11.0	12.6	11.4	12.9	16.6	15.9
7/10	11.6	6.8	8.4	9.8	11.2	12.3	11.3	12.8	11.5	13.1	16.9	16.2
7/11	12.0	6.9	8.6	9.9	11.8	13.0	11.6	13.2	11.7	13.6	17.6	16.8
7/12	12.2	6.9	8.7	9.9	12.0	13.2	11.7	13.4	11.8	13.7	17.8	17.0
7/13	12.3	7.0	8.8	10.0	12.1	13.4	11.8	13.5	12.0	13.8	18.0	17.1
7/14	12.3	7.0	8.9	10.1	12.2	13.5	11.9	13.6	12.1	13.8	18.0	17.2
7/15	12.2	7.0	9.1	9.9	12.3	13.6	12.1	13.6	12.3	13.9	17.9	17.1
7/16	12.0	7.0	9.0	10.1	12.1	13.4	12.2	13.6	12.4	13.9	17.5	16.8
7/17	11.9	7.0	9.1	10.2	12.2	13.5	12.3	13.6	12.5	14.0	17.3	16.7
7/18	11.9	7.1	9.2	10.5	12.3	13.6	12.4	13.7	12.6	14.0	17.2	16.6
7/19	12.0	7.1	9.3	10.5	12.7	13.9	12.6	13.9	12.7	14.4	17.5	16.9
7/20	12.1	7.1	9.3	10.6	12.6	13.8	12.6	14.0	12.8	14.5	17.4	16.9
7/21	12.2	7.1	9.2	10.9	12.9	14.2	12.8	14.2	12.9	14.9	17.8	17.2
7/22	12.5	7.2	9.2	11.3	13.1	14.4	12.9	14.4	13.0	15.2	18.4	17.8
7/23	13.1	7.3	9.4	11.0	13.6	15.0	13.1	14.7	13.2	15.6	19.1	18.4
7/24	13.2	7.3	9.3	11.0	13.4	14.8	13.2	14.8	13.4	15.5	19.4	18.6
7/25	13.2	7.3	9.3	11.0	13.3	14.7	13.2	14.7	13.4	15.6	19.5	18.6
7/26	13.3	7.3	9.2	11.2	13.3	14.7	13.3	14.8	13.4	15.7	19.6	18.8
7/27	13.4	7.3	9.3	11.2	13.4	14.8	13.4	15.0	13.5	15.8	19.8	18.9
7/28	13.7	7.4	9.3	11.3	13.6	15.0	13.5	15.1	13.7	15.9	20.1	19.1
7/29	13.8	7.5	9.4	11.0	13.7	15.1	13.6	15.3	13.8	16.1	20.3	19.3
7/30	13.7	7.5	9.3	11.2	13.4	14.8	13.5	15.2	13.9	15.9	20.3	19.3
7/31	14.0	7.5	9.3	11.1	13.7	15.0	13.3	15.1	13.6	15.9	20.5	19.4

