

## APPENDIX B5: MISSION CREEK

### EFN Transect Locations



Figure B5-1: Location of EFN transects and hydrometric stations along Mission Creek



## Transect Descriptions

### Mission Riffle 1

<b>Install Date</b>	Aug 22, 2016		
<b>Lat./Long.</b>	49.842788, -119.475591		
<b>Width</b>	19.45 m	<b>Depth</b>	0.26 m
<b>Avg. width range</b>	18.62-26.44 m	<b>Avg. depth range</b>	0.24-0.36 m



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Glide 1

<b>Install Date</b>	Aug 22, 2016		
<b>Lat./Long.</b>	49.843048, -119.474936		
<b>Width</b>	18.3 m	<b>Depth</b>	0.30 m
<b>Avg. width range</b>	19.32-22.24 m	<b>Avg. depth range</b>	0.32-0.47 m
<b>Comment</b>	Kokanee spawning observed in this transect		



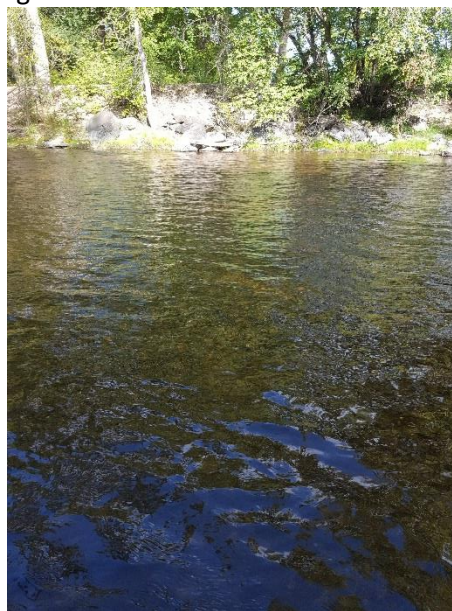
Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Creek Hydrometric Station 1

**Install Date** March 2017

**Lat./Long.** 49.842622, -119.475923

**Comment** Installed near left bank on boulder. Real-time station.



### Mission Creek Hydrometric Station 2

**Install Date** Mar 22, 2016

**Lat./Long.** 49.845549, -119.467669

**Comment** Installed 50 m downstream of Casorso Road bridge. No EFN transect





### Mission Glide 3

<b>Install Date</b>	Aug 18, 2016		
<b>Lat./Long.</b>	49.862723, -119.442721		
<b>Width</b>	13.7 m	<b>Depth</b>	0.42 m
<b>Avg. width range</b>	19.32-22.24 m	<b>Avg. depth range</b>	0.32-0.47 m
<b>Comment</b>	Kokanee spawning observed. Transect from previous EFN study re-established.		



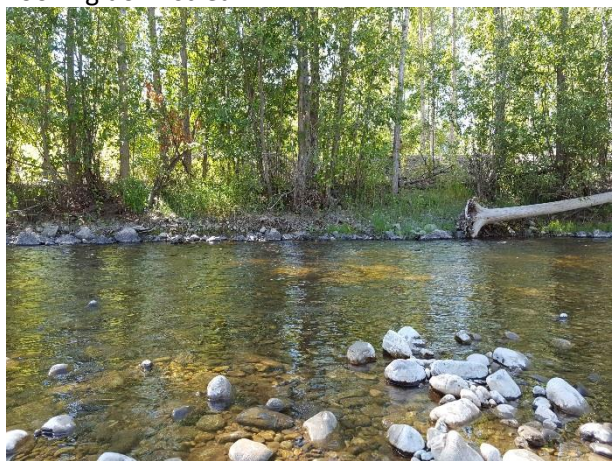
Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Riffle 3

<b>Install Date</b>	Aug 18, 2016		
<b>Lat./Long.</b>	49.863685, -119.442025		
<b>Width</b>	16.7 m	<b>Depth</b>	0.31 m
<b>Avg. width range</b>	18.62-26.44 m	<b>Avg. depth range</b>	0.24-0.36 m



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Creek Hydrometric Station 3

**Install Date** Mar 22, 2016

**Lat./Long.** 49.863053, -119.442630

**Comment** Installed on boulder on right bank near Gordon Road





**Mission Glide 4**

<b>Install Date</b>	Aug 22, 2016		
<b>Lat./Long.</b>	49.879859, -119.420927		
<b>Width</b>	13.40 m	<b>Depth</b>	0.45 m
<b>Avg. width range</b>	11.64-19.36 m	<b>Avg. depth range</b>	0.19-0.75 m
<b>Comment</b>	Kokanee spawning observed in this transect.		



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



#### Mission Riffle 4

<b>Install Date</b>	Aug 22, 2016		
<b>Lat./Long.</b>	49.879855, -119.420571		
<b>Width</b>	12.30 m	<b>Depth</b>	0.46 m
<b>Avg. width range</b>	12.14 - 16.26 m	<b>Avg. depth range</b>	0.34 - 0.65 m



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



#### Mission Creek Hydromet 4

**Install Date** Jul 13, 2016

**Lat./Long.** 49.879779, -119.421831

**Comment** Installed on boulder on right bank near Glide 4





**Mission Glide 6**

<b>Install Date</b>	Aug 22, 2016		
<b>Lat./Long.</b>	49.872497, -119.398727		
<b>Width</b>	13.40 m	<b>Depth</b>	0.69 m
<b>Avg. width range</b>	11.64-19.36 m	<b>Avg. depth range</b>	0.19-0.75 m
<b>Comment</b>	Kokanee spawning observed in this transect		



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Riffle 6

<b>Install Date</b>	Aug 22, 2016		
<b>Lat./Long.</b>	49.872466, -119.398241		
<b>Width</b>	20.90 m	<b>Depth</b>	0.40 m
<b>Avg. width range</b>	16.75-23.75 m	<b>Avg. depth range</b>	0.33-0.45 m
<b>Comment</b>	-		



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Creek Hydromet 6

**Install Date** April 1, 2016

**Lat./Long.** 49.872494, -119.397853

**Comment** Installed on small boulder on right bank near Riffle 6





**Mission Glide 7a**

**Install Date** July 4, 2017

**Lat./Long.** 49.850999, -119.386135

**Comment** Kokanee spawning observed in this transect. Transect was re-installed approximately 10m upstream from original location due to changes in the channel post-freshet.



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Riffle 7

**Install Date** Aug 18, 2016

**Lat./Long.** 49.850880, -119.385663

**Width** 15.5 m

**Depth** 0.46 m

**Avg. width range** 12.21-27.29 m

**Avg. depth range** 0.24-0.65 m



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Creek Hydromet 7

**Install Date** Mar 22, 2016

**Lat./Long.** 49.850663, -119.382771

**Comment** Installed on the root of an alder tree on right bank.





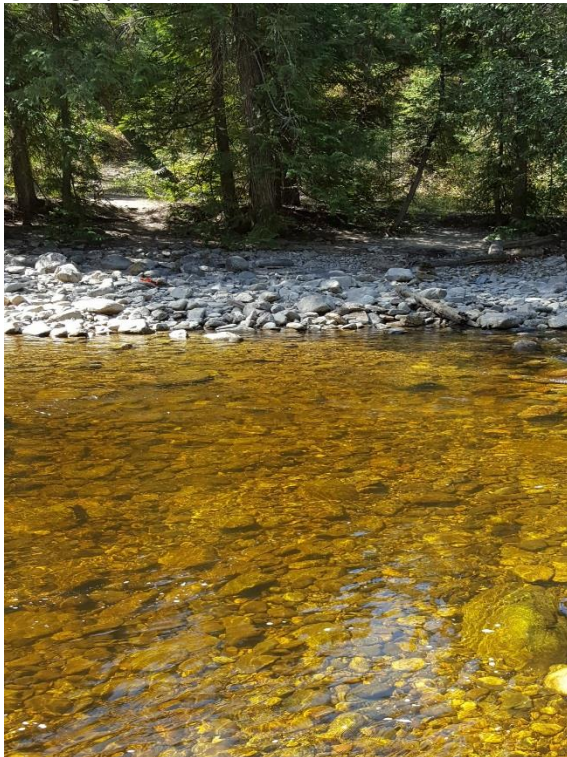
<b>Mission Glide 8</b>			
<b>Install Date</b>	Aug 18, 2016		
<b>Lat./Long.</b>	49.844910-119.364471		
<b>Width</b>	14.30 m	<b>Depth</b>	0.66 m
<b>Avg. width range</b>	17.05 - 25.17 m	<b>Avg. depth range</b>	0.42-0.63 m
<b>Comment</b>	Kokanee spawning observed in this transect.		



