



Energizing Life in Our Communities

June 27, 2019

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 – 2018 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 2018 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 2018, please contact Keith Binkley, Natural Resources Manager, at (425) 783-1769.

Sincerely,

/s/ Tom DeBoer

Tom DeBoer
Assistant General Manager of Generation, Power, Rates and Transmission Management
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Enclosed: Water Quality Monitoring Plan Annual Report for 2018

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

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



License Article 401: Water Quality Monitoring Plan – 2018 Annual Report



Everett, WA

June 2019

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. 2019. Water Quality Monitoring Plan 2018 Annual Report, License Article 401, for the Henry M. Jackson Hydroelectric Project, FERC No. 2157. June 2019.

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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 (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 2018. 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; no comments regarding the draft report were received. Consultation documentation is 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 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 2018, a total rainfall of 154.2 inches was recorded at the Culmback Dam Weather Station. The rainfall measured during 2018 was slightly less than the historical annual average of 161.7 inches. Monthly rainfall averaged 12.8 inches and ranged between a low of 1.1 inches in July and a high of 32.6 inches in January (Table 2-1). During 2018, the highest recorded daily rainfall (3.8 inches) occurred on January 12, 2018.

Table 2-1. Monthly rainfall, Culmback Dam Weather Station, 2018.

Month	Rainfall (inches)
January	32.6
February	28.6
March	5.5
April	9.9
May	2.1
June	3.4
July	1.1
August	2.0
September	13.0
October	12.3
November	22.5
December	21.0

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 99.2 and 41.9 inches, respectively. During the 2018 survey, there were 144.5 inches of snow at the Stickney Ridge station (Figure 2-1) which was 146 percent of historical mean. In terms of water content, the 60.9 inches recorded equated to 144 percent of the historic mean.

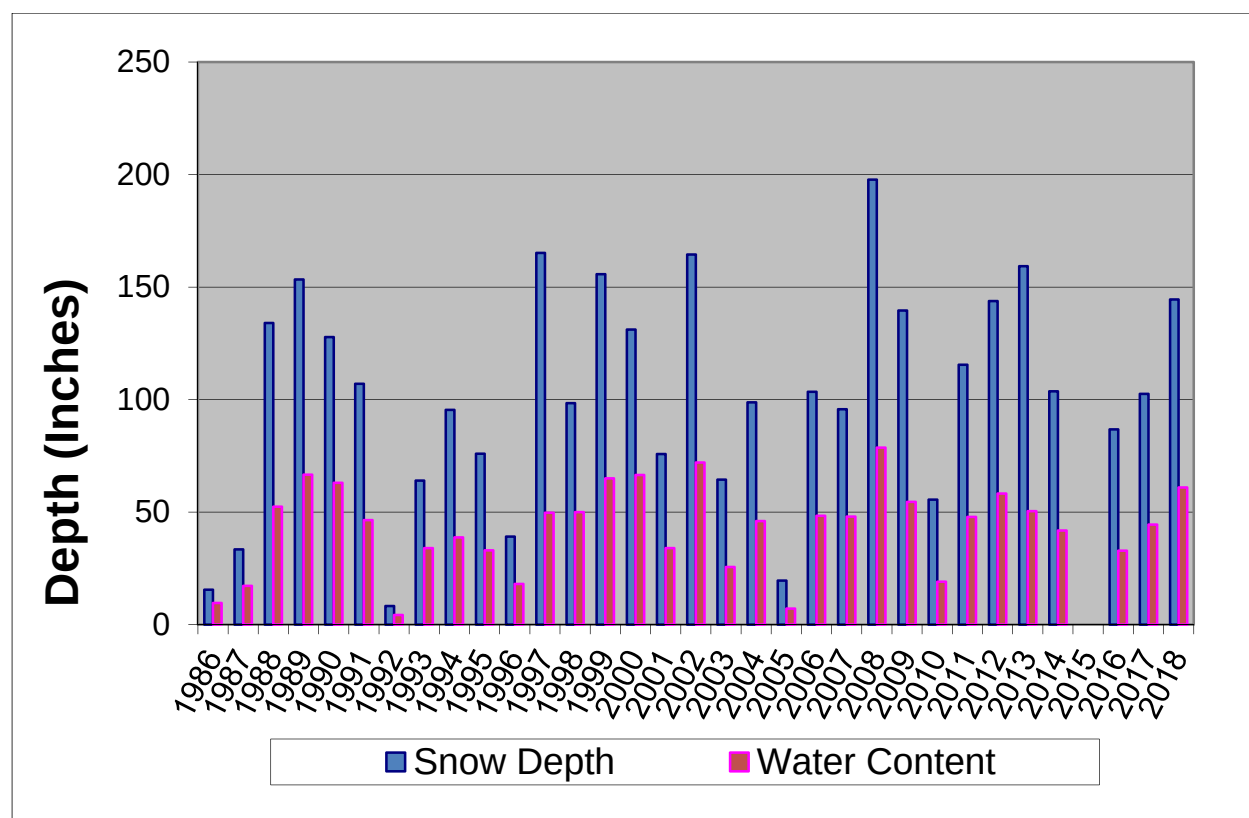


Figure 2-1. Snow survey data, Stickney Ridge, Sultan Watershed, 1986-2018.

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 2018 hydrograph for this station is presented in Figure 2-2. Instantaneous flow values ranged from 3.5 to 3,610 cfs. Mean daily flow during 2018 averaged 148.8 cfs and ranged between a low of 5.7 cfs and a high flow of 1,587 cfs. The average mean annual flow, based on the USGS Water Year, for this station is 132.9 cfs (Period of Record 1992-2018).

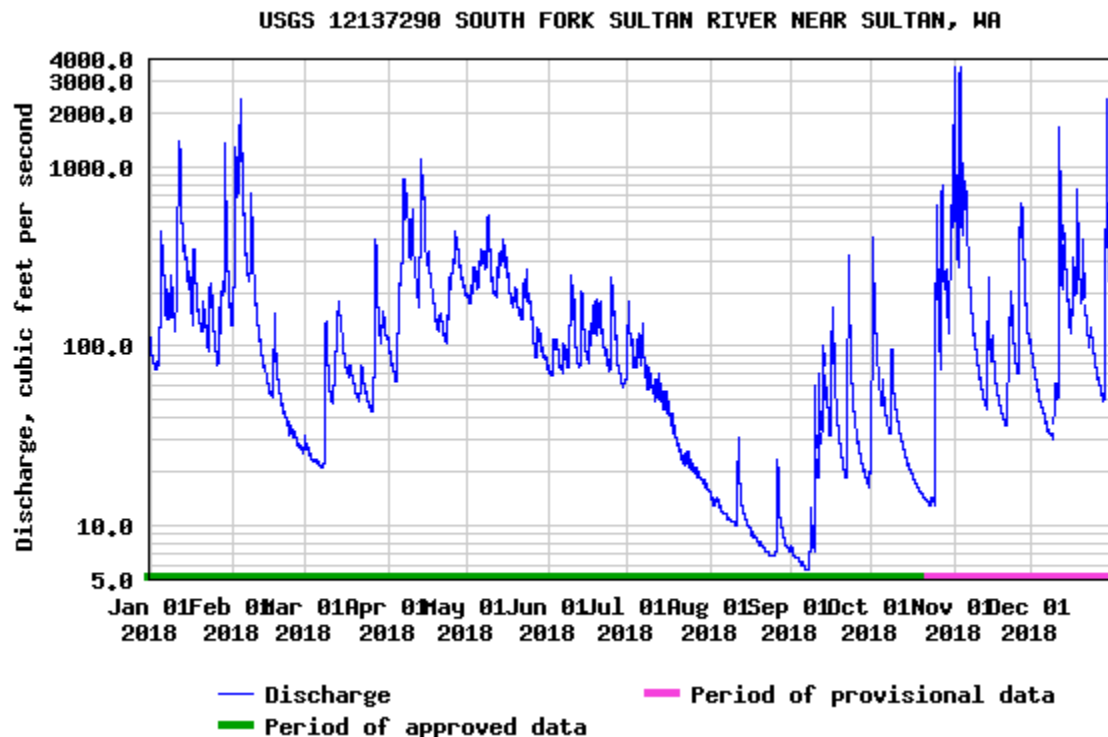


Figure 2-2. Hydrograph for the South Fork Sultan River, USGS Station No. 12137290, 2018 calendar year.

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 2018, the Project did not experience spill events. Daily plant generation during 2018 is depicted in Figure 2-3. A total of 460,640 megawatt hours were produced during 2018 equating to 110 percent of the historic annual average of 418,739 megawatts.

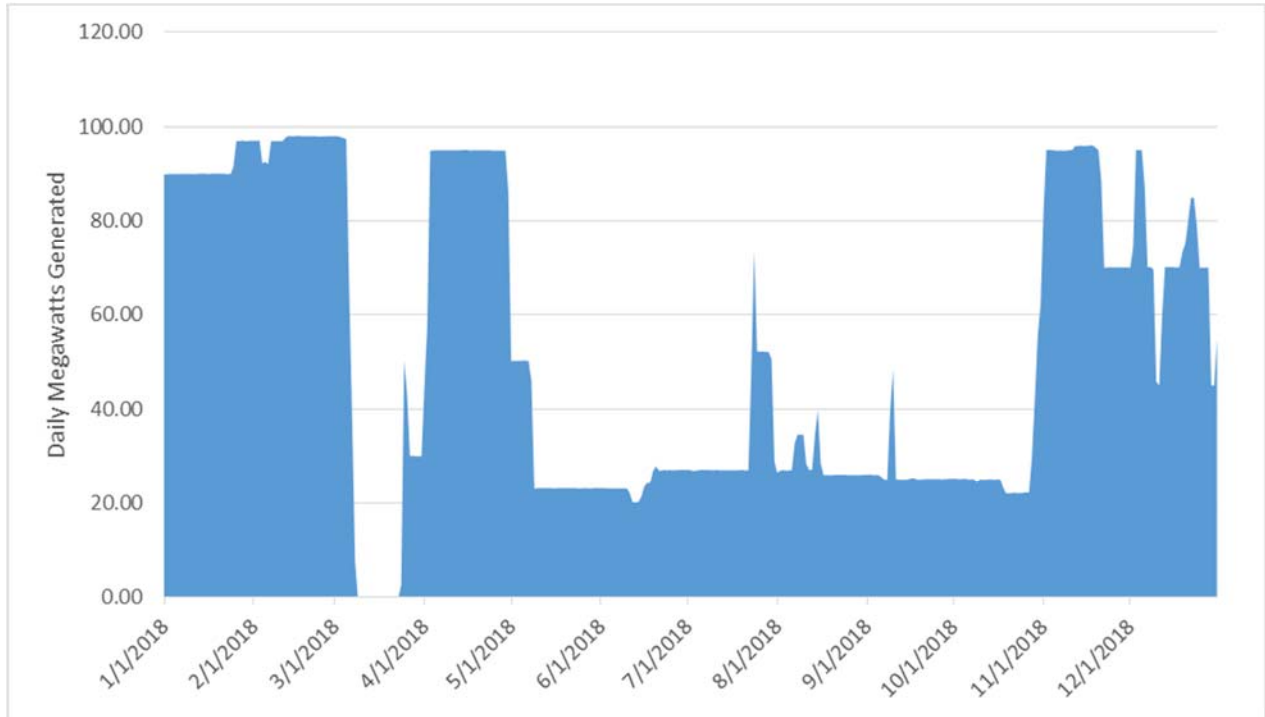


Figure 2-3. Daily plant generation, Jackson Hydroelectric Project, 2018.

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 2018, Spada Lake Reservoir was drafted and filled in accordance with the rule curves established for the Project (Figure 2-4).

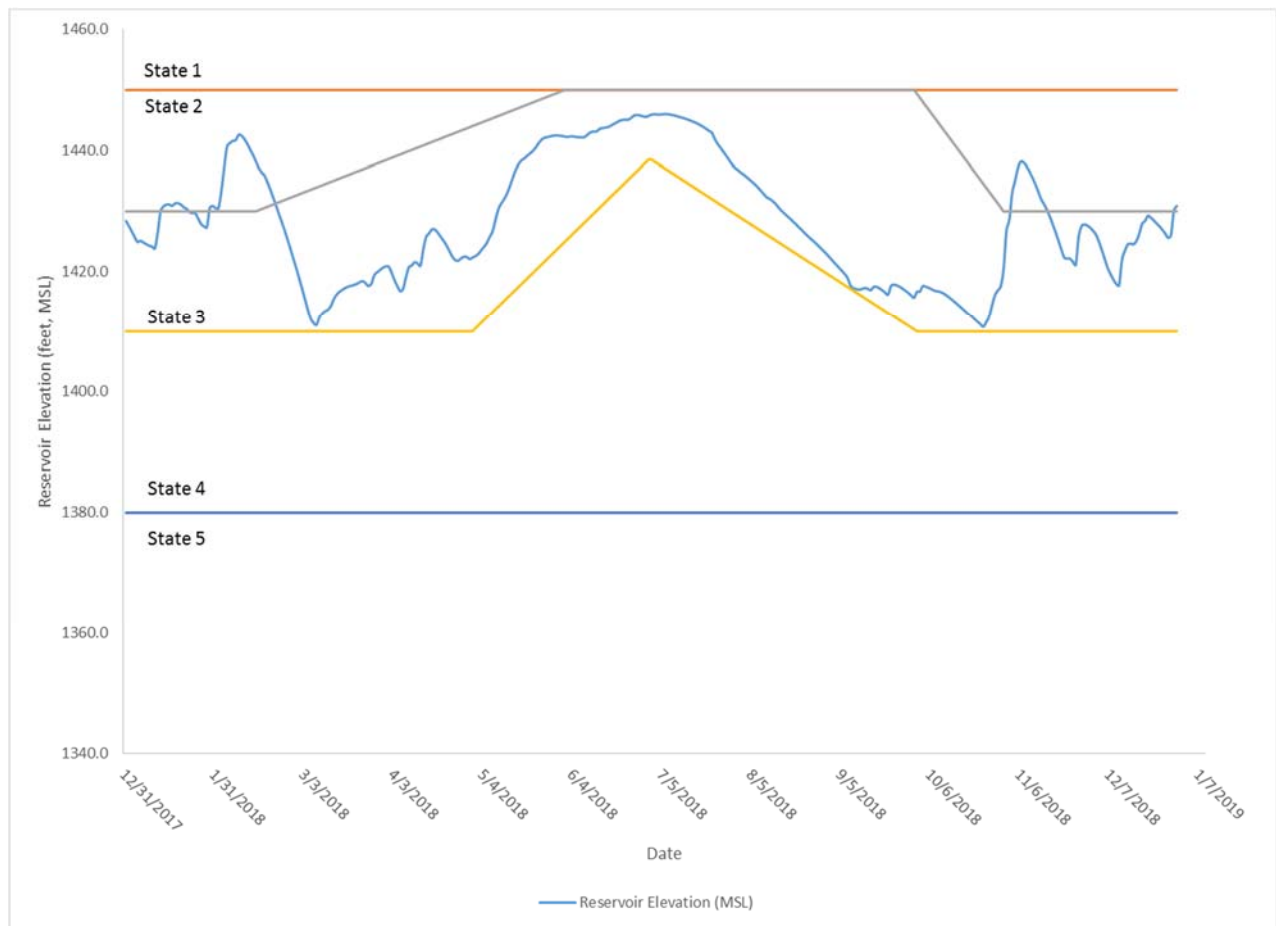


Figure 2-4. Daily water surface elevation, Spada Lake Reservoir, 2018.

2.3. Water Quality

Monthly sampling of water quality in Spada Lake Reservoir occurred on the following dates during 2018: May 8, June 19, July 18, August 14, September 19, and October 9. 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 2018, 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 recorded in June. By August, the warmest water temperature was documented and the thermocline was set near 23 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 4.2 to 21.9 °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. July and September also had a high resistance to mixing. The strongest point in the thermocline dropped from 13 to 49 feet over the course of the summer and early fall. The thermocline was present at a depth of 62 feet in October.

2.3.2. pH

The highest measured pH was 7.0 in August at the surface. The lowest pH of 5.5 was measured in October at a depth of 102 feet and was likely due to increased bacterial degradation of organic matter.

2.3.3. Dissolved Oxygen

Dissolved oxygen ranged from a low of 8.5 mg/L in August and September to a high of 12.1 mg/L in May. By saturation values, the maximum of 107 percent in June was likely due to increasing primary production, and the minimum of 69 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 June, and further from June to July. In September, 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 22 feet in July to a low of 6 feet in May (Table 2-2).

Table 2-2. Secchi transparency, Spada Lake Reservoir, 2018.

Date	Result (feet)
5/8/2018	6
6/19/2018	16
7/18/2018	22
8/14/2018	18
9/19/2018	9.5
10/9/2018	10

2.3.6. Nutrients

Total phosphorus concentrations were between 4.6 and 12.7 µg/L for most of the summer, both at the surface and at depth. An increase in total phosphorus was noted during September sampling. Total nitrogen was also relatively constant between 48.7 and 153.3 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 0.7 and 71.0 µg/L from April through October. Silica concentrations were relatively stable throughout the water column, ranging from 1,398 and 1,694 µg/L.