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
8/1	14.2	7.5	9.3	11.1	13.7	15.1	13.6	15.0	13.3	15.6	20.7	19.5
8/2	14.4	7.4	9.2	11.2	13.7	15.1	13.6	14.9	13.1	15.3	20.9	19.5
8/3	14.7	7.5	9.2	11.3	13.9	15.3	13.6	14.9	13.0	15.1	21.4	19.8
8/4	15.0	7.5	9.3	11.0	14.0	15.4	13.6	14.9	13.1	15.2	21.6	19.9
8/5	15.0	7.5	9.1	10.8	13.7	15.1	13.6	14.7	13.0	14.8	21.5	19.7
8/6	15.1	7.5	9.1	10.7	13.4	14.7	13.6	14.5	12.9	14.6	21.2	19.4
8/7	15.1	7.6	9.0	10.4	13.1	14.5	13.8	14.5	13.2	14.8	20.9	19.2
8/8	14.8	7.6	9.0	10.2	12.6	13.9	14.0	14.5	13.5	14.9	20.4	18.9
8/9	14.5	7.6	8.9	10.2	12.4	13.7	14.0	14.5	13.8	15.1	20.0	18.7
8/10	14.3	7.6	9.0	10.1	12.3	13.5	14.0	14.6	13.9	15.4	19.8	18.6
8/11	14.1	7.6	8.9	10.4	12.2	13.4	14.0	14.7	14.0	15.5	19.7	18.5
8/12	14.3	7.6	9.1	10.6	12.4	13.7	14.0	14.9	14.0	15.8	19.8	18.6
8/13	14.5	7.6	9.1	10.4	12.7	14.0	14.0	15.1	14.2	16.0	20.0	18.9
8/14	14.4	7.6	9.0	10.5	12.6	13.7	14.0	15.1	14.1	15.8	20.1	18.8
8/15	14.7	7.6	9.0	10.5	12.7	13.9	13.9	15.0	14.0	15.7	20.3	18.9
8/16	15.2	7.5	8.9	10.3	12.6	13.9	13.8	14.9	13.8	15.5	20.4	18.9
8/17	15.3	7.5	8.8	9.9	12.4	13.7	12.5	14.7	13.5	15.2	20.4	18.7
8/18	15.1	7.4	8.7	9.6	12.0	13.2	12.5	14.3	13.3	14.6	20.1	18.4
8/19	14.9	7.3	8.5	9.5	11.6	12.7	12.5	13.9	13.0	14.2	19.7	17.9
8/20	14.7	7.3	8.5	9.5	11.3	12.5	12.7	13.6	12.7	14.0	19.3	17.6
8/21	14.7	7.3	8.5	9.4	11.4	12.5	12.9	13.6	12.7	14.1	19.3	17.6
8/22	14.5	7.3	8.4	9.4	11.2	12.4	13.2	13.6	12.7	14.2	19.2	17.5
8/23	14.4	7.3	8.4	9.5	11.1	12.2	13.2	13.6	12.8	14.3	19.0	17.4
8/24	14.7	7.3	8.5	9.8	11.2	12.3	13.5	13.7	12.9	14.4	19.0	17.4
8/25	15.6	7.4	8.6	9.9	11.4	12.6	13.5	13.9	13.0	14.8	19.2	17.6
8/26	15.9	7.5	8.7	9.9	11.6	12.9	13.5	14.1	13.2	15.0	19.4	17.8
8/27	16.5	7.5	8.7	9.9	11.7	13.0	13.5	14.3	13.4	15.2	19.7	18.1
8/28	16.9	7.6	8.8	10.0	11.7	13.0	13.5	14.4	13.5	15.3	19.8	18.2
8/29	17.4	7.6	8.8	9.8	11.7	13.1	13.6	14.5	13.6	15.5	20.0	18.3
8/30	18.4	7.7	8.8	9.7	11.6	12.9	13.8	14.5	13.8	15.7	20.2	18.5
8/31	19.1	7.7	8.7	9.6	11.5	12.7	14.2	14.5	13.9	15.7	20.2	18.5