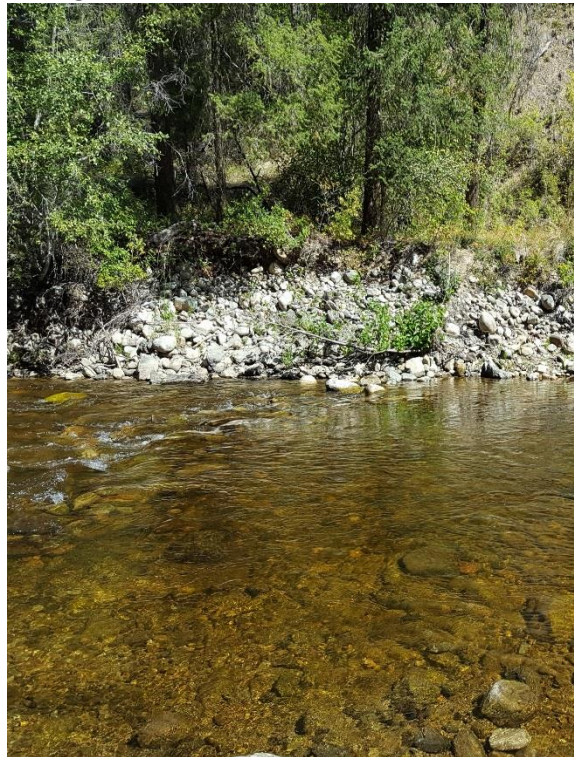
Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank



### Mission Creek Hydromet 8

**Install Date** Apr 1, 2016

**Lat./Long.** 49.844894, -119.364307

**Comment** Installed on a large boulder on right bank.





## Discharge Records

Mission Creek Hydrometric Station 1 - 08NM551

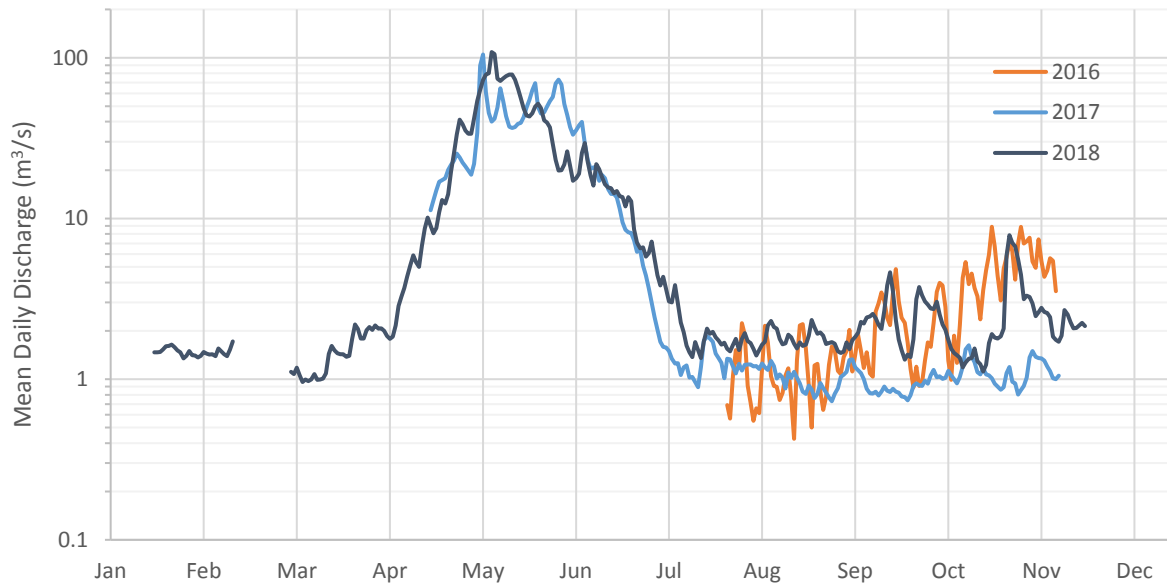


Figure B5-2: Mean daily discharge measured at the Mission Hydrometric Station 1 from 2016 to 2018

Mission Creek Hydrometric Station 3 - 08NM553

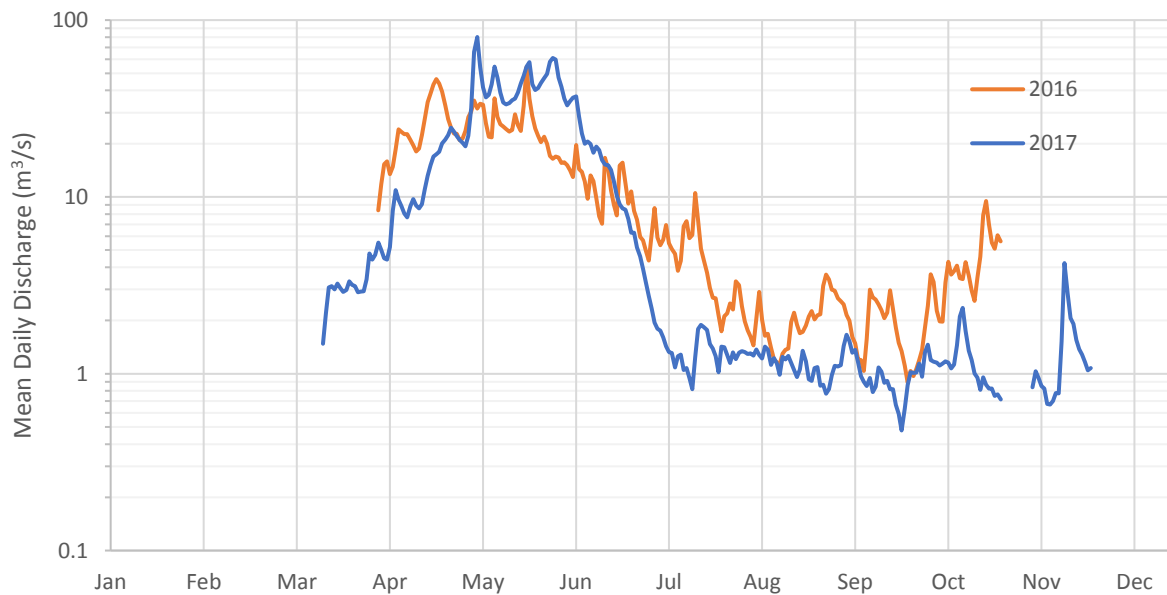
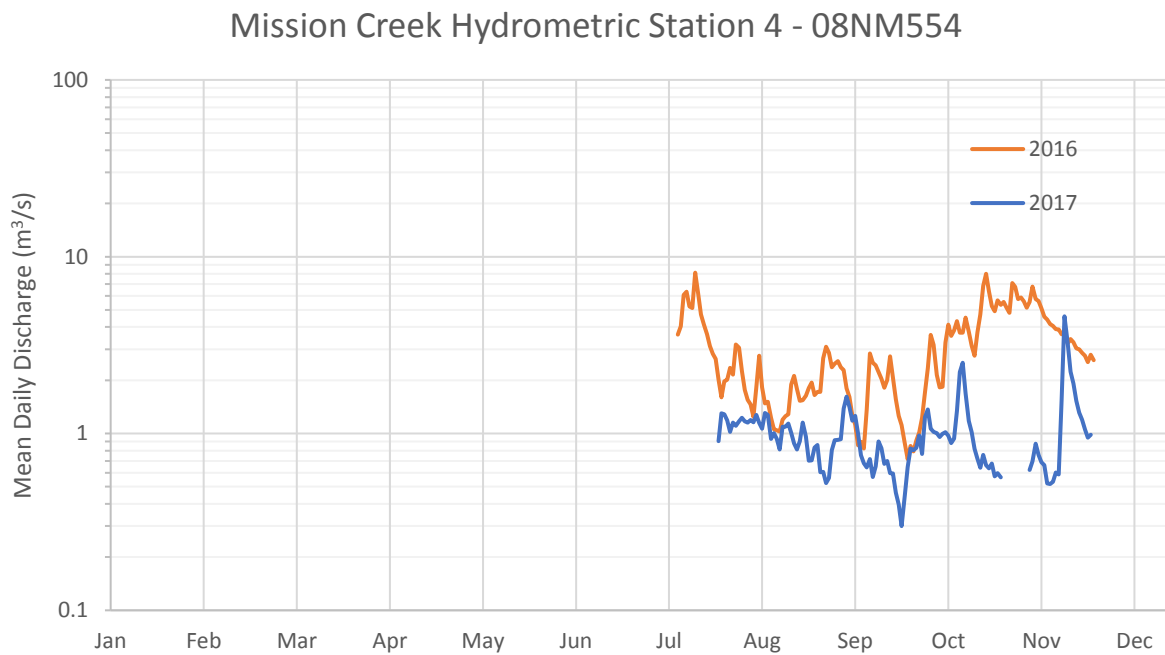
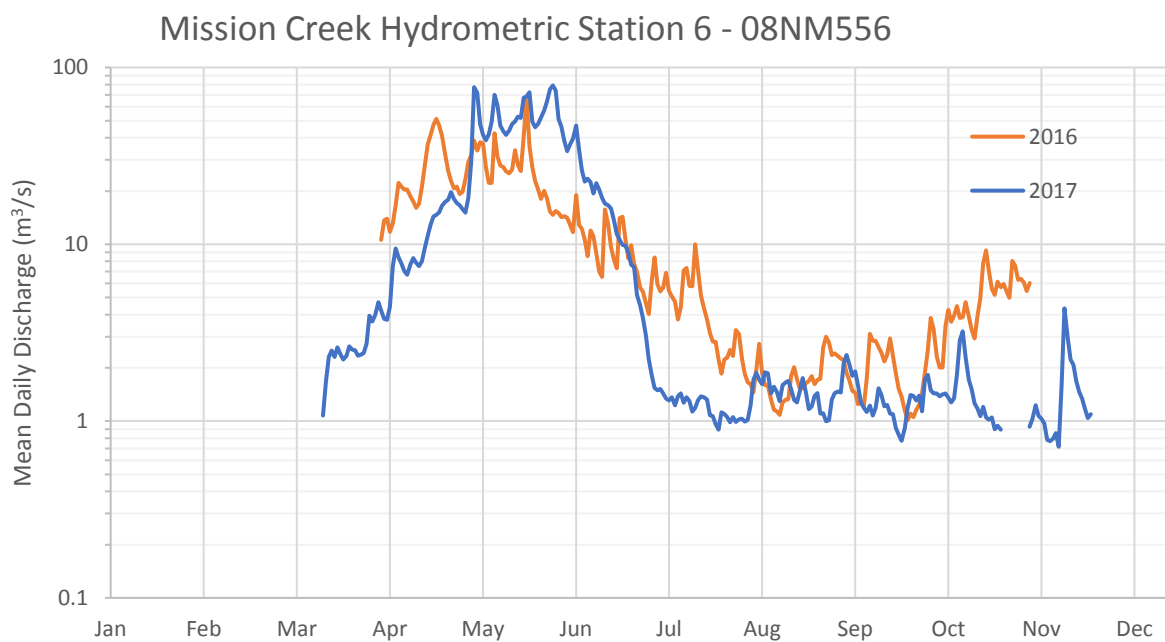


Figure B5-3: Mean daily discharge measured at the Mission Hydrometric Station 3 from 2016 to 2017



