APPENDIX

A WATERMAIN NETWORK AND DEMAND CALCULATION

Southwest Middlesex Master Servicing Plan

Demands

Population (Single Family)	3.39	ppu
Population (Townhouses)	2.45	ppu
Population (Apartments)	1.76	ppu
Commercial	80.00	person/hectare
Industrial/Institutional	115.00	person/hectare
Average Day Demand	350	L/cap/day

Peaking Factors

Peak Hour	4.10
Maximum Day	3.00

Demand Rate Calculation

Node	Single Family (No. of Units)	Townhouses (No. of Units)	Apartments (No. of Units)	Commercial (Hectare)	Industrial/Institutional (Hectare)	POPULATION	AVERAGE DAY (L/S)	MAX DAY (L/S)	PEAK HOUR (L/S)
Wardsville									
J-0429	18					61	0.25	0.74	1.01
J-0446	11				0.01	38	0.16	0.47	0.64
J-0238	14					47	0.19	0.58	0.79
J-0506	13			0.10		52	0.21	0.63	0.86
J-0122	10			0.10		42	0.17	0.51	0.70
J-0051	12					41	0.16	0.49	0.68
WVW052	6					20	0.08	0.25	0.34
WVW041	9			0.18	0.02	47	0.19	0.58	0.79
WVW048	13					44	0.18	0.54	0.73
J-0283	18			0.08		67	0.27	0.82	1.12
J-0217	7				0.20	47	0.19	0.57	0.78
J-0030	16					54	0.22	0.66	0.90
J-0023	13					44	0.18	0.54	0.73
J-0550	12					41	0.16	0.49	0.68
Zone Total	**172**	**0**	**0**	**0.46**	**0.23**	**647**	**2.62**	**7.86**	**10.74**
Glencoe									
J-0235	43					146	0.59	1.77	2.42
J-0409	30					102	0.41	1.24	1.69
J-0586	48				0.69	242	0.98	2.94	4.02
J-0539	11					37	0.15	0.45	0.62
J-0529	14			0.05	0.04	56	0.23	0.68	0.93
J-0107	25				0.04	89	0.36	1.08	1.48
J-0187	40	8		0.06		160	0.65	1.94	2.66
J-0267	21	4		0.79	0.03	147	0.60	1.79	2.44
J-0421	26	14		0.02	0.07	131	0.53	1.60	2.18

APPENDIX A

WATER DEMANDS

Node	Single Family (No. of Units)	Townhouses (No. of Units)	Apartments (No. of Units)	Commercial (Hectare)	Industrial/Institutional (Hectare)	POPULATION	AVERAGE DAY (L/S)	MAX DAY (L/S)	PEAK HOUR (L/S)
J-0354	50					170	0.69	2.06	2.82
J-0146	39				0.37	175	0.71	2.12	2.90
J-0067					0.70	81	0.33	0.98	1.34
J-720	33			0.27		133	0.54	1.62	2.21
J-0546	24	7		0.48		137	0.55	1.66	2.27
J-0144	16			0.71		111	0.45	1.35	1.84
J-0175	28	4		0.40		137	0.55	1.66	2.27
J-0284	26	14		0.62	0.05	178	0.72	2.16	2.95
J-0222	29			0.31	0.11	136	0.55	1.65	2.25
J-0481	17					58	0.23	0.70	0.96
WVG074	31			0.13	0.30	150	0.61	1.82	2.49
WVG190	32					108	0.44	1.32	1.80
J-0198	43					146	0.59	1.77	2.42
J-0054	34					115	0.47	1.40	1.91
J-0427	71	5				253	1.02	3.07	4.20
J-0306	5			0.60		65	0.26	0.79	1.08
J-0627	9	4		1.03	0.11	135	0.55	1.65	2.25
J-0634	11	3			0.06	51	0.21	0.62	0.85
Zone Total	**756**	**63**	**0**	**5.46**	**2.56**	**3448**	**13.97**	**41.90**	**57.27**
Appin									
J-0254	44					149	0.60	1.81	2.48
J-0318	27					92	0.37	1.11	1.52
J-0480	17				0.09	68	0.28	0.83	1.13
J-0378	17					58	0.23	0.70	0.96
Zone Total	**105**	**0**	**0**	**0.00**	**0.09**	**366**	**1.48**	**4.45**	**6.08**
Melbourne									
J-0407	31				0.06	112	0.46	1.37	1.87
J-0177	29			0.07		104	0.42	1.26	1.72
J-0467	16					54	0.22	0.66	0.90
J-0109	26			0.14	0.02	101	0.41	1.23	1.68
J-0230	24	14				116	0.47	1.41	1.92
J-0249	27			0.05	0.13	111	0.45	1.35	1.84
J_Hyd-M013	4			0.15		26	0.10	0.31	0.42
Zone Total	**157**	**14**	**0**	**0.40**	**0.22**	**623**	**2.53**	**7.58**	**10.36**
System Total	**1190**	**77**	**0**	**6.32**	**3.09**	**5084**	**20.60**	**61.79**	**84.44**

Southwest Middlesex Master Servicing Plan - Future Development

Demands

Population (Single Family)	3.39	ppu
Population (Townhouses)	2.45	ppu
Population (Apartments)	1.76	ppu
Commercial	80.00	person/hectare
Industrial/Institutional	115.00	person/hectare
Average Day Demand	350	L/cap/day

Peaking Factors

Peak Hour	4.10
Maximum Day	3.00

Demand Rate Calculation

Node	Single Family (No. of Units)	Townhouses (No. of Units)	Apartments (No. of Units)	Commercial (Hectare)	Industrial/Institutional (Hectare)	POPULATION	AVERAGE DAY (L/S)	MAX DAY (L/S)	PEAK HOUR (L/S)
Wardsville									
J-0313		4				10	0.04	0.12	0.16
Zone Total	**0**	**4**	**0**	**0.00**	**0.00**	**10**	**0.04**	**0.12**	**0.16**
Glencoe									
WVG001		10				25	0.10	0.30	0.41
WVG151	22					75	0.30	0.91	1.24
J-0267	41					139	0.56	1.69	2.31
J-0494	53					180	0.73	2.18	2.98
J-0634	55					186	0.76	2.27	3.10
J-0364	13	26				108	0.44	1.31	1.79
J-0447	30					102	0.41	1.24	1.69
WVG054					2.29	264	1.07	3.20	4.38
J-0213	31					105	0.43	1.28	1.75
J-0054	8					27	0.11	0.33	0.45
J-0554	24					81	0.33	0.99	1.35
J-0135	18					61	0.25	0.74	1.01
J-0581						56	0.23	0.68	0.93
WVG051	1					3	0.01	0.04	0.06
Zone Total	**296**	**36**	**0**	**0.00**	**2.29**	**1411**	**5.72**	**17.15**	**23.44**
Melbourne									
J-0493	9					31	0.12	0.37	0.51
Zone Total	**9**	**0**	**0**	**0.00**	**0.00**	**31**	**0.12**	**0.37**	**0.51**
System Total	**305**	**40**	**0**	**0.00**	**2.29**	**1451**	**5.88**	**17.64**	**24.11**

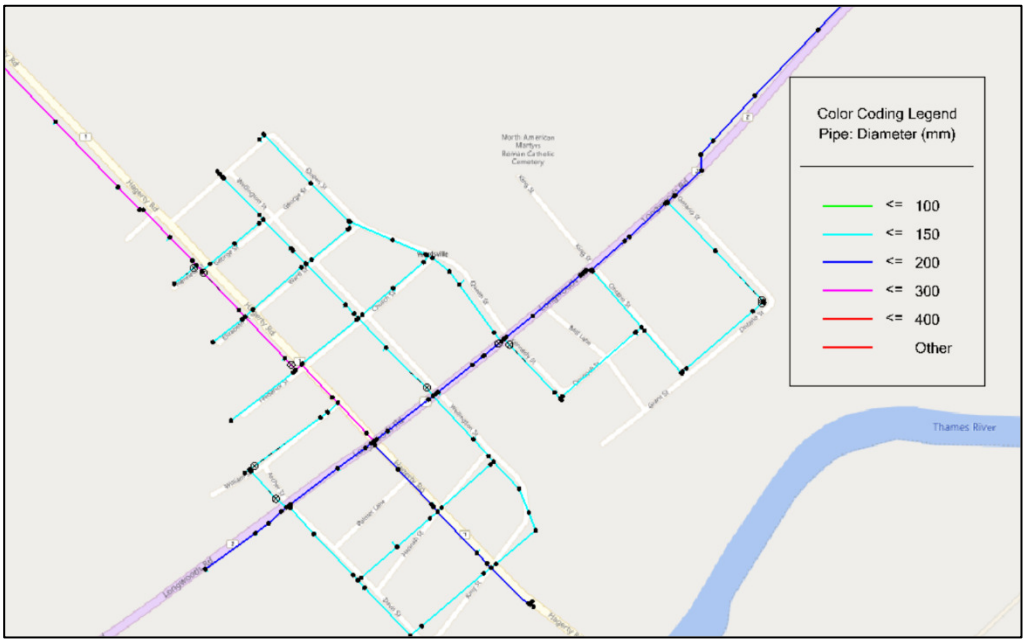


Figure A1 – Wardsville Water Network Layout

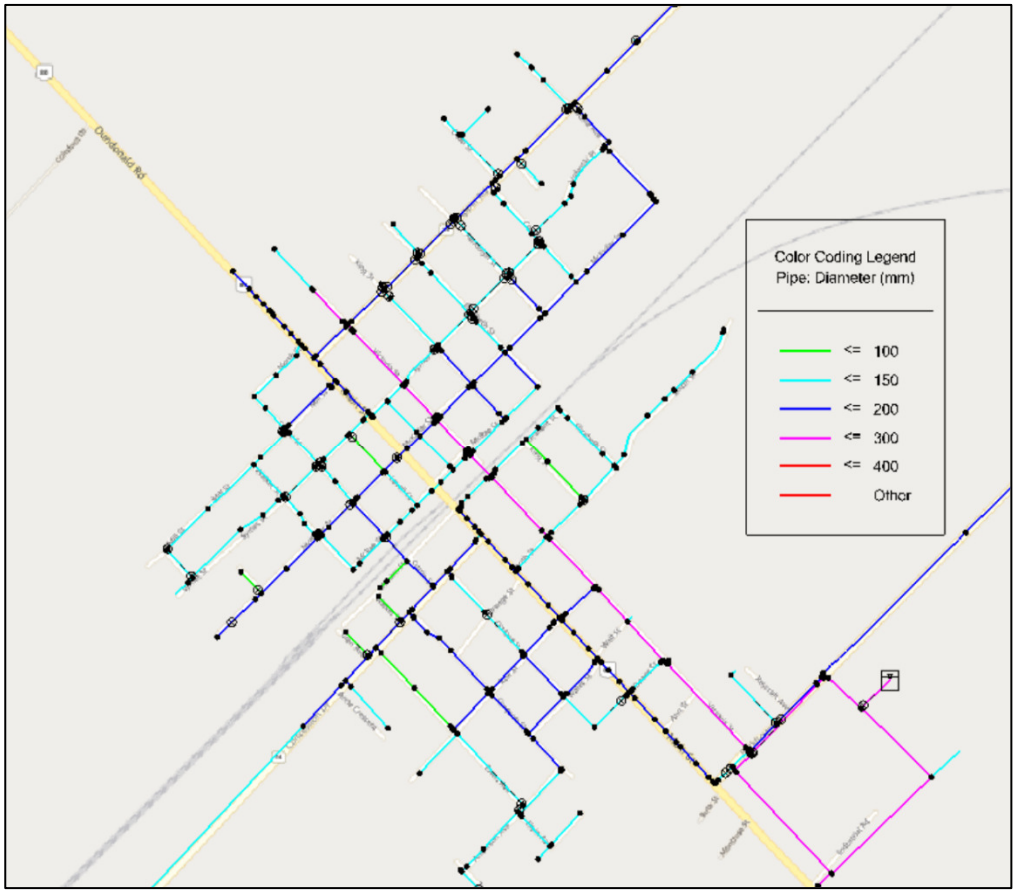


Figure A2 – Glencoe Water Network Layout

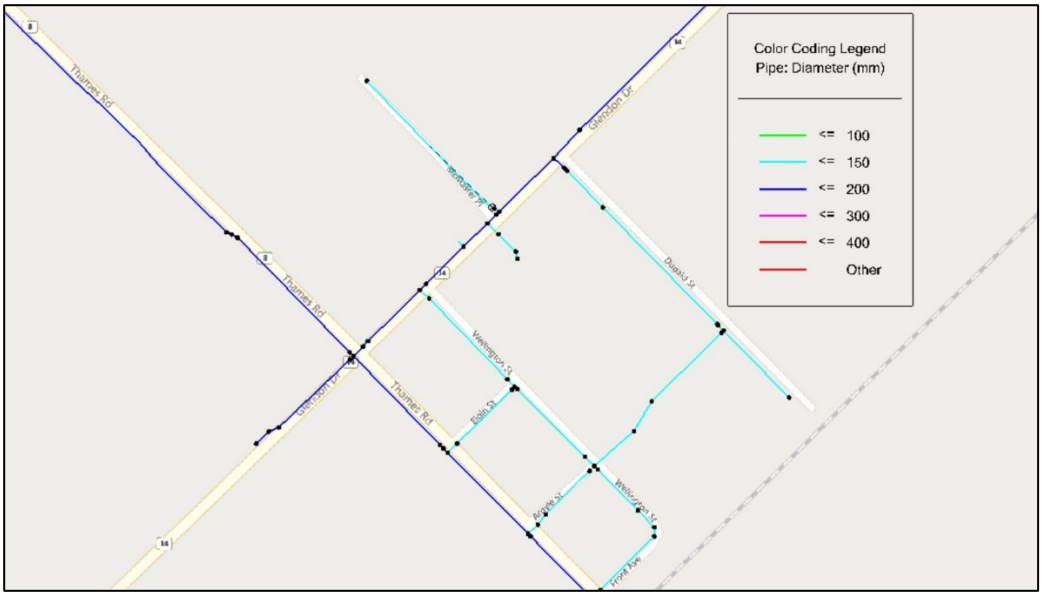


Figure A3 – Appin Water Network Layout

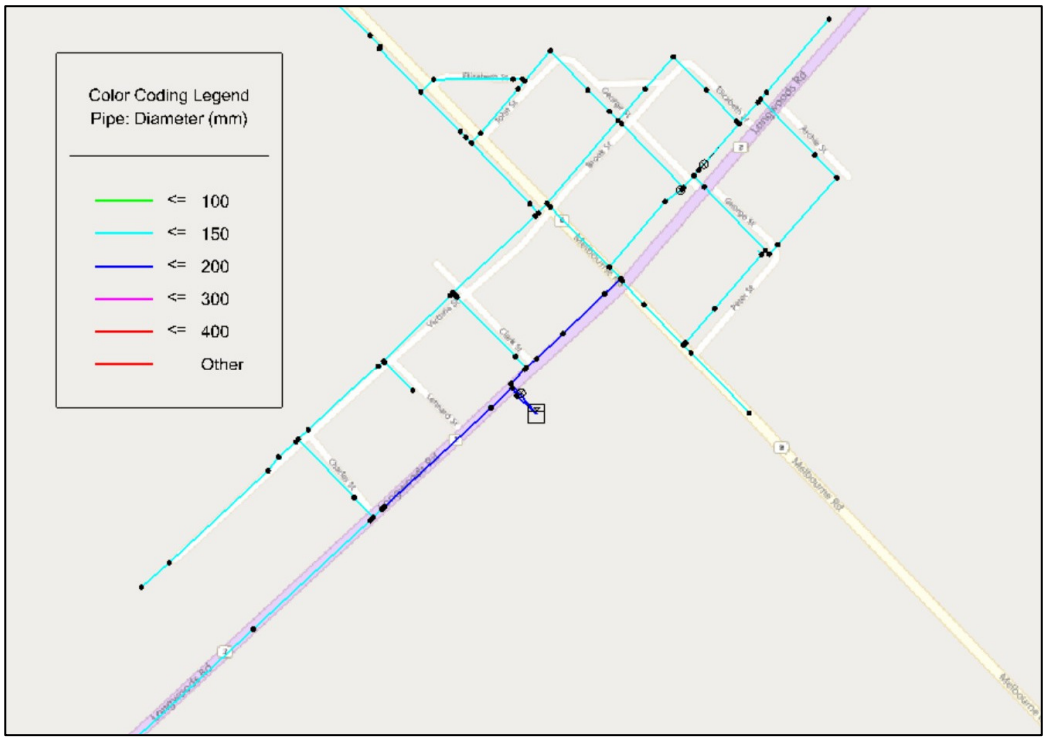


Figure A4 – Melbourne Water Network Layout

APPENDIX

B

PIPE AND JUNCTION RESULTS

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0003	Glencoe	0.00	220.18	264.2	431
J-0004	Glencoe	0.00	221.47	264.2	418
J-0005	Glencoe	0.00	220.94	264.2	424
J-0006	Glencoe	0.00	219.32	264.3	440
J-0007	Glencoe	0.00	219.32	264.3	440
J-0011	Glencoe	0.00	219.21	264.3	441
J-0013	Glencoe	0.00	219.32	264.3	440
J-0014	Glencoe	0.00	219.71	264.2	436
J-0017	Glencoe	0.00	219.32	264.3	440
J-0025	Glencoe	0.00	221.81	264.2	415
J-0032	Glencoe	0.00	221.02	264.2	423
J-0036	Glencoe	0.00	220.75	264.2	426
J-0038	Glencoe	0.00	219.48	264.3	439
J-0039	Glencoe	0.00	219.48	264.3	439
J-0044	Glencoe	0.00	221.03	264.2	423
J-0045	Glencoe	0.00	221.03	264.2	423
J-0047	Glencoe	0.00	219.32	264.3	440
J-0048	Glencoe	0.00	219.89	264.3	434
J-0049	Glencoe	0.00	219.89	264.3	434
J-0054	Glencoe	0.26	222.07	264.2	413
J-0059	Glencoe	0.00	221.53	264.2	418
J-0060	Glencoe	0.00	221.52	264.2	418
J-0063	Glencoe	0.00	219.52	264.3	438
J-0066	Glencoe	0.00	219.37	264.4	441
J-0067	Glencoe	0.18	219.37	264.4	441
J-0070	Glencoe	0.00	220.30	264.2	430
J-0071	Glencoe	0.00	221.39	264.2	419
J-0072	Glencoe	0.00	221.47	264.2	418
J-0075	Glencoe	0.00	219.89	264.3	434
J-0076	Glencoe	0.00	221.37	264.2	420
J-0080	Glencoe	0.00	219.03	264.3	443
J-0084	Glencoe	0.00	221.64	264.2	417
J-0089	Glencoe	0.00	218.74	264.3	445
J-0091	Glencoe	0.00	219.67	264.3	436
J-0093	Glencoe	0.00	219.21	264.3	441
J-0094	Glencoe	0.00	219.02	264.3	443
J-0097	Glencoe	0.00	220.18	264.2	431
J-0098	Glencoe	0.00	222.46	264.2	409
J-0099	Glencoe	0.00	220.30	264.2	430
J-0101	Glencoe	0.00	220.52	264.3	428
J-0104	Glencoe	0.00	219.02	264.3	443
J-0106	Glencoe	0.00	220.30	264.2	430
J-0107	Glencoe	0.20	219.71	264.2	436
J-0111	Glencoe	0.00	220.46	264.2	428
J-0115	Glencoe	0.00	221.64	264.2	417
J-0116	Glencoe	0.00	221.14	264.2	422
J-0123	Glencoe	0.00	219.89	264.3	434
J-0124	Glencoe	0.00	221.86	264.2	415
J-0126	Glencoe	0.00	222.19	264.2	412
J-0128	Glencoe	0.00	220.36	264.2	429
J-0134	Glencoe	0.00	221.58	264.2	417
J-0135	Glencoe	0.00	221.58	264.2	417
J-0139	Glencoe	0.00	220.94	264.2	424
J-0144	Glencoe	0.25	220.30	264.2	430
J-0145	Glencoe	0.00	219.32	264.3	440
J-0146	Glencoe	0.40	219.32	264.3	440
J-0165	Glencoe	0.00	222.40	264.2	409
J-0166	Glencoe	0.00	222.18	264.2	412
J-0168	Glencoe	0.00	218.80	264.2	445
J-0169	Glencoe	0.00	219.08	264.2	442
J-0172	Glencoe	0.00	220.46	264.2	428
J-0175	Glencoe	0.31	220.69	264.2	426
J-0178	Glencoe	0.00	220.82	264.2	425
J-0179	Glencoe	0.00	221.40	264.2	419
J-0180	Glencoe	0.00	219.24	264.3	441
J-0187	Glencoe	0.36	219.29	264.3	440
J-0191	Glencoe	0.00	219.87	264.2	434
J-0198	Glencoe	0.33	220.60	264.2	427
J-0201	Glencoe	0.00	221.07	264.2	423
J-0202	Glencoe	0.00	219.58	264.3	438
J-0205	Glencoe	0.00	219.67	264.3	436
J-0211	Glencoe	0.00	220.94	264.2	424
J-0213	Glencoe	0.00	220.33	264.2	430

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0222	Glencoe	0.31	221.83	264.2	415
J-0227	Glencoe	0.00	218.72	264.3	446
J-0235	Glencoe	0.33	219.58	264.2	437
J-0236	Glencoe	0.00	221.53	264.2	418
J-0239	Glencoe	0.00	220.46	264.2	428
J-0252	Glencoe	0.00	221.64	264.2	417
J-0255	Glencoe	0.00	220.66	264.2	427
J-0256	Glencoe	0.00	220.66	264.2	427
J-0262	Glencoe	0.00	218.81	264.3	445
J-0264	Glencoe	0.00	221.34	264.2	420
J-0265	Glencoe	0.00	221.14	264.2	422
J-0267	Glencoe	0.45	220.89	264.3	424
J-0271	Glencoe	0.00	221.37	264.2	419
J-0272	Glencoe	0.00	220.69	264.2	426
J-0273	Glencoe	0.00	220.69	264.2	426
J-0275	Glencoe	0.00	218.80	264.3	445
J-0279	Glencoe	0.00	219.07	264.2	442
J-0284	Glencoe	0.40	221.40	264.2	419
J-0285	Glencoe	0.00	221.40	264.2	419
J-0286	Glencoe	0.00	220.95	264.2	424
J-0288	Glencoe	0.00	219.95	264.2	433
J-0291	Glencoe	0.00	220.39	264.2	429
J-0303	Glencoe	0.00	220.18	264.2	431
J-0306	Glencoe	0.15	220.39	264.2	429
J-0316	Glencoe	0.00	219.71	264.2	436
J-0321	Glencoe	0.00	218.44	264.2	448
J-0324	Glencoe	0.00	220.30	264.2	430
J-0331	Glencoe	0.00	220.78	264.2	425
J-0332	Glencoe	0.00	221.43	264.2	419
J-0333	Glencoe	0.00	220.63	264.2	427
J-0334	Glencoe	0.00	220.51	264.2	428
J-0336	Glencoe	0.00	220.94	264.2	424
J-0337	Glencoe	0.00	219.08	264.3	442
J-0338	Glencoe	0.00	219.08	264.3	442
J-0339	Glencoe	0.00	221.94	264.2	414
J-0340	Glencoe	0.00	221.94	264.2	414
J-0342	Glencoe	0.00	220.51	264.2	428
J-0344	Glencoe	0.00	221.97	264.2	414
J-0353	Glencoe	0.00	221.46	264.2	419
J-0354	Glencoe	0.38	220.21	264.2	431
J-0358	Glencoe	0.00	218.83	264.3	444
J-0360	Glencoe	0.00	220.66	264.2	426
J-0364	Glencoe	0.00	222.05	264.2	413
J-0367	Glencoe	0.00	221.47	264.2	419
J-0368	Glencoe	0.00	221.72	264.2	416
J-0373	Glencoe	0.00	221.20	264.2	421
J-0381	Glencoe	0.00	220.68	264.2	426
J-0384	Glencoe	0.00	220.86	264.2	424
J-0389	Glencoe	0.00	220.58	264.2	427
J-0390	Glencoe	0.00	221.48	264.2	418
J-0402	Glencoe	0.00	222.13	264.2	412
J-0409	Glencoe	0.22	220.12	264.2	432
J-0410	Glencoe	0.00	220.77	264.2	425
J-0421	Glencoe	0.30	219.44	264.2	438
J-0424	Glencoe	0.00	221.29	264.2	420
J-0425	Glencoe	0.00	220.56	264.2	427
J-0427	Glencoe	0.57	221.50	264.2	418
J-0435	Glencoe	0.00	220.73	264.2	426
J-0437	Glencoe	0.00	221.47	264.2	419
J-0447	Glencoe	0.00	219.72	264.2	436
J-0449	Glencoe	0.00	220.38	264.2	429
J-0450	Glencoe	0.00	220.38	264.2	429
J-0451	Glencoe	0.00	220.75	264.2	426
J-0452	Glencoe	0.00	222.13	264.2	412
J-0468	Glencoe	0.00	220.56	264.2	428
J-0469	Glencoe	0.00	220.51	264.2	428
J-0481	Glencoe	0.13	221.57	264.2	418
J-0488	Glencoe	0.00	219.85	264.2	434
J-0494	Glencoe	0.00	219.65	264.4	438
J-0497	Glencoe	0.00	220.51	264.2	428
J-0503	Glencoe	0.00	220.59	264.2	427
J-0507	Glencoe	0.00	221.01	264.2	423
J-0524	Glencoe	0.00	220.61	264.2	427
J-0529	Glencoe	0.13	220.34	264.2	430
J-0533	Glencoe	0.00	220.79	264.2	425

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0535	Glencoe	0.00	220.56	264.2	428
J-0539	Glencoe	0.08	220.67	264.2	426
J-0543	Glencoe	0.00	221.46	264.2	419
J-0544	Glencoe	0.00	219.48	264.3	438
J-0546	Glencoe	0.31	221.52	264.2	418
J-0554	Glencoe	0.00	221.27	264.2	420
J-0559	Glencoe	0.00	219.25	264.3	440
J-0561	Glencoe	0.00	221.13	264.2	422
J-0564	Glencoe	0.00	220.73	264.2	426
J-0566	Glencoe	0.00	221.47	264.2	419
J-0568	Glencoe	0.00	218.97	264.2	443
J-0579	Glencoe	0.00	221.75	264.2	416
J-0580	Glencoe	0.00	221.33	264.2	420
J-0581	Glencoe	0.00	221.45	264.2	419
J-0584	Glencoe	0.00	220.81	264.2	425
J-0586	Glencoe	0.73	221.75	264.2	416
J-0590	Glencoe	0.00	219.80	264.3	435
J-0602	Glencoe	0.00	221.75	264.2	416
J-0627	Glencoe	0.31	221.20	264.2	421
J-0632	Glencoe	0.00	219.75	264.2	435
J-0635	Glencoe	0.00	222.08	264.6	416
J-0646	Glencoe	0.00	214.32	278.0	623
J-690	Glencoe	0.00	219.24	264.3	441
J-692	Glencoe	0.00	221.27	264.2	421
J-695	Glencoe	0.00	221.39	264.2	419
J-698	Glencoe	0.00	221.97	264.2	414
J-700	Glencoe	0.00	221.63	264.2	417
J-703	Glencoe	0.00	220.68	264.2	426
J-705	Glencoe	0.00	221.20	264.2	421
J-707	Glencoe	0.00	221.01	264.2	423
J-709	Glencoe	0.00	219.02	264.3	443
J-713	Glencoe	0.00	220.91	264.2	424
J-715	Glencoe	0.00	220.94	264.2	424
J-718	Glencoe	0.00	220.68	264.2	426
J-720	Glencoe	0.30	221.39	264.2	419
J-722	Glencoe	0.00	222.21	264.2	411
J-724	Glencoe	0.00	222.40	264.2	409
J-727	Glencoe	0.00	222.40	264.2	409
J-734	Glencoe	0.00	220.09	264.3	432
J-735	Glencoe	0.00	220.09	264.2	432
J-753	Glencoe	0.00	220.54	264.2	428
J-759	Glencoe	0.00	220.47	264.2	428
J-760	Glencoe	0.00	220.38	264.2	429
J-761	Glencoe	0.00	220.22	264.2	431
J-762	Glencoe	0.00	221.99	264.2	413
J-764	Glencoe	0.00	219.44	264.2	438
J-765	Glencoe	0.00	219.44	264.2	438
J-766	Glencoe	0.00	219.88	264.2	434
J-767	Glencoe	0.00	219.50	264.2	438
J-768	Glencoe	0.00	219.49	264.2	438
J-769	Glencoe	0.00	219.58	264.2	437
J-770	Glencoe	0.00	219.69	264.2	436
J-771	Glencoe	0.00	219.83	264.2	435
J-772	Glencoe	0.00	219.83	264.2	435
J-773	Glencoe	0.00	219.88	264.2	434
J-775	Glencoe	0.00	219.80	264.2	435
J-777	Glencoe	0.00	219.87	264.2	434
J-778	Glencoe	0.00	219.73	264.2	436
J-779	Glencoe	0.00	219.26	264.2	440
J-780	Glencoe	0.00	220.29	264.2	430
J-781	Glencoe	0.00	218.70	264.2	446
J-782	Glencoe	0.00	218.55	264.2	447
J-783	Glencoe	0.00	218.42	264.2	448
J-784	Glencoe	0.00	218.23	264.2	450
J-785	Glencoe	0.00	217.92	264.3	453
J-786	Glencoe	0.00	217.71	264.3	455
J-787	Glencoe	0.00	217.74	264.3	455
J-788	Glencoe	0.00	217.66	264.3	456
J-789	Glencoe	0.00	217.51	264.3	457
J-790	Glencoe	0.00	217.28	264.3	460
J-791	Glencoe	0.00	217.22	264.3	460
J-792	Glencoe	0.00	217.28	264.3	460
J-793	Glencoe	0.00	217.38	264.3	459
J-794	Glencoe	0.00	217.70	264.3	456
J-795	Glencoe	0.00	218.09	264.3	452

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-796	Glencoe	0.00	218.22	264.3	451
J-797	Glencoe	0.00	218.88	264.3	444
J-798	Glencoe	0.00	219.44	264.3	439
J-799	Glencoe	0.00	219.63	264.3	437
J-800	Glencoe	0.00	221.39	264.2	419
J-801	Glencoe	0.00	220.08	264.2	432
J-803	Glencoe	0.00	218.52	264.2	448
J-804	Glencoe	0.00	218.51	264.2	448
J-805	Glencoe	0.00	218.60	264.2	447
J-806	Glencoe	0.00	218.14	264.3	451
J-807	Glencoe	0.00	218.08	264.3	452
J-810	Glencoe	0.00	218.27	264.3	450
J-812	Glencoe	0.00	217.74	264.3	455
J-813	Glencoe	0.00	217.74	264.3	455
J-814	Glencoe	0.00	217.91	264.3	453
J-816	Glencoe	0.00	217.74	264.3	455
J-817	Glencoe	0.00	217.93	264.3	453
J-818	Glencoe	0.00	217.37	264.3	459
J-819	Glencoe	0.00	217.41	264.3	458
J-820	Glencoe	0.00	217.56	264.3	457
J-821	Glencoe	0.00	217.29	264.3	460
J-822	Glencoe	0.00	218.81	264.3	445
J-823	Glencoe	0.00	218.81	264.3	445
J-824	Glencoe	0.00	218.90	264.3	444
J-826	Glencoe	0.00	217.90	264.3	454
J-827	Glencoe	0.00	219.58	264.3	437
J_Hyd-G001	Glencoe	0.00	220.49	264.2	428
J_Hyd-G002	Glencoe	0.00	219.67	264.3	436
J_Hyd-G003	Glencoe	0.00	221.48	264.2	418
J_Hyd-G004	Glencoe	0.00	221.23	264.2	421
J_Hyd-G005	Glencoe	0.00	222.23	264.2	411
J_Hyd-G006	Glencoe	0.00	222.40	264.2	409
J_Hyd-G008	Glencoe	0.00	220.68	264.2	426
J_Hyd-G009	Glencoe	0.00	221.54	264.2	418
J_Hyd-G010	Glencoe	0.00	221.47	264.2	418
J_Hyd-G011	Glencoe	0.00	219.92	264.2	434
J_Hyd-G012	Glencoe	0.00	220.18	264.2	431
J_Hyd-G013	Glencoe	0.00	221.02	264.2	423
J_Hyd-G014	Glencoe	0.00	221.20	264.2	421
J_Hyd-G016	Glencoe	0.00	221.03	264.2	423
J_Hyd-G018	Glencoe	0.00	220.42	264.2	429
J_Hyd-G019	Glencoe	0.00	220.44	264.2	429
J_Hyd-G020	Glencoe	0.00	221.28	264.2	420
J_Hyd-G021	Glencoe	0.00	221.03	264.2	423
J_Hyd-G022	Glencoe	0.00	219.49	264.2	438
J_Hyd-G023	Glencoe	0.00	220.09	264.3	432
J_Hyd-G024	Glencoe	0.00	221.83	264.2	415
J_Hyd-G025	Glencoe	0.00	221.53	264.2	418
J_Hyd-G026	Glencoe	0.00	221.14	264.2	422
J_Hyd-G027	Glencoe	0.00	221.43	264.2	419
J_Hyd-G028	Glencoe	0.00	221.41	264.2	419
J_Hyd-G029	Glencoe	0.00	220.02	264.2	433
J_Hyd-G041	Glencoe	0.00	220.89	264.2	424
J_Hyd-G042	Glencoe	0.00	220.42	264.2	429
J_Hyd-G043	Glencoe	0.00	220.64	264.2	427
J_Hyd-G044	Glencoe	0.00	220.85	264.2	425
J_Hyd-G045	Glencoe	0.00	221.65	264.2	417
J_Hyd-G046	Glencoe	0.00	221.40	264.2	419
J_Hyd-G047	Glencoe	0.00	221.04	264.2	423
J_Hyd-G048	Glencoe	0.00	220.30	264.2	430
J_Hyd-G049	Glencoe	0.00	220.49	264.2	428
J_Hyd-G050	Glencoe	0.00	221.05	264.2	423
J_Hyd-G051	Glencoe	0.00	221.15	264.2	422
J_Hyd-G052	Glencoe	0.00	220.65	264.2	427
J_Hyd-G053	Glencoe	0.00	220.83	264.2	425
J_Hyd-G056	Glencoe	0.00	220.90	264.2	424
J_Hyd-G057	Glencoe	0.00	220.89	264.2	424
J_Hyd-G058	Glencoe	0.00	221.20	264.2	421
J_Hyd-G059	Glencoe	0.00	219.83	264.2	435
J_Hyd-G060	Glencoe	0.00	219.29	264.3	440
J_Hyd-G061	Glencoe	0.00	219.19	264.3	441
J_Hyd-G062	Glencoe	0.00	220.50	264.3	429
J_Hyd-G063	Glencoe	0.00	220.84	264.2	425
J_Hyd-G064	Glencoe	0.00	219.52	264.3	438
J_Hyd-G065	Glencoe	0.00	219.55	264.3	437

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-G066	Glencoe	0.00	220.23	264.2	431
J_Hyd-G067	Glencoe	0.00	219.02	264.3	443
J_Hyd-G068	Glencoe	0.00	218.84	264.2	444
J_Hyd-G069	Glencoe	0.00	221.96	264.2	414
J_Hyd-G070	Glencoe	0.00	221.63	264.2	417
J_Hyd-G071	Glencoe	0.00	220.68	264.2	426
J_Hyd-G073	Glencoe	0.00	220.65	264.2	427
J_Hyd-G074	Glencoe	0.00	220.63	264.2	427
J_Hyd-G075	Glencoe	0.00	221.31	264.2	420
J_Hyd-G076	Glencoe	0.00	221.52	264.2	418
J_Hyd-G077	Glencoe	0.00	221.15	264.2	422
J_Hyd-G078	Glencoe	0.00	219.48	264.3	439
J_Hyd-G079	Glencoe	0.00	218.83	264.3	445
J_Hyd-G080	Glencoe	0.00	221.89	264.2	414
J_Hyd-G081	Glencoe	0.00	218.72	264.3	446
J_Hyd-G082	Glencoe	0.00	222.21	264.2	411
J_Hyd-G083	Glencoe	0.00	220.52	264.3	428
J_Hyd-G084	Glencoe	0.00	218.50	264.3	448
J_Hyd-G085	Glencoe	0.00	221.05	264.2	423
J_Hyd-G086	Glencoe	0.00	221.52	264.2	418
J_Hyd-G087	Glencoe	0.00	222.13	264.2	412
J_Hyd-G088	Glencoe	0.00	218.78	264.2	445
J_Hyd-G089	Glencoe	0.00	219.14	264.2	441
J_Hyd-G090	Glencoe	0.00	218.83	264.2	444
J_Hyd-G091	Glencoe	0.00	218.54	264.2	447
J_Hyd-G092	Glencoe	0.00	221.27	264.2	421
J_Hyd-G093	Glencoe	0.00	220.52	264.2	428
J_Hyd-G094	Glencoe	0.00	220.33	264.2	430
J_Hyd-G095	Glencoe	0.00	221.89	264.2	414
J_Hyd-G096	Glencoe	0.00	221.27	264.2	420
J_Hyd-G097	Glencoe	0.00	221.43	264.2	419
J_Hyd-G098	Glencoe	0.00	222.70	264.2	406
J_Hyd-H_T-718	Glencoe	0.00	219.72	264.3	436
WV-348	Glencoe	0.00	222.18	264.2	412
WVG001	Glencoe	0.00	221.52	264.2	418
WVG002	Glencoe	0.00	220.69	264.2	426
WVG003	Glencoe	0.00	220.69	264.2	426
WVG004	Glencoe	0.00	220.69	264.2	426
WVG010	Glencoe	0.00	220.30	264.2	430
WVG010	Glencoe	0.00	218.74	264.3	445
WVG011	Glencoe	0.00	220.30	264.2	430
WVG012	Glencoe	0.00	220.60	264.2	427
WVG013	Glencoe	0.00	220.91	264.2	424
WVG015	Glencoe	0.00	220.81	264.2	425
WVG018	Glencoe	0.00	220.30	264.2	430
WVG019	Glencoe	0.00	220.30	264.2	430
WVG020	Glencoe	0.00	220.83	264.2	425
WVG022	Glencoe	0.00	221.20	264.2	421
WVG027	Glencoe	0.00	221.37	264.2	420
WVG028	Glencoe	0.00	221.31	264.2	420
WVG029	Glencoe	0.00	221.64	264.2	417
WVG030	Glencoe	0.00	221.21	264.2	421
WVG032	Glencoe	0.00	221.00	264.2	423
WVG035	Glencoe	0.00	220.82	264.2	425
WVG036	Glencoe	0.00	220.82	264.2	425
WVG037	Glencoe	0.00	220.78	264.2	425
WVG038	Glencoe	0.00	220.94	264.2	424
WVG039	Glencoe	0.00	220.94	264.2	424
WVG040	Glencoe	0.00	220.94	264.2	424
WVG041	Glencoe	0.00	220.94	264.2	424
WVG042	Glencoe	0.00	220.94	264.2	424
WVG043	Glencoe	0.00	221.07	264.2	423
WVG044	Glencoe	0.00	221.07	264.2	423
WVG045	Glencoe	0.00	221.44	264.2	419
WVG046	Glencoe	0.00	221.52	264.2	418
WVG047	Glencoe	0.00	221.40	264.2	419
WVG048	Glencoe	0.00	221.65	264.2	417
WVG049	Glencoe	0.00	221.65	264.2	417
WVG050	Glencoe	0.00	221.39	264.2	419
WVG051	Glencoe	0.00	220.88	264.2	424
WVG052	Glencoe	0.00	220.75	264.2	426
WVG053	Glencoe	0.00	220.37	264.2	429
WVG054	Glencoe	0.00	220.60	264.2	427
WVG055	Glencoe	0.00	220.65	264.2	427
WVG056	Glencoe	0.00	220.39	264.2	429

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVG057	Glencoe	0.00	221.86	264.2	415
WVG058	Glencoe	0.00	221.52	264.2	418
WVG059	Glencoe	0.00	221.52	264.2	418
WVG061	Glencoe	0.00	221.43	264.2	419
WVG064	Glencoe	0.00	221.03	264.2	423
WVG069	Glencoe	0.00	221.89	264.2	414
WVG070	Glencoe	0.00	221.83	264.2	415
WVG071	Glencoe	0.00	221.83	264.2	415
WVG074	Glencoe	0.34	221.48	264.2	418
WVG085	Glencoe	0.00	221.35	264.2	420
WVG086	Glencoe	0.00	221.47	264.2	418
WVG087	Glencoe	0.00	221.20	264.2	421
WVG090	Glencoe	0.00	220.66	264.2	426
WVG091	Glencoe	0.00	220.36	264.2	429
WVG093	Glencoe	0.00	220.18	264.2	431
WVG094	Glencoe	0.00	219.87	264.2	434
WVG096	Glencoe	0.00	219.71	264.2	436
WVG097	Glencoe	0.00	219.72	264.2	436
WVG099	Glencoe	0.00	220.09	264.3	432
WVG100	Glencoe	0.00	220.09	264.2	432
WVG101	Glencoe	0.00	219.67	264.3	436
WVG102	Glencoe	0.00	219.67	264.3	436
WVG103	Glencoe	0.00	219.67	264.3	436
WVG104	Glencoe	0.00	219.29	264.3	440
WVG105	Glencoe	0.00	219.29	264.3	440
WVG106	Glencoe	0.00	219.52	264.3	438
WVG107	Glencoe	0.00	219.52	264.3	438
WVG108	Glencoe	0.00	218.74	264.3	445
WVG109	Glencoe	0.00	218.74	264.3	445
WVG113	Glencoe	0.00	219.67	264.3	436
WVG116	Glencoe	0.00	219.80	264.2	435
WVG117	Glencoe	0.00	220.25	264.2	431
WVG120	Glencoe	0.00	218.73	264.3	446
WVG122	Glencoe	0.00	220.89	264.3	424
WVG129	Glencoe	0.00	220.46	264.2	428
WVG130	Glencoe	0.00	220.46	264.2	428
WVG131	Glencoe	0.00	220.46	264.2	428
WVG132	Glencoe	0.00	219.02	264.3	443
WVG133	Glencoe	0.00	219.02	264.3	443
WVG139	Glencoe	0.00	219.72	264.3	436
WVG140	Glencoe	0.00	219.89	264.3	434
WVG143	Glencoe	0.00	219.32	264.3	440
WVG147	Glencoe	0.00	218.60	264.2	447
WVG148	Glencoe	0.00	218.97	264.2	443
WVG149	Glencoe	0.00	219.95	264.2	433
WVG150	Glencoe	0.00	219.40	264.2	439
WVG151	Glencoe	0.00	218.54	264.2	447
WVG152	Glencoe	0.00	221.63	264.2	417
WVG153	Glencoe	0.00	222.46	264.2	409
WVG158	Glencoe	0.00	221.74	264.2	416
WVG159	Glencoe	0.00	222.07	264.2	413
WVG161	Glencoe	0.00	220.95	264.2	424
WVG164	Glencoe	0.00	221.63	264.2	417
WVG165	Glencoe	0.00	221.86	264.2	415
WVG169	Glencoe	0.00	221.97	264.2	414
WVG170	Glencoe	0.00	221.61	264.2	417
WVG171	Glencoe	0.00	221.81	264.2	415
WVG172	Glencoe	0.00	221.64	264.2	417
WVG175	Glencoe	0.00	221.83	264.2	415
WVG181	Glencoe	0.00	219.21	264.3	441
WVG183	Glencoe	0.00	219.03	264.3	443
WVG185	Glencoe	0.00	219.58	264.2	437
WVG186	Glencoe	0.00	220.09	264.2	432
WVG187	Glencoe	0.00	219.62	264.3	437
WVG188	Glencoe	0.00	221.14	264.2	422
WVG189	Glencoe	0.00	220.09	264.2	432
WVG190	Glencoe	0.25	219.29	264.2	440
WVG191	Glencoe	0.00	218.72	264.3	446
WVG192	Glencoe	0.00	218.72	264.3	446
WVG193	Glencoe	0.00	219.89	264.3	434
WVG196	Glencoe	0.00	219.58	264.3	437
WVG197	Glencoe	0.00	219.58	264.3	438
WVG199	Glencoe	0.00	221.53	264.2	418
WVG200	Glencoe	0.00	221.46	264.2	419
WVR021	Glencoe	0.00	219.38	264.5	441

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVR022	Glencoe	0.00	219.48	264.3	439
J-0037	Melborne	0.00	221.36	251.6	296
J-0065	Melborne	0.00	221.95	251.6	290
J-0105	Melborne	0.00	221.78	251.6	292
J-0108	Melborne	0.00	222.00	251.6	290
J-0109	Melborne	0.23	222.00	251.6	290
J-0125	Melborne	0.00	221.88	251.6	290
J-0156	Melborne	0.00	222.65	251.6	284
J-0157	Melborne	0.00	222.65	251.6	284
J-0158	Melborne	0.00	221.85	251.6	291
J-0159	Melborne	0.00	221.86	251.6	291
J-0176	Melborne	0.00	219.99	251.6	309
J-0177	Melborne	0.23	220.58	251.6	303
J-0189	Melborne	0.00	221.71	251.6	292
J-0192	Melborne	0.00	221.15	251.6	298
J-0203	Melborne	0.00	221.35	251.6	296
J-0230	Melborne	0.26	222.96	251.6	280
J-0237	Melborne	0.00	221.35	251.6	296
J-0248	Melborne	0.00	221.91	251.6	290
J-0249	Melborne	0.25	221.91	251.6	290
J-0312	Melborne	0.00	221.84	251.6	292
J-0396	Melborne	0.00	221.53	251.6	294
J-0403	Melborne	0.00	221.78	251.6	292
J-0407	Melborne	0.25	220.70	251.6	302
J-0413	Melborne	0.00	221.82	251.7	292
J-0414	Melborne	0.00	221.49	251.7	295
J-0430	Melborne	0.00	221.36	251.6	296
J-0434	Melborne	0.00	221.75	251.6	292
J-0476	Melborne	0.00	223.00	251.6	280
J-0493	Melborne	0.00	219.69	251.6	312
J-0498	Melborne	0.00	222.22	251.6	288
J-0500	Melborne	0.00	222.24	251.6	287
J-0502	Melborne	0.00	221.77	251.6	292
J-0531	Melborne	0.00	222.32	251.8	288
J-0639	Melborne	0.00	225.41	256.6	305
J_Hyd-M002	Melborne	0.00	219.00	252.1	324
J_Hyd-M003	Melborne	0.00	219.73	251.8	314
J_Hyd-M004	Melborne	0.00	221.15	251.6	298
J_Hyd-M005	Melborne	0.00	221.44	251.6	295
J_Hyd-M006	Melborne	0.00	222.31	251.6	286
J_Hyd-M007	Melborne	0.00	221.82	251.6	291
J_Hyd-M008	Melborne	0.00	222.52	251.6	284
J_Hyd-M009	Melborne	0.00	222.86	251.6	281
J_Hyd-M010	Melborne	0.00	221.91	251.6	290
J_Hyd-M011	Melborne	0.00	223.22	251.6	278
J_Hyd-M012	Melborne	0.00	221.53	251.6	294
J_Hyd-M013	Melborne	0.06	223.56	251.6	274
J_Hyd-M014	Melborne	0.00	222.20	251.6	288
J_Hyd-M015	Melborne	0.00	223.30	251.6	277
J_Hyd-M016	Melborne	0.00	222.65	251.6	284
J_Hyd-M017	Melborne	0.00	222.32	251.8	288
J_Hyd-M018	Melborne	0.00	221.84	251.7	292
J_Hyd-M019	Melborne	0.00	221.35	251.6	296
J_Hyd-M020	Melborne	0.00	220.58	251.6	303
J_Hyd-M021	Melborne	0.00	221.95	251.6	290
J_Hyd-M022	Melborne	0.00	220.18	251.6	307
J_Hyd-M023	Melborne	0.00	220.16	251.6	308
WVA023	Melborne	0.00	221.95	251.6	290
WVM001	Melborne	0.00	221.15	251.6	298
WVM002	Melborne	0.00	221.15	251.6	298
WVM003	Melborne	0.00	220.48	251.6	305
WVM005	Melborne	0.00	221.88	251.6	290
WVM006	Melborne	0.00	221.88	251.6	290
WVM007	Melborne	0.00	221.23	251.6	297
WVM008	Melborne	0.00	221.80	251.6	291
WVM009	Melborne	0.00	221.78	251.6	292
WVM010	Melborne	0.00	221.85	251.6	291
WVM011	Melborne	0.00	221.85	251.6	291
WVM012	Melborne	0.00	221.84	251.6	292
WVM013	Melborne	0.00	222.21	251.6	288
WVM014	Melborne	0.00	222.00	251.6	289
WVM015	Melborne	0.00	221.91	251.6	290
WVM017	Melborne	0.00	221.71	251.6	292
WVM018	Melborne	0.00	221.72	251.6	292
WVM019	Melborne	0.00	222.96	251.6	280

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVM020	Melborne	0.00	222.96	251.6	280
WVM021	Melborne	0.00	221.86	251.6	291
WVM022	Melborne	0.00	221.35	251.6	296
WVM023	Melborne	0.00	221.35	251.6	296
WVM025	Melborne	0.00	220.58	251.6	303
WVM026	Melborne	0.00	220.58	251.6	303
WVM027	Melborne	0.00	219.99	251.6	309
WVM028	Melborne	0.00	219.99	251.6	309
WVM030	Melborne	0.00	221.00	251.6	299
WVM031	Melborne	0.00	222.65	251.6	284
WVM032	Melborne	0.00	222.45	251.8	287
J-0002	Wardsville	0.00	204.57	250.5	450
J-0012	Wardsville	0.00	210.33	250.5	394
J-0018	Wardsville	0.00	210.33	250.5	394
J-0022	Wardsville	0.00	195.43	250.5	539
J-0023	Wardsville	0.10	203.82	250.6	457
J-0024	Wardsville	0.00	203.82	250.6	457
J-0027	Wardsville	0.00	212.30	250.5	374
J-0028	Wardsville	0.00	212.30	250.5	374
J-0029	Wardsville	0.00	199.99	250.6	495
J-0030	Wardsville	0.12	199.99	250.6	495
J-0031	Wardsville	0.00	210.85	250.6	389
J-0033	Wardsville	0.00	205.92	250.6	437
J-0034	Wardsville	0.00	205.92	250.6	437
J-0035	Wardsville	0.00	211.90	250.5	378
J-0040	Wardsville	0.00	200.40	250.5	491
J-0042	Wardsville	0.00	201.97	250.5	475
J-0050	Wardsville	0.00	208.88	250.5	408
J-0051	Wardsville	0.09	208.88	250.5	408
J-0055	Wardsville	0.00	210.29	250.5	394
J-0056	Wardsville	0.00	210.29	250.5	394
J-0061	Wardsville	0.00	200.40	250.5	491
J-0062	Wardsville	0.00	200.40	250.5	491
J-0068	Wardsville	0.00	209.82	250.5	399
J-0069	Wardsville	0.00	195.43	250.5	539
J-0081	Wardsville	0.00	209.82	250.5	399
J-0082	Wardsville	0.00	200.40	250.5	491
J-0083	Wardsville	0.00	200.40	250.5	491
J-0088	Wardsville	0.00	205.79	250.5	438
J-0120	Wardsville	0.00	206.22	250.6	434
J-0121	Wardsville	0.00	205.92	250.6	437
J-0122	Wardsville	0.09	207.03	250.5	426
J-0131	Wardsville	0.00	199.31	250.5	501
J-0132	Wardsville	0.00	199.88	250.5	496
J-0154	Wardsville	0.00	211.18	250.5	385
J-0160	Wardsville	0.00	205.17	250.6	444
J-0161	Wardsville	0.00	205.17	250.6	444
J-0174	Wardsville	0.00	201.18	250.5	483
J-0188	Wardsville	0.00	199.35	250.5	501
J-0217	Wardsville	0.11	212.05	250.5	377
J-0218	Wardsville	0.00	212.05	250.5	377
J-0223	Wardsville	0.00	201.18	250.5	483
J-0228	Wardsville	0.00	211.59	250.5	381
J-0229	Wardsville	0.00	211.22	250.5	385
J-0234	Wardsville	0.00	211.43	250.5	383
J-0238	Wardsville	0.13	199.53	250.5	499
J-0242	Wardsville	0.00	212.24	250.5	375
J-0245	Wardsville	0.00	194.57	250.5	548
J-0247	Wardsville	0.00	200.33	250.5	491
J-0251	Wardsville	0.00	198.40	250.5	510
J-0258	Wardsville	0.00	201.05	250.6	484
J-0283	Wardsville	0.15	212.26	250.5	375
J-0297	Wardsville	0.00	198.59	250.5	508
J-0307	Wardsville	0.00	198.04	250.5	514
J-0308	Wardsville	0.00	211.06	250.5	386
J-0311	Wardsville	0.00	205.84	250.5	437
J-0313	Wardsville	0.00	208.66	250.6	410
J-0343	Wardsville	0.00	208.18	250.5	415
J-0349	Wardsville	0.00	211.06	250.5	386
J-0423	Wardsville	0.00	200.86	250.5	486
J-0429	Wardsville	0.15	195.38	250.5	540
J-0438	Wardsville	0.00	211.49	250.6	382
J-0439	Wardsville	0.00	211.49	250.6	382
J-0444	Wardsville	0.00	205.84	250.5	437
J-0446	Wardsville	0.12	199.42	250.5	500

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0456	Wardsville	0.00	211.90	250.5	378
J-0460	Wardsville	0.00	196.26	250.5	531
J-0485	Wardsville	0.00	198.53	250.5	509
J-0504	Wardsville	0.00	211.80	250.5	379
J-0506	Wardsville	0.13	199.60	250.5	499
J-0550	Wardsville	0.09	207.57	250.6	421
J-0553	Wardsville	0.00	210.98	250.6	388
J-0597	Wardsville	0.00	211.52	250.6	382
J-686	Wardsville	0.00	211.90	250.5	378
J-728	Wardsville	0.00	199.35	250.5	501
J_Hyd-W001	Wardsville	0.00	199.59	250.5	499
J_Hyd-W002	Wardsville	0.00	200.22	250.5	492
J_Hyd-W003	Wardsville	0.00	200.09	250.5	494
J_Hyd-W004	Wardsville	0.00	200.26	250.5	492
J_Hyd-W005	Wardsville	0.00	200.73	250.5	487
J_Hyd-W006	Wardsville	0.00	201.97	250.5	475
J_Hyd-W007	Wardsville	0.00	202.85	250.5	467
J_Hyd-W008	Wardsville	0.00	206.22	250.6	434
J_Hyd-W009	Wardsville	0.00	207.09	250.6	425
J_Hyd-W010	Wardsville	0.00	211.08	250.6	386
J_Hyd-W011	Wardsville	0.00	210.99	250.6	387
J_Hyd-W012	Wardsville	0.00	209.97	250.6	397
J_Hyd-W013	Wardsville	0.00	199.99	250.6	495
J_Hyd-W014	Wardsville	0.00	203.96	250.6	456
J_Hyd-W015	Wardsville	0.00	201.05	250.6	484
J_Hyd-W016	Wardsville	0.00	199.31	250.5	501
J_Hyd-W017	Wardsville	0.00	204.86	250.5	447
J_Hyd-W018	Wardsville	0.00	207.95	250.5	417
J_Hyd-W019	Wardsville	0.00	210.80	250.5	389
J_Hyd-W021	Wardsville	0.00	212.03	250.5	377
J_Hyd-W022	Wardsville	0.00	212.33	250.5	374
J_Hyd-W023	Wardsville	0.00	211.80	250.5	379
J_Hyd-W024	Wardsville	0.00	210.17	250.5	395
J_Hyd-W025	Wardsville	0.00	208.87	250.5	408
J_Hyd-W026	Wardsville	0.00	199.86	250.5	496
J_Hyd-W027	Wardsville	0.00	198.54	250.5	509
J_Hyd-W028	Wardsville	0.00	194.57	250.5	548
J_Hyd-W029	Wardsville	0.00	198.04	250.5	514
J_Hyd-W030	Wardsville	0.00	198.82	250.5	506
J_Hyd-W031	Wardsville	0.00	210.43	250.5	393
J_Hyd-W032	Wardsville	0.00	211.40	250.5	383
J_Hyd-W033	Wardsville	0.00	211.13	250.5	386
J_Hyd-W034	Wardsville	0.00	211.75	250.5	380
J_Hyd-W035	Wardsville	0.00	211.50	250.5	382
J_Hyd-W036	Wardsville	0.00	210.68	250.5	390
J_Hyd-W037	Wardsville	0.00	208.27	250.5	414
J_Hyd-W038	Wardsville	0.00	207.21	250.5	424
J_Hyd-W039	Wardsville	0.00	205.93	250.5	437
J_Hyd-W040	Wardsville	0.00	198.92	250.5	505
J_Hyd-W041	Wardsville	0.00	197.74	250.5	517
J_Hyd-W042	Wardsville	0.00	195.70	250.5	537
J_Hyd-W043	Wardsville	0.00	198.47	250.5	510
J_Hyd-W044	Wardsville	0.00	212.21	250.5	375
J_Hyd-W045	Wardsville	0.00	209.85	250.6	399
J_Hyd-W046	Wardsville	0.00	208.62	250.6	411
J_Hyd-W047	Wardsville	0.00	207.07	250.6	426
WVR003	Wardsville	3.57	212.35	250.5	374
WVR006	Wardsville	1.78	211.90	250.5	378
WVW001	Wardsville	0.00	211.08	250.6	386
WVW002	Wardsville	0.00	211.08	250.6	386
WVW003	Wardsville	0.00	210.85	250.6	389
WVW006	Wardsville	0.00	199.99	250.6	495
WVW007	Wardsville	0.00	201.05	250.6	484
WVW008	Wardsville	0.00	201.01	250.6	485
WVW009	Wardsville	0.00	205.92	250.6	437
WVW010	Wardsville	0.00	206.22	250.6	434
WVW011	Wardsville	0.00	201.69	250.5	478
WVW014	Wardsville	0.00	202.53	250.5	470
WVW015	Wardsville	0.00	199.66	250.5	498
WVW016	Wardsville	0.00	200.33	250.5	491
WVW018	Wardsville	0.00	200.33	250.5	491
WVW019	Wardsville	0.00	199.53	250.5	499
WVW020	Wardsville	0.00	199.53	250.5	499
WVW021	Wardsville	0.00	198.66	250.5	508
WVW022	Wardsville	0.00	198.82	250.5	506

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVW023	Wardsville	0.00	198.59	250.5	508
WVW025	Wardsville	0.00	198.04	250.5	514
WVW026	Wardsville	0.00	197.66	250.5	517
WVW027	Wardsville	0.00	198.71	250.5	507
WVW028	Wardsville	0.00	198.33	250.5	511
WVW029	Wardsville	0.00	198.40	250.5	510
WVW030	Wardsville	0.00	200.40	250.5	491
WVW031	Wardsville	0.00	200.40	250.5	491
WVW032	Wardsville	0.00	200.21	250.5	493
WVW033	Wardsville	0.00	200.40	250.5	491
WVW034	Wardsville	0.00	199.35	250.5	501
WVW035	Wardsville	0.00	199.92	250.5	495
WVW036	Wardsville	0.00	199.35	250.5	501
WVW038	Wardsville	0.00	210.33	250.5	394
WVW039	Wardsville	0.00	208.88	250.5	408
WVW041	Wardsville	0.11	211.18	250.5	385
WVW042	Wardsville	0.00	211.18	250.5	385
WVW043	Wardsville	0.00	211.18	250.5	385
WVW044	Wardsville	0.00	207.40	250.5	422
WVW045	Wardsville	0.00	205.79	250.5	438
WVW046	Wardsville	0.00	209.82	250.5	399
WVW047	Wardsville	0.00	209.82	250.5	399
WVW048	Wardsville	0.10	212.30	250.5	374
WVW049	Wardsville	0.00	212.30	250.5	374
WVW051	Wardsville	0.00	211.43	250.5	383
WVW052	Wardsville	0.05	211.43	250.5	383
WVW053	Wardsville	0.00	211.43	250.5	383
WVW054	Wardsville	0.00	212.03	250.5	377
WVW055	Wardsville	0.00	211.12	250.5	386
WVW056	Wardsville	0.00	212.26	250.5	375
WVW057	Wardsville	0.00	212.05	250.5	377
WVW058	Wardsville	0.00	212.26	250.5	375
WVW059	Wardsville	0.00	211.21	250.5	385
WVW061	Wardsville	0.00	211.15	250.5	385
WVW063	Wardsville	0.00	204.57	250.5	450
WVW064	Wardsville	0.00	208.18	250.5	415
WVW066	Wardsville	0.00	207.03	250.5	426
WVW067	Wardsville	0.00	194.57	250.5	548
J-0009	Appin	0.00	225.75	256.6	302
J-0010	Appin	0.00	225.75	256.6	302
J-0015	Appin	0.00	224.12	256.6	318
J-0119	Appin	0.00	224.77	256.7	312
J-0140	Appin	0.00	223.78	256.7	322
J-0152	Appin	0.00	224.42	256.6	315
J-0185	Appin	0.00	225.43	256.6	305
J-0219	Appin	0.00	223.88	256.6	321
J-0221	Appin	0.00	224.26	256.7	317
J-0244	Appin	0.00	224.85	256.6	311
J-0246	Appin	0.00	224.78	256.6	312
J-0254	Appin	0.34	223.45	256.6	325
J-0277	Appin	0.00	223.74	256.7	322
J-0278	Appin	0.00	223.74	256.7	322
J-0280	Appin	0.00	225.40	256.6	305
J-0281	Appin	0.00	225.40	256.6	305
J-0318	Appin	0.21	224.73	256.6	312
J-0322	Appin	0.00	224.94	256.7	310
J-0323	Appin	0.00	224.94	256.7	310
J-0345	Appin	0.00	222.65	256.6	333
J-0346	Appin	0.00	223.66	256.6	323
J-0355	Appin	0.00	224.54	256.7	314
J-0359	Appin	0.00	225.19	256.6	307
J-0361	Appin	0.00	224.05	256.7	319
J-0378	Appin	0.13	225.03	256.6	309
J-0404	Appin	0.00	222.65	256.6	333
J-0479	Appin	0.00	223.74	256.7	322
J-0480	Appin	0.15	223.82	256.7	321
J-0560	Appin	0.00	224.74	256.7	312
J_Hyd-A001	Appin	0.00	224.77	256.6	311
J_Hyd-A002	Appin	0.00	225.61	256.6	303
J_Hyd-A003	Appin	0.00	225.13	256.6	308
J_Hyd-A004	Appin	0.00	224.97	256.6	310
J_Hyd-A005	Appin	0.00	224.76	256.6	312
J_Hyd-A006	Appin	0.00	224.95	256.7	310
J_Hyd-A007	Appin	0.00	224.78	256.7	312
J_Hyd-A008	Appin	0.00	223.78	256.7	322

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-A009	Appin	0.00	223.45	256.6	325
J_Hyd-A010	Appin	0.00	223.84	256.6	321
J_Hyd-A011	Appin	0.00	224.12	256.6	318
WVA001	Appin	0.00	224.54	256.7	314
WVA003	Appin	0.00	224.27	256.7	317
WVA005	Appin	0.00	223.45	256.6	325
WVA006	Appin	0.00	223.45	256.6	325
WVA007	Appin	0.00	223.84	256.6	321
WVA008	Appin	0.00	223.88	256.6	321
WVA009	Appin	0.00	223.88	256.6	321
WVA010	Appin	0.00	224.85	256.7	311
WVA011	Appin	0.00	224.46	256.7	315
WVA012	Appin	0.00	224.74	256.7	312
WVA013	Appin	0.00	224.49	256.6	315
WVA014	Appin	0.00	224.42	256.6	315
WVA015	Appin	0.00	225.05	256.6	309
WVA016	Appin	0.00	224.73	256.6	312
WVA017	Appin	0.00	224.77	256.7	312
WVA018	Appin	0.00	224.77	256.7	312
WVA019	Appin	0.00	225.16	256.6	308
WVA020	Appin	0.00	224.85	256.6	311
WVA021	Appin	0.00	225.12	256.6	308
WVR026	Appin	0.00	224.12	256.6	318
WVR028	Appin	0.00	225.35	256.6	306
J-0019	Rural	0.00	224.91	255.6	300
J-0020	Rural	0.00	215.38	253.9	377
J-0053	Rural	0.00	223.50	255.6	314
J-0057	Rural	0.00	223.26	255.6	316
J-0064	Rural	0.00	223.00	252.9	293
J-0073	Rural	0.00	216.62	259.5	419
J-0074	Rural	0.00	216.62	259.5	420
J-0077	Rural	0.00	224.92	255.9	304
J-0078	Rural	0.00	224.92	255.9	304
J-0086	Rural	0.00	215.90	250.7	341
J-0090	Rural	0.00	217.02	254.2	363
J-0100	Rural	0.00	219.21	262.0	419
J-0103	Rural	0.00	224.29	256.3	313
J-0110	Rural	0.00	224.91	255.6	300
J-0113	Rural	0.00	224.13	256.3	315
J-0117	Rural	0.00	223.95	255.6	310
J-0118	Rural	0.00	225.08	254.9	292
J-0129	Rural	0.00	210.02	267.0	558
J-0130	Rural	0.00	205.48	267.0	602
J-0137	Rural	0.00	222.21	256.9	339
J-0138	Rural	0.00	222.21	256.9	339
J-0149	Rural	0.00	209.61	267.1	562
J-0150	Rural	0.00	210.02	267.1	558
J-0151	Rural	0.00	224.44	255.9	308
J-0163	Rural	0.00	222.45	268.7	453
J-0164	Rural	0.00	222.45	268.7	453
J-0170	Rural	0.00	216.66	267.4	497
J-0171	Rural	0.00	216.66	267.4	496
J-0182	Rural	0.00	215.05	250.7	349
J-0183	Rural	0.00	215.05	250.7	349
J-0186	Rural	0.00	224.50	256.3	311
J-0193	Rural	0.00	218.11	250.7	319
J-0194	Rural	0.00	218.11	250.7	319
J-0199	Rural	0.00	216.02	250.7	340
J-0200	Rural	0.00	215.67	250.7	343
J-0206	Rural	0.00	215.05	250.7	349
J-0207	Rural	0.00	216.66	254.2	367
J-0208	Rural	0.00	224.87	255.6	301
J-0210	Rural	0.00	216.37	259.4	422
J-0215	Rural	0.00	224.44	255.9	308
J-0224	Rural	0.00	215.67	250.7	343
J-0225	Rural	0.00	215.67	250.7	343
J-0231	Rural	0.00	215.88	270.9	539
J-0232	Rural	0.00	215.90	250.7	341
J-0233	Rural	0.00	215.48	250.7	345
J-0241	Rural	0.00	223.95	255.6	310
J-0243	Rural	0.00	216.95	254.2	364
J-0257	Rural	0.00	215.14	253.0	370
J-0260	Rural	0.00	215.99	250.7	340
J-0263	Rural	0.00	216.66	254.2	367
J-0266	Rural	0.00	215.67	250.7	343

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0276	Rural	0.00	215.90	250.7	341
J-0282	Rural	0.00	223.26	255.6	316
J-0293	Rural	0.00	215.90	250.7	341
J-0298	Rural	0.00	221.59	253.0	307
J-0299	Rural	0.00	223.00	253.0	293
J-0300	Rural	0.00	215.20	250.7	347
J-0301	Rural	0.00	215.11	250.7	348
J-0304	Rural	0.00	221.66	256.9	345
J-0309	Rural	0.00	218.12	250.7	319
J-0315	Rural	0.00	222.17	256.9	340
J-0319	Rural	0.00	224.13	256.3	315
J-0325	Rural	0.00	217.23	259.5	413
J-0326	Rural	0.00	221.59	253.0	307
J-0329	Rural	0.00	215.90	250.7	341
J-0330	Rural	0.00	215.55	250.7	344
J-0335	Rural	0.00	227.07	254.6	270
J-0341	Rural	0.00	224.82	254.9	294
J-0351	Rural	0.00	216.30	254.5	374
J-0352	Rural	0.00	224.91	255.6	300
J-0356	Rural	0.00	221.65	265.7	431
J-0357	Rural	0.00	221.65	265.7	431
J-0362	Rural	0.00	225.24	255.9	300
J-0365	Rural	0.00	216.02	250.7	339
J-0366	Rural	0.00	215.27	250.7	347
J-0369	Rural	0.00	215.99	253.9	371
J-0370	Rural	0.00	216.95	254.2	364
J-0374	Rural	0.00	217.94	250.7	321
J-0376	Rural	0.00	222.17	256.9	340
J-0379	Rural	0.00	216.10	267.4	502
J-0383	Rural	0.00	215.74	250.7	343
J-0391	Rural	0.00	220.12	265.7	446
J-0392	Rural	0.00	220.22	265.7	445
J-0397	Rural	0.00	217.12	270.6	523
J-0398	Rural	0.00	216.07	270.6	534
J-0405	Rural	0.00	216.98	254.5	367
J-0408	Rural	0.00	219.48	250.7	306
J-0416	Rural	0.00	216.22	270.9	535
J-0422	Rural	0.00	222.67	268.7	451
J-0431	Rural	0.00	210.65	271.7	598
J-0432	Rural	0.00	210.75	271.7	597
J-0441	Rural	0.00	211.16	270.1	577
J-0442	Rural	0.00	210.36	270.1	584
J-0461	Rural	0.00	219.65	262.3	418
J-0462	Rural	0.00	219.09	262.3	423
J-0463	Rural	0.00	218.71	262.4	428
J-0464	Rural	0.00	219.51	262.4	419
J-0466	Rural	0.00	215.88	270.9	539
J-0483	Rural	0.00	226.33	255.3	284
J-0484	Rural	0.00	225.87	255.4	289
J-0519	Rural	0.00	220.69	264.6	430
J-0520	Rural	0.00	221.62	264.6	421
J-0525	Rural	0.00	217.02	254.2	363
J-0530	Rural	0.00	218.78	250.7	312
J-0536	Rural	0.00	218.90	254.2	345
J-0545	Rural	0.00	222.01	257.0	342
J-0547	Rural	0.00	208.26	270.0	604
J-0563	Rural	0.00	217.68	254.2	358
J-0573	Rural	0.00	217.81	254.6	360
J-0574	Rural	0.00	217.93	254.6	358
J-0577	Rural	0.00	222.72	265.2	415
J-0582	Rural	0.00	225.65	254.9	286
J-0592	Rural	0.00	225.26	256.1	302
J-0593	Rural	0.00	223.37	256.1	320
J-0595	Rural	0.00	213.93	266.9	518
J-0596	Rural	0.00	214.45	266.7	512
J-0599	Rural	0.00	226.75	255.7	283
J-0600	Rural	0.00	225.36	255.6	296
J-0604	Rural	0.00	217.45	253.6	354
J-0605	Rural	0.00	215.66	253.3	368
J-0607	Rural	0.00	216.23	250.7	337
J-0610	Rural	0.00	217.10	250.7	329
J-0611	Rural	0.00	214.85	250.7	351
J-0613	Rural	0.00	217.54	271.1	524
J-0614	Rural	0.00	215.09	266.5	503
J-0616	Rural	0.00	216.04	250.7	339

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0617	Rural	0.00	220.45	266.3	448
J-0618	Rural	0.00	220.05	263.7	427
J-0619	Rural	0.00	217.32	263.4	451
J-0623	Rural	0.00	218.13	250.7	319
J-0624	Rural	0.00	219.80	262.8	420
J-0625	Rural	0.00	219.82	262.0	413
J-0626	Rural	0.00	217.52	250.7	325
J-0629	Rural	0.00	198.11	272.0	723
J-0631	Rural	0.00	220.14	254.4	335
J-0633	Rural	0.00	215.01	250.7	349
J-0634	Rural	0.12	220.90	264.6	428
J-0636	Rural	0.00	226.78	255.3	279
J-0637	Rural	0.00	223.52	255.9	317
J-0638	Rural	0.00	220.56	261.2	397
J-0643	Rural	0.00	216.97	250.6	329
J-0645	Rural	0.01	216.83	250.7	332
J-688	Rural	0.00	222.17	256.9	340
J_Hyd-R001E	Rural	0.00	226.53	255.6	284
J_Hyd-R002E	Rural	0.00	224.87	255.6	301
J_Hyd-R003E	Rural	0.00	223.26	255.6	316
J_Hyd-R004E	Rural	0.00	227.87	255.2	268
J_Hyd-R005E	Rural	0.00	228.14	254.6	259
J_Hyd-R006E	Rural	0.00	223.00	253.0	293
J_Hyd-R007E	Rural	0.00	226.02	255.8	291
J_Hyd-R008E	Rural	0.00	225.38	254.8	288
J_Hyd-R009E	Rural	0.00	215.38	253.9	377
J_Hyd-R010E	Rural	0.00	217.64	254.2	358
J_Hyd-R011E	Rural	0.00	216.30	254.5	374
J_Hyd-R012E	Rural	0.00	225.08	254.9	292
J_Hyd-R013E	Rural	0.00	225.08	254.9	292
J_Hyd-R014E	Rural	0.00	225.24	255.9	300
J_Hyd-R015E	Rural	0.00	222.19	256.8	339
J_Hyd-R016E	Rural	0.00	224.13	256.3	315
J_Hyd-R017M	Rural	0.00	215.90	250.7	341
J_Hyd-R018M	Rural	0.00	209.02	250.7	408
J_Hyd-R019M	Rural	0.00	215.68	250.7	343
J_Hyd-R020M	Rural	0.00	216.37	250.7	336
J_Hyd-R021M	Rural	0.00	215.02	250.6	349
J_Hyd-R026E	Rural	0.00	224.44	255.9	308
J_Hyd-R027W	Rural	0.00	206.98	274.3	659
J_Hyd-R028E	Rural	0.00	222.89	255.6	320
J_Hyd-R029W	Rural	0.00	215.14	276.1	596
J_Hyd-R030M	Rural	0.00	215.76	267.4	505
J_Hyd-R031M	Rural	0.00	215.77	270.8	539
J_Hyd-R032M	Rural	0.00	218.56	250.7	315
J_Hyd-R033E	Rural	0.00	217.26	265.7	474
WVR007	Rural	0.00	215.64	250.6	343
WVR008	Rural	0.00	215.68	250.6	342
WVR009	Rural	0.00	215.39	250.7	346
WVR010	Rural	0.00	215.88	270.9	539
WVR012	Rural	0.00	217.94	250.7	321
WVR013	Rural	0.00	218.56	250.7	315
WVR014	Rural	0.00	218.12	250.7	319
WVR015	Rural	0.00	218.11	250.7	319
WVR019	Rural	0.00	216.86	267.7	498
WVR020	Rural	0.00	221.61	265.3	427
WVR024	Rural	0.00	216.37	259.4	421
WVR024	Rural	0.00	219.21	262.0	419
WVR025	Rural	0.00	222.17	256.9	340
WVR029	Rural	0.00	224.50	256.3	311
WVR030	Rural	0.00	224.40	256.0	310
WVR031	Rural	0.00	224.90	255.9	303
WVR032	Rural	0.00	224.44	255.9	308
WVR033	Rural	0.00	224.92	255.9	304
WVR034	Rural	0.00	224.90	254.9	294
WVR035	Rural	0.00	224.82	254.9	294
WVR036	Rural	0.00	224.82	254.9	294
WVR037	Rural	0.00	217.20	254.5	365
WVR038	Rural	0.00	217.64	254.2	358
WVR039	Rural	0.00	217.02	254.2	363
WVR040	Rural	0.00	215.14	253.0	370
WVR042	Rural	0.00	223.00	252.9	293
WVR043	Rural	0.00	228.14	254.6	259
WVR044	Rural	0.00	227.12	254.6	269
WVR045	Rural	0.00	223.77	255.6	311

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVR046	Rural	0.00	224.91	255.6	300
WVR047	Rural	0.00	223.95	255.6	310
WVR050	Rural	0.00	215.85	250.7	341
WVR051	Rural	0.00	215.90	250.7	341
WVR052	Rural	0.00	219.21	262.0	419
WVR053	Rural	0.00	225.26	256.3	304
WVR054	Rural	0.00	226.99	255.2	276
WVR055	Rural	0.00	226.60	255.3	281
WVR056	Rural	0.00	223.50	255.6	314
WVR060	Rural	0.00	214.01	254.1	392
	Total Demand	17.11		**Maximum Pressure**	723
				Minimum Pressure	259

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P-223	Glencoe	J-747	J-0646	224.53	400	120	37.34	0.30	0.1
P-232	Glencoe	J-0586	G015	3.80	150	100	0.00	0.00	0.0
P-240	Glencoe	J-753	G_H-1	1.46	150	100	0.00	0.00	0.0
P-246	Glencoe	J-759	J-753	58.17	200	110	0.00	0.00	0.0
P-247	Glencoe	J-760	J-759	25.30	200	110	0.00	0.00	0.0
P-248	Glencoe	J-761	J-760	24.76	200	110	0.00	0.00	0.0
P-249(1)	Glencoe	J-762	J-800	10.10	200	110	0.00	0.00	0.0
P-249(2)	Glencoe	J-800	J-761	21.50	200	110	0.00	0.00	0.0
P-251	Glencoe	J-766	J-765	1.74	200	110	0.00	0.00	0.0
P-252	Glencoe	J-765	J-764	2.16	200	110	0.00	0.00	0.0
P-254	Glencoe	J-764	J-762	2.10	200	110	0.00	0.00	0.0
P-255	Glencoe	J-767	J-766	36.14	200	110	0.00	0.00	0.0
P-256	Glencoe	J-768	J-767	23.79	200	110	0.00	0.00	0.0
P-257	Glencoe	J-769	J-768	25.30	200	110	0.00	0.00	0.0
P-258	Glencoe	J-770	J-769	12.16	200	110	0.00	0.00	0.0
P-259(1)	Glencoe	J-771	J-778	30.83	200	110	0.07	0.00	0.0
P-259(2)	Glencoe	J-778	J-770	11.83	200	110	0.07	0.00	0.0
P-260	Glencoe	J-771	J-0264	6.10	200	110	0.08	0.00	0.0
P-261	Glencoe	J-772	J-771	21.73	200	110	0.15	0.00	0.0
P-262	Glencoe	J-773	J-772	53.57	200	110	0.15	0.00	0.0
P-263(1)	Glencoe	J-775	J-777	32.15	200	110	0.32	0.01	0.0
P-263(2)	Glencoe	J-777	J-773	5.67	200	110	0.32	0.01	0.0
P-265	Glencoe	WVG029	J-775	71.28	200	110	0.32	0.01	0.0
P-266	Glencoe	J-773	WVG027	18.50	200	110	0.17	0.01	0.0
P-268	Glencoe	J-770	WVG001	31.17	150	100	0.07	0.00	0.0
P-270(1)(1)	Glencoe	J-779	J-801	24.25	200	110	0.51	0.02	0.0
P-270(1)(2)	Glencoe	J-801	J-780	5.97	200	110	0.51	0.02	0.0
P-270(2)	Glencoe	J-780	J-0126	2.45	200	110	0.51	0.02	0.0
P-271	Glencoe	J-782	J-781	15.01	200	110	0.51	0.02	0.0
P-272	Glencoe	J-781	J-779	27.58	200	110	0.51	0.02	0.0
P-273(1)(1)	Glencoe	J-785	J-807	42.61	200	110	1.22	0.04	0.0
P-273(1)(2)	Glencoe	J-807	J-806	13.65	200	110	1.12	0.04	0.0
P-273(2)	Glencoe	J-806	J-784	24.08	200	110	1.12	0.04	0.0
P-274	Glencoe	J-784	J-783	60.15	200	110	1.12	0.04	0.0
P-275(1)(1)	Glencoe	J-783	J-804	24.03	200	110	1.12	0.04	0.0
P-275(1)(2)	Glencoe	J-804	J-803	0.79	200	110	0.51	0.02	0.0
P-275(2)	Glencoe	J-803	J-782	7.79	200	110	0.51	0.02	0.0
P-276	Glencoe	J-786	J-785	70.18	200	110	1.22	0.04	0.0
P-277(1)(1)	Glencoe	J-787	J-813	5.52	200	110	0.95	0.03	0.0
P-277(1)(2)(1)	Glencoe	J-813	J-816	4.54	200	110	2.11	0.07	0.0
P-277(1)(2)(2)	Glencoe	J-816	J-812	0.65	200	110	1.22	0.04	0.0
P-277(2)	Glencoe	J-812	J-786	39.29	200	110	1.22	0.04	0.0
P-278	Glencoe	J-791	J-790	37.40	200	110	1.98	0.06	0.0
P-279(1)	Glencoe	J-790	J-818	26.33	200	110	1.98	0.06	0.0
P-279(2)(1)	Glencoe	J-818	J-819	12.63	200	110	1.98	0.06	0.0
P-279(2)(2)	Glencoe	J-819	J-789	31.06	200	110	0.95	0.03	0.0
P-280	Glencoe	J-789	J-788	52.74	200	110	0.95	0.03	0.0
P-281	Glencoe	J-788	J-787	40.02	200	110	0.95	0.03	0.0
P-282	Glencoe	J-792	J-791	35.04	200	110	1.98	0.06	0.0
P-283(1)	Glencoe	J-795	J-826	36.70	200	110	1.56	0.05	0.0
P-283(2)	Glencoe	J-826	J-794	38.31	200	110	1.56	0.05	0.0
P-284	Glencoe	J-794	J-793	70.18	200	110	1.56	0.05	0.0
P-285(1)	Glencoe	J-793	J-821	19.05	200	110	1.56	0.05	0.0
P-285(2)	Glencoe	J-821	J-792	1.09	200	110	1.98	0.06	0.0
P-286(1)	Glencoe	J-799	J-827	5.70	200	110	1.56	0.05	0.0
P-286(2)	Glencoe	J-827	J-798	15.33	200	110	1.56	0.05	0.0
P-287	Glencoe	J-798	J-797	45.01	200	110	1.56	0.05	0.0
P-288	Glencoe	J-797	J-796	55.00	200	110	1.56	0.05	0.0
P-289	Glencoe	J-796	J-795	14.97	200	110	1.56	0.05	0.0
P-290	Glencoe	J-800	G_H-2	1.49	150	100	0.00	0.00	0.0
P-291	Glencoe	J-778	G_H-3	1.50	150	100	0.00	0.00	0.0
P-292	Glencoe	J-777	G_H-4	0.54	150	100	0.00	0.00	0.0
P-294	Glencoe	J-801	G_H-5	1.96	150	100	0.00	0.00	0.0
P-295	Glencoe	J-803	G_H-6	1.67	150	100	0.00	0.00	0.0
P-296	Glencoe	J-804	J-805	17.92	150	100	0.60	0.03	0.0
P-297	Glencoe	J-805	WVG097	5.39	150	100	0.60	0.03	0.0
P-298	Glencoe	J-806	G_H-7	2.83	150	100	0.00	0.00	0.0
P-301	Glencoe	J-807	J-810	4.01	150	100	0.11	0.01	0.0
P-302	Glencoe	J-810	J-811	3.62	150	100	0.11	0.01	0.0
P-303	Glencoe	J-812	G_H-8	1.47	150	100	0.00	0.00	0.0
P-304	Glencoe	J-813	J-814	4.27	200	110	-1.16	0.04	0.0
P-305	Glencoe	J-814	J-815	3.22	200	110	-1.16	0.04	0.0
P-306	Glencoe	J-816	J-817	16.89	200	110	0.88	0.03	0.0
P-307	Glencoe	J-817	J-0011	2.48	200	110	0.88	0.03	0.0
P-308	Glencoe	J-818	G_H-9	1.82	150	100	0.00	0.00	0.0
P-309	Glencoe	J-819	J-820	8.75	200	110	1.03	0.03	0.0
P-310	Glencoe	J-820	WVG120	3.89	200	110	1.03	0.03	0.0
P-311	Glencoe	J-821	J-822	7.32	150	100	-1.11	0.06	0.0
P-312	Glencoe	J-822	J-823	3.21	150	100	-1.11	0.06	0.0
P-313	Glencoe	J-823	J-0262	0.92	150	100	-1.11	0.06	0.0
P-314	Glencoe	J-821	J-824	9.93	150	100	0.68	0.04	0.0
P-315	Glencoe	J-824	J-825	2.86	150	100	0.68	0.04	0.0
P-316	Glencoe	J-826	G_H-10	2.85	150	100	0.00	0.00	0.0
P-317	Glencoe	J-827	G_H-11	1.80	150	100	0.00	0.00	0.0
P-318	Glencoe	J-799	J-0267	3.89	150	100	-1.56	0.09	0.0
P-923	Glencoe	J-720	J-0533	70.98	25	100	0.00	0.00	0.0
P-925	Glencoe	J_Hyd-G084	J-0101	235.01	300	120	13.83	0.20	0.0
P-927	Glencoe	J-0101	J_Hyd-G083	2.91	300	120	13.83	0.20	0.0
P-928	Glencoe	J_Hyd-G083	Glencoe Tower	97.16	300	120	11.29	0.16	0.0
P-929	Glencoe	J_Hyd-G083	J-0337	106.00	300	120	2.55	0.04	0.0
P-932	Glencoe	J-0180	J-690	4.46	150	100	8.16	0.46	0.0
P-936	Glencoe	J-0634	J-0635	660.21	50	130	0.00	0.00	0.0
P_Hyd-G001	Glencoe	J_Hyd-G001	G001	4.85	150	100	0.00	0.00	0.0
P_Hyd-G002	Glencoe	J_Hyd-G002	G002	2.71	150	100	0.00	0.00	0.0
P_Hyd-G003	Glencoe	J_Hyd-G003	G003	2.46	150	100	0.00	0.00	0.0
P_Hyd-G004	Glencoe	J_Hyd-G004	G004	0.85	150	100	0.00	0.00	0.0
P_Hyd-G005	Glencoe	J_Hyd-G005	G005	5.89	150	100	0.00	0.00	0.0
P_Hyd-G006	Glencoe	J_Hyd-G006	G006	5.74	150	100	0.00	0.00	0.0
P_Hyd-G008	Glencoe	J_Hyd-G008	G008	2.51	150	100	0.00	0.00	0.0

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-G009	Glencoe	J_Hyd-G009	G009	3.80	150	100	0.00	0.00	0.0
P_Hyd-G010	Glencoe	J_Hyd-G010	G010	3.17	150	100	0.00	0.00	0.0
P_Hyd-G011	Glencoe	J_Hyd-G011	G011	2.84	150	100	0.00	0.00	0.0
P_Hyd-G012	Glencoe	J_Hyd-G012	G012	1.27	150	100	0.00	0.00	0.0
P_Hyd-G013	Glencoe	J_Hyd-G013	G013	0.22	150	100	0.00	0.00	0.0
P_Hyd-G014	Glencoe	J_Hyd-G014	G014	1.48	150	100	0.00	0.00	0.0
P_Hyd-G016	Glencoe	J_Hyd-G016	G016	2.59	150	100	0.00	0.00	0.0
P_Hyd-G018	Glencoe	J_Hyd-G018	G018	1.41	150	100	0.00	0.00	0.0
P_Hyd-G019	Glencoe	J_Hyd-G019	G019	1.61	150	100	0.00	0.00	0.0
P_Hyd-G020	Glencoe	J_Hyd-G020	G020	3.56	150	100	0.00	0.00	0.0
P_Hyd-G021	Glencoe	J_Hyd-G021	G021	3.54	150	100	0.00	0.00	0.0
P_Hyd-G022	Glencoe	J_Hyd-G022	G022	2.23	150	100	0.00	0.00	0.0
P_Hyd-G023	Glencoe	J_Hyd-G023	G023	2.41	150	100	0.00	0.00	0.0
P_Hyd-G024	Glencoe	J_Hyd-G024	G024	1.78	150	100	0.00	0.00	0.0
P_Hyd-G025	Glencoe	J_Hyd-G025	G025	1.60	150	100	0.00	0.00	0.0
P_Hyd-G026	Glencoe	J_Hyd-G026	G026	5.18	150	100	0.00	0.00	0.0
P_Hyd-G027	Glencoe	J_Hyd-G027	G027	2.73	150	100	0.00	0.00	0.0
P_Hyd-G028	Glencoe	J_Hyd-G028	G028	4.76	150	100	0.00	0.00	0.0
P_Hyd-G029	Glencoe	J_Hyd-G029	G029	1.38	150	100	0.00	0.00	0.0
P_Hyd-G041	Glencoe	J_Hyd-G041	G041	1.19	150	100	0.00	0.00	0.0
P_Hyd-G042	Glencoe	J_Hyd-G042	G042	1.81	150	100	0.00	0.00	0.0
P_Hyd-G043	Glencoe	J_Hyd-G043	G043	0.88	150	100	0.00	0.00	0.0
P_Hyd-G044	Glencoe	J_Hyd-G044	G044	1.63	150	100	0.00	0.00	0.0
P_Hyd-G045	Glencoe	J_Hyd-G045	G045	3.33	150	100	0.00	0.00	0.0
P_Hyd-G046	Glencoe	J_Hyd-G046	G046	1.69	150	100	0.00	0.00	0.0
P_Hyd-G047	Glencoe	J_Hyd-G047	G047	7.03	150	100	0.00	0.00	0.0
P_Hyd-G048	Glencoe	J_Hyd-G048	G048	4.14	150	100	0.00	0.00	0.0
P_Hyd-G049	Glencoe	J_Hyd-G049	G049	0.49	150	100	0.00	0.00	0.0
P_Hyd-G050	Glencoe	J_Hyd-G050	G050	1.47	150	100	0.00	0.00	0.0
P_Hyd-G051	Glencoe	J_Hyd-G051	G051	0.78	150	100	0.00	0.00	0.0
P_Hyd-G052	Glencoe	J_Hyd-G052	G052	1.12	150	100	0.00	0.00	0.0
P_Hyd-G053	Glencoe	J_Hyd-G053	G053	1.89	150	100	0.00	0.00	0.0
P_Hyd-G054	Glencoe	WVG032	G054	2.99	150	100	0.00	0.00	0.0
P_Hyd-G055	Glencoe	WVG041	G055	0.94	150	100	0.00	0.00	0.0
P_Hyd-G056	Glencoe	J_Hyd-G056	G056	2.18	150	100	0.00	0.00	0.0
P_Hyd-G057	Glencoe	J_Hyd-G057	G057	1.91	150	100	0.00	0.00	0.0
P_Hyd-G058	Glencoe	J_Hyd-G058	G058	4.86	150	100	0.00	0.00	0.0
P_Hyd-G059	Glencoe	J_Hyd-G059	G059	2.58	150	100	0.00	0.00	0.0
P_Hyd-G060	Glencoe	J_Hyd-G060	G060	1.86	150	100	0.00	0.00	0.0
P_Hyd-G061	Glencoe	J_Hyd-G061	G061	1.77	150	100	0.00	0.00	0.0
P_Hyd-G062	Glencoe	J_Hyd-G062	G062	15.15	150	100	0.00	0.00	0.0
P_Hyd-G063	Glencoe	J_Hyd-G063	G063	5.63	150	100	0.00	0.00	0.0
P_Hyd-G064	Glencoe	J_Hyd-G064	G064	4.15	150	100	0.00	0.00	0.0
P_Hyd-G065	Glencoe	J_Hyd-G065	G065	2.06	150	100	0.00	0.00	0.0
P_Hyd-G066	Glencoe	J_Hyd-G066	G066	2.76	150	100	0.00	0.00	0.0
P_Hyd-G067	Glencoe	J_Hyd-G067	G067	3.98	150	100	0.00	0.00	0.0
P_Hyd-G068	Glencoe	J_Hyd-G068	G068	1.46	150	100	0.00	0.00	0.0
P_Hyd-G069	Glencoe	J_Hyd-G069	G069	1.27	150	100	0.00	0.00	0.0
P_Hyd-G070	Glencoe	J_Hyd-G070	G070	6.10	150	100	0.00	0.00	0.0
P_Hyd-G071	Glencoe	J_Hyd-G071	G071	0.97	150	100	0.00	0.00	0.0
P_Hyd-G073	Glencoe	J_Hyd-G073	G073	1.56	150	100	0.00	0.00	0.0
P_Hyd-G074	Glencoe	J_Hyd-G074	G074	8.97	150	100	0.00	0.00	0.0
P_Hyd-G075	Glencoe	J_Hyd-G075	G075	11.48	150	100	0.00	0.00	0.0
P_Hyd-G076	Glencoe	J_Hyd-G076	G076	2.69	150	100	0.00	0.00	0.0
P_Hyd-G077	Glencoe	J_Hyd-G077	G077	2.18	150	100	0.00	0.00	0.0
P_Hyd-G078	Glencoe	J_Hyd-G078	G078	3.61	150	100	0.00	0.00	0.0
P_Hyd-G079	Glencoe	J_Hyd-G079	G079	13.95	150	100	0.00	0.00	0.0
P_Hyd-G080	Glencoe	J_Hyd-G080	G080	1.13	150	100	0.00	0.00	0.0
P_Hyd-G081	Glencoe	J_Hyd-G081	G081	8.12	150	100	0.00	0.00	0.0
P_Hyd-G082	Glencoe	J_Hyd-G082	G082	7.32	150	100	0.00	0.00	0.0
P_Hyd-G083	Glencoe	J_Hyd-G083	G083	3.97	150	100	0.00	0.00	0.0
P_Hyd-G084	Glencoe	J_Hyd-G084	G084	94.76	150	100	0.00	0.00	0.0
P_Hyd-G085	Glencoe	J_Hyd-G085	G085	0.10	150	100	0.00	0.00	0.0
P_Hyd-G086	Glencoe	J_Hyd-G086	G086	0.02	150	100	0.00	0.00	0.0
P_Hyd-G087	Glencoe	J_Hyd-G087	G087	5.80	150	100	0.00	0.00	0.0
P_Hyd-G088	Glencoe	J_Hyd-G088	G088	2.19	150	100	0.00	0.00	0.0
P_Hyd-G089	Glencoe	J_Hyd-G089	G089	2.09	150	100	0.00	0.00	0.0
P_Hyd-G090	Glencoe	J_Hyd-G090	G090	4.27	150	100	0.00	0.00	0.0
P_Hyd-G091	Glencoe	J_Hyd-G091	G091	4.00	150	100	0.00	0.00	0.0
P_Hyd-G092	Glencoe	J_Hyd-G092	G092	3.58	150	100	0.00	0.00	0.0
P_Hyd-G093	Glencoe	J_Hyd-G093	G093	3.31	150	100	0.00	0.00	0.0
P_Hyd-G094	Glencoe	J_Hyd-G094	G094	3.50	150	100	0.00	0.00	0.0
P_Hyd-G095	Glencoe	J_Hyd-G095	G095	1.07	150	100	0.00	0.00	0.0
P_Hyd-G096	Glencoe	J_Hyd-G096	G096	1.84	150	100	0.00	0.00	0.0
P_Hyd-G097	Glencoe	J_Hyd-G097	G097	1.24	150	100	0.00	0.00	0.0
P_Hyd-G098	Glencoe	J_Hyd-G098	G098	2.53	150	100	0.00	0.00	0.0
P_Hyd-H_T-718	Glencoe	J_Hyd-H_T-718	H_T-718	2.10	150	100	0.00	0.00	0.0
WM1021C_02(2)(2)	Glencoe	J-752	WVR021	155.54	300	120	30.32	0.43	0.1
WM1027C_01	Glencoe	J_Hyd-G014	J-0373	15.24	200	110	-0.73	0.02	0.0
WM1027C_02	Glencoe	J_Hyd-G014	J-0586	134.80	200	110	0.73	0.02	0.0
WM1075C_01	Glencoe	J-0646	J_Hyd-R029W	3402.10	350	120	37.34	0.39	1.9
WM1099C	Glencoe	WVR021	J-0494	49.97	300	120	30.32	0.43	0.0
WM2036_02	Glencoe	J-0275	J-0168	7.98	200	110	11.05	0.35	0.0
WM2036_03	Glencoe	J-0169	J-0618	480.76	200	110	11.05	0.35	0.5
WM2036_10(1)	Glencoe	J-0544	J-690	136.25	200	110	2.88	0.09	0.0
WM2036_10(2)	Glencoe	J-690	J-0275	18.91	200	110	11.05	0.35	0.0
WM2044C(1)	Glencoe	J_Hyd-G006	J-724	5.77	200	110	0.29	0.01	0.0
WM2044C(2)(1)	Glencoe	J-724	J-727	12.57	200	110	0.29	0.01	0.0
WM2044C(2)(2)	Glencoe	J-727	WV-348	5.17	200	110	0.31	0.01	0.0
WM4000	Glencoe	J-0384	J-0546	90.30	150	100	0.16	0.01	0.0
WM4001	Glencoe	J-0213	J_Hyd-G094	5.27	150	100	0.00	0.00	0.0
WM4002	Glencoe	J-0213	J-0584	133.75	150	100	0.00	0.00	0.0
WM4003_01	Glencoe	J_Hyd-G003	WVG087	133.79	150	100	0.00	0.00	0.0
WM4003_02	Glencoe	WVG087	J-0373	19.18	200	110	0.00	0.00	0.0
WM4005	Glencoe	J-0451	J-0539	79.38	50	100	0.08	0.04	0.0
WM4006_01	Glencoe	WVG099	J_Hyd-G023	7.66	150	100	0.16	0.01	0.0
WM4006_02	Glencoe	J_Hyd-G023	J_Hyd-G093	126.19	100	100	0.16	0.02	0.0
WM4006_03	Glencoe	J_Hyd-G093	WVG090	116.28	100	100	0.16	0.02	0.0
WM4006_04	Glencoe	WVG090	J-0032	17.02	200	110	0.16	0.00	0.0

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4007_01(1)	Glencoe	WVG100	J-735	1.24	150	100	0.55	0.03	0.0
WM4007_01(2)	Glencoe	J-735	J-0409	234.57	150	100	0.55	0.03	0.0
WM4007_02(1)	Glencoe	J-734	WVG100	11.48	150	100	0.55	0.03	0.0
WM4007_02(2)	Glencoe	J-734	WVG099	4.20	150	100	0.16	0.01	0.0
WM4008_01	Glencoe	J-0324	J-0106	10.40	150	100	-0.23	0.01	0.0
WM4008_02	Glencoe	J-0256	J-0435	102.03	150	100	0.16	0.01	0.0
WM4009_01	Glencoe	J-0255	J-0256	6.83	150	100	0.32	0.02	0.0
WM4009_02	Glencoe	J-0255	J-0450	53.25	150	100	-0.23	0.01	0.0
WM4009_03	Glencoe	J-0449	J-0450	25.45	150	100	0.23	0.01	0.0
WM4009_04	Glencoe	WVG018	J-0449	35.04	150	100	0.23	0.01	0.0
WM4009_05	Glencoe	WVG018	J-0070	2.19	150	100	-0.23	0.01	0.0
WM4009_06	Glencoe	J-0070	J-0324	11.16	150	100	-0.23	0.01	0.0
WM4010_01	Glencoe	J-0106	WVG020	3.03	150	100	-0.24	0.01	0.0
WM4010_02	Glencoe	J-0410	WVG020	110.85	150	100	0.24	0.01	0.0
WM4011_01	Glencoe	J-0535	WVG091	76.44	25	100	0.00	0.00	0.0
WM4011_02	Glencoe	WVG091	J-0128	3.53	25	100	0.00	0.00	0.0
WM4012_01	Glencoe	J-0468	J-0469	33.17	200	110	1.02	0.03	0.0
WM4012_02	Glencoe	J-0469	J-0097	46.60	200	110	1.02	0.03	0.0
WM4012_03	Glencoe	J-0097	WVG093	3.00	200	110	1.02	0.03	0.0
WM4012_04	Glencoe	WVG093	J-0003	1.12	200	110	0.00	0.00	0.0
WM4012_05	Glencoe	J-0303	WVG093	15.47	200	110	-1.02	0.03	0.0
WM4013_01	Glencoe	J-0205	J_Hyd-G065	9.39	200	110	1.02	0.03	0.0
WM4013_02	Glencoe	J_Hyd-G065	J_Hyd-G066	127.29	200	110	1.02	0.03	0.0
WM4013_03	Glencoe	J_Hyd-G066	J-0468	39.92	200	110	1.02	0.03	0.0
WM4014_01	Glencoe	J-0205	WVG101	9.82	200	110	-0.85	0.03	0.0
WM4014_02	Glencoe	WVG107	J_Hyd-G064	6.15	200	110	0.85	0.03	0.0
WM4014_03	Glencoe	J_Hyd-G064	WVG101	119.04	200	110	0.85	0.03	0.0
WM4015_01	Glencoe	J-0048	J-0049	1.67	200	110	5.40	0.17	0.0
WM4015_02	Glencoe	J-0048	WVG193	5.79	200	110	0.00	0.00	0.0
WM4015_03	Glencoe	WVG193	J-0075	2.30	200	110	0.00	0.00	0.0
WM4015_04	Glencoe	J-0091	WVG113	2.54	200	110	0.00	0.00	0.0
WM4015_05	Glencoe	WVG113	WVG106	98.98	200	110	0.00	0.00	0.0
WM4015_06	Glencoe	J-0063	WVG106	16.77	200	110	0.00	0.00	0.0
WM4016_01	Glencoe	WVG003	J-0175	4.35	150	100	-0.06	0.00	0.0
WM4016_02	Glencoe	WVG002	J-0333	104.71	150	100	-0.19	0.01	0.0
WM4016_03	Glencoe	J-0481	J_Hyd-G016	38.74	150	100	-0.06	0.00	0.0
WM4016_04	Glencoe	J_Hyd-G016	WVG003	64.80	150	100	-0.06	0.00	0.0
WM4016_05	Glencoe	J-0175	WVG002	13.38	150	100	-0.19	0.01	0.0
WM4018_01	Glencoe	J-0333	J-0334	11.46	150	100	-0.26	0.01	0.0
WM4018_02	Glencoe	J-0334	J-0497	46.44	150	100	-0.26	0.01	0.0
WM4018_03	Glencoe	J-0144	J-0497	65.09	150	100	0.26	0.01	0.0
WM4019_01	Glencoe	J-0144	WVG010	3.77	200	110	-0.75	0.02	0.0
WM4019_02	Glencoe	WVG010	J-713	110.69	200	110	-0.75	0.02	0.0
WM4020_01	Glencoe	J_Hyd-G059	J-0107	113.86	150	100	0.51	0.03	0.0
WM4020_02	Glencoe	J-0107	J-0014	3.03	150	100	0.31	0.02	0.0
WM4020_03	Glencoe	J-0014	WVG096	1.04	150	100	0.31	0.02	0.0
WM4020_04	Glencoe	WVG096	J-0316	15.27	200	110	0.31	0.01	0.0
WM4021_01	Glencoe	J-0187	WVG105	5.72	150	100	0.51	0.03	0.0
WM4021_02	Glencoe	WVG105	J_Hyd-G060	4.08	150	100	0.51	0.03	0.0
WM4021_03	Glencoe	J_Hyd-G060	J_Hyd-G059	130.41	150	100	0.51	0.03	0.0
WM4022_01	Glencoe	J-0089	WVG109	3.68	200	110	0.86	0.03	0.0
WM4022_02	Glencoe	WVG109	J_Hyd-G061	5.42	200	110	0.86	0.03	0.0
WM4022_03	Glencoe	J_Hyd-G061	J-0187	128.70	200	110	0.86	0.03	0.0
WM4023_01	Glencoe	J-0222	WVG071	6.23	300	120	0.00	0.00	0.0
WM4023_02	Glencoe	WVG071	J-0134	6.29	300	120	0.00	0.00	0.0
WM4023_03	Glencoe	J-0134	J-0135	3.59	300	120	0.00	0.00	0.0
WM4023_04	Glencoe	J-0135	WVG085	103.05	300	120	0.00	0.00	0.0
WM4023_05	Glencoe	WVG085	J_Hyd-G085	4.68	300	120	0.00	0.00	0.0
WM4024_01	Glencoe	WVG069	J_Hyd-G080	7.03	250	120	-0.87	0.02	0.0
WM4024_02	Glencoe	J_Hyd-G080	J-0124	174.48	250	120	-0.87	0.02	0.0
WM4024_03	Glencoe	WVG069	J-0222	14.30	250	120	0.87	0.02	0.0
WM4025_01	Glencoe	J-0124	WVG058	3.66	250	120	-1.04	0.02	0.0
WM4025_02	Glencoe	WVG058	J_Hyd-G076	0.90	250	120	-1.04	0.02	0.0
WM4025_03	Glencoe	J_Hyd-G076	J-0284	104.25	250	120	-1.04	0.02	0.0
WM4026_01	Glencoe	J-0284	WVG047	10.69	250	120	-1.95	0.04	0.0
WM4026_02	Glencoe	J-0285	J-0179	9.19	200	110	0.51	0.02	0.0
WM4026_03	Glencoe	WVG047	WVG038	100.52	250	120	-1.95	0.04	0.0
WM4026_04	Glencoe	WVG038	J-715	3.84	250	120	-1.95	0.04	0.0
WM4027_01	Glencoe	J-0111	WVG130	4.08	250	120	-2.53	0.05	0.0
WM4027_02	Glencoe	WVG130	J-0421	174.59	250	120	-2.53	0.05	0.0
WM4027_03(1)	Glencoe	J-0421	J-709	19.33	250	120	-2.83	0.06	0.0
WM4027_03(2)	Glencoe	J-709	J-0104	2.64	250	120	-3.13	0.06	0.0
WM4028_01	Glencoe	J-0104	J-0094	2.96	250	120	-3.13	0.06	0.0
WM4028_02	Glencoe	J-0094	J_Hyd-G067	2.65	250	120	-3.13	0.06	0.0
WM4028_03	Glencoe	J_Hyd-G067	J-0227	159.12	250	120	-3.13	0.06	0.0
WM4029_01	Glencoe	J_Hyd-G079	J_Hyd-G081	102.59	250	120	4.29	0.09	0.0
WM4029_02	Glencoe	J_Hyd-G081	WVG192	2.89	250	120	4.29	0.09	0.0
WM4029_03	Glencoe	WVG192	J-0227	8.63	250	120	4.29	0.09	0.0
WM4030	Glencoe	J-0123	J_Hyd-G079	126.31	250	120	4.29	0.09	0.0
WM4032_01	Glencoe	WVR022	J-0006	4.47	250	120	-5.40	0.11	0.0
WM4032_02	Glencoe	J-0006	J-0007	0.86	200	110	-7.41	0.24	0.0
WM4032_03	Glencoe	J-0007	J-0017	1.08	200	110	-7.41	0.24	0.0
WM4032_04	Glencoe	WVR022	J_Hyd-G078	6.97	250	120	5.40	0.11	0.0
WM4032_05	Glencoe	J_Hyd-G078	WVG140	274.02	250	120	5.40	0.11	0.0
WM4032_06	Glencoe	WVG140	J-0048	4.92	250	120	5.40	0.11	0.0
WM4032_07	Glencoe	J-0049	J-0123	9.92	250	120	5.40	0.11	0.0
WM4035_01(1)	Glencoe	J-0344	J-698	1.22	150	100	0.00	0.00	0.0
WM4035_01(2)	Glencoe	J-698	WVG061	10.93	150	100	-0.15	0.01	0.0
WM4035_02	Glencoe	WVG061	J_Hyd-G027	3.18	200	110	-0.15	0.00	0.0
WM4035_03	Glencoe	J-0344	J_Hyd-G028	161.67	150	100	0.00	0.00	0.0
WM4035_04	Glencoe	J_Hyd-G028	J-0437	24.28	150	100	0.00	0.00	0.0
WM4036	Glencoe	J_Hyd-G027	J-695	109.13	200	110	-0.15	0.00	0.0
WM4037_01	Glencoe	J-695	WVG049	6.43	200	110	-0.20	0.01	0.0
WM4037_02	Glencoe	WVG049	J_Hyd-G026	90.02	200	110	-0.20	0.01	0.0
WM4037_03	Glencoe	J_Hyd-G026	J-0201	18.69	200	110	-0.20	0.01	0.0
WM4038_01	Glencoe	J_Hyd-G029	J_Hyd-G068	118.88	100	100	-0.16	0.02	0.0
WM4038_02	Glencoe	J-0354	J_Hyd-G029	74.71	100	100	-0.16	0.02	0.0
WM4038_03	Glencoe	J_Hyd-G068	J-0321	10.21	100	100	-0.16	0.02	0.0
WM4040_01	Glencoe	J-0390	WVG074	17.67	200	110	0.12	0.00	0.0

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WM4040_02	Glencoe	WVG074	J_Hyd-G020	31.15	150	100	-0.22	0.01	0.0
WM4040_03	Glencoe	J_Hyd-G020	J-0044	136.07	150	100	-0.22	0.01	0.0
WM4040_04	Glencoe	J-0044	J_Hyd-G021	13.53	150	100	-0.16	0.01	0.0
WM4041_01	Glencoe	J-0036	WVG051	15.67	150	100	0.16	0.01	0.0
WM4041_02	Glencoe	J_Hyd-G021	WVG064	10.79	150	100	-0.16	0.01	0.0
WM4041_03	Glencoe	WVG064	WVG051	85.34	150	100	-0.16	0.01	0.0
WM4042_01	Glencoe	J-0036	WVG052	1.53	150	100	-0.28	0.02	0.0
WM4042_02	Glencoe	J-0564	WVG052	112.33	200	110	0.28	0.01	0.0
WM4044_01	Glencoe	J-0288	WVG149	8.47	150	100	0.00	0.00	0.0
WM4044_02	Glencoe	WVG149	J-0447	25.14	150	100	0.00	0.00	0.0
WM4044_03	Glencoe	J-0447	J_Hyd-G022	121.76	150	100	0.00	0.00	0.0
WM4044_04	Glencoe	J_Hyd-G022	WVG148	39.91	150	100	0.00	0.00	0.0
WM4044_05	Glencoe	WVG148	J-0279	8.16	150	100	0.00	0.00	0.0
WM4045	Glencoe	J_Hyd-G062	J-0544	160.30	150	100	0.00	0.00	0.0
WM4048	Glencoe	J-0561	J-0602	197.94	150	100	0.00	0.00	0.0
WM4049_01	Glencoe	J-0198	WVG053	17.47	200	110	0.00	0.00	0.0
WM4049_02	Glencoe	J-0561	WVG053	105.28	200	110	0.00	0.00	0.0
WM4050	Glencoe	J-0452	J-0071	136.52	150	100	0.26	0.01	0.0
WM4051_01(1)	Glencoe	J-0381	J-703	11.62	150	100	0.09	0.00	0.0
WM4051_01(2)	Glencoe	J-703	J_Hyd-G008	5.45	150	100	0.36	0.02	0.0
WM4051_02(1)	Glencoe	J_Hyd-G008	J-705	24.45	150	100	0.36	0.02	0.0
WM4051_02(2)	Glencoe	J-705	J_Hyd-G009	99.83	150	100	0.02	0.00	0.0
WM4051_03	Glencoe	J_Hyd-G009	J-0339	35.00	150	100	0.02	0.00	0.0
WM4051_04	Glencoe	J-0339	J-0340	11.79	150	100	0.02	0.00	0.0
WM4051_05	Glencoe	J-0340	J-0402	19.06	200	110	0.02	0.00	0.0
WM4052_01	Glencoe	J-0389	WVG055	17.50	150	100	0.09	0.00	0.0
WM4052_02	Glencoe	WVG055	J-0381	97.74	150	100	0.09	0.00	0.0
WM4053_01	Glencoe	J-722	J-0543	84.11	150	100	0.00	0.00	0.0
WM4053_02	Glencoe	J-0632	J-0586	611.63	150	100	0.00	0.00	0.0
WM4053_03	Glencoe	J-0045	J_Hyd-G077	136.44	150	100	0.27	0.02	0.0
WM4053_04	Glencoe	J_Hyd-G077	J-703	104.84	150	100	0.27	0.02	0.0
WM4053_05	Glencoe	J-0165	J-727	19.07	200	110	0.01	0.00	0.0
WM4053_06	Glencoe	J_Hyd-G085	J-0581	131.21	150	100	0.00	0.00	0.0
WM4054_01	Glencoe	J_Hyd-G095	J-0098	44.85	150	100	0.00	0.00	0.0
WM4054_02	Glencoe	J-0098	WVG153	2.73	150	100	0.00	0.00	0.0
WM4054_03	Glencoe	WVG153	J_Hyd-G098	40.38	150	100	0.00	0.00	0.0
WM4054_04	Glencoe	J_Hyd-G098	J-724	91.69	150	100	0.00	0.00	0.0
WM4055_01	Glencoe	J-0165	J-0166	4.18	200	110	-0.01	0.00	0.0
WM4055_02	Glencoe	J-0166	J_Hyd-G069	17.94	200	110	-0.01	0.00	0.0
WM4055_03	Glencoe	J_Hyd-G069	J-0364	83.89	200	110	-0.01	0.00	0.0
WM4055_04	Glencoe	J-0364	WVG164	14.54	200	110	-0.01	0.00	0.0
WM4056_01	Glencoe	J-0306	J-0291	9.23	200	110	0.25	0.01	0.0
WM4056_02	Glencoe	J-0291	WVG056	8.53	200	110	0.25	0.01	0.0
WM4056_03	Glencoe	WVG056	J_Hyd-G071	6.29	200	110	0.25	0.01	0.0
WM4056_04	Glencoe	J_Hyd-G071	J_Hyd-G070	141.64	200	110	0.25	0.01	0.0
WM4056_05(1)	Glencoe	J_Hyd-G070	J-700	14.39	200	110	0.25	0.01	0.0
WM4056_05(2)	Glencoe	J-700	WVG164	2.83	200	110	0.01	0.00	0.0
WM4059_01	Glencoe	J-0071	J-0072	2.21	150	100	0.26	0.01	0.0
WM4059_02	Glencoe	J-0072	WVG086	4.07	150	100	0.26	0.01	0.0
WM4059_03	Glencoe	WVG086	J-0004	0.64	150	100	0.26	0.01	0.0
WM4059_04	Glencoe	J-0004	WVG159	85.81	150	100	0.26	0.01	0.0
WM4059_05	Glencoe	WVG159	J-0054	1.75	150	100	0.26	0.01	0.0
WM4060C_01	Glencoe	J-0264	WVG070	100.69	200	110	0.08	0.00	0.0
WM4060C_02	Glencoe	WVG070	J-0222	5.50	100	100	0.08	0.01	0.0
WM4061C_01	Glencoe	J-0222	WVG175	13.49	200	110	0.64	0.02	0.0
WM4061C_02	Glencoe	WVG175	J-0566	109.30	200	110	0.64	0.02	0.0
WM4062C(1)	Glencoe	J-0390	J-0368	107.52	200	110	-0.64	0.02	0.0
WM4062C(2)	Glencoe	J-0368	J-0566	1.97	200	110	-0.64	0.02	0.0
WM4063C(1)	Glencoe	J-0390	J-692	10.67	200	110	0.53	0.02	0.0
WM4063C(2)	Glencoe	J-692	J-0579	118.60	200	110	0.53	0.02	0.0
WM4064C	Glencoe	J-0579	J-0402	125.69	200	110	0.53	0.02	0.0
WM4066_01	Glencoe	J-0481	J_Hyd-G097	73.16	150	100	-0.07	0.00	0.0
WM4066_02	Glencoe	J_Hyd-G097	WVG001	67.96	150	100	-0.07	0.00	0.0
WM4067_01	Glencoe	J-0546	J_Hyd-G086	4.52	150	100	-0.15	0.01	0.0
WM4067_02	Glencoe	J_Hyd-G086	J_Hyd-G056	136.36	150	100	-0.15	0.01	0.0
WM4067_03	Glencoe	J-0435	J_Hyd-G056	152.58	150	100	0.15	0.01	0.0
WM4068_01	Glencoe	J-0272	J-0273	7.81	200	110	0.01	0.00	0.0
WM4068_02	Glencoe	J-0273	J-0175	10.81	200	110	0.01	0.00	0.0
WM4068_03	Glencoe	J-0435	WVG015	24.20	150	100	0.01	0.00	0.0
WM4068_04	Glencoe	WVG015	J-0272	79.45	150	100	0.01	0.00	0.0
WM4069_02	Glencoe	WVG027	J-0076	2.31	200	110	0.17	0.01	0.0
WM4069_03	Glencoe	J-0076	J-0271	7.68	200	110	0.17	0.01	0.0
WM4069_04	Glencoe	J-0271	J_Hyd-G057	136.22	200	110	0.17	0.01	0.0
WM4069_05	Glencoe	J_Hyd-G057	WVG004	8.11	200	110	0.17	0.01	0.0
WM4069_06	Glencoe	WVG004	J-0175	4.98	200	110	0.17	0.01	0.0
WM4070_01	Glencoe	J-700	WVG152	8.78	150	100	0.24	0.01	0.0
WM4070_02	Glencoe	WVG152	J_Hyd-G096	110.01	150	100	0.24	0.01	0.0
WM4070_03	Glencoe	J_Hyd-G096	J-0427	29.19	150	100	0.24	0.01	0.0
WM4070_04	Glencoe	J-0427	WVG165	22.83	150	100	-0.34	0.02	0.0
WM4071_01	Glencoe	J-0384	J-0524	163.12	150	100	-0.16	0.01	0.0
WM4071_02	Glencoe	J-0524	J-0503	64.16	150	100	-0.16	0.01	0.0
WM4071_03	Glencoe	J-0503	J_Hyd-G073	51.20	150	100	-0.16	0.01	0.0
WM4071_04	Glencoe	J_Hyd-G073	J-0256	17.07	150	100	-0.16	0.01	0.0
WM4072_01	Glencoe	J-0255	J-0342	102.78	150	100	-0.09	0.00	0.0
WM4072_02	Glencoe	J-0342	J-0333	12.07	150	100	-0.09	0.00	0.0
WM4074_01	Glencoe	J-0124	WVG057	3.42	250	120	-0.02	0.00	0.0
WM4074_02	Glencoe	J-0084	WVG172	2.45	150	100	-0.24	0.01	0.0
WM4074_03	Glencoe	WVG172	J-0025	49.15	150	100	-0.24	0.01	0.0
WM4074_04	Glencoe	J-0025	WVG057	52.74	150	100	0.02	0.00	0.0
WM4075_01	Glencoe	J-0332	J-698	11.44	200	110	0.19	0.01	0.0
WM4075_02	Glencoe	J-0124	WVG059	4.81	150	100	0.19	0.01	0.0
WM4075_03	Glencoe	WVG059	J-0060	1.83	150	100	0.19	0.01	0.0
WM4075_04	Glencoe	J-0060	WVG170	3.49	150	100	0.19	0.01	0.0
WM4075_05	Glencoe	WVG170	J-0332	102.63	150	100	0.19	0.01	0.0
WM4075_06	Glencoe	J-0333	J_Hyd-G074	15.51	150	100	-0.01	0.00	0.0
WM4075_07	Glencoe	J_Hyd-G074	J-0507	82.01	150	100	-0.01	0.00	0.0
WM4075_08(1)	Glencoe	J-0507	J-707	6.31	150	100	-0.01	0.00	0.0
WM4075_08(2)	Glencoe	J-707	WVG028	45.56	150	100	0.08	0.00	0.0
WM4075_09	Glencoe	WVG028	J_Hyd-G075	3.61	150	100	0.08	0.00	0.0

2021 ADD Pipe Results									
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WM4075_10	Glencoe	J_Hyd-G075	J-0252	19.39	150	100	0.08	0.00	0.0
WM4076_01	Glencoe	WVG169	J-698	4.82	200	110	-0.34	0.01	0.0
WM4076_02	Glencoe	WVG169	J-0044	105.78	150	100	0.34	0.02	0.0
WM4077	Glencoe	J-0044	J-0045	1.64	150	100	0.27	0.02	0.0
WM4079_01	Glencoe	J-0178	WVG035	4.43	150	100	-0.28	0.02	0.0
WM4079_02	Glencoe	WVG035	J-718	110.51	150	100	-0.28	0.02	0.0
WM4080_01	Glencoe	J-0099	WVG019	2.84	200	110	0.30	0.01	0.0
WM4080_02	Glencoe	J-0580	J_Hyd-G051	129.47	200	110	0.00	0.00	0.0
WM4081_01	Glencoe	WVG019	J_Hyd-G050	103.90	200	110	0.30	0.01	0.0
WM4081_02(1)	Glencoe	J_Hyd-G050	J-720	84.40	200	110	0.30	0.01	0.0
WM4081_02(2)	Glencoe	J-720	J-0580	19.71	200	110	0.00	0.00	0.0
WM4082_01	Glencoe	J-0099	J-0106	11.28	200	110	-0.30	0.01	0.0
WM4082_02	Glencoe	J-0106	J_Hyd-G049	24.29	200	110	-0.29	0.01	0.0
WM4082_03	Glencoe	J_Hyd-G049	J-0144	83.33	200	110	-0.29	0.01	0.0
WM4083_01	Glencoe	J-0144	WVG011	10.85	200	110	-0.05	0.00	0.0
WM4083_02	Glencoe	WVG011	J_Hyd-G048	5.58	200	110	-0.05	0.00	0.0
WM4083_03	Glencoe	J_Hyd-G048	WVG036	85.97	200	110	-0.05	0.00	0.0
WM4083_04	Glencoe	WVG036	J-0178	5.16	200	110	-0.05	0.00	0.0
WM4084_01	Glencoe	J-0178	J_Hyd-G047	44.27	200	110	0.13	0.00	0.0
WM4084_02	Glencoe	J_Hyd-G047	WVG030	33.12	200	110	0.13	0.00	0.0
WM4085_01	Glencoe	WVG030	WVG046	90.09	200	110	0.13	0.00	0.0
WM4085_02	Glencoe	WVG046	J_Hyd-G046	6.34	200	110	0.13	0.00	0.0
WM4085_03	Glencoe	J_Hyd-G046	J-0179	12.04	200	110	0.13	0.00	0.0
WM4085_04	Glencoe	J-0284	J-0285	8.41	200	110	0.51	0.02	0.0
WM4086_01	Glencoe	J-0179	WVG200	4.45	200	110	0.64	0.02	0.0
WM4086_02	Glencoe	WVG200	WVG048	97.18	200	110	0.64	0.02	0.0
WM4086_03	Glencoe	WVG048	J_Hyd-G045	1.59	200	110	0.64	0.02	0.0
WM4086_04(1)	Glencoe	J_Hyd-G045	J-695	8.56	200	110	0.64	0.02	0.0
WM4086_04(2)	Glencoe	J-695	WVG050	7.32	200	110	0.69	0.02	0.0
WM4087	Glencoe	WVG050	J-0036	103.33	200	110	0.69	0.02	0.0
WM4088_01	Glencoe	J-0036	J_Hyd-G044	15.50	200	110	0.82	0.03	0.0
WM4088_02	Glencoe	J_Hyd-G044	J_Hyd-G043	102.76	200	110	0.82	0.03	0.0
WM4088_03	Glencoe	J_Hyd-G043	J-0198	13.93	200	110	0.82	0.03	0.0
WM4089_01	Glencoe	J-0198	WVG054	4.87	200	110	0.49	0.02	0.0
WM4089_02	Glencoe	WVG054	J-0389	104.26	200	110	0.49	0.02	0.0
WM4090_01	Glencoe	J-0389	J_Hyd-G042	35.45	200	110	0.40	0.01	0.0
WM4090_02	Glencoe	J_Hyd-G042	J_Hyd-G041	123.12	200	110	0.40	0.01	0.0
WM4090_03	Glencoe	J_Hyd-G041	J-0306	113.59	200	110	0.40	0.01	0.0
WM4091_01	Glencoe	J-0410	J_Hyd-G052	20.75	150	100	-0.24	0.01	0.0
WM4091_02	Glencoe	J_Hyd-G052	WVG012	81.54	150	100	-0.24	0.01	0.0
WM4092_01(1)	Glencoe	WVG012	J-713	7.73	150	100	-0.24	0.01	0.0
WM4092_01(2)	Glencoe	J-713	WVG013	8.18	150	100	0.15	0.01	0.0
WM4092_02	Glencoe	WVG013	J_Hyd-G053	42.46	150	100	0.15	0.01	0.0
WM4092_03	Glencoe	J_Hyd-G053	WVG161	39.94	150	100	0.15	0.01	0.0
WM4093(1)	Glencoe	WVG161	J-718	17.09	150	100	0.15	0.01	0.0
WM4093(2)	Glencoe	J-718	WVG032	49.53	150	100	-0.13	0.01	0.0
WM4094_01	Glencoe	WVG039	J-0139	3.71	150	100	0.39	0.02	0.0
WM4094_02	Glencoe	J-0139	J-0336	11.56	150	100	0.39	0.02	0.0
WM4094_03	Glencoe	J-0336	J-0331	39.62	150	100	0.39	0.02	0.0
WM4094_04	Glencoe	J-0331	J-0286	42.02	150	100	0.13	0.01	0.0
WM4094_05	Glencoe	J-0286	WVG032	30.10	150	100	0.13	0.01	0.0
WM4095_01	Glencoe	J-0201	WVG044	10.01	150	100	-0.48	0.03	0.0
WM4095_02	Glencoe	WVG044	WVG041	98.34	150	100	-0.48	0.03	0.0
WM4095_03	Glencoe	WVG041	J-0211	5.17	150	100	-0.48	0.03	0.0
WM4095_04	Glencoe	J-0211	WVG040	8.79	150	100	-0.48	0.03	0.0
WM4095_05	Glencoe	WVG040	J-0005	2.73	150	100	0.00	0.00	0.0
WM4095_06(1)	Glencoe	WVG040	J-715	6.18	150	100	-0.48	0.03	0.0
WM4095_06(2)	Glencoe	J-715	WVG039	2.36	150	100	0.39	0.02	0.0
WM4096_01	Glencoe	WVG043	J-0201	4.96	150	100	-0.28	0.02	0.0
WM4096_02	Glencoe	J-0564	WVG043	106.76	150	100	-0.28	0.02	0.0
WM4097_01	Glencoe	J-0529	J-0425	68.18	50	100	0.00	0.00	0.0
WM4097_02	Glencoe	J-0424	J-0425	22.42	50	100	0.00	0.00	0.0
WM4098_01	Glencoe	J-0111	WVG129	3.15	150	100	-0.51	0.03	0.0
WM4098_02	Glencoe	WVG129	J-0172	4.26	150	100	-0.51	0.03	0.0
WM4098_03	Glencoe	J-0172	J-0239	6.15	150	100	-0.51	0.03	0.0
WM4098_04	Glencoe	J-0239	J_Hyd-G024	62.71	150	100	-0.51	0.03	0.0
WM4098_05	Glencoe	J_Hyd-G024	J-0265	21.45	150	100	-0.51	0.03	0.0
WM4098_06	Glencoe	J-0265	J-0116	7.41	150	100	-0.51	0.03	0.0
WM4098_07	Glencoe	J-0116	WVG188	3.18	150	100	-0.51	0.03	0.0
WM4098_08	Glencoe	WVG188	J-0126	5.05	150	100	-0.51	0.03	0.0
WM4099_01	Glencoe	J-0354	WVG189	13.18	150	100	-0.22	0.01	0.0
WM4099_02	Glencoe	WVG189	J_Hyd-G025	91.45	150	100	-0.22	0.01	0.0
WM4099_03	Glencoe	J_Hyd-G025	J-0236	3.77	150	100	-0.22	0.01	0.0
WM4099_04	Glencoe	J-0236	J-0059	6.09	150	100	-0.22	0.01	0.0
WM4099_05	Glencoe	J-0059	WVG199	1.83	150	100	-0.22	0.01	0.0
WM4099_06	Glencoe	WVG199	WVG131	5.28	150	100	-0.22	0.01	0.0
WM4099_07	Glencoe	WVG131	J-0111	4.06	150	100	-0.22	0.01	0.0
WM4101_01	Glencoe	WVG187	WVG132	101.68	150	100	0.11	0.01	0.0
WM4101_02	Glencoe	WVG132	J-709	2.48	150	100	0.11	0.01	0.0
WM4101_03(1)	Glencoe	WVG187	J-811	1.61	150	100	-0.11	0.01	0.0
WM4102_01	Glencoe	J-709	WVG133	13.28	150	100	0.41	0.02	0.0
WM4102_02	Glencoe	WVG133	WVG147	97.08	150	100	0.41	0.02	0.0
WM4102_03	Glencoe	WVG147	J-0321	13.28	150	100	0.41	0.02	0.0
WM4103	Glencoe	J-0321	J-0568	110.36	150	100	0.25	0.01	0.0
WM4104_01	Glencoe	J-0568	J_Hyd-G088	35.37	150	100	0.25	0.01	0.0
WM4104_02	Glencoe	J_Hyd-G088	J_Hyd-G089	114.83	150	100	0.25	0.01	0.0
WM4104_03	Glencoe	J_Hyd-G089	WVG150	58.22	150	100	0.25	0.01	0.0
WM4104_04	Glencoe	WVG150	WVG190	30.53	150	100	0.25	0.01	0.0
WM4104_05	Glencoe	WVG190	J_Hyd-G090	61.89	150	100	0.00	0.00	0.0
WM4104_06	Glencoe	J_Hyd-G090	WVG151	122.12	150	100	0.00	0.00	0.0
WM4104_07	Glencoe	WVG151	J_Hyd-G091	7.91	150	100	0.00	0.00	0.0
WM4107_01	Glencoe	J-735	WVG186	1.65	150	100	0.00	0.00	0.0
WM4107_02	Glencoe	WVG186	J_Hyd-G004	130.23	150	100	0.00	0.00	0.0
WM4108_01	Glencoe	J-0205	WVG103	5.09	200	110	0.71	0.02	0.0
WM4108_02	Glencoe	J-734	WVG103	119.43	200	110	-0.71	0.02	0.0
WM4109_01	Glencoe	WVG102	WVG104	108.82	200	110	-0.87	0.03	0.0
WM4109_02	Glencoe	WVG104	J-0187	4.57	200	110	-0.87	0.03	0.0
WM4109_03	Glencoe	WVG102	J-0205	9.87	200	110	0.87	0.03	0.0
WM4110_01	Glencoe	J-0187	J-0358	89.06	200	110	-0.88	0.03	0.0

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4110_02	Glencoe	J-0358	WVG181	13.95	200	110	-0.88	0.03	0.0
WM4110_03	Glencoe	WVG181	J-0011	1.00	200	110	-0.88	0.03	0.0
WM4110_04(2)(2)	Glencoe	J-815	J-0093	4.88	200	110	-1.16	0.04	0.0
WM4111_01	Glencoe	J-0093	J-0080	2.63	200	110	-1.16	0.04	0.0
WM4111_02	Glencoe	J-0080	WVG183	2.38	200	110	-1.16	0.04	0.0
WM4111_03	Glencoe	WVG183	WVG191	91.38	200	110	-1.16	0.04	0.0
WM4111_04	Glencoe	WVG191	J-0227	5.56	200	110	-1.16	0.04	0.0
WM4112_01	Glencoe	J-0063	WVG108	120.28	200	110	-0.85	0.03	0.0
WM4112_02	Glencoe	WVG108	J-0089	2.53	200	110	-0.85	0.03	0.0
WM4113_01	Glencoe	J-0089	WVG010	10.60	200	110	-1.03	0.03	0.0
WM4113_02	Glencoe	WVG010	WVG120	100.04	200	110	-1.03	0.03	0.0
WM4114	Glencoe	WVG107	J-0063	1.84	150	100	-0.85	0.05	0.0
WM4115_01	Glencoe	J-0123	WVG139	3.41	150	100	1.11	0.06	0.0
WM4115_02	Glencoe	WVG139	J_Hyd-H_T-718	3.84	150	100	1.11	0.06	0.0
WM4115_04	Glencoe	J_Hyd-H_T-718	J-0262	93.36	150	100	1.11	0.06	0.0
WM4115_05(2)	Glencoe	J-825	J-0559	106.02	150	100	0.68	0.04	0.0
WM4115_06	Glencoe	J-0559	J-0089	104.29	150	100	0.68	0.04	0.0
WM4116_01	Glencoe	J_Hyd-G001	WVG117	58.22	150	100	0.00	0.00	0.0
WM4116_02	Glencoe	WVG117	J-0213	16.86	150	100	0.00	0.00	0.0
WM4116_03	Glencoe	J-0360	J_Hyd-G001	121.50	150	100	0.00	0.00	0.0
WM4117	Glencoe	J-0360	J-0409	20.60	150	100	-0.33	0.02	0.0
WM4118_01	Glencoe	J-0590	J_Hyd-G002	142.34	150	100	0.00	0.00	0.0
WM4118_02	Glencoe	J_Hyd-G002	J-0091	4.87	150	100	0.00	0.00	0.0
WM4120	Glencoe	J-0235	J_Hyd-G018	41.76	150	100	0.00	0.00	0.0
WM4121_01	Glencoe	WVG185	J-0235	6.04	150	100	0.00	0.00	0.0
WM4121_02	Glencoe	WVG185	J_Hyd-G019	101.74	150	100	0.00	0.00	0.0
WM4124_01	Glencoe	J-0067	J-0494	44.34	300	120	-30.32	0.43	0.0
WM4124_02	Glencoe	J-0066	J_Hyd-G084	333.82	300	120	13.83	0.20	0.1
WM4124_03	Glencoe	J-0066	J-0067	2.04	300	120	-13.83	0.20	0.0
WM4125_01	Glencoe	J-0146	J-0202	57.31	300	120	-16.30	0.23	0.0
WM4125_02	Glencoe	J-0006	WVG196	53.16	150	100	2.01	0.11	0.0
WM4125_03	Glencoe	WVG122	J-0267	7.87	150	100	2.01	0.11	0.0
WM4125_04	Glencoe	WVG122	WVG196	48.20	150	100	-2.01	0.11	0.0
WM4125_05	Glencoe	J-0337	J-0338	11.59	300	120	2.55	0.04	0.0
WM4125_06	Glencoe	J-0338	J-0180	21.85	300	120	2.55	0.04	0.0
WM4125_07	Glencoe	J-0180	J-0146	229.84	300	120	-5.62	0.08	0.0
WM4125_08	Glencoe	J-0145	J-0017	4.06	300	120	10.29	0.15	0.0
WM4126_01	Glencoe	J-0017	WVG143	1.42	200	110	2.88	0.09	0.0
WM4126_02	Glencoe	WVG143	J-0013	1.00	200	110	2.88	0.09	0.0
WM4126_03	Glencoe	J-0013	J-0047	1.67	200	110	2.88	0.09	0.0
WM4126_04	Glencoe	J-0047	J-0038	2.12	200	110	2.88	0.09	0.0
WM4126_05	Glencoe	J-0038	J-0039	1.57	200	110	2.88	0.09	0.0
WM4126_06	Glencoe	J-0168	J-0169	4.23	200	110	11.05	0.35	0.0
WM4126_07	Glencoe	J-0039	J-0544	87.81	200	110	2.88	0.09	0.0
WM4128C_01	Glencoe	J-0252	WVG029	6.68	150	100	0.32	0.02	0.0
WM4129C_01	Glencoe	J-0115	J-0084	3.18	150	100	0.00	0.00	0.0
WM4129C_02	Glencoe	J-0084	J-0252	8.39	150	100	0.24	0.01	0.0
WM4143C	Glencoe	J-0373	J-0451	80.71	200	110	-0.73	0.02	0.0
WM4145C_01	Glencoe	J-0451	J_Hyd-G013	25.95	200	110	-0.81	0.03	0.0
WM4145C_02	Glencoe	J_Hyd-G013	J-0032	1.48	150	100	-0.81	0.05	0.0
WM4147C_01	Glencoe	J-0316	J-0191	48.55	200	110	0.91	0.03	0.0
WM4147C_02	Glencoe	J-0191	J_Hyd-G012	75.68	200	110	-0.36	0.01	0.0
WM4147C_03	Glencoe	J_Hyd-G012	J-0303	9.12	150	100	-0.36	0.02	0.0
WM4147C_04	Glencoe	J-0032	J-0128	88.99	200	110	-0.65	0.02	0.0
WM4147C_05	Glencoe	J-0128	J-0303	27.37	200	110	-0.65	0.02	0.0
WM4148C_01	Glencoe	J-0316	J_Hyd-G011	10.01	200	110	-0.60	0.02	0.0
WM4148C_02	Glencoe	WVG097	J_Hyd-G011	89.00	200	110	0.60	0.02	0.0
WM4149_01	Glencoe	J-715	WVG042	11.98	250	120	-2.82	0.06	0.0
WM4149_02	Glencoe	WVG042	J-0111	70.85	250	120	-2.82	0.06	0.0
WM4153C_01	Glencoe	J-0071	J_Hyd-G010	2.62	150	100	0.00	0.00	0.0
WM4153C_02	Glencoe	WVG158	J_Hyd-G010	52.89	150	100	0.00	0.00	0.0
WM4153C_03	Glencoe	J-0402	J_Hyd-G087	11.71	200	110	0.55	0.02	0.0
WM4153C_04	Glencoe	J_Hyd-G087	J-0452	14.25	200	110	0.55	0.02	0.0
WM4153C_05(1)	Glencoe	J-0452	J-722	58.28	200	110	0.29	0.01	0.0
WM4153C_05(2)	Glencoe	J-722	J_Hyd-G082	28.48	200	110	0.29	0.01	0.0
WM4153C_06	Glencoe	J_Hyd-G082	J_Hyd-G006	142.80	200	110	0.29	0.01	0.0
WM4153C_07	Glencoe	WV-348	J_Hyd-G005	108.11	200	110	0.31	0.01	0.0
WM4153C_08	Glencoe	J_Hyd-G005	J_Hyd-G063	100.69	200	110	0.31	0.01	0.0
WM4153C_09	Glencoe	J_Hyd-G063	J_Hyd-G058	130.80	200	110	0.31	0.01	0.0
WM4153C_10	Glencoe	J_Hyd-G058	J-0627	10.14	200	110	0.31	0.01	0.0
WM4156	Glencoe	J-0367	J-0368	16.07	150	100	0.00	0.00	0.0
WM4157_01	Glencoe	J-0554	J_Hyd-G092	93.03	150	100	0.00	0.00	0.0
WM4157_02	Glencoe	J_Hyd-G092	J-692	5.66	150	100	0.00	0.00	0.0
WM4159_01	Glencoe	J-0384	WVG022	17.17	150	100	0.00	0.00	0.0
WM4159_02	Glencoe	WVG022	G072	40.39	150	100	0.00	0.00	0.0
WM4160_01	Glencoe	J-0360	WVG116	14.15	150	100	0.33	0.02	0.0
WM4160_02	Glencoe	WVG116	J-0235	99.50	150	100	0.33	0.02	0.0
WM4162_01	Glencoe	J-0191	WVG094	4.72	150	100	1.27	0.07	0.0
WM4162_02	Glencoe	WVG094	J-0529	83.93	200	110	1.27	0.04	0.0
WM4162_03	Glencoe	J-0529	J-713	78.46	200	110	1.15	0.04	0.0
WM4167_01	Glencoe	J-0288	J-0488	67.16	150	100	0.00	0.00	0.0
WM4167_02	Glencoe	J-0488	J-0354	40.17	150	100	0.00	0.00	0.0
WM4178L.B	Glencoe	J-705	WVG165	107.96	150	100	0.34	0.02	0.0
WM4181L.B	Glencoe	J-0178	J-707	123.47	100	100	0.09	0.01	0.0
WM4182L.B_01	Glencoe	J-0353	WVG045	13.16	150	100	0.27	0.02	0.0
WM4182L.B_02	Glencoe	WVG045	WVG171	101.55	150	100	0.27	0.02	0.0
WM4182L.B_03	Glencoe	J-0025	WVG171	1.26	150	100	-0.27	0.02	0.0
WM4184L.B_01	Glencoe	J-0331	WVG037	11.11	150	100	0.27	0.02	0.0
WM4184L.B_02	Glencoe	WVG037	J-0353	103.47	150	100	0.27	0.02	0.0
WM4196L.B_01	Glencoe	J-0145	J-0146	3.84	300	120	-10.29	0.15	0.0
WM4196L.B_02	Glencoe	J-0202	WVG197	5.00	300	120	-16.30	0.23	0.0
WM4196L.B_03	Glencoe	WVG197	J-0067	333.26	300	120	-16.30	0.23	0.1
P-234	Melborne	J_Hyd-M017	J-0531	3.11	150	100	5.09	0.29	0.0
P-237	Melborne	WVM004	J-0037	11.15	200	110	-8.93	0.28	0.0
P_Hyd-M002	Melborne	J_Hyd-M002	M002	4.54	150	100	0.00	0.00	0.0
P_Hyd-M003	Melborne	J_Hyd-M003	M003	3.46	150	100	0.00	0.00	0.0
P_Hyd-M004	Melborne	J_Hyd-M004	M004	2.69	150	100	0.00	0.00	0.0
P_Hyd-M005	Melborne	J_Hyd-M005	M005	4.60	150	100	0.00	0.00	0.0
P_Hyd-M006	Melborne	J_Hyd-M006	M006	1.58	150	100	0.00	0.00	0.0