2.3.7. Phytoplankton

The greatest total volume (µm³/mL) of phytoplankton occurred in the June sample, of which, *Bacillariophyta* was the predominant taxon by total biovolume. *Pyrrhophyta* and *Chrysophyta* was the predominant taxon by total volume for July and August, respectively. By September, *Cyanophyta*, *Chlorophyta*, and *Chrysophyta* decreased 26, 69, and 96% (colonies/mL) from August. 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 (2.8 µg/L).

2.3.8. Zooplankton

Holopedium were the dominant zooplankter in all samples collected during May and July. *Conochilus* (single) were the most abundant zooplankter during August and October, whereas *Conochilus* (colony) were most abundant in September. The largest diversity in zooplankton species occurred from June through October. The total number of zooplankton/L ranged from 0.1 (May) to 9.5 (August) and averaged 4.3 between May and October.

3. RIVER MONITORING

3.1. *Background*

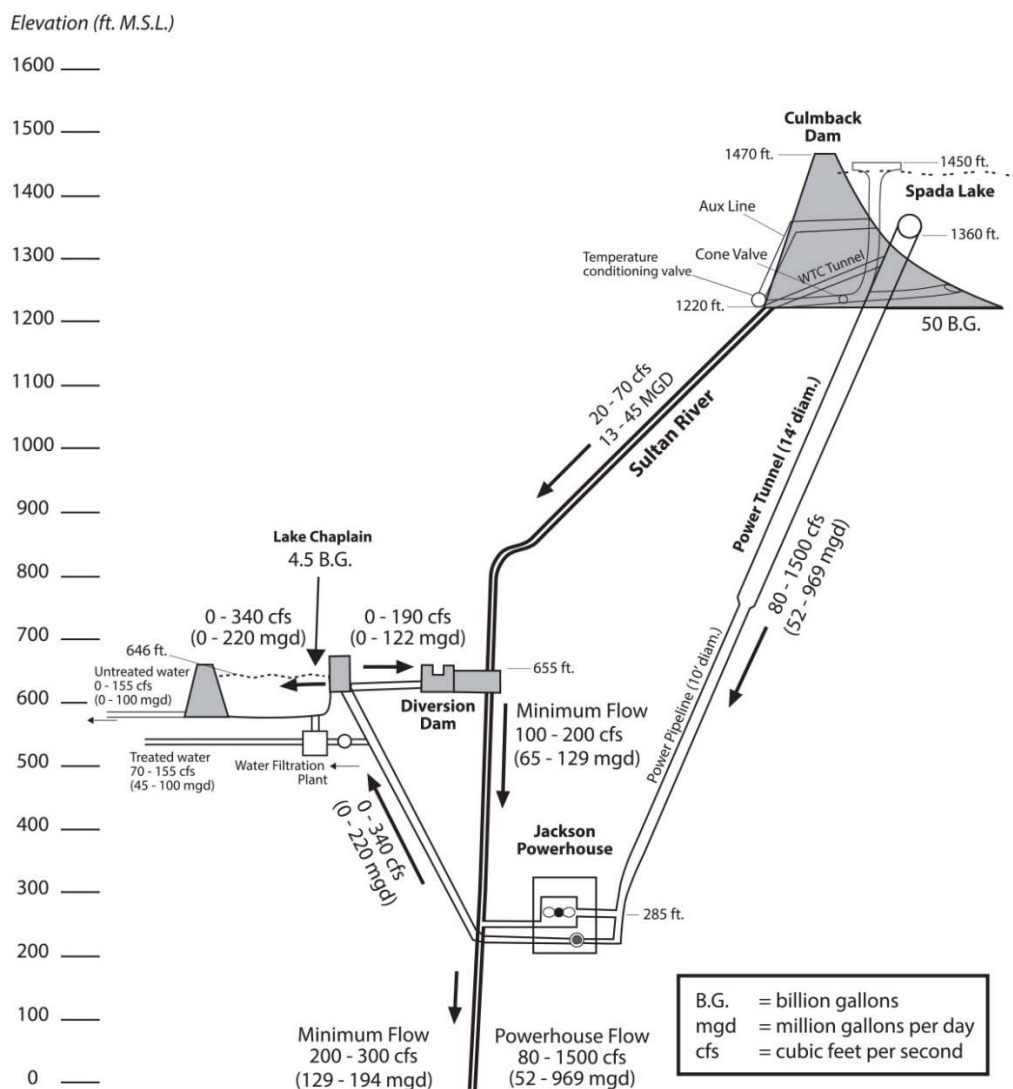
Maintaining suitable water temperatures in the Sultan River is an important aspect of the Project operation. Water temperature influences fish behavior, especially anadromous fish during the freshwater phase of their life cycle. The Sultan River produces Chinook, coho, chum and pink salmon, and steelhead 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 to a variable extent by releases through an auxiliary line down the face of Culmback Dam. 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 2018 are presented in Table 3-1.



Jackson Project Hydraulics



Rev 2/19

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

Table 3-1. Settings for selective withdrawal panels, Spada Lake Reservoir, 2018.

Dates	Panel Setting	Upper Opening (elevation in feet msl)	Lower Opening (elevation in feet msl)
Beginning of year to 6/11/18	C	1,420 – 1,400	None
6/12/18 to 7/18/18	D	1,405 – 1,385	None
07/19/18 to 8/22/18	D-E	1,407.5 – 1,397.5	1,370 to 1,360
8/23/18 to end of year	E	1,390 – 1,360	None

3.2. Continuous Temperature Monitoring

The District continuously monitored water temperature at 12 locations within the Project area during 2018 (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 2018 were slightly cooler than 2017 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 2018 are presented in Appendix B. A tabulation of all mean daily temperature data for 2018 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.

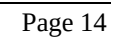


Figure 3-2. Locations of water temperature monitoring, Jackson Hydroelectric Project.

3.3. *Synoptic Measurements of Water Quality*

Synoptic measurements of water quality were collected during late spring, summer, and early fall 2018 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, 2018.

Location	Date	Temp °C	pH Units	Turb NTU	LDO mg/l
South Fork Sultan River (SF)					
	5/8/2018	5.7	6.7	0.3	12.2
	6/19/2018	9.7	6.6	1.4	11.0
	7/18/2018	12.2	7.0	0.7	10.3
	8/14/2018	13.4	7.0	0.3	10.2
	9/19/2018	9.7	7.0	0.0	11.1
	10/9/2018	8.3	7.0	1.4	11.3
Sultan River upstream of Diversion Dam (RM 9.8)					
	5/8/2018	8.7	7.1	10.7	11.8
	6/19/2018	13.7	7.3	3.7	10.4
	7/18/2018	14.7	7.4	2.5	9.4
	8/14/2018	12.8	7.2	1.2	10.8
	9/19/2018	10.9	7.3	8.3	11.1
	10/9/2018	9.6	7.5	3.5	11.4
Sultan River downstream of Powerhouse (RM 4.4)					
	5/8/2018	8.1	7.1	6.1	12.1
	6/19/2018	7.0	7.0	3.5	11.5
	7/18/2018	11.3	7.0	1.8	11.1
	8/14/2018	13.6	7.0	1.3	10.8
	9/19/2018	12.8	7.1	7.7	10.8
	10/9/2018	11.5	7.3	3.5	11.0

4. DATA QUALITY AND COMPLIANCE

Monitoring of water quality during 2018 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 2 and 10, 2018, water temperature exceeded the state water temperature criteria on seven days at the monitoring site on the South Fork Sultan River (RM 18.2). Additionally, state temperature criteria were exceeded at two sites on the Sultan River, downstream of the reservoir. These sites were, RM 11.3 (2 days), and RM 9.8 (14 days). These exceedances were attributable to longitudinal warming in the 6-mile bypass reach. During summer 2018, both stations on the Skykomish River exceeded the state water temperature criteria for 63 and 64 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	meters	feet	feet	degrees C	mS/cm		mg/L	RFU	NTU
5/8/2018	0.5	1.7	1425.6	11.4	0.02	6.4	11.3	0.0	3.1
5/8/2018	1	3.1	1424.2	11.1	0.02	6.4	11.4	0.0	3.2
5/8/2018	2	7.1	1420.2	11.0	0.02	6.5	11.4	0.1	2.9
5/8/2018	3	10.1	1417.2	11.0	0.02	6.5	11.4	0.2	3.3
5/8/2018	4	12.9	1414.4	10.7	0.02	6.7	11.4	0.2	3.1
5/8/2018	5	16.2	1411.1	10.5	0.02	6.7	11.4	0.1	3.2
5/8/2018	6	19.5	1407.8	10.5	0.02	6.8	11.4	0.1	3.0
5/8/2018	7	23.0	1404.3	8.8	0.02	6.9	11.5	0.2	3.6
5/8/2018	8	26.1	1401.2	8.2	0.02	6.6	11.8	0.1	3.4
5/8/2018	9	28.6	1398.7	8.0	0.02	6.5	11.8	0.2	3.8
5/8/2018	10	32.7	1394.6	7.4	0.02	6.6	11.8	0.1	3.8
5/8/2018	11	36.4	1390.9	7.1	0.02	6.5	11.8	0.1	3.8
5/8/2018	12	38.6	1388.7	6.9	0.02	6.5	11.8	0.0	4.0
5/8/2018	13	42.8	1384.5	6.4	0.02	6.5	11.9	0.0	3.7
5/8/2018	14	46.5	1380.8	6.1	0.02	6.5	11.9	0.0	4.2
5/8/2018	15	49.0	1378.3	6.0	0.02	6.5	11.9	0.0	4.4
5/8/2018	17	56.6	1370.7	5.5	0.02	6.5	11.9	0.0	4.8
5/8/2018	19	61.9	1365.4	5.2	0.02	6.5	12.0	0.0	5.0
5/8/2018	21	68.9	1358.4	4.9	0.02	6.5	12.0	0.1	5.3
5/8/2018	23	75.1	1352.2	4.6	0.02	6.5	12.0	0.0	5.0
5/8/2018	25	82.3	1345.0	4.3	0.02	6.5	12.1	0.0	5.7
5/8/2018	27	89.0	1338.3	4.2	0.02	6.5	12.0	0.1	5.9
5/8/2018	29	95.3	1332.0	4.2	0.02	6.6	11.9	0.1	6.5
5/8/2018	31	101.9	1325.4	4.2	0.02	6.6	11.9	0.2	7.2
5/8/2018	34	111.8	1315.5	4.2	0.02	6.6	11.8	0.0	8.7
5/8/2018	37	121.1	1306.2	4.2	0.02	6.6	11.7	0.1	10.0
5/8/2018	40	131.1	1296.2	4.2	0.02	6.6	11.6	0.1	10.8
5/8/2018	43	140.8	1286.5	4.2	0.02	6.6	11.5	0.2	12.7
5/8/2018	46	151.1	1276.2	4.2	0.02	6.6	11.4	0.1	14.9

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	meters	feet	feet	degrees C	mS/cm		mg/L	RFU	NTU
6/19/2018	0.5	1.6	1448.4	16.8	0.02	6.5	10.0	0.0	0.7
6/19/2018	1	3.4	1446.6	16.4	0.02	6.6	10.0	0.0	0.7
6/19/2018	2	6.6	1443.4	16.2	0.02	6.6	10.1	0.0	0.7
6/19/2018	3	9.7	1440.3	16.1	0.02	6.6	10.1	0.0	0.7
6/19/2018	4	13.1	1436.9	15.9	0.02	6.6	10.1	0.1	0.8
6/19/2018	5	16.3	1433.7	15.6	0.02	6.7	10.1	0.2	0.8
6/19/2018	6	19.7	1430.3	13.7	0.02	6.9	10.7	0.2	0.8
6/19/2018	7	23.1	1426.9	12.6	0.02	6.7	11.4	0.3	0.8
6/19/2018	8	26.3	1423.7	11.0	0.02	6.7	11.7	0.6	0.8
6/19/2018	9	29.5	1420.5	10.3	0.02	6.5	11.8	0.9	0.9
6/19/2018	10	32.8	1417.2	9.7	0.02	6.3	11.6	0.8	0.9
6/19/2018	11	36.2	1413.8	9.4	0.02	6.2	11.5	0.7	0.9
6/19/2018	12	39.3	1410.7	9.0	0.02	6.2	11.4	0.8	0.9
6/19/2018	13	42.7	1407.3	8.2	0.02	6.2	11.4	0.5	0.9
6/19/2018	14	45.9	1404.1	7.6	0.02	6.1	11.3	0.3	0.9
6/19/2018	15	49.2	1400.8	6.9	0.02	6.1	11.3	0.1	1.6
6/19/2018	17	55.8	1394.2	6.3	0.02	6.1	11.4	0.0	2.2
6/19/2018	19	62.3	1387.7	6.0	0.02	6.0	11.4	0.0	2.5
6/19/2018	21	68.8	1381.2	5.8	0.02	6.0	11.5	0.0	2.8
6/19/2018	23	75.5	1374.5	5.6	0.02	5.9	11.5	0.0	3.1
6/19/2018	25	82.0	1368.0	5.5	0.02	6.0	11.5	0.0	3.2
6/19/2018	27	88.7	1361.3	5.4	0.02	6.0	11.5	0.0	3.5
6/19/2018	29	95.1	1354.9	5.3	0.02	6.0	11.5	-0.1	3.7
6/19/2018	31	101.6	1348.4	5.1	0.02	6.0	11.5	0.0	4.2
6/19/2018	34	111.6	1338.4	5.0	0.02	6.1	11.5	0.0	4.6
6/19/2018	37	121.4	1328.6	4.8	0.02	6.1	11.5	0.0	4.5
6/19/2018	40	131.1	1318.9	4.7	0.02	6.1	11.5	0.0	5.4
6/19/2018	43	141.1	1308.9	4.6	0.02	6.1	11.4	0.0	5.7
6/19/2018	46	150.9	1299.1	4.6	0.02	6.0	11.3	0.0	6.6
6/19/2018	49	160.8	1289.2	4.6	0.02	6.1	11.0	0.0	8.3
6/19/2018	50	166.0	1284.0	4.6	0.02	6.2	10.3	0.1	9.9

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	meters	feet	feet	degrees C	mS/cm		mg/L	RFU	NTU
7/18/2018	0.5	1.6	1442.8	20.5	0.02	6.7	8.8	0.1	0.3
7/18/2018	1	3.3	1441.2	20.5	0.02	6.8	8.8	0.0	0.3
7/18/2018	2	6.5	1437.9	20.3	0.02	6.8	8.8	0.0	0.3
7/18/2018	3	9.9	1434.6	20.1	0.02	6.8	8.9	0.0	0.4
7/18/2018	4	13.0	1431.4	18.9	0.02	6.7	9.4	0.0	0.3
7/18/2018	5	16.6	1427.8	18.2	0.02	6.8	9.6	0.1	0.3
7/18/2018	6	19.7	1424.8	17.3	0.02	6.8	9.9	0.0	0.3
7/18/2018	7	22.9	1421.5	16.0	0.02	6.7	10.1	0.1	0.3
7/18/2018	8	26.2	1418.3	15.3	0.02	6.7	10.4	0.0	0.3
7/18/2018	9	29.6	1414.9	14.1	0.02	6.6	10.7	0.1	0.3
7/18/2018	10	32.8	1411.6	13.2	0.02	6.5	10.8	0.1	0.4
7/18/2018	11	36.2	1408.2	12.6	0.02	6.4	10.9	0.2	0.4
7/18/2018	12	39.5	1404.9	11.8	0.02	6.4	11.0	0.2	0.4
7/18/2018	13	42.6	1401.9	11.2	0.02	6.2	10.9	0.4	0.5
7/18/2018	14	45.9	1398.6	10.5	0.02	6.1	10.9	0.5	0.5
7/18/2018	15	49.3	1395.2	9.6	0.02	6.0	10.8	0.6	0.6
7/18/2018	17	55.8	1388.6	8.0	0.02	5.8	10.7	0.4	0.9
7/18/2018	19	62.4	1382.1	7.0	0.02	5.8	10.7	0.2	1.4
7/18/2018	21	69.1	1375.4	6.4	0.02	5.8	10.8	0.1	1.8
7/18/2018	23	75.4	1369.1	6.1	0.02	5.8	10.8	0.0	2.3
7/18/2018	25	81.9	1362.6	5.9	0.02	5.8	10.8	0.0	2.5
7/18/2018	27	88.5	1356.0	5.8	0.02	5.8	10.9	0.0	2.3
7/18/2018	29	95.2	1349.2	5.7	0.02	5.8	10.9	0.1	2.4
7/18/2018	31	101.7	1342.8	5.6	0.02	5.9	11.0	0.0	2.6
7/18/2018	34	111.6	1332.9	5.5	0.02	5.9	11.0	0.1	2.4
7/18/2018	37	121.4	1323.1	5.4	0.02	5.9	11.1	0.1	2.5
7/18/2018	40	131.2	1313.3	5.3	0.02	5.9	11.1	0.0	2.7
7/18/2018	43	141.2	1303.3	5.1	0.02	6.0	11.1	0.0	2.8
7/18/2018	46	150.9	1293.6	5.0	0.02	6.0	11.0	0.1	2.9
7/18/2018	49	160.7	1283.8	4.9	0.02	6.0	10.9	0.0	3.3
7/18/2018	51	169.0	1275.5	4.8	0.02	6.1	10.7	0.0	3.3

