

APPENDIX B6: MCDOUGALL CREEK

Habitat Mapping

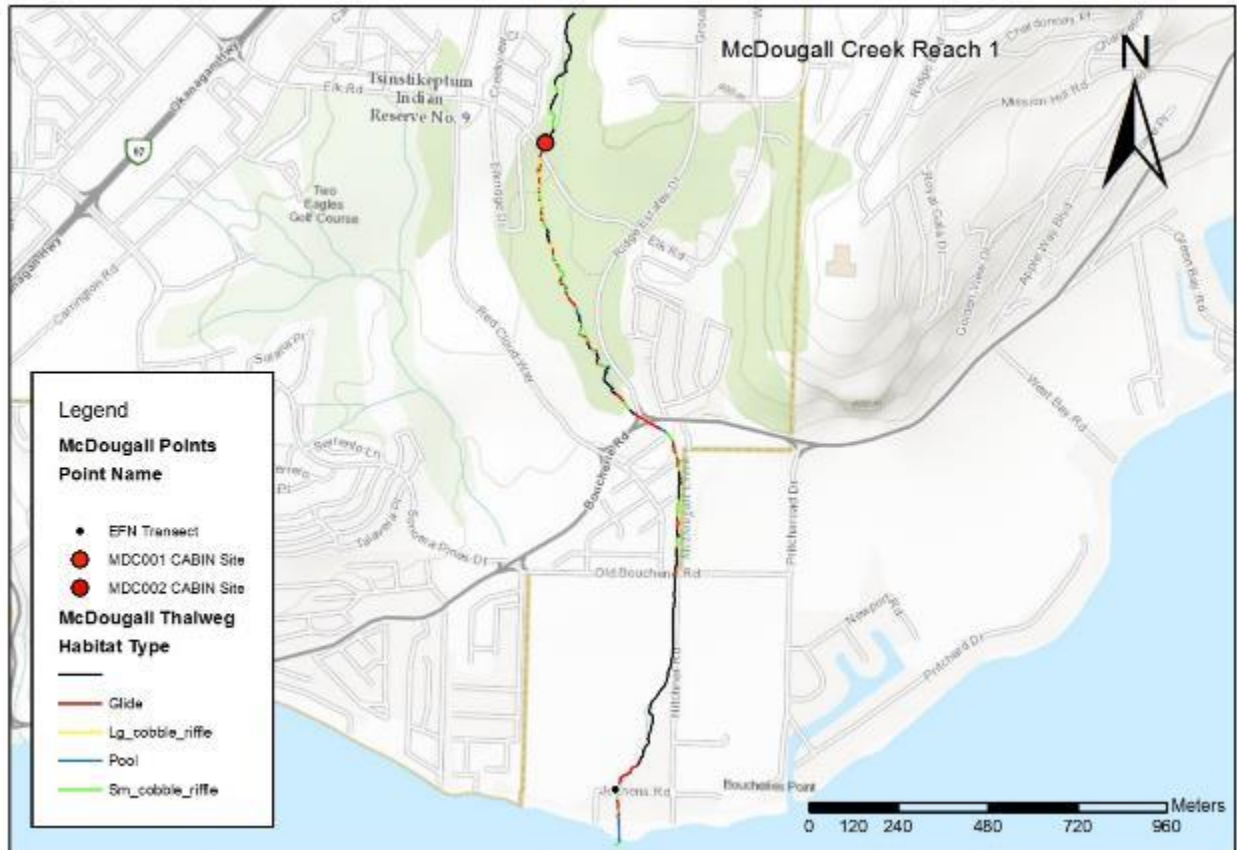


Figure B6-1: Habitat types recorded along Reach 1 of McDougall Creek in the fall of 2016



Figure B6-2: Habitat types recorded along Reach 2 of McDougall Creek in the fall of 2016

Table B6-1: Habitat types recorded in McDougall Creek in the fall of 2016

	Length (m)	% of Total Reach Length
Reach 1	2581.9	
Glide	608.6	24
Large cobble riffle	104.9	4
Pool	151.4	6
Small cobble riffle	483.3	19
No Data	1233.8	48
Reach 2	914.6	
Glide	202.6	22
Large cobble riffle	303.4	33
Pool	34.6	4
No Data	374.0	41
Grand Total	3496.4	

EFN Transect Locations

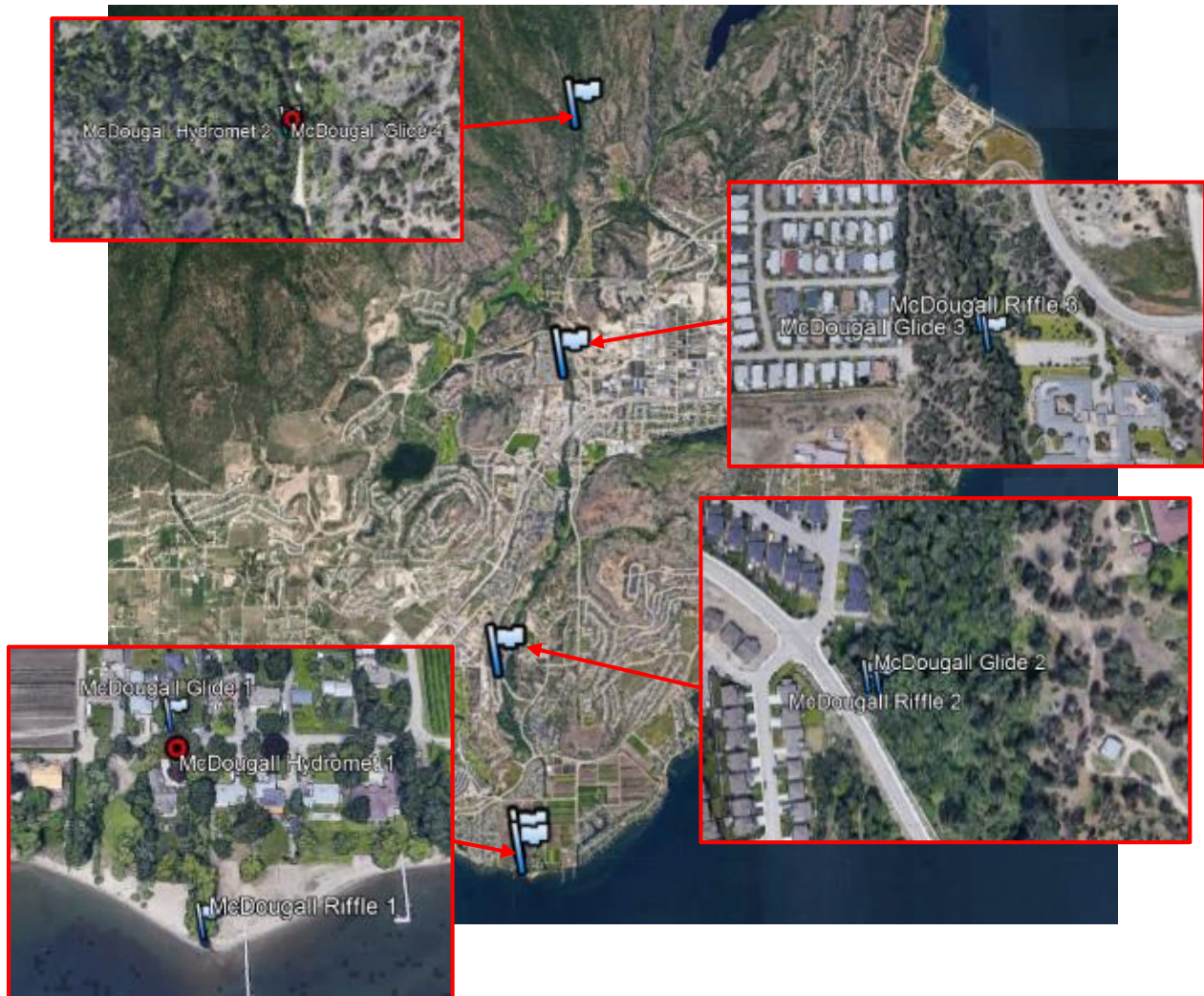


Figure B6-3: EFN transects and hydrometric stations on McDougall Creek

Transect Descriptions

McDougall Riffle 1a

Install Date June 12, 2017

Lat./Long. 49.822572, -119.595265

Comment Replaced original Glide 1 due to channel changes during freshet



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank

McDougall Glide 1a

Install Date June 12, 2017

Lat./Long. 49.822624, -119.595163

Comment Moved slightly due to changes in the channel during freshet.