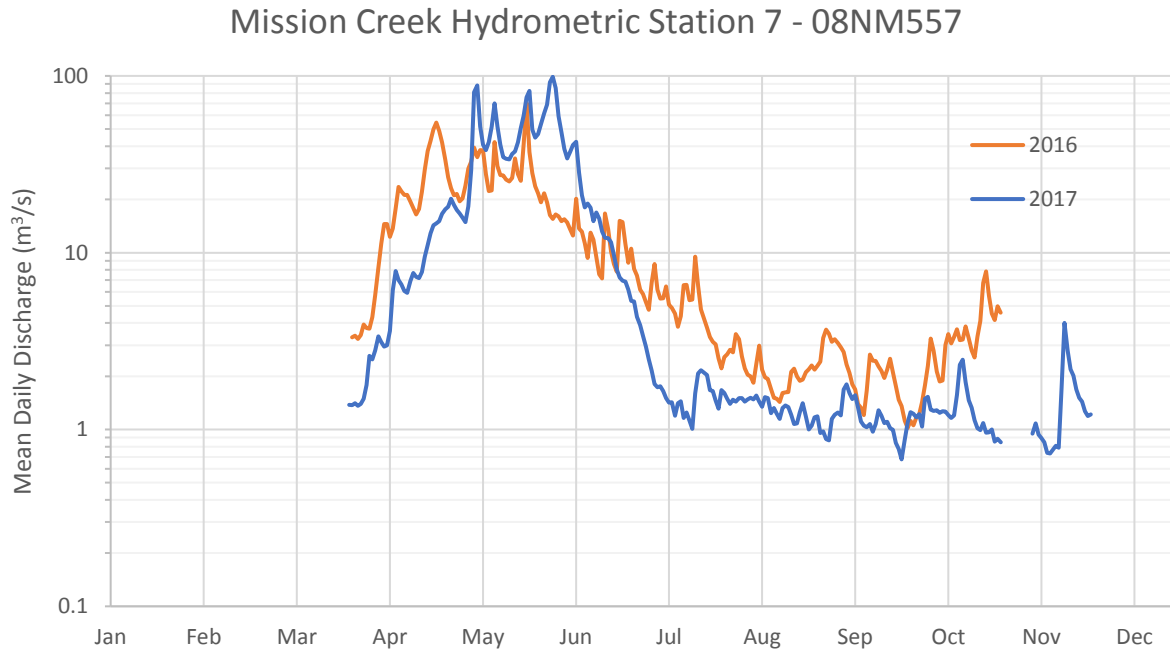


**Figure B5-4: Mean daily discharge measured at the Mission Hydrometric Station 4 from 2016 to 2017**

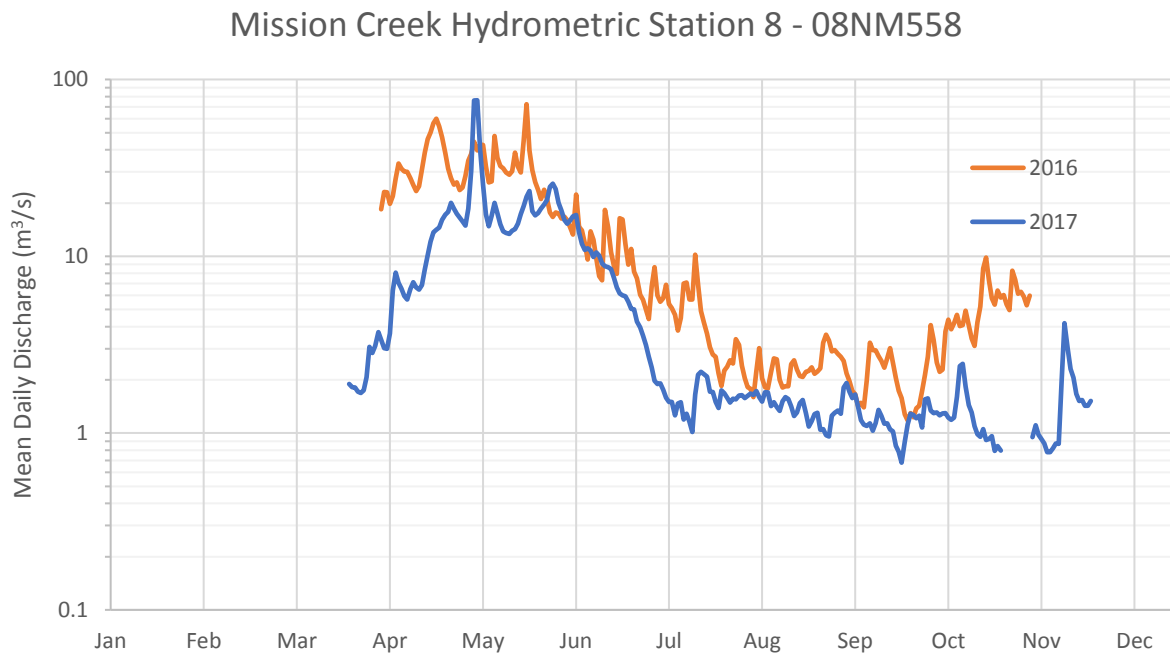


**Figure B5-5: Mean daily discharge measured at the Mission Hydrometric Station 6 from 2016 to 2017**



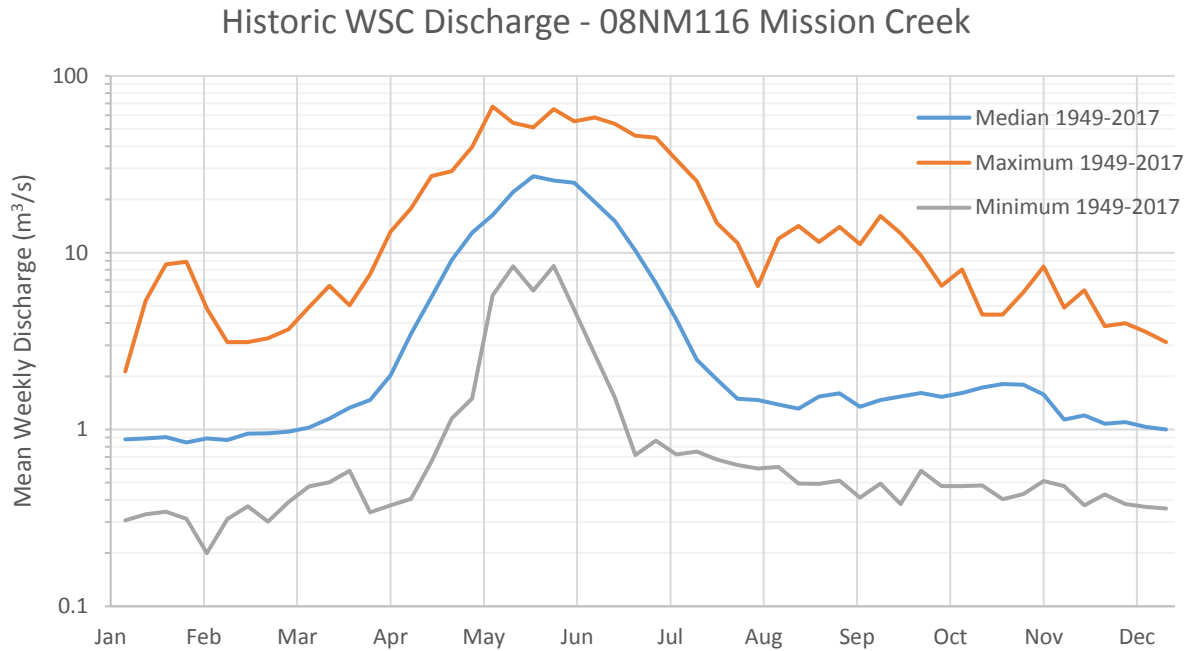


**Figure B5- 6: Mean daily discharge measured at the Mission Hydrometric Station 7 from 2016 to 2017**



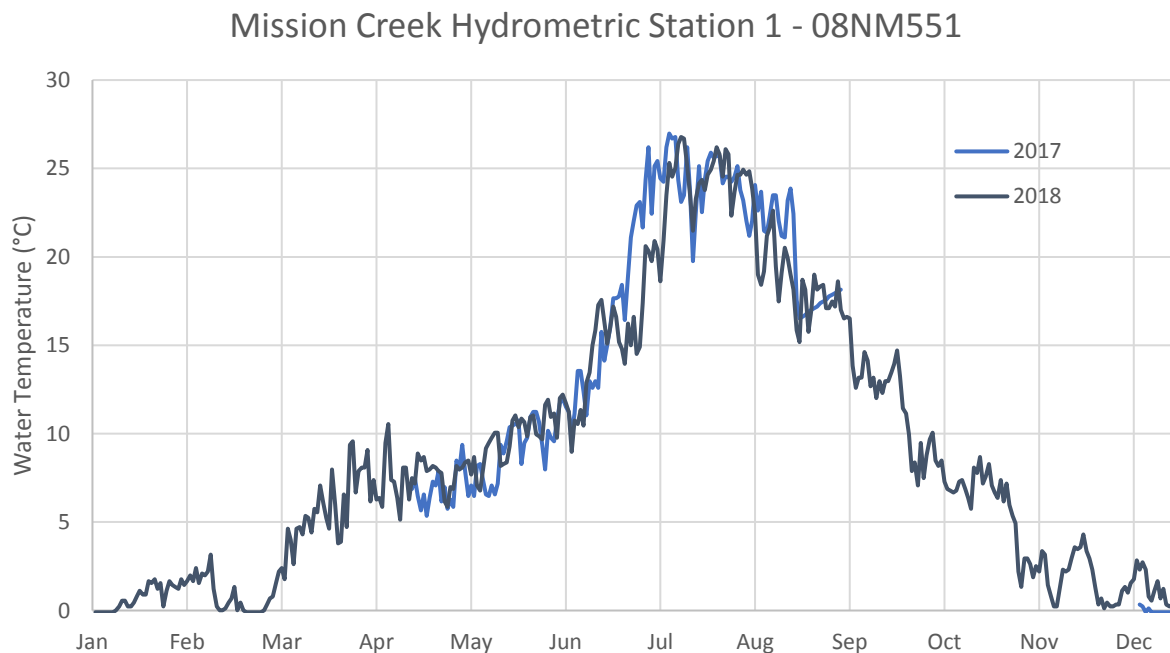
**Figure B5-7: Mean daily discharge measured at the Mission Hydrometric Station 8 from 2016 to 2017**