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	meters	feet	feet	degrees C	mS/cm		mg/L	RFU	NTU
8/14/2018	0.5	1.6	1429.5	21.9	0.02	7.0	8.5	0.0	1.0
8/14/2018	1	3.3	1427.8	21.8	0.02	7.0	8.5	0.0	1.0
8/14/2018	2	6.6	1424.5	21.8	0.02	7.0	8.5	-0.1	1.0
8/14/2018	3	9.8	1421.3	21.8	0.02	7.0	8.5	0.0	0.9
8/14/2018	4	13.2	1417.9	21.8	0.02	7.0	8.5	0.1	1.0
8/14/2018	5	16.4	1414.7	21.7	0.02	7.0	8.5	0.0	0.9
8/14/2018	6	19.8	1411.3	21.7	0.02	7.0	8.5	0.0	1.0
8/14/2018	7	23.0	1408.1	21.6	0.02	7.0	8.5	0.1	1.3
8/14/2018	8	26.3	1404.8	19.0	0.02	6.8	9.6	0.0	0.7
8/14/2018	9	29.5	1401.6	17.6	0.02	6.7	9.9	0.1	0.6
8/14/2018	10	33.0	1398.1	15.9	0.02	6.3	10.1	0.1	0.7
8/14/2018	11	36.2	1394.9	14.6	0.02	6.1	10.2	0.1	0.8
8/14/2018	12	39.4	1391.7	13.3	0.02	6.1	10.1	0.1	0.9
8/14/2018	13	42.7	1388.4	12.4	0.02	6.0	10.1	0.1	1.0
8/14/2018	14	46.0	1385.1	11.4	0.02	6.0	10.1	0.2	1.1
8/14/2018	15	49.2	1381.9	10.0	0.02	5.9	10.0	0.1	1.2
8/14/2018	17	55.8	1375.3	7.8	0.02	5.8	10.0	0.0	1.2
8/14/2018	19	62.3	1368.8	6.8	0.02	5.8	10.2	0.0	1.4
8/14/2018	21	68.9	1362.2	6.5	0.02	5.8	10.3	-0.1	1.6
8/14/2018	23	75.5	1355.6	6.3	0.02	5.7	10.3	-0.1	1.7
8/14/2018	25	82.1	1349.0	6.2	0.02	5.7	10.4	0.0	1.7
8/14/2018	27	88.5	1342.6	6.0	0.02	5.7	10.5	-0.1	1.9
8/14/2018	29	95.3	1335.8	6.0	0.02	5.7	10.5	0.0	1.9
8/14/2018	31	101.6	1329.5	5.9	0.02	5.7	10.5	-0.1	2.0
8/14/2018	34	111.6	1319.6	5.6	0.02	5.8	10.6	0.0	2.1
8/14/2018	37	121.4	1309.7	5.5	0.02	5.8	10.7	-0.1	2.1
8/14/2018	43	141.1	1290.0	5.2	0.02	5.8	10.7	0.0	2.4
8/14/2018	46	150.7	1280.4	5.1	0.02	5.8	10.6	0.0	2.4
8/14/2018	49	160.9	1270.2	5.1	0.02	5.8	10.5	0.0	2.5
8/14/2018	47	155.9	1275.2	5.1	0.02	6.0	10.4	-0.1	2.6

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	meters	feet	feet	degrees C	mS/cm		mg/L	RFU	NTU
9/19/2018	0.5	1.6	1415.7	16.4	0.03	6.3	9.0	0.0	1.8
9/19/2018	1	3.3	1414.0	16.4	0.03	6.5	8.9	0.1	2.4
9/19/2018	2	6.6	1410.7	16.4	0.03	6.5	8.9	0.1	2.4
9/19/2018	3	9.6	1407.7	16.4	0.03	6.6	8.9	0.2	2.4
9/19/2018	4	13.0	1404.3	16.4	0.03	6.6	8.9	0.3	2.3
9/19/2018	5	16.3	1401.0	16.4	0.03	6.5	8.9	0.2	2.3
9/19/2018	6	19.6	1397.7	16.4	0.03	6.6	8.9	0.2	2.3
9/19/2018	7	23.1	1394.2	16.4	0.03	6.6	8.9	0.1	2.4
9/19/2018	8	26.2	1391.1	16.3	0.03	6.5	8.8	0.1	2.7
9/19/2018	9	29.6	1387.7	16.2	0.03	6.5	8.7	0.2	3.2
9/19/2018	10	32.8	1384.5	15.9	0.03	6.4	8.6	0.0	3.5
9/19/2018	11	36.2	1381.1	15.5	0.03	6.3	8.5	0.1	4.0
9/19/2018	12	39.3	1378.0	15.0	0.03	6.3	8.6	0.1	3.8
9/19/2018	13	42.7	1374.6	13.9	0.02	6.2	8.6	0.1	4.4
9/19/2018	14	45.8	1371.5	12.4	0.02	6.0	8.6	0.0	3.0
9/19/2018	15	49.3	1368.0	9.4	0.02	5.6	8.9	0.0	2.2
9/19/2018	17	55.7	1361.6	7.1	0.02	5.7	9.2	0.0	1.8
9/19/2018	19	62.2	1355.1	6.5	0.02	5.6	9.6	0.0	1.8
9/19/2018	21	68.7	1348.6	6.3	0.02	5.7	9.8	0.1	1.8
9/19/2018	23	75.5	1341.8	6.2	0.02	5.6	9.9	0.0	2.0
9/19/2018	25	82.0	1335.3	6.1	0.02	5.6	9.9	-0.1	2.1
9/19/2018	27	88.6	1328.7	6.0	0.02	5.6	10.0	0.0	2.1
9/19/2018	29	95.1	1322.2	5.9	0.02	5.6	10.1	0.0	2.0
9/19/2018	31	101.7	1315.6	5.7	0.02	5.6	10.2	0.0	2.2
9/19/2018	34	111.6	1305.7	5.6	0.02	5.6	10.2	0.1	2.3
9/19/2018	37	121.4	1295.9	5.4	0.02	5.6	10.1	0.1	2.5
9/19/2018	40	131.1	1286.2	5.4	0.02	5.6	10.0	0.0	2.7
9/19/2018	43	141.1	1276.2	5.4	0.02	5.6	10.0	0.0	3.0
9/19/2018	44	144.0	1273.3	5.3	0.02	5.7	9.2	0.1	3.5

Date	Depth	Depth	Elevation	Temperature	Conductivity	pH	Dissolved Oxygen	Chlorophyll	Turbidity
M/D/Y	meters	feet	feet	degrees C	mS/cm		mg/L	RFU	NTU
10/9/2018	0.5	1.8	1414.9	13.3	0.03	6.4	9.4	No Data	2.0
10/9/2018	1	3.4	1413.3	13.3	0.03	6.4	9.4	No Data	2.1
10/9/2018	2	6.7	1410.0	13.3	0.03	6.4	9.4	No Data	2.0
10/9/2018	3	9.8	1406.9	13.3	0.03	6.5	9.4	No Data	2.1
10/9/2018	4	13.2	1403.5	13.2	0.03	6.5	9.3	No Data	2.0
10/9/2018	5	16.4	1400.3	13.2	0.03	6.5	9.3	No Data	2.3
10/9/2018	6	19.7	1397.0	13.2	0.03	6.4	9.2	No Data	2.4
10/9/2018	7	23.0	1393.7	12.7	0.02	6.4	9.1	No Data	3.2
10/9/2018	8	26.3	1390.4	12.6	0.02	6.2	9.0	No Data	3.4
10/9/2018	9	29.5	1387.2	12.5	0.02	6.2	9.0	No Data	3.4
10/9/2018	10	32.7	1384.0	12.4	0.02	6.2	8.9	No Data	3.4
10/9/2018	11	36.1	1380.6	12.2	0.02	6.2	9.1	No Data	3.7
10/9/2018	12	39.4	1377.3	12.1	0.03	6.2	9.2	No Data	4.0
10/9/2018	13	42.6	1374.1	12.0	0.02	6.2	9.2	No Data	4.2
10/9/2018	14	45.9	1370.8	11.7	0.02	6.1	9.1	No Data	4.6
10/9/2018	15	49.2	1367.5	11.4	0.02	6.1	9.1	No Data	4.7
10/9/2018	17	55.9	1360.8	10.2	0.02	6.0	8.8	No Data	4.2
10/9/2018	19	62.2	1354.5	7.6	0.02	5.9	8.9	No Data	2.6
10/9/2018	21	68.8	1347.9	6.7	0.02	5.7	9.3	No Data	2.2
10/9/2018	23	75.5	1341.2	6.4	0.02	5.6	9.5	No Data	2.0
10/9/2018	25	81.9	1334.8	6.3	0.02	5.6	9.7	No Data	1.9
10/9/2018	27	88.7	1328.0	6.2	0.02	5.6	9.7	No Data	2.0
10/9/2018	29	95.1	1321.6	6.0	0.02	5.6	9.8	No Data	1.9
10/9/2018	31	101.8	1314.9	5.9	0.02	5.5	9.8	No Data	2.4
10/9/2018	34	111.6	1305.1	5.7	0.02	5.5	9.8	No Data	2.4
10/9/2018	37	121.4	1295.3	5.6	0.02	5.5	9.7	No Data	2.8
10/9/2018	40	131.2	1285.5	5.6	0.02	5.5	9.5	No Data	3.2
10/9/2018	43	141.0	1275.7	5.5	0.02	5.5	9.1	No Data	4.3
10/9/2018	44	144.0	1272.7	5.5	0.02	5.6	8.8	No Data	5.0

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 2018

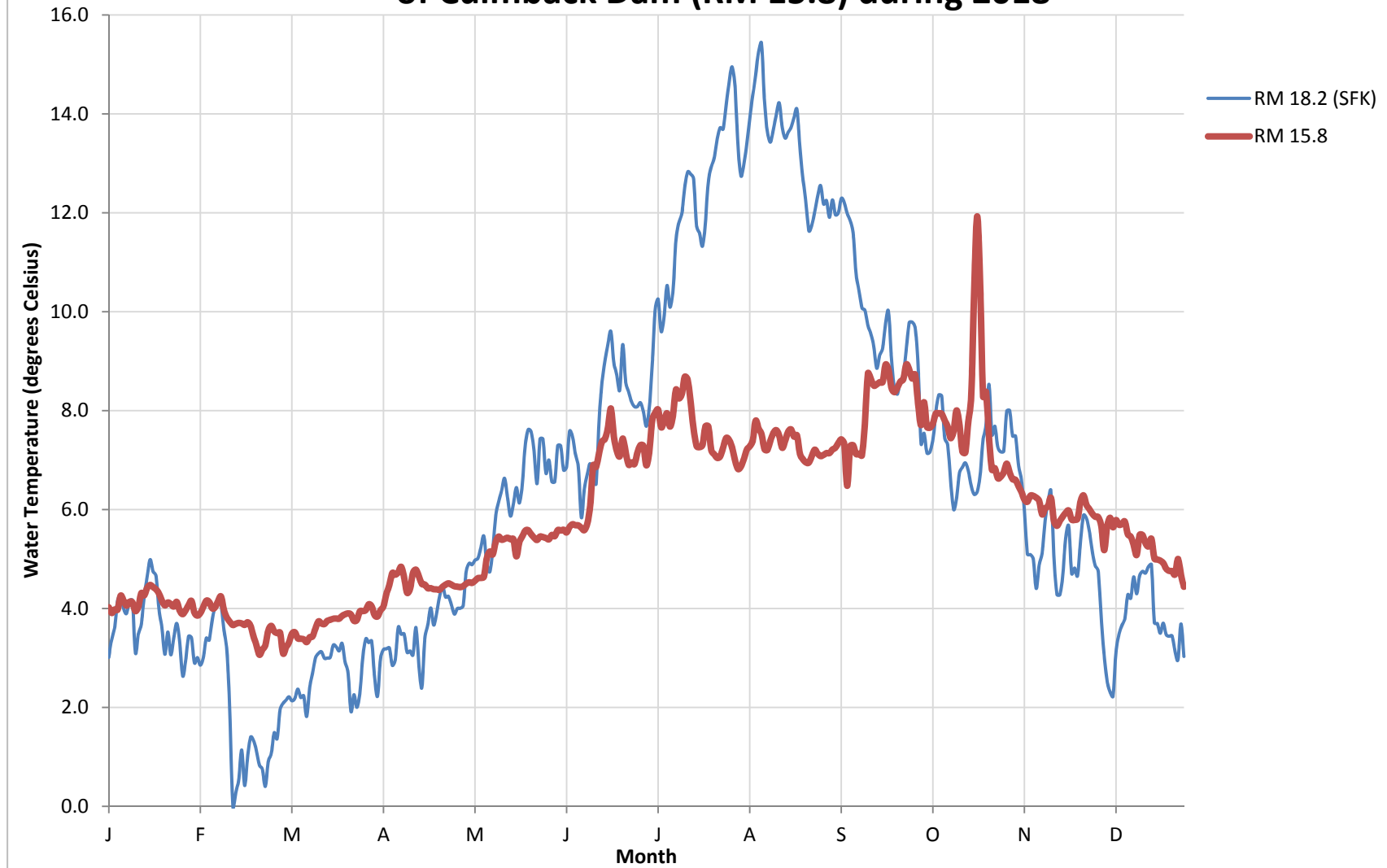


Figure B-2. Longitudinal Depiction of Mean Daily Water Temperature in the Bypass Reach (Reach 3) of the Sultan River during 2018