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	22.5	7.7	8.6	9.5	11.2	12.5	14.2	14.5	14.0	15.7	20.1	18.5
9/2	20.1	7.8	8.6	9.6	11.1	12.3	14.4	14.5	14.1	15.8	20.1	18.5
9/3	21.3	7.8	8.7	9.7	11.1	12.3	14.4	14.5	14.2	16.0	20.2	18.6
9/4	22.5	7.9	8.7	9.5	11.1	12.2	14.4	14.5	14.4	16.0	20.1	18.6
9/5	22.1	7.9	8.7	9.7	11.0	12.0	14.6	14.4	14.5	15.8	19.8	18.3
9/6	20.6	7.9	8.8	9.5	10.8	11.7	14.9	14.1	14.5	15.6	19.3	17.9
9/7	19.1	7.9	8.8	9.5	10.7	11.5	14.9	14.0	14.5	15.7	18.9	17.6
9/8	17.5	7.9	8.8	9.5	10.7	11.4	14.9	13.9	14.6	15.7	18.6	17.5
9/9	16.5	7.9	8.8	9.4	10.6	11.4	14.9	13.9	14.7	15.9	18.4	17.4
9/10	14.4	8.2	8.9	9.5	10.4	11.1	14.9	13.8	14.7	15.7	18.0	17.1
9/11	12.6	8.3	9.0	9.8	10.4	11.0	14.9	13.8	14.7	15.7	17.5	16.8
9/12	12.1	8.5	9.4	9.9	10.6	11.1	14.9	13.9	14.6	15.7	17.1	16.6
9/13	11.8	8.7	9.5	10.1	10.7	11.3	14.8	14.1	14.7	15.8	16.7	16.4
9/14	11.4	8.9	9.7	10.2	10.7	11.3	14.8	14.1	14.6	15.6	16.2	16.0
9/15	11.2	9.0	9.8	10.3	10.8	11.3	14.6	14.0	14.5	15.4	15.7	15.6
9/16	10.9	9.2	10.0	10.3	10.9	11.3	14.3	13.9	14.4	15.3	15.3	15.3
9/17	10.7	9.1	9.9	10.3	10.9	11.4	14.2	13.8	14.2	15.2	15.0	15.0
9/18	10.6	9.1	9.9	10.2	11.0	11.5	14.2	13.8	14.1	15.2	15.0	15.0
9/19	10.4	9.0	9.9	10.3	10.9	11.4	14.2	13.7	14.0	15.1	14.9	15.0
9/20	10.4	9.0	10.0	10.4	10.9	11.4	14.2	13.6	13.9	15.0	14.9	14.9
9/21	10.4	8.9	10.1	10.3	11.0	11.5	14.2	13.6	13.8	14.9	14.9	14.9
9/22	10.4	8.9	10.0	10.4	11.0	11.5	14.0	13.5	13.8	14.8	15.0	14.9
9/23	10.4	8.8	10.1	10.3	11.0	11.5	13.2	13.4	13.7	14.6	14.9	14.8
9/24	10.2	8.8	10.1	10.2	10.9	11.4	13.2	13.2	13.5	14.4	14.6	14.5
9/25	9.9	8.7	9.9	9.9	10.7	11.1	13.2	12.9	13.2	14.1	14.0	13.9
9/26	8.4	8.6	9.6	9.6	10.4	10.8	12.8	12.6	12.9	13.8	13.4	13.4
9/27	8.1	8.5	9.3	9.3	10.0	10.4	12.5	12.3	12.7	13.6	13.0	13.0
9/28	7.9	8.4	9.0	9.1	9.6	10.0	12.2	12.0	12.4	13.4	12.6	12.6
9/29	7.9	8.3	8.8	8.8	9.3	9.7	12.2	11.7	12.2	13.1	12.0	12.2
9/30	7.8	8.2	8.6	8.7	9.0	9.3	12.2	11.5	12.0	12.9	11.6	11.8