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-M007	Melborne	J_Hyd-M007	M007	3.19	150	100	0.00	0.00	0.0
P_Hyd-M008	Melborne	J_Hyd-M008	M008	1.77	150	100	0.00	0.00	0.0
P_Hyd-M009	Melborne	J_Hyd-M009	M009	4.67	150	100	0.00	0.00	0.0
P_Hyd-M010	Melborne	J_Hyd-M010	M010	6.09	150	100	0.00	0.00	0.0
P_Hyd-M011	Melborne	J_Hyd-M011	M011	1.88	150	100	0.00	0.00	0.0
P_Hyd-M012	Melborne	J_Hyd-M012	M012	3.91	150	100	0.00	0.00	0.0
P_Hyd-M013	Melborne	J_Hyd-M013	M013	2.29	150	100	0.00	0.00	0.0
P_Hyd-M014	Melborne	J_Hyd-M014	M014	1.98	150	100	0.00	0.00	0.0
P_Hyd-M015	Melborne	J_Hyd-M015	M015	2.99	150	100	0.00	0.00	0.0
P_Hyd-M016	Melborne	J_Hyd-M016	M016	2.30	150	100	0.00	0.00	0.0
P_Hyd-M017	Melborne	J_Hyd-M017	M017	4.21	150	100	0.00	0.00	0.0
P_Hyd-M018	Melborne	J_Hyd-M018	M018	0.81	150	100	0.00	0.00	0.0
P_Hyd-M019	Melborne	J_Hyd-M019	M019	3.99	150	100	0.00	0.00	0.0
P_Hyd-M020	Melborne	J_Hyd-M020	M020	3.90	150	100	0.00	0.00	0.0
P_Hyd-M021	Melborne	J_Hyd-M021	M021	3.76	150	100	0.00	0.00	0.0
P_Hyd-M022	Melborne	J_Hyd-M022	M022	4.35	150	100	0.00	0.00	0.0
P_Hyd-M023	Melborne	J_Hyd-M023	M023	1.95	150	100	0.00	0.00	0.0
WM2002C	Melborne	J-0237	WVM022	6.14	150	100	1.59	0.09	0.0
WM2030C_13	Melborne	J_Hyd-M002	J_Hyd-M003	206.11	150	100	5.13	0.29	0.3
WM2110C_01	Melborne	J-0158	WVM011	12.91	150	100	0.00	0.00	0.0
WM2110C_02	Melborne	WVM011	J_Hyd-M008	99.39	150	100	0.00	0.00	0.0
WM2111C_04	Melborne	WVM032	J_Hyd-M017	17.49	150	100	5.09	0.29	0.0
WM6000_01	Melborne	J-0176	WVM003	95.00	150	100	-1.05	0.06	0.0
WM6000_02	Melborne	WVM003	J-0192	32.55	150	100	-1.05	0.06	0.0
WM6001_01	Melborne	J-0065	WVA023	2.02	150	100	0.00	0.00	0.0
WM6001_02	Melborne	WVA023	WVM030	47.35	150	100	0.00	0.00	0.0
WM6002C_01	Melborne	J-0105	J-0403	19.22	150	100	-2.52	0.14	0.0
WM6002C_02	Melborne	WVM022	J-0403	98.89	150	100	1.59	0.09	0.0
WM6002_01	Melborne	WVM025	J_Hyd-M020	2.65	150	100	1.87	0.11	0.0
WM6002_02	Melborne	J-0177	WVM025	4.37	150	100	1.87	0.11	0.0
WM6002_03	Melborne	J_Hyd-M020	WVM007	98.53	150	100	1.87	0.11	0.0
WM6002_04	Melborne	WVM007	J-0125	18.26	150	100	1.87	0.11	0.0
WM6003C_01	Melborne	J-0192	WVM001	4.73	150	100	-5.13	0.29	0.0
WM6003C_02	Melborne	J_Hyd-M003	WVM001	187.86	150	100	5.13	0.29	0.2
WM6003_01	Melborne	J-0176	WVM027	4.36	150	100	0.25	0.01	0.0
WM6003_02	Melborne	WVM027	J_Hyd-M022	26.82	150	100	0.25	0.01	0.0
WM6003_03	Melborne	J_Hyd-M022	J-0407	20.47	150	100	0.25	0.01	0.0
WM6003_04	Melborne	J_Hyd-M023	J-0407	158.98	150	100	0.00	0.00	0.0
WM6003_05	Melborne	J_Hyd-M023	J-0493	43.36	150	100	0.00	0.00	0.0
WM6004C_01	Melborne	J-0192	WVM002	14.53	150	100	4.08	0.23	0.0
WM6004C_02	Melborne	WVM002	J_Hyd-M004	4.18	150	100	4.08	0.23	0.0
WM6004C_03	Melborne	J_Hyd-M004	J_Hyd-M005	170.61	200	110	4.08	0.13	0.0
WM6004_01	Melborne	J-0065	J_Hyd-M021	8.68	150	100	-0.80	0.05	0.0
WM6004_02	Melborne	J_Hyd-M021	WVM028	111.82	150	100	-0.80	0.05	0.0
WM6004_03	Melborne	WVM028	J-0176	16.14	150	100	-0.80	0.05	0.0
WM6005C_01	Melborne	J-0125	WVM005	3.45	200	110	4.85	0.15	0.0
WM6005C_02	Melborne	WVM005	J-0430	23.41	200	110	4.85	0.15	0.0
WM6005C_03	Melborne	Standpipe	J-0430	46.70	200	110	0.00	0.00	0.0
WM6005C_04	Melborne	J_Hyd-M005	J-0037	34.61	200	110	4.08	0.13	0.0
WM6005C_05	Melborne	J-0430	J-0037	4.98	200	110	4.85	0.15	0.0
WM6005C_06	Melborne	Standpipe	WVM004	31.50	200	110	-8.93	0.28	0.0
WM6005_01	Melborne	J-0177	WVM026	4.51	150	100	-0.80	0.05	0.0
WM6005_02	Melborne	WVM026	J-0065	110.26	150	100	-0.80	0.05	0.0
WM6006C_01	Melborne	J-0125	WVM006	15.98	200	110	-2.98	0.09	0.0
WM6006C_02	Melborne	WVM006	J_Hyd-M006	43.26	200	110	-2.98	0.09	0.0
WM6006C_03	Melborne	J_Hyd-M006	WVM008	67.74	200	110	-2.98	0.09	0.0
WM6006C_04	Melborne	WVM008	J-0105	26.02	200	110	-2.98	0.09	0.0
WM6006_01	Melborne	J-0203	J_Hyd-M019	5.07	150	100	1.31	0.07	0.0
WM6006_02	Melborne	J_Hyd-M019	J-0177	132.87	150	100	1.31	0.07	0.0
WM6007SC_01	Melborne	J-0312	WVM013	15.69	150	100	0.07	0.00	0.0
WM6007SC_02	Melborne	WVM013	J_Hyd-M016	68.32	150	100	0.07	0.00	0.0
WM6007SC_03	Melborne	J_Hyd-M016	J-0156	12.36	150	100	0.07	0.00	0.0
WM6007SC_04	Melborne	J-0156	J-0498	46.76	150	100	2.33	0.13	0.0
WM6008SCC_01	Melborne	J-0403	J-0434	101.45	150	100	-0.93	0.05	0.0
WM6008SCC_02	Melborne	J-0434	J-0108	24.19	150	100	-0.93	0.05	0.0
WM6008SCC_03	Melborne	J-0108	J-0109	3.08	150	100	-0.93	0.05	0.0
WM6008SC_01	Melborne	J-0230	J-0237	128.60	150	100	0.14	0.01	0.0
WM6008SC_02	Melborne	J-0237	J-0203	15.29	150	100	-1.45	0.08	0.0
WM6009SC_01	Melborne	J-0158	WVM010	4.02	150	100	-0.46	0.03	0.0
WM6009SC_02	Melborne	WVM010	J_Hyd-M009	52.80	150	100	-0.46	0.03	0.0
WM6009SC_03	Melborne	J_Hyd-M009	J_Hyd-M010	84.25	150	100	-0.46	0.03	0.0
WM6009SC_04	Melborne	J_Hyd-M010	J-0248	6.77	150	100	-0.46	0.03	0.0
WM6010C_01	Melborne	J-0105	WVM009	3.01	150	100	-0.46	0.03	0.0
WM6010C_02	Melborne	WVM009	J_Hyd-M007	38.17	150	100	-0.46	0.03	0.0
WM6010C_03	Melborne	J_Hyd-M007	J-0158	66.46	150	100	-0.46	0.03	0.0
WM6010SCC	Melborne	J_Hyd-M012	J-0159	72.47	150	100	-0.03	0.00	0.0
WM6010SC_01	Melborne	J-0500	J-0230	48.94	150	100	-0.80	0.05	0.0
WM6010SC_02	Melborne	J-0502	J-0500	50.61	150	100	-0.80	0.05	0.0
WM6010SC_03	Melborne	J-0396	WVM014	18.01	150	100	0.00	0.00	0.0
WM6010SC_04	Melborne	WVM014	J-0248	103.75	150	100	0.00	0.00	0.0
WM6011C_01	Melborne	J-0413	J_Hyd-M018	65.91	150	100	2.83	0.16	0.0
WM6011C_02	Melborne	J_Hyd-M018	WVM012	9.39	150	100	2.83	0.16	0.0
WM6011C_03	Melborne	WVM012	J-0312	9.52	150	100	2.83	0.16	0.0
WM6011SC_01	Melborne	J-0413	J-0414	20.96	150	100	2.25	0.13	0.0
WM6011SC_02	Melborne	J-0156	J-0157	3.99	150	100	-2.25	0.13	0.0
WM6011SC_03	Melborne	J-0157	WVM031	10.91	150	100	-2.25	0.13	0.0
WM6011SC_04	Melborne	J-0414	WVM031	93.52	150	100	2.25	0.13	0.0
WM6013C_01	Melborne	WVM023	J-0203	14.89	150	100	2.76	0.16	0.0
WM6013C_02	Melborne	J-0312	WVM023	99.33	150	100	2.76	0.16	0.0
WM6013SC_01	Melborne	J-0498	J_Hyd-M015	64.17	150	100	2.33	0.13	0.0
WM6013SC_02	Melborne	J-0230	WVM020	14.69	150	100	-2.33	0.13	0.0
WM6013SC_03	Melborne	WVM020	J_Hyd-M015	35.71	150	100	-2.33	0.13	0.0
WM6015SC_01	Melborne	J-0502	J_Hyd-M014	55.20	150	100	0.80	0.05	0.0
WM6015SC_02	Melborne	J_Hyd-M014	WVM021	51.37	150	100	0.80	0.05	0.0
WM6015SC_03	Melborne	WVM021	J-0159	4.03	150	100	0.80	0.05	0.0
WM6016SCC_01	Melborne	J-0159	WVM017	33.77	150	100	0.77	0.04	0.0
WM6016SCC_02	Melborne	WVM017	J-0189	4.61	150	100	0.77	0.04	0.0
WM6016SC_01	Melborne	J-0476	J_Hyd-M011	37.38	150	100	-0.71	0.04	0.0
WM6016SC_02	Melborne	J_Hyd-M011	J-0189	91.52	150	100	-0.71	0.04	0.0

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM6017SCC_01	Melborne	WVM018	J_Hyd-M013	113.47	150	100	0.06	0.00	0.0
WM6017SCC_02	Melborne	J-0189	WVM018	10.70	150	100	0.06	0.00	0.0
WM6018SCC	Melborne	J-0109	J_Hyd-M012	27.44	150	100	-0.03	0.00	0.0
WM6018SC_01	Melborne	J-0248	J-0249	6.36	150	100	-0.46	0.03	0.0
WM6018SC_02	Melborne	J-0249	WVM015	15.24	150	100	-0.71	0.04	0.0
WM6018SC_03	Melborne	WVM015	J-0476	105.12	150	100	-0.71	0.04	0.0
WM6018SC_04	Melborne	WVM019	J-0230	5.70	150	100	-1.13	0.06	0.0
WM6018SC_05	Melborne	WVM019	J-0109	104.89	150	100	1.13	0.06	0.0
WM6019C	Melborne	J-0531	J-0413	70.43	150	100	5.09	0.29	0.1
P-319	Wardsville	WVW007	J_Hyd-W015	1.13	150	100	0.37	0.02	0.0
P_Hyd-W001	Wardsville	J_Hyd-W001	W001	5.48	150	90	0.00	0.00	0.0
P_Hyd-W002	Wardsville	J_Hyd-W002	W002	4.70	150	90	0.00	0.00	0.0
P_Hyd-W003	Wardsville	J_Hyd-W003	W003	5.65	150	90	0.00	0.00	0.0
P_Hyd-W004	Wardsville	J_Hyd-W004	W004	3.86	150	90	0.00	0.00	0.0
P_Hyd-W005	Wardsville	J_Hyd-W005	W005	6.90	150	90	0.00	0.00	0.0
P_Hyd-W006	Wardsville	J_Hyd-W006	W006	3.88	150	90	0.00	0.00	0.0
P_Hyd-W007	Wardsville	J_Hyd-W007	W007	1.75	150	90	0.00	0.00	0.0
P_Hyd-W008	Wardsville	J_Hyd-W008	W008	1.93	150	90	0.00	0.00	0.0
P_Hyd-W009	Wardsville	J_Hyd-W009	W009	3.07	150	90	0.00	0.00	0.0
P_Hyd-W010	Wardsville	J_Hyd-W010	W010	1.19	150	90	0.00	0.00	0.0
P_Hyd-W011	Wardsville	J_Hyd-W011	W011	6.93	150	90	0.00	0.00	0.0
P_Hyd-W012	Wardsville	J_Hyd-W012	W012	2.69	150	90	0.00	0.00	0.0
P_Hyd-W013	Wardsville	J_Hyd-W013	W013	2.70	150	90	0.00	0.00	0.0
P_Hyd-W014	Wardsville	J_Hyd-W014	W014	1.95	150	90	0.00	0.00	0.0
P_Hyd-W015	Wardsville	J_Hyd-W015	W015	6.64	150	90	0.00	0.00	0.0
P_Hyd-W016	Wardsville	J_Hyd-W016	W016	5.24	150	90	0.00	0.00	0.0
P_Hyd-W017	Wardsville	J_Hyd-W017	W017	10.85	150	90	0.00	0.00	0.0
P_Hyd-W018	Wardsville	J_Hyd-W018	W018	2.15	150	90	0.00	0.00	0.0
P_Hyd-W019	Wardsville	J_Hyd-W019	W019	2.50	150	90	0.00	0.00	0.0
P_Hyd-W020	Wardsville	WVW055	W020	4.99	150	90	0.00	0.00	0.0
P_Hyd-W021	Wardsville	J_Hyd-W021	W021	3.07	150	90	0.00	0.00	0.0
P_Hyd-W022	Wardsville	J_Hyd-W022	W022	4.10	150	90	0.00	0.00	0.0
P_Hyd-W023	Wardsville	J_Hyd-W023	W023	5.14	150	90	0.00	0.00	0.0
P_Hyd-W024	Wardsville	J_Hyd-W024	W024	5.95	150	90	0.00	0.00	0.0
P_Hyd-W025	Wardsville	J_Hyd-W025	W025	6.22	150	90	0.00	0.00	0.0
P_Hyd-W026	Wardsville	J_Hyd-W026	W026	6.37	150	90	0.00	0.00	0.0
P_Hyd-W027	Wardsville	J_Hyd-W027	W027	3.79	150	90	0.00	0.00	0.0
P_Hyd-W028	Wardsville	J_Hyd-W028	W028	3.84	150	90	0.00	0.00	0.0
P_Hyd-W029	Wardsville	J_Hyd-W029	W029	6.11	150	90	0.00	0.00	0.0
P_Hyd-W030	Wardsville	J_Hyd-W030	W030	3.82	150	90	0.00	0.00	0.0
P_Hyd-W031	Wardsville	J_Hyd-W031	W031	5.06	150	90	0.00	0.00	0.0
P_Hyd-W032	Wardsville	J_Hyd-W032	W032	7.29	150	90	0.00	0.00	0.0
P_Hyd-W033	Wardsville	J_Hyd-W033	W033	6.07	150	90	0.00	0.00	0.0
P_Hyd-W034	Wardsville	J_Hyd-W034	W034	5.18	150	90	0.00	0.00	0.0
P_Hyd-W035	Wardsville	J_Hyd-W035	W035	4.26	150	90	0.00	0.00	0.0
P_Hyd-W036	Wardsville	J_Hyd-W036	W036	3.12	150	90	0.00	0.00	0.0
P_Hyd-W037	Wardsville	J_Hyd-W037	W037	1.94	150	90	0.00	0.00	0.0
P_Hyd-W038	Wardsville	J_Hyd-W038	W038	1.51	150	90	0.00	0.00	0.0
P_Hyd-W039	Wardsville	J_Hyd-W039	W039	0.69	150	90	0.02	0.00	0.0
P_Hyd-W040	Wardsville	J_Hyd-W040	W040	5.52	150	90	0.00	0.00	0.0
P_Hyd-W041	Wardsville	J_Hyd-W041	W041	5.79	150	90	0.00	0.00	0.0
P_Hyd-W042	Wardsville	J_Hyd-W042	W042	3.43	150	90	0.00	0.00	0.0
P_Hyd-W043	Wardsville	J_Hyd-W043	W043	11.13	150	90	0.00	0.00	0.0
P_Hyd-W044	Wardsville	J_Hyd-W044	W044	5.49	150	90	0.00	0.00	0.0
P_Hyd-W045	Wardsville	J_Hyd-W045	W045	6.88	150	90	0.00	0.00	0.0
P_Hyd-W046	Wardsville	J_Hyd-W046	W046	5.95	150	90	0.00	0.00	0.0
P_Hyd-W047	Wardsville	J_Hyd-W047	W047	6.10	150	90	0.00	0.00	0.0
SWM_GIS.Waterm	Wardsville	W039	J_Hyd-W039	0.69	150	90	0.02	0.00	0.0
WM1009C_01	Wardsville	J_Hyd-W001	J_Hyd-W002	94.93	200	100	0.00	0.00	0.0
WM1009C_02	Wardsville	J_Hyd-W002	J-0446	25.09	200	100	0.00	0.00	0.0
WM1010C_01	Wardsville	J-0031	WVW001	14.43	200	100	-1.81	0.06	0.0
WM1010C_02	Wardsville	WVW001	J_Hyd-W010	1.27	200	100	-1.81	0.06	0.0
WM1010C_03	Wardsville	J_Hyd-W010	J-0438	55.92	200	100	-1.81	0.06	0.0
WM1010C_04	Wardsville	J-0438	J-0439	24.67	200	100	-1.81	0.06	0.0
WM1010C_05	Wardsville	J-0439	J_Hyd-W011	28.71	200	100	-1.81	0.06	0.0
WM1010C_06	Wardsville	J_Hyd-W011	J-0550	94.48	200	100	-1.81	0.06	0.0
WM1010C_07	Wardsville	J-0550	J_Hyd-W047	140.43	200	100	-1.90	0.06	0.0
WM1010C_08	Wardsville	J_Hyd-W047	J_Hyd-W045	152.33	200	100	-1.90	0.06	0.0
WM1010C_09	Wardsville	J_Hyd-W045	J-0160	109.76	200	100	-1.90	0.06	0.0
WM1010C_10	Wardsville	J-0160	J-0161	4.04	200	100	-1.90	0.06	0.0
WM1010C_11	Wardsville	J-0161	J_Hyd-W046	92.10	200	100	-1.90	0.06	0.0
WM1010C_12	Wardsville	J_Hyd-W046	J-0553	96.02	200	100	-1.90	0.06	0.0
WM1010C_13	Wardsville	J-0553	J_Hyd-R021M	1022.49	200	100	-1.90	0.06	0.1
WM1010_01	Wardsville	J-0643	J-0597	2259.98	300	110	4.99	0.07	0.1
WM1010_02	Wardsville	J-0597	J-0456	167.81	300	110	4.99	0.07	0.0
WM1064C_01	Wardsville	J-0245	WVW067	6.24	200	100	0.00	0.00	0.0
WM1064C_02	Wardsville	WVW067	J-0022	1.26	200	100	0.00	0.00	0.0
WM1064C_03	Wardsville	J-0022	J_Hyd-W028	5.40	200	100	0.00	0.00	0.0
WM1064C_04	Wardsville	J-0022	J-0069	2.10	200	100	0.00	0.00	0.0
WM1064C_05	Wardsville	J-0069	J-0307	79.42	200	100	0.00	0.00	0.0
WM1065C_01	Wardsville	J-0035	WVR006	1.51	150	90	0.36	0.02	0.0
WM1065C_02	Wardsville	WVR006	J-686	1.59	150	90	-1.43	0.08	0.0
WM1065C_03	Wardsville	J_Hyd-W044	J-0504	618.26	300	110	0.36	0.01	0.0
WM1065C_04	Wardsville	J-0504	J-0035	51.23	300	110	0.36	0.01	0.0
WM1066C_01(1)	Wardsville	J-0456	J-686	2.75	300	110	4.99	0.07	0.0
WM1066C_01(2)	Wardsville	J-686	J-0242	25.10	300	110	3.57	0.05	0.0
WM1066C_02	Wardsville	J-0242	WVR003	6.22	300	110	3.57	0.05	0.0
WM3000C_01	Wardsville	J-0061	WVW033	17.06	300	110	0.40	0.01	0.0
WM3000C_02	Wardsville	WVW033	J-0343	64.42	300	110	0.40	0.01	0.0
WM3000_01	Wardsville	J-728	WVW066	78.11	150	90	0.03	0.00	0.0
WM3000_02	Wardsville	WVW066	J-0122	3.40	150	90	0.03	0.00	0.0
WM3001C_01	Wardsville	J-0506	WVW031	51.53	200	100	-0.15	0.00	0.0
WM3001C_02	Wardsville	WVW031	J-0040	1.58	200	100	-0.15	0.00	0.0
WM3001C_03	Wardsville	J-0040	J-0083	3.94	200	100	-0.15	0.00	0.0
WM3001_01	Wardsville	J_Hyd-W040	WVW036	53.55	150	90	-0.01	0.00	0.0
WM3001_02	Wardsville	WVW036	J-0188	4.61	150	90	-0.01	0.00	0.0
WM3002C_01	Wardsville	J-0297	WVW022	10.56	200	100	-0.02	0.00	0.0
WM3002C_02	Wardsville	WVW022	J_Hyd-W030	4.30	200	100	-0.02	0.00	0.0
WM3002C_03	Wardsville	J_Hyd-W030	J-0506	74.51	200	100	-0.02	0.00	0.0

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3002_01	Wardsville	J-0251	WVW028	10.95	150	90	-0.01	0.00	0.0
WM3002_02	Wardsville	WVW028	J_Hyd-W040	87.52	150	90	-0.01	0.00	0.0
WM3003C_01	Wardsville	J-0307	WVW025	9.26	200	100	-0.03	0.00	0.0
WM3003C_02	Wardsville	WVW025	J_Hyd-W029	22.49	200	100	-0.03	0.00	0.0
WM3003C_03	Wardsville	J_Hyd-W029	J-0297	87.53	200	100	-0.03	0.00	0.0
WM3003_01	Wardsville	J-0429	J_Hyd-W041	101.52	150	90	-0.07	0.00	0.0
WM3003_02	Wardsville	J_Hyd-W041	J-0251	15.68	150	90	-0.07	0.00	0.0
WM3004C_01	Wardsville	J-0349	J-0308	12.47	300	110	0.36	0.01	0.0
WM3004C_02	Wardsville	J-0308	WVW061	9.36	300	110	0.36	0.01	0.0
WM3004C_03	Wardsville	WVW061	J_Hyd-W032	49.83	300	110	0.36	0.01	0.0
WM3004_01	Wardsville	J-0283	WVW056	9.15	150	90	0.11	0.01	0.0
WM3004_02	Wardsville	WVW056	J_Hyd-W021	79.20	150	90	0.11	0.01	0.0
WM3004_03	Wardsville	J_Hyd-W021	WVW054	2.33	150	90	0.11	0.01	0.0
WM3004_04	Wardsville	WVW054	J-0218	6.54	150	90	0.11	0.01	0.0
WM3004_05	Wardsville	J-0217	J-0218	5.41	150	90	-0.11	0.01	0.0
WM3005C_01	Wardsville	J-0234	WVW053	13.96	300	110	0.45	0.01	0.0
WM3005C_02	Wardsville	WVW053	J-0349	82.84	300	110	0.45	0.01	0.0
WM3005_01	Wardsville	J-0028	WVW057	27.93	150	90	0.17	0.01	0.0
WM3005_02	Wardsville	WVW057	J_Hyd-W022	4.65	150	90	0.17	0.01	0.0
WM3005_03	Wardsville	J_Hyd-W022	J-0283	61.43	150	90	0.17	0.01	0.0
WM3006C_01	Wardsville	J-0050	J_Hyd-W031	24.70	300	110	0.41	0.01	0.0
WM3006C_02	Wardsville	J_Hyd-W031	J-0234	88.41	300	110	0.41	0.01	0.0
WM3006_01	Wardsville	WVW043	J_Hyd-W023	18.88	150	90	0.15	0.01	0.0
WM3006_02	Wardsville	J_Hyd-W023	J-0027	87.15	150	90	0.15	0.01	0.0
WM3006_03	Wardsville	J-0027	J-0028	1.30	150	90	0.25	0.01	0.0
WM3006_04	Wardsville	WVW043	J-0154	9.51	150	90	-0.15	0.01	0.0
WM3007C_01	Wardsville	J-0343	WVW064	12.09	300	110	0.34	0.00	0.0
WM3007C_02	Wardsville	WVW064	J-0018	68.86	300	110	0.34	0.00	0.0
WM3007_01	Wardsville	J-0247	J_Hyd-W025	104.21	150	90	0.20	0.01	0.0
WM3007_02	Wardsville	J-0154	J_Hyd-W025	62.02	150	90	-0.20	0.01	0.0
WM3008_01	Wardsville	J-0247	J_Hyd-W026	91.00	150	90	0.26	0.01	0.0
WM3008_02	Wardsville	WVW019	J-0238	11.66	150	90	0.26	0.01	0.0
WM3008_03	Wardsville	J_Hyd-W026	WVW019	34.82	150	90	0.26	0.01	0.0
WM3009_01	Wardsville	J-0238	J-0485	57.20	150	90	0.05	0.00	0.0
WM3009_02	Wardsville	J_Hyd-W027	J-0485	39.51	150	90	-0.05	0.00	0.0
WM3009_03	Wardsville	J_Hyd-W027	J-0460	29.49	150	90	0.05	0.00	0.0
WM3010_01	Wardsville	J_Hyd-W019	J-0055	103.28	150	90	0.00	0.00	0.0
WM3010_02	Wardsville	J-0055	J-0056	1.79	150	90	0.00	0.00	0.0
WM3011	Wardsville	WVW046	J_Hyd-W019	82.16	150	90	0.00	0.00	0.0
WM3012_01	Wardsville	J-0088	WVW045	2.49	150	90	0.21	0.01	0.0
WM3012_02	Wardsville	WVW045	J_Hyd-W018	55.58	150	90	0.21	0.01	0.0
WM3012_03	Wardsville	J_Hyd-W018	J-0068	71.53	150	90	0.21	0.01	0.0
WM3013_01	Wardsville	J-0223	WVW014	17.55	150	90	0.42	0.02	0.0
WM3013_02	Wardsville	WVW014	J_Hyd-W017	91.23	150	90	0.42	0.02	0.0
WM3013_03	Wardsville	J_Hyd-W017	J-0444	24.98	150	90	0.42	0.02	0.0
WM3013_04	Wardsville	J-0444	J-0311	33.46	150	90	0.42	0.02	0.0
WM3013_05	Wardsville	J-0311	J-0088	9.52	150	90	0.42	0.02	0.0
WM3014_01	Wardsville	J-0131	J_Hyd-W016	12.42	150	90	0.37	0.02	0.0
WM3014_02	Wardsville	J_Hyd-W016	J-0174	113.19	150	90	0.37	0.02	0.0
WM3014_03	Wardsville	J-0131	J-0132	3.57	150	90	0.00	0.00	0.0
WM3016	Wardsville	WVW009	J-0034	2.74	150	90	-0.18	0.01	0.0
WM3017_01	Wardsville	J-0029	J-0030	1.33	150	90	0.12	0.01	0.0
WM3017_02	Wardsville	J-0029	WVW008	85.97	150	90	0.19	0.01	0.0
WM3017_03	Wardsville	WVW008	J-0258	6.92	150	90	0.19	0.01	0.0
WM3017_04	Wardsville	J-0258	WVW009	114.37	150	90	-0.18	0.01	0.0
WM3018_01	Wardsville	J_Hyd-W012	WVW002	103.92	150	90	-0.41	0.02	0.0
WM3018_02	Wardsville	J-0031	WVW002	1.39	150	90	0.41	0.02	0.0
WM3018_03	Wardsville	J_Hyd-W012	J-0023	108.22	150	90	0.41	0.02	0.0
WM3018_04	Wardsville	J-0023	J-0024	1.26	150	90	0.00	0.00	0.0
WM3019C	Wardsville	J_Hyd-W033	J_Hyd-W044	138.80	300	110	0.36	0.01	0.0
WM3020	Wardsville	J_Hyd-W035	J-0308	44.57	150	90	0.00	0.00	0.0
WM3020C_01	Wardsville	J-0228	J-0229	5.61	300	110	0.36	0.01	0.0
WM3020C_02	Wardsville	J-0229	J_Hyd-W033	48.18	300	110	0.36	0.01	0.0
WM3021_01	Wardsville	J-0234	WVW052	5.86	150	90	0.05	0.00	0.0
WM3021_02	Wardsville	WVW052	J_Hyd-W036	57.41	150	90	0.00	0.00	0.0
WM3022_01	Wardsville	J-0051	WVW039	3.85	150	90	0.00	0.00	0.0
WM3022_02	Wardsville	WVW039	J_Hyd-W037	120.90	150	90	0.00	0.00	0.0
WM3022_03	Wardsville	J-0050	J-0051	1.72	300	110	0.09	0.00	0.0
WM3023C_01	Wardsville	WVW034	J_Hyd-W003	91.07	200	100	-0.16	0.00	0.0
WM3023C_02	Wardsville	J_Hyd-W003	WVW032	52.82	200	100	-0.16	0.00	0.0
WM3023C_03	Wardsville	WVW032	J-0082	11.99	200	100	-0.16	0.00	0.0
WM3023C_04	Wardsville	J-0082	J-0083	2.41	300	110	-0.16	0.00	0.0
WM3023_01	Wardsville	J-0122	J_Hyd-W039	135.47	150	90	-0.06	0.00	0.0
WM3023_02	Wardsville	J_Hyd-W039	WVW063	13.80	150	90	-0.06	0.00	0.0
WM3023_03	Wardsville	WVW063	J-0002	1.04	150	90	0.00	0.00	0.0
WM3023_04	Wardsville	WVW063	J-0343	21.64	150	90	-0.06	0.00	0.0
WM3023_05	Wardsville	J-0122	J_Hyd-W038	9.17	150	90	0.00	0.00	0.0
WM3025_01	Wardsville	J-0297	WVW023	15.43	150	90	0.06	0.00	0.0
WM3025_02	Wardsville	WVW023	J_Hyd-W043	67.26	150	90	0.06	0.00	0.0
WM3025_03	Wardsville	J_Hyd-W043	WVW029	72.48	150	90	0.06	0.00	0.0
WM3025_04	Wardsville	WVW029	J-0251	6.56	150	90	0.06	0.00	0.0
WM3026_01	Wardsville	J-0238	WVW020	6.15	150	90	0.07	0.00	0.0
WM3026_02	Wardsville	WVW020	WVW021	100.45	150	90	0.07	0.00	0.0
WM3026_03	Wardsville	WVW021	J-0297	8.86	150	90	0.07	0.00	0.0
WM3027_01	Wardsville	J-0307	WVW026	14.56	150	90	0.08	0.00	0.0
WM3027_02	Wardsville	WVW026	J_Hyd-W042	125.13	150	90	0.08	0.00	0.0
WM3027_03	Wardsville	J_Hyd-W042	J-0429	22.83	150	90	0.08	0.00	0.0
WM3028_01	Wardsville	J-0460	WVW027	79.81	150	90	0.05	0.00	0.0
WM3028_02	Wardsville	WVW027	J-0307	9.37	150	90	0.05	0.00	0.0
WM3029C	Wardsville	J_Hyd-W032	J-0228	58.86	300	110	0.36	0.01	0.0
WM3030	Wardsville	J-0055	WVW055	10.06	150	90	0.00	0.00	0.0
WM3031_01	Wardsville	J-0283	WVW058	8.32	150	90	-0.09	0.01	0.0
WM3031_02	Wardsville	WVW058	J_Hyd-W034	48.91	150	90	-0.09	0.01	0.0
WM3031_03	Wardsville	J_Hyd-W034	WVW059	49.21	150	90	-0.09	0.01	0.0
WM3031_04	Wardsville	WVW059	J-0349	16.87	150	90	-0.09	0.01	0.0
WM3033_01	Wardsville	J-0028	WVW049	8.75	150	90	0.09	0.00	0.0
WM3033_02	Wardsville	WVW049	WVW051	98.98	150	90	0.09	0.00	0.0
WM3033_03	Wardsville	WVW051	J-0234	16.36	150	90	0.09	0.00	0.0
WM3034_01	Wardsville	J-0068	WVW046	2.10	150	90	0.00	0.00	0.0

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3034_02	Wardsville	J-0068	J-0081	10.14	150	90	0.21	0.01	0.0
WM3034_03	Wardsville	J-0081	WVW047	2.39	150	90	0.21	0.01	0.0
WM3034_04	Wardsville	WVW047	WVW048	73.09	150	90	0.21	0.01	0.0
WM3034_05	Wardsville	WVW048	J-0027	10.74	150	90	0.11	0.01	0.0
WM3035C_01	Wardsville	J-0062	WVW030	2.56	200	100	-0.70	0.02	0.0
WM3035C_02	Wardsville	WVW030	J_Hyd-W004	21.12	200	100	-0.70	0.02	0.0
WM3035C_03	Wardsville	J_Hyd-W004	WVW018	79.59	200	100	-0.70	0.02	0.0
WM3035C_04	Wardsville	WVW018	J-0247	8.72	200	100	-0.70	0.02	0.0
WM3035C_05	Wardsville	J-0061	J-0083	2.95	200	100	0.31	0.01	0.0
WM3035C_06	Wardsville	J-0061	J-0062	1.83	300	110	-0.70	0.01	0.0
WM3035_01	Wardsville	J-0154	WVW042	3.97	150	90	0.17	0.01	0.0
WM3035_02	Wardsville	WVW042	WVW038	106.74	150	90	0.17	0.01	0.0
WM3035_03	Wardsville	WVW038	J-0012	1.00	150	90	0.17	0.01	0.0
WM3035_04	Wardsville	J-0018	J-0012	1.10	300	110	-0.17	0.00	0.0
WM3035_05	Wardsville	J-0018	J-0050	12.34	300	110	0.50	0.01	0.0
WM3036C_01	Wardsville	J-0247	WVW016	6.26	200	100	-1.16	0.04	0.0
WM3036C_02	Wardsville	WVW016	J_Hyd-W005	3.42	200	100	-1.16	0.04	0.0
WM3036C_03	Wardsville	J_Hyd-W005	J-0423	67.48	200	100	-1.16	0.04	0.0
WM3036C_04	Wardsville	J-0423	J-0042	22.05	200	100	-1.16	0.04	0.0
WM3036C_05	Wardsville	J-0042	J_Hyd-W006	1.59	200	100	-1.16	0.04	0.0
WM3036C_06	Wardsville	J_Hyd-W006	J-0223	34.03	200	100	-1.16	0.04	0.0
WM3036_01	Wardsville	J-0088	WVW044	12.77	150	90	0.22	0.01	0.0
WM3036_02	Wardsville	WVW044	J_Hyd-W024	61.63	150	90	0.22	0.01	0.0
WM3036_03	Wardsville	J_Hyd-W024	WVW041	62.52	150	90	0.22	0.01	0.0
WM3036_04	Wardsville	WVW041	J-0154	8.37	150	90	0.11	0.01	0.0
WM3037C_01	Wardsville	J-0223	J-0174	5.52	200	100	-1.59	0.05	0.0
WM3037C_02	Wardsville	J-0174	WVW011	4.34	200	100	-1.22	0.04	0.0
WM3037C_03	Wardsville	WVW011	J_Hyd-W007	52.35	200	100	-1.22	0.04	0.0
WM3037C_04	Wardsville	J_Hyd-W007	J_Hyd-W008	96.68	200	100	-1.22	0.04	0.0
WM3037C_05	Wardsville	J_Hyd-W008	WVW010	3.99	200	100	-1.22	0.04	0.0
WM3037C_06	Wardsville	WVW010	J-0120	4.52	200	100	-1.22	0.04	0.0
WM3037C_07	Wardsville	J-0120	J-0121	3.38	200	100	-1.22	0.04	0.0
WM3037C_08	Wardsville	J-0121	J-0033	7.19	200	100	-1.22	0.04	0.0
WM3037C_09	Wardsville	J-0033	J-0034	1.48	200	100	-1.22	0.04	0.0
WM3037_01	Wardsville	J-0258	WVW007	11.40	150	90	0.37	0.02	0.0
WM3037_02	Wardsville	J_Hyd-W015	WVW015	149.19	150	90	0.37	0.02	0.0
WM3037_03	Wardsville	WVW015	J-0131	4.69	150	90	0.37	0.02	0.0
WM3039C_01	Wardsville	J-0034	J-0313	67.18	200	100	-1.40	0.04	0.0
WM3039C_02	Wardsville	J-0313	J_Hyd-W009	9.84	200	100	-1.40	0.04	0.0
WM3039C_03	Wardsville	J_Hyd-W009	WVW003	75.53	200	100	-1.40	0.04	0.0
WM3039C_04	Wardsville	WVW003	J-0031	3.69	200	100	-1.40	0.04	0.0
WM3039_01	Wardsville	J-0023	J_Hyd-W014	21.87	150	90	0.31	0.02	0.0
WM3039_02	Wardsville	J_Hyd-W014	J_Hyd-W013	134.93	150	90	0.31	0.02	0.0
WM3039_03	Wardsville	J_Hyd-W013	WVW006	7.63	150	90	0.31	0.02	0.0
WM3039_04	Wardsville	WVW006	J-0029	2.85	150	90	0.31	0.02	0.0
WM3041C_01	Wardsville	J-0446	WVW035	27.23	200	100	-0.12	0.00	0.0
WM3041C_02(1)	Wardsville	WVW035	J-728	10.26	200	100	-0.12	0.00	0.0
WM3041C_02(2)(1)	Wardsville	J-728	J-0188	3.98	200	100	-0.15	0.00	0.0
WM3041C_02(2)(2)	Wardsville	J-0188	WVW034	4.02	200	100	-0.16	0.00	0.0
P_Hyd-A001	Appin	J_Hyd-A001	A001	2.16	150	100	0.00	0.00	0.0
P_Hyd-A002	Appin	J_Hyd-A002	A002	3.25	150	100	0.00	0.00	0.0
P_Hyd-A003	Appin	J_Hyd-A003	A003	1.26	150	100	0.00	0.00	0.0
P_Hyd-A004	Appin	J_Hyd-A004	A004	8.01	150	100	0.00	0.00	0.0
P_Hyd-A005	Appin	J_Hyd-A005	A005	2.77	150	100	0.00	0.00	0.0
P_Hyd-A006	Appin	J_Hyd-A006	A006	3.67	150	100	0.00	0.00	0.0
P_Hyd-A007	Appin	J_Hyd-A007	A007	3.11	150	100	0.00	0.00	0.0
P_Hyd-A008	Appin	J_Hyd-A008	A008	3.87	150	100	0.00	0.00	0.0
P_Hyd-A009	Appin	J_Hyd-A009	A009	3.13	150	100	0.00	0.00	0.0
P_Hyd-A010	Appin	J_Hyd-A010	A010	4.30	150	100	0.00	0.00	0.0
P_Hyd-A011	Appin	J_Hyd-A011	A011	3.08	150	100	0.00	0.00	0.0
WM2039_04	Appin	J_Hyd-R015E	J-0592	1807.30	200	110	6.50	0.21	0.7
WM2047C_01	Appin	WVR028	WVR053	1957.59	200	110	3.72	0.12	0.3
WM2089C_01	Appin	J-0355	J-0277	21.32	200	110	-4.55	0.14	0.0
WM2089C_02	Appin	J-0277	J-0278	8.12	200	110	-4.55	0.14	0.0
WM2089C_03	Appin	J-0278	J_Hyd-A007	52.72	200	110	-4.55	0.14	0.0
WM2089C_04	Appin	J_Hyd-A007	J-0304	888.44	200	110	-4.55	0.14	0.2
WM2090C_01	Appin	J-0015	J_Hyd-A011	1.06	200	110	0.00	0.00	0.0
WM2090C_02	Appin	J_Hyd-A011	WVA008	178.39	200	110	0.00	0.00	0.0
WM2090C_03	Appin	WVA008	J-0219	6.16	200	110	0.00	0.00	0.0
WM2090C_04	Appin	J-0015	WVR026	6.89	200	110	0.00	0.00	0.0
WM2090C_05	Appin	WVR026	J-0246	6.25	200	110	0.00	0.00	0.0
WM2090C_06	Appin	J-0246	J-0639	984.73	200	110	0.00	0.00	0.0
WM5000C	Appin	J-0185	J-0378	85.38	200	110	3.85	0.12	0.0
WM5000_01	Appin	J-0244	J_Hyd-A003	201.84	150	100	0.00	0.00	0.0
WM5000_02	Appin	J-0244	J-0185	6.24	150	100	0.00	0.00	0.0
WM5001C_01	Appin	J-0219	WVA006	138.25	200	110	-2.60	0.08	0.0
WM5001C_02	Appin	WVA006	J_Hyd-A009	5.56	200	110	-2.60	0.08	0.0
WM5001C_03	Appin	J_Hyd-A009	J-0254	6.79	200	110	-2.60	0.08	0.0
WM5001_01	Appin	WVA015	WVA013	125.45	150	100	-1.46	0.08	0.0
WM5001_02	Appin	WVA013	J-0152	11.83	150	100	-1.46	0.08	0.0
WM5001_03	Appin	J-0318	WVA015	14.13	150	100	-1.46	0.08	0.0
WM5002C	Appin	J-0254	J-0140	127.36	200	110	-3.10	0.10	0.0
WM5002_01	Appin	J-0152	J_Hyd-A005	3.94	150	100	-1.29	0.07	0.0
WM5002_02	Appin	J_Hyd-A005	WVA010	106.59	150	100	-1.29	0.07	0.0
WM5002_03	Appin	WVA010	J-0221	14.76	150	100	-1.29	0.07	0.0
WM5003C_01	Appin	J-0140	J_Hyd-A008	3.71	200	110	-3.48	0.11	0.0
WM5003C_02	Appin	J_Hyd-A008	J-0355	96.83	200	110	-3.48	0.11	0.0
WM5003_01	Appin	J-0221	WVA012	5.45	300	120	-1.07	0.02	0.0
WM5003_02	Appin	J_Hyd-A006	WVA012	63.78	150	100	1.07	0.06	0.0
WM5003_03	Appin	J_Hyd-A006	J-0322	26.27	150	100	-1.07	0.06	0.0
WM5004_01	Appin	J-0359	WVA019	17.34	150	100	0.00	0.00	0.0
WM5004_02	Appin	WVA019	J-0280	27.46	150	100	0.00	0.00	0.0
WM5004_03	Appin	J-0280	J-0281	8.22	150	100	0.00	0.00	0.0
WM5005C	Appin	J-0378	WVR028	42.73	200	110	3.72	0.12	0.0
WM5005_01	Appin	J-0119	WVA018	8.26	150	100	0.00	0.00	0.0
WM5005_02	Appin	J_Hyd-A001	J_Hyd-A002	182.10	150	100	0.00	0.00	0.0
WM5005_03	Appin	J_Hyd-A002	WVA021	57.26	150	100	0.00	0.00	0.0
WM5005_04	Appin	WVA021	J-0009	3.68	150	100	0.00	0.00	0.0
WM5005_05	Appin	J-0009	J-0010	0.95	200	110	0.00	0.00	0.0

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM5005_06	Appin	J-0010	J-0378	15.89	200	110	0.00	0.00	0.0
WM5006C_01	Appin	J-0318	J_Hyd-A010	80.91	200	110	-2.60	0.08	0.0
WM5006C_02	Appin	J_Hyd-A010	WVA007	8.74	200	110	-2.60	0.08	0.0
WM5006C_03	Appin	WVA007	J-0219	14.62	200	110	-2.60	0.08	0.0
WM5006_01	Appin	J-0152	WVA014	4.55	150	100	-0.17	0.01	0.0
WM5006_02	Appin	J-0254	WVA005	14.70	150	100	0.17	0.01	0.0
WM5006_03	Appin	WVA005	WVA014	85.73	150	100	0.17	0.01	0.0
WM5008_01	Appin	J-0140	WVA003	15.05	150	100	0.37	0.02	0.0
WM5008_02	Appin	WVA003	J-0361	14.45	150	100	0.37	0.02	0.0
WM5008_03	Appin	J-0361	WVA011	68.77	150	100	0.37	0.02	0.0
WM5008_04	Appin	WVA011	J-0221	7.70	150	100	0.37	0.02	0.0
WM5009_01	Appin	J-0322	J-0323	10.27	150	100	-1.07	0.06	0.0
WM5009_02	Appin	J-0355	WVA001	13.48	150	100	1.07	0.06	0.0
WM5009_03	Appin	J-0323	WVA001	84.78	150	100	-1.07	0.06	0.0
WM5010C_01	Appin	WVA020	J-0359	14.01	200	110	-3.85	0.12	0.0
WM5010C_02	Appin	J-0359	J_Hyd-A004	37.21	200	110	-3.85	0.12	0.0
WM5010C_03	Appin	J_Hyd-A004	WVA016	58.77	200	110	-3.85	0.12	0.0
WM5010C_04	Appin	WVA016	J-0318	10.02	200	110	-3.85	0.12	0.0
WM5010C_05	Appin	WVA020	J-0185	4.51	200	110	3.85	0.12	0.0
WM5011_01	Appin	J-0221	J-0479	58.91	150	100	0.15	0.01	0.0
WM5011_02	Appin	J-0479	J-0480	38.55	150	100	0.15	0.01	0.0
WM5016_01	Appin	J-0480	WVA017	109.22	150	100	0.00	0.00	0.0
WM5016_02	Appin	WVA017	J-0119	3.36	150	100	0.00	0.00	0.0
WM5018	Appin	J-0560	J-0119	104.65	150	100	0.00	0.00	0.0
WM5019C_01	Appin	J-0404	J-0345	19.32	200	110	0.00	0.00	0.0
WM5019C_02	Appin	J-0345	J-0346	12.16	200	110	0.00	0.00	0.0
WM5019C_03	Appin	J-0346	WVA009	109.80	200	110	0.00	0.00	0.0
WM5019C_04	Appin	WVA009	J-0219	5.41	200	110	0.00	0.00	0.0
P-233	Rural	J-0299	J_Hyd-R006E	1.74	150	100	5.09	0.29	0.0
P-235	Rural	J-0634	J-752	4.00	50	130	-0.12	0.06	0.0
P-236	Rural	J-0335	J_Hyd-R005E	15.68	150	100	1.37	0.08	0.0
P-238	Rural	WVR039	J-0525	2.51	200	110	5.13	0.16	0.0
P-239	Rural	J_Hyd-R021M	WVR007	1.46	200	110	-1.90	0.06	0.0
P-937	Rural	J-0519	J-0520	68.34	18	130	0.00	0.00	0.0
P_Hyd-R001E	Rural	J_Hyd-R001E	R001E	4.14	150	100	0.00	0.00	0.0
P_Hyd-R002E	Rural	J_Hyd-R002E	R002E	2.23	150	100	0.00	0.00	0.0
P_Hyd-R003E	Rural	J_Hyd-R003E	R003E	3.03	150	100	0.00	0.00	0.0
P_Hyd-R004E	Rural	J_Hyd-R004E	R004E	6.82	150	100	0.00	0.00	0.0
P_Hyd-R005E	Rural	J_Hyd-R005E	R005E	8.61	150	100	0.00	0.00	0.0
P_Hyd-R006E	Rural	J_Hyd-R006E	R006E	4.58	150	100	0.00	0.00	0.0
P_Hyd-R007E	Rural	J_Hyd-R007E	R007E	3.56	150	100	0.00	0.00	0.0
P_Hyd-R008E	Rural	J_Hyd-R008E	R008E	2.58	150	100	0.00	0.00	0.0
P_Hyd-R009E	Rural	J_Hyd-R009E	R009E	7.00	150	100	0.00	0.00	0.0
P_Hyd-R010E	Rural	J_Hyd-R010E	R010E	2.16	150	100	0.00	0.00	0.0
P_Hyd-R011E	Rural	J_Hyd-R011E	R011E	2.25	150	100	0.00	0.00	0.0
P_Hyd-R012E	Rural	J_Hyd-R012E	R012E	1.76	150	100	0.00	0.00	0.0
P_Hyd-R013E	Rural	J_Hyd-R013E	R013E	5.77	150	100	0.00	0.00	0.0
P_Hyd-R014E	Rural	J_Hyd-R014E	R014E	3.99	150	100	0.00	0.00	0.0
P_Hyd-R015E	Rural	J_Hyd-R015E	R015E	3.40	150	100	0.00	0.00	0.0
P_Hyd-R016E	Rural	J_Hyd-R016E	R016E	6.25	150	100	0.00	0.00	0.0
P_Hyd-R017M	Rural	J_Hyd-R017M	R017M	6.10	150	100	0.00	0.00	0.0
P_Hyd-R018M	Rural	J_Hyd-R018M	R018M	1.92	150	100	0.00	0.00	0.0
P_Hyd-R019M	Rural	J_Hyd-R019M	R019M	0.87	150	100	0.00	0.00	0.0
P_Hyd-R020M	Rural	J_Hyd-R020M	R020M	4.05	150	100	0.00	0.00	0.0
P_Hyd-R021M	Rural	J_Hyd-R021M	R021M	5.88	150	100	0.00	0.00	0.0
P_Hyd-R026E	Rural	J_Hyd-R026E	R026E	3.60	150	100	0.00	0.00	0.0
P_Hyd-R027W	Rural	J_Hyd-R027W	R027W	10.01	150	100	0.00	0.00	0.0
P_Hyd-R028E	Rural	J_Hyd-R028E	R028E	2.63	150	100	0.00	0.00	0.0
P_Hyd-R029W	Rural	J_Hyd-R029W	R029W	161.23	150	100	0.00	0.00	0.0
P_Hyd-R030M	Rural	J_Hyd-R030M	R030M	58.13	150	100	0.00	0.00	0.0
P_Hyd-R031M	Rural	J_Hyd-R031M	R031M	4.46	150	100	0.00	0.00	0.0
P_Hyd-R032M	Rural	J_Hyd-R032M	R032M	15.28	150	100	0.00	0.00	0.0
P_Hyd-R033E	Rural	J_Hyd-R033E	R033E	7.67	150	100	0.00	0.00	0.0
WM1010C_14	Rural	WVR007	WVR008	50.55	200	110	-1.90	0.06	0.0
WM1011C_01	Rural	WVR008	J_Hyd-R020M	457.55	200	110	-1.90	0.06	0.0
WM1011C_02	Rural	J_Hyd-R020M	J_Hyd-R019M	757.63	200	110	-1.90	0.06	0.0
WM1011C_03	Rural	J_Hyd-R019M	J_Hyd-R018M	317.29	200	110	-1.90	0.06	0.0
WM1011C_04	Rural	J_Hyd-R018M	WVR009	881.46	200	110	-1.90	0.06	0.0
WM1011C_05	Rural	J-0086	J-0260	7.07	200	110	-1.90	0.06	0.0
WM1011C_06	Rural	WVR009	J_Hyd-R017M	6.62	200	110	-1.90	0.06	0.0
WM1011C_07	Rural	J_Hyd-R017M	J-0086	2.48	200	110	-1.90	0.06	0.0
WM1011C_08	Rural	PRV-1	J-0260	21.84	300	120	6.91	0.10	0.0
WM1011_01	Rural	WVR050	J-0633	615.40	300	120	4.99	0.07	0.0
WM1011_02	Rural	J-0232	WVR050	5.77	150	100	4.99	0.28	0.0
WM1011_03	Rural	J-0633	J-0643	1830.27	300	120	4.99	0.07	0.1
WM1012C_01	Rural	J-0231	J_Hyd-R031M	80.50	300	120	30.44	0.43	0.1
WM1012C_02	Rural	J_Hyd-R031M	J-0397	294.47	300	120	30.44	0.43	0.2
WM1012C_03	Rural	J-0397	J-0398	18.34	300	120	30.44	0.43	0.0
WM1012C_04	Rural	J-0398	J-0441	604.41	300	120	30.44	0.43	0.5
WM1012C_05	Rural	J-0441	J-0442	24.83	300	120	30.44	0.43	0.0
WM1012C_06	Rural	J-0442	J-0547	90.95	300	120	30.44	0.43	0.1
WM1012C_07	Rural	J-0547	J-0422	1548.63	300	120	30.44	0.43	1.3
WM1012C_08	Rural	J-0422	J-0163	21.99	300	120	30.44	0.43	0.0
WM1012_01	Rural	J-0329	J-0330	11.08	50	130	0.00	0.00	0.0
WM1012_02	Rural	J-0330	J-0300	1185.95	50	130	0.00	0.00	0.0
WM1012_03	Rural	J-0300	J-0301	9.00	50	130	0.00	0.00	0.0
WM1012_04	Rural	J-0301	J-0616	285.01	50	130	0.00	0.00	0.0
WM1013C_01	Rural	J-0164	WVR019	1176.14	300	120	30.44	0.43	1.0
WM1013C_02	Rural	J-0163	J-0164	4.12	300	120	30.44	0.43	0.0
WM1013C_03	Rural	WVR019	J_Hyd-R030M	388.90	300	120	30.44	0.43	0.3
WM1013C_04	Rural	J_Hyd-R030M	J-0170	21.89	300	120	30.44	0.43	0.0
WM1013C_05	Rural	J-0170	J-0171	4.24	300	120	30.44	0.43	0.0
WM1013C_06	Rural	J-0171	J-0379	16.49	300	120	30.44	0.43	0.0
WM1013C_07	Rural	J-0379	J-0149	372.44	300	120	30.44	0.43	0.3
WM1013C_08	Rural	J-0149	J-0150	3.91	300	120	30.44	0.43	0.0
WM1013C_09	Rural	J-0150	J-0129	27.49	300	120	30.44	0.43	0.0
WM1013C_10	Rural	J-0129	J-0130	3.55	300	120	30.44	0.43	0.0
WM1013C_11	Rural	J-0130	J-0595	201.38	300	120	30.44	0.43	0.2
WM1021C_01	Rural	WVR020	J-0577	121.69	300	120	30.44	0.43	0.1

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM1021C_02(1)	Rural	J-0577	J-0519	660.77	300	120	30.44	0.43	0.5
WM1021C_02(2)(1)	Rural	J-0519	J-752	22.88	300	120	30.44	0.43	0.0
WM1026C_01	Rural	J-0408	WVR013	20.55	150	100	0.01	0.00	0.0
WM1026C_02	Rural	WVR013	J-0645	2396.11	150	100	0.01	0.00	0.0
WM1075C_02	Rural	J_Hyd-R029W	J_Hyd-R027W	3137.12	350	120	37.34	0.39	1.8
WM1075C_03	Rural	J_Hyd-R027W	J-0629	4074.92	350	120	37.34	0.39	2.3
WM1075C_04	Rural	J-0629	J-0431	496.33	350	120	37.34	0.39	0.3
WM1075C_05	Rural	J-0431	J-0432	23.51	350	120	37.34	0.39	0.0
WM1075C_06	Rural	J-0432	J-0613	1094.09	350	120	37.34	0.39	0.6
WM1075C_07	Rural	J-0613	J-0416	258.33	350	120	37.34	0.39	0.2
WM1075C_08(1)	Rural	J-0416	J-0466	12.01	300	120	37.34	0.53	0.0
WM1075C_08(2)	Rural	J-0466	WVR010	9.40	300	120	30.44	0.43	0.0
WM1075C_09	Rural	WVR010	J-0231	5.73	300	120	30.44	0.43	0.0
WM1075C_10	Rural	PRV-1	J-0466	31.58	300	120	-6.91	0.10	0.0
WM1086_01	Rural	J-0383	J-0199	63.41	300	120	5.00	0.07	0.0
WM1086_02	Rural	J-0199	J-0200	4.92	300	120	5.00	0.07	0.0
WM1086_03	Rural	J-0200	J-0266	7.51	300	120	5.00	0.07	0.0
WM1086_04	Rural	J-0266	J-0224	8.04	300	120	5.00	0.07	0.0
WM1086_05	Rural	J-0224	J-0225	5.54	300	120	5.00	0.07	0.0
WM1086_06	Rural	J-0225	J-0610	279.39	300	120	5.00	0.07	0.0
WM1086_07	Rural	J-0610	J-0611	236.26	300	120	5.00	0.07	0.0
WM1086_08	Rural	J-0611	J-0626	363.27	300	120	5.00	0.07	0.0
WM1086_09	Rural	J-0626	J-0232	348.32	300	120	5.00	0.07	0.0
WM1086_10	Rural	J-0260	J-0383	17.08	200	110	5.00	0.16	0.0
WM1087_01	Rural	J-0232	WVR051	12.83	200	110	0.01	0.00	0.0
WM1087_02	Rural	WVR051	J-0276	8.01	200	110	0.01	0.00	0.0
WM1087_03	Rural	J-0276	J-0293	8.73	200	110	0.01	0.00	0.0
WM1087_04	Rural	J-0293	J-0365	39.13	200	110	0.01	0.00	0.0
WM1087_05	Rural	J-0365	J-0366	14.54	200	110	0.01	0.00	0.0
WM1087_06	Rural	J-0366	J-0607	301.23	200	110	0.01	0.00	0.0
WM1087_07	Rural	J-0607	J-0206	227.17	200	110	0.01	0.00	0.0
WM1087_08	Rural	J-0206	J-0182	5.10	200	110	0.01	0.00	0.0
WM1087_09	Rural	J-0182	J-0183	4.50	200	110	0.01	0.00	0.0
WM1087_10	Rural	J-0183	J-0233	5.81	200	110	0.01	0.00	0.0
WM1087_11	Rural	J-0233	WVR012	785.82	200	110	0.01	0.00	0.0
WM1087_12	Rural	WVR012	J-0374	15.48	200	110	0.01	0.00	0.0
WM1087_13	Rural	J-0366	J-0329	62.78	50	130	0.00	0.00	0.0
WM1088_01	Rural	J-0374	J-0623	321.50	200	110	0.01	0.00	0.0
WM1088_02	Rural	J-0623	J-0530	924.91	200	110	0.01	0.00	0.0
WM1088_03	Rural	J-0530	WVR014	69.85	200	110	0.01	0.00	0.0
WM1089_01	Rural	WVR014	J-0309	9.37	200	110	0.01	0.00	0.0
WM1089_02(1)	Rural	J-0309	J-0408	31.72	200	110	0.01	0.00	0.0
WM1089_02(2)	Rural	J-0408	J_Hyd-R032M	6.61	200	110	0.00	0.00	0.0
WM1089_03	Rural	J_Hyd-R032M	WVR015	244.84	200	110	0.00	0.00	0.0
WM1089_04	Rural	WVR015	J-0193	5.52	200	110	0.00	0.00	0.0
WM1089_05	Rural	J-0193	J-0194	4.77	200	110	0.00	0.00	0.0
WM1097C_01	Rural	J-0595	J-0596	165.95	300	120	30.44	0.43	0.1
WM1097C_02	Rural	J-0596	J-0614	269.97	300	120	30.44	0.43	0.2
WM1097C_03	Rural	J-0614	J-0617	300.03	300	120	30.44	0.43	0.3
WM1097C_04	Rural	J-0617	J-0392	683.41	300	120	30.44	0.43	0.6
WM1098C	Rural	J-0392	WVR020	538.86	300	120	30.44	0.43	0.4
WM2025_01	Rural	J-0391	J-0356	287.21	150	100	0.00	0.00	0.0
WM2025_02	Rural	J-0356	J-0357	13.93	150	100	0.00	0.00	0.0
WM2025_03	Rural	J-0357	J_Hyd-R033E	230.73	150	100	0.00	0.00	0.0
WM2025_04	Rural	J-0391	J-0392	17.92	150	100	0.00	0.00	0.0
WM2030C_01	Rural	J-0263	J-0207	7.29	200	110	5.13	0.16	0.0
WM2030C_02	Rural	J-0207	J-0090	5.11	200	110	5.13	0.16	0.0
WM2030C_03	Rural	J-0090	WVR039	2.54	200	110	5.13	0.16	0.0
WM2030C_04	Rural	J-0525	WVR060	64.33	150	100	5.13	0.29	0.1
WM2030C_05	Rural	WVR060	J-0369	135.29	150	100	5.13	0.29	0.2
WM2030C_06	Rural	J-0369	J-0020	14.81	150	100	5.13	0.29	0.0
WM2030C_07	Rural	J-0020	J_Hyd-R009E	1.18	150	100	5.13	0.29	0.0
WM2030C_08	Rural	J_Hyd-R009E	J-0604	243.33	150	100	5.13	0.29	0.3
WM2030C_09	Rural	J-0604	J-0605	220.12	150	100	5.13	0.29	0.3
WM2030C_10	Rural	J-0605	J-0257	263.84	150	100	5.13	0.29	0.3
WM2030C_11	Rural	J-0257	WVR040	6.86	150	100	5.13	0.29	0.0
WM2030C_12	Rural	WVR040	J_Hyd-M002	689.84	150	100	5.13	0.29	0.9
WM2036_01	Rural	J-0100	J-0462	239.86	200	110	-11.05	0.35	0.3
WM2036_04	Rural	J-0618	J-0619	303.91	200	110	11.05	0.35	0.3
WM2036_05	Rural	J-0619	J-0624	603.05	200	110	11.05	0.35	0.6
WM2036_06	Rural	J-0624	J-0463	327.67	200	110	11.05	0.35	0.4
WM2036_07	Rural	J-0463	J-0464	30.58	200	110	11.05	0.35	0.0
WM2036_08	Rural	J-0464	J-0461	41.99	200	110	11.05	0.35	0.0
WM2036_09	Rural	J-0461	J-0462	30.21	200	110	11.05	0.35	0.0
WM2037_01	Rural	J-0325	J-0073	26.45	200	110	-11.05	0.35	0.0
WM2037_02	Rural	J-0073	J-0074	2.30	200	110	-11.05	0.35	0.0
WM2037_03	Rural	J-0074	J-0638	1562.44	200	110	-11.05	0.35	1.7
WM2037_04	Rural	J-0638	WVR052	826.51	200	110	-11.05	0.35	0.9
WM2037_05	Rural	WVR052	J-0100	3.90	200	110	-11.05	0.35	0.0
WM2038_01	Rural	J-0376	J-0545	89.85	200	110	-11.05	0.35	0.1
WM2038_02	Rural	J-0545	WVR024	2310.40	200	110	-11.05	0.35	2.5
WM2038_03	Rural	WVR024	J-0210	5.19	200	110	-11.05	0.35	0.0
WM2038_04	Rural	J-0210	J-0325	10.57	200	110	-11.05	0.35	0.0
WM2039_01	Rural	J-688	WVR025	1.73	200	110	6.50	0.21	0.0
WM2039_02	Rural	WVR025	J-0315	9.84	200	110	6.50	0.21	0.0
WM2039_03	Rural	J-0315	J_Hyd-R015E	53.54	200	110	6.50	0.21	0.0
WM2039_05	Rural	J-0592	J-0593	154.11	200	110	6.50	0.21	0.1
WM2039_06	Rural	J-0593	WVR031	431.61	200	110	6.50	0.21	0.2
WM2039_07	Rural	WVR031	J-0362	20.22	200	110	6.50	0.21	0.0
WM2040_01	Rural	J-0362	J_Hyd-R014E	14.45	200	110	6.50	0.21	0.0
WM2040_02	Rural	J_Hyd-R014E	J-0599	560.06	200	110	6.50	0.21	0.2
WM2040_03	Rural	J-0599	J-0600	185.21	200	110	6.50	0.21	0.1
WM2040_04	Rural	J-0600	J-0636	706.37	200	110	6.50	0.21	0.3
WM2040_05	Rural	J-0636	WVR034	947.99	200	110	6.50	0.21	0.4
WM2040_06	Rural	WVR034	J_Hyd-R013E	20.02	200	110	6.50	0.21	0.0
WM2041_01	Rural	J_Hyd-R013E	J-0118	4.50	200	110	1.37	0.04	0.0
WM2041_02	Rural	J-0118	WVR035	3.31	200	110	1.37	0.04	0.0
WM2041_03	Rural	WVR035	J-0341	11.80	150	100	1.37	0.08	0.0
WM2041_04	Rural	J-0341	J_Hyd-R008E	1161.30	150	100	1.37	0.08	0.1

2021 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM2041_05	Rural	J_Hyd-R008E	WVR044	1217.52	150	100	1.37	0.08	0.1
WM2041_06	Rural	WVR044	J-0335	11.48	150	100	1.37	0.08	0.0
WM2042_01	Rural	J-0241	WVR047	6.16	100	100	0.00	0.00	0.0
WM2042_02	Rural	WVR047	J-0117	3.28	100	100	0.00	0.00	0.0
WM2042_03	Rural	J-0117	J-0053	90.84	100	100	0.00	0.00	0.0
WM2042_04	Rural	J-0053	WVR056	1.74	50	100	0.00	0.00	0.0
WM2043_01	Rural	J-0208	J_Hyd-R002E	5.14	150	100	0.00	0.00	0.0
WM2043_02	Rural	J_Hyd-R002E	J-0057	289.87	150	100	0.00	0.00	0.0
WM2043_03	Rural	J-0057	J_Hyd-R003E	1.81	150	100	0.00	0.00	0.0
WM2043_04	Rural	J_Hyd-R003E	J-0282	8.32	150	100	0.00	0.00	0.0
WM2043_05	Rural	J-0282	J_Hyd-R028E	276.99	150	100	0.00	0.00	0.0
WM2047C_02	Rural	WVR053	J-0319	110.95	200	110	3.72	0.12	0.0
WM2047C_03	Rural	J-0319	J_Hyd-R016E	10.19	200	110	3.72	0.12	0.0
WM2047C_04	Rural	J_Hyd-R016E	J-0113	3.18	200	110	3.72	0.12	0.0
WM2047C_05	Rural	J-0113	J-0186	5.93	200	110	3.72	0.12	0.0
WM2048C_01	Rural	J-0186	WVR029	4.53	200	110	3.72	0.12	0.0
WM2048C_02	Rural	WVR029	J-0103	2.95	200	110	3.72	0.12	0.0
WM2048C_03	Rural	J-0103	WVR030	1818.80	200	110	3.72	0.12	0.3
WM2048C_04	Rural	WVR030	WVR032	608.74	200	110	3.72	0.12	0.1
WM2048C_05	Rural	WVR032	J-0151	3.93	200	110	3.72	0.12	0.0
WM2048C_06	Rural	J-0151	J-0215	5.40	200	110	3.72	0.12	0.0
WM2048C_07	Rural	J-0215	J-0077	9.76	200	110	3.72	0.12	0.0
WM2049C_01	Rural	J-0077	J-0078	2.32	200	110	3.72	0.12	0.0
WM2049C_02	Rural	J-0078	WVR033	3.59	200	110	3.72	0.12	0.0
WM2049C_03	Rural	WVR033	J_Hyd-R007E	995.72	200	110	3.72	0.12	0.1
WM2049C_04	Rural	J_Hyd-R007E	J-0352	1408.71	200	110	3.72	0.12	0.2
WM2049C_05	Rural	J-0019	WVR046	1.14	200	110	-3.72	0.12	0.0
WM2049C_06	Rural	WVR046	J-0110	3.14	200	110	-3.72	0.12	0.0
WM2049C_07	Rural	J-0110	J-0352	13.14	200	110	-3.72	0.12	0.0
WM2089C_05	Rural	J-0304	J-0137	9.13	200	110	-4.55	0.14	0.0
WM2089C_06	Rural	J-0137	J-0138	3.61	200	110	-4.55	0.14	0.0
WM2089C_07(1)	Rural	J-0138	J-688	5.16	200	110	-4.55	0.14	0.0
WM2089C_07(2)	Rural	J-688	J-0376	10.48	200	110	-11.05	0.35	0.0
WM2097_01	Rural	J-0100	WVR024	2.85	100	100	0.00	0.00	0.0
WM2097_02	Rural	WVR024	J-0625	347.23	100	100	0.00	0.00	0.0
WM2111C_01	Rural	J_Hyd-R006E	J-0064	8.81	150	100	5.09	0.29	0.0
WM2111C_02	Rural	J-0064	WVR042	1.98	150	100	5.09	0.29	0.0
WM2111C_03	Rural	WVR042	WVM032	932.63	150	100	5.09	0.29	1.2
WM2111_01	Rural	J-0405	J-0631	583.42	200	110	5.13	0.16	0.2
WM2111_02	Rural	J-0631	J-0563	549.68	200	110	5.13	0.16	0.1
WM2111_03	Rural	J-0563	J-0536	105.89	200	110	5.13	0.16	0.0
WM2111_04	Rural	J-0536	J_Hyd-R010E	76.85	200	110	5.13	0.16	0.0
WM2111_05	Rural	J_Hyd-R010E	WVR038	3.57	200	110	5.13	0.16	0.0
WM2111_06	Rural	WVR038	J-0243	6.22	200	110	5.13	0.16	0.0
WM2111_07	Rural	J-0243	J-0370	14.97	200	110	5.13	0.16	0.0
WM2111_08	Rural	J-0370	J-0263	36.29	200	110	5.13	0.16	0.0
WM2112C_01	Rural	J_Hyd-R005E	WVR043	17.41	150	100	5.09	0.29	0.0
WM2112C_02	Rural	WVR043	J-0326	1341.21	150	100	5.09	0.29	1.7
WM2112C_03	Rural	J-0326	J-0298	10.58	150	100	5.09	0.29	0.0
WM2112C_04	Rural	J-0298	J-0299	8.97	150	100	5.09	0.29	0.0
WM2112_01	Rural	J_Hyd-R013E	WVR036	20.22	200	110	5.13	0.16	0.0
WM2112_02	Rural	WVR036	J_Hyd-R012E	11.04	200	110	5.13	0.16	0.0
WM2112_03	Rural	J_Hyd-R012E	J-0582	131.98	200	110	5.13	0.16	0.0
WM2112_04	Rural	J-0582	J-0573	1091.55	200	110	5.13	0.16	0.3
WM2112_05	Rural	J-0573	J-0574	114.04	200	110	5.13	0.16	0.0
WM2112_06	Rural	J-0574	J_Hyd-R011E	120.36	200	110	5.13	0.16	0.0
WM2112_07	Rural	J_Hyd-R011E	J-0351	12.71	200	110	5.13	0.16	0.0
WM2112_08	Rural	J-0351	WVR037	15.56	200	110	5.13	0.16	0.0
WM2112_09	Rural	WVR037	J-0405	20.43	200	110	5.13	0.16	0.0
WM2113C_01	Rural	J_Hyd-R004E	J_Hyd-R005E	813.28	150	100	3.72	0.21	0.6
WM2113C_02	Rural	WVR054	WVR055	86.32	150	100	-3.72	0.21	0.1
WM2113C_03	Rural	WVR055	J-0483	97.84	150	100	-3.72	0.21	0.1
WM2113C_04	Rural	WVR054	J_Hyd-R004E	21.71	150	100	3.72	0.21	0.0
WM2113C_05	Rural	J-0483	J-0484	39.50	150	100	-3.72	0.21	0.0
WM2113C_06	Rural	J-0484	WVR045	285.24	150	100	-3.72	0.21	0.2
WM2113C_07	Rural	WVR045	J-0019	39.17	150	100	-3.72	0.21	0.0
WM2114C	Rural	J-0208	J_Hyd-R001E	498.34	150	100	0.00	0.00	0.0
WM2114_01	Rural	J-0077	J_Hyd-R026E	4.87	200	110	0.00	0.00	0.0
WM2114_02	Rural	J_Hyd-R026E	J-0637	713.60	200	110	0.00	0.00	0.0
WM2118C	Rural	J-0241	J-0208	215.87	150	100	0.00	0.00	0.0
WM2119C	Rural	J-0019	J-0241	176.56	150	100	0.00	0.00	0.0

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0003	Glencoe	0.00	220.18	263.0	419
J-0004	Glencoe	0.00	221.47	262.8	404
J-0005	Glencoe	0.00	220.94	262.9	411
J-0006	Glencoe	0.00	219.32	264.0	437
J-0007	Glencoe	0.00	219.32	264.0	438
J-0011	Glencoe	0.00	219.21	263.1	430
J-0013	Glencoe	0.00	219.32	264.0	438
J-0014	Glencoe	0.00	219.71	263.0	424
J-0017	Glencoe	0.00	219.32	264.0	438
J-0025	Glencoe	0.00	221.81	262.9	402
J-0032	Glencoe	0.00	221.02	263.0	411
J-0036	Glencoe	0.00	220.75	262.9	412
J-0038	Glencoe	0.00	219.48	264.0	436
J-0039	Glencoe	0.00	219.48	264.0	436
J-0044	Glencoe	0.00	221.03	262.9	409
J-0045	Glencoe	0.00	221.03	262.9	409
J-0047	Glencoe	0.00	219.32	264.0	438
J-0048	Glencoe	0.00	219.89	263.5	427
J-0049	Glencoe	0.00	219.89	263.5	427
J-0054	Glencoe	1.40	222.07	262.8	398
J-0059	Glencoe	0.00	221.53	263.0	405
J-0060	Glencoe	0.00	221.52	262.9	405
J-0063	Glencoe	0.00	219.52	263.1	426
J-0066	Glencoe	0.00	219.37	264.2	439
J-0067	Glencoe	0.99	219.37	264.2	439
J-0070	Glencoe	0.00	220.30	262.9	417
J-0071	Glencoe	0.00	221.39	262.8	405
J-0072	Glencoe	0.00	221.47	262.8	404
J-0075	Glencoe	0.00	219.89	263.5	427
J-0076	Glencoe	0.00	221.37	262.9	406
J-0080	Glencoe	0.00	219.03	263.1	432
J-0084	Glencoe	0.00	221.64	262.9	404
J-0089	Glencoe	0.00	218.74	263.1	434
J-0091	Glencoe	0.00	219.67	263.1	425
J-0093	Glencoe	0.00	219.21	263.1	430
J-0094	Glencoe	0.00	219.02	263.1	431
J-0097	Glencoe	0.00	220.18	263.0	419
J-0098	Glencoe	0.00	222.46	262.8	395
J-0099	Glencoe	0.00	220.30	262.9	417
J-0101	Glencoe	0.00	220.52	264.2	428
J-0104	Glencoe	0.00	219.02	263.1	431
J-0106	Glencoe	0.00	220.30	262.9	417
J-0107	Glencoe	1.08	219.71	263.0	424
J-0111	Glencoe	0.00	220.46	263.0	416
J-0115	Glencoe	0.00	221.64	262.9	404
J-0116	Glencoe	0.00	221.14	263.0	410
J-0123	Glencoe	0.00	219.89	263.5	426
J-0124	Glencoe	0.00	221.86	262.9	401
J-0126	Glencoe	0.00	222.19	263.0	400
J-0128	Glencoe	0.00	220.36	263.0	417
J-0134	Glencoe	0.00	221.58	262.9	404
J-0135	Glencoe	0.00	221.58	262.9	404
J-0139	Glencoe	0.00	220.94	262.9	411
J-0144	Glencoe	1.35	220.30	262.9	417
J-0145	Glencoe	0.00	219.32	264.0	438
J-0146	Glencoe	2.12	219.32	264.0	438
J-0165	Glencoe	0.00	222.40	262.8	395
J-0166	Glencoe	0.00	222.18	262.8	398
J-0168	Glencoe	0.00	218.80	264.0	443
J-0169	Glencoe	0.00	219.08	264.0	440
J-0172	Glencoe	0.00	220.46	263.0	416
J-0175	Glencoe	1.66	220.69	262.9	413
J-0178	Glencoe	0.00	220.82	262.9	412
J-0179	Glencoe	0.00	221.40	262.9	406
J-0180	Glencoe	0.00	219.24	264.1	439
J-0187	Glencoe	1.94	219.29	263.1	429
J-0191	Glencoe	0.00	219.87	263.0	422
J-0198	Glencoe	1.77	220.60	262.8	413
J-0201	Glencoe	0.00	221.07	262.9	409
J-0202	Glencoe	0.00	219.58	264.1	435
J-0205	Glencoe	0.00	219.67	263.1	425
J-0211	Glencoe	0.00	220.94	262.9	411
J-0213	Glencoe	0.00	220.33	262.9	417
J-0222	Glencoe	1.65	221.83	262.9	402
J-0227	Glencoe	0.00	218.72	263.2	435
J-0235	Glencoe	1.77	219.58	262.9	424
J-0236	Glencoe	0.00	221.53	263.0	405
J-0239	Glencoe	0.00	220.46	263.0	416
J-0252	Glencoe	0.00	221.64	262.9	404

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0255	Glencoe	0.00	220.66	262.9	413
J-0256	Glencoe	0.00	220.66	262.9	413
J-0262	Glencoe	0.00	218.81	263.3	435
J-0264	Glencoe	0.00	221.34	262.9	406
J-0265	Glencoe	0.00	221.14	263.0	410
J-0267	Glencoe	2.44	220.89	263.5	417
J-0271	Glencoe	0.00	221.37	262.9	406
J-0272	Glencoe	0.00	220.69	262.9	413
J-0273	Glencoe	0.00	220.69	262.9	413
J-0275	Glencoe	0.00	218.80	264.0	443
J-0279	Glencoe	0.00	219.07	263.0	429
J-0284	Glencoe	2.16	221.40	262.9	406
J-0285	Glencoe	0.00	221.40	262.9	406
J-0286	Glencoe	0.00	220.95	262.9	411
J-0288	Glencoe	0.00	219.95	263.0	421
J-0291	Glencoe	0.00	220.39	262.8	415
J-0303	Glencoe	0.00	220.18	263.0	419
J-0306	Glencoe	0.79	220.39	262.8	415
J-0316	Glencoe	0.00	219.71	263.0	424
J-0321	Glencoe	0.00	218.44	263.0	436
J-0324	Glencoe	0.00	220.30	262.9	417
J-0331	Glencoe	0.00	220.78	262.9	412
J-0332	Glencoe	0.00	221.43	262.9	406
J-0333	Glencoe	0.00	220.63	262.9	413
J-0334	Glencoe	0.00	220.51	262.9	415
J-0336	Glencoe	0.00	220.94	262.9	411
J-0337	Glencoe	0.00	219.08	264.1	441
J-0338	Glencoe	0.00	219.08	264.1	441
J-0339	Glencoe	0.00	221.94	262.8	400
J-0340	Glencoe	0.00	221.94	262.8	400
J-0342	Glencoe	0.00	220.51	262.9	415
J-0344	Glencoe	0.00	221.97	262.9	400
J-0353	Glencoe	0.00	221.46	262.9	405
J-0354	Glencoe	2.06	220.21	263.0	418
J-0358	Glencoe	0.00	218.83	263.1	433
J-0360	Glencoe	0.00	220.66	262.9	414
J-0364	Glencoe	0.00	222.05	262.8	399
J-0367	Glencoe	0.00	221.47	262.9	405
J-0368	Glencoe	0.00	221.72	262.9	402
J-0373	Glencoe	0.00	221.20	263.0	409
J-0381	Glencoe	0.00	220.68	262.8	412
J-0384	Glencoe	0.00	220.86	262.9	411
J-0389	Glencoe	0.00	220.58	262.8	413
J-0390	Glencoe	0.00	221.48	262.8	405
J-0402	Glencoe	0.00	222.13	262.8	398
J-0409	Glencoe	1.19	220.12	262.9	419
J-0410	Glencoe	0.00	220.77	262.9	412
J-0421	Glencoe	1.60	219.44	263.0	427
J-0424	Glencoe	0.00	221.29	262.9	408
J-0425	Glencoe	0.00	220.56	262.9	415
J-0427	Glencoe	3.07	221.50	262.8	404
J-0435	Glencoe	0.00	220.73	262.9	412
J-0437	Glencoe	0.00	221.47	262.9	405
J-0447	Glencoe	0.00	219.72	263.0	423
J-0449	Glencoe	0.00	220.38	262.9	416
J-0450	Glencoe	0.00	220.38	262.9	416
J-0451	Glencoe	0.00	220.75	263.0	413
J-0452	Glencoe	0.00	222.13	262.8	398
J-0468	Glencoe	0.00	220.56	263.0	415
J-0469	Glencoe	0.00	220.51	263.0	416
J-0481	Glencoe	0.70	221.57	262.9	404
J-0488	Glencoe	0.00	219.85	263.0	422
J-0494	Glencoe	0.00	219.65	264.3	437
J-0497	Glencoe	0.00	220.51	262.9	415
J-0503	Glencoe	0.00	220.59	262.9	414
J-0507	Glencoe	0.00	221.01	262.9	410
J-0524	Glencoe	0.00	220.61	262.9	414
J-0529	Glencoe	0.68	220.34	262.9	417
J-0533	Glencoe	0.00	220.79	262.9	412
J-0535	Glencoe	0.00	220.56	263.0	415
J-0539	Glencoe	0.45	220.67	262.7	412
J-0543	Glencoe	0.00	221.46	262.8	405
J-0544	Glencoe	0.00	219.48	264.0	436
J-0546	Glencoe	1.66	221.52	262.9	405
J-0554	Glencoe	0.00	221.27	262.8	407
J-0559	Glencoe	0.00	219.25	263.2	430
J-0561	Glencoe	0.00	221.13	262.8	408
J-0564	Glencoe	0.00	220.73	262.9	412
J-0566	Glencoe	0.00	221.47	262.9	405

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0568	Glencoe	0.00	218.97	263.0	431
J-0579	Glencoe	0.00	221.75	262.8	402
J-0580	Glencoe	0.00	221.33	262.9	407
J-0581	Glencoe	0.00	221.45	262.9	405
J-0584	Glencoe	0.00	220.81	262.9	412
J-0586	Glencoe	3.89	221.75	262.9	403
J-0590	Glencoe	0.00	219.80	263.1	424
J-0602	Glencoe	0.00	221.75	262.8	402
J-0627	Glencoe	1.65	221.20	262.8	407
J-0632	Glencoe	0.00	219.75	262.9	423
J-0635	Glencoe	0.00	222.08	264.4	414
J-0646	Glencoe	0.00	214.32	277.6	619
J-690	Glencoe	0.00	219.24	264.1	439
J-692	Glencoe	0.00	221.27	262.8	407
J-695	Glencoe	0.00	221.39	262.9	406
J-698	Glencoe	0.00	221.97	262.9	400
J-700	Glencoe	0.00	221.63	262.8	403
J-703	Glencoe	0.00	220.68	262.8	412
J-705	Glencoe	0.00	221.20	262.8	407
J-707	Glencoe	0.00	221.01	262.9	410
J-709	Glencoe	0.00	219.02	263.1	431
J-713	Glencoe	0.00	220.91	262.9	411
J-715	Glencoe	0.00	220.94	262.9	411
J-718	Glencoe	0.00	220.68	262.9	413
J-720	Glencoe	1.62	221.39	262.9	406
J-722	Glencoe	0.00	222.21	262.8	397
J-724	Glencoe	0.00	222.40	262.8	395
J-727	Glencoe	0.00	222.40	262.8	395
J-734	Glencoe	0.00	220.09	263.1	420
J-735	Glencoe	0.00	220.09	263.0	420
J-753	Glencoe	0.00	220.54	262.9	414
J-759	Glencoe	0.00	220.47	262.9	415
J-760	Glencoe	0.00	220.38	262.9	416
J-761	Glencoe	0.00	220.22	262.9	417
J-762	Glencoe	0.00	221.99	262.9	400
J-764	Glencoe	0.00	219.44	262.9	425
J-765	Glencoe	0.00	219.44	262.9	425
J-766	Glencoe	0.00	219.88	262.9	421
J-767	Glencoe	0.00	219.50	262.9	424
J-768	Glencoe	0.00	219.49	262.9	424
J-769	Glencoe	0.00	219.58	262.9	424
J-770	Glencoe	0.00	219.69	262.9	423
J-771	Glencoe	0.00	219.83	262.9	421
J-772	Glencoe	0.00	219.83	262.9	421
J-773	Glencoe	0.00	219.88	262.9	421
J-775	Glencoe	0.00	219.80	262.9	421
J-777	Glencoe	0.00	219.87	262.9	421
J-778	Glencoe	0.00	219.73	262.9	422
J-779	Glencoe	0.00	219.26	263.0	428
J-780	Glencoe	0.00	220.29	263.0	418
J-781	Glencoe	0.00	218.70	263.0	434
J-782	Glencoe	0.00	218.55	263.0	435
J-783	Glencoe	0.00	218.42	263.0	437
J-784	Glencoe	0.00	218.23	263.0	439
J-785	Glencoe	0.00	217.92	263.1	442
J-786	Glencoe	0.00	217.71	263.1	444
J-787	Glencoe	0.00	217.74	263.1	444
J-788	Glencoe	0.00	217.66	263.1	445
J-789	Glencoe	0.00	217.51	263.2	447
J-790	Glencoe	0.00	217.28	263.2	449
J-791	Glencoe	0.00	217.22	263.2	450
J-792	Glencoe	0.00	217.28	263.3	450
J-793	Glencoe	0.00	217.38	263.3	449
J-794	Glencoe	0.00	217.70	263.3	447
J-795	Glencoe	0.00	218.09	263.4	443
J-796	Glencoe	0.00	218.22	263.4	442
J-797	Glencoe	0.00	218.88	263.4	436
J-798	Glencoe	0.00	219.44	263.5	431
J-799	Glencoe	0.00	219.63	263.5	429
J-800	Glencoe	0.00	221.39	262.9	406
J-801	Glencoe	0.00	220.08	263.0	420
J-803	Glencoe	0.00	218.52	263.0	435
J-804	Glencoe	0.00	218.51	263.0	436
J-805	Glencoe	0.00	218.60	263.0	435
J-806	Glencoe	0.00	218.14	263.1	440
J-807	Glencoe	0.00	218.08	263.1	440
J-810	Glencoe	0.00	218.27	263.1	438
J-812	Glencoe	0.00	217.74	263.1	444
J-813	Glencoe	0.00	217.74	263.1	444

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-814	Glencoe	0.00	217.91	263.1	442
J-816	Glencoe	0.00	217.74	263.1	444
J-817	Glencoe	0.00	217.93	263.1	442
J-818	Glencoe	0.00	217.37	263.2	448
J-819	Glencoe	0.00	217.41	263.2	448
J-820	Glencoe	0.00	217.56	263.2	446
J-821	Glencoe	0.00	217.29	263.3	450
J-822	Glencoe	0.00	218.81	263.3	435
J-823	Glencoe	0.00	218.81	263.3	435
J-824	Glencoe	0.00	218.90	263.3	434
J-826	Glencoe	0.00	217.90	263.4	445
J-827	Glencoe	0.00	219.58	263.5	429
J_Hyd-G001	Glencoe	0.00	220.49	262.9	415
J_Hyd-G002	Glencoe	0.00	219.67	263.1	425
J_Hyd-G003	Glencoe	0.00	221.48	263.0	406
J_Hyd-G004	Glencoe	0.00	221.23	263.0	409
J_Hyd-G005	Glencoe	0.00	222.23	262.8	397
J_Hyd-G006	Glencoe	0.00	222.40	262.8	395
J_Hyd-G008	Glencoe	0.00	220.68	262.8	412
J_Hyd-G009	Glencoe	0.00	221.54	262.8	404
J_Hyd-G010	Glencoe	0.00	221.47	262.8	404
J_Hyd-G011	Glencoe	0.00	219.92	263.0	422
J_Hyd-G012	Glencoe	0.00	220.18	263.0	419
J_Hyd-G013	Glencoe	0.00	221.02	263.0	411
J_Hyd-G014	Glencoe	0.00	221.20	263.0	409
J_Hyd-G016	Glencoe	0.00	221.03	262.9	409
J_Hyd-G018	Glencoe	0.00	220.42	262.9	416
J_Hyd-G019	Glencoe	0.00	220.44	262.9	416
J_Hyd-G020	Glencoe	0.00	221.28	262.8	407
J_Hyd-G021	Glencoe	0.00	221.03	262.9	409
J_Hyd-G022	Glencoe	0.00	219.49	263.0	425
J_Hyd-G023	Glencoe	0.00	220.09	263.0	420
J_Hyd-G024	Glencoe	0.00	221.83	263.0	403
J_Hyd-G025	Glencoe	0.00	221.53	263.0	405
J_Hyd-G026	Glencoe	0.00	221.14	262.9	408
J_Hyd-G027	Glencoe	0.00	221.43	262.9	406
J_Hyd-G028	Glencoe	0.00	221.41	262.9	406
J_Hyd-G029	Glencoe	0.00	220.02	263.0	420
J_Hyd-G041	Glencoe	0.00	220.89	262.8	410
J_Hyd-G042	Glencoe	0.00	220.42	262.8	415
J_Hyd-G043	Glencoe	0.00	220.64	262.8	413
J_Hyd-G044	Glencoe	0.00	220.85	262.9	411
J_Hyd-G045	Glencoe	0.00	221.65	262.9	403
J_Hyd-G046	Glencoe	0.00	221.40	262.9	406
J_Hyd-G047	Glencoe	0.00	221.04	262.9	409
J_Hyd-G048	Glencoe	0.00	220.30	262.9	417
J_Hyd-G049	Glencoe	0.00	220.49	262.9	415
J_Hyd-G050	Glencoe	0.00	221.05	262.9	409
J_Hyd-G051	Glencoe	0.00	221.15	262.9	408
J_Hyd-G052	Glencoe	0.00	220.65	262.9	413
J_Hyd-G053	Glencoe	0.00	220.83	262.9	412
J_Hyd-G056	Glencoe	0.00	220.90	262.9	411
J_Hyd-G057	Glencoe	0.00	220.89	262.9	411
J_Hyd-G058	Glencoe	0.00	221.20	262.8	407
J_Hyd-G059	Glencoe	0.00	219.83	263.0	423
J_Hyd-G060	Glencoe	0.00	219.29	263.1	429
J_Hyd-G061	Glencoe	0.00	219.19	263.1	430
J_Hyd-G062	Glencoe	0.00	220.50	264.0	426
J_Hyd-G063	Glencoe	0.00	220.84	262.8	411
J_Hyd-G064	Glencoe	0.00	219.52	263.1	426
J_Hyd-G065	Glencoe	0.00	219.55	263.1	426
J_Hyd-G066	Glencoe	0.00	220.23	263.0	419
J_Hyd-G067	Glencoe	0.00	219.02	263.1	431
J_Hyd-G068	Glencoe	0.00	218.84	263.0	432
J_Hyd-G069	Glencoe	0.00	221.96	262.8	400
J_Hyd-G070	Glencoe	0.00	221.63	262.8	403
J_Hyd-G071	Glencoe	0.00	220.68	262.8	412
J_Hyd-G073	Glencoe	0.00	220.65	262.9	413
J_Hyd-G074	Glencoe	0.00	220.63	262.9	413
J_Hyd-G075	Glencoe	0.00	221.31	262.9	407
J_Hyd-G076	Glencoe	0.00	221.52	262.9	405
J_Hyd-G077	Glencoe	0.00	221.15	262.8	408
J_Hyd-G078	Glencoe	0.00	219.48	264.0	436
J_Hyd-G079	Glencoe	0.00	218.83	263.3	435
J_Hyd-G080	Glencoe	0.00	221.89	262.9	401
J_Hyd-G081	Glencoe	0.00	218.72	263.2	435
J_Hyd-G082	Glencoe	0.00	222.21	262.8	397
J_Hyd-G083	Glencoe	0.00	220.52	264.2	428
J_Hyd-G084	Glencoe	0.00	218.50	264.2	447

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-G085	Glencoe	0.00	221.05	262.9	409
J_Hyd-G086	Glencoe	0.00	221.52	262.9	405
J_Hyd-G087	Glencoe	0.00	222.13	262.8	398
J_Hyd-G088	Glencoe	0.00	218.78	263.0	433
J_Hyd-G089	Glencoe	0.00	219.14	263.0	429
J_Hyd-G090	Glencoe	0.00	218.83	263.0	432
J_Hyd-G091	Glencoe	0.00	218.54	263.0	435
J_Hyd-G092	Glencoe	0.00	221.27	262.8	407
J_Hyd-G093	Glencoe	0.00	220.52	263.0	416
J_Hyd-G094	Glencoe	0.00	220.33	262.9	417
J_Hyd-G095	Glencoe	0.00	221.89	262.8	400
J_Hyd-G096	Glencoe	0.00	221.27	262.8	406
J_Hyd-G097	Glencoe	0.00	221.43	262.9	405
J_Hyd-G098	Glencoe	0.00	222.70	262.8	392
J_Hyd-H_T-718	Glencoe	0.00	219.72	263.4	428
WV-348	Glencoe	0.00	222.18	262.8	398
WVG001	Glencoe	0.00	221.52	262.9	405
WVG002	Glencoe	0.00	220.69	262.9	413
WVG003	Glencoe	0.00	220.69	262.9	413
WVG004	Glencoe	0.00	220.69	262.9	413
WVG010	Glencoe	0.00	220.30	262.9	417
WVG010	Glencoe	0.00	218.74	263.1	434
WVG011	Glencoe	0.00	220.30	262.9	417
WVG012	Glencoe	0.00	220.60	262.9	414
WVG013	Glencoe	0.00	220.91	262.9	411
WVG015	Glencoe	0.00	220.81	262.9	412
WVG018	Glencoe	0.00	220.30	262.9	417
WVG019	Glencoe	0.00	220.30	262.9	417
WVG020	Glencoe	0.00	220.83	262.9	412
WVG022	Glencoe	0.00	221.20	262.9	408
WVG027	Glencoe	0.00	221.37	262.9	406
WVG028	Glencoe	0.00	221.31	262.9	407
WVG029	Glencoe	0.00	221.64	262.9	404
WVG030	Glencoe	0.00	221.21	262.9	408
WVG032	Glencoe	0.00	221.00	262.9	410
WVG035	Glencoe	0.00	220.82	262.9	412
WVG036	Glencoe	0.00	220.82	262.9	412
WVG037	Glencoe	0.00	220.78	262.9	412
WVG038	Glencoe	0.00	220.94	262.9	411
WVG039	Glencoe	0.00	220.94	262.9	411
WVG040	Glencoe	0.00	220.94	262.9	411
WVG041	Glencoe	0.00	220.94	262.9	411
WVG042	Glencoe	0.00	220.94	262.9	411
WVG043	Glencoe	0.00	221.07	262.9	409
WVG044	Glencoe	0.00	221.07	262.9	409
WVG045	Glencoe	0.00	221.44	262.9	406
WVG046	Glencoe	0.00	221.52	262.9	405
WVG047	Glencoe	0.00	221.40	262.9	406
WVG048	Glencoe	0.00	221.65	262.9	403
WVG049	Glencoe	0.00	221.65	262.9	403
WVG050	Glencoe	0.00	221.39	262.9	406
WVG051	Glencoe	0.00	220.88	262.9	411
WVG052	Glencoe	0.00	220.75	262.9	412
WVG053	Glencoe	0.00	220.37	262.8	415
WVG054	Glencoe	0.00	220.60	262.8	413
WVG055	Glencoe	0.00	220.65	262.8	413
WVG056	Glencoe	0.00	220.39	262.8	415
WVG057	Glencoe	0.00	221.86	262.9	401
WVG058	Glencoe	0.00	221.52	262.9	405
WVG059	Glencoe	0.00	221.52	262.9	405
WVG061	Glencoe	0.00	221.43	262.9	406
WVG064	Glencoe	0.00	221.03	262.9	409
WVG069	Glencoe	0.00	221.89	262.9	401
WVG070	Glencoe	0.00	221.83	262.9	402
WVG071	Glencoe	0.00	221.83	262.9	402
WVG074	Glencoe	1.82	221.48	262.8	405
WVG085	Glencoe	0.00	221.35	262.9	406
WVG086	Glencoe	0.00	221.47	262.8	404
WVG087	Glencoe	0.00	221.20	263.0	409
WVG090	Glencoe	0.00	220.66	263.0	414
WVG091	Glencoe	0.00	220.36	263.0	417
WVG093	Glencoe	0.00	220.18	263.0	419
WVG094	Glencoe	0.00	219.87	263.0	422
WVG096	Glencoe	0.00	219.71	263.0	424
WVG097	Glencoe	0.00	219.72	263.0	424
WVG099	Glencoe	0.00	220.09	263.0	420
WVG100	Glencoe	0.00	220.09	263.0	420
WVG101	Glencoe	0.00	219.67	263.1	425
WVG102	Glencoe	0.00	219.67	263.1	425

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVG103	Glencoe	0.00	219.67	263.1	425
WVG104	Glencoe	0.00	219.29	263.1	429
WVG105	Glencoe	0.00	219.29	263.1	429
WVG106	Glencoe	0.00	219.52	263.1	426
WVG107	Glencoe	0.00	219.52	263.1	426
WVG108	Glencoe	0.00	218.74	263.1	434
WVG109	Glencoe	0.00	218.74	263.1	434
WVG113	Glencoe	0.00	219.67	263.1	425
WVG116	Glencoe	0.00	219.80	262.9	422
WVG117	Glencoe	0.00	220.25	262.9	418
WVG120	Glencoe	0.00	218.73	263.2	435
WVG122	Glencoe	0.00	220.89	263.5	417
WVG129	Glencoe	0.00	220.46	263.0	416
WVG130	Glencoe	0.00	220.46	263.0	416
WVG131	Glencoe	0.00	220.46	263.0	416
WVG132	Glencoe	0.00	219.02	263.1	431
WVG133	Glencoe	0.00	219.02	263.1	431
WVG139	Glencoe	0.00	219.72	263.5	428
WVG140	Glencoe	0.00	219.89	263.5	427
WVG143	Glencoe	0.00	219.32	264.0	438
WVG147	Glencoe	0.00	218.60	263.0	435
WVG148	Glencoe	0.00	218.97	263.0	430
WVG149	Glencoe	0.00	219.95	263.0	421
WVG150	Glencoe	0.00	219.40	263.0	427
WVG151	Glencoe	0.00	218.54	263.0	435
WVG152	Glencoe	0.00	221.63	262.8	403
WVG153	Glencoe	0.00	222.46	262.8	395
WVG158	Glencoe	0.00	221.74	262.8	402
WVG159	Glencoe	0.00	222.07	262.8	398
WVG161	Glencoe	0.00	220.95	262.9	411
WVG164	Glencoe	0.00	221.63	262.8	403
WVG165	Glencoe	0.00	221.86	262.8	401
WVG169	Glencoe	0.00	221.97	262.9	400
WVG170	Glencoe	0.00	221.61	262.9	404
WVG171	Glencoe	0.00	221.81	262.9	402
WVG172	Glencoe	0.00	221.64	262.9	404
WVG175	Glencoe	0.00	221.83	262.9	402
WVG181	Glencoe	0.00	219.21	263.1	430
WVG183	Glencoe	0.00	219.03	263.1	432
WVG185	Glencoe	0.00	219.58	262.9	424
WVG186	Glencoe	0.00	220.09	263.0	420
WVG187	Glencoe	0.00	219.62	263.1	425
WVG188	Glencoe	0.00	221.14	263.0	410
WVG189	Glencoe	0.00	220.09	263.0	419
WVG190	Glencoe	1.32	219.29	263.0	428
WVG191	Glencoe	0.00	218.72	263.2	435
WVG192	Glencoe	0.00	218.72	263.2	435
WVG193	Glencoe	0.00	219.89	263.5	427
WVG196	Glencoe	0.00	219.58	263.8	432
WVG197	Glencoe	0.00	219.58	264.1	435
WVG199	Glencoe	0.00	221.53	263.0	405
WVG200	Glencoe	0.00	221.46	262.9	405
WVR021	Glencoe	0.00	219.38	264.3	440
WVR022	Glencoe	0.00	219.48	264.0	436
J-0037	Melborne	0.00	221.36	253.7	317
J-0065	Melborne	0.00	221.95	253.7	311
J-0105	Melborne	0.00	221.78	253.7	312
J-0108	Melborne	0.00	222.00	253.7	310
J-0109	Melborne	1.23	222.00	253.7	310
J-0125	Melborne	0.00	221.88	253.7	311
J-0156	Melborne	0.00	222.65	253.7	304
J-0157	Melborne	0.00	222.65	253.7	304
J-0158	Melborne	0.00	221.85	253.7	312
J-0159	Melborne	0.00	221.86	253.7	312
J-0176	Melborne	0.00	219.99	253.7	330
J-0177	Melborne	1.26	220.58	253.7	324
J-0189	Melborne	0.00	221.71	253.7	313
J-0192	Melborne	0.00	221.15	253.7	319
J-0203	Melborne	0.00	221.35	253.7	317
J-0230	Melborne	1.41	222.96	253.7	301
J-0237	Melborne	0.00	221.35	253.7	317
J-0248	Melborne	0.00	221.91	253.7	311
J-0249	Melborne	1.35	221.91	253.7	311
J-0312	Melborne	0.00	221.84	253.7	312
J-0396	Melborne	0.00	221.53	253.7	315
J-0403	Melborne	0.00	221.78	253.7	312
J-0407	Melborne	1.37	220.70	253.7	323
J-0413	Melborne	0.00	221.82	253.7	312
J-0414	Melborne	0.00	221.49	253.7	316

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0430	Melborne	0.00	221.36	253.7	317
J-0434	Melborne	0.00	221.75	253.7	313
J-0476	Melborne	0.00	223.00	253.7	300
J-0493	Melborne	0.00	219.69	253.7	333
J-0498	Melborne	0.00	222.22	253.7	308
J-0500	Melborne	0.00	222.24	253.7	308
J-0502	Melborne	0.00	221.77	253.7	312
J-0531	Melborne	0.00	222.32	253.8	308
J-0639	Melborne	0.00	225.41	255.9	298
J_Hyd-M002	Melborne	0.00	219.00	254.0	342
J_Hyd-M003	Melborne	0.00	219.73	253.8	334
J_Hyd-M004	Melborne	0.00	221.15	253.7	319
J_Hyd-M005	Melborne	0.00	221.44	253.7	316
J_Hyd-M006	Melborne	0.00	222.31	253.7	307
J_Hyd-M007	Melborne	0.00	221.82	253.7	312
J_Hyd-M008	Melborne	0.00	222.52	253.7	305
J_Hyd-M009	Melborne	0.00	222.86	253.7	302
J_Hyd-M010	Melborne	0.00	221.91	253.7	311
J_Hyd-M011	Melborne	0.00	223.22	253.7	298
J_Hyd-M012	Melborne	0.00	221.53	253.7	315
J_Hyd-M013	Melborne	0.31	223.56	253.7	295
J_Hyd-M014	Melborne	0.00	222.20	253.7	308
J_Hyd-M015	Melborne	0.00	223.30	253.7	298
J_Hyd-M016	Melborne	0.00	222.65	253.7	304
J_Hyd-M017	Melborne	0.00	222.32	253.8	308
J_Hyd-M018	Melborne	0.00	221.84	253.7	312
J_Hyd-M019	Melborne	0.00	221.35	253.7	317
J_Hyd-M020	Melborne	0.00	220.58	253.7	324
J_Hyd-M021	Melborne	0.00	221.95	253.7	311
J_Hyd-M022	Melborne	0.00	220.18	253.7	328
J_Hyd-M023	Melborne	0.00	220.16	253.7	328
WVA023	Melborne	0.00	221.95	253.7	311
WVM001	Melborne	0.00	221.15	253.7	319
WVM002	Melborne	0.00	221.15	253.7	319
WVM003	Melborne	0.00	220.48	253.7	325
WVM005	Melborne	0.00	221.88	253.7	311
WVM006	Melborne	0.00	221.88	253.7	311
WVM007	Melborne	0.00	221.23	253.7	318
WVM008	Melborne	0.00	221.80	253.7	312
WVM009	Melborne	0.00	221.78	253.7	312
WVM010	Melborne	0.00	221.85	253.7	312
WVM011	Melborne	0.00	221.85	253.7	312
WVM012	Melborne	0.00	221.84	253.7	312
WVM013	Melborne	0.00	222.21	253.7	308
WVM014	Melborne	0.00	222.00	253.7	310
WVM015	Melborne	0.00	221.91	253.7	311
WVM017	Melborne	0.00	221.71	253.7	313
WVM018	Melborne	0.00	221.72	253.7	313
WVM019	Melborne	0.00	222.96	253.7	301
WVM020	Melborne	0.00	222.96	253.7	301
WVM021	Melborne	0.00	221.86	253.7	312
WVM022	Melborne	0.00	221.35	253.7	317
WVM023	Melborne	0.00	221.35	253.7	317
WVM025	Melborne	0.00	220.58	253.7	324
WVM026	Melborne	0.00	220.58	253.7	324
WVM027	Melborne	0.00	219.99	253.7	330
WVM028	Melborne	0.00	219.99	253.7	330
WVM030	Melborne	0.00	221.00	253.7	320
WVM031	Melborne	0.00	222.65	253.7	304
WVM032	Melborne	0.00	222.45	253.8	307
J-0002	Wardsville	0.00	204.57	250.4	449
J-0012	Wardsville	0.00	210.33	250.4	392
J-0018	Wardsville	0.00	210.33	250.4	392
J-0022	Wardsville	0.00	195.43	250.4	538
J-0023	Wardsville	0.54	203.82	250.4	456
J-0024	Wardsville	0.00	203.82	250.4	456
J-0027	Wardsville	0.00	212.30	250.4	373
J-0028	Wardsville	0.00	212.30	250.4	373
J-0029	Wardsville	0.00	199.99	250.4	494
J-0030	Wardsville	0.66	199.99	250.4	494
J-0031	Wardsville	0.00	210.85	250.4	387
J-0033	Wardsville	0.00	205.92	250.4	436
J-0034	Wardsville	0.00	205.92	250.4	436
J-0035	Wardsville	0.00	211.90	250.5	377
J-0040	Wardsville	0.00	200.40	250.4	489
J-0042	Wardsville	0.00	201.97	250.4	474
J-0050	Wardsville	0.00	208.88	250.4	407
J-0051	Wardsville	0.49	208.88	250.4	407
J-0055	Wardsville	0.00	210.29	250.4	393

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0056	Wardsville	0.00	210.29	250.4	393
J-0061	Wardsville	0.00	200.40	250.4	489
J-0062	Wardsville	0.00	200.40	250.4	489
J-0068	Wardsville	0.00	209.82	250.4	397
J-0069	Wardsville	0.00	195.43	250.4	538
J-0081	Wardsville	0.00	209.82	250.4	397
J-0082	Wardsville	0.00	200.40	250.4	489
J-0083	Wardsville	0.00	200.40	250.4	489
J-0088	Wardsville	0.00	205.79	250.4	437
J-0120	Wardsville	0.00	206.22	250.4	433
J-0121	Wardsville	0.00	205.92	250.4	436
J-0122	Wardsville	0.51	207.03	250.4	425
J-0131	Wardsville	0.00	199.31	250.4	500
J-0132	Wardsville	0.00	199.88	250.4	495
J-0154	Wardsville	0.00	211.18	250.4	384
J-0160	Wardsville	0.00	205.17	250.5	443
J-0161	Wardsville	0.00	205.17	250.5	443
J-0174	Wardsville	0.00	201.18	250.4	482
J-0188	Wardsville	0.00	199.35	250.4	500
J-0217	Wardsville	0.57	212.05	250.4	375
J-0218	Wardsville	0.00	212.05	250.4	375
J-0223	Wardsville	0.00	201.18	250.4	482
J-0228	Wardsville	0.00	211.59	250.4	380
J-0229	Wardsville	0.00	211.22	250.4	384
J-0234	Wardsville	0.00	211.43	250.4	382
J-0238	Wardsville	0.70	199.53	250.4	498
J-0242	Wardsville	0.00	212.24	250.5	374
J-0245	Wardsville	0.00	194.57	250.4	547
J-0247	Wardsville	0.00	200.33	250.4	490
J-0251	Wardsville	0.00	198.40	250.4	509
J-0258	Wardsville	0.00	201.05	250.4	483
J-0283	Wardsville	0.82	212.26	250.4	373
J-0297	Wardsville	0.00	198.59	250.4	507
J-0307	Wardsville	0.00	198.04	250.4	513
J-0308	Wardsville	0.00	211.06	250.4	385
J-0311	Wardsville	0.00	205.84	250.4	436
J-0313	Wardsville	0.00	208.66	250.4	409
J-0343	Wardsville	0.00	208.18	250.4	413
J-0349	Wardsville	0.00	211.06	250.4	385
J-0423	Wardsville	0.00	200.86	250.4	485
J-0429	Wardsville	0.82	195.38	250.4	539
J-0438	Wardsville	0.00	211.49	250.4	381
J-0439	Wardsville	0.00	211.49	250.4	381
J-0444	Wardsville	0.00	205.84	250.4	436
J-0446	Wardsville	0.62	199.42	250.4	499
J-0456	Wardsville	0.00	211.90	250.5	378
J-0460	Wardsville	0.00	196.26	250.4	530
J-0485	Wardsville	0.00	198.53	250.4	508
J-0504	Wardsville	0.00	211.80	250.5	378
J-0506	Wardsville	0.72	199.60	250.4	497
J-0550	Wardsville	0.49	207.57	250.4	420
J-0553	Wardsville	0.00	210.98	250.5	387
J-0597	Wardsville	0.00	211.52	250.5	381
J-686	Wardsville	0.00	211.90	250.5	378
J-728	Wardsville	0.00	199.35	250.4	500
J_Hyd-W001	Wardsville	0.00	199.59	250.4	497
J_Hyd-W002	Wardsville	0.00	200.22	250.4	491
J_Hyd-W003	Wardsville	0.00	200.09	250.4	493
J_Hyd-W004	Wardsville	0.00	200.26	250.4	491
J_Hyd-W005	Wardsville	0.00	200.73	250.4	486
J_Hyd-W006	Wardsville	0.00	201.97	250.4	474
J_Hyd-W007	Wardsville	0.00	202.85	250.4	466
J_Hyd-W008	Wardsville	0.00	206.22	250.4	433
J_Hyd-W009	Wardsville	0.00	207.09	250.4	424
J_Hyd-W010	Wardsville	0.00	211.08	250.4	385
J_Hyd-W011	Wardsville	0.00	210.99	250.4	386
J_Hyd-W012	Wardsville	0.00	209.97	250.4	396
J_Hyd-W013	Wardsville	0.00	199.99	250.4	494
J_Hyd-W014	Wardsville	0.00	203.96	250.4	455
J_Hyd-W015	Wardsville	0.00	201.05	250.4	483
J_Hyd-W016	Wardsville	0.00	199.31	250.4	500
J_Hyd-W017	Wardsville	0.00	204.86	250.4	446
J_Hyd-W018	Wardsville	0.00	207.95	250.4	416
J_Hyd-W019	Wardsville	0.00	210.80	250.4	388
J_Hyd-W021	Wardsville	0.00	212.03	250.4	376
J_Hyd-W022	Wardsville	0.00	212.33	250.4	373
J_Hyd-W023	Wardsville	0.00	211.80	250.4	378
J_Hyd-W024	Wardsville	0.00	210.17	250.4	394
J_Hyd-W025	Wardsville	0.00	208.87	250.4	407

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-W026	Wardsville	0.00	199.86	250.4	495
J_Hyd-W027	Wardsville	0.00	198.54	250.4	508
J_Hyd-W028	Wardsville	0.00	194.57	250.4	547
J_Hyd-W029	Wardsville	0.00	198.04	250.4	513
J_Hyd-W030	Wardsville	0.00	198.82	250.4	505
J_Hyd-W031	Wardsville	0.00	210.43	250.4	391
J_Hyd-W032	Wardsville	0.00	211.40	250.4	382
J_Hyd-W033	Wardsville	0.00	211.13	250.4	385
J_Hyd-W034	Wardsville	0.00	211.75	250.4	379
J_Hyd-W035	Wardsville	0.00	211.50	250.4	381
J_Hyd-W036	Wardsville	0.00	210.68	250.4	389
J_Hyd-W037	Wardsville	0.00	208.27	250.4	412
J_Hyd-W038	Wardsville	0.00	207.21	250.4	423
J_Hyd-W039	Wardsville	0.00	205.93	250.4	435
J_Hyd-W040	Wardsville	0.00	198.92	250.4	504
J_Hyd-W041	Wardsville	0.00	197.74	250.4	516
J_Hyd-W042	Wardsville	0.00	195.70	250.4	535
J_Hyd-W043	Wardsville	0.00	198.47	250.4	508
J_Hyd-W044	Wardsville	0.00	212.21	250.4	374
J_Hyd-W045	Wardsville	0.00	209.85	250.5	397
J_Hyd-W046	Wardsville	0.00	208.62	250.5	410
J_Hyd-W047	Wardsville	0.00	207.07	250.5	425
WVR003	Wardsville	0.00	212.35	250.5	373
WVR006	Wardsville	0.00	211.90	250.5	378
WVW001	Wardsville	0.00	211.08	250.4	385
WVW002	Wardsville	0.00	211.08	250.4	385
WVW003	Wardsville	0.00	210.85	250.4	387
WVW006	Wardsville	0.00	199.99	250.4	494
WVW007	Wardsville	0.00	201.05	250.4	483
WVW008	Wardsville	0.00	201.01	250.4	484
WVW009	Wardsville	0.00	205.92	250.4	436
WVW010	Wardsville	0.00	206.22	250.4	433
WVW011	Wardsville	0.00	201.69	250.4	477
WVW014	Wardsville	0.00	202.53	250.4	469
WVW015	Wardsville	0.00	199.66	250.4	497
WVW016	Wardsville	0.00	200.33	250.4	490
WVW018	Wardsville	0.00	200.33	250.4	490
WVW019	Wardsville	0.00	199.53	250.4	498
WVW020	Wardsville	0.00	199.53	250.4	498
WVW021	Wardsville	0.00	198.66	250.4	507
WVW022	Wardsville	0.00	198.82	250.4	505
WVW023	Wardsville	0.00	198.59	250.4	507
WVW025	Wardsville	0.00	198.04	250.4	513
WVW026	Wardsville	0.00	197.66	250.4	516
WVW027	Wardsville	0.00	198.71	250.4	506
WVW028	Wardsville	0.00	198.33	250.4	510
WVW029	Wardsville	0.00	198.40	250.4	509
WVW030	Wardsville	0.00	200.40	250.4	489
WVW031	Wardsville	0.00	200.40	250.4	489
WVW032	Wardsville	0.00	200.21	250.4	491
WVW033	Wardsville	0.00	200.40	250.4	489
WVW034	Wardsville	0.00	199.35	250.4	500
WVW035	Wardsville	0.00	199.92	250.4	494
WVW036	Wardsville	0.00	199.35	250.4	500
WVW038	Wardsville	0.00	210.33	250.4	392
WVW039	Wardsville	0.00	208.88	250.4	407
WVW041	Wardsville	0.58	211.18	250.4	384
WVW042	Wardsville	0.00	211.18	250.4	384
WVW043	Wardsville	0.00	211.18	250.4	384
WVW044	Wardsville	0.00	207.40	250.4	421
WVW045	Wardsville	0.00	205.79	250.4	437
WVW046	Wardsville	0.00	209.82	250.4	397
WVW047	Wardsville	0.00	209.82	250.4	397
WVW048	Wardsville	0.54	212.30	250.4	373
WVW049	Wardsville	0.00	212.30	250.4	373
WVW051	Wardsville	0.00	211.43	250.4	382
WVW052	Wardsville	0.25	211.43	250.4	382
WVW053	Wardsville	0.00	211.43	250.4	382
WVW054	Wardsville	0.00	212.03	250.4	376
WVW055	Wardsville	0.00	211.12	250.4	385
WVW056	Wardsville	0.00	212.26	250.4	373
WVW057	Wardsville	0.00	212.05	250.4	376
WVW058	Wardsville	0.00	212.26	250.4	373
WVW059	Wardsville	0.00	211.21	250.4	384
WVW061	Wardsville	0.00	211.15	250.4	384
WVW063	Wardsville	0.00	204.57	250.4	449
WVW064	Wardsville	0.00	208.18	250.4	413
WVW066	Wardsville	0.00	207.03	250.4	425
WVW067	Wardsville	0.00	194.57	250.4	547

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0009	Appin	0.00	225.75	255.9	295
J-0010	Appin	0.00	225.75	255.9	295
J-0015	Appin	0.00	224.12	255.9	311
J-0119	Appin	0.00	224.77	255.9	305
J-0140	Appin	0.00	223.78	255.9	315
J-0152	Appin	0.00	224.42	255.9	308
J-0185	Appin	0.00	225.43	255.9	298
J-0219	Appin	0.00	223.88	255.9	313
J-0221	Appin	0.00	224.26	255.9	310
J-0244	Appin	0.00	224.85	255.9	304
J-0246	Appin	0.00	224.78	255.9	304
J-0254	Appin	1.81	223.45	255.9	318
J-0277	Appin	0.00	223.74	256.0	315
J-0278	Appin	0.00	223.74	256.0	315
J-0280	Appin	0.00	225.40	255.9	298
J-0281	Appin	0.00	225.40	255.9	298
J-0318	Appin	1.11	224.73	255.9	305
J-0322	Appin	0.00	224.94	255.9	303
J-0323	Appin	0.00	224.94	255.9	303
J-0345	Appin	0.00	222.65	255.9	325
J-0346	Appin	0.00	223.66	255.9	315
J-0355	Appin	0.00	224.54	256.0	307
J-0359	Appin	0.00	225.19	255.9	300
J-0361	Appin	0.00	224.05	255.9	312
J-0378	Appin	0.70	225.03	255.9	302
J-0404	Appin	0.00	222.65	255.9	325
J-0479	Appin	0.00	223.74	255.9	315
J-0480	Appin	0.83	223.82	255.9	314
J-0560	Appin	0.00	224.74	255.9	305
J_Hyd-A001	Appin	0.00	224.77	255.9	304
J_Hyd-A002	Appin	0.00	225.61	255.9	296
J_Hyd-A003	Appin	0.00	225.13	255.9	301
J_Hyd-A004	Appin	0.00	224.97	255.9	302
J_Hyd-A005	Appin	0.00	224.76	255.9	305
J_Hyd-A006	Appin	0.00	224.95	255.9	303
J_Hyd-A007	Appin	0.00	224.78	256.0	305
J_Hyd-A008	Appin	0.00	223.78	255.9	315
J_Hyd-A009	Appin	0.00	223.45	255.9	318
J_Hyd-A010	Appin	0.00	223.84	255.9	314
J_Hyd-A011	Appin	0.00	224.12	255.9	311
WVA001	Appin	0.00	224.54	255.9	307
WVA003	Appin	0.00	224.27	255.9	310
WVA005	Appin	0.00	223.45	255.9	318
WVA006	Appin	0.00	223.45	255.9	318
WVA007	Appin	0.00	223.84	255.9	314
WVA008	Appin	0.00	223.88	255.9	313
WVA009	Appin	0.00	223.88	255.9	313
WVA010	Appin	0.00	224.85	255.9	304
WVA011	Appin	0.00	224.46	255.9	308
WVA012	Appin	0.00	224.74	255.9	305
WVA013	Appin	0.00	224.49	255.9	307
WVA014	Appin	0.00	224.42	255.9	308
WVA015	Appin	0.00	225.05	255.9	302
WVA016	Appin	0.00	224.73	255.9	305
WVA017	Appin	0.00	224.77	255.9	305
WVA018	Appin	0.00	224.77	255.9	305
WVA019	Appin	0.00	225.16	255.9	301
WVA020	Appin	0.00	224.85	255.9	304
WVA021	Appin	0.00	225.12	255.9	301
WVR026	Appin	0.00	224.12	255.9	311
WVR028	Appin	0.00	225.35	255.9	299
J-0019	Rural	0.00	224.91	255.5	299
J-0020	Rural	0.00	215.38	254.8	386
J-0053	Rural	0.00	223.50	255.5	313
J-0057	Rural	0.00	223.26	255.5	315
J-0064	Rural	0.00	223.00	254.3	307
J-0073	Rural	0.00	216.62	259.1	416
J-0074	Rural	0.00	216.62	259.1	416
J-0077	Rural	0.00	224.92	255.6	300
J-0078	Rural	0.00	224.92	255.6	300
J-0086	Rural	0.00	215.90	250.7	341
J-0090	Rural	0.00	217.02	255.0	371
J-0100	Rural	0.00	219.21	261.7	416
J-0103	Rural	0.00	224.29	255.7	308
J-0110	Rural	0.00	224.91	255.5	299
J-0113	Rural	0.00	224.13	255.8	309
J-0117	Rural	0.00	223.95	255.5	309
J-0118	Rural	0.00	225.08	255.3	296
J-0129	Rural	0.00	210.02	266.7	555

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0130	Rural	0.00	205.48	266.7	599
J-0137	Rural	0.00	222.21	256.4	334
J-0138	Rural	0.00	222.21	256.4	334
J-0149	Rural	0.00	209.61	266.7	559
J-0150	Rural	0.00	210.02	266.7	555
J-0151	Rural	0.00	224.44	255.6	305
J-0163	Rural	0.00	222.45	268.3	448
J-0164	Rural	0.00	222.45	268.3	448
J-0170	Rural	0.00	216.66	267.0	493
J-0171	Rural	0.00	216.66	267.0	493
J-0182	Rural	0.00	215.05	250.7	349
J-0183	Rural	0.00	215.05	250.7	349
J-0186	Rural	0.00	224.50	255.7	306
J-0193	Rural	0.00	218.11	250.7	319
J-0194	Rural	0.00	218.11	250.7	319
J-0199	Rural	0.00	216.02	250.7	340
J-0200	Rural	0.00	215.67	250.7	343
J-0206	Rural	0.00	215.05	250.7	349
J-0207	Rural	0.00	216.66	255.0	375
J-0208	Rural	0.00	224.87	255.5	300
J-0210	Rural	0.00	216.37	259.0	418
J-0215	Rural	0.00	224.44	255.6	305
J-0224	Rural	0.00	215.67	250.7	343
J-0225	Rural	0.00	215.67	250.7	343
J-0231	Rural	0.00	215.88	270.3	533
J-0232	Rural	0.00	215.90	250.7	340
J-0233	Rural	0.00	215.48	250.7	345
J-0241	Rural	0.00	223.95	255.5	309
J-0243	Rural	0.00	216.95	255.0	372
J-0257	Rural	0.00	215.14	254.4	384
J-0260	Rural	0.00	215.99	250.7	340
J-0263	Rural	0.00	216.66	255.0	375
J-0266	Rural	0.00	215.67	250.7	343
J-0276	Rural	0.00	215.90	250.7	340
J-0282	Rural	0.00	223.26	255.5	315
J-0293	Rural	0.00	215.90	250.7	340
J-0298	Rural	0.00	221.59	254.3	321
J-0299	Rural	0.00	223.00	254.3	307
J-0300	Rural	0.00	215.20	250.7	347
J-0301	Rural	0.00	215.11	250.7	348
J-0304	Rural	0.00	221.66	256.4	340
J-0309	Rural	0.00	218.12	250.7	319
J-0315	Rural	0.00	222.17	256.4	335
J-0319	Rural	0.00	224.13	255.8	309
J-0325	Rural	0.00	217.23	259.1	409
J-0326	Rural	0.00	221.59	254.3	321
J-0329	Rural	0.00	215.90	250.7	340
J-0330	Rural	0.00	215.55	250.7	344
J-0335	Rural	0.00	227.07	255.1	275
J-0341	Rural	0.00	224.82	255.3	298
J-0351	Rural	0.00	216.30	255.1	380
J-0352	Rural	0.00	224.91	255.5	299
J-0356	Rural	0.00	221.65	265.5	429
J-0357	Rural	0.00	221.65	265.5	429
J-0362	Rural	0.00	225.24	255.8	299
J-0365	Rural	0.00	216.02	250.7	339
J-0366	Rural	0.00	215.27	250.7	347
J-0369	Rural	0.00	215.99	254.8	380
J-0370	Rural	0.00	216.95	255.0	372
J-0374	Rural	0.00	217.94	250.7	320
J-0376	Rural	0.00	222.17	256.4	335
J-0379	Rural	0.00	216.10	267.0	498
J-0383	Rural	0.00	215.74	250.7	342
J-0391	Rural	0.00	220.12	265.5	444
J-0392	Rural	0.00	220.22	265.5	443
J-0397	Rural	0.00	217.12	270.1	518
J-0398	Rural	0.00	216.07	270.0	528
J-0405	Rural	0.00	216.98	255.1	373
J-0408	Rural	0.00	219.48	250.7	305
J-0416	Rural	0.00	216.22	270.4	530
J-0422	Rural	0.00	222.67	268.3	446
J-0431	Rural	0.00	210.65	271.2	592
J-0432	Rural	0.00	210.75	271.2	591
J-0441	Rural	0.00	211.16	269.6	572
J-0442	Rural	0.00	210.36	269.6	579
J-0461	Rural	0.00	219.65	262.0	415
J-0462	Rural	0.00	219.09	262.0	420
J-0463	Rural	0.00	218.71	262.1	425
J-0464	Rural	0.00	219.51	262.1	417

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0466	Rural	0.00	215.88	270.4	533
J-0483	Rural	0.00	226.33	255.4	284
J-0484	Rural	0.00	225.87	255.4	289
J-0519	Rural	0.00	220.69	264.4	428
J-0520	Rural	0.00	221.62	264.4	419
J-0525	Rural	0.00	217.02	255.0	371
J-0530	Rural	0.00	218.78	250.7	312
J-0536	Rural	0.00	218.90	255.0	353
J-0545	Rural	0.00	222.01	256.5	337
J-0547	Rural	0.00	208.26	269.5	599
J-0563	Rural	0.00	217.68	255.0	365
J-0573	Rural	0.00	217.81	255.2	365
J-0574	Rural	0.00	217.93	255.1	364
J-0577	Rural	0.00	222.72	264.9	413
J-0582	Rural	0.00	225.65	255.3	290
J-0592	Rural	0.00	225.26	256.0	300
J-0593	Rural	0.00	223.37	255.9	319
J-0595	Rural	0.00	213.93	266.6	515
J-0596	Rural	0.00	214.45	266.4	509
J-0599	Rural	0.00	226.75	255.7	283
J-0600	Rural	0.00	225.36	255.7	297
J-0604	Rural	0.00	217.45	254.7	364
J-0605	Rural	0.00	215.66	254.5	381
J-0607	Rural	0.00	216.23	250.7	337
J-0610	Rural	0.00	217.10	250.7	329
J-0611	Rural	0.00	214.85	250.7	351
J-0613	Rural	0.00	217.54	270.5	519
J-0614	Rural	0.00	215.09	266.2	500
J-0616	Rural	0.00	216.04	250.7	339
J-0617	Rural	0.00	220.45	266.0	446
J-0618	Rural	0.00	220.05	263.5	425
J-0619	Rural	0.00	217.32	263.2	449
J-0623	Rural	0.00	218.13	250.7	319
J-0624	Rural	0.00	219.80	262.5	418
J-0625	Rural	0.00	219.82	261.7	410
J-0626	Rural	0.00	217.52	250.7	325
J-0629	Rural	0.00	198.11	271.5	718
J-0631	Rural	0.00	220.14	255.1	342
J-0633	Rural	0.00	215.01	250.7	349
J-0634	Rural	0.62	220.90	264.4	426
J-0636	Rural	0.00	226.78	255.5	281
J-0637	Rural	0.00	223.52	255.6	314
J-0638	Rural	0.00	220.56	260.8	394
J-0643	Rural	0.00	216.97	250.6	329
J-0645	Rural	0.00	216.83	250.7	331
J-688	Rural	0.00	222.17	256.4	335
J_Hyd-R001E	Rural	0.00	226.53	255.5	283
J_Hyd-R002E	Rural	0.00	224.87	255.5	300
J_Hyd-R003E	Rural	0.00	223.26	255.5	315
J_Hyd-R004E	Rural	0.00	227.87	255.3	269
J_Hyd-R005E	Rural	0.00	228.14	255.1	264
J_Hyd-R006E	Rural	0.00	223.00	254.3	307
J_Hyd-R007E	Rural	0.00	226.02	255.6	289
J_Hyd-R008E	Rural	0.00	225.38	255.2	292
J_Hyd-R009E	Rural	0.00	215.38	254.8	386
J_Hyd-R010E	Rural	0.00	217.64	255.0	365
J_Hyd-R011E	Rural	0.00	216.30	255.1	380
J_Hyd-R012E	Rural	0.00	225.08	255.3	296
J_Hyd-R013E	Rural	0.00	225.08	255.3	296
J_Hyd-R014E	Rural	0.00	225.24	255.8	299
J_Hyd-R015E	Rural	0.00	222.19	256.3	334
J_Hyd-R016E	Rural	0.00	224.13	255.8	309
J_Hyd-R017M	Rural	0.00	215.90	250.7	341
J_Hyd-R018M	Rural	0.00	209.02	250.7	408
J_Hyd-R019M	Rural	0.00	215.68	250.7	342
J_Hyd-R020M	Rural	0.00	216.37	250.6	335
J_Hyd-R021M	Rural	0.00	215.02	250.6	348
J_Hyd-R026E	Rural	0.00	224.44	255.6	305
J_Hyd-R027W	Rural	0.00	206.98	273.8	654
J_Hyd-R028E	Rural	0.00	222.89	255.5	319
J_Hyd-R029W	Rural	0.00	215.14	275.6	592
J_Hyd-R030M	Rural	0.00	215.76	267.1	502
J_Hyd-R031M	Rural	0.00	215.77	270.3	533
J_Hyd-R032M	Rural	0.00	218.56	250.7	314
J_Hyd-R033E	Rural	0.00	217.26	265.5	472
WVR007	Rural	0.00	215.64	250.6	342
WVR008	Rural	0.00	215.68	250.6	342
WVR009	Rural	0.00	215.39	250.7	346
WVR010	Rural	0.00	215.88	270.4	533

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVR012	Rural	0.00	217.94	250.7	320
WVR013	Rural	0.00	218.56	250.7	314
WVR014	Rural	0.00	218.12	250.7	319
WVR015	Rural	0.00	218.11	250.7	319
WVR019	Rural	0.00	216.86	267.4	494
WVR020	Rural	0.00	221.61	265.0	425
WVR024	Rural	0.00	216.37	259.0	418
WVR024	Rural	0.00	219.21	261.7	416
WVR025	Rural	0.00	222.17	256.4	335
WVR029	Rural	0.00	224.50	255.7	306
WVR030	Rural	0.00	224.40	255.7	306
WVR031	Rural	0.00	224.90	255.8	303
WVR032	Rural	0.00	224.44	255.6	305
WVR033	Rural	0.00	224.92	255.6	300
WVR034	Rural	0.00	224.90	255.3	298
WVR035	Rural	0.00	224.82	255.3	298
WVR036	Rural	0.00	224.82	255.3	298
WVR037	Rural	0.00	217.20	255.1	371
WVR038	Rural	0.00	217.64	255.0	365
WVR039	Rural	0.00	217.02	255.0	371
WVR040	Rural	0.00	215.14	254.4	384
WVR042	Rural	0.00	223.00	254.3	307
WVR043	Rural	0.00	228.14	255.1	264
WVR044	Rural	0.00	227.12	255.1	274
WVR045	Rural	0.00	223.77	255.5	310
WVR046	Rural	0.00	224.91	255.5	299
WVR047	Rural	0.00	223.95	255.5	309
WVR050	Rural	0.00	215.85	250.7	341
WVR051	Rural	0.00	215.90	250.7	340
WVR052	Rural	0.00	219.21	261.7	416
WVR053	Rural	0.00	225.26	255.8	298
WVR054	Rural	0.00	226.99	255.3	277
WVR055	Rural	0.00	226.60	255.4	281
WVR056	Rural	0.00	223.50	255.5	313
WVR060	Rural	0.00	214.01	254.9	400

