

APPENDIX B14: TREPANIER CREEK

Discharge Records

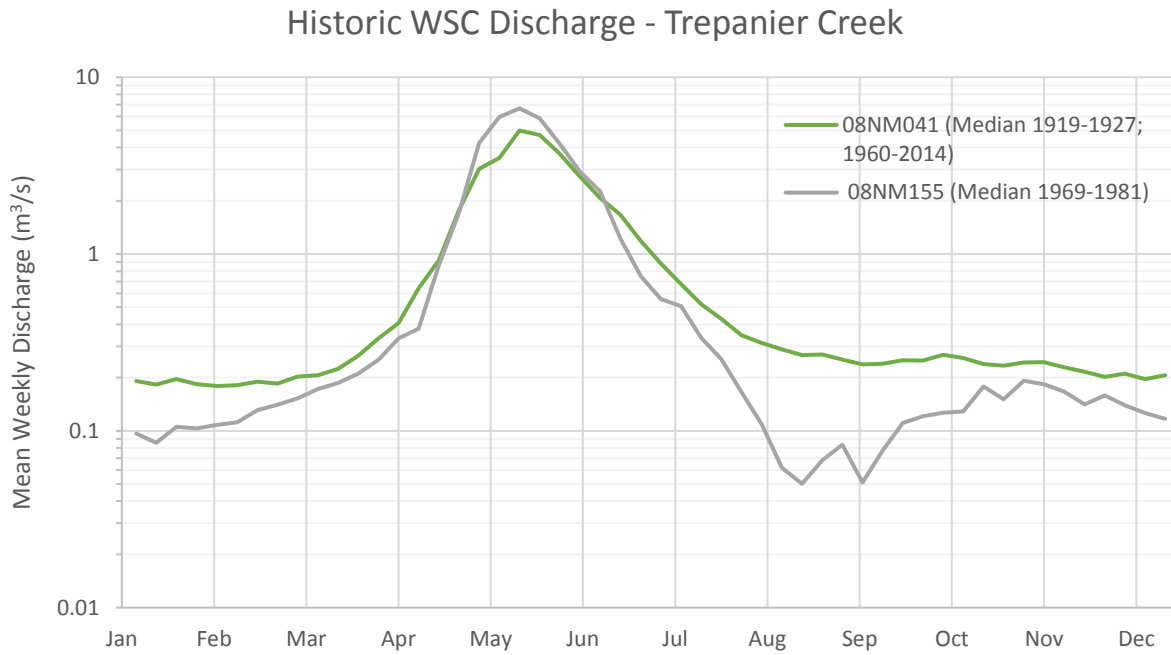


Figure B14-1: Historical discharge recorded at WSC stations 08NM041 (Trepanier Creek near Peachland) from 1919-1927; 1960-2014, and 08NM155 (Trepanier Creek at the Mouth) from 1969-1981

