

Appendix F:

**ADDITIONAL KEY STATISTICS:
2019 ANALYSES**

Detailed Summary Statistics for the Catchments Analyzed for I&I in 2019 ¹

Catchment Name	Size (ha)	Ave. Age (yrs.)	Peak 24 Hour Flows (5-yr storm)			Peak 1-hr Flow (5 yr. storm)		Flow Breakdown for the 5-year Storm						Typical Daily Flows			Groundwater		
								BSF	GWl (winter ¹)	24 hour I&I		1-hr I&I		ADWF (summer)	Winter ²		Median Summer		Winter ²
			l/s	m3/day	vs ADWF	l/s	vs ADWF	l/s	l/s	RDII (l/s)	Total I&I (l/ha/day)	RDII (l/s)	Total I&I (l/ha/day)	l/s	l/s	vs ADWF	l/s	vs ADWF	vs ADWF
Esquimalt Catchments																			
Canteen (ES29)	0.6	n/a	3.8	331	21.4 x ADWF	11.9	66.5 x ADWF	0.13	0.1	3.7	533,384	11.1	1,605,879	0.2	0.18	1.0 x ADWF	0.05	29% of ADWF	29% of ADWF
Constance (ES30)	1.3	n/a	0.9	80.5	7.7 x ADWF	1.4	11.6 x ADWF	0.09	0.0	0.8	56,007	1.2	82,478	0.1	0.13	1.1 x ADWF	0.03	26% of ADWF	34% of ADWF
Devonshire (ES14)	144	74	115.7	10000	6.5 x ADWF	180.0	10.2 x ADWF	12.7	6.8	96.2	61,812	150	94,068	17.7	19.5	1.1 x ADWF	4.96	28% of ADWF	38% of ADWF
Dockyard (ES19)	72	65	45.0	3886	6.5 x ADWF	64.6	9.3 x ADWF	4.5	3.6	36.9	48,620	56.6	72,288	7.00	8.1	1.2 x ADWF	2.5	36% of ADWF	52% of ADWF
Esquimalt Panhandle (ES15)	17	44	5.3	459	3.7 x ADWF	7.5	5.2 x ADWF	1.2	0.2	3.9	20,698	6	31,460	1.4	1.44	1.0 x ADWF	0.19	13% of ADWF	13% of ADWF
Foreshaw (ES24)	34	61	25.5	2200	8.4 x ADWF	34.5	11.4 x ADWF	2.2	1.2	22.1	59,090	30	79,259	3.0	3.4	1.1 x ADWF	0.81	27% of ADWF	39% of ADWF
Garthland (ES31)	6.6	n/a	4.1	350	5.8 x ADWF	8.6	12.3 x ADWF	0.5	0.2	3.4	46,461	7.89	105,881	0.70	0.7	1.0 x ADWF	0.20	28% of ADWF	28% of ADWF
Grafton (ES25)	17	43	9.3	800	10.4 x ADWF	18.0	20.2 x ADWF	0.6	0.3	8.4	43,908	16	82,741	0.89	0.9	1.0 x ADWF	0.27	30% of ADWF	31% of ADWF
Head (ES16)	124	77	78.1	6750	6.2 x ADWF	125.0	9.9 x ADWF	9.7	7.6	60.8	47,649	102	76,339	12.67	17.3	1.4 x ADWF	2.93	23% of ADWF	60% of ADWF
Kinver (ES17)	39	75	26.0	2250	6.3 x ADWF	36.0	8.7 x ADWF	2.1	2.7	21.2	53,129	30.7	74,082	4.13	4.8	1.2 x ADWF	2.07	50% of ADWF	66% of ADWF
Lang Cove Esquimalt (ES9)	56	75	22.3	1929	6.1 x ADWF	30.0	8.1 x ADWF	2.8	2.7	16.8	30,142	24.5	41,981	3.69	5.5	1.5 x ADWF	0.90	24% of ADWF	73% of ADWF
Luscombe (ES32)	2.6	n/a	0.6	51	2.0 x ADWF	0.9	3.2 x ADWF	0.2	0.1	0.3	12,561	0.63	24,766	0.30	0.33	1.1 x ADWF	0.09	29% of ADWF	39% of ADWF
Sea Haven (ES28)	6	83	1.0	90	1.5 x ADWF	1.4	2.0 x ADWF	0.6	0.1	0.3	6,936	0.7	12,096	0.71	0.71	1.0 x ADWF	0.14	20% of ADWF	20% of ADWF
Wilson (ES20)	19	78	14.9	1286	5.0 x ADWF	25.0	8.4 x ADWF	1.2	1.8	11.9	62,045	21.7	106,681	2.99	3	1.0 x ADWF	1.76	59% of ADWF	59% of ADWF
Uganda (ES26)	18	83	16.2	1400	6.6 x ADWF	30.0	12.1 x ADWF	1.8	0.7	13.7	69,186	25	123,408	2.47	2.5	1.0 x ADWF	0.68	28% of ADWF	29% of ADWF