Looking upstream



Looking downstream

McDougall Hydromet 1

Install Date Aug 30, 2016

Lat./Long. 49.822420, -119.595243

Comment Installed on boulder approx. 10 m downstream of Jennens Road bridge.



McDougall Glide 2

Install Date	Aug 25, 2016		
Lat./Long.	49.838041, -119.598666		
Width (install)	2.30 m	Depth (install)	0.16 m
Avg. width range	2.23 - 2.92 m	Avg. depth range	0.16 - 0.19 m
Comment	Gravel and cobble, typical of this reach		



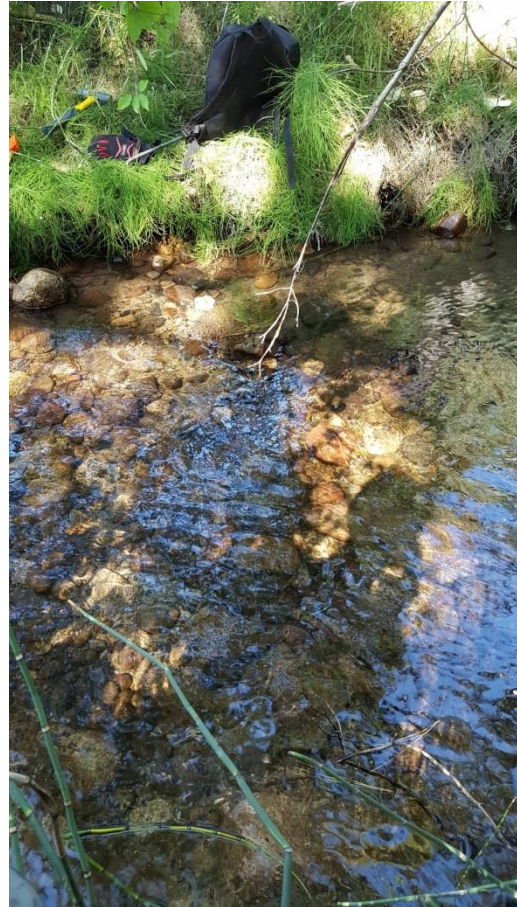
Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank

McDougall Riffle 2

Install Date	Aug 25, 2016		
Lat./Long.	49.838034, -119.598569		
Width (install)	2.30 m	Depth (install)	0.14 m
Avg. width range	1.51 - 2.37 m	Avg. depth range	0.13 - 0.15 m
Comment	Large cobble riffle		



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank

McDougall Riffle 3

Install Date	Aug 25, 2016		
Lat./Long.	49.864366, -119.590491		
Width (install)	2.20 m	Depth (install)	0.08 m
Avg. width range	1.85 - 2.17 m (glide)	Avg. depth range	0.16 - 0.22 m (glide)
Comment	Large cobble riffle; flow dropped in this section from habitat survey		



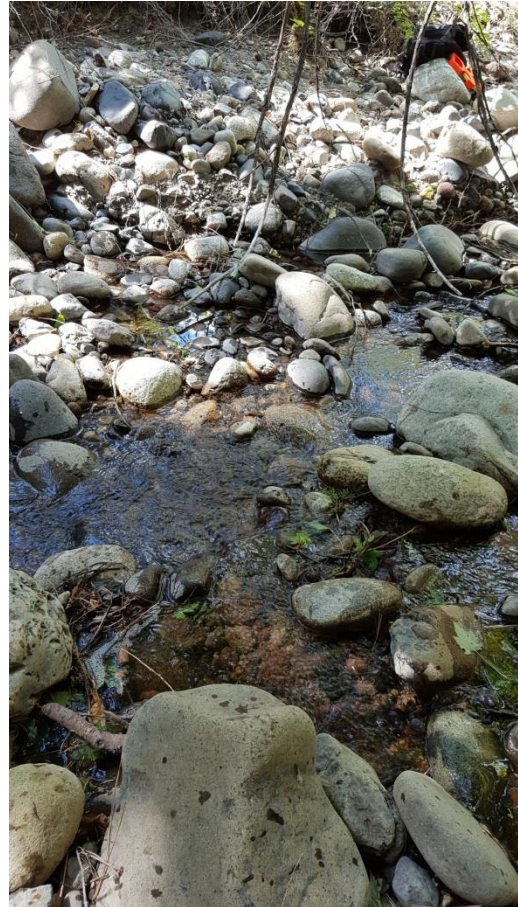
Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank

McDougall Glide 3

Install Date Aug 25, 2016

Latitude 49.864526, -119.590583

Width (install) 1.80 m

Depth (install) 0.17 m

Avg. width range 1.85 - 2.17 m

Avg. depth range 0.16 - 0.22 m

Comment Rainbow trout observed; some dead; extremely low flows during install



Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank

McDougall Glide 4

Install Date Aug 25, 2016

Latitude 49.887101, -119.589160

Width (install) 3.20 m

Depth (install) 0.19 m

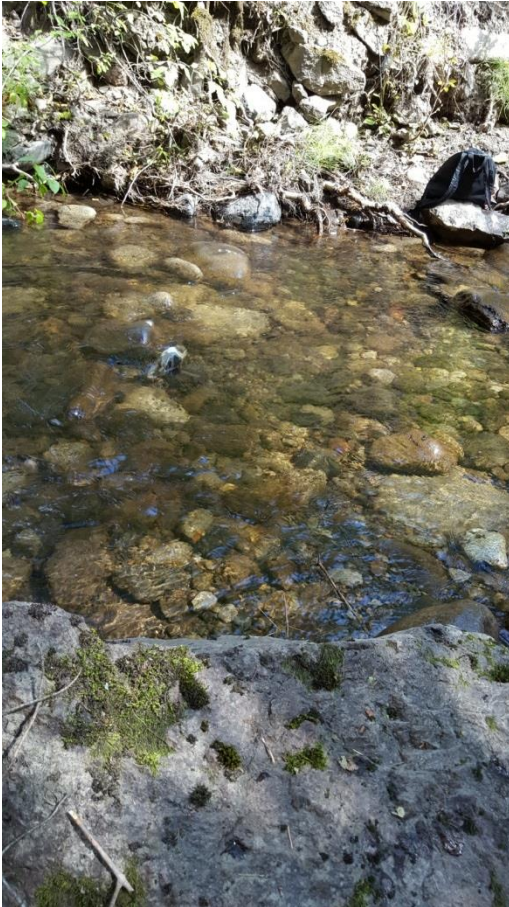
selection comment Rainbow trout observed; selected for hydrometric measurement located above all diversions with good flow.