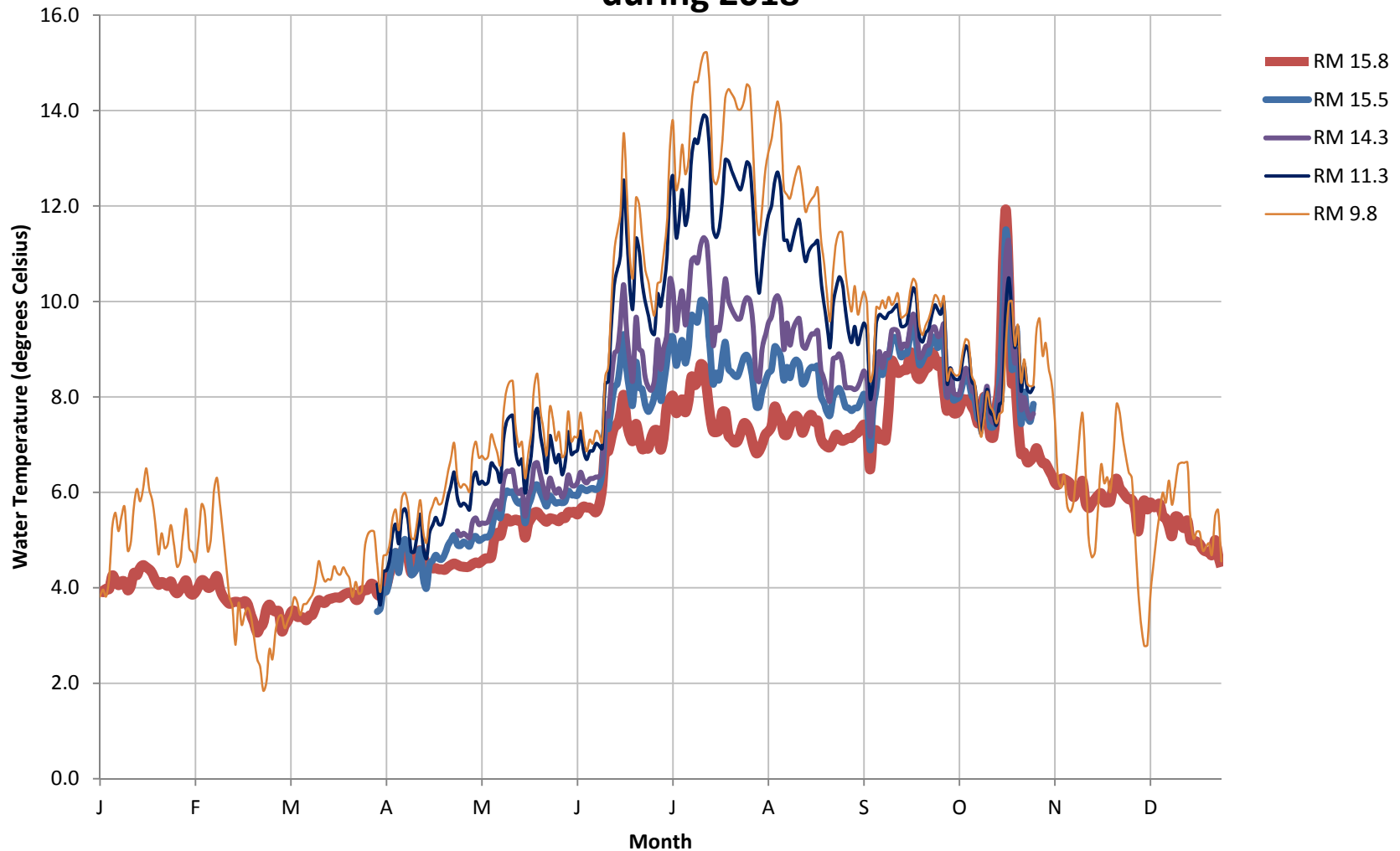
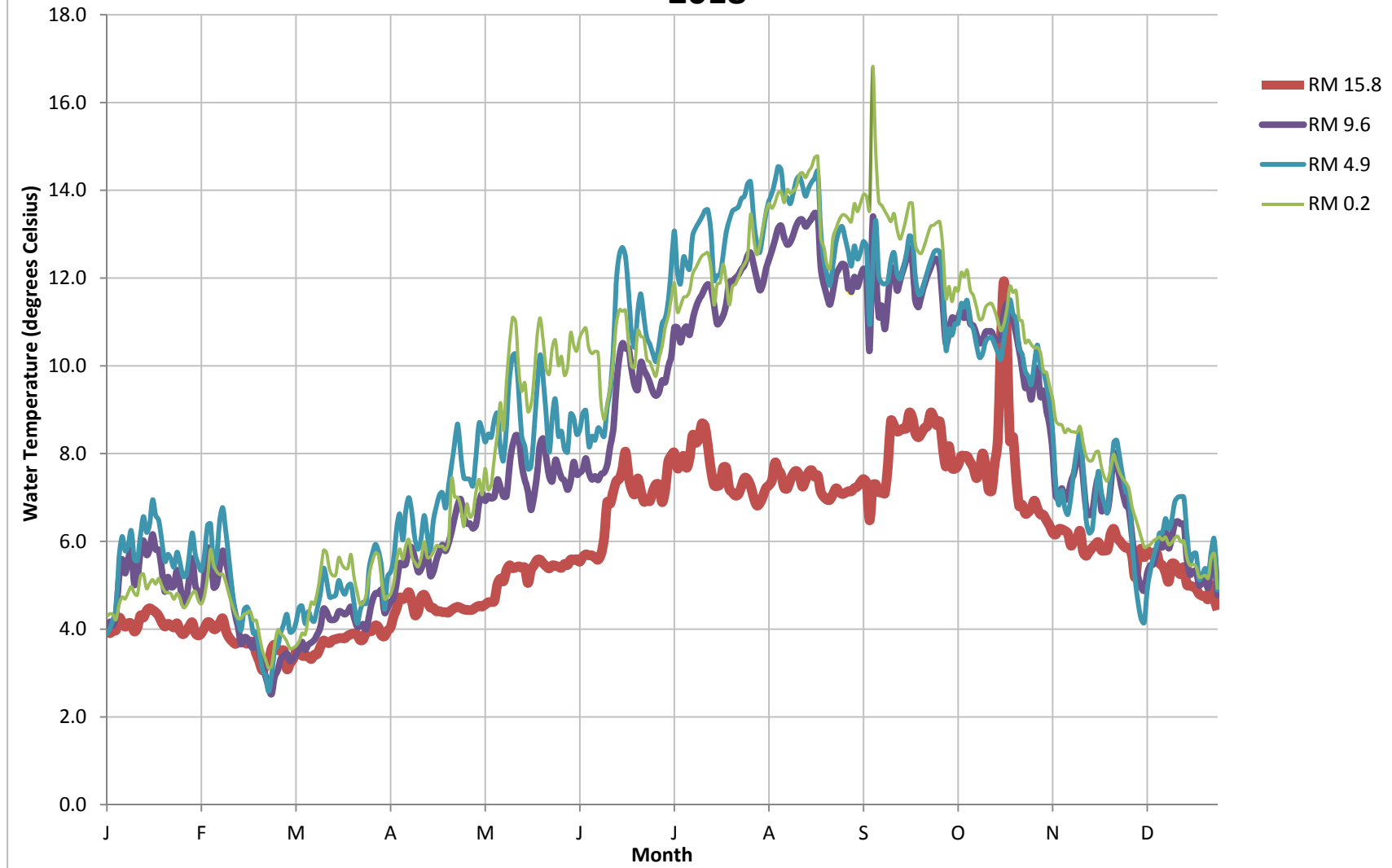
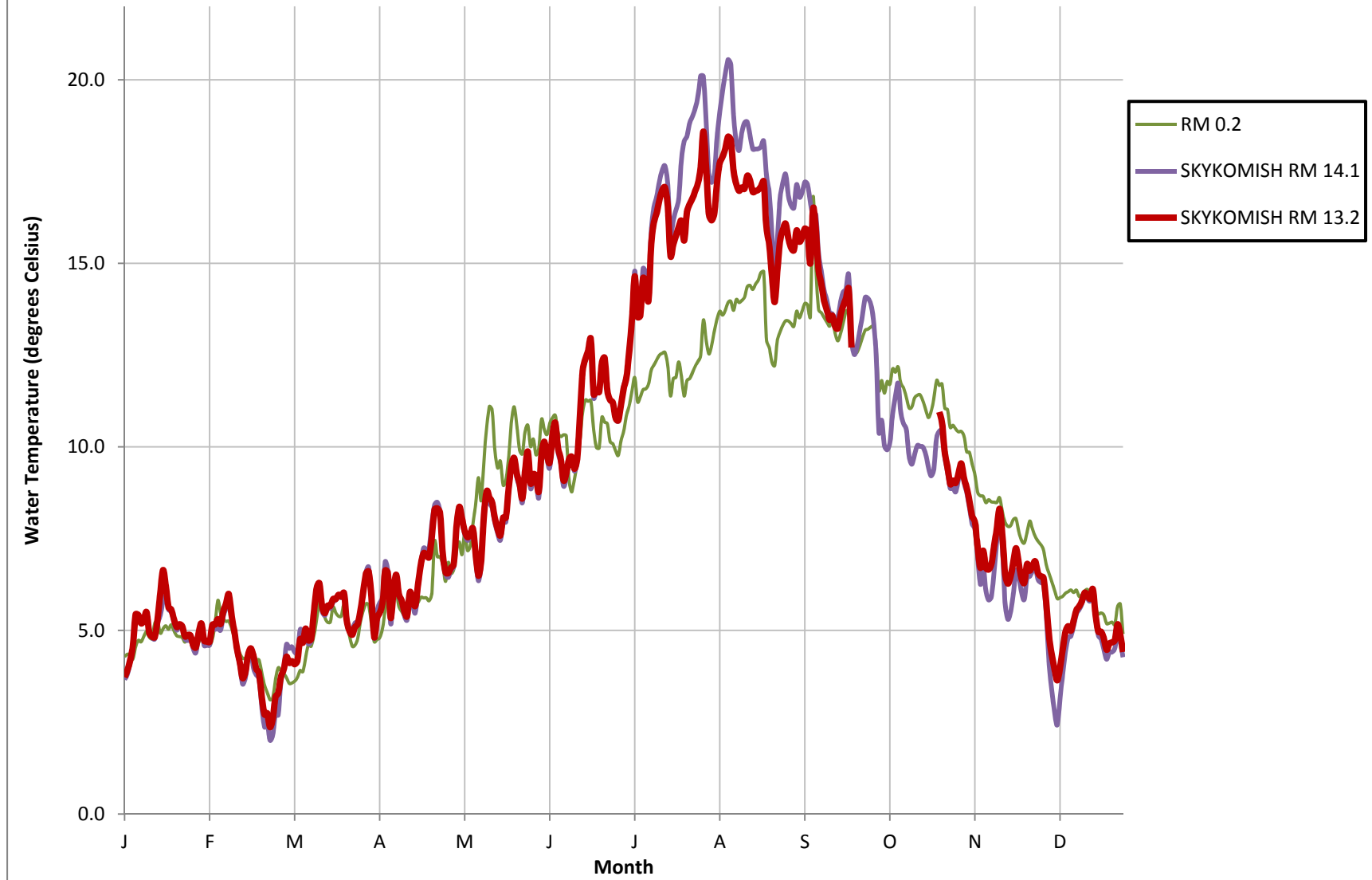


Figure B-3. Longitudinal Depiction of Mean Daily Water Temperature, Sultan River downstream of Culmback Dam during 2018



**Figure B-4. Mean Daily Water Temperature
near confluence of Sultan and Skykomish rivers during 2018**



APPENDIX C

Mean Daily Water Temperature Data in Tabular Format

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	3.0	4.0				3.8	4.0	3.9	4.2	4.3	3.7	3.7
1/2	3.4	3.9				4.0	4.2	4.0	4.3	4.4	3.8	3.9
1/3	3.6	4.0				3.8	4.1	4.2	4.3	4.3	4.1	4.2
1/4	4.2	4.0				4.2	4.3	4.5	4.0	4.2	4.5	4.6
1/5	4.3	4.3				5.3	5.2	5.6	4.4	4.5	5.4	5.4
1/6	4.0	4.2				5.6	5.6	6.1	4.7	4.7	5.4	5.4
1/7	3.9	4.1				5.2	5.3	5.8	4.6	4.7	5.2	5.2
1/8	4.2	4.1				5.5	5.6	5.9	4.8	4.8	5.2	5.3
1/9	4.2	4.1				5.7	5.8	6.2	5.0	5.0	5.5	5.5
1/10	3.1	3.9				4.8	5.0	5.6	4.7	4.8	4.9	4.9
1/11	3.5	4.0				4.9	5.1	5.6	4.7	4.8	4.8	4.8
1/12	3.7	4.3				5.7	5.8	6.1	5.4	5.2	4.8	4.8
1/13	4.2	4.3				6.1	6.0	6.6	5.3	5.3	5.2	5.3
1/14	4.6	4.4				5.8	5.7	6.2	4.9	4.9	5.4	6.0
1/15	5.0	4.5				6.1	5.8	6.4	4.9	5.0	5.8	6.6
1/16	4.7	4.4				6.5	6.2	6.9	5.0	5.1	5.9	6.2
1/17	4.7	4.4				6.1	5.8	6.6	4.9	5.0	5.6	5.6
1/18	4.0	4.3				5.8	5.8	6.5	5.1	5.2	5.5	5.6
1/19	3.6	4.2				5.3	5.4	6.0	4.9	5.0	5.2	5.3
1/20	3.1	4.1				4.7	4.9	5.5	4.7	4.9	5.0	5.1
1/21	3.5	4.1				5.1	5.2	5.7	4.7	4.8	5.1	5.2
1/22	3.1	4.1				4.8	5.0	5.6	4.7	4.8	5.1	5.1
1/23	3.4	4.0				4.9	5.0	5.4	4.6	4.7	4.8	4.8
1/24	3.7	4.1				5.3	5.3	5.8	4.7	4.8	4.7	4.9
1/25	3.3	4.0				4.9	5.0	5.5	4.6	4.7	4.8	4.9
1/26	2.6	3.9				4.4	4.6	5.2	4.3	4.5	4.5	4.6
1/27	2.9	4.0				4.5	4.7	5.2	4.4	4.5	4.4	4.5
1/28	3.4	4.1				5.1	5.2	5.7	4.6	4.7	4.9	4.9
1/29	3.4	4.2				5.7	5.6	6.2	4.8	4.8	5.1	5.2
1/30	2.9	3.9				4.8	5.0	5.7	4.7	4.9	4.6	4.7
1/31	3.0	3.9				4.7	4.8	5.5	4.5	4.6	4.6	4.7

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	2.9	3.9				4.5	4.7	5.3	4.4	4.6	4.6	4.7
2/2	3.0	4.0				5.0	5.2	5.7	4.7	4.8	5.1	5.1
2/3	3.4	4.2				5.7	5.8	6.4	5.4	5.2	5.0	5.2
2/4	3.4	4.1				5.6	5.8	6.4	6.2	5.8	5.1	5.3
2/5	3.8	4.0				4.8	5.0	5.4	5.4	5.5	5.0	5.2
2/6	4.0	4.0				5.0	5.0	5.7	5.3	5.3	5.4	5.5
2/7	4.2	4.1				6.0	5.4	6.5	5.2	5.2	5.6	5.7
2/8	4.1	4.2				6.3	5.8	6.8	5.2	5.3	5.9	6.0
2/9	3.6	4.0				5.7	5.5	6.2	4.9	5.1	5.3	5.4
2/10	3.1	3.8				5.1	5.2	5.6	4.6	4.8	4.9	5.0
2/11	1.9	3.7				4.5	4.7	4.9	4.3	4.6	4.4	4.5
2/12	0.0	3.7				3.8	4.4	4.4	4.1	4.4	4.0	4.1
2/13	0.3	3.7				3.6	4.1	4.2	4.0	4.2	3.5	3.7
2/14	0.5	3.7				2.8	3.7	4.0	4.0	4.2	3.7	3.9
2/15	1.1	3.7				3.7	3.8	4.4	4.1	4.3	4.3	4.3
2/16	0.4	3.7				3.2	3.8	4.5	4.1	4.4	4.5	4.5
2/17	1.0	3.7				3.5	3.6	4.3	4.1	4.4	4.0	4.3
2/18	1.4	3.7				3.6	3.6	3.9	3.9	4.2	3.8	4.0
2/19	1.3	3.4				3.4	3.8	3.9	3.9	4.2	3.7	3.8
2/20	1.1	3.3				3.0	3.5	3.5	3.5	3.9	2.9	3.2
2/21	0.8	3.1				2.5	3.2	3.1	3.2	3.5	2.4	2.7
2/22	0.8	3.2				2.3	2.9	2.9	3.1	3.3	2.5	2.7
2/23	0.4	3.3				1.8	2.7	2.6	2.8	3.1	2.0	2.4
2/24	0.9	3.6				2.0	2.5	3.0	3.0	3.2	2.1	2.6
2/25	1.1	3.6				2.7	2.9	3.5	3.7	3.7	2.7	3.2
2/26	1.5	3.5				2.5	3.1	3.6	3.8	4.0	2.7	3.3
2/27	1.4	3.5				3.1	3.3	3.9	3.7	3.9	3.6	3.7
2/28	2.0	3.5				3.4	3.4	4.1	3.6	3.8	3.9	3.9

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

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	2.6	3.9	4.4	4.8	5.5	4.5	4.9	5.4	4.9	5.2	5.9	5.9
4/2	2.2	3.8	3.6	0.0	3.6	3.9	4.4	4.5	4.3	4.7	4.8	4.8
4/3	3.0	4.0	4.0	0.0	4.3	4.7	4.5	5.2	4.5	4.8	5.5	5.3
4/4	3.2	4.0	3.9	0.0	4.4	4.7	4.6	5.3	4.6	4.8	5.8	5.5
4/5	3.2	4.3	4.2	0.0	4.6	4.9	4.7	5.6	4.9	5.0	5.9	5.7
4/6	3.2	4.5	4.6	0.0	5.2	5.5	5.1	6.3	5.4	5.6	6.9	6.6
4/7	2.8	4.7	4.8	0.0	5.3	5.6	5.5	6.6	5.6	5.8	6.6	6.6
4/8	3.0	4.7	4.3	0.0	4.9	5.2	5.5	6.0	5.5	5.6	5.2	5.3
4/9	3.6	4.7	4.8	0.0	5.6	5.9	5.5	6.7	5.7	5.9	6.0	6.1
4/10	3.5	4.8	5.0	0.0	5.7	6.0	5.9	7.0	5.8	6.0	6.4	6.5
4/11	3.5	4.6	4.8	0.0	5.4	5.7	5.8	6.6	5.5	5.7	5.9	6.0
4/12	3.1	4.3	4.3	0.0	4.8	5.1	5.6	6.0	5.3	5.5	5.8	5.8
4/13	3.1	4.4	4.3	0.0	4.8	5.0	5.3	5.8	5.2	5.4	5.4	5.5
4/14	3.1	4.7	4.5	0.0	5.1	5.4	5.4	6.1	5.5	5.6	5.3	5.4
4/15	3.6	4.8	4.8	0.0	5.5	5.8	5.6	6.6	5.9	6.0	5.9	6.0
4/16	2.9	4.6	4.2	0.0	4.8	5.1	5.7	6.2	5.5	5.6	5.7	5.8
4/17	2.4	4.5	4.0	0.0	4.6	4.9	5.2	5.8	5.4	5.6	5.5	5.7
4/18	3.4	4.5	4.5	0.0	5.2	5.5	5.3	6.5	5.5	5.8	6.2	6.3
4/19	3.7	4.4	4.6	0.0	5.3	5.7	5.6	6.8	5.6	5.9	6.8	6.8
4/20	4.0	4.4	4.7	0.0	5.5	5.9	5.8	7.1	5.7	5.9	7.2	7.1
4/21	3.7	4.4	4.6	0.0	5.3	5.7	5.9	7.1	5.7	5.9	7.2	7.1
4/22	3.9	4.4	4.6	0.0	5.3	5.8	5.8	6.8	5.5	5.8	7.2	7.0
4/23	4.2	4.4	4.7	0.0	5.6	6.1	6.0	7.3	5.8	6.0	7.9	7.6
4/24	4.5	4.4	4.9	0.0	5.9	6.4	6.2	7.8	7.1	7.4	8.4	8.3
4/25	4.2	4.5	5.0	0.0	6.2	6.7	6.5	8.2	6.6	7.0	8.5	8.3
4/26	4.2	4.5	5.1	0.0	6.4	7.0	6.8	8.7	6.8	7.0	8.2	8.2
4/27	4.1	4.5	4.9	5.2	5.9	6.3	7.0	8.0	6.5	6.8	7.0	7.1
4/28	3.9	4.4	4.9	5.1	5.7	6.1	6.6	7.4	6.2	6.3	6.5	6.6
4/29	4.0	4.4	5.0	5.1	5.8	6.2	6.4	7.4	6.6	6.9	6.4	6.6
4/30	4.0	4.4	4.9	5.1	5.7	6.1	6.4	7.4	6.3	6.6	6.6	6.7