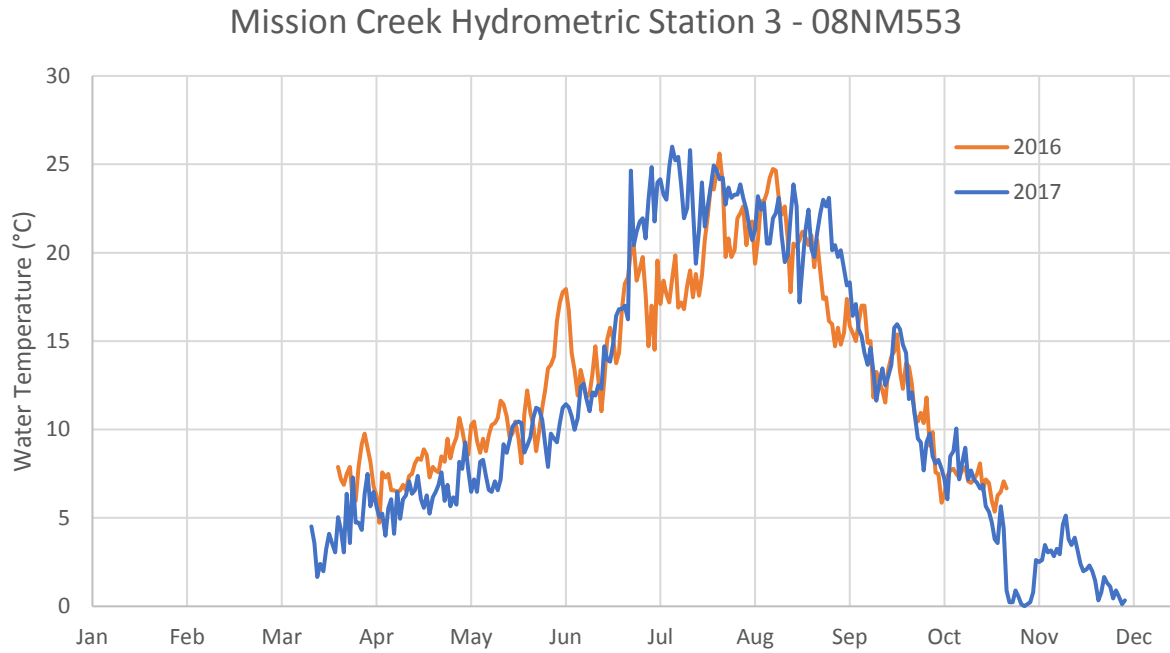
**Figure B5-8: Median, minimum and maximum weekly discharge measured at WSC hydrometric station Mission Creek near East Kelowna (08NM116) from 1949-2017**

## Water Temperature Records

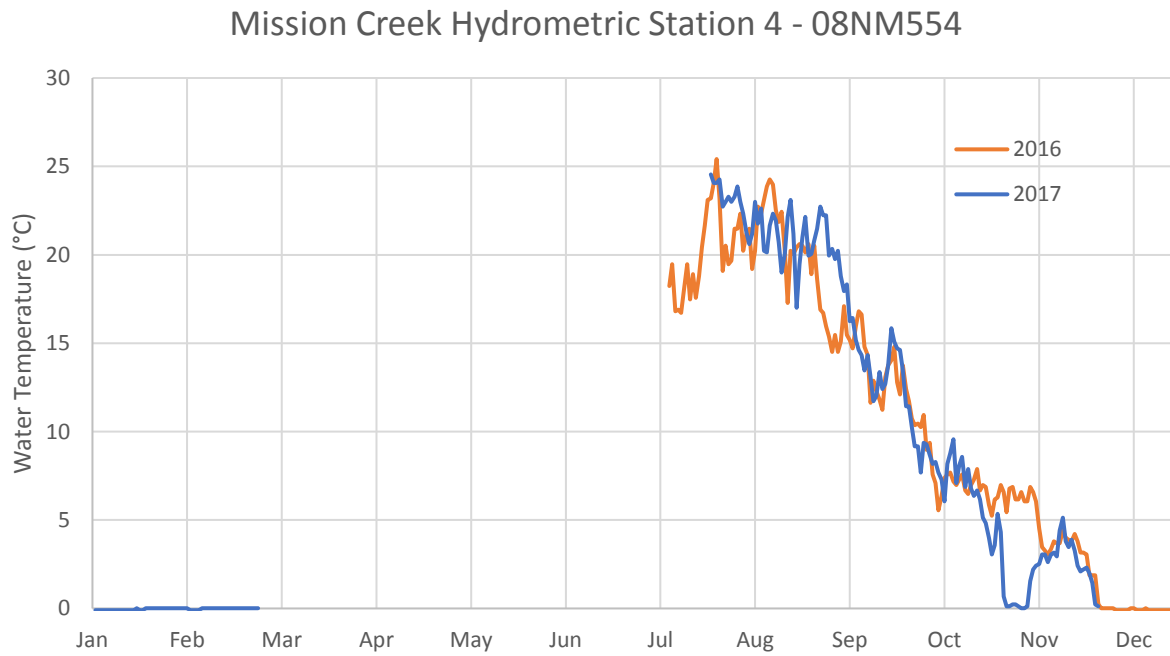


**Figure B5- 9: Daily maximum temperature recorded at Mission Creek Hydrometric Station 1 from 2017 to 2018**

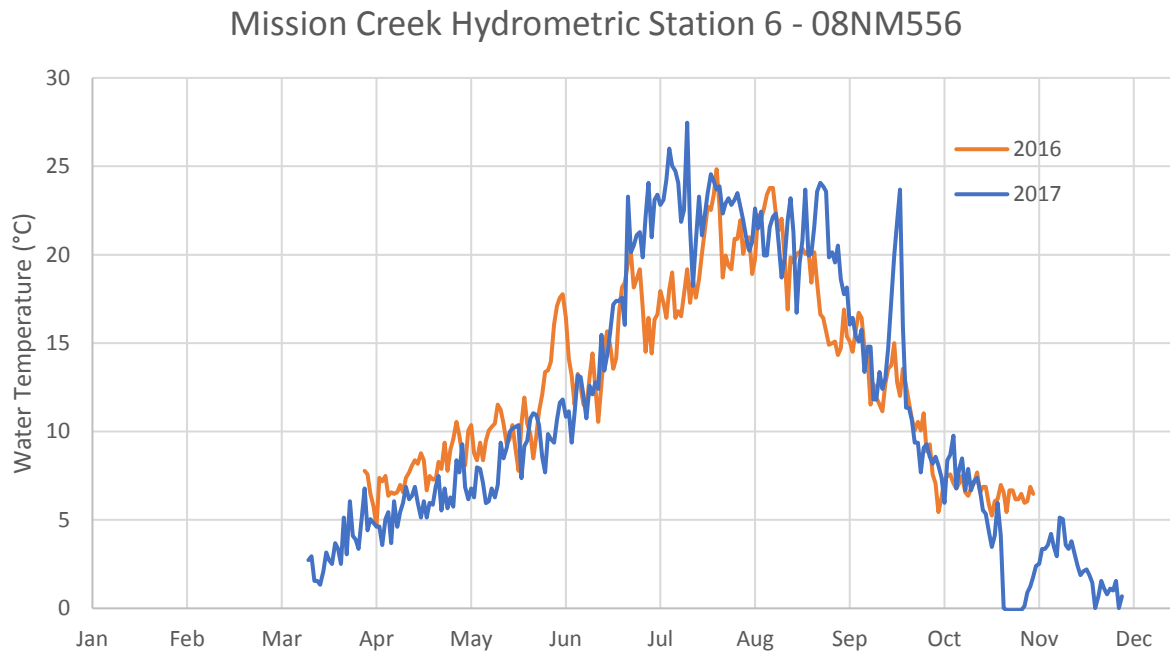




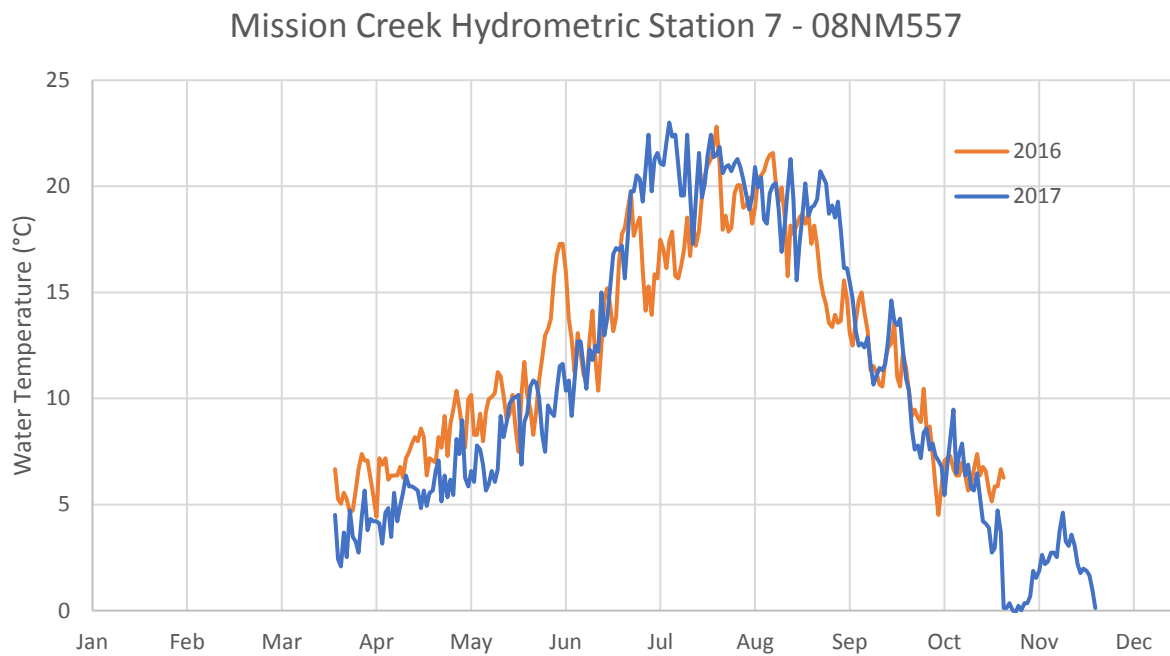
**Figure B5- 10: Daily maximum temperature recorded at Mission Creek Hydrometric Station 3 from 2016 to 2017**