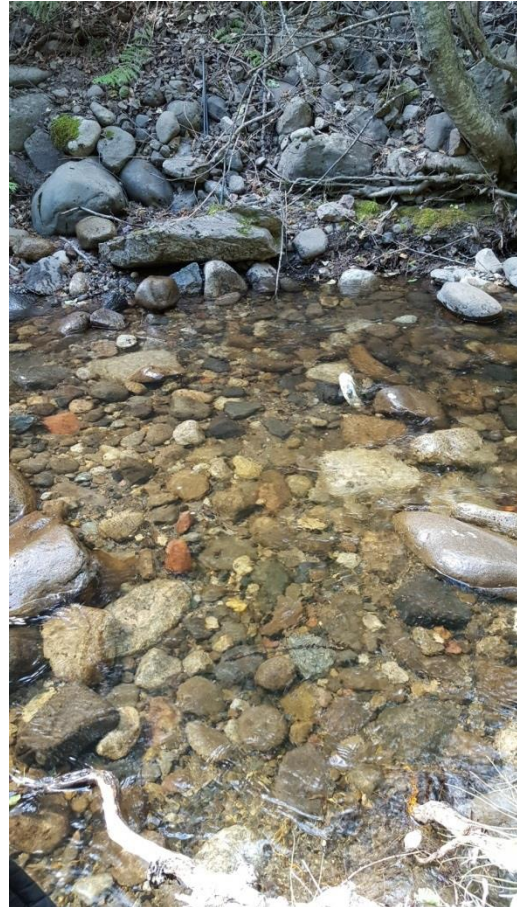
Looking upstream



Looking downstream



Looking right bank to left bank



Looking left bank to right bank

McDougall Hydromet 2

Install Date Aug 30, 2016

Lat./Long. 49.887219, -119.589125

Comment Installed on boulder upstream of Glide 4.



Discharge Records



Figure B6-4: Daily mean discharge recorded at the McDougall Hydrometric Station 1 (08NM590 near the mouth) and McDougall Hydrometric Station 2 (08NM591 at Bartley Road) from 2017 to 2018

Historic WSC Discharge - McDougall

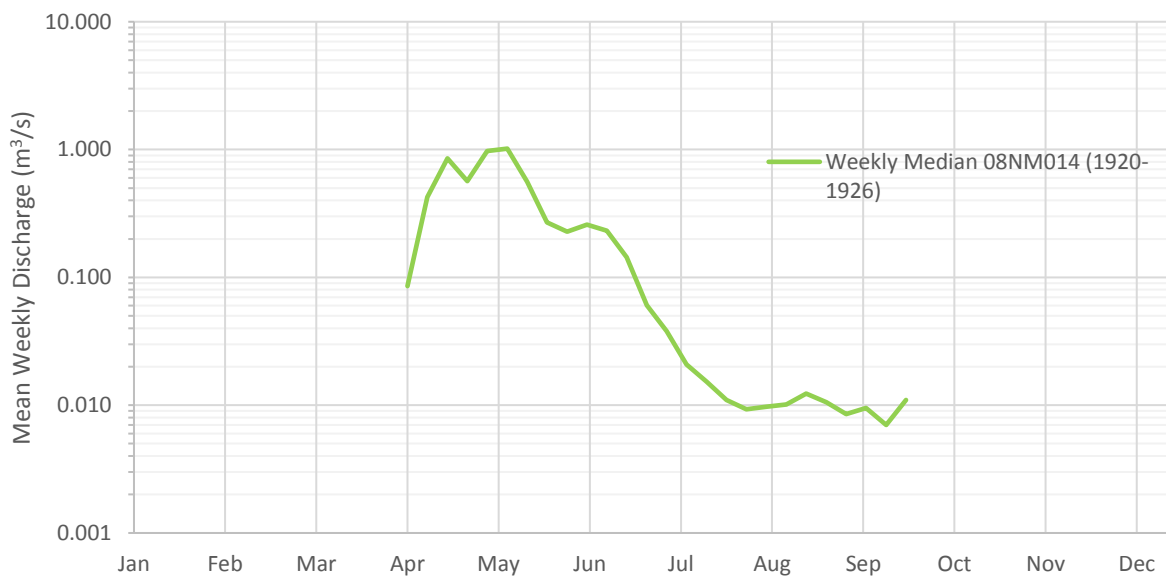


Figure B6-5: Historic discharge recorded at WSC station 08NM014 (McDougall Creek near Westbank) from 1920-1926

Water Temperature Records



Figure B6-6: Daily maximum temperatures recorded at McDougall Hydrometric Station 2 (08NM591 at Bartley Road) from 2016 to 2018

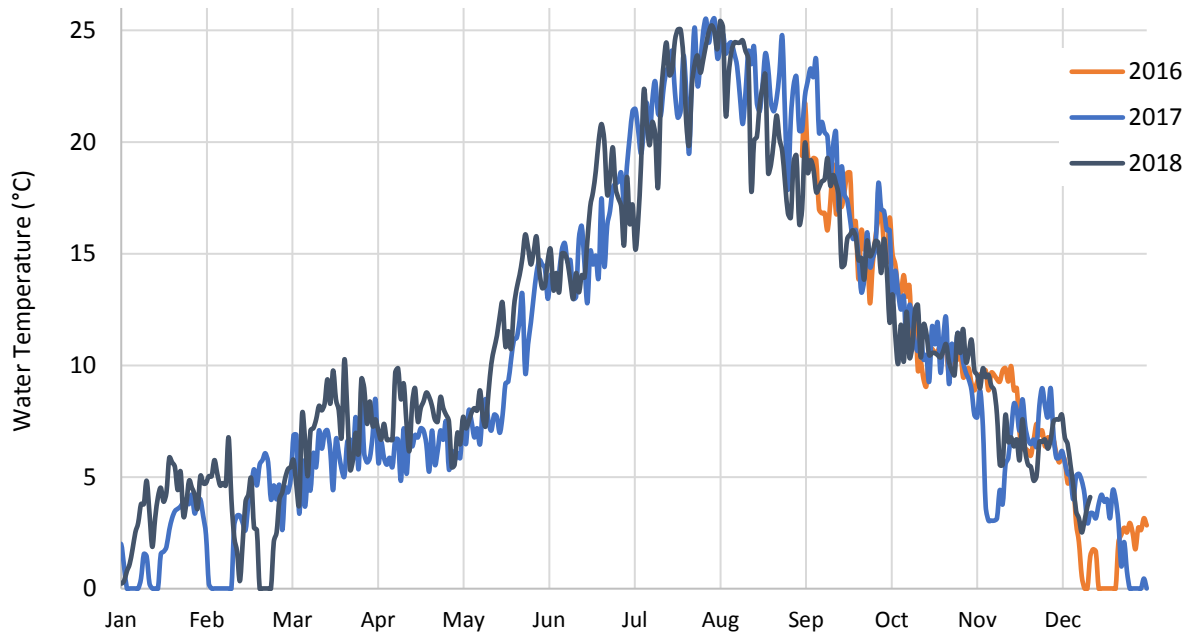


Figure B6-7: Daily maximum temperatures recorded at McDougall Hydrometric Station 1 (08NM590 near the mouth) from 2016 to 2018