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
10/1	7.6	8.1	8.5	8.6	8.8	9.1	12.2	11.4	11.9	12.7	11.3	11.6
10/2	7.4	8.0	8.4	8.6	8.8	9.1	12.5	11.3	11.8	12.7	11.2	11.5
10/3	7.3	8.0	8.4	8.7	8.7	9.1	12.5	11.2	11.7	12.6	11.3	11.5
10/4	7.3	8.0	8.5	8.7	8.8	9.1	12.5	11.3	11.7	12.5	11.2	11.5
10/5	7.0	7.9	8.5	8.6	9.0	9.2	12.5	11.2	11.6	12.4	11.1	11.4
10/6	6.9	7.8	8.4	8.4	8.8	9.1	12.5	10.9	11.4	12.1	10.8	11.1
10/7	7.1	7.6	8.2	8.3	8.5	8.8	12.5	10.6	11.0	11.7	10.3	10.6
10/8	7.3	7.5	8.1	8.2	8.3	8.6	12.5	10.3	10.7	11.5	10.0	10.3
10/9	7.4	7.5	8.0	8.1	8.2	8.4	10.7	10.1	10.5	11.3	9.6	10.0
10/10	7.4	7.4	7.9	7.9	8.2	8.4	10.7	10.0	10.4	11.1	9.4	9.8
10/11	7.2	7.3	7.7	7.7	7.9	8.2	10.7	9.8	10.2	11.0	9.3	9.7
10/12	7.3	7.3	7.6	7.8	7.8	8.0	10.7	9.7	10.1	10.9	9.2	9.5
10/13	7.3	7.3	7.6	7.9	7.8	8.1	10.7	9.9	10.2	10.9	9.4	9.7
10/14	7.2	7.2	7.7	7.8	8.0	8.3	10.7	10.0	10.3	10.9	9.5	9.9
10/15	7.2	7.2	7.7	7.8	8.1	8.3	10.7	10.0	10.3	10.9	9.6	9.9
10/16	7.3	7.1	7.6	7.7	8.1	8.3	10.6	9.9	10.2	10.7	9.5	9.8
10/17	7.3	7.0	7.6	7.8	8.0	8.2	10.4	9.8	10.0	10.5	9.2	9.5
10/18	7.1	6.9	7.8	8.0	8.2	8.4	9.9	9.7	9.9	10.3	8.9	9.1
10/19	6.8	7.2	8.0	8.2	8.4	8.5	9.9	9.7	9.8	10.2	8.7	9.0
10/20	6.4	7.5	8.2	8.3	8.4	8.6	9.9	9.6	9.7	10.0	8.5	8.8
10/21	5.9	7.7	8.3	8.3	8.6	8.7	9.9	9.5	9.5	9.8	8.3	8.6
10/22	5.5	7.7	8.3	8.3	8.6	8.8	9.9	9.5	9.4	9.7	8.4	8.6
10/23	5.0	7.7	8.2	8.1	8.6	8.9	9.0	9.5	9.4	9.6	8.4	8.7
10/24	4.7	7.7	8.1	7.8	8.4	8.7	8.1	9.4	9.3	9.6	8.4	8.7
10/25	4.7	7.5	7.7	7.3	8.0	8.2	7.6	9.1	9.2	9.5	8.3	8.6
10/26	4.7	7.1	7.2	6.8	7.4	7.7	7.4	8.7	9.0	9.3	7.9	8.3
10/27	4.7	6.7	6.8	6.4	6.9	7.1	6.8	8.4	8.9	9.1	7.5	8.0
10/28	4.8	6.3	6.4	6.2	6.4	6.6	6.6	8.0	8.7	9.0	7.1	7.7
10/29	5.0	6.4	6.3	6.2	6.0	6.2	6.6	7.7	8.6	8.9	6.7	7.4
10/30	5.1	6.6	6.4	6.4	5.8	5.9	6.6	7.4	8.4	8.8	6.4	7.2
10/31	5.3	6.8	6.5	6.5	5.8	5.9	6.6	7.3	8.3	8.7	6.3	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
11/1	4.7	7.0				6.0	6.6	7.3	8.3	8.6	6.3	7.2
11/2	4.7	7.2				6.1	6.6	7.3	8.2	8.5	6.4	7.2
11/3	4.8	7.4				6.3	6.7	7.4	8.1	8.5	6.5	7.3
11/4	5.0	7.6				6.5	7.0	7.4	8.1	8.5	6.7	7.4
11/5	5.1	7.6				6.7	7.0	7.6	8.1	8.5	6.8	7.4
11/6	5.3	7.6				6.9	7.0	7.7	8.1	8.5	6.9	7.5
11/7	5.5	7.6				7.1	7.0	7.8	8.1	8.6	7.1	7.6
11/8	5.7	7.6				7.3	7.0	8.0	8.1	8.6	7.2	7.7
11/9	5.9	7.6				7.6	7.0	8.1	8.2	8.6	7.4	7.9
11/10	5.9	7.6				7.7	8.4	8.3	8.2	8.7	7.7	8.0
11/11	6.2	7.6				7.8	9.0	8.3	8.2	8.7	7.9	8.2
11/12	5.7	7.4				7.9	9.0	8.4	8.2	8.7	8.0	8.3
11/13	6.5	7.2				7.8	9.0	8.4	8.2	8.7	8.1	8.4
11/14	6.5	7.0				7.8	9.0	8.4	8.3	8.6	8.0	8.3
11/15	6.6	6.7				7.9	9.0	8.5	8.3	8.7	8.0	8.3
11/16	6.6	6.5				7.9	9.0	8.5	8.4	8.7	8.0	8.2
11/17	6.7	6.3				7.9	9.0	8.6	8.4	8.6	7.9	8.1
11/18	6.6	6.2				7.6	8.9	8.3	8.2	8.4	7.6	7.9
11/19	6.4	6.1				7.2	8.7	8.0	8.0	8.1	7.2	7.5
11/20	6.0	6.1				7.0	8.2	7.8	7.8	8.0	6.9	7.2
11/21	5.9	6.1				6.8	6.2	7.6	7.6	7.8	6.8	7.0
11/22	5.7	6.0				6.5	6.2	7.3	7.3	7.6	6.5	6.8
11/23	5.4	6.0				6.1	6.2	6.9	7.1	7.3	6.2	6.5
11/24	5.1	5.9				5.6	6.2	6.5	6.8	7.0	5.8	6.1
11/25	4.8	5.8				5.4	5.6	6.2	6.7	6.8	5.5	5.8
11/26	4.6	5.7				5.1	5.3	6.0	6.6	6.7	5.3	5.6
11/27	4.3	5.7				4.7	4.9	5.7	6.5	6.5	4.9	5.3
11/28	4.0	5.7				4.3	5.1	5.4	6.3	6.3	4.4	4.9
11/29	3.6	5.7				4.2	5.2	5.2	6.2	6.2	4.2	4.7
11/30	3.5	5.8				4.3	5.2	5.2	6.1	6.2	4.2	4.7