**Figure B5- 11: Daily maximum temperature recorded at Mission Creek Hydrometric Station 4 from 2016 to 2017**

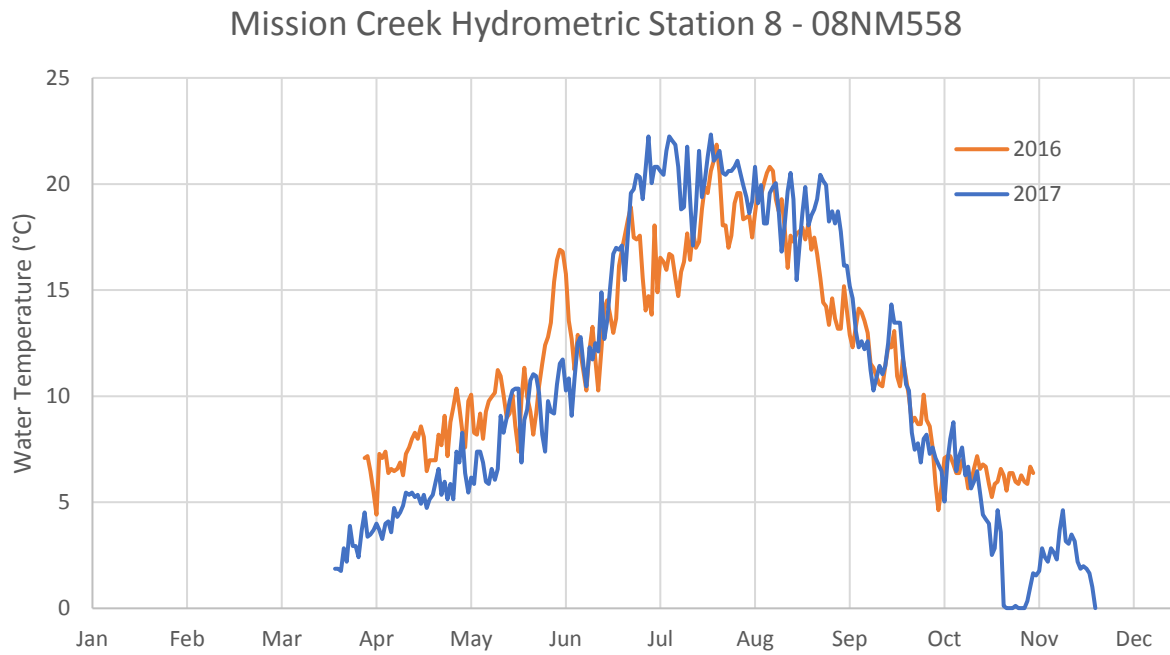


**Figure B5- 12: Daily maximum temperature recorded at Mission Creek Hydrometric Station 6 from 2016 to 2017**



**Figure B5- 13: Daily maximum temperature recorded at Mission Creek Hydrometric Station 7 from 2016 to 2017**





**Figure B5- 14: Daily maximum temperature recorded at Mission Creek Hydrometric Station 8 from 2016 to 2017**

## Flow standards and periodicity – Okanagan Tennant analysis for Mission Creek

Week Ending	Life Stage/ Week	Rainbow						Kokanee				Ecological Flows	
		Adult migration	Spawning	Incubation	Rearing	Juvenile migration	Over-wintering	Adult migration	Spawning	Incubation	Juvenile migration	Wetland, side channel linkage, flushing and channel maintenance flow	Ecosystem flows
Jan							20%			20%			
Feb							20%			20%			
Mar							20%			20%			
1-Apr	13				20%						50%	<input checked="" type="checkbox"/>	
8-Apr	14				20%						50%	<input checked="" type="checkbox"/>	
15-Apr	15	76%			20%						50%	<input checked="" type="checkbox"/>	
22-Apr	16	76%			20%						50%	<input checked="" type="checkbox"/>	
29-Apr	17	76%			20%						50%	<input checked="" type="checkbox"/>	
6-May	18	76%			20%	50%					50%	<input checked="" type="checkbox"/>	
13-May	19	76%			20%	50%					50%	<input checked="" type="checkbox"/>	
20-May	20	76%	40%		20%	50%					50%	<input checked="" type="checkbox"/>	
27-May	21	76%	40%	20%	20%	50%					50%	870%	
3-Jun	22	76%	40%	20%	20%	50%						870%	
10-Jun	23	76%	40%	20%	20%	50%						<input checked="" type="checkbox"/>	100%
17-Jun	24	76%	40%	20%	20%	50%						<input checked="" type="checkbox"/>	100%
24-Jun	25	76%	40%	20%	20%	50%							100%
1-Jul	26	76%	40%	20%	20%	50%							100%
8-Jul	27	76%	40%	20%	20%	50%							100%
15-Jul	28			20%	20%	50%							100%
22-Jul	29				20%								100%
29-Jul	30				20%								100%
5-Aug	31				20%								
12-Aug	32				20%								
19-Aug	33				20%								
26-Aug	34				20%			20%					
2-Sep	35				20%			20%	20%				
9-Sep	36				20%			20%	20%				
16-Sep	37				20%			20%	20%	20%			
23-Sep	38				20%			20%	20%	20%			
30-Sep	39				20%			20%	20%	20%			
7-Oct	40				20%				20%	20%			
14-Oct	41				20%					20%			
21-Oct	42				20%					20%			
28-Oct	43				20%					20%			
Nov							20%			20%			
Dec							20%			20%			