Flow standards and periodicity - Okanagan Tennant analysis for McDougall Creek

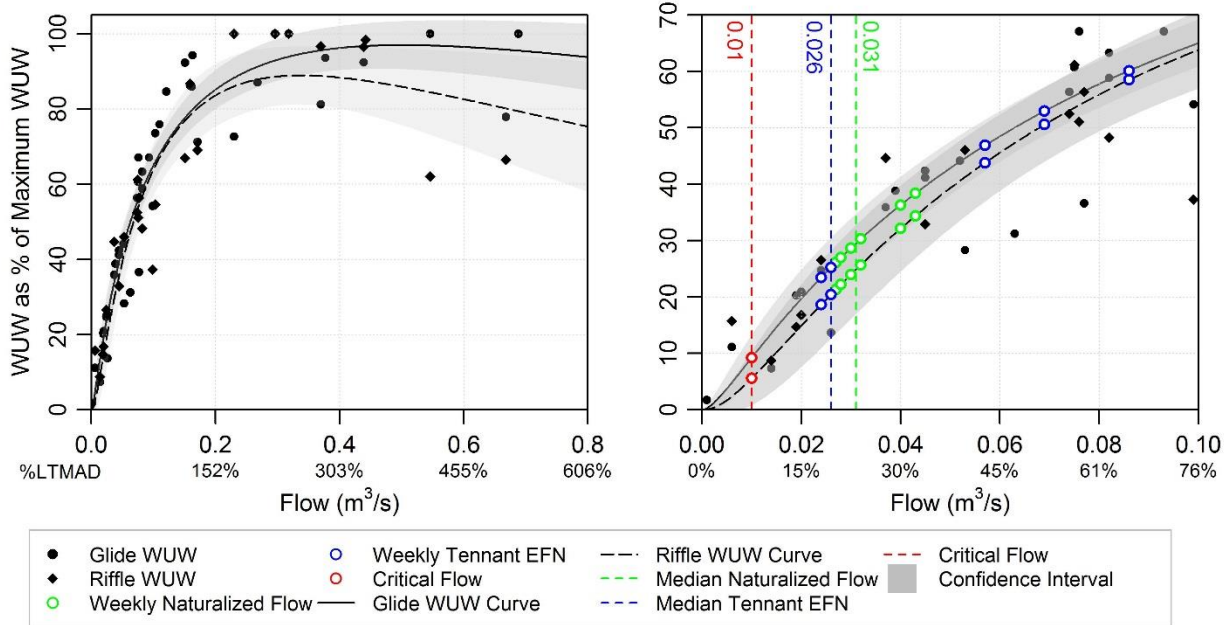
Week Ending	Life Stage / Week	Rainbow						Kokanee				Ecological Flows	
		Adult migration	Spawning	Incubation	Rearing	Juvenile migration	Over-wintering	Adult migration	Spawning	Incubation	Juvenile migration	Wetland, side channel linkage, flushing and channel maintenance flow	Cottonwood ecosystem
Jan							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	307%			20%						50%	<input checked="" type="checkbox"/>	
22-Apr	16	307%			20%						50%	<input checked="" type="checkbox"/>	
29-Apr	17	307%			20%						50%	<input checked="" type="checkbox"/>	
6-May	18	307%			20%	50%					50%	<input checked="" type="checkbox"/>	
13-May	19	307%	40%		20%	50%					50%	<input checked="" type="checkbox"/>	
20-May	20	307%	40%		20%	50%					50%	730%	100%
27-May	21	307%	40%	20%	20%	50%					50%	730%	100%
3-Jun	22	307%	40%	20%	20%	50%						<input checked="" type="checkbox"/>	100%
10-Jun	23	307%	40%	20%	20%	50%						<input checked="" type="checkbox"/>	100%
17-Jun	24	307%	40%	20%	20%	50%						<input checked="" type="checkbox"/>	100%
24-Jun	25	307%	40%	20%	20%	50%							100%
1-Jul	26	307%	40%	20%	20%	50%							100%
8-Jul	27	307%	40%	20%	20%	50%							100%
15-Jul	28			20%	20%	50%							100%
22-Jul	29			20%	20%								100%
29-Jul	30			20%	20%								100%
5-Aug	31				20%								
12-Aug	32				20%								
19-Aug	33				20%								
26-Aug	34				20%								
2-Sep	35				20%								
9-Sep	36				20%			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%	20%			
14-Oct	41				20%			20%	20%	20%			
21-Oct	42				20%			20%	20%	20%			
28-Oct	43				20%					20%			
Nov							20%			20%			
Dec							20%			20%			

EFNs and Critical Flows for McDougall Creek

Week Ending	EFN - all factors (%LTMAD)	EFN based on flow standards (m ³ /s)	Nat. median weekly Q (m ³ /s)	Okanagan Tennant EFN		WUW EFN (m ³ /s)					FINAL EFN		CRITICAL FLOW (m ³ /s)			
				Discharge m ³ /s	%LTMAD	Rainbow rearing	Insect production	Kokanee spawning	Rainbow spawning	FINAL	Value (m ³ /s)	Dominant Species / Life Stage	Rainbow rearing & overwintering	Kokanee spawning	Rainbow spawning	FINAL
Jan	20%	0.026	0.025	0.025	19%						0.025	overwintering egg Incubation	0.010			0.010
Feb	20%	0.026	0.025	0.025	19%						0.025	overwintering egg Incubation	0.010			0.010
Mar	20%	0.026	0.029	0.029	22%						0.029	overwintering egg Incubation	0.010			0.010
1-Apr	50%	0.066	0.069	0.066	50%	0.026	0.026			0.026	0.066	RB juv. migration	0.010			0.010
8-Apr	50%	0.066	0.082	0.066	50%	0.026	0.026			0.026	0.066	RB juv. migration	0.010			0.010
15-Apr	307%	0.407	0.101	0.101	76%	0.026	0.026			0.026	0.101	RB adult migration	0.010	0.101		0.101
22-Apr	307%	0.407	0.200	0.200	151%	0.026	0.026			0.026	0.200	RB adult migration	0.010		0.161	0.161
29-Apr	307%	0.407	0.399	0.399	301%	0.026	0.026			0.026	0.399	RB adult migration	0.010		0.161	0.161
6-May	307%	0.407	0.477	0.407	307%	0.026	0.026			0.026	0.407	RB adult migration	0.010		0.161	0.161
13-May	307%	0.407	0.458	0.407	307%	0.026	0.026		0.373	0.373	0.407	RB adult migration	0.010		0.161	0.161
20-May	730%	0.967	0.659	0.659	498%	0.026	0.026		0.373	0.373	0.659	Ecosystem flows	0.010		0.161	0.161
27-May	730%	0.967	0.587	0.587	443%	0.026	0.026		0.373	0.373	0.587	Ecosystem flows	0.010		0.161	0.161
3-Jun	307%	0.407	0.439	0.407	307%	0.026	0.026		0.373	0.373	0.373	RB Spawning	0.010		0.161	0.161
10-Jun	307%	0.407	0.393	0.393	297%	0.026	0.026		0.373	0.373	0.373	RB Spawning	0.010		0.161	0.161
17-Jun	307%	0.407	0.353	0.353	266%	0.026	0.026		0.373	0.373	0.353	RB Spawning	0.010		0.161	0.161
24-Jun	307%	0.407	0.214	0.214	162%	0.026	0.026		0.373	0.373	0.214	RB Spawning	0.010		0.161	0.161
1-Jul	307%	0.407	0.171	0.171	129%	0.026	0.026		0.373	0.373	0.171	RB Spawning	0.010		0.161	0.161
8-Jul	307%	0.407	0.128	0.128	97%	0.026	0.026		0.373	0.373	0.128	RB Spawning	0.010		0.128	0.128
15-Jul	100%	0.132	0.086	0.086	65%	0.026	0.026			0.026	0.086	RB incubation	0.010			0.010
22-Jul	100%	0.132	0.069	0.069	52%	0.026	0.026			0.026	0.069	RB incubation	0.010			0.010
29-Jul	100%	0.132	0.057	0.057	43%	0.026	0.026			0.026	0.057	RB incubation	0.010			0.010
5-Aug	20%	0.026	0.043	0.026	20%	0.026	0.026			0.026	0.026	RB parr rearing	0.010			0.010
12-Aug	20%	0.026	0.040	0.026	20%	0.026	0.026			0.026	0.026	RB parr rearing	0.010			0.010
19-Aug	20%	0.026	0.032	0.026	20%	0.026	0.026			0.026	0.026	RB parr rearing	0.010			0.010
26-Aug	20%	0.026	0.030	0.026	20%	0.026	0.026			0.026	0.026	RB parr rearing	0.010			0.010
2-Sep	20%	0.026	0.027	0.026	20%	0.026	0.026			0.026	0.026	RB parr rearing	0.010			0.010
9-Sep	20%	0.026	0.024	0.024	18%	0.026	0.026	0.028		0.028	0.028	KO Spawning	0.010	0.013		0.013
16-Sep	20%	0.026	0.024	0.024	18%	0.026	0.026	0.028		0.028	0.028	KO Spawning	0.010	0.013		0.013
23-Sep	20%	0.026	0.027	0.026	20%	0.026	0.026	0.028		0.028	0.028	KO Spawning	0.010	0.013		0.013
30-Sep	20%	0.026	0.028	0.026	20%	0.026	0.026	0.028		0.028	0.028	KO Spawning	0.010	0.013		0.013
7-Oct	20%	0.026	0.029	0.026	20%	0.026	0.026	0.028		0.028	0.028	KO Spawning	0.010	0.013		0.013
14-Oct	20%	0.026	0.028	0.026	20%	0.026	0.026	0.028		0.028	0.028	KO Spawning	0.010	0.013		0.013
21-Oct	20%	0.026	0.033	0.026	20%	0.026	0.026	0.028		0.028	0.028	KO Spawning	0.010	0.013		0.013
28-Oct	20%	0.026	0.033	0.026	20%	0.026	0.026			0.026	0.026	RB parr rearing	0.010			0.010
Nov	20%	0.026	0.032	0.032	24%						0.032	overwintering egg Incubation	0.010			0.010
Dec	20%	0.026	0.026	0.026	20%						0.026	overwintering egg Incubation	0.010			0.010