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	3.4	5.8				4.5	5.3	5.4	6.2	6.3	4.3	4.9
12/2	3.5	5.8				4.9	5.4	5.7	6.2	6.4	4.6	5.1
12/3	3.7	5.8				5.4	5.4	6.0	6.3	6.5	5.0	5.4
12/4	4.1	5.8				5.9	5.4	6.4	6.4	6.7	5.5	5.8
12/5	4.4	5.7				6.3	5.4	6.7	6.5	6.8	6.0	6.2
12/6	4.8	5.6				6.4	5.4	6.9	6.6	6.9	6.2	6.4
12/7	4.9	5.6				6.3	5.4	6.8	6.6	6.8	6.1	6.4
12/8	4.9	5.6				6.3	5.4	6.8	6.5	6.7	6.1	6.4
12/9	5.0	5.5				6.3	5.1	6.8	6.5	6.7	6.1	6.3
12/10	5.0	5.5				6.2	5.1	6.7	6.5	6.6	6.0	6.2
12/11	4.9	5.5				6.1	5.1	6.6	6.4	6.6	5.9	6.2
12/12	4.7	5.4				6.0	5.1	6.5	6.3	6.5	5.8	6.0
12/13	4.7	5.4				5.9	5.4	6.4	6.2	6.3	5.6	5.9
12/14	4.6	5.4				5.9	7.3	6.4	6.2	6.3	5.6	5.8
12/15	4.5	5.3				5.9	7.3	6.3	6.1	6.2	5.5	5.8
12/16	4.5	5.4				5.8	7.3	6.2	6.0	6.1	5.4	5.7
12/17	4.5	5.4				6.0	7.3	6.4	6.1	6.2	5.3	5.6
12/18	4.6	5.5				6.2	7.3	6.5	6.3	6.3	5.3	5.6
12/19	4.6	5.5				6.3	7.3	6.6	6.3	6.3	5.3	5.6
12/20	4.8	5.4				6.4	7.3	6.7	6.3	6.3	5.4	5.7
12/21	4.8	5.4				6.4	7.3	6.8	6.3	6.3	5.5	5.7
12/22	4.8	5.3				6.3	6.5	6.7	6.3	6.3	5.4	5.7
12/23	4.7	5.2				6.1	6.3	6.5	6.2	6.2	5.3	5.5
12/24	4.4	5.1				5.7	6.5	6.2	5.9	5.9	5.2	5.4
12/25	4.1	5.0				5.3	7.2	5.9	5.6	5.7	5.1	5.3
12/26	3.9	5.0				5.1	7.4	5.8	5.5	5.6	5.0	5.3
12/27	3.7	5.0				5.0	7.4	5.7	5.4	5.6	4.9	5.2
12/28	3.7	5.1				5.1	7.4	5.7	5.4	5.6	4.9	5.2
12/29	3.8	5.1				5.4	7.4	5.9	5.5	5.6	5.0	5.3
12/30	4.0	5.2				5.6	7.4	6.2	5.6	5.7	5.2	5.4
12/31	4.2	5.2				5.9	7.4	6.4	5.7	5.8	5.4	5.5