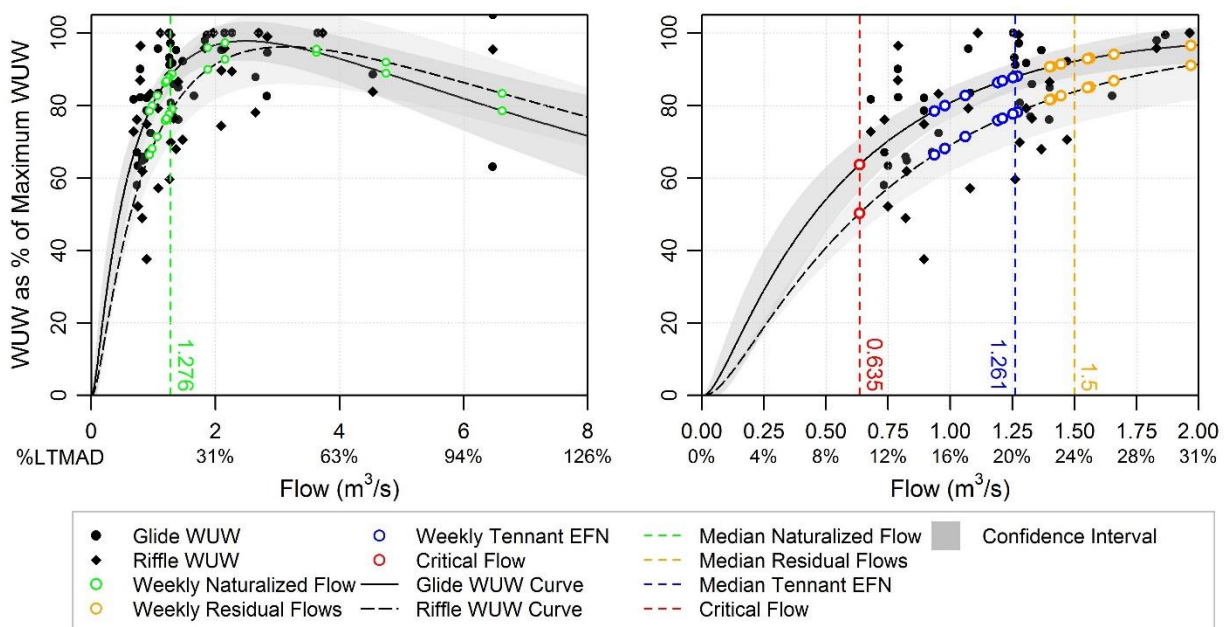


## EFNs and Critical Flows for Mission Creek

Week Ending	EFN - all factors (%LTMA0)	Okanagan Tennant EFN					WUW EFN (m³/s)				FINAL EFN		CRITICAL FLOW (m³/s)			
		Flow standard EFN (m³/s)	Nat. median weekly Q (m³/s)	Residual median weekly Q (m³/s)	Okanagan Tennant EFN (m³/s)	%LTMA0	Rainbow rearing & insect production	Kokanee spawning	Rainbow spawning	FINAL	Value (m³/s)	Dominant Species / Life Stage	Rainbow rearing & overwintering	Kokanee spawning	Rainbow spawning	FINAL
Jan	20%	1.270	0.925	0.851	0.925	15%					0.925	Overwintering, egg incubation	0.635			0.635
Feb	20%	1.270	0.790	0.869	0.790	12%					0.790	Overwintering, egg incubation	0.635			0.635
Mar	20%	1.270	0.812	1.142	0.812	13%					0.812	Overwintering, egg incubation	0.635			0.635
1-Apr	50%	3.176	1.174	1.470	1.174	18%	1.404			1.404	1.174	RB juvenile migration	0.635			0.635
8-Apr	50%	3.176	2.099	2.924	2.099	33%	1.404			1.404	1.404	RB juvenile migration	0.635			0.635
15-Apr	76%	4.828	3.867	6.831	3.867	61%	1.404			1.404	3.867	RB adult migration	0.635		1.118	1.118
22-Apr	76%	4.828	5.349	8.889	4.828	76%	1.404			1.404	4.828	RB adult migration	0.635		1.118	1.118
29-Apr	76%	4.828	11.323	12.203	4.828	76%	1.404			1.404	4.828	RB adult migration	0.635		1.118	1.118
6-May	76%	4.828	13.806	16.586	4.828	76%	1.404			1.404	4.828	RB adult migration	0.635		1.118	1.118
13-May	76%	4.828	13.864	15.600	4.828	76%	1.404			1.404	4.828	RB adult migration	0.635		1.118	1.118
20-May	76%	4.828	23.669	21.784	4.828	76%	1.404		4.828	4.828	4.828	RB adult migration	0.635		1.118	1.118
27-May	870%	55.265	29.567	26.971	29.567	465%	1.404		4.828	4.828	29.567	Ecosystem flows	0.635		1.118	1.118
3-Jun	870%	55.265	32.386	29.071	32.386	510%	1.404		4.828	4.828	32.386	Ecosystem flows	0.635		1.118	1.118
10-Jun	100%	6.352	27.773	26.700	6.352	100%	1.404		4.828	4.828	4.828	RB Spawning	0.635		1.118	1.118
17-Jun	100%	6.352	23.904	23.943	6.352	100%	1.404		4.828	4.828	4.828	RB Spawning	0.635		1.118	1.118
24-Jun	100%	6.352	19.808	17.571	6.352	100%	1.404		4.828	4.828	4.828	RB Spawning	0.635		1.118	1.118
1-Jul	100%	6.352	15.106	11.643	6.352	100%	1.404		4.828	4.828	4.828	RB Spawning	0.635		1.118	1.118
8-Jul	100%	6.352	11.246	6.206	6.352	100%	1.404		4.828	4.828	4.828	RB Spawning	0.635		1.118	1.118
15-Jul	100%	6.352	6.619	3.310	6.352	100%	1.404			1.404	4.828	RB incubation	0.635			0.635
22-Jul	100%	6.352	4.749	2.130	4.749	75%	1.404			1.404	4.749	RB incubation	0.635			0.635
29-Jul	100%	6.352	3.628	1.970	3.628	57%	1.404			1.404	3.628	RB incubation	0.635			0.635
5-Aug	20%	1.270	2.152	1.563	1.270	20%	1.404			1.404	1.404	RB parr rearing	0.635			0.635
12-Aug	20%	1.270	1.876	1.447	1.270	20%	1.404			1.404	1.404	RB parr rearing	0.635			0.635
19-Aug	20%	1.270	1.300	1.260	1.270	20%	1.404			1.404	1.404	RB parr rearing	0.635			0.635
26-Aug	20%	1.270	1.191	1.258	1.191	19%	1.404			1.404	1.404	RB parr rearing	0.635			0.635
2-Sep	20%	1.270	1.253	1.553	1.253	20%	1.404	1.404		1.404	1.404	KO Spawning	0.635	0.635		0.635
9-Sep	20%	1.270	1.211	1.407	1.211	19%	1.404	1.404		1.404	1.404	KO Spawning	0.635	0.635		0.635
16-Sep	20%	1.270	0.978	1.252	0.978	15%	1.404	1.404		1.404	1.404	KO Spawning	0.635	0.635		0.635
23-Sep	20%	1.270	0.937	1.401	0.937	15%	1.404	1.404		1.404	1.404	KO Spawning	0.635	0.635		0.635
30-Sep	20%	1.270	1.061	1.659	1.061	17%	1.404	1.404		1.404	1.404	KO Spawning	0.635	0.635		0.635
7-Oct	20%	1.270	1.152	1.357	1.152	18%	1.404	1.404		1.404	1.404	KO Spawning	0.635	0.635		0.635
14-Oct	20%	1.270	1.201	1.574	1.201	19%	1.404			1.404	1.404	RB parr rearing	0.635			0.635
21-Oct	20%	1.270	1.689	1.875	1.270	20%	1.404			1.404	1.404	RB parr rearing	0.635			0.635
28-Oct	20%	1.270	1.910	1.381	1.270	20%	1.404			1.404	1.404	RB parr rearing	0.635			0.635
Nov	20%	1.270	1.938	1.527	1.270	20%					1.270	Overwintering, egg incubation	0.635			0.635
Dec	20%	1.270	1.203	1.018	1.203	19%					1.203	Overwintering, egg incubation	0.635			0.635

## Weighted Usable Width

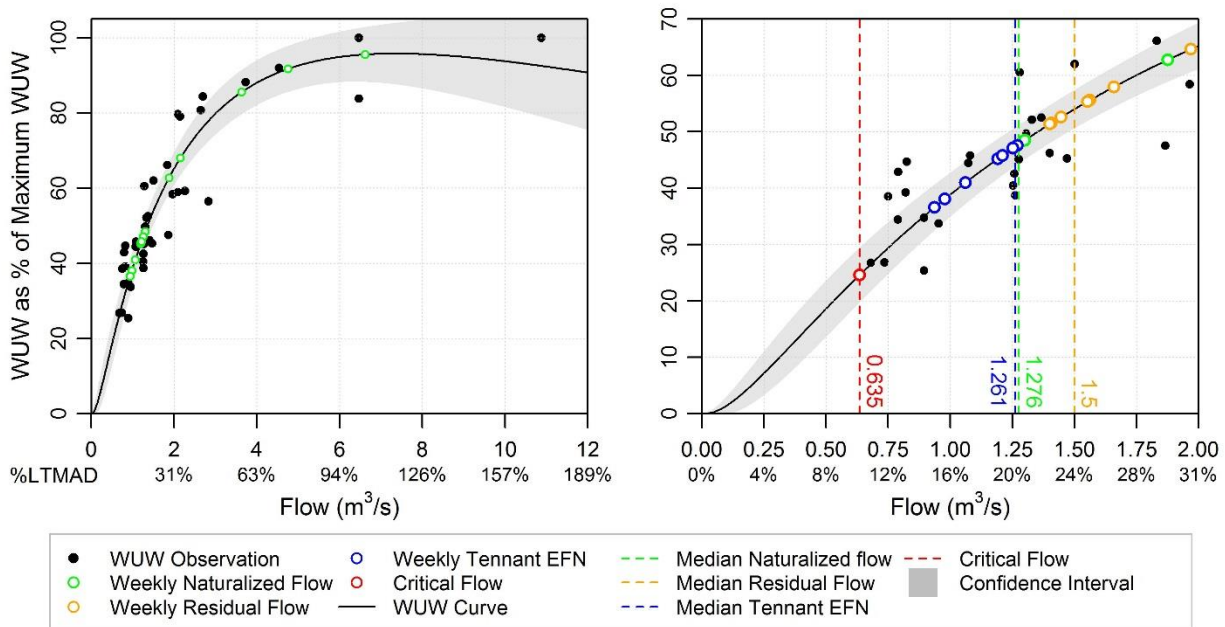
### Mission Creek Rainbow rearing WUW



Median values from mid-July to end of September (week 28-39)

Figure B5-15: WUW curves for Rainbow rearing in Mission Creek for all flows (left) and low flows (right)

### Mission Creek Insect Production WUW



Median values from mid-July to end of September (week 28-39)

Figure B5-16: WUW curves for insect production in Mission Creek for all flows (left) and low flows (right)



## Mission Creek Rainbow Spawning WUW

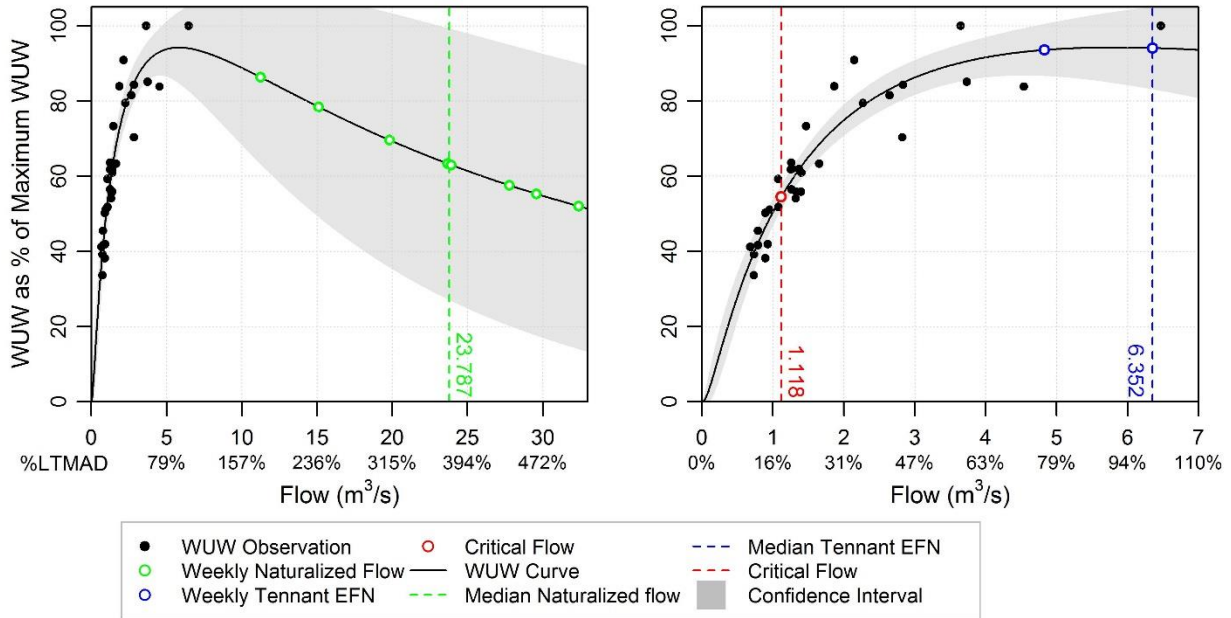


Figure B5-17: WUW curves for Rainbow spawning in Mission Creek for all flows (left) and low flows (right)