Historic MOE Discharge - Trepanier Creek

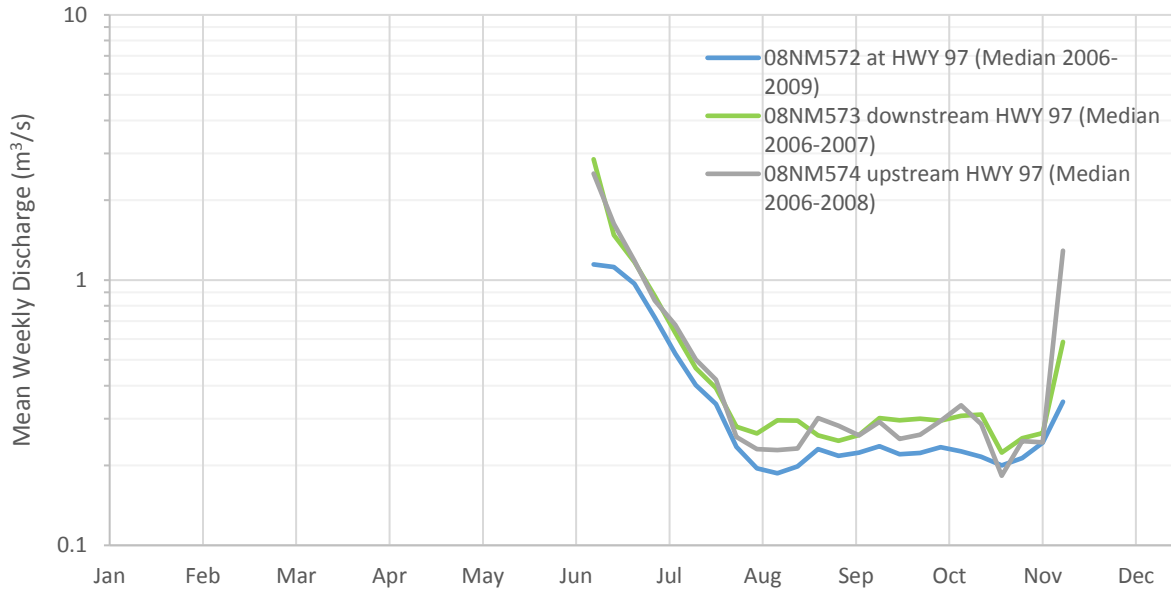


Figure B14-2: Historical discharge recorded at MOE stations 08NM572 (Trepanier Creek at Highway 97) from 2006-2009, 08NM573 (Trepanier Creek downstream of Highway 97) from 2006-2007, and 08NM574 (Trepanier Creek upstream of Highway 97) from 2006-2008

MOE Historic Water Temperature - Trepanier Creek

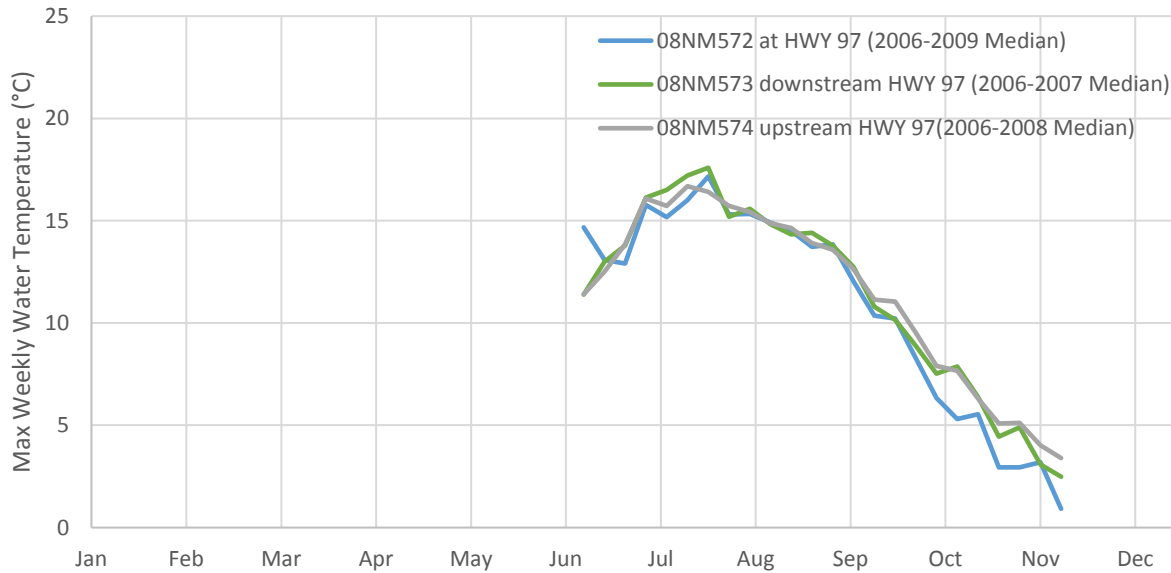


Figure B14-3: Historical water temperatures recorded at MOE stations 08NM572 (Trepanier Creek at Highway 97) from 2006-2009, 08NM573 (Trepanier Creek downstream of Highway 97) from 2006-2007, and 08NM574 (Trepanier Creek upstream of Highway 97) from 2006-2008