Weighted Usable Width

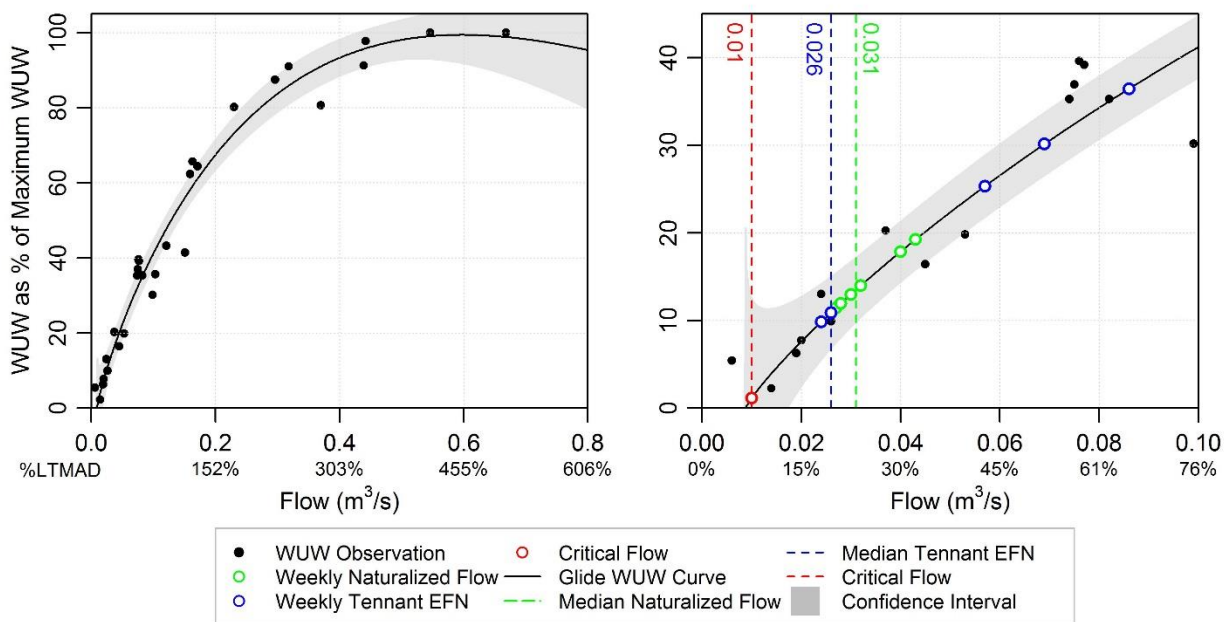
McDougall Creek Rainbow Parr Rearing WUW



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

Figure B6-8: WUW curves for Rainbow rearing in McDougall Creek for all flows (left) and low flows (right)

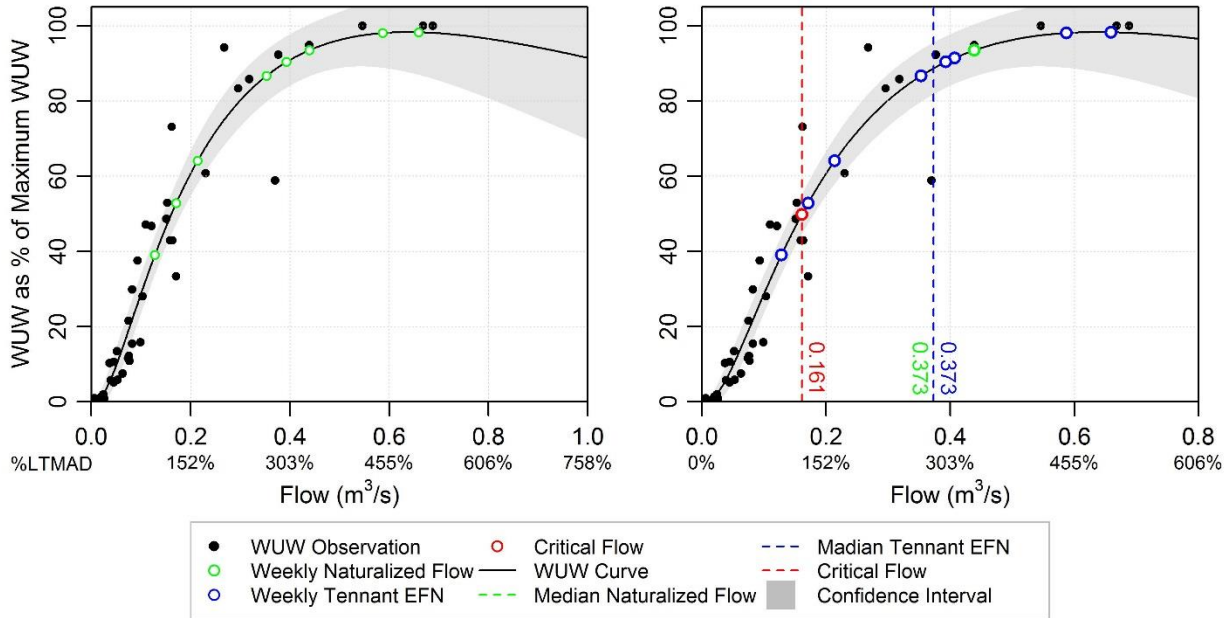
McDougall Creek Insect Production WUW



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

Figure B6-9: WUW curves for insect production in McDougall Creek for all flows (left) and low flows (right)

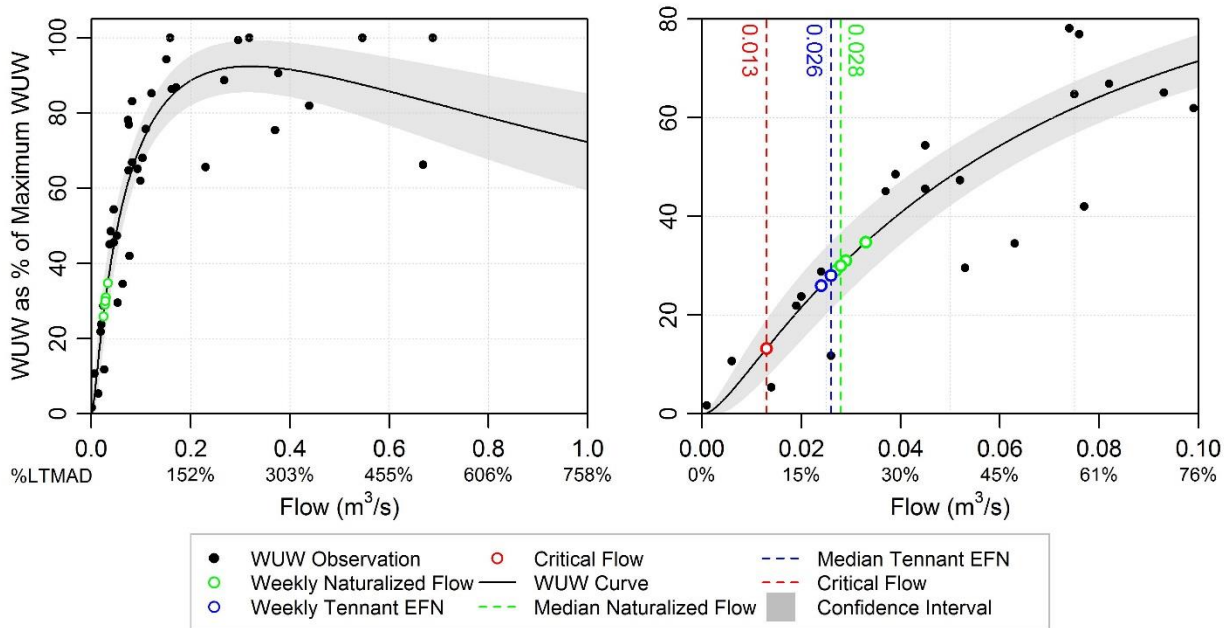
McDougall Creek Rainbow Spawning WUW



Median values from May 20 to July 10 (week 20-27)