## Mission Creek Kokanee Spawning WUW

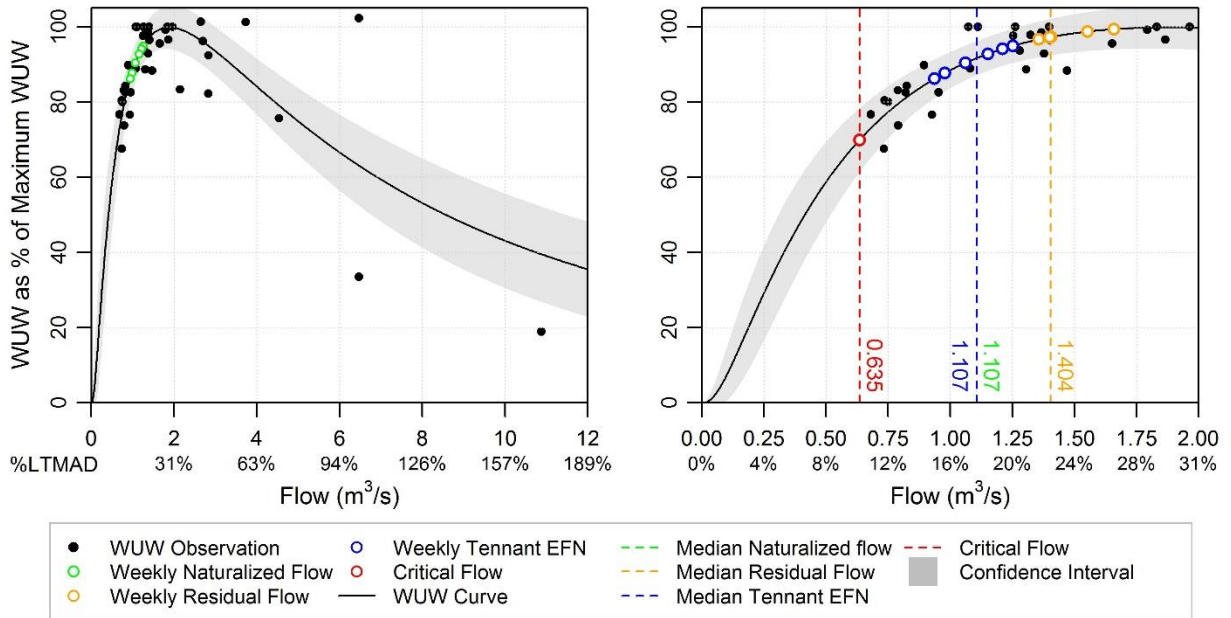


Figure B5-18: WUW curves for Kokanee spawning in Mission Creek for all flows (left) and low flows (right)

## Critical Flows

**Table B5-1: Critical flow analysis for Mission Creek**

Species / Life stage	Critical Flow Criteria	Riffle 1A (m <sup>3</sup> /s) %LTMAD	Riffle 3 (m <sup>3</sup> /s) %LTMAD	Riffle 6 (m <sup>3</sup> /s) %LTMAD	Average (m <sup>3</sup> /s) %LTMAD
	Naturalized LTMAD				6.35 100
	Wetted width at 100% LTMAD (m)	19.12	24.40	22.50	
<b>Insect production, Rainbow rearing &amp; overwintering</b>	60% of width at 100% LTMAD	0.417 7	1.31 21	0.645 10	0.790 12
<b>Rainbow spawning</b>	25% of width at 100% LTMAD is $\geq$ 0.18m deep	1.30 20	1.13 18	0.925 15	1.12 18
<b>Kokanee spawning</b>	25% of width at 100% LTMAD is $\geq$ 0.12m deep	0.422 7	0.716 11	0.848 13	0.662 10

**Table B5-2: Final critical flows for Mission Creek**

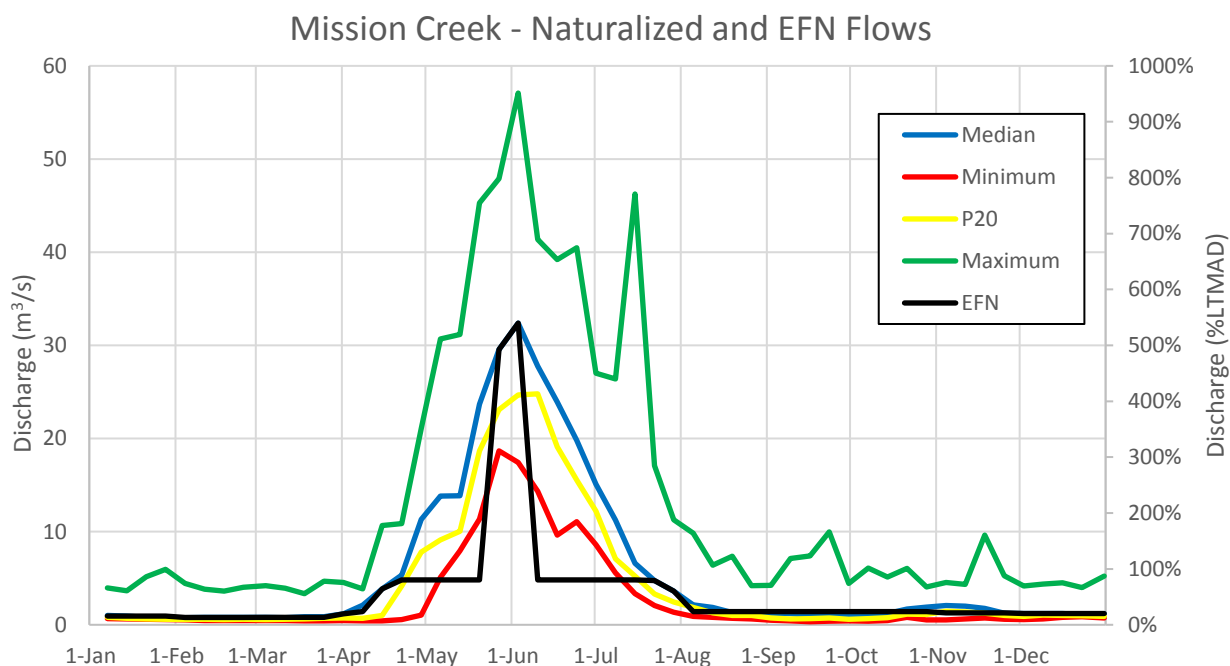
Species/Life stage	Final Critical Flow (m <sup>3</sup> /s)	% LTMAD	Criteria Used
<b>Rainbow rearing &amp; insect production</b>	0.635	10%	10% LTMAD
<b>Rainbow spawning</b>	1.12	18%	0.18m depth requirement
<b>Kokanee spawning</b>	0.635	10%	10% LTMAD
<b>Rainbow overwintering</b>	0.635	10%	10% LTMAD

**Table B5-3: 30 day naturalized low flows for Summer and Winter provided by Associated (2019)**

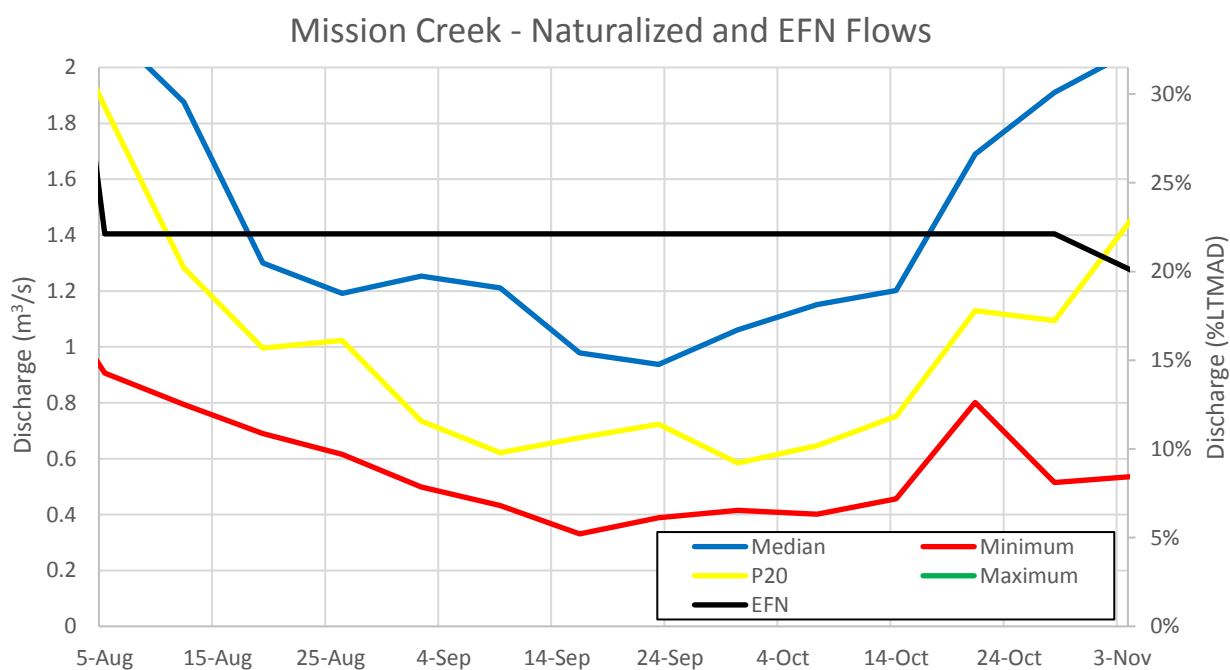
	(m <sup>3</sup> /s)	% LTMAD
<b>Summer (July 1 to September 30) Minimum</b>		
<b>Summer 1:2-year return period 30 Day Naturalized Low</b>	1.10	17%
<b>Summer 1:5-year return period 30 Day Naturalized Low</b>	0.578	9%
<b>Summer 1:10-year return period 30 Day Naturalized Low</b>	0.430	7%
<b>Summer 1:20-year return period 30 Day Naturalized Low</b>	0.340	5%
<b>Winter (November 1 to March 31) Minimum</b>		
<b>Winter 1:2-year return period 30 Day Naturalized Low</b>	0.702	11%
<b>Winter 1:5-year return period 30 Day Naturalized Low</b>	0.507	8%
<b>Winter 1:10-year return period 30 Day Naturalized Low</b>	0.461	7%
<b>Winter 1:20-year return period 30 Day Naturalized Low</b>	0.440	7%