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	4.1	4.5	4.9	5.1	5.6	6.0	6.3	7.3	6.6	6.6	6.7	6.8
5/2	4.7	4.5	5.0	5.4	6.3	6.8	6.4	8.0	7.0	7.1	7.8	7.8
5/3	4.9	4.5	5.1	5.5	6.4	7.1	6.9	8.7	7.4	7.4	8.3	8.4
5/4	4.9	4.5	5.0	5.3	6.2	6.7	7.1	8.5	7.1	7.1	8.0	8.1
5/5	5.0	4.6	5.0	5.4	6.2	6.8	6.9	8.3	7.4	7.7	7.6	7.7
5/6	5.0	4.6	5.1	5.4	6.2	6.7	7.0	8.4	7.2	7.2	7.5	7.5
5/7	5.2	4.6	5.1	5.4	6.2	6.8	7.0	8.4	7.2	7.3	7.6	7.6
5/8	5.5	4.6	5.2	5.6	6.6	7.2	7.0	8.8	7.5	7.9	7.7	7.8
5/9	4.9	5.0	5.5	5.7	6.5	7.0	7.4	8.9	8.3	8.5	6.9	7.1
5/10	4.7	5.2	5.6	5.8	6.4	6.8	7.2	8.1	8.5	9.2	6.4	6.5
5/11	5.2	5.1	5.5	5.7	6.2	6.6	7.0	7.8	7.9	8.5	6.8	6.9
5/12	5.9	5.3	5.9	6.2	7.1	7.7	7.0	8.7	8.8	9.7	8.0	8.1
5/13	6.2	5.5	6.0	6.4	7.5	8.2	7.7	9.8	9.6	10.5	8.6	8.8
5/14	6.4	5.4	6.0	6.4	7.6	8.3	8.2	10.2	10.0	11.1	8.5	8.6
5/15	6.6	5.4	6.0	6.5	7.6	8.3	8.4	10.3	9.9	11.0	8.3	8.5
5/16	6.2	5.4	5.8	6.1	6.8	7.3	8.4	9.4	9.1	9.9	7.9	8.1
5/17	5.9	5.4	5.8	6.0	6.6	7.0	7.8	8.4	8.7	9.4	7.6	7.8
5/18	6.1	5.4	5.8	6.0	6.7	7.1	7.4	8.2	8.8	9.6	7.5	7.6
5/19	6.4	5.1	5.4	5.5	6.0	6.3	7.2	7.7	8.0	9.0	7.9	8.1
5/20	6.1	5.3	5.7	5.9	6.4	6.8	6.7	7.7	8.4	9.1	8.0	8.1
5/21	6.5	5.5	5.9	6.1	6.8	7.3	7.0	8.5	8.8	9.7	8.8	8.9
5/22	7.3	5.6	6.1	6.6	7.6	8.3	7.5	9.5	9.6	10.7	9.4	9.5
5/23	7.6	5.6	6.2	6.6	7.8	8.5	8.2	10.3	10.0	11.1	9.6	9.7
5/24	7.6	5.5	6.0	6.4	7.2	7.7	8.3	9.7	9.6	10.6	9.1	9.3
5/25	7.2	5.4	5.8	6.1	6.8	7.3	7.9	8.9	9.1	9.9	8.9	9.0
5/26	6.5	5.4	5.7	5.9	6.4	6.8	7.5	8.0	8.9	9.8	8.5	8.6
5/27	7.4	5.5	5.9	6.3	7.2	7.8	7.4	8.8	9.3	10.4	9.2	9.3
5/28	7.4	5.4	5.8	6.1	6.9	7.6	7.9	9.2	9.5	10.6	9.7	9.9
5/29	6.7	5.4	5.8	6.0	6.6	7.1	7.7	8.4	9.1	10.0	8.9	9.0
5/30	7.0	5.4	5.8	6.1	6.8	7.3	7.5	8.5	9.1	10.2	9.1	9.3
5/31	6.6	5.5	5.8	5.9	6.4	6.7	7.4	8.1	8.9	9.8	9.1	9.2

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	6.6	5.5	5.8	6.0	6.6	6.8	7.2	8.0	9.0	10.0	8.6	8.8
6/2	7.3	5.6	6.0	6.4	7.3	7.7	7.4	8.9	9.7	10.8	9.7	9.8
6/3	7.3	5.6	5.9	6.2	6.8	7.1	7.8	8.8	9.5	10.5	10.0	10.1
6/4	6.8	5.6	5.9	6.1	6.8	7.2	7.5	8.4	9.3	10.3	9.7	9.8
6/5	6.9	5.5	5.9	6.2	6.9	7.2	7.6	8.5	9.5	10.6	9.4	9.6
6/6	7.6	5.6	6.1	6.4	7.3	7.7	7.6	8.9	9.6	10.8	10.2	10.3
6/7	7.5	5.7	6.1	6.3	6.9	7.2	7.9	9.0	9.8	10.9	10.6	10.7
6/8	7.1	5.7	6.0	6.2	6.7	6.9	7.6	8.2	9.4	10.4	9.9	10.0
6/9	6.8	5.7	6.1	6.3	6.9	7.1	7.4	8.4	9.3	10.3	9.6	9.7
6/10	5.8	5.6	6.1	6.3	6.9	7.0	7.5	8.3	9.2	10.3	8.9	9.1
6/11	6.4	5.6	6.1	6.3	7.0	7.3	7.4	8.6	8.9	10.3	9.2	9.3
6/12	6.7	5.7	6.1	6.3	7.0	7.2	7.5	8.5	8.3	9.1	9.6	9.7
6/13	6.9	6.1	6.4	6.5	6.9	7.1	7.6	8.4	8.2	8.8	9.7	9.7
6/14	6.6	6.9	7.4	7.6	8.3	8.4	7.7	9.1	8.7	9.1	9.3	9.4
6/15	6.5	6.9	7.3	7.6	8.3	8.6	8.2	9.5	8.9	9.5	9.6	9.7
6/16	7.8	7.1	7.8	8.3	9.5	10.0	8.6	10.4	9.0	10.2	10.8	10.8
6/17	8.6	7.4	8.2	8.9	10.4	11.1	9.5	11.9	9.6	11.0	12.1	12.1
6/18	9.0	7.4	8.3	9.0	10.7	11.5	10.2	12.5	9.9	11.3	12.3	12.4
6/19	9.3	7.7	8.8	9.6	11.0	11.9	10.5	12.7	10.1	11.2	12.6	12.6
6/20	9.6	8.0	9.3	10.4	12.5	13.5	10.4	12.5	10.2	11.3	12.9	12.9
6/21	9.0	7.5	8.6	9.3	11.5	12.3	10.4	11.7	9.9	10.5	11.3	11.4
6/22	8.7	7.2	8.1	8.8	10.3	11.0	9.9	10.7	9.3	10.0	11.5	11.5
6/23	8.4	7.1	7.8	8.4	9.9	10.5	9.5	10.4	9.3	10.0	11.5	11.5
6/24	9.3	7.4	8.7	9.7	11.3	12.2	9.5	11.2	9.7	10.8	12.3	12.3
6/25	8.6	7.2	8.2	9.0	11.1	12.0	10.1	11.6	10.2	10.7	12.4	12.4
6/26	8.4	6.9	8.2	8.9	10.4	11.3	9.9	11.1	9.7	10.6	11.5	11.5
6/27	8.2	7.0	7.8	8.4	10.0	10.7	9.8	10.6	9.4	10.1	11.3	11.3
6/28	8.1	6.9	7.7	8.2	9.7	10.4	9.6	10.5	9.5	10.1	11.2	11.2
6/29	8.1	7.2	7.8	8.1	9.4	10.0	9.4	10.3	9.3	9.9	10.8	10.8
6/30	8.2	7.3	8.0	8.4	9.3	9.7	9.3	10.1	9.3	9.8	10.7	10.7

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	8.0	7.3	8.7	9.2	10.1	10.4	9.4	10.5	9.7	10.2	11.2	11.2
7/2	7.7	6.9	7.9	8.6	9.9	10.4	9.7	11.0	10.1	10.4	11.7	11.6
7/3	8.1	7.2	8.3	9.0	10.3	11.0	9.6	11.1	9.9	10.9	12.0	11.9
7/4	8.9	7.8	8.7	9.3	10.9	11.6	10.0	11.5	10.3	11.1	12.7	12.6
7/5	10.0	8.0	9.2	10.5	12.3	13.2	10.2	12.3	10.6	11.5	13.6	13.5
7/6	10.3	8.0	9.2	10.2	12.6	13.8	10.9	13.1	10.8	11.9	14.8	14.6
7/7	9.6	7.7	8.7	9.4	11.4	12.4	10.9	12.1	10.4	11.2	13.6	13.5
7/8	9.9	7.8	8.9	9.9	11.7	12.6	10.5	11.9	10.4	11.4	13.7	13.6
7/9	10.5	7.9	9.2	10.2	12.3	13.3	10.8	12.5	10.6	11.6	14.9	14.6
7/10	10.1	7.7	8.7	9.5	11.6	12.7	10.9	12.3	10.6	11.6	14.7	14.5
7/11	10.4	7.9	9.0	10.0	11.9	12.9	10.7	12.2	10.7	11.7	14.2	14.0
7/12	11.4	8.4	9.7	10.8	13.0	14.1	11.1	13.0	11.0	12.1	15.9	15.5
7/13	11.8	8.2	9.6	10.9	13.4	14.6	11.3	13.1	11.1	12.2	16.5	16.1
7/14	11.7	8.3	9.6	10.8	13.3	14.6	11.5	13.3	11.2	12.4	16.8	16.4
7/15	12.1	8.7	10.0	11.2	13.7	14.9	11.6	13.4	11.3	12.5	17.2	16.7
7/16	11.6	8.6	10.0	11.3	13.9	15.2	11.8	13.5	11.5	12.5	17.5	17.0
7/17	11.3	8.2	9.8	11.2	13.8	15.2	11.9	13.5	11.5	12.6	17.6	17.1
7/18	12.1	7.6	9.0	10.3	13.0	14.4	11.8	13.0	11.3	12.2	17.2	16.6
7/19	12.2	7.3	8.3	9.1	11.5	12.6	11.4	11.9	10.8	11.4	15.8	15.2
7/20	11.9	7.3	8.5	9.5	11.3	12.5	11.0	12.1	10.9	11.9	16.2	15.5
7/21	12.1	7.3	8.4	9.4	11.5	12.7	11.0	12.1	11.0	11.9	16.5	15.7
7/22	12.6	7.7	8.8	9.9	12.1	13.3	11.1	12.5	11.3	12.3	16.7	16.0
7/23	13.1	7.7	9.1	10.5	13.0	14.3	11.4	13.0	11.1	11.9	17.8	16.2
7/24	13.1	7.2	8.6	10.0	12.9	14.4	11.9	13.3	11.1	11.4	18.3	15.6
7/25	13.6	7.1	8.5	9.9	12.7	14.4	11.9	13.5	11.1	11.8	18.5	16.4
7/26	13.7	7.0	8.4	9.7	12.6	14.2	12.0	13.6	11.1	11.9	18.8	16.6
7/27	13.4	7.1	8.4	9.6	12.4	14.0	12.1	13.6	11.2	12.0	19.0	16.8
7/28	13.4	7.3	8.6	9.7	12.3	14.0	12.2	13.8	11.3	12.2	19.2	17.0
7/29	13.4	7.4	8.8	9.9	12.6	14.2	12.3	13.9	11.5	12.3	19.5	17.2
7/30	13.5	7.4	8.9	10.1	12.9	14.5	12.5	14.1	11.7	12.5	20.1	17.6
7/31	13.7	7.3	8.7	10.0	12.8	14.5	12.6	14.2	12.8	13.5	20.1	18.6

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	14.2	13.5	14.1	13.2	11.9	13.2	12.3	14.3	10.8	11.8	19.2	17.6
8/2	13.4	6.8	7.8	8.4	10.7	11.8	12.0	12.8	12.1	12.5	17.4	16.3
8/3	12.7	6.9	7.8	8.3	10.2	11.4	11.7	12.6	12.0	12.8	17.2	16.2
8/4	13.0	7.0	8.1	9.0	10.8	12.0	11.8	13.0	12.3	13.2	17.4	16.4
8/5	13.4	7.2	8.3	9.3	11.4	12.8	12.2	13.5	12.6	13.5	18.5	17.2
8/6	13.9	7.3	8.5	9.6	11.8	13.1	12.4	13.8	12.8	13.7	19.1	17.7
8/7	14.4	7.4	8.6	9.7	12.0	13.4	12.6	13.9	12.7	13.6	19.7	17.9
8/8	14.8	7.8	9.0	10.0	12.5	13.9	12.9	14.2	12.9	13.7	20.2	18.1
8/9	15.3	7.6	9.0	10.1	12.7	14.2	13.1	14.5	13.1	13.9	20.5	18.4
8/10	15.4	7.5	8.8	9.9	12.4	13.8	13.2	14.5	13.2	14.0	20.4	18.4
8/11	14.3	7.2	8.4	9.0	11.3	12.4	12.9	13.8	13.2	13.7	19.0	17.5
8/12	13.6	7.2	8.6	9.5	11.3	12.2	12.8	13.8	13.3	14.0	18.3	17.2
8/13	13.4	7.4	8.4	9.1	11.1	12.2	12.8	13.7	13.3	13.9	18.1	17.0
8/14	13.7	7.5	8.7	9.4	11.3	12.4	13.0	13.9	13.4	14.0	18.6	17.1
8/15	14.0	7.6	8.8	9.6	11.6	12.7	13.2	14.2	13.5	14.1	18.8	17.0
8/16	14.2	7.5	8.7	9.6	11.7	12.8	13.3	14.3	13.8	14.4	18.8	17.4
8/17	13.7	7.2	8.3	9.1	11.2	12.4	13.3	14.1	13.7	14.4	18.5	17.3
8/18	13.5	7.4	8.3	9.0	10.8	11.9	13.2	13.9	13.7	14.3	18.1	16.9
8/19	13.6	7.6	8.5	9.2	11.0	12.0	13.3	14.0	13.8	14.4	18.1	17.0
8/20	13.7	7.6	8.6	9.3	11.2	12.1	13.4	14.2	14.0	14.5	18.1	17.0
8/21	13.9	7.5	8.6	9.3	11.2	12.2	13.5	14.3	14.1	14.7	18.2	17.1
8/22	14.1	7.5	8.6	9.4	11.3	12.4	13.4	14.4	13.8	14.8	18.3	17.2
8/23	13.3	7.1	8.0	8.6	10.5	11.3	12.3	13.0	12.3	12.9	17.4	16.0
8/24	12.7	7.0	7.9	8.4	10.0	10.8	11.9	12.5	12.1	12.7	16.9	15.5
8/25	12.2	7.0	7.7	8.1	9.5	10.2	11.6	12.1	12.0	12.3	15.8	14.7
8/26	11.6	6.9	7.6	7.9	9.0	9.6	11.4	11.8	11.9	12.2	14.8	13.9
8/27	11.7	7.1	8.0	8.8	9.9	10.6	11.7	12.3	12.2	12.9	15.7	14.8
8/28	12.0	7.2	8.1	8.8	10.3	11.3	12.1	12.8	12.5	13.1	16.8	15.6
8/29	12.3	7.1	8.2	8.9	10.5	11.5	12.2	13.1	12.6	13.3	17.2	15.9
8/30	12.5	7.1	8.0	8.7	10.4	11.4	12.3	13.2	12.9	13.4	17.4	16.1
8/31	12.2	7.1	7.8	8.2	9.8	10.6	12.3	12.9	12.9	13.4	16.8	15.7