Total Demand	63.14	**Maximum Pressure**	718
		Minimum Pressure	264

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P-223	Glencoe	J-747	J-0646	224.53	400	120	37.72	0.30	0.1
P-232	Glencoe	J-0586	G015	3.80	150	100	0.00	0.00	0.0
P-240	Glencoe	J-753	G_H-1	1.46	150	100	0.00	0.00	0.0
P-246	Glencoe	J-759	J-753	58.17	200	110	0.00	0.00	0.0
P-247	Glencoe	J-760	J-759	25.30	200	110	0.00	0.00	0.0
P-248	Glencoe	J-761	J-760	24.76	200	110	0.00	0.00	0.0
P-249(1)	Glencoe	J-762	J-800	10.10	200	110	0.00	0.00	0.0
P-249(2)	Glencoe	J-800	J-761	21.50	200	110	0.00	0.00	0.0
P-251	Glencoe	J-766	J-765	1.74	200	110	0.00	0.00	0.0
P-252	Glencoe	J-765	J-764	2.16	200	110	0.00	0.00	0.0
P-254	Glencoe	J-764	J-762	2.10	200	110	0.00	0.00	0.0
P-255	Glencoe	J-767	J-766	36.14	200	110	0.00	0.00	0.0
P-256	Glencoe	J-768	J-767	23.79	200	110	0.00	0.00	0.0
P-257	Glencoe	J-769	J-768	25.30	200	110	0.00	0.00	0.0
P-258	Glencoe	J-770	J-769	12.16	200	110	0.00	0.00	0.0
P-259(1)	Glencoe	J-771	J-778	30.83	200	110	0.39	0.01	0.0
P-259(2)	Glencoe	J-778	J-770	11.83	200	110	0.39	0.01	0.0
P-260	Glencoe	J-771	J-0264	6.10	200	110	0.44	0.01	0.0
P-261	Glencoe	J-772	J-771	21.73	200	110	0.83	0.03	0.0
P-262	Glencoe	J-773	J-772	53.57	200	110	0.83	0.03	0.0
P-263(1)	Glencoe	J-775	J-777	32.15	200	110	1.73	0.05	0.0
P-263(2)	Glencoe	J-777	J-773	5.67	200	110	1.73	0.05	0.0
P-265	Glencoe	WVG029	J-775	71.28	200	110	1.73	0.05	0.0
P-266	Glencoe	J-773	WVG027	18.50	200	110	0.90	0.03	0.0
P-268	Glencoe	J-770	WVG001	31.17	150	100	0.39	0.02	0.0
P-270(1)(1)	Glencoe	J-779	J-801	24.25	200	110	2.75	0.09	0.0
P-270(1)(2)	Glencoe	J-801	J-780	5.97	200	110	2.75	0.09	0.0
P-270(2)	Glencoe	J-780	J-0126	2.45	200	110	2.75	0.09	0.0
P-271	Glencoe	J-782	J-781	15.01	200	110	2.75	0.09	0.0
P-272	Glencoe	J-781	J-779	27.58	200	110	2.75	0.09	0.0
P-273(1)(1)	Glencoe	J-785	J-807	42.61	200	110	6.56	0.21	0.0
P-273(1)(2)	Glencoe	J-807	J-806	13.65	200	110	5.99	0.19	0.0
P-273(2)	Glencoe	J-806	J-784	24.08	200	110	5.99	0.19	0.0
P-274	Glencoe	J-784	J-783	60.15	200	110	5.99	0.19	0.0
P-275(1)(1)	Glencoe	J-783	J-804	24.03	200	110	5.99	0.19	0.0
P-275(1)(2)	Glencoe	J-804	J-803	0.79	200	110	2.75	0.09	0.0
P-275(2)	Glencoe	J-803	J-782	7.79	200	110	2.75	0.09	0.0
P-276	Glencoe	J-786	J-785	70.18	200	110	6.56	0.21	0.0
P-277(1)(1)	Glencoe	J-787	J-813	5.52	200	110	5.10	0.16	0.0
P-277(1)(2)(1)	Glencoe	J-813	J-816	4.54	200	110	11.31	0.36	0.0
P-277(1)(2)(2)	Glencoe	J-816	J-812	0.65	200	110	6.56	0.21	0.0
P-277(2)	Glencoe	J-812	J-786	39.29	200	110	6.56	0.21	0.0
P-278	Glencoe	J-791	J-790	37.40	200	110	10.64	0.34	0.0
P-279(1)	Glencoe	J-790	J-818	26.33	200	110	10.64	0.34	0.0
P-279(2)(1)	Glencoe	J-818	J-819	12.63	200	110	10.64	0.34	0.0
P-279(2)(2)	Glencoe	J-819	J-789	31.06	200	110	5.10	0.16	0.0
P-280	Glencoe	J-789	J-788	52.74	200	110	5.10	0.16	0.0
P-281	Glencoe	J-788	J-787	40.02	200	110	5.10	0.16	0.0
P-282	Glencoe	J-792	J-791	35.04	200	110	10.64	0.34	0.0
P-283(1)	Glencoe	J-795	J-826	36.70	200	110	8.35	0.27	0.0
P-283(2)	Glencoe	J-826	J-794	38.31	200	110	8.35	0.27	0.0
P-284	Glencoe	J-794	J-793	70.18	200	110	8.35	0.27	0.0
P-285(1)	Glencoe	J-793	J-821	19.05	200	110	8.35	0.27	0.0
P-285(2)	Glencoe	J-821	J-792	1.09	200	110	10.64	0.34	0.0
P-286(1)	Glencoe	J-799	J-827	5.70	200	110	8.35	0.27	0.0
P-286(2)	Glencoe	J-827	J-798	15.33	200	110	8.35	0.27	0.0
P-287	Glencoe	J-798	J-797	45.01	200	110	8.35	0.27	0.0
P-288	Glencoe	J-797	J-796	55.00	200	110	8.35	0.27	0.0
P-289	Glencoe	J-796	J-795	14.97	200	110	8.35	0.27	0.0
P-290	Glencoe	J-800	G_H-2	1.49	150	100	0.00	0.00	0.0
P-291	Glencoe	J-778	G_H-3	1.50	150	100	0.00	0.00	0.0
P-292	Glencoe	J-777	G_H-4	0.54	150	100	0.00	0.00	0.0
P-294	Glencoe	J-801	G_H-5	1.96	150	100	0.00	0.00	0.0
P-295	Glencoe	J-803	G_H-6	1.67	150	100	0.00	0.00	0.0
P-296	Glencoe	J-804	J-805	17.92	150	100	3.24	0.18	0.0
P-297	Glencoe	J-805	WVG097	5.39	150	100	3.24	0.18	0.0
P-298	Glencoe	J-806	G_H-7	2.83	150	100	0.00	0.00	0.0
P-301	Glencoe	J-807	J-810	4.01	150	100	0.57	0.03	0.0
P-302	Glencoe	J-810	J-811	3.62	150	100	0.57	0.03	0.0
P-303	Glencoe	J-812	G_H-8	1.47	150	100	0.00	0.00	0.0
P-304	Glencoe	J-813	J-814	4.27	200	110	-6.21	0.20	0.0
P-305	Glencoe	J-814	J-815	3.22	200	110	-6.21	0.20	0.0
P-306	Glencoe	J-816	J-817	16.89	200	110	4.75	0.15	0.0
P-307	Glencoe	J-817	J-0011	2.48	200	110	4.75	0.15	0.0
P-308	Glencoe	J-818	G_H-9	1.82	150	100	0.00	0.00	0.0
P-309	Glencoe	J-819	J-820	8.75	200	110	5.53	0.18	0.0
P-310	Glencoe	J-820	WVG120	3.89	200	110	5.53	0.18	0.0
P-311	Glencoe	J-821	J-822	7.32	150	100	-5.94	0.34	0.0
P-312	Glencoe	J-822	J-823	3.21	150	100	-5.94	0.34	0.0
P-313	Glencoe	J-823	J-0262	0.92	150	100	-5.94	0.34	0.0
P-314	Glencoe	J-821	J-824	9.93	150	100	3.65	0.21	0.0
P-315	Glencoe	J-824	J-825	2.86	150	100	3.65	0.21	0.0
P-316	Glencoe	J-826	G_H-10	2.85	150	100	0.00	0.00	0.0
P-317	Glencoe	J-827	G_H-11	1.80	150	100	0.00	0.00	0.0
P-318	Glencoe	J-799	J-0267	3.89	150	100	-8.35	0.47	0.0
P-923	Glencoe	J-720	J-0533	70.98	25	100	0.00	0.00	0.0
P-925	Glencoe	J_Hyd-G084	J-0101	235.01	300	120	5.12	0.07	0.0
P-927	Glencoe	J-0101	J_Hyd-G083	2.91	300	120	5.12	0.07	0.0
P-928	Glencoe	J_Hyd-G083	Glencoe Tower	97.16	300	120	-25.35	0.36	0.1
P-929	Glencoe	J_Hyd-G083	J-0337	106.00	300	120	30.47	0.43	0.1
P-932	Glencoe	J-0180	J-690	4.46	150	100	14.62	0.83	0.0
P-936	Glencoe	J-0634	J-0635	660.21	50	130	0.00	0.00	0.0
P_Hyd-G001	Glencoe	J_Hyd-G001	G001	4.85	150	100	0.00	0.00	0.0
P_Hyd-G002	Glencoe	J_Hyd-G002	G002	2.71	150	100	0.00	0.00	0.0
P_Hyd-G003	Glencoe	J_Hyd-G003	G003	2.46	150	100	0.00	0.00	0.0
P_Hyd-G004	Glencoe	J_Hyd-G004	G004	0.85	150	100	0.00	0.00	0.0
P_Hyd-G005	Glencoe	J_Hyd-G005	G005	5.89	150	100	0.00	0.00	0.0
P_Hyd-G006	Glencoe	J_Hyd-G006	G006	5.74	150	100	0.00	0.00	0.0
P_Hyd-G008	Glencoe	J_Hyd-G008	G008	2.51	150	100	0.00	0.00	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-G009	Glencoe	J_Hyd-G009	G009	3.80	150	100	0.00	0.00	0.0
P_Hyd-G010	Glencoe	J_Hyd-G010	G010	3.17	150	100	0.00	0.00	0.0
P_Hyd-G011	Glencoe	J_Hyd-G011	G011	2.84	150	100	0.00	0.00	0.0
P_Hyd-G012	Glencoe	J_Hyd-G012	G012	1.27	150	100	0.00	0.00	0.0
P_Hyd-G013	Glencoe	J_Hyd-G013	G013	0.22	150	100	0.00	0.00	0.0
P_Hyd-G014	Glencoe	J_Hyd-G014	G014	1.48	150	100	0.00	0.00	0.0
P_Hyd-G016	Glencoe	J_Hyd-G016	G016	2.59	150	100	0.00	0.00	0.0
P_Hyd-G018	Glencoe	J_Hyd-G018	G018	1.41	150	100	0.00	0.00	0.0
P_Hyd-G019	Glencoe	J_Hyd-G019	G019	1.61	150	100	0.00	0.00	0.0
P_Hyd-G020	Glencoe	J_Hyd-G020	G020	3.56	150	100	0.00	0.00	0.0
P_Hyd-G021	Glencoe	J_Hyd-G021	G021	3.54	150	100	0.00	0.00	0.0
P_Hyd-G022	Glencoe	J_Hyd-G022	G022	2.23	150	100	0.00	0.00	0.0
P_Hyd-G023	Glencoe	J_Hyd-G023	G023	2.41	150	100	0.00	0.00	0.0
P_Hyd-G024	Glencoe	J_Hyd-G024	G024	1.78	150	100	0.00	0.00	0.0
P_Hyd-G025	Glencoe	J_Hyd-G025	G025	1.60	150	100	0.00	0.00	0.0
P_Hyd-G026	Glencoe	J_Hyd-G026	G026	5.18	150	100	0.00	0.00	0.0
P_Hyd-G027	Glencoe	J_Hyd-G027	G027	2.73	150	100	0.00	0.00	0.0
P_Hyd-G028	Glencoe	J_Hyd-G028	G028	4.76	150	100	0.00	0.00	0.0
P_Hyd-G029	Glencoe	J_Hyd-G029	G029	1.38	150	100	0.00	0.00	0.0
P_Hyd-G041	Glencoe	J_Hyd-G041	G041	1.19	150	100	0.00	0.00	0.0
P_Hyd-G042	Glencoe	J_Hyd-G042	G042	1.81	150	100	0.00	0.00	0.0
P_Hyd-G043	Glencoe	J_Hyd-G043	G043	0.88	150	100	0.00	0.00	0.0
P_Hyd-G044	Glencoe	J_Hyd-G044	G044	1.63	150	100	0.00	0.00	0.0
P_Hyd-G045	Glencoe	J_Hyd-G045	G045	3.33	150	100	0.00	0.00	0.0
P_Hyd-G046	Glencoe	J_Hyd-G046	G046	1.69	150	100	0.00	0.00	0.0
P_Hyd-G047	Glencoe	J_Hyd-G047	G047	7.03	150	100	0.00	0.00	0.0
P_Hyd-G048	Glencoe	J_Hyd-G048	G048	4.14	150	100	0.00	0.00	0.0
P_Hyd-G049	Glencoe	J_Hyd-G049	G049	0.49	150	100	0.00	0.00	0.0
P_Hyd-G050	Glencoe	J_Hyd-G050	G050	1.47	150	100	0.00	0.00	0.0
P_Hyd-G051	Glencoe	J_Hyd-G051	G051	0.78	150	100	0.00	0.00	0.0
P_Hyd-G052	Glencoe	J_Hyd-G052	G052	1.12	150	100	0.00	0.00	0.0
P_Hyd-G053	Glencoe	J_Hyd-G053	G053	1.89	150	100	0.00	0.00	0.0
P_Hyd-G054	Glencoe	WVG032	G054	2.99	150	100	0.00	0.00	0.0
P_Hyd-G055	Glencoe	WVG041	G055	0.94	150	100	0.00	0.00	0.0
P_Hyd-G056	Glencoe	J_Hyd-G056	G056	2.18	150	100	0.00	0.00	0.0
P_Hyd-G057	Glencoe	J_Hyd-G057	G057	1.91	150	100	0.00	0.00	0.0
P_Hyd-G058	Glencoe	J_Hyd-G058	G058	4.86	150	100	0.00	0.00	0.0
P_Hyd-G059	Glencoe	J_Hyd-G059	G059	2.58	150	100	0.00	0.00	0.0
P_Hyd-G060	Glencoe	J_Hyd-G060	G060	1.86	150	100	0.00	0.00	0.0
P_Hyd-G061	Glencoe	J_Hyd-G061	G061	1.77	150	100	0.00	0.00	0.0
P_Hyd-G062	Glencoe	J_Hyd-G062	G062	15.15	150	100	0.00	0.00	0.0
P_Hyd-G063	Glencoe	J_Hyd-G063	G063	5.63	150	100	0.00	0.00	0.0
P_Hyd-G064	Glencoe	J_Hyd-G064	G064	4.15	150	100	0.00	0.00	0.0
P_Hyd-G065	Glencoe	J_Hyd-G065	G065	2.06	150	100	0.00	0.00	0.0
P_Hyd-G066	Glencoe	J_Hyd-G066	G066	2.76	150	100	0.00	0.00	0.0
P_Hyd-G067	Glencoe	J_Hyd-G067	G067	3.98	150	100	0.00	0.00	0.0
P_Hyd-G068	Glencoe	J_Hyd-G068	G068	1.46	150	100	0.00	0.00	0.0
P_Hyd-G069	Glencoe	J_Hyd-G069	G069	1.27	150	100	0.00	0.00	0.0
P_Hyd-G070	Glencoe	J_Hyd-G070	G070	6.10	150	100	0.00	0.00	0.0
P_Hyd-G071	Glencoe	J_Hyd-G071	G071	0.97	150	100	0.00	0.00	0.0
P_Hyd-G073	Glencoe	J_Hyd-G073	G073	1.56	150	100	0.00	0.00	0.0
P_Hyd-G074	Glencoe	J_Hyd-G074	G074	8.97	150	100	0.00	0.00	0.0
P_Hyd-G075	Glencoe	J_Hyd-G075	G075	11.48	150	100	0.00	0.00	0.0
P_Hyd-G076	Glencoe	J_Hyd-G076	G076	2.69	150	100	0.00	0.00	0.0
P_Hyd-G077	Glencoe	J_Hyd-G077	G077	2.18	150	100	0.00	0.00	0.0
P_Hyd-G078	Glencoe	J_Hyd-G078	G078	3.61	150	100	0.00	0.00	0.0
P_Hyd-G079	Glencoe	J_Hyd-G079	G079	13.95	150	100	0.00	0.00	0.0
P_Hyd-G080	Glencoe	J_Hyd-G080	G080	1.13	150	100	0.00	0.00	0.0
P_Hyd-G081	Glencoe	J_Hyd-G081	G081	8.12	150	100	0.00	0.00	0.0
P_Hyd-G082	Glencoe	J_Hyd-G082	G082	7.32	150	100	0.00	0.00	0.0
P_Hyd-G083	Glencoe	J_Hyd-G083	G083	3.97	150	100	0.00	0.00	0.0
P_Hyd-G084	Glencoe	J_Hyd-G084	G084	94.76	150	100	0.00	0.00	0.0
P_Hyd-G085	Glencoe	J_Hyd-G085	G085	0.10	150	100	0.00	0.00	0.0
P_Hyd-G086	Glencoe	J_Hyd-G086	G086	0.02	150	100	0.00	0.00	0.0
P_Hyd-G087	Glencoe	J_Hyd-G087	G087	5.80	150	100	0.00	0.00	0.0
P_Hyd-G088	Glencoe	J_Hyd-G088	G088	2.19	150	100	0.00	0.00	0.0
P_Hyd-G089	Glencoe	J_Hyd-G089	G089	2.09	150	100	0.00	0.00	0.0
P_Hyd-G090	Glencoe	J_Hyd-G090	G090	4.27	150	100	0.00	0.00	0.0
P_Hyd-G091	Glencoe	J_Hyd-G091	G091	4.00	150	100	0.00	0.00	0.0
P_Hyd-G092	Glencoe	J_Hyd-G092	G092	3.58	150	100	0.00	0.00	0.0
P_Hyd-G093	Glencoe	J_Hyd-G093	G093	3.31	150	100	0.00	0.00	0.0
P_Hyd-G094	Glencoe	J_Hyd-G094	G094	3.50	150	100	0.00	0.00	0.0
P_Hyd-G095	Glencoe	J_Hyd-G095	G095	1.07	150	100	0.00	0.00	0.0
P_Hyd-G096	Glencoe	J_Hyd-G096	G096	1.84	150	100	0.00	0.00	0.0
P_Hyd-G097	Glencoe	J_Hyd-G097	G097	1.24	150	100	0.00	0.00	0.0
P_Hyd-G098	Glencoe	J_Hyd-G098	G098	2.53	150	100	0.00	0.00	0.0
P_Hyd-H_T-718	Glencoe	J_Hyd-H_T-718	H_T-718	2.10	150	100	0.00	0.00	0.0
WM1021C_02(2)(2)	Glencoe	J-752	WVR021	155.54	300	120	28.79	0.41	0.1
WM1027C_01	Glencoe	J_Hyd-G014	J-0373	15.24	200	110	-3.89	0.12	0.0
WM1027C_02	Glencoe	J_Hyd-G014	J-0586	134.80	200	110	3.89	0.12	0.0
WM1075C_01	Glencoe	J-0646	J_Hyd-R029W	3402.10	350	120	37.72	0.39	2.0
WM1099C	Glencoe	WVR021	J-0494	49.97	300	120	28.79	0.41	0.0
WM2036_02	Glencoe	J-0275	J-0168	7.98	200	110	11.29	0.36	0.0
WM2036_03	Glencoe	J-0169	J-0618	480.76	200	110	11.29	0.36	0.5
WM2036_10(1)	Glencoe	J-0544	J-690	136.25	200	110	-3.33	0.11	0.0
WM2036_10(2)	Glencoe	J-690	J-0275	18.91	200	110	11.29	0.36	0.0
WM2044C(1)	Glencoe	J_Hyd-G006	J-724	5.77	200	110	1.57	0.05	0.0
WM2044C(2)(1)	Glencoe	J-724	J-727	12.57	200	110	1.57	0.05	0.0
WM2044C(2)(2)	Glencoe	J-727	WV-348	5.17	200	110	1.65	0.05	0.0
WM4000	Glencoe	J-0384	J-0546	90.30	150	100	0.84	0.05	0.0
WM4001	Glencoe	J-0213	J_Hyd-G094	5.27	150	100	0.00	0.00	0.0
WM4002	Glencoe	J-0213	J-0584	133.75	150	100	0.00	0.00	0.0
WM4003_01	Glencoe	J_Hyd-G003	WVG087	133.79	150	100	0.00	0.00	0.0
WM4003_02	Glencoe	WVG087	J-0373	19.18	200	110	0.00	0.00	0.0
WM4005	Glencoe	J-0451	J-0539	79.38	50	100	0.45	0.23	0.2
WM4006_01	Glencoe	WVG099	J_Hyd-G023	7.66	150	100	0.83	0.05	0.0
WM4006_02	Glencoe	J_Hyd-G023	J_Hyd-G093	126.19	100	100	0.83	0.11	0.0
WM4006_03	Glencoe	J_Hyd-G093	WVG090	116.28	100	100	0.83	0.11	0.0
WM4006_04	Glencoe	WVG090	J-0032	17.02	200	110	0.83	0.03	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4007_01(1)	Glencoe	WVG100	J-735	1.24	150	100	2.97	0.17	0.0
WM4007_01(2)	Glencoe	J-735	J-0409	234.57	150	100	2.97	0.17	0.1
WM4007_02(1)	Glencoe	J-734	WVG100	11.48	150	100	2.97	0.17	0.0
WM4007_02(2)	Glencoe	J-734	WVG099	4.20	150	100	0.83	0.05	0.0
WM4008_01	Glencoe	J-0324	J-0106	10.40	150	100	-1.25	0.07	0.0
WM4008_02	Glencoe	J-0256	J-0435	102.03	150	100	0.87	0.05	0.0
WM4009_01	Glencoe	J-0255	J-0256	6.83	150	100	1.71	0.10	0.0
WM4009_02	Glencoe	J-0255	J-0450	53.25	150	100	-1.25	0.07	0.0
WM4009_03	Glencoe	J-0449	J-0450	25.45	150	100	1.25	0.07	0.0
WM4009_04	Glencoe	WVG018	J-0449	35.04	150	100	1.25	0.07	0.0
WM4009_05	Glencoe	WVG018	J-0070	2.19	150	100	-1.25	0.07	0.0
WM4009_06	Glencoe	J-0070	J-0324	11.16	150	100	-1.25	0.07	0.0
WM4010_01	Glencoe	J-0106	WVG020	3.03	150	100	-1.30	0.07	0.0
WM4010_02	Glencoe	J-0410	WVG020	110.85	150	100	1.30	0.07	0.0
WM4011_01	Glencoe	J-0535	WVG091	76.44	25	100	0.00	0.00	0.0
WM4011_02	Glencoe	WVG091	J-0128	3.53	25	100	0.00	0.00	0.0
WM4012_01	Glencoe	J-0468	J-0469	33.17	200	110	5.46	0.17	0.0
WM4012_02	Glencoe	J-0469	J-0097	46.60	200	110	5.46	0.17	0.0
WM4012_03	Glencoe	J-0097	WVG093	3.00	200	110	5.46	0.17	0.0
WM4012_04	Glencoe	WVG093	J-0003	1.12	200	110	0.00	0.00	0.0
WM4012_05	Glencoe	J-0303	WVG093	15.47	200	110	-5.46	0.17	0.0
WM4013_01	Glencoe	J-0205	J_Hyd-G065	9.39	200	110	5.46	0.17	0.0
WM4013_02	Glencoe	J_Hyd-G065	J_Hyd-G066	127.29	200	110	5.46	0.17	0.0
WM4013_03	Glencoe	J_Hyd-G066	J-0468	39.92	200	110	5.46	0.17	0.0
WM4014_01	Glencoe	J-0205	WVG101	9.82	200	110	-4.58	0.15	0.0
WM4014_02	Glencoe	WVG107	J_Hyd-G064	6.15	200	110	4.58	0.15	0.0
WM4014_03	Glencoe	J_Hyd-G064	WVG101	119.04	200	110	4.58	0.15	0.0
WM4015_01	Glencoe	J-0048	J-0049	1.67	200	110	28.96	0.92	0.0
WM4015_02	Glencoe	J-0048	WVG193	5.79	200	110	0.00	0.00	0.0
WM4015_03	Glencoe	WVG193	J-0075	2.30	200	110	0.00	0.00	0.0
WM4015_04	Glencoe	J-0091	WVG113	2.54	200	110	0.00	0.00	0.0
WM4015_05	Glencoe	WVG113	WVG106	98.98	200	110	0.00	0.00	0.0
WM4015_06	Glencoe	J-0063	WVG106	16.77	200	110	0.00	0.00	0.0
WM4016_01	Glencoe	WVG003	J-0175	4.35	150	100	-0.31	0.02	0.0
WM4016_02	Glencoe	WVG002	J-0333	104.71	150	100	-1.03	0.06	0.0
WM4016_03	Glencoe	J-0481	J_Hyd-G016	38.74	150	100	-0.31	0.02	0.0
WM4016_04	Glencoe	J_Hyd-G016	WVG003	64.80	150	100	-0.31	0.02	0.0
WM4016_05	Glencoe	J-0175	WVG002	13.38	150	100	-1.03	0.06	0.0
WM4018_01	Glencoe	J-0333	J-0334	11.46	150	100	-1.41	0.08	0.0
WM4018_02	Glencoe	J-0334	J-0497	46.44	150	100	-1.41	0.08	0.0
WM4018_03	Glencoe	J-0144	J-0497	65.09	150	100	1.41	0.08	0.0
WM4019_01	Glencoe	J-0144	WVG010	3.77	200	110	-4.05	0.13	0.0
WM4019_02	Glencoe	WVG010	J-713	110.69	200	110	-4.05	0.13	0.0
WM4020_01	Glencoe	J_Hyd-G059	J-0107	113.86	150	100	2.73	0.15	0.0
WM4020_02	Glencoe	J-0107	J-0014	3.03	150	100	1.65	0.09	0.0
WM4020_03	Glencoe	J-0014	WVG096	1.04	150	100	1.65	0.09	0.0
WM4020_04	Glencoe	WVG096	J-0316	15.27	200	110	1.65	0.05	0.0
WM4021_01	Glencoe	J-0187	WVG105	5.72	150	100	2.73	0.15	0.0
WM4021_02	Glencoe	WVG105	J_Hyd-G060	4.08	150	100	2.73	0.15	0.0
WM4021_03	Glencoe	J_Hyd-G060	J_Hyd-G059	130.41	150	100	2.73	0.15	0.1
WM4022_01	Glencoe	J-0089	WVG109	3.68	200	110	4.60	0.15	0.0
WM4022_02	Glencoe	WVG109	J_Hyd-G061	5.42	200	110	4.60	0.15	0.0
WM4022_03	Glencoe	J_Hyd-G061	J-0187	128.70	200	110	4.60	0.15	0.0
WM4023_01	Glencoe	J-0222	WVG071	6.23	300	120	0.00	0.00	0.0
WM4023_02	Glencoe	WVG071	J-0134	6.29	300	120	0.00	0.00	0.0
WM4023_03	Glencoe	J-0134	J-0135	3.59	300	120	0.00	0.00	0.0
WM4023_04	Glencoe	J-0135	WVG085	103.05	300	120	0.00	0.00	0.0
WM4023_05	Glencoe	WVG085	J_Hyd-G085	4.68	300	120	0.00	0.00	0.0
WM4024_01	Glencoe	WVG069	J_Hyd-G080	7.03	250	120	-4.67	0.10	0.0
WM4024_02	Glencoe	J_Hyd-G080	J-0124	174.48	250	120	-4.67	0.10	0.0
WM4024_03	Glencoe	WVG069	J-0222	14.30	250	120	4.67	0.10	0.0
WM4025_01	Glencoe	J-0124	WVG058	3.66	250	120	-5.56	0.11	0.0
WM4025_02	Glencoe	WVG058	J_Hyd-G076	0.90	250	120	-5.56	0.11	0.0
WM4025_03	Glencoe	J_Hyd-G076	J-0284	104.25	250	120	-5.56	0.11	0.0
WM4026_01	Glencoe	J-0284	WVG047	10.69	250	120	-10.45	0.21	0.0
WM4026_02	Glencoe	J-0285	J-0179	9.19	200	110	2.72	0.09	0.0
WM4026_03	Glencoe	WVG047	WVG038	100.52	250	120	-10.45	0.21	0.0
WM4026_04	Glencoe	WVG038	J-715	3.84	250	120	-10.45	0.21	0.0
WM4027_01	Glencoe	J-0111	WVG130	4.08	250	120	-13.59	0.28	0.0
WM4027_02	Glencoe	WVG130	J-0421	174.59	250	120	-13.59	0.28	0.1
WM4027_03(1)	Glencoe	J-0421	J-709	19.33	250	120	-15.18	0.31	0.0
WM4027_03(2)	Glencoe	J-709	J-0104	2.64	250	120	-16.81	0.34	0.0
WM4028_01	Glencoe	J-0104	J-0094	2.96	250	120	-16.81	0.34	0.0
WM4028_02	Glencoe	J-0094	J_Hyd-G067	2.65	250	120	-16.81	0.34	0.0
WM4028_03	Glencoe	J_Hyd-G067	J-0227	159.12	250	120	-16.81	0.34	0.1
WM4029_01	Glencoe	J_Hyd-G079	J_Hyd-G081	102.59	250	120	23.02	0.47	0.1
WM4029_02	Glencoe	J_Hyd-G081	WVG192	2.89	250	120	23.02	0.47	0.0
WM4029_03	Glencoe	WVG192	J-0227	8.63	250	120	23.02	0.47	0.0
WM4030	Glencoe	J-0123	J_Hyd-G079	126.31	250	120	23.02	0.47	0.2
WM4032_01	Glencoe	WVR022	J-0006	4.47	250	120	-28.96	0.59	0.0
WM4032_02	Glencoe	J-0006	J-0007	0.86	200	110	-39.74	1.27	0.0
WM4032_03	Glencoe	J-0007	J-0017	1.08	200	110	-39.74	1.27	0.0
WM4032_04	Glencoe	WVR022	J_Hyd-G078	6.97	250	120	28.96	0.59	0.0
WM4032_05	Glencoe	J_Hyd-G078	WVG140	274.02	250	120	28.96	0.59	0.5
WM4032_06	Glencoe	WVG140	J-0048	4.92	250	120	28.96	0.59	0.0
WM4032_07	Glencoe	J-0049	J-0123	9.92	250	120	28.96	0.59	0.0
WM4035_01(1)	Glencoe	J-0344	J-698	1.22	150	100	0.00	0.00	0.0
WM4035_01(2)	Glencoe	J-698	WVG061	10.93	150	100	-0.81	0.05	0.0
WM4035_02	Glencoe	WVG061	J_Hyd-G027	3.18	200	110	-0.81	0.03	0.0
WM4035_03	Glencoe	J-0344	J_Hyd-G028	161.67	150	100	0.00	0.00	0.0
WM4035_04	Glencoe	J_Hyd-G028	J-0437	24.28	150	100	0.00	0.00	0.0
WM4036	Glencoe	J_Hyd-G027	J-695	109.13	200	110	-0.81	0.03	0.0
WM4037_01	Glencoe	J-695	WVG049	6.43	200	110	-1.09	0.03	0.0
WM4037_02	Glencoe	WVG049	J_Hyd-G026	90.02	200	110	-1.09	0.03	0.0
WM4037_03	Glencoe	J_Hyd-G026	J-0201	18.69	200	110	-1.09	0.03	0.0
WM4038_01	Glencoe	J_Hyd-G029	J_Hyd-G068	118.88	100	100	-0.88	0.11	0.0
WM4038_02	Glencoe	J-0354	J_Hyd-G029	74.71	100	100	-0.88	0.11	0.0
WM4038_03	Glencoe	J_Hyd-G068	J-0321	10.21	100	100	-0.88	0.11	0.0
WM4040_01	Glencoe	J-0390	WVG074	17.67	200	110	0.62	0.02	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4040_02	Glencoe	WVG074	J_Hyd-G020	31.15	150	100	-1.20	0.07	0.0
WM4040_03	Glencoe	J_Hyd-G020	J-0044	136.07	150	100	-1.20	0.07	0.0
WM4040_04	Glencoe	J-0044	J_Hyd-G021	13.53	150	100	-0.84	0.05	0.0
WM4041_01	Glencoe	J-0036	WVG051	15.67	150	100	0.84	0.05	0.0
WM4041_02	Glencoe	J_Hyd-G021	WVG064	10.79	150	100	-0.84	0.05	0.0
WM4041_03	Glencoe	WVG064	WVG051	85.34	150	100	-0.84	0.05	0.0
WM4042_01	Glencoe	J-0036	WVG052	1.53	150	100	-1.50	0.08	0.0
WM4042_02	Glencoe	J-0564	WVG052	112.33	200	110	1.50	0.05	0.0
WM4044_01	Glencoe	J-0288	WVG149	8.47	150	100	0.00	0.00	0.0
WM4044_02	Glencoe	WVG149	J-0447	25.14	150	100	0.00	0.00	0.0
WM4044_03	Glencoe	J-0447	J_Hyd-G022	121.76	150	100	0.00	0.00	0.0
WM4044_04	Glencoe	J_Hyd-G022	WVG148	39.91	150	100	0.00	0.00	0.0
WM4044_05	Glencoe	WVG148	J-0279	8.16	150	100	0.00	0.00	0.0
WM4045	Glencoe	J_Hyd-G062	J-0544	160.30	150	100	0.00	0.00	0.0
WM4048	Glencoe	J-0561	J-0602	197.94	150	100	0.00	0.00	0.0
WM4049_01	Glencoe	J-0198	WVG053	17.47	200	110	0.00	0.00	0.0
WM4049_02	Glencoe	J-0561	WVG053	105.28	200	110	0.00	0.00	0.0
WM4050	Glencoe	J-0452	J-0071	136.52	150	100	1.40	0.08	0.0
WM4051_01(1)	Glencoe	J-0381	J-703	11.62	150	100	0.47	0.03	0.0
WM4051_01(2)	Glencoe	J-703	J_Hyd-G008	5.45	150	100	1.93	0.11	0.0
WM4051_02(1)	Glencoe	J_Hyd-G008	J-705	24.45	150	100	1.93	0.11	0.0
WM4051_02(2)	Glencoe	J-705	J_Hyd-G009	99.83	150	100	0.13	0.01	0.0
WM4051_03	Glencoe	J_Hyd-G009	J-0339	35.00	150	100	0.13	0.01	0.0
WM4051_04	Glencoe	J-0339	J-0340	11.79	150	100	0.13	0.01	0.0
WM4051_05	Glencoe	J-0340	J-0402	19.06	200	110	0.13	0.00	0.0
WM4052_01	Glencoe	J-0389	WVG055	17.50	150	100	0.47	0.03	0.0
WM4052_02	Glencoe	WVG055	J-0381	97.74	150	100	0.47	0.03	0.0
WM4053_01	Glencoe	J-722	J-0543	84.11	150	100	0.00	0.00	0.0
WM4053_02	Glencoe	J-0632	J-0586	611.63	150	100	0.00	0.00	0.0
WM4053_03	Glencoe	J-0045	J_Hyd-G077	136.44	150	100	1.47	0.08	0.0
WM4053_04	Glencoe	J_Hyd-G077	J-703	104.84	150	100	1.47	0.08	0.0
WM4053_05	Glencoe	J-0165	J-727	19.07	200	110	0.08	0.00	0.0
WM4053_06	Glencoe	J_Hyd-G085	J-0581	131.21	150	100	0.00	0.00	0.0
WM4054_01	Glencoe	J_Hyd-G095	J-0098	44.85	150	100	0.00	0.00	0.0
WM4054_02	Glencoe	J-0098	WVG153	2.73	150	100	0.00	0.00	0.0
WM4054_03	Glencoe	WVG153	J_Hyd-G098	40.38	150	100	0.00	0.00	0.0
WM4054_04	Glencoe	J_Hyd-G098	J-724	91.69	150	100	0.00	0.00	0.0
WM4055_01	Glencoe	J-0165	J-0166	4.18	200	110	-0.08	0.00	0.0
WM4055_02	Glencoe	J-0166	J_Hyd-G069	17.94	200	110	-0.08	0.00	0.0
WM4055_03	Glencoe	J_Hyd-G069	J-0364	83.89	200	110	-0.08	0.00	0.0
WM4055_04	Glencoe	J-0364	WVG164	14.54	200	110	-0.08	0.00	0.0
WM4056_01	Glencoe	J-0306	J-0291	9.23	200	110	1.35	0.04	0.0
WM4056_02	Glencoe	J-0291	WVG056	8.53	200	110	1.35	0.04	0.0
WM4056_03	Glencoe	WVG056	J_Hyd-G071	6.29	200	110	1.35	0.04	0.0
WM4056_04	Glencoe	J_Hyd-G071	J_Hyd-G070	141.64	200	110	1.35	0.04	0.0
WM4056_05(1)	Glencoe	J_Hyd-G070	J-700	14.39	200	110	1.35	0.04	0.0
WM4056_05(2)	Glencoe	J-700	WVG164	2.83	200	110	0.08	0.00	0.0
WM4059_01	Glencoe	J-0071	J-0072	2.21	150	100	1.40	0.08	0.0
WM4059_02	Glencoe	J-0072	WVG086	4.07	150	100	1.40	0.08	0.0
WM4059_03	Glencoe	WVG086	J-0004	0.64	150	100	1.40	0.08	0.0
WM4059_04	Glencoe	J-0004	WVG159	85.81	150	100	1.40	0.08	0.0
WM4059_05	Glencoe	WVG159	J-0054	1.75	150	100	1.40	0.08	0.0
WM4060C_01	Glencoe	J-0264	WVG070	100.69	200	110	0.44	0.01	0.0
WM4060C_02	Glencoe	WVG070	J-0222	5.50	100	100	0.44	0.06	0.0
WM4061C_01	Glencoe	J-0222	WVG175	13.49	200	110	3.46	0.11	0.0
WM4061C_02	Glencoe	WVG175	J-0566	109.30	200	110	3.46	0.11	0.0
WM4062C(1)	Glencoe	J-0390	J-0368	107.52	200	110	-3.46	0.11	0.0
WM4062C(2)	Glencoe	J-0368	J-0566	1.97	200	110	-3.46	0.11	0.0
WM4063C(1)	Glencoe	J-0390	J-692	10.67	200	110	2.84	0.09	0.0
WM4063C(2)	Glencoe	J-692	J-0579	118.60	200	110	2.84	0.09	0.0
WM4064C	Glencoe	J-0579	J-0402	125.69	200	110	2.84	0.09	0.0
WM4066_01	Glencoe	J-0481	J_Hyd-G097	73.16	150	100	-0.39	0.02	0.0
WM4066_02	Glencoe	J_Hyd-G097	WVG001	67.96	150	100	-0.39	0.02	0.0
WM4067_01	Glencoe	J-0546	J_Hyd-G086	4.52	150	100	-0.82	0.05	0.0
WM4067_02	Glencoe	J_Hyd-G086	J_Hyd-G056	136.36	150	100	-0.82	0.05	0.0
WM4067_03	Glencoe	J-0435	J_Hyd-G056	152.58	150	100	0.82	0.05	0.0
WM4068_01	Glencoe	J-0272	J-0273	7.81	200	110	0.05	0.00	0.0
WM4068_02	Glencoe	J-0273	J-0175	10.81	200	110	0.05	0.00	0.0
WM4068_03	Glencoe	J-0435	WVG015	24.20	150	100	0.05	0.00	0.0
WM4068_04	Glencoe	WVG015	J-0272	79.45	150	100	0.05	0.00	0.0
WM4069_02	Glencoe	WVG027	J-0076	2.31	200	110	0.90	0.03	0.0
WM4069_03	Glencoe	J-0076	J-0271	7.68	200	110	0.90	0.03	0.0
WM4069_04	Glencoe	J-0271	J_Hyd-G057	136.22	200	110	0.90	0.03	0.0
WM4069_05	Glencoe	J_Hyd-G057	WVG004	8.11	200	110	0.90	0.03	0.0
WM4069_06	Glencoe	WVG004	J-0175	4.98	200	110	0.90	0.03	0.0
WM4070_01	Glencoe	J-700	WVG152	8.78	150	100	1.27	0.07	0.0
WM4070_02	Glencoe	WVG152	J_Hyd-G096	110.01	150	100	1.27	0.07	0.0
WM4070_03	Glencoe	J_Hyd-G096	J-0427	29.19	150	100	1.27	0.07	0.0
WM4070_04	Glencoe	J-0427	WVG165	22.83	150	100	-1.81	0.10	0.0
WM4071_01	Glencoe	J-0384	J-0524	163.12	150	100	-0.84	0.05	0.0
WM4071_02	Glencoe	J-0524	J-0503	64.16	150	100	-0.84	0.05	0.0
WM4071_03	Glencoe	J-0503	J_Hyd-G073	51.20	150	100	-0.84	0.05	0.0
WM4071_04	Glencoe	J_Hyd-G073	J-0256	17.07	150	100	-0.84	0.05	0.0
WM4072_01	Glencoe	J-0255	J-0342	102.78	150	100	-0.46	0.03	0.0
WM4072_02	Glencoe	J-0342	J-0333	12.07	150	100	-0.46	0.03	0.0
WM4074_01	Glencoe	J-0124	WVG057	3.42	250	120	-0.13	0.00	0.0
WM4074_02	Glencoe	J-0084	WVG172	2.45	150	100	-1.31	0.07	0.0
WM4074_03	Glencoe	WVG172	J-0025	49.15	150	100	-1.31	0.07	0.0
WM4074_04	Glencoe	J-0025	WVG057	52.74	150	100	0.13	0.01	0.0
WM4075_01	Glencoe	J-0332	J-698	11.44	200	110	1.02	0.03	0.0
WM4075_02	Glencoe	J-0124	WVG059	4.81	150	100	1.02	0.06	0.0
WM4075_03	Glencoe	WVG059	J-0060	1.83	150	100	1.02	0.06	0.0
WM4075_04	Glencoe	J-0060	WVG170	3.49	150	100	1.02	0.06	0.0
WM4075_05	Glencoe	WVG170	J-0332	102.63	150	100	1.02	0.06	0.0
WM4075_06	Glencoe	J-0333	J_Hyd-G074	15.51	150	100	-0.07	0.00	0.0
WM4075_07	Glencoe	J_Hyd-G074	J-0507	82.01	150	100	-0.07	0.00	0.0
WM4075_08(1)	Glencoe	J-0507	J-707	6.31	150	100	-0.07	0.00	0.0
WM4075_08(2)	Glencoe	J-707	WVG028	45.56	150	100	0.42	0.02	0.0
WM4075_09	Glencoe	WVG028	J_Hyd-G075	3.61	150	100	0.42	0.02	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4075_10	Glencoe	J_Hyd-G075	J-0252	19.39	150	100	0.42	0.02	0.0
WM4076_01	Glencoe	WVG169	J-698	4.82	200	110	-1.83	0.06	0.0
WM4076_02	Glencoe	WVG169	J-0044	105.78	150	100	1.83	0.10	0.0
WM4077	Glencoe	J-0044	J-0045	1.64	150	100	1.47	0.08	0.0
WM4079_01	Glencoe	J-0178	WVG035	4.43	150	100	-1.49	0.08	0.0
WM4079_02	Glencoe	WVG035	J-718	110.51	150	100	-1.49	0.08	0.0
WM4080_01	Glencoe	J-0099	WVG019	2.84	200	110	1.62	0.05	0.0
WM4080_02	Glencoe	J-0580	J_Hyd-G051	129.47	200	110	0.00	0.00	0.0
WM4081_01	Glencoe	WVG019	J_Hyd-G050	103.90	200	110	1.62	0.05	0.0
WM4081_02(1)	Glencoe	J_Hyd-G050	J-720	84.40	200	110	1.62	0.05	0.0
WM4081_02(2)	Glencoe	J-720	J-0580	19.71	200	110	0.00	0.00	0.0
WM4082_01	Glencoe	J-0099	J-0106	11.28	200	110	-1.62	0.05	0.0
WM4082_02	Glencoe	J-0106	J_Hyd-G049	24.29	200	110	-1.57	0.05	0.0
WM4082_03	Glencoe	J_Hyd-G049	J-0144	83.33	200	110	-1.57	0.05	0.0
WM4083_01	Glencoe	J-0144	WVG011	10.85	200	110	-0.29	0.01	0.0
WM4083_02	Glencoe	WVG011	J_Hyd-G048	5.58	200	110	-0.29	0.01	0.0
WM4083_03	Glencoe	J_Hyd-G048	WVG036	85.97	200	110	-0.29	0.01	0.0
WM4083_04	Glencoe	WVG036	J-0178	5.16	200	110	-0.29	0.01	0.0
WM4084_01	Glencoe	J-0178	J_Hyd-G047	44.27	200	110	0.71	0.02	0.0
WM4084_02	Glencoe	J_Hyd-G047	WVG030	33.12	200	110	0.71	0.02	0.0
WM4085_01	Glencoe	WVG030	WVG046	90.09	200	110	0.71	0.02	0.0
WM4085_02	Glencoe	WVG046	J_Hyd-G046	6.34	200	110	0.71	0.02	0.0
WM4085_03	Glencoe	J_Hyd-G046	J-0179	12.04	200	110	0.71	0.02	0.0
WM4085_04	Glencoe	J-0284	J-0285	8.41	200	110	2.72	0.09	0.0
WM4086_01	Glencoe	J-0179	WVG200	4.45	200	110	3.44	0.11	0.0
WM4086_02	Glencoe	WVG200	WVG048	97.18	200	110	3.44	0.11	0.0
WM4086_03	Glencoe	WVG048	J_Hyd-G045	1.59	200	110	3.44	0.11	0.0
WM4086_04(1)	Glencoe	J_Hyd-G045	J-695	8.56	200	110	3.44	0.11	0.0
WM4086_04(2)	Glencoe	J-695	WVG050	7.32	200	110	3.72	0.12	0.0
WM4087	Glencoe	WVG050	J-0036	103.33	200	110	3.72	0.12	0.0
WM4088_01	Glencoe	J-0036	J_Hyd-G044	15.50	200	110	4.38	0.14	0.0
WM4088_02	Glencoe	J_Hyd-G044	J_Hyd-G043	102.76	200	110	4.38	0.14	0.0
WM4088_03	Glencoe	J_Hyd-G043	J-0198	13.93	200	110	4.38	0.14	0.0
WM4089_01	Glencoe	J-0198	WVG054	4.87	200	110	2.60	0.08	0.0
WM4089_02	Glencoe	WVG054	J-0389	104.26	200	110	2.60	0.08	0.0
WM4090_01	Glencoe	J-0389	J_Hyd-G042	35.45	200	110	2.14	0.07	0.0
WM4090_02	Glencoe	J_Hyd-G042	J_Hyd-G041	123.12	200	110	2.14	0.07	0.0
WM4090_03	Glencoe	J_Hyd-G041	J-0306	113.59	200	110	2.14	0.07	0.0
WM4091_01	Glencoe	J-0410	J_Hyd-G052	20.75	150	100	-1.30	0.07	0.0
WM4091_02	Glencoe	J_Hyd-G052	WVG012	81.54	150	100	-1.30	0.07	0.0
WM4092_01(1)	Glencoe	WVG012	J-713	7.73	150	100	-1.30	0.07	0.0
WM4092_01(2)	Glencoe	J-713	WVG013	8.18	150	100	0.81	0.05	0.0
WM4092_02	Glencoe	WVG013	J_Hyd-G053	42.46	150	100	0.81	0.05	0.0
WM4092_03	Glencoe	J_Hyd-G053	WVG161	39.94	150	100	0.81	0.05	0.0
WM4093(1)	Glencoe	WVG161	J-718	17.09	150	100	0.81	0.05	0.0
WM4093(2)	Glencoe	J-718	WVG032	49.53	150	100	-0.68	0.04	0.0
WM4094_01	Glencoe	WVG039	J-0139	3.71	150	100	2.12	0.12	0.0
WM4094_02	Glencoe	J-0139	J-0336	11.56	150	100	2.12	0.12	0.0
WM4094_03	Glencoe	J-0336	J-0331	39.62	150	100	2.12	0.12	0.0
WM4094_04	Glencoe	J-0331	J-0286	42.02	150	100	0.68	0.04	0.0
WM4094_05	Glencoe	J-0286	WVG032	30.10	150	100	0.68	0.04	0.0
WM4095_01	Glencoe	J-0201	WVG044	10.01	150	100	-2.59	0.15	0.0
WM4095_02	Glencoe	WVG044	WVG041	98.34	150	100	-2.59	0.15	0.0
WM4095_03	Glencoe	WVG041	J-0211	5.17	150	100	-2.59	0.15	0.0
WM4095_04	Glencoe	J-0211	WVG040	8.79	150	100	-2.59	0.15	0.0
WM4095_05	Glencoe	WVG040	J-0005	2.73	150	100	0.00	0.00	0.0
WM4095_06(1)	Glencoe	WVG040	J-715	6.18	150	100	-2.59	0.15	0.0
WM4095_06(2)	Glencoe	J-715	WVG039	2.36	150	100	2.12	0.12	0.0
WM4096_01	Glencoe	WVG043	J-0201	4.96	150	100	-1.50	0.08	0.0
WM4096_02	Glencoe	J-0564	WVG043	106.76	150	100	-1.50	0.08	0.0
WM4097_01	Glencoe	J-0529	J-0425	68.18	50	100	0.00	0.00	0.0
WM4097_02	Glencoe	J-0424	J-0425	22.42	50	100	0.00	0.00	0.0
WM4098_01	Glencoe	J-0111	WVG129	3.15	150	100	-2.75	0.16	0.0
WM4098_02	Glencoe	WVG129	J-0172	4.26	150	100	-2.75	0.16	0.0
WM4098_03	Glencoe	J-0172	J-0239	6.15	150	100	-2.75	0.16	0.0
WM4098_04	Glencoe	J-0239	J_Hyd-G024	62.71	150	100	-2.75	0.16	0.0
WM4098_05	Glencoe	J_Hyd-G024	J-0265	21.45	150	100	-2.75	0.16	0.0
WM4098_06	Glencoe	J-0265	J-0116	7.41	150	100	-2.75	0.16	0.0
WM4098_07	Glencoe	J-0116	WVG188	3.18	150	100	-2.75	0.16	0.0
WM4098_08	Glencoe	WVG188	J-0126	5.05	150	100	-2.75	0.16	0.0
WM4099_01	Glencoe	J-0354	WVG189	13.18	150	100	-1.18	0.07	0.0
WM4099_02	Glencoe	WVG189	J_Hyd-G025	91.45	150	100	-1.18	0.07	0.0
WM4099_03	Glencoe	J_Hyd-G025	J-0236	3.77	150	100	-1.18	0.07	0.0
WM4099_04	Glencoe	J-0236	J-0059	6.09	150	100	-1.18	0.07	0.0
WM4099_05	Glencoe	J-0059	WVG199	1.83	150	100	-1.18	0.07	0.0
WM4099_06	Glencoe	WVG199	WVG131	5.28	150	100	-1.18	0.07	0.0
WM4099_07	Glencoe	WVG131	J-0111	4.06	150	100	-1.18	0.07	0.0
WM4101_01	Glencoe	WVG187	WVG132	101.68	150	100	0.57	0.03	0.0
WM4101_02	Glencoe	WVG132	J-709	2.48	150	100	0.57	0.03	0.0
WM4101_03(1)	Glencoe	WVG187	J-811	1.61	150	100	-0.57	0.03	0.0
WM4102_01	Glencoe	J-709	WVG133	13.28	150	100	2.19	0.12	0.0
WM4102_02	Glencoe	WVG133	WVG147	97.08	150	100	2.19	0.12	0.0
WM4102_03	Glencoe	WVG147	J-0321	13.28	150	100	2.19	0.12	0.0
WM4103	Glencoe	J-0321	J-0568	110.36	150	100	1.32	0.07	0.0
WM4104_01	Glencoe	J-0568	J_Hyd-G088	35.37	150	100	1.32	0.07	0.0
WM4104_02	Glencoe	J_Hyd-G088	J_Hyd-G089	114.83	150	100	1.32	0.07	0.0
WM4104_03	Glencoe	J_Hyd-G089	WVG150	58.22	150	100	1.32	0.07	0.0
WM4104_04	Glencoe	WVG150	WVG190	30.53	150	100	1.32	0.07	0.0
WM4104_05	Glencoe	WVG190	J_Hyd-G090	61.89	150	100	0.00	0.00	0.0
WM4104_06	Glencoe	J_Hyd-G090	WVG151	122.12	150	100	0.00	0.00	0.0
WM4104_07	Glencoe	WVG151	J_Hyd-G091	7.91	150	100	0.00	0.00	0.0
WM4107_01	Glencoe	J-735	WVG186	1.65	150	100	0.00	0.00	0.0
WM4107_02	Glencoe	WVG186	J_Hyd-G004	130.23	150	100	0.00	0.00	0.0
WM4108_01	Glencoe	J-0205	WVG103	5.09	200	110	3.80	0.12	0.0
WM4108_02	Glencoe	J-734	WVG103	119.43	200	110	-3.80	0.12	0.0
WM4109_01	Glencoe	WVG102	WVG104	108.82	200	110	-4.67	0.15	0.0
WM4109_02	Glencoe	WVG104	J-0187	4.57	200	110	-4.67	0.15	0.0
WM4109_03	Glencoe	WVG102	J-0205	9.87	200	110	4.67	0.15	0.0
WM4110_01	Glencoe	J-0187	J-0358	89.06	200	110	-4.75	0.15	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4110_02	Glencoe	J-0358	WVG181	13.95	200	110	-4.75	0.15	0.0
WM4110_03	Glencoe	WVG181	J-0011	1.00	200	110	-4.75	0.15	0.0
WM4110_04(2)(2)	Glencoe	J-815	J-0093	4.88	200	110	-6.21	0.20	0.0
WM4111_01	Glencoe	J-0093	J-0080	2.63	200	110	-6.21	0.20	0.0
WM4111_02	Glencoe	J-0080	WVG183	2.38	200	110	-6.21	0.20	0.0
WM4111_03	Glencoe	WVG183	WVG191	91.38	200	110	-6.21	0.20	0.0
WM4111_04	Glencoe	WVG191	J-0227	5.56	200	110	-6.21	0.20	0.0
WM4112_01	Glencoe	J-0063	WVG108	120.28	200	110	-4.58	0.15	0.0
WM4112_02	Glencoe	WVG108	J-0089	2.53	200	110	-4.58	0.15	0.0
WM4113_01	Glencoe	J-0089	WVG010	10.60	200	110	-5.53	0.18	0.0
WM4113_02	Glencoe	WVG010	WVG120	100.04	200	110	-5.53	0.18	0.0
WM4114	Glencoe	WVG107	J-0063	1.84	150	100	-4.58	0.26	0.0
WM4115_01	Glencoe	J-0123	WVG139	3.41	150	100	5.94	0.34	0.0
WM4115_02	Glencoe	WVG139	J_Hyd-H_T-718	3.84	150	100	5.94	0.34	0.0
WM4115_04	Glencoe	J_Hyd-H_T-718	J-0262	93.36	150	100	5.94	0.34	0.2
WM4115_05(2)	Glencoe	J-825	J-0559	106.02	150	100	3.65	0.21	0.1
WM4115_06	Glencoe	J-0559	J-0089	104.29	150	100	3.65	0.21	0.1
WM4116_01	Glencoe	J_Hyd-G001	WVG117	58.22	150	100	0.00	0.00	0.0
WM4116_02	Glencoe	WVG117	J-0213	16.86	150	100	0.00	0.00	0.0
WM4116_03	Glencoe	J-0360	J_Hyd-G001	121.50	150	100	0.00	0.00	0.0
WM4117	Glencoe	J-0360	J-0409	20.60	150	100	-1.77	0.10	0.0
WM4118_01	Glencoe	J-0590	J_Hyd-G002	142.34	150	100	0.00	0.00	0.0
WM4118_02	Glencoe	J_Hyd-G002	J-0091	4.87	150	100	0.00	0.00	0.0
WM4120	Glencoe	J-0235	J_Hyd-G018	41.76	150	100	0.00	0.00	0.0
WM4121_01	Glencoe	WVG185	J-0235	6.04	150	100	0.00	0.00	0.0
WM4121_02	Glencoe	WVG185	J_Hyd-G019	101.74	150	100	0.00	0.00	0.0
WM4124_01	Glencoe	J-0067	J-0494	44.34	300	120	-28.79	0.41	0.0
WM4124_02	Glencoe	J-0066	J_Hyd-G084	333.82	300	120	5.12	0.07	0.0
WM4124_03	Glencoe	J-0066	J-0067	2.04	300	120	-5.12	0.07	0.0
WM4125_01	Glencoe	J-0146	J-0202	57.31	300	120	-22.68	0.32	0.0
WM4125_02	Glencoe	J-0006	WVG196	53.16	150	100	10.78	0.61	0.3
WM4125_03	Glencoe	WVG122	J-0267	7.87	150	100	10.78	0.61	0.0
WM4125_04	Glencoe	WVG122	WVG196	48.20	150	100	-10.78	0.61	0.2
WM4125_05	Glencoe	J-0337	J-0338	11.59	300	120	30.47	0.43	0.0
WM4125_06	Glencoe	J-0338	J-0180	21.85	300	120	30.47	0.43	0.0
WM4125_07	Glencoe	J-0180	J-0146	229.84	300	120	15.85	0.22	0.1
WM4125_08	Glencoe	J-0145	J-0017	4.06	300	120	36.41	0.52	0.0
WM4126_01	Glencoe	J-0017	WVG143	1.42	200	110	-3.33	0.11	0.0
WM4126_02	Glencoe	WVG143	J-0013	1.00	200	110	-3.33	0.11	0.0
WM4126_03	Glencoe	J-0013	J-0047	1.67	200	110	-3.33	0.11	0.0
WM4126_04	Glencoe	J-0047	J-0038	2.12	200	110	-3.33	0.11	0.0
WM4126_05	Glencoe	J-0038	J-0039	1.57	200	110	-3.33	0.11	0.0
WM4126_06	Glencoe	J-0168	J-0169	4.23	200	110	11.29	0.36	0.0
WM4126_07	Glencoe	J-0039	J-0544	87.81	200	110	-3.33	0.11	0.0
WM4128C_01	Glencoe	J-0252	WVG029	6.68	150	100	1.73	0.10	0.0
WM4129C_01	Glencoe	J-0115	J-0084	3.18	150	100	0.00	0.00	0.0
WM4129C_02	Glencoe	J-0084	J-0252	8.39	150	100	1.31	0.07	0.0
WM4143C	Glencoe	J-0373	J-0451	80.71	200	110	-3.89	0.12	0.0
WM4145C_01	Glencoe	J-0451	J_Hyd-G013	25.95	200	110	-4.35	0.14	0.0
WM4145C_02	Glencoe	J_Hyd-G013	J-0032	1.48	150	100	-4.35	0.25	0.0
WM4147C_01	Glencoe	J-0316	J-0191	48.55	200	110	4.89	0.16	0.0
WM4147C_02	Glencoe	J-0191	J_Hyd-G012	75.68	200	110	-1.95	0.06	0.0
WM4147C_03	Glencoe	J_Hyd-G012	J-0303	9.12	150	100	-1.95	0.11	0.0
WM4147C_04	Glencoe	J-0032	J-0128	88.99	200	110	-3.51	0.11	0.0
WM4147C_05	Glencoe	J-0128	J-0303	27.37	200	110	-3.51	0.11	0.0
WM4148C_01	Glencoe	J-0316	J_Hyd-G011	10.01	200	110	-3.24	0.10	0.0
WM4148C_02	Glencoe	WVG097	J_Hyd-G011	89.00	200	110	3.24	0.10	0.0
WM4149_01	Glencoe	J-715	WVG042	11.98	250	120	-15.15	0.31	0.0
WM4149_02	Glencoe	WVG042	J-0111	70.85	250	120	-15.15	0.31	0.0
WM4153C_01	Glencoe	J-0071	J_Hyd-G010	2.62	150	100	0.00	0.00	0.0
WM4153C_02	Glencoe	WVG158	J_Hyd-G010	52.89	150	100	0.00	0.00	0.0
WM4153C_03	Glencoe	J-0402	J_Hyd-G087	11.71	200	110	2.97	0.09	0.0
WM4153C_04	Glencoe	J_Hyd-G087	J-0452	14.25	200	110	2.97	0.09	0.0
WM4153C_05(1)	Glencoe	J-0452	J-722	58.28	200	110	1.57	0.05	0.0
WM4153C_05(2)	Glencoe	J-722	J_Hyd-G082	28.48	200	110	1.57	0.05	0.0
WM4153C_06	Glencoe	J_Hyd-G082	J_Hyd-G006	142.80	200	110	1.57	0.05	0.0
WM4153C_07	Glencoe	WV-348	J_Hyd-G005	108.11	200	110	1.65	0.05	0.0
WM4153C_08	Glencoe	J_Hyd-G005	J_Hyd-G063	100.69	200	110	1.65	0.05	0.0
WM4153C_09	Glencoe	J_Hyd-G063	J_Hyd-G058	130.80	200	110	1.65	0.05	0.0
WM4153C_10	Glencoe	J_Hyd-G058	J-0627	10.14	200	110	1.65	0.05	0.0
WM4156	Glencoe	J-0367	J-0368	16.07	150	100	0.00	0.00	0.0
WM4157_01	Glencoe	J-0554	J_Hyd-G092	93.03	150	100	0.00	0.00	0.0
WM4157_02	Glencoe	J_Hyd-G092	J-692	5.66	150	100	0.00	0.00	0.0
WM4159_01	Glencoe	J-0384	WVG022	17.17	150	100	0.00	0.00	0.0
WM4159_02	Glencoe	WVG022	G072	40.39	150	100	0.00	0.00	0.0
WM4160_01	Glencoe	J-0360	WVG116	14.15	150	100	1.77	0.10	0.0
WM4160_02	Glencoe	WVG116	J-0235	99.50	150	100	1.77	0.10	0.0
WM4162_01	Glencoe	J-0191	WVG094	4.72	150	100	6.84	0.39	0.0
WM4162_02	Glencoe	WVG094	J-0529	83.93	200	110	6.84	0.22	0.0
WM4162_03	Glencoe	J-0529	J-713	78.46	200	110	6.16	0.20	0.0
WM4167_01	Glencoe	J-0288	J-0488	67.16	150	100	0.00	0.00	0.0
WM4167_02	Glencoe	J-0488	J-0354	40.17	150	100	0.00	0.00	0.0
WM4178L.B	Glencoe	J-705	WVG165	107.96	150	100	1.81	0.10	0.0
WM4181L.B	Glencoe	J-0178	J-707	123.47	100	100	0.49	0.06	0.0
WM4182L.B_01	Glencoe	J-0353	WVG045	13.16	150	100	1.44	0.08	0.0
WM4182L.B_02	Glencoe	WVG045	WVG171	101.55	150	100	1.44	0.08	0.0
WM4182L.B_03	Glencoe	J-0025	WVG171	1.26	150	100	-1.44	0.08	0.0
WM4184L.B_01	Glencoe	J-0331	WVG037	11.11	150	100	1.44	0.08	0.0
WM4184L.B_02	Glencoe	WVG037	J-0353	103.47	150	100	1.44	0.08	0.0
WM4196L.B_01	Glencoe	J-0145	J-0146	3.84	300	120	-36.41	0.52	0.0
WM4196L.B_02	Glencoe	J-0202	WVG197	5.00	300	120	-22.68	0.32	0.0
WM4196L.B_03	Glencoe	WVG197	J-0067	333.26	300	120	-22.68	0.32	0.2
P-234	Melborne	J_Hyd-M017	J-0531	3.11	150	100	3.37	0.19	0.0
P-237	Melborne	WVM004	J-0037	11.15	200	110	0.09	0.00	0.0
P_Hyd-M002	Melborne	J_Hyd-M002	M002	4.54	150	100	0.00	0.00	0.0
P_Hyd-M003	Melborne	J_Hyd-M003	M003	3.46	150	100	0.00	0.00	0.0
P_Hyd-M004	Melborne	J_Hyd-M004	M004	2.69	150	100	0.00	0.00	0.0
P_Hyd-M005	Melborne	J_Hyd-M005	M005	4.60	150	100	0.00	0.00	0.0
P_Hyd-M006	Melborne	J_Hyd-M006	M006	1.58	150	100	0.00	0.00	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-M007	Melborne	J_Hyd-M007	M007	3.19	150	100	0.00	0.00	0.0
P_Hyd-M008	Melborne	J_Hyd-M008	M008	1.77	150	100	0.00	0.00	0.0
P_Hyd-M009	Melborne	J_Hyd-M009	M009	4.67	150	100	0.00	0.00	0.0
P_Hyd-M010	Melborne	J_Hyd-M010	M010	6.09	150	100	0.00	0.00	0.0
P_Hyd-M011	Melborne	J_Hyd-M011	M011	1.88	150	100	0.00	0.00	0.0
P_Hyd-M012	Melborne	J_Hyd-M012	M012	3.91	150	100	0.00	0.00	0.0
P_Hyd-M013	Melborne	J_Hyd-M013	M013	2.29	150	100	0.00	0.00	0.0
P_Hyd-M014	Melborne	J_Hyd-M014	M014	1.98	150	100	0.00	0.00	0.0
P_Hyd-M015	Melborne	J_Hyd-M015	M015	2.99	150	100	0.00	0.00	0.0
P_Hyd-M016	Melborne	J_Hyd-M016	M016	2.30	150	100	0.00	0.00	0.0
P_Hyd-M017	Melborne	J_Hyd-M017	M017	4.21	150	100	0.00	0.00	0.0
P_Hyd-M018	Melborne	J_Hyd-M018	M018	0.81	150	100	0.00	0.00	0.0
P_Hyd-M019	Melborne	J_Hyd-M019	M019	3.99	150	100	0.00	0.00	0.0
P_Hyd-M020	Melborne	J_Hyd-M020	M020	3.90	150	100	0.00	0.00	0.0
P_Hyd-M021	Melborne	J_Hyd-M021	M021	3.76	150	100	0.00	0.00	0.0
P_Hyd-M022	Melborne	J_Hyd-M022	M022	4.35	150	100	0.00	0.00	0.0
P_Hyd-M023	Melborne	J_Hyd-M023	M023	1.95	150	100	0.00	0.00	0.0
WM2002C	Melborne	J-0237	WVM022	6.14	150	100	0.42	0.02	0.0
WM2030C_13	Melborne	J_Hyd-M002	J_Hyd-M003	206.11	150	100	3.46	0.20	0.1
WM2110C_01	Melborne	J-0158	WVM011	12.91	150	100	0.00	0.00	0.0
WM2110C_02	Melborne	WVM011	J_Hyd-M008	99.39	150	100	0.00	0.00	0.0
WM2111C_04	Melborne	WVM032	J_Hyd-M017	17.49	150	100	3.37	0.19	0.0
WM6000_01	Melborne	J-0176	WVM003	95.00	150	100	-1.52	0.09	0.0
WM6000_02	Melborne	WVM003	J-0192	32.55	150	100	-1.52	0.09	0.0
WM6001_01	Melborne	J-0065	WVA023	2.02	150	100	0.00	0.00	0.0
WM6001_02	Melborne	WVA023	WVM030	47.35	150	100	0.00	0.00	0.0
WM6002C_01	Melborne	J-0105	J-0403	19.22	150	100	0.50	0.03	0.0
WM6002C_02	Melborne	WVM022	J-0403	98.89	150	100	0.42	0.02	0.0
WM6002_01	Melborne	WVM025	J_Hyd-M020	2.65	150	100	-0.64	0.04	0.0
WM6002_02	Melborne	J-0177	WVM025	4.37	150	100	-0.64	0.04	0.0
WM6002_03	Melborne	J_Hyd-M020	WVM007	98.53	150	100	-0.64	0.04	0.0
WM6002_04	Melborne	WVM007	J-0125	18.26	150	100	-0.64	0.04	0.0
WM6003C_01	Melborne	J-0192	WVM001	4.73	150	100	-3.46	0.20	0.0
WM6003C_02	Melborne	J_Hyd-M003	WVM001	187.86	150	100	3.46	0.20	0.1
WM6003_01	Melborne	J-0176	WVM027	4.36	150	100	1.37	0.08	0.0
WM6003_02	Melborne	WVM027	J_Hyd-M022	26.82	150	100	1.37	0.08	0.0
WM6003_03	Melborne	J_Hyd-M022	J-0407	20.47	150	100	1.37	0.08	0.0
WM6003_04	Melborne	J_Hyd-M023	J-0407	158.98	150	100	0.00	0.00	0.0
WM6003_05	Melborne	J_Hyd-M023	J-0493	43.36	150	100	0.00	0.00	0.0
WM6004C_01	Melborne	J-0192	WVM002	14.53	150	100	1.94	0.11	0.0
WM6004C_02	Melborne	WVM002	J_Hyd-M004	4.18	150	100	1.94	0.11	0.0
WM6004C_03	Melborne	J_Hyd-M004	J_Hyd-M005	170.61	200	110	1.94	0.06	0.0
WM6004_01	Melborne	J-0065	J_Hyd-M021	8.68	150	100	-0.16	0.01	0.0
WM6004_02	Melborne	J_Hyd-M021	WVM028	111.82	150	100	-0.16	0.01	0.0
WM6004_03	Melborne	WVM028	J-0176	16.14	150	100	-0.16	0.01	0.0
WM6005C_01	Melborne	J-0125	WVM005	3.45	200	110	-2.03	0.06	0.0
WM6005C_02	Melborne	WVM005	J-0430	23.41	200	110	-2.03	0.06	0.0
WM6005C_03	Melborne	Standpipe	J-0430	46.70	200	110	0.00	0.00	0.0
WM6005C_04	Melborne	J_Hyd-M005	J-0037	34.61	200	110	1.94	0.06	0.0
WM6005C_05	Melborne	J-0430	J-0037	4.98	200	110	-2.03	0.06	0.0
WM6005C_06	Melborne	Standpipe	WVM004	31.50	200	110	0.09	0.00	0.0
WM6005_01	Melborne	J-0177	WVM026	4.51	150	100	-0.16	0.01	0.0
WM6005_02	Melborne	WVM026	J-0065	110.26	150	100	-0.16	0.01	0.0
WM6006C_01	Melborne	J-0125	WVM006	15.98	200	110	1.39	0.04	0.0
WM6006C_02	Melborne	WVM006	J_Hyd-M006	43.26	200	110	1.39	0.04	0.0
WM6006C_03	Melborne	J_Hyd-M006	WVM008	67.74	200	110	1.39	0.04	0.0
WM6006C_04	Melborne	WVM008	J-0105	26.02	200	110	1.39	0.04	0.0
WM6006_01	Melborne	J-0203	J_Hyd-M019	5.07	150	100	0.47	0.03	0.0
WM6006_02	Melborne	J_Hyd-M019	J-0177	132.87	150	100	0.47	0.03	0.0
WM6007SC_01	Melborne	J-0312	WVM013	15.69	150	100	0.17	0.01	0.0
WM6007SC_02	Melborne	WVM013	J_Hyd-M016	68.32	150	100	0.17	0.01	0.0
WM6007SC_03	Melborne	J_Hyd-M016	J-0156	12.36	150	100	0.17	0.01	0.0
WM6007SC_04	Melborne	J-0156	J-0498	46.76	150	100	1.66	0.09	0.0
WM6008SCC_01	Melborne	J-0403	J-0434	101.45	150	100	0.92	0.05	0.0
WM6008SCC_02	Melborne	J-0434	J-0108	24.19	150	100	0.92	0.05	0.0
WM6008SCC_03	Melborne	J-0108	J-0109	3.08	150	100	0.92	0.05	0.0
WM6008SC_01	Melborne	J-0230	J-0237	128.60	150	100	-0.82	0.05	0.0
WM6008SC_02	Melborne	J-0237	J-0203	15.29	150	100	-1.24	0.07	0.0
WM6009SC_01	Melborne	J-0158	WVM010	4.02	150	100	0.89	0.05	0.0
WM6009SC_02	Melborne	WVM010	J_Hyd-M009	52.80	150	100	0.89	0.05	0.0
WM6009SC_03	Melborne	J_Hyd-M009	J_Hyd-M010	84.25	150	100	0.89	0.05	0.0
WM6009SC_04	Melborne	J_Hyd-M010	J-0248	6.77	150	100	0.89	0.05	0.0
WM6010C_01	Melborne	J-0105	WVM009	3.01	150	100	0.89	0.05	0.0
WM6010C_02	Melborne	WVM009	J_Hyd-M007	38.17	150	100	0.89	0.05	0.0
WM6010C_03	Melborne	J_Hyd-M007	J-0158	66.46	150	100	0.89	0.05	0.0
WM6010SCC	Melborne	J_Hyd-M012	J-0159	72.47	150	100	0.29	0.02	0.0
WM6010SC_01	Melborne	J-0500	J-0230	48.94	150	100	-0.48	0.03	0.0
WM6010SC_02	Melborne	J-0502	J-0500	50.61	150	100	-0.48	0.03	0.0
WM6010SC_03	Melborne	J-0396	WVM014	18.01	150	100	0.00	0.00	0.0
WM6010SC_04	Melborne	WVM014	J-0248	103.75	150	100	0.00	0.00	0.0
WM6011C_01	Melborne	J-0413	J_Hyd-M018	65.91	150	100	1.87	0.11	0.0
WM6011C_02	Melborne	J_Hyd-M018	WVM012	9.39	150	100	1.87	0.11	0.0
WM6011C_03	Melborne	WVM012	J-0312	9.52	150	100	1.87	0.11	0.0
WM6011SC_01	Melborne	J-0413	J-0414	20.96	150	100	1.50	0.08	0.0
WM6011SC_02	Melborne	J-0156	J-0157	3.99	150	100	-1.50	0.08	0.0
WM6011SC_03	Melborne	J-0157	WVM031	10.91	150	100	-1.50	0.08	0.0
WM6011SC_04	Melborne	J-0414	WVM031	93.52	150	100	1.50	0.08	0.0
WM6013C_01	Melborne	WVM023	J-0203	14.89	150	100	1.70	0.10	0.0
WM6013C_02	Melborne	J-0312	WVM023	99.33	150	100	1.70	0.10	0.0
WM6013SC_01	Melborne	J-0498	J_Hyd-M015	64.17	150	100	1.66	0.09	0.0
WM6013SC_02	Melborne	J-0230	WVM020	14.69	150	100	-1.66	0.09	0.0
WM6013SC_03	Melborne	WVM020	J_Hyd-M015	35.71	150	100	-1.66	0.09	0.0
WM6015SC_01	Melborne	J-0502	J_Hyd-M014	55.20	150	100	0.48	0.03	0.0
WM6015SC_02	Melborne	J_Hyd-M014	WVM021	51.37	150	100	0.48	0.03	0.0
WM6015SC_03	Melborne	WVM021	J-0159	4.03	150	100	0.48	0.03	0.0
WM6016SCC_01	Melborne	J-0159	WVM017	33.77	150	100	0.77	0.04	0.0
WM6016SCC_02	Melborne	WVM017	J-0189	4.61	150	100	0.77	0.04	0.0
WM6016SC_01	Melborne	J-0476	J_Hyd-M011	37.38	150	100	-0.46	0.03	0.0
WM6016SC_02	Melborne	J_Hyd-M011	J-0189	91.52	150	100	-0.46	0.03	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM6017SCC_01	Melborne	WVM018	J_Hyd-M013	113.47	150	100	0.31	0.02	0.0
WM6017SCC_02	Melborne	J-0189	WVM018	10.70	150	100	0.31	0.02	0.0
WM6018SCC	Melborne	J-0109	J_Hyd-M012	27.44	150	100	0.29	0.02	0.0
WM6018SC_01	Melborne	J-0248	J-0249	6.36	150	100	0.89	0.05	0.0
WM6018SC_02	Melborne	J-0249	WVM015	15.24	150	100	-0.46	0.03	0.0
WM6018SC_03	Melborne	WVM015	J-0476	105.12	150	100	-0.46	0.03	0.0
WM6018SC_04	Melborne	WVM019	J-0230	5.70	150	100	-0.60	0.03	0.0
WM6018SC_05	Melborne	WVM019	J-0109	104.89	150	100	0.60	0.03	0.0
WM6019C	Melborne	J-0531	J-0413	70.43	150	100	3.37	0.19	0.0
P-319	Wardsville	WVW007	J_Hyd-W015	1.13	150	100	-0.05	0.00	0.0
P_Hyd-W001	Wardsville	J_Hyd-W001	W001	5.48	150	90	0.00	0.00	0.0
P_Hyd-W002	Wardsville	J_Hyd-W002	W002	4.70	150	90	0.00	0.00	0.0
P_Hyd-W003	Wardsville	J_Hyd-W003	W003	5.65	150	90	0.00	0.00	0.0
P_Hyd-W004	Wardsville	J_Hyd-W004	W004	3.86	150	90	0.00	0.00	0.0
P_Hyd-W005	Wardsville	J_Hyd-W005	W005	6.90	150	90	0.00	0.00	0.0
P_Hyd-W006	Wardsville	J_Hyd-W006	W006	3.88	150	90	0.00	0.00	0.0
P_Hyd-W007	Wardsville	J_Hyd-W007	W007	1.75	150	90	0.00	0.00	0.0
P_Hyd-W008	Wardsville	J_Hyd-W008	W008	1.93	150	90	0.00	0.00	0.0
P_Hyd-W009	Wardsville	J_Hyd-W009	W009	3.07	150	90	0.00	0.00	0.0
P_Hyd-W010	Wardsville	J_Hyd-W010	W010	1.19	150	90	0.00	0.00	0.0
P_Hyd-W011	Wardsville	J_Hyd-W011	W011	6.93	150	90	0.00	0.00	0.0
P_Hyd-W012	Wardsville	J_Hyd-W012	W012	2.69	150	90	0.00	0.00	0.0
P_Hyd-W013	Wardsville	J_Hyd-W013	W013	2.70	150	90	0.00	0.00	0.0
P_Hyd-W014	Wardsville	J_Hyd-W014	W014	1.95	150	90	0.00	0.00	0.0
P_Hyd-W015	Wardsville	J_Hyd-W015	W015	6.64	150	90	0.00	0.00	0.0
P_Hyd-W016	Wardsville	J_Hyd-W016	W016	5.24	150	90	0.00	0.00	0.0
P_Hyd-W017	Wardsville	J_Hyd-W017	W017	10.85	150	90	0.00	0.00	0.0
P_Hyd-W018	Wardsville	J_Hyd-W018	W018	2.15	150	90	0.00	0.00	0.0
P_Hyd-W019	Wardsville	J_Hyd-W019	W019	2.50	150	90	0.00	0.00	0.0
P_Hyd-W020	Wardsville	WVW055	W020	4.99	150	90	0.00	0.00	0.0
P_Hyd-W021	Wardsville	J_Hyd-W021	W021	3.07	150	90	0.00	0.00	0.0
P_Hyd-W022	Wardsville	J_Hyd-W022	W022	4.10	150	90	0.00	0.00	0.0
P_Hyd-W023	Wardsville	J_Hyd-W023	W023	5.14	150	90	0.00	0.00	0.0
P_Hyd-W024	Wardsville	J_Hyd-W024	W024	5.95	150	90	0.00	0.00	0.0
P_Hyd-W025	Wardsville	J_Hyd-W025	W025	6.22	150	90	0.00	0.00	0.0
P_Hyd-W026	Wardsville	J_Hyd-W026	W026	6.37	150	90	0.00	0.00	0.0
P_Hyd-W027	Wardsville	J_Hyd-W027	W027	3.79	150	90	0.00	0.00	0.0
P_Hyd-W028	Wardsville	J_Hyd-W028	W028	3.84	150	90	0.00	0.00	0.0
P_Hyd-W029	Wardsville	J_Hyd-W029	W029	6.11	150	90	0.00	0.00	0.0
P_Hyd-W030	Wardsville	J_Hyd-W030	W030	3.82	150	90	0.00	0.00	0.0
P_Hyd-W031	Wardsville	J_Hyd-W031	W031	5.06	150	90	0.00	0.00	0.0
P_Hyd-W032	Wardsville	J_Hyd-W032	W032	7.29	150	90	0.00	0.00	0.0
P_Hyd-W033	Wardsville	J_Hyd-W033	W033	6.07	150	90	0.00	0.00	0.0
P_Hyd-W034	Wardsville	J_Hyd-W034	W034	5.18	150	90	0.00	0.00	0.0
P_Hyd-W035	Wardsville	J_Hyd-W035	W035	4.26	150	90	0.00	0.00	0.0
P_Hyd-W036	Wardsville	J_Hyd-W036	W036	3.12	150	90	0.00	0.00	0.0
P_Hyd-W037	Wardsville	J_Hyd-W037	W037	1.94	150	90	0.00	0.00	0.0
P_Hyd-W038	Wardsville	J_Hyd-W038	W038	1.51	150	90	0.00	0.00	0.0
P_Hyd-W039	Wardsville	J_Hyd-W039	W039	0.69	150	90	0.05	0.00	0.0
P_Hyd-W040	Wardsville	J_Hyd-W040	W040	5.52	150	90	0.00	0.00	0.0
P_Hyd-W041	Wardsville	J_Hyd-W041	W041	5.79	150	90	0.00	0.00	0.0
P_Hyd-W042	Wardsville	J_Hyd-W042	W042	3.43	150	90	0.00	0.00	0.0
P_Hyd-W043	Wardsville	J_Hyd-W043	W043	11.13	150	90	0.00	0.00	0.0
P_Hyd-W044	Wardsville	J_Hyd-W044	W044	5.49	150	90	0.00	0.00	0.0
P_Hyd-W045	Wardsville	J_Hyd-W045	W045	6.88	150	90	0.00	0.00	0.0
P_Hyd-W046	Wardsville	J_Hyd-W046	W046	5.95	150	90	0.00	0.00	0.0
P_Hyd-W047	Wardsville	J_Hyd-W047	W047	6.10	150	90	0.00	0.00	0.0
SWM_GIS.Waterm	Wardsville	W039	J_Hyd-W039	0.69	150	90	0.05	0.00	0.0
WM1009C_01	Wardsville	J_Hyd-W001	J_Hyd-W002	94.93	200	100	0.00	0.00	0.0
WM1009C_02	Wardsville	J_Hyd-W002	J-0446	25.09	200	100	0.00	0.00	0.0
WM1010C_01	Wardsville	J-0031	WVW001	14.43	200	100	-2.02	0.06	0.0
WM1010C_02	Wardsville	WVW001	J_Hyd-W010	1.27	200	100	-2.02	0.06	0.0
WM1010C_03	Wardsville	J_Hyd-W010	J-0438	55.92	200	100	-2.02	0.06	0.0
WM1010C_04	Wardsville	J-0438	J-0439	24.67	200	100	-2.02	0.06	0.0
WM1010C_05	Wardsville	J-0439	J_Hyd-W011	28.71	200	100	-2.02	0.06	0.0
WM1010C_06	Wardsville	J_Hyd-W011	J-0550	94.48	200	100	-2.02	0.06	0.0
WM1010C_07	Wardsville	J-0550	J_Hyd-W047	140.43	200	100	-2.52	0.08	0.0
WM1010C_08	Wardsville	J_Hyd-W047	J_Hyd-W045	152.33	200	100	-2.52	0.08	0.0
WM1010C_09	Wardsville	J_Hyd-W045	J-0160	109.76	200	100	-2.52	0.08	0.0
WM1010C_10	Wardsville	J-0160	J-0161	4.04	200	100	-2.52	0.08	0.0
WM1010C_11	Wardsville	J-0161	J_Hyd-W046	92.10	200	100	-2.52	0.08	0.0
WM1010C_12	Wardsville	J_Hyd-W046	J-0553	96.02	200	100	-2.52	0.08	0.0
WM1010C_13	Wardsville	J-0553	J_Hyd-R021M	1022.49	200	100	-2.52	0.08	0.1
WM1010_01	Wardsville	J-0643	J-0597	2259.98	300	110	5.78	0.08	0.1
WM1010_02	Wardsville	J-0597	J-0456	167.81	300	110	5.78	0.08	0.0
WM1064C_01	Wardsville	J-0245	WVW067	6.24	200	100	0.00	0.00	0.0
WM1064C_02	Wardsville	WVW067	J-0022	1.26	200	100	0.00	0.00	0.0
WM1064C_03	Wardsville	J-0022	J_Hyd-W028	5.40	200	100	0.00	0.00	0.0
WM1064C_04	Wardsville	J-0022	J-0069	2.10	200	100	0.00	0.00	0.0
WM1064C_05	Wardsville	J-0069	J-0307	79.42	200	100	0.00	0.00	0.0
WM1065C_01	Wardsville	J-0035	WVR006	1.51	150	90	-5.78	0.33	0.0
WM1065C_02	Wardsville	WVR006	J-686	1.59	150	90	-5.78	0.33	0.0
WM1065C_03	Wardsville	J_Hyd-W044	J-0504	618.26	300	110	-5.78	0.08	0.0
WM1065C_04	Wardsville	J-0504	J-0035	51.23	300	110	-5.78	0.08	0.0
WM1066C_01(1)	Wardsville	J-0456	J-686	2.75	300	110	5.78	0.08	0.0
WM1066C_01(2)	Wardsville	J-686	J-0242	25.10	300	110	0.00	0.00	0.0
WM1066C_02	Wardsville	J-0242	WVR003	6.22	300	110	0.00	0.00	0.0
WM3000C_01	Wardsville	J-0061	WVW033	17.06	300	110	-2.43	0.03	0.0
WM3000C_02	Wardsville	WVW033	J-0343	64.42	300	110	-2.43	0.03	0.0
WM3000_01	Wardsville	J-728	WVW066	78.11	150	90	0.04	0.00	0.0
WM3000_02	Wardsville	WVW066	J-0122	3.40	150	90	0.04	0.00	0.0
WM3001C_01	Wardsville	J-0506	WVW031	51.53	200	100	-1.46	0.05	0.0
WM3001C_02	Wardsville	WVW031	J-0040	1.58	200	100	-1.46	0.05	0.0
WM3001C_03	Wardsville	J-0040	J-0083	3.94	200	100	-1.46	0.05	0.0
WM3001_01	Wardsville	J_Hyd-W040	WVW036	53.55	150	90	-0.26	0.01	0.0
WM3001_02	Wardsville	WVW036	J-0188	4.61	150	90	-0.26	0.01	0.0
WM3002C_01	Wardsville	J-0297	WVW022	10.56	200	100	-0.74	0.02	0.0
WM3002C_02	Wardsville	WVW022	J_Hyd-W030	4.30	200	100	-0.74	0.02	0.0
WM3002C_03	Wardsville	J_Hyd-W030	J-0506	74.51	200	100	-0.74	0.02	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3002_01	Wardsville	J-0251	WVW028	10.95	150	90	-0.26	0.01	0.0
WM3002_02	Wardsville	WVW028	J_Hyd-W040	87.52	150	90	-0.26	0.01	0.0
WM3003C_01	Wardsville	J-0307	WVW025	9.26	200	100	-0.39	0.01	0.0
WM3003C_02	Wardsville	WVW025	J_Hyd-W029	22.49	200	100	-0.39	0.01	0.0
WM3003C_03	Wardsville	J_Hyd-W029	J-0297	87.53	200	100	-0.39	0.01	0.0
WM3003_01	Wardsville	J-0429	J_Hyd-W041	101.52	150	90	-0.44	0.02	0.0
WM3003_02	Wardsville	J_Hyd-W041	J-0251	15.68	150	90	-0.44	0.02	0.0
WM3004C_01	Wardsville	J-0349	J-0308	12.47	300	110	-5.78	0.08	0.0
WM3004C_02	Wardsville	J-0308	WVW061	9.36	300	110	-5.78	0.08	0.0
WM3004C_03	Wardsville	WVW061	J_Hyd-W032	49.83	300	110	-5.78	0.08	0.0
WM3004_01	Wardsville	J-0283	WVW056	9.15	150	90	0.57	0.03	0.0
WM3004_02	Wardsville	WVW056	J_Hyd-W021	79.20	150	90	0.57	0.03	0.0
WM3004_03	Wardsville	J_Hyd-W021	WVW054	2.33	150	90	0.57	0.03	0.0
WM3004_04	Wardsville	WVW054	J-0218	6.54	150	90	0.57	0.03	0.0
WM3004_05	Wardsville	J-0217	J-0218	5.41	150	90	-0.57	0.03	0.0
WM3005C_01	Wardsville	J-0234	WVW053	13.96	300	110	-4.79	0.07	0.0
WM3005C_02	Wardsville	WVW053	J-0349	82.84	300	110	-4.79	0.07	0.0
WM3005_01	Wardsville	J-0028	WVW057	27.93	150	90	0.40	0.02	0.0
WM3005_02	Wardsville	WVW057	J_Hyd-W022	4.65	150	90	0.40	0.02	0.0
WM3005_03	Wardsville	J_Hyd-W022	J-0283	61.43	150	90	0.40	0.02	0.0
WM3006C_01	Wardsville	J-0050	J_Hyd-W031	24.70	300	110	-3.84	0.05	0.0
WM3006C_02	Wardsville	J_Hyd-W031	J-0234	88.41	300	110	-3.85	0.05	0.0
WM3006_01	Wardsville	WVW043	J_Hyd-W023	18.88	150	90	0.11	0.01	0.0
WM3006_02	Wardsville	J_Hyd-W023	J-0027	87.15	150	90	0.11	0.01	0.0
WM3006_03	Wardsville	J-0027	J-0028	1.30	150	90	-0.30	0.02	0.0
WM3006_04	Wardsville	WVW043	J-0154	9.51	150	90	-0.11	0.01	0.0
WM3007C_01	Wardsville	J-0343	WVW064	12.09	300	110	-2.89	0.04	0.0
WM3007C_02	Wardsville	WVW064	J-0018	68.86	300	110	-2.89	0.04	0.0
WM3007_01	Wardsville	J-0247	J_Hyd-W025	104.21	150	90	0.11	0.01	0.0
WM3007_02	Wardsville	J-0154	J_Hyd-W025	62.02	150	90	-0.11	0.01	0.0
WM3008_01	Wardsville	J-0247	J_Hyd-W026	91.00	150	90	0.52	0.03	0.0
WM3008_02	Wardsville	WVW019	J-0238	11.66	150	90	0.52	0.03	0.0
WM3008_03	Wardsville	J_Hyd-W026	WVW019	34.82	150	90	0.52	0.03	0.0
WM3009_01	Wardsville	J-0238	J-0485	57.20	150	90	0.00	0.00	0.0
WM3009_02	Wardsville	J_Hyd-W027	J-0485	39.51	150	90	0.00	0.00	0.0
WM3009_03	Wardsville	J_Hyd-W027	J-0460	29.49	150	90	0.00	0.00	0.0
WM3010_01	Wardsville	J_Hyd-W019	J-0055	103.28	150	90	0.00	0.00	0.0
WM3010_02	Wardsville	J-0055	J-0056	1.79	150	90	0.00	0.00	0.0
WM3011	Wardsville	WVW046	J_Hyd-W019	82.16	150	90	0.00	0.00	0.0
WM3012_01	Wardsville	J-0088	WVW045	2.49	150	90	0.12	0.01	0.0
WM3012_02	Wardsville	WVW045	J_Hyd-W018	55.58	150	90	0.12	0.01	0.0
WM3012_03	Wardsville	J_Hyd-W018	J-0068	71.53	150	90	0.12	0.01	0.0
WM3013_01	Wardsville	J-0223	WVW014	17.55	150	90	0.24	0.01	0.0
WM3013_02	Wardsville	WVW014	J_Hyd-W017	91.23	150	90	0.24	0.01	0.0
WM3013_03	Wardsville	J_Hyd-W017	J-0444	24.98	150	90	0.24	0.01	0.0
WM3013_04	Wardsville	J-0444	J-0311	33.46	150	90	0.24	0.01	0.0
WM3013_05	Wardsville	J-0311	J-0088	9.52	150	90	0.24	0.01	0.0
WM3014_01	Wardsville	J-0131	J_Hyd-W016	12.42	150	90	-0.05	0.00	0.0
WM3014_02	Wardsville	J_Hyd-W016	J-0174	113.19	150	90	-0.05	0.00	0.0
WM3014_03	Wardsville	J-0131	J-0132	3.57	150	90	0.00	0.00	0.0
WM3016	Wardsville	WVW009	J-0034	2.74	150	90	-0.46	0.03	0.0
WM3017_01	Wardsville	J-0029	J-0030	1.33	150	90	0.66	0.04	0.0
WM3017_02	Wardsville	J-0029	WVW008	85.97	150	90	-0.51	0.03	0.0
WM3017_03	Wardsville	WVW008	J-0258	6.92	150	90	-0.51	0.03	0.0
WM3017_04	Wardsville	J-0258	WVW009	114.37	150	90	-0.46	0.03	0.0
WM3018_01	Wardsville	J_Hyd-W012	WVW002	103.92	150	90	-0.68	0.04	0.0
WM3018_02	Wardsville	J-0031	WVW002	1.39	150	90	0.68	0.04	0.0
WM3018_03	Wardsville	J_Hyd-W012	J-0023	108.22	150	90	0.68	0.04	0.0
WM3018_04	Wardsville	J-0023	J-0024	1.26	150	90	0.00	0.00	0.0
WM3019C	Wardsville	J_Hyd-W033	J_Hyd-W044	138.80	300	110	-5.78	0.08	0.0
WM3020	Wardsville	J_Hyd-W035	J-0308	44.57	150	90	0.00	0.00	0.0
WM3020C_01	Wardsville	J-0228	J-0229	5.61	300	110	-5.78	0.08	0.0
WM3020C_02	Wardsville	J-0229	J_Hyd-W033	48.18	300	110	-5.78	0.08	0.0
WM3021_01	Wardsville	J-0234	WVW052	5.86	150	90	0.25	0.01	0.0
WM3021_02	Wardsville	WVW052	J_Hyd-W036	57.41	150	90	0.00	0.00	0.0
WM3022_01	Wardsville	J-0051	WVW039	3.85	150	90	0.00	0.00	0.0
WM3022_02	Wardsville	WVW039	J_Hyd-W037	120.90	150	90	0.00	0.00	0.0
WM3022_03	Wardsville	J-0050	J-0051	1.72	300	110	0.49	0.01	0.0
WM3023C_01	Wardsville	WVW034	J_Hyd-W003	91.07	200	100	-0.92	0.03	0.0
WM3023C_02	Wardsville	J_Hyd-W003	WVW032	52.82	200	100	-0.92	0.03	0.0
WM3023C_03	Wardsville	WVW032	J-0082	11.99	200	100	-0.92	0.03	0.0
WM3023C_04	Wardsville	J-0082	J-0083	2.41	300	110	-0.92	0.01	0.0
WM3023_01	Wardsville	J-0122	J_Hyd-W039	135.47	150	90	-0.46	0.03	0.0
WM3023_02	Wardsville	J_Hyd-W039	WVW063	13.80	150	90	-0.46	0.03	0.0
WM3023_03	Wardsville	WVW063	J-0002	1.04	150	90	0.00	0.00	0.0
WM3023_04	Wardsville	WVW063	J-0343	21.64	150	90	-0.46	0.03	0.0
WM3023_05	Wardsville	J-0122	J_Hyd-W038	9.17	150	90	0.00	0.00	0.0
WM3025_01	Wardsville	J-0297	WVW023	15.43	150	90	0.18	0.01	0.0
WM3025_02	Wardsville	WVW023	J_Hyd-W043	67.26	150	90	0.18	0.01	0.0
WM3025_03	Wardsville	J_Hyd-W043	WVW029	72.48	150	90	0.18	0.01	0.0
WM3025_04	Wardsville	WVW029	J-0251	6.56	150	90	0.18	0.01	0.0
WM3026_01	Wardsville	J-0238	WVW020	6.15	150	90	-0.18	0.01	0.0
WM3026_02	Wardsville	WVW020	WVW021	100.45	150	90	-0.18	0.01	0.0
WM3026_03	Wardsville	WVW021	J-0297	8.86	150	90	-0.18	0.01	0.0
WM3027_01	Wardsville	J-0307	WVW026	14.56	150	90	0.39	0.02	0.0
WM3027_02	Wardsville	WVW026	J_Hyd-W042	125.13	150	90	0.39	0.02	0.0
WM3027_03	Wardsville	J_Hyd-W042	J-0429	22.83	150	90	0.39	0.02	0.0
WM3028_01	Wardsville	J-0460	WVW027	79.81	150	90	0.00	0.00	0.0
WM3028_02	Wardsville	WVW027	J-0307	9.37	150	90	0.00	0.00	0.0
WM3029C	Wardsville	J_Hyd-W032	J-0228	58.86	300	110	-5.78	0.08	0.0
WM3030	Wardsville	J-0055	WVW055	10.06	150	90	0.00	0.00	0.0
WM3031_01	Wardsville	J-0283	WVW058	8.32	150	90	-0.99	0.06	0.0
WM3031_02	Wardsville	WVW058	J_Hyd-W034	48.91	150	90	-0.99	0.06	0.0
WM3031_03	Wardsville	J_Hyd-W034	WVW059	49.21	150	90	-0.99	0.06	0.0
WM3031_04	Wardsville	WVW059	J-0349	16.87	150	90	-0.99	0.06	0.0
WM3033_01	Wardsville	J-0028	WVW049	8.75	150	90	-0.69	0.04	0.0
WM3033_02	Wardsville	WVW049	WVW051	98.98	150	90	-0.69	0.04	0.0
WM3033_03	Wardsville	WVW051	J-0234	16.36	150	90	-0.69	0.04	0.0
WM3034_01	Wardsville	J-0068	WVW046	2.10	150	90	0.00	0.00	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3034_02	Wardsville	J-0068	J-0081	10.14	150	90	0.12	0.01	0.0
WM3034_03	Wardsville	J-0081	WVW047	2.39	150	90	0.12	0.01	0.0
WM3034_04	Wardsville	WVW047	WVW048	73.09	150	90	0.12	0.01	0.0
WM3034_05	Wardsville	WVW048	J-0027	10.74	150	90	-0.41	0.02	0.0
WM3035C_01	Wardsville	J-0062	WVW030	2.56	200	100	0.05	0.00	0.0
WM3035C_02	Wardsville	WVW030	J_Hyd-W004	21.12	200	100	0.05	0.00	0.0
WM3035C_03	Wardsville	J_Hyd-W004	WVW018	79.59	200	100	0.05	0.00	0.0
WM3035C_04	Wardsville	WVW018	J-0247	8.72	200	100	0.05	0.00	0.0
WM3035C_05	Wardsville	J-0061	J-0083	2.95	200	100	2.38	0.08	0.0
WM3035C_06	Wardsville	J-0061	J-0062	1.83	300	110	0.05	0.00	0.0
WM3035_01	Wardsville	J-0154	WVW042	3.97	150	90	-0.46	0.03	0.0
WM3035_02	Wardsville	WVW042	WVW038	106.74	150	90	-0.46	0.03	0.0
WM3035_03	Wardsville	WVW038	J-0012	1.00	150	90	-0.46	0.03	0.0
WM3035_04	Wardsville	J-0018	J-0012	1.10	300	110	0.46	0.01	0.0
WM3035_05	Wardsville	J-0018	J-0050	12.34	300	110	-3.35	0.05	0.0
WM3036C_01	Wardsville	J-0247	WVW016	6.26	200	100	-0.59	0.02	0.0
WM3036C_02	Wardsville	WVW016	J_Hyd-W005	3.42	200	100	-0.59	0.02	0.0
WM3036C_03	Wardsville	J_Hyd-W005	J-0423	67.48	200	100	-0.59	0.02	0.0
WM3036C_04	Wardsville	J-0423	J-0042	22.05	200	100	-0.59	0.02	0.0
WM3036C_05	Wardsville	J-0042	J_Hyd-W006	1.59	200	100	-0.59	0.02	0.0
WM3036C_06	Wardsville	J_Hyd-W006	J-0223	34.03	200	100	-0.59	0.02	0.0
WM3036_01	Wardsville	J-0088	WVW044	12.77	150	90	0.12	0.01	0.0
WM3036_02	Wardsville	WVW044	J_Hyd-W024	61.63	150	90	0.12	0.01	0.0
WM3036_03	Wardsville	J_Hyd-W024	WVW041	62.52	150	90	0.12	0.01	0.0
WM3036_04	Wardsville	WVW041	J-0154	8.37	150	90	-0.46	0.03	0.0
WM3037C_01	Wardsville	J-0223	J-0174	5.52	200	100	-0.83	0.03	0.0
WM3037C_02	Wardsville	J-0174	WVW011	4.34	200	100	-0.88	0.03	0.0
WM3037C_03	Wardsville	WVW011	J_Hyd-W007	52.35	200	100	-0.88	0.03	0.0
WM3037C_04	Wardsville	J_Hyd-W007	J_Hyd-W008	96.68	200	100	-0.88	0.03	0.0
WM3037C_05	Wardsville	J_Hyd-W008	WVW010	3.99	200	100	-0.88	0.03	0.0
WM3037C_06	Wardsville	WVW010	J-0120	4.52	200	100	-0.88	0.03	0.0
WM3037C_07	Wardsville	J-0120	J-0121	3.38	200	100	-0.88	0.03	0.0
WM3037C_08	Wardsville	J-0121	J-0033	7.19	200	100	-0.88	0.03	0.0
WM3037C_09	Wardsville	J-0033	J-0034	1.48	200	100	-0.88	0.03	0.0
WM3037_01	Wardsville	J-0258	WVW007	11.40	150	90	-0.05	0.00	0.0
WM3037_02	Wardsville	J_Hyd-W015	WVW015	149.19	150	90	-0.05	0.00	0.0
WM3037_03	Wardsville	WVW015	J-0131	4.69	150	90	-0.05	0.00	0.0
WM3039C_01	Wardsville	J-0034	J-0313	67.18	200	100	-1.34	0.04	0.0
WM3039C_02	Wardsville	J-0313	J_Hyd-W009	9.84	200	100	-1.34	0.04	0.0
WM3039C_03	Wardsville	J_Hyd-W009	WVW003	75.53	200	100	-1.34	0.04	0.0
WM3039C_04	Wardsville	WVW003	J-0031	3.69	200	100	-1.34	0.04	0.0
WM3039_01	Wardsville	J-0023	J_Hyd-W014	21.87	150	90	0.15	0.01	0.0
WM3039_02	Wardsville	J_Hyd-W014	J_Hyd-W013	134.93	150	90	0.15	0.01	0.0
WM3039_03	Wardsville	J_Hyd-W013	WVW006	7.63	150	90	0.15	0.01	0.0
WM3039_04	Wardsville	WVW006	J-0029	2.85	150	90	0.15	0.01	0.0
WM3041C_01	Wardsville	J-0446	WVW035	27.23	200	100	-0.62	0.02	0.0
WM3041C_02(1)	Wardsville	WVW035	J-728	10.26	200	100	-0.62	0.02	0.0
WM3041C_02(2)(1)	Wardsville	J-728	J-0188	3.98	200	100	-0.66	0.02	0.0
WM3041C_02(2)(2)	Wardsville	J-0188	WVW034	4.02	200	100	-0.92	0.03	0.0
P_Hyd-A001	Appin	J_Hyd-A001	A001	2.16	150	100	0.00	0.00	0.0
P_Hyd-A002	Appin	J_Hyd-A002	A002	3.25	150	100	0.00	0.00	0.0
P_Hyd-A003	Appin	J_Hyd-A003	A003	1.26	150	100	0.00	0.00	0.0
P_Hyd-A004	Appin	J_Hyd-A004	A004	8.01	150	100	0.00	0.00	0.0
P_Hyd-A005	Appin	J_Hyd-A005	A005	2.77	150	100	0.00	0.00	0.0
P_Hyd-A006	Appin	J_Hyd-A006	A006	3.67	150	100	0.00	0.00	0.0
P_Hyd-A007	Appin	J_Hyd-A007	A007	3.11	150	100	0.00	0.00	0.0
P_Hyd-A008	Appin	J_Hyd-A008	A008	3.87	150	100	0.00	0.00	0.0
P_Hyd-A009	Appin	J_Hyd-A009	A009	3.13	150	100	0.00	0.00	0.0
P_Hyd-A010	Appin	J_Hyd-A010	A010	4.30	150	100	0.00	0.00	0.0
P_Hyd-A011	Appin	J_Hyd-A011	A011	3.08	150	100	0.00	0.00	0.0
WM2039_04	Appin	J_Hyd-R015E	J-0592	1807.30	200	110	4.63	0.15	0.4
WM2047C_01	Appin	WVR028	WVR053	1957.59	200	110	2.21	0.07	0.1
WM2089C_01	Appin	J-0355	J-0277	21.32	200	110	-6.66	0.21	0.0
WM2089C_02	Appin	J-0277	J-0278	8.12	200	110	-6.66	0.21	0.0
WM2089C_03	Appin	J-0278	J_Hyd-A007	52.72	200	110	-6.66	0.21	0.0
WM2089C_04	Appin	J_Hyd-A007	J-0304	888.44	200	110	-6.66	0.21	0.4
WM2090C_01	Appin	J-0015	J_Hyd-A011	1.06	200	110	0.00	0.00	0.0
WM2090C_02	Appin	J_Hyd-A011	WVA008	178.39	200	110	0.00	0.00	0.0
WM2090C_03	Appin	WVA008	J-0219	6.16	200	110	0.00	0.00	0.0
WM2090C_04	Appin	J-0015	WVR026	6.89	200	110	0.00	0.00	0.0
WM2090C_05	Appin	WVR026	J-0246	6.25	200	110	0.00	0.00	0.0
WM2090C_06	Appin	J-0246	J-0639	984.73	200	110	0.00	0.00	0.0
WM5000C	Appin	J-0185	J-0378	85.38	200	110	2.91	0.09	0.0
WM5000_01	Appin	J-0244	J_Hyd-A003	201.84	150	100	0.00	0.00	0.0
WM5000_02	Appin	J-0244	J-0185	6.24	150	100	0.00	0.00	0.0
WM5001C_01	Appin	J-0219	WVA006	138.25	200	110	-2.56	0.08	0.0
WM5001C_02	Appin	WVA006	J_Hyd-A009	5.56	200	110	-2.56	0.08	0.0
WM5001C_03	Appin	J_Hyd-A009	J-0254	6.79	200	110	-2.56	0.08	0.0
WM5001_01	Appin	WVA015	WVA013	125.45	150	100	-1.46	0.08	0.0
WM5001_02	Appin	WVA013	J-0152	11.83	150	100	-1.46	0.08	0.0
WM5001_03	Appin	J-0318	WVA015	14.13	150	100	-1.46	0.08	0.0
WM5002C	Appin	J-0254	J-0140	127.36	200	110	-4.22	0.13	0.0
WM5002_01	Appin	J-0152	J_Hyd-A005	3.94	150	100	-1.61	0.09	0.0
WM5002_02	Appin	J_Hyd-A005	WVA010	106.59	150	100	-1.61	0.09	0.0
WM5002_03	Appin	WVA010	J-0221	14.76	150	100	-1.61	0.09	0.0
WM5003C_01	Appin	J-0140	J_Hyd-A008	3.71	200	110	-5.04	0.16	0.0
WM5003C_02	Appin	J_Hyd-A008	J-0355	96.83	200	110	-5.04	0.16	0.0
WM5003_01	Appin	J-0221	WVA012	5.45	300	120	-1.62	0.02	0.0
WM5003_02	Appin	J_Hyd-A006	WVA012	63.78	150	100	1.62	0.09	0.0
WM5003_03	Appin	J_Hyd-A006	J-0322	26.27	150	100	-1.62	0.09	0.0
WM5004_01	Appin	J-0359	WVA019	17.34	150	100	0.00	0.00	0.0
WM5004_02	Appin	WVA019	J-0280	27.46	150	100	0.00	0.00	0.0
WM5004_03	Appin	J-0280	J-0281	8.22	150	100	0.00	0.00	0.0
WM5005C	Appin	J-0378	WVR028	42.73	200	110	2.21	0.07	0.0
WM5005_01	Appin	J-0119	WVA018	8.26	150	100	0.00	0.00	0.0
WM5005_02	Appin	J_Hyd-A001	J_Hyd-A002	182.10	150	100	0.00	0.00	0.0
WM5005_03	Appin	J_Hyd-A002	WVA021	57.26	150	100	0.00	0.00	0.0
WM5005_04	Appin	WVA021	J-0009	3.68	150	100	0.00	0.00	0.0
WM5005_05	Appin	J-0009	J-0010	0.95	200	110	0.00	0.00	0.0

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM5005_06	Appin	J-0010	J-0378	15.89	200	110	0.00	0.00	0.0
WM5006C_01	Appin	J-0318	J_Hyd-A010	80.91	200	110	-2.56	0.08	0.0
WM5006C_02	Appin	J_Hyd-A010	WVA007	8.74	200	110	-2.56	0.08	0.0
WM5006C_03	Appin	WVA007	J-0219	14.62	200	110	-2.56	0.08	0.0
WM5006_01	Appin	J-0152	WVA014	4.55	150	100	0.15	0.01	0.0
WM5006_02	Appin	J-0254	WVA005	14.70	150	100	-0.15	0.01	0.0
WM5006_03	Appin	WVA005	WVA014	85.73	150	100	-0.15	0.01	0.0
WM5008_01	Appin	J-0140	WVA003	15.05	150	100	0.81	0.05	0.0
WM5008_02	Appin	WVA003	J-0361	14.45	150	100	0.81	0.05	0.0
WM5008_03	Appin	J-0361	WVA011	68.77	150	100	0.81	0.05	0.0
WM5008_04	Appin	WVA011	J-0221	7.70	150	100	0.81	0.05	0.0
WM5009_01	Appin	J-0322	J-0323	10.27	150	100	-1.62	0.09	0.0
WM5009_02	Appin	J-0355	WVA001	13.48	150	100	1.62	0.09	0.0
WM5009_03	Appin	J-0323	WVA001	84.78	150	100	-1.62	0.09	0.0
WM5010C_01	Appin	WVA020	J-0359	14.01	200	110	-2.91	0.09	0.0
WM5010C_02	Appin	J-0359	J_Hyd-A004	37.21	200	110	-2.91	0.09	0.0
WM5010C_03	Appin	J_Hyd-A004	WVA016	58.77	200	110	-2.91	0.09	0.0
WM5010C_04	Appin	WVA016	J-0318	10.02	200	110	-2.91	0.09	0.0
WM5010C_05	Appin	WVA020	J-0185	4.51	200	110	2.91	0.09	0.0
WM5011_01	Appin	J-0221	J-0479	58.91	150	100	0.83	0.05	0.0
WM5011_02	Appin	J-0479	J-0480	38.55	150	100	0.83	0.05	0.0
WM5016_01	Appin	J-0480	WVA017	109.22	150	100	0.00	0.00	0.0
WM5016_02	Appin	WVA017	J-0119	3.36	150	100	0.00	0.00	0.0
WM5018	Appin	J-0560	J-0119	104.65	150	100	0.00	0.00	0.0
WM5019C_01	Appin	J-0404	J-0345	19.32	200	110	0.00	0.00	0.0
WM5019C_02	Appin	J-0345	J-0346	12.16	200	110	0.00	0.00	0.0
WM5019C_03	Appin	J-0346	WVA009	109.80	200	110	0.00	0.00	0.0
WM5019C_04	Appin	WVA009	J-0219	5.41	200	110	0.00	0.00	0.0
P-233	Rural	J-0299	J_Hyd-R006E	1.74	150	100	3.37	0.19	0.0
P-235	Rural	J-0634	J-752	4.00	50	130	-0.62	0.32	0.0
P-236	Rural	J-0335	J_Hyd-R005E	15.68	150	100	1.16	0.07	0.0
P-238	Rural	WVR039	J-0525	2.51	200	110	3.46	0.11	0.0
P-239	Rural	J_Hyd-R021M	WVR007	1.46	200	110	-2.52	0.08	0.0
P-937	Rural	J-0519	J-0520	68.34	18	130	0.00	0.00	0.0
P_Hyd-R001E	Rural	J_Hyd-R001E	R001E	4.14	150	100	0.00	0.00	0.0
P_Hyd-R002E	Rural	J_Hyd-R002E	R002E	2.23	150	100	0.00	0.00	0.0
P_Hyd-R003E	Rural	J_Hyd-R003E	R003E	3.03	150	100	0.00	0.00	0.0
P_Hyd-R004E	Rural	J_Hyd-R004E	R004E	6.82	150	100	0.00	0.00	0.0
P_Hyd-R005E	Rural	J_Hyd-R005E	R005E	8.61	150	100	0.00	0.00	0.0
P_Hyd-R006E	Rural	J_Hyd-R006E	R006E	4.58	150	100	0.00	0.00	0.0
P_Hyd-R007E	Rural	J_Hyd-R007E	R007E	3.56	150	100	0.00	0.00	0.0
P_Hyd-R008E	Rural	J_Hyd-R008E	R008E	2.58	150	100	0.00	0.00	0.0
P_Hyd-R009E	Rural	J_Hyd-R009E	R009E	7.00	150	100	0.00	0.00	0.0
P_Hyd-R010E	Rural	J_Hyd-R010E	R010E	2.16	150	100	0.00	0.00	0.0
P_Hyd-R011E	Rural	J_Hyd-R011E	R011E	2.25	150	100	0.00	0.00	0.0
P_Hyd-R012E	Rural	J_Hyd-R012E	R012E	1.76	150	100	0.00	0.00	0.0
P_Hyd-R013E	Rural	J_Hyd-R013E	R013E	5.77	150	100	0.00	0.00	0.0
P_Hyd-R014E	Rural	J_Hyd-R014E	R014E	3.99	150	100	0.00	0.00	0.0
P_Hyd-R015E	Rural	J_Hyd-R015E	R015E	3.40	150	100	0.00	0.00	0.0
P_Hyd-R016E	Rural	J_Hyd-R016E	R016E	6.25	150	100	0.00	0.00	0.0
P_Hyd-R017M	Rural	J_Hyd-R017M	R017M	6.10	150	100	0.00	0.00	0.0
P_Hyd-R018M	Rural	J_Hyd-R018M	R018M	1.92	150	100	0.00	0.00	0.0
P_Hyd-R019M	Rural	J_Hyd-R019M	R019M	0.87	150	100	0.00	0.00	0.0
P_Hyd-R020M	Rural	J_Hyd-R020M	R020M	4.05	150	100	0.00	0.00	0.0
P_Hyd-R021M	Rural	J_Hyd-R021M	R021M	5.88	150	100	0.00	0.00	0.0
P_Hyd-R026E	Rural	J_Hyd-R026E	R026E	3.60	150	100	0.00	0.00	0.0
P_Hyd-R027W	Rural	J_Hyd-R027W	R027W	10.01	150	100	0.00	0.00	0.0
P_Hyd-R028E	Rural	J_Hyd-R028E	R028E	2.63	150	100	0.00	0.00	0.0
P_Hyd-R029W	Rural	J_Hyd-R029W	R029W	161.23	150	100	0.00	0.00	0.0
P_Hyd-R030M	Rural	J_Hyd-R030M	R030M	58.13	150	100	0.00	0.00	0.0
P_Hyd-R031M	Rural	J_Hyd-R031M	R031M	4.46	150	100	0.00	0.00	0.0
P_Hyd-R032M	Rural	J_Hyd-R032M	R032M	15.28	150	100	0.00	0.00	0.0
P_Hyd-R033E	Rural	J_Hyd-R033E	R033E	7.67	150	100	0.00	0.00	0.0
WM1010C_14	Rural	WVR007	WVR008	50.55	200	110	-2.52	0.08	0.0
WM1011C_01	Rural	WVR008	J_Hyd-R020M	457.55	200	110	-2.52	0.08	0.0
WM1011C_02	Rural	J_Hyd-R020M	J_Hyd-R019M	757.63	200	110	-2.52	0.08	0.1
WM1011C_03	Rural	J_Hyd-R019M	J_Hyd-R018M	317.29	200	110	-2.52	0.08	0.0
WM1011C_04	Rural	J_Hyd-R018M	WVR009	881.46	200	110	-2.52	0.08	0.1
WM1011C_05	Rural	J-0086	J-0260	7.07	200	110	-2.52	0.08	0.0
WM1011C_06	Rural	WVR009	J_Hyd-R017M	6.62	200	110	-2.52	0.08	0.0
WM1011C_07	Rural	J_Hyd-R017M	J-0086	2.48	200	110	-2.52	0.08	0.0
WM1011C_08	Rural	PRV-1	J-0260	21.84	300	120	8.30	0.12	0.0
WM1011_01	Rural	WVR050	J-0633	615.40	300	120	5.78	0.08	0.0
WM1011_02	Rural	J-0232	WVR050	5.77	150	100	5.78	0.33	0.0
WM1011_03	Rural	J-0633	J-0643	1830.27	300	120	5.78	0.08	0.1
WM1012C_01	Rural	J-0231	J_Hyd-R031M	80.50	300	120	29.41	0.42	0.1
WM1012C_02	Rural	J_Hyd-R031M	J-0397	294.47	300	120	29.41	0.42	0.2
WM1012C_03	Rural	J-0397	J-0398	18.34	300	120	29.41	0.42	0.0
WM1012C_04	Rural	J-0398	J-0441	604.41	300	120	29.41	0.42	0.5
WM1012C_05	Rural	J-0441	J-0442	24.83	300	120	29.41	0.42	0.0
WM1012C_06	Rural	J-0442	J-0547	90.95	300	120	29.41	0.42	0.1
WM1012C_07	Rural	J-0547	J-0422	1548.63	300	120	29.41	0.42	1.2
WM1012C_08	Rural	J-0422	J-0163	21.99	300	120	29.41	0.42	0.0
WM1012_01	Rural	J-0329	J-0330	11.08	50	130	0.00	0.00	0.0
WM1012_02	Rural	J-0330	J-0300	1185.95	50	130	0.00	0.00	0.0
WM1012_03	Rural	J-0300	J-0301	9.00	50	130	0.00	0.00	0.0
WM1012_04	Rural	J-0301	J-0616	285.01	50	130	0.00	0.00	0.0
WM1013C_01	Rural	J-0164	WVR019	1176.14	300	120	29.41	0.42	0.9
WM1013C_02	Rural	J-0163	J-0164	4.12	300	120	29.41	0.42	0.0
WM1013C_03	Rural	WVR019	J_Hyd-R030M	388.90	300	120	29.41	0.42	0.3
WM1013C_04	Rural	J_Hyd-R030M	J-0170	21.89	300	120	29.41	0.42	0.0
WM1013C_05	Rural	J-0170	J-0171	4.24	300	120	29.41	0.42	0.0
WM1013C_06	Rural	J-0171	J-0379	16.49	300	120	29.41	0.42	0.0
WM1013C_07	Rural	J-0379	J-0149	372.44	300	120	29.41	0.42	0.3
WM1013C_08	Rural	J-0149	J-0150	3.91	300	120	29.41	0.42	0.0
WM1013C_09	Rural	J-0150	J-0129	27.49	300	120	29.41	0.42	0.0
WM1013C_10	Rural	J-0129	J-0130	3.55	300	120	29.41	0.42	0.0
WM1013C_11	Rural	J-0130	J-0595	201.38	300	120	29.41	0.42	0.2
WM1021C_01	Rural	WVR020	J-0577	121.69	300	120	29.41	0.42	0.1

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM1021C_02(1)	Rural	J-0577	J-0519	660.77	300	120	29.41	0.42	0.5
WM1021C_02(2)(1)	Rural	J-0519	J-752	22.88	300	120	29.41	0.42	0.0
WM1026C_01	Rural	J-0408	WVR013	20.55	150	100	0.00	0.00	0.0
WM1026C_02	Rural	WVR013	J-0645	2396.11	150	100	0.00	0.00	0.0
WM1075C_02	Rural	J_Hyd-R029W	J_Hyd-R027W	3137.12	350	120	37.72	0.39	1.8
WM1075C_03	Rural	J_Hyd-R027W	J-0629	4074.92	350	120	37.72	0.39	2.4
WM1075C_04	Rural	J-0629	J-0431	496.33	350	120	37.72	0.39	0.3
WM1075C_05	Rural	J-0431	J-0432	23.51	350	120	37.72	0.39	0.0
WM1075C_06	Rural	J-0432	J-0613	1094.09	350	120	37.72	0.39	0.6
WM1075C_07	Rural	J-0613	J-0416	258.33	350	120	37.72	0.39	0.2
WM1075C_08(1)	Rural	J-0416	J-0466	12.01	300	120	37.72	0.53	0.0
WM1075C_08(2)	Rural	J-0466	WVR010	9.40	300	120	29.41	0.42	0.0
WM1075C_09	Rural	WVR010	J-0231	5.73	300	120	29.41	0.42	0.0
WM1075C_10	Rural	PRV-1	J-0466	31.58	300	120	-8.30	0.12	0.0
WM1086_01	Rural	J-0383	J-0199	63.41	300	120	5.78	0.08	0.0
WM1086_02	Rural	J-0199	J-0200	4.92	300	120	5.78	0.08	0.0
WM1086_03	Rural	J-0200	J-0266	7.51	300	120	5.78	0.08	0.0
WM1086_04	Rural	J-0266	J-0224	8.04	300	120	5.78	0.08	0.0
WM1086_05	Rural	J-0224	J-0225	5.54	300	120	5.78	0.08	0.0
WM1086_06	Rural	J-0225	J-0610	279.39	300	120	5.78	0.08	0.0
WM1086_07	Rural	J-0610	J-0611	236.26	300	120	5.78	0.08	0.0
WM1086_08	Rural	J-0611	J-0626	363.27	300	120	5.78	0.08	0.0
WM1086_09	Rural	J-0626	J-0232	348.32	300	120	5.78	0.08	0.0
WM1086_10	Rural	J-0260	J-0383	17.08	200	110	5.78	0.18	0.0
WM1087_01	Rural	J-0232	WVR051	12.83	200	110	0.00	0.00	0.0
WM1087_02	Rural	WVR051	J-0276	8.01	200	110	0.00	0.00	0.0
WM1087_03	Rural	J-0276	J-0293	8.73	200	110	0.00	0.00	0.0
WM1087_04	Rural	J-0293	J-0365	39.13	200	110	0.00	0.00	0.0
WM1087_05	Rural	J-0365	J-0366	14.54	200	110	0.00	0.00	0.0
WM1087_06	Rural	J-0366	J-0607	301.23	200	110	0.00	0.00	0.0
WM1087_07	Rural	J-0607	J-0206	227.17	200	110	0.00	0.00	0.0
WM1087_08	Rural	J-0206	J-0182	5.10	200	110	0.00	0.00	0.0
WM1087_09	Rural	J-0182	J-0183	4.50	200	110	0.00	0.00	0.0
WM1087_10	Rural	J-0183	J-0233	5.81	200	110	0.00	0.00	0.0
WM1087_11	Rural	J-0233	WVR012	785.82	200	110	0.00	0.00	0.0
WM1087_12	Rural	WVR012	J-0374	15.48	200	110	0.00	0.00	0.0
WM1087_13	Rural	J-0366	J-0329	62.78	50	130	0.00	0.00	0.0
WM1088_01	Rural	J-0374	J-0623	321.50	200	110	0.00	0.00	0.0
WM1088_02	Rural	J-0623	J-0530	924.91	200	110	0.00	0.00	0.0
WM1088_03	Rural	J-0530	WVR014	69.85	200	110	0.00	0.00	0.0
WM1089_01	Rural	WVR014	J-0309	9.37	200	110	0.00	0.00	0.0
WM1089_02(1)	Rural	J-0309	J-0408	31.72	200	110	0.00	0.00	0.0
WM1089_02(2)	Rural	J-0408	J_Hyd-R032M	6.61	200	110	0.00	0.00	0.0
WM1089_03	Rural	J_Hyd-R032M	WVR015	244.84	200	110	0.00	0.00	0.0
WM1089_04	Rural	WVR015	J-0193	5.52	200	110	0.00	0.00	0.0
WM1089_05	Rural	J-0193	J-0194	4.77	200	110	0.00	0.00	0.0
WM1097C_01	Rural	J-0595	J-0596	165.95	300	120	29.41	0.42	0.1
WM1097C_02	Rural	J-0596	J-0614	269.97	300	120	29.41	0.42	0.2
WM1097C_03	Rural	J-0614	J-0617	300.03	300	120	29.41	0.42	0.2
WM1097C_04	Rural	J-0617	J-0392	683.41	300	120	29.41	0.42	0.5
WM1098C	Rural	J-0392	WVR020	538.86	300	120	29.41	0.42	0.4
WM2025_01	Rural	J-0391	J-0356	287.21	150	100	0.00	0.00	0.0
WM2025_02	Rural	J-0356	J-0357	13.93	150	100	0.00	0.00	0.0
WM2025_03	Rural	J-0357	J_Hyd-R033E	230.73	150	100	0.00	0.00	0.0
WM2025_04	Rural	J-0391	J-0392	17.92	150	100	0.00	0.00	0.0
WM2030C_01	Rural	J-0263	J-0207	7.29	200	110	3.46	0.11	0.0
WM2030C_02	Rural	J-0207	J-0090	5.11	200	110	3.46	0.11	0.0
WM2030C_03	Rural	J-0090	WVR039	2.54	200	110	3.46	0.11	0.0
WM2030C_04	Rural	J-0525	WVR060	64.33	150	100	3.46	0.20	0.0
WM2030C_05	Rural	WVR060	J-0369	135.29	150	100	3.46	0.20	0.1
WM2030C_06	Rural	J-0369	J-0020	14.81	150	100	3.46	0.20	0.0
WM2030C_07	Rural	J-0020	J_Hyd-R009E	1.18	150	100	3.46	0.20	0.0
WM2030C_08	Rural	J_Hyd-R009E	J-0604	243.33	150	100	3.46	0.20	0.2
WM2030C_09	Rural	J-0604	J-0605	220.12	150	100	3.46	0.20	0.1
WM2030C_10	Rural	J-0605	J-0257	263.84	150	100	3.46	0.20	0.2
WM2030C_11	Rural	J-0257	WVR040	6.86	150	100	3.46	0.20	0.0
WM2030C_12	Rural	WVR040	J_Hyd-M002	689.84	150	100	3.46	0.20	0.4
WM2036_01	Rural	J-0100	J-0462	239.86	200	110	-11.29	0.36	0.3
WM2036_04	Rural	J-0618	J-0619	303.91	200	110	11.29	0.36	0.3
WM2036_05	Rural	J-0619	J-0624	603.05	200	110	11.29	0.36	0.7
WM2036_06	Rural	J-0624	J-0463	327.67	200	110	11.29	0.36	0.4
WM2036_07	Rural	J-0463	J-0464	30.58	200	110	11.29	0.36	0.0
WM2036_08	Rural	J-0464	J-0461	41.99	200	110	11.29	0.36	0.1
WM2036_09	Rural	J-0461	J-0462	30.21	200	110	11.29	0.36	0.0
WM2037_01	Rural	J-0325	J-0073	26.45	200	110	-11.29	0.36	0.0
WM2037_02	Rural	J-0073	J-0074	2.30	200	110	-11.29	0.36	0.0
WM2037_03	Rural	J-0074	J-0638	1562.44	200	110	-11.29	0.36	1.7
WM2037_04	Rural	J-0638	WVR052	826.51	200	110	-11.29	0.36	0.9
WM2037_05	Rural	WVR052	J-0100	3.90	200	110	-11.29	0.36	0.0
WM2038_01	Rural	J-0376	J-0545	89.85	200	110	-11.29	0.36	0.1
WM2038_02	Rural	J-0545	WVR024	2310.40	200	110	-11.29	0.36	2.6
WM2038_03	Rural	WVR024	J-0210	5.19	200	110	-11.29	0.36	0.0
WM2038_04	Rural	J-0210	J-0325	10.57	200	110	-11.29	0.36	0.0
WM2039_01	Rural	J-688	WVR025	1.73	200	110	4.63	0.15	0.0
WM2039_02	Rural	WVR025	J-0315	9.84	200	110	4.63	0.15	0.0
WM2039_03	Rural	J-0315	J_Hyd-R015E	53.54	200	110	4.63	0.15	0.0
WM2039_05	Rural	J-0592	J-0593	154.11	200	110	4.63	0.15	0.0
WM2039_06	Rural	J-0593	WVR031	431.61	200	110	4.63	0.15	0.1
WM2039_07	Rural	WVR031	J-0362	20.22	200	110	4.63	0.15	0.0
WM2040_01	Rural	J-0362	J_Hyd-R014E	14.45	200	110	4.63	0.15	0.0
WM2040_02	Rural	J_Hyd-R014E	J-0599	560.06	200	110	4.63	0.15	0.1
WM2040_03	Rural	J-0599	J-0600	185.21	200	110	4.63	0.15	0.0
WM2040_04	Rural	J-0600	J-0636	706.37	200	110	4.63	0.15	0.2
WM2040_05	Rural	J-0636	WVR034	947.99	200	110	4.63	0.15	0.2
WM2040_06	Rural	WVR034	J_Hyd-R013E	20.02	200	110	4.63	0.15	0.0
WM2041_01	Rural	J_Hyd-R013E	J-0118	4.50	200	110	1.16	0.04	0.0
WM2041_02	Rural	J-0118	WVR035	3.31	200	110	1.16	0.04	0.0
WM2041_03	Rural	WVR035	J-0341	11.80	150	100	1.16	0.07	0.0
WM2041_04	Rural	J-0341	J_Hyd-R008E	1161.30	150	100	1.16	0.07	0.1

2021 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM2041_05	Rural	J_Hyd-R008E	WVR044	1217.52	150	100	1.16	0.07	0.1
WM2041_06	Rural	WVR044	J-0335	11.48	150	100	1.16	0.07	0.0
WM2042_01	Rural	J-0241	WVR047	6.16	100	100	0.00	0.00	0.0
WM2042_02	Rural	WVR047	J-0117	3.28	100	100	0.00	0.00	0.0
WM2042_03	Rural	J-0117	J-0053	90.84	100	100	0.00	0.00	0.0
WM2042_04	Rural	J-0053	WVR056	1.74	50	100	0.00	0.00	0.0
WM2043_01	Rural	J-0208	J_Hyd-R002E	5.14	150	100	0.00	0.00	0.0
WM2043_02	Rural	J_Hyd-R002E	J-0057	289.87	150	100	0.00	0.00	0.0
WM2043_03	Rural	J-0057	J_Hyd-R003E	1.81	150	100	0.00	0.00	0.0
WM2043_04	Rural	J_Hyd-R003E	J-0282	8.32	150	100	0.00	0.00	0.0
WM2043_05	Rural	J-0282	J_Hyd-R028E	276.99	150	100	0.00	0.00	0.0
WM2047C_02	Rural	WVR053	J-0319	110.95	200	110	2.21	0.07	0.0
WM2047C_03	Rural	J-0319	J_Hyd-R016E	10.19	200	110	2.21	0.07	0.0
WM2047C_04	Rural	J_Hyd-R016E	J-0113	3.18	200	110	2.21	0.07	0.0
WM2047C_05	Rural	J-0113	J-0186	5.93	200	110	2.21	0.07	0.0
WM2048C_01	Rural	J-0186	WVR029	4.53	200	110	2.21	0.07	0.0
WM2048C_02	Rural	WVR029	J-0103	2.95	200	110	2.21	0.07	0.0
WM2048C_03	Rural	J-0103	WVR030	1818.80	200	110	2.21	0.07	0.1
WM2048C_04	Rural	WVR030	WVR032	608.74	200	110	2.21	0.07	0.0
WM2048C_05	Rural	WVR032	J-0151	3.93	200	110	2.21	0.07	0.0
WM2048C_06	Rural	J-0151	J-0215	5.40	200	110	2.21	0.07	0.0
WM2048C_07	Rural	J-0215	J-0077	9.76	200	110	2.21	0.07	0.0
WM2049C_01	Rural	J-0077	J-0078	2.32	200	110	2.21	0.07	0.0
WM2049C_02	Rural	J-0078	WVR033	3.59	200	110	2.21	0.07	0.0
WM2049C_03	Rural	WVR033	J_Hyd-R007E	995.72	200	110	2.21	0.07	0.1
WM2049C_04	Rural	J_Hyd-R007E	J-0352	1408.71	200	110	2.21	0.07	0.1
WM2049C_05	Rural	J-0019	WVR046	1.14	200	110	-2.21	0.07	0.0
WM2049C_06	Rural	WVR046	J-0110	3.14	200	110	-2.21	0.07	0.0
WM2049C_07	Rural	J-0110	J-0352	13.14	200	110	-2.21	0.07	0.0
WM2089C_05	Rural	J-0304	J-0137	9.13	200	110	-6.66	0.21	0.0
WM2089C_06	Rural	J-0137	J-0138	3.61	200	110	-6.66	0.21	0.0
WM2089C_07(1)	Rural	J-0138	J-688	5.16	200	110	-6.66	0.21	0.0
WM2089C_07(2)	Rural	J-688	J-0376	10.48	200	110	-11.29	0.36	0.0
WM2097_01	Rural	J-0100	WVR024	2.85	100	100	0.00	0.00	0.0
WM2097_02	Rural	WVR024	J-0625	347.23	100	100	0.00	0.00	0.0
WM2111C_01	Rural	J_Hyd-R006E	J-0064	8.81	150	100	3.37	0.19	0.0
WM2111C_02	Rural	J-0064	WVR042	1.98	150	100	3.37	0.19	0.0
WM2111C_03	Rural	WVR042	WVM032	932.63	150	100	3.37	0.19	0.5
WM2111_01	Rural	J-0405	J-0631	583.42	200	110	3.46	0.11	0.1
WM2111_02	Rural	J-0631	J-0563	549.68	200	110	3.46	0.11	0.1
WM2111_03	Rural	J-0563	J-0536	105.89	200	110	3.46	0.11	0.0
WM2111_04	Rural	J-0536	J_Hyd-R010E	76.85	200	110	3.46	0.11	0.0
WM2111_05	Rural	J_Hyd-R010E	WVR038	3.57	200	110	3.46	0.11	0.0
WM2111_06	Rural	WVR038	J-0243	6.22	200	110	3.46	0.11	0.0
WM2111_07	Rural	J-0243	J-0370	14.97	200	110	3.46	0.11	0.0
WM2111_08	Rural	J-0370	J-0263	36.29	200	110	3.46	0.11	0.0
WM2112C_01	Rural	J_Hyd-R005E	WVR043	17.41	150	100	3.37	0.19	0.0
WM2112C_02	Rural	WVR043	J-0326	1341.21	150	100	3.37	0.19	0.8
WM2112C_03	Rural	J-0326	J-0298	10.58	150	100	3.37	0.19	0.0
WM2112C_04	Rural	J-0298	J-0299	8.97	150	100	3.37	0.19	0.0
WM2112_01	Rural	J_Hyd-R013E	WVR036	20.22	200	110	3.46	0.11	0.0
WM2112_02	Rural	WVR036	J_Hyd-R012E	11.04	200	110	3.46	0.11	0.0
WM2112_03	Rural	J_Hyd-R012E	J-0582	131.98	200	110	3.46	0.11	0.0
WM2112_04	Rural	J-0582	J-0573	1091.55	200	110	3.46	0.11	0.1
WM2112_05	Rural	J-0573	J-0574	114.04	200	110	3.46	0.11	0.0
WM2112_06	Rural	J-0574	J_Hyd-R011E	120.36	200	110	3.46	0.11	0.0
WM2112_07	Rural	J_Hyd-R011E	J-0351	12.71	200	110	3.46	0.11	0.0
WM2112_08	Rural	J-0351	WVR037	15.56	200	110	3.46	0.11	0.0
WM2112_09	Rural	WVR037	J-0405	20.43	200	110	3.46	0.11	0.0
WM2113C_01	Rural	J_Hyd-R004E	J_Hyd-R005E	813.28	150	100	2.21	0.12	0.2
WM2113C_02	Rural	WVR054	WVR055	86.32	150	100	-2.21	0.12	0.0
WM2113C_03	Rural	WVR055	J-0483	97.84	150	100	-2.21	0.12	0.0
WM2113C_04	Rural	WVR054	J_Hyd-R004E	21.71	150	100	2.21	0.12	0.0
WM2113C_05	Rural	J-0483	J-0484	39.50	150	100	-2.21	0.12	0.0
WM2113C_06	Rural	J-0484	WVR045	285.24	150	100	-2.21	0.12	0.1
WM2113C_07	Rural	WVR045	J-0019	39.17	150	100	-2.21	0.12	0.0
WM2114C	Rural	J-0208	J_Hyd-R001E	498.34	150	100	0.00	0.00	0.0
WM2114_01	Rural	J-0077	J_Hyd-R026E	4.87	200	110	0.00	0.00	0.0
WM2114_02	Rural	J_Hyd-R026E	J-0637	713.60	200	110	0.00	0.00	0.0
WM2118C	Rural	J-0241	J-0208	215.87	150	100	0.00	0.00	0.0
WM2119C	Rural	J-0019	J-0241	176.56	150	100	0.00	0.00	0.0