Catchment Name	Size (ha)	Ave. Age (yrs.)	Peak 24 Hour Flows (5-yr storm)			Peak 1-hr Flow (5 yr. storm)		Flow Breakdown for the 5-year Storm						Typical Daily Flows			Groundwater		
								BSF	GWl (winter ¹)	24 hour I&I		1-hr I&I		ADWF (summer)	Winter ²		Median Summer		Winter ²
			l/s	m3/day	vs ADWF	l/s	vs ADWF	l/s	l/s	RDII (l/s)	Total I&I (l/ha/day)	RDII (l/s)	Total I&I (l/ha/day)	l/s	l/s	vs ADWF	l/s	vs ADWF	vs ADWF
Langford Catchments																			
Meaford (LGALL)	714	14	135.6	11714	1.9 x ADWF	193.8	2.7 x ADWF	54.3	28.7	52.6	9,834	85	13,757	71.22	83	1.2 x ADWF	16.9	24% of ADWF	40% of ADWF
Country (LG4)	12	19	1.9	166	1.5 x ADWF	3.3	2.5 x ADWF	1.1	0.2	0.6	5,985	2.1	16,128	1.28	1.28	1.0 x ADWF	0.2	15% of ADWF	15% of ADWF
Florence (LG12)	37	12	4.3	371	2.0 x ADWF	4.65	2.2 x ADWF	1.8	0.4	2.1	5,941	2.9	7,589	2.15	2.12	1.0 x ADWF	0.45	19% of ADWF	19% of ADWF
Goldie (LG5)	67	14	14.5	1250	2.7 x ADWF	19.5	3.6 x ADWF	4.4	2.11	8.0	12,996	14.0	20,775	5.43	6.50	1.2 x ADWF	1.05	19% of ADWF	32% of ADWF
Goldstream (LG13)	55	12	4.6	400.0	1.6 x ADWF	6	2.0 x ADWF	2.5	0.9	1.3	3,377	3.3	6,519	2.93	3.33	1.1 x ADWF	0.5	16% of ADWF	29% of ADWF
Happy Valley (LG6)	82	13	12.7	1100.0	2.1 x ADWF	12.6	2.1 x ADWF	5.0	1.6	7.8	8,178	7.7	9,788	5.96	6.59	1.1 x ADWF	1.0	17% of ADWF	27% of ADWF
Jeanine (LG7)	29	16	4.3	371	2.7 x ADWF	5.6	3.5 x ADWF	1.2	0.5	2.6	9,099	3.2	11,023	1.59	2.3	1.4 x ADWF	0.3	21% of ADWF	31% of ADWF
Langford Parkway (LG15)	18	9	No measurable I&I																
Leigh (LG16)	9	13	No measurable I&I																
Millstream (LG17)	8	12	2.0	176	2.7 x ADWF	4.0	5.3 x ADWF	0.6	0.1	1.3	15,520	2.9	31,860	0.76	0.7	0.9 x ADWF	0.2	21% of ADWF	13% of ADWF
Selwyn (LG8)	208	14	49.6	4285	2.5 x ADWF	53.8	2.8 x ADWF	14.9	5.3	29.5	14,433	34.2	16,387	19.50	20.1	1.0 x ADWF	4.7	24% of ADWF	27% of ADWF
Wild Ridge (LG9)	20	12	2.4	208	2.0 x ADWF	3.2	2.7 x ADWF	0.95	0.5	1.0	6,296	1.5	8,424	1.18	1.4	1.2 x ADWF	0.2	20% of ADWF	38% of ADWF