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	12.2	7.1	7.8	8.2	9.4	10.1	11.8	12.6	12.8	13.4	16.6	15.4
9/2	11.9	7.1	7.7	8.2	9.1	9.8	11.7	12.3	12.8	13.3	16.5	15.4
9/3	12.3	7.2	7.8	8.2	9.5	10.3	12.0	12.7	13.1	13.7	17.1	15.9
9/4	12.0	7.2	7.8	8.2	9.1	9.7	11.8	12.4	13.0	13.5	16.8	15.6
9/5	12.0	7.3	7.9	8.4	9.3	10.0	12.0	12.6	13.2	13.7	16.9	15.7
9/6	12.3	7.4	8.1	8.5	9.5	10.2	12.2	12.8	13.3	13.9	17.2	15.9
9/7	12.2	7.3	7.9	8.4	9.4	10.0	12.1	12.7	13.3	13.9	17.1	15.9
9/8	12.0	6.5	6.9	7.2	8.0	8.3	10.4	10.9	13.1	13.5	16.7	15.0
9/9	11.8	7.3	7.8	7.9	8.3	8.6	13.3	12.2	16.1	16.8	16.3	16.5
9/10	11.6	7.3	8.2	8.6	9.5	9.9	12.2	13.3	13.9	14.9	16.3	15.9
9/11	10.8	7.1	8.8	9.0	9.7	9.8	11.1	12.0	13.1	13.7	15.3	14.8
9/12	10.4	7.1	8.5	8.6	9.7	10.0	11.4	11.9	13.1	13.7	14.8	14.4
9/13	10.1	7.1	8.8	8.9	9.6	9.9	10.8	11.9	13.0	13.5	14.3	14.0
9/14	10.0	7.7	8.8	8.9	9.8	10.1	11.5	11.9	12.8	13.4	14.0	13.7
9/15	9.7	8.7	9.2	9.4	9.8	9.9	12.2	12.4	12.8	13.3	13.7	13.5
9/16	9.6	8.6	9.2	9.4	9.9	10.0	12.2	12.6	12.9	13.5	13.6	13.6
9/17	9.3	8.5	9.1	9.4	9.9	10.2	11.7	12.1	12.4	13.1	13.5	13.3
9/18	8.9	8.5	8.8	9.0	9.5	9.7	11.9	12.0	12.4	12.9	13.5	13.2
9/19	9.1	8.6	8.9	9.1	9.5	9.7	12.2	12.2	12.6	13.1	13.9	13.6
9/20	9.3	8.6	8.9	9.1	9.5	9.8	12.4	12.5	12.9	13.4	14.2	13.8
9/21	9.8	8.9	9.3	9.5	10.0	10.2	12.7	13.0	13.2	13.7	14.3	14.0
9/22	10.0	8.8	9.5	9.7	10.3	10.5	12.4	12.9	13.0	13.7	14.7	14.3
9/23	9.0	8.5	9.2	9.5	10.1	10.4	11.5	12.0	12.3	12.8	12.9	12.7
9/24	8.4	8.4	8.7	8.8	9.3	9.5	11.3	11.6	12.1	12.6	12.5	
9/25	8.3	8.5	8.8	8.9	9.1	9.3	11.6	11.7	12.1	12.6	12.7	
9/26	8.6	8.6	8.9	9.1	9.3	9.5	11.8	11.9	12.3	12.8	13.2	
9/27	8.7	8.6	8.9	9.1	9.4	9.6	12.1	12.2	12.5	13.0	13.6	
9/28	9.2	8.9	9.2	9.4	9.7	9.9	12.2	12.4	12.7	13.2	14.1	
9/29	9.8	8.8	9.2	9.5	9.9	10.1	12.4	12.6	12.8	13.2	14.0	
9/30	9.8	8.6	9.0	9.3	9.8	10.1	12.4	12.6	12.9	13.3	13.9	

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	9.7	8.7	9.3	9.3	9.7	9.9	12.2	12.6	12.9	13.3	13.4	
10/2	8.9	8.1	9.1	9.5	10.0	10.1	11.4	11.9	12.2	12.7	12.5	
10/3	7.3	7.7	8.0	8.0	8.3	8.4	10.5	10.4	11.1	11.5	10.4	
10/4	7.5	8.2	8.5	8.6	8.6	8.6	10.8	10.8	11.3	11.8	10.7	
10/5	7.1	7.7	7.9	8.1	8.4	8.5	11.1	10.7	11.3	11.5	10.0	
10/6	7.2	7.7	8.0	8.1	8.4	8.4	11.1	11.0	11.4	11.8	9.9	
10/7	7.4	7.7	8.0	8.1	8.4	8.5	11.1	11.0	11.5	11.7	10.1	
10/8	8.0	7.9	8.3	8.3	8.8	8.9	11.3	11.4	11.7	12.1	10.9	
10/9	8.3	7.9	8.4	8.6	9.1	9.2	11.1	11.3	11.6	12.0	11.4	
10/10	8.3	7.9	8.3	8.5	9.0	9.2	11.3	11.5	11.8	12.2	11.7	
10/11	7.5	7.8	8.0	8.1	8.3	8.5	11.0	11.0	11.3	11.7	10.9	
10/12	7.3	7.7	7.9	8.1	8.2	8.3	10.9	10.8	11.3	11.6	10.6	
10/13	6.6	7.4	7.6	7.6	7.6	7.7	10.7	10.5	11.0	11.3	10.5	
10/14	6.0	7.6	7.5	7.4	7.2	7.2	10.5	10.2	10.8	11.1	9.7	
10/15	6.2	8.0	8.0	7.8	7.6	7.5	10.6	10.3	10.8	11.1	9.5	
10/16	6.7	7.7	8.0	8.2	8.2	8.1	10.8	10.6	11.1	11.3	9.8	
10/17	6.9	7.2	7.4	7.6	7.7	7.8	10.8	10.6	11.2	11.4	10.0	
10/18	6.9	7.2	7.4	7.5	7.6	7.7	10.8	10.6	11.2	11.4	10.0	
10/19	6.8	7.8	7.7	7.5	7.4	7.4	10.6	10.5	11.0	11.3	10.0	
10/20	6.5	8.3	8.3	8.2	7.8	7.6	10.6	10.3	10.8	11.0	9.8	
10/21	6.3	10.5	9.6	8.5	7.9	7.7	10.6	10.1	10.7	10.8	9.5	
10/22	6.4	11.9	11.5	10.9	9.8	9.0	11.2	10.6	11.0	11.0	9.2	
10/23	6.7	10.6	11.0	11.3	10.5	10.0	11.4	11.1	11.3	11.3	9.4	
10/24	7.4	8.3	8.6	9.4	9.8	10.0	11.3	11.5	11.6	11.8	10.2	
10/25	7.7	8.4	8.6	8.7	9.0	9.1	11.1	11.2	11.4	11.7	10.4	11.0
10/26	8.5	7.5	8.7	9.0	9.5	9.5	10.7	11.1	11.2	11.7	10.5	10.7
10/27	7.5	6.8	7.4	7.8	8.1	8.3	10.4	10.4	10.8	11.1	9.7	9.9
10/28	7.7	6.8	8.1	8.0	8.7	8.8	9.9	10.3	10.5	11.0	9.3	9.5
10/29	7.3	6.6	7.6	7.7	8.2	8.3	9.5	9.9	10.2	10.5	8.9	9.0
10/30	7.2	6.7	7.5	7.5	8.1	8.2	9.6	9.8	10.3	10.6	8.9	9.1
10/31	7.2	6.8	7.8	7.6	8.2	8.3	9.2	9.6	10.1	10.5	8.8	9.0

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	8.0	6.9				9.4	9.8	10.1	10.2	10.4	9.1	9.3
11/2	8.0	6.7				9.6	9.9	10.5	10.3	10.4	9.4	9.5
11/3	7.5	6.6				8.9	9.3	10.0	10.1	10.3	9.0	9.2
11/4	7.5	6.6				9.1	9.4	9.9	9.7	9.9	8.8	8.9
11/5	6.9	6.5				8.6	9.0	9.5	9.6	9.8	8.3	8.5
11/6	6.6	6.4				8.3	8.6	9.2	9.3	9.5	7.9	8.1
11/7	6.0	6.2				7.5	8.0	8.5	9.0	9.2	7.8	8.0
11/8	5.1	6.2				6.3	7.0	7.3	8.6	8.8	7.0	7.3
11/9	5.1	6.3				6.1	7.0	6.8	8.5	8.7	6.3	6.7
11/10	5.0	6.3				6.4	7.2	7.2	8.5	8.7	6.7	7.2
11/11	4.4	6.2				5.7	6.9	6.8	8.4	8.5	6.1	6.7
11/12	4.9	6.2				5.6	7.1	6.6	8.5	8.6	5.8	6.7
11/13	5.1	5.9				5.8	7.4	7.0	8.4	8.5	5.9	6.8
11/14	5.8	6.0				6.5	7.5	7.7	8.3	8.5	6.6	7.3
11/15	6.2	6.1				7.2	7.9	8.1	8.3	8.5	7.4	7.8
11/16	6.4	6.2				7.6	8.1	8.5	8.4	8.6	8.1	8.3
11/17	5.0	5.8				6.4	7.4	7.6	8.1	8.2	7.2	7.6
11/18	4.3	5.7				5.0	6.7	6.5	7.9	7.9	5.7	6.5
11/19	4.3	5.8				4.6	6.6	6.2	7.8	7.8	5.3	6.3
11/20	4.7	5.9				4.8	6.7	6.3	7.8	7.9	5.5	6.5
11/21	5.4	5.9				5.7	7.2	7.0	7.8	8.0	6.0	6.9
11/22	5.7	6.0				6.6	7.4	7.6	7.9	8.0	6.6	7.2
11/23	4.7	5.8				6.2	6.7	7.1	7.4	7.7	6.5	6.8
11/24	4.8	5.8				6.3	6.8	6.8	7.2	7.5	6.0	6.4
11/25	4.7	5.8				6.0	6.7	6.7	7.2	7.4	5.8	6.3
11/26	5.4	6.2				6.8	7.2	7.4	7.5	7.7	6.4	6.8
11/27	5.9	6.3				7.8	8.0	8.2	7.9	8.0	6.5	6.6
11/28	5.8	6.1				7.7	7.8	8.3	7.7	7.8	6.6	6.8
11/29	5.6	6.0				7.2	7.4	7.9	7.5	7.6	6.7	6.9
11/30	5.1	5.9				6.8	7.1	7.5	7.3	7.4	6.4	6.6

DATE	RM 18.2 (SFK)	Sultan River									Skykomish River	
		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	4.9	5.9				6.4	6.8	7.1	7.2	7.3	6.3	6.5
12/2	4.7	5.8				6.3	6.7	7.0	7.1	7.2	6.2	6.4
12/3	3.8	5.7				5.2	6.1	6.1	6.8	6.8	5.5	5.8
12/4	3.1	5.2				4.0	5.6	5.2	6.6	6.6	4.1	4.9
12/5	2.5	5.7				3.2	5.2	4.6	6.4	6.3	3.4	4.3
12/6	2.3	5.8				2.8	5.0	4.2	6.1	6.1	2.8	4.0
12/7	2.2	5.6				2.8	4.9	4.2	5.8	5.9	2.4	3.6
12/8	3.1	5.8				3.9	5.3	4.9	5.8	5.9	3.1	4.0
12/9	3.5	5.7				4.5	5.5	5.3	5.8	5.9	3.8	4.5
12/10	3.7	5.7				5.1	5.5	5.6	5.9	6.0	4.4	5.0
12/11	3.8	5.8				5.6	5.7	5.9	5.9	6.1	4.8	5.1
12/12	4.3	5.5				6.0	6.0	6.2	6.0	6.1	4.8	5.0
12/13	4.2	5.5				5.8	5.9	6.2	6.0	6.0	5.1	5.3
12/14	4.6	5.3				6.2	6.2	6.5	6.1	6.1	5.4	5.6
12/15	4.3	5.1				5.7	5.8	6.3	5.9	5.9	5.6	5.7
12/16	4.7	5.5				6.1	6.1	6.5	5.9	6.0	5.7	5.8
12/17	4.7	5.5				6.6	6.4	6.9	6.1	6.1	6.0	6.0
12/18	4.7	5.3				6.6	6.5	7.0	6.1	6.1	5.9	6.0
12/19	4.8	5.3				6.6	6.4	7.0	6.0	6.0	5.8	5.9
12/20	4.9	5.4				6.6	6.4	7.0	6.0	6.0	6.1	6.1
12/21	3.7	5.0				5.4	5.6	6.2	5.6	5.6	5.3	5.4
12/22	3.7	5.0				5.0	5.2	5.5	5.4	5.5	4.9	5.0
12/23	3.5	5.0				5.2	5.3	5.7	5.4	5.5	4.8	5.0
12/24	3.7	4.9				5.2	5.3	5.7	5.4	5.4	4.5	4.8
12/25	3.5	4.8				4.8	5.0	5.1	5.1	5.2	4.2	4.5
12/26	3.4	4.8				4.9	5.1	5.2	5.1	5.2	4.4	4.6
12/27	3.4	4.8				4.9	5.1	5.4	5.2	5.2	4.4	4.7
12/28	3.1	4.7				4.7	5.0	5.2	5.1	5.2	4.5	4.7
12/29	3.0	5.0				5.5	5.5	5.8	5.7	5.6	4.9	5.2
12/30	3.7	4.7				5.6	5.7	6.0	5.8	5.7	4.7	4.9
12/31	3.0	4.4				4.6	4.8	4.9	4.9	4.9	4.3	4.4

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	3.7	4.3				4.7	4.8	5.0	4.7	4.7	4.5	4.6
1/2	3.8	4.2				4.7	4.8	5.1	4.6	4.7	4.7	4.7
1/3	3.9	4.2				4.8	4.9	5.1	4.5	4.6	4.8	4.8
1/4	4.0	4.1				4.9	4.9	5.2	4.5	4.6	4.9	4.9
1/5	4.1	4.2				5.1	5.2	5.5	4.5	4.7	5.1	5.1
1/6	4.2	4.2				5.3	5.4	5.8	4.6	4.7	5.3	5.3
1/7	4.2	4.2				5.5	5.5	6.0	4.7	4.8	5.4	5.4
1/8	4.1	4.2				5.5	5.6	6.1	4.8	4.9	5.4	5.4
1/9	4.0	4.2				5.6	5.6	6.1	5.0	5.0	5.3	5.3
1/10	4.1	4.2				5.7	5.7	6.2	5.1	5.0	5.3	5.3
1/11	4.2	4.2				5.8	5.8	6.3	5.1	5.1	5.3	5.5
1/12	4.3	4.3				5.9	5.8	6.4	5.1	5.1	5.4	5.7
1/13	4.4	4.3				6.0	5.9	6.5	5.2	5.2	5.5	5.9
1/14	4.6	4.4				6.2	6.0	6.6	5.2	5.2	5.6	6.0
1/15	4.8	4.5				6.3	6.1	6.8	5.2	5.2	5.7	6.1
1/16	4.8	4.5				6.2	6.1	6.7	5.1	5.2	5.8	6.1
1/17	4.6	4.4				6.0	5.9	6.6	5.0	5.1	5.7	6.1
1/18	4.4	4.4				6.0	5.8	6.5	5.0	5.1	5.7	5.9
1/19	4.2	4.3				5.8	5.7	6.3	5.0	5.1	5.5	5.7
1/20	4.0	4.3				5.5	5.5	6.1	4.9	5.0	5.4	5.4
1/21	3.8	4.2				5.4	5.4	6.0	4.9	5.0	5.2	5.3
1/22	3.6	4.1				5.3	5.3	5.9	4.8	4.9	5.1	5.2
1/23	3.5	4.1				5.2	5.2	5.8	4.7	4.8	5.0	5.1
1/24	3.5	4.1				5.1	5.2	5.7	4.7	4.8	4.9	5.0
1/25	3.5	4.1				5.1	5.2	5.7	4.7	4.8	4.9	5.0
1/26	3.5	4.1				5.2	5.3	5.8	4.7	4.8	4.9	5.0
1/27	3.5	4.1				5.3	5.3	5.9	4.8	4.8	5.0	5.1
1/28	3.4	4.1				5.2	5.2	5.9	4.7	4.8	4.9	5.0
1/29	3.3	4.0				5.1	5.2	5.8	4.7	4.8	4.9	5.0
1/30	3.3	4.1				5.2	5.3	5.9	4.8	4.8	5.0	5.1
1/31	3.4	4.1				5.4	5.5	6.1	5.0	4.9	5.1	5.2