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0003	Glencoe	0.00	220.18	261.9	409
J-0004	Glencoe	0.00	221.47	261.6	393
J-0005	Glencoe	0.00	220.94	261.8	400
J-0006	Glencoe	0.00	219.32	263.8	435
J-0007	Glencoe	0.00	219.32	263.8	435
J-0011	Glencoe	0.00	219.21	262.2	420
J-0013	Glencoe	0.00	219.32	263.8	435
J-0014	Glencoe	0.00	219.71	261.9	413
J-0017	Glencoe	0.00	219.32	263.8	435
J-0025	Glencoe	0.00	221.81	261.7	391
J-0032	Glencoe	0.00	221.02	261.9	400
J-0036	Glencoe	0.00	220.75	261.7	401
J-0038	Glencoe	0.00	219.48	263.8	434
J-0039	Glencoe	0.00	219.48	263.8	434
J-0044	Glencoe	0.00	221.03	261.7	398
J-0045	Glencoe	0.00	221.03	261.7	398
J-0047	Glencoe	0.00	219.32	263.8	435
J-0048	Glencoe	0.00	219.89	262.8	420
J-0049	Glencoe	0.00	219.89	262.8	420
J-0054	Glencoe	1.91	222.07	261.6	387
J-0059	Glencoe	0.00	221.53	261.9	395
J-0060	Glencoe	0.00	221.52	261.7	393
J-0063	Glencoe	0.00	219.52	262.1	417
J-0066	Glencoe	0.00	219.37	264.1	438
J-0067	Glencoe	1.36	219.37	264.1	438
J-0070	Glencoe	0.00	220.30	261.7	406
J-0071	Glencoe	0.00	221.39	261.6	393
J-0072	Glencoe	0.00	221.47	261.6	393
J-0075	Glencoe	0.00	219.89	262.8	420
J-0076	Glencoe	0.00	221.37	261.7	395
J-0080	Glencoe	0.00	219.03	262.2	422
J-0084	Glencoe	0.00	221.64	261.7	392
J-0089	Glencoe	0.00	218.74	262.2	425
J-0091	Glencoe	0.00	219.67	262.1	415
J-0093	Glencoe	0.00	219.21	262.2	421
J-0094	Glencoe	0.00	219.02	262.1	421
J-0097	Glencoe	0.00	220.18	261.9	409
J-0098	Glencoe	0.00	222.46	261.6	383
J-0099	Glencoe	0.00	220.30	261.7	406
J-0101	Glencoe	0.00	220.52	264.1	427
J-0104	Glencoe	0.00	219.02	262.1	421
J-0106	Glencoe	0.00	220.30	261.7	406
J-0107	Glencoe	1.48	219.71	261.9	413
J-0111	Glencoe	0.00	220.46	261.9	405
J-0115	Glencoe	0.00	221.64	261.7	392
J-0116	Glencoe	0.00	221.14	262.0	399
J-0123	Glencoe	0.00	219.89	262.8	420
J-0124	Glencoe	0.00	221.86	261.7	390
J-0126	Glencoe	0.00	222.19	262.0	389
J-0128	Glencoe	0.00	220.36	261.9	407
J-0134	Glencoe	0.00	221.58	261.7	393
J-0135	Glencoe	0.00	221.58	261.7	393
J-0139	Glencoe	0.00	220.94	261.8	400
J-0144	Glencoe	1.84	220.30	261.8	406
J-0145	Glencoe	0.00	219.32	263.8	435
J-0146	Glencoe	2.90	219.32	263.8	435
J-0165	Glencoe	0.00	222.40	261.6	384
J-0166	Glencoe	0.00	222.18	261.6	386
J-0168	Glencoe	0.00	218.80	263.8	441
J-0169	Glencoe	0.00	219.08	263.8	438
J-0172	Glencoe	0.00	220.46	261.9	405
J-0175	Glencoe	2.27	220.69	261.7	401
J-0178	Glencoe	0.00	220.82	261.8	401
J-0179	Glencoe	0.00	221.40	261.7	395
J-0180	Glencoe	0.00	219.24	263.9	437
J-0187	Glencoe	2.66	219.29	262.1	419
J-0191	Glencoe	0.00	219.87	261.9	411
J-0198	Glencoe	2.42	220.60	261.7	402
J-0201	Glencoe	0.00	221.07	261.7	398
J-0202	Glencoe	0.00	219.58	263.9	433
J-0205	Glencoe	0.00	219.67	262.1	415
J-0211	Glencoe	0.00	220.94	261.8	400
J-0213	Glencoe	0.00	220.33	261.8	406
J-0222	Glencoe	2.25	221.83	261.7	390
J-0227	Glencoe	0.00	218.72	262.3	426
J-0235	Glencoe	2.42	219.58	261.8	413
J-0236	Glencoe	0.00	221.53	261.9	395
J-0239	Glencoe	0.00	220.46	261.9	405
J-0252	Glencoe	0.00	221.64	261.7	392

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0255	Glencoe	0.00	220.66	261.7	402
J-0256	Glencoe	0.00	220.66	261.7	402
J-0262	Glencoe	0.00	218.81	262.5	427
J-0264	Glencoe	0.00	221.34	261.7	395
J-0265	Glencoe	0.00	221.14	262.0	399
J-0267	Glencoe	3.33	220.89	262.8	410
J-0271	Glencoe	0.00	221.37	261.7	395
J-0272	Glencoe	0.00	220.69	261.7	401
J-0273	Glencoe	0.00	220.69	261.7	401
J-0275	Glencoe	0.00	218.80	263.8	441
J-0279	Glencoe	0.00	219.07	261.9	419
J-0284	Glencoe	2.95	221.40	261.8	395
J-0285	Glencoe	0.00	221.40	261.8	395
J-0286	Glencoe	0.00	220.95	261.8	400
J-0288	Glencoe	0.00	219.95	261.9	410
J-0291	Glencoe	0.00	220.39	261.6	403
J-0303	Glencoe	0.00	220.18	261.9	409
J-0306	Glencoe	1.08	220.39	261.6	403
J-0316	Glencoe	0.00	219.71	261.9	413
J-0321	Glencoe	0.00	218.44	262.0	426
J-0324	Glencoe	0.00	220.30	261.7	406
J-0331	Glencoe	0.00	220.78	261.8	401
J-0332	Glencoe	0.00	221.43	261.7	394
J-0333	Glencoe	0.00	220.63	261.7	402
J-0334	Glencoe	0.00	220.51	261.7	403
J-0336	Glencoe	0.00	220.94	261.8	400
J-0337	Glencoe	0.00	219.08	264.0	439
J-0338	Glencoe	0.00	219.08	264.0	439
J-0339	Glencoe	0.00	221.94	261.6	388
J-0340	Glencoe	0.00	221.94	261.6	388
J-0342	Glencoe	0.00	220.51	261.7	403
J-0344	Glencoe	0.00	221.97	261.7	389
J-0353	Glencoe	0.00	221.46	261.8	394
J-0354	Glencoe	2.82	220.21	261.9	408
J-0358	Glencoe	0.00	218.83	262.2	424
J-0360	Glencoe	0.00	220.66	261.8	403
J-0364	Glencoe	0.00	222.05	261.6	387
J-0367	Glencoe	0.00	221.47	261.7	393
J-0368	Glencoe	0.00	221.72	261.7	391
J-0373	Glencoe	0.00	221.20	261.9	398
J-0381	Glencoe	0.00	220.68	261.6	401
J-0384	Glencoe	0.00	220.86	261.7	400
J-0389	Glencoe	0.00	220.58	261.6	402
J-0390	Glencoe	0.00	221.48	261.7	393
J-0402	Glencoe	0.00	222.13	261.6	386
J-0409	Glencoe	1.63	220.12	261.8	408
J-0410	Glencoe	0.00	220.77	261.8	401
J-0421	Glencoe	2.18	219.44	262.0	417
J-0424	Glencoe	0.00	221.29	261.8	397
J-0425	Glencoe	0.00	220.56	261.8	404
J-0427	Glencoe	4.20	221.50	261.6	392
J-0435	Glencoe	0.00	220.73	261.7	401
J-0437	Glencoe	0.00	221.47	261.7	394
J-0447	Glencoe	0.00	219.72	261.9	412
J-0449	Glencoe	0.00	220.38	261.7	405
J-0450	Glencoe	0.00	220.38	261.7	405
J-0451	Glencoe	0.00	220.75	261.9	403
J-0452	Glencoe	0.00	222.13	261.6	386
J-0468	Glencoe	0.00	220.56	262.0	405
J-0469	Glencoe	0.00	220.51	262.0	406
J-0481	Glencoe	0.96	221.57	261.7	393
J-0488	Glencoe	0.00	219.85	261.9	411
J-0494	Glencoe	0.00	219.65	264.1	435
J-0497	Glencoe	0.00	220.51	261.7	403
J-0503	Glencoe	0.00	220.59	261.7	402
J-0507	Glencoe	0.00	221.01	261.7	398
J-0524	Glencoe	0.00	220.61	261.7	402
J-0529	Glencoe	0.93	220.34	261.8	406
J-0533	Glencoe	0.00	220.79	261.7	401
J-0535	Glencoe	0.00	220.56	261.9	405
J-0539	Glencoe	0.62	220.67	261.5	399
J-0543	Glencoe	0.00	221.46	261.6	393
J-0544	Glencoe	0.00	219.48	263.8	434
J-0546	Glencoe	2.27	221.52	261.7	393
J-0554	Glencoe	0.00	221.27	261.7	395
J-0559	Glencoe	0.00	219.25	262.3	421
J-0561	Glencoe	0.00	221.13	261.7	397
J-0564	Glencoe	0.00	220.73	261.7	401
J-0566	Glencoe	0.00	221.47	261.7	394

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0568	Glencoe	0.00	218.97	262.0	421
J-0579	Glencoe	0.00	221.75	261.6	390
J-0580	Glencoe	0.00	221.33	261.7	395
J-0581	Glencoe	0.00	221.45	261.7	394
J-0584	Glencoe	0.00	220.81	261.8	401
J-0586	Glencoe	5.32	221.75	261.8	392
J-0590	Glencoe	0.00	219.80	262.1	414
J-0602	Glencoe	0.00	221.75	261.7	391
J-0627	Glencoe	2.25	221.20	261.6	395
J-0632	Glencoe	0.00	219.75	261.8	412
J-0635	Glencoe	0.00	222.08	264.2	413
J-0646	Glencoe	0.00	214.32	276.8	611
J-690	Glencoe	0.00	219.24	263.9	437
J-692	Glencoe	0.00	221.27	261.7	395
J-695	Glencoe	0.00	221.39	261.7	395
J-698	Glencoe	0.00	221.97	261.7	389
J-700	Glencoe	0.00	221.63	261.6	391
J-703	Glencoe	0.00	220.68	261.6	401
J-705	Glencoe	0.00	221.20	261.6	396
J-707	Glencoe	0.00	221.01	261.7	398
J-709	Glencoe	0.00	219.02	262.1	421
J-713	Glencoe	0.00	220.91	261.8	400
J-715	Glencoe	0.00	220.94	261.8	400
J-718	Glencoe	0.00	220.68	261.8	402
J-720	Glencoe	2.21	221.39	261.7	395
J-722	Glencoe	0.00	222.21	261.6	386
J-724	Glencoe	0.00	222.40	261.6	384
J-727	Glencoe	0.00	222.40	261.6	384
J-734	Glencoe	0.00	220.09	262.0	411
J-735	Glencoe	0.00	220.09	262.0	410
J-753	Glencoe	0.00	220.54	261.7	403
J-759	Glencoe	0.00	220.47	261.7	404
J-760	Glencoe	0.00	220.38	261.7	404
J-761	Glencoe	0.00	220.22	261.7	406
J-762	Glencoe	0.00	221.99	261.7	389
J-764	Glencoe	0.00	219.44	261.7	414
J-765	Glencoe	0.00	219.44	261.7	414
J-766	Glencoe	0.00	219.88	261.7	409
J-767	Glencoe	0.00	219.50	261.7	413
J-768	Glencoe	0.00	219.49	261.7	413
J-769	Glencoe	0.00	219.58	261.7	412
J-770	Glencoe	0.00	219.69	261.7	411
J-771	Glencoe	0.00	219.83	261.7	410
J-772	Glencoe	0.00	219.83	261.7	410
J-773	Glencoe	0.00	219.88	261.7	409
J-775	Glencoe	0.00	219.80	261.7	410
J-777	Glencoe	0.00	219.87	261.7	410
J-778	Glencoe	0.00	219.73	261.7	411
J-779	Glencoe	0.00	219.26	262.0	418
J-780	Glencoe	0.00	220.29	262.0	408
J-781	Glencoe	0.00	218.70	262.0	424
J-782	Glencoe	0.00	218.55	262.0	425
J-783	Glencoe	0.00	218.42	262.0	426
J-784	Glencoe	0.00	218.23	262.0	429
J-785	Glencoe	0.00	217.92	262.1	432
J-786	Glencoe	0.00	217.71	262.1	435
J-787	Glencoe	0.00	217.74	262.2	435
J-788	Glencoe	0.00	217.66	262.2	436
J-789	Glencoe	0.00	217.51	262.2	438
J-790	Glencoe	0.00	217.28	262.3	441
J-791	Glencoe	0.00	217.22	262.4	442
J-792	Glencoe	0.00	217.28	262.4	442
J-793	Glencoe	0.00	217.38	262.5	441
J-794	Glencoe	0.00	217.70	262.5	439
J-795	Glencoe	0.00	218.09	262.6	436
J-796	Glencoe	0.00	218.22	262.6	435
J-797	Glencoe	0.00	218.88	262.7	429
J-798	Glencoe	0.00	219.44	262.8	424
J-799	Glencoe	0.00	219.63	262.8	422
J-800	Glencoe	0.00	221.39	261.7	395
J-801	Glencoe	0.00	220.08	262.0	410
J-803	Glencoe	0.00	218.52	262.0	425
J-804	Glencoe	0.00	218.51	262.0	425
J-805	Glencoe	0.00	218.60	262.0	424
J-806	Glencoe	0.00	218.14	262.0	430
J-807	Glencoe	0.00	218.08	262.1	430
J-810	Glencoe	0.00	218.27	262.1	428
J-812	Glencoe	0.00	217.74	262.2	435
J-813	Glencoe	0.00	217.74	262.2	435

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-814	Glencoe	0.00	217.91	262.2	433
J-816	Glencoe	0.00	217.74	262.2	435
J-817	Glencoe	0.00	217.93	262.2	433
J-818	Glencoe	0.00	217.37	262.3	439
J-819	Glencoe	0.00	217.41	262.2	439
J-820	Glencoe	0.00	217.56	262.2	437
J-821	Glencoe	0.00	217.29	262.4	442
J-822	Glencoe	0.00	218.81	262.5	427
J-823	Glencoe	0.00	218.81	262.5	427
J-824	Glencoe	0.00	218.90	262.4	426
J-826	Glencoe	0.00	217.90	262.6	437
J-827	Glencoe	0.00	219.58	262.8	423
J_Hyd-G001	Glencoe	0.00	220.49	261.8	405
J_Hyd-G002	Glencoe	0.00	219.67	262.1	415
J_Hyd-G003	Glencoe	0.00	221.48	261.9	395
J_Hyd-G004	Glencoe	0.00	221.23	262.0	399
J_Hyd-G005	Glencoe	0.00	222.23	261.6	385
J_Hyd-G006	Glencoe	0.00	222.40	261.6	384
J_Hyd-G008	Glencoe	0.00	220.68	261.6	401
J_Hyd-G009	Glencoe	0.00	221.54	261.6	392
J_Hyd-G010	Glencoe	0.00	221.47	261.6	393
J_Hyd-G011	Glencoe	0.00	219.92	261.9	411
J_Hyd-G012	Glencoe	0.00	220.18	261.9	409
J_Hyd-G013	Glencoe	0.00	221.02	261.9	400
J_Hyd-G014	Glencoe	0.00	221.20	261.9	398
J_Hyd-G016	Glencoe	0.00	221.03	261.7	398
J_Hyd-G018	Glencoe	0.00	220.42	261.8	405
J_Hyd-G019	Glencoe	0.00	220.44	261.8	405
J_Hyd-G020	Glencoe	0.00	221.28	261.7	395
J_Hyd-G021	Glencoe	0.00	221.03	261.7	398
J_Hyd-G022	Glencoe	0.00	219.49	261.9	415
J_Hyd-G023	Glencoe	0.00	220.09	262.0	411
J_Hyd-G024	Glencoe	0.00	221.83	261.9	392
J_Hyd-G025	Glencoe	0.00	221.53	261.9	395
J_Hyd-G026	Glencoe	0.00	221.14	261.7	397
J_Hyd-G027	Glencoe	0.00	221.43	261.7	394
J_Hyd-G028	Glencoe	0.00	221.41	261.7	394
J_Hyd-G029	Glencoe	0.00	220.02	261.9	410
J_Hyd-G041	Glencoe	0.00	220.89	261.6	399
J_Hyd-G042	Glencoe	0.00	220.42	261.6	403
J_Hyd-G043	Glencoe	0.00	220.64	261.7	401
J_Hyd-G044	Glencoe	0.00	220.85	261.7	400
J_Hyd-G045	Glencoe	0.00	221.65	261.7	392
J_Hyd-G046	Glencoe	0.00	221.40	261.7	395
J_Hyd-G047	Glencoe	0.00	221.04	261.8	398
J_Hyd-G048	Glencoe	0.00	220.30	261.8	406
J_Hyd-G049	Glencoe	0.00	220.49	261.7	404
J_Hyd-G050	Glencoe	0.00	221.05	261.7	398
J_Hyd-G051	Glencoe	0.00	221.15	261.7	397
J_Hyd-G052	Glencoe	0.00	220.65	261.8	402
J_Hyd-G053	Glencoe	0.00	220.83	261.8	401
J_Hyd-G056	Glencoe	0.00	220.90	261.7	399
J_Hyd-G057	Glencoe	0.00	220.89	261.7	399
J_Hyd-G058	Glencoe	0.00	221.20	261.6	395
J_Hyd-G059	Glencoe	0.00	219.83	262.0	413
J_Hyd-G060	Glencoe	0.00	219.29	262.1	419
J_Hyd-G061	Glencoe	0.00	219.19	262.2	421
J_Hyd-G062	Glencoe	0.00	220.50	263.8	424
J_Hyd-G063	Glencoe	0.00	220.84	261.6	399
J_Hyd-G064	Glencoe	0.00	219.52	262.1	417
J_Hyd-G065	Glencoe	0.00	219.55	262.1	416
J_Hyd-G066	Glencoe	0.00	220.23	262.0	409
J_Hyd-G067	Glencoe	0.00	219.02	262.1	421
J_Hyd-G068	Glencoe	0.00	218.84	262.0	422
J_Hyd-G069	Glencoe	0.00	221.96	261.6	388
J_Hyd-G070	Glencoe	0.00	221.63	261.6	391
J_Hyd-G071	Glencoe	0.00	220.68	261.6	401
J_Hyd-G073	Glencoe	0.00	220.65	261.7	402
J_Hyd-G074	Glencoe	0.00	220.63	261.7	402
J_Hyd-G075	Glencoe	0.00	221.31	261.7	396
J_Hyd-G076	Glencoe	0.00	221.52	261.7	393
J_Hyd-G077	Glencoe	0.00	221.15	261.7	396
J_Hyd-G078	Glencoe	0.00	219.48	263.7	433
J_Hyd-G079	Glencoe	0.00	218.83	262.5	427
J_Hyd-G080	Glencoe	0.00	221.89	261.7	390
J_Hyd-G081	Glencoe	0.00	218.72	262.3	426
J_Hyd-G082	Glencoe	0.00	222.21	261.6	386
J_Hyd-G083	Glencoe	0.00	220.52	264.1	427
J_Hyd-G084	Glencoe	0.00	218.50	264.1	446

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-G085	Glencoe	0.00	221.05	261.7	398
J_Hyd-G086	Glencoe	0.00	221.52	261.7	393
J_Hyd-G087	Glencoe	0.00	222.13	261.6	386
J_Hyd-G088	Glencoe	0.00	218.78	262.0	423
J_Hyd-G089	Glencoe	0.00	219.14	261.9	419
J_Hyd-G090	Glencoe	0.00	218.83	261.9	422
J_Hyd-G091	Glencoe	0.00	218.54	261.9	425
J_Hyd-G092	Glencoe	0.00	221.27	261.7	395
J_Hyd-G093	Glencoe	0.00	220.52	262.0	406
J_Hyd-G094	Glencoe	0.00	220.33	261.8	406
J_Hyd-G095	Glencoe	0.00	221.89	261.6	389
J_Hyd-G096	Glencoe	0.00	221.27	261.6	394
J_Hyd-G097	Glencoe	0.00	221.43	261.7	394
J_Hyd-G098	Glencoe	0.00	222.70	261.6	381
J_Hyd-H_T-718	Glencoe	0.00	219.72	262.7	421
WV-348	Glencoe	0.00	222.18	261.6	386
WVG001	Glencoe	0.00	221.52	261.7	393
WVG002	Glencoe	0.00	220.69	261.7	401
WVG003	Glencoe	0.00	220.69	261.7	401
WVG004	Glencoe	0.00	220.69	261.7	401
WVG010	Glencoe	0.00	220.30	261.8	406
WVG010	Glencoe	0.00	218.74	262.2	425
WVG011	Glencoe	0.00	220.30	261.8	406
WVG012	Glencoe	0.00	220.60	261.8	403
WVG013	Glencoe	0.00	220.91	261.8	400
WVG015	Glencoe	0.00	220.81	261.7	400
WVG018	Glencoe	0.00	220.30	261.7	406
WVG019	Glencoe	0.00	220.30	261.7	406
WVG020	Glencoe	0.00	220.83	261.7	400
WVG022	Glencoe	0.00	221.20	261.7	396
WVG027	Glencoe	0.00	221.37	261.7	395
WVG028	Glencoe	0.00	221.31	261.7	396
WVG029	Glencoe	0.00	221.64	261.7	392
WVG030	Glencoe	0.00	221.21	261.8	397
WVG032	Glencoe	0.00	221.00	261.8	399
WVG035	Glencoe	0.00	220.82	261.8	401
WVG036	Glencoe	0.00	220.82	261.8	401
WVG037	Glencoe	0.00	220.78	261.8	401
WVG038	Glencoe	0.00	220.94	261.8	400
WVG039	Glencoe	0.00	220.94	261.8	400
WVG040	Glencoe	0.00	220.94	261.8	400
WVG041	Glencoe	0.00	220.94	261.8	400
WVG042	Glencoe	0.00	220.94	261.8	400
WVG043	Glencoe	0.00	221.07	261.7	398
WVG044	Glencoe	0.00	221.07	261.7	398
WVG045	Glencoe	0.00	221.44	261.8	394
WVG046	Glencoe	0.00	221.52	261.7	394
WVG047	Glencoe	0.00	221.40	261.8	395
WVG048	Glencoe	0.00	221.65	261.7	392
WVG049	Glencoe	0.00	221.65	261.7	392
WVG050	Glencoe	0.00	221.39	261.7	395
WVG051	Glencoe	0.00	220.88	261.7	399
WVG052	Glencoe	0.00	220.75	261.7	401
WVG053	Glencoe	0.00	220.37	261.7	404
WVG054	Glencoe	0.00	220.60	261.7	402
WVG055	Glencoe	0.00	220.65	261.6	401
WVG056	Glencoe	0.00	220.39	261.6	403
WVG057	Glencoe	0.00	221.86	261.7	390
WVG058	Glencoe	0.00	221.52	261.7	393
WVG059	Glencoe	0.00	221.52	261.7	393
WVG061	Glencoe	0.00	221.43	261.7	394
WVG064	Glencoe	0.00	221.03	261.7	398
WVG069	Glencoe	0.00	221.89	261.7	390
WVG070	Glencoe	0.00	221.83	261.7	390
WVG071	Glencoe	0.00	221.83	261.7	390
WVG074	Glencoe	2.49	221.48	261.7	393
WVG085	Glencoe	0.00	221.35	261.7	395
WVG086	Glencoe	0.00	221.47	261.6	393
WVG087	Glencoe	0.00	221.20	261.9	398
WVG090	Glencoe	0.00	220.66	261.9	404
WVG091	Glencoe	0.00	220.36	261.9	407
WVG093	Glencoe	0.00	220.18	261.9	409
WVG094	Glencoe	0.00	219.87	261.9	411
WVG096	Glencoe	0.00	219.71	261.9	413
WVG097	Glencoe	0.00	219.72	262.0	413
WVG099	Glencoe	0.00	220.09	262.0	411
WVG100	Glencoe	0.00	220.09	262.0	410
WVG101	Glencoe	0.00	219.67	262.1	415
WVG102	Glencoe	0.00	219.67	262.1	415

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVG103	Glencoe	0.00	219.67	262.1	415
WVG104	Glencoe	0.00	219.29	262.1	419
WVG105	Glencoe	0.00	219.29	262.1	419
WVG106	Glencoe	0.00	219.52	262.1	417
WVG107	Glencoe	0.00	219.52	262.1	417
WVG108	Glencoe	0.00	218.74	262.2	425
WVG109	Glencoe	0.00	218.74	262.2	425
WVG113	Glencoe	0.00	219.67	262.1	415
WVG116	Glencoe	0.00	219.80	261.8	411
WVG117	Glencoe	0.00	220.25	261.8	407
WVG120	Glencoe	0.00	218.73	262.2	426
WVG122	Glencoe	0.00	220.89	262.9	411
WVG129	Glencoe	0.00	220.46	261.9	405
WVG130	Glencoe	0.00	220.46	261.9	405
WVG131	Glencoe	0.00	220.46	261.9	405
WVG132	Glencoe	0.00	219.02	262.1	421
WVG133	Glencoe	0.00	219.02	262.0	421
WVG139	Glencoe	0.00	219.72	262.8	421
WVG140	Glencoe	0.00	219.89	262.8	420
WVG143	Glencoe	0.00	219.32	263.8	435
WVG147	Glencoe	0.00	218.60	262.0	425
WVG148	Glencoe	0.00	218.97	261.9	420
WVG149	Glencoe	0.00	219.95	261.9	410
WVG150	Glencoe	0.00	219.40	261.9	416
WVG151	Glencoe	0.00	218.54	261.9	425
WVG152	Glencoe	0.00	221.63	261.6	391
WVG153	Glencoe	0.00	222.46	261.6	383
WVG158	Glencoe	0.00	221.74	261.6	390
WVG159	Glencoe	0.00	222.07	261.6	387
WVG161	Glencoe	0.00	220.95	261.8	400
WVG164	Glencoe	0.00	221.63	261.6	391
WVG165	Glencoe	0.00	221.86	261.6	389
WVG169	Glencoe	0.00	221.97	261.7	389
WVG170	Glencoe	0.00	221.61	261.7	393
WVG171	Glencoe	0.00	221.81	261.7	391
WVG172	Glencoe	0.00	221.64	261.7	392
WVG175	Glencoe	0.00	221.83	261.7	390
WVG181	Glencoe	0.00	219.21	262.2	420
WVG183	Glencoe	0.00	219.03	262.2	422
WVG185	Glencoe	0.00	219.58	261.8	413
WVG186	Glencoe	0.00	220.09	262.0	410
WVG187	Glencoe	0.00	219.62	262.1	415
WVG188	Glencoe	0.00	221.14	262.0	399
WVG189	Glencoe	0.00	220.09	261.9	409
WVG190	Glencoe	1.80	219.29	261.9	417
WVG191	Glencoe	0.00	218.72	262.2	426
WVG192	Glencoe	0.00	218.72	262.3	426
WVG193	Glencoe	0.00	219.89	262.8	420
WVG196	Glencoe	0.00	219.58	263.3	428
WVG197	Glencoe	0.00	219.58	263.9	433
WVG199	Glencoe	0.00	221.53	261.9	395
WVG200	Glencoe	0.00	221.46	261.7	394
WVR021	Glencoe	0.00	219.38	264.2	438
WVR022	Glencoe	0.00	219.48	263.7	433
J-0037	Melborne	0.00	221.36	253.7	317
J-0065	Melborne	0.00	221.95	253.7	310
J-0105	Melborne	0.00	221.78	253.7	312
J-0108	Melborne	0.00	222.00	253.7	310
J-0109	Melborne	1.68	222.00	253.7	310
J-0125	Melborne	0.00	221.88	253.7	311
J-0156	Melborne	0.00	222.65	253.7	304
J-0157	Melborne	0.00	222.65	253.7	304
J-0158	Melborne	0.00	221.85	253.7	311
J-0159	Melborne	0.00	221.86	253.7	311
J-0176	Melborne	0.00	219.99	253.7	330
J-0177	Melborne	1.72	220.58	253.7	324
J-0189	Melborne	0.00	221.71	253.7	313
J-0192	Melborne	0.00	221.15	253.7	319
J-0203	Melborne	0.00	221.35	253.7	316
J-0230	Melborne	1.92	222.96	253.7	300
J-0237	Melborne	0.00	221.35	253.7	316
J-0248	Melborne	0.00	221.91	253.7	311
J-0249	Melborne	1.84	221.91	253.7	311
J-0312	Melborne	0.00	221.84	253.7	312
J-0396	Melborne	0.00	221.53	253.7	314
J-0403	Melborne	0.00	221.78	253.7	312
J-0407	Melborne	1.87	220.70	253.7	323
J-0413	Melborne	0.00	221.82	253.7	312
J-0414	Melborne	0.00	221.49	253.7	315

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0430	Melborne	0.00	221.36	253.7	317
J-0434	Melborne	0.00	221.75	253.7	312
J-0476	Melborne	0.00	223.00	253.7	300
J-0493	Melborne	0.00	219.69	253.7	332
J-0498	Melborne	0.00	222.22	253.7	308
J-0500	Melborne	0.00	222.24	253.7	307
J-0502	Melborne	0.00	221.77	253.7	312
J-0531	Melborne	0.00	222.32	253.7	307
J-0639	Melborne	0.00	225.41	255.0	290
J_Hyd-M002	Melborne	0.00	219.00	253.9	341
J_Hyd-M003	Melborne	0.00	219.73	253.8	333
J_Hyd-M004	Melborne	0.00	221.15	253.7	319
J_Hyd-M005	Melborne	0.00	221.44	253.7	316
J_Hyd-M006	Melborne	0.00	222.31	253.7	307
J_Hyd-M007	Melborne	0.00	221.82	253.7	312
J_Hyd-M008	Melborne	0.00	222.52	253.7	305
J_Hyd-M009	Melborne	0.00	222.86	253.7	301
J_Hyd-M010	Melborne	0.00	221.91	253.7	311
J_Hyd-M011	Melborne	0.00	223.22	253.7	298
J_Hyd-M012	Melborne	0.00	221.53	253.7	314
J_Hyd-M013	Melborne	0.42	223.56	253.7	294
J_Hyd-M014	Melborne	0.00	222.20	253.7	308
J_Hyd-M015	Melborne	0.00	223.30	253.7	297
J_Hyd-M016	Melborne	0.00	222.65	253.7	304
J_Hyd-M017	Melborne	0.00	222.32	253.7	307
J_Hyd-M018	Melborne	0.00	221.84	253.7	312
J_Hyd-M019	Melborne	0.00	221.35	253.7	316
J_Hyd-M020	Melborne	0.00	220.58	253.7	324
J_Hyd-M021	Melborne	0.00	221.95	253.7	310
J_Hyd-M022	Melborne	0.00	220.18	253.7	328
J_Hyd-M023	Melborne	0.00	220.16	253.7	328
WVA023	Melborne	0.00	221.95	253.7	310
WVM001	Melborne	0.00	221.15	253.7	319
WVM002	Melborne	0.00	221.15	253.7	319
WVM003	Melborne	0.00	220.48	253.7	325
WVM005	Melborne	0.00	221.88	253.7	311
WVM006	Melborne	0.00	221.88	253.7	311
WVM007	Melborne	0.00	221.23	253.7	318
WVM008	Melborne	0.00	221.80	253.7	312
WVM009	Melborne	0.00	221.78	253.7	312
WVM010	Melborne	0.00	221.85	253.7	311
WVM011	Melborne	0.00	221.85	253.7	311
WVM012	Melborne	0.00	221.84	253.7	312
WVM013	Melborne	0.00	222.21	253.7	308
WVM014	Melborne	0.00	222.00	253.7	310
WVM015	Melborne	0.00	221.91	253.7	311
WVM017	Melborne	0.00	221.71	253.7	313
WVM018	Melborne	0.00	221.72	253.7	313
WVM019	Melborne	0.00	222.96	253.7	300
WVM020	Melborne	0.00	222.96	253.7	300
WVM021	Melborne	0.00	221.86	253.7	311
WVM022	Melborne	0.00	221.35	253.7	316
WVM023	Melborne	0.00	221.35	253.7	316
WVM025	Melborne	0.00	220.58	253.7	324
WVM026	Melborne	0.00	220.58	253.7	324
WVM027	Melborne	0.00	219.99	253.7	330
WVM028	Melborne	0.00	219.99	253.7	330
WVM030	Melborne	0.00	221.00	253.7	320
WVM031	Melborne	0.00	222.65	253.7	304
WVM032	Melborne	0.00	222.45	253.7	306
J-0002	Wardsville	0.00	204.57	250.2	446
J-0012	Wardsville	0.00	210.33	250.2	390
J-0018	Wardsville	0.00	210.33	250.2	390
J-0022	Wardsville	0.00	195.43	250.2	536
J-0023	Wardsville	0.73	203.82	250.2	454
J-0024	Wardsville	0.00	203.82	250.2	454
J-0027	Wardsville	0.00	212.30	250.2	371
J-0028	Wardsville	0.00	212.30	250.2	371
J-0029	Wardsville	0.00	199.99	250.2	491
J-0030	Wardsville	0.90	199.99	250.2	491
J-0031	Wardsville	0.00	210.85	250.2	385
J-0033	Wardsville	0.00	205.92	250.2	433
J-0034	Wardsville	0.00	205.92	250.2	433
J-0035	Wardsville	0.00	211.90	250.3	375
J-0040	Wardsville	0.00	200.40	250.2	487
J-0042	Wardsville	0.00	201.97	250.2	472
J-0050	Wardsville	0.00	208.88	250.2	404
J-0051	Wardsville	0.68	208.88	250.2	404
J-0055	Wardsville	0.00	210.29	250.2	390

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0056	Wardsville	0.00	210.29	250.2	390
J-0061	Wardsville	0.00	200.40	250.2	487
J-0062	Wardsville	0.00	200.40	250.2	487
J-0068	Wardsville	0.00	209.82	250.2	395
J-0069	Wardsville	0.00	195.43	250.2	536
J-0081	Wardsville	0.00	209.82	250.2	395
J-0082	Wardsville	0.00	200.40	250.2	487
J-0083	Wardsville	0.00	200.40	250.2	487
J-0088	Wardsville	0.00	205.79	250.2	434
J-0120	Wardsville	0.00	206.22	250.2	430
J-0121	Wardsville	0.00	205.92	250.2	433
J-0122	Wardsville	0.70	207.03	250.2	422
J-0131	Wardsville	0.00	199.31	250.2	498
J-0132	Wardsville	0.00	199.88	250.2	492
J-0154	Wardsville	0.00	211.18	250.2	382
J-0160	Wardsville	0.00	205.17	250.3	441
J-0161	Wardsville	0.00	205.17	250.3	441
J-0174	Wardsville	0.00	201.18	250.2	479
J-0188	Wardsville	0.00	199.35	250.2	497
J-0217	Wardsville	0.78	212.05	250.2	373
J-0218	Wardsville	0.00	212.05	250.2	373
J-0223	Wardsville	0.00	201.18	250.2	479
J-0228	Wardsville	0.00	211.59	250.2	378
J-0229	Wardsville	0.00	211.22	250.2	381
J-0234	Wardsville	0.00	211.43	250.2	379
J-0238	Wardsville	0.96	199.53	250.2	495
J-0242	Wardsville	0.00	212.24	250.3	372
J-0245	Wardsville	0.00	194.57	250.2	544
J-0247	Wardsville	0.00	200.33	250.2	488
J-0251	Wardsville	0.00	198.40	250.2	507
J-0258	Wardsville	0.00	201.05	250.2	481
J-0283	Wardsville	1.12	212.26	250.2	371
J-0297	Wardsville	0.00	198.59	250.2	505
J-0307	Wardsville	0.00	198.04	250.2	510
J-0308	Wardsville	0.00	211.06	250.2	383
J-0311	Wardsville	0.00	205.84	250.2	434
J-0313	Wardsville	0.00	208.66	250.2	406
J-0343	Wardsville	0.00	208.18	250.2	411
J-0349	Wardsville	0.00	211.06	250.2	383
J-0423	Wardsville	0.00	200.86	250.2	483
J-0429	Wardsville	1.13	195.38	250.2	536
J-0438	Wardsville	0.00	211.49	250.2	379
J-0439	Wardsville	0.00	211.49	250.2	379
J-0444	Wardsville	0.00	205.84	250.2	434
J-0446	Wardsville	0.84	199.42	250.2	497
J-0456	Wardsville	0.00	211.90	250.3	375
J-0460	Wardsville	0.00	196.26	250.2	527
J-0485	Wardsville	0.00	198.53	250.2	505
J-0504	Wardsville	0.00	211.80	250.3	376
J-0506	Wardsville	0.98	199.60	250.2	495
J-0550	Wardsville	0.68	207.57	250.2	417
J-0553	Wardsville	0.00	210.98	250.3	385
J-0597	Wardsville	0.00	211.52	250.3	379
J-686	Wardsville	0.00	211.90	250.3	375
J-728	Wardsville	0.00	199.35	250.2	497
J_Hyd-W001	Wardsville	0.00	199.59	250.2	495
J_Hyd-W002	Wardsville	0.00	200.22	250.2	489
J_Hyd-W003	Wardsville	0.00	200.09	250.2	490
J_Hyd-W004	Wardsville	0.00	200.26	250.2	488
J_Hyd-W005	Wardsville	0.00	200.73	250.2	484
J_Hyd-W006	Wardsville	0.00	201.97	250.2	472
J_Hyd-W007	Wardsville	0.00	202.85	250.2	463
J_Hyd-W008	Wardsville	0.00	206.22	250.2	430
J_Hyd-W009	Wardsville	0.00	207.09	250.2	422
J_Hyd-W010	Wardsville	0.00	211.08	250.2	383
J_Hyd-W011	Wardsville	0.00	210.99	250.2	384
J_Hyd-W012	Wardsville	0.00	209.97	250.2	393
J_Hyd-W013	Wardsville	0.00	199.99	250.2	491
J_Hyd-W014	Wardsville	0.00	203.96	250.2	452
J_Hyd-W015	Wardsville	0.00	201.05	250.2	481
J_Hyd-W016	Wardsville	0.00	199.31	250.2	498
J_Hyd-W017	Wardsville	0.00	204.86	250.2	443
J_Hyd-W018	Wardsville	0.00	207.95	250.2	413
J_Hyd-W019	Wardsville	0.00	210.80	250.2	385
J_Hyd-W021	Wardsville	0.00	212.03	250.2	373
J_Hyd-W022	Wardsville	0.00	212.33	250.2	370
J_Hyd-W023	Wardsville	0.00	211.80	250.2	375
J_Hyd-W024	Wardsville	0.00	210.17	250.2	391
J_Hyd-W025	Wardsville	0.00	208.87	250.2	404

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-W026	Wardsville	0.00	199.86	250.2	492
J_Hyd-W027	Wardsville	0.00	198.54	250.2	505
J_Hyd-W028	Wardsville	0.00	194.57	250.2	544
J_Hyd-W029	Wardsville	0.00	198.04	250.2	510
J_Hyd-W030	Wardsville	0.00	198.82	250.2	502
J_Hyd-W031	Wardsville	0.00	210.43	250.2	389
J_Hyd-W032	Wardsville	0.00	211.40	250.2	380
J_Hyd-W033	Wardsville	0.00	211.13	250.2	382
J_Hyd-W034	Wardsville	0.00	211.75	250.2	376
J_Hyd-W035	Wardsville	0.00	211.50	250.2	379
J_Hyd-W036	Wardsville	0.00	210.68	250.2	387
J_Hyd-W037	Wardsville	0.00	208.27	250.2	410
J_Hyd-W038	Wardsville	0.00	207.21	250.2	420
J_Hyd-W039	Wardsville	0.00	205.93	250.2	433
J_Hyd-W040	Wardsville	0.00	198.92	250.2	501
J_Hyd-W041	Wardsville	0.00	197.74	250.2	513
J_Hyd-W042	Wardsville	0.00	195.70	250.2	533
J_Hyd-W043	Wardsville	0.00	198.47	250.2	506
J_Hyd-W044	Wardsville	0.00	212.21	250.2	372
J_Hyd-W045	Wardsville	0.00	209.85	250.2	395
J_Hyd-W046	Wardsville	0.00	208.62	250.3	408
J_Hyd-W047	Wardsville	0.00	207.07	250.2	422
WVR003	Wardsville	0.00	212.35	250.3	371
WVR006	Wardsville	0.01	211.90	250.3	375
WVW001	Wardsville	0.00	211.08	250.2	383
WVW002	Wardsville	0.00	211.08	250.2	383
WVW003	Wardsville	0.00	210.85	250.2	385
WVW006	Wardsville	0.00	199.99	250.2	491
WVW007	Wardsville	0.00	201.05	250.2	481
WVW008	Wardsville	0.00	201.01	250.2	481
WVW009	Wardsville	0.00	205.92	250.2	433
WVW010	Wardsville	0.00	206.22	250.2	430
WVW011	Wardsville	0.00	201.69	250.2	474
WVW014	Wardsville	0.00	202.53	250.2	466
WVW015	Wardsville	0.00	199.66	250.2	494
WVW016	Wardsville	0.00	200.33	250.2	488
WVW018	Wardsville	0.00	200.33	250.2	488
WVW019	Wardsville	0.00	199.53	250.2	495
WVW020	Wardsville	0.00	199.53	250.2	495
WVW021	Wardsville	0.00	198.66	250.2	504
WVW022	Wardsville	0.00	198.82	250.2	502
WVW023	Wardsville	0.00	198.59	250.2	505
WVW025	Wardsville	0.00	198.04	250.2	510
WVW026	Wardsville	0.00	197.66	250.2	514
WVW027	Wardsville	0.00	198.71	250.2	504
WVW028	Wardsville	0.00	198.33	250.2	507
WVW029	Wardsville	0.00	198.40	250.2	507
WVW030	Wardsville	0.00	200.40	250.2	487
WVW031	Wardsville	0.00	200.40	250.2	487
WVW032	Wardsville	0.00	200.21	250.2	489
WVW033	Wardsville	0.00	200.40	250.2	487
WVW034	Wardsville	0.00	199.35	250.2	497
WVW035	Wardsville	0.00	199.92	250.2	492
WVW036	Wardsville	0.00	199.35	250.2	497
WVW038	Wardsville	0.00	210.33	250.2	390
WVW039	Wardsville	0.00	208.88	250.2	404
WVW041	Wardsville	0.79	211.18	250.2	382
WVW042	Wardsville	0.00	211.18	250.2	382
WVW043	Wardsville	0.00	211.18	250.2	382
WVW044	Wardsville	0.00	207.40	250.2	418
WVW045	Wardsville	0.00	205.79	250.2	434
WVW046	Wardsville	0.00	209.82	250.2	395
WVW047	Wardsville	0.00	209.82	250.2	395
WVW048	Wardsville	0.73	212.30	250.2	371
WVW049	Wardsville	0.00	212.30	250.2	371
WVW051	Wardsville	0.00	211.43	250.2	379
WVW052	Wardsville	0.34	211.43	250.2	379
WVW053	Wardsville	0.00	211.43	250.2	379
WVW054	Wardsville	0.00	212.03	250.2	373
WVW055	Wardsville	0.00	211.12	250.2	382
WVW056	Wardsville	0.00	212.26	250.2	371
WVW057	Wardsville	0.00	212.05	250.2	373
WVW058	Wardsville	0.00	212.26	250.2	371
WVW059	Wardsville	0.00	211.21	250.2	381
WVW061	Wardsville	0.00	211.15	250.2	382
WVW063	Wardsville	0.00	204.57	250.2	446
WVW064	Wardsville	0.00	208.18	250.2	411
WVW066	Wardsville	0.00	207.03	250.2	422
WVW067	Wardsville	0.00	194.57	250.2	544

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0009	Appin	0.00	225.75	255.0	286
J-0010	Appin	0.00	225.75	255.0	286
J-0015	Appin	0.00	224.12	255.0	303
J-0119	Appin	0.00	224.77	255.1	296
J-0140	Appin	0.00	223.78	255.1	306
J-0152	Appin	0.00	224.42	255.0	300
J-0185	Appin	0.00	225.43	255.0	290
J-0219	Appin	0.00	223.88	255.0	305
J-0221	Appin	0.00	224.26	255.1	301
J-0244	Appin	0.00	224.85	255.0	295
J-0246	Appin	0.00	224.78	255.0	296
J-0254	Appin	2.48	223.45	255.0	309
J-0277	Appin	0.00	223.74	255.1	307
J-0278	Appin	0.00	223.74	255.1	307
J-0280	Appin	0.00	225.40	255.0	290
J-0281	Appin	0.00	225.40	255.0	290
J-0318	Appin	1.52	224.73	255.0	296
J-0322	Appin	0.00	224.94	255.1	295
J-0323	Appin	0.00	224.94	255.1	295
J-0345	Appin	0.00	222.65	255.0	317
J-0346	Appin	0.00	223.66	255.0	307
J-0355	Appin	0.00	224.54	255.1	299
J-0359	Appin	0.00	225.19	255.0	292
J-0361	Appin	0.00	224.05	255.1	304
J-0378	Appin	0.96	225.03	255.0	293
J-0404	Appin	0.00	222.65	255.0	317
J-0479	Appin	0.00	223.74	255.1	306
J-0480	Appin	1.13	223.82	255.1	306
J-0560	Appin	0.00	224.74	255.1	297
J_Hyd-A001	Appin	0.00	224.77	255.0	296
J_Hyd-A002	Appin	0.00	225.61	255.0	288
J_Hyd-A003	Appin	0.00	225.13	255.0	292
J_Hyd-A004	Appin	0.00	224.97	255.0	294
J_Hyd-A005	Appin	0.00	224.76	255.0	296
J_Hyd-A006	Appin	0.00	224.95	255.1	295
J_Hyd-A007	Appin	0.00	224.78	255.1	297
J_Hyd-A008	Appin	0.00	223.78	255.1	306
J_Hyd-A009	Appin	0.00	223.45	255.0	309
J_Hyd-A010	Appin	0.00	223.84	255.0	305
J_Hyd-A011	Appin	0.00	224.12	255.0	303
WVA001	Appin	0.00	224.54	255.1	299
WVA003	Appin	0.00	224.27	255.1	301
WVA005	Appin	0.00	223.45	255.0	309
WVA006	Appin	0.00	223.45	255.0	309
WVA007	Appin	0.00	223.84	255.0	305
WVA008	Appin	0.00	223.88	255.0	305
WVA009	Appin	0.00	223.88	255.0	305
WVA010	Appin	0.00	224.85	255.1	296
WVA011	Appin	0.00	224.46	255.1	300
WVA012	Appin	0.00	224.74	255.1	297
WVA013	Appin	0.00	224.49	255.0	299
WVA014	Appin	0.00	224.42	255.0	300
WVA015	Appin	0.00	225.05	255.0	293
WVA016	Appin	0.00	224.73	255.0	296
WVA017	Appin	0.00	224.77	255.1	296
WVA018	Appin	0.00	224.77	255.1	296
WVA019	Appin	0.00	225.16	255.0	292
WVA020	Appin	0.00	224.85	255.0	295
WVA021	Appin	0.00	225.12	255.0	292
WVR026	Appin	0.00	224.12	255.0	303
WVR028	Appin	0.00	225.35	255.0	290
J-0019	Rural	0.00	224.91	254.8	293
J-0020	Rural	0.00	215.38	254.5	382
J-0053	Rural	0.00	223.50	254.8	306
J-0057	Rural	0.00	223.26	254.8	309
J-0064	Rural	0.00	223.00	254.1	304
J-0073	Rural	0.00	216.62	258.5	410
J-0074	Rural	0.00	216.62	258.6	410
J-0077	Rural	0.00	224.92	254.9	293
J-0078	Rural	0.00	224.92	254.9	293
J-0086	Rural	0.00	215.90	250.7	341
J-0090	Rural	0.00	217.02	254.6	367
J-0100	Rural	0.00	219.21	261.4	413
J-0103	Rural	0.00	224.29	255.0	300
J-0110	Rural	0.00	224.91	254.8	293
J-0113	Rural	0.00	224.13	255.0	302
J-0117	Rural	0.00	223.95	254.8	302
J-0118	Rural	0.00	225.08	254.8	291
J-0129	Rural	0.00	210.02	266.2	550

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0130	Rural	0.00	205.48	266.2	594
J-0137	Rural	0.00	222.21	255.6	327
J-0138	Rural	0.00	222.21	255.6	327
J-0149	Rural	0.00	209.61	266.2	554
J-0150	Rural	0.00	210.02	266.2	550
J-0151	Rural	0.00	224.44	254.9	298
J-0163	Rural	0.00	222.45	267.6	441
J-0164	Rural	0.00	222.45	267.6	441
J-0170	Rural	0.00	216.66	266.5	488
J-0171	Rural	0.00	216.66	266.5	488
J-0182	Rural	0.00	215.05	250.6	348
J-0183	Rural	0.00	215.05	250.6	348
J-0186	Rural	0.00	224.50	255.0	298
J-0193	Rural	0.00	218.11	250.6	318
J-0194	Rural	0.00	218.11	250.6	318
J-0199	Rural	0.00	216.02	250.7	340
J-0200	Rural	0.00	215.67	250.7	343
J-0206	Rural	0.00	215.05	250.6	348
J-0207	Rural	0.00	216.66	254.6	371
J-0208	Rural	0.00	224.87	254.8	293
J-0210	Rural	0.00	216.37	258.5	412
J-0215	Rural	0.00	224.44	254.9	298
J-0224	Rural	0.00	215.67	250.7	343
J-0225	Rural	0.00	215.67	250.7	343
J-0231	Rural	0.00	215.88	269.3	523
J-0232	Rural	0.00	215.90	250.6	340
J-0233	Rural	0.00	215.48	250.6	344
J-0241	Rural	0.00	223.95	254.8	302
J-0243	Rural	0.00	216.95	254.6	368
J-0257	Rural	0.00	215.14	254.2	382
J-0260	Rural	0.00	215.99	250.7	340
J-0263	Rural	0.00	216.66	254.6	371
J-0266	Rural	0.00	215.67	250.7	343
J-0276	Rural	0.00	215.90	250.6	340
J-0282	Rural	0.00	223.26	254.8	309
J-0293	Rural	0.00	215.90	250.6	340
J-0298	Rural	0.00	221.59	254.1	318
J-0299	Rural	0.00	223.00	254.1	304
J-0300	Rural	0.00	215.20	250.6	347
J-0301	Rural	0.00	215.11	250.6	348
J-0304	Rural	0.00	221.66	255.6	332
J-0309	Rural	0.00	218.12	250.6	318
J-0315	Rural	0.00	222.17	255.6	328
J-0319	Rural	0.00	224.13	255.0	302
J-0325	Rural	0.00	217.23	258.5	404
J-0326	Rural	0.00	221.59	254.1	318
J-0329	Rural	0.00	215.90	250.6	340
J-0330	Rural	0.00	215.55	250.6	343
J-0335	Rural	0.00	227.07	254.6	270
J-0341	Rural	0.00	224.82	254.8	293
J-0351	Rural	0.00	216.30	254.7	376
J-0352	Rural	0.00	224.91	254.8	293
J-0356	Rural	0.00	221.65	265.1	426
J-0357	Rural	0.00	221.65	265.1	426
J-0362	Rural	0.00	225.24	255.2	293
J-0365	Rural	0.00	216.02	250.6	339
J-0366	Rural	0.00	215.27	250.6	346
J-0369	Rural	0.00	215.99	254.5	377
J-0370	Rural	0.00	216.95	254.6	368
J-0374	Rural	0.00	217.94	250.6	320
J-0376	Rural	0.00	222.17	255.6	328
J-0379	Rural	0.00	216.10	266.5	493
J-0383	Rural	0.00	215.74	250.7	342
J-0391	Rural	0.00	220.12	265.1	441
J-0392	Rural	0.00	220.22	265.1	440
J-0397	Rural	0.00	217.12	269.1	509
J-0398	Rural	0.00	216.07	269.1	519
J-0405	Rural	0.00	216.98	254.7	369
J-0408	Rural	0.00	219.48	250.6	305
J-0416	Rural	0.00	216.22	269.4	520
J-0422	Rural	0.00	222.67	267.6	439
J-0431	Rural	0.00	210.65	270.2	582
J-0432	Rural	0.00	210.75	270.2	581
J-0441	Rural	0.00	211.16	268.7	563
J-0442	Rural	0.00	210.36	268.7	570
J-0461	Rural	0.00	219.65	261.7	412
J-0462	Rural	0.00	219.09	261.7	417
J-0463	Rural	0.00	218.71	261.8	422
J-0464	Rural	0.00	219.51	261.8	413

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0466	Rural	0.00	215.88	269.3	523
J-0483	Rural	0.00	226.33	254.8	278
J-0484	Rural	0.00	225.87	254.8	283
J-0519	Rural	0.00	220.69	264.3	427
J-0520	Rural	0.00	221.62	264.3	417
J-0525	Rural	0.00	217.02	254.6	367
J-0530	Rural	0.00	218.78	250.6	312
J-0536	Rural	0.06	218.90	254.6	349
J-0545	Rural	0.00	222.01	255.8	330
J-0547	Rural	0.00	208.26	268.6	590
J-0563	Rural	0.00	217.68	254.6	361
J-0573	Rural	0.00	217.81	254.7	361
J-0574	Rural	0.00	217.93	254.7	360
J-0577	Rural	0.00	222.72	264.7	411
J-0582	Rural	0.00	225.65	254.8	285
J-0592	Rural	0.00	225.26	255.3	294
J-0593	Rural	0.00	223.37	255.3	312
J-0595	Rural	0.00	213.93	266.1	510
J-0596	Rural	0.00	214.45	266.0	504
J-0599	Rural	0.00	226.75	255.1	278
J-0600	Rural	0.00	225.36	255.1	291
J-0604	Rural	0.00	217.45	254.4	361
J-0605	Rural	0.00	215.66	254.3	378
J-0607	Rural	0.00	216.23	250.6	337
J-0610	Rural	0.00	217.10	250.7	329
J-0611	Rural	0.00	214.85	250.7	351
J-0613	Rural	0.00	217.54	269.5	509
J-0614	Rural	0.00	215.09	265.8	496
J-0616	Rural	0.00	216.04	250.6	339
J-0617	Rural	0.00	220.45	265.6	442
J-0618	Rural	0.00	220.05	263.3	423
J-0619	Rural	0.00	217.32	262.9	446
J-0623	Rural	0.00	218.13	250.6	318
J-0624	Rural	0.00	219.80	262.2	415
J-0625	Rural	0.00	219.82	261.4	407
J-0626	Rural	0.00	217.52	250.7	324
J-0629	Rural	0.00	198.11	270.5	708
J-0631	Rural	0.00	220.14	254.6	337
J-0633	Rural	0.00	215.01	250.6	348
J-0634	Rural	0.85	220.90	264.2	424
J-0636	Rural	0.00	226.78	255.0	276
J-0637	Rural	0.00	223.52	254.9	307
J-0638	Rural	0.00	220.56	260.4	390
J-0643	Rural	0.00	216.97	250.5	328
J-0645	Rural	0.00	216.83	250.6	331
J-688	Rural	0.00	222.17	255.6	328
J_Hyd-R001E	Rural	0.00	226.53	254.8	277
J_Hyd-R002E	Rural	0.00	224.87	254.8	293
J_Hyd-R003E	Rural	0.00	223.26	254.8	309
J_Hyd-R004E	Rural	0.00	227.87	254.7	263
J_Hyd-R005E	Rural	0.00	228.14	254.6	259
J_Hyd-R006E	Rural	0.00	223.00	254.1	304
J_Hyd-R007E	Rural	0.00	226.02	254.9	282
J_Hyd-R008E	Rural	0.00	225.38	254.7	287
J_Hyd-R009E	Rural	0.00	215.38	254.5	382
J_Hyd-R010E	Rural	0.00	217.64	254.6	361
J_Hyd-R011E	Rural	0.00	216.30	254.7	376
J_Hyd-R012E	Rural	0.00	225.08	254.8	291
J_Hyd-R013E	Rural	0.00	225.08	254.8	291
J_Hyd-R014E	Rural	0.00	225.24	255.2	293
J_Hyd-R015E	Rural	0.00	222.19	255.6	327
J_Hyd-R016E	Rural	0.00	224.13	255.0	302
J_Hyd-R017M	Rural	0.00	215.90	250.7	341
J_Hyd-R018M	Rural	0.00	209.02	250.6	407
J_Hyd-R019M	Rural	0.00	215.68	250.6	342
J_Hyd-R020M	Rural	0.00	216.37	250.5	334
J_Hyd-R021M	Rural	0.00	215.02	250.4	347
J_Hyd-R026E	Rural	0.00	224.44	254.9	298
J_Hyd-R027W	Rural	0.00	206.98	272.9	645
J_Hyd-R028E	Rural	0.00	222.89	254.8	312
J_Hyd-R029W	Rural	0.00	215.14	274.8	584
J_Hyd-R030M	Rural	0.00	215.76	266.5	497
J_Hyd-R031M	Rural	0.00	215.77	269.3	524
J_Hyd-R032M	Rural	0.00	218.56	250.6	314
J_Hyd-R033E	Rural	0.00	217.26	265.1	469
WVR007	Rural	0.00	215.64	250.4	341
WVR008	Rural	0.00	215.68	250.4	340
WVR009	Rural	0.00	215.39	250.7	346
WVR010	Rural	0.00	215.88	269.3	523

2021 Junctions Table
Southwest Middlesex Master Servicing Plan

2021 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVR012	Rural	0.00	217.94	250.6	320
WVR013	Rural	0.00	218.56	250.6	314
WVR014	Rural	0.00	218.12	250.6	318
WVR015	Rural	0.00	218.11	250.6	318
WVR019	Rural	0.00	216.86	266.8	489
WVR020	Rural	0.00	221.61	264.8	423
WVR024	Rural	0.00	216.37	258.5	412
WVR024	Rural	0.00	219.21	261.4	413
WVR025	Rural	0.00	222.17	255.6	328
WVR029	Rural	0.00	224.50	255.0	298
WVR030	Rural	0.00	224.40	254.9	298
WVR031	Rural	0.00	224.90	255.2	297
WVR032	Rural	0.00	224.44	254.9	298
WVR033	Rural	0.00	224.92	254.9	293
WVR034	Rural	0.00	224.90	254.8	293
WVR035	Rural	0.00	224.82	254.8	293
WVR036	Rural	0.00	224.82	254.8	293
WVR037	Rural	0.00	217.20	254.7	367
WVR038	Rural	0.00	217.64	254.6	361
WVR039	Rural	0.00	217.02	254.6	367
WVR040	Rural	0.00	215.14	254.2	382
WVR042	Rural	0.00	223.00	254.1	304
WVR043	Rural	0.00	228.14	254.6	259
WVR044	Rural	0.00	227.12	254.6	269
WVR045	Rural	0.00	223.77	254.8	304
WVR046	Rural	0.00	224.91	254.8	293
WVR047	Rural	0.00	223.95	254.8	302
WVR050	Rural	0.00	215.85	250.6	340
WVR051	Rural	0.00	215.90	250.6	340
WVR052	Rural	0.00	219.21	261.4	413
WVR053	Rural	0.00	225.26	255.0	291
WVR054	Rural	0.00	226.99	254.7	272
WVR055	Rural	0.00	226.60	254.7	275
WVR056	Rural	0.00	223.50	254.8	306
WVR060	Rural	0.00	214.01	254.5	396

Total Demand	86.37	**Maximum Pressure**	708
		Minimum Pressure	259

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P-223	Glencoe	J-747	J-0646	224.53	400	120	38.37	0.31	0.1
P-232	Glencoe	J-0586	G015	3.80	150	100	0.00	0.00	0.0
P-240	Glencoe	J-753	G_H-1	1.46	150	100	0.00	0.00	0.0
P-246	Glencoe	J-759	J-753	58.17	200	110	0.00	0.00	0.0
P-247	Glencoe	J-760	J-759	25.30	200	110	0.00	0.00	0.0
P-248	Glencoe	J-761	J-760	24.76	200	110	0.00	0.00	0.0
P-249(1)	Glencoe	J-762	J-800	10.10	200	110	0.00	0.00	0.0
P-249(2)	Glencoe	J-800	J-761	21.50	200	110	0.00	0.00	0.0
P-251	Glencoe	J-766	J-765	1.74	200	110	0.00	0.00	0.0
P-252	Glencoe	J-765	J-764	2.16	200	110	0.00	0.00	0.0
P-254	Glencoe	J-764	J-762	2.10	200	110	0.00	0.00	0.0
P-255	Glencoe	J-767	J-766	36.14	200	110	0.00	0.00	0.0
P-256	Glencoe	J-768	J-767	23.79	200	110	0.00	0.00	0.0
P-257	Glencoe	J-769	J-768	25.30	200	110	0.00	0.00	0.0
P-258	Glencoe	J-770	J-769	12.16	200	110	0.00	0.00	0.0
P-259(1)	Glencoe	J-771	J-778	30.83	200	110	0.53	0.02	0.0
P-259(2)	Glencoe	J-778	J-770	11.83	200	110	0.53	0.02	0.0
P-260	Glencoe	J-771	J-0264	6.10	200	110	0.60	0.02	0.0
P-261	Glencoe	J-772	J-771	21.73	200	110	1.13	0.04	0.0
P-262	Glencoe	J-773	J-772	53.57	200	110	1.13	0.04	0.0
P-263(1)	Glencoe	J-775	J-777	32.15	200	110	2.36	0.08	0.0
P-263(2)	Glencoe	J-777	J-773	5.67	200	110	2.36	0.08	0.0
P-265	Glencoe	WVG029	J-775	71.28	200	110	2.36	0.08	0.0
P-266	Glencoe	J-773	WVG027	18.50	200	110	1.23	0.04	0.0
P-268	Glencoe	J-770	WVG001	31.17	150	100	0.53	0.03	0.0
P-270(1)(1)	Glencoe	J-779	J-801	24.25	200	110	3.76	0.12	0.0
P-270(1)(2)	Glencoe	J-801	J-780	5.97	200	110	3.76	0.12	0.0
P-270(2)	Glencoe	J-780	J-0126	2.45	200	110	3.76	0.12	0.0
P-271	Glencoe	J-782	J-781	15.01	200	110	3.76	0.12	0.0
P-272	Glencoe	J-781	J-779	27.58	200	110	3.76	0.12	0.0
P-273(1)(1)	Glencoe	J-785	J-807	42.61	200	110	8.97	0.29	0.0
P-273(1)(2)	Glencoe	J-807	J-806	13.65	200	110	8.19	0.26	0.0
P-273(2)	Glencoe	J-806	J-784	24.08	200	110	8.19	0.26	0.0
P-274	Glencoe	J-784	J-783	60.15	200	110	8.19	0.26	0.0
P-275(1)(1)	Glencoe	J-783	J-804	24.03	200	110	8.19	0.26	0.0
P-275(1)(2)	Glencoe	J-804	J-803	0.79	200	110	3.76	0.12	0.0
P-275(2)	Glencoe	J-803	J-782	7.79	200	110	3.76	0.12	0.0
P-276	Glencoe	J-786	J-785	70.18	200	110	8.97	0.29	0.1
P-277(1)(1)	Glencoe	J-787	J-813	5.52	200	110	6.97	0.22	0.0
P-277(1)(2)(1)	Glencoe	J-813	J-816	4.54	200	110	15.46	0.49	0.0
P-277(1)(2)(2)	Glencoe	J-816	J-812	0.65	200	110	8.97	0.29	0.0
P-277(2)	Glencoe	J-812	J-786	39.29	200	110	8.97	0.29	0.0
P-278	Glencoe	J-791	J-790	37.40	200	110	14.54	0.46	0.1
P-279(1)	Glencoe	J-790	J-818	26.33	200	110	14.54	0.46	0.1
P-279(2)(1)	Glencoe	J-818	J-819	12.63	200	110	14.54	0.46	0.0
P-279(2)(2)	Glencoe	J-819	J-789	31.06	200	110	6.97	0.22	0.0
P-280	Glencoe	J-789	J-788	52.74	200	110	6.97	0.22	0.0
P-281	Glencoe	J-788	J-787	40.02	200	110	6.97	0.22	0.0
P-282	Glencoe	J-792	J-791	35.04	200	110	14.54	0.46	0.1
P-283(1)	Glencoe	J-795	J-826	36.70	200	110	11.41	0.36	0.0
P-283(2)	Glencoe	J-826	J-794	38.31	200	110	11.41	0.36	0.0
P-284	Glencoe	J-794	J-793	70.18	200	110	11.41	0.36	0.1
P-285(1)	Glencoe	J-793	J-821	19.05	200	110	11.41	0.36	0.0
P-285(2)	Glencoe	J-821	J-792	1.09	200	110	14.54	0.46	0.0
P-286(1)	Glencoe	J-799	J-827	5.70	200	110	11.41	0.36	0.0
P-286(2)	Glencoe	J-827	J-798	15.33	200	110	11.41	0.36	0.0
P-287	Glencoe	J-798	J-797	45.01	200	110	11.41	0.36	0.1
P-288	Glencoe	J-797	J-796	55.00	200	110	11.41	0.36	0.1
P-289	Glencoe	J-796	J-795	14.97	200	110	11.41	0.36	0.0
P-290	Glencoe	J-800	G_H-2	1.49	150	100	0.00	0.00	0.0
P-291	Glencoe	J-778	G_H-3	1.50	150	100	0.00	0.00	0.0
P-292	Glencoe	J-777	G_H-4	0.54	150	100	0.00	0.00	0.0
P-294	Glencoe	J-801	G_H-5	1.96	150	100	0.00	0.00	0.0
P-295	Glencoe	J-803	G_H-6	1.67	150	100	0.00	0.00	0.0
P-296	Glencoe	J-804	J-805	17.92	150	100	4.43	0.25	0.0
P-297	Glencoe	J-805	WVG097	5.39	150	100	4.43	0.25	0.0
P-298	Glencoe	J-806	G_H-7	2.83	150	100	0.00	0.00	0.0
P-301	Glencoe	J-807	J-810	4.01	150	100	0.78	0.04	0.0
P-302	Glencoe	J-810	J-811	3.62	150	100	0.78	0.04	0.0
P-303	Glencoe	J-812	G_H-8	1.47	150	100	0.00	0.00	0.0
P-304	Glencoe	J-813	J-814	4.27	200	110	-8.48	0.27	0.0
P-305	Glencoe	J-814	J-815	3.22	200	110	-8.48	0.27	0.0
P-306	Glencoe	J-816	J-817	16.89	200	110	6.49	0.21	0.0
P-307	Glencoe	J-817	J-0011	2.48	200	110	6.49	0.21	0.0
P-308	Glencoe	J-818	G_H-9	1.82	150	100	0.00	0.00	0.0
P-309	Glencoe	J-819	J-820	8.75	200	110	7.56	0.24	0.0
P-310	Glencoe	J-820	WVG120	3.89	200	110	7.56	0.24	0.0
P-311	Glencoe	J-821	J-822	7.32	150	100	-8.12	0.46	0.0
P-312	Glencoe	J-822	J-823	3.21	150	100	-8.12	0.46	0.0
P-313	Glencoe	J-823	J-0262	0.92	150	100	-8.12	0.46	0.0
P-314	Glencoe	J-821	J-824	9.93	150	100	4.99	0.28	0.0
P-315	Glencoe	J-824	J-825	2.86	150	100	4.99	0.28	0.0
P-316	Glencoe	J-826	G_H-10	2.85	150	100	0.00	0.00	0.0
P-317	Glencoe	J-827	G_H-11	1.80	150	100	0.00	0.00	0.0
P-318	Glencoe	J-799	J-0267	3.89	150	100	-11.41	0.65	0.0
P-923	Glencoe	J-720	J-0533	70.98	25	100	0.00	0.00	0.0
P-925	Glencoe	J_Hyd-G084	J-0101	235.01	300	120	-3.89	0.06	0.0
P-927	Glencoe	J-0101	J_Hyd-G083	2.91	300	120	-3.89	0.06	0.0
P-928	Glencoe	J_Hyd-G083	Glencoe Tower	97.16	300	120	-44.09	0.62	0.2
P-929	Glencoe	J_Hyd-G083	J-0337	106.00	300	120	40.20	0.57	0.2
P-932	Glencoe	J-0180	J-690	4.46	150	100	17.41	0.98	0.1
P-936	Glencoe	J-0634	J-0635	660.21	50	130	0.00	0.00	0.0
P_Hyd-G001	Glencoe	J_Hyd-G001	G001	4.85	150	100	0.00	0.00	0.0
P_Hyd-G002	Glencoe	J_Hyd-G002	G002	2.71	150	100	0.00	0.00	0.0
P_Hyd-G003	Glencoe	J_Hyd-G003	G003	2.46	150	100	0.00	0.00	0.0
P_Hyd-G004	Glencoe	J_Hyd-G004	G004	0.85	150	100	0.00	0.00	0.0
P_Hyd-G005	Glencoe	J_Hyd-G005	G005	5.89	150	100	0.00	0.00	0.0
P_Hyd-G006	Glencoe	J_Hyd-G006	G006	5.74	150	100	0.00	0.00	0.0
P_Hyd-G008	Glencoe	J_Hyd-G008	G008	2.51	150	100	0.00	0.00	0.0

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-G009	Glencoe	J_Hyd-G009	G009	3.80	150	100	0.00	0.00	0.0
P_Hyd-G010	Glencoe	J_Hyd-G010	G010	3.17	150	100	0.00	0.00	0.0
P_Hyd-G011	Glencoe	J_Hyd-G011	G011	2.84	150	100	0.00	0.00	0.0
P_Hyd-G012	Glencoe	J_Hyd-G012	G012	1.27	150	100	0.00	0.00	0.0
P_Hyd-G013	Glencoe	J_Hyd-G013	G013	0.22	150	100	0.00	0.00	0.0
P_Hyd-G014	Glencoe	J_Hyd-G014	G014	1.48	150	100	0.00	0.00	0.0
P_Hyd-G016	Glencoe	J_Hyd-G016	G016	2.59	150	100	0.00	0.00	0.0
P_Hyd-G018	Glencoe	J_Hyd-G018	G018	1.41	150	100	0.00	0.00	0.0
P_Hyd-G019	Glencoe	J_Hyd-G019	G019	1.61	150	100	0.00	0.00	0.0
P_Hyd-G020	Glencoe	J_Hyd-G020	G020	3.56	150	100	0.00	0.00	0.0
P_Hyd-G021	Glencoe	J_Hyd-G021	G021	3.54	150	100	0.00	0.00	0.0
P_Hyd-G022	Glencoe	J_Hyd-G022	G022	2.23	150	100	0.00	0.00	0.0
P_Hyd-G023	Glencoe	J_Hyd-G023	G023	2.41	150	100	0.00	0.00	0.0
P_Hyd-G024	Glencoe	J_Hyd-G024	G024	1.78	150	100	0.00	0.00	0.0
P_Hyd-G025	Glencoe	J_Hyd-G025	G025	1.60	150	100	0.00	0.00	0.0
P_Hyd-G026	Glencoe	J_Hyd-G026	G026	5.18	150	100	0.00	0.00	0.0
P_Hyd-G027	Glencoe	J_Hyd-G027	G027	2.73	150	100	0.00	0.00	0.0
P_Hyd-G028	Glencoe	J_Hyd-G028	G028	4.76	150	100	0.00	0.00	0.0
P_Hyd-G029	Glencoe	J_Hyd-G029	G029	1.38	150	100	0.00	0.00	0.0
P_Hyd-G041	Glencoe	J_Hyd-G041	G041	1.19	150	100	0.00	0.00	0.0
P_Hyd-G042	Glencoe	J_Hyd-G042	G042	1.81	150	100	0.00	0.00	0.0
P_Hyd-G043	Glencoe	J_Hyd-G043	G043	0.88	150	100	0.00	0.00	0.0
P_Hyd-G044	Glencoe	J_Hyd-G044	G044	1.63	150	100	0.00	0.00	0.0
P_Hyd-G045	Glencoe	J_Hyd-G045	G045	3.33	150	100	0.00	0.00	0.0
P_Hyd-G046	Glencoe	J_Hyd-G046	G046	1.69	150	100	0.00	0.00	0.0
P_Hyd-G047	Glencoe	J_Hyd-G047	G047	7.03	150	100	0.00	0.00	0.0
P_Hyd-G048	Glencoe	J_Hyd-G048	G048	4.14	150	100	0.00	0.00	0.0
P_Hyd-G049	Glencoe	J_Hyd-G049	G049	0.49	150	100	0.00	0.00	0.0
P_Hyd-G050	Glencoe	J_Hyd-G050	G050	1.47	150	100	0.00	0.00	0.0
P_Hyd-G051	Glencoe	J_Hyd-G051	G051	0.78	150	100	0.00	0.00	0.0
P_Hyd-G052	Glencoe	J_Hyd-G052	G052	1.12	150	100	0.00	0.00	0.0
P_Hyd-G053	Glencoe	J_Hyd-G053	G053	1.89	150	100	0.00	0.00	0.0
P_Hyd-G054	Glencoe	WVG032	G054	2.99	150	100	0.00	0.00	0.0
P_Hyd-G055	Glencoe	WVG041	G055	0.94	150	100	0.00	0.00	0.0
P_Hyd-G056	Glencoe	J_Hyd-G056	G056	2.18	150	100	0.00	0.00	0.0
P_Hyd-G057	Glencoe	J_Hyd-G057	G057	1.91	150	100	0.00	0.00	0.0
P_Hyd-G058	Glencoe	J_Hyd-G058	G058	4.86	150	100	0.00	0.00	0.0
P_Hyd-G059	Glencoe	J_Hyd-G059	G059	2.58	150	100	0.00	0.00	0.0
P_Hyd-G060	Glencoe	J_Hyd-G060	G060	1.86	150	100	0.00	0.00	0.0
P_Hyd-G061	Glencoe	J_Hyd-G061	G061	1.77	150	100	0.00	0.00	0.0
P_Hyd-G062	Glencoe	J_Hyd-G062	G062	15.15	150	100	0.00	0.00	0.0
P_Hyd-G063	Glencoe	J_Hyd-G063	G063	5.63	150	100	0.00	0.00	0.0
P_Hyd-G064	Glencoe	J_Hyd-G064	G064	4.15	150	100	0.00	0.00	0.0
P_Hyd-G065	Glencoe	J_Hyd-G065	G065	2.06	150	100	0.00	0.00	0.0
P_Hyd-G066	Glencoe	J_Hyd-G066	G066	2.76	150	100	0.00	0.00	0.0
P_Hyd-G067	Glencoe	J_Hyd-G067	G067	3.98	150	100	0.00	0.00	0.0
P_Hyd-G068	Glencoe	J_Hyd-G068	G068	1.46	150	100	0.00	0.00	0.0
P_Hyd-G069	Glencoe	J_Hyd-G069	G069	1.27	150	100	0.00	0.00	0.0
P_Hyd-G070	Glencoe	J_Hyd-G070	G070	6.10	150	100	0.00	0.00	0.0
P_Hyd-G071	Glencoe	J_Hyd-G071	G071	0.97	150	100	0.00	0.00	0.0
P_Hyd-G073	Glencoe	J_Hyd-G073	G073	1.56	150	100	0.00	0.00	0.0
P_Hyd-G074	Glencoe	J_Hyd-G074	G074	8.97	150	100	0.00	0.00	0.0
P_Hyd-G075	Glencoe	J_Hyd-G075	G075	11.48	150	100	0.00	0.00	0.0
P_Hyd-G076	Glencoe	J_Hyd-G076	G076	2.69	150	100	0.00	0.00	0.0
P_Hyd-G077	Glencoe	J_Hyd-G077	G077	2.18	150	100	0.00	0.00	0.0
P_Hyd-G078	Glencoe	J_Hyd-G078	G078	3.61	150	100	0.00	0.00	0.0
P_Hyd-G079	Glencoe	J_Hyd-G079	G079	13.95	150	100	0.00	0.00	0.0
P_Hyd-G080	Glencoe	J_Hyd-G080	G080	1.13	150	100	0.00	0.00	0.0
P_Hyd-G081	Glencoe	J_Hyd-G081	G081	8.12	150	100	0.00	0.00	0.0
P_Hyd-G082	Glencoe	J_Hyd-G082	G082	7.32	150	100	0.00	0.00	0.0
P_Hyd-G083	Glencoe	J_Hyd-G083	G083	3.97	150	100	0.00	0.00	0.0
P_Hyd-G084	Glencoe	J_Hyd-G084	G084	94.76	150	100	0.00	0.00	0.0
P_Hyd-G085	Glencoe	J_Hyd-G085	G085	0.10	150	100	0.00	0.00	0.0
P_Hyd-G086	Glencoe	J_Hyd-G086	G086	0.02	150	100	0.00	0.00	0.0
P_Hyd-G087	Glencoe	J_Hyd-G087	G087	5.80	150	100	0.00	0.00	0.0
P_Hyd-G088	Glencoe	J_Hyd-G088	G088	2.19	150	100	0.00	0.00	0.0
P_Hyd-G089	Glencoe	J_Hyd-G089	G089	2.09	150	100	0.00	0.00	0.0
P_Hyd-G090	Glencoe	J_Hyd-G090	G090	4.27	150	100	0.00	0.00	0.0
P_Hyd-G091	Glencoe	J_Hyd-G091	G091	4.00	150	100	0.00	0.00	0.0
P_Hyd-G092	Glencoe	J_Hyd-G092	G092	3.58	150	100	0.00	0.00	0.0
P_Hyd-G093	Glencoe	J_Hyd-G093	G093	3.31	150	100	0.00	0.00	0.0
P_Hyd-G094	Glencoe	J_Hyd-G094	G094	3.50	150	100	0.00	0.00	0.0
P_Hyd-G095	Glencoe	J_Hyd-G095	G095	1.07	150	100	0.00	0.00	0.0
P_Hyd-G096	Glencoe	J_Hyd-G096	G096	1.84	150	100	0.00	0.00	0.0
P_Hyd-G097	Glencoe	J_Hyd-G097	G097	1.24	150	100	0.00	0.00	0.0
P_Hyd-G098	Glencoe	J_Hyd-G098	G098	2.53	150	100	0.00	0.00	0.0
P_Hyd-H_T-718	Glencoe	J_Hyd-H_T-718	H_T-718	2.10	150	100	0.00	0.00	0.0
WM1021C_02(2)(2)	Glencoe	J-752	WVR021	155.54	300	120	26.18	0.37	0.1
WM1027C_01	Glencoe	J_Hyd-G014	J-0373	15.24	200	110	-5.32	0.17	0.0
WM1027C_02	Glencoe	J_Hyd-G014	J-0586	134.80	200	110	5.32	0.17	0.0
WM1075C_01	Glencoe	J-0646	J_Hyd-R029W	3402.10	350	120	38.37	0.40	2.0
WM1099C	Glencoe	WVR021	J-0494	49.97	300	120	26.18	0.37	0.0
WM2036_02	Glencoe	J-0275	J-0168	7.98	200	110	11.70	0.37	0.0
WM2036_03	Glencoe	J-0169	J-0618	480.76	200	110	11.70	0.37	0.6
WM2036_10(1)	Glencoe	J-0544	J-690	136.25	200	110	-5.71	0.18	0.0
WM2036_10(2)	Glencoe	J-690	J-0275	18.91	200	110	11.70	0.37	0.0
WM2044C(1)	Glencoe	J_Hyd-G006	J-724	5.77	200	110	2.14	0.07	0.0
WM2044C(2)(1)	Glencoe	J-724	J-727	12.57	200	110	2.14	0.07	0.0
WM2044C(2)(2)	Glencoe	J-727	WV-348	5.17	200	110	2.25	0.07	0.0
WM4000	Glencoe	J-0384	J-0546	90.30	150	100	1.15	0.07	0.0
WM4001	Glencoe	J-0213	J_Hyd-G094	5.27	150	100	0.00	0.00	0.0
WM4002	Glencoe	J-0213	J-0584	133.75	150	100	0.00	0.00	0.0
WM4003_01	Glencoe	J_Hyd-G003	WVG087	133.79	150	100	0.00	0.00	0.0
WM4003_02	Glencoe	WVG087	J-0373	19.18	200	110	0.00	0.00	0.0
WM4005	Glencoe	J-0451	J-0539	79.38	50	100	0.62	0.32	0.4
WM4006_01	Glencoe	WVG099	J_Hyd-G023	7.66	150	100	1.14	0.06	0.0
WM4006_02	Glencoe	J_Hyd-G023	J_Hyd-G093	126.19	100	100	1.14	0.14	0.1
WM4006_03	Glencoe	J_Hyd-G093	WVG090	116.28	100	100	1.14	0.14	0.1
WM4006_04	Glencoe	WVG090	J-0032	17.02	200	110	1.14	0.04	0.0

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4007_01(1)	Glencoe	WVG100	J-735	1.24	150	100	4.05	0.23	0.0
WM4007_01(2)	Glencoe	J-735	J-0409	234.57	150	100	4.05	0.23	0.2
WM4007_02(1)	Glencoe	J-734	WVG100	11.48	150	100	4.05	0.23	0.0
WM4007_02(2)	Glencoe	J-734	WVG099	4.20	150	100	1.14	0.06	0.0
WM4008_01	Glencoe	J-0324	J-0106	10.40	150	100	-1.71	0.10	0.0
WM4008_02	Glencoe	J-0256	J-0435	102.03	150	100	1.18	0.07	0.0
WM4009_01	Glencoe	J-0255	J-0256	6.83	150	100	2.34	0.13	0.0
WM4009_02	Glencoe	J-0255	J-0450	53.25	150	100	-1.71	0.10	0.0
WM4009_03	Glencoe	J-0449	J-0450	25.45	150	100	1.71	0.10	0.0
WM4009_04	Glencoe	WVG018	J-0449	35.04	150	100	1.71	0.10	0.0
WM4009_05	Glencoe	WVG018	J-0070	2.19	150	100	-1.71	0.10	0.0
WM4009_06	Glencoe	J-0070	J-0324	11.16	150	100	-1.71	0.10	0.0
WM4010_01	Glencoe	J-0106	WVG020	3.03	150	100	-1.78	0.10	0.0
WM4010_02	Glencoe	J-0410	WVG020	110.85	150	100	1.78	0.10	0.0
WM4011_01	Glencoe	J-0535	WVG091	76.44	25	100	0.00	0.00	0.0
WM4011_02	Glencoe	WVG091	J-0128	3.53	25	100	0.00	0.00	0.0
WM4012_01	Glencoe	J-0468	J-0469	33.17	200	110	7.46	0.24	0.0
WM4012_02	Glencoe	J-0469	J-0097	46.60	200	110	7.46	0.24	0.0
WM4012_03	Glencoe	J-0097	WVG093	3.00	200	110	7.46	0.24	0.0
WM4012_04	Glencoe	WVG093	J-0003	1.12	200	110	0.00	0.00	0.0
WM4012_05	Glencoe	J-0303	WVG093	15.47	200	110	-7.46	0.24	0.0
WM4013_01	Glencoe	J-0205	J_Hyd-G065	9.39	200	110	7.46	0.24	0.0
WM4013_02	Glencoe	J_Hyd-G065	J_Hyd-G066	127.29	200	110	7.46	0.24	0.1
WM4013_03	Glencoe	J_Hyd-G066	J-0468	39.92	200	110	7.46	0.24	0.0
WM4014_01	Glencoe	J-0205	WVG101	9.82	200	110	-6.26	0.20	0.0
WM4014_02	Glencoe	WVG107	J_Hyd-G064	6.15	200	110	6.26	0.20	0.0
WM4014_03	Glencoe	J_Hyd-G064	WVG101	119.04	200	110	6.26	0.20	0.0
WM4015_01	Glencoe	J-0048	J-0049	1.67	200	110	39.58	1.26	0.0
WM4015_02	Glencoe	J-0048	WVG193	5.79	200	110	0.00	0.00	0.0
WM4015_03	Glencoe	WVG193	J-0075	2.30	200	110	0.00	0.00	0.0
WM4015_04	Glencoe	J-0091	WVG113	2.54	200	110	0.00	0.00	0.0
WM4015_05	Glencoe	WVG113	WVG106	98.98	200	110	0.00	0.00	0.0
WM4015_06	Glencoe	J-0063	WVG106	16.77	200	110	0.00	0.00	0.0
WM4016_01	Glencoe	WVG003	J-0175	4.35	150	100	-0.42	0.02	0.0
WM4016_02	Glencoe	WVG002	J-0333	104.71	150	100	-1.40	0.08	0.0
WM4016_03	Glencoe	J-0481	J_Hyd-G016	38.74	150	100	-0.42	0.02	0.0
WM4016_04	Glencoe	J_Hyd-G016	WVG003	64.80	150	100	-0.42	0.02	0.0
WM4016_05	Glencoe	J-0175	WVG002	13.38	150	100	-1.40	0.08	0.0
WM4018_01	Glencoe	J-0333	J-0334	11.46	150	100	-1.93	0.11	0.0
WM4018_02	Glencoe	J-0334	J-0497	46.44	150	100	-1.93	0.11	0.0
WM4018_03	Glencoe	J-0144	J-0497	65.09	150	100	1.93	0.11	0.0
WM4019_01	Glencoe	J-0144	WVG010	3.77	200	110	-5.53	0.18	0.0
WM4019_02	Glencoe	WVG010	J-713	110.69	200	110	-5.53	0.18	0.0
WM4020_01	Glencoe	J_Hyd-G059	J-0107	113.86	150	100	3.73	0.21	0.1
WM4020_02	Glencoe	J-0107	J-0014	3.03	150	100	2.25	0.13	0.0
WM4020_03	Glencoe	J-0014	WVG096	1.04	150	100	2.25	0.13	0.0
WM4020_04	Glencoe	WVG096	J-0316	15.27	200	110	2.25	0.07	0.0
WM4021_01	Glencoe	J-0187	WVG105	5.72	150	100	3.73	0.21	0.0
WM4021_02	Glencoe	WVG105	J_Hyd-G060	4.08	150	100	3.73	0.21	0.0
WM4021_03	Glencoe	J_Hyd-G060	J_Hyd-G059	130.41	150	100	3.73	0.21	0.1
WM4022_01	Glencoe	J-0089	WVG109	3.68	200	110	6.29	0.20	0.0
WM4022_02	Glencoe	WVG109	J_Hyd-G061	5.42	200	110	6.29	0.20	0.0
WM4022_03	Glencoe	J_Hyd-G061	J-0187	128.70	200	110	6.29	0.20	0.1
WM4023_01	Glencoe	J-0222	WVG071	6.23	300	120	0.00	0.00	0.0
WM4023_02	Glencoe	WVG071	J-0134	6.29	300	120	0.00	0.00	0.0
WM4023_03	Glencoe	J-0134	J-0135	3.59	300	120	0.00	0.00	0.0
WM4023_04	Glencoe	J-0135	WVG085	103.05	300	120	0.00	0.00	0.0
WM4023_05	Glencoe	WVG085	J_Hyd-G085	4.68	300	120	0.00	0.00	0.0
WM4024_01	Glencoe	WVG069	J_Hyd-G080	7.03	250	120	-6.39	0.13	0.0
WM4024_02	Glencoe	J_Hyd-G080	J-0124	174.48	250	120	-6.39	0.13	0.0
WM4024_03	Glencoe	WVG069	J-0222	14.30	250	120	6.39	0.13	0.0
WM4025_01	Glencoe	J-0124	WVG058	3.66	250	120	-7.60	0.15	0.0
WM4025_02	Glencoe	WVG058	J_Hyd-G076	0.90	250	120	-7.60	0.15	0.0
WM4025_03	Glencoe	J_Hyd-G076	J-0284	104.25	250	120	-7.60	0.15	0.0
WM4026_01	Glencoe	J-0284	WVG047	10.69	250	120	-14.28	0.29	0.0
WM4026_02	Glencoe	J-0285	J-0179	9.19	200	110	3.72	0.12	0.0
WM4026_03	Glencoe	WVG047	WVG038	100.52	250	120	-14.28	0.29	0.1
WM4026_04	Glencoe	WVG038	J-715	3.84	250	120	-14.28	0.29	0.0
WM4027_01	Glencoe	J-0111	WVG130	4.08	250	120	-18.57	0.38	0.0
WM4027_02	Glencoe	WVG130	J-0421	174.59	250	120	-18.57	0.38	0.1
WM4027_03(1)	Glencoe	J-0421	J-709	19.33	250	120	-20.75	0.42	0.0
WM4027_03(2)	Glencoe	J-709	J-0104	2.64	250	120	-22.97	0.47	0.0
WM4028_01	Glencoe	J-0104	J-0094	2.96	250	120	-22.97	0.47	0.0
WM4028_02	Glencoe	J-0094	J_Hyd-G067	2.65	250	120	-22.97	0.47	0.0
WM4028_03	Glencoe	J_Hyd-G067	J-0227	159.12	250	120	-22.97	0.47	0.2
WM4029_01	Glencoe	J_Hyd-G079	J_Hyd-G081	102.59	250	120	31.45	0.64	0.2
WM4029_02	Glencoe	J_Hyd-G081	WVG192	2.89	250	120	31.45	0.64	0.0
WM4029_03	Glencoe	WVG192	J-0227	8.63	250	120	31.45	0.64	0.0
WM4030	Glencoe	J-0123	J_Hyd-G079	126.31	250	120	31.45	0.64	0.3
WM4032_01	Glencoe	WVR022	J-0006	4.47	250	120	-39.58	0.81	0.0
WM4032_02	Glencoe	J-0006	J-0007	0.86	200	110	-54.31	1.73	0.0
WM4032_03	Glencoe	J-0007	J-0017	1.08	200	110	-54.31	1.73	0.0
WM4032_04	Glencoe	WVR022	J_Hyd-G078	6.97	250	120	39.58	0.81	0.0
WM4032_05	Glencoe	J_Hyd-G078	WVG140	274.02	250	120	39.58	0.81	0.9
WM4032_06	Glencoe	WVG140	J-0048	4.92	250	120	39.58	0.81	0.0
WM4032_07	Glencoe	J-0049	J-0123	9.92	250	120	39.58	0.81	0.0
WM4035_01(1)	Glencoe	J-0344	J-698	1.22	150	100	0.00	0.00	0.0
WM4035_01(2)	Glencoe	J-698	WVG061	10.93	150	100	-1.11	0.06	0.0
WM4035_02	Glencoe	WVG061	J_Hyd-G027	3.18	200	110	-1.11	0.04	0.0
WM4035_03	Glencoe	J-0344	J_Hyd-G028	161.67	150	100	0.00	0.00	0.0
WM4035_04	Glencoe	J_Hyd-G028	J-0437	24.28	150	100	0.00	0.00	0.0
WM4036	Glencoe	J_Hyd-G027	J-695	109.13	200	110	-1.11	0.04	0.0
WM4037_01	Glencoe	J-695	WVG049	6.43	200	110	-1.49	0.05	0.0
WM4037_02	Glencoe	WVG049	J_Hyd-G026	90.02	200	110	-1.49	0.05	0.0
WM4037_03	Glencoe	J_Hyd-G026	J-0201	18.69	200	110	-1.49	0.05	0.0
WM4038_01	Glencoe	J_Hyd-G029	J_Hyd-G068	118.88	100	100	-1.20	0.15	0.1
WM4038_02	Glencoe	J-0354	J_Hyd-G029	74.71	100	100	-1.20	0.15	0.1
WM4038_03	Glencoe	J_Hyd-G068	J-0321	10.21	100	100	-1.20	0.15	0.0
WM4040_01	Glencoe	J-0390	WVG074	17.67	200	110	0.85	0.03	0.0

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4040_02	Glencoe	WVG074	J_Hyd-G020	31.15	150	100	-1.64	0.09	0.0
WM4040_03	Glencoe	J_Hyd-G020	J-0044	136.07	150	100	-1.64	0.09	0.0
WM4040_04	Glencoe	J-0044	J_Hyd-G021	13.53	150	100	-1.15	0.06	0.0
WM4041_01	Glencoe	J-0036	WVG051	15.67	150	100	1.15	0.06	0.0
WM4041_02	Glencoe	J_Hyd-G021	WVG064	10.79	150	100	-1.15	0.06	0.0
WM4041_03	Glencoe	WVG064	WVG051	85.34	150	100	-1.15	0.06	0.0
WM4042_01	Glencoe	J-0036	WVG052	1.53	150	100	-2.05	0.12	0.0
WM4042_02	Glencoe	J-0564	WVG052	112.33	200	110	2.05	0.07	0.0
WM4044_01	Glencoe	J-0288	WVG149	8.47	150	100	0.00	0.00	0.0
WM4044_02	Glencoe	WVG149	J-0447	25.14	150	100	0.00	0.00	0.0
WM4044_03	Glencoe	J-0447	J_Hyd-G022	121.76	150	100	0.00	0.00	0.0
WM4044_04	Glencoe	J_Hyd-G022	WVG148	39.91	150	100	0.00	0.00	0.0
WM4044_05	Glencoe	WVG148	J-0279	8.16	150	100	0.00	0.00	0.0
WM4045	Glencoe	J_Hyd-G062	J-0544	160.30	150	100	0.00	0.00	0.0
WM4048	Glencoe	J-0561	J-0602	197.94	150	100	0.00	0.00	0.0
WM4049_01	Glencoe	J-0198	WVG053	17.47	200	110	0.00	0.00	0.0
WM4049_02	Glencoe	J-0561	WVG053	105.28	200	110	0.00	0.00	0.0
WM4050	Glencoe	J-0452	J-0071	136.52	150	100	1.91	0.11	0.0
WM4051_01(1)	Glencoe	J-0381	J-703	11.62	150	100	0.64	0.04	0.0
WM4051_01(2)	Glencoe	J-703	J_Hyd-G008	5.45	150	100	2.64	0.15	0.0
WM4051_02(1)	Glencoe	J_Hyd-G008	J-705	24.45	150	100	2.64	0.15	0.0
WM4051_02(2)	Glencoe	J-705	J_Hyd-G009	99.83	150	100	0.17	0.01	0.0
WM4051_03	Glencoe	J_Hyd-G009	J-0339	35.00	150	100	0.17	0.01	0.0
WM4051_04	Glencoe	J-0339	J-0340	11.79	150	100	0.17	0.01	0.0
WM4051_05	Glencoe	J-0340	J-0402	19.06	200	110	0.17	0.01	0.0
WM4052_01	Glencoe	J-0389	WVG055	17.50	150	100	0.64	0.04	0.0
WM4052_02	Glencoe	WVG055	J-0381	97.74	150	100	0.64	0.04	0.0
WM4053_01	Glencoe	J-722	J-0543	84.11	150	100	0.00	0.00	0.0
WM4053_02	Glencoe	J-0632	J-0586	611.63	150	100	0.00	0.00	0.0
WM4053_03	Glencoe	J-0045	J_Hyd-G077	136.44	150	100	2.00	0.11	0.0
WM4053_04	Glencoe	J_Hyd-G077	J-703	104.84	150	100	2.00	0.11	0.0
WM4053_05	Glencoe	J-0165	J-727	19.07	200	110	0.11	0.00	0.0
WM4053_06	Glencoe	J_Hyd-G085	J-0581	131.21	150	100	0.00	0.00	0.0
WM4054_01	Glencoe	J_Hyd-G095	J-0098	44.85	150	100	0.00	0.00	0.0
WM4054_02	Glencoe	J-0098	WVG153	2.73	150	100	0.00	0.00	0.0
WM4054_03	Glencoe	WVG153	J_Hyd-G098	40.38	150	100	0.00	0.00	0.0
WM4054_04	Glencoe	J_Hyd-G098	J-724	91.69	150	100	0.00	0.00	0.0
WM4055_01	Glencoe	J-0165	J-0166	4.18	200	110	-0.11	0.00	0.0
WM4055_02	Glencoe	J-0166	J_Hyd-G069	17.94	200	110	-0.11	0.00	0.0
WM4055_03	Glencoe	J_Hyd-G069	J-0364	83.89	200	110	-0.11	0.00	0.0
WM4055_04	Glencoe	J-0364	WVG164	14.54	200	110	-0.11	0.00	0.0
WM4056_01	Glencoe	J-0306	J-0291	9.23	200	110	1.84	0.06	0.0
WM4056_02	Glencoe	J-0291	WVG056	8.53	200	110	1.84	0.06	0.0
WM4056_03	Glencoe	WVG056	J_Hyd-G071	6.29	200	110	1.84	0.06	0.0
WM4056_04	Glencoe	J_Hyd-G071	J_Hyd-G070	141.64	200	110	1.84	0.06	0.0
WM4056_05(1)	Glencoe	J_Hyd-G070	J-700	14.39	200	110	1.84	0.06	0.0
WM4056_05(2)	Glencoe	J-700	WVG164	2.83	200	110	0.11	0.00	0.0
WM4059_01	Glencoe	J-0071	J-0072	2.21	150	100	1.91	0.11	0.0
WM4059_02	Glencoe	J-0072	WVG086	4.07	150	100	1.91	0.11	0.0
WM4059_03	Glencoe	WVG086	J-0004	0.64	150	100	1.91	0.11	0.0
WM4059_04	Glencoe	J-0004	WVG159	85.81	150	100	1.91	0.11	0.0
WM4059_05	Glencoe	WVG159	J-0054	1.75	150	100	1.91	0.11	0.0
WM4060C_01	Glencoe	J-0264	WVG070	100.69	200	110	0.60	0.02	0.0
WM4060C_02	Glencoe	WVG070	J-0222	5.50	100	100	0.60	0.08	0.0
WM4061C_01	Glencoe	J-0222	WVG175	13.49	200	110	4.73	0.15	0.0
WM4061C_02	Glencoe	WVG175	J-0566	109.30	200	110	4.73	0.15	0.0
WM4062C(1)	Glencoe	J-0390	J-0368	107.52	200	110	-4.73	0.15	0.0
WM4062C(2)	Glencoe	J-0368	J-0566	1.97	200	110	-4.73	0.15	0.0
WM4063C(1)	Glencoe	J-0390	J-692	10.67	200	110	3.88	0.12	0.0
WM4063C(2)	Glencoe	J-692	J-0579	118.60	200	110	3.88	0.12	0.0
WM4064C	Glencoe	J-0579	J-0402	125.69	200	110	3.88	0.12	0.0
WM4066_01	Glencoe	J-0481	J_Hyd-G097	73.16	150	100	-0.53	0.03	0.0
WM4066_02	Glencoe	J_Hyd-G097	WVG001	67.96	150	100	-0.53	0.03	0.0
WM4067_01	Glencoe	J-0546	J_Hyd-G086	4.52	150	100	-1.12	0.06	0.0
WM4067_02	Glencoe	J_Hyd-G086	J_Hyd-G056	136.36	150	100	-1.12	0.06	0.0
WM4067_03	Glencoe	J-0435	J_Hyd-G056	152.58	150	100	1.12	0.06	0.0
WM4068_01	Glencoe	J-0272	J-0273	7.81	200	110	0.06	0.00	0.0
WM4068_02	Glencoe	J-0273	J-0175	10.81	200	110	0.06	0.00	0.0
WM4068_03	Glencoe	J-0435	WVG015	24.20	150	100	0.06	0.00	0.0
WM4068_04	Glencoe	WVG015	J-0272	79.45	150	100	0.06	0.00	0.0
WM4069_02	Glencoe	WVG027	J-0076	2.31	200	110	1.23	0.04	0.0
WM4069_03	Glencoe	J-0076	J-0271	7.68	200	110	1.23	0.04	0.0
WM4069_04	Glencoe	J-0271	J_Hyd-G057	136.22	200	110	1.23	0.04	0.0
WM4069_05	Glencoe	J_Hyd-G057	WVG004	8.11	200	110	1.23	0.04	0.0
WM4069_06	Glencoe	WVG004	J-0175	4.98	200	110	1.23	0.04	0.0
WM4070_01	Glencoe	J-700	WVG152	8.78	150	100	1.73	0.10	0.0
WM4070_02	Glencoe	WVG152	J_Hyd-G096	110.01	150	100	1.73	0.10	0.0
WM4070_03	Glencoe	J_Hyd-G096	J-0427	29.19	150	100	1.73	0.10	0.0
WM4070_04	Glencoe	J-0427	WVG165	22.83	150	100	-2.47	0.14	0.0
WM4071_01	Glencoe	J-0384	J-0524	163.12	150	100	-1.15	0.07	0.0
WM4071_02	Glencoe	J-0524	J-0503	64.16	150	100	-1.15	0.07	0.0
WM4071_03	Glencoe	J-0503	J_Hyd-G073	51.20	150	100	-1.15	0.07	0.0
WM4071_04	Glencoe	J_Hyd-G073	J-0256	17.07	150	100	-1.15	0.07	0.0
WM4072_01	Glencoe	J-0255	J-0342	102.78	150	100	-0.62	0.04	0.0
WM4072_02	Glencoe	J-0342	J-0333	12.07	150	100	-0.62	0.04	0.0
WM4074_01	Glencoe	J-0124	WVG057	3.42	250	120	-0.18	0.00	0.0
WM4074_02	Glencoe	J-0084	WVG172	2.45	150	100	-1.79	0.10	0.0
WM4074_03	Glencoe	WVG172	J-0025	49.15	150	100	-1.79	0.10	0.0
WM4074_04	Glencoe	J-0025	WVG057	52.74	150	100	0.18	0.01	0.0
WM4075_01	Glencoe	J-0332	J-698	11.44	200	110	1.39	0.04	0.0
WM4075_02	Glencoe	J-0124	WVG059	4.81	150	100	1.39	0.08	0.0
WM4075_03	Glencoe	WVG059	J-0060	1.83	150	100	1.39	0.08	0.0
WM4075_04	Glencoe	J-0060	WVG170	3.49	150	100	1.39	0.08	0.0
WM4075_05	Glencoe	WVG170	J-0332	102.63	150	100	1.39	0.08	0.0
WM4075_06	Glencoe	J-0333	J_Hyd-G074	15.51	150	100	-0.09	0.01	0.0
WM4075_07	Glencoe	J_Hyd-G074	J-0507	82.01	150	100	-0.09	0.01	0.0
WM4075_08(1)	Glencoe	J-0507	J-707	6.31	150	100	-0.09	0.01	0.0
WM4075_08(2)	Glencoe	J-707	WVG028	45.56	150	100	0.58	0.03	0.0
WM4075_09	Glencoe	WVG028	J_Hyd-G075	3.61	150	100	0.58	0.03	0.0

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4075_10	Glencoe	J_Hyd-G075	J-0252	19.39	150	100	0.58	0.03	0.0
WM4076_01	Glencoe	WVG169	J-698	4.82	200	110	-2.50	0.08	0.0
WM4076_02	Glencoe	WVG169	J-0044	105.78	150	100	2.50	0.14	0.0
WM4077	Glencoe	J-0044	J-0045	1.64	150	100	2.00	0.11	0.0
WM4079_01	Glencoe	J-0178	WVG035	4.43	150	100	-2.03	0.12	0.0
WM4079_02	Glencoe	WVG035	J-718	110.51	150	100	-2.03	0.12	0.0
WM4080_01	Glencoe	J-0099	WVG019	2.84	200	110	2.21	0.07	0.0
WM4080_02	Glencoe	J-0580	J_Hyd-G051	129.47	200	110	0.00	0.00	0.0
WM4081_01	Glencoe	WVG019	J_Hyd-G050	103.90	200	110	2.21	0.07	0.0
WM4081_02(1)	Glencoe	J_Hyd-G050	J-720	84.40	200	110	2.21	0.07	0.0
WM4081_02(2)	Glencoe	J-720	J-0580	19.71	200	110	0.00	0.00	0.0
WM4082_01	Glencoe	J-0099	J-0106	11.28	200	110	-2.21	0.07	0.0
WM4082_02	Glencoe	J-0106	J_Hyd-G049	24.29	200	110	-2.15	0.07	0.0
WM4082_03	Glencoe	J_Hyd-G049	J-0144	83.33	200	110	-2.15	0.07	0.0
WM4083_01	Glencoe	J-0144	WVG011	10.85	200	110	-0.39	0.01	0.0
WM4083_02	Glencoe	WVG011	J_Hyd-G048	5.58	200	110	-0.39	0.01	0.0
WM4083_03	Glencoe	J_Hyd-G048	WVG036	85.97	200	110	-0.39	0.01	0.0
WM4083_04	Glencoe	WVG036	J-0178	5.16	200	110	-0.39	0.01	0.0
WM4084_01	Glencoe	J-0178	J_Hyd-G047	44.27	200	110	0.97	0.03	0.0
WM4084_02	Glencoe	J_Hyd-G047	WVG030	33.12	200	110	0.97	0.03	0.0
WM4085_01	Glencoe	WVG030	WVG046	90.09	200	110	0.97	0.03	0.0
WM4085_02	Glencoe	WVG046	J_Hyd-G046	6.34	200	110	0.97	0.03	0.0
WM4085_03	Glencoe	J_Hyd-G046	J-0179	12.04	200	110	0.97	0.03	0.0
WM4085_04	Glencoe	J-0284	J-0285	8.41	200	110	3.72	0.12	0.0
WM4086_01	Glencoe	J-0179	WVG200	4.45	200	110	4.70	0.15	0.0
WM4086_02	Glencoe	WVG200	WVG048	97.18	200	110	4.70	0.15	0.0
WM4086_03	Glencoe	WVG048	J_Hyd-G045	1.59	200	110	4.70	0.15	0.0
WM4086_04(1)	Glencoe	J_Hyd-G045	J-695	8.56	200	110	4.70	0.15	0.0
WM4086_04(2)	Glencoe	J-695	WVG050	7.32	200	110	5.08	0.16	0.0
WM4087	Glencoe	WVG050	J-0036	103.33	200	110	5.08	0.16	0.0
WM4088_01	Glencoe	J-0036	J_Hyd-G044	15.50	200	110	5.98	0.19	0.0
WM4088_02	Glencoe	J_Hyd-G044	J_Hyd-G043	102.76	200	110	5.98	0.19	0.0
WM4088_03	Glencoe	J_Hyd-G043	J-0198	13.93	200	110	5.98	0.19	0.0
WM4089_01	Glencoe	J-0198	WVG054	4.87	200	110	3.56	0.11	0.0
WM4089_02	Glencoe	WVG054	J-0389	104.26	200	110	3.56	0.11	0.0
WM4090_01	Glencoe	J-0389	J_Hyd-G042	35.45	200	110	2.92	0.09	0.0
WM4090_02	Glencoe	J_Hyd-G042	J_Hyd-G041	123.12	200	110	2.92	0.09	0.0
WM4090_03	Glencoe	J_Hyd-G041	J-0306	113.59	200	110	2.92	0.09	0.0
WM4091_01	Glencoe	J-0410	J_Hyd-G052	20.75	150	100	-1.78	0.10	0.0
WM4091_02	Glencoe	J_Hyd-G052	WVG012	81.54	150	100	-1.78	0.10	0.0
WM4092_01(1)	Glencoe	WVG012	J-713	7.73	150	100	-1.78	0.10	0.0
WM4092_01(2)	Glencoe	J-713	WVG013	8.18	150	100	1.10	0.06	0.0
WM4092_02	Glencoe	WVG013	J_Hyd-G053	42.46	150	100	1.10	0.06	0.0
WM4092_03	Glencoe	J_Hyd-G053	WVG161	39.94	150	100	1.10	0.06	0.0
WM4093(1)	Glencoe	WVG161	J-718	17.09	150	100	1.10	0.06	0.0
WM4093(2)	Glencoe	J-718	WVG032	49.53	150	100	-0.93	0.05	0.0
WM4094_01	Glencoe	WVG039	J-0139	3.71	150	100	2.89	0.16	0.0
WM4094_02	Glencoe	J-0139	J-0336	11.56	150	100	2.89	0.16	0.0
WM4094_03	Glencoe	J-0336	J-0331	39.62	150	100	2.89	0.16	0.0
WM4094_04	Glencoe	J-0331	J-0286	42.02	150	100	0.93	0.05	0.0
WM4094_05	Glencoe	J-0286	WVG032	30.10	150	100	0.93	0.05	0.0
WM4095_01	Glencoe	J-0201	WVG044	10.01	150	100	-3.54	0.20	0.0
WM4095_02	Glencoe	WVG044	WVG041	98.34	150	100	-3.54	0.20	0.1
WM4095_03	Glencoe	WVG041	J-0211	5.17	150	100	-3.54	0.20	0.0
WM4095_04	Glencoe	J-0211	WVG040	8.79	150	100	-3.54	0.20	0.0
WM4095_05	Glencoe	WVG040	J-0005	2.73	150	100	0.00	0.00	0.0
WM4095_06(1)	Glencoe	WVG040	J-715	6.18	150	100	-3.54	0.20	0.0
WM4095_06(2)	Glencoe	J-715	WVG039	2.36	150	100	2.89	0.16	0.0
WM4096_01	Glencoe	WVG043	J-0201	4.96	150	100	-2.05	0.12	0.0
WM4096_02	Glencoe	J-0564	WVG043	106.76	150	100	-2.05	0.12	0.0
WM4097_01	Glencoe	J-0529	J-0425	68.18	50	100	0.00	0.00	0.0
WM4097_02	Glencoe	J-0424	J-0425	22.42	50	100	0.00	0.00	0.0
WM4098_01	Glencoe	J-0111	WVG129	3.15	150	100	-3.76	0.21	0.0
WM4098_02	Glencoe	WVG129	J-0172	4.26	150	100	-3.76	0.21	0.0
WM4098_03	Glencoe	J-0172	J-0239	6.15	150	100	-3.76	0.21	0.0
WM4098_04	Glencoe	J-0239	J_Hyd-G024	62.71	150	100	-3.76	0.21	0.0
WM4098_05	Glencoe	J_Hyd-G024	J-0265	21.45	150	100	-3.76	0.21	0.0
WM4098_06	Glencoe	J-0265	J-0116	7.41	150	100	-3.76	0.21	0.0
WM4098_07	Glencoe	J-0116	WVG188	3.18	150	100	-3.76	0.21	0.0
WM4098_08	Glencoe	WVG188	J-0126	5.05	150	100	-3.76	0.21	0.0
WM4099_01	Glencoe	J-0354	WVG189	13.18	150	100	-1.62	0.09	0.0
WM4099_02	Glencoe	WVG189	J_Hyd-G025	91.45	150	100	-1.62	0.09	0.0
WM4099_03	Glencoe	J_Hyd-G025	J-0236	3.77	150	100	-1.62	0.09	0.0
WM4099_04	Glencoe	J-0236	J-0059	6.09	150	100	-1.62	0.09	0.0
WM4099_05	Glencoe	J-0059	WVG199	1.83	150	100	-1.62	0.09	0.0
WM4099_06	Glencoe	WVG199	WVG131	5.28	150	100	-1.62	0.09	0.0
WM4099_07	Glencoe	WVG131	J-0111	4.06	150	100	-1.62	0.09	0.0
WM4101_01	Glencoe	WVG187	WVG132	101.68	150	100	0.78	0.04	0.0
WM4101_02	Glencoe	WVG132	J-709	2.48	150	100	0.78	0.04	0.0
WM4101_03(1)	Glencoe	WVG187	J-811	1.61	150	100	-0.78	0.04	0.0
WM4102_01	Glencoe	J-709	WVG133	13.28	150	100	3.00	0.17	0.0
WM4102_02	Glencoe	WVG133	WVG147	97.08	150	100	3.00	0.17	0.0
WM4102_03	Glencoe	WVG147	J-0321	13.28	150	100	3.00	0.17	0.0
WM4103	Glencoe	J-0321	J-0568	110.36	150	100	1.80	0.10	0.0
WM4104_01	Glencoe	J-0568	J_Hyd-G088	35.37	150	100	1.80	0.10	0.0
WM4104_02	Glencoe	J_Hyd-G088	J_Hyd-G089	114.83	150	100	1.80	0.10	0.0
WM4104_03	Glencoe	J_Hyd-G089	WVG150	58.22	150	100	1.80	0.10	0.0
WM4104_04	Glencoe	WVG150	WVG190	30.53	150	100	1.80	0.10	0.0
WM4104_05	Glencoe	WVG190	J_Hyd-G090	61.89	150	100	0.00	0.00	0.0
WM4104_06	Glencoe	J_Hyd-G090	WVG151	122.12	150	100	0.00	0.00	0.0
WM4104_07	Glencoe	WVG151	J_Hyd-G091	7.91	150	100	0.00	0.00	0.0
WM4107_01	Glencoe	J-735	WVG186	1.65	150	100	0.00	0.00	0.0
WM4107_02	Glencoe	WVG186	J_Hyd-G004	130.23	150	100	0.00	0.00	0.0
WM4108_01	Glencoe	J-0205	WVG103	5.09	200	110	5.19	0.17	0.0
WM4108_02	Glencoe	J-734	WVG103	119.43	200	110	-5.19	0.17	0.0
WM4109_01	Glencoe	WVG102	WVG104	108.82	200	110	-6.39	0.20	0.0
WM4109_02	Glencoe	WVG104	J-0187	4.57	200	110	-6.39	0.20	0.0
WM4109_03	Glencoe	WVG102	J-0205	9.87	200	110	6.39	0.20	0.0
WM4110_01	Glencoe	J-0187	J-0358	89.06	200	110	-6.49	0.21	0.0

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4110_02	Glencoe	J-0358	WVG181	13.95	200	110	-6.49	0.21	0.0
WM4110_03	Glencoe	WVG181	J-0011	1.00	200	110	-6.49	0.21	0.0
WM4110_04(2)(2)	Glencoe	J-815	J-0093	4.88	200	110	-8.48	0.27	0.0
WM4111_01	Glencoe	J-0093	J-0080	2.63	200	110	-8.48	0.27	0.0
WM4111_02	Glencoe	J-0080	WVG183	2.38	200	110	-8.48	0.27	0.0
WM4111_03	Glencoe	WVG183	WVG191	91.38	200	110	-8.48	0.27	0.1
WM4111_04	Glencoe	WVG191	J-0227	5.56	200	110	-8.48	0.27	0.0
WM4112_01	Glencoe	J-0063	WVG108	120.28	200	110	-6.26	0.20	0.0
WM4112_02	Glencoe	WVG108	J-0089	2.53	200	110	-6.26	0.20	0.0
WM4113_01	Glencoe	J-0089	WVG010	10.60	200	110	-7.56	0.24	0.0
WM4113_02	Glencoe	WVG010	WVG120	100.04	200	110	-7.56	0.24	0.1
WM4114	Glencoe	WVG107	J-0063	1.84	150	100	-6.26	0.35	0.0
WM4115_01	Glencoe	J-0123	WVG139	3.41	150	100	8.12	0.46	0.0
WM4115_02	Glencoe	WVG139	J_Hyd-H_T-718	3.84	150	100	8.12	0.46	0.0
WM4115_04	Glencoe	J_Hyd-H_T-718	J-0262	93.36	150	100	8.12	0.46	0.3
WM4115_05(2)	Glencoe	J-825	J-0559	106.02	150	100	4.99	0.28	0.1
WM4115_06	Glencoe	J-0559	J-0089	104.29	150	100	4.99	0.28	0.1
WM4116_01	Glencoe	J_Hyd-G001	WVG117	58.22	150	100	0.00	0.00	0.0
WM4116_02	Glencoe	WVG117	J-0213	16.86	150	100	0.00	0.00	0.0
WM4116_03	Glencoe	J-0360	J_Hyd-G001	121.50	150	100	0.00	0.00	0.0
WM4117	Glencoe	J-0360	J-0409	20.60	150	100	-2.42	0.14	0.0
WM4118_01	Glencoe	J-0590	J_Hyd-G002	142.34	150	100	0.00	0.00	0.0
WM4118_02	Glencoe	J_Hyd-G002	J-0091	4.87	150	100	0.00	0.00	0.0
WM4120	Glencoe	J-0235	J_Hyd-G018	41.76	150	100	0.00	0.00	0.0
WM4121_01	Glencoe	WVG185	J-0235	6.04	150	100	0.00	0.00	0.0
WM4121_02	Glencoe	WVG185	J_Hyd-G019	101.74	150	100	0.00	0.00	0.0
WM4124_01	Glencoe	J-0067	J-0494	44.34	300	120	-26.18	0.37	0.0
WM4124_02	Glencoe	J-0066	J_Hyd-G084	333.82	300	120	-3.89	0.06	0.0
WM4124_03	Glencoe	J-0066	J-0067	2.04	300	120	3.89	0.06	0.0
WM4125_01	Glencoe	J-0146	J-0202	57.31	300	120	-28.72	0.41	0.0
WM4125_02	Glencoe	J-0006	WVG196	53.16	150	100	14.74	0.83	0.5
WM4125_03	Glencoe	WVG122	J-0267	7.87	150	100	14.74	0.83	0.1
WM4125_04	Glencoe	WVG122	WVG196	48.20	150	100	-14.74	0.83	0.4
WM4125_05	Glencoe	J-0337	J-0338	11.59	300	120	40.20	0.57	0.0
WM4125_06	Glencoe	J-0338	J-0180	21.85	300	120	40.20	0.57	0.0
WM4125_07	Glencoe	J-0180	J-0146	229.84	300	120	22.79	0.32	0.1
WM4125_08	Glencoe	J-0145	J-0017	4.06	300	120	48.61	0.69	0.0
WM4126_01	Glencoe	J-0017	WVG143	1.42	200	110	-5.71	0.18	0.0
WM4126_02	Glencoe	WVG143	J-0013	1.00	200	110	-5.71	0.18	0.0
WM4126_03	Glencoe	J-0013	J-0047	1.67	200	110	-5.71	0.18	0.0
WM4126_04	Glencoe	J-0047	J-0038	2.12	200	110	-5.71	0.18	0.0
WM4126_05	Glencoe	J-0038	J-0039	1.57	200	110	-5.71	0.18	0.0
WM4126_06	Glencoe	J-0168	J-0169	4.23	200	110	11.70	0.37	0.0
WM4126_07	Glencoe	J-0039	J-0544	87.81	200	110	-5.71	0.18	0.0
WM4128C_01	Glencoe	J-0252	WVG029	6.68	150	100	2.36	0.13	0.0
WM4129C_01	Glencoe	J-0115	J-0084	3.18	150	100	0.00	0.00	0.0
WM4129C_02	Glencoe	J-0084	J-0252	8.39	150	100	1.79	0.10	0.0
WM4143C	Glencoe	J-0373	J-0451	80.71	200	110	-5.32	0.17	0.0
WM4145C_01	Glencoe	J-0451	J_Hyd-G013	25.95	200	110	-5.94	0.19	0.0
WM4145C_02	Glencoe	J_Hyd-G013	J-0032	1.48	150	100	-5.94	0.34	0.0
WM4147C_01	Glencoe	J-0316	J-0191	48.55	200	110	6.69	0.21	0.0
WM4147C_02	Glencoe	J-0191	J_Hyd-G012	75.68	200	110	-2.66	0.08	0.0
WM4147C_03	Glencoe	J_Hyd-G012	J-0303	9.12	150	100	-2.66	0.15	0.0
WM4147C_04	Glencoe	J-0032	J-0128	88.99	200	110	-4.80	0.15	0.0
WM4147C_05	Glencoe	J-0128	J-0303	27.37	200	110	-4.80	0.15	0.0
WM4148C_01	Glencoe	J-0316	J_Hyd-G011	10.01	200	110	-4.43	0.14	0.0
WM4148C_02	Glencoe	WVG097	J_Hyd-G011	89.00	200	110	4.43	0.14	0.0
WM4149_01	Glencoe	J-715	WVG042	11.98	250	120	-20.71	0.42	0.0
WM4149_02	Glencoe	WVG042	J-0111	70.85	250	120	-20.71	0.42	0.1
WM4153C_01	Glencoe	J-0071	J_Hyd-G010	2.62	150	100	0.00	0.00	0.0
WM4153C_02	Glencoe	WVG158	J_Hyd-G010	52.89	150	100	0.00	0.00	0.0
WM4153C_03	Glencoe	J-0402	J_Hyd-G087	11.71	200	110	4.06	0.13	0.0
WM4153C_04	Glencoe	J_Hyd-G087	J-0452	14.25	200	110	4.06	0.13	0.0
WM4153C_05(1)	Glencoe	J-0452	J-722	58.28	200	110	2.14	0.07	0.0
WM4153C_05(2)	Glencoe	J-722	J_Hyd-G082	28.48	200	110	2.14	0.07	0.0
WM4153C_06	Glencoe	J_Hyd-G082	J_Hyd-G006	142.80	200	110	2.14	0.07	0.0
WM4153C_07	Glencoe	WV-348	J_Hyd-G005	108.11	200	110	2.25	0.07	0.0
WM4153C_08	Glencoe	J_Hyd-G005	J_Hyd-G063	100.69	200	110	2.25	0.07	0.0
WM4153C_09	Glencoe	J_Hyd-G063	J_Hyd-G058	130.80	200	110	2.25	0.07	0.0
WM4153C_10	Glencoe	J_Hyd-G058	J-0627	10.14	200	110	2.25	0.07	0.0
WM4156	Glencoe	J-0367	J-0368	16.07	150	100	0.00	0.00	0.0
WM4157_01	Glencoe	J-0554	J_Hyd-G092	93.03	150	100	0.00	0.00	0.0
WM4157_02	Glencoe	J_Hyd-G092	J-692	5.66	150	100	0.00	0.00	0.0
WM4159_01	Glencoe	J-0384	WVG022	17.17	150	100	0.00	0.00	0.0
WM4159_02	Glencoe	WVG022	G072	40.39	150	100	0.00	0.00	0.0
WM4160_01	Glencoe	J-0360	WVG116	14.15	150	100	2.42	0.14	0.0
WM4160_02	Glencoe	WVG116	J-0235	99.50	150	100	2.42	0.14	0.0
WM4162_01	Glencoe	J-0191	WVG094	4.72	150	100	9.34	0.53	0.0
WM4162_02	Glencoe	WVG094	J-0529	83.93	200	110	9.34	0.30	0.1
WM4162_03	Glencoe	J-0529	J-713	78.46	200	110	8.42	0.27	0.1
WM4167_01	Glencoe	J-0288	J-0488	67.16	150	100	0.00	0.00	0.0
WM4167_02	Glencoe	J-0488	J-0354	40.17	150	100	0.00	0.00	0.0
WM4178L.B	Glencoe	J-705	WVG165	107.96	150	100	2.47	0.14	0.0
WM4181L.B	Glencoe	J-0178	J-707	123.47	100	100	0.67	0.08	0.0
WM4182L.B_01	Glencoe	J-0353	WVG045	13.16	150	100	1.96	0.11	0.0
WM4182L.B_02	Glencoe	WVG045	WVG171	101.55	150	100	1.96	0.11	0.0
WM4182L.B_03	Glencoe	J-0025	WVG171	1.26	150	100	-1.96	0.11	0.0
WM4184L.B_01	Glencoe	J-0331	WVG037	11.11	150	100	1.96	0.11	0.0
WM4184L.B_02	Glencoe	WVG037	J-0353	103.47	150	100	1.96	0.11	0.0
WM4196L.B_01	Glencoe	J-0145	J-0146	3.84	300	120	-48.61	0.69	0.0
WM4196L.B_02	Glencoe	J-0202	WVG197	5.00	300	120	-28.72	0.41	0.0
WM4196L.B_03	Glencoe	WVG197	J-0067	333.26	300	120	-28.72	0.41	0.3
P-234	Melborne	J_Hyd-M017	J-0531	3.11	150	100	2.71	0.15	0.0
P-237	Melborne	WVM004	J-0037	11.15	200	110	3.91	0.12	0.0
P_Hyd-M002	Melborne	J_Hyd-M002	M002	4.54	150	100	0.00	0.00	0.0
P_Hyd-M003	Melborne	J_Hyd-M003	M003	3.46	150	100	0.00	0.00	0.0
P_Hyd-M004	Melborne	J_Hyd-M004	M004	2.69	150	100	0.00	0.00	0.0
P_Hyd-M005	Melborne	J_Hyd-M005	M005	4.60	150	100	0.00	0.00	0.0
P_Hyd-M006	Melborne	J_Hyd-M006	M006	1.58	150	100	0.00	0.00	0.0

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P_Hyd-M007	Melborne	J_Hyd-M007	M007	3.19	150	100	0.00	0.00	0.0
P_Hyd-M008	Melborne	J_Hyd-M008	M008	1.77	150	100	0.00	0.00	0.0
P_Hyd-M009	Melborne	J_Hyd-M009	M009	4.67	150	100	0.00	0.00	0.0
P_Hyd-M010	Melborne	J_Hyd-M010	M010	6.09	150	100	0.00	0.00	0.0
P_Hyd-M011	Melborne	J_Hyd-M011	M011	1.88	150	100	0.00	0.00	0.0
P_Hyd-M012	Melborne	J_Hyd-M012	M012	3.91	150	100	0.00	0.00	0.0
P_Hyd-M013	Melborne	J_Hyd-M013	M013	2.29	150	100	0.00	0.00	0.0
P_Hyd-M014	Melborne	J_Hyd-M014	M014	1.98	150	100	0.00	0.00	0.0
P_Hyd-M015	Melborne	J_Hyd-M015	M015	2.99	150	100	0.00	0.00	0.0
P_Hyd-M016	Melborne	J_Hyd-M016	M016	2.30	150	100	0.00	0.00	0.0
P_Hyd-M017	Melborne	J_Hyd-M017	M017	4.21	150	100	0.00	0.00	0.0
P_Hyd-M018	Melborne	J_Hyd-M018	M018	0.81	150	100	0.00	0.00	0.0
P_Hyd-M019	Melborne	J_Hyd-M019	M019	3.99	150	100	0.00	0.00	0.0
P_Hyd-M020	Melborne	J_Hyd-M020	M020	3.90	150	100	0.00	0.00	0.0
P_Hyd-M021	Melborne	J_Hyd-M021	M021	3.76	150	100	0.00	0.00	0.0
P_Hyd-M022	Melborne	J_Hyd-M022	M022	4.35	150	100	0.00	0.00	0.0
P_Hyd-M023	Melborne	J_Hyd-M023	M023	1.95	150	100	0.00	0.00	0.0
WM2002C	Melborne	J-0237	WVM022	6.14	150	100	-0.24	0.01	0.0
WM2030C_13	Melborne	J_Hyd-M002	J_Hyd-M003	206.11	150	100	2.84	0.16	0.1
WM2110C_01	Melborne	J-0158	WVM011	12.91	150	100	0.00	0.00	0.0
WM2110C_02	Melborne	WVM011	J_Hyd-M008	99.39	150	100	0.00	0.00	0.0
WM2111C_04	Melborne	WVM032	J_Hyd-M017	17.49	150	100	2.71	0.15	0.0
WM6000_01	Melborne	J-0176	WVM003	95.00	150	100	-2.00	0.11	0.0
WM6000_02	Melborne	WVM003	J-0192	32.55	150	100	-2.00	0.11	0.0
WM6001_01	Melborne	J-0065	WVA023	2.02	150	100	0.00	0.00	0.0
WM6001_02	Melborne	WVA023	WVM030	47.35	150	100	0.00	0.00	0.0
WM6002C_01	Melborne	J-0105	J-0403	19.22	150	100	1.77	0.10	0.0
WM6002C_02	Melborne	WVM022	J-0403	98.89	150	100	-0.24	0.01	0.0
WM6002_01	Melborne	WVM025	J_Hyd-M020	2.65	150	100	-1.62	0.09	0.0
WM6002_02	Melborne	J-0177	WVM025	4.37	150	100	-1.62	0.09	0.0
WM6002_03	Melborne	J_Hyd-M020	WVM007	98.53	150	100	-1.62	0.09	0.0
WM6002_04	Melborne	WVM007	J-0125	18.26	150	100	-1.62	0.09	0.0
WM6003C_01	Melborne	J-0192	WVM001	4.73	150	100	-2.84	0.16	0.0
WM6003C_02	Melborne	J_Hyd-M003	WVM001	187.86	150	100	2.84	0.16	0.1
WM6003_01	Melborne	J-0176	WVM027	4.36	150	100	1.87	0.11	0.0
WM6003_02	Melborne	WVM027	J_Hyd-M022	26.82	150	100	1.87	0.11	0.0
WM6003_03	Melborne	J_Hyd-M022	J-0407	20.47	150	100	1.87	0.11	0.0
WM6003_04	Melborne	J_Hyd-M023	J-0407	158.98	150	100	0.00	0.00	0.0
WM6003_05	Melborne	J_Hyd-M023	J-0493	43.36	150	100	0.00	0.00	0.0
WM6004C_01	Melborne	J-0192	WVM002	14.53	150	100	0.84	0.05	0.0
WM6004C_02	Melborne	WVM002	J_Hyd-M004	4.18	150	100	0.84	0.05	0.0
WM6004C_03	Melborne	J_Hyd-M004	J_Hyd-M005	170.61	200	110	0.84	0.03	0.0
WM6004_01	Melborne	J-0065	J_Hyd-M021	8.68	150	100	-0.13	0.01	0.0
WM6004_02	Melborne	J_Hyd-M021	WVM028	111.82	150	100	-0.13	0.01	0.0
WM6004_03	Melborne	WVM028	J-0176	16.14	150	100	-0.13	0.01	0.0
WM6005C_01	Melborne	J-0125	WVM005	3.45	200	110	-4.74	0.15	0.0
WM6005C_02	Melborne	WVM005	J-0430	23.41	200	110	-4.74	0.15	0.0
WM6005C_03	Melborne	Standpipe	J-0430	46.70	200	110	0.00	0.00	0.0
WM6005C_04	Melborne	J_Hyd-M005	J-0037	34.61	200	110	0.84	0.03	0.0
WM6005C_05	Melborne	J-0430	J-0037	4.98	200	110	-4.74	0.15	0.0
WM6005C_06	Melborne	Standpipe	WVM004	31.50	200	110	3.91	0.12	0.0
WM6005_01	Melborne	J-0177	WVM026	4.51	150	100	-0.13	0.01	0.0
WM6005_02	Melborne	WVM026	J-0065	110.26	150	100	-0.13	0.01	0.0
WM6006C_01	Melborne	J-0125	WVM006	15.98	200	110	3.12	0.10	0.0
WM6006C_02	Melborne	WVM006	J_Hyd-M006	43.26	200	110	3.12	0.10	0.0
WM6006C_03	Melborne	J_Hyd-M006	WVM008	67.74	200	110	3.12	0.10	0.0
WM6006C_04	Melborne	WVM008	J-0105	26.02	200	110	3.12	0.10	0.0
WM6006_01	Melborne	J-0203	J_Hyd-M019	5.07	150	100	-0.03	0.00	0.0
WM6006_02	Melborne	J_Hyd-M019	J-0177	132.87	150	100	-0.03	0.00	0.0
WM6007SC_01	Melborne	J-0312	WVM013	15.69	150	100	0.36	0.02	0.0
WM6007SC_02	Melborne	WVM013	J_Hyd-M016	68.32	150	100	0.36	0.02	0.0
WM6007SC_03	Melborne	J_Hyd-M016	J-0156	12.36	150	100	0.36	0.02	0.0
WM6007SC_04	Melborne	J-0156	J-0498	46.76	150	100	1.60	0.09	0.0
WM6008SCC_01	Melborne	J-0403	J-0434	101.45	150	100	1.53	0.09	0.0
WM6008SCC_02	Melborne	J-0434	J-0108	24.19	150	100	1.53	0.09	0.0
WM6008SCC_03	Melborne	J-0108	J-0109	3.08	150	100	1.53	0.09	0.0
WM6008SC_01	Melborne	J-0230	J-0237	128.60	150	100	-1.39	0.08	0.0
WM6008SC_02	Melborne	J-0237	J-0203	15.29	150	100	-1.15	0.07	0.0
WM6009SC_01	Melborne	J-0158	WVM010	4.02	150	100	1.35	0.08	0.0
WM6009SC_02	Melborne	WVM010	J_Hyd-M009	52.80	150	100	1.35	0.08	0.0
WM6009SC_03	Melborne	J_Hyd-M009	J_Hyd-M010	84.25	150	100	1.35	0.08	0.0
WM6009SC_04	Melborne	J_Hyd-M010	J-0248	6.77	150	100	1.35	0.08	0.0
WM6010C_01	Melborne	J-0105	WVM009	3.01	150	100	1.35	0.08	0.0
WM6010C_02	Melborne	WVM009	J_Hyd-M007	38.17	150	100	1.35	0.08	0.0
WM6010C_03	Melborne	J_Hyd-M007	J-0158	66.46	150	100	1.35	0.08	0.0
WM6010SCC	Melborne	J_Hyd-M012	J-0159	72.47	150	100	0.41	0.02	0.0
WM6010SC_01	Melborne	J-0500	J-0230	48.94	150	100	-0.50	0.03	0.0
WM6010SC_02	Melborne	J-0502	J-0500	50.61	150	100	-0.50	0.03	0.0
WM6010SC_03	Melborne	J-0396	WVM014	18.01	150	100	0.00	0.00	0.0
WM6010SC_04	Melborne	WVM014	J-0248	103.75	150	100	0.00	0.00	0.0
WM6011C_01	Melborne	J-0413	J_Hyd-M018	65.91	150	100	1.48	0.08	0.0
WM6011C_02	Melborne	J_Hyd-M018	WVM012	9.39	150	100	1.48	0.08	0.0
WM6011C_03	Melborne	WVM012	J-0312	9.52	150	100	1.48	0.08	0.0
WM6011SC_01	Melborne	J-0413	J-0414	20.96	150	100	1.23	0.07	0.0
WM6011SC_02	Melborne	J-0156	J-0157	3.99	150	100	-1.23	0.07	0.0
WM6011SC_03	Melborne	J-0157	WVM031	10.91	150	100	-1.23	0.07	0.0
WM6011SC_04	Melborne	J-0414	WVM031	93.52	150	100	1.23	0.07	0.0
WM6013C_01	Melborne	WVM023	J-0203	14.89	150	100	1.12	0.06	0.0
WM6013C_02	Melborne	J-0312	WVM023	99.33	150	100	1.12	0.06	0.0
WM6013SC_01	Melborne	J-0498	J_Hyd-M015	64.17	150	100	1.60	0.09	0.0
WM6013SC_02	Melborne	J-0230	WVM020	14.69	150	100	-1.59	0.09	0.0
WM6013SC_03	Melborne	WVM020	J_Hyd-M015	35.71	150	100	-1.59	0.09	0.0
WM6015SC_01	Melborne	J-0502	J_Hyd-M014	55.20	150	100	0.50	0.03	0.0
WM6015SC_02	Melborne	J_Hyd-M014	WVM021	51.37	150	100	0.50	0.03	0.0
WM6015SC_03	Melborne	WVM021	J-0159	4.03	150	100	0.50	0.03	0.0
WM6016SCC_01	Melborne	J-0159	WVM017	33.77	150	100	0.91	0.05	0.0
WM6016SCC_02	Melborne	WVM017	J-0189	4.61	150	100	0.91	0.05	0.0
WM6016SC_01	Melborne	J-0476	J_Hyd-M011	37.38	150	100	-0.49	0.03	0.0
WM6016SC_02	Melborne	J_Hyd-M011	J-0189	91.52	150	100	-0.49	0.03	0.0