Flow standards and periodicity – Okanagan Tennant analysis for Trepanier 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
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	135%			20%					50%	<input checked="" type="checkbox"/>	
22-Apr	16	135%			20%					50%	<input checked="" type="checkbox"/>	
29-Apr	17	135%			20%					50%	<input checked="" type="checkbox"/>	
6-May	18	135%			20%	50%				50%	<input checked="" type="checkbox"/>	
13-May	19	135%	40%		20%	50%				50%	890%	
20-May	20	135%	40%	20%	20%	50%				50%	890%	
27-May	21	135%	40%	20%	20%	50%				50%	<input checked="" type="checkbox"/>	100%
3-Jun	22	135%	40%	20%	20%	50%					<input checked="" type="checkbox"/>	100%
10-Jun	23	135%	40%	20%	20%	50%					<input checked="" type="checkbox"/>	100%
17-Jun	24	135%	40%	20%	20%	50%					<input checked="" type="checkbox"/>	100%
24-Jun	25	135%	40%	20%	20%	50%						100%
1-Jul	26	135%	40%	20%	20%	50%						100%
8-Jul	27	135%	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%			20%				
2-Sep	35				20%			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%		
21-Oct	42				20%					20%		
28-Oct	43				20%					20%		
Nov							20%			20%		
Dec							20%			20%		

EFNs and critical flows for Trepanier Creek

Week Ending	Okanagan Tennant EFN					FINAL EFN		CRITICAL FLOWS (m ³ /s)			
	EFN - all factors (%LTMAD)	EFN based on flow standards (m ³ /s)	Nat. median weekly Q (m ³ /s)	Discharge m ³ /s	%LTMAD	Value (m ³ /s)	Dominant Species / Life Stage	Rainbow trout rearing & overwintering	Kokanee spawning	Rainbow trout migration & spawning	FINAL
Jan	20%	0.257	0.239	0.239	19%	0.239	overwintering egg incubation	0.064			0.064
Feb	20%	0.257	0.229	0.229	18%	0.229	overwintering egg incubation	0.064			0.064
Mar	20%	0.257	0.281	0.257	20%	0.257	overwintering egg incubation	0.064			0.064
1-Apr	50%	0.642	0.432	0.432	34%	0.432	KO juvenile migration	0.064			0.064
8-Apr	50%	0.642	0.596	0.596	46%	0.596	KO juvenile migration	0.064			0.064
15-Apr	135%	1.733	0.834	0.834	65%	0.834	RB adult migration	0.064		0.642	0.642
22-Apr	135%	1.733	1.278	1.278	100%	1.278	RB adult migration	0.064		0.642	0.642
29-Apr	135%	1.733	3.350	1.733	135%	1.733	RB adult migration	0.064		0.642	0.642
6-May	135%	1.733	4.423	1.733	135%	1.733	RB adult migration	0.064		0.642	0.642
13-May	135%	1.733	4.223	1.733	135%	1.733	RB adult migration	0.064		0.642	0.642
20-May	890%	11.423	7.658	7.658	597%	7.658	Ecosystem	0.064		0.642	0.642
27-May	890%	11.423	5.889	5.889	459%	5.889	Ecosystem	0.064		0.642	0.642
3-Jun	135%	1.733	5.244	1.733	135%	1.733	RB spawning	0.064		0.642	0.642
10-Jun	135%	1.733	3.806	1.733	135%	1.733	RB spawning	0.064		0.642	0.642
17-Jun	135%	1.733	2.879	1.733	135%	1.733	RB spawning	0.064		0.642	0.642
24-Jun	135%	1.733	2.268	1.733	135%	1.733	RB spawning	0.064		0.642	0.642
1-Jul	135%	1.733	1.683	1.683	131%	1.683	RB spawning	0.064		0.642	0.642
8-Jul	135%	1.733	1.145	1.145	89%	1.145	RB spawning	0.064		0.642	0.642
15-Jul	100%	1.283	0.968	0.968	75%	0.968	RB incubation	0.064			0.064
22-Jul	100%	1.283	0.812	0.812	63%	0.812	RB incubation	0.064			0.064
29-Jul	100%	1.283	0.626	0.626	49%	0.626	RB incubation	0.064			0.064
5-Aug	20%	0.257	0.536	0.257	20%	0.257	RB parr rearing	0.064			0.064
12-Aug	20%	0.257	0.437	0.257	20%	0.257	RB parr rearing	0.064			0.064
19-Aug	20%	0.257	0.384	0.257	20%	0.257	RB parr rearing	0.064			0.064
26-Aug	20%	0.257	0.371	0.257	20%	0.257	RB parr rearing, KO migration	0.064			0.064
2-Sep	20%	0.257	0.314	0.257	20%	0.257	RB parr rearing, KO migration	0.064			0.064
9-Sep	20%	0.257	0.283	0.257	20%	0.257	KO Spawning	0.064	0.128		0.128
16-Sep	20%	0.257	0.268	0.257	20%	0.257	KO Spawning	0.064	0.128		0.128
23-Sep	20%	0.257	0.270	0.257	20%	0.257	KO Spawning	0.064	0.128		0.128
30-Sep	20%	0.257	0.270	0.257	20%	0.257	KO Spawning	0.064	0.128		0.128
7-Oct	20%	0.257	0.278	0.257	20%	0.257	KO Spawning	0.064	0.128		0.128
14-Oct	20%	0.257	0.279	0.257	20%	0.257	RB parr rearing	0.064			0.064
21-Oct	20%	0.257	0.312	0.257	20%	0.257	RB parr rearing	0.064			0.064
28-Oct	20%	0.257	0.325	0.257	20%	0.257	RB parr rearing	0.064			0.064
Nov	20%	0.257	0.310	0.257	20%	0.257	overwintering egg incubation	0.064			0.064
Dec	20%	0.257	0.275	0.257	20%	0.257	overwintering egg incubation	0.064			0.064