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	3.4	4.1				5.5	5.6	6.2	5.3	5.1	5.1	5.3
2/2	3.5	4.1				5.3	5.5	6.1	5.3	5.2	5.1	5.3
2/3	3.6	4.1				5.4	5.4	6.1	5.4	5.3	5.2	5.3
2/4	3.8	4.2				5.6	5.5	6.2	5.5	5.4	5.4	5.5
2/5	4.0	4.2				5.9	5.7	6.4	5.6	5.4	5.6	5.7
2/6	4.0	4.2				5.9	5.7	6.5	5.6	5.5	5.6	5.8
2/7	4.0	4.1				5.8	5.6	6.4	5.4	5.4	5.6	5.7
2/8	3.9	4.1				5.6	5.4	6.2	5.1	5.2	5.5	5.6
2/9	3.4	4.0				5.6	5.4	6.0	4.9	5.0	5.4	5.5
2/10	3.3	4.0				5.3	5.2	5.8	4.7	4.9	5.2	5.3
2/11	2.8	3.9				4.9	5.0	5.5	4.6	4.7	4.9	5.0
2/12	2.6	3.8				4.6	4.7	5.2	4.4	4.6	4.7	4.8
2/13	2.2	3.8				4.3	4.5	5.0	4.3	4.5	4.6	4.6
2/14	1.9	3.8				4.1	4.2	4.8	4.2	4.4	4.4	4.5
2/15	1.8	3.8				4.0	4.1	4.7	4.2	4.4	4.4	4.5
2/16	2.0	3.7				4.0	4.0	4.6	4.2	4.4	4.4	4.4
2/17	1.7	3.7				3.9	3.9	4.5	4.1	4.3	4.3	4.4
2/18	1.8	3.6				3.8	3.8	4.4	4.0	4.2	4.1	4.2
2/19	1.6	3.5				3.6	3.7	4.1	3.9	4.1	3.9	4.0
2/20	1.5	3.5				3.4	3.5	3.9	3.7	3.9	3.5	3.7
2/21	1.5	3.5				3.2	3.4	3.7	3.6	3.8	3.3	3.5
2/22	1.4	3.5				3.0	3.3	3.6	3.5	3.7	3.1	3.3
2/23	1.5	3.5				2.9	3.2	3.6	3.5	3.7	3.0	3.3
2/24	1.5	3.5				2.9	3.1	3.6	3.5	3.7	3.1	3.3
2/25	1.6	3.5				3.1	3.1	3.7	3.6	3.7	3.3	3.5
2/26	1.7	3.5				3.2	3.2	3.9	3.6	3.8	3.7	3.8
2/27	2.0	3.5				3.4	3.3	4.1	3.6	3.8	4.0	4.0
2/28	2.2	3.5				3.6	3.4	4.3	3.7	3.9	4.5	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	2.3	3.5				3.8	3.4	4.4	3.6	3.8	4.7	4.4
3/2	2.4	3.5				3.9	3.5	4.5	3.6	3.8	4.9	4.5
3/3	2.6	3.5				4.1	3.6	4.6	3.6	3.8	5.2	4.8
3/4	2.7	3.5				4.1	3.6	4.6	3.8	3.9	5.4	4.9
3/5	2.7	3.5				4.1	3.6	4.6	3.9	4.0	5.3	5.0
3/6	2.7	3.5				4.2	3.7	4.7	4.1	4.2	5.4	5.1
3/7	2.8	3.5				4.2	3.8	4.8	4.4	4.3	5.4	5.2
3/8	2.9	3.5				4.3	3.9	4.9	4.7	4.5	5.7	5.6
3/9	3.0	3.5				4.3	4.0	5.0	5.0	4.8	6.0	5.9
3/10	3.1	3.6				4.4	4.1	5.1	5.2	5.1	6.0	6.0
3/11	3.2	3.6				4.5	4.2	5.2	5.4	5.3	6.1	6.1
3/12	3.4	3.6				4.6	4.3	5.3	5.5	5.5	6.2	6.3
3/13	3.5	3.7				4.7	4.4	5.5	5.6	5.6	6.5	6.5
3/14	3.6	3.7				4.7	4.4	5.5	5.7	5.7	6.6	6.6
3/15	3.6	3.8				4.8	4.5	5.5	5.7	5.8	6.5	6.6
3/16	3.6	3.8				4.8	4.5	5.5	5.7	5.8	6.4	6.5
3/17	3.7	3.8				4.8	4.5	5.5	5.6	5.8	6.5	6.6
3/18	3.7	3.8				4.9	4.5	5.5	5.7	5.8	6.7	6.8
3/19	3.7	3.9				4.9	4.6	5.5	5.7	5.9	6.7	6.7
3/20	3.6	3.9				4.8	4.5	5.5	5.6	5.9	6.6	6.6
3/21	3.5	3.9				4.8	4.5	5.3	5.5	5.8	6.5	6.5
3/22	3.4	3.9				4.8	4.5	5.3	5.4	5.6	6.4	6.4
3/23	3.2	3.9				4.7	4.4	5.2	5.2	5.5	6.3	6.2
3/24	3.0	3.9				4.6	4.4	5.1	5.1	5.3	6.0	6.0
3/25	2.9	3.9				4.6	4.3	5.1	5.1	5.3	5.9	5.8
3/26	3.0	4.0				4.8	4.4	5.2	5.1	5.3	5.9	5.9
3/27	3.1	4.0				4.9	4.4	5.4	5.2	5.4	6.1	6.0
3/28	3.3	4.0				5.2	4.5	5.7	5.4	5.6	6.4	6.3
3/29	3.4	4.1				5.3	4.6	5.8	5.5	5.7	6.6	6.5
3/30	3.4	4.1				5.4	4.7	5.9	5.5	5.8	6.6	6.5
3/31	3.6	4.1				5.5	4.8	6.0	5.5	5.8	6.7	6.6

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
4/1	3.6	4.1	4.4			5.5	4.8	5.9	5.3	5.7	6.7	6.5
4/2	3.5	4.2	4.4			5.4	4.8	5.9	5.2	5.6	6.6	6.5
4/3	3.6	4.2	4.4		5.1	5.6	4.9	6.1	5.2	5.6	6.7	6.5
4/4	3.4	4.3	4.5		5.1	5.5	5.0	6.1	5.2	5.5	6.7	6.5
4/5	3.4	4.4	4.6		5.1	5.5	5.1	6.2	5.2	5.5	6.5	6.3
4/6	3.7	4.5	4.7		5.4	5.7	5.3	6.5	5.4	5.6	6.7	6.5
4/7	3.7	4.7	4.8		5.6	5.9	5.4	6.8	5.6	5.8	6.8	6.7
4/8	3.7	4.8	4.9		5.7	6.1	5.6	7.0	5.8	5.9	6.9	6.8
4/9	3.7	4.8	4.9		5.7	6.1	5.8	7.1	5.8	6.0	6.8	6.8
4/10	3.6	4.7	4.9		5.6	5.9	5.8	6.9	5.8	5.9	6.5	6.5
4/11	3.6	4.7	4.8		5.6	5.9	5.8	6.8	5.7	5.9	6.2	6.3
4/12	3.8	4.7	4.9		5.7	6.1	5.8	7.0	5.8	6.0	6.3	6.4
4/13	3.7	4.7	4.9		5.6	5.9	5.8	6.8	5.8	5.9	6.2	6.3
4/14	3.6	4.7	4.7		5.5	5.8	5.7	6.7	5.7	5.9	6.1	6.2
4/15	3.7	4.6	4.8		5.5	5.9	5.6	6.8	5.8	6.0	6.3	6.4
4/16	3.8	4.6	4.9		5.7	6.1	5.6	7.0	5.8	6.1	6.5	6.6
4/17	4.1	4.6	4.9		5.9	6.3	5.7	7.3	5.9	6.2	6.8	6.9
4/18	4.2	4.6	5.0		5.9	6.4	5.8	7.5	5.9	6.3	7.1	7.1
4/19	4.3	4.5	5.0		6.0	6.6	5.8	7.5	5.9	6.3	7.4	7.3
4/20	4.6	4.5	5.0		6.2	6.9	5.9	7.8	6.0	6.4	7.9	7.7
4/21	5.0	4.5	5.2		6.5	7.2	6.0	8.1	6.3	6.7	8.3	8.1
4/22	5.2	4.5	5.3		6.7	7.5	6.2	8.4	6.4	6.9	8.6	8.4
4/23	5.4	4.5	5.3		6.9	7.8	6.4	8.6	6.7	7.1	8.8	8.6
4/24	5.4	4.5	5.4		6.9	7.8	6.6	8.9	6.9	7.3	8.9	8.7
4/25	5.4	4.5	5.4		7.0	7.8	6.7	8.9	7.1	7.4	8.9	8.7
4/26	5.3	4.5	5.4		6.9	7.7	6.8	8.9	7.2	7.5	8.7	8.5
4/27	5.1	4.5	5.3		6.8	7.5	6.8	8.7	7.2	7.5	8.3	8.3
4/28	4.9	4.5	5.3		6.6	7.2	6.8	8.5	7.1	7.4	8.0	8.0
4/29	5.0	4.5	5.3	5.8	6.6	7.3	6.8	8.5	7.2	7.5	8.0	8.0
4/30	5.1	4.5	5.3	5.8	6.6	7.3	6.8	8.5	7.2	7.6	8.0	8.0

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
5/1	5.2	4.5	5.3	5.9	6.8	7.4	6.8	8.5	7.2	7.6	8.1	8.1
5/2	5.5	4.6	5.4	6.0	7.0	7.7	6.9	8.8	7.4	7.9	8.2	8.2
5/3	5.7	4.6	5.4	6.1	7.1	7.8	7.0	9.0	7.5	8.1	8.4	8.4
5/4	6.1	4.6	5.5	6.3	7.2	8.0	7.0	9.2	7.6	8.3	8.6	8.7
5/5	6.5	4.7	5.6	6.3	7.5	8.4	7.2	9.5	7.9	8.6	8.9	8.9
5/6	6.3	4.8	5.6	6.2	7.4	8.3	7.3	9.6	8.1	8.7	8.7	8.8
5/7	6.1	4.9	5.6	6.2	7.3	8.0	7.3	9.4	8.2	8.9	8.4	8.4
5/8	6.1	5.0	5.7	6.4	7.2	7.9	7.3	9.2	8.3	9.1	8.2	8.3
5/9	6.3	5.1	5.9	6.7	7.4	8.2	7.4	9.4	8.6	9.5	8.4	8.4
5/10	6.6	5.3	6.0	6.9	7.8	8.6	7.5	9.7	9.0	10.2	8.6	8.7
5/11	6.8	5.4	6.2	7.1	8.1	9.0	7.7	10.0	9.4	10.9	8.7	8.9
5/12	6.9	5.5	6.3	7.1	8.4	9.3	7.9	10.2	9.7	11.4	8.9	9.0
5/13	7.1	5.5	6.3	7.1	8.4	9.3	8.1	10.4	9.8	11.6	9.0	9.1
5/14	7.3	5.6	6.4	7.1	8.4	9.3	8.2	10.5	9.8	11.6	9.2	9.4
5/15	7.4	5.6	6.4	6.8	8.4	9.4	8.2	10.5	9.9	11.8	9.3	9.5
5/16	7.3	5.6	6.2	6.6	8.1	8.9	8.2	10.2	9.8	11.6	9.1	9.3
5/17	7.1	5.6	6.1	6.4	7.7	8.4	8.0	9.8	9.5	11.2	9.0	9.1
5/18	7.1	5.6	6.0	6.5	7.4	8.1	7.8	9.5	9.3	10.9	9.0	9.1
5/19	7.2	5.6	6.1	6.7	7.5	8.1	7.8	9.5	9.3	10.9	9.2	9.3
5/20	7.6	5.6	6.2	6.9	7.8	8.6	7.8	9.6	9.4	11.3	9.4	9.5
5/21	8.0	5.6	6.2	6.9	8.1	8.9	7.9	9.9	9.5	11.6	9.6	9.7
5/22	8.2	5.7	6.2	6.9	8.1	8.9	8.0	10.1	9.6	11.7	9.9	10.0
5/23	8.1	5.7	6.3	7.1	8.2	9.1	8.1	10.1	9.6	11.7	10.1	10.2
5/24	8.5	5.7	6.4	7.1	8.5	9.5	8.2	10.4	9.8	12.1	10.3	10.4
5/25	8.6	5.7	6.3	7.0	8.6	9.6	8.3	10.6	9.9	12.3	10.4	10.5
5/26	8.3	5.7	6.2	6.8	8.3	9.2	8.3	10.3	9.8	12.0	10.2	10.3
5/27	8.2	5.7	6.2	6.6	8.1	8.9	8.1	10.0	9.7	11.7	10.2	10.3
5/28	7.9	5.6	6.1	6.6	7.8	8.7	8.0	9.7	9.5	11.6	10.1	10.2
5/29	7.8	5.6	6.1	6.8	7.8	8.6	7.9	9.6	9.5	11.5	10.0	10.1
5/30	8.0	5.6	6.2	6.6	8.1	9.0	7.9	9.8	9.7	11.7	10.3	10.4
5/31	7.8	5.7	6.1	6.6	7.8	8.6	7.9	9.8	9.8	11.5	10.3	10.4

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

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
7/1	8.8	7.6	8.7	10.1	10.8	11.6	9.7	11.4	10.3	11.4	12.3	12.3
7/2	9.3	7.8	9.1	10.5	11.6	12.4	9.9	11.8	10.6	11.8	12.9	12.8
7/3	9.7	7.9	9.4	10.6	12.3	13.1	10.1	12.4	10.8	12.3	13.5	13.4
7/4	9.9	7.9	9.6	10.9	12.7	13.6	10.3	12.7	11.0	12.5	14.1	14.0
7/5	10.4	8.1	9.7	11.3	13.2	14.2	10.5	13.0	11.1	12.9	14.6	14.5
7/6	11.0	8.2	10.0	11.2	13.8	14.7	10.6	13.3	11.2	13.1	15.1	14.9
7/7	11.1	8.3	10.0	11.5	13.8	14.7	10.8	13.5	11.3	13.1	15.3	15.2
7/8	11.4	8.2	10.1	11.6	14.3	15.1	10.9	13.6	11.2	13.4	15.7	15.6
7/9	11.6	8.3	10.1	11.8	14.4	15.2	11.0	13.8	11.3	13.4	16.0	15.8
7/10	11.9	8.4	10.2	12.3	14.6	15.4	11.0	13.8	11.3	13.5	16.4	16.1
7/11	12.5	8.5	10.5	12.5	15.2	16.0	11.1	14.2	11.4	13.9	16.9	16.6
7/12	13.7	8.6	10.7	12.7	15.5	16.4	11.3	14.4	11.6	14.0	17.4	17.1
7/13	12.1	8.7	10.8	13.2	15.8	16.7	11.4	14.6	11.7	14.2	17.8	17.5
7/14	13.7	8.8	11.1	13.1	16.3	17.2	11.6	14.9	11.8	14.4	18.3	17.9
7/15	13.8	8.7	11.1	12.7	16.2	17.2	11.7	15.0	11.9	14.3	18.6	18.2
7/16	12.5	8.5	10.7	12.4	15.7	16.8	11.7	14.6	11.9	14.0	18.5	18.0
7/17	13.1	8.3	10.5	12.2	15.3	16.5	11.7	14.5	11.8	13.9	18.5	18.0
7/18	14.0	8.2	10.2	12.0	14.9	16.2	11.6	14.3	11.8	13.8	18.5	17.9
7/19	14.0	8.0	10.1	11.9	14.7	16.0	11.6	14.2	11.8	13.8	18.5	17.9
7/20	12.4	7.9	10.0	11.7	14.6	15.9	11.5	14.1	11.8	13.7	18.6	17.7
7/21	13.4	7.7	9.8	11.7	14.5	15.8	11.5	14.1	11.7	13.3	18.8	17.5
7/22	14.1	7.6	9.7	12.0	14.6	15.9	11.6	14.2	11.8	13.3	19.1	17.5
7/23	14.7	7.6	9.9	12.1	15.0	16.3	11.7	14.6	11.8	13.5	19.6	17.8
7/24	15.0	7.6	9.9	12.1	15.2	16.5	11.9	14.8	11.9	13.4	20.0	17.9
7/25	15.5	7.6	9.9	12.0	15.3	16.6	12.1	15.0	12.0	13.3	20.4	18.1
7/26	15.5	7.5	9.9	11.9	15.3	16.7	12.3	15.1	12.0	13.2	20.8	18.2
7/27	14.9	7.5	9.8	11.9	15.2	16.6	12.4	15.2	12.1	13.2	21.0	18.4
7/28	15.1	7.5	9.8	11.8	15.2	16.6	12.5	15.3	12.3	13.7	21.2	18.9
7/29	15.1	7.5	9.7	11.4	15.0	16.2	12.6	15.1	12.5	13.8	21.2	18.9
7/30	15.2	7.4	9.5	11.0	14.4	15.6	12.6	14.9	12.5	13.8	20.8	18.8
7/31	15.4	7.4	9.3	10.9	13.9	15.2	12.5	14.6	12.6	13.9	20.5	18.6