Figure B6-10: WUW curves for Rainbow spawning in McDougall Creek for all flows (left) and low flows (right)

McDougall Creek Kokanee Spawning WUW



Median values from September 1 to October 20 (week 36-42)

Figure B6 11: WUW curves for Kokanee spawning in McDougall Creek for all flows (left) and low flows (right)

Critical Flows

Table B6-2: Critical flow analysis for McDougall Creek

Species / Life Stage	Critical Flow Criteria	Glide 1		Riffle 1a		Riffle 2		Riffle 3		Average	
		(m ³ /s)	LTMAD	(m ³ /s)	LTMAD	(m ³ /s)	LTMAD	(m ³ /s)	LTMAD	(m ³ /s)	LTMAD
	Naturalized LTMAD	0.132	100%	0.132	100%	0.132	100%	0.132	100%		
	Wetted width at 100% LTMAD (m)	2.64		2.60		2.33		2.71			
Rainbow rearing, insect production & overwintering	60% of width at 100% LTMAD	0.015	11%	0.012	9%	0.010	8%	0.004	3%	0.010	8%
Rainbow spawning	25% width at 100% LTMAD is ≥ 0.18 m deep	0.084	64%	0.274	208%	0.141	107%	0.145	110%	0.161	122%
Kokanee spawning	25% of width at 100% LTMAD is ≥ 0.12 m deep	0.044	33%	0.077	58%	0.032	24%	0.029	22%	0.046	34%

Table B6-3: Final critical flows for McDougall Creek

Species/Life stage	Final Critical Flow (m ³ /s)	% LTMAD	Criteria Used
Rainbow rearing and insect production	0.010	8%	60% of max wetted width
Rainbow spawning	0.161	122%	0.18m depth criterion
Kokanee Spawning	0.013	10%	10% LTMAD
Rainbow overwintering	0.010	8%	60% of max wetted width

Table B6-4: 30 day naturalized low flows for Summer and Winter provided by Associated (2019)

	(m ³ /s)	% LTMAD
Summer (July 1 to September 30) Minimum		
Summer 1:2-year return period 30 Day Naturalized Low	0.024	18%
Summer 1:5-year return period 30 Day Naturalized Low	0.018	14%
Summer 1:10-year return period 30 Day Naturalized Low	0.015	11%
Summer 1:20-year return period 30 Day Naturalized Low	0.014	11%
Winter (November 1 to March 31) Minimum		
Winter 1:2-year return period 30 Day Naturalized Low	0.023	17%
Winter 1:5-year return period 30 Day Naturalized Low	0.018	14%
Winter 1:10-year return period 30 Day Naturalized Low	0.016	12%
Winter 1:20-year return period 30 Day Naturalized Low	0.015	11%

Percentile Flows for McDougall Creek

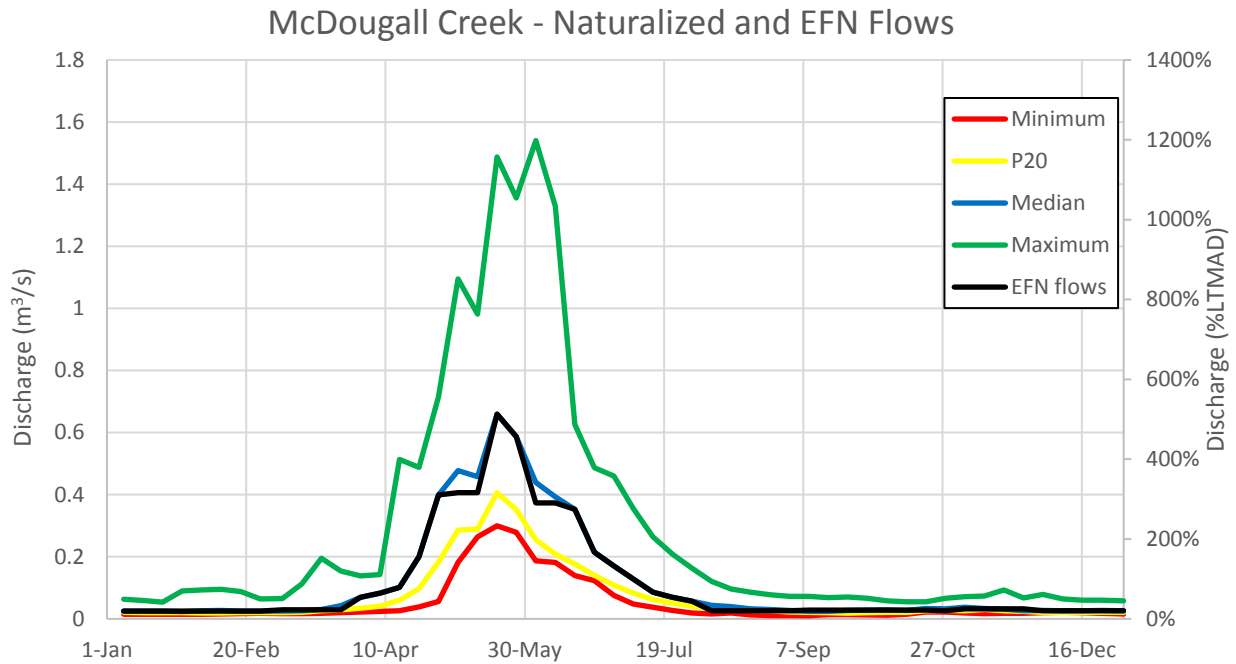


Figure B6-12: EFN flows compared with naturalized flow percentiles in McDougall Creek (Discharge & %LTMAD)