## Percentile Flows for Mission Creek



**Figure B5-19: EFN flows compared with naturalized flow percentiles in Mission Creek (Discharge & %LTMA)**



**Figure B5-20: EFN flows compared with naturalized flow percentiles in Mission Creek Aug-Nov (Discharge & %LTMA)**

## Naturalized Percentile Flows for Mission Creek

NATURALIZED FLOW		as m <sup>3</sup> /s				as %LTMD			
Week	Ending	Min	P20	Median	Max	Min	P20	Median	Max
01	7-Jan	0.663	0.803	1.000	3.955	10%	13%	16%	62%
02	14-Jan	0.638	0.693	0.923	3.663	10%	11%	15%	58%
03	21-Jan	0.601	0.612	0.791	5.178	9%	10%	12%	82%
04	28-Jan	0.568	0.603	0.756	5.937	9%	9%	12%	93%
05	4-Feb	0.523	0.569	0.773	4.443	8%	9%	12%	70%
06	11-Feb	0.443	0.587	0.786	3.811	7%	9%	12%	60%
07	18-Feb	0.467	0.571	0.805	3.618	7%	9%	13%	57%
08	25-Feb	0.462	0.597	0.800	4.016	7%	9%	13%	63%
09	4-Mar	0.456	0.571	0.810	4.203	7%	9%	13%	66%
10	11-Mar	0.446	0.586	0.781	3.914	7%	9%	12%	62%
11	18-Mar	0.419	0.638	0.864	3.342	7%	10%	14%	53%
12	25-Mar	0.419	0.680	0.872	4.688	7%	11%	14%	74%
13	1-Apr	0.452	0.742	1.174	4.543	7%	12%	18%	72%
14	8-Apr	0.429	0.702	2.099	3.869	7%	11%	33%	61%
15	15-Apr	0.408	1.021	3.867	10.673	6%	16%	61%	168%
16	22-Apr	0.573	4.180	5.349	10.855	9%	66%	84%	171%
17	29-Apr	1.028	7.823	11.323	21.077	16%	123%	178%	332%
18	6-May	5.096	9.114	13.806	30.702	80%	143%	217%	483%
19	13-May	7.939	10.035	13.864	31.162	125%	158%	218%	491%
20	20-May	11.344	18.669	23.669	45.282	179%	294%	373%	713%
21	27-May	18.673	23.093	29.567	47.891	294%	364%	465%	754%
22	3-Jun	17.440	24.674	32.386	57.084	275%	388%	510%	899%
23	10-Jun	14.348	24.796	27.773	41.354	226%	390%	437%	651%
24	17-Jun	9.617	19.103	23.904	39.214	151%	301%	376%	617%
25	24-Jun	11.078	15.546	19.808	40.466	174%	245%	312%	637%
26	1-Jul	8.583	12.198	15.106	27.008	135%	192%	238%	425%
27	8-Jul	5.573	7.091	11.246	26.385	88%	112%	177%	415%
28	15-Jul	3.355	5.222	6.619	46.234	53%	82%	104%	728%
29	22-Jul	2.057	3.314	4.749	17.077	32%	52%	75%	269%
30	29-Jul	1.344	2.466	3.628	11.263	21%	39%	57%	177%
31	5-Aug	0.906	1.859	2.152	9.838	14%	29%	34%	155%
32	12-Aug	0.794	1.283	1.876	6.415	12%	20%	30%	101%
33	19-Aug	0.689	0.995	1.300	7.348	11%	16%	20%	116%
34	26-Aug	0.616	1.023	1.191	4.211	10%	16%	19%	66%
35	2-Sep	0.499	0.735	1.253	4.246	8%	12%	20%	67%
36	9-Sep	0.433	0.621	1.211	7.136	7%	10%	19%	112%
37	16-Sep	0.331	0.675	0.978	7.410	5%	11%	15%	117%
38	23-Sep	0.389	0.723	0.937	9.980	6%	11%	15%	157%
39	30-Sep	0.416	0.584	1.061	4.451	7%	9%	17%	70%
40	7-Oct	0.401	0.647	1.152	6.095	6%	10%	18%	96%
41	14-Oct	0.457	0.751	1.201	5.125	7%	12%	19%	81%
42	21-Oct	0.801	1.129	1.689	6.043	13%	18%	27%	95%
43	28-Oct	0.515	1.094	1.910	4.076	8%	17%	30%	64%
44	4-Nov	0.537	1.466	2.061	4.528	8%	23%	32%	71%
45	11-Nov	0.644	1.385	1.995	4.348	10%	22%	31%	68%
46	18-Nov	0.716	1.246	1.767	9.640	11%	20%	28%	152%
47	25-Nov	0.596	0.993	1.238	5.260	9%	16%	19%	83%
48	2-Dec	0.557	0.910	1.213	4.183	9%	14%	19%	66%
49	9-Dec	0.619	1.048	1.217	4.381	10%	16%	19%	69%
50	16-Dec	0.784	0.992	1.203	4.522	12%	16%	19%	71%
51	23-Dec	0.871	0.967	1.109	3.987	14%	15%	17%	63%
52	31-Dec	0.714	0.889	1.186	5.214	11%	14%	19%	82%



## Residual Percentile Flows for Mission Creek

RESIDUAL FLOW		as m <sup>3</sup> /s				as %LTMAD			
Week	Ending	Min	P20	Median	Max	Min	P20	Median	Max
01	7-Jan	0.479	0.564	0.866	1.811	8%	9%	14%	29%
02	14-Jan	0.443	0.621	0.871	5.371	7%	10%	14%	85%
03	21-Jan	0.413	0.643	0.751	8.579	6%	10%	12%	135%
04	28-Jan	0.372	0.620	0.729	8.886	6%	10%	11%	140%
05	4-Feb	0.376	0.597	0.748	4.831	6%	9%	12%	76%
06	11-Feb	0.407	0.605	0.804	3.120	6%	10%	13%	49%
07	18-Feb	0.369	0.621	0.956	3.126	6%	10%	15%	49%
08	25-Feb	0.451	0.677	0.959	3.277	7%	11%	15%	52%
09	4-Mar	0.388	0.640	1.109	3.690	6%	10%	17%	58%
10	11-Mar	0.509	0.668	1.057	4.909	8%	11%	17%	77%
11	18-Mar	0.731	0.957	1.132	6.494	12%	15%	18%	102%
12	25-Mar	0.769	1.012	1.296	5.041	12%	16%	20%	79%
13	1-Apr	1.061	1.220	1.470	4.789	17%	19%	23%	75%
14	8-Apr	0.972	1.287	2.924	5.990	15%	20%	46%	94%
15	15-Apr	0.935	1.967	6.831	17.786	15%	31%	108%	280%
16	22-Apr	2.316	4.100	8.889	18.443	36%	65%	140%	290%
17	29-Apr	2.727	8.722	12.203	28.929	43%	137%	192%	455%
18	6-May	6.260	9.807	16.586	39.743	99%	154%	261%	626%
19	13-May	5.786	9.767	15.600	36.914	91%	154%	246%	581%
20	20-May	8.374	19.386	21.784	53.786	132%	305%	343%	847%
21	27-May	15.300	17.914	26.971	50.200	241%	282%	425%	790%
22	3-Jun	17.300	21.251	29.071	61.729	272%	335%	458%	972%
23	10-Jun	11.737	21.634	26.700	44.943	185%	341%	420%	708%
24	17-Jun	7.326	14.817	23.943	40.829	115%	233%	377%	643%
25	24-Jun	8.230	11.654	17.571	39.371	130%	183%	277%	620%
26	1-Jul	5.276	7.820	11.643	25.586	83%	123%	183%	403%
27	8-Jul	2.607	4.751	6.206	20.571	41%	75%	98%	324%
28	15-Jul	0.945	2.428	3.310	33.529	15%	38%	52%	528%
29	22-Jul	0.750	1.582	2.130	12.290	12%	25%	34%	193%
30	29-Jul	0.910	1.412	1.970	8.047	14%	22%	31%	127%
31	5-Aug	0.942	1.093	1.563	7.140	15%	17%	25%	112%
32	12-Aug	0.940	1.137	1.447	4.880	15%	18%	23%	77%
33	19-Aug	0.733	0.973	1.260	3.797	12%	15%	20%	60%
34	26-Aug	0.732	0.930	1.258	3.101	12%	15%	20%	49%
35	2-Sep	0.691	0.919	1.553	2.640	11%	14%	24%	42%
36	9-Sep	0.586	0.918	1.407	5.031	9%	14%	22%	79%
37	16-Sep	0.653	0.967	1.252	4.841	10%	15%	20%	76%
38	23-Sep	0.732	1.154	1.401	10.123	12%	18%	22%	159%
39	30-Sep	0.624	1.010	1.659	5.374	10%	16%	26%	85%
40	7-Oct	0.861	1.020	1.357	7.913	14%	16%	21%	125%
41	14-Oct	0.825	0.987	1.574	5.037	13%	16%	25%	79%
42	21-Oct	0.808	1.302	1.875	6.217	13%	21%	30%	98%
43	28-Oct	0.734	0.951	1.381	3.831	12%	15%	22%	60%
44	4-Nov	0.403	1.124	1.478	4.471	6%	18%	23%	70%
45	11-Nov	0.520	0.844	1.883	5.961	8%	13%	30%	94%
46	18-Nov	0.593	0.906	1.579	8.344	9%	14%	25%	131%
47	25-Nov	0.521	0.637	1.019	4.667	8%	10%	16%	73%
48	2-Dec	0.372	0.552	1.200	5.306	6%	9%	19%	84%
49	9-Dec	0.429	0.567	1.077	3.843	7%	9%	17%	60%
50	16-Dec	0.379	0.574	1.024	3.999	6%	9%	16%	63%
51	23-Dec	0.453	0.507	0.906	3.563	7%	8%	14%	56%
52	31-Dec	0.512	0.536	0.889	3.024	8%	8%	14%	48%

## Maximum Licensed Percentile Flows for Mission Creek

Maximum Licensed Percentile Flows for Mission Creek are unavailable at the time of reporting