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM6017SCC_01	Melborne	WVM018	J_Hyd-M013	113.47	150	100	0.42	0.02	0.0
WM6017SCC_02	Melborne	J-0189	WVM018	10.70	150	100	0.42	0.02	0.0
WM6018SCC	Melborne	J-0109	J_Hyd-M012	27.44	150	100	0.41	0.02	0.0
WM6018SC_01	Melborne	J-0248	J-0249	6.36	150	100	1.35	0.08	0.0
WM6018SC_02	Melborne	J-0249	WVM015	15.24	150	100	-0.49	0.03	0.0
WM6018SC_03	Melborne	WVM015	J-0476	105.12	150	100	-0.49	0.03	0.0
WM6018SC_04	Melborne	WVM019	J-0230	5.70	150	100	-0.57	0.03	0.0
WM6018SC_05	Melborne	WVM019	J-0109	104.89	150	100	0.57	0.03	0.0
WM6019C	Melborne	J-0531	J-0413	70.43	150	100	2.71	0.15	0.0
P-319	Wardsville	WVW007	J_Hyd-W015	1.13	150	100	-0.06	0.00	0.0
P_Hyd-W001	Wardsville	J_Hyd-W001	W001	5.48	150	90	0.00	0.00	0.0
P_Hyd-W002	Wardsville	J_Hyd-W002	W002	4.70	150	90	0.00	0.00	0.0
P_Hyd-W003	Wardsville	J_Hyd-W003	W003	5.65	150	90	0.00	0.00	0.0
P_Hyd-W004	Wardsville	J_Hyd-W004	W004	3.86	150	90	0.00	0.00	0.0
P_Hyd-W005	Wardsville	J_Hyd-W005	W005	6.90	150	90	0.00	0.00	0.0
P_Hyd-W006	Wardsville	J_Hyd-W006	W006	3.88	150	90	0.00	0.00	0.0
P_Hyd-W007	Wardsville	J_Hyd-W007	W007	1.75	150	90	0.00	0.00	0.0
P_Hyd-W008	Wardsville	J_Hyd-W008	W008	1.93	150	90	0.00	0.00	0.0
P_Hyd-W009	Wardsville	J_Hyd-W009	W009	3.07	150	90	0.00	0.00	0.0
P_Hyd-W010	Wardsville	J_Hyd-W010	W010	1.19	150	90	0.00	0.00	0.0
P_Hyd-W011	Wardsville	J_Hyd-W011	W011	6.93	150	90	0.00	0.00	0.0
P_Hyd-W012	Wardsville	J_Hyd-W012	W012	2.69	150	90	0.00	0.00	0.0
P_Hyd-W013	Wardsville	J_Hyd-W013	W013	2.70	150	90	0.00	0.00	0.0
P_Hyd-W014	Wardsville	J_Hyd-W014	W014	1.95	150	90	0.00	0.00	0.0
P_Hyd-W015	Wardsville	J_Hyd-W015	W015	6.64	150	90	0.00	0.00	0.0
P_Hyd-W016	Wardsville	J_Hyd-W016	W016	5.24	150	90	0.00	0.00	0.0
P_Hyd-W017	Wardsville	J_Hyd-W017	W017	10.85	150	90	0.00	0.00	0.0
P_Hyd-W018	Wardsville	J_Hyd-W018	W018	2.15	150	90	0.00	0.00	0.0
P_Hyd-W019	Wardsville	J_Hyd-W019	W019	2.50	150	90	0.00	0.00	0.0
P_Hyd-W020	Wardsville	WVW055	W020	4.99	150	90	0.00	0.00	0.0
P_Hyd-W021	Wardsville	J_Hyd-W021	W021	3.07	150	90	0.00	0.00	0.0
P_Hyd-W022	Wardsville	J_Hyd-W022	W022	4.10	150	90	0.00	0.00	0.0
P_Hyd-W023	Wardsville	J_Hyd-W023	W023	5.14	150	90	0.00	0.00	0.0
P_Hyd-W024	Wardsville	J_Hyd-W024	W024	5.95	150	90	0.00	0.00	0.0
P_Hyd-W025	Wardsville	J_Hyd-W025	W025	6.22	150	90	0.00	0.00	0.0
P_Hyd-W026	Wardsville	J_Hyd-W026	W026	6.37	150	90	0.00	0.00	0.0
P_Hyd-W027	Wardsville	J_Hyd-W027	W027	3.79	150	90	0.00	0.00	0.0
P_Hyd-W028	Wardsville	J_Hyd-W028	W028	3.84	150	90	0.00	0.00	0.0
P_Hyd-W029	Wardsville	J_Hyd-W029	W029	6.11	150	90	0.00	0.00	0.0
P_Hyd-W030	Wardsville	J_Hyd-W030	W030	3.82	150	90	0.00	0.00	0.0
P_Hyd-W031	Wardsville	J_Hyd-W031	W031	5.06	150	90	0.00	0.00	0.0
P_Hyd-W032	Wardsville	J_Hyd-W032	W032	7.29	150	90	0.00	0.00	0.0
P_Hyd-W033	Wardsville	J_Hyd-W033	W033	6.07	150	90	0.00	0.00	0.0
P_Hyd-W034	Wardsville	J_Hyd-W034	W034	5.18	150	90	0.00	0.00	0.0
P_Hyd-W035	Wardsville	J_Hyd-W035	W035	4.26	150	90	0.00	0.00	0.0
P_Hyd-W036	Wardsville	J_Hyd-W036	W036	3.12	150	90	0.00	0.00	0.0
P_Hyd-W037	Wardsville	J_Hyd-W037	W037	1.94	150	90	0.00	0.00	0.0
P_Hyd-W038	Wardsville	J_Hyd-W038	W038	1.51	150	90	0.00	0.00	0.0
P_Hyd-W039	Wardsville	J_Hyd-W039	W039	0.69	150	90	0.05	0.00	0.0
P_Hyd-W040	Wardsville	J_Hyd-W040	W040	5.52	150	90	0.00	0.00	0.0
P_Hyd-W041	Wardsville	J_Hyd-W041	W041	5.79	150	90	0.00	0.00	0.0
P_Hyd-W042	Wardsville	J_Hyd-W042	W042	3.43	150	90	0.00	0.00	0.0
P_Hyd-W043	Wardsville	J_Hyd-W043	W043	11.13	150	90	0.00	0.00	0.0
P_Hyd-W044	Wardsville	J_Hyd-W044	W044	5.49	150	90	0.00	0.00	0.0
P_Hyd-W045	Wardsville	J_Hyd-W045	W045	6.88	150	90	0.00	0.00	0.0
P_Hyd-W046	Wardsville	J_Hyd-W046	W046	5.95	150	90	0.00	0.00	0.0
P_Hyd-W047	Wardsville	J_Hyd-W047	W047	6.10	150	90	0.00	0.00	0.0
SWM_GIS.Waterm	Wardsville	W039	J_Hyd-W039	0.69	150	90	0.05	0.00	0.0
WM1009C_01	Wardsville	J_Hyd-W001	J_Hyd-W002	94.93	200	100	0.00	0.00	0.0
WM1009C_02	Wardsville	J_Hyd-W002	J-0446	25.09	200	100	0.00	0.00	0.0
WM1010C_01	Wardsville	J-0031	WVW001	14.43	200	100	-2.77	0.09	0.0
WM1010C_02	Wardsville	WVW001	J_Hyd-W010	1.27	200	100	-2.77	0.09	0.0
WM1010C_03	Wardsville	J_Hyd-W010	J-0438	55.92	200	100	-2.77	0.09	0.0
WM1010C_04	Wardsville	J-0438	J-0439	24.67	200	100	-2.77	0.09	0.0
WM1010C_05	Wardsville	J-0439	J_Hyd-W011	28.71	200	100	-2.77	0.09	0.0
WM1010C_06	Wardsville	J_Hyd-W011	J-0550	94.48	200	100	-2.77	0.09	0.0
WM1010C_07	Wardsville	J-0550	J_Hyd-W047	140.43	200	100	-3.44	0.11	0.0
WM1010C_08	Wardsville	J_Hyd-W047	J_Hyd-W045	152.33	200	100	-3.44	0.11	0.0
WM1010C_09	Wardsville	J_Hyd-W045	J-0160	109.76	200	100	-3.44	0.11	0.0
WM1010C_10	Wardsville	J-0160	J-0161	4.04	200	100	-3.44	0.11	0.0
WM1010C_11	Wardsville	J-0161	J_Hyd-W046	92.10	200	100	-3.44	0.11	0.0
WM1010C_12	Wardsville	J_Hyd-W046	J-0553	96.02	200	100	-3.44	0.11	0.0
WM1010C_13	Wardsville	J-0553	J_Hyd-R021M	1022.49	200	100	-3.44	0.11	0.2
WM1010_01	Wardsville	J-0643	J-0597	2259.98	300	110	7.90	0.11	0.2
WM1010_02	Wardsville	J-0597	J-0456	167.81	300	110	7.90	0.11	0.0
WM1064C_01	Wardsville	J-0245	WVW067	6.24	200	100	0.00	0.00	0.0
WM1064C_02	Wardsville	WVW067	J-0022	1.26	200	100	0.00	0.00	0.0
WM1064C_03	Wardsville	J-0022	J_Hyd-W028	5.40	200	100	0.00	0.00	0.0
WM1064C_04	Wardsville	J-0022	J-0069	2.10	200	100	0.00	0.00	0.0
WM1064C_05	Wardsville	J-0069	J-0307	79.42	200	100	0.00	0.00	0.0
WM1065C_01	Wardsville	J-0035	WVR006	1.51	150	90	-7.90	0.45	0.0
WM1065C_02	Wardsville	WVR006	J-686	1.59	150	90	-7.90	0.45	0.0
WM1065C_03	Wardsville	J_Hyd-W044	J-0504	618.26	300	110	-7.90	0.11	0.1
WM1065C_04	Wardsville	J-0504	J-0035	51.23	300	110	-7.90	0.11	0.0
WM1066C_01(1)	Wardsville	J-0456	J-686	2.75	300	110	7.90	0.11	0.0
WM1066C_01(2)	Wardsville	J-686	J-0242	25.10	300	110	0.00	0.00	0.0
WM1066C_02	Wardsville	J-0242	WVR003	6.22	300	110	0.00	0.00	0.0
WM3000C_01	Wardsville	J-0061	WVW033	17.06	300	110	-3.31	0.05	0.0
WM3000C_02	Wardsville	WVW033	J-0343	64.42	300	110	-3.31	0.05	0.0
WM3000_01	Wardsville	J-728	WVW066	78.11	150	90	0.06	0.00	0.0
WM3000_02	Wardsville	WVW066	J-0122	3.40	150	90	0.06	0.00	0.0
WM3001C_01	Wardsville	J-0506	WVW031	51.53	200	100	-2.00	0.06	0.0
WM3001C_02	Wardsville	WVW031	J-0040	1.58	200	100	-2.00	0.06	0.0
WM3001C_03	Wardsville	J-0040	J-0083	3.94	200	100	-2.00	0.06	0.0
WM3001_01	Wardsville	J_Hyd-W040	WVW036	53.55	150	90	-0.35	0.02	0.0
WM3001_02	Wardsville	WVW036	J-0188	4.61	150	90	-0.35	0.02	0.0
WM3002C_01	Wardsville	J-0297	WVW022	10.56	200	100	-1.02	0.03	0.0
WM3002C_02	Wardsville	WVW022	J_Hyd-W030	4.30	200	100	-1.02	0.03	0.0
WM3002C_03	Wardsville	J_Hyd-W030	J-0506	74.51	200	100	-1.02	0.03	0.0

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3002_01	Wardsville	J-0251	WVW028	10.95	150	90	-0.35	0.02	0.0
WM3002_02	Wardsville	WVW028	J_Hyd-W040	87.52	150	90	-0.35	0.02	0.0
WM3003C_01	Wardsville	J-0307	WVW025	9.26	200	100	-0.53	0.02	0.0
WM3003C_02	Wardsville	WVW025	J_Hyd-W029	22.49	200	100	-0.53	0.02	0.0
WM3003C_03	Wardsville	J_Hyd-W029	J-0297	87.53	200	100	-0.53	0.02	0.0
WM3003_01	Wardsville	J-0429	J_Hyd-W041	101.52	150	90	-0.60	0.03	0.0
WM3003_02	Wardsville	J_Hyd-W041	J-0251	15.68	150	90	-0.60	0.03	0.0
WM3004C_01	Wardsville	J-0349	J-0308	12.47	300	110	-7.90	0.11	0.0
WM3004C_02	Wardsville	J-0308	WVW061	9.36	300	110	-7.90	0.11	0.0
WM3004C_03	Wardsville	WVW061	J_Hyd-W032	49.83	300	110	-7.90	0.11	0.0
WM3004_01	Wardsville	J-0283	WVW056	9.15	150	90	0.78	0.04	0.0
WM3004_02	Wardsville	WVW056	J_Hyd-W021	79.20	150	90	0.78	0.04	0.0
WM3004_03	Wardsville	J_Hyd-W021	WVW054	2.33	150	90	0.78	0.04	0.0
WM3004_04	Wardsville	WVW054	J-0218	6.54	150	90	0.78	0.04	0.0
WM3004_05	Wardsville	J-0217	J-0218	5.41	150	90	-0.78	0.04	0.0
WM3005C_01	Wardsville	J-0234	WVW053	13.96	300	110	-6.54	0.09	0.0
WM3005C_02	Wardsville	WVW053	J-0349	82.84	300	110	-6.54	0.09	0.0
WM3005_01	Wardsville	J-0028	WVW057	27.93	150	90	0.54	0.03	0.0
WM3005_02	Wardsville	WVW057	J_Hyd-W022	4.65	150	90	0.54	0.03	0.0
WM3005_03	Wardsville	J_Hyd-W022	J-0283	61.43	150	90	0.54	0.03	0.0
WM3006C_01	Wardsville	J-0050	J_Hyd-W031	24.70	300	110	-5.25	0.07	0.0
WM3006C_02	Wardsville	J_Hyd-W031	J-0234	88.41	300	110	-5.25	0.07	0.0
WM3006_01	Wardsville	WVW043	J_Hyd-W023	18.88	150	90	0.15	0.01	0.0
WM3006_02	Wardsville	J_Hyd-W023	J-0027	87.15	150	90	0.15	0.01	0.0
WM3006_03	Wardsville	J-0027	J-0028	1.30	150	90	-0.41	0.02	0.0
WM3006_04	Wardsville	WVW043	J-0154	9.51	150	90	-0.15	0.01	0.0
WM3007C_01	Wardsville	J-0343	WVW064	12.09	300	110	-3.95	0.06	0.0
WM3007C_02	Wardsville	WVW064	J-0018	68.86	300	110	-3.95	0.06	0.0
WM3007_01	Wardsville	J-0247	J_Hyd-W025	104.21	150	90	0.15	0.01	0.0
WM3007_02	Wardsville	J-0154	J_Hyd-W025	62.02	150	90	-0.15	0.01	0.0
WM3008_01	Wardsville	J-0247	J_Hyd-W026	91.00	150	90	0.71	0.04	0.0
WM3008_02	Wardsville	WVW019	J-0238	11.66	150	90	0.71	0.04	0.0
WM3008_03	Wardsville	J_Hyd-W026	WVW019	34.82	150	90	0.71	0.04	0.0
WM3009_01	Wardsville	J-0238	J-0485	57.20	150	90	-0.01	0.00	0.0
WM3009_02	Wardsville	J_Hyd-W027	J-0485	39.51	150	90	0.01	0.00	0.0
WM3009_03	Wardsville	J_Hyd-W027	J-0460	29.49	150	90	-0.01	0.00	0.0
WM3010_01	Wardsville	J_Hyd-W019	J-0055	103.28	150	90	0.00	0.00	0.0
WM3010_02	Wardsville	J-0055	J-0056	1.79	150	90	0.00	0.00	0.0
WM3011	Wardsville	WVW046	J_Hyd-W019	82.16	150	90	0.00	0.00	0.0
WM3012_01	Wardsville	J-0088	WVW045	2.49	150	90	0.17	0.01	0.0
WM3012_02	Wardsville	WVW045	J_Hyd-W018	55.58	150	90	0.17	0.01	0.0
WM3012_03	Wardsville	J_Hyd-W018	J-0068	71.53	150	90	0.17	0.01	0.0
WM3013_01	Wardsville	J-0223	WVW014	17.55	150	90	0.33	0.02	0.0
WM3013_02	Wardsville	WVW014	J_Hyd-W017	91.23	150	90	0.33	0.02	0.0
WM3013_03	Wardsville	J_Hyd-W017	J-0444	24.98	150	90	0.33	0.02	0.0
WM3013_04	Wardsville	J-0444	J-0311	33.46	150	90	0.33	0.02	0.0
WM3013_05	Wardsville	J-0311	J-0088	9.52	150	90	0.33	0.02	0.0
WM3014_01	Wardsville	J-0131	J_Hyd-W016	12.42	150	90	-0.06	0.00	0.0
WM3014_02	Wardsville	J_Hyd-W016	J-0174	113.19	150	90	-0.06	0.00	0.0
WM3014_03	Wardsville	J-0131	J-0132	3.57	150	90	0.00	0.00	0.0
WM3016	Wardsville	WVW009	J-0034	2.74	150	90	-0.64	0.04	0.0
WM3017_01	Wardsville	J-0029	J-0030	1.33	150	90	0.90	0.05	0.0
WM3017_02	Wardsville	J-0029	WVW008	85.97	150	90	-0.70	0.04	0.0
WM3017_03	Wardsville	WVW008	J-0258	6.92	150	90	-0.70	0.04	0.0
WM3017_04	Wardsville	J-0258	WVW009	114.37	150	90	-0.64	0.04	0.0
WM3018_01	Wardsville	J_Hyd-W012	WVW002	103.92	150	90	-0.93	0.05	0.0
WM3018_02	Wardsville	J-0031	WVW002	1.39	150	90	0.93	0.05	0.0
WM3018_03	Wardsville	J_Hyd-W012	J-0023	108.22	150	90	0.93	0.05	0.0
WM3018_04	Wardsville	J-0023	J-0024	1.26	150	90	0.00	0.00	0.0
WM3019C	Wardsville	J_Hyd-W033	J_Hyd-W044	138.80	300	110	-7.90	0.11	0.0
WM3020	Wardsville	J_Hyd-W035	J-0308	44.57	150	90	0.00	0.00	0.0
WM3020C_01	Wardsville	J-0228	J-0229	5.61	300	110	-7.90	0.11	0.0
WM3020C_02	Wardsville	J-0229	J_Hyd-W033	48.18	300	110	-7.90	0.11	0.0
WM3021_01	Wardsville	J-0234	WVW052	5.86	150	90	0.34	0.02	0.0
WM3021_02	Wardsville	WVW052	J_Hyd-W036	57.41	150	90	0.00	0.00	0.0
WM3022_01	Wardsville	J-0051	WVW039	3.85	150	90	0.00	0.00	0.0
WM3022_02	Wardsville	WVW039	J_Hyd-W037	120.90	150	90	0.00	0.00	0.0
WM3022_03	Wardsville	J-0050	J-0051	1.72	300	110	0.68	0.01	0.0
WM3023C_01	Wardsville	WVW034	J_Hyd-W003	91.07	200	100	-1.26	0.04	0.0
WM3023C_02	Wardsville	J_Hyd-W003	WVW032	52.82	200	100	-1.26	0.04	0.0
WM3023C_03	Wardsville	WVW032	J-0082	11.99	200	100	-1.26	0.04	0.0
WM3023C_04	Wardsville	J-0082	J-0083	2.41	300	110	-1.26	0.02	0.0
WM3023_01	Wardsville	J-0122	J_Hyd-W039	135.47	150	90	-0.64	0.04	0.0
WM3023_02	Wardsville	J_Hyd-W039	WVW063	13.80	150	90	-0.64	0.04	0.0
WM3023_03	Wardsville	WVW063	J-0002	1.04	150	90	0.00	0.00	0.0
WM3023_04	Wardsville	WVW063	J-0343	21.64	150	90	-0.64	0.04	0.0
WM3023_05	Wardsville	J-0122	J_Hyd-W038	9.17	150	90	0.00	0.00	0.0
WM3025_01	Wardsville	J-0297	WVW023	15.43	150	90	0.25	0.01	0.0
WM3025_02	Wardsville	WVW023	J_Hyd-W043	67.26	150	90	0.25	0.01	0.0
WM3025_03	Wardsville	J_Hyd-W043	WVW029	72.48	150	90	0.25	0.01	0.0
WM3025_04	Wardsville	WVW029	J-0251	6.56	150	90	0.25	0.01	0.0
WM3026_01	Wardsville	J-0238	WVW020	6.15	150	90	-0.24	0.01	0.0
WM3026_02	Wardsville	WVW020	WVW021	100.45	150	90	-0.24	0.01	0.0
WM3026_03	Wardsville	WVW021	J-0297	8.86	150	90	-0.24	0.01	0.0
WM3027_01	Wardsville	J-0307	WVW026	14.56	150	90	0.53	0.03	0.0
WM3027_02	Wardsville	WVW026	J_Hyd-W042	125.13	150	90	0.53	0.03	0.0
WM3027_03	Wardsville	J_Hyd-W042	J-0429	22.83	150	90	0.53	0.03	0.0
WM3028_01	Wardsville	J-0460	WVW027	79.81	150	90	-0.01	0.00	0.0
WM3028_02	Wardsville	WVW027	J-0307	9.37	150	90	-0.01	0.00	0.0
WM3029C	Wardsville	J_Hyd-W032	J-0228	58.86	300	110	-7.90	0.11	0.0
WM3030	Wardsville	J-0055	WVW055	10.06	150	90	0.00	0.00	0.0
WM3031_01	Wardsville	J-0283	WVW058	8.32	150	90	-1.36	0.08	0.0
WM3031_02	Wardsville	WVW058	J_Hyd-W034	48.91	150	90	-1.36	0.08	0.0
WM3031_03	Wardsville	J_Hyd-W034	WVW059	49.21	150	90	-1.36	0.08	0.0
WM3031_04	Wardsville	WVW059	J-0349	16.87	150	90	-1.36	0.08	0.0
WM3033_01	Wardsville	J-0028	WVW049	8.75	150	90	-0.95	0.05	0.0
WM3033_02	Wardsville	WVW049	WVW051	98.98	150	90	-0.95	0.05	0.0
WM3033_03	Wardsville	WVW051	J-0234	16.36	150	90	-0.95	0.05	0.0
WM3034_01	Wardsville	J-0068	WVW046	2.10	150	90	0.00	0.00	0.0

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3034_02	Wardsville	J-0068	J-0081	10.14	150	90	0.17	0.01	0.0
WM3034_03	Wardsville	J-0081	WVW047	2.39	150	90	0.17	0.01	0.0
WM3034_04	Wardsville	WVW047	WVW048	73.09	150	90	0.17	0.01	0.0
WM3034_05	Wardsville	WVW048	J-0027	10.74	150	90	-0.56	0.03	0.0
WM3035C_01	Wardsville	J-0062	WVW030	2.56	200	100	0.06	0.00	0.0
WM3035C_02	Wardsville	WVW030	J_Hyd-W004	21.12	200	100	0.06	0.00	0.0
WM3035C_03	Wardsville	J_Hyd-W004	WVW018	79.59	200	100	0.06	0.00	0.0
WM3035C_04	Wardsville	WVW018	J-0247	8.72	200	100	0.06	0.00	0.0
WM3035C_05	Wardsville	J-0061	J-0083	2.95	200	100	3.25	0.10	0.0
WM3035C_06	Wardsville	J-0061	J-0062	1.83	300	110	0.06	0.00	0.0
WM3035_01	Wardsville	J-0154	WVW042	3.97	150	90	-0.63	0.04	0.0
WM3035_02	Wardsville	WVW042	WVW038	106.74	150	90	-0.63	0.04	0.0
WM3035_03	Wardsville	WVW038	J-0012	1.00	150	90	-0.63	0.04	0.0
WM3035_04	Wardsville	J-0018	J-0012	1.10	300	110	0.63	0.01	0.0
WM3035_05	Wardsville	J-0018	J-0050	12.34	300	110	-4.58	0.06	0.0
WM3036C_01	Wardsville	J-0247	WVW016	6.26	200	100	-0.81	0.03	0.0
WM3036C_02	Wardsville	WVW016	J_Hyd-W005	3.42	200	100	-0.81	0.03	0.0
WM3036C_03	Wardsville	J_Hyd-W005	J-0423	67.48	200	100	-0.81	0.03	0.0
WM3036C_04	Wardsville	J-0423	J-0042	22.05	200	100	-0.81	0.03	0.0
WM3036C_05	Wardsville	J-0042	J_Hyd-W006	1.59	200	100	-0.81	0.03	0.0
WM3036C_06	Wardsville	J_Hyd-W006	J-0223	34.03	200	100	-0.81	0.03	0.0
WM3036_01	Wardsville	J-0088	WVW044	12.77	150	90	0.16	0.01	0.0
WM3036_02	Wardsville	WVW044	J_Hyd-W024	61.63	150	90	0.16	0.01	0.0
WM3036_03	Wardsville	J_Hyd-W024	WVW041	62.52	150	90	0.16	0.01	0.0
WM3036_04	Wardsville	WVW041	J-0154	8.37	150	90	-0.63	0.04	0.0
WM3037C_01	Wardsville	J-0223	J-0174	5.52	200	100	-1.13	0.04	0.0
WM3037C_02	Wardsville	J-0174	WVW011	4.34	200	100	-1.20	0.04	0.0
WM3037C_03	Wardsville	WVW011	J_Hyd-W007	52.35	200	100	-1.20	0.04	0.0
WM3037C_04	Wardsville	J_Hyd-W007	J_Hyd-W008	96.68	200	100	-1.20	0.04	0.0
WM3037C_05	Wardsville	J_Hyd-W008	WVW010	3.99	200	100	-1.20	0.04	0.0
WM3037C_06	Wardsville	WVW010	J-0120	4.52	200	100	-1.20	0.04	0.0
WM3037C_07	Wardsville	J-0120	J-0121	3.38	200	100	-1.20	0.04	0.0
WM3037C_08	Wardsville	J-0121	J-0033	7.19	200	100	-1.20	0.04	0.0
WM3037C_09	Wardsville	J-0033	J-0034	1.48	200	100	-1.20	0.04	0.0
WM3037_01	Wardsville	J-0258	WVW007	11.40	150	90	-0.06	0.00	0.0
WM3037_02	Wardsville	J_Hyd-W015	WVW015	149.19	150	90	-0.06	0.00	0.0
WM3037_03	Wardsville	WVW015	J-0131	4.69	150	90	-0.06	0.00	0.0
WM3039C_01	Wardsville	J-0034	J-0313	67.18	200	100	-1.83	0.06	0.0
WM3039C_02	Wardsville	J-0313	J_Hyd-W009	9.84	200	100	-1.83	0.06	0.0
WM3039C_03	Wardsville	J_Hyd-W009	WVW003	75.53	200	100	-1.83	0.06	0.0
WM3039C_04	Wardsville	WVW003	J-0031	3.69	200	100	-1.83	0.06	0.0
WM3039_01	Wardsville	J-0023	J_Hyd-W014	21.87	150	90	0.20	0.01	0.0
WM3039_02	Wardsville	J_Hyd-W014	J_Hyd-W013	134.93	150	90	0.20	0.01	0.0
WM3039_03	Wardsville	J_Hyd-W013	WVW006	7.63	150	90	0.20	0.01	0.0
WM3039_04	Wardsville	WVW006	J-0029	2.85	150	90	0.20	0.01	0.0
WM3041C_01	Wardsville	J-0446	WVW035	27.23	200	100	-0.84	0.03	0.0
WM3041C_02(1)	Wardsville	WVW035	J-728	10.26	200	100	-0.84	0.03	0.0
WM3041C_02(2)(1)	Wardsville	J-728	J-0188	3.98	200	100	-0.91	0.03	0.0
WM3041C_02(2)(2)	Wardsville	J-0188	WVW034	4.02	200	100	-1.26	0.04	0.0
P_Hyd-A001	Appin	J_Hyd-A001	A001	2.16	150	100	0.00	0.00	0.0
P_Hyd-A002	Appin	J_Hyd-A002	A002	3.25	150	100	0.00	0.00	0.0
P_Hyd-A003	Appin	J_Hyd-A003	A003	1.26	150	100	0.00	0.00	0.0
P_Hyd-A004	Appin	J_Hyd-A004	A004	8.01	150	100	0.00	0.00	0.0
P_Hyd-A005	Appin	J_Hyd-A005	A005	2.77	150	100	0.00	0.00	0.0
P_Hyd-A006	Appin	J_Hyd-A006	A006	3.67	150	100	0.00	0.00	0.0
P_Hyd-A007	Appin	J_Hyd-A007	A007	3.11	150	100	0.00	0.00	0.0
P_Hyd-A008	Appin	J_Hyd-A008	A008	3.87	150	100	0.00	0.00	0.0
P_Hyd-A009	Appin	J_Hyd-A009	A009	3.13	150	100	0.00	0.00	0.0
P_Hyd-A010	Appin	J_Hyd-A010	A010	4.30	150	100	0.00	0.00	0.0
P_Hyd-A011	Appin	J_Hyd-A011	A011	3.08	150	100	0.00	0.00	0.0
WM2039_04	Appin	J_Hyd-R015E	J-0592	1807.30	200	110	4.06	0.13	0.3
WM2047C_01	Appin	WVR028	WVR053	1957.59	200	110	1.56	0.05	0.1
WM2089C_01	Appin	J-0355	J-0277	21.32	200	110	-7.64	0.24	0.0
WM2089C_02	Appin	J-0277	J-0278	8.12	200	110	-7.64	0.24	0.0
WM2089C_03	Appin	J-0278	J_Hyd-A007	52.72	200	110	-7.64	0.24	0.0
WM2089C_04	Appin	J_Hyd-A007	J-0304	888.44	200	110	-7.64	0.24	0.5
WM2090C_01	Appin	J-0015	J_Hyd-A011	1.06	200	110	0.00	0.00	0.0
WM2090C_02	Appin	J_Hyd-A011	WVA008	178.39	200	110	0.00	0.00	0.0
WM2090C_03	Appin	WVA008	J-0219	6.16	200	110	0.00	0.00	0.0
WM2090C_04	Appin	J-0015	WVR026	6.89	200	110	0.00	0.00	0.0
WM2090C_05	Appin	WVR026	J-0246	6.25	200	110	0.00	0.00	0.0
WM2090C_06	Appin	J-0246	J-0639	984.73	200	110	0.00	0.00	0.0
WM5000C	Appin	J-0185	J-0378	85.38	200	110	2.51	0.08	0.0
WM5000_01	Appin	J-0244	J_Hyd-A003	201.84	150	100	0.00	0.00	0.0
WM5000_02	Appin	J-0244	J-0185	6.24	150	100	0.00	0.00	0.0
WM5001C_01	Appin	J-0219	WVA006	138.25	200	110	-2.56	0.08	0.0
WM5001C_02	Appin	WVA006	J_Hyd-A009	5.56	200	110	-2.56	0.08	0.0
WM5001C_03	Appin	J_Hyd-A009	J-0254	6.79	200	110	-2.56	0.08	0.0
WM5001_01	Appin	WVA015	WVA013	125.45	150	100	-1.47	0.08	0.0
WM5001_02	Appin	WVA013	J-0152	11.83	150	100	-1.47	0.08	0.0
WM5001_03	Appin	J-0318	WVA015	14.13	150	100	-1.47	0.08	0.0
WM5002C	Appin	J-0254	J-0140	127.36	200	110	-4.76	0.15	0.0
WM5002_01	Appin	J-0152	J_Hyd-A005	3.94	150	100	-1.75	0.10	0.0
WM5002_02	Appin	J_Hyd-A005	WVA010	106.59	150	100	-1.75	0.10	0.0
WM5002_03	Appin	WVA010	J-0221	14.76	150	100	-1.75	0.10	0.0
WM5003C_01	Appin	J-0140	J_Hyd-A008	3.71	200	110	-5.76	0.18	0.0
WM5003C_02	Appin	J_Hyd-A008	J-0355	96.83	200	110	-5.76	0.18	0.0
WM5003_01	Appin	J-0221	WVA012	5.45	300	120	-1.88	0.03	0.0
WM5003_02	Appin	J_Hyd-A006	WVA012	63.78	150	100	1.88	0.11	0.0
WM5003_03	Appin	J_Hyd-A006	J-0322	26.27	150	100	-1.88	0.11	0.0
WM5004_01	Appin	J-0359	WVA019	17.34	150	100	0.00	0.00	0.0
WM5004_02	Appin	WVA019	J-0280	27.46	150	100	0.00	0.00	0.0
WM5004_03	Appin	J-0280	J-0281	8.22	150	100	0.00	0.00	0.0
WM5005C	Appin	J-0378	WVR028	42.73	200	110	1.56	0.05	0.0
WM5005_01	Appin	J-0119	WVA018	8.26	150	100	0.00	0.00	0.0
WM5005_02	Appin	J_Hyd-A001	J_Hyd-A002	182.10	150	100	0.00	0.00	0.0
WM5005_03	Appin	J_Hyd-A002	WVA021	57.26	150	100	0.00	0.00	0.0
WM5005_04	Appin	WVA021	J-0009	3.68	150	100	0.00	0.00	0.0
WM5005_05	Appin	J-0009	J-0010	0.95	200	110	0.00	0.00	0.0

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ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM5005_06	Appin	J-0010	J-0378	15.89	200	110	0.00	0.00	0.0
WM5006C_01	Appin	J-0318	J_Hyd-A010	80.91	200	110	-2.56	0.08	0.0
WM5006C_02	Appin	J_Hyd-A010	WVA007	8.74	200	110	-2.56	0.08	0.0
WM5006C_03	Appin	WVA007	J-0219	14.62	200	110	-2.56	0.08	0.0
WM5006_01	Appin	J-0152	WVA014	4.55	150	100	0.28	0.02	0.0
WM5006_02	Appin	J-0254	WVA005	14.70	150	100	-0.28	0.02	0.0
WM5006_03	Appin	WVA005	WVA014	85.73	150	100	-0.28	0.02	0.0
WM5008_01	Appin	J-0140	WVA003	15.05	150	100	1.01	0.06	0.0
WM5008_02	Appin	WVA003	J-0361	14.45	150	100	1.01	0.06	0.0
WM5008_03	Appin	J-0361	WVA011	68.77	150	100	1.01	0.06	0.0
WM5008_04	Appin	WVA011	J-0221	7.70	150	100	1.01	0.06	0.0
WM5009_01	Appin	J-0322	J-0323	10.27	150	100	-1.88	0.11	0.0
WM5009_02	Appin	J-0355	WVA001	13.48	150	100	1.88	0.11	0.0
WM5009_03	Appin	J-0323	WVA001	84.78	150	100	-1.88	0.11	0.0
WM5010C_01	Appin	WVA020	J-0359	14.01	200	110	-2.51	0.08	0.0
WM5010C_02	Appin	J-0359	J_Hyd-A004	37.21	200	110	-2.51	0.08	0.0
WM5010C_03	Appin	J_Hyd-A004	WVA016	58.77	200	110	-2.51	0.08	0.0
WM5010C_04	Appin	WVA016	J-0318	10.02	200	110	-2.51	0.08	0.0
WM5010C_05	Appin	WVA020	J-0185	4.51	200	110	2.51	0.08	0.0
WM5011_01	Appin	J-0221	J-0479	58.91	150	100	1.13	0.06	0.0
WM5011_02	Appin	J-0479	J-0480	38.55	150	100	1.13	0.06	0.0
WM5016_01	Appin	J-0480	WVA017	109.22	150	100	0.00	0.00	0.0
WM5016_02	Appin	WVA017	J-0119	3.36	150	100	0.00	0.00	0.0
WM5018	Appin	J-0560	J-0119	104.65	150	100	0.00	0.00	0.0
WM5019C_01	Appin	J-0404	J-0345	19.32	200	110	0.00	0.00	0.0
WM5019C_02	Appin	J-0345	J-0346	12.16	200	110	0.00	0.00	0.0
WM5019C_03	Appin	J-0346	WVA009	109.80	200	110	0.00	0.00	0.0
WM5019C_04	Appin	WVA009	J-0219	5.41	200	110	0.00	0.00	0.0
P-233	Rural	J-0299	J_Hyd-R006E	1.74	150	100	2.71	0.15	0.0
P-235	Rural	J-0634	J-752	4.00	50	130	-0.85	0.43	0.0
P-236	Rural	J-0335	J_Hyd-R005E	15.68	150	100	1.16	0.07	0.0
P-238	Rural	WVR039	J-0525	2.51	200	110	2.84	0.09	0.0
P-239	Rural	J_Hyd-R021M	WVR007	1.46	200	110	-3.44	0.11	0.0
P-937	Rural	J-0519	J-0520	68.34	18	130	0.00	0.00	0.0
P_Hyd-R001E	Rural	J_Hyd-R001E	R001E	4.14	150	100	0.00	0.00	0.0
P_Hyd-R002E	Rural	J_Hyd-R002E	R002E	2.23	150	100	0.00	0.00	0.0
P_Hyd-R003E	Rural	J_Hyd-R003E	R003E	3.03	150	100	0.00	0.00	0.0
P_Hyd-R004E	Rural	J_Hyd-R004E	R004E	6.82	150	100	0.00	0.00	0.0
P_Hyd-R005E	Rural	J_Hyd-R005E	R005E	8.61	150	100	0.00	0.00	0.0
P_Hyd-R006E	Rural	J_Hyd-R006E	R006E	4.58	150	100	0.00	0.00	0.0
P_Hyd-R007E	Rural	J_Hyd-R007E	R007E	3.56	150	100	0.00	0.00	0.0
P_Hyd-R008E	Rural	J_Hyd-R008E	R008E	2.58	150	100	0.00	0.00	0.0
P_Hyd-R009E	Rural	J_Hyd-R009E	R009E	7.00	150	100	0.00	0.00	0.0
P_Hyd-R010E	Rural	J_Hyd-R010E	R010E	2.16	150	100	0.00	0.00	0.0
P_Hyd-R011E	Rural	J_Hyd-R011E	R011E	2.25	150	100	0.00	0.00	0.0
P_Hyd-R012E	Rural	J_Hyd-R012E	R012E	1.76	150	100	0.00	0.00	0.0
P_Hyd-R013E	Rural	J_Hyd-R013E	R013E	5.77	150	100	0.00	0.00	0.0
P_Hyd-R014E	Rural	J_Hyd-R014E	R014E	3.99	150	100	0.00	0.00	0.0
P_Hyd-R015E	Rural	J_Hyd-R015E	R015E	3.40	150	100	0.00	0.00	0.0
P_Hyd-R016E	Rural	J_Hyd-R016E	R016E	6.25	150	100	0.00	0.00	0.0
P_Hyd-R017M	Rural	J_Hyd-R017M	R017M	6.10	150	100	0.00	0.00	0.0
P_Hyd-R018M	Rural	J_Hyd-R018M	R018M	1.92	150	100	0.00	0.00	0.0
P_Hyd-R019M	Rural	J_Hyd-R019M	R019M	0.87	150	100	0.00	0.00	0.0
P_Hyd-R020M	Rural	J_Hyd-R020M	R020M	4.05	150	100	0.00	0.00	0.0
P_Hyd-R021M	Rural	J_Hyd-R021M	R021M	5.88	150	100	0.00	0.00	0.0
P_Hyd-R026E	Rural	J_Hyd-R026E	R026E	3.60	150	100	0.00	0.00	0.0
P_Hyd-R027W	Rural	J_Hyd-R027W	R027W	10.01	150	100	0.00	0.00	0.0
P_Hyd-R028E	Rural	J_Hyd-R028E	R028E	2.63	150	100	0.00	0.00	0.0
P_Hyd-R029W	Rural	J_Hyd-R029W	R029W	161.23	150	100	0.00	0.00	0.0
P_Hyd-R030M	Rural	J_Hyd-R030M	R030M	58.13	150	100	0.00	0.00	0.0
P_Hyd-R031M	Rural	J_Hyd-R031M	R031M	4.46	150	100	0.00	0.00	0.0
P_Hyd-R032M	Rural	J_Hyd-R032M	R032M	15.28	150	100	0.00	0.00	0.0
P_Hyd-R033E	Rural	J_Hyd-R033E	R033E	7.67	150	100	0.00	0.00	0.0
WM1010C_14	Rural	WVR007	WVR008	50.55	200	110	-3.44	0.11	0.0
WM1011C_01	Rural	WVR008	J_Hyd-R020M	457.55	200	110	-3.44	0.11	0.1
WM1011C_02	Rural	J_Hyd-R020M	J_Hyd-R019M	757.63	200	110	-3.44	0.11	0.1
WM1011C_03	Rural	J_Hyd-R019M	J_Hyd-R018M	317.29	200	110	-3.44	0.11	0.0
WM1011C_04	Rural	J_Hyd-R018M	WVR009	881.46	200	110	-3.44	0.11	0.1
WM1011C_05	Rural	J-0086	J-0260	7.07	200	110	-3.44	0.11	0.0
WM1011C_06	Rural	WVR009	J_Hyd-R017M	6.62	200	110	-3.44	0.11	0.0
WM1011C_07	Rural	J_Hyd-R017M	J-0086	2.48	200	110	-3.44	0.11	0.0
WM1011C_08	Rural	PRV-1	J-0260	21.84	300	120	11.35	0.16	0.0
WM1011_01	Rural	WVR050	J-0633	615.40	300	120	7.90	0.11	0.0
WM1011_02	Rural	J-0232	WVR050	5.77	150	100	7.90	0.45	0.0
WM1011_03	Rural	J-0633	J-0643	1830.27	300	120	7.90	0.11	0.1
WM1012C_01	Rural	J-0231	J_Hyd-R031M	80.50	300	120	27.03	0.38	0.1
WM1012C_02	Rural	J_Hyd-R031M	J-0397	294.47	300	120	27.03	0.38	0.2
WM1012C_03	Rural	J-0397	J-0398	18.34	300	120	27.03	0.38	0.0
WM1012C_04	Rural	J-0398	J-0441	604.41	300	120	27.03	0.38	0.4
WM1012C_05	Rural	J-0441	J-0442	24.83	300	120	27.03	0.38	0.0
WM1012C_06	Rural	J-0442	J-0547	90.95	300	120	27.03	0.38	0.1
WM1012C_07	Rural	J-0547	J-0422	1548.63	300	120	27.03	0.38	1.0
WM1012C_08	Rural	J-0422	J-0163	21.99	300	120	27.03	0.38	0.0
WM1012_01	Rural	J-0329	J-0330	11.08	50	130	0.00	0.00	0.0
WM1012_02	Rural	J-0330	J-0300	1185.95	50	130	0.00	0.00	0.0
WM1012_03	Rural	J-0300	J-0301	9.00	50	130	0.00	0.00	0.0
WM1012_04	Rural	J-0301	J-0616	285.01	50	130	0.00	0.00	0.0
WM1013C_01	Rural	J-0164	WVR019	1176.14	300	120	27.03	0.38	0.8
WM1013C_02	Rural	J-0163	J-0164	4.12	300	120	27.03	0.38	0.0
WM1013C_03	Rural	WVR019	J_Hyd-R030M	388.90	300	120	27.03	0.38	0.3
WM1013C_04	Rural	J_Hyd-R030M	J-0170	21.89	300	120	27.03	0.38	0.0
WM1013C_05	Rural	J-0170	J-0171	4.24	300	120	27.03	0.38	0.0
WM1013C_06	Rural	J-0171	J-0379	16.49	300	120	27.03	0.38	0.0
WM1013C_07	Rural	J-0379	J-0149	372.44	300	120	27.03	0.38	0.3
WM1013C_08	Rural	J-0149	J-0150	3.91	300	120	27.03	0.38	0.0
WM1013C_09	Rural	J-0150	J-0129	27.49	300	120	27.03	0.38	0.0
WM1013C_10	Rural	J-0129	J-0130	3.55	300	120	27.03	0.38	0.0
WM1013C_11	Rural	J-0130	J-0595	201.38	300	120	27.03	0.38	0.1
WM1021C_01	Rural	WVR020	J-0577	121.69	300	120	27.03	0.38	0.1

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM1021C_02(1)	Rural	J-0577	J-0519	660.77	300	120	27.03	0.38	0.4
WM1021C_02(2)(1)	Rural	J-0519	J-752	22.88	300	120	27.03	0.38	0.0
WM1026C_01	Rural	J-0408	WVR013	20.55	150	100	0.00	0.00	0.0
WM1026C_02	Rural	WVR013	J-0645	2396.11	150	100	0.00	0.00	0.0
WM1075C_02	Rural	J_Hyd-R029W	J_Hyd-R027W	3137.12	350	120	38.37	0.40	1.9
WM1075C_03	Rural	J_Hyd-R027W	J-0629	4074.92	350	120	38.37	0.40	2.4
WM1075C_04	Rural	J-0629	J-0431	496.33	350	120	38.37	0.40	0.3
WM1075C_05	Rural	J-0431	J-0432	23.51	350	120	38.37	0.40	0.0
WM1075C_06	Rural	J-0432	J-0613	1094.09	350	120	38.37	0.40	0.7
WM1075C_07	Rural	J-0613	J-0416	258.33	350	120	38.37	0.40	0.2
WM1075C_08(1)	Rural	J-0416	J-0466	12.01	300	120	38.37	0.54	0.0
WM1075C_08(2)	Rural	J-0466	WVR010	9.40	300	120	27.03	0.38	0.0
WM1075C_09	Rural	WVR010	J-0231	5.73	300	120	27.03	0.38	0.0
WM1075C_10	Rural	PRV-1	J-0466	31.58	300	120	-11.35	0.16	0.0
WM1086_01	Rural	J-0383	J-0199	63.41	300	120	7.90	0.11	0.0
WM1086_02	Rural	J-0199	J-0200	4.92	300	120	7.90	0.11	0.0
WM1086_03	Rural	J-0200	J-0266	7.51	300	120	7.90	0.11	0.0
WM1086_04	Rural	J-0266	J-0224	8.04	300	120	7.90	0.11	0.0
WM1086_05	Rural	J-0224	J-0225	5.54	300	120	7.90	0.11	0.0
WM1086_06	Rural	J-0225	J-0610	279.39	300	120	7.90	0.11	0.0
WM1086_07	Rural	J-0610	J-0611	236.26	300	120	7.90	0.11	0.0
WM1086_08	Rural	J-0611	J-0626	363.27	300	120	7.90	0.11	0.0
WM1086_09	Rural	J-0626	J-0232	348.32	300	120	7.90	0.11	0.0
WM1086_10	Rural	J-0260	J-0383	17.08	200	110	7.90	0.25	0.0
WM1087_01	Rural	J-0232	WVR051	12.83	200	110	0.00	0.00	0.0
WM1087_02	Rural	WVR051	J-0276	8.01	200	110	0.00	0.00	0.0
WM1087_03	Rural	J-0276	J-0293	8.73	200	110	0.00	0.00	0.0
WM1087_04	Rural	J-0293	J-0365	39.13	200	110	0.00	0.00	0.0
WM1087_05	Rural	J-0365	J-0366	14.54	200	110	0.00	0.00	0.0
WM1087_06	Rural	J-0366	J-0607	301.23	200	110	0.00	0.00	0.0
WM1087_07	Rural	J-0607	J-0206	227.17	200	110	0.00	0.00	0.0
WM1087_08	Rural	J-0206	J-0182	5.10	200	110	0.00	0.00	0.0
WM1087_09	Rural	J-0182	J-0183	4.50	200	110	0.00	0.00	0.0
WM1087_10	Rural	J-0183	J-0233	5.81	200	110	0.00	0.00	0.0
WM1087_11	Rural	J-0233	WVR012	785.82	200	110	0.00	0.00	0.0
WM1087_12	Rural	WVR012	J-0374	15.48	200	110	0.00	0.00	0.0
WM1087_13	Rural	J-0366	J-0329	62.78	50	130	0.00	0.00	0.0
WM1088_01	Rural	J-0374	J-0623	321.50	200	110	0.00	0.00	0.0
WM1088_02	Rural	J-0623	J-0530	924.91	200	110	0.00	0.00	0.0
WM1088_03	Rural	J-0530	WVR014	69.85	200	110	0.00	0.00	0.0
WM1089_01	Rural	WVR014	J-0309	9.37	200	110	0.00	0.00	0.0
WM1089_02(1)	Rural	J-0309	J-0408	31.72	200	110	0.00	0.00	0.0
WM1089_02(2)	Rural	J-0408	J_Hyd-R032M	6.61	200	110	0.00	0.00	0.0
WM1089_03	Rural	J_Hyd-R032M	WVR015	244.84	200	110	0.00	0.00	0.0
WM1089_04	Rural	WVR015	J-0193	5.52	200	110	0.00	0.00	0.0
WM1089_05	Rural	J-0193	J-0194	4.77	200	110	0.00	0.00	0.0
WM1097C_01	Rural	J-0595	J-0596	165.95	300	120	27.03	0.38	0.1
WM1097C_02	Rural	J-0596	J-0614	269.97	300	120	27.03	0.38	0.2
WM1097C_03	Rural	J-0614	J-0617	300.03	300	120	27.03	0.38	0.2
WM1097C_04	Rural	J-0617	J-0392	683.41	300	120	27.03	0.38	0.5
WM1098C	Rural	J-0392	WVR020	538.86	300	120	27.03	0.38	0.4
WM2025_01	Rural	J-0391	J-0356	287.21	150	100	0.00	0.00	0.0
WM2025_02	Rural	J-0356	J-0357	13.93	150	100	0.00	0.00	0.0
WM2025_03	Rural	J-0357	J_Hyd-R033E	230.73	150	100	0.00	0.00	0.0
WM2025_04	Rural	J-0391	J-0392	17.92	150	100	0.00	0.00	0.0
WM2030C_01	Rural	J-0263	J-0207	7.29	200	110	2.84	0.09	0.0
WM2030C_02	Rural	J-0207	J-0090	5.11	200	110	2.84	0.09	0.0
WM2030C_03	Rural	J-0090	WVR039	2.54	200	110	2.84	0.09	0.0
WM2030C_04	Rural	J-0525	WVR060	64.33	150	100	2.84	0.16	0.0
WM2030C_05	Rural	WVR060	J-0369	135.29	150	100	2.84	0.16	0.1
WM2030C_06	Rural	J-0369	J-0020	14.81	150	100	2.84	0.16	0.0
WM2030C_07	Rural	J-0020	J_Hyd-R009E	1.18	150	100	2.84	0.16	0.0
WM2030C_08	Rural	J_Hyd-R009E	J-0604	243.33	150	100	2.84	0.16	0.1
WM2030C_09	Rural	J-0604	J-0605	220.12	150	100	2.84	0.16	0.1
WM2030C_10	Rural	J-0605	J-0257	263.84	150	100	2.84	0.16	0.1
WM2030C_11	Rural	J-0257	WVR040	6.86	150	100	2.84	0.16	0.0
WM2030C_12	Rural	WVR040	J_Hyd-M002	689.84	150	100	2.84	0.16	0.3
WM2036_01	Rural	J-0100	J-0462	239.86	200	110	-11.70	0.37	0.3
WM2036_04	Rural	J-0618	J-0619	303.91	200	110	11.70	0.37	0.4
WM2036_05	Rural	J-0619	J-0624	603.05	200	110	11.70	0.37	0.7
WM2036_06	Rural	J-0624	J-0463	327.67	200	110	11.70	0.37	0.4
WM2036_07	Rural	J-0463	J-0464	30.58	200	110	11.70	0.37	0.0
WM2036_08	Rural	J-0464	J-0461	41.99	200	110	11.70	0.37	0.1
WM2036_09	Rural	J-0461	J-0462	30.21	200	110	11.70	0.37	0.0
WM2037_01	Rural	J-0325	J-0073	26.45	200	110	-11.70	0.37	0.0
WM2037_02	Rural	J-0073	J-0074	2.30	200	110	-11.70	0.37	0.0
WM2037_03	Rural	J-0074	J-0638	1562.44	200	110	-11.70	0.37	1.9
WM2037_04	Rural	J-0638	WVR052	826.51	200	110	-11.70	0.37	1.0
WM2037_05	Rural	WVR052	J-0100	3.90	200	110	-11.70	0.37	0.0
WM2038_01	Rural	J-0376	J-0545	89.85	200	110	-11.70	0.37	0.1
WM2038_02	Rural	J-0545	WVR024	2310.40	200	110	-11.70	0.37	2.7
WM2038_03	Rural	WVR024	J-0210	5.19	200	110	-11.70	0.37	0.0
WM2038_04	Rural	J-0210	J-0325	10.57	200	110	-11.70	0.37	0.0
WM2039_01	Rural	J-688	WVR025	1.73	200	110	4.06	0.13	0.0
WM2039_02	Rural	WVR025	J-0315	9.84	200	110	4.06	0.13	0.0
WM2039_03	Rural	J-0315	J_Hyd-R015E	53.54	200	110	4.06	0.13	0.0
WM2039_05	Rural	J-0592	J-0593	154.11	200	110	4.06	0.13	0.0
WM2039_06	Rural	J-0593	WVR031	431.61	200	110	4.06	0.13	0.1
WM2039_07	Rural	WVR031	J-0362	20.22	200	110	4.06	0.13	0.0
WM2040_01	Rural	J-0362	J_Hyd-R014E	14.45	200	110	4.06	0.13	0.0
WM2040_02	Rural	J_Hyd-R014E	J-0599	560.06	200	110	4.06	0.13	0.1
WM2040_03	Rural	J-0599	J-0600	185.21	200	110	4.06	0.13	0.0
WM2040_04	Rural	J-0600	J-0636	706.37	200	110	4.06	0.13	0.1
WM2040_05	Rural	J-0636	WVR034	947.99	200	110	4.06	0.13	0.2
WM2040_06	Rural	WVR034	J_Hyd-R013E	20.02	200	110	4.06	0.13	0.0
WM2041_01	Rural	J_Hyd-R013E	J-0118	4.50	200	110	1.16	0.04	0.0
WM2041_02	Rural	J-0118	WVR035	3.31	200	110	1.16	0.04	0.0
WM2041_03	Rural	WVR035	J-0341	11.80	150	100	1.16	0.07	0.0
WM2041_04	Rural	J-0341	J_Hyd-R008E	1161.30	150	100	1.16	0.07	0.1

2021 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM2041_05	Rural	J_Hyd-R008E	WVR044	1217.52	150	100	1.16	0.07	0.1
WM2041_06	Rural	WVR044	J-0335	11.48	150	100	1.16	0.07	0.0
WM2042_01	Rural	J-0241	WVR047	6.16	100	100	0.00	0.00	0.0
WM2042_02	Rural	WVR047	J-0117	3.28	100	100	0.00	0.00	0.0
WM2042_03	Rural	J-0117	J-0053	90.84	100	100	0.00	0.00	0.0
WM2042_04	Rural	J-0053	WVR056	1.74	50	100	0.00	0.00	0.0
WM2043_01	Rural	J-0208	J_Hyd-R002E	5.14	150	100	0.00	0.00	0.0
WM2043_02	Rural	J_Hyd-R002E	J-0057	289.87	150	100	0.00	0.00	0.0
WM2043_03	Rural	J-0057	J_Hyd-R003E	1.81	150	100	0.00	0.00	0.0
WM2043_04	Rural	J_Hyd-R003E	J-0282	8.32	150	100	0.00	0.00	0.0
WM2043_05	Rural	J-0282	J_Hyd-R028E	276.99	150	100	0.00	0.00	0.0
WM2047C_02	Rural	WVR053	J-0319	110.95	200	110	1.56	0.05	0.0
WM2047C_03	Rural	J-0319	J_Hyd-R016E	10.19	200	110	1.56	0.05	0.0
WM2047C_04	Rural	J_Hyd-R016E	J-0113	3.18	200	110	1.56	0.05	0.0
WM2047C_05	Rural	J-0113	J-0186	5.93	200	110	1.56	0.05	0.0
WM2048C_01	Rural	J-0186	WVR029	4.53	200	110	1.56	0.05	0.0
WM2048C_02	Rural	WVR029	J-0103	2.95	200	110	1.56	0.05	0.0
WM2048C_03	Rural	J-0103	WVR030	1818.80	200	110	1.56	0.05	0.1
WM2048C_04	Rural	WVR030	WVR032	608.74	200	110	1.56	0.05	0.0
WM2048C_05	Rural	WVR032	J-0151	3.93	200	110	1.56	0.05	0.0
WM2048C_06	Rural	J-0151	J-0215	5.40	200	110	1.56	0.05	0.0
WM2048C_07	Rural	J-0215	J-0077	9.76	200	110	1.56	0.05	0.0
WM2049C_01	Rural	J-0077	J-0078	2.32	200	110	1.56	0.05	0.0
WM2049C_02	Rural	J-0078	WVR033	3.59	200	110	1.56	0.05	0.0
WM2049C_03	Rural	WVR033	J_Hyd-R007E	995.72	200	110	1.56	0.05	0.0
WM2049C_04	Rural	J_Hyd-R007E	J-0352	1408.71	200	110	1.56	0.05	0.0
WM2049C_05	Rural	J-0019	WVR046	1.14	200	110	-1.56	0.05	0.0
WM2049C_06	Rural	WVR046	J-0110	3.14	200	110	-1.56	0.05	0.0
WM2049C_07	Rural	J-0110	J-0352	13.14	200	110	-1.56	0.05	0.0
WM2089C_05	Rural	J-0304	J-0137	9.13	200	110	-7.64	0.24	0.0
WM2089C_06	Rural	J-0137	J-0138	3.61	200	110	-7.64	0.24	0.0
WM2089C_07(1)	Rural	J-0138	J-688	5.16	200	110	-7.64	0.24	0.0
WM2089C_07(2)	Rural	J-688	J-0376	10.48	200	110	-11.70	0.37	0.0
WM2097_01	Rural	J-0100	WVR024	2.85	100	100	0.00	0.00	0.0
WM2097_02	Rural	WVR024	J-0625	347.23	100	100	0.00	0.00	0.0
WM2111C_01	Rural	J_Hyd-R006E	J-0064	8.81	150	100	2.71	0.15	0.0
WM2111C_02	Rural	J-0064	WVR042	1.98	150	100	2.71	0.15	0.0
WM2111C_03	Rural	WVR042	WVM032	932.63	150	100	2.71	0.15	0.4
WM2111_01	Rural	J-0405	J-0631	583.42	200	110	2.90	0.09	0.1
WM2111_02	Rural	J-0631	J-0563	549.68	200	110	2.90	0.09	0.1
WM2111_03	Rural	J-0563	J-0536	105.89	200	110	2.90	0.09	0.0
WM2111_04	Rural	J-0536	J_Hyd-R010E	76.85	200	110	2.84	0.09	0.0
WM2111_05	Rural	J_Hyd-R010E	WVR038	3.57	200	110	2.84	0.09	0.0
WM2111_06	Rural	WVR038	J-0243	6.22	200	110	2.84	0.09	0.0
WM2111_07	Rural	J-0243	J-0370	14.97	200	110	2.84	0.09	0.0
WM2111_08	Rural	J-0370	J-0263	36.29	200	110	2.84	0.09	0.0
WM2112C_01	Rural	J_Hyd-R005E	WVR043	17.41	150	100	2.71	0.15	0.0
WM2112C_02	Rural	WVR043	J-0326	1341.21	150	100	2.71	0.15	0.5
WM2112C_03	Rural	J-0326	J-0298	10.58	150	100	2.71	0.15	0.0
WM2112C_04	Rural	J-0298	J-0299	8.97	150	100	2.71	0.15	0.0
WM2112_01	Rural	J_Hyd-R013E	WVR036	20.22	200	110	2.90	0.09	0.0
WM2112_02	Rural	WVR036	J_Hyd-R012E	11.04	200	110	2.90	0.09	0.0
WM2112_03	Rural	J_Hyd-R012E	J-0582	131.98	200	110	2.90	0.09	0.0
WM2112_04	Rural	J-0582	J-0573	1091.55	200	110	2.90	0.09	0.1
WM2112_05	Rural	J-0573	J-0574	114.04	200	110	2.90	0.09	0.0
WM2112_06	Rural	J-0574	J_Hyd-R011E	120.36	200	110	2.90	0.09	0.0
WM2112_07	Rural	J_Hyd-R011E	J-0351	12.71	200	110	2.90	0.09	0.0
WM2112_08	Rural	J-0351	WVR037	15.56	200	110	2.90	0.09	0.0
WM2112_09	Rural	WVR037	J-0405	20.43	200	110	2.90	0.09	0.0
WM2113C_01	Rural	J_Hyd-R004E	J_Hyd-R005E	813.28	150	100	1.56	0.09	0.1
WM2113C_02	Rural	WVR054	WVR055	86.32	150	100	-1.56	0.09	0.0
WM2113C_03	Rural	WVR055	J-0483	97.84	150	100	-1.56	0.09	0.0
WM2113C_04	Rural	WVR054	J_Hyd-R004E	21.71	150	100	1.56	0.09	0.0
WM2113C_05	Rural	J-0483	J-0484	39.50	150	100	-1.56	0.09	0.0
WM2113C_06	Rural	J-0484	WVR045	285.24	150	100	-1.56	0.09	0.0
WM2113C_07	Rural	WVR045	J-0019	39.17	150	100	-1.56	0.09	0.0
WM2114C	Rural	J-0208	J_Hyd-R001E	498.34	150	100	0.00	0.00	0.0
WM2114_01	Rural	J-0077	J_Hyd-R026E	4.87	200	110	0.00	0.00	0.0
WM2114_02	Rural	J_Hyd-R026E	J-0637	713.60	200	110	0.00	0.00	0.0
WM2118C	Rural	J-0241	J-0208	215.87	150	100	0.00	0.00	0.0
WM2119C	Rural	J-0019	J-0241	176.56	150	100	0.00	0.00	0.0

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0003	Glencoe	0.00	220.18	264.2	430
J-0004	Glencoe	0.00	221.47	264.1	418
J-0005	Glencoe	0.00	220.94	264.2	423
J-0006	Glencoe	0.00	219.32	264.3	440
J-0007	Glencoe	0.00	219.32	264.3	440
J-0011	Glencoe	0.00	219.21	264.2	440
J-0013	Glencoe	0.00	219.32	264.3	440
J-0014	Glencoe	0.00	219.71	264.2	435
J-0017	Glencoe	0.00	219.32	264.3	440
J-0025	Glencoe	0.00	221.81	264.1	414
J-0032	Glencoe	0.00	221.02	264.2	422
J-0036	Glencoe	0.00	220.75	264.1	425
J-0038	Glencoe	0.00	219.48	264.3	438
J-0039	Glencoe	0.00	219.48	264.3	438
J-0044	Glencoe	0.00	221.03	264.1	422
J-0045	Glencoe	0.00	221.03	264.1	422
J-0047	Glencoe	0.00	219.32	264.3	440
J-0048	Glencoe	0.00	219.89	264.2	434
J-0049	Glencoe	0.00	219.89	264.2	434
J-0054	Glencoe	0.26	222.07	264.1	412
J-0059	Glencoe	0.00	221.53	264.2	417
J-0060	Glencoe	0.00	221.52	264.1	417
J-0063	Glencoe	0.00	219.52	264.2	437
J-0066	Glencoe	2.14	219.37	264.4	440
J-0067	Glencoe	0.18	219.37	264.4	440
J-0070	Glencoe	0.00	220.30	264.1	429
J-0071	Glencoe	0.00	221.39	264.1	418
J-0072	Glencoe	0.00	221.47	264.1	418
J-0075	Glencoe	0.00	219.89	264.2	434
J-0076	Glencoe	0.00	221.37	264.1	419
J-0080	Glencoe	0.00	219.03	264.2	442
J-0084	Glencoe	0.00	221.64	264.1	416
J-0089	Glencoe	0.00	218.74	264.2	445
J-0091	Glencoe	0.00	219.67	264.2	435
J-0093	Glencoe	0.00	219.21	264.2	440
J-0094	Glencoe	0.00	219.02	264.2	442
J-0097	Glencoe	0.00	220.18	264.2	430
J-0098	Glencoe	0.00	222.46	264.1	408
J-0099	Glencoe	0.00	220.30	264.2	429
J-0101	Glencoe	0.75	220.52	264.3	428
J-0104	Glencoe	0.00	219.02	264.2	442
J-0106	Glencoe	0.00	220.30	264.2	429
J-0107	Glencoe	0.20	219.71	264.2	435
J-0111	Glencoe	0.00	220.46	264.2	428
J-0115	Glencoe	0.00	221.64	264.1	416
J-0116	Glencoe	0.00	221.14	264.2	421
J-0123	Glencoe	0.00	219.89	264.2	434
J-0124	Glencoe	0.00	221.86	264.1	414
J-0126	Glencoe	0.00	222.19	264.2	411
J-0128	Glencoe	0.00	220.36	264.2	429
J-0134	Glencoe	0.00	221.58	264.1	417
J-0135	Glencoe	0.25	221.58	264.1	417
J-0139	Glencoe	0.00	220.94	264.2	423
J-0144	Glencoe	0.25	220.30	264.2	429
J-0145	Glencoe	0.00	219.32	264.3	440
J-0146	Glencoe	0.40	219.32	264.3	440
J-0165	Glencoe	0.00	222.40	264.1	408
J-0166	Glencoe	0.00	222.18	264.1	411
J-0168	Glencoe	0.00	218.80	264.2	444
J-0169	Glencoe	0.00	219.08	264.2	442
J-0172	Glencoe	0.00	220.46	264.2	428
J-0175	Glencoe	0.31	220.69	264.1	425
J-0178	Glencoe	0.00	220.82	264.2	424
J-0179	Glencoe	0.00	221.40	264.1	418
J-0180	Glencoe	0.00	219.24	264.3	441
J-0187	Glencoe	0.36	219.29	264.2	439
J-0191	Glencoe	0.00	219.87	264.2	433
J-0198	Glencoe	0.33	220.60	264.1	426
J-0201	Glencoe	0.00	221.07	264.1	422
J-0202	Glencoe	0.00	219.58	264.3	437
J-0205	Glencoe	0.00	219.67	264.2	435
J-0211	Glencoe	0.00	220.94	264.2	423
J-0213	Glencoe	0.22	220.33	264.2	429

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0222	Glencoe	0.31	221.83	264.1	414
J-0227	Glencoe	0.00	218.72	264.2	445
J-0235	Glencoe	0.33	219.58	264.2	436
J-0236	Glencoe	0.00	221.53	264.2	417
J-0239	Glencoe	0.00	220.46	264.2	428
J-0252	Glencoe	0.00	221.64	264.1	416
J-0255	Glencoe	0.00	220.66	264.1	426
J-0256	Glencoe	0.00	220.66	264.1	426
J-0262	Glencoe	0.00	218.81	264.2	444
J-0264	Glencoe	0.00	221.34	264.1	419
J-0265	Glencoe	0.00	221.14	264.2	421
J-0267	Glencoe	1.37	220.89	264.2	424
J-0271	Glencoe	0.00	221.37	264.1	419
J-0272	Glencoe	0.00	220.69	264.1	425
J-0273	Glencoe	0.00	220.69	264.1	425
J-0275	Glencoe	0.00	218.80	264.2	445
J-0279	Glencoe	0.00	219.07	264.2	441
J-0284	Glencoe	0.40	221.40	264.1	418
J-0285	Glencoe	0.00	221.40	264.1	418
J-0286	Glencoe	0.00	220.95	264.2	423
J-0288	Glencoe	0.00	219.95	264.2	433
J-0291	Glencoe	0.00	220.39	264.1	428
J-0303	Glencoe	0.00	220.18	264.2	430
J-0306	Glencoe	0.15	220.39	264.1	428
J-0316	Glencoe	0.00	219.71	264.2	435
J-0321	Glencoe	0.00	218.44	264.2	447
J-0324	Glencoe	0.00	220.30	264.2	429
J-0331	Glencoe	0.00	220.78	264.2	424
J-0332	Glencoe	0.00	221.43	264.1	418
J-0333	Glencoe	0.00	220.63	264.1	426
J-0334	Glencoe	0.00	220.51	264.1	427
J-0336	Glencoe	0.00	220.94	264.2	423
J-0337	Glencoe	0.00	219.08	264.3	442
J-0338	Glencoe	0.00	219.08	264.3	442
J-0339	Glencoe	0.00	221.94	264.1	413
J-0340	Glencoe	0.00	221.94	264.1	413
J-0342	Glencoe	0.00	220.51	264.1	427
J-0344	Glencoe	0.00	221.97	264.1	413
J-0353	Glencoe	0.00	221.46	264.2	418
J-0354	Glencoe	0.38	220.21	264.2	430
J-0358	Glencoe	0.00	218.83	264.2	444
J-0360	Glencoe	0.00	220.66	264.2	426
J-0364	Glencoe	0.44	222.05	264.1	412
J-0367	Glencoe	0.00	221.47	264.1	418
J-0368	Glencoe	0.00	221.72	264.1	415
J-0373	Glencoe	0.00	221.20	264.2	420
J-0381	Glencoe	0.00	220.68	264.1	425
J-0384	Glencoe	0.00	220.86	264.1	424
J-0389	Glencoe	0.00	220.58	264.1	426
J-0390	Glencoe	0.00	221.48	264.1	418
J-0402	Glencoe	0.00	222.13	264.1	411
J-0409	Glencoe	0.22	220.12	264.2	431
J-0410	Glencoe	0.00	220.77	264.2	425
J-0421	Glencoe	0.30	219.44	264.2	438
J-0424	Glencoe	0.00	221.29	264.2	420
J-0425	Glencoe	0.00	220.56	264.2	427
J-0427	Glencoe	0.57	221.50	264.1	417
J-0435	Glencoe	0.00	220.73	264.1	425
J-0437	Glencoe	0.00	221.47	264.1	418
J-0447	Glencoe	0.41	219.72	264.2	435
J-0449	Glencoe	0.00	220.38	264.1	428
J-0450	Glencoe	0.00	220.38	264.1	428
J-0451	Glencoe	0.00	220.75	264.2	425
J-0452	Glencoe	0.00	222.13	264.1	411
J-0468	Glencoe	0.00	220.56	264.2	427
J-0469	Glencoe	0.00	220.51	264.2	427
J-0481	Glencoe	0.13	221.57	264.1	417
J-0488	Glencoe	0.00	219.85	264.2	434
J-0494	Glencoe	0.73	219.65	264.4	438
J-0497	Glencoe	0.00	220.51	264.1	427
J-0503	Glencoe	0.00	220.59	264.1	426
J-0507	Glencoe	0.00	221.01	264.1	422
J-0524	Glencoe	0.00	220.61	264.1	426
J-0529	Glencoe	0.13	220.34	264.2	429
J-0533	Glencoe	0.00	220.79	264.1	424

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0535	Glencoe	0.00	220.56	264.2	427
J-0539	Glencoe	0.08	220.67	264.2	425
J-0543	Glencoe	0.00	221.46	264.1	418
J-0544	Glencoe	0.00	219.48	264.3	438
J-0546	Glencoe	0.31	221.52	264.1	417
J-0554	Glencoe	0.33	221.27	264.1	420
J-0559	Glencoe	0.00	219.25	264.2	440
J-0561	Glencoe	0.00	221.13	264.1	421
J-0564	Glencoe	0.00	220.73	264.1	425
J-0566	Glencoe	0.00	221.47	264.1	418
J-0568	Glencoe	0.00	218.97	264.2	442
J-0579	Glencoe	0.00	221.75	264.1	415
J-0580	Glencoe	0.00	221.33	264.1	419
J-0581	Glencoe	0.23	221.45	264.1	418
J-0584	Glencoe	0.00	220.81	264.2	424
J-0586	Glencoe	0.73	221.75	264.2	415
J-0590	Glencoe	0.00	219.80	264.2	434
J-0602	Glencoe	0.00	221.75	264.1	415
J-0627	Glencoe	0.31	221.20	264.1	420
J-0632	Glencoe	0.00	219.75	264.2	435
J-0635	Glencoe	0.00	222.08	264.5	415
J-0646	Glencoe	0.00	214.32	278.0	623
J-690	Glencoe	0.00	219.24	264.3	440
J-692	Glencoe	0.00	221.27	264.1	420
J-695	Glencoe	0.00	221.39	264.1	418
J-698	Glencoe	0.00	221.97	264.1	413
J-700	Glencoe	0.00	221.63	264.1	416
J-703	Glencoe	0.00	220.68	264.1	425
J-705	Glencoe	0.00	221.20	264.1	420
J-707	Glencoe	0.00	221.01	264.1	422
J-709	Glencoe	0.00	219.02	264.2	442
J-713	Glencoe	0.00	220.91	264.2	423
J-715	Glencoe	0.00	220.94	264.2	423
J-718	Glencoe	0.00	220.68	264.2	425
J-720	Glencoe	0.30	221.39	264.1	418
J-722	Glencoe	0.00	222.21	264.1	410
J-724	Glencoe	0.00	222.40	264.1	408
J-727	Glencoe	0.00	222.40	264.1	408
J-734	Glencoe	0.00	220.09	264.2	431
J-735	Glencoe	0.00	220.09	264.2	431
J-753	Glencoe	0.00	220.54	264.1	427
J-759	Glencoe	0.00	220.47	264.1	427
J-760	Glencoe	0.00	220.38	264.1	428
J-761	Glencoe	0.00	220.22	264.1	430
J-762	Glencoe	0.00	221.99	264.1	413
J-764	Glencoe	0.00	219.44	264.1	437
J-765	Glencoe	0.00	219.44	264.1	437
J-766	Glencoe	0.00	219.88	264.1	433
J-767	Glencoe	0.00	219.50	264.1	437
J-768	Glencoe	0.00	219.49	264.1	437
J-769	Glencoe	0.00	219.58	264.1	436
J-770	Glencoe	0.00	219.69	264.1	435
J-771	Glencoe	0.00	219.83	264.1	434
J-772	Glencoe	0.00	219.83	264.1	434
J-773	Glencoe	0.00	219.88	264.1	433
J-775	Glencoe	0.00	219.80	264.1	434
J-777	Glencoe	0.00	219.87	264.1	433
J-778	Glencoe	0.00	219.73	264.1	435
J-779	Glencoe	0.00	219.26	264.2	439
J-780	Glencoe	0.00	220.29	264.2	429
J-781	Glencoe	0.00	218.70	264.2	445
J-782	Glencoe	0.00	218.55	264.2	446
J-783	Glencoe	0.00	218.42	264.2	448
J-784	Glencoe	0.00	218.23	264.2	450
J-785	Glencoe	0.00	217.92	264.2	453
J-786	Glencoe	0.00	217.71	264.2	455
J-787	Glencoe	0.00	217.74	264.2	454
J-788	Glencoe	0.00	217.66	264.2	455
J-789	Glencoe	0.00	217.51	264.2	457
J-790	Glencoe	0.00	217.28	264.2	459
J-791	Glencoe	0.00	217.22	264.2	460
J-792	Glencoe	0.00	217.28	264.2	459
J-793	Glencoe	0.00	217.38	264.2	458
J-794	Glencoe	0.00	217.70	264.2	455
J-795	Glencoe	0.00	218.09	264.2	451

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-796	Glencoe	0.00	218.22	264.2	450
J-797	Glencoe	0.00	218.88	264.2	443
J-798	Glencoe	0.00	219.44	264.2	438
J-799	Glencoe	0.00	219.63	264.2	436
J-800	Glencoe	0.00	221.39	264.1	418
J-801	Glencoe	0.00	220.08	264.2	431
J-803	Glencoe	0.00	218.52	264.2	447
J-804	Glencoe	0.00	218.51	264.2	447
J-805	Glencoe	0.00	218.60	264.2	446
J-806	Glencoe	0.00	218.14	264.2	450
J-807	Glencoe	0.00	218.08	264.2	451
J-810	Glencoe	0.00	218.27	264.2	449
J-812	Glencoe	0.00	217.74	264.2	454
J-813	Glencoe	0.00	217.74	264.2	454
J-814	Glencoe	0.00	217.91	264.2	453
J-816	Glencoe	0.00	217.74	264.2	454
J-817	Glencoe	0.00	217.93	264.2	453
J-818	Glencoe	0.00	217.37	264.2	458
J-819	Glencoe	0.00	217.41	264.2	458
J-820	Glencoe	0.00	217.56	264.2	456
J-821	Glencoe	0.00	217.29	264.2	459
J-822	Glencoe	0.00	218.81	264.2	444
J-823	Glencoe	0.00	218.81	264.2	444
J-824	Glencoe	0.00	218.90	264.2	443
J-826	Glencoe	0.00	217.90	264.2	453
J-827	Glencoe	0.00	219.58	264.2	437
J_Hyd-G001	Glencoe	0.00	220.49	264.2	427
J_Hyd-G002	Glencoe	0.00	219.67	264.2	435
J_Hyd-G003	Glencoe	0.00	221.48	264.2	418
J_Hyd-G004	Glencoe	0.00	221.23	264.2	420
J_Hyd-G005	Glencoe	0.00	222.23	264.1	410
J_Hyd-G006	Glencoe	0.00	222.40	264.1	408
J_Hyd-G008	Glencoe	0.00	220.68	264.1	425
J_Hyd-G009	Glencoe	0.00	221.54	264.1	417
J_Hyd-G010	Glencoe	0.00	221.47	264.1	418
J_Hyd-G011	Glencoe	0.00	219.92	264.2	433
J_Hyd-G012	Glencoe	0.00	220.18	264.2	430
J_Hyd-G013	Glencoe	0.00	221.02	264.2	422
J_Hyd-G014	Glencoe	0.00	221.20	264.2	420
J_Hyd-G016	Glencoe	0.00	221.03	264.1	422
J_Hyd-G018	Glencoe	0.00	220.42	264.2	428
J_Hyd-G019	Glencoe	0.00	220.44	264.2	428
J_Hyd-G020	Glencoe	0.00	221.28	264.1	419
J_Hyd-G021	Glencoe	0.00	221.03	264.1	422
J_Hyd-G022	Glencoe	0.00	219.49	264.2	437
J_Hyd-G023	Glencoe	0.00	220.09	264.2	431
J_Hyd-G024	Glencoe	0.00	221.83	264.2	414
J_Hyd-G025	Glencoe	0.00	221.53	264.2	417
J_Hyd-G026	Glencoe	0.00	221.14	264.1	421
J_Hyd-G027	Glencoe	0.00	221.43	264.1	418
J_Hyd-G028	Glencoe	0.00	221.41	264.1	418
J_Hyd-G029	Glencoe	0.00	220.02	264.2	432
J_Hyd-G041	Glencoe	0.00	220.89	264.1	423
J_Hyd-G042	Glencoe	0.00	220.42	264.1	428
J_Hyd-G043	Glencoe	0.00	220.64	264.1	426
J_Hyd-G044	Glencoe	0.00	220.85	264.1	424
J_Hyd-G045	Glencoe	0.00	221.65	264.1	416
J_Hyd-G046	Glencoe	0.00	221.40	264.1	418
J_Hyd-G047	Glencoe	0.00	221.04	264.2	422
J_Hyd-G048	Glencoe	0.00	220.30	264.2	429
J_Hyd-G049	Glencoe	0.00	220.49	264.2	427
J_Hyd-G050	Glencoe	0.00	221.05	264.2	422
J_Hyd-G051	Glencoe	0.00	221.15	264.1	421
J_Hyd-G052	Glencoe	0.00	220.65	264.2	426
J_Hyd-G053	Glencoe	0.00	220.83	264.2	424
J_Hyd-G056	Glencoe	0.00	220.90	264.1	423
J_Hyd-G057	Glencoe	0.00	220.89	264.1	423
J_Hyd-G058	Glencoe	0.00	221.20	264.1	420
J_Hyd-G059	Glencoe	0.00	219.83	264.2	434
J_Hyd-G060	Glencoe	0.00	219.29	264.2	439
J_Hyd-G061	Glencoe	0.00	219.19	264.2	440
J_Hyd-G062	Glencoe	0.00	220.50	264.3	428
J_Hyd-G063	Glencoe	0.00	220.84	264.1	424
J_Hyd-G064	Glencoe	0.00	219.52	264.2	437
J_Hyd-G065	Glencoe	0.00	219.55	264.2	437

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-G066	Glencoe	0.00	220.23	264.2	430
J_Hyd-G067	Glencoe	0.00	219.02	264.2	442
J_Hyd-G068	Glencoe	0.00	218.84	264.2	443
J_Hyd-G069	Glencoe	0.00	221.96	264.1	413
J_Hyd-G070	Glencoe	0.00	221.63	264.1	416
J_Hyd-G071	Glencoe	0.00	220.68	264.1	425
J_Hyd-G073	Glencoe	0.00	220.65	264.1	426
J_Hyd-G074	Glencoe	0.00	220.63	264.1	426
J_Hyd-G075	Glencoe	0.00	221.31	264.1	419
J_Hyd-G076	Glencoe	0.00	221.52	264.1	417
J_Hyd-G077	Glencoe	0.00	221.15	264.1	421
J_Hyd-G078	Glencoe	0.00	219.48	264.3	438
J_Hyd-G079	Glencoe	0.00	218.83	264.2	444
J_Hyd-G080	Glencoe	0.00	221.89	264.1	413
J_Hyd-G081	Glencoe	0.00	218.72	264.2	445
J_Hyd-G082	Glencoe	0.00	222.21	264.1	410
J_Hyd-G083	Glencoe	0.00	220.52	264.3	428
J_Hyd-G084	Glencoe	0.00	218.50	264.3	448
J_Hyd-G085	Glencoe	0.00	221.05	264.1	422
J_Hyd-G086	Glencoe	0.00	221.52	264.1	417
J_Hyd-G087	Glencoe	0.00	222.13	264.1	411
J_Hyd-G088	Glencoe	0.00	218.78	264.2	444
J_Hyd-G089	Glencoe	0.00	219.14	264.2	441
J_Hyd-G090	Glencoe	0.00	218.83	264.2	444
J_Hyd-G091	Glencoe	0.00	218.54	264.2	446
J_Hyd-G092	Glencoe	0.00	221.27	264.1	420
J_Hyd-G093	Glencoe	0.00	220.52	264.2	427
J_Hyd-G094	Glencoe	0.00	220.33	264.2	429
J_Hyd-G095	Glencoe	0.00	221.89	264.1	413
J_Hyd-G096	Glencoe	0.00	221.27	264.1	419
J_Hyd-G097	Glencoe	0.00	221.43	264.1	418
J_Hyd-G098	Glencoe	0.00	222.70	264.1	405
J_Hyd-H_T-718	Glencoe	0.00	219.72	264.2	435
WV-348	Glencoe	0.00	222.18	264.1	411
WVG001	Glencoe	0.10	221.52	264.1	417
WVG002	Glencoe	0.00	220.69	264.1	425
WVG003	Glencoe	0.00	220.69	264.1	425
WVG004	Glencoe	0.00	220.69	264.1	425
WVG010	Glencoe	0.00	220.30	264.2	429
WVG010	Glencoe	0.00	218.74	264.2	445
WVG011	Glencoe	0.00	220.30	264.2	429
WVG012	Glencoe	0.00	220.60	264.2	426
WVG013	Glencoe	0.00	220.91	264.2	423
WVG015	Glencoe	0.00	220.81	264.1	424
WVG018	Glencoe	0.00	220.30	264.1	429
WVG019	Glencoe	0.00	220.30	264.2	429
WVG020	Glencoe	0.00	220.83	264.2	424
WVG022	Glencoe	0.00	221.20	264.1	420
WVG027	Glencoe	0.00	221.37	264.1	419
WVG028	Glencoe	0.00	221.31	264.1	419
WVG029	Glencoe	0.00	221.64	264.1	416
WVG030	Glencoe	0.00	221.21	264.1	420
WVG032	Glencoe	0.00	221.00	264.2	422
WVG035	Glencoe	0.00	220.82	264.2	424
WVG036	Glencoe	0.00	220.82	264.2	424
WVG037	Glencoe	0.00	220.78	264.2	424
WVG038	Glencoe	0.00	220.94	264.2	423
WVG039	Glencoe	0.00	220.94	264.2	423
WVG040	Glencoe	0.00	220.94	264.2	423
WVG041	Glencoe	0.00	220.94	264.2	423
WVG042	Glencoe	0.00	220.94	264.2	423
WVG043	Glencoe	0.00	221.07	264.1	422
WVG044	Glencoe	0.00	221.07	264.1	422
WVG045	Glencoe	0.00	221.44	264.2	418
WVG046	Glencoe	0.00	221.52	264.1	417
WVG047	Glencoe	0.00	221.40	264.1	418
WVG048	Glencoe	0.00	221.65	264.1	416
WVG049	Glencoe	0.00	221.65	264.1	416
WVG050	Glencoe	0.00	221.39	264.1	418
WVG051	Glencoe	0.01	220.88	264.1	423
WVG052	Glencoe	0.00	220.75	264.1	425
WVG053	Glencoe	0.00	220.37	264.1	428
WVG054	Glencoe	1.07	220.60	264.1	426
WVG055	Glencoe	0.00	220.65	264.1	426
WVG056	Glencoe	0.00	220.39	264.1	428

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVG057	Glencoe	0.00	221.86	264.1	414
WVG058	Glencoe	0.00	221.52	264.1	417
WVG059	Glencoe	0.00	221.52	264.1	417
WVG061	Glencoe	0.00	221.43	264.1	418
WVG064	Glencoe	0.00	221.03	264.1	422
WVG069	Glencoe	0.00	221.89	264.1	413
WVG070	Glencoe	0.00	221.83	264.1	414
WVG071	Glencoe	0.00	221.83	264.1	414
WVG074	Glencoe	0.34	221.48	264.1	418
WVG085	Glencoe	0.00	221.35	264.1	419
WVG086	Glencoe	0.00	221.47	264.1	418
WVG087	Glencoe	0.00	221.20	264.2	420
WVG090	Glencoe	0.00	220.66	264.2	426
WVG091	Glencoe	0.00	220.36	264.2	429
WVG093	Glencoe	0.00	220.18	264.2	430
WVG094	Glencoe	0.00	219.87	264.2	433
WVG096	Glencoe	0.00	219.71	264.2	435
WVG097	Glencoe	0.00	219.72	264.2	435
WVG099	Glencoe	0.00	220.09	264.2	431
WVG100	Glencoe	0.00	220.09	264.2	431
WVG101	Glencoe	0.00	219.67	264.2	435
WVG102	Glencoe	0.00	219.67	264.2	435
WVG103	Glencoe	0.00	219.67	264.2	435
WVG104	Glencoe	0.00	219.29	264.2	439
WVG105	Glencoe	0.00	219.29	264.2	439
WVG106	Glencoe	0.00	219.52	264.2	437
WVG107	Glencoe	0.00	219.52	264.2	437
WVG108	Glencoe	0.00	218.74	264.2	445
WVG109	Glencoe	0.00	218.74	264.2	445
WVG113	Glencoe	0.00	219.67	264.2	435
WVG116	Glencoe	0.00	219.80	264.2	434
WVG117	Glencoe	0.00	220.25	264.2	430
WVG120	Glencoe	0.00	218.73	264.2	445
WVG122	Glencoe	0.00	220.89	264.2	424
WVG129	Glencoe	0.00	220.46	264.2	428
WVG130	Glencoe	0.00	220.46	264.2	428
WVG131	Glencoe	0.00	220.46	264.2	428
WVG132	Glencoe	0.00	219.02	264.2	442
WVG133	Glencoe	0.00	219.02	264.2	442
WVG139	Glencoe	0.00	219.72	264.2	435
WVG140	Glencoe	0.00	219.89	264.2	434
WVG143	Glencoe	0.00	219.32	264.3	440
WVG147	Glencoe	0.00	218.60	264.2	446
WVG148	Glencoe	0.00	218.97	264.2	442
WVG149	Glencoe	0.00	219.95	264.2	433
WVG150	Glencoe	0.00	219.40	264.2	438
WVG151	Glencoe	0.30	218.54	264.2	446
WVG152	Glencoe	0.00	221.63	264.1	416
WVG153	Glencoe	0.00	222.46	264.1	408
WVG158	Glencoe	0.00	221.74	264.1	415
WVG159	Glencoe	0.00	222.07	264.1	412
WVG161	Glencoe	0.00	220.95	264.2	423
WVG164	Glencoe	0.00	221.63	264.1	416
WVG165	Glencoe	0.00	221.86	264.1	414
WVG169	Glencoe	0.00	221.97	264.1	413
WVG170	Glencoe	0.00	221.61	264.1	416
WVG171	Glencoe	0.00	221.81	264.1	414
WVG172	Glencoe	0.00	221.64	264.1	416
WVG175	Glencoe	0.00	221.83	264.1	414
WVG181	Glencoe	0.00	219.21	264.2	440
WVG183	Glencoe	0.00	219.03	264.2	442
WVG185	Glencoe	0.00	219.58	264.2	436
WVG186	Glencoe	0.00	220.09	264.2	431
WVG187	Glencoe	0.00	219.62	264.2	436
WVG188	Glencoe	0.00	221.14	264.2	421
WVG189	Glencoe	0.00	220.09	264.2	431
WVG190	Glencoe	0.25	219.29	264.2	439
WVG191	Glencoe	0.00	218.72	264.2	445
WVG192	Glencoe	0.00	218.72	264.2	445
WVG193	Glencoe	0.00	219.89	264.2	434
WVG196	Glencoe	0.00	219.58	264.2	437
WVG197	Glencoe	0.00	219.58	264.3	437
WVG199	Glencoe	0.00	221.53	264.2	417
WVG200	Glencoe	0.00	221.46	264.1	418
WVR021	Glencoe	0.00	219.38	264.4	441

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVR022	Glencoe	0.00	219.48	264.3	438
J-0037	Melborne	0.00	221.36	251.6	296
J-0065	Melborne	0.00	221.95	251.6	290
J-0105	Melborne	0.00	221.78	251.6	292
J-0108	Melborne	0.00	222.00	251.6	290
J-0109	Melborne	0.23	222.00	251.6	290
J-0125	Melborne	0.00	221.88	251.6	290
J-0156	Melborne	0.00	222.65	251.6	284
J-0157	Melborne	0.00	222.65	251.6	284
J-0158	Melborne	0.00	221.85	251.6	291
J-0159	Melborne	0.00	221.86	251.6	291
J-0176	Melborne	0.00	219.99	251.6	309
J-0177	Melborne	0.23	220.58	251.6	303
J-0189	Melborne	0.00	221.71	251.6	292
J-0192	Melborne	0.00	221.15	251.6	298
J-0203	Melborne	0.00	221.35	251.6	296
J-0230	Melborne	0.26	222.96	251.6	280
J-0237	Melborne	0.00	221.35	251.6	296
J-0248	Melborne	0.00	221.91	251.6	290
J-0249	Melborne	0.25	221.91	251.6	290
J-0312	Melborne	0.00	221.84	251.6	292
J-0396	Melborne	0.00	221.53	251.6	294
J-0403	Melborne	0.00	221.78	251.6	292
J-0407	Melborne	0.25	220.70	251.6	302
J-0413	Melborne	0.00	221.82	251.7	292
J-0414	Melborne	0.00	221.49	251.7	295
J-0430	Melborne	0.00	221.36	251.6	296
J-0434	Melborne	0.00	221.75	251.6	292
J-0476	Melborne	0.00	223.00	251.6	280
J-0493	Melborne	0.12	219.69	251.6	312
J-0498	Melborne	0.00	222.22	251.6	288
J-0500	Melborne	0.00	222.24	251.6	287
J-0502	Melborne	0.00	221.77	251.6	292
J-0531	Melborne	0.00	222.32	251.8	288
J-0639	Melborne	0.00	225.41	256.6	305
J_Hyd-M002	Melborne	0.00	219.00	252.1	324
J_Hyd-M003	Melborne	0.00	219.73	251.8	314
J_Hyd-M004	Melborne	0.00	221.15	251.6	298
J_Hyd-M005	Melborne	0.00	221.44	251.6	295
J_Hyd-M006	Melborne	0.00	222.31	251.6	286
J_Hyd-M007	Melborne	0.00	221.82	251.6	291
J_Hyd-M008	Melborne	0.00	222.52	251.6	284
J_Hyd-M009	Melborne	0.00	222.86	251.6	281
J_Hyd-M010	Melborne	0.00	221.91	251.6	290
J_Hyd-M011	Melborne	0.00	223.22	251.6	278
J_Hyd-M012	Melborne	0.00	221.53	251.6	294
J_Hyd-M013	Melborne	0.06	223.56	251.6	274
J_Hyd-M014	Melborne	0.00	222.20	251.6	288
J_Hyd-M015	Melborne	0.00	223.30	251.6	277
J_Hyd-M016	Melborne	0.00	222.65	251.6	284
J_Hyd-M017	Melborne	0.00	222.32	251.8	288
J_Hyd-M018	Melborne	0.00	221.84	251.7	292
J_Hyd-M019	Melborne	0.00	221.35	251.6	296
J_Hyd-M020	Melborne	0.00	220.58	251.6	303
J_Hyd-M021	Melborne	0.00	221.95	251.6	290
J_Hyd-M022	Melborne	0.00	220.18	251.6	307
J_Hyd-M023	Melborne	0.00	220.16	251.6	308
WVA023	Melborne	0.00	221.95	251.6	290
WVM001	Melborne	0.00	221.15	251.6	298
WVM002	Melborne	0.00	221.15	251.6	298
WVM003	Melborne	0.00	220.48	251.6	305
WVM005	Melborne	0.00	221.88	251.6	290
WVM006	Melborne	0.00	221.88	251.6	290
WVM007	Melborne	0.00	221.23	251.6	297
WVM008	Melborne	0.00	221.80	251.6	291
WVM009	Melborne	0.00	221.78	251.6	292
WVM010	Melborne	0.00	221.85	251.6	291
WVM011	Melborne	0.00	221.85	251.6	291
WVM012	Melborne	0.00	221.84	251.6	292
WVM013	Melborne	0.00	222.21	251.6	288
WVM014	Melborne	0.00	222.00	251.6	289
WVM015	Melborne	0.00	221.91	251.6	290
WVM017	Melborne	0.00	221.71	251.6	292
WVM018	Melborne	0.00	221.72	251.6	292
WVM019	Melborne	0.00	222.96	251.6	280

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVM020	Melborne	0.00	222.96	251.6	280
WVM021	Melborne	0.00	221.86	251.6	291
WVM022	Melborne	0.00	221.35	251.6	296
WVM023	Melborne	0.00	221.35	251.6	296
WVM025	Melborne	0.00	220.58	251.6	303
WVM026	Melborne	0.00	220.58	251.6	303
WVM027	Melborne	0.00	219.99	251.6	309
WVM028	Melborne	0.00	219.99	251.6	309
WVM030	Melborne	0.00	221.00	251.6	299
WVM031	Melborne	0.00	222.65	251.6	284
WVM032	Melborne	0.00	222.45	251.8	287
J-0002	Wardsville	0.00	204.57	250.5	450
J-0012	Wardsville	0.00	210.33	250.5	394
J-0018	Wardsville	0.00	210.33	250.5	394
J-0022	Wardsville	0.00	195.43	250.5	539
J-0023	Wardsville	0.10	203.82	250.6	457
J-0024	Wardsville	0.00	203.82	250.6	457
J-0027	Wardsville	0.00	212.30	250.5	374
J-0028	Wardsville	0.00	212.30	250.5	374
J-0029	Wardsville	0.00	199.99	250.5	495
J-0030	Wardsville	0.12	199.99	250.5	495
J-0031	Wardsville	0.00	210.85	250.6	388
J-0033	Wardsville	0.00	205.92	250.5	437
J-0034	Wardsville	0.00	205.92	250.5	437
J-0035	Wardsville	0.00	211.90	250.5	378
J-0040	Wardsville	0.00	200.40	250.5	491
J-0042	Wardsville	0.00	201.97	250.5	475
J-0050	Wardsville	0.00	208.88	250.5	408
J-0051	Wardsville	0.09	208.88	250.5	408
J-0055	Wardsville	0.00	210.29	250.5	394
J-0056	Wardsville	0.00	210.29	250.5	394
J-0061	Wardsville	0.00	200.40	250.5	491
J-0062	Wardsville	0.00	200.40	250.5	491
J-0068	Wardsville	0.00	209.82	250.5	398
J-0069	Wardsville	0.00	195.43	250.5	539
J-0081	Wardsville	0.00	209.82	250.5	398
J-0082	Wardsville	0.00	200.40	250.5	491
J-0083	Wardsville	0.00	200.40	250.5	491
J-0088	Wardsville	0.00	205.79	250.5	438
J-0120	Wardsville	0.00	206.22	250.5	434
J-0121	Wardsville	0.00	205.92	250.5	437
J-0122	Wardsville	0.09	207.03	250.5	426
J-0131	Wardsville	0.00	199.31	250.5	501
J-0132	Wardsville	0.00	199.88	250.5	496
J-0154	Wardsville	0.00	211.18	250.5	385
J-0160	Wardsville	0.00	205.17	250.6	444
J-0161	Wardsville	0.00	205.17	250.6	444
J-0174	Wardsville	0.00	201.18	250.5	483
J-0188	Wardsville	0.00	199.35	250.5	501
J-0217	Wardsville	0.11	212.05	250.5	377
J-0218	Wardsville	0.00	212.05	250.5	377
J-0223	Wardsville	0.00	201.18	250.5	483
J-0228	Wardsville	0.00	211.59	250.5	381
J-0229	Wardsville	0.00	211.22	250.5	385
J-0234	Wardsville	0.00	211.43	250.5	383
J-0238	Wardsville	0.13	199.53	250.5	499
J-0242	Wardsville	0.00	212.24	250.5	375
J-0245	Wardsville	0.00	194.57	250.5	548
J-0247	Wardsville	0.00	200.33	250.5	491
J-0251	Wardsville	0.00	198.40	250.5	510
J-0258	Wardsville	0.00	201.05	250.5	484
J-0283	Wardsville	0.15	212.26	250.5	375
J-0297	Wardsville	0.00	198.59	250.5	508
J-0307	Wardsville	0.00	198.04	250.5	514
J-0308	Wardsville	0.00	211.06	250.5	386
J-0311	Wardsville	0.00	205.84	250.5	437
J-0313	Wardsville	0.04	208.66	250.6	410
J-0343	Wardsville	0.00	208.18	250.5	415
J-0349	Wardsville	0.00	211.06	250.5	386
J-0423	Wardsville	0.00	200.86	250.5	486
J-0429	Wardsville	0.15	195.38	250.5	540
J-0438	Wardsville	0.00	211.49	250.6	382
J-0439	Wardsville	0.00	211.49	250.6	382
J-0444	Wardsville	0.00	205.84	250.5	437
J-0446	Wardsville	0.12	199.42	250.5	500

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0456	Wardsville	0.00	211.90	250.5	378
J-0460	Wardsville	0.00	196.26	250.5	531
J-0485	Wardsville	0.00	198.53	250.5	509
J-0504	Wardsville	0.00	211.80	250.5	379
J-0506	Wardsville	0.13	199.60	250.5	498
J-0550	Wardsville	0.09	207.57	250.6	421
J-0553	Wardsville	0.00	210.98	250.6	388
J-0597	Wardsville	0.00	211.52	250.5	382
J-686	Wardsville	0.00	211.90	250.5	378
J-728	Wardsville	0.00	199.35	250.5	501
J_Hyd-W001	Wardsville	0.00	199.59	250.5	499
J_Hyd-W002	Wardsville	0.00	200.22	250.5	492
J_Hyd-W003	Wardsville	0.00	200.09	250.5	494
J_Hyd-W004	Wardsville	0.00	200.26	250.5	492
J_Hyd-W005	Wardsville	0.00	200.73	250.5	487
J_Hyd-W006	Wardsville	0.00	201.97	250.5	475
J_Hyd-W007	Wardsville	0.00	202.85	250.5	467
J_Hyd-W008	Wardsville	0.00	206.22	250.5	434
J_Hyd-W009	Wardsville	0.00	207.09	250.6	425
J_Hyd-W010	Wardsville	0.00	211.08	250.6	386
J_Hyd-W011	Wardsville	0.00	210.99	250.6	387
J_Hyd-W012	Wardsville	0.00	209.97	250.6	397
J_Hyd-W013	Wardsville	0.00	199.99	250.5	495
J_Hyd-W014	Wardsville	0.00	203.96	250.6	456
J_Hyd-W015	Wardsville	0.00	201.05	250.5	484
J_Hyd-W016	Wardsville	0.00	199.31	250.5	501
J_Hyd-W017	Wardsville	0.00	204.86	250.5	447
J_Hyd-W018	Wardsville	0.00	207.95	250.5	417
J_Hyd-W019	Wardsville	0.00	210.80	250.5	389
J_Hyd-W021	Wardsville	0.00	212.03	250.5	377
J_Hyd-W022	Wardsville	0.00	212.33	250.5	374
J_Hyd-W023	Wardsville	0.00	211.80	250.5	379
J_Hyd-W024	Wardsville	0.00	210.17	250.5	395
J_Hyd-W025	Wardsville	0.00	208.87	250.5	408
J_Hyd-W026	Wardsville	0.00	199.86	250.5	496
J_Hyd-W027	Wardsville	0.00	198.54	250.5	509
J_Hyd-W028	Wardsville	0.00	194.57	250.5	548
J_Hyd-W029	Wardsville	0.00	198.04	250.5	514
J_Hyd-W030	Wardsville	0.00	198.82	250.5	506
J_Hyd-W031	Wardsville	0.00	210.43	250.5	393
J_Hyd-W032	Wardsville	0.00	211.40	250.5	383
J_Hyd-W033	Wardsville	0.00	211.13	250.5	386
J_Hyd-W034	Wardsville	0.00	211.75	250.5	380
J_Hyd-W035	Wardsville	0.00	211.50	250.5	382
J_Hyd-W036	Wardsville	0.00	210.68	250.5	390
J_Hyd-W037	Wardsville	0.00	208.27	250.5	414
J_Hyd-W038	Wardsville	0.00	207.21	250.5	424
J_Hyd-W039	Wardsville	0.00	205.93	250.5	437
J_Hyd-W040	Wardsville	0.00	198.92	250.5	505
J_Hyd-W041	Wardsville	0.00	197.74	250.5	517
J_Hyd-W042	Wardsville	0.00	195.70	250.5	537
J_Hyd-W043	Wardsville	0.00	198.47	250.5	510
J_Hyd-W044	Wardsville	0.00	212.21	250.5	375
J_Hyd-W045	Wardsville	0.00	209.85	250.6	399
J_Hyd-W046	Wardsville	0.00	208.62	250.6	411
J_Hyd-W047	Wardsville	0.00	207.07	250.6	426
WVR003	Wardsville	3.57	212.35	250.5	374
WVR006	Wardsville	1.78	211.90	250.5	378
WVW001	Wardsville	0.00	211.08	250.6	386
WVW002	Wardsville	0.00	211.08	250.6	386
WVW003	Wardsville	0.00	210.85	250.6	388
WVW006	Wardsville	0.00	199.99	250.5	495
WVW007	Wardsville	0.00	201.05	250.5	484
WVW008	Wardsville	0.00	201.01	250.5	485
WVW009	Wardsville	0.00	205.92	250.5	437
WVW010	Wardsville	0.00	206.22	250.5	434
WVW011	Wardsville	0.00	201.69	250.5	478
WVW014	Wardsville	0.00	202.53	250.5	470
WVW015	Wardsville	0.00	199.66	250.5	498
WVW016	Wardsville	0.00	200.33	250.5	491
WVW018	Wardsville	0.00	200.33	250.5	491
WVW019	Wardsville	0.00	199.53	250.5	499
WVW020	Wardsville	0.00	199.53	250.5	499
WVW021	Wardsville	0.00	198.66	250.5	508
WVW022	Wardsville	0.00	198.82	250.5	506

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVW023	Wardsville	0.00	198.59	250.5	508
WVW025	Wardsville	0.00	198.04	250.5	514
WVW026	Wardsville	0.00	197.66	250.5	517
WVW027	Wardsville	0.00	198.71	250.5	507
WVW028	Wardsville	0.00	198.33	250.5	511
WVW029	Wardsville	0.00	198.40	250.5	510
WVW030	Wardsville	0.00	200.40	250.5	491
WVW031	Wardsville	0.00	200.40	250.5	491
WVW032	Wardsville	0.00	200.21	250.5	493
WVW033	Wardsville	0.00	200.40	250.5	491
WVW034	Wardsville	0.00	199.35	250.5	501
WVW035	Wardsville	0.00	199.92	250.5	495
WVW036	Wardsville	0.00	199.35	250.5	501
WVW038	Wardsville	0.00	210.33	250.5	394
WVW039	Wardsville	0.00	208.88	250.5	408
WVW041	Wardsville	0.11	211.18	250.5	385
WVW042	Wardsville	0.00	211.18	250.5	385
WVW043	Wardsville	0.00	211.18	250.5	385
WVW044	Wardsville	0.00	207.40	250.5	422
WVW045	Wardsville	0.00	205.79	250.5	438
WVW046	Wardsville	0.00	209.82	250.5	398
WVW047	Wardsville	0.00	209.82	250.5	398
WVW048	Wardsville	0.10	212.30	250.5	374
WVW049	Wardsville	0.00	212.30	250.5	374
WVW051	Wardsville	0.00	211.43	250.5	383
WVW052	Wardsville	0.05	211.43	250.5	383
WVW053	Wardsville	0.00	211.43	250.5	383
WVW054	Wardsville	0.00	212.03	250.5	377
WVW055	Wardsville	0.00	211.12	250.5	386
WVW056	Wardsville	0.00	212.26	250.5	375
WVW057	Wardsville	0.00	212.05	250.5	377
WVW058	Wardsville	0.00	212.26	250.5	375
WVW059	Wardsville	0.00	211.21	250.5	385
WVW061	Wardsville	0.00	211.15	250.5	385
WVW063	Wardsville	0.00	204.57	250.5	450
WVW064	Wardsville	0.00	208.18	250.5	415
WVW066	Wardsville	0.00	207.03	250.5	426
WVW067	Wardsville	0.00	194.57	250.5	548
J-0009	Appin	0.00	225.75	256.6	302
J-0010	Appin	0.00	225.75	256.6	302
J-0015	Appin	0.00	224.12	256.6	318
J-0119	Appin	0.00	224.77	256.6	312
J-0140	Appin	0.00	223.78	256.6	322
J-0152	Appin	0.00	224.42	256.6	315
J-0185	Appin	0.00	225.43	256.6	305
J-0219	Appin	0.00	223.88	256.6	320
J-0221	Appin	0.00	224.26	256.6	317
J-0244	Appin	0.00	224.85	256.6	311
J-0246	Appin	0.00	224.78	256.6	312
J-0254	Appin	0.34	223.45	256.6	325
J-0277	Appin	0.00	223.74	256.7	322
J-0278	Appin	0.00	223.74	256.7	322
J-0280	Appin	0.00	225.40	256.6	305
J-0281	Appin	0.00	225.40	256.6	305
J-0318	Appin	0.21	224.73	256.6	312
J-0322	Appin	0.00	224.94	256.6	310
J-0323	Appin	0.00	224.94	256.7	310
J-0345	Appin	0.00	222.65	256.6	332
J-0346	Appin	0.00	223.66	256.6	323
J-0355	Appin	0.00	224.54	256.7	314
J-0359	Appin	0.00	225.19	256.6	307
J-0361	Appin	0.00	224.05	256.6	319
J-0378	Appin	0.13	225.03	256.6	309
J-0404	Appin	0.00	222.65	256.6	332
J-0479	Appin	0.00	223.74	256.6	322
J-0480	Appin	0.15	223.82	256.6	321
J-0560	Appin	0.00	224.74	256.6	312
J_Hyd-A001	Appin	0.00	224.77	256.6	311
J_Hyd-A002	Appin	0.00	225.61	256.6	303
J_Hyd-A003	Appin	0.00	225.13	256.6	308
J_Hyd-A004	Appin	0.00	224.97	256.6	310
J_Hyd-A005	Appin	0.00	224.76	256.6	312
J_Hyd-A006	Appin	0.00	224.95	256.6	310
J_Hyd-A007	Appin	0.00	224.78	256.7	312
J_Hyd-A008	Appin	0.00	223.78	256.6	322

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-A009	Appin	0.00	223.45	256.6	325
J_Hyd-A010	Appin	0.00	223.84	256.6	321
J_Hyd-A011	Appin	0.00	224.12	256.6	318
WVA001	Appin	0.00	224.54	256.7	314
WVA003	Appin	0.00	224.27	256.6	317
WVA005	Appin	0.00	223.45	256.6	325
WVA006	Appin	0.00	223.45	256.6	325
WVA007	Appin	0.00	223.84	256.6	321
WVA008	Appin	0.00	223.88	256.6	320
WVA009	Appin	0.00	223.88	256.6	320
WVA010	Appin	0.00	224.85	256.6	311
WVA011	Appin	0.00	224.46	256.6	315
WVA012	Appin	0.00	224.74	256.6	312
WVA013	Appin	0.00	224.49	256.6	314
WVA014	Appin	0.00	224.42	256.6	315
WVA015	Appin	0.00	225.05	256.6	309
WVA016	Appin	0.00	224.73	256.6	312
WVA017	Appin	0.00	224.77	256.6	312
WVA018	Appin	0.00	224.77	256.6	312
WVA019	Appin	0.00	225.16	256.6	308
WVA020	Appin	0.00	224.85	256.6	311
WVA021	Appin	0.00	225.12	256.6	308
WVR026	Appin	0.00	224.12	256.6	318
WVR028	Appin	0.00	225.35	256.6	306
J-0019	Rural	0.00	224.91	255.6	300
J-0020	Rural	0.00	215.38	253.9	377
J-0053	Rural	0.00	223.50	255.6	314
J-0057	Rural	0.00	223.26	255.6	316
J-0064	Rural	0.00	223.00	252.9	293
J-0073	Rural	0.00	216.62	259.5	419
J-0074	Rural	0.00	216.62	259.5	419
J-0077	Rural	0.00	224.92	255.9	303
J-0078	Rural	0.00	224.92	255.9	303
J-0086	Rural	0.00	215.90	250.7	341
J-0090	Rural	0.00	217.02	254.1	363
J-0100	Rural	0.00	219.21	262.0	419
J-0103	Rural	0.00	224.29	256.3	313
J-0110	Rural	0.00	224.91	255.6	300
J-0113	Rural	0.00	224.13	256.3	315
J-0117	Rural	0.00	223.95	255.6	310
J-0118	Rural	0.00	225.08	254.9	292
J-0129	Rural	0.00	210.02	267.0	558
J-0130	Rural	0.00	205.48	267.0	602
J-0137	Rural	0.00	222.21	256.9	339
J-0138	Rural	0.00	222.21	256.9	339
J-0149	Rural	0.00	209.61	267.0	562
J-0150	Rural	0.00	210.02	267.0	558
J-0151	Rural	0.00	224.44	255.9	308
J-0163	Rural	0.00	222.45	268.6	452
J-0164	Rural	0.00	222.45	268.6	452
J-0170	Rural	0.00	216.66	267.3	496
J-0171	Rural	0.00	216.66	267.3	496
J-0182	Rural	0.00	215.05	250.7	349
J-0183	Rural	0.00	215.05	250.7	349
J-0186	Rural	0.00	224.50	256.3	311
J-0193	Rural	0.00	218.11	250.7	319
J-0194	Rural	0.00	218.11	250.7	319
J-0199	Rural	0.00	216.02	250.7	340
J-0200	Rural	0.00	215.67	250.7	343
J-0206	Rural	0.00	215.05	250.7	349
J-0207	Rural	0.00	216.66	254.1	367
J-0208	Rural	0.00	224.87	255.6	301
J-0210	Rural	0.00	216.37	259.4	421
J-0215	Rural	0.00	224.44	255.9	308
J-0224	Rural	0.00	215.67	250.7	343
J-0225	Rural	0.00	215.67	250.7	343
J-0231	Rural	0.00	215.88	270.9	538
J-0232	Rural	0.00	215.90	250.7	341
J-0233	Rural	0.00	215.48	250.7	345
J-0241	Rural	0.00	223.95	255.6	310
J-0243	Rural	0.00	216.95	254.2	364
J-0257	Rural	0.00	215.14	253.0	370
J-0260	Rural	0.00	215.99	250.7	340
J-0263	Rural	0.00	216.66	254.2	367
J-0266	Rural	0.00	215.67	250.7	343

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0276	Rural	0.00	215.90	250.7	341
J-0282	Rural	0.00	223.26	255.6	316
J-0293	Rural	0.00	215.90	250.7	341
J-0298	Rural	0.00	221.59	253.0	307
J-0299	Rural	0.00	223.00	252.9	293
J-0300	Rural	0.00	215.20	250.7	347
J-0301	Rural	0.00	215.11	250.7	348
J-0304	Rural	0.00	221.66	256.9	344
J-0309	Rural	0.00	218.12	250.7	319
J-0315	Rural	0.00	222.17	256.9	339
J-0319	Rural	0.00	224.13	256.3	315
J-0325	Rural	0.00	217.23	259.4	413
J-0326	Rural	0.00	221.59	253.0	307
J-0329	Rural	0.00	215.90	250.7	341
J-0330	Rural	0.00	215.55	250.7	344
J-0335	Rural	0.00	227.07	254.6	270
J-0341	Rural	0.00	224.82	254.9	294
J-0351	Rural	0.00	216.30	254.5	374
J-0352	Rural	0.00	224.91	255.6	300
J-0356	Rural	0.00	221.65	265.7	431
J-0357	Rural	0.00	221.65	265.7	431
J-0362	Rural	0.00	225.24	255.9	300
J-0365	Rural	0.00	216.02	250.7	339
J-0366	Rural	0.00	215.27	250.7	347
J-0369	Rural	0.00	215.99	253.9	371
J-0370	Rural	0.00	216.95	254.2	364
J-0374	Rural	0.00	217.94	250.7	321
J-0376	Rural	0.00	222.17	256.9	340
J-0379	Rural	0.00	216.10	267.3	501
J-0383	Rural	0.00	215.74	250.7	343
J-0391	Rural	0.00	220.12	265.7	446
J-0392	Rural	0.00	220.22	265.7	445
J-0397	Rural	0.00	217.12	270.5	523
J-0398	Rural	0.00	216.07	270.5	533
J-0405	Rural	0.00	216.98	254.5	367
J-0408	Rural	0.00	219.48	250.7	306
J-0416	Rural	0.00	216.22	270.9	535
J-0422	Rural	0.00	222.67	268.7	450
J-0431	Rural	0.00	210.65	271.7	597
J-0432	Rural	0.00	210.75	271.7	596
J-0441	Rural	0.00	211.16	270.0	576
J-0442	Rural	0.00	210.36	270.0	584
J-0461	Rural	0.00	219.65	262.3	417
J-0462	Rural	0.00	219.09	262.3	423
J-0463	Rural	0.00	218.71	262.4	427
J-0464	Rural	0.00	219.51	262.4	419
J-0466	Rural	0.00	215.88	270.9	538
J-0483	Rural	0.00	226.33	255.3	284
J-0484	Rural	0.00	225.87	255.4	289
J-0519	Rural	0.00	220.69	264.6	429
J-0520	Rural	0.00	221.62	264.6	420
J-0525	Rural	0.00	217.02	254.1	363
J-0530	Rural	0.00	218.78	250.7	312
J-0536	Rural	0.00	218.90	254.2	345
J-0545	Rural	0.00	222.01	257.0	342
J-0547	Rural	0.00	208.26	269.9	604
J-0563	Rural	0.00	217.68	254.2	358
J-0573	Rural	0.00	217.81	254.6	360
J-0574	Rural	0.00	217.93	254.5	358
J-0577	Rural	0.00	222.72	265.1	415
J-0582	Rural	0.00	225.65	254.9	286
J-0592	Rural	0.00	225.26	256.1	302
J-0593	Rural	0.00	223.37	256.1	320
J-0595	Rural	0.00	213.93	266.8	518
J-0596	Rural	0.00	214.45	266.7	511
J-0599	Rural	0.00	226.75	255.6	283
J-0600	Rural	0.00	225.36	255.6	296
J-0604	Rural	0.00	217.45	253.6	353
J-0605	Rural	0.00	215.66	253.3	368
J-0607	Rural	0.00	216.23	250.7	337
J-0610	Rural	0.00	217.10	250.7	329
J-0611	Rural	0.00	214.85	250.7	351
J-0613	Rural	0.00	217.54	271.0	524
J-0614	Rural	0.00	215.09	266.5	503
J-0616	Rural	0.00	216.04	250.7	339

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0617	Rural	0.00	220.45	266.2	448
J-0618	Rural	0.00	220.05	263.7	427
J-0619	Rural	0.00	217.32	263.4	451
J-0623	Rural	0.00	218.13	250.7	319
J-0624	Rural	0.00	219.80	262.7	420
J-0625	Rural	0.00	219.82	262.0	413
J-0626	Rural	0.00	217.52	250.7	325
J-0629	Rural	0.00	198.11	271.9	723
J-0631	Rural	0.00	220.14	254.4	335
J-0633	Rural	0.00	215.01	250.7	349
J-0634	Rural	0.97	220.90	264.5	427
J-0636	Rural	0.00	226.78	255.3	279
J-0637	Rural	0.00	223.52	255.9	317
J-0638	Rural	0.00	220.56	261.1	397
J-0643	Rural	0.00	216.97	250.6	329
J-0645	Rural	0.01	216.83	250.7	332
J-688	Rural	0.00	222.17	256.9	339
J_Hyd-R001E	Rural	0.00	226.53	255.6	284
J_Hyd-R002E	Rural	0.00	224.87	255.6	301
J_Hyd-R003E	Rural	0.00	223.26	255.6	316
J_Hyd-R004E	Rural	0.00	227.87	255.2	267
J_Hyd-R005E	Rural	0.00	228.14	254.6	259
J_Hyd-R006E	Rural	0.00	223.00	252.9	293
J_Hyd-R007E	Rural	0.00	226.02	255.8	291
J_Hyd-R008E	Rural	0.00	225.38	254.8	288
J_Hyd-R009E	Rural	0.00	215.38	253.9	377
J_Hyd-R010E	Rural	0.00	217.64	254.2	357
J_Hyd-R011E	Rural	0.00	216.30	254.5	374
J_Hyd-R012E	Rural	0.00	225.08	254.9	292
J_Hyd-R013E	Rural	0.00	225.08	254.9	292
J_Hyd-R014E	Rural	0.00	225.24	255.9	300
J_Hyd-R015E	Rural	0.00	222.19	256.8	339
J_Hyd-R016E	Rural	0.00	224.13	256.3	315
J_Hyd-R017M	Rural	0.00	215.90	250.7	341
J_Hyd-R018M	Rural	0.00	209.02	250.7	408
J_Hyd-R019M	Rural	0.00	215.68	250.7	343
J_Hyd-R020M	Rural	0.00	216.37	250.7	336
J_Hyd-R021M	Rural	0.00	215.02	250.6	349
J_Hyd-R026E	Rural	0.00	224.44	255.9	308
J_Hyd-R027W	Rural	0.00	206.98	274.3	658
J_Hyd-R028E	Rural	0.00	222.89	255.6	320
J_Hyd-R029W	Rural	0.00	215.14	276.0	596
J_Hyd-R030M	Rural	0.00	215.76	267.4	505
J_Hyd-R031M	Rural	0.00	215.77	270.8	538
J_Hyd-R032M	Rural	0.00	218.56	250.7	315
J_Hyd-R033E	Rural	0.00	217.26	265.7	474
WVR007	Rural	0.00	215.64	250.6	343
WVR008	Rural	0.00	215.68	250.6	342
WVR009	Rural	0.00	215.39	250.7	346
WVR010	Rural	0.00	215.88	270.9	538
WVR012	Rural	0.00	217.94	250.7	321
WVR013	Rural	0.00	218.56	250.7	315
WVR014	Rural	0.00	218.12	250.7	319
WVR015	Rural	0.00	218.11	250.7	319
WVR019	Rural	0.00	216.86	267.7	497
WVR020	Rural	0.00	221.61	265.2	427
WVR024	Rural	0.00	216.37	259.4	421
WVR024	Rural	0.00	219.21	262.0	419
WVR025	Rural	0.00	222.17	256.9	339
WVR029	Rural	0.00	224.50	256.3	311
WVR030	Rural	0.00	224.40	256.0	309
WVR031	Rural	0.00	224.90	255.9	303
WVR032	Rural	0.00	224.44	255.9	308
WVR033	Rural	0.00	224.92	255.9	303
WVR034	Rural	0.00	224.90	254.9	294
WVR035	Rural	0.00	224.82	254.9	294
WVR036	Rural	0.00	224.82	254.9	294
WVR037	Rural	0.00	217.20	254.5	365
WVR038	Rural	0.00	217.64	254.2	357
WVR039	Rural	0.00	217.02	254.1	363
WVR040	Rural	0.00	215.14	253.0	370
WVR042	Rural	0.00	223.00	252.9	293
WVR043	Rural	0.00	228.14	254.6	259
WVR044	Rural	0.00	227.12	254.6	269
WVR045	Rural	0.00	223.77	255.6	311

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 ADD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVR046	Rural	0.00	224.91	255.6	300
WVR047	Rural	0.00	223.95	255.6	310
WVR050	Rural	0.00	215.85	250.7	341
WVR051	Rural	0.00	215.90	250.7	341
WVR052	Rural	0.00	219.21	262.0	419
WVR053	Rural	0.00	225.26	256.3	304
WVR054	Rural	0.00	226.99	255.2	276
WVR055	Rural	0.00	226.60	255.3	281
WVR056	Rural	0.00	223.50	255.6	314
WVR060	Rural	0.00	214.01	254.1	392
	Total Demand	26.02		**Maximum Pressure**	723
				Minimum Pressure	259