Percentile Flows for Trepanier Creek

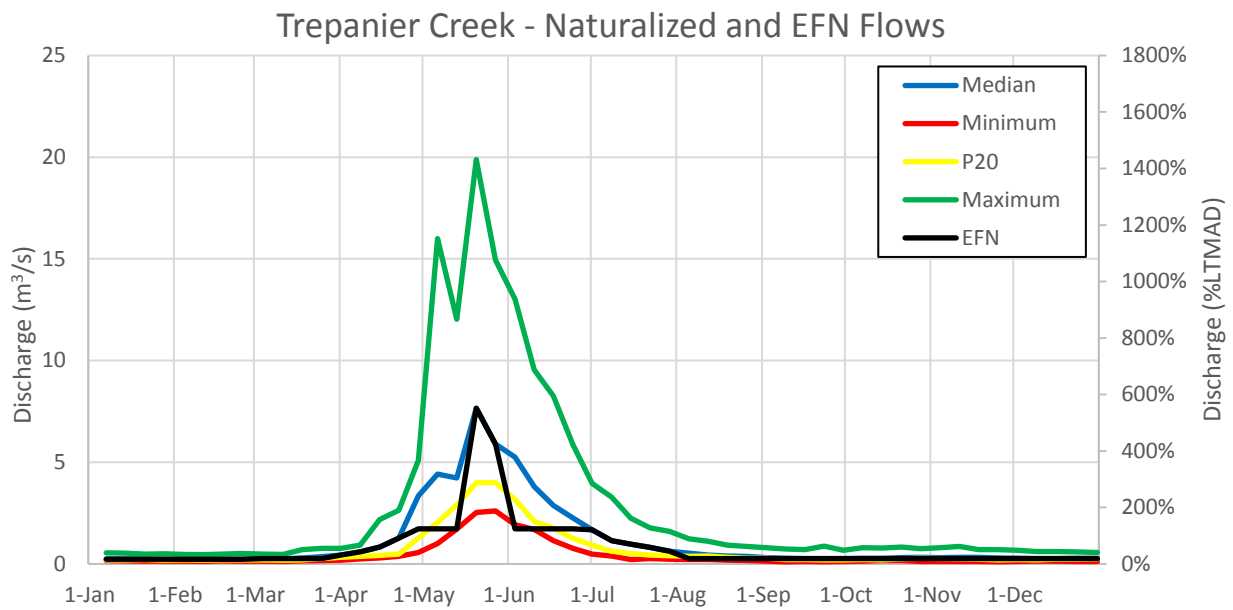


Figure B14-2: Okanagan Tennant EFNs compared to naturalized flow percentiles for Trepanier Creek (Discharge & %LTMAD)

