
Appendix C

Water Model

Assumption	Value	Unit	Source
Average Day Flow - Residential	300	L/cap/d	Phase 1 - MP Report Tables - Water Export
Average Day Flow - Commercial	26000	L/h/d	Phase 1 - MP Report Tables - Water Export
Average Day Flow - Typical Industrial	45000	L/h/d	Phase 1 - MP Report Tables - Water Export
Average Day Flow - Hospital	1400	L/bed/d	Phase 1 - MP Report Tables - Water Export
MDD Peaking Factor	2.08	*ADD	Phase 1 - MP Report Tables - Water Export
PHD Peaking Factor	1.5	*MDD	Phase 1 - MP Report Tables - Water Export

Table 1. Future Residential Development Units and Population Projections

WaterCAD Node	ID	Development	Type	Timeframe	Units	Population	Average Day Demand (L/s)	Maximum Day Demand (L/s)	Peak Hour Demand (L/s)
J-36	1A	Danford's - Phase 1	Semis and Singles	0-5 Years	15	49	0.170	0.354	0.531
J-36	1B	Danford's - Phase 1	Rows & Other Multiples	0-5 Years	5	11	0.036	0.079	0.119
J-92	2A	Bonter's	Semis and Singles	0-5 Years	17	55	0.191	0.397	0.596
J-92	2B	Bonter's	Rows & Other Multiples	0-5 Years	15	34	0.118	0.246	0.368
J-100	3	Moira Meadows	Semis and Singles	0-5 Years	24	78	0.271	0.563	0.845
J-31	4	95 Rollins St	Apartments	0-5 Years	29	44	0.153	0.318	0.477
J-44	5	108 Russel St	Apartments	0-5 Years	9	14	0.049	0.101	0.152
J-36	6	Seymour St W #2	Semis and Singles	0-5 Years	1	3	0.010	0.022	0.033
J-22	7	29 Rollins St	Semis and Singles	0-5 Years	2	7	0.024	0.051	0.076
J-50	8	Champlain St	Semis and Singles	0-5 Years	1	3	0.010	0.022	0.033
J-77	9	75 Baldwin St	Semis and Singles	0-5 Years	1	3	0.010	0.022	0.033
J-94	10	Elgin and McKenzie	Semis and Singles	0-5 Years	7	23	0.080	0.166	0.249
J-106	11A	Morey	Semis and Singles	0-5 Years	8	26	0.090	0.188	0.282
J-106	11B	Morey	Rows & Other Multiples	0-5 Years	12	27	0.094	0.195	0.293
J-19, J-51, J-98, J-60, J-27, and J-56	-	Intensification of Existing Units	Historical Population Density	0-5 Years	9	23	0.080	0.166	0.249
		TOTAL Short-Term Growth (0-5 Years; 2024-2029)			155	400	1.389	2.889	4.333
J-87	12	Duncan Street	Semis and Singles	5-10 Years	21	68	0.236	0.491	0.737
J-49	13	Former Becker's	Apartments	5-10 Years	9	14	0.049	0.101	0.152
J-36	14	Danford's - Phase 2	Semis and Singles	5-10 Years	22	72	0.250	0.520	0.780
J-72	15	Durham St. S Development # 2	Semis and Singles	5-10 Years	4	13	0.045	0.094	0.141
J-110	16	McKenzie St	Semis and Singles	5-10 Years	142	463	1.608	3.344	5.016
J-108	17A	Bonjour Blvd	Apartments	5-10 Years	60	72	0.250	0.520	0.780
J-108	17B	Bonjour Blvd	Apartments	5-10 Years	60	120	0.417	0.867	1.300
J-10	18	Marmora Street	Semis and Singles	5-10 Years	7	23	0.080	0.166	0.249
J-90	19	Elgin and St. Lawrence	Semis and Singles	5-10 Years	5	16	0.055	0.116	0.173
J-26	20	Seymour St W	Semis and Singles	5-10 Years	2	7	0.024	0.051	0.076
J-19, J-51, J-98, J-60, J-27, and J-56	-	Intensification of Existing Units	Historical Population Density	5-10 Years	9	23	0.080	0.166	0.249
		TOTAL Mid-Term Growth (5-10 Years; 2029 to 2034)			341	891	3.094	6.435	9.653
J-62	21	Durham St. S Development #1	Semis and Singles	10-20 Years	4	13	0.045	0.094	0.141
J-63	22	Gladstone St E	Semis and Singles	10-20 Years	45	147	0.510	1.062	1.593
J-111	23	Marmora Street	Rows & Other Multiples	10-20 Years	400	3,125	3.125	6,500	9,750
J-96	24	Concession Rd	Semis and Singles	10-20 Years	1	3	0.010	0.022	0.033
J-12	25	St. Lawrence St. E	Semis and Singles	10-20 Years	100	326	1.132	2.354	3.532
J-78	26	35 Seymour St E	Semis and Singles	10-20 Years	1	3	0.010	0.022	0.033
J-70	27	Maid St	Semis and Singles	10-20 Years	24	78	0.271	0.563	0.845
J-77	28	McNab St	Semis and Singles	10-20 Years	2	7	0.024	0.051	0.076
J-84	29	Richardson Lane	Rows & Other Multiples	10-20 Years	16	36	0.125	0.260	0.390
J-19, J-51, J-98, J-60, J-27, and J-56	-	Intensification of Existing Units	Historical Population Density	10-20 Years	18	46	0.160	0.332	0.498
		TOTAL Long-Term Growth (10-20 Years; 2034 to 2044)			952	1559	5.413	11.259	16.899

Table 2. Future ICI Development Land Projections

WaterCAD Node	ID	Development	Type	Timeframe	Beds	Average Day Demand (L/s)	Maximum Day Demand (L/s)	Peak Hour Demand (L/s)
J-9	35	Long Term Care	Hospital	0-5 Years	129	2,074	4,314	6,471
		TOTAL Short-Term Growth			128	2,074	4,314	6,471
		Development	Type	Timeframe	Hectares			
J-3	36	Hwy 7 Commercial Development #1	Commercial	5-10 Years	1,538	0.498	1.037	1.555
J-14	37	Hwy 7 Commercial Development #2	Commercial	5-10 Years	2,307	0.748	1.555	2.332
		TOTAL Medium-Term Growth			3,845	1,246	2,591	3,887
J-112	38	Hwy 62 Commercial Properties	Commercial	10-20 Years	2,833	0.918	1.910	2,864
J-53	39	Downtown Core Commercial Lots	Commercial	10-20 Years	0,121	0.039	0.082	0.123
J-1	40	Hill Ave/Burnside St Commercial Lots	Commercial	10-20 Years	4,978	1,613	3,355	5,033
J-1	41	Hill Ave/Burnside St Industrial Lots	Typical Industrial	10-20 Years	2,347	1,222	2,543	3,814
		TOTAL Long-Term Growth			10,279	3,793	7,889	11,834