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P-223	Glencoe	J-747	J-0646	224.53	400	120	37.38	0.30	0.1
P-232	Glencoe	J-0586	G015	3.80	150	100	0.00	0.00	0.0
P-240	Glencoe	J-753	G_H-1	1.46	150	100	0.00	0.00	0.0
P-246	Glencoe	J-759	J-753	58.17	200	110	0.00	0.00	0.0
P-247	Glencoe	J-760	J-759	25.30	200	110	0.00	0.00	0.0
P-248	Glencoe	J-761	J-760	24.76	200	110	0.00	0.00	0.0
P-249(1)	Glencoe	J-762	J-800	10.10	200	110	0.00	0.00	0.0
P-249(2)	Glencoe	J-800	J-761	21.50	200	110	0.00	0.00	0.0
P-251	Glencoe	J-766	J-765	1.74	200	110	0.00	0.00	0.0
P-252	Glencoe	J-765	J-764	2.16	200	110	0.00	0.00	0.0
P-254	Glencoe	J-764	J-762	2.10	200	110	0.00	0.00	0.0
P-255	Glencoe	J-767	J-766	36.14	200	110	0.00	0.00	0.0
P-256	Glencoe	J-768	J-767	23.79	200	110	0.00	0.00	0.0
P-257	Glencoe	J-769	J-768	25.30	200	110	0.00	0.00	0.0
P-258	Glencoe	J-770	J-769	12.16	200	110	0.00	0.00	0.0
P-259(1)	Glencoe	J-771	J-778	30.83	200	110	0.06	0.00	0.0
P-259(2)	Glencoe	J-778	J-770	11.83	200	110	0.06	0.00	0.0
P-260	Glencoe	J-771	J-0264	6.10	200	110	0.42	0.01	0.0
P-261	Glencoe	J-772	J-771	21.73	200	110	0.48	0.02	0.0
P-262	Glencoe	J-773	J-772	53.57	200	110	0.48	0.02	0.0
P-263(1)	Glencoe	J-775	J-777	32.15	200	110	0.50	0.02	0.0
P-263(2)	Glencoe	J-777	J-773	5.67	200	110	0.50	0.02	0.0
P-265	Glencoe	WVG029	J-775	71.28	200	110	0.50	0.02	0.0
P-266	Glencoe	J-773	WVG027	18.50	200	110	0.02	0.00	0.0
P-268	Glencoe	J-770	WVG001	31.17	150	100	0.06	0.00	0.0
P-270(1)(1)	Glencoe	J-779	J-801	24.25	200	110	0.90	0.03	0.0
P-270(1)(2)	Glencoe	J-801	J-780	5.97	200	110	0.90	0.03	0.0
P-270(2)	Glencoe	J-780	J-0126	2.45	200	110	0.90	0.03	0.0
P-271	Glencoe	J-782	J-781	15.01	200	110	0.90	0.03	0.0
P-272	Glencoe	J-781	J-779	27.58	200	110	0.90	0.03	0.0
P-273(1)(1)	Glencoe	J-785	J-807	42.61	200	110	1.90	0.06	0.0
P-273(1)(2)	Glencoe	J-807	J-806	13.65	200	110	1.62	0.05	0.0
P-273(2)	Glencoe	J-806	J-784	24.08	200	110	1.62	0.05	0.0
P-274	Glencoe	J-784	J-783	60.15	200	110	1.62	0.05	0.0
P-275(1)(1)	Glencoe	J-783	J-804	24.03	200	110	1.62	0.05	0.0
P-275(1)(2)	Glencoe	J-804	J-803	0.79	200	110	0.90	0.03	0.0
P-275(2)	Glencoe	J-803	J-782	7.79	200	110	0.90	0.03	0.0
P-276	Glencoe	J-786	J-785	70.18	200	110	1.90	0.06	0.0
P-277(1)(1)	Glencoe	J-787	J-813	5.52	200	110	1.36	0.04	0.0
P-277(1)(2)(1)	Glencoe	J-813	J-816	4.54	200	110	3.07	0.10	0.0
P-277(1)(2)(2)	Glencoe	J-816	J-812	0.65	200	110	1.90	0.06	0.0
P-277(2)	Glencoe	J-812	J-786	39.29	200	110	1.90	0.06	0.0
P-278	Glencoe	J-791	J-790	37.40	200	110	2.79	0.09	0.0
P-279(1)	Glencoe	J-790	J-818	26.33	200	110	2.79	0.09	0.0
P-279(2)(1)	Glencoe	J-818	J-819	12.63	200	110	2.79	0.09	0.0
P-279(2)(2)	Glencoe	J-819	J-789	31.06	200	110	1.36	0.04	0.0
P-280	Glencoe	J-789	J-788	52.74	200	110	1.36	0.04	0.0
P-281	Glencoe	J-788	J-787	40.02	200	110	1.36	0.04	0.0
P-282	Glencoe	J-792	J-791	35.04	200	110	2.79	0.09	0.0
P-283(1)	Glencoe	J-795	J-826	36.70	200	110	1.97	0.06	0.0
P-283(2)	Glencoe	J-826	J-794	38.31	200	110	1.97	0.06	0.0
P-284	Glencoe	J-794	J-793	70.18	200	110	1.97	0.06	0.0
P-285(1)	Glencoe	J-793	J-821	19.05	200	110	1.97	0.06	0.0
P-285(2)	Glencoe	J-821	J-792	1.09	200	110	2.79	0.09	0.0
P-286(1)	Glencoe	J-799	J-827	5.70	200	110	1.97	0.06	0.0
P-286(2)	Glencoe	J-827	J-798	15.33	200	110	1.97	0.06	0.0
P-287	Glencoe	J-798	J-797	45.01	200	110	1.97	0.06	0.0
P-288	Glencoe	J-797	J-796	55.00	200	110	1.97	0.06	0.0
P-289	Glencoe	J-796	J-795	14.97	200	110	1.97	0.06	0.0
P-290	Glencoe	J-800	G_H-2	1.49	150	100	0.00	0.00	0.0
P-291	Glencoe	J-778	G_H-3	1.50	150	100	0.00	0.00	0.0
P-292	Glencoe	J-777	G_H-4	0.54	150	100	0.00	0.00	0.0
P-294	Glencoe	J-801	G_H-5	1.96	150	100	0.00	0.00	0.0
P-295	Glencoe	J-803	G_H-6	1.67	150	100	0.00	0.00	0.0
P-296	Glencoe	J-804	J-805	17.92	150	100	0.72	0.04	0.0
P-297	Glencoe	J-805	WVG097	5.39	150	100	0.72	0.04	0.0
P-298	Glencoe	J-806	G_H-7	2.83	150	100	0.00	0.00	0.0
P-301	Glencoe	J-807	J-810	4.01	150	100	0.28	0.02	0.0
P-302	Glencoe	J-810	J-811	3.62	150	100	0.28	0.02	0.0
P-303	Glencoe	J-812	G_H-8	1.47	150	100	0.00	0.00	0.0
P-304	Glencoe	J-813	J-814	4.27	200	110	-1.71	0.05	0.0
P-305	Glencoe	J-814	J-815	3.22	200	110	-1.71	0.05	0.0
P-306	Glencoe	J-816	J-817	16.89	200	110	1.17	0.04	0.0
P-307	Glencoe	J-817	J-0011	2.48	200	110	1.17	0.04	0.0
P-308	Glencoe	J-818	G_H-9	1.82	150	100	0.00	0.00	0.0
P-309	Glencoe	J-819	J-820	8.75	200	110	1.43	0.05	0.0
P-310	Glencoe	J-820	WVG120	3.89	200	110	1.43	0.05	0.0
P-311	Glencoe	J-821	J-822	7.32	150	100	-1.78	0.10	0.0
P-312	Glencoe	J-822	J-823	3.21	150	100	-1.78	0.10	0.0
P-313	Glencoe	J-823	J-0262	0.92	150	100	-1.78	0.10	0.0
P-314	Glencoe	J-821	J-824	9.93	150	100	0.96	0.05	0.0
P-315	Glencoe	J-824	J-825	2.86	150	100	0.96	0.05	0.0
P-316	Glencoe	J-826	G_H-10	2.85	150	100	0.00	0.00	0.0
P-317	Glencoe	J-827	G_H-11	1.80	150	100	0.00	0.00	0.0
P-318	Glencoe	J-799	J-0267	3.89	150	100	-1.97	0.11	0.0
P-923	Glencoe	J-720	J-0533	70.98	25	100	0.00	0.00	0.0
P-925	Glencoe	J_Hyd-G084	J-0101	235.01	300	120	11.46	0.16	0.0
P-927	Glencoe	J-0101	J_Hyd-G083	2.91	300	120	10.71	0.15	0.0
P-928	Glencoe	J_Hyd-G083	Glencoe Tower	97.16	300	120	2.54	0.04	0.0
P-929	Glencoe	J_Hyd-G083	J-0337	106.00	300	120	8.16	0.12	0.0
P-932	Glencoe	J-0180	J-690	4.46	150	100	8.74	0.49	0.0
P-936	Glencoe	J-0634	J-0635	660.21	50	130	0.00	0.00	0.0
P_Hyd-G001	Glencoe	J_Hyd-G001	G001	4.85	150	100	0.00	0.00	0.0
P_Hyd-G002	Glencoe	J_Hyd-G002	G002	2.71	150	100	0.00	0.00	0.0
P_Hyd-G003	Glencoe	J_Hyd-G003	G003	2.46	150	100	0.00	0.00	0.0
P_Hyd-G004	Glencoe	J_Hyd-G004	G004	0.85	150	100	0.00	0.00	0.0
P_Hyd-G005	Glencoe	J_Hyd-G005	G005	5.89	150	100	0.00	0.00	0.0
P_Hyd-G006	Glencoe	J_Hyd-G006	G006	5.74	150	100	0.00	0.00	0.0
P_Hyd-G008	Glencoe	J_Hyd-G008	G008	2.51	150	100	0.00	0.00	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-G009	Glencoe	J_Hyd-G009	G009	3.80	150	100	0.00	0.00	0.0
P_Hyd-G010	Glencoe	J_Hyd-G010	G010	3.17	150	100	0.00	0.00	0.0
P_Hyd-G011	Glencoe	J_Hyd-G011	G011	2.84	150	100	0.00	0.00	0.0
P_Hyd-G012	Glencoe	J_Hyd-G012	G012	1.27	150	100	0.00	0.00	0.0
P_Hyd-G013	Glencoe	J_Hyd-G013	G013	0.22	150	100	0.00	0.00	0.0
P_Hyd-G014	Glencoe	J_Hyd-G014	G014	1.48	150	100	0.00	0.00	0.0
P_Hyd-G016	Glencoe	J_Hyd-G016	G016	2.59	150	100	0.00	0.00	0.0
P_Hyd-G018	Glencoe	J_Hyd-G018	G018	1.41	150	100	0.00	0.00	0.0
P_Hyd-G019	Glencoe	J_Hyd-G019	G019	1.61	150	100	0.00	0.00	0.0
P_Hyd-G020	Glencoe	J_Hyd-G020	G020	3.56	150	100	0.00	0.00	0.0
P_Hyd-G021	Glencoe	J_Hyd-G021	G021	3.54	150	100	0.00	0.00	0.0
P_Hyd-G022	Glencoe	J_Hyd-G022	G022	2.23	150	100	0.00	0.00	0.0
P_Hyd-G023	Glencoe	J_Hyd-G023	G023	2.41	150	100	0.00	0.00	0.0
P_Hyd-G024	Glencoe	J_Hyd-G024	G024	1.78	150	100	0.00	0.00	0.0
P_Hyd-G025	Glencoe	J_Hyd-G025	G025	1.60	150	100	0.00	0.00	0.0
P_Hyd-G026	Glencoe	J_Hyd-G026	G026	5.18	150	100	0.00	0.00	0.0
P_Hyd-G027	Glencoe	J_Hyd-G027	G027	2.73	150	100	0.00	0.00	0.0
P_Hyd-G028	Glencoe	J_Hyd-G028	G028	4.76	150	100	0.00	0.00	0.0
P_Hyd-G029	Glencoe	J_Hyd-G029	G029	1.38	150	100	0.00	0.00	0.0
P_Hyd-G041	Glencoe	J_Hyd-G041	G041	1.19	150	100	0.00	0.00	0.0
P_Hyd-G042	Glencoe	J_Hyd-G042	G042	1.81	150	100	0.00	0.00	0.0
P_Hyd-G043	Glencoe	J_Hyd-G043	G043	0.88	150	100	0.00	0.00	0.0
P_Hyd-G044	Glencoe	J_Hyd-G044	G044	1.63	150	100	0.00	0.00	0.0
P_Hyd-G045	Glencoe	J_Hyd-G045	G045	3.33	150	100	0.00	0.00	0.0
P_Hyd-G046	Glencoe	J_Hyd-G046	G046	1.69	150	100	0.00	0.00	0.0
P_Hyd-G047	Glencoe	J_Hyd-G047	G047	7.03	150	100	0.00	0.00	0.0
P_Hyd-G048	Glencoe	J_Hyd-G048	G048	4.14	150	100	0.00	0.00	0.0
P_Hyd-G049	Glencoe	J_Hyd-G049	G049	0.49	150	100	0.00	0.00	0.0
P_Hyd-G050	Glencoe	J_Hyd-G050	G050	1.47	150	100	0.00	0.00	0.0
P_Hyd-G051	Glencoe	J_Hyd-G051	G051	0.78	150	100	0.00	0.00	0.0
P_Hyd-G052	Glencoe	J_Hyd-G052	G052	1.12	150	100	0.00	0.00	0.0
P_Hyd-G053	Glencoe	J_Hyd-G053	G053	1.89	150	100	0.00	0.00	0.0
P_Hyd-G054	Glencoe	WVG032	G054	2.99	150	100	0.00	0.00	0.0
P_Hyd-G055	Glencoe	WVG041	G055	0.94	150	100	0.00	0.00	0.0
P_Hyd-G056	Glencoe	J_Hyd-G056	G056	2.18	150	100	0.00	0.00	0.0
P_Hyd-G057	Glencoe	J_Hyd-G057	G057	1.91	150	100	0.00	0.00	0.0
P_Hyd-G058	Glencoe	J_Hyd-G058	G058	4.86	150	100	0.00	0.00	0.0
P_Hyd-G059	Glencoe	J_Hyd-G059	G059	2.58	150	100	0.00	0.00	0.0
P_Hyd-G060	Glencoe	J_Hyd-G060	G060	1.86	150	100	0.00	0.00	0.0
P_Hyd-G061	Glencoe	J_Hyd-G061	G061	1.77	150	100	0.00	0.00	0.0
P_Hyd-G062	Glencoe	J_Hyd-G062	G062	15.15	150	100	0.00	0.00	0.0
P_Hyd-G063	Glencoe	J_Hyd-G063	G063	5.63	150	100	0.00	0.00	0.0
P_Hyd-G064	Glencoe	J_Hyd-G064	G064	4.15	150	100	0.00	0.00	0.0
P_Hyd-G065	Glencoe	J_Hyd-G065	G065	2.06	150	100	0.00	0.00	0.0
P_Hyd-G066	Glencoe	J_Hyd-G066	G066	2.76	150	100	0.00	0.00	0.0
P_Hyd-G067	Glencoe	J_Hyd-G067	G067	3.98	150	100	0.00	0.00	0.0
P_Hyd-G068	Glencoe	J_Hyd-G068	G068	1.46	150	100	0.00	0.00	0.0
P_Hyd-G069	Glencoe	J_Hyd-G069	G069	1.27	150	100	0.00	0.00	0.0
P_Hyd-G070	Glencoe	J_Hyd-G070	G070	6.10	150	100	0.00	0.00	0.0
P_Hyd-G071	Glencoe	J_Hyd-G071	G071	0.97	150	100	0.00	0.00	0.0
P_Hyd-G073	Glencoe	J_Hyd-G073	G073	1.56	150	100	0.00	0.00	0.0
P_Hyd-G074	Glencoe	J_Hyd-G074	G074	8.97	150	100	0.00	0.00	0.0
P_Hyd-G075	Glencoe	J_Hyd-G075	G075	11.48	150	100	0.00	0.00	0.0
P_Hyd-G076	Glencoe	J_Hyd-G076	G076	2.69	150	100	0.00	0.00	0.0
P_Hyd-G077	Glencoe	J_Hyd-G077	G077	2.18	150	100	0.00	0.00	0.0
P_Hyd-G078	Glencoe	J_Hyd-G078	G078	3.61	150	100	0.00	0.00	0.0
P_Hyd-G079	Glencoe	J_Hyd-G079	G079	13.95	150	100	0.00	0.00	0.0
P_Hyd-G080	Glencoe	J_Hyd-G080	G080	1.13	150	100	0.00	0.00	0.0
P_Hyd-G081	Glencoe	J_Hyd-G081	G081	8.12	150	100	0.00	0.00	0.0
P_Hyd-G082	Glencoe	J_Hyd-G082	G082	7.32	150	100	0.00	0.00	0.0
P_Hyd-G083	Glencoe	J_Hyd-G083	G083	3.97	150	100	0.00	0.00	0.0
P_Hyd-G084	Glencoe	J_Hyd-G084	G084	94.76	150	100	0.00	0.00	0.0
P_Hyd-G085	Glencoe	J_Hyd-G085	G085	0.10	150	100	0.00	0.00	0.0
P_Hyd-G086	Glencoe	J_Hyd-G086	G086	0.02	150	100	0.00	0.00	0.0
P_Hyd-G087	Glencoe	J_Hyd-G087	G087	5.80	150	100	0.00	0.00	0.0
P_Hyd-G088	Glencoe	J_Hyd-G088	G088	2.19	150	100	0.00	0.00	0.0
P_Hyd-G089	Glencoe	J_Hyd-G089	G089	2.09	150	100	0.00	0.00	0.0
P_Hyd-G090	Glencoe	J_Hyd-G090	G090	4.27	150	100	0.00	0.00	0.0
P_Hyd-G091	Glencoe	J_Hyd-G091	G091	4.00	150	100	0.00	0.00	0.0
P_Hyd-G092	Glencoe	J_Hyd-G092	G092	3.58	150	100	0.00	0.00	0.0
P_Hyd-G093	Glencoe	J_Hyd-G093	G093	3.31	150	100	0.00	0.00	0.0
P_Hyd-G094	Glencoe	J_Hyd-G094	G094	3.50	150	100	0.00	0.00	0.0
P_Hyd-G095	Glencoe	J_Hyd-G095	G095	1.07	150	100	0.00	0.00	0.0
P_Hyd-G096	Glencoe	J_Hyd-G096	G096	1.84	150	100	0.00	0.00	0.0
P_Hyd-G097	Glencoe	J_Hyd-G097	G097	1.24	150	100	0.00	0.00	0.0
P_Hyd-G098	Glencoe	J_Hyd-G098	G098	2.53	150	100	0.00	0.00	0.0
P_Hyd-H_T-718	Glencoe	J_Hyd-H_T-718	H_T-718	2.10	150	100	0.00	0.00	0.0
WM1021C_02(2)(	Glencoe	J-752	WVR021	155.54	300	120	29.47	0.42	0.1
WM1027C_01	Glencoe	J_Hyd-G014	J-0373	15.24	200	110	-0.73	0.02	0.0
WM1027C_02	Glencoe	J_Hyd-G014	J-0586	134.80	200	110	0.73	0.02	0.0
WM1075C_01	Glencoe	J-0646	J_Hyd-R029W	3402.10	350	120	37.38	0.39	1.9
WM1099C	Glencoe	WVR021	J-0494	49.97	300	120	29.47	0.42	0.0
WM2036_02	Glencoe	J-0275	J-0168	7.98	200	110	11.04	0.35	0.0
WM2036_03	Glencoe	J-0169	J-0618	480.76	200	110	11.04	0.35	0.5
WM2036_10(1)	Glencoe	J-0544	J-690	136.25	200	110	2.30	0.07	0.0
WM2036_10(2)	Glencoe	J-690	J-0275	18.91	200	110	11.04	0.35	0.0
WM2044C(1)	Glencoe	J_Hyd-G006	J-724	5.77	200	110	0.56	0.02	0.0
WM2044C(2)(1)	Glencoe	J-724	J-727	12.57	200	110	0.56	0.02	0.0
WM2044C(2)(2)	Glencoe	J-727	WV-348	5.17	200	110	0.31	0.01	0.0
WM4000	Glencoe	J-0384	J-0546	90.30	150	100	0.18	0.01	0.0
WM4001	Glencoe	J-0213	J_Hyd-G094	5.27	150	100	0.00	0.00	0.0
WM4002	Glencoe	J-0213	J-0584	133.75	150	100	0.00	0.00	0.0
WM4003_01	Glencoe	J_Hyd-G003	WVG087	133.79	150	100	0.00	0.00	0.0
WM4003_02	Glencoe	WVG087	J-0373	19.18	200	110	0.00	0.00	0.0
WM4005	Glencoe	J-0451	J-0539	79.38	50	100	0.08	0.04	0.0
WM4006_01	Glencoe	WVG099	J_Hyd-G023	7.66	150	100	0.21	0.01	0.0
WM4006_02	Glencoe	J_Hyd-G023	J_Hyd-G093	126.19	100	100	0.21	0.03	0.0
WM4006_03	Glencoe	J_Hyd-G093	WVG090	116.28	100	100	0.21	0.03	0.0
WM4006_04	Glencoe	WVG090	J-0032	17.02	200	110	0.21	0.01	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4007_01(1)	Glencoe	WVG100	J-735	1.24	150	100	0.77	0.04	0.0
WM4007_01(2)	Glencoe	J-735	J-0409	234.57	150	100	0.77	0.04	0.0
WM4007_02(1)	Glencoe	J-734	WVG100	11.48	150	100	0.77	0.04	0.0
WM4007_02(2)	Glencoe	J-734	WVG099	4.20	150	100	0.21	0.01	0.0
WM4008_01	Glencoe	J-0324	J-0106	10.40	150	100	-0.40	0.02	0.0
WM4008_02	Glencoe	J-0256	J-0435	102.03	150	100	0.27	0.02	0.0
WM4009_01	Glencoe	J-0255	J-0256	6.83	150	100	0.45	0.03	0.0
WM4009_02	Glencoe	J-0255	J-0450	53.25	150	100	-0.40	0.02	0.0
WM4009_03	Glencoe	J-0449	J-0450	25.45	150	100	0.40	0.02	0.0
WM4009_04	Glencoe	WVG018	J-0449	35.04	150	100	0.40	0.02	0.0
WM4009_05	Glencoe	WVG018	J-0070	2.19	150	100	-0.40	0.02	0.0
WM4009_06	Glencoe	J-0070	J-0324	11.16	150	100	-0.40	0.02	0.0
WM4010_01	Glencoe	J-0106	WVG020	3.03	150	100	-0.39	0.02	0.0
WM4010_02	Glencoe	J-0410	WVG020	110.85	150	100	0.39	0.02	0.0
WM4011_01	Glencoe	J-0535	WVG091	76.44	25	100	0.00	0.00	0.0
WM4011_02	Glencoe	WVG091	J-0128	3.53	25	100	0.00	0.00	0.0
WM4012_01	Glencoe	J-0468	J-0469	33.17	200	110	1.46	0.05	0.0
WM4012_02	Glencoe	J-0469	J-0097	46.60	200	110	1.46	0.05	0.0
WM4012_03	Glencoe	J-0097	WVG093	3.00	200	110	1.46	0.05	0.0
WM4012_04	Glencoe	WVG093	J-0003	1.12	200	110	0.00	0.00	0.0
WM4012_05	Glencoe	J-0303	WVG093	15.47	200	110	-1.46	0.05	0.0
WM4013_01	Glencoe	J-0205	J_Hyd-G065	9.39	200	110	1.46	0.05	0.0
WM4013_02	Glencoe	J_Hyd-G065	J_Hyd-G066	127.29	200	110	1.46	0.05	0.0
WM4013_03	Glencoe	J_Hyd-G066	J-0468	39.92	200	110	1.46	0.05	0.0
WM4014_01	Glencoe	J-0205	WVG101	9.82	200	110	-1.20	0.04	0.0
WM4014_02	Glencoe	WVG107	J_Hyd-G064	6.15	200	110	1.20	0.04	0.0
WM4014_03	Glencoe	J_Hyd-G064	WVG101	119.04	200	110	1.20	0.04	0.0
WM4015_01	Glencoe	J-0048	J-0049	1.67	200	110	8.35	0.27	0.0
WM4015_02	Glencoe	J-0048	WVG193	5.79	200	110	0.00	0.00	0.0
WM4015_03	Glencoe	WVG193	J-0075	2.30	200	110	0.00	0.00	0.0
WM4015_04	Glencoe	J-0091	WVG113	2.54	200	110	0.00	0.00	0.0
WM4015_05	Glencoe	WVG113	WVG106	98.98	200	110	0.00	0.00	0.0
WM4015_06	Glencoe	J-0063	WVG106	16.77	200	110	0.00	0.00	0.0
WM4016_01	Glencoe	WVG003	J-0175	4.35	150	100	-0.17	0.01	0.0
WM4016_02	Glencoe	WVG002	J-0333	104.71	150	100	-0.32	0.02	0.0
WM4016_03	Glencoe	J-0481	J_Hyd-G016	38.74	150	100	-0.17	0.01	0.0
WM4016_04	Glencoe	J_Hyd-G016	WVG003	64.80	150	100	-0.17	0.01	0.0
WM4016_05	Glencoe	J-0175	WVG002	13.38	150	100	-0.32	0.02	0.0
WM4018_01	Glencoe	J-0333	J-0334	11.46	150	100	-0.45	0.03	0.0
WM4018_02	Glencoe	J-0334	J-0497	46.44	150	100	-0.45	0.03	0.0
WM4018_03	Glencoe	J-0144	J-0497	65.09	150	100	0.45	0.03	0.0
WM4019_01	Glencoe	J-0144	WVG010	3.77	200	110	-1.27	0.04	0.0
WM4019_02	Glencoe	WVG010	J-713	110.69	200	110	-1.27	0.04	0.0
WM4020_01	Glencoe	J_Hyd-G059	J-0107	113.86	150	100	0.76	0.04	0.0
WM4020_02	Glencoe	J-0107	J-0014	3.03	150	100	0.56	0.03	0.0
WM4020_03	Glencoe	J-0014	WVG096	1.04	150	100	0.56	0.03	0.0
WM4020_04	Glencoe	WVG096	J-0316	15.27	200	110	0.56	0.02	0.0
WM4021_01	Glencoe	J-0187	WVG105	5.72	150	100	0.76	0.04	0.0
WM4021_02	Glencoe	WVG105	J_Hyd-G060	4.08	150	100	0.76	0.04	0.0
WM4021_03	Glencoe	J_Hyd-G060	J_Hyd-G059	130.41	150	100	0.76	0.04	0.0
WM4022_01	Glencoe	J-0089	WVG109	3.68	200	110	1.19	0.04	0.0
WM4022_02	Glencoe	WVG109	J_Hyd-G061	5.42	200	110	1.19	0.04	0.0
WM4022_03	Glencoe	J_Hyd-G061	J-0187	128.70	200	110	1.19	0.04	0.0
WM4023_01	Glencoe	J-0222	WVG071	6.23	300	120	0.48	0.01	0.0
WM4023_02	Glencoe	WVG071	J-0134	6.29	300	120	0.48	0.01	0.0
WM4023_03	Glencoe	J-0134	J-0135	3.59	300	120	0.48	0.01	0.0
WM4023_04	Glencoe	J-0135	WVG085	103.05	300	120	0.23	0.00	0.0
WM4023_05	Glencoe	WVG085	J_Hyd-G085	4.68	300	120	0.23	0.00	0.0
WM4024_01	Glencoe	WVG069	J_Hyd-G080	7.03	250	120	-1.58	0.03	0.0
WM4024_02	Glencoe	J_Hyd-G080	J-0124	174.48	250	120	-1.58	0.03	0.0
WM4024_03	Glencoe	WVG069	J-0222	14.30	250	120	1.58	0.03	0.0
WM4025_01	Glencoe	J-0124	WVG058	3.66	250	120	-1.83	0.04	0.0
WM4025_02	Glencoe	WVG058	J_Hyd-G076	0.90	250	120	-1.83	0.04	0.0
WM4025_03	Glencoe	J_Hyd-G076	J-0284	104.25	250	120	-1.83	0.04	0.0
WM4026_01	Glencoe	J-0284	WVG047	10.69	250	120	-3.02	0.06	0.0
WM4026_02	Glencoe	J-0285	J-0179	9.19	200	110	0.80	0.03	0.0
WM4026_03	Glencoe	WVG047	WVG038	100.52	250	120	-3.02	0.06	0.0
WM4026_04	Glencoe	WVG038	J-715	3.84	250	120	-3.02	0.06	0.0
WM4027_01	Glencoe	J-0111	WVG130	4.08	250	120	-4.04	0.08	0.0
WM4027_02	Glencoe	WVG130	J-0421	174.59	250	120	-4.04	0.08	0.0
WM4027_03(1)	Glencoe	J-0421	J-709	19.33	250	120	-4.34	0.09	0.0
WM4027_03(2)	Glencoe	J-709	J-0104	2.64	250	120	-4.86	0.10	0.0
WM4028_01	Glencoe	J-0104	J-0094	2.96	250	120	-4.86	0.10	0.0
WM4028_02	Glencoe	J-0094	J_Hyd-G067	2.65	250	120	-4.86	0.10	0.0
WM4028_03	Glencoe	J_Hyd-G067	J-0227	159.12	250	120	-4.86	0.10	0.0
WM4029_01	Glencoe	J_Hyd-G079	J_Hyd-G081	102.59	250	120	6.57	0.13	0.0
WM4029_02	Glencoe	J_Hyd-G081	WVG192	2.89	250	120	6.57	0.13	0.0
WM4029_03	Glencoe	WVG192	J-0227	8.63	250	120	6.57	0.13	0.0
WM4030	Glencoe	J-0123	J_Hyd-G079	126.31	250	120	6.57	0.13	0.0
WM4032_01	Glencoe	WVR022	J-0006	4.47	250	120	-8.35	0.17	0.0
WM4032_02	Glencoe	J-0006	J-0007	0.86	200	110	-11.68	0.37	0.0
WM4032_03	Glencoe	J-0007	J-0017	1.08	200	110	-11.68	0.37	0.0
WM4032_04	Glencoe	WVR022	J_Hyd-G078	6.97	250	120	8.35	0.17	0.0
WM4032_05	Glencoe	J_Hyd-G078	WVG140	274.02	250	120	8.35	0.17	0.1
WM4032_06	Glencoe	WVG140	J-0048	4.92	250	120	8.35	0.17	0.0
WM4032_07	Glencoe	J-0049	J-0123	9.92	250	120	8.35	0.17	0.0
WM4035_01(1)	Glencoe	J-0344	J-698	1.22	150	100	0.00	0.00	0.0
WM4035_01(2)	Glencoe	J-698	WVG061	10.93	150	100	-0.22	0.01	0.0
WM4035_02	Glencoe	WVG061	J_Hyd-G027	3.18	200	110	-0.22	0.01	0.0
WM4035_03	Glencoe	J-0344	J_Hyd-G028	161.67	150	100	0.00	0.00	0.0
WM4035_04	Glencoe	J_Hyd-G028	J-0437	24.28	150	100	0.00	0.00	0.0
WM4036	Glencoe	J_Hyd-G027	J-695	109.13	200	110	-0.22	0.01	0.0
WM4037_01	Glencoe	J-695	WVG049	6.43	200	110	-0.29	0.01	0.0
WM4037_02	Glencoe	WVG049	J_Hyd-G026	90.02	200	110	-0.29	0.01	0.0
WM4037_03	Glencoe	J_Hyd-G026	J-0201	18.69	200	110	-0.29	0.01	0.0
WM4038_01	Glencoe	J_Hyd-G029	J_Hyd-G068	118.88	100	100	-0.25	0.03	0.0
WM4038_02	Glencoe	J-0354	J_Hyd-G029	74.71	100	100	-0.25	0.03	0.0
WM4038_03	Glencoe	J_Hyd-G068	J-0321	10.21	100	100	-0.25	0.03	0.0
WM4040_01	Glencoe	J-0390	WVG074	17.67	200	110	-0.02	0.00	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4040_02	Glencoe	WVG074	J_Hyd-G020	31.15	150	100	-0.36	0.02	0.0
WM4040_03	Glencoe	J_Hyd-G020	J-0044	136.07	150	100	-0.36	0.02	0.0
WM4040_04	Glencoe	J-0044	J_Hyd-G021	13.53	150	100	-0.21	0.01	0.0
WM4041_01	Glencoe	J-0036	WVG051	15.67	150	100	0.22	0.01	0.0
WM4041_02	Glencoe	J_Hyd-G021	WVG064	10.79	150	100	-0.21	0.01	0.0
WM4041_03	Glencoe	WVG064	WVG051	85.34	150	100	-0.21	0.01	0.0
WM4042_01	Glencoe	J-0036	WVG052	1.53	150	100	-0.55	0.03	0.0
WM4042_02	Glencoe	J-0564	WVG052	112.33	200	110	0.55	0.02	0.0
WM4044_01	Glencoe	J-0288	WVG149	8.47	150	100	0.41	0.02	0.0
WM4044_02	Glencoe	WVG149	J-0447	25.14	150	100	0.41	0.02	0.0
WM4044_03	Glencoe	J-0447	J_Hyd-G022	121.76	150	100	0.00	0.00	0.0
WM4044_04	Glencoe	J_Hyd-G022	WVG148	39.91	150	100	0.00	0.00	0.0
WM4044_05	Glencoe	WVG148	J-0279	8.16	150	100	0.00	0.00	0.0
WM4045	Glencoe	J_Hyd-G062	J-0544	160.30	150	100	0.00	0.00	0.0
WM4048	Glencoe	J-0561	J-0602	197.94	150	100	0.00	0.00	0.0
WM4049_01	Glencoe	J-0198	WVG053	17.47	200	110	0.00	0.00	0.0
WM4049_02	Glencoe	J-0561	WVG053	105.28	200	110	0.00	0.00	0.0
WM4050	Glencoe	J-0452	J-0071	136.52	150	100	0.26	0.01	0.0
WM4051_01(1)	Glencoe	J-0381	J-703	11.62	150	100	-0.17	0.01	0.0
WM4051_01(2)	Glencoe	J-703	J_Hyd-G008	5.45	150	100	0.33	0.02	0.0
WM4051_02(1)	Glencoe	J_Hyd-G008	J-705	24.45	150	100	0.33	0.02	0.0
WM4051_02(2)	Glencoe	J-705	J_Hyd-G009	99.83	150	100	-0.09	0.00	0.0
WM4051_03	Glencoe	J_Hyd-G009	J-0339	35.00	150	100	-0.09	0.00	0.0
WM4051_04	Glencoe	J-0339	J-0340	11.79	150	100	-0.09	0.00	0.0
WM4051_05	Glencoe	J-0340	J-0402	19.06	200	110	-0.09	0.00	0.0
WM4052_01	Glencoe	J-0389	WVG055	17.50	150	100	-0.17	0.01	0.0
WM4052_02	Glencoe	WVG055	J-0381	97.74	150	100	-0.17	0.01	0.0
WM4053_01	Glencoe	J-722	J-0543	84.11	150	100	0.00	0.00	0.0
WM4053_02	Glencoe	J-0632	J-0586	611.63	150	100	0.00	0.00	0.0
WM4053_03	Glencoe	J-0045	J_Hyd-G077	136.44	150	100	0.50	0.03	0.0
WM4053_04	Glencoe	J_Hyd-G077	J-703	104.84	150	100	0.50	0.03	0.0
WM4053_05	Glencoe	J-0165	J-727	19.07	200	110	-0.25	0.01	0.0
WM4053_06	Glencoe	J_Hyd-G085	J-0581	131.21	150	100	0.23	0.01	0.0
WM4054_01	Glencoe	J_Hyd-G095	J-0098	44.85	150	100	0.00	0.00	0.0
WM4054_02	Glencoe	J-0098	WVG153	2.73	150	100	0.00	0.00	0.0
WM4054_03	Glencoe	WVG153	J_Hyd-G098	40.38	150	100	0.00	0.00	0.0
WM4054_04	Glencoe	J_Hyd-G098	J-724	91.69	150	100	0.00	0.00	0.0
WM4055_01	Glencoe	J-0165	J-0166	4.18	200	110	0.25	0.01	0.0
WM4055_02	Glencoe	J-0166	J_Hyd-G069	17.94	200	110	0.25	0.01	0.0
WM4055_03	Glencoe	J_Hyd-G069	J-0364	83.89	200	110	0.25	0.01	0.0
WM4055_04	Glencoe	J-0364	WVG164	14.54	200	110	-0.19	0.01	0.0
WM4056_01	Glencoe	J-0306	J-0291	9.23	200	110	0.35	0.01	0.0
WM4056_02	Glencoe	J-0291	WVG056	8.53	200	110	0.35	0.01	0.0
WM4056_03	Glencoe	WVG056	J_Hyd-G071	6.29	200	110	0.35	0.01	0.0
WM4056_04	Glencoe	J_Hyd-G071	J_Hyd-G070	141.64	200	110	0.35	0.01	0.0
WM4056_05(1)	Glencoe	J_Hyd-G070	J-700	14.39	200	110	0.35	0.01	0.0
WM4056_05(2)	Glencoe	J-700	WVG164	2.83	200	110	0.19	0.01	0.0
WM4059_01	Glencoe	J-0071	J-0072	2.21	150	100	0.26	0.01	0.0
WM4059_02	Glencoe	J-0072	WVG086	4.07	150	100	0.26	0.01	0.0
WM4059_03	Glencoe	WVG086	J-0004	0.64	150	100	0.26	0.01	0.0
WM4059_04	Glencoe	J-0004	WVG159	85.81	150	100	0.26	0.01	0.0
WM4059_05	Glencoe	WVG159	J-0054	1.75	150	100	0.26	0.01	0.0
WM4060C_01	Glencoe	J-0264	WVG070	100.69	200	110	0.42	0.01	0.0
WM4060C_02	Glencoe	WVG070	J-0222	5.50	100	100	0.42	0.05	0.0
WM4061C_01	Glencoe	J-0222	WVG175	13.49	200	110	1.22	0.04	0.0
WM4061C_02	Glencoe	WVG175	J-0566	109.30	200	110	1.22	0.04	0.0
WM4062C(1)	Glencoe	J-0390	J-0368	107.52	200	110	-1.22	0.04	0.0
WM4062C(2)	Glencoe	J-0368	J-0566	1.97	200	110	-1.22	0.04	0.0
WM4063C(1)	Glencoe	J-0390	J-692	10.67	200	110	1.23	0.04	0.0
WM4063C(2)	Glencoe	J-692	J-0579	118.60	200	110	0.90	0.03	0.0
WM4064C	Glencoe	J-0579	J-0402	125.69	200	110	0.90	0.03	0.0
WM4066_01	Glencoe	J-0481	J_Hyd-G097	73.16	150	100	0.04	0.00	0.0
WM4066_02	Glencoe	J_Hyd-G097	WVG001	67.96	150	100	0.04	0.00	0.0
WM4067_01	Glencoe	J-0546	J_Hyd-G086	4.52	150	100	-0.13	0.01	0.0
WM4067_02	Glencoe	J_Hyd-G086	J_Hyd-G056	136.36	150	100	-0.13	0.01	0.0
WM4067_03	Glencoe	J-0435	J_Hyd-G056	152.58	150	100	0.13	0.01	0.0
WM4068_01	Glencoe	J-0272	J-0273	7.81	200	110	0.14	0.00	0.0
WM4068_02	Glencoe	J-0273	J-0175	10.81	200	110	0.14	0.00	0.0
WM4068_03	Glencoe	J-0435	WVG015	24.20	150	100	0.14	0.01	0.0
WM4068_04	Glencoe	WVG015	J-0272	79.45	150	100	0.14	0.01	0.0
WM4069_02	Glencoe	WVG027	J-0076	2.31	200	110	0.02	0.00	0.0
WM4069_03	Glencoe	J-0076	J-0271	7.68	200	110	0.02	0.00	0.0
WM4069_04	Glencoe	J-0271	J_Hyd-G057	136.22	200	110	0.02	0.00	0.0
WM4069_05	Glencoe	J_Hyd-G057	WVG004	8.11	200	110	0.02	0.00	0.0
WM4069_06	Glencoe	WVG004	J-0175	4.98	200	110	0.02	0.00	0.0
WM4070_01	Glencoe	J-700	WVG152	8.78	150	100	0.16	0.01	0.0
WM4070_02	Glencoe	WVG152	J_Hyd-G096	110.01	150	100	0.16	0.01	0.0
WM4070_03	Glencoe	J_Hyd-G096	J-0427	29.19	150	100	0.16	0.01	0.0
WM4070_04	Glencoe	J-0427	WVG165	22.83	150	100	-0.42	0.02	0.0
WM4071_01	Glencoe	J-0384	J-0524	163.12	150	100	-0.18	0.01	0.0
WM4071_02	Glencoe	J-0524	J-0503	64.16	150	100	-0.18	0.01	0.0
WM4071_03	Glencoe	J-0503	J_Hyd-G073	51.20	150	100	-0.18	0.01	0.0
WM4071_04	Glencoe	J_Hyd-G073	J-0256	17.07	150	100	-0.18	0.01	0.0
WM4072_01	Glencoe	J-0255	J-0342	102.78	150	100	-0.05	0.00	0.0
WM4072_02	Glencoe	J-0342	J-0333	12.07	150	100	-0.05	0.00	0.0
WM4074_01	Glencoe	J-0124	WVG057	3.42	250	120	-0.19	0.00	0.0
WM4074_02	Glencoe	J-0084	WVG172	2.45	150	100	-0.26	0.01	0.0
WM4074_03	Glencoe	WVG172	J-0025	49.15	150	100	-0.26	0.01	0.0
WM4074_04	Glencoe	J-0025	WVG057	52.74	150	100	0.19	0.01	0.0
WM4075_01	Glencoe	J-0332	J-698	11.44	200	110	0.43	0.01	0.0
WM4075_02	Glencoe	J-0124	WVG059	4.81	150	100	0.43	0.02	0.0
WM4075_03	Glencoe	WVG059	J-0060	1.83	150	100	0.43	0.02	0.0
WM4075_04	Glencoe	J-0060	WVG170	3.49	150	100	0.43	0.02	0.0
WM4075_05	Glencoe	WVG170	J-0332	102.63	150	100	0.43	0.02	0.0
WM4075_06	Glencoe	J-0333	J_Hyd-G074	15.51	150	100	0.09	0.00	0.0
WM4075_07	Glencoe	J_Hyd-G074	J-0507	82.01	150	100	0.09	0.00	0.0
WM4075_08(1)	Glencoe	J-0507	J-707	6.31	150	100	0.09	0.00	0.0
WM4075_08(2)	Glencoe	J-707	WVG028	45.56	150	100	0.24	0.01	0.0
WM4075_09	Glencoe	WVG028	J_Hyd-G075	3.61	150	100	0.24	0.01	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4075_10	Glencoe	J_Hyd-G075	J-0252	19.39	150	100	0.24	0.01	0.0
WM4076_01	Glencoe	WVG169	J-698	4.82	200	110	-0.65	0.02	0.0
WM4076_02	Glencoe	WVG169	J-0044	105.78	150	100	0.65	0.04	0.0
WM4077	Glencoe	J-0044	J-0045	1.64	150	100	0.50	0.03	0.0
WM4079_01	Glencoe	J-0178	WVG035	4.43	150	100	-0.43	0.02	0.0
WM4079_02	Glencoe	WVG035	J-718	110.51	150	100	-0.43	0.02	0.0
WM4080_01	Glencoe	J-0099	WVG019	2.84	200	110	0.30	0.01	0.0
WM4080_02	Glencoe	J-0580	J_Hyd-G051	129.47	200	110	0.00	0.00	0.0
WM4081_01	Glencoe	WVG019	J_Hyd-G050	103.90	200	110	0.30	0.01	0.0
WM4081_02(1)	Glencoe	J_Hyd-G050	J-720	84.40	200	110	0.30	0.01	0.0
WM4081_02(2)	Glencoe	J-720	J-0580	19.71	200	110	0.00	0.00	0.0
WM4082_01	Glencoe	J-0099	J-0106	11.28	200	110	-0.30	0.01	0.0
WM4082_02	Glencoe	J-0106	J_Hyd-G049	24.29	200	110	-0.31	0.01	0.0
WM4082_03	Glencoe	J_Hyd-G049	J-0144	83.33	200	110	-0.31	0.01	0.0
WM4083_01	Glencoe	J-0144	WVG011	10.85	200	110	0.26	0.01	0.0
WM4083_02	Glencoe	WVG011	J_Hyd-G048	5.58	200	110	0.26	0.01	0.0
WM4083_03	Glencoe	J_Hyd-G048	WVG036	85.97	200	110	0.26	0.01	0.0
WM4083_04	Glencoe	WVG036	J-0178	5.16	200	110	0.26	0.01	0.0
WM4084_01	Glencoe	J-0178	J_Hyd-G047	44.27	200	110	0.53	0.02	0.0
WM4084_02	Glencoe	J_Hyd-G047	WVG030	33.12	200	110	0.53	0.02	0.0
WM4085_01	Glencoe	WVG030	WVG046	90.09	200	110	0.53	0.02	0.0
WM4085_02	Glencoe	WVG046	J_Hyd-G046	6.34	200	110	0.53	0.02	0.0
WM4085_03	Glencoe	J_Hyd-G046	J-0179	12.04	200	110	0.53	0.02	0.0
WM4085_04	Glencoe	J-0284	J-0285	8.41	200	110	0.80	0.03	0.0
WM4086_01	Glencoe	J-0179	WVG200	4.45	200	110	1.33	0.04	0.0
WM4086_02	Glencoe	WVG200	WVG048	97.18	200	110	1.33	0.04	0.0
WM4086_03	Glencoe	WVG048	J_Hyd-G045	1.59	200	110	1.33	0.04	0.0
WM4086_04(1)	Glencoe	J_Hyd-G045	J-695	8.56	200	110	1.33	0.04	0.0
WM4086_04(2)	Glencoe	J-695	WVG050	7.32	200	110	1.40	0.04	0.0
WM4087	Glencoe	WVG050	J-0036	103.33	200	110	1.40	0.04	0.0
WM4088_01	Glencoe	J-0036	J_Hyd-G044	15.50	200	110	1.72	0.05	0.0
WM4088_02	Glencoe	J_Hyd-G044	J_Hyd-G043	102.76	200	110	1.72	0.05	0.0
WM4088_03	Glencoe	J_Hyd-G043	J-0198	13.93	200	110	1.72	0.05	0.0
WM4089_01	Glencoe	J-0198	WVG054	4.87	200	110	1.39	0.04	0.0
WM4089_02	Glencoe	WVG054	J-0389	104.26	200	110	0.32	0.01	0.0
WM4090_01	Glencoe	J-0389	J_Hyd-G042	35.45	200	110	0.49	0.02	0.0
WM4090_02	Glencoe	J_Hyd-G042	J_Hyd-G041	123.12	200	110	0.49	0.02	0.0
WM4090_03	Glencoe	J_Hyd-G041	J-0306	113.59	200	110	0.49	0.02	0.0
WM4091_01	Glencoe	J-0410	J_Hyd-G052	20.75	150	100	-0.39	0.02	0.0
WM4091_02	Glencoe	J_Hyd-G052	WVG012	81.54	150	100	-0.39	0.02	0.0
WM4092_01(1)	Glencoe	WVG012	J-713	7.73	150	100	-0.39	0.02	0.0
WM4092_01(2)	Glencoe	J-713	WVG013	8.18	150	100	0.34	0.02	0.0
WM4092_02	Glencoe	WVG013	J_Hyd-G053	42.46	150	100	0.34	0.02	0.0
WM4092_03	Glencoe	J_Hyd-G053	WVG161	39.94	150	100	0.34	0.02	0.0
WM4093(1)	Glencoe	WVG161	J-718	17.09	150	100	0.34	0.02	0.0
WM4093(2)	Glencoe	J-718	WVG032	49.53	150	100	-0.09	0.00	0.0
WM4094_01	Glencoe	WVG039	J-0139	3.71	150	100	0.54	0.03	0.0
WM4094_02	Glencoe	J-0139	J-0336	11.56	150	100	0.54	0.03	0.0
WM4094_03	Glencoe	J-0336	J-0331	39.62	150	100	0.54	0.03	0.0
WM4094_04	Glencoe	J-0331	J-0286	42.02	150	100	0.09	0.00	0.0
WM4094_05	Glencoe	J-0286	WVG032	30.10	150	100	0.09	0.00	0.0
WM4095_01	Glencoe	J-0201	WVG044	10.01	150	100	-0.84	0.05	0.0
WM4095_02	Glencoe	WVG044	WVG041	98.34	150	100	-0.84	0.05	0.0
WM4095_03	Glencoe	WVG041	J-0211	5.17	150	100	-0.84	0.05	0.0
WM4095_04	Glencoe	J-0211	WVG040	8.79	150	100	-0.84	0.05	0.0
WM4095_05	Glencoe	WVG040	J-0005	2.73	150	100	0.00	0.00	0.0
WM4095_06(1)	Glencoe	WVG040	J-715	6.18	150	100	-0.84	0.05	0.0
WM4095_06(2)	Glencoe	J-715	WVG039	2.36	150	100	0.54	0.03	0.0
WM4096_01	Glencoe	WVG043	J-0201	4.96	150	100	-0.55	0.03	0.0
WM4096_02	Glencoe	J-0564	WVG043	106.76	150	100	-0.55	0.03	0.0
WM4097_01	Glencoe	J-0529	J-0425	68.18	50	100	0.00	0.00	0.0
WM4097_02	Glencoe	J-0424	J-0425	22.42	50	100	0.00	0.00	0.0
WM4098_01	Glencoe	J-0111	WVG129	3.15	150	100	-0.90	0.05	0.0
WM4098_02	Glencoe	WVG129	J-0172	4.26	150	100	-0.90	0.05	0.0
WM4098_03	Glencoe	J-0172	J-0239	6.15	150	100	-0.90	0.05	0.0
WM4098_04	Glencoe	J-0239	J_Hyd-G024	62.71	150	100	-0.90	0.05	0.0
WM4098_05	Glencoe	J_Hyd-G024	J-0265	21.45	150	100	-0.90	0.05	0.0
WM4098_06	Glencoe	J-0265	J-0116	7.41	150	100	-0.90	0.05	0.0
WM4098_07	Glencoe	J-0116	WVG188	3.18	150	100	-0.90	0.05	0.0
WM4098_08	Glencoe	WVG188	J-0126	5.05	150	100	-0.90	0.05	0.0
WM4099_01	Glencoe	J-0354	WVG189	13.18	150	100	-0.54	0.03	0.0
WM4099_02	Glencoe	WVG189	J_Hyd-G025	91.45	150	100	-0.54	0.03	0.0
WM4099_03	Glencoe	J_Hyd-G025	J-0236	3.77	150	100	-0.54	0.03	0.0
WM4099_04	Glencoe	J-0236	J-0059	6.09	150	100	-0.54	0.03	0.0
WM4099_05	Glencoe	J-0059	WVG199	1.83	150	100	-0.54	0.03	0.0
WM4099_06	Glencoe	WVG199	WVG131	5.28	150	100	-0.54	0.03	0.0
WM4099_07	Glencoe	WVG131	J-0111	4.06	150	100	-0.54	0.03	0.0
WM4101_01	Glencoe	WVG187	WVG132	101.68	150	100	0.28	0.02	0.0
WM4101_02	Glencoe	WVG132	J-709	2.48	150	100	0.28	0.02	0.0
WM4101_03(1)	Glencoe	WVG187	J-811	1.61	150	100	-0.28	0.02	0.0
WM4102_01	Glencoe	J-709	WVG133	13.28	150	100	0.80	0.05	0.0
WM4102_02	Glencoe	WVG133	WVG147	97.08	150	100	0.80	0.05	0.0
WM4102_03	Glencoe	WVG147	J-0321	13.28	150	100	0.80	0.05	0.0
WM4103	Glencoe	J-0321	J-0568	110.36	150	100	0.55	0.03	0.0
WM4104_01	Glencoe	J-0568	J_Hyd-G088	35.37	150	100	0.55	0.03	0.0
WM4104_02	Glencoe	J_Hyd-G088	J_Hyd-G089	114.83	150	100	0.55	0.03	0.0
WM4104_03	Glencoe	J_Hyd-G089	WVG150	58.22	150	100	0.55	0.03	0.0
WM4104_04	Glencoe	WVG150	WVG190	30.53	150	100	0.55	0.03	0.0
WM4104_05	Glencoe	WVG190	J_Hyd-G090	61.89	150	100	0.30	0.02	0.0
WM4104_06	Glencoe	J_Hyd-G090	WVG151	122.12	150	100	0.30	0.02	0.0
WM4104_07	Glencoe	WVG151	J_Hyd-G091	7.91	150	100	0.00	0.00	0.0
WM4107_01	Glencoe	J-735	WVG186	1.65	150	100	0.00	0.00	0.0
WM4107_02	Glencoe	WVG186	J_Hyd-G004	130.23	150	100	0.00	0.00	0.0
WM4108_01	Glencoe	J-0205	WVG103	5.09	200	110	0.98	0.03	0.0
WM4108_02	Glencoe	J-734	WVG103	119.43	200	110	-0.98	0.03	0.0
WM4109_01	Glencoe	WVG102	WVG104	108.82	200	110	-1.24	0.04	0.0
WM4109_02	Glencoe	WVG104	J-0187	4.57	200	110	-1.24	0.04	0.0
WM4109_03	Glencoe	WVG102	J-0205	9.87	200	110	1.24	0.04	0.0
WM4110_01	Glencoe	J-0187	J-0358	89.06	200	110	-1.17	0.04	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4110_02	Glencoe	J-0358	WVG181	13.95	200	110	-1.17	0.04	0.0
WM4110_03	Glencoe	WVG181	J-0011	1.00	200	110	-1.17	0.04	0.0
WM4110_04(2)(2	Glencoe	J-815	J-0093	4.88	200	110	-1.71	0.05	0.0
WM4111_01	Glencoe	J-0093	J-0080	2.63	200	110	-1.71	0.05	0.0
WM4111_02	Glencoe	J-0080	WVG183	2.38	200	110	-1.71	0.05	0.0
WM4111_03	Glencoe	WVG183	WVG191	91.38	200	110	-1.71	0.05	0.0
WM4111_04	Glencoe	WVG191	J-0227	5.56	200	110	-1.71	0.05	0.0
WM4112_01	Glencoe	J-0063	WVG108	120.28	200	110	-1.20	0.04	0.0
WM4112_02	Glencoe	WVG108	J-0089	2.53	200	110	-1.20	0.04	0.0
WM4113_01	Glencoe	J-0089	WVG010	10.60	200	110	-1.43	0.05	0.0
WM4113_02	Glencoe	WVG010	WVG120	100.04	200	110	-1.43	0.05	0.0
WM4114	Glencoe	WVG107	J-0063	1.84	150	100	-1.20	0.07	0.0
WM4115_01	Glencoe	J-0123	WVG139	3.41	150	100	1.78	0.10	0.0
WM4115_02	Glencoe	WVG139	J_Hyd-H_T-718	3.84	150	100	1.78	0.10	0.0
WM4115_04	Glencoe	J_Hyd-H_T-718	J-0262	93.36	150	100	1.78	0.10	0.0
WM4115_05(2)	Glencoe	J-825	J-0559	106.02	150	100	0.96	0.05	0.0
WM4115_06	Glencoe	J-0559	J-0089	104.29	150	100	0.96	0.05	0.0
WM4116_01	Glencoe	J_Hyd-G001	WVG117	58.22	150	100	0.22	0.01	0.0
WM4116_02	Glencoe	WVG117	J-0213	16.86	150	100	0.22	0.01	0.0
WM4116_03	Glencoe	J-0360	J_Hyd-G001	121.50	150	100	0.22	0.01	0.0
WM4117	Glencoe	J-0360	J-0409	20.60	150	100	-0.55	0.03	0.0
WM4118_01	Glencoe	J-0590	J_Hyd-G002	142.34	150	100	0.00	0.00	0.0
WM4118_02	Glencoe	J_Hyd-G002	J-0091	4.87	150	100	0.00	0.00	0.0
WM4120	Glencoe	J-0235	J_Hyd-G018	41.76	150	100	0.00	0.00	0.0
WM4121_01	Glencoe	WVG185	J-0235	6.04	150	100	0.00	0.00	0.0
WM4121_02	Glencoe	WVG185	J_Hyd-G019	101.74	150	100	0.00	0.00	0.0
WM4124_01	Glencoe	J-0067	J-0494	44.34	300	120	-28.74	0.41	0.0
WM4124_02	Glencoe	J-0066	J_Hyd-G084	333.82	300	120	11.46	0.16	0.1
WM4124_03	Glencoe	J-0066	J-0067	2.04	300	120	-13.60	0.19	0.0
WM4125_01	Glencoe	J-0146	J-0202	57.31	300	120	-14.96	0.21	0.0
WM4125_02	Glencoe	J-0006	WVG196	53.16	150	100	3.34	0.19	0.0
WM4125_03	Glencoe	WVG122	J-0267	7.87	150	100	3.34	0.19	0.0
WM4125_04	Glencoe	WVG122	WVG196	48.20	150	100	-3.34	0.19	0.0
WM4125_05	Glencoe	J-0337	J-0338	11.59	300	120	8.16	0.12	0.0
WM4125_06	Glencoe	J-0338	J-0180	21.85	300	120	8.16	0.12	0.0
WM4125_07	Glencoe	J-0180	J-0146	229.84	300	120	-0.58	0.01	0.0
WM4125_08	Glencoe	J-0145	J-0017	4.06	300	120	13.98	0.20	0.0
WM4126_01	Glencoe	J-0017	WVG143	1.42	200	110	2.30	0.07	0.0
WM4126_02	Glencoe	WVG143	J-0013	1.00	200	110	2.30	0.07	0.0
WM4126_03	Glencoe	J-0013	J-0047	1.67	200	110	2.30	0.07	0.0
WM4126_04	Glencoe	J-0047	J-0038	2.12	200	110	2.30	0.07	0.0
WM4126_05	Glencoe	J-0038	J-0039	1.57	200	110	2.30	0.07	0.0
WM4126_06	Glencoe	J-0168	J-0169	4.23	200	110	11.04	0.35	0.0
WM4126_07	Glencoe	J-0039	J-0544	87.81	200	110	2.30	0.07	0.0
WM4128C_01	Glencoe	J-0252	WVG029	6.68	150	100	0.50	0.03	0.0
WM4129C_01	Glencoe	J-0115	J-0084	3.18	150	100	0.00	0.00	0.0
WM4129C_02	Glencoe	J-0084	J-0252	8.39	150	100	0.26	0.01	0.0
WM4143C	Glencoe	J-0373	J-0451	80.71	200	110	-0.73	0.02	0.0
WM4145C_01	Glencoe	J-0451	J_Hyd-G013	25.95	200	110	-0.81	0.03	0.0
WM4145C_02	Glencoe	J_Hyd-G013	J-0032	1.48	150	100	-0.81	0.05	0.0
WM4147C_01	Glencoe	J-0316	J-0191	48.55	200	110	1.28	0.04	0.0
WM4147C_02	Glencoe	J-0191	J_Hyd-G012	75.68	200	110	-0.86	0.03	0.0
WM4147C_03	Glencoe	J_Hyd-G012	J-0303	9.12	150	100	-0.86	0.05	0.0
WM4147C_04	Glencoe	J-0032	J-0128	88.99	200	110	-0.60	0.02	0.0
WM4147C_05	Glencoe	J-0128	J-0303	27.37	200	110	-0.60	0.02	0.0
WM4148C_01	Glencoe	J-0316	J_Hyd-G011	10.01	200	110	-0.72	0.02	0.0
WM4148C_02	Glencoe	WVG097	J_Hyd-G011	89.00	200	110	0.72	0.02	0.0
WM4149_01	Glencoe	J-715	WVG042	11.98	250	120	-4.40	0.09	0.0
WM4149_02	Glencoe	WVG042	J-0111	70.85	250	120	-4.40	0.09	0.0
WM4153C_01	Glencoe	J-0071	J_Hyd-G010	2.62	150	100	0.00	0.00	0.0
WM4153C_02	Glencoe	WVG158	J_Hyd-G010	52.89	150	100	0.00	0.00	0.0
WM4153C_03	Glencoe	J-0402	J_Hyd-G087	11.71	200	110	0.82	0.03	0.0
WM4153C_04	Glencoe	J_Hyd-G087	J-0452	14.25	200	110	0.82	0.03	0.0
WM4153C_05(1)	Glencoe	J-0452	J-722	58.28	200	110	0.56	0.02	0.0
WM4153C_05(2)	Glencoe	J-722	J_Hyd-G082	28.48	200	110	0.56	0.02	0.0
WM4153C_06	Glencoe	J_Hyd-G082	J_Hyd-G006	142.80	200	110	0.56	0.02	0.0
WM4153C_07	Glencoe	WV-348	J_Hyd-G005	108.11	200	110	0.31	0.01	0.0
WM4153C_08	Glencoe	J_Hyd-G005	J_Hyd-G063	100.69	200	110	0.31	0.01	0.0
WM4153C_09	Glencoe	J_Hyd-G063	J_Hyd-G058	130.80	200	110	0.31	0.01	0.0
WM4153C_10	Glencoe	J_Hyd-G058	J-0627	10.14	200	110	0.31	0.01	0.0
WM4156	Glencoe	J-0367	J-0368	16.07	150	100	0.00	0.00	0.0
WM4157_01	Glencoe	J-0554	J_Hyd-G092	93.03	150	100	-0.33	0.02	0.0
WM4157_02	Glencoe	J_Hyd-G092	J-692	5.66	150	100	-0.33	0.02	0.0
WM4159_01	Glencoe	J-0384	WVG022	17.17	150	100	0.00	0.00	0.0
WM4159_02	Glencoe	WVG022	G072	40.39	150	100	0.00	0.00	0.0
WM4160_01	Glencoe	J-0360	WVG116	14.15	150	100	0.33	0.02	0.0
WM4160_02	Glencoe	WVG116	J-0235	99.50	150	100	0.33	0.02	0.0
WM4162_01	Glencoe	J-0191	WVG094	4.72	150	100	2.13	0.12	0.0
WM4162_02	Glencoe	WVG094	J-0529	83.93	200	110	2.13	0.07	0.0
WM4162_03	Glencoe	J-0529	J-713	78.46	200	110	2.01	0.06	0.0
WM4167_01	Glencoe	J-0288	J-0488	67.16	150	100	-0.41	0.02	0.0
WM4167_02	Glencoe	J-0488	J-0354	40.17	150	100	-0.41	0.02	0.0
WM4178L.B	Glencoe	J-705	WVG165	107.96	150	100	0.42	0.02	0.0
WM4181L.B	Glencoe	J-0178	J-707	123.47	100	100	0.15	0.02	0.0
WM4182L.B_01	Glencoe	J-0353	WVG045	13.16	150	100	0.45	0.03	0.0
WM4182L.B_02	Glencoe	WVG045	WVG171	101.55	150	100	0.45	0.03	0.0
WM4182L.B_03	Glencoe	J-0025	WVG171	1.26	150	100	-0.45	0.03	0.0
WM4184L.B_01	Glencoe	J-0331	WVG037	11.11	150	100	0.45	0.03	0.0
WM4184L.B_02	Glencoe	WVG037	J-0353	103.47	150	100	0.45	0.03	0.0
WM4196L.B_01	Glencoe	J-0145	J-0146	3.84	300	120	-13.98	0.20	0.0
WM4196L.B_02	Glencoe	J-0202	WVG197	5.00	300	120	-14.96	0.21	0.0
WM4196L.B_03	Glencoe	WVG197	J-0067	333.26	300	120	-14.96	0.21	0.1
P-234	Melborne	J_Hyd-M017	J-0531	3.11	150	100	5.08	0.29	0.0
P-237	Melborne	WVM004	J-0037	11.15	200	110	-8.80	0.28	0.0
P_Hyd-M002	Melborne	J_Hyd-M002	M002	4.54	150	100	0.00	0.00	0.0
P_Hyd-M003	Melborne	J_Hyd-M003	M003	3.46	150	100	0.00	0.00	0.0
P_Hyd-M004	Melborne	J_Hyd-M004	M004	2.69	150	100	0.00	0.00	0.0
P_Hyd-M005	Melborne	J_Hyd-M005	M005	4.60	150	100	0.00	0.00	0.0
P_Hyd-M006	Melborne	J_Hyd-M006	M006	1.58	150	100	0.00	0.00	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-M007	Melborne	J_Hyd-M007	M007	3.19	150	100	0.00	0.00	0.0
P_Hyd-M008	Melborne	J_Hyd-M008	M008	1.77	150	100	0.00	0.00	0.0
P_Hyd-M009	Melborne	J_Hyd-M009	M009	4.67	150	100	0.00	0.00	0.0
P_Hyd-M010	Melborne	J_Hyd-M010	M010	6.09	150	100	0.00	0.00	0.0
P_Hyd-M011	Melborne	J_Hyd-M011	M011	1.88	150	100	0.00	0.00	0.0
P_Hyd-M012	Melborne	J_Hyd-M012	M012	3.91	150	100	0.00	0.00	0.0
P_Hyd-M013	Melborne	J_Hyd-M013	M013	2.29	150	100	0.00	0.00	0.0
P_Hyd-M014	Melborne	J_Hyd-M014	M014	1.98	150	100	0.00	0.00	0.0
P_Hyd-M015	Melborne	J_Hyd-M015	M015	2.99	150	100	0.00	0.00	0.0
P_Hyd-M016	Melborne	J_Hyd-M016	M016	2.30	150	100	0.00	0.00	0.0
P_Hyd-M017	Melborne	J_Hyd-M017	M017	4.21	150	100	0.00	0.00	0.0
P_Hyd-M018	Melborne	J_Hyd-M018	M018	0.81	150	100	0.00	0.00	0.0
P_Hyd-M019	Melborne	J_Hyd-M019	M019	3.99	150	100	0.00	0.00	0.0
P_Hyd-M020	Melborne	J_Hyd-M020	M020	3.90	150	100	0.00	0.00	0.0
P_Hyd-M021	Melborne	J_Hyd-M021	M021	3.76	150	100	0.00	0.00	0.0
P_Hyd-M022	Melborne	J_Hyd-M022	M022	4.35	150	100	0.00	0.00	0.0
P_Hyd-M023	Melborne	J_Hyd-M023	M023	1.95	150	100	0.00	0.00	0.0
WM2002C	Melborne	J-0237	WVM022	6.14	150	100	1.58	0.09	0.0
WM2030C_13	Melborne	J_Hyd-M002	J_Hyd-M003	206.11	150	100	5.13	0.29	0.3
WM2110C_01	Melborne	J-0158	WVM011	12.91	150	100	0.00	0.00	0.0
WM2110C_02	Melborne	WVM011	J_Hyd-M008	99.39	150	100	0.00	0.00	0.0
WM2111C_04	Melborne	WVM032	J_Hyd-M017	17.49	150	100	5.08	0.29	0.0
WM6000_01	Melborne	J-0176	WVM003	95.00	150	100	-1.12	0.06	0.0
WM6000_02	Melborne	WVM003	J-0192	32.55	150	100	-1.12	0.06	0.0
WM6001_01	Melborne	J-0065	WVA023	2.02	150	100	0.00	0.00	0.0
WM6001_02	Melborne	WVA023	WVM030	47.35	150	100	0.00	0.00	0.0
WM6002C_01	Melborne	J-0105	J-0403	19.22	150	100	-2.50	0.14	0.0
WM6002C_02	Melborne	WVM022	J-0403	98.89	150	100	1.58	0.09	0.0
WM6002_01	Melborne	WVM025	J_Hyd-M020	2.65	150	100	1.83	0.10	0.0
WM6002_02	Melborne	J-0177	WVM025	4.37	150	100	1.83	0.10	0.0
WM6002_03	Melborne	J_Hyd-M020	WVM007	98.53	150	100	1.83	0.10	0.0
WM6002_04	Melborne	WVM007	J-0125	18.26	150	100	1.83	0.10	0.0
WM6003C_01	Melborne	J-0192	WVM001	4.73	150	100	-5.13	0.29	0.0
WM6003C_02	Melborne	J_Hyd-M003	WVM001	187.86	150	100	5.13	0.29	0.2
WM6003_01	Melborne	J-0176	WVM027	4.36	150	100	0.37	0.02	0.0
WM6003_02	Melborne	WVM027	J_Hyd-M022	26.82	150	100	0.37	0.02	0.0
WM6003_03	Melborne	J_Hyd-M022	J-0407	20.47	150	100	0.37	0.02	0.0
WM6003_04	Melborne	J_Hyd-M023	J-0407	158.98	150	100	-0.12	0.01	0.0
WM6003_05	Melborne	J_Hyd-M023	J-0493	43.36	150	100	0.12	0.01	0.0
WM6004C_01	Melborne	J-0192	WVM002	14.53	150	100	4.01	0.23	0.0
WM6004C_02	Melborne	WVM002	J_Hyd-M004	4.18	150	100	4.01	0.23	0.0
WM6004C_03	Melborne	J_Hyd-M004	J_Hyd-M005	170.61	200	110	4.01	0.13	0.0
WM6004_01	Melborne	J-0065	J_Hyd-M021	8.68	150	100	-0.74	0.04	0.0
WM6004_02	Melborne	J_Hyd-M021	WVM028	111.82	150	100	-0.74	0.04	0.0
WM6004_03	Melborne	WVM028	J-0176	16.14	150	100	-0.74	0.04	0.0
WM6005C_01	Melborne	J-0125	WVM005	3.45	200	110	4.79	0.15	0.0
WM6005C_02	Melborne	WVM005	J-0430	23.41	200	110	4.79	0.15	0.0
WM6005C_03	Melborne	Standpipe	J-0430	46.70	200	110	0.00	0.00	0.0
WM6005C_04	Melborne	J_Hyd-M005	J-0037	34.61	200	110	4.01	0.13	0.0
WM6005C_05	Melborne	J-0430	J-0037	4.98	200	110	4.79	0.15	0.0
WM6005C_06	Melborne	Standpipe	WVM004	31.50	200	110	-8.80	0.28	0.0
WM6005_01	Melborne	J-0177	WVM026	4.51	150	100	-0.74	0.04	0.0
WM6005_02	Melborne	WVM026	J-0065	110.26	150	100	-0.74	0.04	0.0
WM6006C_01	Melborne	J-0125	WVM006	15.98	200	110	-2.95	0.09	0.0
WM6006C_02	Melborne	WVM006	J_Hyd-M006	43.26	200	110	-2.95	0.09	0.0
WM6006C_03	Melborne	J_Hyd-M006	WVM008	67.74	200	110	-2.95	0.09	0.0
WM6006C_04	Melborne	WVM008	J-0105	26.02	200	110	-2.95	0.09	0.0
WM6006_01	Melborne	J-0203	J_Hyd-M019	5.07	150	100	1.33	0.08	0.0
WM6006_02	Melborne	J_Hyd-M019	J-0177	132.87	150	100	1.33	0.08	0.0
WM6007SC_01	Melborne	J-0312	WVM013	15.69	150	100	0.07	0.00	0.0
WM6007SC_02	Melborne	WVM013	J_Hyd-M016	68.32	150	100	0.07	0.00	0.0
WM6007SC_03	Melborne	J_Hyd-M016	J-0156	12.36	150	100	0.07	0.00	0.0
WM6007SC_04	Melborne	J-0156	J-0498	46.76	150	100	2.33	0.13	0.0
WM6008SCC_01	Melborne	J-0403	J-0434	101.45	150	100	-0.92	0.05	0.0
WM6008SCC_02	Melborne	J-0434	J-0108	24.19	150	100	-0.92	0.05	0.0
WM6008SCC_03	Melborne	J-0108	J-0109	3.08	150	100	-0.92	0.05	0.0
WM6008SC_01	Melborne	J-0230	J-0237	128.60	150	100	0.15	0.01	0.0
WM6008SC_02	Melborne	J-0237	J-0203	15.29	150	100	-1.43	0.08	0.0
WM6009SC_01	Melborne	J-0158	WVM010	4.02	150	100	-0.46	0.03	0.0
WM6009SC_02	Melborne	WVM010	J_Hyd-M009	52.80	150	100	-0.46	0.03	0.0
WM6009SC_03	Melborne	J_Hyd-M009	J_Hyd-M010	84.25	150	100	-0.46	0.03	0.0
WM6009SC_04	Melborne	J_Hyd-M010	J-0248	6.77	150	100	-0.46	0.03	0.0
WM6010C_01	Melborne	J-0105	WVM009	3.01	150	100	-0.46	0.03	0.0
WM6010C_02	Melborne	WVM009	J_Hyd-M007	38.17	150	100	-0.46	0.03	0.0
WM6010C_03	Melborne	J_Hyd-M007	J-0158	66.46	150	100	-0.46	0.03	0.0
WM6010SCC	Melborne	J_Hyd-M012	J-0159	72.47	150	100	-0.03	0.00	0.0
WM6010SC_01	Melborne	J-0500	J-0230	48.94	150	100	-0.79	0.04	0.0
WM6010SC_02	Melborne	J-0502	J-0500	50.61	150	100	-0.79	0.04	0.0
WM6010SC_03	Melborne	J-0396	WVM014	18.01	150	100	0.00	0.00	0.0
WM6010SC_04	Melborne	WVM014	J-0248	103.75	150	100	0.00	0.00	0.0
WM6011C_01	Melborne	J-0413	J_Hyd-M018	65.91	150	100	2.83	0.16	0.0
WM6011C_02	Melborne	J_Hyd-M018	WVM012	9.39	150	100	2.83	0.16	0.0
WM6011C_03	Melborne	WVM012	J-0312	9.52	150	100	2.83	0.16	0.0
WM6011SC_01	Melborne	J-0413	J-0414	20.96	150	100	2.25	0.13	0.0
WM6011SC_02	Melborne	J-0156	J-0157	3.99	150	100	-2.25	0.13	0.0
WM6011SC_03	Melborne	J-0157	WVM031	10.91	150	100	-2.25	0.13	0.0
WM6011SC_04	Melborne	J-0414	WVM031	93.52	150	100	2.25	0.13	0.0
WM6013C_01	Melborne	WVM023	J-0203	14.89	150	100	2.75	0.16	0.0
WM6013C_02	Melborne	J-0312	WVM023	99.33	150	100	2.75	0.16	0.0
WM6013SC_01	Melborne	J-0498	J_Hyd-M015	64.17	150	100	2.33	0.13	0.0
WM6013SC_02	Melborne	J-0230	WVM020	14.69	150	100	-2.33	0.13	0.0
WM6013SC_03	Melborne	WVM020	J_Hyd-M015	35.71	150	100	-2.33	0.13	0.0
WM6015SC_01	Melborne	J-0502	J_Hyd-M014	55.20	150	100	0.79	0.04	0.0
WM6015SC_02	Melborne	J_Hyd-M014	WVM021	51.37	150	100	0.79	0.04	0.0
WM6015SC_03	Melborne	WVM021	J-0159	4.03	150	100	0.79	0.04	0.0
WM6016SCC_01	Melborne	J-0159	WVM017	33.77	150	100	0.76	0.04	0.0
WM6016SCC_02	Melborne	WVM017	J-0189	4.61	150	100	0.76	0.04	0.0
WM6016SC_01	Melborne	J-0476	J_Hyd-M011	37.38	150	100	-0.71	0.04	0.0
WM6016SC_02	Melborne	J_Hyd-M011	J-0189	91.52	150	100	-0.71	0.04	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM6017SCC_01	Melborne	WVM018	J_Hyd-M013	113.47	150	100	0.06	0.00	0.0
WM6017SCC_02	Melborne	J-0189	WVM018	10.70	150	100	0.06	0.00	0.0
WM6018SCC	Melborne	J-0109	J_Hyd-M012	27.44	150	100	-0.03	0.00	0.0
WM6018SC_01	Melborne	J-0248	J-0249	6.36	150	100	-0.46	0.03	0.0
WM6018SC_02	Melborne	J-0249	WVM015	15.24	150	100	-0.71	0.04	0.0
WM6018SC_03	Melborne	WVM015	J-0476	105.12	150	100	-0.71	0.04	0.0
WM6018SC_04	Melborne	WVM019	J-0230	5.70	150	100	-1.12	0.06	0.0
WM6018SC_05	Melborne	WVM019	J-0109	104.89	150	100	1.12	0.06	0.0
WM6019C	Melborne	J-0531	J-0413	70.43	150	100	5.08	0.29	0.1
P-319	Wardsville	WVW007	J_Hyd-W015	1.13	150	100	0.36	0.02	0.0
P_Hyd-W001	Wardsville	J_Hyd-W001	W001	5.48	150	90	0.00	0.00	0.0
P_Hyd-W002	Wardsville	J_Hyd-W002	W002	4.70	150	90	0.00	0.00	0.0
P_Hyd-W003	Wardsville	J_Hyd-W003	W003	5.65	150	90	0.00	0.00	0.0
P_Hyd-W004	Wardsville	J_Hyd-W004	W004	3.86	150	90	0.00	0.00	0.0
P_Hyd-W005	Wardsville	J_Hyd-W005	W005	6.90	150	90	0.00	0.00	0.0
P_Hyd-W006	Wardsville	J_Hyd-W006	W006	3.88	150	90	0.00	0.00	0.0
P_Hyd-W007	Wardsville	J_Hyd-W007	W007	1.75	150	90	0.00	0.00	0.0
P_Hyd-W008	Wardsville	J_Hyd-W008	W008	1.93	150	90	0.00	0.00	0.0
P_Hyd-W009	Wardsville	J_Hyd-W009	W009	3.07	150	90	0.00	0.00	0.0
P_Hyd-W010	Wardsville	J_Hyd-W010	W010	1.19	150	90	0.00	0.00	0.0
P_Hyd-W011	Wardsville	J_Hyd-W011	W011	6.93	150	90	0.00	0.00	0.0
P_Hyd-W012	Wardsville	J_Hyd-W012	W012	2.69	150	90	0.00	0.00	0.0
P_Hyd-W013	Wardsville	J_Hyd-W013	W013	2.70	150	90	0.00	0.00	0.0
P_Hyd-W014	Wardsville	J_Hyd-W014	W014	1.95	150	90	0.00	0.00	0.0
P_Hyd-W015	Wardsville	J_Hyd-W015	W015	6.64	150	90	0.00	0.00	0.0
P_Hyd-W016	Wardsville	J_Hyd-W016	W016	5.24	150	90	0.00	0.00	0.0
P_Hyd-W017	Wardsville	J_Hyd-W017	W017	10.85	150	90	0.00	0.00	0.0
P_Hyd-W018	Wardsville	J_Hyd-W018	W018	2.15	150	90	0.00	0.00	0.0
P_Hyd-W019	Wardsville	J_Hyd-W019	W019	2.50	150	90	0.00	0.00	0.0
P_Hyd-W020	Wardsville	WVW055	W020	4.99	150	90	0.00	0.00	0.0
P_Hyd-W021	Wardsville	J_Hyd-W021	W021	3.07	150	90	0.00	0.00	0.0
P_Hyd-W022	Wardsville	J_Hyd-W022	W022	4.10	150	90	0.00	0.00	0.0
P_Hyd-W023	Wardsville	J_Hyd-W023	W023	5.14	150	90	0.00	0.00	0.0
P_Hyd-W024	Wardsville	J_Hyd-W024	W024	5.95	150	90	0.00	0.00	0.0
P_Hyd-W025	Wardsville	J_Hyd-W025	W025	6.22	150	90	0.00	0.00	0.0
P_Hyd-W026	Wardsville	J_Hyd-W026	W026	6.37	150	90	0.00	0.00	0.0
P_Hyd-W027	Wardsville	J_Hyd-W027	W027	3.79	150	90	0.00	0.00	0.0
P_Hyd-W028	Wardsville	J_Hyd-W028	W028	3.84	150	90	0.00	0.00	0.0
P_Hyd-W029	Wardsville	J_Hyd-W029	W029	6.11	150	90	0.00	0.00	0.0
P_Hyd-W030	Wardsville	J_Hyd-W030	W030	3.82	150	90	0.00	0.00	0.0
P_Hyd-W031	Wardsville	J_Hyd-W031	W031	5.06	150	90	0.00	0.00	0.0
P_Hyd-W032	Wardsville	J_Hyd-W032	W032	7.29	150	90	0.00	0.00	0.0
P_Hyd-W033	Wardsville	J_Hyd-W033	W033	6.07	150	90	0.00	0.00	0.0
P_Hyd-W034	Wardsville	J_Hyd-W034	W034	5.18	150	90	0.00	0.00	0.0
P_Hyd-W035	Wardsville	J_Hyd-W035	W035	4.26	150	90	0.00	0.00	0.0
P_Hyd-W036	Wardsville	J_Hyd-W036	W036	3.12	150	90	0.00	0.00	0.0
P_Hyd-W037	Wardsville	J_Hyd-W037	W037	1.94	150	90	0.00	0.00	0.0
P_Hyd-W038	Wardsville	J_Hyd-W038	W038	1.51	150	90	0.00	0.00	0.0
P_Hyd-W039	Wardsville	J_Hyd-W039	W039	0.69	150	90	0.02	0.00	0.0
P_Hyd-W040	Wardsville	J_Hyd-W040	W040	5.52	150	90	0.00	0.00	0.0
P_Hyd-W041	Wardsville	J_Hyd-W041	W041	5.79	150	90	0.00	0.00	0.0
P_Hyd-W042	Wardsville	J_Hyd-W042	W042	3.43	150	90	0.00	0.00	0.0
P_Hyd-W043	Wardsville	J_Hyd-W043	W043	11.13	150	90	0.00	0.00	0.0
P_Hyd-W044	Wardsville	J_Hyd-W044	W044	5.49	150	90	0.00	0.00	0.0
P_Hyd-W045	Wardsville	J_Hyd-W045	W045	6.88	150	90	0.00	0.00	0.0
P_Hyd-W046	Wardsville	J_Hyd-W046	W046	5.95	150	90	0.00	0.00	0.0
P_Hyd-W047	Wardsville	J_Hyd-W047	W047	6.10	150	90	0.00	0.00	0.0
SWM_GIS.Water	Wardsville	W039	J_Hyd-W039	0.69	150	90	0.02	0.00	0.0
WM1009C_01	Wardsville	J_Hyd-W001	J_Hyd-W002	94.93	200	100	0.00	0.00	0.0
WM1009C_02	Wardsville	J_Hyd-W002	J-0446	25.09	200	100	0.00	0.00	0.0
WM1010C_01	Wardsville	J-0031	WVW001	14.43	200	100	-1.82	0.06	0.0
WM1010C_02	Wardsville	WVW001	J_Hyd-W010	1.27	200	100	-1.82	0.06	0.0
WM1010C_03	Wardsville	J_Hyd-W010	J-0438	55.92	200	100	-1.82	0.06	0.0
WM1010C_04	Wardsville	J-0438	J-0439	24.67	200	100	-1.82	0.06	0.0
WM1010C_05	Wardsville	J-0439	J_Hyd-W011	28.71	200	100	-1.82	0.06	0.0
WM1010C_06	Wardsville	J_Hyd-W011	J-0550	94.48	200	100	-1.82	0.06	0.0
WM1010C_07	Wardsville	J-0550	J_Hyd-W047	140.43	200	100	-1.92	0.06	0.0
WM1010C_08	Wardsville	J_Hyd-W047	J_Hyd-W045	152.33	200	100	-1.92	0.06	0.0
WM1010C_09	Wardsville	J_Hyd-W045	J-0160	109.76	200	100	-1.92	0.06	0.0
WM1010C_10	Wardsville	J-0160	J-0161	4.04	200	100	-1.92	0.06	0.0
WM1010C_11	Wardsville	J-0161	J_Hyd-W046	92.10	200	100	-1.92	0.06	0.0
WM1010C_12	Wardsville	J_Hyd-W046	J-0553	96.02	200	100	-1.92	0.06	0.0
WM1010C_13	Wardsville	J-0553	J_Hyd-R021M	1022.49	200	100	-1.92	0.06	0.1
WM1010_01	Wardsville	J-0643	J-0597	2259.98	300	110	5.02	0.07	0.1
WM1010_02	Wardsville	J-0597	J-0456	167.81	300	110	5.02	0.07	0.0
WM1064C_01	Wardsville	J-0245	WVW067	6.24	200	100	0.00	0.00	0.0
WM1064C_02	Wardsville	WVW067	J-0022	1.26	200	100	0.00	0.00	0.0
WM1064C_03	Wardsville	J-0022	J_Hyd-W028	5.40	200	100	0.00	0.00	0.0
WM1064C_04	Wardsville	J-0022	J-0069	2.10	200	100	0.00	0.00	0.0
WM1064C_05	Wardsville	J-0069	J-0307	79.42	200	100	0.00	0.00	0.0
WM1065C_01	Wardsville	J-0035	WVR006	1.51	150	90	0.33	0.02	0.0
WM1065C_02	Wardsville	WVR006	J-686	1.59	150	90	-1.45	0.08	0.0
WM1065C_03	Wardsville	J_Hyd-W044	J-0504	618.26	300	110	0.33	0.00	0.0
WM1065C_04	Wardsville	J-0504	J-0035	51.23	300	110	0.33	0.00	0.0
WM1066C_01(1)	Wardsville	J-0456	J-686	2.75	300	110	5.02	0.07	0.0
WM1066C_01(2)	Wardsville	J-686	J-0242	25.10	300	110	3.57	0.05	0.0
WM1066C_02	Wardsville	J-0242	WVR003	6.22	300	110	3.57	0.05	0.0
WM3000C_01	Wardsville	J-0061	WVW033	17.06	300	110	0.38	0.01	0.0
WM3000C_02	Wardsville	WVW033	J-0343	64.42	300	110	0.38	0.01	0.0
WM3000_01	Wardsville	J-728	WVW066	78.11	150	90	0.03	0.00	0.0
WM3000_02	Wardsville	WVW066	J-0122	3.40	150	90	0.03	0.00	0.0
WM3001C_01	Wardsville	J-0506	WVW031	51.53	200	100	-0.16	0.00	0.0
WM3001C_02	Wardsville	WVW031	J-0040	1.58	200	100	-0.16	0.00	0.0
WM3001C_03	Wardsville	J-0040	J-0083	3.94	200	100	-0.16	0.00	0.0
WM3001_01	Wardsville	J_Hyd-W040	WVW036	53.55	150	90	-0.01	0.00	0.0
WM3001_02	Wardsville	WVW036	J-0188	4.61	150	90	-0.01	0.00	0.0
WM3002C_01	Wardsville	J-0297	WVW022	10.56	200	100	-0.02	0.00	0.0
WM3002C_02	Wardsville	WVW022	J_Hyd-W030	4.30	200	100	-0.02	0.00	0.0
WM3002C_03	Wardsville	J_Hyd-W030	J-0506	74.51	200	100	-0.02	0.00	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3002_01	Wardsville	J-0251	WVW028	10.95	150	90	-0.01	0.00	0.0
WM3002_02	Wardsville	WVW028	J_Hyd-W040	87.52	150	90	-0.01	0.00	0.0
WM3003C_01	Wardsville	J-0307	WVW025	9.26	200	100	-0.03	0.00	0.0
WM3003C_02	Wardsville	WVW025	J_Hyd-W029	22.49	200	100	-0.03	0.00	0.0
WM3003C_03	Wardsville	J_Hyd-W029	J-0297	87.53	200	100	-0.03	0.00	0.0
WM3003_01	Wardsville	J-0429	J_Hyd-W041	101.52	150	90	-0.07	0.00	0.0
WM3003_02	Wardsville	J_Hyd-W041	J-0251	15.68	150	90	-0.07	0.00	0.0
WM3004C_01	Wardsville	J-0349	J-0308	12.47	300	110	0.33	0.00	0.0
WM3004C_02	Wardsville	J-0308	WVW061	9.36	300	110	0.33	0.00	0.0
WM3004C_03	Wardsville	WVW061	J_Hyd-W032	49.83	300	110	0.33	0.00	0.0
WM3004_01	Wardsville	J-0283	WVW056	9.15	150	90	0.11	0.01	0.0
WM3004_02	Wardsville	WVW056	J_Hyd-W021	79.20	150	90	0.11	0.01	0.0
WM3004_03	Wardsville	J_Hyd-W021	WVW054	2.33	150	90	0.11	0.01	0.0
WM3004_04	Wardsville	WVW054	J-0218	6.54	150	90	0.11	0.01	0.0
WM3004_05	Wardsville	J-0217	J-0218	5.41	150	90	-0.11	0.01	0.0
WM3005C_01	Wardsville	J-0234	WVW053	13.96	300	110	0.42	0.01	0.0
WM3005C_02	Wardsville	WVW053	J-0349	82.84	300	110	0.42	0.01	0.0
WM3005_01	Wardsville	J-0028	WVW057	27.93	150	90	0.16	0.01	0.0
WM3005_02	Wardsville	WVW057	J_Hyd-W022	4.65	150	90	0.16	0.01	0.0
WM3005_03	Wardsville	J_Hyd-W022	J-0283	61.43	150	90	0.16	0.01	0.0
WM3006C_01	Wardsville	J-0050	J_Hyd-W031	24.70	300	110	0.39	0.01	0.0
WM3006C_02	Wardsville	J_Hyd-W031	J-0234	88.41	300	110	0.39	0.01	0.0
WM3006_01	Wardsville	WVW043	J_Hyd-W023	18.88	150	90	0.14	0.01	0.0
WM3006_02	Wardsville	J_Hyd-W023	J-0027	87.15	150	90	0.14	0.01	0.0
WM3006_03	Wardsville	J-0027	J-0028	1.30	150	90	0.24	0.01	0.0
WM3006_04	Wardsville	WVW043	J-0154	9.51	150	90	-0.14	0.01	0.0
WM3007C_01	Wardsville	J-0343	WVW064	12.09	300	110	0.32	0.00	0.0
WM3007C_02	Wardsville	WVW064	J-0018	68.86	300	110	0.32	0.00	0.0
WM3007_01	Wardsville	J-0247	J_Hyd-W025	104.21	150	90	0.20	0.01	0.0
WM3007_02	Wardsville	J-0154	J_Hyd-W025	62.02	150	90	-0.20	0.01	0.0
WM3008_01	Wardsville	J-0247	J_Hyd-W026	91.00	150	90	0.26	0.01	0.0
WM3008_02	Wardsville	WVW019	J-0238	11.66	150	90	0.26	0.01	0.0
WM3008_03	Wardsville	J_Hyd-W026	WVW019	34.82	150	90	0.26	0.01	0.0
WM3009_01	Wardsville	J-0238	J-0485	57.20	150	90	0.05	0.00	0.0
WM3009_02	Wardsville	J_Hyd-W027	J-0485	39.51	150	90	-0.05	0.00	0.0
WM3009_03	Wardsville	J_Hyd-W027	J-0460	29.49	150	90	0.05	0.00	0.0
WM3010_01	Wardsville	J_Hyd-W019	J-0055	103.28	150	90	0.00	0.00	0.0
WM3010_02	Wardsville	J-0055	J-0056	1.79	150	90	0.00	0.00	0.0
WM3011	Wardsville	WVW046	J_Hyd-W019	82.16	150	90	0.00	0.00	0.0
WM3012_01	Wardsville	J-0088	WVW045	2.49	150	90	0.20	0.01	0.0
WM3012_02	Wardsville	WVW045	J_Hyd-W018	55.58	150	90	0.20	0.01	0.0
WM3012_03	Wardsville	J_Hyd-W018	J-0068	71.53	150	90	0.20	0.01	0.0
WM3013_01	Wardsville	J-0223	WVW014	17.55	150	90	0.42	0.02	0.0
WM3013_02	Wardsville	WVW014	J_Hyd-W017	91.23	150	90	0.42	0.02	0.0
WM3013_03	Wardsville	J_Hyd-W017	J-0444	24.98	150	90	0.42	0.02	0.0
WM3013_04	Wardsville	J-0444	J-0311	33.46	150	90	0.42	0.02	0.0
WM3013_05	Wardsville	J-0311	J-0088	9.52	150	90	0.42	0.02	0.0
WM3014_01	Wardsville	J-0131	J_Hyd-W016	12.42	150	90	0.36	0.02	0.0
WM3014_02	Wardsville	J_Hyd-W016	J-0174	113.19	150	90	0.36	0.02	0.0
WM3014_03	Wardsville	J-0131	J-0132	3.57	150	90	0.00	0.00	0.0
WM3016	Wardsville	WVW009	J-0034	2.74	150	90	-0.18	0.01	0.0
WM3017_01	Wardsville	J-0029	J-0030	1.33	150	90	0.12	0.01	0.0
WM3017_02	Wardsville	J-0029	WVW008	85.97	150	90	0.19	0.01	0.0
WM3017_03	Wardsville	WVW008	J-0258	6.92	150	90	0.19	0.01	0.0
WM3017_04	Wardsville	J-0258	WVW009	114.37	150	90	-0.18	0.01	0.0
WM3018_01	Wardsville	J_Hyd-W012	WVW002	103.92	150	90	-0.41	0.02	0.0
WM3018_02	Wardsville	J-0031	WVW002	1.39	150	90	0.41	0.02	0.0
WM3018_03	Wardsville	J_Hyd-W012	J-0023	108.22	150	90	0.41	0.02	0.0
WM3018_04	Wardsville	J-0023	J-0024	1.26	150	90	0.00	0.00	0.0
WM3019C	Wardsville	J_Hyd-W033	J_Hyd-W044	138.80	300	110	0.33	0.00	0.0
WM3020	Wardsville	J_Hyd-W035	J-0308	44.57	150	90	0.00	0.00	0.0
WM3020C_01	Wardsville	J-0228	J-0229	5.61	300	110	0.33	0.00	0.0
WM3020C_02	Wardsville	J-0229	J_Hyd-W033	48.18	300	110	0.33	0.00	0.0
WM3021_01	Wardsville	J-0234	WVW052	5.86	150	90	0.05	0.00	0.0
WM3021_02	Wardsville	WVW052	J_Hyd-W036	57.41	150	90	0.00	0.00	0.0
WM3022_01	Wardsville	J-0051	WVW039	3.85	150	90	0.00	0.00	0.0
WM3022_02	Wardsville	WVW039	J_Hyd-W037	120.90	150	90	0.00	0.00	0.0
WM3022_03	Wardsville	J-0050	J-0051	1.72	300	110	0.09	0.00	0.0
WM3023C_01	Wardsville	WVW034	J_Hyd-W003	91.07	200	100	-0.16	0.00	0.0
WM3023C_02	Wardsville	J_Hyd-W003	WVW032	52.82	200	100	-0.16	0.00	0.0
WM3023C_03	Wardsville	WVW032	J-0082	11.99	200	100	-0.16	0.00	0.0
WM3023C_04	Wardsville	J-0082	J-0083	2.41	300	110	-0.16	0.00	0.0
WM3023_01	Wardsville	J-0122	J_Hyd-W039	135.47	150	90	-0.06	0.00	0.0
WM3023_02	Wardsville	J_Hyd-W039	WVW063	13.80	150	90	-0.06	0.00	0.0
WM3023_03	Wardsville	WVW063	J-0002	1.04	150	90	0.00	0.00	0.0
WM3023_04	Wardsville	WVW063	J-0343	21.64	150	90	-0.06	0.00	0.0
WM3023_05	Wardsville	J-0122	J_Hyd-W038	9.17	150	90	0.00	0.00	0.0
WM3025_01	Wardsville	J-0297	WVW023	15.43	150	90	0.06	0.00	0.0
WM3025_02	Wardsville	WVW023	J_Hyd-W043	67.26	150	90	0.06	0.00	0.0
WM3025_03	Wardsville	J_Hyd-W043	WVW029	72.48	150	90	0.06	0.00	0.0
WM3025_04	Wardsville	WVW029	J-0251	6.56	150	90	0.06	0.00	0.0
WM3026_01	Wardsville	J-0238	WVW020	6.15	150	90	0.07	0.00	0.0
WM3026_02	Wardsville	WVW020	WVW021	100.45	150	90	0.07	0.00	0.0
WM3026_03	Wardsville	WVW021	J-0297	8.86	150	90	0.07	0.00	0.0
WM3027_01	Wardsville	J-0307	WVW026	14.56	150	90	0.08	0.00	0.0
WM3027_02	Wardsville	WVW026	J_Hyd-W042	125.13	150	90	0.08	0.00	0.0
WM3027_03	Wardsville	J_Hyd-W042	J-0429	22.83	150	90	0.08	0.00	0.0
WM3028_01	Wardsville	J-0460	WVW027	79.81	150	90	0.05	0.00	0.0
WM3028_02	Wardsville	WVW027	J-0307	9.37	150	90	0.05	0.00	0.0
WM3029C	Wardsville	J_Hyd-W032	J-0228	58.86	300	110	0.33	0.00	0.0
WM3030	Wardsville	J-0055	WVW055	10.06	150	90	0.00	0.00	0.0
WM3031_01	Wardsville	J-0283	WVW058	8.32	150	90	-0.10	0.01	0.0
WM3031_02	Wardsville	WVW058	J_Hyd-W034	48.91	150	90	-0.10	0.01	0.0
WM3031_03	Wardsville	J_Hyd-W034	WVW059	49.21	150	90	-0.10	0.01	0.0
WM3031_04	Wardsville	WVW059	J-0349	16.87	150	90	-0.10	0.01	0.0
WM3033_01	Wardsville	J-0028	WVW049	8.75	150	90	0.08	0.00	0.0
WM3033_02	Wardsville	WVW049	WVW051	98.98	150	90	0.08	0.00	0.0
WM3033_03	Wardsville	WVW051	J-0234	16.36	150	90	0.08	0.00	0.0
WM3034_01	Wardsville	J-0068	WVW046	2.10	150	90	0.00	0.00	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3034_02	Wardsville	J-0068	J-0081	10.14	150	90	0.20	0.01	0.0
WM3034_03	Wardsville	J-0081	WVW047	2.39	150	90	0.20	0.01	0.0
WM3034_04	Wardsville	WVW047	WVW048	73.09	150	90	0.20	0.01	0.0
WM3034_05	Wardsville	WVW048	J-0027	10.74	150	90	0.10	0.01	0.0
WM3035C_01	Wardsville	J-0062	WVW030	2.56	200	100	-0.69	0.02	0.0
WM3035C_02	Wardsville	WVW030	J_Hyd-W004	21.12	200	100	-0.69	0.02	0.0
WM3035C_03	Wardsville	J_Hyd-W004	WVW018	79.59	200	100	-0.69	0.02	0.0
WM3035C_04	Wardsville	WVW018	J-0247	8.72	200	100	-0.69	0.02	0.0
WM3035C_05	Wardsville	J-0061	J-0083	2.95	200	100	0.31	0.01	0.0
WM3035C_06	Wardsville	J-0061	J-0062	1.83	300	110	-0.69	0.01	0.0
WM3035_01	Wardsville	J-0154	WVW042	3.97	150	90	0.16	0.01	0.0
WM3035_02	Wardsville	WVW042	WVW038	106.74	150	90	0.16	0.01	0.0
WM3035_03	Wardsville	WVW038	J-0012	1.00	150	90	0.16	0.01	0.0
WM3035_04	Wardsville	J-0018	J-0012	1.10	300	110	-0.16	0.00	0.0
WM3035_05	Wardsville	J-0018	J-0050	12.34	300	110	0.48	0.01	0.0
WM3036C_01	Wardsville	J-0247	WVW016	6.26	200	100	-1.14	0.04	0.0
WM3036C_02	Wardsville	WVW016	J_Hyd-W005	3.42	200	100	-1.14	0.04	0.0
WM3036C_03	Wardsville	J_Hyd-W005	J-0423	67.48	200	100	-1.14	0.04	0.0
WM3036C_04	Wardsville	J-0423	J-0042	22.05	200	100	-1.14	0.04	0.0
WM3036C_05	Wardsville	J-0042	J_Hyd-W006	1.59	200	100	-1.14	0.04	0.0
WM3036C_06	Wardsville	J_Hyd-W006	J-0223	34.03	200	100	-1.14	0.04	0.0
WM3036_01	Wardsville	J-0088	WVW044	12.77	150	90	0.22	0.01	0.0
WM3036_02	Wardsville	WVW044	J_Hyd-W024	61.63	150	90	0.22	0.01	0.0
WM3036_03	Wardsville	J_Hyd-W024	WVW041	62.52	150	90	0.22	0.01	0.0
WM3036_04	Wardsville	WVW041	J-0154	8.37	150	90	0.11	0.01	0.0
WM3037C_01	Wardsville	J-0223	J-0174	5.52	200	100	-1.56	0.05	0.0
WM3037C_02	Wardsville	J-0174	WVW011	4.34	200	100	-1.20	0.04	0.0
WM3037C_03	Wardsville	WVW011	J_Hyd-W007	52.35	200	100	-1.20	0.04	0.0
WM3037C_04	Wardsville	J_Hyd-W007	J_Hyd-W008	96.68	200	100	-1.20	0.04	0.0
WM3037C_05	Wardsville	J_Hyd-W008	WVW010	3.99	200	100	-1.20	0.04	0.0
WM3037C_06	Wardsville	WVW010	J-0120	4.52	200	100	-1.20	0.04	0.0
WM3037C_07	Wardsville	J-0120	J-0121	3.38	200	100	-1.20	0.04	0.0
WM3037C_08	Wardsville	J-0121	J-0033	7.19	200	100	-1.20	0.04	0.0
WM3037C_09	Wardsville	J-0033	J-0034	1.48	200	100	-1.20	0.04	0.0
WM3037_01	Wardsville	J-0258	WVW007	11.40	150	90	0.36	0.02	0.0
WM3037_02	Wardsville	J_Hyd-W015	WVW015	149.19	150	90	0.36	0.02	0.0
WM3037_03	Wardsville	WVW015	J-0131	4.69	150	90	0.36	0.02	0.0
WM3039C_01	Wardsville	J-0034	J-0313	67.18	200	100	-1.38	0.04	0.0
WM3039C_02	Wardsville	J-0313	J_Hyd-W009	9.84	200	100	-1.42	0.05	0.0
WM3039C_03	Wardsville	J_Hyd-W009	WVW003	75.53	200	100	-1.42	0.05	0.0
WM3039C_04	Wardsville	WVW003	J-0031	3.69	200	100	-1.42	0.05	0.0
WM3039_01	Wardsville	J-0023	J_Hyd-W014	21.87	150	90	0.31	0.02	0.0
WM3039_02	Wardsville	J_Hyd-W014	J_Hyd-W013	134.93	150	90	0.31	0.02	0.0
WM3039_03	Wardsville	J_Hyd-W013	WVW006	7.63	150	90	0.31	0.02	0.0
WM3039_04	Wardsville	WVW006	J-0029	2.85	150	90	0.31	0.02	0.0
WM3041C_01	Wardsville	J-0446	WVW035	27.23	200	100	-0.12	0.00	0.0
WM3041C_02(1)	Wardsville	WVW035	J-728	10.26	200	100	-0.12	0.00	0.0
WM3041C_02(2)(	Wardsville	J-728	J-0188	3.98	200	100	-0.15	0.00	0.0
WM3041C_02(2)(	Wardsville	J-0188	WVW034	4.02	200	100	-0.16	0.00	0.0
P_Hyd-A001	Appin	J_Hyd-A001	A001	2.16	150	100	0.00	0.00	0.0
P_Hyd-A002	Appin	J_Hyd-A002	A002	3.25	150	100	0.00	0.00	0.0
P_Hyd-A003	Appin	J_Hyd-A003	A003	1.26	150	100	0.00	0.00	0.0
P_Hyd-A004	Appin	J_Hyd-A004	A004	8.01	150	100	0.00	0.00	0.0
P_Hyd-A005	Appin	J_Hyd-A005	A005	2.77	150	100	0.00	0.00	0.0
P_Hyd-A006	Appin	J_Hyd-A006	A006	3.67	150	100	0.00	0.00	0.0
P_Hyd-A007	Appin	J_Hyd-A007	A007	3.11	150	100	0.00	0.00	0.0
P_Hyd-A008	Appin	J_Hyd-A008	A008	3.87	150	100	0.00	0.00	0.0
P_Hyd-A009	Appin	J_Hyd-A009	A009	3.13	150	100	0.00	0.00	0.0
P_Hyd-A010	Appin	J_Hyd-A010	A010	4.30	150	100	0.00	0.00	0.0
P_Hyd-A011	Appin	J_Hyd-A011	A011	3.08	150	100	0.00	0.00	0.0
WM2039_04	Appin	J_Hyd-R015E	J-0592	1807.30	200	110	6.49	0.21	0.7
WM2047C_01	Appin	WVR028	WVR053	1957.59	200	110	3.71	0.12	0.3
WM2089C_01	Appin	J-0355	J-0277	21.32	200	110	-4.54	0.14	0.0
WM2089C_02	Appin	J-0277	J-0278	8.12	200	110	-4.54	0.14	0.0
WM2089C_03	Appin	J-0278	J_Hyd-A007	52.72	200	110	-4.54	0.14	0.0
WM2089C_04	Appin	J_Hyd-A007	J-0304	888.44	200	110	-4.54	0.14	0.2
WM2090C_01	Appin	J-0015	J_Hyd-A011	1.06	200	110	0.00	0.00	0.0
WM2090C_02	Appin	J_Hyd-A011	WVA008	178.39	200	110	0.00	0.00	0.0
WM2090C_03	Appin	WVA008	J-0219	6.16	200	110	0.00	0.00	0.0
WM2090C_04	Appin	J-0015	WVR026	6.89	200	110	0.00	0.00	0.0
WM2090C_05	Appin	WVR026	J-0246	6.25	200	110	0.00	0.00	0.0
WM2090C_06	Appin	J-0246	J-0639	984.73	200	110	0.00	0.00	0.0
WM5000C	Appin	J-0185	J-0378	85.38	200	110	3.84	0.12	0.0
WM5000_01	Appin	J-0244	J_Hyd-A003	201.84	150	100	0.00	0.00	0.0
WM5000_02	Appin	J-0244	J-0185	6.24	150	100	0.00	0.00	0.0
WM5001C_01	Appin	J-0219	WVA006	138.25	200	110	-2.59	0.08	0.0
WM5001C_02	Appin	WVA006	J_Hyd-A009	5.56	200	110	-2.59	0.08	0.0
WM5001C_03	Appin	J_Hyd-A009	J-0254	6.79	200	110	-2.59	0.08	0.0
WM5001_01	Appin	WVA015	WVA013	125.45	150	100	-1.46	0.08	0.0
WM5001_02	Appin	WVA013	J-0152	11.83	150	100	-1.46	0.08	0.0
WM5001_03	Appin	J-0318	WVA015	14.13	150	100	-1.46	0.08	0.0
WM5002C	Appin	J-0254	J-0140	127.36	200	110	-3.10	0.10	0.0
WM5002_01	Appin	J-0152	J_Hyd-A005	3.94	150	100	-1.29	0.07	0.0
WM5002_02	Appin	J_Hyd-A005	WVA010	106.59	150	100	-1.29	0.07	0.0
WM5002_03	Appin	WVA010	J-0221	14.76	150	100	-1.29	0.07	0.0
WM5003C_01	Appin	J-0140	J_Hyd-A008	3.71	200	110	-3.47	0.11	0.0
WM5003C_02	Appin	J_Hyd-A008	J-0355	96.83	200	110	-3.47	0.11	0.0
WM5003_01	Appin	J-0221	WVA012	5.45	300	120	-1.07	0.02	0.0
WM5003_02	Appin	J_Hyd-A006	WVA012	63.78	150	100	1.07	0.06	0.0
WM5003_03	Appin	J_Hyd-A006	J-0322	26.27	150	100	-1.07	0.06	0.0
WM5004_01	Appin	J-0359	WVA019	17.34	150	100	0.00	0.00	0.0
WM5004_02	Appin	WVA019	J-0280	27.46	150	100	0.00	0.00	0.0
WM5004_03	Appin	J-0280	J-0281	8.22	150	100	0.00	0.00	0.0
WM5005C	Appin	J-0378	WVR028	42.73	200	110	3.71	0.12	0.0
WM5005_01	Appin	J-0119	WVA018	8.26	150	100	0.00	0.00	0.0
WM5005_02	Appin	J_Hyd-A001	J_Hyd-A002	182.10	150	100	0.00	0.00	0.0
WM5005_03	Appin	J_Hyd-A002	WVA021	57.26	150	100	0.00	0.00	0.0
WM5005_04	Appin	WVA021	J-0009	3.68	150	100	0.00	0.00	0.0
WM5005_05	Appin	J-0009	J-0010	0.95	200	110	0.00	0.00	0.0

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM5005_06	Appin	J-0010	J-0378	15.89	200	110	0.00	0.00	0.0
WM5006C_01	Appin	J-0318	J_Hyd-A010	80.91	200	110	-2.59	0.08	0.0
WM5006C_02	Appin	J_Hyd-A010	WVA007	8.74	200	110	-2.59	0.08	0.0
WM5006C_03	Appin	WVA007	J-0219	14.62	200	110	-2.59	0.08	0.0
WM5006_01	Appin	J-0152	WVA014	4.55	150	100	-0.17	0.01	0.0
WM5006_02	Appin	J-0254	WVA005	14.70	150	100	0.17	0.01	0.0
WM5006_03	Appin	WVA005	WVA014	85.73	150	100	0.17	0.01	0.0
WM5008_01	Appin	J-0140	WVA003	15.05	150	100	0.37	0.02	0.0
WM5008_02	Appin	WVA003	J-0361	14.45	150	100	0.37	0.02	0.0
WM5008_03	Appin	J-0361	WVA011	68.77	150	100	0.37	0.02	0.0
WM5008_04	Appin	WVA011	J-0221	7.70	150	100	0.37	0.02	0.0
WM5009_01	Appin	J-0322	J-0323	10.27	150	100	-1.07	0.06	0.0
WM5009_02	Appin	J-0355	WVA001	13.48	150	100	1.07	0.06	0.0
WM5009_03	Appin	J-0323	WVA001	84.78	150	100	-1.07	0.06	0.0
WM5010C_01	Appin	WVA020	J-0359	14.01	200	110	-3.84	0.12	0.0
WM5010C_02	Appin	J-0359	J_Hyd-A004	37.21	200	110	-3.84	0.12	0.0
WM5010C_03	Appin	J_Hyd-A004	WVA016	58.77	200	110	-3.84	0.12	0.0
WM5010C_04	Appin	WVA016	J-0318	10.02	200	110	-3.84	0.12	0.0
WM5010C_05	Appin	WVA020	J-0185	4.51	200	110	3.84	0.12	0.0
WM5011_01	Appin	J-0221	J-0479	58.91	150	100	0.15	0.01	0.0
WM5011_02	Appin	J-0479	J-0480	38.55	150	100	0.15	0.01	0.0
WM5016_01	Appin	J-0480	WVA017	109.22	150	100	0.00	0.00	0.0
WM5016_02	Appin	WVA017	J-0119	3.36	150	100	0.00	0.00	0.0
WM5018	Appin	J-0560	J-0119	104.65	150	100	0.00	0.00	0.0
WM5019C_01	Appin	J-0404	J-0345	19.32	200	110	0.00	0.00	0.0
WM5019C_02	Appin	J-0345	J-0346	12.16	200	110	0.00	0.00	0.0
WM5019C_03	Appin	J-0346	WVA009	109.80	200	110	0.00	0.00	0.0
WM5019C_04	Appin	WVA009	J-0219	5.41	200	110	0.00	0.00	0.0
P-233	Rural	J-0299	J_Hyd-R006E	1.74	150	100	5.08	0.29	0.0
P-235	Rural	J-0634	J-752	4.00	50	130	-0.97	0.49	0.0
P-236	Rural	J-0335	J_Hyd-R005E	15.68	150	100	1.37	0.08	0.0
P-238	Rural	WVR039	J-0525	2.51	200	110	5.13	0.16	0.0
P-239	Rural	J_Hyd-R021M	WVR007	1.46	200	110	-1.92	0.06	0.0
P-937	Rural	J-0519	J-0520	68.34	18	130	0.00	0.00	0.0
P_Hyd-R001E	Rural	J_Hyd-R001E	R001E	4.14	150	100	0.00	0.00	0.0
P_Hyd-R002E	Rural	J_Hyd-R002E	R002E	2.23	150	100	0.00	0.00	0.0
P_Hyd-R003E	Rural	J_Hyd-R003E	R003E	3.03	150	100	0.00	0.00	0.0
P_Hyd-R004E	Rural	J_Hyd-R004E	R004E	6.82	150	100	0.00	0.00	0.0
P_Hyd-R005E	Rural	J_Hyd-R005E	R005E	8.61	150	100	0.00	0.00	0.0
P_Hyd-R006E	Rural	J_Hyd-R006E	R006E	4.58	150	100	0.00	0.00	0.0
P_Hyd-R007E	Rural	J_Hyd-R007E	R007E	3.56	150	100	0.00	0.00	0.0
P_Hyd-R008E	Rural	J_Hyd-R008E	R008E	2.58	150	100	0.00	0.00	0.0
P_Hyd-R009E	Rural	J_Hyd-R009E	R009E	7.00	150	100	0.00	0.00	0.0
P_Hyd-R010E	Rural	J_Hyd-R010E	R010E	2.16	150	100	0.00	0.00	0.0
P_Hyd-R011E	Rural	J_Hyd-R011E	R011E	2.25	150	100	0.00	0.00	0.0
P_Hyd-R012E	Rural	J_Hyd-R012E	R012E	1.76	150	100	0.00	0.00	0.0
P_Hyd-R013E	Rural	J_Hyd-R013E	R013E	5.77	150	100	0.00	0.00	0.0
P_Hyd-R014E	Rural	J_Hyd-R014E	R014E	3.99	150	100	0.00	0.00	0.0
P_Hyd-R015E	Rural	J_Hyd-R015E	R015E	3.40	150	100	0.00	0.00	0.0
P_Hyd-R016E	Rural	J_Hyd-R016E	R016E	6.25	150	100	0.00	0.00	0.0
P_Hyd-R017M	Rural	J_Hyd-R017M	R017M	6.10	150	100	0.00	0.00	0.0
P_Hyd-R018M	Rural	J_Hyd-R018M	R018M	1.92	150	100	0.00	0.00	0.0
P_Hyd-R019M	Rural	J_Hyd-R019M	R019M	0.87	150	100	0.00	0.00	0.0
P_Hyd-R020M	Rural	J_Hyd-R020M	R020M	4.05	150	100	0.00	0.00	0.0
P_Hyd-R021M	Rural	J_Hyd-R021M	R021M	5.88	150	100	0.00	0.00	0.0
P_Hyd-R026E	Rural	J_Hyd-R026E	R026E	3.60	150	100	0.00	0.00	0.0
P_Hyd-R027W	Rural	J_Hyd-R027W	R027W	10.01	150	100	0.00	0.00	0.0
P_Hyd-R028E	Rural	J_Hyd-R028E	R028E	2.63	150	100	0.00	0.00	0.0
P_Hyd-R029W	Rural	J_Hyd-R029W	R029W	161.23	150	100	0.00	0.00	0.0
P_Hyd-R030M	Rural	J_Hyd-R030M	R030M	58.13	150	100	0.00	0.00	0.0
P_Hyd-R031M	Rural	J_Hyd-R031M	R031M	4.46	150	100	0.00	0.00	0.0
P_Hyd-R032M	Rural	J_Hyd-R032M	R032M	15.28	150	100	0.00	0.00	0.0
P_Hyd-R033E	Rural	J_Hyd-R033E	R033E	7.67	150	100	0.00	0.00	0.0
WM1010C_14	Rural	WVR007	WVR008	50.55	200	110	-1.92	0.06	0.0
WM1011C_01	Rural	WVR008	J_Hyd-R020M	457.55	200	110	-1.92	0.06	0.0
WM1011C_02	Rural	J_Hyd-R020M	J_Hyd-R019M	757.63	200	110	-1.92	0.06	0.0
WM1011C_03	Rural	J_Hyd-R019M	J_Hyd-R018M	317.29	200	110	-1.92	0.06	0.0
WM1011C_04	Rural	J_Hyd-R018M	WVR009	881.46	200	110	-1.92	0.06	0.0
WM1011C_05	Rural	J-0086	J-0260	7.07	200	110	-1.92	0.06	0.0
WM1011C_06	Rural	WVR009	J_Hyd-R017M	6.62	200	110	-1.92	0.06	0.0
WM1011C_07	Rural	J_Hyd-R017M	J-0086	2.48	200	110	-1.92	0.06	0.0
WM1011C_08	Rural	PRV-1	J-0260	21.84	300	120	6.95	0.10	0.0
WM1011_01	Rural	WVR050	J-0633	615.40	300	120	5.02	0.07	0.0
WM1011_02	Rural	J-0232	WVR050	5.77	150	100	5.02	0.28	0.0
WM1011_03	Rural	J-0633	J-0643	1830.27	300	120	5.02	0.07	0.1
WM1012C_01	Rural	J-0231	J_Hyd-R031M	80.50	300	120	30.43	0.43	0.1
WM1012C_02	Rural	J_Hyd-R031M	J-0397	294.47	300	120	30.43	0.43	0.2
WM1012C_03	Rural	J-0397	J-0398	18.34	300	120	30.43	0.43	0.0
WM1012C_04	Rural	J-0398	J-0441	604.41	300	120	30.43	0.43	0.5
WM1012C_05	Rural	J-0441	J-0442	24.83	300	120	30.43	0.43	0.0
WM1012C_06	Rural	J-0442	J-0547	90.95	300	120	30.43	0.43	0.1
WM1012C_07	Rural	J-0547	J-0422	1548.63	300	120	30.43	0.43	1.3
WM1012C_08	Rural	J-0422	J-0163	21.99	300	120	30.43	0.43	0.0
WM1012_01	Rural	J-0329	J-0330	11.08	50	130	0.00	0.00	0.0
WM1012_02	Rural	J-0330	J-0300	1185.95	50	130	0.00	0.00	0.0
WM1012_03	Rural	J-0300	J-0301	9.00	50	130	0.00	0.00	0.0
WM1012_04	Rural	J-0301	J-0616	285.01	50	130	0.00	0.00	0.0
WM1013C_01	Rural	J-0164	WVR019	1176.14	300	120	30.43	0.43	1.0
WM1013C_02	Rural	J-0163	J-0164	4.12	300	120	30.43	0.43	0.0
WM1013C_03	Rural	WVR019	J_Hyd-R030M	388.90	300	120	30.43	0.43	0.3
WM1013C_04	Rural	J_Hyd-R030M	J-0170	21.89	300	120	30.43	0.43	0.0
WM1013C_05	Rural	J-0170	J-0171	4.24	300	120	30.43	0.43	0.0
WM1013C_06	Rural	J-0171	J-0379	16.49	300	120	30.43	0.43	0.0
WM1013C_07	Rural	J-0379	J-0149	372.44	300	120	30.43	0.43	0.3
WM1013C_08	Rural	J-0149	J-0150	3.91	300	120	30.43	0.43	0.0
WM1013C_09	Rural	J-0150	J-0129	27.49	300	120	30.43	0.43	0.0
WM1013C_10	Rural	J-0129	J-0130	3.55	300	120	30.43	0.43	0.0
WM1013C_11	Rural	J-0130	J-0595	201.38	300	120	30.43	0.43	0.2
WM1021C_01	Rural	WVR020	J-0577	121.69	300	120	30.43	0.43	0.1

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM1021C_02(1)	Rural	J-0577	J-0519	660.77	300	120	30.43	0.43	0.5
WM1021C_02(2)(	Rural	J-0519	J-752	22.88	300	120	30.43	0.43	0.0
WM1026C_01	Rural	J-0408	WVR013	20.55	150	100	0.01	0.00	0.0
WM1026C_02	Rural	WVR013	J-0645	2396.11	150	100	0.01	0.00	0.0
WM1075C_02	Rural	J_Hyd-R029W	J_Hyd-R027W	3137.12	350	120	37.38	0.39	1.8
WM1075C_03	Rural	J_Hyd-R027W	J-0629	4074.92	350	120	37.38	0.39	2.3
WM1075C_04	Rural	J-0629	J-0431	496.33	350	120	37.38	0.39	0.3
WM1075C_05	Rural	J-0431	J-0432	23.51	350	120	37.38	0.39	0.0
WM1075C_06	Rural	J-0432	J-0613	1094.09	350	120	37.38	0.39	0.6
WM1075C_07	Rural	J-0613	J-0416	258.33	350	120	37.38	0.39	0.2
WM1075C_08(1)	Rural	J-0416	J-0466	12.01	300	120	37.38	0.53	0.0
WM1075C_08(2)	Rural	J-0466	WVR010	9.40	300	120	30.43	0.43	0.0
WM1075C_09	Rural	WVR010	J-0231	5.73	300	120	30.43	0.43	0.0
WM1075C_10	Rural	PRV-1	J-0466	31.58	300	120	-6.95	0.10	0.0
WM1086_01	Rural	J-0383	J-0199	63.41	300	120	5.03	0.07	0.0
WM1086_02	Rural	J-0199	J-0200	4.92	300	120	5.03	0.07	0.0
WM1086_03	Rural	J-0200	J-0266	7.51	300	120	5.03	0.07	0.0
WM1086_04	Rural	J-0266	J-0224	8.04	300	120	5.03	0.07	0.0
WM1086_05	Rural	J-0224	J-0225	5.54	300	120	5.03	0.07	0.0
WM1086_06	Rural	J-0225	J-0610	279.39	300	120	5.03	0.07	0.0
WM1086_07	Rural	J-0610	J-0611	236.26	300	120	5.03	0.07	0.0
WM1086_08	Rural	J-0611	J-0626	363.27	300	120	5.03	0.07	0.0
WM1086_09	Rural	J-0626	J-0232	348.32	300	120	5.03	0.07	0.0
WM1086_10	Rural	J-0260	J-0383	17.08	200	110	5.03	0.16	0.0
WM1087_01	Rural	J-0232	WVR051	12.83	200	110	0.01	0.00	0.0
WM1087_02	Rural	WVR051	J-0276	8.01	200	110	0.01	0.00	0.0
WM1087_03	Rural	J-0276	J-0293	8.73	200	110	0.01	0.00	0.0
WM1087_04	Rural	J-0293	J-0365	39.13	200	110	0.01	0.00	0.0
WM1087_05	Rural	J-0365	J-0366	14.54	200	110	0.01	0.00	0.0
WM1087_06	Rural	J-0366	J-0607	301.23	200	110	0.01	0.00	0.0
WM1087_07	Rural	J-0607	J-0206	227.17	200	110	0.01	0.00	0.0
WM1087_08	Rural	J-0206	J-0182	5.10	200	110	0.01	0.00	0.0
WM1087_09	Rural	J-0182	J-0183	4.50	200	110	0.01	0.00	0.0
WM1087_10	Rural	J-0183	J-0233	5.81	200	110	0.01	0.00	0.0
WM1087_11	Rural	J-0233	WVR012	785.82	200	110	0.01	0.00	0.0
WM1087_12	Rural	WVR012	J-0374	15.48	200	110	0.01	0.00	0.0
WM1087_13	Rural	J-0366	J-0329	62.78	50	130	0.00	0.00	0.0
WM1088_01	Rural	J-0374	J-0623	321.50	200	110	0.01	0.00	0.0
WM1088_02	Rural	J-0623	J-0530	924.91	200	110	0.01	0.00	0.0
WM1088_03	Rural	J-0530	WVR014	69.85	200	110	0.01	0.00	0.0
WM1089_01	Rural	WVR014	J-0309	9.37	200	110	0.01	0.00	0.0
WM1089_02(1)	Rural	J-0309	J-0408	31.72	200	110	0.01	0.00	0.0
WM1089_02(2)	Rural	J-0408	J_Hyd-R032M	6.61	200	110	0.00	0.00	0.0
WM1089_03	Rural	J_Hyd-R032M	WVR015	244.84	200	110	0.00	0.00	0.0
WM1089_04	Rural	WVR015	J-0193	5.52	200	110	0.00	0.00	0.0
WM1089_05	Rural	J-0193	J-0194	4.77	200	110	0.00	0.00	0.0
WM1097C_01	Rural	J-0595	J-0596	165.95	300	120	30.43	0.43	0.1
WM1097C_02	Rural	J-0596	J-0614	269.97	300	120	30.43	0.43	0.2
WM1097C_03	Rural	J-0614	J-0617	300.03	300	120	30.43	0.43	0.3
WM1097C_04	Rural	J-0617	J-0392	683.41	300	120	30.43	0.43	0.6
WM1098C	Rural	J-0392	WVR020	538.86	300	120	30.43	0.43	0.4
WM2025_01	Rural	J-0391	J-0356	287.21	150	100	0.00	0.00	0.0
WM2025_02	Rural	J-0356	J-0357	13.93	150	100	0.00	0.00	0.0
WM2025_03	Rural	J-0357	J_Hyd-R033E	230.73	150	100	0.00	0.00	0.0
WM2025_04	Rural	J-0391	J-0392	17.92	150	100	0.00	0.00	0.0
WM2030C_01	Rural	J-0263	J-0207	7.29	200	110	5.13	0.16	0.0
WM2030C_02	Rural	J-0207	J-0090	5.11	200	110	5.13	0.16	0.0
WM2030C_03	Rural	J-0090	WVR039	2.54	200	110	5.13	0.16	0.0
WM2030C_04	Rural	J-0525	WVR060	64.33	150	100	5.13	0.29	0.1
WM2030C_05	Rural	WVR060	J-0369	135.29	150	100	5.13	0.29	0.2
WM2030C_06	Rural	J-0369	J-0020	14.81	150	100	5.13	0.29	0.0
WM2030C_07	Rural	J-0020	J_Hyd-R009E	1.18	150	100	5.13	0.29	0.0
WM2030C_08	Rural	J_Hyd-R009E	J-0604	243.33	150	100	5.13	0.29	0.3
WM2030C_09	Rural	J-0604	J-0605	220.12	150	100	5.13	0.29	0.3
WM2030C_10	Rural	J-0605	J-0257	263.84	150	100	5.13	0.29	0.3
WM2030C_11	Rural	J-0257	WVR040	6.86	150	100	5.13	0.29	0.0
WM2030C_12	Rural	WVR040	J_Hyd-M002	689.84	150	100	5.13	0.29	0.9
WM2036_01	Rural	J-0100	J-0462	239.86	200	110	-11.04	0.35	0.3
WM2036_04	Rural	J-0618	J-0619	303.91	200	110	11.04	0.35	0.3
WM2036_05	Rural	J-0619	J-0624	603.05	200	110	11.04	0.35	0.6
WM2036_06	Rural	J-0624	J-0463	327.67	200	110	11.04	0.35	0.4
WM2036_07	Rural	J-0463	J-0464	30.58	200	110	11.04	0.35	0.0
WM2036_08	Rural	J-0464	J-0461	41.99	200	110	11.04	0.35	0.0
WM2036_09	Rural	J-0461	J-0462	30.21	200	110	11.04	0.35	0.0
WM2037_01	Rural	J-0325	J-0073	26.45	200	110	-11.04	0.35	0.0
WM2037_02	Rural	J-0073	J-0074	2.30	200	110	-11.04	0.35	0.0
WM2037_03	Rural	J-0074	J-0638	1562.44	200	110	-11.04	0.35	1.7
WM2037_04	Rural	J-0638	WVR052	826.51	200	110	-11.04	0.35	0.9
WM2037_05	Rural	WVR052	J-0100	3.90	200	110	-11.04	0.35	0.0
WM2038_01	Rural	J-0376	J-0545	89.85	200	110	-11.04	0.35	0.1
WM2038_02	Rural	J-0545	WVR024	2310.40	200	110	-11.04	0.35	2.5
WM2038_03	Rural	WVR024	J-0210	5.19	200	110	-11.04	0.35	0.0
WM2038_04	Rural	J-0210	J-0325	10.57	200	110	-11.04	0.35	0.0
WM2039_01	Rural	J-688	WVR025	1.73	200	110	6.49	0.21	0.0
WM2039_02	Rural	WVR025	J-0315	9.84	200	110	6.49	0.21	0.0
WM2039_03	Rural	J-0315	J_Hyd-R015E	53.54	200	110	6.49	0.21	0.0
WM2039_05	Rural	J-0592	J-0593	154.11	200	110	6.49	0.21	0.1
WM2039_06	Rural	J-0593	WVR031	431.61	200	110	6.49	0.21	0.2
WM2039_07	Rural	WVR031	J-0362	20.22	200	110	6.49	0.21	0.0
WM2040_01	Rural	J-0362	J_Hyd-R014E	14.45	200	110	6.49	0.21	0.0
WM2040_02	Rural	J_Hyd-R014E	J-0599	560.06	200	110	6.49	0.21	0.2
WM2040_03	Rural	J-0599	J-0600	185.21	200	110	6.49	0.21	0.1
WM2040_04	Rural	J-0600	J-0636	706.37	200	110	6.49	0.21	0.3
WM2040_05	Rural	J-0636	WVR034	947.99	200	110	6.49	0.21	0.4
WM2040_06	Rural	WVR034	J_Hyd-R013E	20.02	200	110	6.49	0.21	0.0
WM2041_01	Rural	J_Hyd-R013E	J-0118	4.50	200	110	1.37	0.04	0.0
WM2041_02	Rural	J-0118	WVR035	3.31	200	110	1.37	0.04	0.0
WM2041_03	Rural	WVR035	J-0341	11.80	150	100	1.37	0.08	0.0
WM2041_04	Rural	J-0341	J_Hyd-R008E	1161.30	150	100	1.37	0.08	0.1

2041 ADD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM2041_05	Rural	J_Hyd-R008E	WVR044	1217.52	150	100	1.37	0.08	0.1
WM2041_06	Rural	WVR044	J-0335	11.48	150	100	1.37	0.08	0.0
WM2042_01	Rural	J-0241	WVR047	6.16	100	100	0.00	0.00	0.0
WM2042_02	Rural	WVR047	J-0117	3.28	100	100	0.00	0.00	0.0
WM2042_03	Rural	J-0117	J-0053	90.84	100	100	0.00	0.00	0.0
WM2042_04	Rural	J-0053	WVR056	1.74	50	100	0.00	0.00	0.0
WM2043_01	Rural	J-0208	J_Hyd-R002E	5.14	150	100	0.00	0.00	0.0
WM2043_02	Rural	J_Hyd-R002E	J-0057	289.87	150	100	0.00	0.00	0.0
WM2043_03	Rural	J-0057	J_Hyd-R003E	1.81	150	100	0.00	0.00	0.0
WM2043_04	Rural	J_Hyd-R003E	J-0282	8.32	150	100	0.00	0.00	0.0
WM2043_05	Rural	J-0282	J_Hyd-R028E	276.99	150	100	0.00	0.00	0.0
WM2047C_02	Rural	WVR053	J-0319	110.95	200	110	3.71	0.12	0.0
WM2047C_03	Rural	J-0319	J_Hyd-R016E	10.19	200	110	3.71	0.12	0.0
WM2047C_04	Rural	J_Hyd-R016E	J-0113	3.18	200	110	3.71	0.12	0.0
WM2047C_05	Rural	J-0113	J-0186	5.93	200	110	3.71	0.12	0.0
WM2048C_01	Rural	J-0186	WVR029	4.53	200	110	3.71	0.12	0.0
WM2048C_02	Rural	WVR029	J-0103	2.95	200	110	3.71	0.12	0.0
WM2048C_03	Rural	J-0103	WVR030	1818.80	200	110	3.71	0.12	0.3
WM2048C_04	Rural	WVR030	WVR032	608.74	200	110	3.71	0.12	0.1
WM2048C_05	Rural	WVR032	J-0151	3.93	200	110	3.71	0.12	0.0
WM2048C_06	Rural	J-0151	J-0215	5.40	200	110	3.71	0.12	0.0
WM2048C_07	Rural	J-0215	J-0077	9.76	200	110	3.71	0.12	0.0
WM2049C_01	Rural	J-0077	J-0078	2.32	200	110	3.71	0.12	0.0
WM2049C_02	Rural	J-0078	WVR033	3.59	200	110	3.71	0.12	0.0
WM2049C_03	Rural	WVR033	J_Hyd-R007E	995.72	200	110	3.71	0.12	0.1
WM2049C_04	Rural	J_Hyd-R007E	J-0352	1408.71	200	110	3.71	0.12	0.2
WM2049C_05	Rural	J-0019	WVR046	1.14	200	110	-3.71	0.12	0.0
WM2049C_06	Rural	WVR046	J-0110	3.14	200	110	-3.71	0.12	0.0
WM2049C_07	Rural	J-0110	J-0352	13.14	200	110	-3.71	0.12	0.0
WM2089C_05	Rural	J-0304	J-0137	9.13	200	110	-4.54	0.14	0.0
WM2089C_06	Rural	J-0137	J-0138	3.61	200	110	-4.54	0.14	0.0
WM2089C_07(1)	Rural	J-0138	J-688	5.16	200	110	-4.54	0.14	0.0
WM2089C_07(2)	Rural	J-688	J-0376	10.48	200	110	-11.04	0.35	0.0
WM2097_01	Rural	J-0100	WVR024	2.85	100	100	0.00	0.00	0.0
WM2097_02	Rural	WVR024	J-0625	347.23	100	100	0.00	0.00	0.0
WM2111C_01	Rural	J_Hyd-R006E	J-0064	8.81	150	100	5.08	0.29	0.0
WM2111C_02	Rural	J-0064	WVR042	1.98	150	100	5.08	0.29	0.0
WM2111C_03	Rural	WVR042	WVM032	932.63	150	100	5.08	0.29	1.1
WM2111_01	Rural	J-0405	J-0631	583.42	200	110	5.13	0.16	0.2
WM2111_02	Rural	J-0631	J-0563	549.68	200	110	5.13	0.16	0.1
WM2111_03	Rural	J-0563	J-0536	105.89	200	110	5.13	0.16	0.0
WM2111_04	Rural	J-0536	J_Hyd-R010E	76.85	200	110	5.13	0.16	0.0
WM2111_05	Rural	J_Hyd-R010E	WVR038	3.57	200	110	5.13	0.16	0.0
WM2111_06	Rural	WVR038	J-0243	6.22	200	110	5.13	0.16	0.0
WM2111_07	Rural	J-0243	J-0370	14.97	200	110	5.13	0.16	0.0
WM2111_08	Rural	J-0370	J-0263	36.29	200	110	5.13	0.16	0.0
WM2112C_01	Rural	J_Hyd-R005E	WVR043	17.41	150	100	5.08	0.29	0.0
WM2112C_02	Rural	WVR043	J-0326	1341.21	150	100	5.08	0.29	1.6
WM2112C_03	Rural	J-0326	J-0298	10.58	150	100	5.08	0.29	0.0
WM2112C_04	Rural	J-0298	J-0299	8.97	150	100	5.08	0.29	0.0
WM2112_01	Rural	J_Hyd-R013E	WVR036	20.22	200	110	5.13	0.16	0.0
WM2112_02	Rural	WVR036	J_Hyd-R012E	11.04	200	110	5.13	0.16	0.0
WM2112_03	Rural	J_Hyd-R012E	J-0582	131.98	200	110	5.13	0.16	0.0
WM2112_04	Rural	J-0582	J-0573	1091.55	200	110	5.13	0.16	0.3
WM2112_05	Rural	J-0573	J-0574	114.04	200	110	5.13	0.16	0.0
WM2112_06	Rural	J-0574	J_Hyd-R011E	120.36	200	110	5.13	0.16	0.0
WM2112_07	Rural	J_Hyd-R011E	J-0351	12.71	200	110	5.13	0.16	0.0
WM2112_08	Rural	J-0351	WVR037	15.56	200	110	5.13	0.16	0.0
WM2112_09	Rural	WVR037	J-0405	20.43	200	110	5.13	0.16	0.0
WM2113C_01	Rural	J_Hyd-R004E	J_Hyd-R005E	813.28	150	100	3.71	0.21	0.6
WM2113C_02	Rural	WVR054	WVR055	86.32	150	100	-3.71	0.21	0.1
WM2113C_03	Rural	WVR055	J-0483	97.84	150	100	-3.71	0.21	0.1
WM2113C_04	Rural	WVR054	J_Hyd-R004E	21.71	150	100	3.71	0.21	0.0
WM2113C_05	Rural	J-0483	J-0484	39.50	150	100	-3.71	0.21	0.0
WM2113C_06	Rural	J-0484	WVR045	285.24	150	100	-3.71	0.21	0.2
WM2113C_07	Rural	WVR045	J-0019	39.17	150	100	-3.71	0.21	0.0
WM2114C	Rural	J-0208	J_Hyd-R001E	498.34	150	100	0.00	0.00	0.0
WM2114_01	Rural	J-0077	J_Hyd-R026E	4.87	200	110	0.00	0.00	0.0
WM2114_02	Rural	J_Hyd-R026E	J-0637	713.60	200	110	0.00	0.00	0.0
WM2118C	Rural	J-0241	J-0208	215.87	150	100	0.00	0.00	0.0
WM2119C	Rural	J-0019	J-0241	176.56	150	100	0.00	0.00	0.0

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0003	Glencoe	0.00	220.18	262.1	410
J-0004	Glencoe	0.00	221.47	261.7	394
J-0005	Glencoe	0.00	220.94	262.0	401
J-0006	Glencoe	0.00	219.32	263.7	435
J-0007	Glencoe	0.00	219.32	263.7	435
J-0011	Glencoe	0.00	219.21	262.3	422
J-0013	Glencoe	0.00	219.32	263.8	435
J-0014	Glencoe	0.00	219.71	262.1	415
J-0017	Glencoe	0.00	219.32	263.8	435
J-0025	Glencoe	0.00	221.81	261.9	392
J-0032	Glencoe	0.00	221.02	262.1	402
J-0036	Glencoe	0.00	220.75	261.8	402
J-0038	Glencoe	0.00	219.48	263.8	433
J-0039	Glencoe	0.00	219.48	263.8	433
J-0044	Glencoe	0.00	221.03	261.8	399
J-0045	Glencoe	0.00	221.03	261.8	399
J-0047	Glencoe	0.00	219.32	263.8	435
J-0048	Glencoe	0.00	219.89	262.9	421
J-0049	Glencoe	0.00	219.89	262.9	421
J-0054	Glencoe	1.40	222.07	261.7	388
J-0059	Glencoe	0.00	221.53	262.0	396
J-0060	Glencoe	0.00	221.52	261.9	395
J-0063	Glencoe	0.00	219.52	262.3	418
J-0066	Glencoe	6.41	219.37	264.0	437
J-0067	Glencoe	0.99	219.37	264.0	437
J-0070	Glencoe	0.00	220.30	261.9	407
J-0071	Glencoe	0.00	221.39	261.7	395
J-0072	Glencoe	0.00	221.47	261.7	394
J-0075	Glencoe	0.00	219.89	262.9	421
J-0076	Glencoe	0.00	221.37	261.9	396
J-0080	Glencoe	0.00	219.03	262.3	424
J-0084	Glencoe	0.00	221.64	261.9	394
J-0089	Glencoe	0.00	218.74	262.3	426
J-0091	Glencoe	0.00	219.67	262.3	417
J-0093	Glencoe	0.00	219.21	262.3	422
J-0094	Glencoe	0.00	219.02	262.2	422
J-0097	Glencoe	0.00	220.18	262.1	410
J-0098	Glencoe	0.00	222.46	261.7	384
J-0099	Glencoe	0.00	220.30	261.9	407
J-0101	Glencoe	2.26	220.52	264.1	426
J-0104	Glencoe	0.00	219.02	262.2	422
J-0106	Glencoe	0.00	220.30	261.9	407
J-0107	Glencoe	1.08	219.71	262.1	415
J-0111	Glencoe	0.00	220.46	262.0	407
J-0115	Glencoe	0.00	221.64	261.9	394
J-0116	Glencoe	0.00	221.14	262.1	401
J-0123	Glencoe	0.00	219.89	262.8	420
J-0124	Glencoe	0.00	221.86	261.9	392
J-0126	Glencoe	0.00	222.19	262.1	391
J-0128	Glencoe	0.00	220.36	262.1	408
J-0134	Glencoe	0.00	221.58	261.9	394
J-0135	Glencoe	0.74	221.58	261.9	394
J-0139	Glencoe	0.00	220.94	262.0	401
J-0144	Glencoe	1.35	220.30	261.9	407
J-0145	Glencoe	0.00	219.32	263.8	435
J-0146	Glencoe	2.12	219.32	263.8	435
J-0165	Glencoe	0.00	222.40	261.7	385
J-0166	Glencoe	0.00	222.18	261.7	387
J-0168	Glencoe	0.00	218.80	263.8	440
J-0169	Glencoe	0.00	219.08	263.8	438
J-0172	Glencoe	0.00	220.46	262.0	407
J-0175	Glencoe	1.66	220.69	261.9	403
J-0178	Glencoe	0.00	220.82	261.9	402
J-0179	Glencoe	0.00	221.40	261.9	396
J-0180	Glencoe	0.00	219.24	263.9	437
J-0187	Glencoe	1.94	219.29	262.3	420
J-0191	Glencoe	0.00	219.87	262.1	413
J-0198	Glencoe	1.77	220.60	261.8	403
J-0201	Glencoe	0.00	221.07	261.9	399
J-0202	Glencoe	0.00	219.58	263.8	433
J-0205	Glencoe	0.00	219.67	262.2	416
J-0211	Glencoe	0.00	220.94	261.9	401
J-0213	Glencoe	0.99	220.33	262.0	407
J-0222	Glencoe	1.65	221.83	261.9	392
J-0227	Glencoe	0.00	218.72	262.4	427
J-0235	Glencoe	1.77	219.58	262.0	415
J-0236	Glencoe	0.00	221.53	262.0	396
J-0239	Glencoe	0.00	220.46	262.0	407
J-0252	Glencoe	0.00	221.64	261.9	394

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0255	Glencoe	0.00	220.66	261.9	403
J-0256	Glencoe	0.00	220.66	261.9	403
J-0262	Glencoe	0.00	218.81	262.6	428
J-0264	Glencoe	0.00	221.34	261.9	397
J-0265	Glencoe	0.00	221.14	262.1	401
J-0267	Glencoe	4.13	220.89	262.8	410
J-0271	Glencoe	0.00	221.37	261.9	396
J-0272	Glencoe	0.00	220.69	261.9	403
J-0273	Glencoe	0.00	220.69	261.9	403
J-0275	Glencoe	0.00	218.80	263.8	441
J-0279	Glencoe	0.00	219.07	262.0	420
J-0284	Glencoe	2.16	221.40	261.9	396
J-0285	Glencoe	0.00	221.40	261.9	396
J-0286	Glencoe	0.00	220.95	261.9	401
J-0288	Glencoe	0.00	219.95	262.0	411
J-0291	Glencoe	0.00	220.39	261.7	405
J-0303	Glencoe	0.00	220.18	262.1	410
J-0306	Glencoe	0.79	220.39	261.7	405
J-0316	Glencoe	0.00	219.71	262.1	415
J-0321	Glencoe	0.00	218.44	262.1	427
J-0324	Glencoe	0.00	220.30	261.9	407
J-0331	Glencoe	0.00	220.78	261.9	403
J-0332	Glencoe	0.00	221.43	261.9	396
J-0333	Glencoe	0.00	220.63	261.9	404
J-0334	Glencoe	0.00	220.51	261.9	405
J-0336	Glencoe	0.00	220.94	261.9	401
J-0337	Glencoe	0.00	219.08	263.9	439
J-0338	Glencoe	0.00	219.08	263.9	439
J-0339	Glencoe	0.00	221.94	261.8	390
J-0340	Glencoe	0.00	221.94	261.8	390
J-0342	Glencoe	0.00	220.51	261.9	405
J-0344	Glencoe	0.00	221.97	261.9	390
J-0353	Glencoe	0.00	221.46	261.9	396
J-0354	Glencoe	2.06	220.21	262.0	409
J-0358	Glencoe	0.00	218.83	262.3	425
J-0360	Glencoe	0.00	220.66	262.0	404
J-0364	Glencoe	1.31	222.05	261.7	388
J-0367	Glencoe	0.00	221.47	261.8	395
J-0368	Glencoe	0.00	221.72	261.8	392
J-0373	Glencoe	0.00	221.20	262.1	400
J-0381	Glencoe	0.00	220.68	261.8	402
J-0384	Glencoe	0.00	220.86	261.9	401
J-0389	Glencoe	0.00	220.58	261.8	403
J-0390	Glencoe	0.00	221.48	261.8	395
J-0402	Glencoe	0.00	222.13	261.8	388
J-0409	Glencoe	1.19	220.12	262.0	410
J-0410	Glencoe	0.00	220.77	261.9	403
J-0421	Glencoe	1.60	219.44	262.2	418
J-0424	Glencoe	0.00	221.29	262.0	398
J-0425	Glencoe	0.00	220.56	262.0	405
J-0427	Glencoe	3.07	221.50	261.7	394
J-0435	Glencoe	0.00	220.73	261.9	403
J-0437	Glencoe	0.00	221.47	261.9	395
J-0447	Glencoe	1.24	219.72	262.0	414
J-0449	Glencoe	0.00	220.38	261.9	406
J-0450	Glencoe	0.00	220.38	261.9	406
J-0451	Glencoe	0.00	220.75	262.1	404
J-0452	Glencoe	0.00	222.13	261.8	388
J-0468	Glencoe	0.00	220.56	262.1	407
J-0469	Glencoe	0.00	220.51	262.1	407
J-0481	Glencoe	0.70	221.57	261.9	394
J-0488	Glencoe	0.00	219.85	262.0	412
J-0494	Glencoe	2.18	219.65	264.0	434
J-0497	Glencoe	0.00	220.51	261.9	405
J-0503	Glencoe	0.00	220.59	261.9	404
J-0507	Glencoe	0.00	221.01	261.9	400
J-0524	Glencoe	0.00	220.61	261.9	404
J-0529	Glencoe	0.68	220.34	262.0	408
J-0533	Glencoe	0.00	220.79	261.9	402
J-0535	Glencoe	0.00	220.56	262.1	406
J-0539	Glencoe	0.45	220.67	261.8	403
J-0543	Glencoe	0.00	221.46	261.8	394
J-0544	Glencoe	0.00	219.48	263.8	434
J-0546	Glencoe	1.66	221.52	261.9	395
J-0554	Glencoe	0.99	221.27	261.8	397
J-0559	Glencoe	0.00	219.25	262.4	422
J-0561	Glencoe	0.00	221.13	261.8	398
J-0564	Glencoe	0.00	220.73	261.8	402
J-0566	Glencoe	0.00	221.47	261.8	395

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0568	Glencoe	0.00	218.97	262.1	422
J-0579	Glencoe	0.00	221.75	261.8	392
J-0580	Glencoe	0.00	221.33	261.9	397
J-0581	Glencoe	0.68	221.45	261.9	395
J-0584	Glencoe	0.00	220.81	262.0	403
J-0586	Glencoe	3.89	221.75	262.0	394
J-0590	Glencoe	0.00	219.80	262.3	416
J-0602	Glencoe	0.00	221.75	261.8	392
J-0627	Glencoe	1.65	221.20	261.7	397
J-0632	Glencoe	0.00	219.75	262.0	414
J-0635	Glencoe	0.00	222.08	264.0	410
J-0646	Glencoe	0.00	214.32	277.4	617
J-690	Glencoe	0.00	219.24	263.8	436
J-692	Glencoe	0.00	221.27	261.8	397
J-695	Glencoe	0.00	221.39	261.9	396
J-698	Glencoe	0.00	221.97	261.9	390
J-700	Glencoe	0.00	221.63	261.7	392
J-703	Glencoe	0.00	220.68	261.8	402
J-705	Glencoe	0.00	221.20	261.8	397
J-707	Glencoe	0.00	221.01	261.9	400
J-709	Glencoe	0.00	219.02	262.2	422
J-713	Glencoe	0.00	220.91	261.9	402
J-715	Glencoe	0.00	220.94	262.0	401
J-718	Glencoe	0.00	220.68	261.9	404
J-720	Glencoe	1.62	221.39	261.9	396
J-722	Glencoe	0.00	222.21	261.8	387
J-724	Glencoe	0.00	222.40	261.7	385
J-727	Glencoe	0.00	222.40	261.7	385
J-734	Glencoe	0.00	220.09	262.2	412
J-735	Glencoe	0.00	220.09	262.2	412
J-753	Glencoe	0.00	220.54	261.9	404
J-759	Glencoe	0.00	220.47	261.9	405
J-760	Glencoe	0.00	220.38	261.9	406
J-761	Glencoe	0.00	220.22	261.9	408
J-762	Glencoe	0.00	221.99	261.9	390
J-764	Glencoe	0.00	219.44	261.9	415
J-765	Glencoe	0.00	219.44	261.9	415
J-766	Glencoe	0.00	219.88	261.9	411
J-767	Glencoe	0.00	219.50	261.9	415
J-768	Glencoe	0.00	219.49	261.9	415
J-769	Glencoe	0.00	219.58	261.9	414
J-770	Glencoe	0.00	219.69	261.9	413
J-771	Glencoe	0.00	219.83	261.9	411
J-772	Glencoe	0.00	219.83	261.9	411
J-773	Glencoe	0.00	219.88	261.9	411
J-775	Glencoe	0.00	219.80	261.9	412
J-777	Glencoe	0.00	219.87	261.9	411
J-778	Glencoe	0.00	219.73	261.9	412
J-779	Glencoe	0.00	219.26	262.1	419
J-780	Glencoe	0.00	220.29	262.1	409
J-781	Glencoe	0.00	218.70	262.1	425
J-782	Glencoe	0.00	218.55	262.1	426
J-783	Glencoe	0.00	218.42	262.1	428
J-784	Glencoe	0.00	218.23	262.2	430
J-785	Glencoe	0.00	217.92	262.2	434
J-786	Glencoe	0.00	217.71	262.3	436
J-787	Glencoe	0.00	217.74	262.3	436
J-788	Glencoe	0.00	217.66	262.3	437
J-789	Glencoe	0.00	217.51	262.3	439
J-790	Glencoe	0.00	217.28	262.4	442
J-791	Glencoe	0.00	217.22	262.5	443
J-792	Glencoe	0.00	217.28	262.5	443
J-793	Glencoe	0.00	217.38	262.5	442
J-794	Glencoe	0.00	217.70	262.6	439
J-795	Glencoe	0.00	218.09	262.7	436
J-796	Glencoe	0.00	218.22	262.7	435
J-797	Glencoe	0.00	218.88	262.7	429
J-798	Glencoe	0.00	219.44	262.8	424
J-799	Glencoe	0.00	219.63	262.8	422
J-800	Glencoe	0.00	221.39	261.9	396
J-801	Glencoe	0.00	220.08	262.1	411
J-803	Glencoe	0.00	218.52	262.1	427
J-804	Glencoe	0.00	218.51	262.1	427
J-805	Glencoe	0.00	218.60	262.1	426
J-806	Glencoe	0.00	218.14	262.2	431
J-807	Glencoe	0.00	218.08	262.2	432
J-810	Glencoe	0.00	218.27	262.2	430
J-812	Glencoe	0.00	217.74	262.3	436
J-813	Glencoe	0.00	217.74	262.3	436

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-814	Glencoe	0.00	217.91	262.3	434
J-816	Glencoe	0.00	217.74	262.3	436
J-817	Glencoe	0.00	217.93	262.3	434
J-818	Glencoe	0.00	217.37	262.4	440
J-819	Glencoe	0.00	217.41	262.4	440
J-820	Glencoe	0.00	217.56	262.4	438
J-821	Glencoe	0.00	217.29	262.5	443
J-822	Glencoe	0.00	218.81	262.5	428
J-823	Glencoe	0.00	218.81	262.6	428
J-824	Glencoe	0.00	218.90	262.5	427
J-826	Glencoe	0.00	217.90	262.6	438
J-827	Glencoe	0.00	219.58	262.8	423
J_Hyd-G001	Glencoe	0.00	220.49	262.0	406
J_Hyd-G002	Glencoe	0.00	219.67	262.3	417
J_Hyd-G003	Glencoe	0.00	221.48	262.1	397
J_Hyd-G004	Glencoe	0.00	221.23	262.2	401
J_Hyd-G005	Glencoe	0.00	222.23	261.7	387
J_Hyd-G006	Glencoe	0.00	222.40	261.7	385
J_Hyd-G008	Glencoe	0.00	220.68	261.8	402
J_Hyd-G009	Glencoe	0.00	221.54	261.8	394
J_Hyd-G010	Glencoe	0.00	221.47	261.7	394
J_Hyd-G011	Glencoe	0.00	219.92	262.1	413
J_Hyd-G012	Glencoe	0.00	220.18	262.1	410
J_Hyd-G013	Glencoe	0.00	221.02	262.1	402
J_Hyd-G014	Glencoe	0.00	221.20	262.1	400
J_Hyd-G016	Glencoe	0.00	221.03	261.9	400
J_Hyd-G018	Glencoe	0.00	220.42	262.0	407
J_Hyd-G019	Glencoe	0.00	220.44	262.0	406
J_Hyd-G020	Glencoe	0.00	221.28	261.8	397
J_Hyd-G021	Glencoe	0.00	221.03	261.8	399
J_Hyd-G022	Glencoe	0.00	219.49	262.0	416
J_Hyd-G023	Glencoe	0.00	220.09	262.2	412
J_Hyd-G024	Glencoe	0.00	221.83	262.1	394
J_Hyd-G025	Glencoe	0.00	221.53	262.0	396
J_Hyd-G026	Glencoe	0.00	221.14	261.9	399
J_Hyd-G027	Glencoe	0.00	221.43	261.9	396
J_Hyd-G028	Glencoe	0.00	221.41	261.9	396
J_Hyd-G029	Glencoe	0.00	220.02	262.0	411
J_Hyd-G041	Glencoe	0.00	220.89	261.8	400
J_Hyd-G042	Glencoe	0.00	220.42	261.8	405
J_Hyd-G043	Glencoe	0.00	220.64	261.8	403
J_Hyd-G044	Glencoe	0.00	220.85	261.8	401
J_Hyd-G045	Glencoe	0.00	221.65	261.9	394
J_Hyd-G046	Glencoe	0.00	221.40	261.9	396
J_Hyd-G047	Glencoe	0.00	221.04	261.9	400
J_Hyd-G048	Glencoe	0.00	220.30	261.9	407
J_Hyd-G049	Glencoe	0.00	220.49	261.9	405
J_Hyd-G050	Glencoe	0.00	221.05	261.9	400
J_Hyd-G051	Glencoe	0.00	221.15	261.9	399
J_Hyd-G052	Glencoe	0.00	220.65	261.9	404
J_Hyd-G053	Glencoe	0.00	220.83	261.9	402
J_Hyd-G056	Glencoe	0.00	220.90	261.9	401
J_Hyd-G057	Glencoe	0.00	220.89	261.9	401
J_Hyd-G058	Glencoe	0.00	221.20	261.7	397
J_Hyd-G059	Glencoe	0.00	219.83	262.2	414
J_Hyd-G060	Glencoe	0.00	219.29	262.3	420
J_Hyd-G061	Glencoe	0.00	219.19	262.3	422
J_Hyd-G062	Glencoe	0.00	220.50	263.8	424
J_Hyd-G063	Glencoe	0.00	220.84	261.7	400
J_Hyd-G064	Glencoe	0.00	219.52	262.3	418
J_Hyd-G065	Glencoe	0.00	219.55	262.2	418
J_Hyd-G066	Glencoe	0.00	220.23	262.2	410
J_Hyd-G067	Glencoe	0.00	219.02	262.2	423
J_Hyd-G068	Glencoe	0.00	218.84	262.1	423
J_Hyd-G069	Glencoe	0.00	221.96	261.7	389
J_Hyd-G070	Glencoe	0.00	221.63	261.7	392
J_Hyd-G071	Glencoe	0.00	220.68	261.7	402
J_Hyd-G073	Glencoe	0.00	220.65	261.9	403
J_Hyd-G074	Glencoe	0.00	220.63	261.9	404
J_Hyd-G075	Glencoe	0.00	221.31	261.9	397
J_Hyd-G076	Glencoe	0.00	221.52	261.9	395
J_Hyd-G077	Glencoe	0.00	221.15	261.8	398
J_Hyd-G078	Glencoe	0.00	219.48	263.7	433
J_Hyd-G079	Glencoe	0.00	218.83	262.6	428
J_Hyd-G080	Glencoe	0.00	221.89	261.9	391
J_Hyd-G081	Glencoe	0.00	218.72	262.4	427
J_Hyd-G082	Glencoe	0.00	222.21	261.7	387
J_Hyd-G083	Glencoe	0.00	220.52	264.1	426
J_Hyd-G084	Glencoe	0.00	218.50	264.1	446

