

**Appendix 'G'  
Detailed Storage Calculations**

---

2018 Calculations											
Pressure Zone	Name of Facility	Built Storage	Total Fire Flow [L/min]	Duration [hr]	Equivalent Units [Units]	Equivalent Units	Maximum Daily Demand [m3/day]	Storage Volume Required [m3] A(S)	Equalization Storage [m3] B	Emergency Storage [m3] C	Total Water Storage Volume Required [m3] A(S)+B+C
PZ 1 PZ 1a	Commerical Block	4180	13000	3	2785 13	2798	3530.17	2340	882.54	805.64	4028.18
PZ 2 PZ 2a	Lora Bay Golf Clubhouse	0	7000	2	188 228	416	524.86	840	131.21	242.80	1214.02
PZ 3	Georgian Bay Golf Clubhouse	2662	9000	2	43	43	54.25	1080	13.56	273.39	1366.95
PZ 4 PZ 4a PZ 4b PZ 4c PZ 4d PZ 4e PZ 4f/PZ-1	Conference Center	5000	14000	3	3606 374 5 126 12 0 511	4634	5846.60	2520	1461.65	995.41	4977.06
PZ 5	Home	536	8000	2	108	108	136.26	960	34.07	248.52	1242.58
PZ CG	Housing development in Craighleith Area	0	11000	2.5	0	0	0.00	1650	0.00	412.50	2062.50

2038 - A Calculations (Without Clarksburg)											
Pressure Zone	Name of Facility	Built Storage	Total Fire Flow [L/min]	Duration [hr]	Equivalent Units [Units]	Equivalent Units	Maximum Daily Demand	Storage Volume Required [m3] A(S)	Equalization Storage [m3] B	Emergency Storage [m3] C	Total Water Storage Volume Required [m3]
PZ 1 PZ 1a	Commerical Block	4180	13000	3	3002 14	3016	4269.148	2340	1067.29	851.82	4259.11
PZ 2 PZ 2a	Lora Bay Golf Clubhouse	0	7000	2	517 267	784	1109.752	840	277.44	279.36	1396.80
PZ 3	Georgian Bay Golf Clubhouse	2662	9000	2	163	163	230.7265	1080	57.68	284.42	1422.10
PZ 4 PZ 4a PZ 4b PZ 4c PZ 4d PZ 4e PZ 4f	Conference Center	5000	14000	3	4651 407 8 142 13 0 1033	6254	8852.54	2520	2213.13	1183.28	5916.42
PZ 5	Home	536	8000	2	124	124	175.522	960	43.88	250.97	1254.85
PZ CG	Housing development in Craighleith Area	0	11000	2.5	0	0	0	1650	0.00	412.50	2062.50

2038 - B Calculations (With Clarksburg)											
Pressure Zone	Name of Facility	Built Storage	Total Fire Flow [L/min]	Duration [hr]	Equivalent Units [Units]	Equivalent Units	Maximum Daily Demand	Storage Volume Required [m3] A(S)	Equilization Storage [m3] B	Emergency Storage [m3] C	Total Water Storage Volume Required [m3]
PZ 1 PZ 1a	Commerical Block	4180	13000	3	3412 14	3426	4849.503	2340	1212.38	888.09	4440.47
PZ 2 PZ 2a	Lora Bay Golf Clubhouse	0	7000	2	517 267	784	1109.752	840	277.44	279.36	1396.80
PZ 3	Georgian Bay Golf Clubhouse	2662	9000	2	163	163	230.7265	1080	57.68	284.42	1422.10
PZ 4 PZ 4a PZ 4b PZ 4c PZ 4d PZ 4e PZ 4f/PZ-1	Conference Center	5000	14000	3	4651 407 8 142 13 0 1033	6254	8852.54	2520	2213.13	1183.28	5916.42
PZ 5	Home	536	8000	2	124	124	175.522	960	43.88	250.97	1254.85
PZ CG	Housing development in Craigleith Area	0	11000	2.5	0	0	0	1650	0.00	412.50	2062.50

Build-Out Calculations											
Pressure Zone	Name of Facility	Built Storage	Total Fire Flow [L/min]	Duration [hr]	Equivalent Units [Units]	Equivalent Units	Maximum Daily Demand [m3/day]	Storage Volume Required [m3] A(S)	Equilization Storage [m3] B	Emergency Storage [m3] C	Total Water Storage Volume Required [m3]
PZ 1 PZ 1a	Commerical Block	4180	13000	3	6131 14	6145	8240.445	2340	2060.11	1100.03	5500.14
PZ 2 PZ 2a	Lora Bay Golf Clubhouse	0	7000	2	1286 267	1553	2082.573	840	520.64	340.16	1700.80
PZ 3	Georgian Bay Golf Clubhouse	2662	9000	2	403	403	540.423	1080	135.11	303.78	1518.88
PZ 4 PZ 4a PZ 4b PZ 4c PZ 4d PZ 4e PZ 4f/PZ-1	Conference Center	5000	14000	3	8883 560 8 182 13 0 2668	12314	16513.074	2520	4128.27	1662.07	8310.34
PZ 5	Home	536	8000	2	124	124	166.284	960	41.57	250.39	1251.96
PZ CG	Housing development in Craigleith Area	0	11000	2.5	0	0	0	1650	0.00	412.50	2062.50



[www.jlrichards.ca](http://www.jlrichards.ca)

**Ottawa**

864 Lady Ellen Place  
Ottawa ON Canada  
K1Z 5M2  
Tel: 613 728-3571  
ottawa@jlrichards.ca

**Kingston**

203-863 Princess Street  
Kingston ON Canada  
K7L 5N4  
Tel: 613 544-1424  
kingston@jlrichards.ca

**Sudbury**

314 Countryside Drive  
Sudbury ON Canada  
P3E 6G2  
Tel: 705 522-8174  
sudbury@jlrichards.ca

**Timmins**

834 Mountjoy Street S, PO Box 10  
Timmins ON Canada  
P4N 7C5  
Tel: 705 360-1899  
timmins@jlrichards.ca

**North Bay**

200-175 Progress Road  
North Bay ON Canada  
P1A 0B8  
Tel: 705 495-7597  
northbay@jlrichards.ca

**Hawkesbury**

372 Bertha Street  
Hawkesbury ON Canada  
K6A 2A8  
Tel: 613 632-0287  
hawkesbury@jlrichards.ca

**Guelph**

107-450 Speedvale Ave. W  
Guelph ON Canada  
N1H 7Y6  
Tel: 519 763-0713  
guelph@jlrichards.ca