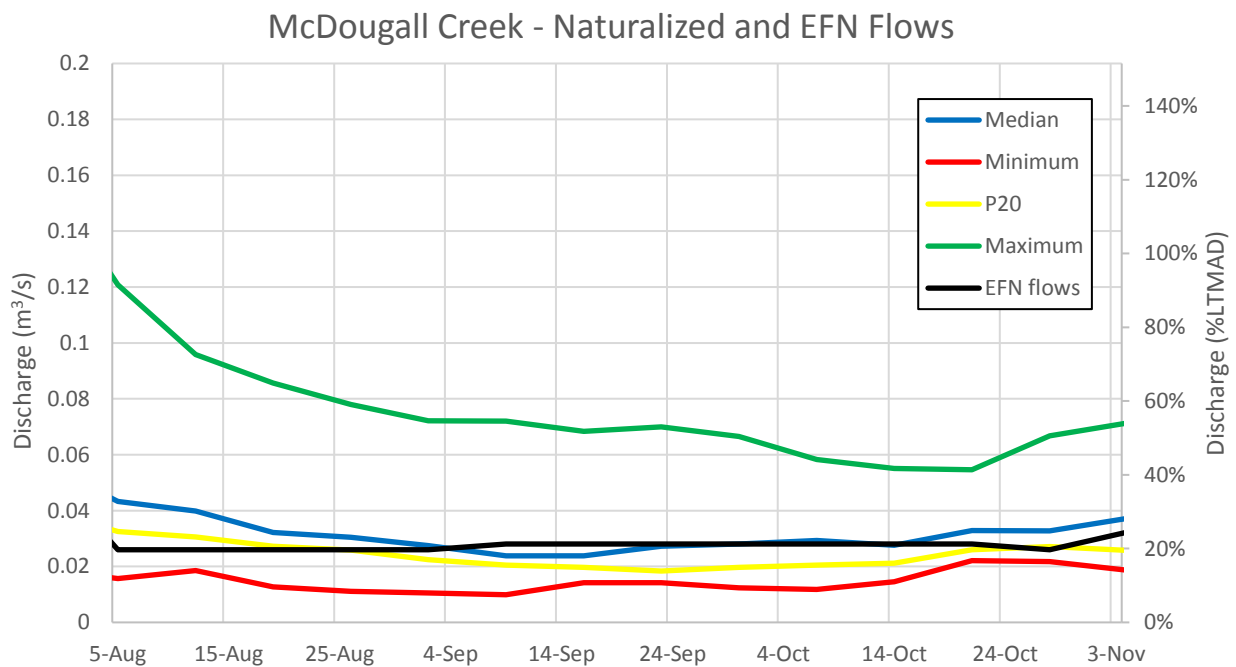


Figure B6-13: EFN flows compared with naturalized flow percentiles in McDougall Creek Aug-Nov (Discharge & %LTMAD)

Naturalized Percentile Flows for McDougall Creek

NATURALIZED FLOW		as m ³ /s				as %LTMD			
Week	Ending	Min	P20	Median	Max	Min	P20	Median	Max
01	7-Jan	0.015	0.021	0.025	0.063	11%	16%	19%	48%
02	14-Jan	0.015	0.020	0.025	0.059	11%	15%	19%	45%
03	21-Jan	0.015	0.020	0.025	0.054	12%	15%	19%	41%
04	28-Jan	0.015	0.020	0.023	0.090	11%	15%	18%	68%
05	4-Feb	0.015	0.019	0.026	0.093	11%	14%	20%	70%
06	11-Feb	0.016	0.019	0.027	0.095	12%	14%	20%	72%
07	18-Feb	0.017	0.020	0.025	0.088	13%	15%	19%	66%
08	25-Feb	0.018	0.020	0.025	0.064	13%	15%	19%	48%
09	4-Mar	0.017	0.020	0.025	0.065	13%	15%	19%	49%
10	11-Mar	0.017	0.021	0.026	0.113	13%	16%	19%	85%
11	18-Mar	0.018	0.026	0.030	0.195	14%	19%	23%	147%
12	25-Mar	0.020	0.029	0.043	0.153	15%	22%	32%	116%
13	1-Apr	0.022	0.034	0.069	0.139	16%	26%	52%	105%
14	8-Apr	0.025	0.040	0.082	0.142	19%	30%	62%	107%
15	15-Apr	0.026	0.060	0.101	0.514	20%	45%	76%	388%
16	22-Apr	0.039	0.098	0.200	0.488	29%	74%	151%	368%
17	29-Apr	0.056	0.183	0.399	0.716	42%	138%	301%	540%
18	6-May	0.182	0.286	0.477	1.095	138%	216%	360%	826%
19	13-May	0.264	0.288	0.458	0.981	199%	218%	346%	741%
20	20-May	0.300	0.406	0.659	1.488	226%	307%	498%	1123%
21	27-May	0.279	0.351	0.587	1.356	211%	265%	443%	1024%
22	3-Jun	0.187	0.255	0.439	1.540	141%	193%	332%	1163%
23	10-Jun	0.182	0.208	0.393	1.329	137%	157%	297%	1003%
24	17-Jun	0.139	0.176	0.353	0.626	105%	133%	266%	472%
25	24-Jun	0.122	0.140	0.214	0.486	92%	106%	162%	367%
26	1-Jul	0.075	0.108	0.171	0.460	57%	82%	129%	347%
27	8-Jul	0.047	0.083	0.128	0.355	36%	63%	97%	268%
28	15-Jul	0.037	0.062	0.086	0.264	28%	47%	65%	199%
29	22-Jul	0.027	0.050	0.069	0.208	20%	38%	52%	157%
30	29-Jul	0.019	0.041	0.057	0.163	14%	31%	43%	123%
31	5-Aug	0.016	0.033	0.043	0.121	12%	25%	33%	91%
32	12-Aug	0.018	0.031	0.040	0.096	14%	23%	30%	72%
33	19-Aug	0.013	0.027	0.032	0.086	10%	21%	24%	65%
34	26-Aug	0.011	0.026	0.030	0.078	8%	20%	23%	59%
35	2-Sep	0.011	0.022	0.027	0.072	8%	17%	21%	54%
36	9-Sep	0.010	0.021	0.024	0.072	7%	16%	18%	54%
37	16-Sep	0.014	0.020	0.024	0.068	11%	15%	18%	52%
38	23-Sep	0.014	0.018	0.027	0.070	11%	14%	21%	53%
39	30-Sep	0.012	0.020	0.028	0.066	9%	15%	21%	50%
40	7-Oct	0.012	0.020	0.029	0.058	9%	15%	22%	44%
41	14-Oct	0.015	0.021	0.028	0.055	11%	16%	21%	42%
42	21-Oct	0.022	0.026	0.033	0.055	17%	20%	25%	41%
43	28-Oct	0.022	0.027	0.033	0.067	16%	21%	25%	50%
44	4-Nov	0.019	0.026	0.037	0.071	14%	19%	28%	54%
45	11-Nov	0.017	0.030	0.034	0.074	13%	22%	25%	56%
46	18-Nov	0.018	0.026	0.031	0.093	13%	20%	24%	70%
47	25-Nov	0.018	0.024	0.026	0.068	13%	18%	20%	51%
48	2-Dec	0.020	0.021	0.027	0.079	15%	16%	20%	60%
49	9-Dec	0.021	0.021	0.026	0.065	16%	16%	19%	49%
50	16-Dec	0.020	0.021	0.026	0.060	15%	16%	20%	45%
51	23-Dec	0.018	0.021	0.027	0.060	14%	16%	20%	46%
52	31-Dec	0.015	0.021	0.026	0.058	12%	16%	20%	44%