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								BSF	GWl (winter ¹)	24 hour I&I		1-hr I&I		ADWF (summer)	Winter ²		Median Summer		Winter ²
			l/s	m3/day	vs ADWF	l/s	vs ADWF	l/s	l/s	RDII (l/s)	Total I&I (l/ha/day)	RDII (l/s)	Total I&I (l/ha/day)	l/s	l/s	vs ADWF	l/s	vs ADWF	vs ADWF
Oak Bay Catchments																			
Currie Minor (OB26)	184	~90	191.8	16571	12.4 x ADWF	317.0	20.4 x ADWF	10.1 4	6.9	174.8	85,298	283	136,108	15.52	17	1.1 x ADWF	4.5 5	29% of ADWF	44% of ADWF
Harling (OB14)	26	75	22.7	1964	21.9 x ADWF	33.5	32.2 x ADWF	1.04	0.5	21.2	72,082	31.7	106,870	1.04	1.5	1.4 x ADWF	0.0 0	0% of ADWF	44% of ADWF
Windsor Flodar (OB15)	324	65	196.8	17000	8.7 x ADWF	268.0	11.8 x ADWF	14.1 1	20.5	162.2	48,706	226	65,731	22.67	34.6	1.5 x ADWF	8.5 7	38% of ADWF	90% of ADWF
Saanich Catchments																			
Boundary (SA15)	575	54	121.5	10500	3.6 x ADWF	180.0	5.4 x ADWF	26.8 9	7.2	87.4	14,220	141	22,270	33.57	34.1	1.0 x ADWF	6.6 8	20% of ADWF	21% of ADWF
Colquitz (SA4)	439	32	115.7	10000	4.0 x ADWF	173.0	6.0 x ADWF	23.5 2	17.3	74.9	18,150	130.5	29,085	28.94	40.8	1.4 x ADWF	5.4 2	19% of ADWF	60% of ADWF
Haro (SA23)	29	37	No measurable I&I																
Harriet (SA17)	297	57	108.4	9362	4.7 x ADWF	167.6	7.2 x ADWF	18.2 5	6.1	84.0	26,213	142	43,084	23.22	24.4	1.1 x ADWF	4.9 7	21% of ADWF	26% of ADWF
Haultain (SA22)	50	52	14.0	1210	4.1 x ADWF	n/a	n/a	2.82	1.3	9.9	19,327	18.1	33,523	3.43	4.5	1.3 x ADWF	0.6 1	18% of ADWF	38% of ADWF
Marigold (SA18)	1850	33	399.3	34500	3.5 x ADWF	480.0	4.3 x ADWF	89.8 4	37.2	272.3	14,453	355	18,315	112.69	127	1.1 x ADWF	22. 86	20% of ADWF	33% of ADWF
Penrhyn (SA19)	246	38	31.7	2743	3.6 x ADWF	40.0	4.5 x ADWF	6.65	2.7	22.4	8,815	29.7	11,362	8.82	9.3	1.1 x ADWF	2.1 6	24% of ADWF	30% of ADWF
Swan Lake (SA20)	411	40	95.1	8216	3.0 x ADWF	143.0	4.5 x ADWF	25.0 3	8.9	61.2	14,728	104	23,727	31.70	33.9	1.1 x ADWF	6.6 7	21% of ADWF	28% of ADWF
Townley (SA21)	22	53	Data too inconsistent to produce reliable I&I data. This will likely be resolved in the future through flume calibrations.																