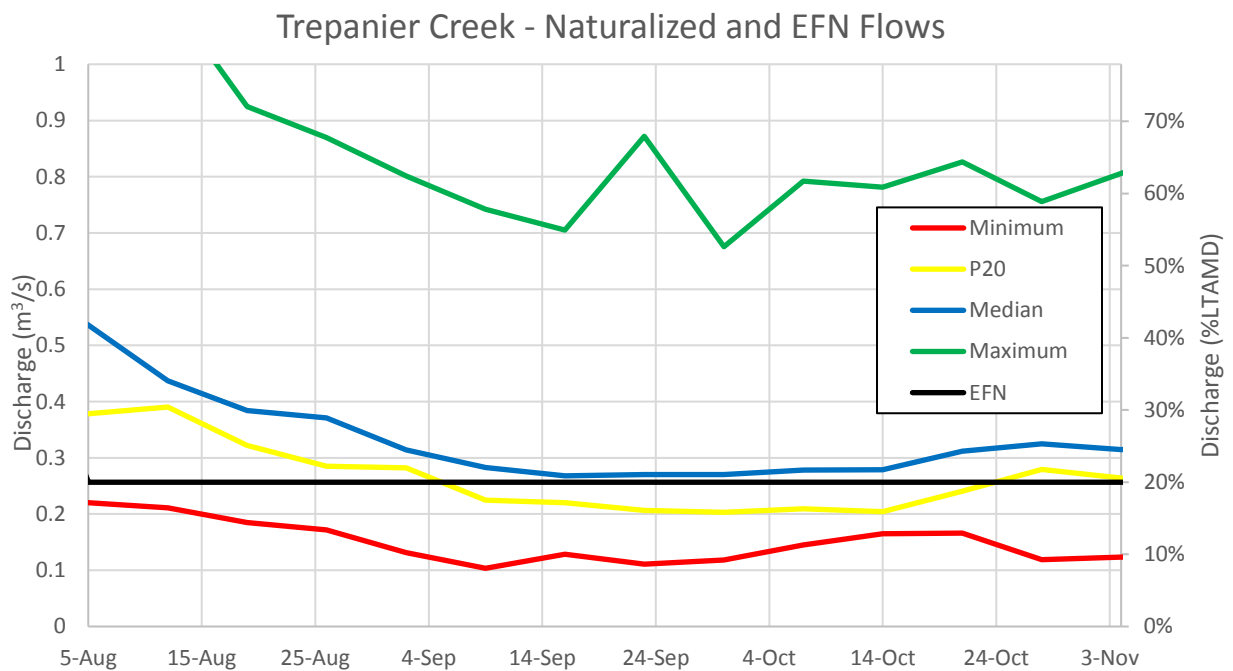


Figure B14-3: Okanagan Tennant EFNs compared to naturalized flow percentiles for Trepanier Creek Aug – Nov (Discharge & %LTAMAD)