Residual Percentile Flows for McDougall Creek

RESIDUAL FLOW		as m ³ /s				as %LTMAD			
Week	Ending	Min	P20	Median	Max	Min	P20	Median	Max
01	7-Jan	0.009	0.012	0.020	0.059	7%	9%	15%	44%
02	14-Jan	0.009	0.012	0.021	0.055	7%	9%	16%	41%
03	21-Jan	0.011	0.011	0.020	0.047	8%	9%	15%	36%
04	28-Jan	0.010	0.011	0.019	0.071	8%	8%	14%	54%
05	4-Feb	0.009	0.011	0.021	0.073	7%	9%	15%	55%
06	11-Feb	0.010	0.011	0.021	0.075	7%	9%	16%	57%
07	18-Feb	0.011	0.012	0.020	0.070	8%	9%	15%	53%
08	25-Feb	0.010	0.013	0.020	0.056	8%	10%	15%	42%
09	4-Mar	0.010	0.014	0.021	0.061	8%	11%	16%	46%
10	11-Mar	0.009	0.016	0.021	0.090	7%	12%	16%	68%
11	18-Mar	0.009	0.017	0.024	0.155	7%	13%	18%	117%
12	25-Mar	0.011	0.021	0.032	0.122	8%	16%	24%	92%
13	1-Apr	0.012	0.024	0.057	0.110	9%	18%	43%	83%
14	8-Apr	0.042	0.052	0.099	0.154	32%	39%	75%	116%
15	15-Apr	0.041	0.074	0.106	0.514	31%	56%	80%	388%
16	22-Apr	0.045	0.078	0.167	0.471	34%	59%	126%	355%
17	29-Apr	0.069	0.152	0.313	0.539	52%	115%	236%	407%
18	6-May	0.104	0.176	0.364	0.811	78%	133%	275%	612%
19	13-May	0.136	0.216	0.363	0.844	102%	163%	274%	637%
20	20-May	0.043	0.212	0.466	1.260	32%	160%	351%	951%
21	27-May	0.147	0.191	0.428	1.122	111%	144%	323%	847%
22	3-Jun	0.095	0.135	0.301	1.345	72%	102%	227%	1015%
23	10-Jun	0.080	0.133	0.314	1.187	60%	101%	237%	896%
24	17-Jun	0.044	0.090	0.244	0.526	33%	68%	184%	397%
25	24-Jun	0.119	0.141	0.220	0.501	89%	106%	166%	378%
26	1-Jul	0.070	0.105	0.162	0.472	53%	79%	123%	356%
27	8-Jul	0.040	0.077	0.121	0.365	30%	58%	91%	275%
28	15-Jul	0.026	0.055	0.084	0.271	20%	42%	63%	205%
29	22-Jul	0.011	0.041	0.066	0.212	8%	31%	50%	160%
30	29-Jul	0.002	0.029	0.046	0.162	2%	22%	35%	122%
31	5-Aug	0.000	0.022	0.034	0.117	0%	17%	26%	89%
32	12-Aug	0.004	0.020	0.034	0.092	3%	15%	26%	70%
33	19-Aug	0.001	0.022	0.029	0.086	1%	17%	22%	65%
34	26-Aug	0.001	0.021	0.027	0.080	1%	16%	21%	60%
35	2-Sep	0.002	0.018	0.029	0.079	2%	14%	22%	60%
36	9-Sep	0.004	0.019	0.032	0.085	3%	15%	24%	64%
37	16-Sep	0.013	0.019	0.033	0.087	10%	15%	25%	66%
38	23-Sep	0.018	0.025	0.040	0.093	14%	19%	30%	70%
39	30-Sep	0.021	0.035	0.043	0.093	15%	26%	32%	70%
40	7-Oct	0.000	0.003	0.013	0.044	0%	2%	10%	33%
41	14-Oct	0.000	0.009	0.014	0.043	0%	7%	11%	32%
42	21-Oct	0.011	0.016	0.023	0.043	8%	12%	17%	32%
43	28-Oct	0.013	0.016	0.025	0.052	10%	12%	19%	40%
44	4-Nov	0.011	0.017	0.027	0.056	9%	13%	20%	43%
45	11-Nov	0.012	0.019	0.026	0.059	9%	14%	20%	44%
46	18-Nov	0.013	0.017	0.023	0.072	10%	13%	17%	55%
47	25-Nov	0.013	0.015	0.022	0.053	10%	11%	16%	40%
48	2-Dec	0.012	0.015	0.022	0.063	9%	11%	17%	47%
49	9-Dec	0.013	0.015	0.020	0.051	10%	12%	15%	39%
50	16-Dec	0.011	0.014	0.022	0.048	8%	11%	16%	36%
51	23-Dec	0.011	0.014	0.022	0.048	8%	10%	16%	36%
52	31-Dec	0.010	0.014	0.022	0.047	8%	10%	16%	36%

Max Licensed Percentile Flows for McDougall Creek

MAX LICENSED FLOW		as m ³ /s				as %LTMAD			
Week	Ending	Min	P20	Median	Max	Min	P20	Median	Max
01	7-Jan	0.009	0.011	0.020	0.059	6%	9%	15%	44%
02	14-Jan	0.009	0.011	0.021	0.055	7%	9%	16%	41%
03	21-Jan	0.010	0.011	0.020	0.047	8%	8%	15%	35%
04	28-Jan	0.010	0.011	0.019	0.071	8%	8%	14%	53%
05	4-Feb	0.009	0.011	0.020	0.073	7%	8%	15%	55%
06	11-Feb	0.009	0.011	0.020	0.075	7%	8%	15%	57%
07	18-Feb	0.010	0.012	0.019	0.069	8%	9%	15%	52%
08	25-Feb	0.010	0.012	0.020	0.055	8%	9%	15%	42%
09	4-Mar	0.010	0.014	0.021	0.060	8%	10%	16%	45%
10	11-Mar	0.009	0.016	0.021	0.089	7%	12%	16%	67%
11	18-Mar	0.009	0.017	0.024	0.154	7%	13%	18%	116%
12	25-Mar	0.010	0.021	0.032	0.121	8%	16%	24%	92%
13	1-Apr	0.011	0.023	0.057	0.109	9%	18%	43%	83%
14	8-Apr	0.042	0.052	0.099	0.155	32%	40%	75%	117%
15	15-Apr	0.042	0.076	0.107	0.516	32%	58%	81%	390%
16	22-Apr	0.048	0.083	0.169	0.474	36%	62%	127%	358%
17	29-Apr	0.072	0.158	0.318	0.539	54%	119%	240%	407%
18	6-May	0.109	0.181	0.368	0.813	83%	136%	278%	614%
19	13-May	0.139	0.220	0.354	0.849	105%	166%	267%	641%
20	20-May	0.043	0.208	0.449	1.261	32%	157%	339%	952%
21	27-May	0.140	0.178	0.419	1.117	106%	135%	316%	843%
22	3-Jun	0.082	0.119	0.285	1.335	62%	90%	215%	1008%
23	10-Jun	0.059	0.113	0.288	1.165	45%	85%	217%	880%
24	17-Jun	0.021	0.065	0.217	0.490	15%	49%	164%	370%
25	24-Jun	0.085	0.100	0.192	0.468	64%	75%	145%	353%
26	1-Jul	0.032	0.061	0.128	0.430	24%	46%	97%	324%
27	8-Jul	0.000	0.019	0.083	0.312	0%	14%	63%	236%
28	15-Jul	0.000	0.000	0.033	0.209	0%	0%	25%	158%
29	22-Jul	0.000	0.000	0.018	0.137	0%	0%	14%	104%
30	29-Jul	0.000	0.000	0.000	0.078	0%	0%	0%	59%
31	5-Aug	0.000	0.000	0.000	0.022	0%	0%	0%	17%
32	12-Aug	0.000	0.000	0.000	0.020	0%	0%	0%	15%
33	19-Aug	0.000	0.000	0.000	0.030	0%	0%	0%	23%
34	26-Aug	0.000	0.000	0.000	0.006	0%	0%	0%	5%
35	2-Sep	0.000	0.000	0.000	0.019	0%	0%	0%	14%
36	9-Sep	0.000	0.000	0.000	0.035	0%	0%	0%	27%
37	16-Sep	0.000	0.000	0.000	0.053	0%	0%	0%	40%
38	23-Sep	0.000	0.000	0.008	0.069	0%	0%	6%	52%
39	30-Sep	0.000	0.007	0.020	0.079	0%	5%	15%	59%
40	7-Oct	0.000	0.000	0.000	0.037	0%	0%	0%	28%
41	14-Oct	0.000	0.000	0.003	0.039	0%	0%	2%	29%
42	21-Oct	0.003	0.007	0.017	0.039	2%	5%	13%	29%
43	28-Oct	0.008	0.012	0.024	0.049	6%	9%	18%	37%
44	4-Nov	0.011	0.014	0.025	0.055	8%	11%	19%	41%
45	11-Nov	0.011	0.018	0.026	0.058	8%	14%	19%	44%
46	18-Nov	0.013	0.016	0.023	0.072	10%	12%	17%	54%
47	25-Nov	0.013	0.014	0.021	0.052	10%	11%	16%	40%
48	2-Dec	0.012	0.014	0.022	0.062	9%	11%	16%	47%
49	9-Dec	0.012	0.015	0.020	0.051	9%	11%	15%	38%
50	16-Dec	0.011	0.014	0.021	0.047	8%	10%	16%	36%
51	23-Dec	0.011	0.013	0.021	0.047	8%	10%	16%	36%
52	31-Dec	0.010	0.013	0.021	0.047	7%	10%	16%	36%