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								BSF	GWI (winter ¹)	24 hour I&I		1-hr I&I		ADWF (summer)	Winter ²		Median Summer		Winte r ²
			l/s	m3/day	vs ADWF	l/s	vs ADWF	l/s	l/s	RDII (l/s)	Total I&I (l/ha/day)	RDII (l/s)	Total I&I (l/ha/day)	l/s	l/s	vs ADWF	l/s	vs ADWF	vs ADWF
Victoria Flodar Catchments																			
Belleville (S0323)	405	n/a	353.0	30500	2.8 x ADWF	530.0	4.1 x ADWF	114.0	14.0	225.0	50,989	394	87,040	128.0	128	1.0 x ADWF	14.0	11% of ADWF	11% of ADWF
Doncaster (VIC49)	101	n/a	81.0	7000	5.9 x ADWF	152.0	11.0 x ADWF	10.0	16.2	54.8	60,770	115	112,252	13.8	26.2	1.9 x ADWF	3.8	28% of ADWF	117% of ADWF
Fort (VIC51)	82.8	n/a	85.6	7400	4.4 x ADWF	115.0	5.9 x ADWF	12.9	9.6	63.1	75,953	95	109,190	19.4	22.5	1.2 x ADWF	6.5	34% of ADWF	50% of ADWF
Government @ Belleville (VIC61)	325	n/a	283.9	24530	4.0 x ADWF	500.0	7.0 x ADWF	45.0	34.1	204.8	63,522	442	126,577	70.98	79.1	1.1 x ADWF	26.0	37% of ADWF	48% of ADWF
Gonzales (VIC3)	41.2	n/a	17.8	1537	4.0 x ADWF	25.0	5.6 x ADWF	2.8	3.2	11.8	31,392	20.5	49,659	4.5	6	1.3 x ADWF	1.6	37% of ADWF	71% of ADWF
Kings (VIC41)	83.9	n/a	111.6	9645	4.2 x ADWF	150.0	5.7 x ADWF	14.7	10.3	86.6	99,800	125	139,332	26.5	28	1.1 x ADWF	11.8	44% of ADWF	39% of ADWF
Mid-Cook East (VIC44)	92.2	n/a	60.2	5200	3.9 x ADWF	115.0	7.4 x ADWF	12.4	5.5	42.3	44,770	105	103,539	15.5	17.9	1.2 x ADWF	3.1	20% of ADWF	35% of ADWF
Mid Cook West (VIC45)	65.5	n/a	69.4	6000	2.7 x ADWF	99.0	3.9 x ADWF	15.7	10.7	43.0	70,854	78	116,963	25.5	26.4	1.0 x ADWF	9.8	38% of ADWF	42% of ADWF
Moss (VIC46)	36.6	n/a	50.9	4400	13.0 x ADWF	88.0	22.4 x ADWF	2.6	2.9	45.4	114,128	80	195,746	3.9	5.5	1.4 x ADWF	1.3	34% of ADWF	74% of ADWF