APPENDIX E

Consultation Documentation Regarding Draft Report

Presler, Dawn

From: Presler, Dawn
Sent: Monday, April 27, 2020 9:25 AM
To: 'mkan461@ecy.wa.gov'; 'rmiller@tualiptribes-nsn.gov'; Andrew McDonnell; Anne Savery; Brock Applegate; Janet Curran; Jen Ford; Jim Miller; Jim Pacheco; Keith Binkley; Mike Rustay; Nate Morgan; Presler Dawn (E-mail); Tim Romanski; Tom O'Keefe
Subject: JHP (FERC NO. 2157) - draft 2019 Water Quality Monitoring Plan report for your 30-day review and comment
Attachments: DRAFT_2019_JHP_WQMP_Annual_Report.pdf

Dear Jackson Project Aquatic Resource Committee Members, Ryan, and Monika,
Attached is the draft Water Quality Monitoring Plan 2019 Annual Report for your 30-day review. Please email comments, if any, back to me by May 26. If you have any specific questions regarding the contents of the report, please contact Keith Binkley. An email stating you have no comments regarding the report is appreciated too.

Hoping you all are staying healthy.

Sincerely,
Dawn Presler
Sr. Environmental Coordinator
Generation – Natural Resources
(425) 783-1709

PUD No. 1 of Snohomish County
PO Box 1107
Everett, WA 98206-1107

Presler, Dawn

From: Presler, Dawn
Sent: Monday, April 27, 2020 9:27 AM
To: 'rmiller@tulaliptribes-nsn.gov'
Subject: JHP (FERC NO. 2157) - draft 2019 Water Quality Monitoring Plan report for your 30-day review and comment
Attachments: DRAFT_2019_JHP_WQMP_Annual_Report.pdf

Dear Jackson Project Aquatic Resource Committee Members, Ryan, and Monika,
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Hoping you all are staying healthy.

Sincerely,
Dawn Presler
Sr. Environmental Coordinator
Generation – Natural Resources
(425) 783-1709

PUD No. 1 of Snohomish County
PO Box 1107
Everett, WA 98206-1107