Trepanier Creek naturalized percentile flow data

NATURALIZED FLOW		as m ³ /s				as %LTMD			
Week	Ending	Min	P20	Median	Max	Min	P20	Median	Max
01	7-Jan	0.167	0.203	0.253	0.554	13%	16%	20%	43%
02	14-Jan	0.147	0.209	0.254	0.530	11%	16%	20%	41%
03	21-Jan	0.133	0.210	0.230	0.486	10%	16%	18%	38%
04	28-Jan	0.138	0.189	0.221	0.504	11%	15%	17%	39%
05	4-Feb	0.135	0.202	0.217	0.462	11%	16%	17%	36%
06	11-Feb	0.116	0.191	0.227	0.460	9%	15%	18%	36%
07	18-Feb	0.149	0.199	0.237	0.482	12%	16%	18%	38%
08	25-Feb	0.133	0.196	0.230	0.519	10%	15%	18%	40%
09	4-Mar	0.135	0.197	0.242	0.484	11%	15%	19%	38%
10	11-Mar	0.126	0.189	0.252	0.469	10%	15%	20%	37%
11	18-Mar	0.156	0.202	0.289	0.707	12%	16%	22%	55%
12	25-Mar	0.165	0.267	0.361	0.768	13%	21%	28%	60%
13	1-Apr	0.180	0.320	0.432	0.764	14%	25%	34%	60%
14	8-Apr	0.253	0.377	0.596	0.925	20%	29%	46%	72%
15	15-Apr	0.302	0.417	0.834	2.182	24%	33%	65%	170%
16	22-Apr	0.370	0.478	1.278	2.636	29%	37%	100%	205%
17	29-Apr	0.557	1.276	3.350	5.096	43%	99%	261%	397%
18	6-May	1.002	2.037	4.423	15.998	78%	159%	345%	1247%
19	13-May	1.704	2.906	4.223	12.034	133%	226%	329%	938%
20	20-May	2.538	3.993	7.658	19.887	198%	311%	597%	1549%
21	27-May	2.610	4.001	5.889	14.940	203%	312%	459%	1164%
22	3-Jun	1.933	3.176	5.244	13.020	151%	247%	409%	1014%
23	10-Jun	1.698	2.095	3.806	9.548	132%	163%	297%	744%
24	17-Jun	1.144	1.760	2.879	8.263	89%	137%	224%	644%
25	24-Jun	0.771	1.255	2.268	5.858	60%	98%	177%	456%
26	1-Jul	0.487	0.920	1.683	3.955	38%	72%	131%	308%
27	8-Jul	0.389	0.623	1.145	3.278	30%	49%	89%	255%
28	15-Jul	0.225	0.517	0.968	2.242	18%	40%	75%	175%
29	22-Jul	0.260	0.436	0.812	1.769	20%	34%	63%	138%
30	29-Jul	0.240	0.410	0.626	1.600	19%	32%	49%	125%
31	5-Aug	0.220	0.378	0.536	1.238	17%	29%	42%	96%
32	12-Aug	0.211	0.390	0.437	1.120	16%	30%	34%	87%
33	19-Aug	0.185	0.322	0.384	0.925	14%	25%	30%	72%
34	26-Aug	0.172	0.285	0.371	0.870	13%	22%	29%	68%
35	2-Sep	0.132	0.282	0.314	0.801	10%	22%	24%	62%
36	9-Sep	0.104	0.225	0.283	0.742	8%	17%	22%	58%
37	16-Sep	0.129	0.220	0.268	0.705	10%	17%	21%	55%
38	23-Sep	0.111	0.206	0.270	0.872	9%	16%	21%	68%
39	30-Sep	0.118	0.203	0.270	0.676	9%	16%	21%	53%
40	7-Oct	0.145	0.209	0.278	0.792	11%	16%	22%	62%
41	14-Oct	0.165	0.204	0.279	0.781	13%	16%	22%	61%
42	21-Oct	0.166	0.241	0.312	0.826	13%	19%	24%	64%
43	28-Oct	0.119	0.279	0.325	0.756	9%	22%	25%	59%
44	4-Nov	0.123	0.264	0.315	0.806	10%	21%	25%	63%
45	11-Nov	0.122	0.248	0.323	0.857	9%	19%	25%	67%
46	18-Nov	0.128	0.226	0.319	0.700	10%	18%	25%	55%
47	25-Nov	0.112	0.198	0.291	0.710	9%	15%	23%	55%
48	2-Dec	0.118	0.216	0.277	0.676	9%	17%	22%	53%
49	9-Dec	0.131	0.200	0.269	0.609	10%	16%	21%	47%
50	16-Dec	0.141	0.239	0.257	0.613	11%	19%	20%	48%
51	23-Dec	0.118	0.228	0.275	0.601	9%	18%	21%	47%
52	31-Dec	0.128	0.241	0.281	0.569	10%	19%	22%	44%

Residual and maximum licensed flows are not available at this time.