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								BSF	GWl (winter ¹)	24 hour I&I		1-hr I&I		ADWF (summer)	Winter ²		Median Summer		Winter ²
			l/s	m3/day	vs ADWF	l/s	vs ADWF	l/s	l/s	RDII (l/s)	Total I&I (l/ha/day)	RDII (l/s)	Total I&I (l/ha/day)	l/s	l/s	vs ADWF	l/s	vs ADWF	vs ADWF
Victoria Pump Station Catchments																			
Cecelia PS (VIC35)	92.6	113	81.0	7000	5.1 x ADWF	124.0	7.8 x ADWF	10.7	5.2	65.1	65,638	113	110,286	16.0	17.2	1.1 x ADWF	5.3	33% of ADWF	33% of ADWF
Dockside PS (VIC42)	25.3	85	16.3	1410	4.1 x ADWF	27.0	6.8 x ADWF	2.7	1.9	11.7	46,511	20	74,789	4.0	4.6	1.2 x ADWF	1.3	33% of ADWF	48% of ADWF
Garbally (VIC37)	30.7	107	13.9	1200	4.1 x ADWF	25.0	7.3 x ADWF	2.7	1.2	10.0	31,574	19.6	58,623	3.41	3.9	1.1 x ADWF	0.7	21% of ADWF	36% of ADWF
Government (VIC38)	14.2	108	13.1	1130	5.2 x ADWF	40.0	15.8 x ADWF	2.1	0.5	10.5	67,104	37.5	231,090	2.53	2.53	1.0 x ADWF	0.5	19% of ADWF	19% of ADWF
Niagara (VIC39)	24	97	12.7	1100	5.0 x ADWF	22.0	8.6 x ADWF	2.2	0.4	10.2	38,021	17.3	63,720	2.57	2.57	1.0 x ADWF	0.4	16% of ADWF	16% of ADWF
Superior (VIC40)	87.5	93	104.2	9000	3.7 x ADWF	149.0	5.3 x ADWF	22.3	5.8	76.1	80,847	128	132,108	28.08	28.08	1.0 x ADWF	5.8	21% of ADWF	21% of ADWF
Victoria Catchments Monitored by the CRD																			
Cecelia Flume (VIC31)	179	96	135.4	11702	5.1 x ADWF	231.0	8.7 x ADWF	17.0	10.9	107.5	57,164	202	102,758	26.61	27.9	1.0 x ADWF	9.6	36% of ADWF	41% of ADWF
Hereward (VIC32)	75.7	101	83.3	7200	4.0 x ADWF	132.0	6.3 x ADWF	13.0	8.2	62.1	80,298	109	133,789	20.94	21.2	1.0 x ADWF	8.0	38% of ADWF	39% of ADWF
Hollywood (VIC55)	67.3	0	81.0	7000	14.1 x ADWF	125.0	21.8 x ADWF	4.3	4.4	72.3	98,492	116	154,570	5.74	8.7	1.5 x ADWF	1.4	25% of ADWF	77% of ADWF
Langford Flume (VIC33)	11.3	116	13.7	1180	14.4 x ADWF	27.0	28.4 x ADWF	0.8	0.3	12.5	98,155	25.5	197,420	0.95	1.14	1.2 x ADWF	0.3	33% of ADWF	34% of ADWF
Trent PS (VIC11)	446	91	426.5	36850	6.5 x ADWF	600.0	9.1 x ADWF	55.3	57.8	313.4	71,909	490	106,119	65.68	113.1	1.7 x ADWF	10.4	16% of ADWF	88% of ADWF

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								BSF	GWl (winter ¹)	24 hour I&I		1-hr I&I		ADWF (summer)	Winter ²		Median Summer		Winter ²
			l/s	m3/day	vs ADWF	l/s	vs ADWF	l/s	l/s	RDII (l/s)	Total I&I (l/ha/day)	RDII (l/s)	Total I&I (l/ha/day)	l/s	l/s	vs ADWF	l/s	vs ADWF	vs ADWF
First Nations																			
Maplebank (SFN2)	3	—	This is a new catchment. It's flows are very small and highly varied. There is no noticeable I&I at this time.																
Songhees (SFI1)	50	~40	26.8	2314	6.0 x ADWF	45.8	10.3 x ADWF	2.76	4.9	19.1	41,511	41.7	80,594	4.46	7.7	1.7 x ADWF	1.70	38% of ADWF	111% of ADWF
DND																			
Anson (ES13)	10	46	7.3	629	29.4 x ADWF	10.4	41.9 x ADWF	0.20	0.3	6.8	61,163	10	89,156	0.25	0.5	2.1 x ADWF	0.05	19% of ADWF	129% of ADWF
Lang Cove DND (ES18)	33	42	11.6	1000	3.9 x ADWF	20.4	6.8 x ADWF	2.21	1.1	8.3	24,517	17.3	48,148	2.99	3.3	1.1 x ADWF	0.74	25% of ADWF	36% of ADWF

¹ Please note that the values in this table were calculated for I&I purposes only. They are not considered suitable for any other purpose including engineering design or sewer modeling work. The accuracy of the data varies; largely due to variations in the accuracy of the raw flow data that was analyzed.

² The winter flows are based on "typical" dry winter day chosen for use in the I&I analyses.