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-G085	Glencoe	0.00	221.05	261.9	399
J_Hyd-G086	Glencoe	0.00	221.52	261.9	395
J_Hyd-G087	Glencoe	0.00	222.13	261.8	388
J_Hyd-G088	Glencoe	0.00	218.78	262.1	424
J_Hyd-G089	Glencoe	0.00	219.14	262.0	420
J_Hyd-G090	Glencoe	0.00	218.83	262.0	423
J_Hyd-G091	Glencoe	0.00	218.54	262.0	425
J_Hyd-G092	Glencoe	0.00	221.27	261.8	397
J_Hyd-G093	Glencoe	0.00	220.52	262.1	407
J_Hyd-G094	Glencoe	0.00	220.33	262.0	407
J_Hyd-G095	Glencoe	0.00	221.89	261.7	390
J_Hyd-G096	Glencoe	0.00	221.27	261.7	396
J_Hyd-G097	Glencoe	0.00	221.43	261.9	396
J_Hyd-G098	Glencoe	0.00	222.70	261.7	382
J_Hyd-H_T-718	Glencoe	0.00	219.72	262.8	422
WV-348	Glencoe	0.00	222.18	261.7	387
WVG001	Glencoe	0.30	221.52	261.9	395
WVG002	Glencoe	0.00	220.69	261.9	403
WVG003	Glencoe	0.00	220.69	261.9	403
WVG004	Glencoe	0.00	220.69	261.9	403
WVG010	Glencoe	0.00	220.30	261.9	407
WVG010	Glencoe	0.00	218.74	262.3	426
WVG011	Glencoe	0.00	220.30	261.9	407
WVG012	Glencoe	0.00	220.60	261.9	405
WVG013	Glencoe	0.00	220.91	261.9	402
WVG015	Glencoe	0.00	220.81	261.9	402
WVG018	Glencoe	0.00	220.30	261.9	407
WVG019	Glencoe	0.00	220.30	261.9	407
WVG020	Glencoe	0.00	220.83	261.9	402
WVG022	Glencoe	0.00	221.20	261.9	398
WVG027	Glencoe	0.00	221.37	261.9	396
WVG028	Glencoe	0.00	221.31	261.9	397
WVG029	Glencoe	0.00	221.64	261.9	394
WVG030	Glencoe	0.00	221.21	261.9	398
WVG032	Glencoe	0.00	221.00	261.9	401
WVG035	Glencoe	0.00	220.82	261.9	402
WVG036	Glencoe	0.00	220.82	261.9	402
WVG037	Glencoe	0.00	220.78	261.9	403
WVG038	Glencoe	0.00	220.94	262.0	401
WVG039	Glencoe	0.00	220.94	262.0	401
WVG040	Glencoe	0.00	220.94	262.0	401
WVG041	Glencoe	0.00	220.94	261.9	401
WVG042	Glencoe	0.00	220.94	262.0	401
WVG043	Glencoe	0.00	221.07	261.9	399
WVG044	Glencoe	0.00	221.07	261.9	399
WVG045	Glencoe	0.00	221.44	261.9	396
WVG046	Glencoe	0.00	221.52	261.9	395
WVG047	Glencoe	0.00	221.40	261.9	396
WVG048	Glencoe	0.00	221.65	261.9	394
WVG049	Glencoe	0.00	221.65	261.9	394
WVG050	Glencoe	0.00	221.39	261.9	396
WVG051	Glencoe	0.04	220.88	261.8	401
WVG052	Glencoe	0.00	220.75	261.8	402
WVG053	Glencoe	0.00	220.37	261.8	405
WVG054	Glencoe	3.20	220.60	261.8	403
WVG055	Glencoe	0.00	220.65	261.8	402
WVG056	Glencoe	0.00	220.39	261.7	405
WVG057	Glencoe	0.00	221.86	261.9	392
WVG058	Glencoe	0.00	221.52	261.9	395
WVG059	Glencoe	0.00	221.52	261.9	395
WVG061	Glencoe	0.00	221.43	261.9	396
WVG064	Glencoe	0.00	221.03	261.8	399
WVG069	Glencoe	0.00	221.89	261.9	391
WVG070	Glencoe	0.00	221.83	261.9	392
WVG071	Glencoe	0.00	221.83	261.9	392
WVG074	Glencoe	1.82	221.48	261.8	395
WVG085	Glencoe	0.00	221.35	261.9	396
WVG086	Glencoe	0.00	221.47	261.7	394
WVG087	Glencoe	0.00	221.20	262.1	400
WVG090	Glencoe	0.00	220.66	262.1	405
WVG091	Glencoe	0.00	220.36	262.1	408
WVG093	Glencoe	0.00	220.18	262.1	410
WVG094	Glencoe	0.00	219.87	262.1	413
WVG096	Glencoe	0.00	219.71	262.1	415
WVG097	Glencoe	0.00	219.72	262.1	415
WVG099	Glencoe	0.00	220.09	262.2	412
WVG100	Glencoe	0.00	220.09	262.2	412
WVG101	Glencoe	0.00	219.67	262.2	416
WVG102	Glencoe	0.00	219.67	262.2	416

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVG103	Glencoe	0.00	219.67	262.2	416
WVG104	Glencoe	0.00	219.29	262.3	420
WVG105	Glencoe	0.00	219.29	262.3	420
WVG106	Glencoe	0.00	219.52	262.3	418
WVG107	Glencoe	0.00	219.52	262.3	418
WVG108	Glencoe	0.00	218.74	262.3	426
WVG109	Glencoe	0.00	218.74	262.3	426
WVG113	Glencoe	0.00	219.67	262.3	417
WVG116	Glencoe	0.00	219.80	262.0	413
WVG117	Glencoe	0.00	220.25	262.0	408
WVG120	Glencoe	0.00	218.73	262.3	427
WVG122	Glencoe	0.00	220.89	262.9	411
WVG129	Glencoe	0.00	220.46	262.0	407
WVG130	Glencoe	0.00	220.46	262.0	407
WVG131	Glencoe	0.00	220.46	262.0	407
WVG132	Glencoe	0.00	219.02	262.2	422
WVG133	Glencoe	0.00	219.02	262.2	422
WVG139	Glencoe	0.00	219.72	262.8	422
WVG140	Glencoe	0.00	219.89	262.9	421
WVG143	Glencoe	0.00	219.32	263.8	435
WVG147	Glencoe	0.00	218.60	262.1	426
WVG148	Glencoe	0.00	218.97	262.0	421
WVG149	Glencoe	0.00	219.95	262.0	411
WVG150	Glencoe	0.00	219.40	262.0	417
WVG151	Glencoe	0.91	218.54	262.0	425
WVG152	Glencoe	0.00	221.63	261.7	392
WVG153	Glencoe	0.00	222.46	261.7	384
WVG158	Glencoe	0.00	221.74	261.7	391
WVG159	Glencoe	0.00	222.07	261.7	388
WVG161	Glencoe	0.00	220.95	261.9	401
WVG164	Glencoe	0.00	221.63	261.7	392
WVG165	Glencoe	0.00	221.86	261.7	390
WVG169	Glencoe	0.00	221.97	261.9	390
WVG170	Glencoe	0.00	221.61	261.9	394
WVG171	Glencoe	0.00	221.81	261.9	392
WVG172	Glencoe	0.00	221.64	261.9	394
WVG175	Glencoe	0.00	221.83	261.9	392
WVG181	Glencoe	0.00	219.21	262.3	422
WVG183	Glencoe	0.00	219.03	262.3	424
WVG185	Glencoe	0.00	219.58	262.0	415
WVG186	Glencoe	0.00	220.09	262.2	412
WVG187	Glencoe	0.00	219.62	262.2	417
WVG188	Glencoe	0.00	221.14	262.1	401
WVG189	Glencoe	0.00	220.09	262.0	410
WVG190	Glencoe	1.32	219.29	262.0	418
WVG191	Glencoe	0.00	218.72	262.4	427
WVG192	Glencoe	0.00	218.72	262.4	427
WVG193	Glencoe	0.00	219.89	262.9	421
WVG196	Glencoe	0.00	219.58	263.3	428
WVG197	Glencoe	0.00	219.58	263.8	433
WVG199	Glencoe	0.00	221.53	262.0	396
WVG200	Glencoe	0.00	221.46	261.9	396
WVR021	Glencoe	0.00	219.38	264.1	437
WVR022	Glencoe	0.00	219.48	263.7	433
J-0037	Melborne	0.00	221.36	253.7	317
J-0065	Melborne	0.00	221.95	253.7	311
J-0105	Melborne	0.00	221.78	253.7	312
J-0108	Melborne	0.00	222.00	253.7	310
J-0109	Melborne	1.23	222.00	253.7	310
J-0125	Melborne	0.00	221.88	253.7	311
J-0156	Melborne	0.00	222.65	253.7	304
J-0157	Melborne	0.00	222.65	253.7	304
J-0158	Melborne	0.00	221.85	253.7	312
J-0159	Melborne	0.00	221.86	253.7	312
J-0176	Melborne	0.00	219.99	253.7	330
J-0177	Melborne	1.26	220.58	253.7	324
J-0189	Melborne	0.00	221.71	253.7	313
J-0192	Melborne	0.00	221.15	253.7	319
J-0203	Melborne	0.00	221.35	253.7	317
J-0230	Melborne	1.41	222.96	253.7	301
J-0237	Melborne	0.00	221.35	253.7	317
J-0248	Melborne	0.00	221.91	253.7	311
J-0249	Melborne	1.35	221.91	253.7	311
J-0312	Melborne	0.00	221.84	253.7	312
J-0396	Melborne	0.00	221.53	253.7	315
J-0403	Melborne	0.00	221.78	253.7	312
J-0407	Melborne	1.37	220.70	253.7	323
J-0413	Melborne	0.00	221.82	253.7	312
J-0414	Melborne	0.00	221.49	253.7	316

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0430	Melborne	0.00	221.36	253.7	317
J-0434	Melborne	0.00	221.75	253.7	313
J-0476	Melborne	0.00	223.00	253.7	300
J-0493	Melborne	0.37	219.69	253.7	333
J-0498	Melborne	0.00	222.22	253.7	308
J-0500	Melborne	0.00	222.24	253.7	308
J-0502	Melborne	0.00	221.77	253.7	312
J-0531	Melborne	0.00	222.32	253.8	308
J-0639	Melborne	0.00	225.41	255.8	298
J_Hyd-M002	Melborne	0.00	219.00	254.0	342
J_Hyd-M003	Melborne	0.00	219.73	253.8	334
J_Hyd-M004	Melborne	0.00	221.15	253.7	319
J_Hyd-M005	Melborne	0.00	221.44	253.7	316
J_Hyd-M006	Melborne	0.00	222.31	253.7	307
J_Hyd-M007	Melborne	0.00	221.82	253.7	312
J_Hyd-M008	Melborne	0.00	222.52	253.7	305
J_Hyd-M009	Melborne	0.00	222.86	253.7	302
J_Hyd-M010	Melborne	0.00	221.91	253.7	311
J_Hyd-M011	Melborne	0.00	223.22	253.7	298
J_Hyd-M012	Melborne	0.00	221.53	253.7	315
J_Hyd-M013	Melborne	0.31	223.56	253.7	295
J_Hyd-M014	Melborne	0.00	222.20	253.7	308
J_Hyd-M015	Melborne	0.00	223.30	253.7	298
J_Hyd-M016	Melborne	0.00	222.65	253.7	304
J_Hyd-M017	Melborne	0.00	222.32	253.8	308
J_Hyd-M018	Melborne	0.00	221.84	253.7	312
J_Hyd-M019	Melborne	0.00	221.35	253.7	317
J_Hyd-M020	Melborne	0.00	220.58	253.7	324
J_Hyd-M021	Melborne	0.00	221.95	253.7	311
J_Hyd-M022	Melborne	0.00	220.18	253.7	328
J_Hyd-M023	Melborne	0.00	220.16	253.7	328
WVA023	Melborne	0.00	221.95	253.7	311
WVM001	Melborne	0.00	221.15	253.7	319
WVM002	Melborne	0.00	221.15	253.7	319
WVM003	Melborne	0.00	220.48	253.7	325
WVM005	Melborne	0.00	221.88	253.7	311
WVM006	Melborne	0.00	221.88	253.7	311
WVM007	Melborne	0.00	221.23	253.7	318
WVM008	Melborne	0.00	221.80	253.7	312
WVM009	Melborne	0.00	221.78	253.7	312
WVM010	Melborne	0.00	221.85	253.7	312
WVM011	Melborne	0.00	221.85	253.7	312
WVM012	Melborne	0.00	221.84	253.7	312
WVM013	Melborne	0.00	222.21	253.7	308
WVM014	Melborne	0.00	222.00	253.7	310
WVM015	Melborne	0.00	221.91	253.7	311
WVM017	Melborne	0.00	221.71	253.7	313
WVM018	Melborne	0.00	221.72	253.7	313
WVM019	Melborne	0.00	222.96	253.7	301
WVM020	Melborne	0.00	222.96	253.7	301
WVM021	Melborne	0.00	221.86	253.7	312
WVM022	Melborne	0.00	221.35	253.7	317
WVM023	Melborne	0.00	221.35	253.7	317
WVM025	Melborne	0.00	220.58	253.7	324
WVM026	Melborne	0.00	220.58	253.7	324
WVM027	Melborne	0.00	219.99	253.7	330
WVM028	Melborne	0.00	219.99	253.7	330
WVM030	Melborne	0.00	221.00	253.7	320
WVM031	Melborne	0.00	222.65	253.7	304
WVM032	Melborne	0.00	222.45	253.8	307
J-0002	Wardsville	0.00	204.57	250.4	449
J-0012	Wardsville	0.00	210.33	250.4	392
J-0018	Wardsville	0.00	210.33	250.4	392
J-0022	Wardsville	0.00	195.43	250.4	538
J-0023	Wardsville	0.54	203.82	250.4	456
J-0024	Wardsville	0.00	203.82	250.4	456
J-0027	Wardsville	0.00	212.30	250.4	373
J-0028	Wardsville	0.00	212.30	250.4	373
J-0029	Wardsville	0.00	199.99	250.4	493
J-0030	Wardsville	0.66	199.99	250.4	493
J-0031	Wardsville	0.00	210.85	250.4	387
J-0033	Wardsville	0.00	205.92	250.4	435
J-0034	Wardsville	0.00	205.92	250.4	435
J-0035	Wardsville	0.00	211.90	250.5	377
J-0040	Wardsville	0.00	200.40	250.4	489
J-0042	Wardsville	0.00	201.97	250.4	474
J-0050	Wardsville	0.00	208.88	250.4	406
J-0051	Wardsville	0.49	208.88	250.4	406
J-0055	Wardsville	0.00	210.29	250.4	393

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0056	Wardsville	0.00	210.29	250.4	393
J-0061	Wardsville	0.00	200.40	250.4	489
J-0062	Wardsville	0.00	200.40	250.4	489
J-0068	Wardsville	0.00	209.82	250.4	397
J-0069	Wardsville	0.00	195.43	250.4	538
J-0081	Wardsville	0.00	209.82	250.4	397
J-0082	Wardsville	0.00	200.40	250.4	489
J-0083	Wardsville	0.00	200.40	250.4	489
J-0088	Wardsville	0.00	205.79	250.4	437
J-0120	Wardsville	0.00	206.22	250.4	433
J-0121	Wardsville	0.00	205.92	250.4	435
J-0122	Wardsville	0.51	207.03	250.4	425
J-0131	Wardsville	0.00	199.31	250.4	500
J-0132	Wardsville	0.00	199.88	250.4	495
J-0154	Wardsville	0.00	211.18	250.4	384
J-0160	Wardsville	0.00	205.17	250.5	443
J-0161	Wardsville	0.00	205.17	250.5	443
J-0174	Wardsville	0.00	201.18	250.4	482
J-0188	Wardsville	0.00	199.35	250.4	500
J-0217	Wardsville	0.57	212.05	250.4	375
J-0218	Wardsville	0.00	212.05	250.4	375
J-0223	Wardsville	0.00	201.18	250.4	482
J-0228	Wardsville	0.00	211.59	250.4	380
J-0229	Wardsville	0.00	211.22	250.4	384
J-0234	Wardsville	0.00	211.43	250.4	382
J-0238	Wardsville	0.70	199.53	250.4	498
J-0242	Wardsville	0.00	212.24	250.5	374
J-0245	Wardsville	0.00	194.57	250.4	546
J-0247	Wardsville	0.00	200.33	250.4	490
J-0251	Wardsville	0.00	198.40	250.4	509
J-0258	Wardsville	0.00	201.05	250.4	483
J-0283	Wardsville	0.82	212.26	250.4	373
J-0297	Wardsville	0.00	198.59	250.4	507
J-0307	Wardsville	0.00	198.04	250.4	513
J-0308	Wardsville	0.00	211.06	250.4	385
J-0311	Wardsville	0.00	205.84	250.4	436
J-0313	Wardsville	0.12	208.66	250.4	409
J-0343	Wardsville	0.00	208.18	250.4	413
J-0349	Wardsville	0.00	211.06	250.4	385
J-0423	Wardsville	0.00	200.86	250.4	485
J-0429	Wardsville	0.82	195.38	250.4	538
J-0438	Wardsville	0.00	211.49	250.4	381
J-0439	Wardsville	0.00	211.49	250.4	381
J-0444	Wardsville	0.00	205.84	250.4	436
J-0446	Wardsville	0.62	199.42	250.4	499
J-0456	Wardsville	0.00	211.90	250.5	377
J-0460	Wardsville	0.00	196.26	250.4	530
J-0485	Wardsville	0.00	198.53	250.4	508
J-0504	Wardsville	0.00	211.80	250.5	378
J-0506	Wardsville	0.72	199.60	250.4	497
J-0550	Wardsville	0.49	207.57	250.4	419
J-0553	Wardsville	0.00	210.98	250.5	387
J-0597	Wardsville	0.00	211.52	250.5	381
J-686	Wardsville	0.00	211.90	250.5	377
J-728	Wardsville	0.00	199.35	250.4	500
J_Hyd-W001	Wardsville	0.00	199.59	250.4	497
J_Hyd-W002	Wardsville	0.00	200.22	250.4	491
J_Hyd-W003	Wardsville	0.00	200.09	250.4	492
J_Hyd-W004	Wardsville	0.00	200.26	250.4	491
J_Hyd-W005	Wardsville	0.00	200.73	250.4	486
J_Hyd-W006	Wardsville	0.00	201.97	250.4	474
J_Hyd-W007	Wardsville	0.00	202.85	250.4	466
J_Hyd-W008	Wardsville	0.00	206.22	250.4	433
J_Hyd-W009	Wardsville	0.00	207.09	250.4	424
J_Hyd-W010	Wardsville	0.00	211.08	250.4	385
J_Hyd-W011	Wardsville	0.00	210.99	250.4	386
J_Hyd-W012	Wardsville	0.00	209.97	250.4	396
J_Hyd-W013	Wardsville	0.00	199.99	250.4	493
J_Hyd-W014	Wardsville	0.00	203.96	250.4	455
J_Hyd-W015	Wardsville	0.00	201.05	250.4	483
J_Hyd-W016	Wardsville	0.00	199.31	250.4	500
J_Hyd-W017	Wardsville	0.00	204.86	250.4	446
J_Hyd-W018	Wardsville	0.00	207.95	250.4	416
J_Hyd-W019	Wardsville	0.00	210.80	250.4	388
J_Hyd-W021	Wardsville	0.00	212.03	250.4	376
J_Hyd-W022	Wardsville	0.00	212.33	250.4	373
J_Hyd-W023	Wardsville	0.00	211.80	250.4	378
J_Hyd-W024	Wardsville	0.00	210.17	250.4	394
J_Hyd-W025	Wardsville	0.00	208.87	250.4	407

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-W026	Wardsville	0.00	199.86	250.4	495
J_Hyd-W027	Wardsville	0.00	198.54	250.4	508
J_Hyd-W028	Wardsville	0.00	194.57	250.4	546
J_Hyd-W029	Wardsville	0.00	198.04	250.4	513
J_Hyd-W030	Wardsville	0.00	198.82	250.4	505
J_Hyd-W031	Wardsville	0.00	210.43	250.4	391
J_Hyd-W032	Wardsville	0.00	211.40	250.4	382
J_Hyd-W033	Wardsville	0.00	211.13	250.4	385
J_Hyd-W034	Wardsville	0.00	211.75	250.4	378
J_Hyd-W035	Wardsville	0.00	211.50	250.4	381
J_Hyd-W036	Wardsville	0.00	210.68	250.4	389
J_Hyd-W037	Wardsville	0.00	208.27	250.4	412
J_Hyd-W038	Wardsville	0.00	207.21	250.4	423
J_Hyd-W039	Wardsville	0.00	205.93	250.4	435
J_Hyd-W040	Wardsville	0.00	198.92	250.4	504
J_Hyd-W041	Wardsville	0.00	197.74	250.4	515
J_Hyd-W042	Wardsville	0.00	195.70	250.4	535
J_Hyd-W043	Wardsville	0.00	198.47	250.4	508
J_Hyd-W044	Wardsville	0.00	212.21	250.4	374
J_Hyd-W045	Wardsville	0.00	209.85	250.5	397
J_Hyd-W046	Wardsville	0.00	208.62	250.5	410
J_Hyd-W047	Wardsville	0.00	207.07	250.4	424
WVR003	Wardsville	0.00	212.35	250.5	373
WVR006	Wardsville	0.00	211.90	250.5	377
WVW001	Wardsville	0.00	211.08	250.4	385
WVW002	Wardsville	0.00	211.08	250.4	385
WVW003	Wardsville	0.00	210.85	250.4	387
WVW006	Wardsville	0.00	199.99	250.4	493
WVW007	Wardsville	0.00	201.05	250.4	483
WVW008	Wardsville	0.00	201.01	250.4	484
WVW009	Wardsville	0.00	205.92	250.4	435
WVW010	Wardsville	0.00	206.22	250.4	433
WVW011	Wardsville	0.00	201.69	250.4	477
WVW014	Wardsville	0.00	202.53	250.4	469
WVW015	Wardsville	0.00	199.66	250.4	497
WVW016	Wardsville	0.00	200.33	250.4	490
WVW018	Wardsville	0.00	200.33	250.4	490
WVW019	Wardsville	0.00	199.53	250.4	498
WVW020	Wardsville	0.00	199.53	250.4	498
WVW021	Wardsville	0.00	198.66	250.4	506
WVW022	Wardsville	0.00	198.82	250.4	505
WVW023	Wardsville	0.00	198.59	250.4	507
WVW025	Wardsville	0.00	198.04	250.4	513
WVW026	Wardsville	0.00	197.66	250.4	516
WVW027	Wardsville	0.00	198.71	250.4	506
WVW028	Wardsville	0.00	198.33	250.4	510
WVW029	Wardsville	0.00	198.40	250.4	509
WVW030	Wardsville	0.00	200.40	250.4	489
WVW031	Wardsville	0.00	200.40	250.4	489
WVW032	Wardsville	0.00	200.21	250.4	491
WVW033	Wardsville	0.00	200.40	250.4	489
WVW034	Wardsville	0.00	199.35	250.4	500
WVW035	Wardsville	0.00	199.92	250.4	494
WVW036	Wardsville	0.00	199.35	250.4	500
WVW038	Wardsville	0.00	210.33	250.4	392
WVW039	Wardsville	0.00	208.88	250.4	406
WVW041	Wardsville	0.58	211.18	250.4	384
WVW042	Wardsville	0.00	211.18	250.4	384
WVW043	Wardsville	0.00	211.18	250.4	384
WVW044	Wardsville	0.00	207.40	250.4	421
WVW045	Wardsville	0.00	205.79	250.4	437
WVW046	Wardsville	0.00	209.82	250.4	397
WVW047	Wardsville	0.00	209.82	250.4	397
WVW048	Wardsville	0.54	212.30	250.4	373
WVW049	Wardsville	0.00	212.30	250.4	373
WVW051	Wardsville	0.00	211.43	250.4	382
WVW052	Wardsville	0.25	211.43	250.4	382
WVW053	Wardsville	0.00	211.43	250.4	382
WVW054	Wardsville	0.00	212.03	250.4	376
WVW055	Wardsville	0.00	211.12	250.4	385
WVW056	Wardsville	0.00	212.26	250.4	373
WVW057	Wardsville	0.00	212.05	250.4	375
WVW058	Wardsville	0.00	212.26	250.4	373
WVW059	Wardsville	0.00	211.21	250.4	384
WVW061	Wardsville	0.00	211.15	250.4	384
WVW063	Wardsville	0.00	204.57	250.4	449
WVW064	Wardsville	0.00	208.18	250.4	413
WVW066	Wardsville	0.00	207.03	250.4	425
WVW067	Wardsville	0.00	194.57	250.4	546

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0009	Appin	0.00	225.75	255.8	294
J-0010	Appin	0.00	225.75	255.8	294
J-0015	Appin	0.00	224.12	255.8	310
J-0119	Appin	0.00	224.77	255.8	304
J-0140	Appin	0.00	223.78	255.8	314
J-0152	Appin	0.00	224.42	255.8	307
J-0185	Appin	0.00	225.43	255.8	297
J-0219	Appin	0.00	223.88	255.8	313
J-0221	Appin	0.00	224.26	255.8	309
J-0244	Appin	0.00	224.85	255.8	303
J-0246	Appin	0.00	224.78	255.8	304
J-0254	Appin	1.81	223.45	255.8	317
J-0277	Appin	0.00	223.74	255.9	314
J-0278	Appin	0.00	223.74	255.9	315
J-0280	Appin	0.00	225.40	255.8	297
J-0281	Appin	0.00	225.40	255.8	297
J-0318	Appin	1.11	224.73	255.8	304
J-0322	Appin	0.00	224.94	255.9	303
J-0323	Appin	0.00	224.94	255.9	303
J-0345	Appin	0.00	222.65	255.8	325
J-0346	Appin	0.00	223.66	255.8	315
J-0355	Appin	0.00	224.54	255.9	307
J-0359	Appin	0.00	225.19	255.8	300
J-0361	Appin	0.00	224.05	255.8	311
J-0378	Appin	0.70	225.03	255.8	301
J-0404	Appin	0.00	222.65	255.8	325
J-0479	Appin	0.00	223.74	255.8	314
J-0480	Appin	0.83	223.82	255.8	313
J-0560	Appin	0.00	224.74	255.8	304
J_Hyd-A001	Appin	0.00	224.77	255.8	304
J_Hyd-A002	Appin	0.00	225.61	255.8	295
J_Hyd-A003	Appin	0.00	225.13	255.8	300
J_Hyd-A004	Appin	0.00	224.97	255.8	302
J_Hyd-A005	Appin	0.00	224.76	255.8	304
J_Hyd-A006	Appin	0.00	224.95	255.9	302
J_Hyd-A007	Appin	0.00	224.78	255.9	305
J_Hyd-A008	Appin	0.00	223.78	255.9	314
J_Hyd-A009	Appin	0.00	223.45	255.8	317
J_Hyd-A010	Appin	0.00	223.84	255.8	313
J_Hyd-A011	Appin	0.00	224.12	255.8	310
WVA001	Appin	0.00	224.54	255.9	307
WVA003	Appin	0.00	224.27	255.8	309
WVA005	Appin	0.00	223.45	255.8	317
WVA006	Appin	0.00	223.45	255.8	317
WVA007	Appin	0.00	223.84	255.8	313
WVA008	Appin	0.00	223.88	255.8	313
WVA009	Appin	0.00	223.88	255.8	313
WVA010	Appin	0.00	224.85	255.8	303
WVA011	Appin	0.00	224.46	255.8	307
WVA012	Appin	0.00	224.74	255.8	304
WVA013	Appin	0.00	224.49	255.8	307
WVA014	Appin	0.00	224.42	255.8	307
WVA015	Appin	0.00	225.05	255.8	301
WVA016	Appin	0.00	224.73	255.8	304
WVA017	Appin	0.00	224.77	255.8	304
WVA018	Appin	0.00	224.77	255.8	304
WVA019	Appin	0.00	225.16	255.8	300
WVA020	Appin	0.00	224.85	255.8	303
WVA021	Appin	0.00	225.12	255.8	300
WVR026	Appin	0.00	224.12	255.8	310
WVR028	Appin	0.00	225.35	255.8	298
J-0019	Rural	0.00	224.91	255.4	299
J-0020	Rural	0.00	215.38	254.8	386
J-0053	Rural	0.00	223.50	255.4	312
J-0057	Rural	0.00	223.26	255.4	315
J-0064	Rural	0.00	223.00	254.3	306
J-0073	Rural	0.00	216.62	259.0	414
J-0074	Rural	0.00	216.62	259.0	414
J-0077	Rural	0.00	224.92	255.6	300
J-0078	Rural	0.00	224.92	255.6	300
J-0086	Rural	0.00	215.90	250.7	341
J-0090	Rural	0.00	217.02	254.9	371
J-0100	Rural	0.00	219.21	261.6	414
J-0103	Rural	0.00	224.29	255.7	307
J-0110	Rural	0.00	224.91	255.4	299
J-0113	Rural	0.00	224.13	255.7	309
J-0117	Rural	0.00	223.95	255.4	308
J-0118	Rural	0.00	225.08	255.3	295
J-0129	Rural	0.00	210.02	266.5	553

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0130	Rural	0.00	205.48	266.5	597
J-0137	Rural	0.00	222.21	256.3	333
J-0138	Rural	0.00	222.21	256.3	333
J-0149	Rural	0.00	209.61	266.5	557
J-0150	Rural	0.00	210.02	266.5	553
J-0151	Rural	0.00	224.44	255.6	304
J-0163	Rural	0.00	222.45	268.0	446
J-0164	Rural	0.00	222.45	268.0	446
J-0170	Rural	0.00	216.66	266.8	491
J-0171	Rural	0.00	216.66	266.8	491
J-0182	Rural	0.00	215.05	250.7	349
J-0183	Rural	0.00	215.05	250.7	349
J-0186	Rural	0.00	224.50	255.7	305
J-0193	Rural	0.00	218.11	250.7	319
J-0194	Rural	0.00	218.11	250.7	319
J-0199	Rural	0.00	216.02	250.7	340
J-0200	Rural	0.00	215.67	250.7	343
J-0206	Rural	0.00	215.05	250.7	349
J-0207	Rural	0.00	216.66	254.9	374
J-0208	Rural	0.00	224.87	255.4	299
J-0210	Rural	0.00	216.37	258.9	416
J-0215	Rural	0.00	224.44	255.6	304
J-0224	Rural	0.00	215.67	250.7	343
J-0225	Rural	0.00	215.67	250.7	343
J-0231	Rural	0.00	215.88	270.1	531
J-0232	Rural	0.00	215.90	250.7	340
J-0233	Rural	0.00	215.48	250.7	345
J-0241	Rural	0.00	223.95	255.4	308
J-0243	Rural	0.00	216.95	254.9	372
J-0257	Rural	0.00	215.14	254.4	384
J-0260	Rural	0.00	215.99	250.7	340
J-0263	Rural	0.00	216.66	254.9	374
J-0266	Rural	0.00	215.67	250.7	343
J-0276	Rural	0.00	215.90	250.7	340
J-0282	Rural	0.00	223.26	255.4	315
J-0293	Rural	0.00	215.90	250.7	340
J-0298	Rural	0.00	221.59	254.3	320
J-0299	Rural	0.00	223.00	254.3	306
J-0300	Rural	0.00	215.20	250.7	347
J-0301	Rural	0.00	215.11	250.7	348
J-0304	Rural	0.00	221.66	256.3	339
J-0309	Rural	0.00	218.12	250.7	319
J-0315	Rural	0.00	222.17	256.3	334
J-0319	Rural	0.00	224.13	255.7	309
J-0325	Rural	0.00	217.23	258.9	408
J-0326	Rural	0.00	221.59	254.3	320
J-0329	Rural	0.00	215.90	250.7	340
J-0330	Rural	0.00	215.55	250.7	344
J-0335	Rural	0.00	227.07	255.1	274
J-0341	Rural	0.00	224.82	255.3	298
J-0351	Rural	0.00	216.30	255.1	379
J-0352	Rural	0.00	224.91	255.4	299
J-0356	Rural	0.00	221.65	265.2	426
J-0357	Rural	0.00	221.65	265.2	426
J-0362	Rural	0.00	225.24	255.8	299
J-0365	Rural	0.00	216.02	250.7	339
J-0366	Rural	0.00	215.27	250.7	347
J-0369	Rural	0.00	215.99	254.8	380
J-0370	Rural	0.00	216.95	254.9	372
J-0374	Rural	0.00	217.94	250.7	320
J-0376	Rural	0.00	222.17	256.3	334
J-0379	Rural	0.00	216.10	266.8	496
J-0383	Rural	0.00	215.74	250.7	342
J-0391	Rural	0.00	220.12	265.2	441
J-0392	Rural	0.00	220.22	265.2	440
J-0397	Rural	0.00	217.12	269.8	516
J-0398	Rural	0.00	216.07	269.8	526
J-0405	Rural	0.00	216.98	255.1	373
J-0408	Rural	0.00	219.48	250.7	305
J-0416	Rural	0.00	216.22	270.1	528
J-0422	Rural	0.00	222.67	268.1	444
J-0431	Rural	0.00	210.65	270.9	590
J-0432	Rural	0.00	210.75	270.9	589
J-0441	Rural	0.00	211.16	269.3	569
J-0442	Rural	0.00	210.36	269.3	577
J-0461	Rural	0.00	219.65	261.9	413
J-0462	Rural	0.00	219.09	261.8	418
J-0463	Rural	0.00	218.71	261.9	423
J-0464	Rural	0.00	219.51	261.9	415

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0466	Rural	0.00	215.88	270.1	531
J-0483	Rural	0.00	226.33	255.3	284
J-0484	Rural	0.00	225.87	255.3	288
J-0519	Rural	0.00	220.69	264.2	426
J-0520	Rural	0.00	221.62	264.2	417
J-0525	Rural	0.00	217.02	254.9	371
J-0530	Rural	0.00	218.78	250.7	312
J-0536	Rural	0.00	218.90	254.9	353
J-0545	Rural	0.00	222.01	256.4	336
J-0547	Rural	0.00	208.26	269.3	597
J-0563	Rural	0.00	217.68	254.9	365
J-0573	Rural	0.00	217.81	255.1	365
J-0574	Rural	0.00	217.93	255.1	364
J-0577	Rural	0.00	222.72	264.7	411
J-0582	Rural	0.00	225.65	255.2	290
J-0592	Rural	0.00	225.26	255.9	300
J-0593	Rural	0.00	223.37	255.9	318
J-0595	Rural	0.00	213.93	266.3	513
J-0596	Rural	0.00	214.45	266.2	506
J-0599	Rural	0.00	226.75	255.7	283
J-0600	Rural	0.00	225.36	255.6	296
J-0604	Rural	0.00	217.45	254.6	364
J-0605	Rural	0.00	215.66	254.5	380
J-0607	Rural	0.00	216.23	250.7	337
J-0610	Rural	0.00	217.10	250.7	329
J-0611	Rural	0.00	214.85	250.7	351
J-0613	Rural	0.00	217.54	270.3	516
J-0614	Rural	0.00	215.09	266.0	498
J-0616	Rural	0.00	216.04	250.7	339
J-0617	Rural	0.00	220.45	265.7	443
J-0618	Rural	0.00	220.05	263.3	423
J-0619	Rural	0.00	217.32	262.9	446
J-0623	Rural	0.00	218.13	250.7	319
J-0624	Rural	0.00	219.80	262.3	416
J-0625	Rural	0.00	219.82	261.6	408
J-0626	Rural	0.00	217.52	250.7	325
J-0629	Rural	0.00	198.11	271.2	716
J-0631	Rural	0.00	220.14	255.0	341
J-0633	Rural	0.00	215.01	250.7	349
J-0634	Rural	2.89	220.90	264.0	421
J-0636	Rural	0.00	226.78	255.5	281
J-0637	Rural	0.00	223.52	255.6	313
J-0638	Rural	0.00	220.56	260.7	392
J-0643	Rural	0.00	216.97	250.6	329
J-0645	Rural	0.00	216.83	250.7	331
J-688	Rural	0.00	222.17	256.3	334
J_Hyd-R001E	Rural	0.00	226.53	255.4	283
J_Hyd-R002E	Rural	0.00	224.87	255.4	299
J_Hyd-R003E	Rural	0.00	223.26	255.4	315
J_Hyd-R004E	Rural	0.00	227.87	255.3	268
J_Hyd-R005E	Rural	0.00	228.14	255.1	264
J_Hyd-R006E	Rural	0.00	223.00	254.3	306
J_Hyd-R007E	Rural	0.00	226.02	255.5	288
J_Hyd-R008E	Rural	0.00	225.38	255.2	292
J_Hyd-R009E	Rural	0.00	215.38	254.8	386
J_Hyd-R010E	Rural	0.00	217.64	254.9	365
J_Hyd-R011E	Rural	0.00	216.30	255.1	380
J_Hyd-R012E	Rural	0.00	225.08	255.3	295
J_Hyd-R013E	Rural	0.00	225.08	255.3	295
J_Hyd-R014E	Rural	0.00	225.24	255.8	299
J_Hyd-R015E	Rural	0.00	222.19	256.3	333
J_Hyd-R016E	Rural	0.00	224.13	255.7	309
J_Hyd-R017M	Rural	0.00	215.90	250.7	341
J_Hyd-R018M	Rural	0.00	209.02	250.7	408
J_Hyd-R019M	Rural	0.00	215.68	250.7	342
J_Hyd-R020M	Rural	0.00	216.37	250.6	335
J_Hyd-R021M	Rural	0.00	215.02	250.6	348
J_Hyd-R026E	Rural	0.00	224.44	255.6	304
J_Hyd-R027W	Rural	0.00	206.98	273.6	652
J_Hyd-R028E	Rural	0.00	222.89	255.4	318
J_Hyd-R029W	Rural	0.00	215.14	275.4	590
J_Hyd-R030M	Rural	0.00	215.76	266.8	500
J_Hyd-R031M	Rural	0.00	215.77	270.1	531
J_Hyd-R032M	Rural	0.00	218.56	250.7	314
J_Hyd-R033E	Rural	0.00	217.26	265.2	469
WVR007	Rural	0.00	215.64	250.6	342
WVR008	Rural	0.00	215.68	250.6	341
WVR009	Rural	0.00	215.39	250.7	346
WVR010	Rural	0.00	215.88	270.1	531

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 MDD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVR012	Rural	0.00	217.94	250.7	320
WVR013	Rural	0.00	218.56	250.7	314
WVR014	Rural	0.00	218.12	250.7	319
WVR015	Rural	0.00	218.11	250.7	319
WVR019	Rural	0.00	216.86	267.1	492
WVR020	Rural	0.00	221.61	264.8	423
WVR024	Rural	0.00	216.37	258.9	416
WVR024	Rural	0.00	219.21	261.6	414
WVR025	Rural	0.00	222.17	256.3	334
WVR029	Rural	0.00	224.50	255.7	305
WVR030	Rural	0.00	224.40	255.6	305
WVR031	Rural	0.00	224.90	255.8	302
WVR032	Rural	0.00	224.44	255.6	304
WVR033	Rural	0.00	224.92	255.6	300
WVR034	Rural	0.00	224.90	255.3	297
WVR035	Rural	0.00	224.82	255.3	298
WVR036	Rural	0.00	224.82	255.3	298
WVR037	Rural	0.00	217.20	255.1	371
WVR038	Rural	0.00	217.64	254.9	365
WVR039	Rural	0.00	217.02	254.9	371
WVR040	Rural	0.00	215.14	254.4	384
WVR042	Rural	0.00	223.00	254.3	306
WVR043	Rural	0.00	228.14	255.1	263
WVR044	Rural	0.00	227.12	255.1	274
WVR045	Rural	0.00	223.77	255.4	310
WVR046	Rural	0.00	224.91	255.4	299
WVR047	Rural	0.00	223.95	255.4	308
WVR050	Rural	0.00	215.85	250.7	341
WVR051	Rural	0.00	215.90	250.7	340
WVR052	Rural	0.00	219.21	261.6	414
WVR053	Rural	0.00	225.26	255.7	298
WVR054	Rural	0.00	226.99	255.3	277
WVR055	Rural	0.00	226.60	255.3	281
WVR056	Rural	0.00	223.50	255.4	312
WVR060	Rural	0.00	214.01	254.9	400

Total Demand	88.84	**Maximum Pressure**	716
		Minimum Pressure	263

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P-223	Glencoe	J-747	J-0646	224.53	400	120	37.87	0.30	0.1
P-232	Glencoe	J-0586	G015	3.80	150	100	0.00	0.00	0.0
P-240	Glencoe	J-753	G_H-1	1.46	150	100	0.00	0.00	0.0
P-246	Glencoe	J-759	J-753	58.17	200	110	0.00	0.00	0.0
P-247	Glencoe	J-760	J-759	25.30	200	110	0.00	0.00	0.0
P-248	Glencoe	J-761	J-760	24.76	200	110	0.00	0.00	0.0
P-249(1)	Glencoe	J-762	J-800	10.10	200	110	0.00	0.00	0.0
P-249(2)	Glencoe	J-800	J-761	21.50	200	110	0.00	0.00	0.0
P-251	Glencoe	J-766	J-765	1.74	200	110	0.00	0.00	0.0
P-252	Glencoe	J-765	J-764	2.16	200	110	0.00	0.00	0.0
P-254	Glencoe	J-764	J-762	2.10	200	110	0.00	0.00	0.0
P-255	Glencoe	J-767	J-766	36.14	200	110	0.00	0.00	0.0
P-256	Glencoe	J-768	J-767	23.79	200	110	0.00	0.00	0.0
P-257	Glencoe	J-769	J-768	25.30	200	110	0.00	0.00	0.0
P-258	Glencoe	J-770	J-769	12.16	200	110	0.00	0.00	0.0
P-259(1)	Glencoe	J-771	J-778	30.83	200	110	0.37	0.01	0.0
P-259(2)	Glencoe	J-778	J-770	11.83	200	110	0.37	0.01	0.0
P-260	Glencoe	J-771	J-0264	6.10	200	110	1.46	0.05	0.0
P-261	Glencoe	J-772	J-771	21.73	200	110	1.83	0.06	0.0
P-262	Glencoe	J-773	J-772	53.57	200	110	1.83	0.06	0.0
P-263(1)	Glencoe	J-775	J-777	32.15	200	110	2.31	0.07	0.0
P-263(2)	Glencoe	J-777	J-773	5.67	200	110	2.31	0.07	0.0
P-265	Glencoe	WVG029	J-775	71.28	200	110	2.31	0.07	0.0
P-266	Glencoe	J-773	WVG027	18.50	200	110	0.47	0.02	0.0
P-268	Glencoe	J-770	WVG001	31.17	150	100	0.37	0.02	0.0
P-270(1)(1)	Glencoe	J-779	J-801	24.25	200	110	3.90	0.12	0.0
P-270(1)(2)	Glencoe	J-801	J-780	5.97	200	110	3.90	0.12	0.0
P-270(2)	Glencoe	J-780	J-0126	2.45	200	110	3.90	0.12	0.0
P-271	Glencoe	J-782	J-781	15.01	200	110	3.90	0.12	0.0
P-272	Glencoe	J-781	J-779	27.58	200	110	3.90	0.12	0.0
P-273(1)(1)	Glencoe	J-785	J-807	42.61	200	110	8.63	0.27	0.0
P-273(1)(2)	Glencoe	J-807	J-806	13.65	200	110	7.52	0.24	0.0
P-273(2)	Glencoe	J-806	J-784	24.08	200	110	7.52	0.24	0.0
P-274	Glencoe	J-784	J-783	60.15	200	110	7.52	0.24	0.0
P-275(1)(1)	Glencoe	J-783	J-804	24.03	200	110	7.52	0.24	0.0
P-275(1)(2)	Glencoe	J-804	J-803	0.79	200	110	3.90	0.12	0.0
P-275(2)	Glencoe	J-803	J-782	7.79	200	110	3.90	0.12	0.0
P-276	Glencoe	J-786	J-785	70.18	200	110	8.63	0.27	0.1
P-277(1)(1)	Glencoe	J-787	J-813	5.52	200	110	6.51	0.21	0.0
P-277(1)(2)(1)	Glencoe	J-813	J-816	4.54	200	110	14.29	0.45	0.0
P-277(1)(2)(2)	Glencoe	J-816	J-812	0.65	200	110	8.63	0.27	0.0
P-277(2)	Glencoe	J-812	J-786	39.29	200	110	8.63	0.27	0.0
P-278	Glencoe	J-791	J-790	37.40	200	110	13.38	0.43	0.1
P-279(1)	Glencoe	J-790	J-818	26.33	200	110	13.38	0.43	0.0
P-279(2)(1)	Glencoe	J-818	J-819	12.63	200	110	13.38	0.43	0.0
P-279(2)(2)	Glencoe	J-819	J-789	31.06	200	110	6.51	0.21	0.0
P-280	Glencoe	J-789	J-788	52.74	200	110	6.51	0.21	0.0
P-281	Glencoe	J-788	J-787	40.02	200	110	6.51	0.21	0.0
P-282	Glencoe	J-792	J-791	35.04	200	110	13.38	0.43	0.1
P-283(1)	Glencoe	J-795	J-826	36.70	200	110	10.18	0.32	0.0
P-283(2)	Glencoe	J-826	J-794	38.31	200	110	10.18	0.32	0.0
P-284	Glencoe	J-794	J-793	70.18	200	110	10.18	0.32	0.1
P-285(1)	Glencoe	J-793	J-821	19.05	200	110	10.18	0.32	0.0
P-285(2)	Glencoe	J-821	J-792	1.09	200	110	13.38	0.43	0.0
P-286(1)	Glencoe	J-799	J-827	5.70	200	110	10.18	0.32	0.0
P-286(2)	Glencoe	J-827	J-798	15.33	200	110	10.18	0.32	0.0
P-287	Glencoe	J-798	J-797	45.01	200	110	10.18	0.32	0.0
P-288	Glencoe	J-797	J-796	55.00	200	110	10.18	0.32	0.1
P-289	Glencoe	J-796	J-795	14.97	200	110	10.18	0.32	0.0
P-290	Glencoe	J-800	G_H-2	1.49	150	100	0.00	0.00	0.0
P-291	Glencoe	J-778	G_H-3	1.50	150	100	0.00	0.00	0.0
P-292	Glencoe	J-777	G_H-4	0.54	150	100	0.00	0.00	0.0
P-294	Glencoe	J-801	G_H-5	1.96	150	100	0.00	0.00	0.0
P-295	Glencoe	J-803	G_H-6	1.67	150	100	0.00	0.00	0.0
P-296	Glencoe	J-804	J-805	17.92	150	100	3.62	0.20	0.0
P-297	Glencoe	J-805	WVG097	5.39	150	100	3.62	0.20	0.0
P-298	Glencoe	J-806	G_H-7	2.83	150	100	0.00	0.00	0.0
P-301	Glencoe	J-807	J-810	4.01	150	100	1.11	0.06	0.0
P-302	Glencoe	J-810	J-811	3.62	150	100	1.11	0.06	0.0
P-303	Glencoe	J-812	G_H-8	1.47	150	100	0.00	0.00	0.0
P-304	Glencoe	J-813	J-814	4.27	200	110	-7.79	0.25	0.0
P-305	Glencoe	J-814	J-815	3.22	200	110	-7.79	0.25	0.0
P-306	Glencoe	J-816	J-817	16.89	200	110	5.67	0.18	0.0
P-307	Glencoe	J-817	J-0011	2.48	200	110	5.67	0.18	0.0
P-308	Glencoe	J-818	G_H-9	1.82	150	100	0.00	0.00	0.0
P-309	Glencoe	J-819	J-820	8.75	200	110	6.87	0.22	0.0
P-310	Glencoe	J-820	WVG120	3.89	200	110	6.87	0.22	0.0
P-311	Glencoe	J-821	J-822	7.32	150	100	-7.77	0.44	0.0
P-312	Glencoe	J-822	J-823	3.21	150	100	-7.77	0.44	0.0
P-313	Glencoe	J-823	J-0262	0.92	150	100	-7.77	0.44	0.0
P-314	Glencoe	J-821	J-824	9.93	150	100	4.58	0.26	0.0
P-315	Glencoe	J-824	J-825	2.86	150	100	4.58	0.26	0.0
P-316	Glencoe	J-826	G_H-10	2.85	150	100	0.00	0.00	0.0
P-317	Glencoe	J-827	G_H-11	1.80	150	100	0.00	0.00	0.0
P-318	Glencoe	J-799	J-0267	3.89	150	100	-10.18	0.58	0.0
P-923	Glencoe	J-720	J-0533	70.98	25	100	0.00	0.00	0.0
P-925	Glencoe	J_Hyd-G084	J-0101	235.01	300	120	-8.94	0.13	0.0
P-927	Glencoe	J-0101	J_Hyd-G083	2.91	300	120	-11.21	0.16	0.0
P-928	Glencoe	J_Hyd-G083	Glencoe Tower	97.16	300	120	-50.41	0.71	0.2
P-929	Glencoe	J_Hyd-G083	J-0337	106.00	300	120	39.21	0.55	0.1
P-932	Glencoe	J-0180	J-690	4.46	150	100	16.81	0.95	0.1
P-936	Glencoe	J-0634	J-0635	660.21	50	130	0.00	0.00	0.0
P_Hyd-G001	Glencoe	J_Hyd-G001	G001	4.85	150	100	0.00	0.00	0.0
P_Hyd-G002	Glencoe	J_Hyd-G002	G002	2.71	150	100	0.00	0.00	0.0
P_Hyd-G003	Glencoe	J_Hyd-G003	G003	2.46	150	100	0.00	0.00	0.0
P_Hyd-G004	Glencoe	J_Hyd-G004	G004	0.85	150	100	0.00	0.00	0.0
P_Hyd-G005	Glencoe	J_Hyd-G005	G005	5.89	150	100	0.00	0.00	0.0
P_Hyd-G006	Glencoe	J_Hyd-G006	G006	5.74	150	100	0.00	0.00	0.0
P_Hyd-G008	Glencoe	J_Hyd-G008	G008	2.51	150	100	0.00	0.00	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-G009	Glencoe	J_Hyd-G009	G009	3.80	150	100	0.00	0.00	0.0
P_Hyd-G010	Glencoe	J_Hyd-G010	G010	3.17	150	100	0.00	0.00	0.0
P_Hyd-G011	Glencoe	J_Hyd-G011	G011	2.84	150	100	0.00	0.00	0.0
P_Hyd-G012	Glencoe	J_Hyd-G012	G012	1.27	150	100	0.00	0.00	0.0
P_Hyd-G013	Glencoe	J_Hyd-G013	G013	0.22	150	100	0.00	0.00	0.0
P_Hyd-G014	Glencoe	J_Hyd-G014	G014	1.48	150	100	0.00	0.00	0.0
P_Hyd-G016	Glencoe	J_Hyd-G016	G016	2.59	150	100	0.00	0.00	0.0
P_Hyd-G018	Glencoe	J_Hyd-G018	G018	1.41	150	100	0.00	0.00	0.0
P_Hyd-G019	Glencoe	J_Hyd-G019	G019	1.61	150	100	0.00	0.00	0.0
P_Hyd-G020	Glencoe	J_Hyd-G020	G020	3.56	150	100	0.00	0.00	0.0
P_Hyd-G021	Glencoe	J_Hyd-G021	G021	3.54	150	100	0.00	0.00	0.0
P_Hyd-G022	Glencoe	J_Hyd-G022	G022	2.23	150	100	0.00	0.00	0.0
P_Hyd-G023	Glencoe	J_Hyd-G023	G023	2.41	150	100	0.00	0.00	0.0
P_Hyd-G024	Glencoe	J_Hyd-G024	G024	1.78	150	100	0.00	0.00	0.0
P_Hyd-G025	Glencoe	J_Hyd-G025	G025	1.60	150	100	0.00	0.00	0.0
P_Hyd-G026	Glencoe	J_Hyd-G026	G026	5.18	150	100	0.00	0.00	0.0
P_Hyd-G027	Glencoe	J_Hyd-G027	G027	2.73	150	100	0.00	0.00	0.0
P_Hyd-G028	Glencoe	J_Hyd-G028	G028	4.76	150	100	0.00	0.00	0.0
P_Hyd-G029	Glencoe	J_Hyd-G029	G029	1.38	150	100	0.00	0.00	0.0
P_Hyd-G041	Glencoe	J_Hyd-G041	G041	1.19	150	100	0.00	0.00	0.0
P_Hyd-G042	Glencoe	J_Hyd-G042	G042	1.81	150	100	0.00	0.00	0.0
P_Hyd-G043	Glencoe	J_Hyd-G043	G043	0.88	150	100	0.00	0.00	0.0
P_Hyd-G044	Glencoe	J_Hyd-G044	G044	1.63	150	100	0.00	0.00	0.0
P_Hyd-G045	Glencoe	J_Hyd-G045	G045	3.33	150	100	0.00	0.00	0.0
P_Hyd-G046	Glencoe	J_Hyd-G046	G046	1.69	150	100	0.00	0.00	0.0
P_Hyd-G047	Glencoe	J_Hyd-G047	G047	7.03	150	100	0.00	0.00	0.0
P_Hyd-G048	Glencoe	J_Hyd-G048	G048	4.14	150	100	0.00	0.00	0.0
P_Hyd-G049	Glencoe	J_Hyd-G049	G049	0.49	150	100	0.00	0.00	0.0
P_Hyd-G050	Glencoe	J_Hyd-G050	G050	1.47	150	100	0.00	0.00	0.0
P_Hyd-G051	Glencoe	J_Hyd-G051	G051	0.78	150	100	0.00	0.00	0.0
P_Hyd-G052	Glencoe	J_Hyd-G052	G052	1.12	150	100	0.00	0.00	0.0
P_Hyd-G053	Glencoe	J_Hyd-G053	G053	1.89	150	100	0.00	0.00	0.0
P_Hyd-G054	Glencoe	WVG032	G054	2.99	150	100	0.00	0.00	0.0
P_Hyd-G055	Glencoe	WVG041	G055	0.94	150	100	0.00	0.00	0.0
P_Hyd-G056	Glencoe	J_Hyd-G056	G056	2.18	150	100	0.00	0.00	0.0
P_Hyd-G057	Glencoe	J_Hyd-G057	G057	1.91	150	100	0.00	0.00	0.0
P_Hyd-G058	Glencoe	J_Hyd-G058	G058	4.86	150	100	0.00	0.00	0.0
P_Hyd-G059	Glencoe	J_Hyd-G059	G059	2.58	150	100	0.00	0.00	0.0
P_Hyd-G060	Glencoe	J_Hyd-G060	G060	1.86	150	100	0.00	0.00	0.0
P_Hyd-G061	Glencoe	J_Hyd-G061	G061	1.77	150	100	0.00	0.00	0.0
P_Hyd-G062	Glencoe	J_Hyd-G062	G062	15.15	150	100	0.00	0.00	0.0
P_Hyd-G063	Glencoe	J_Hyd-G063	G063	5.63	150	100	0.00	0.00	0.0
P_Hyd-G064	Glencoe	J_Hyd-G064	G064	4.15	150	100	0.00	0.00	0.0
P_Hyd-G065	Glencoe	J_Hyd-G065	G065	2.06	150	100	0.00	0.00	0.0
P_Hyd-G066	Glencoe	J_Hyd-G066	G066	2.76	150	100	0.00	0.00	0.0
P_Hyd-G067	Glencoe	J_Hyd-G067	G067	3.98	150	100	0.00	0.00	0.0
P_Hyd-G068	Glencoe	J_Hyd-G068	G068	1.46	150	100	0.00	0.00	0.0
P_Hyd-G069	Glencoe	J_Hyd-G069	G069	1.27	150	100	0.00	0.00	0.0
P_Hyd-G070	Glencoe	J_Hyd-G070	G070	6.10	150	100	0.00	0.00	0.0
P_Hyd-G071	Glencoe	J_Hyd-G071	G071	0.97	150	100	0.00	0.00	0.0
P_Hyd-G073	Glencoe	J_Hyd-G073	G073	1.56	150	100	0.00	0.00	0.0
P_Hyd-G074	Glencoe	J_Hyd-G074	G074	8.97	150	100	0.00	0.00	0.0
P_Hyd-G075	Glencoe	J_Hyd-G075	G075	11.48	150	100	0.00	0.00	0.0
P_Hyd-G076	Glencoe	J_Hyd-G076	G076	2.69	150	100	0.00	0.00	0.0
P_Hyd-G077	Glencoe	J_Hyd-G077	G077	2.18	150	100	0.00	0.00	0.0
P_Hyd-G078	Glencoe	J_Hyd-G078	G078	3.61	150	100	0.00	0.00	0.0
P_Hyd-G079	Glencoe	J_Hyd-G079	G079	13.95	150	100	0.00	0.00	0.0
P_Hyd-G080	Glencoe	J_Hyd-G080	G080	1.13	150	100	0.00	0.00	0.0
P_Hyd-G081	Glencoe	J_Hyd-G081	G081	8.12	150	100	0.00	0.00	0.0
P_Hyd-G082	Glencoe	J_Hyd-G082	G082	7.32	150	100	0.00	0.00	0.0
P_Hyd-G083	Glencoe	J_Hyd-G083	G083	3.97	150	100	0.00	0.00	0.0
P_Hyd-G084	Glencoe	J_Hyd-G084	G084	94.76	150	100	0.00	0.00	0.0
P_Hyd-G085	Glencoe	J_Hyd-G085	G085	0.10	150	100	0.00	0.00	0.0
P_Hyd-G086	Glencoe	J_Hyd-G086	G086	0.02	150	100	0.00	0.00	0.0
P_Hyd-G087	Glencoe	J_Hyd-G087	G087	5.80	150	100	0.00	0.00	0.0
P_Hyd-G088	Glencoe	J_Hyd-G088	G088	2.19	150	100	0.00	0.00	0.0
P_Hyd-G089	Glencoe	J_Hyd-G089	G089	2.09	150	100	0.00	0.00	0.0
P_Hyd-G090	Glencoe	J_Hyd-G090	G090	4.27	150	100	0.00	0.00	0.0
P_Hyd-G091	Glencoe	J_Hyd-G091	G091	4.00	150	100	0.00	0.00	0.0
P_Hyd-G092	Glencoe	J_Hyd-G092	G092	3.58	150	100	0.00	0.00	0.0
P_Hyd-G093	Glencoe	J_Hyd-G093	G093	3.31	150	100	0.00	0.00	0.0
P_Hyd-G094	Glencoe	J_Hyd-G094	G094	3.50	150	100	0.00	0.00	0.0
P_Hyd-G095	Glencoe	J_Hyd-G095	G095	1.07	150	100	0.00	0.00	0.0
P_Hyd-G096	Glencoe	J_Hyd-G096	G096	1.84	150	100	0.00	0.00	0.0
P_Hyd-G097	Glencoe	J_Hyd-G097	G097	1.24	150	100	0.00	0.00	0.0
P_Hyd-G098	Glencoe	J_Hyd-G098	G098	2.53	150	100	0.00	0.00	0.0
P_Hyd-H_T-718	Glencoe	J_Hyd-H_T-718	H_T-718	2.10	150	100	0.00	0.00	0.0
WM1021C_02(2)(	Glencoe	J-752	WVR021	155.54	300	120	26.55	0.38	0.1
WM1027C_01	Glencoe	J_Hyd-G014	J-0373	15.24	200	110	-3.89	0.12	0.0
WM1027C_02	Glencoe	J_Hyd-G014	J-0586	134.80	200	110	3.89	0.12	0.0
WM1075C_01	Glencoe	J-0646	J_Hyd-R029W	3402.10	350	120	37.87	0.39	2.0
WM1099C	Glencoe	WVR021	J-0494	49.97	300	120	26.55	0.38	0.0
WM2036_02	Glencoe	J-0275	J-0168	7.98	200	110	11.17	0.36	0.0
WM2036_03	Glencoe	J-0169	J-0618	480.76	200	110	11.17	0.36	0.5
WM2036_10(1)	Glencoe	J-0544	J-690	136.25	200	110	-5.64	0.18	0.0
WM2036_10(2)	Glencoe	J-690	J-0275	18.91	200	110	11.17	0.36	0.0
WM2044C(1)	Glencoe	J_Hyd-G006	J-724	5.77	200	110	2.35	0.07	0.0
WM2044C(2)(1)	Glencoe	J-724	J-727	12.57	200	110	2.35	0.07	0.0
WM2044C(2)(2)	Glencoe	J-727	WV-348	5.17	200	110	1.65	0.05	0.0
WM4000	Glencoe	J-0384	J-0546	90.30	150	100	0.90	0.05	0.0
WM4001	Glencoe	J-0213	J_Hyd-G094	5.27	150	100	0.00	0.00	0.0
WM4002	Glencoe	J-0213	J-0584	133.75	150	100	0.00	0.00	0.0
WM4003_01	Glencoe	J_Hyd-G003	WVG087	133.79	150	100	0.00	0.00	0.0
WM4003_02	Glencoe	WVG087	J-0373	19.18	200	110	0.00	0.00	0.0
WM4005	Glencoe	J-0451	J-0539	79.38	50	100	0.45	0.23	0.2
WM4006_01	Glencoe	WVG099	J_Hyd-G023	7.66	150	100	0.98	0.06	0.0
WM4006_02	Glencoe	J_Hyd-G023	J_Hyd-G093	126.19	100	100	0.98	0.12	0.1
WM4006_03	Glencoe	J_Hyd-G093	WVG090	116.28	100	100	0.98	0.12	0.1
WM4006_04	Glencoe	WVG090	J-0032	17.02	200	110	0.98	0.03	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4007_01(1)	Glencoe	WVG100	J-735	1.24	150	100	3.96	0.22	0.0
WM4007_01(2)	Glencoe	J-735	J-0409	234.57	150	100	3.96	0.22	0.2
WM4007_02(1)	Glencoe	J-734	WVG100	11.48	150	100	3.96	0.22	0.0
WM4007_02(2)	Glencoe	J-734	WVG099	4.20	150	100	0.98	0.06	0.0
WM4008_01	Glencoe	J-0324	J-0106	10.40	150	100	-1.76	0.10	0.0
WM4008_02	Glencoe	J-0256	J-0435	102.03	150	100	1.21	0.07	0.0
WM4009_01	Glencoe	J-0255	J-0256	6.83	150	100	2.11	0.12	0.0
WM4009_02	Glencoe	J-0255	J-0450	53.25	150	100	-1.76	0.10	0.0
WM4009_03	Glencoe	J-0449	J-0450	25.45	150	100	1.76	0.10	0.0
WM4009_04	Glencoe	WVG018	J-0449	35.04	150	100	1.76	0.10	0.0
WM4009_05	Glencoe	WVG018	J-0070	2.19	150	100	-1.76	0.10	0.0
WM4009_06	Glencoe	J-0070	J-0324	11.16	150	100	-1.76	0.10	0.0
WM4010_01	Glencoe	J-0106	WVG020	3.03	150	100	-1.75	0.10	0.0
WM4010_02	Glencoe	J-0410	WVG020	110.85	150	100	1.75	0.10	0.0
WM4011_01	Glencoe	J-0535	WVG091	76.44	25	100	0.00	0.00	0.0
WM4011_02	Glencoe	WVG091	J-0128	3.53	25	100	0.00	0.00	0.0
WM4012_01	Glencoe	J-0468	J-0469	33.17	200	110	6.76	0.22	0.0
WM4012_02	Glencoe	J-0469	J-0097	46.60	200	110	6.76	0.22	0.0
WM4012_03	Glencoe	J-0097	WVG093	3.00	200	110	6.76	0.22	0.0
WM4012_04	Glencoe	WVG093	J-0003	1.12	200	110	0.00	0.00	0.0
WM4012_05	Glencoe	J-0303	WVG093	15.47	200	110	-6.76	0.22	0.0
WM4013_01	Glencoe	J-0205	J_Hyd-G065	9.39	200	110	6.76	0.22	0.0
WM4013_02	Glencoe	J_Hyd-G065	J_Hyd-G066	127.29	200	110	6.76	0.22	0.1
WM4013_03	Glencoe	J_Hyd-G066	J-0468	39.92	200	110	6.76	0.22	0.0
WM4014_01	Glencoe	J-0205	WVG101	9.82	200	110	-5.75	0.18	0.0
WM4014_02	Glencoe	WVG107	J_Hyd-G064	6.15	200	110	5.75	0.18	0.0
WM4014_03	Glencoe	J_Hyd-G064	WVG101	119.04	200	110	5.75	0.18	0.0
WM4015_01	Glencoe	J-0048	J-0049	1.67	200	110	37.52	1.19	0.0
WM4015_02	Glencoe	J-0048	WVG193	5.79	200	110	0.00	0.00	0.0
WM4015_03	Glencoe	WVG193	J-0075	2.30	200	110	0.00	0.00	0.0
WM4015_04	Glencoe	J-0091	WVG113	2.54	200	110	0.00	0.00	0.0
WM4015_05	Glencoe	WVG113	WVG106	98.98	200	110	0.00	0.00	0.0
WM4015_06	Glencoe	J-0063	WVG106	16.77	200	110	0.00	0.00	0.0
WM4016_01	Glencoe	WVG003	J-0175	4.35	150	100	-0.63	0.04	0.0
WM4016_02	Glencoe	WVG002	J-0333	104.71	150	100	-1.37	0.08	0.0
WM4016_03	Glencoe	J-0481	J_Hyd-G016	38.74	150	100	-0.63	0.04	0.0
WM4016_04	Glencoe	J_Hyd-G016	WVG003	64.80	150	100	-0.63	0.04	0.0
WM4016_05	Glencoe	J-0175	WVG002	13.38	150	100	-1.37	0.08	0.0
WM4018_01	Glencoe	J-0333	J-0334	11.46	150	100	-1.96	0.11	0.0
WM4018_02	Glencoe	J-0334	J-0497	46.44	150	100	-1.96	0.11	0.0
WM4018_03	Glencoe	J-0144	J-0497	65.09	150	100	1.96	0.11	0.0
WM4019_01	Glencoe	J-0144	WVG010	3.77	200	110	-5.61	0.18	0.0
WM4019_02	Glencoe	WVG010	J-713	110.69	200	110	-5.61	0.18	0.0
WM4020_01	Glencoe	J_Hyd-G059	J-0107	113.86	150	100	3.48	0.20	0.1
WM4020_02	Glencoe	J-0107	J-0014	3.03	150	100	2.40	0.14	0.0
WM4020_03	Glencoe	J-0014	WVG096	1.04	150	100	2.40	0.14	0.0
WM4020_04	Glencoe	WVG096	J-0316	15.27	200	110	2.40	0.08	0.0
WM4021_01	Glencoe	J-0187	WVG105	5.72	150	100	3.48	0.20	0.0
WM4021_02	Glencoe	WVG105	J_Hyd-G060	4.08	150	100	3.48	0.20	0.0
WM4021_03	Glencoe	J_Hyd-G060	J_Hyd-G059	130.41	150	100	3.48	0.20	0.1
WM4022_01	Glencoe	J-0089	WVG109	3.68	200	110	5.70	0.18	0.0
WM4022_02	Glencoe	WVG109	J_Hyd-G061	5.42	200	110	5.70	0.18	0.0
WM4022_03	Glencoe	J_Hyd-G061	J-0187	128.70	200	110	5.70	0.18	0.0
WM4023_01	Glencoe	J-0222	WVG071	6.23	300	120	1.42	0.02	0.0
WM4023_02	Glencoe	WVG071	J-0134	6.29	300	120	1.42	0.02	0.0
WM4023_03	Glencoe	J-0134	J-0135	3.59	300	120	1.42	0.02	0.0
WM4023_04	Glencoe	J-0135	WVG085	103.05	300	120	0.68	0.01	0.0
WM4023_05	Glencoe	WVG085	J_Hyd-G085	4.68	300	120	0.68	0.01	0.0
WM4024_01	Glencoe	WVG069	J_Hyd-G080	7.03	250	120	-6.77	0.14	0.0
WM4024_02	Glencoe	J_Hyd-G080	J-0124	174.48	250	120	-6.78	0.14	0.0
WM4024_03	Glencoe	WVG069	J-0222	14.30	250	120	6.77	0.14	0.0
WM4025_01	Glencoe	J-0124	WVG058	3.66	250	120	-7.93	0.16	0.0
WM4025_02	Glencoe	WVG058	J_Hyd-G076	0.90	250	120	-7.93	0.16	0.0
WM4025_03	Glencoe	J_Hyd-G076	J-0284	104.25	250	120	-7.93	0.16	0.0
WM4026_01	Glencoe	J-0284	WVG047	10.69	250	120	-13.64	0.28	0.0
WM4026_02	Glencoe	J-0285	J-0179	9.19	200	110	3.56	0.11	0.0
WM4026_03	Glencoe	WVG047	WVG038	100.52	250	120	-13.64	0.28	0.1
WM4026_04	Glencoe	WVG038	J-715	3.84	250	120	-13.64	0.28	0.0
WM4027_01	Glencoe	J-0111	WVG130	4.08	250	120	-18.10	0.37	0.0
WM4027_02	Glencoe	WVG130	J-0421	174.59	250	120	-18.10	0.37	0.1
WM4027_03(1)	Glencoe	J-0421	J-709	19.33	250	120	-19.69	0.40	0.0
WM4027_03(2)	Glencoe	J-709	J-0104	2.64	250	120	-21.96	0.45	0.0
WM4028_01	Glencoe	J-0104	J-0094	2.96	250	120	-21.96	0.45	0.0
WM4028_02	Glencoe	J-0094	J_Hyd-G067	2.65	250	120	-21.96	0.45	0.0
WM4028_03	Glencoe	J_Hyd-G067	J-0227	159.12	250	120	-21.96	0.45	0.2
WM4029_01	Glencoe	J_Hyd-G079	J_Hyd-G081	102.59	250	120	29.75	0.61	0.2
WM4029_02	Glencoe	J_Hyd-G081	WVG192	2.89	250	120	29.75	0.61	0.0
WM4029_03	Glencoe	WVG192	J-0227	8.63	250	120	29.75	0.61	0.0
WM4030	Glencoe	J-0123	J_Hyd-G079	126.31	250	120	29.75	0.61	0.2
WM4032_01	Glencoe	WVR022	J-0006	4.47	250	120	-37.52	0.76	0.0
WM4032_02	Glencoe	J-0006	J-0007	0.86	200	110	-51.83	1.65	0.0
WM4032_03	Glencoe	J-0007	J-0017	1.08	200	110	-51.83	1.65	0.0
WM4032_04	Glencoe	WVR022	J_Hyd-G078	6.97	250	120	37.52	0.76	0.0
WM4032_05	Glencoe	J_Hyd-G078	WVG140	274.02	250	120	37.52	0.76	0.8
WM4032_06	Glencoe	WVG140	J-0048	4.92	250	120	37.52	0.76	0.0
WM4032_07	Glencoe	J-0049	J-0123	9.92	250	120	37.52	0.76	0.0
WM4035_01(1)	Glencoe	J-0344	J-698	1.22	150	100	0.00	0.00	0.0
WM4035_01(2)	Glencoe	J-698	WVG061	10.93	150	100	-1.01	0.06	0.0
WM4035_02	Glencoe	WVG061	J_Hyd-G027	3.18	200	110	-1.01	0.03	0.0
WM4035_03	Glencoe	J-0344	J_Hyd-G028	161.67	150	100	0.00	0.00	0.0
WM4035_04	Glencoe	J_Hyd-G028	J-0437	24.28	150	100	0.00	0.00	0.0
WM4036	Glencoe	J_Hyd-G027	J-695	109.13	200	110	-1.01	0.03	0.0
WM4037_01	Glencoe	J-695	WVG049	6.43	200	110	-1.33	0.04	0.0
WM4037_02	Glencoe	WVG049	J_Hyd-G026	90.02	200	110	-1.33	0.04	0.0
WM4037_03	Glencoe	J_Hyd-G026	J-0201	18.69	200	110	-1.33	0.04	0.0
WM4038_01	Glencoe	J_Hyd-G029	J_Hyd-G068	118.88	100	100	-1.15	0.15	0.1
WM4038_02	Glencoe	J-0354	J_Hyd-G029	74.71	100	100	-1.15	0.15	0.0
WM4038_03	Glencoe	J_Hyd-G068	J-0321	10.21	100	100	-1.15	0.15	0.0
WM4040_01	Glencoe	J-0390	WVG074	17.67	200	110	0.23	0.01	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4040_02	Glencoe	WVG074	J_Hyd-G020	31.15	150	100	-1.59	0.09	0.0
WM4040_03	Glencoe	J_Hyd-G020	J-0044	136.07	150	100	-1.59	0.09	0.0
WM4040_04	Glencoe	J-0044	J_Hyd-G021	13.53	150	100	-1.00	0.06	0.0
WM4041_01	Glencoe	J-0036	WVG051	15.67	150	100	1.04	0.06	0.0
WM4041_02	Glencoe	J_Hyd-G021	WVG064	10.79	150	100	-1.00	0.06	0.0
WM4041_03	Glencoe	WVG064	WVG051	85.34	150	100	-1.00	0.06	0.0
WM4042_01	Glencoe	J-0036	WVG052	1.53	150	100	-2.30	0.13	0.0
WM4042_02	Glencoe	J-0564	WVG052	112.33	200	110	2.30	0.07	0.0
WM4044_01	Glencoe	J-0288	WVG149	8.47	150	100	1.24	0.07	0.0
WM4044_02	Glencoe	WVG149	J-0447	25.14	150	100	1.24	0.07	0.0
WM4044_03	Glencoe	J-0447	J_Hyd-G022	121.76	150	100	0.00	0.00	0.0
WM4044_04	Glencoe	J_Hyd-G022	WVG148	39.91	150	100	0.00	0.00	0.0
WM4044_05	Glencoe	WVG148	J-0279	8.16	150	100	0.00	0.00	0.0
WM4045	Glencoe	J_Hyd-G062	J-0544	160.30	150	100	0.00	0.00	0.0
WM4048	Glencoe	J-0561	J-0602	197.94	150	100	0.00	0.00	0.0
WM4049_01	Glencoe	J-0198	WVG053	17.47	200	110	0.00	0.00	0.0
WM4049_02	Glencoe	J-0561	WVG053	105.28	200	110	0.00	0.00	0.0
WM4050	Glencoe	J-0452	J-0071	136.52	150	100	1.40	0.08	0.0
WM4051_01(1)	Glencoe	J-0381	J-703	11.62	150	100	-0.32	0.02	0.0
WM4051_01(2)	Glencoe	J-703	J_Hyd-G008	5.45	150	100	1.82	0.10	0.0
WM4051_02(1)	Glencoe	J_Hyd-G008	J-705	24.45	150	100	1.82	0.10	0.0
WM4051_02(2)	Glencoe	J-705	J_Hyd-G009	99.83	150	100	-0.20	0.01	0.0
WM4051_03	Glencoe	J_Hyd-G009	J-0339	35.00	150	100	-0.20	0.01	0.0
WM4051_04	Glencoe	J-0339	J-0340	11.79	150	100	-0.20	0.01	0.0
WM4051_05	Glencoe	J-0340	J-0402	19.06	200	110	-0.20	0.01	0.0
WM4052_01	Glencoe	J-0389	WVG055	17.50	150	100	-0.32	0.02	0.0
WM4052_02	Glencoe	WVG055	J-0381	97.74	150	100	-0.32	0.02	0.0
WM4053_01	Glencoe	J-722	J-0543	84.11	150	100	0.00	0.00	0.0
WM4053_02	Glencoe	J-0632	J-0586	611.63	150	100	0.00	0.00	0.0
WM4053_03	Glencoe	J-0045	J_Hyd-G077	136.44	150	100	2.14	0.12	0.0
WM4053_04	Glencoe	J_Hyd-G077	J-703	104.84	150	100	2.14	0.12	0.0
WM4053_05	Glencoe	J-0165	J-727	19.07	200	110	-0.71	0.02	0.0
WM4053_06	Glencoe	J_Hyd-G085	J-0581	131.21	150	100	0.68	0.04	0.0
WM4054_01	Glencoe	J_Hyd-G095	J-0098	44.85	150	100	0.00	0.00	0.0
WM4054_02	Glencoe	J-0098	WVG153	2.73	150	100	0.00	0.00	0.0
WM4054_03	Glencoe	WVG153	J_Hyd-G098	40.38	150	100	0.00	0.00	0.0
WM4054_04	Glencoe	J_Hyd-G098	J-724	91.69	150	100	0.00	0.00	0.0
WM4055_01	Glencoe	J-0165	J-0166	4.18	200	110	0.71	0.02	0.0
WM4055_02	Glencoe	J-0166	J_Hyd-G069	17.94	200	110	0.71	0.02	0.0
WM4055_03	Glencoe	J_Hyd-G069	J-0364	83.89	200	110	0.71	0.02	0.0
WM4055_04	Glencoe	J-0364	WVG164	14.54	200	110	-0.60	0.02	0.0
WM4056_01	Glencoe	J-0306	J-0291	9.23	200	110	1.66	0.05	0.0
WM4056_02	Glencoe	J-0291	WVG056	8.53	200	110	1.66	0.05	0.0
WM4056_03	Glencoe	WVG056	J_Hyd-G071	6.29	200	110	1.66	0.05	0.0
WM4056_04	Glencoe	J_Hyd-G071	J_Hyd-G070	141.64	200	110	1.66	0.05	0.0
WM4056_05(1)	Glencoe	J_Hyd-G070	J-700	14.39	200	110	1.66	0.05	0.0
WM4056_05(2)	Glencoe	J-700	WVG164	2.83	200	110	0.60	0.02	0.0
WM4059_01	Glencoe	J-0071	J-0072	2.21	150	100	1.40	0.08	0.0
WM4059_02	Glencoe	J-0072	WVG086	4.07	150	100	1.40	0.08	0.0
WM4059_03	Glencoe	WVG086	J-0004	0.64	150	100	1.40	0.08	0.0
WM4059_04	Glencoe	J-0004	WVG159	85.81	150	100	1.40	0.08	0.0
WM4059_05	Glencoe	WVG159	J-0054	1.75	150	100	1.40	0.08	0.0
WM4060C_01	Glencoe	J-0264	WVG070	100.69	200	110	1.46	0.05	0.0
WM4060C_02	Glencoe	WVG070	J-0222	5.50	100	100	1.46	0.19	0.0
WM4061C_01	Glencoe	J-0222	WVG175	13.49	200	110	5.17	0.16	0.0
WM4061C_02	Glencoe	WVG175	J-0566	109.30	200	110	5.17	0.16	0.0
WM4062C(1)	Glencoe	J-0390	J-0368	107.52	200	110	-5.17	0.16	0.0
WM4062C(2)	Glencoe	J-0368	J-0566	1.97	200	110	-5.17	0.16	0.0
WM4063C(1)	Glencoe	J-0390	J-692	10.67	200	110	4.94	0.16	0.0
WM4063C(2)	Glencoe	J-692	J-0579	118.60	200	110	3.95	0.13	0.0
WM4064C	Glencoe	J-0579	J-0402	125.69	200	110	3.95	0.13	0.0
WM4066_01	Glencoe	J-0481	J_Hyd-G097	73.16	150	100	-0.07	0.00	0.0
WM4066_02	Glencoe	J_Hyd-G097	WVG001	67.96	150	100	-0.07	0.00	0.0
WM4067_01	Glencoe	J-0546	J_Hyd-G086	4.52	150	100	-0.76	0.04	0.0
WM4067_02	Glencoe	J_Hyd-G086	J_Hyd-G056	136.36	150	100	-0.76	0.04	0.0
WM4067_03	Glencoe	J-0435	J_Hyd-G056	152.58	150	100	0.76	0.04	0.0
WM4068_01	Glencoe	J-0272	J-0273	7.81	200	110	0.45	0.01	0.0
WM4068_02	Glencoe	J-0273	J-0175	10.81	200	110	0.45	0.01	0.0
WM4068_03	Glencoe	J-0435	WVG015	24.20	150	100	0.45	0.03	0.0
WM4068_04	Glencoe	WVG015	J-0272	79.45	150	100	0.45	0.03	0.0
WM4069_02	Glencoe	WVG027	J-0076	2.31	200	110	0.47	0.02	0.0
WM4069_03	Glencoe	J-0076	J-0271	7.68	200	110	0.47	0.02	0.0
WM4069_04	Glencoe	J-0271	J_Hyd-G057	136.22	200	110	0.47	0.02	0.0
WM4069_05	Glencoe	J_Hyd-G057	WVG004	8.11	200	110	0.47	0.02	0.0
WM4069_06	Glencoe	WVG004	J-0175	4.98	200	110	0.47	0.02	0.0
WM4070_01	Glencoe	J-700	WVG152	8.78	150	100	1.06	0.06	0.0
WM4070_02	Glencoe	WVG152	J_Hyd-G096	110.01	150	100	1.06	0.06	0.0
WM4070_03	Glencoe	J_Hyd-G096	J-0427	29.19	150	100	1.06	0.06	0.0
WM4070_04	Glencoe	J-0427	WVG165	22.83	150	100	-2.02	0.11	0.0
WM4071_01	Glencoe	J-0384	J-0524	163.12	150	100	-0.90	0.05	0.0
WM4071_02	Glencoe	J-0524	J-0503	64.16	150	100	-0.90	0.05	0.0
WM4071_03	Glencoe	J-0503	J_Hyd-G073	51.20	150	100	-0.90	0.05	0.0
WM4071_04	Glencoe	J_Hyd-G073	J-0256	17.07	150	100	-0.90	0.05	0.0
WM4072_01	Glencoe	J-0255	J-0342	102.78	150	100	-0.35	0.02	0.0
WM4072_02	Glencoe	J-0342	J-0333	12.07	150	100	-0.35	0.02	0.0
WM4074_01	Glencoe	J-0124	WVG057	3.42	250	120	-0.58	0.01	0.0
WM4074_02	Glencoe	J-0084	WVG172	2.45	150	100	-1.39	0.08	0.0
WM4074_03	Glencoe	WVG172	J-0025	49.15	150	100	-1.39	0.08	0.0
WM4074_04	Glencoe	J-0025	WVG057	52.74	150	100	0.58	0.03	0.0
WM4075_01	Glencoe	J-0332	J-698	11.44	200	110	1.73	0.06	0.0
WM4075_02	Glencoe	J-0124	WVG059	4.81	150	100	1.73	0.10	0.0
WM4075_03	Glencoe	WVG059	J-0060	1.83	150	100	1.73	0.10	0.0
WM4075_04	Glencoe	J-0060	WVG170	3.49	150	100	1.73	0.10	0.0
WM4075_05	Glencoe	WVG170	J-0332	102.63	150	100	1.73	0.10	0.0
WM4075_06	Glencoe	J-0333	J_Hyd-G074	15.51	150	100	0.24	0.01	0.0
WM4075_07	Glencoe	J_Hyd-G074	J-0507	82.01	150	100	0.24	0.01	0.0
WM4075_08(1)	Glencoe	J-0507	J-707	6.31	150	100	0.24	0.01	0.0
WM4075_08(2)	Glencoe	J-707	WVG028	45.56	150	100	0.91	0.05	0.0
WM4075_09	Glencoe	WVG028	J_Hyd-G075	3.61	150	100	0.91	0.05	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4075_10	Glencoe	J_Hyd-G075	J-0252	19.39	150	100	0.91	0.05	0.0
WM4076_01	Glencoe	WVG169	J-698	4.82	200	110	-2.74	0.09	0.0
WM4076_02	Glencoe	WVG169	J-0044	105.78	150	100	2.74	0.16	0.0
WM4077	Glencoe	J-0044	J-0045	1.64	150	100	2.14	0.12	0.0
WM4079_01	Glencoe	J-0178	WVG035	4.43	150	100	-1.95	0.11	0.0
WM4079_02	Glencoe	WVG035	J-718	110.51	150	100	-1.95	0.11	0.0
WM4080_01	Glencoe	J-0099	WVG019	2.84	200	110	1.62	0.05	0.0
WM4080_02	Glencoe	J-0580	J_Hyd-G051	129.47	200	110	0.00	0.00	0.0
WM4081_01	Glencoe	WVG019	J_Hyd-G050	103.90	200	110	1.62	0.05	0.0
WM4081_02(1)	Glencoe	J_Hyd-G050	J-720	84.40	200	110	1.62	0.05	0.0
WM4081_02(2)	Glencoe	J-720	J-0580	19.71	200	110	0.00	0.00	0.0
WM4082_01	Glencoe	J-0099	J-0106	11.28	200	110	-1.62	0.05	0.0
WM4082_02	Glencoe	J-0106	J_Hyd-G049	24.29	200	110	-1.63	0.05	0.0
WM4082_03	Glencoe	J_Hyd-G049	J-0144	83.33	200	110	-1.63	0.05	0.0
WM4083_01	Glencoe	J-0144	WVG011	10.85	200	110	0.67	0.02	0.0
WM4083_02	Glencoe	WVG011	J_Hyd-G048	5.58	200	110	0.67	0.02	0.0
WM4083_03	Glencoe	J_Hyd-G048	WVG036	85.97	200	110	0.67	0.02	0.0
WM4083_04	Glencoe	WVG036	J-0178	5.16	200	110	0.67	0.02	0.0
WM4084_01	Glencoe	J-0178	J_Hyd-G047	44.27	200	110	1.95	0.06	0.0
WM4084_02	Glencoe	J_Hyd-G047	WVG030	33.12	200	110	1.95	0.06	0.0
WM4085_01	Glencoe	WVG030	WVG046	90.09	200	110	1.95	0.06	0.0
WM4085_02	Glencoe	WVG046	J_Hyd-G046	6.34	200	110	1.95	0.06	0.0
WM4085_03	Glencoe	J_Hyd-G046	J-0179	12.04	200	110	1.95	0.06	0.0
WM4085_04	Glencoe	J-0284	J-0285	8.41	200	110	3.56	0.11	0.0
WM4086_01	Glencoe	J-0179	WVG200	4.45	200	110	5.51	0.18	0.0
WM4086_02	Glencoe	WVG200	WVG048	97.18	200	110	5.51	0.18	0.0
WM4086_03	Glencoe	WVG048	J_Hyd-G045	1.59	200	110	5.51	0.18	0.0
WM4086_04(1)	Glencoe	J_Hyd-G045	J-695	8.56	200	110	5.51	0.18	0.0
WM4086_04(2)	Glencoe	J-695	WVG050	7.32	200	110	5.83	0.19	0.0
WM4087	Glencoe	WVG050	J-0036	103.33	200	110	5.83	0.19	0.0
WM4088_01	Glencoe	J-0036	J_Hyd-G044	15.50	200	110	7.10	0.23	0.0
WM4088_02	Glencoe	J_Hyd-G044	J_Hyd-G043	102.76	200	110	7.10	0.23	0.1
WM4088_03	Glencoe	J_Hyd-G043	J-0198	13.93	200	110	7.10	0.23	0.0
WM4089_01	Glencoe	J-0198	WVG054	4.87	200	110	5.33	0.17	0.0
WM4089_02	Glencoe	WVG054	J-0389	104.26	200	110	2.13	0.07	0.0
WM4090_01	Glencoe	J-0389	J_Hyd-G042	35.45	200	110	2.45	0.08	0.0
WM4090_02	Glencoe	J_Hyd-G042	J_Hyd-G041	123.12	200	110	2.45	0.08	0.0
WM4090_03	Glencoe	J_Hyd-G041	J-0306	113.59	200	110	2.45	0.08	0.0
WM4091_01	Glencoe	J-0410	J_Hyd-G052	20.75	150	100	-1.75	0.10	0.0
WM4091_02	Glencoe	J_Hyd-G052	WVG012	81.54	150	100	-1.75	0.10	0.0
WM4092_01(1)	Glencoe	WVG012	J-713	7.73	150	100	-1.75	0.10	0.0
WM4092_01(2)	Glencoe	J-713	WVG013	8.18	150	100	1.36	0.08	0.0
WM4092_02	Glencoe	WVG013	J_Hyd-G053	42.46	150	100	1.36	0.08	0.0
WM4092_03	Glencoe	J_Hyd-G053	WVG161	39.94	150	100	1.36	0.08	0.0
WM4093(1)	Glencoe	WVG161	J-718	17.09	150	100	1.36	0.08	0.0
WM4093(2)	Glencoe	J-718	WVG032	49.53	150	100	-0.59	0.03	0.0
WM4094_01	Glencoe	WVG039	J-0139	3.71	150	100	2.56	0.14	0.0
WM4094_02	Glencoe	J-0139	J-0336	11.56	150	100	2.56	0.14	0.0
WM4094_03	Glencoe	J-0336	J-0331	39.62	150	100	2.56	0.14	0.0
WM4094_04	Glencoe	J-0331	J-0286	42.02	150	100	0.59	0.03	0.0
WM4094_05	Glencoe	J-0286	WVG032	30.10	150	100	0.59	0.03	0.0
WM4095_01	Glencoe	J-0201	WVG044	10.01	150	100	-3.64	0.21	0.0
WM4095_02	Glencoe	WVG044	WVG041	98.34	150	100	-3.64	0.21	0.1
WM4095_03	Glencoe	WVG041	J-0211	5.17	150	100	-3.64	0.21	0.0
WM4095_04	Glencoe	J-0211	WVG040	8.79	150	100	-3.64	0.21	0.0
WM4095_05	Glencoe	WVG040	J-0005	2.73	150	100	0.00	0.00	0.0
WM4095_06(1)	Glencoe	WVG040	J-715	6.18	150	100	-3.64	0.21	0.0
WM4095_06(2)	Glencoe	J-715	WVG039	2.36	150	100	2.56	0.14	0.0
WM4096_01	Glencoe	WVG043	J-0201	4.96	150	100	-2.30	0.13	0.0
WM4096_02	Glencoe	J-0564	WVG043	106.76	150	100	-2.30	0.13	0.0
WM4097_01	Glencoe	J-0529	J-0425	68.18	50	100	0.00	0.00	0.0
WM4097_02	Glencoe	J-0424	J-0425	22.42	50	100	0.00	0.00	0.0
WM4098_01	Glencoe	J-0111	WVG129	3.15	150	100	-3.90	0.22	0.0
WM4098_02	Glencoe	WVG129	J-0172	4.26	150	100	-3.90	0.22	0.0
WM4098_03	Glencoe	J-0172	J-0239	6.15	150	100	-3.90	0.22	0.0
WM4098_04	Glencoe	J-0239	J_Hyd-G024	62.71	150	100	-3.90	0.22	0.1
WM4098_05	Glencoe	J_Hyd-G024	J-0265	21.45	150	100	-3.90	0.22	0.0
WM4098_06	Glencoe	J-0265	J-0116	7.41	150	100	-3.90	0.22	0.0
WM4098_07	Glencoe	J-0116	WVG188	3.18	150	100	-3.90	0.22	0.0
WM4098_08	Glencoe	WVG188	J-0126	5.05	150	100	-3.90	0.22	0.0
WM4099_01	Glencoe	J-0354	WVG189	13.18	150	100	-2.15	0.12	0.0
WM4099_02	Glencoe	WVG189	J_Hyd-G025	91.45	150	100	-2.15	0.12	0.0
WM4099_03	Glencoe	J_Hyd-G025	J-0236	3.77	150	100	-2.15	0.12	0.0
WM4099_04	Glencoe	J-0236	J-0059	6.09	150	100	-2.15	0.12	0.0
WM4099_05	Glencoe	J-0059	WVG199	1.83	150	100	-2.15	0.12	0.0
WM4099_06	Glencoe	WVG199	WVG131	5.28	150	100	-2.15	0.12	0.0
WM4099_07	Glencoe	WVG131	J-0111	4.06	150	100	-2.15	0.12	0.0
WM4101_01	Glencoe	WVG187	WVG132	101.68	150	100	1.11	0.06	0.0
WM4101_02	Glencoe	WVG132	J-709	2.48	150	100	1.11	0.06	0.0
WM4101_03(1)	Glencoe	WVG187	J-811	1.61	150	100	-1.11	0.06	0.0
WM4102_01	Glencoe	J-709	WVG133	13.28	150	100	3.37	0.19	0.0
WM4102_02	Glencoe	WVG133	WVG147	97.08	150	100	3.37	0.19	0.1
WM4102_03	Glencoe	WVG147	J-0321	13.28	150	100	3.37	0.19	0.0
WM4103	Glencoe	J-0321	J-0568	110.36	150	100	2.23	0.13	0.0
WM4104_01	Glencoe	J-0568	J_Hyd-G088	35.37	150	100	2.23	0.13	0.0
WM4104_02	Glencoe	J_Hyd-G088	J_Hyd-G089	114.83	150	100	2.23	0.13	0.0
WM4104_03	Glencoe	J_Hyd-G089	WVG150	58.22	150	100	2.23	0.13	0.0
WM4104_04	Glencoe	WVG150	WVG190	30.53	150	100	2.23	0.13	0.0
WM4104_05	Glencoe	WVG190	J_Hyd-G090	61.89	150	100	0.91	0.05	0.0
WM4104_06	Glencoe	J_Hyd-G090	WVG151	122.12	150	100	0.91	0.05	0.0
WM4104_07	Glencoe	WVG151	J_Hyd-G091	7.91	150	100	0.00	0.00	0.0
WM4107_01	Glencoe	J-735	WVG186	1.65	150	100	0.00	0.00	0.0
WM4107_02	Glencoe	WVG186	J_Hyd-G004	130.23	150	100	0.00	0.00	0.0
WM4108_01	Glencoe	J-0205	WVG103	5.09	200	110	4.93	0.16	0.0
WM4108_02	Glencoe	J-734	WVG103	119.43	200	110	-4.93	0.16	0.0
WM4109_01	Glencoe	WVG102	WVG104	108.82	200	110	-5.94	0.19	0.0
WM4109_02	Glencoe	WVG104	J-0187	4.57	200	110	-5.94	0.19	0.0
WM4109_03	Glencoe	WVG102	J-0205	9.87	200	110	5.94	0.19	0.0
WM4110_01	Glencoe	J-0187	J-0358	89.06	200	110	-5.67	0.18	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4110_02	Glencoe	J-0358	WVG181	13.95	200	110	-5.67	0.18	0.0
WM4110_03	Glencoe	WVG181	J-0011	1.00	200	110	-5.67	0.18	0.0
WM4110_04(2)(2	Glencoe	J-815	J-0093	4.88	200	110	-7.79	0.25	0.0
WM4111_01	Glencoe	J-0093	J-0080	2.63	200	110	-7.79	0.25	0.0
WM4111_02	Glencoe	J-0080	WVG183	2.38	200	110	-7.79	0.25	0.0
WM4111_03	Glencoe	WVG183	WVG191	91.38	200	110	-7.79	0.25	0.1
WM4111_04	Glencoe	WVG191	J-0227	5.56	200	110	-7.79	0.25	0.0
WM4112_01	Glencoe	J-0063	WVG108	120.28	200	110	-5.75	0.18	0.0
WM4112_02	Glencoe	WVG108	J-0089	2.53	200	110	-5.75	0.18	0.0
WM4113_01	Glencoe	J-0089	WVG010	10.60	200	110	-6.87	0.22	0.0
WM4113_02	Glencoe	WVG010	WVG120	100.04	200	110	-6.87	0.22	0.0
WM4114	Glencoe	WVG107	J-0063	1.84	150	100	-5.75	0.33	0.0
WM4115_01	Glencoe	J-0123	WVG139	3.41	150	100	7.77	0.44	0.0
WM4115_02	Glencoe	WVG139	J_Hyd-H_T-718	3.84	150	100	7.77	0.44	0.0
WM4115_04	Glencoe	J_Hyd-H_T-718	J-0262	93.36	150	100	7.77	0.44	0.3
WM4115_05(2)	Glencoe	J-825	J-0559	106.02	150	100	4.58	0.26	0.1
WM4115_06	Glencoe	J-0559	J-0089	104.29	150	100	4.58	0.26	0.1
WM4116_01	Glencoe	J_Hyd-G001	WVG117	58.22	150	100	0.99	0.06	0.0
WM4116_02	Glencoe	WVG117	J-0213	16.86	150	100	0.99	0.06	0.0
WM4116_03	Glencoe	J-0360	J_Hyd-G001	121.50	150	100	0.99	0.06	0.0
WM4117	Glencoe	J-0360	J-0409	20.60	150	100	-2.76	0.16	0.0
WM4118_01	Glencoe	J-0590	J_Hyd-G002	142.34	150	100	0.00	0.00	0.0
WM4118_02	Glencoe	J_Hyd-G002	J-0091	4.87	150	100	0.00	0.00	0.0
WM4120	Glencoe	J-0235	J_Hyd-G018	41.76	150	100	0.00	0.00	0.0
WM4121_01	Glencoe	WVG185	J-0235	6.04	150	100	0.00	0.00	0.0
WM4121_02	Glencoe	WVG185	J_Hyd-G019	101.74	150	100	0.00	0.00	0.0
WM4124_01	Glencoe	J-0067	J-0494	44.34	300	120	-24.37	0.34	0.0
WM4124_02	Glencoe	J-0066	J_Hyd-G084	333.82	300	120	-8.94	0.13	0.0
WM4124_03	Glencoe	J-0066	J-0067	2.04	300	120	2.54	0.04	0.0
WM4125_01	Glencoe	J-0146	J-0202	57.31	300	120	-25.92	0.37	0.0
WM4125_02	Glencoe	J-0006	WVG196	53.16	150	100	14.31	0.81	0.4
WM4125_03	Glencoe	WVG122	J-0267	7.87	150	100	14.31	0.81	0.1
WM4125_04	Glencoe	WVG122	WVG196	48.20	150	100	-14.31	0.81	0.4
WM4125_05	Glencoe	J-0337	J-0338	11.59	300	120	39.21	0.55	0.0
WM4125_06	Glencoe	J-0338	J-0180	21.85	300	120	39.21	0.55	0.0
WM4125_07	Glencoe	J-0180	J-0146	229.84	300	120	22.40	0.32	0.1
WM4125_08	Glencoe	J-0145	J-0017	4.06	300	120	46.19	0.65	0.0
WM4126_01	Glencoe	J-0017	WVG143	1.42	200	110	-5.64	0.18	0.0
WM4126_02	Glencoe	WVG143	J-0013	1.00	200	110	-5.64	0.18	0.0
WM4126_03	Glencoe	J-0013	J-0047	1.67	200	110	-5.64	0.18	0.0
WM4126_04	Glencoe	J-0047	J-0038	2.12	200	110	-5.64	0.18	0.0
WM4126_05	Glencoe	J-0038	J-0039	1.57	200	110	-5.64	0.18	0.0
WM4126_06	Glencoe	J-0168	J-0169	4.23	200	110	11.17	0.36	0.0
WM4126_07	Glencoe	J-0039	J-0544	87.81	200	110	-5.64	0.18	0.0
WM4128C_01	Glencoe	J-0252	WVG029	6.68	150	100	2.31	0.13	0.0
WM4129C_01	Glencoe	J-0115	J-0084	3.18	150	100	0.00	0.00	0.0
WM4129C_02	Glencoe	J-0084	J-0252	8.39	150	100	1.39	0.08	0.0
WM4143C	Glencoe	J-0373	J-0451	80.71	200	110	-3.89	0.12	0.0
WM4145C_01	Glencoe	J-0451	J_Hyd-G013	25.95	200	110	-4.35	0.14	0.0
WM4145C_02	Glencoe	J_Hyd-G013	J-0032	1.48	150	100	-4.35	0.25	0.0
WM4147C_01	Glencoe	J-0316	J-0191	48.55	200	110	6.02	0.19	0.0
WM4147C_02	Glencoe	J-0191	J_Hyd-G012	75.68	200	110	-3.39	0.11	0.0
WM4147C_03	Glencoe	J_Hyd-G012	J-0303	9.12	150	100	-3.39	0.19	0.0
WM4147C_04	Glencoe	J-0032	J-0128	88.99	200	110	-3.37	0.11	0.0
WM4147C_05	Glencoe	J-0128	J-0303	27.37	200	110	-3.37	0.11	0.0
WM4148C_01	Glencoe	J-0316	J_Hyd-G011	10.01	200	110	-3.62	0.12	0.0
WM4148C_02	Glencoe	WVG097	J_Hyd-G011	89.00	200	110	3.62	0.12	0.0
WM4149_01	Glencoe	J-715	WVG042	11.98	250	120	-19.84	0.40	0.0
WM4149_02	Glencoe	WVG042	J-0111	70.85	250	120	-19.84	0.40	0.1
WM4153C_01	Glencoe	J-0071	J_Hyd-G010	2.62	150	100	0.00	0.00	0.0
WM4153C_02	Glencoe	WVG158	J_Hyd-G010	52.89	150	100	0.00	0.00	0.0
WM4153C_03	Glencoe	J-0402	J_Hyd-G087	11.71	200	110	3.75	0.12	0.0
WM4153C_04	Glencoe	J_Hyd-G087	J-0452	14.25	200	110	3.75	0.12	0.0
WM4153C_05(1)	Glencoe	J-0452	J-722	58.28	200	110	2.35	0.07	0.0
WM4153C_05(2)	Glencoe	J-722	J_Hyd-G082	28.48	200	110	2.35	0.07	0.0
WM4153C_06	Glencoe	J_Hyd-G082	J_Hyd-G006	142.80	200	110	2.35	0.07	0.0
WM4153C_07	Glencoe	WV-348	J_Hyd-G005	108.11	200	110	1.65	0.05	0.0
WM4153C_08	Glencoe	J_Hyd-G005	J_Hyd-G063	100.69	200	110	1.65	0.05	0.0
WM4153C_09	Glencoe	J_Hyd-G063	J_Hyd-G058	130.80	200	110	1.65	0.05	0.0
WM4153C_10	Glencoe	J_Hyd-G058	J-0627	10.14	200	110	1.65	0.05	0.0
WM4156	Glencoe	J-0367	J-0368	16.07	150	100	0.00	0.00	0.0
WM4157_01	Glencoe	J-0554	J_Hyd-G092	93.03	150	100	-0.99	0.06	0.0
WM4157_02	Glencoe	J_Hyd-G092	J-692	5.66	150	100	-0.99	0.06	0.0
WM4159_01	Glencoe	J-0384	WVG022	17.17	150	100	0.00	0.00	0.0
WM4159_02	Glencoe	WVG022	G072	40.39	150	100	0.00	0.00	0.0
WM4160_01	Glencoe	J-0360	WVG116	14.15	150	100	1.77	0.10	0.0
WM4160_02	Glencoe	WVG116	J-0235	99.50	150	100	1.77	0.10	0.0
WM4162_01	Glencoe	J-0191	WVG094	4.72	150	100	9.41	0.53	0.0
WM4162_02	Glencoe	WVG094	J-0529	83.93	200	110	9.41	0.30	0.1
WM4162_03	Glencoe	J-0529	J-713	78.46	200	110	8.73	0.28	0.1
WM4167_01	Glencoe	J-0288	J-0488	67.16	150	100	-1.24	0.07	0.0
WM4167_02	Glencoe	J-0488	J-0354	40.17	150	100	-1.24	0.07	0.0
WM4178L.B	Glencoe	J-705	WVG165	107.96	150	100	2.02	0.11	0.0
WM4181L.B	Glencoe	J-0178	J-707	123.47	100	100	0.67	0.09	0.0
WM4182L.B_01	Glencoe	J-0353	WVG045	13.16	150	100	1.98	0.11	0.0
WM4182L.B_02	Glencoe	WVG045	WVG171	101.55	150	100	1.98	0.11	0.0
WM4182L.B_03	Glencoe	J-0025	WVG171	1.26	150	100	-1.98	0.11	0.0
WM4184L.B_01	Glencoe	J-0331	WVG037	11.11	150	100	1.98	0.11	0.0
WM4184L.B_02	Glencoe	WVG037	J-0353	103.47	150	100	1.98	0.11	0.0
WM4196L.B_01	Glencoe	J-0145	J-0146	3.84	300	120	-46.19	0.65	0.0
WM4196L.B_02	Glencoe	J-0202	WVG197	5.00	300	120	-25.92	0.37	0.0
WM4196L.B_03	Glencoe	WVG197	J-0067	333.26	300	120	-25.92	0.37	0.2
P-234	Melborne	J_Hyd-M017	J-0531	3.11	150	100	3.31	0.19	0.0
P-237	Melborne	WVM004	J-0037	11.15	200	110	0.57	0.02	0.0
P_Hyd-M002	Melborne	J_Hyd-M002	M002	4.54	150	100	0.00	0.00	0.0
P_Hyd-M003	Melborne	J_Hyd-M003	M003	3.46	150	100	0.00	0.00	0.0
P_Hyd-M004	Melborne	J_Hyd-M004	M004	2.69	150	100	0.00	0.00	0.0
P_Hyd-M005	Melborne	J_Hyd-M005	M005	4.60	150	100	0.00	0.00	0.0
P_Hyd-M006	Melborne	J_Hyd-M006	M006	1.58	150	100	0.00	0.00	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-M007	Melborne	J_Hyd-M007	M007	3.19	150	100	0.00	0.00	0.0
P_Hyd-M008	Melborne	J_Hyd-M008	M008	1.77	150	100	0.00	0.00	0.0
P_Hyd-M009	Melborne	J_Hyd-M009	M009	4.67	150	100	0.00	0.00	0.0
P_Hyd-M010	Melborne	J_Hyd-M010	M010	6.09	150	100	0.00	0.00	0.0
P_Hyd-M011	Melborne	J_Hyd-M011	M011	1.88	150	100	0.00	0.00	0.0
P_Hyd-M012	Melborne	J_Hyd-M012	M012	3.91	150	100	0.00	0.00	0.0
P_Hyd-M013	Melborne	J_Hyd-M013	M013	2.29	150	100	0.00	0.00	0.0
P_Hyd-M014	Melborne	J_Hyd-M014	M014	1.98	150	100	0.00	0.00	0.0
P_Hyd-M015	Melborne	J_Hyd-M015	M015	2.99	150	100	0.00	0.00	0.0
P_Hyd-M016	Melborne	J_Hyd-M016	M016	2.30	150	100	0.00	0.00	0.0
P_Hyd-M017	Melborne	J_Hyd-M017	M017	4.21	150	100	0.00	0.00	0.0
P_Hyd-M018	Melborne	J_Hyd-M018	M018	0.81	150	100	0.00	0.00	0.0
P_Hyd-M019	Melborne	J_Hyd-M019	M019	3.99	150	100	0.00	0.00	0.0
P_Hyd-M020	Melborne	J_Hyd-M020	M020	3.90	150	100	0.00	0.00	0.0
P_Hyd-M021	Melborne	J_Hyd-M021	M021	3.76	150	100	0.00	0.00	0.0
P_Hyd-M022	Melborne	J_Hyd-M022	M022	4.35	150	100	0.00	0.00	0.0
P_Hyd-M023	Melborne	J_Hyd-M023	M023	1.95	150	100	0.00	0.00	0.0
WM2002C	Melborne	J-0237	WVM022	6.14	150	100	0.32	0.02	0.0
WM2030C_13	Melborne	J_Hyd-M002	J_Hyd-M003	206.11	150	100	3.41	0.19	0.1
WM2110C_01	Melborne	J-0158	WVM011	12.91	150	100	0.00	0.00	0.0
WM2110C_02	Melborne	WVM011	J_Hyd-M008	99.39	150	100	0.00	0.00	0.0
WM2111C_04	Melborne	WVM032	J_Hyd-M017	17.49	150	100	3.31	0.19	0.0
WM6000_01	Melborne	J-0176	WVM003	95.00	150	100	-1.61	0.09	0.0
WM6000_02	Melborne	WVM003	J-0192	32.55	150	100	-1.61	0.09	0.0
WM6001_01	Melborne	J-0065	WVA023	2.02	150	100	0.00	0.00	0.0
WM6001_02	Melborne	WVA023	WVM030	47.35	150	100	0.00	0.00	0.0
WM6002C_01	Melborne	J-0105	J-0403	19.22	150	100	0.63	0.04	0.0
WM6002C_02	Melborne	WVM022	J-0403	98.89	150	100	0.32	0.02	0.0
WM6002_01	Melborne	WVM025	J_Hyd-M020	2.65	150	100	-0.84	0.05	0.0
WM6002_02	Melborne	J-0177	WVM025	4.37	150	100	-0.84	0.05	0.0
WM6002_03	Melborne	J_Hyd-M020	WVM007	98.53	150	100	-0.84	0.05	0.0
WM6002_04	Melborne	WVM007	J-0125	18.26	150	100	-0.84	0.05	0.0
WM6003C_01	Melborne	J-0192	WVM001	4.73	150	100	-3.41	0.19	0.0
WM6003C_02	Melborne	J_Hyd-M003	WVM001	187.86	150	100	3.41	0.19	0.1
WM6003_01	Melborne	J-0176	WVM027	4.36	150	100	1.74	0.10	0.0
WM6003_02	Melborne	WVM027	J_Hyd-M022	26.82	150	100	1.74	0.10	0.0
WM6003_03	Melborne	J_Hyd-M022	J-0407	20.47	150	100	1.74	0.10	0.0
WM6003_04	Melborne	J_Hyd-M023	J-0407	158.98	150	100	-0.37	0.02	0.0
WM6003_05	Melborne	J_Hyd-M023	J-0493	43.36	150	100	0.37	0.02	0.0
WM6004C_01	Melborne	J-0192	WVM002	14.53	150	100	1.80	0.10	0.0
WM6004C_02	Melborne	WVM002	J_Hyd-M004	4.18	150	100	1.80	0.10	0.0
WM6004C_03	Melborne	J_Hyd-M004	J_Hyd-M005	170.61	200	110	1.80	0.06	0.0
WM6004_01	Melborne	J-0065	J_Hyd-M021	8.68	150	100	0.13	0.01	0.0
WM6004_02	Melborne	J_Hyd-M021	WVM028	111.82	150	100	0.13	0.01	0.0
WM6004_03	Melborne	WVM028	J-0176	16.14	150	100	0.13	0.01	0.0
WM6005C_01	Melborne	J-0125	WVM005	3.45	200	110	-2.37	0.08	0.0
WM6005C_02	Melborne	WVM005	J-0430	23.41	200	110	-2.37	0.08	0.0
WM6005C_03	Melborne	Standpipe	J-0430	46.70	200	110	0.00	0.00	0.0
WM6005C_04	Melborne	J_Hyd-M005	J-0037	34.61	200	110	1.80	0.06	0.0
WM6005C_05	Melborne	J-0430	J-0037	4.98	200	110	-2.37	0.08	0.0
WM6005C_06	Melborne	Standpipe	WVM004	31.50	200	110	0.57	0.02	0.0
WM6005_01	Melborne	J-0177	WVM026	4.51	150	100	0.13	0.01	0.0
WM6005_02	Melborne	WVM026	J-0065	110.26	150	100	0.13	0.01	0.0
WM6006C_01	Melborne	J-0125	WVM006	15.98	200	110	1.53	0.05	0.0
WM6006C_02	Melborne	WVM006	J_Hyd-M006	43.26	200	110	1.53	0.05	0.0
WM6006C_03	Melborne	J_Hyd-M006	WVM008	67.74	200	110	1.53	0.05	0.0
WM6006C_04	Melborne	WVM008	J-0105	26.02	200	110	1.53	0.05	0.0
WM6006_01	Melborne	J-0203	J_Hyd-M019	5.07	150	100	0.54	0.03	0.0
WM6006_02	Melborne	J_Hyd-M019	J-0177	132.87	150	100	0.54	0.03	0.0
WM6007SC_01	Melborne	J-0312	WVM013	15.69	150	100	0.16	0.01	0.0
WM6007SC_02	Melborne	WVM013	J_Hyd-M016	68.32	150	100	0.16	0.01	0.0
WM6007SC_03	Melborne	J_Hyd-M016	J-0156	12.36	150	100	0.16	0.01	0.0
WM6007SC_04	Melborne	J-0156	J-0498	46.76	150	100	1.64	0.09	0.0
WM6008SCC_01	Melborne	J-0403	J-0434	101.45	150	100	0.95	0.05	0.0
WM6008SCC_02	Melborne	J-0434	J-0108	24.19	150	100	0.95	0.05	0.0
WM6008SCC_03	Melborne	J-0108	J-0109	3.08	150	100	0.95	0.05	0.0
WM6008SC_01	Melborne	J-0230	J-0237	128.60	150	100	-0.82	0.05	0.0
WM6008SC_02	Melborne	J-0237	J-0203	15.29	150	100	-1.13	0.06	0.0
WM6009SC_01	Melborne	J-0158	WVM010	4.02	150	100	0.90	0.05	0.0
WM6009SC_02	Melborne	WVM010	J_Hyd-M009	52.80	150	100	0.90	0.05	0.0
WM6009SC_03	Melborne	J_Hyd-M009	J_Hyd-M010	84.25	150	100	0.90	0.05	0.0
WM6009SC_04	Melborne	J_Hyd-M010	J-0248	6.77	150	100	0.90	0.05	0.0
WM6010C_01	Melborne	J-0105	WVM009	3.01	150	100	0.90	0.05	0.0
WM6010C_02	Melborne	WVM009	J_Hyd-M007	38.17	150	100	0.90	0.05	0.0
WM6010C_03	Melborne	J_Hyd-M007	J-0158	66.46	150	100	0.90	0.05	0.0
WM6010SCC	Melborne	J_Hyd-M012	J-0159	72.47	150	100	0.30	0.02	0.0
WM6010SC_01	Melborne	J-0500	J-0230	48.94	150	100	-0.46	0.03	0.0
WM6010SC_02	Melborne	J-0502	J-0500	50.61	150	100	-0.46	0.03	0.0
WM6010SC_03	Melborne	J-0396	WVM014	18.01	150	100	0.00	0.00	0.0
WM6010SC_04	Melborne	WVM014	J-0248	103.75	150	100	0.00	0.00	0.0
WM6011C_01	Melborne	J-0413	J_Hyd-M018	65.91	150	100	1.84	0.10	0.0
WM6011C_02	Melborne	J_Hyd-M018	WVM012	9.39	150	100	1.84	0.10	0.0
WM6011C_03	Melborne	WVM012	J-0312	9.52	150	100	1.84	0.10	0.0
WM6011SC_01	Melborne	J-0413	J-0414	20.96	150	100	1.47	0.08	0.0
WM6011SC_02	Melborne	J-0156	J-0157	3.99	150	100	-1.47	0.08	0.0
WM6011SC_03	Melborne	J-0157	WVM031	10.91	150	100	-1.47	0.08	0.0
WM6011SC_04	Melborne	J-0414	WVM031	93.52	150	100	1.47	0.08	0.0
WM6013C_01	Melborne	WVM023	J-0203	14.89	150	100	1.68	0.09	0.0
WM6013C_02	Melborne	J-0312	WVM023	99.33	150	100	1.68	0.09	0.0
WM6013SC_01	Melborne	J-0498	J_Hyd-M015	64.17	150	100	1.64	0.09	0.0
WM6013SC_02	Melborne	J-0230	WVM020	14.69	150	100	-1.64	0.09	0.0
WM6013SC_03	Melborne	WVM020	J_Hyd-M015	35.71	150	100	-1.64	0.09	0.0
WM6015SC_01	Melborne	J-0502	J_Hyd-M014	55.20	150	100	0.46	0.03	0.0
WM6015SC_02	Melborne	J_Hyd-M014	WVM021	51.37	150	100	0.46	0.03	0.0
WM6015SC_03	Melborne	WVM021	J-0159	4.03	150	100	0.46	0.03	0.0
WM6016SCC_01	Melborne	J-0159	WVM017	33.77	150	100	0.76	0.04	0.0
WM6016SCC_02	Melborne	WVM017	J-0189	4.61	150	100	0.76	0.04	0.0
WM6016SC_01	Melborne	J-0476	J_Hyd-M011	37.38	150	100	-0.45	0.03	0.0
WM6016SC_02	Melborne	J_Hyd-M011	J-0189	91.52	150	100	-0.45	0.03	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM6017SCC_01	Melborne	WVM018	J_Hyd-M013	113.47	150	100	0.31	0.02	0.0
WM6017SCC_02	Melborne	J-0189	WVM018	10.70	150	100	0.31	0.02	0.0
WM6018SCC	Melborne	J-0109	J_Hyd-M012	27.44	150	100	0.30	0.02	0.0
WM6018SC_01	Melborne	J-0248	J-0249	6.36	150	100	0.90	0.05	0.0
WM6018SC_02	Melborne	J-0249	WVM015	15.24	150	100	-0.45	0.03	0.0
WM6018SC_03	Melborne	WVM015	J-0476	105.12	150	100	-0.45	0.03	0.0
WM6018SC_04	Melborne	WVM019	J-0230	5.70	150	100	-0.58	0.03	0.0
WM6018SC_05	Melborne	WVM019	J-0109	104.89	150	100	0.58	0.03	0.0
WM6019C	Melborne	J-0531	J-0413	70.43	150	100	3.31	0.19	0.0
P-319	Wardsville	WVW007	J_Hyd-W015	1.13	150	100	-0.08	0.00	0.0
P_Hyd-W001	Wardsville	J_Hyd-W001	W001	5.48	150	90	0.00	0.00	0.0
P_Hyd-W002	Wardsville	J_Hyd-W002	W002	4.70	150	90	0.00	0.00	0.0
P_Hyd-W003	Wardsville	J_Hyd-W003	W003	5.65	150	90	0.00	0.00	0.0
P_Hyd-W004	Wardsville	J_Hyd-W004	W004	3.86	150	90	0.00	0.00	0.0
P_Hyd-W005	Wardsville	J_Hyd-W005	W005	6.90	150	90	0.00	0.00	0.0
P_Hyd-W006	Wardsville	J_Hyd-W006	W006	3.88	150	90	0.00	0.00	0.0
P_Hyd-W007	Wardsville	J_Hyd-W007	W007	1.75	150	90	0.00	0.00	0.0
P_Hyd-W008	Wardsville	J_Hyd-W008	W008	1.93	150	90	0.00	0.00	0.0
P_Hyd-W009	Wardsville	J_Hyd-W009	W009	3.07	150	90	0.00	0.00	0.0
P_Hyd-W010	Wardsville	J_Hyd-W010	W010	1.19	150	90	0.00	0.00	0.0
P_Hyd-W011	Wardsville	J_Hyd-W011	W011	6.93	150	90	0.00	0.00	0.0
P_Hyd-W012	Wardsville	J_Hyd-W012	W012	2.69	150	90	0.00	0.00	0.0
P_Hyd-W013	Wardsville	J_Hyd-W013	W013	2.70	150	90	0.00	0.00	0.0
P_Hyd-W014	Wardsville	J_Hyd-W014	W014	1.95	150	90	0.00	0.00	0.0
P_Hyd-W015	Wardsville	J_Hyd-W015	W015	6.64	150	90	0.00	0.00	0.0
P_Hyd-W016	Wardsville	J_Hyd-W016	W016	5.24	150	90	0.00	0.00	0.0
P_Hyd-W017	Wardsville	J_Hyd-W017	W017	10.85	150	90	0.00	0.00	0.0
P_Hyd-W018	Wardsville	J_Hyd-W018	W018	2.15	150	90	0.00	0.00	0.0
P_Hyd-W019	Wardsville	J_Hyd-W019	W019	2.50	150	90	0.00	0.00	0.0
P_Hyd-W020	Wardsville	WVW055	W020	4.99	150	90	0.00	0.00	0.0
P_Hyd-W021	Wardsville	J_Hyd-W021	W021	3.07	150	90	0.00	0.00	0.0
P_Hyd-W022	Wardsville	J_Hyd-W022	W022	4.10	150	90	0.00	0.00	0.0
P_Hyd-W023	Wardsville	J_Hyd-W023	W023	5.14	150	90	0.00	0.00	0.0
P_Hyd-W024	Wardsville	J_Hyd-W024	W024	5.95	150	90	0.00	0.00	0.0
P_Hyd-W025	Wardsville	J_Hyd-W025	W025	6.22	150	90	0.00	0.00	0.0
P_Hyd-W026	Wardsville	J_Hyd-W026	W026	6.37	150	90	0.00	0.00	0.0
P_Hyd-W027	Wardsville	J_Hyd-W027	W027	3.79	150	90	0.00	0.00	0.0
P_Hyd-W028	Wardsville	J_Hyd-W028	W028	3.84	150	90	0.00	0.00	0.0
P_Hyd-W029	Wardsville	J_Hyd-W029	W029	6.11	150	90	0.00	0.00	0.0
P_Hyd-W030	Wardsville	J_Hyd-W030	W030	3.82	150	90	0.00	0.00	0.0
P_Hyd-W031	Wardsville	J_Hyd-W031	W031	5.06	150	90	0.00	0.00	0.0
P_Hyd-W032	Wardsville	J_Hyd-W032	W032	7.29	150	90	0.00	0.00	0.0
P_Hyd-W033	Wardsville	J_Hyd-W033	W033	6.07	150	90	0.00	0.00	0.0
P_Hyd-W034	Wardsville	J_Hyd-W034	W034	5.18	150	90	0.00	0.00	0.0
P_Hyd-W035	Wardsville	J_Hyd-W035	W035	4.26	150	90	0.00	0.00	0.0
P_Hyd-W036	Wardsville	J_Hyd-W036	W036	3.12	150	90	0.00	0.00	0.0
P_Hyd-W037	Wardsville	J_Hyd-W037	W037	1.94	150	90	0.00	0.00	0.0
P_Hyd-W038	Wardsville	J_Hyd-W038	W038	1.51	150	90	0.00	0.00	0.0
P_Hyd-W039	Wardsville	J_Hyd-W039	W039	0.69	150	90	0.05	0.00	0.0
P_Hyd-W040	Wardsville	J_Hyd-W040	W040	5.52	150	90	0.00	0.00	0.0
P_Hyd-W041	Wardsville	J_Hyd-W041	W041	5.79	150	90	0.00	0.00	0.0
P_Hyd-W042	Wardsville	J_Hyd-W042	W042	3.43	150	90	0.00	0.00	0.0
P_Hyd-W043	Wardsville	J_Hyd-W043	W043	11.13	150	90	0.00	0.00	0.0
P_Hyd-W044	Wardsville	J_Hyd-W044	W044	5.49	150	90	0.00	0.00	0.0
P_Hyd-W045	Wardsville	J_Hyd-W045	W045	6.88	150	90	0.00	0.00	0.0
P_Hyd-W046	Wardsville	J_Hyd-W046	W046	5.95	150	90	0.00	0.00	0.0
P_Hyd-W047	Wardsville	J_Hyd-W047	W047	6.10	150	90	0.00	0.00	0.0
SWM_GIS.Water	Wardsville	W039	J_Hyd-W039	0.69	150	90	0.05	0.00	0.0
WM1009C_01	Wardsville	J_Hyd-W001	J_Hyd-W002	94.93	200	100	0.00	0.00	0.0
WM1009C_02	Wardsville	J_Hyd-W002	J-0446	25.09	200	100	0.00	0.00	0.0
WM1010C_01	Wardsville	J-0031	WVW001	14.43	200	100	-2.06	0.07	0.0
WM1010C_02	Wardsville	WVW001	J_Hyd-W010	1.27	200	100	-2.06	0.07	0.0
WM1010C_03	Wardsville	J_Hyd-W010	J-0438	55.92	200	100	-2.06	0.07	0.0
WM1010C_04	Wardsville	J-0438	J-0439	24.67	200	100	-2.06	0.07	0.0
WM1010C_05	Wardsville	J-0439	J_Hyd-W011	28.71	200	100	-2.06	0.07	0.0
WM1010C_06	Wardsville	J_Hyd-W011	J-0550	94.48	200	100	-2.06	0.07	0.0
WM1010C_07	Wardsville	J-0550	J_Hyd-W047	140.43	200	100	-2.56	0.08	0.0
WM1010C_08	Wardsville	J_Hyd-W047	J_Hyd-W045	152.33	200	100	-2.56	0.08	0.0
WM1010C_09	Wardsville	J_Hyd-W045	J-0160	109.76	200	100	-2.56	0.08	0.0
WM1010C_10	Wardsville	J-0160	J-0161	4.04	200	100	-2.56	0.08	0.0
WM1010C_11	Wardsville	J-0161	J_Hyd-W046	92.10	200	100	-2.56	0.08	0.0
WM1010C_12	Wardsville	J_Hyd-W046	J-0553	96.02	200	100	-2.56	0.08	0.0
WM1010C_13	Wardsville	J-0553	J_Hyd-R021M	1022.49	200	100	-2.56	0.08	0.1
WM1010_01	Wardsville	J-0643	J-0597	2259.98	300	110	5.87	0.08	0.1
WM1010_02	Wardsville	J-0597	J-0456	167.81	300	110	5.87	0.08	0.0
WM1064C_01	Wardsville	J-0245	WVW067	6.24	200	100	0.00	0.00	0.0
WM1064C_02	Wardsville	WVW067	J-0022	1.26	200	100	0.00	0.00	0.0
WM1064C_03	Wardsville	J-0022	J_Hyd-W028	5.40	200	100	0.00	0.00	0.0
WM1064C_04	Wardsville	J-0022	J-0069	2.10	200	100	0.00	0.00	0.0
WM1064C_05	Wardsville	J-0069	J-0307	79.42	200	100	0.00	0.00	0.0
WM1065C_01	Wardsville	J-0035	WVR006	1.51	150	90	-5.86	0.33	0.0
WM1065C_02	Wardsville	WVR006	J-686	1.59	150	90	-5.87	0.33	0.0
WM1065C_03	Wardsville	J_Hyd-W044	J-0504	618.26	300	110	-5.86	0.08	0.0
WM1065C_04	Wardsville	J-0504	J-0035	51.23	300	110	-5.86	0.08	0.0
WM1066C_01(1)	Wardsville	J-0456	J-686	2.75	300	110	5.87	0.08	0.0
WM1066C_01(2)	Wardsville	J-686	J-0242	25.10	300	110	0.00	0.00	0.0
WM1066C_02	Wardsville	J-0242	WVR003	6.22	300	110	0.00	0.00	0.0
WM3000C_01	Wardsville	J-0061	WVW033	17.06	300	110	-2.48	0.04	0.0
WM3000C_02	Wardsville	WVW033	J-0343	64.42	300	110	-2.48	0.04	0.0
WM3000_01	Wardsville	J-728	WVW066	78.11	150	90	0.04	0.00	0.0
WM3000_02	Wardsville	WVW066	J-0122	3.40	150	90	0.04	0.00	0.0
WM3001C_01	Wardsville	J-0506	WVW031	51.53	200	100	-1.46	0.05	0.0
WM3001C_02	Wardsville	WVW031	J-0040	1.58	200	100	-1.46	0.05	0.0
WM3001C_03	Wardsville	J-0040	J-0083	3.94	200	100	-1.46	0.05	0.0
WM3001_01	Wardsville	J_Hyd-W040	WVW036	53.55	150	90	-0.26	0.01	0.0
WM3001_02	Wardsville	WVW036	J-0188	4.61	150	90	-0.26	0.01	0.0
WM3002C_01	Wardsville	J-0297	WVW022	10.56	200	100	-0.75	0.02	0.0
WM3002C_02	Wardsville	WVW022	J_Hyd-W030	4.30	200	100	-0.75	0.02	0.0
WM3002C_03	Wardsville	J_Hyd-W030	J-0506	74.51	200	100	-0.75	0.02	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3002_01	Wardsville	J-0251	WVW028	10.95	150	90	-0.26	0.01	0.0
WM3002_02	Wardsville	WVW028	J_Hyd-W040	87.52	150	90	-0.26	0.01	0.0
WM3003C_01	Wardsville	J-0307	WVW025	9.26	200	100	-0.39	0.01	0.0
WM3003C_02	Wardsville	WVW025	J_Hyd-W029	22.49	200	100	-0.39	0.01	0.0
WM3003C_03	Wardsville	J_Hyd-W029	J-0297	87.53	200	100	-0.39	0.01	0.0
WM3003_01	Wardsville	J-0429	J_Hyd-W041	101.52	150	90	-0.44	0.02	0.0
WM3003_02	Wardsville	J_Hyd-W041	J-0251	15.68	150	90	-0.44	0.02	0.0
WM3004C_01	Wardsville	J-0349	J-0308	12.47	300	110	-5.86	0.08	0.0
WM3004C_02	Wardsville	J-0308	WVW061	9.36	300	110	-5.86	0.08	0.0
WM3004C_03	Wardsville	WVW061	J_Hyd-W032	49.83	300	110	-5.86	0.08	0.0
WM3004_01	Wardsville	J-0283	WVW056	9.15	150	90	0.57	0.03	0.0
WM3004_02	Wardsville	WVW056	J_Hyd-W021	79.20	150	90	0.57	0.03	0.0
WM3004_03	Wardsville	J_Hyd-W021	WVW054	2.33	150	90	0.57	0.03	0.0
WM3004_04	Wardsville	WVW054	J-0218	6.54	150	90	0.57	0.03	0.0
WM3004_05	Wardsville	J-0217	J-0218	5.41	150	90	-0.57	0.03	0.0
WM3005C_01	Wardsville	J-0234	WVW053	13.96	300	110	-4.86	0.07	0.0
WM3005C_02	Wardsville	WVW053	J-0349	82.84	300	110	-4.86	0.07	0.0
WM3005_01	Wardsville	J-0028	WVW057	27.93	150	90	0.39	0.02	0.0
WM3005_02	Wardsville	WVW057	J_Hyd-W022	4.65	150	90	0.39	0.02	0.0
WM3005_03	Wardsville	J_Hyd-W022	J-0283	61.43	150	90	0.39	0.02	0.0
WM3006C_01	Wardsville	J-0050	J_Hyd-W031	24.70	300	110	-3.91	0.06	0.0
WM3006C_02	Wardsville	J_Hyd-W031	J-0234	88.41	300	110	-3.91	0.06	0.0
WM3006_01	Wardsville	WVW043	J_Hyd-W023	18.88	150	90	0.10	0.01	0.0
WM3006_02	Wardsville	J_Hyd-W023	J-0027	87.15	150	90	0.10	0.01	0.0
WM3006_03	Wardsville	J-0027	J-0028	1.30	150	90	-0.32	0.02	0.0
WM3006_04	Wardsville	WVW043	J-0154	9.51	150	90	-0.10	0.01	0.0
WM3007C_01	Wardsville	J-0343	WVW064	12.09	300	110	-2.95	0.04	0.0
WM3007C_02	Wardsville	WVW064	J-0018	68.86	300	110	-2.95	0.04	0.0
WM3007_01	Wardsville	J-0247	J_Hyd-W025	104.21	150	90	0.11	0.01	0.0
WM3007_02	Wardsville	J-0154	J_Hyd-W025	62.02	150	90	-0.11	0.01	0.0
WM3008_01	Wardsville	J-0247	J_Hyd-W026	91.00	150	90	0.52	0.03	0.0
WM3008_02	Wardsville	WVW019	J-0238	11.66	150	90	0.52	0.03	0.0
WM3008_03	Wardsville	J_Hyd-W026	WVW019	34.82	150	90	0.52	0.03	0.0
WM3009_01	Wardsville	J-0238	J-0485	57.20	150	90	0.00	0.00	0.0
WM3009_02	Wardsville	J_Hyd-W027	J-0485	39.51	150	90	0.00	0.00	0.0
WM3009_03	Wardsville	J_Hyd-W027	J-0460	29.49	150	90	0.00	0.00	0.0
WM3010_01	Wardsville	J_Hyd-W019	J-0055	103.28	150	90	0.00	0.00	0.0
WM3010_02	Wardsville	J-0055	J-0056	1.79	150	90	0.00	0.00	0.0
WM3011	Wardsville	WVW046	J_Hyd-W019	82.16	150	90	0.00	0.00	0.0
WM3012_01	Wardsville	J-0088	WVW045	2.49	150	90	0.11	0.01	0.0
WM3012_02	Wardsville	WVW045	J_Hyd-W018	55.58	150	90	0.11	0.01	0.0
WM3012_03	Wardsville	J_Hyd-W018	J-0068	71.53	150	90	0.11	0.01	0.0
WM3013_01	Wardsville	J-0223	WVW014	17.55	150	90	0.22	0.01	0.0
WM3013_02	Wardsville	WVW014	J_Hyd-W017	91.23	150	90	0.22	0.01	0.0
WM3013_03	Wardsville	J_Hyd-W017	J-0444	24.98	150	90	0.22	0.01	0.0
WM3013_04	Wardsville	J-0444	J-0311	33.46	150	90	0.22	0.01	0.0
WM3013_05	Wardsville	J-0311	J-0088	9.52	150	90	0.22	0.01	0.0
WM3014_01	Wardsville	J-0131	J_Hyd-W016	12.42	150	90	-0.08	0.00	0.0
WM3014_02	Wardsville	J_Hyd-W016	J-0174	113.19	150	90	-0.08	0.00	0.0
WM3014_03	Wardsville	J-0131	J-0132	3.57	150	90	0.00	0.00	0.0
WM3016	Wardsville	WVW009	J-0034	2.74	150	90	-0.44	0.03	0.0
WM3017_01	Wardsville	J-0029	J-0030	1.33	150	90	0.66	0.04	0.0
WM3017_02	Wardsville	J-0029	WVW008	85.97	150	90	-0.52	0.03	0.0
WM3017_03	Wardsville	WVW008	J-0258	6.92	150	90	-0.52	0.03	0.0
WM3017_04	Wardsville	J-0258	WVW009	114.37	150	90	-0.44	0.03	0.0
WM3018_01	Wardsville	J_Hyd-W012	WVW002	103.92	150	90	-0.68	0.04	0.0
WM3018_02	Wardsville	J-0031	WVW002	1.39	150	90	0.68	0.04	0.0
WM3018_03	Wardsville	J_Hyd-W012	J-0023	108.22	150	90	0.68	0.04	0.0
WM3018_04	Wardsville	J-0023	J-0024	1.26	150	90	0.00	0.00	0.0
WM3019C	Wardsville	J_Hyd-W033	J_Hyd-W044	138.80	300	110	-5.86	0.08	0.0
WM3020	Wardsville	J_Hyd-W035	J-0308	44.57	150	90	0.00	0.00	0.0
WM3020C_01	Wardsville	J-0228	J-0229	5.61	300	110	-5.86	0.08	0.0
WM3020C_02	Wardsville	J-0229	J_Hyd-W033	48.18	300	110	-5.86	0.08	0.0
WM3021_01	Wardsville	J-0234	WVW052	5.86	150	90	0.25	0.01	0.0
WM3021_02	Wardsville	WVW052	J_Hyd-W036	57.41	150	90	0.00	0.00	0.0
WM3022_01	Wardsville	J-0051	WVW039	3.85	150	90	0.00	0.00	0.0
WM3022_02	Wardsville	WVW039	J_Hyd-W037	120.90	150	90	0.00	0.00	0.0
WM3022_03	Wardsville	J-0050	J-0051	1.72	300	110	0.49	0.01	0.0
WM3023C_01	Wardsville	WVW034	J_Hyd-W003	91.07	200	100	-0.92	0.03	0.0
WM3023C_02	Wardsville	J_Hyd-W003	WVW032	52.82	200	100	-0.92	0.03	0.0
WM3023C_03	Wardsville	WVW032	J-0082	11.99	200	100	-0.92	0.03	0.0
WM3023C_04	Wardsville	J-0082	J-0083	2.41	300	110	-0.92	0.01	0.0
WM3023_01	Wardsville	J-0122	J_Hyd-W039	135.47	150	90	-0.47	0.03	0.0
WM3023_02	Wardsville	J_Hyd-W039	WVW063	13.80	150	90	-0.47	0.03	0.0
WM3023_03	Wardsville	WVW063	J-0002	1.04	150	90	0.00	0.00	0.0
WM3023_04	Wardsville	WVW063	J-0343	21.64	150	90	-0.47	0.03	0.0
WM3023_05	Wardsville	J-0122	J_Hyd-W038	9.17	150	90	0.00	0.00	0.0
WM3025_01	Wardsville	J-0297	WVW023	15.43	150	90	0.18	0.01	0.0
WM3025_02	Wardsville	WVW023	J_Hyd-W043	67.26	150	90	0.18	0.01	0.0
WM3025_03	Wardsville	J_Hyd-W043	WVW029	72.48	150	90	0.18	0.01	0.0
WM3025_04	Wardsville	WVW029	J-0251	6.56	150	90	0.18	0.01	0.0
WM3026_01	Wardsville	J-0238	WVW020	6.15	150	90	-0.18	0.01	0.0
WM3026_02	Wardsville	WVW020	WVW021	100.45	150	90	-0.18	0.01	0.0
WM3026_03	Wardsville	WVW021	J-0297	8.86	150	90	-0.18	0.01	0.0
WM3027_01	Wardsville	J-0307	WVW026	14.56	150	90	0.39	0.02	0.0
WM3027_02	Wardsville	WVW026	J_Hyd-W042	125.13	150	90	0.39	0.02	0.0
WM3027_03	Wardsville	J_Hyd-W042	J-0429	22.83	150	90	0.39	0.02	0.0
WM3028_01	Wardsville	J-0460	WVW027	79.81	150	90	0.00	0.00	0.0
WM3028_02	Wardsville	WVW027	J-0307	9.37	150	90	0.00	0.00	0.0
WM3029C	Wardsville	J_Hyd-W032	J-0228	58.86	300	110	-5.86	0.08	0.0
WM3030	Wardsville	J-0055	WVW055	10.06	150	90	0.00	0.00	0.0
WM3031_01	Wardsville	J-0283	WVW058	8.32	150	90	-1.00	0.06	0.0
WM3031_02	Wardsville	WVW058	J_Hyd-W034	48.91	150	90	-1.00	0.06	0.0
WM3031_03	Wardsville	J_Hyd-W034	WVW059	49.21	150	90	-1.00	0.06	0.0
WM3031_04	Wardsville	WVW059	J-0349	16.87	150	90	-1.00	0.06	0.0
WM3033_01	Wardsville	J-0028	WVW049	8.75	150	90	-0.70	0.04	0.0
WM3033_02	Wardsville	WVW049	WVW051	98.98	150	90	-0.70	0.04	0.0
WM3033_03	Wardsville	WVW051	J-0234	16.36	150	90	-0.70	0.04	0.0
WM3034_01	Wardsville	J-0068	WVW046	2.10	150	90	0.00	0.00	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3034_02	Wardsville	J-0068	J-0081	10.14	150	90	0.11	0.01	0.0
WM3034_03	Wardsville	J-0081	WVW047	2.39	150	90	0.11	0.01	0.0
WM3034_04	Wardsville	WVW047	WVW048	73.09	150	90	0.11	0.01	0.0
WM3034_05	Wardsville	WVW048	J-0027	10.74	150	90	-0.42	0.02	0.0
WM3035C_01	Wardsville	J-0062	WVW030	2.56	200	100	0.10	0.00	0.0
WM3035C_02	Wardsville	WVW030	J_Hyd-W004	21.12	200	100	0.10	0.00	0.0
WM3035C_03	Wardsville	J_Hyd-W004	WVW018	79.59	200	100	0.10	0.00	0.0
WM3035C_04	Wardsville	WVW018	J-0247	8.72	200	100	0.10	0.00	0.0
WM3035C_05	Wardsville	J-0061	J-0083	2.95	200	100	2.38	0.08	0.0
WM3035C_06	Wardsville	J-0061	J-0062	1.83	300	110	0.10	0.00	0.0
WM3035_01	Wardsville	J-0154	WVW042	3.97	150	90	-0.47	0.03	0.0
WM3035_02	Wardsville	WVW042	WVW038	106.74	150	90	-0.47	0.03	0.0
WM3035_03	Wardsville	WVW038	J-0012	1.00	150	90	-0.47	0.03	0.0
WM3035_04	Wardsville	J-0018	J-0012	1.10	300	110	0.47	0.01	0.0
WM3035_05	Wardsville	J-0018	J-0050	12.34	300	110	-3.41	0.05	0.0
WM3036C_01	Wardsville	J-0247	WVW016	6.26	200	100	-0.53	0.02	0.0
WM3036C_02	Wardsville	WVW016	J_Hyd-W005	3.42	200	100	-0.53	0.02	0.0
WM3036C_03	Wardsville	J_Hyd-W005	J-0423	67.48	200	100	-0.53	0.02	0.0
WM3036C_04	Wardsville	J-0423	J-0042	22.05	200	100	-0.53	0.02	0.0
WM3036C_05	Wardsville	J-0042	J_Hyd-W006	1.59	200	100	-0.53	0.02	0.0
WM3036C_06	Wardsville	J_Hyd-W006	J-0223	34.03	200	100	-0.53	0.02	0.0
WM3036_01	Wardsville	J-0088	WVW044	12.77	150	90	0.11	0.01	0.0
WM3036_02	Wardsville	WVW044	J_Hyd-W024	61.63	150	90	0.11	0.01	0.0
WM3036_03	Wardsville	J_Hyd-W024	WVW041	62.52	150	90	0.11	0.01	0.0
WM3036_04	Wardsville	WVW041	J-0154	8.37	150	90	-0.47	0.03	0.0
WM3037C_01	Wardsville	J-0223	J-0174	5.52	200	100	-0.75	0.02	0.0
WM3037C_02	Wardsville	J-0174	WVW011	4.34	200	100	-0.82	0.03	0.0
WM3037C_03	Wardsville	WVW011	J_Hyd-W007	52.35	200	100	-0.82	0.03	0.0
WM3037C_04	Wardsville	J_Hyd-W007	J_Hyd-W008	96.68	200	100	-0.82	0.03	0.0
WM3037C_05	Wardsville	J_Hyd-W008	WVW010	3.99	200	100	-0.82	0.03	0.0
WM3037C_06	Wardsville	WVW010	J-0120	4.52	200	100	-0.82	0.03	0.0
WM3037C_07	Wardsville	J-0120	J-0121	3.38	200	100	-0.82	0.03	0.0
WM3037C_08	Wardsville	J-0121	J-0033	7.19	200	100	-0.82	0.03	0.0
WM3037C_09	Wardsville	J-0033	J-0034	1.48	200	100	-0.82	0.03	0.0
WM3037_01	Wardsville	J-0258	WVW007	11.40	150	90	-0.08	0.00	0.0
WM3037_02	Wardsville	J_Hyd-W015	WVW015	149.19	150	90	-0.08	0.00	0.0
WM3037_03	Wardsville	WVW015	J-0131	4.69	150	90	-0.08	0.00	0.0
WM3039C_01	Wardsville	J-0034	J-0313	67.18	200	100	-1.27	0.04	0.0
WM3039C_02	Wardsville	J-0313	J_Hyd-W009	9.84	200	100	-1.39	0.04	0.0
WM3039C_03	Wardsville	J_Hyd-W009	WVW003	75.53	200	100	-1.39	0.04	0.0
WM3039C_04	Wardsville	WVW003	J-0031	3.69	200	100	-1.39	0.04	0.0
WM3039_01	Wardsville	J-0023	J_Hyd-W014	21.87	150	90	0.14	0.01	0.0
WM3039_02	Wardsville	J_Hyd-W014	J_Hyd-W013	134.93	150	90	0.14	0.01	0.0
WM3039_03	Wardsville	J_Hyd-W013	WVW006	7.63	150	90	0.14	0.01	0.0
WM3039_04	Wardsville	WVW006	J-0029	2.85	150	90	0.14	0.01	0.0
WM3041C_01	Wardsville	J-0446	WVW035	27.23	200	100	-0.62	0.02	0.0
WM3041C_02(1)	Wardsville	WVW035	J-728	10.26	200	100	-0.62	0.02	0.0
WM3041C_02(2)(	Wardsville	J-728	J-0188	3.98	200	100	-0.66	0.02	0.0
WM3041C_02(2)(	Wardsville	J-0188	WVW034	4.02	200	100	-0.92	0.03	0.0
P_Hyd-A001	Appin	J_Hyd-A001	A001	2.16	150	100	0.00	0.00	0.0
P_Hyd-A002	Appin	J_Hyd-A002	A002	3.25	150	100	0.00	0.00	0.0
P_Hyd-A003	Appin	J_Hyd-A003	A003	1.26	150	100	0.00	0.00	0.0
P_Hyd-A004	Appin	J_Hyd-A004	A004	8.01	150	100	0.00	0.00	0.0
P_Hyd-A005	Appin	J_Hyd-A005	A005	2.77	150	100	0.00	0.00	0.0
P_Hyd-A006	Appin	J_Hyd-A006	A006	3.67	150	100	0.00	0.00	0.0
P_Hyd-A007	Appin	J_Hyd-A007	A007	3.11	150	100	0.00	0.00	0.0
P_Hyd-A008	Appin	J_Hyd-A008	A008	3.87	150	100	0.00	0.00	0.0
P_Hyd-A009	Appin	J_Hyd-A009	A009	3.13	150	100	0.00	0.00	0.0
P_Hyd-A010	Appin	J_Hyd-A010	A010	4.30	150	100	0.00	0.00	0.0
P_Hyd-A011	Appin	J_Hyd-A011	A011	3.08	150	100	0.00	0.00	0.0
WM2039_04	Appin	J_Hyd-R015E	J-0592	1807.30	200	110	4.56	0.15	0.4
WM2047C_01	Appin	WVR028	WVR053	1957.59	200	110	2.16	0.07	0.1
WM2089C_01	Appin	J-0355	J-0277	21.32	200	110	-6.61	0.21	0.0
WM2089C_02	Appin	J-0277	J-0278	8.12	200	110	-6.61	0.21	0.0
WM2089C_03	Appin	J-0278	J_Hyd-A007	52.72	200	110	-6.61	0.21	0.0
WM2089C_04	Appin	J_Hyd-A007	J-0304	888.44	200	110	-6.61	0.21	0.4
WM2090C_01	Appin	J-0015	J_Hyd-A011	1.06	200	110	0.00	0.00	0.0
WM2090C_02	Appin	J_Hyd-A011	WVA008	178.39	200	110	0.00	0.00	0.0
WM2090C_03	Appin	WVA008	J-0219	6.16	200	110	0.00	0.00	0.0
WM2090C_04	Appin	J-0015	WVR026	6.89	200	110	0.00	0.00	0.0
WM2090C_05	Appin	WVR026	J-0246	6.25	200	110	0.00	0.00	0.0
WM2090C_06	Appin	J-0246	J-0639	984.73	200	110	0.00	0.00	0.0
WM5000C	Appin	J-0185	J-0378	85.38	200	110	2.86	0.09	0.0
WM5000_01	Appin	J-0244	J_Hyd-A003	201.84	150	100	0.00	0.00	0.0
WM5000_02	Appin	J-0244	J-0185	6.24	150	100	0.00	0.00	0.0
WM5001C_01	Appin	J-0219	WVA006	138.25	200	110	-2.53	0.08	0.0
WM5001C_02	Appin	WVA006	J_Hyd-A009	5.56	200	110	-2.53	0.08	0.0
WM5001C_03	Appin	J_Hyd-A009	J-0254	6.79	200	110	-2.53	0.08	0.0
WM5001_01	Appin	WVA015	WVA013	125.45	150	100	-1.44	0.08	0.0
WM5001_02	Appin	WVA013	J-0152	11.83	150	100	-1.44	0.08	0.0
WM5001_03	Appin	J-0318	WVA015	14.13	150	100	-1.44	0.08	0.0
WM5002C	Appin	J-0254	J-0140	127.36	200	110	-4.19	0.13	0.0
WM5002_01	Appin	J-0152	J_Hyd-A005	3.94	150	100	-1.60	0.09	0.0
WM5002_02	Appin	J_Hyd-A005	WVA010	106.59	150	100	-1.60	0.09	0.0
WM5002_03	Appin	WVA010	J-0221	14.76	150	100	-1.60	0.09	0.0
WM5003C_01	Appin	J-0140	J_Hyd-A008	3.71	200	110	-5.00	0.16	0.0
WM5003C_02	Appin	J_Hyd-A008	J-0355	96.83	200	110	-5.00	0.16	0.0
WM5003_01	Appin	J-0221	WVA012	5.45	300	120	-1.61	0.02	0.0
WM5003_02	Appin	J_Hyd-A006	WVA012	63.78	150	100	1.61	0.09	0.0
WM5003_03	Appin	J_Hyd-A006	J-0322	26.27	150	100	-1.61	0.09	0.0
WM5004_01	Appin	J-0359	WVA019	17.34	150	100	0.00	0.00	0.0
WM5004_02	Appin	WVA019	J-0280	27.46	150	100	0.00	0.00	0.0
WM5004_03	Appin	J-0280	J-0281	8.22	150	100	0.00	0.00	0.0
WM5005C	Appin	J-0378	WVR028	42.73	200	110	2.16	0.07	0.0
WM5005_01	Appin	J-0119	WVA018	8.26	150	100	0.00	0.00	0.0
WM5005_02	Appin	J_Hyd-A001	J_Hyd-A002	182.10	150	100	0.00	0.00	0.0
WM5005_03	Appin	J_Hyd-A002	WVA021	57.26	150	100	0.00	0.00	0.0
WM5005_04	Appin	WVA021	J-0009	3.68	150	100	0.00	0.00	0.0
WM5005_05	Appin	J-0009	J-0010	0.95	200	110	0.00	0.00	0.0