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
8/1	15.9	7.4	9.2	10.8	13.8	15.0	12.5	14.5	12.7	14.2	20.3	18.6
8/2	16.3	7.3	9.1	10.7	13.6	14.7	12.5	14.4	12.9	14.5	20.2	18.7
8/3	16.4	7.3	9.1	10.7	13.4	14.5	12.5	14.3	12.9	14.8	20.0	18.8
8/4	16.4	7.3	9.1	10.8	13.3	14.4	12.5	14.3	12.9	14.8	20.1	18.6
8/5	15.3	7.5	9.2	11.2	13.5	14.7	12.6	14.5	13.0	14.9	20.4	18.8
8/6	15.8	7.6	9.5	11.5	13.9	15.2	12.7	14.9	13.2	15.3	20.9	19.2
8/7	16.4	7.7	9.7	11.3	14.3	15.5	12.9	15.2	13.3	15.4	21.5	19.5
8/8	16.5	7.7	9.6	11.2	14.1	15.3	13.1	15.2	13.4	15.3	21.6	19.5
8/9	16.3	7.7	9.6	11.1	13.9	15.1	13.2	15.2	13.5	15.3	21.4	19.4
8/10	16.1	7.7	9.5	10.9	13.7	14.9	13.2	15.1	13.6	15.2	21.2	19.2
8/11	15.9	7.7	9.5	10.7	13.5	14.7	13.3	15.0	13.7	15.2	20.9	19.0
8/12	15.7	7.7	9.4	10.6	13.2	14.4	13.3	14.9	13.7	15.2	20.7	18.8
8/13	15.5	7.6	9.3	10.5	13.0	14.2	13.3	14.9	13.8	15.3	20.4	18.6
8/14	15.1	7.6	9.2	10.6	12.8	14.0	13.3	14.8	13.9	15.3	20.0	18.5
8/15	15.1	7.6	9.3	10.6	12.8	14.0	13.4	14.8	14.0	15.5	19.9	18.5
8/16	15.1	7.7	9.3	10.6	12.8	14.0	13.4	14.9	14.1	15.6	19.9	18.4
8/17	15.1	7.7	9.3	10.5	12.8	14.0	13.5	15.0	14.2	15.7	19.9	18.4
8/18	15.1	7.7	9.3	10.5	12.7	13.9	13.6	15.0	14.2	15.8	19.8	18.4
8/19	15.2	7.7	9.2	10.2	12.7	13.8	13.6	15.0	14.3	15.9	19.7	18.4
8/20	14.9	7.6	9.1	10.0	12.4	13.5	13.5	14.9	14.2	15.6	19.4	18.2
8/21	14.6	7.6	9.0	9.7	12.1	13.2	13.3	14.6	13.9	15.3	19.2	17.9
8/22	14.3	7.5	8.8	9.4	11.7	12.7	13.1	14.3	13.6	14.9	18.8	17.5
8/23	13.9	7.4	8.6	9.4	11.3	12.2	12.8	13.9	13.3	14.4	18.2	16.9
8/24	13.6	7.3	8.5	9.4	11.2	12.1	12.7	13.7	13.1	14.2	18.0	16.7
8/25	13.4	7.3	8.5	9.3	11.1	12.0	12.5	13.6	12.9	14.0	17.8	16.6
8/26	13.1	7.2	8.4	9.4	11.0	11.9	12.4	13.4	12.7	13.8	17.6	16.4
8/27	13.0	7.2	8.5	9.4	11.0	12.0	12.4	13.4	12.7	14.0	17.6	16.4
8/28	13.0	7.3	8.5	9.4	11.0	12.0	12.4	13.4	12.8	14.0	17.6	16.4
8/29	13.2	7.3	8.5	9.6	11.1	12.1	12.5	13.5	12.9	14.3	17.7	16.5
8/30	13.5	7.4	8.6	9.4	11.3	12.3	12.7	13.7	13.1	14.6	18.1	16.9
8/31	13.6	7.4	8.5	9.3	11.2	12.2	12.7	13.8	13.1	14.7	18.3	17.0

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	13.7	7.4	8.5	9.2	10.9	12.0	12.7	13.7	13.2	14.8	18.2	16.9
9/2	13.6	7.5	8.4	9.2	10.7	11.8	12.7	13.6	13.3	14.8	18.2	17.0
9/3	13.6	7.5	8.4	9.3	10.7	11.6	10.9	13.6	13.4	15.0	18.2	17.0
9/4	13.7	7.5	8.4	9.2	10.6	11.6	11.6	13.6	13.5	15.2	18.3	17.1
9/5	13.5	7.5	8.4	9.2	10.5	11.4	12.8	13.6	13.8	15.3	18.2	17.0
9/6	13.4	7.5	8.4	9.2	10.3	11.2	13.1	13.7	14.3	15.7	18.2	17.1
9/7	13.1	7.5	8.4	9.2	10.2	10.9	13.2	13.7	14.4	15.9	18.0	17.0
9/8	12.7	7.5	8.6	9.1	10.1	10.8	13.1	13.6	14.4	15.8	17.6	16.8
9/9	12.3	7.4	8.6	9.1	10.1	10.6	12.9	13.4	14.4	15.8	17.3	16.5
9/10	11.9	7.4	8.7	9.1	10.0	10.4	12.6	13.1	14.3	15.5	16.7	16.1
9/11	11.4	7.6	8.8	9.3	10.0	10.3	12.6	13.0	14.2	15.4	16.2	15.7
9/12	11.2	7.8	9.1	9.4	10.1	10.4	12.6	13.0	13.9	15.1	15.8	15.4
9/13	10.7	8.0	9.2	9.5	10.2	10.5	12.3	12.8	13.4	14.5	15.4	14.9
9/14	10.4	8.2	9.4	9.5	10.3	10.6	12.1	12.6	13.2	14.2	15.0	14.6
9/15	10.2	8.4	9.3	9.6	10.3	10.6	12.2	12.6	13.1	14.1	14.9	14.5
9/16	10.1	8.6	9.4	9.5	10.3	10.7	12.4	12.7	13.0	14.1	14.8	14.5
9/17	10.0	8.8	9.4	9.6	10.2	10.7	12.6	12.9	13.0	14.1	14.8	14.5
9/18	9.9	8.9	9.4	9.7	10.3	10.7	12.6	13.0	13.1	14.1	14.8	14.5
9/19	9.9	8.9	9.5	9.8	10.4	10.8	12.7	13.0	13.1	14.2	15.0	14.7
9/20	9.9	8.9	9.5	9.7	10.4	10.9	12.6	12.9	13.1	14.1	15.0	14.6
9/21	9.8	8.8	9.4	9.7	10.3	10.7	12.5	12.9	13.0	14.0	14.9	14.4
9/22	9.7	8.8	9.5	9.7	10.2	10.6	12.4	12.8	13.0	13.9	14.7	14.4
9/23	9.6	8.9	9.5	9.8	10.2	10.6	12.4	12.8	12.9	13.9	14.6	14.3
9/24	9.6	8.9	9.5	9.8	10.1	10.6	12.4	12.7	12.9	13.8	14.6	
9/25	9.5	8.9	9.5	9.7	10.1	10.6	12.4	12.7	12.8	13.8	14.7	
9/26	9.9	8.9	9.4	9.6	10.0	10.6	12.4	12.6	12.8	13.8	14.6	
9/27	9.6	8.9	9.4	9.7	10.0	10.5	12.5	12.7	12.9	13.8	14.7	
9/28	9.4	9.0	9.5	9.8	10.0	10.5	12.6	12.8	12.9	13.8	14.7	
9/29	9.1	9.0	9.7	9.7	10.2	10.5	12.5	12.8	13.0	13.8	14.6	
9/30	8.6	8.9	9.6	9.7	10.0	10.3	12.3	12.6	12.8	13.5	14.1	

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
10/1	8.1	9.1	9.7	9.6	9.9	10.1	12.1	12.4	12.6	13.3	13.7	
10/2	8.1	8.9	9.5	9.4	9.8	9.8	11.9	12.1	12.4	13.0	13.0	
10/3	8.1	8.7	9.3	9.2	9.5	9.5	11.7	11.8	12.2	12.8	12.3	
10/4	8.1	8.6	9.2	9.0	9.4	9.4	11.5	11.6	12.0	12.6	11.8	
10/5	7.9	8.4	8.9	8.8	9.2	9.2	11.4	11.5	11.8	12.4	11.4	
10/6	7.6	8.4	8.7	8.8	9.0	9.1	11.3	11.3	11.7	12.3	11.2	
10/7	7.4	8.4	8.7	8.6	9.1	9.2	11.4	11.5	11.8	12.4	11.4	
10/8	7.3	8.1	8.4	8.5	9.0	9.2	11.4	11.5	11.8	12.4	11.5	
10/9	7.2	8.1	8.4	8.5	9.0	9.2	11.4	11.5	11.8	12.4	11.7	
10/10	7.1	8.1	8.4	8.4	8.9	9.1	11.3	11.5	11.7	12.4	11.8	
10/11	7.1	8.1	8.3	8.3	8.7	8.9	11.2	11.4	11.6	12.3	11.8	
10/12	7.1	8.1	8.3	8.3	8.5	8.7	11.2	11.3	11.5	12.3	11.7	
10/13	7.1	8.1	8.3	8.2	8.4	8.6	11.1	11.2	11.5	12.3	11.6	
10/14	7.1	8.0	8.2	8.1	8.3	8.4	11.0	11.1	11.4	12.2	11.3	
10/15	7.2	7.9	8.1	8.0	8.1	8.3	11.0	11.0	11.4	12.2	11.2	
10/16	7.3	7.9	8.1	8.0	8.0	8.2	11.0	11.0	11.3	12.1	11.0	
10/17	7.5	8.0	8.2	8.3	8.0	8.2	11.0	10.9	11.3	12.0	10.9	
10/18	7.7	8.6	8.7	8.7	8.2	8.2	11.0	10.9	11.3	12.0	10.7	
10/19	7.9	9.1	9.1	9.2	8.5	8.5	11.1	11.0	11.3	11.9	10.6	
10/20	7.9	9.6	9.6	9.5	8.9	8.8	11.2	11.1	11.3	11.9	10.5	
10/21	8.0	9.8	9.7	9.7	9.3	9.1	11.3	11.2	11.4	11.9	10.5	
10/22	8.0	9.9	9.9	9.9	9.5	9.3	11.3	11.2	11.4	11.8	10.4	
10/23	8.0	9.9	10.0	9.9	9.8	9.5	11.2	11.2	11.4	11.8	10.4	
10/24	7.9	9.7	9.9	9.7	9.9	9.7	11.2	11.2	11.4	11.8	10.3	
10/25	7.8	9.0	9.5	9.3	9.9	9.8	11.1	11.2	11.4	11.8	10.3	10.8
10/26	7.8	8.3	9.0	8.7	9.6	9.6	10.8	11.1	11.2	11.6	10.2	10.6
10/27	7.8	7.5	8.4	8.3	9.2	9.3	10.6	10.9	11.1	11.5	10.0	10.4
10/28	7.7	7.3	8.3	8.3	8.9	9.1	10.3	10.6	10.9	11.2	9.8	10.0
10/29	7.5	7.1	8.4	8.4	9.0	9.1	10.1	10.5	10.7	11.1	9.6	9.8
10/30	7.1	6.9	8.4	8.4	9.0	9.1	10.0	10.4	10.5	10.8	9.4	9.6
10/31	6.6	6.9	8.5	7.0	9.0	9.1	9.8	10.3	10.4	10.7	9.3	9.5

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
11/1	7.8	6.9				9.2	9.8	10.2	10.3	10.5	9.2	9.3
11/2	7.8	6.8				9.2	9.7	10.2	10.2	10.4	9.1	9.3
11/3	7.7	6.8				9.2	9.5	10.0	10.0	10.2	9.0	9.1
11/4	7.5	6.7				9.0	9.4	9.9	9.9	10.1	8.9	9.0
11/5	7.1	6.6				8.6	9.0	9.5	9.6	9.9	8.6	8.7
11/6	6.6	6.5				8.1	8.6	9.1	9.4	9.6	8.1	8.3
11/7	6.3	6.4				7.8	8.3	8.6	9.1	9.4	7.8	8.1
11/8	5.9	6.4				7.3	8.0	8.2	9.0	9.2	7.5	7.8
11/9	5.6	6.4				6.9	7.7	7.9	8.8	9.0	7.2	7.6
11/10	5.4	6.3				6.6	7.5	7.6	8.7	8.9	6.9	7.4
11/11	5.4	6.3				6.5	7.5	7.5	8.5	8.8	6.8	7.3
11/12	5.5	6.2				6.6	7.5	7.6	8.5	8.7	6.8	7.4
11/13	5.7	6.3				6.8	7.7	7.8	8.5	8.7	7.1	7.6
11/14	5.8	6.3				6.9	7.8	7.9	8.4	8.7	7.3	7.7
11/15	5.8	6.2				6.8	7.7	7.9	8.4	8.6	7.2	7.7
11/16	5.7	6.1				6.6	7.6	7.8	8.3	8.5	7.1	7.6
11/17	5.6	6.1				6.5	7.6	7.7	8.2	8.4	7.1	7.6
11/18	5.5	6.1				6.4	7.5	7.6	8.1	8.3	7.0	7.5
11/19	5.5	6.1				6.3	7.4	7.5	8.0	8.3	6.9	7.4
11/20	5.2	5.9				6.1	7.2	7.4	7.9	8.1	6.6	7.2
11/21	5.1	5.9				6.0	7.1	7.2	7.8	8.0	6.4	7.0
11/22	5.2	6.0				6.1	7.1	7.2	7.7	7.9	6.4	6.9
11/23	5.4	6.0				6.4	7.2	7.4	7.7	7.9	6.5	7.0
11/24	5.5	6.1				6.9	7.4	7.6	7.7	7.9	6.6	7.0
11/25	5.5	6.1				7.1	7.5	7.8	7.7	7.9	6.6	7.0
11/26	5.5	6.1				7.2	7.5	7.8	7.7	7.8	6.6	6.9
11/27	5.6	6.1				7.3	7.5	7.8	7.6	7.8	6.6	6.8
11/28	5.6	6.1				7.2	7.5	7.9	7.6	7.8	6.6	6.8
11/29	5.6	6.1				7.3	7.5	7.9	7.6	7.7	6.7	6.8
11/30	5.4	6.0				7.1	7.3	7.7	7.5	7.6	6.6	6.7

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	5.0	5.9				6.5	7.0	7.3	7.3	7.4	6.3	6.5
12/2	4.5	5.9				5.9	6.6	6.8	7.1	7.2	5.8	6.2
12/3	4.0	5.9				5.2	6.2	6.3	6.9	7.0	5.3	5.8
12/4	3.6	5.8				4.7	5.9	5.8	6.7	6.8	4.8	5.4
12/5	3.4	5.8				4.4	5.7	5.5	6.5	6.6	4.3	5.0
12/6	3.2	5.8				4.1	5.5	5.3	6.3	6.4	4.0	4.8
12/7	3.2	5.8				4.1	5.4	5.2	6.2	6.2	3.8	4.6
12/8	3.3	5.9				4.3	5.5	5.2	6.1	6.2	3.9	4.6
12/9	3.5	5.8				4.7	5.6	5.4	6.0	6.1	4.1	4.7
12/10	3.8	5.8				5.1	5.7	5.7	6.0	6.1	4.4	4.9
12/11	4.1	5.7				5.6	5.9	6.0	6.0	6.1	4.8	5.2
12/12	4.3	5.6				5.8	6.0	6.2	6.0	6.1	5.2	5.4
12/13	4.4	5.6				6.1	6.1	6.4	6.0	6.1	5.4	5.6
12/14	4.6	5.6				6.3	6.2	6.6	6.1	6.1	5.6	5.7
12/15	4.7	5.5				6.4	6.3	6.7	6.1	6.1	5.7	5.8
12/16	4.8	5.4				6.5	6.4	6.8	6.1	6.1	5.8	5.9
12/17	4.9	5.5				6.6	6.4	6.9	6.1	6.1	6.0	6.0
12/18	4.8	5.4				6.5	6.4	6.9	6.1	6.1	6.0	6.0
12/19	4.7	5.4				6.4	6.3	6.8	6.0	6.0	5.9	5.9
12/20	4.6	5.3				6.3	6.2	6.7	5.9	6.0	5.7	5.8
12/21	4.4	5.2				6.1	6.0	6.5	5.8	5.9	5.6	5.7
12/22	4.2	5.1				5.9	5.8	6.3	5.7	5.7	5.3	5.5
12/23	4.0	5.1				5.6	5.6	6.0	5.5	5.6	5.1	5.3
12/24	3.8	5.0				5.4	5.4	5.8	5.4	5.5	4.9	5.1
12/25	3.7	4.9				5.2	5.3	5.6	5.3	5.4	4.7	4.9
12/26	3.7	4.9				5.3	5.4	5.7	5.5	5.5	4.8	5.0
12/27	3.7	4.9				5.4	5.5	5.8	5.6	5.6	4.8	5.0
12/28	3.7	4.8				5.3	5.4	5.7	5.5	5.5	4.7	4.9
12/29	3.6	4.8				5.3	5.4	5.7	5.5	5.5	4.7	4.9
12/30	3.7	4.8				5.3	5.4	5.7	5.5	5.4	4.8	4.9
12/31	3.7	4.8				5.4	5.5	5.7	5.5	5.4	4.8	5.0

APPENDIX E

Consultation Documentation Regarding Draft Report

Presler, Dawn

From: Presler, Dawn
Sent: Monday, April 29, 2019 11:59 AM
To: 'Ford, Jennifer - FS'; 'Anne Savery'; 'Janet Curran - NOAA Federal'; 'Asman, Lindsay'; 'Rustay, Michael'; 'Jim Miller (JMiller@everettwa.gov)'; 'nate.morgan@ci.sultan.wa.us'; 'okeefe@americanwhitewater.org'; 'brock.applegate@dfw.wa.gov' (brock.applegate@dfw.wa.gov); 'James (ECY) Pacheco' (JPAC461@ECY.WA.GOV)
Cc: Binkley, Keith
Subject: JHP (FERC No. 2157) - draft WQMP Annual Report for your 30-day review by May 29
Attachments: 2018_WQMP Annual_Report_DRAFT.pdf

Dear ARC,

Attached is the Draft Water Quality Management Plan Annual Report for 2018 for your 30-day review and comment. Please email comments, if any, to me (with cc: to Keith) by May 29, 2019. An email stating you have no comments regarding the draft report would be appreciated too. Thanks!

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