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM5005_06	Appin	J-0010	J-0378	15.89	200	110	0.00	0.00	0.0
WM5006C_01	Appin	J-0318	J_Hyd-A010	80.91	200	110	-2.53	0.08	0.0
WM5006C_02	Appin	J_Hyd-A010	WVA007	8.74	200	110	-2.53	0.08	0.0
WM5006C_03	Appin	WVA007	J-0219	14.62	200	110	-2.53	0.08	0.0
WM5006_01	Appin	J-0152	WVA014	4.55	150	100	0.16	0.01	0.0
WM5006_02	Appin	J-0254	WVA005	14.70	150	100	-0.16	0.01	0.0
WM5006_03	Appin	WVA005	WVA014	85.73	150	100	-0.16	0.01	0.0
WM5008_01	Appin	J-0140	WVA003	15.05	150	100	0.81	0.05	0.0
WM5008_02	Appin	WVA003	J-0361	14.45	150	100	0.81	0.05	0.0
WM5008_03	Appin	J-0361	WVA011	68.77	150	100	0.81	0.05	0.0
WM5008_04	Appin	WVA011	J-0221	7.70	150	100	0.81	0.05	0.0
WM5009_01	Appin	J-0322	J-0323	10.27	150	100	-1.61	0.09	0.0
WM5009_02	Appin	J-0355	WVA001	13.48	150	100	1.61	0.09	0.0
WM5009_03	Appin	J-0323	WVA001	84.78	150	100	-1.61	0.09	0.0
WM5010C_01	Appin	WVA020	J-0359	14.01	200	110	-2.86	0.09	0.0
WM5010C_02	Appin	J-0359	J_Hyd-A004	37.21	200	110	-2.86	0.09	0.0
WM5010C_03	Appin	J_Hyd-A004	WVA016	58.77	200	110	-2.86	0.09	0.0
WM5010C_04	Appin	WVA016	J-0318	10.02	200	110	-2.86	0.09	0.0
WM5010C_05	Appin	WVA020	J-0185	4.51	200	110	2.86	0.09	0.0
WM5011_01	Appin	J-0221	J-0479	58.91	150	100	0.83	0.05	0.0
WM5011_02	Appin	J-0479	J-0480	38.55	150	100	0.83	0.05	0.0
WM5016_01	Appin	J-0480	WVA017	109.22	150	100	0.00	0.00	0.0
WM5016_02	Appin	WVA017	J-0119	3.36	150	100	0.00	0.00	0.0
WM5018	Appin	J-0560	J-0119	104.65	150	100	0.00	0.00	0.0
WM5019C_01	Appin	J-0404	J-0345	19.32	200	110	0.00	0.00	0.0
WM5019C_02	Appin	J-0345	J-0346	12.16	200	110	0.00	0.00	0.0
WM5019C_03	Appin	J-0346	WVA009	109.80	200	110	0.00	0.00	0.0
WM5019C_04	Appin	WVA009	J-0219	5.41	200	110	0.00	0.00	0.0
P-233	Rural	J-0299	J_Hyd-R006E	1.74	150	100	3.31	0.19	0.0
P-235	Rural	J-0634	J-752	4.00	50	130	-2.89	1.47	0.2
P-236	Rural	J-0335	J_Hyd-R005E	15.68	150	100	1.15	0.06	0.0
P-238	Rural	WVR039	J-0525	2.51	200	110	3.41	0.11	0.0
P-239	Rural	J_Hyd-R021M	WVR007	1.46	200	110	-2.56	0.08	0.0
P-937	Rural	J-0519	J-0520	68.34	18	130	0.00	0.00	0.0
P_Hyd-R001E	Rural	J_Hyd-R001E	R001E	4.14	150	100	0.00	0.00	0.0
P_Hyd-R002E	Rural	J_Hyd-R002E	R002E	2.23	150	100	0.00	0.00	0.0
P_Hyd-R003E	Rural	J_Hyd-R003E	R003E	3.03	150	100	0.00	0.00	0.0
P_Hyd-R004E	Rural	J_Hyd-R004E	R004E	6.82	150	100	0.00	0.00	0.0
P_Hyd-R005E	Rural	J_Hyd-R005E	R005E	8.61	150	100	0.00	0.00	0.0
P_Hyd-R006E	Rural	J_Hyd-R006E	R006E	4.58	150	100	0.00	0.00	0.0
P_Hyd-R007E	Rural	J_Hyd-R007E	R007E	3.56	150	100	0.00	0.00	0.0
P_Hyd-R008E	Rural	J_Hyd-R008E	R008E	2.58	150	100	0.00	0.00	0.0
P_Hyd-R009E	Rural	J_Hyd-R009E	R009E	7.00	150	100	0.00	0.00	0.0
P_Hyd-R010E	Rural	J_Hyd-R010E	R010E	2.16	150	100	0.00	0.00	0.0
P_Hyd-R011E	Rural	J_Hyd-R011E	R011E	2.25	150	100	0.00	0.00	0.0
P_Hyd-R012E	Rural	J_Hyd-R012E	R012E	1.76	150	100	0.00	0.00	0.0
P_Hyd-R013E	Rural	J_Hyd-R013E	R013E	5.77	150	100	0.00	0.00	0.0
P_Hyd-R014E	Rural	J_Hyd-R014E	R014E	3.99	150	100	0.00	0.00	0.0
P_Hyd-R015E	Rural	J_Hyd-R015E	R015E	3.40	150	100	0.00	0.00	0.0
P_Hyd-R016E	Rural	J_Hyd-R016E	R016E	6.25	150	100	0.00	0.00	0.0
P_Hyd-R017M	Rural	J_Hyd-R017M	R017M	6.10	150	100	0.00	0.00	0.0
P_Hyd-R018M	Rural	J_Hyd-R018M	R018M	1.92	150	100	0.00	0.00	0.0
P_Hyd-R019M	Rural	J_Hyd-R019M	R019M	0.87	150	100	0.00	0.00	0.0
P_Hyd-R020M	Rural	J_Hyd-R020M	R020M	4.05	150	100	0.00	0.00	0.0
P_Hyd-R021M	Rural	J_Hyd-R021M	R021M	5.88	150	100	0.00	0.00	0.0
P_Hyd-R026E	Rural	J_Hyd-R026E	R026E	3.60	150	100	0.00	0.00	0.0
P_Hyd-R027W	Rural	J_Hyd-R027W	R027W	10.01	150	100	0.00	0.00	0.0
P_Hyd-R028E	Rural	J_Hyd-R028E	R028E	2.63	150	100	0.00	0.00	0.0
P_Hyd-R029W	Rural	J_Hyd-R029W	R029W	161.23	150	100	0.00	0.00	0.0
P_Hyd-R030M	Rural	J_Hyd-R030M	R030M	58.13	150	100	0.00	0.00	0.0
P_Hyd-R031M	Rural	J_Hyd-R031M	R031M	4.46	150	100	0.00	0.00	0.0
P_Hyd-R032M	Rural	J_Hyd-R032M	R032M	15.28	150	100	0.00	0.00	0.0
P_Hyd-R033E	Rural	J_Hyd-R033E	R033E	7.67	150	100	0.00	0.00	0.0
WM1010C_14	Rural	WVR007	WVR008	50.55	200	110	-2.56	0.08	0.0
WM1011C_01	Rural	WVR008	J_Hyd-R020M	457.55	200	110	-2.56	0.08	0.0
WM1011C_02	Rural	J_Hyd-R020M	J_Hyd-R019M	757.63	200	110	-2.56	0.08	0.1
WM1011C_03	Rural	J_Hyd-R019M	J_Hyd-R018M	317.29	200	110	-2.56	0.08	0.0
WM1011C_04	Rural	J_Hyd-R018M	WVR009	881.46	200	110	-2.56	0.08	0.1
WM1011C_05	Rural	J-0086	J-0260	7.07	200	110	-2.56	0.08	0.0
WM1011C_06	Rural	WVR009	J_Hyd-R017M	6.62	200	110	-2.56	0.08	0.0
WM1011C_07	Rural	J_Hyd-R017M	J-0086	2.48	200	110	-2.56	0.08	0.0
WM1011C_08	Rural	PRV-1	J-0260	21.84	300	120	8.42	0.12	0.0
WM1011_01	Rural	WVR050	J-0633	615.40	300	120	5.87	0.08	0.0
WM1011_02	Rural	J-0232	WVR050	5.77	150	100	5.87	0.33	0.0
WM1011_03	Rural	J-0633	J-0643	1830.27	300	120	5.87	0.08	0.1
WM1012C_01	Rural	J-0231	J_Hyd-R031M	80.50	300	120	29.44	0.42	0.1
WM1012C_02	Rural	J_Hyd-R031M	J-0397	294.47	300	120	29.44	0.42	0.2
WM1012C_03	Rural	J-0397	J-0398	18.34	300	120	29.44	0.42	0.0
WM1012C_04	Rural	J-0398	J-0441	604.41	300	120	29.44	0.42	0.5
WM1012C_05	Rural	J-0441	J-0442	24.83	300	120	29.44	0.42	0.0
WM1012C_06	Rural	J-0442	J-0547	90.95	300	120	29.44	0.42	0.1
WM1012C_07	Rural	J-0547	J-0422	1548.63	300	120	29.44	0.42	1.2
WM1012C_08	Rural	J-0422	J-0163	21.99	300	120	29.44	0.42	0.0
WM1012_01	Rural	J-0329	J-0330	11.08	50	130	0.00	0.00	0.0
WM1012_02	Rural	J-0330	J-0300	1185.95	50	130	0.00	0.00	0.0
WM1012_03	Rural	J-0300	J-0301	9.00	50	130	0.00	0.00	0.0
WM1012_04	Rural	J-0301	J-0616	285.01	50	130	0.00	0.00	0.0
WM1013C_01	Rural	J-0164	WVR019	1176.14	300	120	29.44	0.42	0.9
WM1013C_02	Rural	J-0163	J-0164	4.12	300	120	29.44	0.42	0.0
WM1013C_03	Rural	WVR019	J_Hyd-R030M	388.90	300	120	29.44	0.42	0.3
WM1013C_04	Rural	J_Hyd-R030M	J-0170	21.89	300	120	29.44	0.42	0.0
WM1013C_05	Rural	J-0170	J-0171	4.24	300	120	29.44	0.42	0.0
WM1013C_06	Rural	J-0171	J-0379	16.49	300	120	29.44	0.42	0.0
WM1013C_07	Rural	J-0379	J-0149	372.44	300	120	29.44	0.42	0.3
WM1013C_08	Rural	J-0149	J-0150	3.91	300	120	29.44	0.42	0.0
WM1013C_09	Rural	J-0150	J-0129	27.49	300	120	29.44	0.42	0.0
WM1013C_10	Rural	J-0129	J-0130	3.55	300	120	29.44	0.42	0.0
WM1013C_11	Rural	J-0130	J-0595	201.38	300	120	29.44	0.42	0.2
WM1021C_01	Rural	WVR020	J-0577	121.69	300	120	29.44	0.42	0.1

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM1021C_02(1)	Rural	J-0577	J-0519	660.77	300	120	29.44	0.42	0.5
WM1021C_02(2)(	Rural	J-0519	J-752	22.88	300	120	29.44	0.42	0.0
WM1026C_01	Rural	J-0408	WVR013	20.55	150	100	0.00	0.00	0.0
WM1026C_02	Rural	WVR013	J-0645	2396.11	150	100	0.00	0.00	0.0
WM1075C_02	Rural	J_Hyd-R029W	J_Hyd-R027W	3137.12	350	120	37.87	0.39	1.8
WM1075C_03	Rural	J_Hyd-R027W	J-0629	4074.92	350	120	37.87	0.39	2.4
WM1075C_04	Rural	J-0629	J-0431	496.33	350	120	37.87	0.39	0.3
WM1075C_05	Rural	J-0431	J-0432	23.51	350	120	37.87	0.39	0.0
WM1075C_06	Rural	J-0432	J-0613	1094.09	350	120	37.87	0.39	0.6
WM1075C_07	Rural	J-0613	J-0416	258.33	350	120	37.87	0.39	0.2
WM1075C_08(1)	Rural	J-0416	J-0466	12.01	300	120	37.87	0.54	0.0
WM1075C_08(2)	Rural	J-0466	WVR010	9.40	300	120	29.44	0.42	0.0
WM1075C_09	Rural	WVR010	J-0231	5.73	300	120	29.44	0.42	0.0
WM1075C_10	Rural	PRV-1	J-0466	31.58	300	120	-8.42	0.12	0.0
WM1086_01	Rural	J-0383	J-0199	63.41	300	120	5.87	0.08	0.0
WM1086_02	Rural	J-0199	J-0200	4.92	300	120	5.87	0.08	0.0
WM1086_03	Rural	J-0200	J-0266	7.51	300	120	5.87	0.08	0.0
WM1086_04	Rural	J-0266	J-0224	8.04	300	120	5.87	0.08	0.0
WM1086_05	Rural	J-0224	J-0225	5.54	300	120	5.87	0.08	0.0
WM1086_06	Rural	J-0225	J-0610	279.39	300	120	5.87	0.08	0.0
WM1086_07	Rural	J-0610	J-0611	236.26	300	120	5.87	0.08	0.0
WM1086_08	Rural	J-0611	J-0626	363.27	300	120	5.87	0.08	0.0
WM1086_09	Rural	J-0626	J-0232	348.32	300	120	5.87	0.08	0.0
WM1086_10	Rural	J-0260	J-0383	17.08	200	110	5.87	0.19	0.0
WM1087_01	Rural	J-0232	WVR051	12.83	200	110	0.00	0.00	0.0
WM1087_02	Rural	WVR051	J-0276	8.01	200	110	0.00	0.00	0.0
WM1087_03	Rural	J-0276	J-0293	8.73	200	110	0.00	0.00	0.0
WM1087_04	Rural	J-0293	J-0365	39.13	200	110	0.00	0.00	0.0
WM1087_05	Rural	J-0365	J-0366	14.54	200	110	0.00	0.00	0.0
WM1087_06	Rural	J-0366	J-0607	301.23	200	110	0.00	0.00	0.0
WM1087_07	Rural	J-0607	J-0206	227.17	200	110	0.00	0.00	0.0
WM1087_08	Rural	J-0206	J-0182	5.10	200	110	0.00	0.00	0.0
WM1087_09	Rural	J-0182	J-0183	4.50	200	110	0.00	0.00	0.0
WM1087_10	Rural	J-0183	J-0233	5.81	200	110	0.00	0.00	0.0
WM1087_11	Rural	J-0233	WVR012	785.82	200	110	0.00	0.00	0.0
WM1087_12	Rural	WVR012	J-0374	15.48	200	110	0.00	0.00	0.0
WM1087_13	Rural	J-0366	J-0329	62.78	50	130	0.00	0.00	0.0
WM1088_01	Rural	J-0374	J-0623	321.50	200	110	0.00	0.00	0.0
WM1088_02	Rural	J-0623	J-0530	924.91	200	110	0.00	0.00	0.0
WM1088_03	Rural	J-0530	WVR014	69.85	200	110	0.00	0.00	0.0
WM1089_01	Rural	WVR014	J-0309	9.37	200	110	0.00	0.00	0.0
WM1089_02(1)	Rural	J-0309	J-0408	31.72	200	110	0.00	0.00	0.0
WM1089_02(2)	Rural	J-0408	J_Hyd-R032M	6.61	200	110	0.00	0.00	0.0
WM1089_03	Rural	J_Hyd-R032M	WVR015	244.84	200	110	0.00	0.00	0.0
WM1089_04	Rural	WVR015	J-0193	5.52	200	110	0.00	0.00	0.0
WM1089_05	Rural	J-0193	J-0194	4.77	200	110	0.00	0.00	0.0
WM1097C_01	Rural	J-0595	J-0596	165.95	300	120	29.44	0.42	0.1
WM1097C_02	Rural	J-0596	J-0614	269.97	300	120	29.44	0.42	0.2
WM1097C_03	Rural	J-0614	J-0617	300.03	300	120	29.44	0.42	0.2
WM1097C_04	Rural	J-0617	J-0392	683.41	300	120	29.44	0.42	0.5
WM1098C	Rural	J-0392	WVR020	538.86	300	120	29.44	0.42	0.4
WM2025_01	Rural	J-0391	J-0356	287.21	150	100	0.00	0.00	0.0
WM2025_02	Rural	J-0356	J-0357	13.93	150	100	0.00	0.00	0.0
WM2025_03	Rural	J-0357	J_Hyd-R033E	230.73	150	100	0.00	0.00	0.0
WM2025_04	Rural	J-0391	J-0392	17.92	150	100	0.00	0.00	0.0
WM2030C_01	Rural	J-0263	J-0207	7.29	200	110	3.41	0.11	0.0
WM2030C_02	Rural	J-0207	J-0090	5.11	200	110	3.41	0.11	0.0
WM2030C_03	Rural	J-0090	WVR039	2.54	200	110	3.41	0.11	0.0
WM2030C_04	Rural	J-0525	WVR060	64.33	150	100	3.41	0.19	0.0
WM2030C_05	Rural	WVR060	J-0369	135.29	150	100	3.41	0.19	0.1
WM2030C_06	Rural	J-0369	J-0020	14.81	150	100	3.41	0.19	0.0
WM2030C_07	Rural	J-0020	J_Hyd-R009E	1.18	150	100	3.41	0.19	0.0
WM2030C_08	Rural	J_Hyd-R009E	J-0604	243.33	150	100	3.41	0.19	0.1
WM2030C_09	Rural	J-0604	J-0605	220.12	150	100	3.41	0.19	0.1
WM2030C_10	Rural	J-0605	J-0257	263.84	150	100	3.41	0.19	0.2
WM2030C_11	Rural	J-0257	WVR040	6.86	150	100	3.41	0.19	0.0
WM2030C_12	Rural	WVR040	J_Hyd-M002	689.84	150	100	3.41	0.19	0.4
WM2036_01	Rural	J-0100	J-0462	239.86	200	110	-11.17	0.36	0.3
WM2036_04	Rural	J-0618	J-0619	303.91	200	110	11.17	0.36	0.3
WM2036_05	Rural	J-0619	J-0624	603.05	200	110	11.17	0.36	0.7
WM2036_06	Rural	J-0624	J-0463	327.67	200	110	11.17	0.36	0.4
WM2036_07	Rural	J-0463	J-0464	30.58	200	110	11.17	0.36	0.0
WM2036_08	Rural	J-0464	J-0461	41.99	200	110	11.17	0.36	0.1
WM2036_09	Rural	J-0461	J-0462	30.21	200	110	11.17	0.36	0.0
WM2037_01	Rural	J-0325	J-0073	26.45	200	110	-11.17	0.36	0.0
WM2037_02	Rural	J-0073	J-0074	2.30	200	110	-11.17	0.36	0.0
WM2037_03	Rural	J-0074	J-0638	1562.44	200	110	-11.17	0.36	1.7
WM2037_04	Rural	J-0638	WVR052	826.51	200	110	-11.17	0.36	0.9
WM2037_05	Rural	WVR052	J-0100	3.90	200	110	-11.17	0.36	0.0
WM2038_01	Rural	J-0376	J-0545	89.85	200	110	-11.17	0.36	0.1
WM2038_02	Rural	J-0545	WVR024	2310.40	200	110	-11.17	0.36	2.5
WM2038_03	Rural	WVR024	J-0210	5.19	200	110	-11.17	0.36	0.0
WM2038_04	Rural	J-0210	J-0325	10.57	200	110	-11.17	0.36	0.0
WM2039_01	Rural	J-688	WVR025	1.73	200	110	4.56	0.15	0.0
WM2039_02	Rural	WVR025	J-0315	9.84	200	110	4.56	0.15	0.0
WM2039_03	Rural	J-0315	J_Hyd-R015E	53.54	200	110	4.56	0.15	0.0
WM2039_05	Rural	J-0592	J-0593	154.11	200	110	4.56	0.15	0.0
WM2039_06	Rural	J-0593	WVR031	431.61	200	110	4.56	0.15	0.1
WM2039_07	Rural	WVR031	J-0362	20.22	200	110	4.56	0.15	0.0
WM2040_01	Rural	J-0362	J_Hyd-R014E	14.45	200	110	4.56	0.15	0.0
WM2040_02	Rural	J_Hyd-R014E	J-0599	560.06	200	110	4.56	0.15	0.1
WM2040_03	Rural	J-0599	J-0600	185.21	200	110	4.56	0.15	0.0
WM2040_04	Rural	J-0600	J-0636	706.37	200	110	4.56	0.15	0.2
WM2040_05	Rural	J-0636	WVR034	947.99	200	110	4.56	0.15	0.2
WM2040_06	Rural	WVR034	J_Hyd-R013E	20.02	200	110	4.56	0.15	0.0
WM2041_01	Rural	J_Hyd-R013E	J-0118	4.50	200	110	1.15	0.04	0.0
WM2041_02	Rural	J-0118	WVR035	3.31	200	110	1.15	0.04	0.0
WM2041_03	Rural	WVR035	J-0341	11.80	150	100	1.15	0.06	0.0
WM2041_04	Rural	J-0341	J_Hyd-R008E	1161.30	150	100	1.15	0.06	0.1

2041 MDD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM2041_05	Rural	J_Hyd-R008E	WVR044	1217.52	150	100	1.15	0.06	0.1
WM2041_06	Rural	WVR044	J-0335	11.48	150	100	1.15	0.06	0.0
WM2042_01	Rural	J-0241	WVR047	6.16	100	100	0.00	0.00	0.0
WM2042_02	Rural	WVR047	J-0117	3.28	100	100	0.00	0.00	0.0
WM2042_03	Rural	J-0117	J-0053	90.84	100	100	0.00	0.00	0.0
WM2042_04	Rural	J-0053	WVR056	1.74	50	100	0.00	0.00	0.0
WM2043_01	Rural	J-0208	J_Hyd-R002E	5.14	150	100	0.00	0.00	0.0
WM2043_02	Rural	J_Hyd-R002E	J-0057	289.87	150	100	0.00	0.00	0.0
WM2043_03	Rural	J-0057	J_Hyd-R003E	1.81	150	100	0.00	0.00	0.0
WM2043_04	Rural	J_Hyd-R003E	J-0282	8.32	150	100	0.00	0.00	0.0
WM2043_05	Rural	J-0282	J_Hyd-R028E	276.99	150	100	0.00	0.00	0.0
WM2047C_02	Rural	WVR053	J-0319	110.95	200	110	2.16	0.07	0.0
WM2047C_03	Rural	J-0319	J_Hyd-R016E	10.19	200	110	2.16	0.07	0.0
WM2047C_04	Rural	J_Hyd-R016E	J-0113	3.18	200	110	2.16	0.07	0.0
WM2047C_05	Rural	J-0113	J-0186	5.93	200	110	2.16	0.07	0.0
WM2048C_01	Rural	J-0186	WVR029	4.53	200	110	2.16	0.07	0.0
WM2048C_02	Rural	WVR029	J-0103	2.95	200	110	2.16	0.07	0.0
WM2048C_03	Rural	J-0103	WVR030	1818.80	200	110	2.16	0.07	0.1
WM2048C_04	Rural	WVR030	WVR032	608.74	200	110	2.16	0.07	0.0
WM2048C_05	Rural	WVR032	J-0151	3.93	200	110	2.16	0.07	0.0
WM2048C_06	Rural	J-0151	J-0215	5.40	200	110	2.16	0.07	0.0
WM2048C_07	Rural	J-0215	J-0077	9.76	200	110	2.16	0.07	0.0
WM2049C_01	Rural	J-0077	J-0078	2.32	200	110	2.16	0.07	0.0
WM2049C_02	Rural	J-0078	WVR033	3.59	200	110	2.16	0.07	0.0
WM2049C_03	Rural	WVR033	J_Hyd-R007E	995.72	200	110	2.16	0.07	0.1
WM2049C_04	Rural	J_Hyd-R007E	J-0352	1408.71	200	110	2.16	0.07	0.1
WM2049C_05	Rural	J-0019	WVR046	1.14	200	110	-2.16	0.07	0.0
WM2049C_06	Rural	WVR046	J-0110	3.14	200	110	-2.16	0.07	0.0
WM2049C_07	Rural	J-0110	J-0352	13.14	200	110	-2.16	0.07	0.0
WM2089C_05	Rural	J-0304	J-0137	9.13	200	110	-6.61	0.21	0.0
WM2089C_06	Rural	J-0137	J-0138	3.61	200	110	-6.61	0.21	0.0
WM2089C_07(1)	Rural	J-0138	J-688	5.16	200	110	-6.61	0.21	0.0
WM2089C_07(2)	Rural	J-688	J-0376	10.48	200	110	-11.17	0.36	0.0
WM2097_01	Rural	J-0100	WVR024	2.85	100	100	0.00	0.00	0.0
WM2097_02	Rural	WVR024	J-0625	347.23	100	100	0.00	0.00	0.0
WM2111C_01	Rural	J_Hyd-R006E	J-0064	8.81	150	100	3.31	0.19	0.0
WM2111C_02	Rural	J-0064	WVR042	1.98	150	100	3.31	0.19	0.0
WM2111C_03	Rural	WVR042	WVM032	932.63	150	100	3.31	0.19	0.5
WM2111_01	Rural	J-0405	J-0631	583.42	200	110	3.41	0.11	0.1
WM2111_02	Rural	J-0631	J-0563	549.68	200	110	3.41	0.11	0.1
WM2111_03	Rural	J-0563	J-0536	105.89	200	110	3.41	0.11	0.0
WM2111_04	Rural	J-0536	J_Hyd-R010E	76.85	200	110	3.41	0.11	0.0
WM2111_05	Rural	J_Hyd-R010E	WVR038	3.57	200	110	3.41	0.11	0.0
WM2111_06	Rural	WVR038	J-0243	6.22	200	110	3.41	0.11	0.0
WM2111_07	Rural	J-0243	J-0370	14.97	200	110	3.41	0.11	0.0
WM2111_08	Rural	J-0370	J-0263	36.29	200	110	3.41	0.11	0.0
WM2112C_01	Rural	J_Hyd-R005E	WVR043	17.41	150	100	3.31	0.19	0.0
WM2112C_02	Rural	WVR043	J-0326	1341.21	150	100	3.31	0.19	0.7
WM2112C_03	Rural	J-0326	J-0298	10.58	150	100	3.31	0.19	0.0
WM2112C_04	Rural	J-0298	J-0299	8.97	150	100	3.31	0.19	0.0
WM2112_01	Rural	J_Hyd-R013E	WVR036	20.22	200	110	3.41	0.11	0.0
WM2112_02	Rural	WVR036	J_Hyd-R012E	11.04	200	110	3.41	0.11	0.0
WM2112_03	Rural	J_Hyd-R012E	J-0582	131.98	200	110	3.41	0.11	0.0
WM2112_04	Rural	J-0582	J-0573	1091.55	200	110	3.41	0.11	0.1
WM2112_05	Rural	J-0573	J-0574	114.04	200	110	3.41	0.11	0.0
WM2112_06	Rural	J-0574	J_Hyd-R011E	120.36	200	110	3.41	0.11	0.0
WM2112_07	Rural	J_Hyd-R011E	J-0351	12.71	200	110	3.41	0.11	0.0
WM2112_08	Rural	J-0351	WVR037	15.56	200	110	3.41	0.11	0.0
WM2112_09	Rural	WVR037	J-0405	20.43	200	110	3.41	0.11	0.0
WM2113C_01	Rural	J_Hyd-R004E	J_Hyd-R005E	813.28	150	100	2.16	0.12	0.2
WM2113C_02	Rural	WVR054	WVR055	86.32	150	100	-2.16	0.12	0.0
WM2113C_03	Rural	WVR055	J-0483	97.84	150	100	-2.16	0.12	0.0
WM2113C_04	Rural	WVR054	J_Hyd-R004E	21.71	150	100	2.16	0.12	0.0
WM2113C_05	Rural	J-0483	J-0484	39.50	150	100	-2.16	0.12	0.0
WM2113C_06	Rural	J-0484	WVR045	285.24	150	100	-2.16	0.12	0.1
WM2113C_07	Rural	WVR045	J-0019	39.17	150	100	-2.16	0.12	0.0
WM2114C	Rural	J-0208	J_Hyd-R001E	498.34	150	100	0.00	0.00	0.0
WM2114_01	Rural	J-0077	J_Hyd-R026E	4.87	200	110	0.00	0.00	0.0
WM2114_02	Rural	J_Hyd-R026E	J-0637	713.60	200	110	0.00	0.00	0.0
WM2118C	Rural	J-0241	J-0208	215.87	150	100	0.00	0.00	0.0
WM2119C	Rural	J-0019	J-0241	176.56	150	100	0.00	0.00	0.0

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0003	Glencoe	0.00	220.18	260.3	393
J-0004	Glencoe	0.00	221.47	259.7	374
J-0005	Glencoe	0.00	220.94	260.0	383
J-0006	Glencoe	0.00	219.32	263.2	429
J-0007	Glencoe	0.00	219.32	263.2	429
J-0011	Glencoe	0.00	219.21	260.6	405
J-0013	Glencoe	0.00	219.32	263.2	430
J-0014	Glencoe	0.00	219.71	260.3	397
J-0017	Glencoe	0.00	219.32	263.2	430
J-0025	Glencoe	0.00	221.81	259.9	373
J-0032	Glencoe	0.00	221.02	260.3	384
J-0036	Glencoe	0.00	220.75	259.8	382
J-0038	Glencoe	0.00	219.48	263.2	428
J-0039	Glencoe	0.00	219.48	263.2	428
J-0044	Glencoe	0.00	221.03	259.8	379
J-0045	Glencoe	0.00	221.03	259.8	379
J-0047	Glencoe	0.00	219.32	263.2	430
J-0048	Glencoe	0.00	219.89	261.7	409
J-0049	Glencoe	0.00	219.89	261.6	409
J-0054	Glencoe	1.91	222.07	259.6	368
J-0059	Glencoe	0.00	221.53	260.2	378
J-0060	Glencoe	0.00	221.52	259.9	376
J-0063	Glencoe	0.00	219.52	260.6	402
J-0066	Glencoe	8.76	219.37	263.6	433
J-0067	Glencoe	1.36	219.37	263.6	433
J-0070	Glencoe	0.00	220.30	259.9	388
J-0071	Glencoe	0.00	221.39	259.7	375
J-0072	Glencoe	0.00	221.47	259.7	374
J-0075	Glencoe	0.00	219.89	261.7	409
J-0076	Glencoe	0.00	221.37	259.9	377
J-0080	Glencoe	0.00	219.03	260.7	408
J-0084	Glencoe	0.00	221.64	259.9	375
J-0089	Glencoe	0.00	218.74	260.7	410
J-0091	Glencoe	0.00	219.67	260.6	400
J-0093	Glencoe	0.00	219.21	260.7	406
J-0094	Glencoe	0.00	219.02	260.5	406
J-0097	Glencoe	0.00	220.18	260.3	393
J-0098	Glencoe	0.00	222.46	259.7	364
J-0099	Glencoe	0.00	220.30	260.0	388
J-0101	Glencoe	3.09	220.52	263.8	424
J-0104	Glencoe	0.00	219.02	260.5	406
J-0106	Glencoe	0.00	220.30	260.0	388
J-0107	Glencoe	1.48	219.71	260.3	397
J-0111	Glencoe	0.00	220.46	260.2	389
J-0115	Glencoe	0.00	221.64	259.9	375
J-0116	Glencoe	0.00	221.14	260.3	383
J-0123	Glencoe	0.00	219.89	261.6	408
J-0124	Glencoe	0.00	221.86	259.9	372
J-0126	Glencoe	0.00	222.19	260.3	373
J-0128	Glencoe	0.00	220.36	260.3	391
J-0134	Glencoe	0.00	221.58	259.9	375
J-0135	Glencoe	1.01	221.58	259.9	375
J-0139	Glencoe	0.00	220.94	260.0	383
J-0144	Glencoe	1.84	220.30	260.0	388
J-0145	Glencoe	0.00	219.32	263.3	430
J-0146	Glencoe	2.90	219.32	263.3	430
J-0165	Glencoe	0.00	222.40	259.7	365
J-0166	Glencoe	0.00	222.18	259.7	367
J-0168	Glencoe	0.00	218.80	263.4	436
J-0169	Glencoe	0.00	219.08	263.4	434
J-0172	Glencoe	0.00	220.46	260.2	389
J-0175	Glencoe	2.27	220.69	259.9	384
J-0178	Glencoe	0.00	220.82	260.0	383
J-0179	Glencoe	0.00	221.40	259.9	377
J-0180	Glencoe	0.00	219.24	263.5	433
J-0187	Glencoe	2.66	219.29	260.6	404
J-0191	Glencoe	0.00	219.87	260.3	395
J-0198	Glencoe	2.42	220.60	259.7	383
J-0201	Glencoe	0.00	221.07	259.9	380
J-0202	Glencoe	0.00	219.58	263.3	428
J-0205	Glencoe	0.00	219.67	260.5	400
J-0211	Glencoe	0.00	220.94	260.0	382
J-0213	Glencoe	0.90	220.33	260.2	390
J-0222	Glencoe	2.25	221.83	259.9	372
J-0227	Glencoe	0.00	218.72	260.8	411
J-0235	Glencoe	2.42	219.58	260.1	397
J-0236	Glencoe	0.00	221.53	260.2	378
J-0239	Glencoe	0.00	220.46	260.2	389
J-0252	Glencoe	0.00	221.64	259.9	375

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0255	Glencoe	0.00	220.66	259.9	384
J-0256	Glencoe	0.00	220.66	259.9	384
J-0262	Glencoe	0.00	218.81	261.1	414
J-0264	Glencoe	0.00	221.34	259.9	377
J-0265	Glencoe	0.00	221.14	260.3	383
J-0267	Glencoe	5.64	220.89	261.6	398
J-0271	Glencoe	0.00	221.37	259.9	377
J-0272	Glencoe	0.00	220.69	259.9	384
J-0273	Glencoe	0.00	220.69	259.9	384
J-0275	Glencoe	0.00	218.80	263.4	436
J-0279	Glencoe	0.00	219.07	260.1	401
J-0284	Glencoe	2.95	221.40	259.9	377
J-0285	Glencoe	0.00	221.40	259.9	377
J-0286	Glencoe	0.00	220.95	260.0	382
J-0288	Glencoe	0.00	219.95	260.1	393
J-0291	Glencoe	0.00	220.39	259.7	384
J-0303	Glencoe	0.00	220.18	260.3	393
J-0306	Glencoe	1.08	220.39	259.7	384
J-0316	Glencoe	0.00	219.71	260.3	397
J-0321	Glencoe	0.00	218.44	260.3	410
J-0324	Glencoe	0.00	220.30	260.0	388
J-0331	Glencoe	0.00	220.78	260.0	384
J-0332	Glencoe	0.00	221.43	259.9	376
J-0333	Glencoe	0.00	220.63	259.9	384
J-0334	Glencoe	0.00	220.51	259.9	386
J-0336	Glencoe	0.00	220.94	260.0	383
J-0337	Glencoe	0.00	219.08	263.6	435
J-0338	Glencoe	0.00	219.08	263.5	435
J-0339	Glencoe	0.00	221.94	259.7	369
J-0340	Glencoe	0.00	221.94	259.7	369
J-0342	Glencoe	0.00	220.51	259.9	386
J-0344	Glencoe	0.00	221.97	259.9	371
J-0353	Glencoe	0.00	221.46	260.0	377
J-0354	Glencoe	2.82	220.21	260.1	391
J-0358	Glencoe	0.00	218.83	260.6	409
J-0360	Glencoe	0.00	220.66	260.2	387
J-0364	Glencoe	1.79	222.05	259.7	368
J-0367	Glencoe	0.00	221.47	259.8	375
J-0368	Glencoe	0.00	221.72	259.8	373
J-0373	Glencoe	0.00	221.20	260.2	382
J-0381	Glencoe	0.00	220.68	259.7	382
J-0384	Glencoe	0.00	220.86	259.9	382
J-0389	Glencoe	0.00	220.58	259.7	383
J-0390	Glencoe	0.00	221.48	259.8	375
J-0402	Glencoe	0.00	222.13	259.7	368
J-0409	Glencoe	1.63	220.12	260.2	392
J-0410	Glencoe	0.00	220.77	260.0	384
J-0421	Glencoe	2.18	219.44	260.4	401
J-0424	Glencoe	0.00	221.29	260.1	380
J-0425	Glencoe	0.00	220.56	260.1	387
J-0427	Glencoe	4.20	221.50	259.6	373
J-0435	Glencoe	0.00	220.73	259.9	383
J-0437	Glencoe	0.00	221.47	259.9	376
J-0447	Glencoe	1.69	219.72	260.1	395
J-0449	Glencoe	0.00	220.38	259.9	387
J-0450	Glencoe	0.00	220.38	259.9	387
J-0451	Glencoe	0.00	220.75	260.3	387
J-0452	Glencoe	0.00	222.13	259.7	367
J-0468	Glencoe	0.00	220.56	260.4	390
J-0469	Glencoe	0.00	220.51	260.3	390
J-0481	Glencoe	0.96	221.57	259.9	375
J-0488	Glencoe	0.00	219.85	260.1	394
J-0494	Glencoe	2.98	219.65	263.6	430
J-0497	Glencoe	0.00	220.51	259.9	386
J-0503	Glencoe	0.00	220.59	259.9	385
J-0507	Glencoe	0.00	221.01	259.9	381
J-0524	Glencoe	0.00	220.61	259.9	384
J-0529	Glencoe	0.93	220.34	260.1	389
J-0533	Glencoe	0.00	220.79	259.9	383
J-0535	Glencoe	0.00	220.56	260.3	389
J-0539	Glencoe	0.62	220.67	259.8	383
J-0543	Glencoe	0.00	221.46	259.7	374
J-0544	Glencoe	0.00	219.48	263.3	429
J-0546	Glencoe	2.27	221.52	259.9	375
J-0554	Glencoe	1.35	221.27	259.8	377
J-0559	Glencoe	0.00	219.25	260.8	407
J-0561	Glencoe	0.00	221.13	259.7	378
J-0564	Glencoe	0.00	220.73	259.8	383
J-0566	Glencoe	0.00	221.47	259.8	375

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0568	Glencoe	0.00	218.97	260.3	404
J-0579	Glencoe	0.00	221.75	259.7	372
J-0580	Glencoe	0.00	221.33	259.9	378
J-0581	Glencoe	0.93	221.45	259.9	376
J-0584	Glencoe	0.00	220.81	260.2	385
J-0586	Glencoe	5.32	221.75	260.2	376
J-0590	Glencoe	0.00	219.80	260.6	399
J-0602	Glencoe	0.00	221.75	259.7	372
J-0627	Glencoe	2.25	221.20	259.6	376
J-0632	Glencoe	0.00	219.75	260.2	396
J-0635	Glencoe	0.00	222.08	263.3	404
J-0646	Glencoe	0.00	214.32	276.4	608
J-690	Glencoe	0.00	219.24	263.4	432
J-692	Glencoe	0.00	221.27	259.8	377
J-695	Glencoe	0.00	221.39	259.9	377
J-698	Glencoe	0.00	221.97	259.9	371
J-700	Glencoe	0.00	221.63	259.7	372
J-703	Glencoe	0.00	220.68	259.7	382
J-705	Glencoe	0.00	221.20	259.7	377
J-707	Glencoe	0.00	221.01	259.9	381
J-709	Glencoe	0.00	219.02	260.4	405
J-713	Glencoe	0.00	220.91	260.0	383
J-715	Glencoe	0.00	220.94	260.0	383
J-718	Glencoe	0.00	220.68	260.0	385
J-720	Glencoe	2.21	221.39	259.9	377
J-722	Glencoe	0.00	222.21	259.7	367
J-724	Glencoe	0.00	222.40	259.7	365
J-727	Glencoe	0.00	222.40	259.7	365
J-734	Glencoe	0.00	220.09	260.5	395
J-735	Glencoe	0.00	220.09	260.4	395
J-753	Glencoe	0.00	220.54	259.9	385
J-759	Glencoe	0.00	220.47	259.9	386
J-760	Glencoe	0.00	220.38	259.9	387
J-761	Glencoe	0.00	220.22	259.9	388
J-762	Glencoe	0.00	221.99	259.9	371
J-764	Glencoe	0.00	219.44	259.9	396
J-765	Glencoe	0.00	219.44	259.9	396
J-766	Glencoe	0.00	219.88	259.9	391
J-767	Glencoe	0.00	219.50	259.9	395
J-768	Glencoe	0.00	219.49	259.9	395
J-769	Glencoe	0.00	219.58	259.9	394
J-770	Glencoe	0.00	219.69	259.9	393
J-771	Glencoe	0.00	219.83	259.9	392
J-772	Glencoe	0.00	219.83	259.9	392
J-773	Glencoe	0.00	219.88	259.9	392
J-775	Glencoe	0.00	219.80	259.9	392
J-777	Glencoe	0.00	219.87	259.9	392
J-778	Glencoe	0.00	219.73	259.9	393
J-779	Glencoe	0.00	219.26	260.3	402
J-780	Glencoe	0.00	220.29	260.3	392
J-781	Glencoe	0.00	218.70	260.3	408
J-782	Glencoe	0.00	218.55	260.3	409
J-783	Glencoe	0.00	218.42	260.4	411
J-784	Glencoe	0.00	218.23	260.4	413
J-785	Glencoe	0.00	217.92	260.5	417
J-786	Glencoe	0.00	217.71	260.6	420
J-787	Glencoe	0.00	217.74	260.7	420
J-788	Glencoe	0.00	217.66	260.7	421
J-789	Glencoe	0.00	217.51	260.7	423
J-790	Glencoe	0.00	217.28	260.9	426
J-791	Glencoe	0.00	217.22	261.0	428
J-792	Glencoe	0.00	217.28	261.1	428
J-793	Glencoe	0.00	217.38	261.1	428
J-794	Glencoe	0.00	217.70	261.2	426
J-795	Glencoe	0.00	218.09	261.3	423
J-796	Glencoe	0.00	218.22	261.3	422
J-797	Glencoe	0.00	218.88	261.4	416
J-798	Glencoe	0.00	219.44	261.5	412
J-799	Glencoe	0.00	219.63	261.5	410
J-800	Glencoe	0.00	221.39	259.9	377
J-801	Glencoe	0.00	220.08	260.3	394
J-803	Glencoe	0.00	218.52	260.4	409
J-804	Glencoe	0.00	218.51	260.4	409
J-805	Glencoe	0.00	218.60	260.3	408
J-806	Glencoe	0.00	218.14	260.5	414
J-807	Glencoe	0.00	218.08	260.5	415
J-810	Glencoe	0.00	218.27	260.5	413
J-812	Glencoe	0.00	217.74	260.6	420
J-813	Glencoe	0.00	217.74	260.7	420

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-814	Glencoe	0.00	217.91	260.7	418
J-816	Glencoe	0.00	217.74	260.6	420
J-817	Glencoe	0.00	217.93	260.6	418
J-818	Glencoe	0.00	217.37	260.8	425
J-819	Glencoe	0.00	217.41	260.8	424
J-820	Glencoe	0.00	217.56	260.7	423
J-821	Glencoe	0.00	217.29	261.1	428
J-822	Glencoe	0.00	218.81	261.1	414
J-823	Glencoe	0.00	218.81	261.1	414
J-824	Glencoe	0.00	218.90	261.0	412
J-826	Glencoe	0.00	217.90	261.3	424
J-827	Glencoe	0.00	219.58	261.5	411
J_Hyd-G001	Glencoe	0.00	220.49	260.2	388
J_Hyd-G002	Glencoe	0.00	219.67	260.6	400
J_Hyd-G003	Glencoe	0.00	221.48	260.2	379
J_Hyd-G004	Glencoe	0.00	221.23	260.4	384
J_Hyd-G005	Glencoe	0.00	222.23	259.7	366
J_Hyd-G006	Glencoe	0.00	222.40	259.7	365
J_Hyd-G008	Glencoe	0.00	220.68	259.7	382
J_Hyd-G009	Glencoe	0.00	221.54	259.7	373
J_Hyd-G010	Glencoe	0.00	221.47	259.7	374
J_Hyd-G011	Glencoe	0.00	219.92	260.3	395
J_Hyd-G012	Glencoe	0.00	220.18	260.3	393
J_Hyd-G013	Glencoe	0.00	221.02	260.3	384
J_Hyd-G014	Glencoe	0.00	221.20	260.2	382
J_Hyd-G016	Glencoe	0.00	221.03	259.9	380
J_Hyd-G018	Glencoe	0.00	220.42	260.1	389
J_Hyd-G019	Glencoe	0.00	220.44	260.1	388
J_Hyd-G020	Glencoe	0.00	221.28	259.8	377
J_Hyd-G021	Glencoe	0.00	221.03	259.8	379
J_Hyd-G022	Glencoe	0.00	219.49	260.1	397
J_Hyd-G023	Glencoe	0.00	220.09	260.5	395
J_Hyd-G024	Glencoe	0.00	221.83	260.3	376
J_Hyd-G025	Glencoe	0.00	221.53	260.2	378
J_Hyd-G026	Glencoe	0.00	221.14	259.9	379
J_Hyd-G027	Glencoe	0.00	221.43	259.9	376
J_Hyd-G028	Glencoe	0.00	221.41	259.9	376
J_Hyd-G029	Glencoe	0.00	220.02	260.2	393
J_Hyd-G041	Glencoe	0.00	220.89	259.7	380
J_Hyd-G042	Glencoe	0.00	220.42	259.7	384
J_Hyd-G043	Glencoe	0.00	220.64	259.7	382
J_Hyd-G044	Glencoe	0.00	220.85	259.8	381
J_Hyd-G045	Glencoe	0.00	221.65	259.9	374
J_Hyd-G046	Glencoe	0.00	221.40	259.9	377
J_Hyd-G047	Glencoe	0.00	221.04	260.0	381
J_Hyd-G048	Glencoe	0.00	220.30	260.0	388
J_Hyd-G049	Glencoe	0.00	220.49	260.0	386
J_Hyd-G050	Glencoe	0.00	221.05	259.9	381
J_Hyd-G051	Glencoe	0.00	221.15	259.9	380
J_Hyd-G052	Glencoe	0.00	220.65	260.0	385
J_Hyd-G053	Glencoe	0.00	220.83	260.0	383
J_Hyd-G056	Glencoe	0.00	220.90	259.9	381
J_Hyd-G057	Glencoe	0.00	220.89	259.9	382
J_Hyd-G058	Glencoe	0.00	221.20	259.6	376
J_Hyd-G059	Glencoe	0.00	219.83	260.4	397
J_Hyd-G060	Glencoe	0.00	219.29	260.6	404
J_Hyd-G061	Glencoe	0.00	219.19	260.7	406
J_Hyd-G062	Glencoe	0.00	220.50	263.3	419
J_Hyd-G063	Glencoe	0.00	220.84	259.6	380
J_Hyd-G064	Glencoe	0.00	219.52	260.6	402
J_Hyd-G065	Glencoe	0.00	219.55	260.5	401
J_Hyd-G066	Glencoe	0.00	220.23	260.4	393
J_Hyd-G067	Glencoe	0.00	219.02	260.5	406
J_Hyd-G068	Glencoe	0.00	218.84	260.3	406
J_Hyd-G069	Glencoe	0.00	221.96	259.7	369
J_Hyd-G070	Glencoe	0.00	221.63	259.7	372
J_Hyd-G071	Glencoe	0.00	220.68	259.7	382
J_Hyd-G073	Glencoe	0.00	220.65	259.9	384
J_Hyd-G074	Glencoe	0.00	220.63	259.9	384
J_Hyd-G075	Glencoe	0.00	221.31	259.9	378
J_Hyd-G076	Glencoe	0.00	221.52	259.9	376
J_Hyd-G077	Glencoe	0.00	221.15	259.7	378
J_Hyd-G078	Glencoe	0.00	219.48	263.1	427
J_Hyd-G079	Glencoe	0.00	218.83	261.2	414
J_Hyd-G080	Glencoe	0.00	221.89	259.9	372
J_Hyd-G081	Glencoe	0.00	218.72	260.8	412
J_Hyd-G082	Glencoe	0.00	222.21	259.7	367
J_Hyd-G083	Glencoe	0.00	220.52	263.8	424
J_Hyd-G084	Glencoe	0.00	218.50	263.7	443

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-G085	Glencoe	0.00	221.05	259.9	380
J_Hyd-G086	Glencoe	0.00	221.52	259.9	375
J_Hyd-G087	Glencoe	0.00	222.13	259.7	367
J_Hyd-G088	Glencoe	0.00	218.78	260.3	406
J_Hyd-G089	Glencoe	0.00	219.14	260.2	402
J_Hyd-G090	Glencoe	0.00	218.83	260.2	404
J_Hyd-G091	Glencoe	0.00	218.54	260.1	407
J_Hyd-G092	Glencoe	0.00	221.27	259.8	377
J_Hyd-G093	Glencoe	0.00	220.52	260.4	390
J_Hyd-G094	Glencoe	0.00	220.33	260.2	390
J_Hyd-G095	Glencoe	0.00	221.89	259.7	370
J_Hyd-G096	Glencoe	0.00	221.27	259.6	375
J_Hyd-G097	Glencoe	0.00	221.43	259.9	376
J_Hyd-G098	Glencoe	0.00	222.70	259.7	362
J_Hyd-H_T-718	Glencoe	0.00	219.72	261.6	409
WV-348	Glencoe	0.00	222.18	259.7	367
WVG001	Glencoe	0.41	221.52	259.9	375
WVG002	Glencoe	0.00	220.69	259.9	384
WVG003	Glencoe	0.00	220.69	259.9	384
WVG004	Glencoe	0.00	220.69	259.9	384
WVG010	Glencoe	0.00	220.30	260.0	388
WVG010	Glencoe	0.00	218.74	260.7	410
WVG011	Glencoe	0.00	220.30	260.0	388
WVG012	Glencoe	0.00	220.60	260.0	386
WVG013	Glencoe	0.00	220.91	260.0	383
WVG015	Glencoe	0.00	220.81	259.9	382
WVG018	Glencoe	0.00	220.30	259.9	388
WVG019	Glencoe	0.00	220.30	260.0	388
WVG020	Glencoe	0.00	220.83	260.0	383
WVG022	Glencoe	0.00	221.20	259.9	379
WVG027	Glencoe	0.00	221.37	259.9	377
WVG028	Glencoe	0.00	221.31	259.9	378
WVG029	Glencoe	0.00	221.64	259.9	374
WVG030	Glencoe	0.00	221.21	260.0	379
WVG032	Glencoe	0.00	221.00	260.0	382
WVG035	Glencoe	0.00	220.82	260.0	383
WVG036	Glencoe	0.00	220.82	260.0	383
WVG037	Glencoe	0.00	220.78	260.0	384
WVG038	Glencoe	0.00	220.94	260.0	383
WVG039	Glencoe	0.00	220.94	260.0	383
WVG040	Glencoe	0.00	220.94	260.0	383
WVG041	Glencoe	0.00	220.94	260.0	382
WVG042	Glencoe	0.00	220.94	260.1	383
WVG043	Glencoe	0.00	221.07	259.9	380
WVG044	Glencoe	0.00	221.07	259.9	380
WVG045	Glencoe	0.00	221.44	260.0	377
WVG046	Glencoe	0.00	221.52	259.9	376
WVG047	Glencoe	0.00	221.40	260.0	377
WVG048	Glencoe	0.00	221.65	259.9	374
WVG049	Glencoe	0.00	221.65	259.9	374
WVG050	Glencoe	0.00	221.39	259.9	377
WVG051	Glencoe	0.06	220.88	259.8	381
WVG052	Glencoe	0.00	220.75	259.8	382
WVG053	Glencoe	0.00	220.37	259.7	385
WVG054	Glencoe	4.38	220.60	259.7	383
WVG055	Glencoe	0.00	220.65	259.7	382
WVG056	Glencoe	0.00	220.39	259.7	384
WVG057	Glencoe	0.00	221.86	259.9	372
WVG058	Glencoe	0.00	221.52	259.9	376
WVG059	Glencoe	0.00	221.52	259.9	376
WVG061	Glencoe	0.00	221.43	259.9	376
WVG064	Glencoe	0.00	221.03	259.8	379
WVG069	Glencoe	0.00	221.89	259.9	372
WVG070	Glencoe	0.00	221.83	259.9	372
WVG071	Glencoe	0.00	221.83	259.9	372
WVG074	Glencoe	2.49	221.48	259.8	375
WVG085	Glencoe	0.00	221.35	259.9	377
WVG086	Glencoe	0.00	221.47	259.7	374
WVG087	Glencoe	0.00	221.20	260.2	382
WVG090	Glencoe	0.00	220.66	260.3	388
WVG091	Glencoe	0.00	220.36	260.3	391
WVG093	Glencoe	0.00	220.18	260.3	393
WVG094	Glencoe	0.00	219.87	260.2	395
WVG096	Glencoe	0.00	219.71	260.3	397
WVG097	Glencoe	0.00	219.72	260.3	397
WVG099	Glencoe	0.00	220.09	260.5	395
WVG100	Glencoe	0.00	220.09	260.5	395
WVG101	Glencoe	0.00	219.67	260.5	400
WVG102	Glencoe	0.00	219.67	260.5	400

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVG103	Glencoe	0.00	219.67	260.5	400
WVG104	Glencoe	0.00	219.29	260.6	404
WVG105	Glencoe	0.00	219.29	260.6	404
WVG106	Glencoe	0.00	219.52	260.6	402
WVG107	Glencoe	0.00	219.52	260.6	402
WVG108	Glencoe	0.00	218.74	260.7	410
WVG109	Glencoe	0.00	218.74	260.7	410
WVG113	Glencoe	0.00	219.67	260.6	400
WVG116	Glencoe	0.00	219.80	260.2	395
WVG117	Glencoe	0.00	220.25	260.2	390
WVG120	Glencoe	0.00	218.73	260.7	411
WVG122	Glencoe	0.00	220.89	261.7	399
WVG129	Glencoe	0.00	220.46	260.2	389
WVG130	Glencoe	0.00	220.46	260.2	389
WVG131	Glencoe	0.00	220.46	260.2	389
WVG132	Glencoe	0.00	219.02	260.4	405
WVG133	Glencoe	0.00	219.02	260.4	405
WVG139	Glencoe	0.00	219.72	261.6	409
WVG140	Glencoe	0.00	219.89	261.7	409
WVG143	Glencoe	0.00	219.32	263.2	430
WVG147	Glencoe	0.00	218.60	260.3	408
WVG148	Glencoe	0.00	218.97	260.1	402
WVG149	Glencoe	0.00	219.95	260.1	393
WVG150	Glencoe	0.00	219.40	260.2	399
WVG151	Glencoe	1.24	218.54	260.1	407
WVG152	Glencoe	0.00	221.63	259.7	372
WVG153	Glencoe	0.00	222.46	259.7	364
WVG158	Glencoe	0.00	221.74	259.7	371
WVG159	Glencoe	0.00	222.07	259.6	368
WVG161	Glencoe	0.00	220.95	260.0	382
WVG164	Glencoe	0.00	221.63	259.7	372
WVG165	Glencoe	0.00	221.86	259.6	370
WVG169	Glencoe	0.00	221.97	259.9	371
WVG170	Glencoe	0.00	221.61	259.9	375
WVG171	Glencoe	0.00	221.81	259.9	373
WVG172	Glencoe	0.00	221.64	259.9	375
WVG175	Glencoe	0.00	221.83	259.9	372
WVG181	Glencoe	0.00	219.21	260.6	405
WVG183	Glencoe	0.00	219.03	260.7	408
WVG185	Glencoe	0.00	219.58	260.1	397
WVG186	Glencoe	0.00	220.09	260.4	395
WVG187	Glencoe	0.00	219.62	260.5	400
WVG188	Glencoe	0.00	221.14	260.3	383
WVG189	Glencoe	0.00	220.09	260.1	392
WVG190	Glencoe	1.80	219.29	260.2	400
WVG191	Glencoe	0.00	218.72	260.8	411
WVG192	Glencoe	0.00	218.72	260.8	412
WVG193	Glencoe	0.00	219.89	261.7	409
WVG196	Glencoe	0.00	219.58	262.4	419
WVG197	Glencoe	0.00	219.58	263.3	428
WVG199	Glencoe	0.00	221.53	260.2	378
WVG200	Glencoe	0.00	221.46	259.9	377
WVR021	Glencoe	0.00	219.38	263.6	433
WVR022	Glencoe	0.00	219.48	263.2	427
J-0037	Melborne	0.00	221.36	253.7	317
J-0065	Melborne	0.00	221.95	253.7	310
J-0105	Melborne	0.00	221.78	253.7	312
J-0108	Melborne	0.00	222.00	253.7	310
J-0109	Melborne	1.68	222.00	253.7	310
J-0125	Melborne	0.00	221.88	253.7	311
J-0156	Melborne	0.00	222.65	253.7	304
J-0157	Melborne	0.00	222.65	253.7	304
J-0158	Melborne	0.00	221.85	253.7	311
J-0159	Melborne	0.00	221.86	253.7	311
J-0176	Melborne	0.00	219.99	253.7	330
J-0177	Melborne	1.72	220.58	253.7	324
J-0189	Melborne	0.00	221.71	253.6	313
J-0192	Melborne	0.00	221.15	253.7	319
J-0203	Melborne	0.00	221.35	253.7	316
J-0230	Melborne	1.92	222.96	253.7	300
J-0237	Melborne	0.00	221.35	253.7	316
J-0248	Melborne	0.00	221.91	253.6	311
J-0249	Melborne	1.84	221.91	253.6	311
J-0312	Melborne	0.00	221.84	253.7	312
J-0396	Melborne	0.00	221.53	253.6	314
J-0403	Melborne	0.00	221.78	253.7	312
J-0407	Melborne	1.87	220.70	253.7	322
J-0413	Melborne	0.00	221.82	253.7	312
J-0414	Melborne	0.00	221.49	253.7	315

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0430	Melborne	0.00	221.36	253.7	316
J-0434	Melborne	0.00	221.75	253.7	312
J-0476	Melborne	0.00	223.00	253.6	300
J-0493	Melborne	0.51	219.69	253.6	332
J-0498	Melborne	0.00	222.22	253.7	308
J-0500	Melborne	0.00	222.24	253.7	307
J-0502	Melborne	0.00	221.77	253.7	312
J-0531	Melborne	0.00	222.32	253.7	307
J-0639	Melborne	0.00	225.41	254.9	289
J_Hyd-M002	Melborne	0.00	219.00	253.9	341
J_Hyd-M003	Melborne	0.00	219.73	253.8	333
J_Hyd-M004	Melborne	0.00	221.15	253.7	319
J_Hyd-M005	Melborne	0.00	221.44	253.7	316
J_Hyd-M006	Melborne	0.00	222.31	253.7	307
J_Hyd-M007	Melborne	0.00	221.82	253.7	312
J_Hyd-M008	Melborne	0.00	222.52	253.7	305
J_Hyd-M009	Melborne	0.00	222.86	253.7	301
J_Hyd-M010	Melborne	0.00	221.91	253.6	311
J_Hyd-M011	Melborne	0.00	223.22	253.6	298
J_Hyd-M012	Melborne	0.00	221.53	253.7	314
J_Hyd-M013	Melborne	0.42	223.56	253.6	294
J_Hyd-M014	Melborne	0.00	222.20	253.7	308
J_Hyd-M015	Melborne	0.00	223.30	253.7	297
J_Hyd-M016	Melborne	0.00	222.65	253.7	304
J_Hyd-M017	Melborne	0.00	222.32	253.7	307
J_Hyd-M018	Melborne	0.00	221.84	253.7	312
J_Hyd-M019	Melborne	0.00	221.35	253.7	316
J_Hyd-M020	Melborne	0.00	220.58	253.7	324
J_Hyd-M021	Melborne	0.00	221.95	253.7	310
J_Hyd-M022	Melborne	0.00	220.18	253.7	328
J_Hyd-M023	Melborne	0.00	220.16	253.6	328
WVA023	Melborne	0.00	221.95	253.7	310
WVM001	Melborne	0.00	221.15	253.7	319
WVM002	Melborne	0.00	221.15	253.7	319
WVM003	Melborne	0.00	220.48	253.7	325
WVM005	Melborne	0.00	221.88	253.7	311
WVM006	Melborne	0.00	221.88	253.7	311
WVM007	Melborne	0.00	221.23	253.7	318
WVM008	Melborne	0.00	221.80	253.7	312
WVM009	Melborne	0.00	221.78	253.7	312
WVM010	Melborne	0.00	221.85	253.7	311
WVM011	Melborne	0.00	221.85	253.7	311
WVM012	Melborne	0.00	221.84	253.7	312
WVM013	Melborne	0.00	222.21	253.7	308
WVM014	Melborne	0.00	222.00	253.6	310
WVM015	Melborne	0.00	221.91	253.6	311
WVM017	Melborne	0.00	221.71	253.6	313
WVM018	Melborne	0.00	221.72	253.6	312
WVM019	Melborne	0.00	222.96	253.7	300
WVM020	Melborne	0.00	222.96	253.7	300
WVM021	Melborne	0.00	221.86	253.7	311
WVM022	Melborne	0.00	221.35	253.7	316
WVM023	Melborne	0.00	221.35	253.7	316
WVM025	Melborne	0.00	220.58	253.7	324
WVM026	Melborne	0.00	220.58	253.7	324
WVM027	Melborne	0.00	219.99	253.7	330
WVM028	Melborne	0.00	219.99	253.7	330
WVM030	Melborne	0.00	221.00	253.7	320
WVM031	Melborne	0.00	222.65	253.7	304
WVM032	Melborne	0.00	222.45	253.7	306
J-0002	Wardsville	0.00	204.57	250.2	446
J-0012	Wardsville	0.00	210.33	250.2	390
J-0018	Wardsville	0.00	210.33	250.2	390
J-0022	Wardsville	0.00	195.43	250.1	535
J-0023	Wardsville	0.73	203.82	250.2	453
J-0024	Wardsville	0.00	203.82	250.2	453
J-0027	Wardsville	0.00	212.30	250.2	370
J-0028	Wardsville	0.00	212.30	250.2	370
J-0029	Wardsville	0.00	199.99	250.2	491
J-0030	Wardsville	0.90	199.99	250.2	491
J-0031	Wardsville	0.00	210.85	250.2	385
J-0033	Wardsville	0.00	205.92	250.2	433
J-0034	Wardsville	0.00	205.92	250.2	433
J-0035	Wardsville	0.00	211.90	250.2	375
J-0040	Wardsville	0.00	200.40	250.2	487
J-0042	Wardsville	0.00	201.97	250.2	471
J-0050	Wardsville	0.00	208.88	250.2	404
J-0051	Wardsville	0.68	208.88	250.2	404
J-0055	Wardsville	0.00	210.29	250.2	390

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0056	Wardsville	0.00	210.29	250.2	390
J-0061	Wardsville	0.00	200.40	250.2	487
J-0062	Wardsville	0.00	200.40	250.2	487
J-0068	Wardsville	0.00	209.82	250.2	395
J-0069	Wardsville	0.00	195.43	250.1	535
J-0081	Wardsville	0.00	209.82	250.2	395
J-0082	Wardsville	0.00	200.40	250.2	487
J-0083	Wardsville	0.00	200.40	250.2	487
J-0088	Wardsville	0.00	205.79	250.2	434
J-0120	Wardsville	0.00	206.22	250.2	430
J-0121	Wardsville	0.00	205.92	250.2	433
J-0122	Wardsville	0.70	207.03	250.1	422
J-0131	Wardsville	0.00	199.31	250.2	498
J-0132	Wardsville	0.00	199.88	250.2	492
J-0154	Wardsville	0.00	211.18	250.2	381
J-0160	Wardsville	0.00	205.17	250.2	441
J-0161	Wardsville	0.00	205.17	250.2	441
J-0174	Wardsville	0.00	201.18	250.2	479
J-0188	Wardsville	0.00	199.35	250.1	497
J-0217	Wardsville	0.78	212.05	250.1	373
J-0218	Wardsville	0.00	212.05	250.1	373
J-0223	Wardsville	0.00	201.18	250.2	479
J-0228	Wardsville	0.00	211.59	250.2	378
J-0229	Wardsville	0.00	211.22	250.2	381
J-0234	Wardsville	0.00	211.43	250.2	379
J-0238	Wardsville	0.96	199.53	250.1	495
J-0242	Wardsville	0.00	212.24	250.3	372
J-0245	Wardsville	0.00	194.57	250.1	544
J-0247	Wardsville	0.00	200.33	250.2	488
J-0251	Wardsville	0.00	198.40	250.1	506
J-0258	Wardsville	0.00	201.05	250.2	481
J-0283	Wardsville	1.12	212.26	250.2	371
J-0297	Wardsville	0.00	198.59	250.1	505
J-0307	Wardsville	0.00	198.04	250.1	510
J-0308	Wardsville	0.00	211.06	250.2	383
J-0311	Wardsville	0.00	205.84	250.2	434
J-0313	Wardsville	0.16	208.66	250.2	406
J-0343	Wardsville	0.00	208.18	250.2	411
J-0349	Wardsville	0.00	211.06	250.2	383
J-0423	Wardsville	0.00	200.86	250.2	482
J-0429	Wardsville	1.13	195.38	250.1	536
J-0438	Wardsville	0.00	211.49	250.2	379
J-0439	Wardsville	0.00	211.49	250.2	379
J-0444	Wardsville	0.00	205.84	250.2	434
J-0446	Wardsville	0.84	199.42	250.1	496
J-0456	Wardsville	0.00	211.90	250.3	375
J-0460	Wardsville	0.00	196.26	250.1	527
J-0485	Wardsville	0.00	198.53	250.1	505
J-0504	Wardsville	0.00	211.80	250.2	376
J-0506	Wardsville	0.98	199.60	250.2	495
J-0550	Wardsville	0.68	207.57	250.2	417
J-0553	Wardsville	0.00	210.98	250.3	385
J-0597	Wardsville	0.00	211.52	250.3	379
J-686	Wardsville	0.00	211.90	250.3	375
J-728	Wardsville	0.00	199.35	250.1	497
J_Hyd-W001	Wardsville	0.00	199.59	250.1	495
J_Hyd-W002	Wardsville	0.00	200.22	250.1	489
J_Hyd-W003	Wardsville	0.00	200.09	250.2	490
J_Hyd-W004	Wardsville	0.00	200.26	250.2	488
J_Hyd-W005	Wardsville	0.00	200.73	250.2	484
J_Hyd-W006	Wardsville	0.00	201.97	250.2	471
J_Hyd-W007	Wardsville	0.00	202.85	250.2	463
J_Hyd-W008	Wardsville	0.00	206.22	250.2	430
J_Hyd-W009	Wardsville	0.00	207.09	250.2	421
J_Hyd-W010	Wardsville	0.00	211.08	250.2	383
J_Hyd-W011	Wardsville	0.00	210.99	250.2	384
J_Hyd-W012	Wardsville	0.00	209.97	250.2	393
J_Hyd-W013	Wardsville	0.00	199.99	250.2	491
J_Hyd-W014	Wardsville	0.00	203.96	250.2	452
J_Hyd-W015	Wardsville	0.00	201.05	250.2	481
J_Hyd-W016	Wardsville	0.00	199.31	250.2	498
J_Hyd-W017	Wardsville	0.00	204.86	250.2	443
J_Hyd-W018	Wardsville	0.00	207.95	250.2	413
J_Hyd-W019	Wardsville	0.00	210.80	250.2	385
J_Hyd-W021	Wardsville	0.00	212.03	250.1	373
J_Hyd-W022	Wardsville	0.00	212.33	250.2	370
J_Hyd-W023	Wardsville	0.00	211.80	250.2	375
J_Hyd-W024	Wardsville	0.00	210.17	250.2	391
J_Hyd-W025	Wardsville	0.00	208.87	250.2	404

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J_Hyd-W026	Wardsville	0.00	199.86	250.1	492
J_Hyd-W027	Wardsville	0.00	198.54	250.1	505
J_Hyd-W028	Wardsville	0.00	194.57	250.1	544
J_Hyd-W029	Wardsville	0.00	198.04	250.1	510
J_Hyd-W030	Wardsville	0.00	198.82	250.1	502
J_Hyd-W031	Wardsville	0.00	210.43	250.2	389
J_Hyd-W032	Wardsville	0.00	211.40	250.2	379
J_Hyd-W033	Wardsville	0.00	211.13	250.2	382
J_Hyd-W034	Wardsville	0.00	211.75	250.2	376
J_Hyd-W035	Wardsville	0.00	211.50	250.2	378
J_Hyd-W036	Wardsville	0.00	210.68	250.2	386
J_Hyd-W037	Wardsville	0.00	208.27	250.2	410
J_Hyd-W038	Wardsville	0.00	207.21	250.1	420
J_Hyd-W039	Wardsville	0.00	205.93	250.2	433
J_Hyd-W040	Wardsville	0.00	198.92	250.1	501
J_Hyd-W041	Wardsville	0.00	197.74	250.1	513
J_Hyd-W042	Wardsville	0.00	195.70	250.1	533
J_Hyd-W043	Wardsville	0.00	198.47	250.1	506
J_Hyd-W044	Wardsville	0.00	212.21	250.2	372
J_Hyd-W045	Wardsville	0.00	209.85	250.2	395
J_Hyd-W046	Wardsville	0.00	208.62	250.3	408
J_Hyd-W047	Wardsville	0.00	207.07	250.2	422
WVR003	Wardsville	0.00	212.35	250.3	371
WVR006	Wardsville	0.01	211.90	250.3	375
WVW001	Wardsville	0.00	211.08	250.2	383
WVW002	Wardsville	0.00	211.08	250.2	382
WVW003	Wardsville	0.00	210.85	250.2	385
WVW006	Wardsville	0.00	199.99	250.2	491
WVW007	Wardsville	0.00	201.05	250.2	481
WVW008	Wardsville	0.00	201.01	250.2	481
WVW009	Wardsville	0.00	205.92	250.2	433
WVW010	Wardsville	0.00	206.22	250.2	430
WVW011	Wardsville	0.00	201.69	250.2	474
WVW014	Wardsville	0.00	202.53	250.2	466
WVW015	Wardsville	0.00	199.66	250.2	494
WVW016	Wardsville	0.00	200.33	250.2	488
WVW018	Wardsville	0.00	200.33	250.2	488
WVW019	Wardsville	0.00	199.53	250.1	495
WVW020	Wardsville	0.00	199.53	250.1	495
WVW021	Wardsville	0.00	198.66	250.1	504
WVW022	Wardsville	0.00	198.82	250.1	502
WVW023	Wardsville	0.00	198.59	250.1	505
WVW025	Wardsville	0.00	198.04	250.1	510
WVW026	Wardsville	0.00	197.66	250.1	514
WVW027	Wardsville	0.00	198.71	250.1	503
WVW028	Wardsville	0.00	198.33	250.1	507
WVW029	Wardsville	0.00	198.40	250.1	506
WVW030	Wardsville	0.00	200.40	250.2	487
WVW031	Wardsville	0.00	200.40	250.2	487
WVW032	Wardsville	0.00	200.21	250.2	489
WVW033	Wardsville	0.00	200.40	250.2	487
WVW034	Wardsville	0.00	199.35	250.1	497
WVW035	Wardsville	0.00	199.92	250.1	492
WVW036	Wardsville	0.00	199.35	250.1	497
WVW038	Wardsville	0.00	210.33	250.2	390
WVW039	Wardsville	0.00	208.88	250.2	404
WVW041	Wardsville	0.79	211.18	250.2	381
WVW042	Wardsville	0.00	211.18	250.2	381
WVW043	Wardsville	0.00	211.18	250.2	381
WVW044	Wardsville	0.00	207.40	250.2	418
WVW045	Wardsville	0.00	205.79	250.2	434
WVW046	Wardsville	0.00	209.82	250.2	395
WVW047	Wardsville	0.00	209.82	250.2	395
WVW048	Wardsville	0.73	212.30	250.2	370
WVW049	Wardsville	0.00	212.30	250.2	370
WVW051	Wardsville	0.00	211.43	250.2	379
WVW052	Wardsville	0.34	211.43	250.2	379
WVW053	Wardsville	0.00	211.43	250.2	379
WVW054	Wardsville	0.00	212.03	250.1	373
WVW055	Wardsville	0.00	211.12	250.2	382
WVW056	Wardsville	0.00	212.26	250.2	371
WVW057	Wardsville	0.00	212.05	250.2	373
WVW058	Wardsville	0.00	212.26	250.2	371
WVW059	Wardsville	0.00	211.21	250.2	381
WVW061	Wardsville	0.00	211.15	250.2	382
WVW063	Wardsville	0.00	204.57	250.2	446
WVW064	Wardsville	0.00	208.18	250.2	411
WVW066	Wardsville	0.00	207.03	250.1	422
WVW067	Wardsville	0.00	194.57	250.1	544

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0009	Appin	0.00	225.75	254.9	285
J-0010	Appin	0.00	225.75	254.9	285
J-0015	Appin	0.00	224.12	254.9	301
J-0119	Appin	0.00	224.77	254.9	295
J-0140	Appin	0.00	223.78	254.9	305
J-0152	Appin	0.00	224.42	254.9	298
J-0185	Appin	0.00	225.43	254.9	288
J-0219	Appin	0.00	223.88	254.9	304
J-0221	Appin	0.00	224.26	254.9	300
J-0244	Appin	0.00	224.85	254.9	294
J-0246	Appin	0.00	224.78	254.9	295
J-0254	Appin	2.48	223.45	254.9	308
J-0277	Appin	0.00	223.74	255.0	306
J-0278	Appin	0.00	223.74	255.0	306
J-0280	Appin	0.00	225.40	254.9	289
J-0281	Appin	0.00	225.40	254.9	289
J-0318	Appin	1.52	224.73	254.9	295
J-0322	Appin	0.00	224.94	255.0	294
J-0323	Appin	0.00	224.94	255.0	294
J-0345	Appin	0.00	222.65	254.9	316
J-0346	Appin	0.00	223.66	254.9	306
J-0355	Appin	0.00	224.54	255.0	298
J-0359	Appin	0.00	225.19	254.9	291
J-0361	Appin	0.00	224.05	254.9	302
J-0378	Appin	0.96	225.03	254.9	292
J-0404	Appin	0.00	222.65	254.9	316
J-0479	Appin	0.00	223.74	254.9	305
J-0480	Appin	1.13	223.82	254.9	304
J-0560	Appin	0.00	224.74	254.9	295
J_Hyd-A001	Appin	0.00	224.77	254.9	295
J_Hyd-A002	Appin	0.00	225.61	254.9	286
J_Hyd-A003	Appin	0.00	225.13	254.9	291
J_Hyd-A004	Appin	0.00	224.97	254.9	293
J_Hyd-A005	Appin	0.00	224.76	254.9	295
J_Hyd-A006	Appin	0.00	224.95	254.9	294
J_Hyd-A007	Appin	0.00	224.78	255.0	296
J_Hyd-A008	Appin	0.00	223.78	254.9	305
J_Hyd-A009	Appin	0.00	223.45	254.9	308
J_Hyd-A010	Appin	0.00	223.84	254.9	304
J_Hyd-A011	Appin	0.00	224.12	254.9	301
WVA001	Appin	0.00	224.54	255.0	298
WVA003	Appin	0.00	224.27	254.9	300
WVA005	Appin	0.00	223.45	254.9	308
WVA006	Appin	0.00	223.45	254.9	308
WVA007	Appin	0.00	223.84	254.9	304
WVA008	Appin	0.00	223.88	254.9	304
WVA009	Appin	0.00	223.88	254.9	304
WVA010	Appin	0.00	224.85	254.9	294
WVA011	Appin	0.00	224.46	254.9	298
WVA012	Appin	0.00	224.74	254.9	296
WVA013	Appin	0.00	224.49	254.9	298
WVA014	Appin	0.00	224.42	254.9	298
WVA015	Appin	0.00	225.05	254.9	292
WVA016	Appin	0.00	224.73	254.9	295
WVA017	Appin	0.00	224.77	254.9	295
WVA018	Appin	0.00	224.77	254.9	295
WVA019	Appin	0.00	225.16	254.9	291
WVA020	Appin	0.00	224.85	254.9	294
WVA021	Appin	0.00	225.12	254.9	291
WVR026	Appin	0.00	224.12	254.9	301
WVR028	Appin	0.00	225.35	254.9	289
J-0019	Rural	0.00	224.91	254.7	292
J-0020	Rural	0.00	215.38	254.4	382
J-0053	Rural	0.00	223.50	254.7	305
J-0057	Rural	0.00	223.26	254.7	308
J-0064	Rural	0.00	223.00	254.0	304
J-0073	Rural	0.00	216.62	258.3	408
J-0074	Rural	0.00	216.62	258.3	408
J-0077	Rural	0.00	224.92	254.8	292
J-0078	Rural	0.00	224.92	254.8	292
J-0086	Rural	0.00	215.90	250.7	341
J-0090	Rural	0.00	217.02	254.5	367
J-0100	Rural	0.00	219.21	261.0	409
J-0103	Rural	0.00	224.29	254.8	299
J-0110	Rural	0.00	224.91	254.7	292
J-0113	Rural	0.00	224.13	254.8	300
J-0117	Rural	0.00	223.95	254.7	301
J-0118	Rural	0.00	225.08	254.7	290
J-0129	Rural	0.00	210.02	265.7	545

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0130	Rural	0.00	205.48	265.7	589
J-0137	Rural	0.00	222.21	255.5	326
J-0138	Rural	0.00	222.21	255.5	326
J-0149	Rural	0.00	209.61	265.7	549
J-0150	Rural	0.00	210.02	265.7	545
J-0151	Rural	0.00	224.44	254.8	297
J-0163	Rural	0.00	222.45	267.0	436
J-0164	Rural	0.00	222.45	267.0	436
J-0170	Rural	0.00	216.66	266.0	483
J-0171	Rural	0.00	216.66	266.0	483
J-0182	Rural	0.00	215.05	250.6	348
J-0183	Rural	0.00	215.05	250.6	348
J-0186	Rural	0.00	224.50	254.8	297
J-0193	Rural	0.00	218.11	250.6	318
J-0194	Rural	0.00	218.11	250.6	318
J-0199	Rural	0.00	216.02	250.7	340
J-0200	Rural	0.00	215.67	250.7	343
J-0206	Rural	0.00	215.05	250.6	348
J-0207	Rural	0.00	216.66	254.5	370
J-0208	Rural	0.00	224.87	254.7	292
J-0210	Rural	0.00	216.37	258.3	410
J-0215	Rural	0.00	224.44	254.8	297
J-0224	Rural	0.00	215.67	250.7	343
J-0225	Rural	0.00	215.67	250.7	343
J-0231	Rural	0.00	215.88	268.8	518
J-0232	Rural	0.00	215.90	250.6	340
J-0233	Rural	0.00	215.48	250.6	344
J-0241	Rural	0.00	223.95	254.7	301
J-0243	Rural	0.00	216.95	254.5	367
J-0257	Rural	0.00	215.14	254.1	381
J-0260	Rural	0.00	215.99	250.7	340
J-0263	Rural	0.00	216.66	254.5	370
J-0266	Rural	0.00	215.67	250.7	343
J-0276	Rural	0.00	215.90	250.6	340
J-0282	Rural	0.00	223.26	254.7	308
J-0293	Rural	0.00	215.90	250.6	340
J-0298	Rural	0.00	221.59	254.1	318
J-0299	Rural	0.00	223.00	254.1	304
J-0300	Rural	0.00	215.20	250.6	347
J-0301	Rural	0.00	215.11	250.6	348
J-0304	Rural	0.00	221.66	255.5	331
J-0309	Rural	0.00	218.12	250.6	318
J-0315	Rural	0.00	222.17	255.5	326
J-0319	Rural	0.00	224.13	254.8	300
J-0325	Rural	0.00	217.23	258.3	402
J-0326	Rural	0.00	221.59	254.1	318
J-0329	Rural	0.00	215.90	250.6	340
J-0330	Rural	0.00	215.55	250.6	343
J-0335	Rural	0.00	227.07	254.5	269
J-0341	Rural	0.00	224.82	254.7	293
J-0351	Rural	0.00	216.30	254.6	375
J-0352	Rural	0.00	224.91	254.7	292
J-0356	Rural	0.00	221.65	264.6	420
J-0357	Rural	0.00	221.65	264.6	420
J-0362	Rural	0.00	225.24	255.1	292
J-0365	Rural	0.00	216.02	250.6	339
J-0366	Rural	0.00	215.27	250.6	346
J-0369	Rural	0.00	215.99	254.4	376
J-0370	Rural	0.00	216.95	254.5	367
J-0374	Rural	0.00	217.94	250.6	320
J-0376	Rural	0.00	222.17	255.5	326
J-0379	Rural	0.00	216.10	266.0	488
J-0383	Rural	0.00	215.74	250.7	342
J-0391	Rural	0.00	220.12	264.6	435
J-0392	Rural	0.00	220.22	264.6	434
J-0397	Rural	0.00	217.12	268.6	504
J-0398	Rural	0.00	216.07	268.6	514
J-0405	Rural	0.00	216.98	254.6	368
J-0408	Rural	0.00	219.48	250.6	305
J-0416	Rural	0.00	216.22	268.9	515
J-0422	Rural	0.00	222.67	267.1	434
J-0431	Rural	0.00	210.65	269.7	578
J-0432	Rural	0.00	210.75	269.7	577
J-0441	Rural	0.00	211.16	268.2	558
J-0442	Rural	0.00	210.36	268.2	565
J-0461	Rural	0.00	219.65	261.3	408
J-0462	Rural	0.00	219.09	261.3	413
J-0463	Rural	0.00	218.71	261.4	418
J-0464	Rural	0.00	219.51	261.4	410

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
J-0466	Rural	0.00	215.88	268.8	518
J-0483	Rural	0.00	226.33	254.7	277
J-0484	Rural	0.00	225.87	254.7	282
J-0519	Rural	0.00	220.69	263.7	421
J-0520	Rural	0.00	221.62	263.7	412
J-0525	Rural	0.00	217.02	254.5	367
J-0530	Rural	0.00	218.78	250.6	312
J-0536	Rural	0.06	218.90	254.5	348
J-0545	Rural	0.00	222.01	255.6	329
J-0547	Rural	0.00	208.26	268.1	586
J-0563	Rural	0.00	217.68	254.5	360
J-0573	Rural	0.00	217.81	254.6	360
J-0574	Rural	0.00	217.93	254.6	359
J-0577	Rural	0.00	222.72	264.2	406
J-0582	Rural	0.00	225.65	254.7	284
J-0592	Rural	0.00	225.26	255.2	293
J-0593	Rural	0.00	223.37	255.2	311
J-0595	Rural	0.00	213.93	265.6	505
J-0596	Rural	0.00	214.45	265.4	499
J-0599	Rural	0.00	226.75	255.0	277
J-0600	Rural	0.00	225.36	255.0	290
J-0604	Rural	0.00	217.45	254.3	361
J-0605	Rural	0.00	215.66	254.2	377
J-0607	Rural	0.00	216.23	250.6	337
J-0610	Rural	0.00	217.10	250.7	329
J-0611	Rural	0.00	214.85	250.7	351
J-0613	Rural	0.00	217.54	269.0	504
J-0614	Rural	0.00	215.09	265.3	491
J-0616	Rural	0.00	216.04	250.6	339
J-0617	Rural	0.00	220.45	265.1	437
J-0618	Rural	0.00	220.05	262.8	419
J-0619	Rural	0.00	217.32	262.5	442
J-0623	Rural	0.00	218.13	250.6	318
J-0624	Rural	0.00	219.80	261.8	411
J-0625	Rural	0.00	219.82	261.0	403
J-0626	Rural	0.00	217.52	250.7	324
J-0629	Rural	0.00	198.11	270.0	703
J-0631	Rural	0.00	220.14	254.6	337
J-0633	Rural	0.00	215.01	250.6	348
J-0634	Rural	3.95	220.90	263.3	415
J-0636	Rural	0.00	226.78	254.9	275
J-0637	Rural	0.00	223.52	254.8	306
J-0638	Rural	0.00	220.56	260.1	387
J-0643	Rural	0.00	216.97	250.5	328
J-0645	Rural	0.00	216.83	250.6	331
J-688	Rural	0.00	222.17	255.5	326
J_Hyd-R001E	Rural	0.00	226.53	254.7	276
J_Hyd-R002E	Rural	0.00	224.87	254.7	292
J_Hyd-R003E	Rural	0.00	223.26	254.7	308
J_Hyd-R004E	Rural	0.00	227.87	254.6	262
J_Hyd-R005E	Rural	0.00	228.14	254.5	258
J_Hyd-R006E	Rural	0.00	223.00	254.1	304
J_Hyd-R007E	Rural	0.00	226.02	254.7	281
J_Hyd-R008E	Rural	0.00	225.38	254.6	286
J_Hyd-R009E	Rural	0.00	215.38	254.4	382
J_Hyd-R010E	Rural	0.00	217.64	254.5	361
J_Hyd-R011E	Rural	0.00	216.30	254.6	375
J_Hyd-R012E	Rural	0.00	225.08	254.7	290
J_Hyd-R013E	Rural	0.00	225.08	254.7	290
J_Hyd-R014E	Rural	0.00	225.24	255.1	292
J_Hyd-R015E	Rural	0.00	222.19	255.5	326
J_Hyd-R016E	Rural	0.00	224.13	254.8	300
J_Hyd-R017M	Rural	0.00	215.90	250.7	341
J_Hyd-R018M	Rural	0.00	209.02	250.6	407
J_Hyd-R019M	Rural	0.00	215.68	250.6	342
J_Hyd-R020M	Rural	0.00	216.37	250.5	334
J_Hyd-R021M	Rural	0.00	215.02	250.4	347
J_Hyd-R026E	Rural	0.00	224.44	254.8	297
J_Hyd-R027W	Rural	0.00	206.98	272.5	641
J_Hyd-R028E	Rural	0.00	222.89	254.7	311
J_Hyd-R029W	Rural	0.00	215.14	274.4	580
J_Hyd-R030M	Rural	0.00	215.76	266.0	492
J_Hyd-R031M	Rural	0.00	215.77	268.8	519
J_Hyd-R032M	Rural	0.00	218.56	250.6	314
J_Hyd-R033E	Rural	0.00	217.26	264.6	463
WVR007	Rural	0.00	215.64	250.4	340
WVR008	Rural	0.00	215.68	250.4	340
WVR009	Rural	0.00	215.39	250.7	346
WVR010	Rural	0.00	215.88	268.8	518

2041 Junctions Table
Southwest Middlesex Master Servicing Plan

2041 PHD Junction Results					
ID	Zone	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
WVR012	Rural	0.00	217.94	250.6	320
WVR013	Rural	0.00	218.56	250.6	314
WVR014	Rural	0.00	218.12	250.6	318
WVR015	Rural	0.00	218.11	250.6	318
WVR019	Rural	0.00	216.86	266.3	483
WVR020	Rural	0.00	221.61	264.3	417
WVR024	Rural	0.00	216.37	258.2	410
WVR024	Rural	0.00	219.21	261.0	409
WVR025	Rural	0.00	222.17	255.5	326
WVR029	Rural	0.00	224.50	254.8	297
WVR030	Rural	0.00	224.40	254.8	297
WVR031	Rural	0.00	224.90	255.1	296
WVR032	Rural	0.00	224.44	254.8	297
WVR033	Rural	0.00	224.92	254.8	292
WVR034	Rural	0.00	224.90	254.7	292
WVR035	Rural	0.00	224.82	254.7	293
WVR036	Rural	0.00	224.82	254.7	293
WVR037	Rural	0.00	217.20	254.6	366
WVR038	Rural	0.00	217.64	254.5	361
WVR039	Rural	0.00	217.02	254.5	367
WVR040	Rural	0.00	215.14	254.1	381
WVR042	Rural	0.00	223.00	254.0	304
WVR043	Rural	0.00	228.14	254.5	258
WVR044	Rural	0.00	227.12	254.5	268
WVR045	Rural	0.00	223.77	254.7	303
WVR046	Rural	0.00	224.91	254.7	292
WVR047	Rural	0.00	223.95	254.7	301
WVR050	Rural	0.00	215.85	250.6	340
WVR051	Rural	0.00	215.90	250.6	340
WVR052	Rural	0.00	219.21	261.0	409
WVR053	Rural	0.00	225.26	254.8	289
WVR054	Rural	0.00	226.99	254.6	271
WVR055	Rural	0.00	226.60	254.7	274
WVR056	Rural	0.00	223.50	254.7	305
WVR060	Rural	0.00	214.01	254.5	396

Total Demand	121.04	**Maximum Pressure**	703
		Minimum Pressure	258

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P-223	Glencoe	J-747	J-0646	224.53	400	120	38.68	0.31	0.1
P-232	Glencoe	J-0586	G015	3.80	150	100	0.00	0.00	0.0
P-240	Glencoe	J-753	G_H-1	1.46	150	100	0.00	0.00	0.0
P-246	Glencoe	J-759	J-753	58.17	200	110	0.00	0.00	0.0
P-247	Glencoe	J-760	J-759	25.30	200	110	0.00	0.00	0.0
P-248	Glencoe	J-761	J-760	24.76	200	110	0.00	0.00	0.0
P-249(1)	Glencoe	J-762	J-800	10.10	200	110	0.00	0.00	0.0
P-249(2)	Glencoe	J-800	J-761	21.50	200	110	0.00	0.00	0.0
P-251	Glencoe	J-766	J-765	1.74	200	110	0.00	0.00	0.0
P-252	Glencoe	J-765	J-764	2.16	200	110	0.00	0.00	0.0
P-254	Glencoe	J-764	J-762	2.10	200	110	0.00	0.00	0.0
P-255	Glencoe	J-767	J-766	36.14	200	110	0.00	0.00	0.0
P-256	Glencoe	J-768	J-767	23.79	200	110	0.00	0.00	0.0
P-257	Glencoe	J-769	J-768	25.30	200	110	0.00	0.00	0.0
P-258	Glencoe	J-770	J-769	12.16	200	110	0.00	0.00	0.0
P-259(1)	Glencoe	J-771	J-778	30.83	200	110	0.51	0.02	0.0
P-259(2)	Glencoe	J-778	J-770	11.83	200	110	0.51	0.02	0.0
P-260	Glencoe	J-771	J-0264	6.10	200	110	2.00	0.06	0.0
P-261	Glencoe	J-772	J-771	21.73	200	110	2.51	0.08	0.0
P-262	Glencoe	J-773	J-772	53.57	200	110	2.51	0.08	0.0
P-263(1)	Glencoe	J-775	J-777	32.15	200	110	3.15	0.10	0.0
P-263(2)	Glencoe	J-777	J-773	5.67	200	110	3.15	0.10	0.0
P-265	Glencoe	WVG029	J-775	71.28	200	110	3.15	0.10	0.0
P-266	Glencoe	J-773	WVG027	18.50	200	110	0.65	0.02	0.0
P-268	Glencoe	J-770	WVG001	31.17	150	100	0.50	0.03	0.0
P-270(1)(1)	Glencoe	J-779	J-801	24.25	200	110	5.35	0.17	0.0
P-270(1)(2)	Glencoe	J-801	J-780	5.97	200	110	5.35	0.17	0.0
P-270(2)	Glencoe	J-780	J-0126	2.45	200	110	5.35	0.17	0.0
P-271	Glencoe	J-782	J-781	15.01	200	110	5.35	0.17	0.0
P-272	Glencoe	J-781	J-779	27.58	200	110	5.35	0.17	0.0
P-273(1)(1)	Glencoe	J-785	J-807	42.61	200	110	11.79	0.38	0.1
P-273(1)(2)	Glencoe	J-807	J-806	13.65	200	110	10.23	0.33	0.0
P-273(2)	Glencoe	J-806	J-784	24.08	200	110	10.23	0.33	0.0
P-274	Glencoe	J-784	J-783	60.15	200	110	10.23	0.33	0.1
P-275(1)(1)	Glencoe	J-783	J-804	24.03	200	110	10.23	0.33	0.0
P-275(1)(2)	Glencoe	J-804	J-803	0.79	200	110	5.35	0.17	0.0
P-275(2)	Glencoe	J-803	J-782	7.79	200	110	5.35	0.17	0.0
P-276	Glencoe	J-786	J-785	70.18	200	110	11.79	0.38	0.1
P-277(1)(1)	Glencoe	J-787	J-813	5.52	200	110	8.87	0.28	0.0
P-277(1)(2)(1)	Glencoe	J-813	J-816	4.54	200	110	19.37	0.62	0.0
P-277(1)(2)(2)	Glencoe	J-816	J-812	0.65	200	110	11.79	0.38	0.0
P-277(2)	Glencoe	J-812	J-786	39.29	200	110	11.79	0.38	0.1
P-278	Glencoe	J-791	J-790	37.40	200	110	18.14	0.58	0.1
P-279(1)	Glencoe	J-790	J-818	26.33	200	110	18.14	0.58	0.1
P-279(2)(1)	Glencoe	J-818	J-819	12.63	200	110	18.14	0.58	0.0
P-279(2)(2)	Glencoe	J-819	J-789	31.06	200	110	8.87	0.28	0.0
P-280	Glencoe	J-789	J-788	52.74	200	110	8.87	0.28	0.0
P-281	Glencoe	J-788	J-787	40.02	200	110	8.87	0.28	0.0
P-282	Glencoe	J-792	J-791	35.04	200	110	18.14	0.58	0.1
P-283(1)	Glencoe	J-795	J-826	36.70	200	110	13.80	0.44	0.1
P-283(2)	Glencoe	J-826	J-794	38.31	200	110	13.80	0.44	0.1
P-284	Glencoe	J-794	J-793	70.18	200	110	13.80	0.44	0.1
P-285(1)	Glencoe	J-793	J-821	19.05	200	110	13.80	0.44	0.0
P-285(2)	Glencoe	J-821	J-792	1.09	200	110	18.14	0.58	0.0
P-286(1)	Glencoe	J-799	J-827	5.70	200	110	13.80	0.44	0.0
P-286(2)	Glencoe	J-827	J-798	15.33	200	110	13.80	0.44	0.0
P-287	Glencoe	J-798	J-797	45.01	200	110	13.80	0.44	0.1
P-288	Glencoe	J-797	J-796	55.00	200	110	13.80	0.44	0.1
P-289	Glencoe	J-796	J-795	14.97	200	110	13.80	0.44	0.0
P-290	Glencoe	J-800	G_H-2	1.49	150	100	0.00	0.00	0.0
P-291	Glencoe	J-778	G_H-3	1.50	150	100	0.00	0.00	0.0
P-292	Glencoe	J-777	G_H-4	0.54	150	100	0.00	0.00	0.0
P-294	Glencoe	J-801	G_H-5	1.96	150	100	0.00	0.00	0.0
P-295	Glencoe	J-803	G_H-6	1.67	150	100	0.00	0.00	0.0
P-296	Glencoe	J-804	J-805	17.92	150	100	4.88	0.28	0.0
P-297	Glencoe	J-805	WVG097	5.39	150	100	4.88	0.28	0.0
P-298	Glencoe	J-806	G_H-7	2.83	150	100	0.00	0.00	0.0
P-301	Glencoe	J-807	J-810	4.01	150	100	1.56	0.09	0.0
P-302	Glencoe	J-810	J-811	3.62	150	100	1.56	0.09	0.0
P-303	Glencoe	J-812	G_H-8	1.47	150	100	0.00	0.00	0.0
P-304	Glencoe	J-813	J-814	4.27	200	110	-10.50	0.33	0.0
P-305	Glencoe	J-814	J-815	3.22	200	110	-10.50	0.33	0.0
P-306	Glencoe	J-816	J-817	16.89	200	110	7.58	0.24	0.0
P-307	Glencoe	J-817	J-0011	2.48	200	110	7.58	0.24	0.0
P-308	Glencoe	J-818	G_H-9	1.82	150	100	0.00	0.00	0.0
P-309	Glencoe	J-819	J-820	8.75	200	110	9.27	0.30	0.0
P-310	Glencoe	J-820	WVG120	3.89	200	110	9.27	0.30	0.0
P-311	Glencoe	J-821	J-822	7.32	150	100	-10.54	0.60	0.0
P-312	Glencoe	J-822	J-823	3.21	150	100	-10.54	0.60	0.0
P-313	Glencoe	J-823	J-0262	0.92	150	100	-10.54	0.60	0.0
P-314	Glencoe	J-821	J-824	9.93	150	100	6.20	0.35	0.0
P-315	Glencoe	J-824	J-825	2.86	150	100	6.20	0.35	0.0
P-316	Glencoe	J-826	G_H-10	2.85	150	100	0.00	0.00	0.0
P-317	Glencoe	J-827	G_H-11	1.80	150	100	0.00	0.00	0.0
P-318	Glencoe	J-799	J-0267	3.89	150	100	-13.80	0.78	0.0
P-923	Glencoe	J-720	J-0533	70.98	25	100	0.00	0.00	0.0
P-925	Glencoe	J_Hyd-G084	J-0101	235.01	300	120	-20.53	0.29	0.1
P-927	Glencoe	J-0101	J_Hyd-G083	2.91	300	120	-23.62	0.33	0.0
P-928	Glencoe	J_Hyd-G083	Glencoe Tower	97.16	300	120	-77.70	1.10	0.5
P-929	Glencoe	J_Hyd-G083	J-0337	106.00	300	120	54.07	0.76	0.3
P-932	Glencoe	J-0180	J-690	4.46	150	100	20.64	1.17	0.1
P-936	Glencoe	J-0634	J-0635	660.21	50	130	0.00	0.00	0.0
P_Hyd-G001	Glencoe	J_Hyd-G001	G001	4.85	150	100	0.00	0.00	0.0
P_Hyd-G002	Glencoe	J_Hyd-G002	G002	2.71	150	100	0.00	0.00	0.0
P_Hyd-G003	Glencoe	J_Hyd-G003	G003	2.46	150	100	0.00	0.00	0.0
P_Hyd-G004	Glencoe	J_Hyd-G004	G004	0.85	150	100	0.00	0.00	0.0
P_Hyd-G005	Glencoe	J_Hyd-G005	G005	5.89	150	100	0.00	0.00	0.0
P_Hyd-G006	Glencoe	J_Hyd-G006	G006	5.74	150	100	0.00	0.00	0.0
P_Hyd-G008	Glencoe	J_Hyd-G008	G008	2.51	150	100	0.00	0.00	0.0

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
P_Hyd-G009	Glencoe	J_Hyd-G009	G009	3.80	150	100	0.00	0.00	0.0
P_Hyd-G010	Glencoe	J_Hyd-G010	G010	3.17	150	100	0.00	0.00	0.0
P_Hyd-G011	Glencoe	J_Hyd-G011	G011	2.84	150	100	0.00	0.00	0.0
P_Hyd-G012	Glencoe	J_Hyd-G012	G012	1.27	150	100	0.00	0.00	0.0
P_Hyd-G013	Glencoe	J_Hyd-G013	G013	0.22	150	100	0.00	0.00	0.0
P_Hyd-G014	Glencoe	J_Hyd-G014	G014	1.48	150	100	0.00	0.00	0.0
P_Hyd-G016	Glencoe	J_Hyd-G016	G016	2.59	150	100	0.00	0.00	0.0
P_Hyd-G018	Glencoe	J_Hyd-G018	G018	1.41	150	100	0.00	0.00	0.0
P_Hyd-G019	Glencoe	J_Hyd-G019	G019	1.61	150	100	0.00	0.00	0.0
P_Hyd-G020	Glencoe	J_Hyd-G020	G020	3.56	150	100	0.00	0.00	0.0
P_Hyd-G021	Glencoe	J_Hyd-G021	G021	3.54	150	100	0.00	0.00	0.0
P_Hyd-G022	Glencoe	J_Hyd-G022	G022	2.23	150	100	0.00	0.00	0.0
P_Hyd-G023	Glencoe	J_Hyd-G023	G023	2.41	150	100	0.00	0.00	0.0
P_Hyd-G024	Glencoe	J_Hyd-G024	G024	1.78	150	100	0.00	0.00	0.0
P_Hyd-G025	Glencoe	J_Hyd-G025	G025	1.60	150	100	0.00	0.00	0.0
P_Hyd-G026	Glencoe	J_Hyd-G026	G026	5.18	150	100	0.00	0.00	0.0
P_Hyd-G027	Glencoe	J_Hyd-G027	G027	2.73	150	100	0.00	0.00	0.0
P_Hyd-G028	Glencoe	J_Hyd-G028	G028	4.76	150	100	0.00	0.00	0.0
P_Hyd-G029	Glencoe	J_Hyd-G029	G029	1.38	150	100	0.00	0.00	0.0
P_Hyd-G041	Glencoe	J_Hyd-G041	G041	1.19	150	100	0.00	0.00	0.0
P_Hyd-G042	Glencoe	J_Hyd-G042	G042	1.81	150	100	0.00	0.00	0.0
P_Hyd-G043	Glencoe	J_Hyd-G043	G043	0.88	150	100	0.00	0.00	0.0
P_Hyd-G044	Glencoe	J_Hyd-G044	G044	1.63	150	100	0.00	0.00	0.0
P_Hyd-G045	Glencoe	J_Hyd-G045	G045	3.33	150	100	0.00	0.00	0.0
P_Hyd-G046	Glencoe	J_Hyd-G046	G046	1.69	150	100	0.00	0.00	0.0
P_Hyd-G047	Glencoe	J_Hyd-G047	G047	7.03	150	100	0.00	0.00	0.0
P_Hyd-G048	Glencoe	J_Hyd-G048	G048	4.14	150	100	0.00	0.00	0.0
P_Hyd-G049	Glencoe	J_Hyd-G049	G049	0.49	150	100	0.00	0.00	0.0
P_Hyd-G050	Glencoe	J_Hyd-G050	G050	1.47	150	100	0.00	0.00	0.0
P_Hyd-G051	Glencoe	J_Hyd-G051	G051	0.78	150	100	0.00	0.00	0.0
P_Hyd-G052	Glencoe	J_Hyd-G052	G052	1.12	150	100	0.00	0.00	0.0
P_Hyd-G053	Glencoe	J_Hyd-G053	G053	1.89	150	100	0.00	0.00	0.0
P_Hyd-G054	Glencoe	WVG032	G054	2.99	150	100	0.00	0.00	0.0
P_Hyd-G055	Glencoe	WVG041	G055	0.94	150	100	0.00	0.00	0.0
P_Hyd-G056	Glencoe	J_Hyd-G056	G056	2.18	150	100	0.00	0.00	0.0
P_Hyd-G057	Glencoe	J_Hyd-G057	G057	1.91	150	100	0.00	0.00	0.0
P_Hyd-G058	Glencoe	J_Hyd-G058	G058	4.86	150	100	0.00	0.00	0.0
P_Hyd-G059	Glencoe	J_Hyd-G059	G059	2.58	150	100	0.00	0.00	0.0
P_Hyd-G060	Glencoe	J_Hyd-G060	G060	1.86	150	100	0.00	0.00	0.0
P_Hyd-G061	Glencoe	J_Hyd-G061	G061	1.77	150	100	0.00	0.00	0.0
P_Hyd-G062	Glencoe	J_Hyd-G062	G062	15.15	150	100	0.00	0.00	0.0
P_Hyd-G063	Glencoe	J_Hyd-G063	G063	5.63	150	100	0.00	0.00	0.0
P_Hyd-G064	Glencoe	J_Hyd-G064	G064	4.15	150	100	0.00	0.00	0.0
P_Hyd-G065	Glencoe	J_Hyd-G065	G065	2.06	150	100	0.00	0.00	0.0
P_Hyd-G066	Glencoe	J_Hyd-G066	G066	2.76	150	100	0.00	0.00	0.0
P_Hyd-G067	Glencoe	J_Hyd-G067	G067	3.98	150	100	0.00	0.00	0.0
P_Hyd-G068	Glencoe	J_Hyd-G068	G068	1.46	150	100	0.00	0.00	0.0
P_Hyd-G069	Glencoe	J_Hyd-G069	G069	1.27	150	100	0.00	0.00	0.0
P_Hyd-G070	Glencoe	J_Hyd-G070	G070	6.10	150	100	0.00	0.00	0.0
P_Hyd-G071	Glencoe	J_Hyd-G071	G071	0.97	150	100	0.00	0.00	0.0
P_Hyd-G073	Glencoe	J_Hyd-G073	G073	1.56	150	100	0.00	0.00	0.0
P_Hyd-G074	Glencoe	J_Hyd-G074	G074	8.97	150	100	0.00	0.00	0.0
P_Hyd-G075	Glencoe	J_Hyd-G075	G075	11.48	150	100	0.00	0.00	0.0
P_Hyd-G076	Glencoe	J_Hyd-G076	G076	2.69	150	100	0.00	0.00	0.0
P_Hyd-G077	Glencoe	J_Hyd-G077	G077	2.18	150	100	0.00	0.00	0.0
P_Hyd-G078	Glencoe	J_Hyd-G078	G078	3.61	150	100	0.00	0.00	0.0
P_Hyd-G079	Glencoe	J_Hyd-G079	G079	13.95	150	100	0.00	0.00	0.0
P_Hyd-G080	Glencoe	J_Hyd-G080	G080	1.13	150	100	0.00	0.00	0.0
P_Hyd-G081	Glencoe	J_Hyd-G081	G081	8.12	150	100	0.00	0.00	0.0
P_Hyd-G082	Glencoe	J_Hyd-G082	G082	7.32	150	100	0.00	0.00	0.0
P_Hyd-G083	Glencoe	J_Hyd-G083	G083	3.97	150	100	0.00	0.00	0.0
P_Hyd-G084	Glencoe	J_Hyd-G084	G084	94.76	150	100	0.00	0.00	0.0
P_Hyd-G085	Glencoe	J_Hyd-G085	G085	0.10	150	100	0.00	0.00	0.0
P_Hyd-G086	Glencoe	J_Hyd-G086	G086	0.02	150	100	0.00	0.00	0.0
P_Hyd-G087	Glencoe	J_Hyd-G087	G087	5.80	150	100	0.00	0.00	0.0
P_Hyd-G088	Glencoe	J_Hyd-G088	G088	2.19	150	100	0.00	0.00	0.0
P_Hyd-G089	Glencoe	J_Hyd-G089	G089	2.09	150	100	0.00	0.00	0.0
P_Hyd-G090	Glencoe	J_Hyd-G090	G090	4.27	150	100	0.00	0.00	0.0
P_Hyd-G091	Glencoe	J_Hyd-G091	G091	4.00	150	100	0.00	0.00	0.0
P_Hyd-G092	Glencoe	J_Hyd-G092	G092	3.58	150	100	0.00	0.00	0.0
P_Hyd-G093	Glencoe	J_Hyd-G093	G093	3.31	150	100	0.00	0.00	0.0
P_Hyd-G094	Glencoe	J_Hyd-G094	G094	3.50	150	100	0.00	0.00	0.0
P_Hyd-G095	Glencoe	J_Hyd-G095	G095	1.07	150	100	0.00	0.00	0.0
P_Hyd-G096	Glencoe	J_Hyd-G096	G096	1.84	150	100	0.00	0.00	0.0
P_Hyd-G097	Glencoe	J_Hyd-G097	G097	1.24	150	100	0.00	0.00	0.0
P_Hyd-G098	Glencoe	J_Hyd-G098	G098	2.53	150	100	0.00	0.00	0.0
P_Hyd-H_T-718	Glencoe	J_Hyd-H_T-718	H_T-718	2.10	150	100	0.00	0.00	0.0
WM1021C_02(2)(	Glencoe	J-752	WVR021	155.54	300	120	23.23	0.33	0.1
WM1027C_01	Glencoe	J_Hyd-G014	J-0373	15.24	200	110	-5.32	0.17	0.0
WM1027C_02	Glencoe	J_Hyd-G014	J-0586	134.80	200	110	5.32	0.17	0.0
WM1075C_01	Glencoe	J-0646	J_Hyd-R029W	3402.10	350	120	38.68	0.40	2.1
WM1099C	Glencoe	WVR021	J-0494	49.97	300	120	23.23	0.33	0.0
WM2036_02	Glencoe	J-0275	J-0168	7.98	200	110	11.46	0.36	0.0
WM2036_03	Glencoe	J-0169	J-0618	480.76	200	110	11.46	0.36	0.6
WM2036_10(1)	Glencoe	J-0544	J-690	136.25	200	110	-9.18	0.29	0.1
WM2036_10(2)	Glencoe	J-690	J-0275	18.91	200	110	11.46	0.36	0.0
WM2044C(1)	Glencoe	J_Hyd-G006	J-724	5.77	200	110	3.21	0.10	0.0
WM2044C(2)(1)	Glencoe	J-724	J-727	12.57	200	110	3.21	0.10	0.0
WM2044C(2)(2)	Glencoe	J-727	WV-348	5.17	200	110	2.25	0.07	0.0
WM4000	Glencoe	J-0384	J-0546	90.30	150	100	1.24	0.07	0.0
WM4001	Glencoe	J-0213	J_Hyd-G094	5.27	150	100	0.00	0.00	0.0
WM4002	Glencoe	J-0213	J-0584	133.75	150	100	0.00	0.00	0.0
WM4003_01	Glencoe	J_Hyd-G003	WVG087	133.79	150	100	0.00	0.00	0.0
WM4003_02	Glencoe	WVG087	J-0373	19.18	200	110	0.00	0.00	0.0
WM4005	Glencoe	J-0451	J-0539	79.38	50	100	0.62	0.32	0.4
WM4006_01	Glencoe	WVG099	J_Hyd-G023	7.66	150	100	1.37	0.08	0.0
WM4006_02	Glencoe	J_Hyd-G023	J_Hyd-G093	126.19	100	100	1.37	0.17	0.1
WM4006_03	Glencoe	J_Hyd-G093	WVG090	116.28	100	100	1.37	0.17	0.1
WM4006_04	Glencoe	WVG090	J-0032	17.02	200	110	1.37	0.04	0.0

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4007_01(1)	Glencoe	WVG100	J-735	1.24	150	100	4.95	0.28	0.0
WM4007_01(2)	Glencoe	J-735	J-0409	234.57	150	100	4.95	0.28	0.3
WM4007_02(1)	Glencoe	J-734	WVG100	11.48	150	100	4.95	0.28	0.0
WM4007_02(2)	Glencoe	J-734	WVG099	4.20	150	100	1.37	0.08	0.0
WM4008_01	Glencoe	J-0324	J-0106	10.40	150	100	-2.41	0.14	0.0
WM4008_02	Glencoe	J-0256	J-0435	102.03	150	100	1.65	0.09	0.0
WM4009_01	Glencoe	J-0255	J-0256	6.83	150	100	2.89	0.16	0.0
WM4009_02	Glencoe	J-0255	J-0450	53.25	150	100	-2.41	0.14	0.0
WM4009_03	Glencoe	J-0449	J-0450	25.45	150	100	2.41	0.14	0.0
WM4009_04	Glencoe	WVG018	J-0449	35.04	150	100	2.41	0.14	0.0
WM4009_05	Glencoe	WVG018	J-0070	2.19	150	100	-2.41	0.14	0.0
WM4009_06	Glencoe	J-0070	J-0324	11.16	150	100	-2.41	0.14	0.0
WM4010_01	Glencoe	J-0106	WVG020	3.03	150	100	-2.40	0.14	0.0
WM4010_02	Glencoe	J-0410	WVG020	110.85	150	100	2.40	0.14	0.0
WM4011_01	Glencoe	J-0535	WVG091	76.44	25	100	0.00	0.00	0.0
WM4011_02	Glencoe	WVG091	J-0128	3.53	25	100	0.00	0.00	0.0
WM4012_01	Glencoe	J-0468	J-0469	33.17	200	110	9.30	0.30	0.0
WM4012_02	Glencoe	J-0469	J-0097	46.60	200	110	9.30	0.30	0.0
WM4012_03	Glencoe	J-0097	WVG093	3.00	200	110	9.30	0.30	0.0
WM4012_04	Glencoe	WVG093	J-0003	1.12	200	110	0.00	0.00	0.0
WM4012_05	Glencoe	J-0303	WVG093	15.47	200	110	-9.30	0.30	0.0
WM4013_01	Glencoe	J-0205	J_Hyd-G065	9.39	200	110	9.30	0.30	0.0
WM4013_02	Glencoe	J_Hyd-G065	J_Hyd-G066	127.29	200	110	9.30	0.30	0.1
WM4013_03	Glencoe	J_Hyd-G066	J-0468	39.92	200	110	9.30	0.30	0.0
WM4014_01	Glencoe	J-0205	WVG101	9.82	200	110	-7.73	0.25	0.0
WM4014_02	Glencoe	WVG107	J_Hyd-G064	6.15	200	110	7.73	0.25	0.0
WM4014_03	Glencoe	J_Hyd-G064	WVG101	119.04	200	110	7.73	0.25	0.1
WM4015_01	Glencoe	J-0048	J-0049	1.67	200	110	50.95	1.62	0.0
WM4015_02	Glencoe	J-0048	WVG193	5.79	200	110	0.00	0.00	0.0
WM4015_03	Glencoe	WVG193	J-0075	2.30	200	110	0.00	0.00	0.0
WM4015_04	Glencoe	J-0091	WVG113	2.54	200	110	0.00	0.00	0.0
WM4015_05	Glencoe	WVG113	WVG106	98.98	200	110	0.00	0.00	0.0
WM4015_06	Glencoe	J-0063	WVG106	16.77	200	110	0.00	0.00	0.0
WM4016_01	Glencoe	WVG003	J-0175	4.35	150	100	-0.86	0.05	0.0
WM4016_02	Glencoe	WVG002	J-0333	104.71	150	100	-1.88	0.11	0.0
WM4016_03	Glencoe	J-0481	J_Hyd-G016	38.74	150	100	-0.86	0.05	0.0
WM4016_04	Glencoe	J_Hyd-G016	WVG003	64.80	150	100	-0.86	0.05	0.0
WM4016_05	Glencoe	J-0175	WVG002	13.38	150	100	-1.88	0.11	0.0
WM4018_01	Glencoe	J-0333	J-0334	11.46	150	100	-2.69	0.15	0.0
WM4018_02	Glencoe	J-0334	J-0497	46.44	150	100	-2.69	0.15	0.0
WM4018_03	Glencoe	J-0144	J-0497	65.09	150	100	2.69	0.15	0.0
WM4019_01	Glencoe	J-0144	WVG010	3.77	200	110	-7.69	0.24	0.0
WM4019_02	Glencoe	WVG010	J-713	110.69	200	110	-7.69	0.24	0.1
WM4020_01	Glencoe	J_Hyd-G059	J-0107	113.86	150	100	4.77	0.27	0.1
WM4020_02	Glencoe	J-0107	J-0014	3.03	150	100	3.29	0.19	0.0
WM4020_03	Glencoe	J-0014	WVG096	1.04	150	100	3.29	0.19	0.0
WM4020_04	Glencoe	WVG096	J-0316	15.27	200	110	3.29	0.10	0.0
WM4021_01	Glencoe	J-0187	WVG105	5.72	150	100	4.77	0.27	0.0
WM4021_02	Glencoe	WVG105	J_Hyd-G060	4.08	150	100	4.77	0.27	0.0
WM4021_03	Glencoe	J_Hyd-G060	J_Hyd-G059	130.41	150	100	4.77	0.27	0.1
WM4022_01	Glencoe	J-0089	WVG109	3.68	200	110	7.74	0.25	0.0
WM4022_02	Glencoe	WVG109	J_Hyd-G061	5.42	200	110	7.74	0.25	0.0
WM4022_03	Glencoe	J_Hyd-G061	J-0187	128.70	200	110	7.74	0.25	0.1
WM4023_01	Glencoe	J-0222	WVG071	6.23	300	120	1.94	0.03	0.0
WM4023_02	Glencoe	WVG071	J-0134	6.29	300	120	1.94	0.03	0.0
WM4023_03	Glencoe	J-0134	J-0135	3.59	300	120	1.94	0.03	0.0
WM4023_04	Glencoe	J-0135	WVG085	103.05	300	120	0.93	0.01	0.0
WM4023_05	Glencoe	WVG085	J_Hyd-G085	4.68	300	120	0.93	0.01	0.0
WM4024_01	Glencoe	WVG069	J_Hyd-G080	7.03	250	120	-9.26	0.19	0.0
WM4024_02	Glencoe	J_Hyd-G080	J-0124	174.48	250	120	-9.26	0.19	0.0
WM4024_03	Glencoe	WVG069	J-0222	14.30	250	120	9.26	0.19	0.0
WM4025_01	Glencoe	J-0124	WVG058	3.66	250	120	-10.83	0.22	0.0
WM4025_02	Glencoe	WVG058	J_Hyd-G076	0.90	250	120	-10.83	0.22	0.0
WM4025_03	Glencoe	J_Hyd-G076	J-0284	104.25	250	120	-10.83	0.22	0.0
WM4026_01	Glencoe	J-0284	WVG047	10.69	250	120	-18.63	0.38	0.0
WM4026_02	Glencoe	J-0285	J-0179	9.19	200	110	4.85	0.15	0.0
WM4026_03	Glencoe	WVG047	WVG038	100.52	250	120	-18.63	0.38	0.1
WM4026_04	Glencoe	WVG038	J-715	3.84	250	120	-18.63	0.38	0.0
WM4027_01	Glencoe	J-0111	WVG130	4.08	250	120	-24.68	0.50	0.0
WM4027_02	Glencoe	WVG130	J-0421	174.59	250	120	-24.68	0.50	0.2
WM4027_03(1)	Glencoe	J-0421	J-709	19.33	250	120	-26.86	0.55	0.0
WM4027_03(2)	Glencoe	J-709	J-0104	2.64	250	120	-29.90	0.61	0.0
WM4028_01	Glencoe	J-0104	J-0094	2.96	250	120	-29.90	0.61	0.0
WM4028_02	Glencoe	J-0094	J_Hyd-G067	2.65	250	120	-29.90	0.61	0.0
WM4028_03	Glencoe	J_Hyd-G067	J-0227	159.12	250	120	-29.91	0.61	0.3
WM4029_01	Glencoe	J_Hyd-G079	J_Hyd-G081	102.59	250	120	40.40	0.82	0.4
WM4029_02	Glencoe	J_Hyd-G081	WVG192	2.89	250	120	40.40	0.82	0.0
WM4029_03	Glencoe	WVG192	J-0227	8.63	250	120	40.40	0.82	0.0
WM4030	Glencoe	J-0123	J_Hyd-G079	126.31	250	120	40.40	0.82	0.4
WM4032_01	Glencoe	WVR022	J-0006	4.47	250	120	-50.95	1.04	0.0
WM4032_02	Glencoe	J-0006	J-0007	0.86	200	110	-70.38	2.24	0.0
WM4032_03	Glencoe	J-0007	J-0017	1.08	200	110	-70.38	2.24	0.0
WM4032_04	Glencoe	WVR022	J_Hyd-G078	6.97	250	120	50.95	1.04	0.0
WM4032_05	Glencoe	J_Hyd-G078	WVG140	274.02	250	120	50.95	1.04	1.4
WM4032_06	Glencoe	WVG140	J-0048	4.92	250	120	50.95	1.04	0.0
WM4032_07	Glencoe	J-0049	J-0123	9.92	250	120	50.95	1.04	0.1
WM4035_01(1)	Glencoe	J-0344	J-698	1.22	150	100	0.00	0.00	0.0
WM4035_01(2)	Glencoe	J-698	WVG061	10.93	150	100	-1.38	0.08	0.0
WM4035_02	Glencoe	WVG061	J_Hyd-G027	3.18	200	110	-1.38	0.04	0.0
WM4035_03	Glencoe	J-0344	J_Hyd-G028	161.67	150	100	0.00	0.00	0.0
WM4035_04	Glencoe	J_Hyd-G028	J-0437	24.28	150	100	0.00	0.00	0.0
WM4036	Glencoe	J_Hyd-G027	J-695	109.13	200	110	-1.38	0.04	0.0
WM4037_01	Glencoe	J-695	WVG049	6.43	200	110	-1.82	0.06	0.0
WM4037_02	Glencoe	WVG049	J_Hyd-G026	90.02	200	110	-1.82	0.06	0.0
WM4037_03	Glencoe	J_Hyd-G026	J-0201	18.69	200	110	-1.82	0.06	0.0
WM4038_01	Glencoe	J_Hyd-G029	J_Hyd-G068	118.88	100	100	-1.56	0.20	0.1
WM4038_02	Glencoe	J-0354	J_Hyd-G029	74.71	100	100	-1.56	0.20	0.1
WM4038_03	Glencoe	J_Hyd-G068	J-0321	10.21	100	100	-1.56	0.20	0.0
WM4040_01	Glencoe	J-0390	WVG074	17.67	200	110	0.31	0.01	0.0

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4040_02	Glencoe	WVG074	J_Hyd-G020	31.15	150	100	-2.18	0.12	0.0
WM4040_03	Glencoe	J_Hyd-G020	J-0044	136.07	150	100	-2.18	0.12	0.0
WM4040_04	Glencoe	J-0044	J_Hyd-G021	13.53	150	100	-1.36	0.08	0.0
WM4041_01	Glencoe	J-0036	WVG051	15.67	150	100	1.42	0.08	0.0
WM4041_02	Glencoe	J_Hyd-G021	WVG064	10.79	150	100	-1.36	0.08	0.0
WM4041_03	Glencoe	WVG064	WVG051	85.34	150	100	-1.36	0.08	0.0
WM4042_01	Glencoe	J-0036	WVG052	1.53	150	100	-3.15	0.18	0.0
WM4042_02	Glencoe	J-0564	WVG052	112.33	200	110	3.15	0.10	0.0
WM4044_01	Glencoe	J-0288	WVG149	8.47	150	100	1.69	0.10	0.0
WM4044_02	Glencoe	WVG149	J-0447	25.14	150	100	1.69	0.10	0.0
WM4044_03	Glencoe	J-0447	J_Hyd-G022	121.76	150	100	0.00	0.00	0.0
WM4044_04	Glencoe	J_Hyd-G022	WVG148	39.91	150	100	0.00	0.00	0.0
WM4044_05	Glencoe	WVG148	J-0279	8.16	150	100	0.00	0.00	0.0
WM4045	Glencoe	J_Hyd-G062	J-0544	160.30	150	100	0.00	0.00	0.0
WM4048	Glencoe	J-0561	J-0602	197.94	150	100	0.00	0.00	0.0
WM4049_01	Glencoe	J-0198	WVG053	17.47	200	110	0.00	0.00	0.0
WM4049_02	Glencoe	J-0561	WVG053	105.28	200	110	0.00	0.00	0.0
WM4050	Glencoe	J-0452	J-0071	136.52	150	100	1.91	0.11	0.0
WM4051_01(1)	Glencoe	J-0381	J-703	11.62	150	100	-0.44	0.03	0.0
WM4051_01(2)	Glencoe	J-703	J_Hyd-G008	5.45	150	100	2.49	0.14	0.0
WM4051_02(1)	Glencoe	J_Hyd-G008	J-705	24.45	150	100	2.49	0.14	0.0
WM4051_02(2)	Glencoe	J-705	J_Hyd-G009	99.83	150	100	-0.27	0.02	0.0
WM4051_03	Glencoe	J_Hyd-G009	J-0339	35.00	150	100	-0.27	0.02	0.0
WM4051_04	Glencoe	J-0339	J-0340	11.79	150	100	-0.27	0.02	0.0
WM4051_05	Glencoe	J-0340	J-0402	19.06	200	110	-0.27	0.01	0.0
WM4052_01	Glencoe	J-0389	WVG055	17.50	150	100	-0.44	0.03	0.0
WM4052_02	Glencoe	WVG055	J-0381	97.74	150	100	-0.44	0.03	0.0
WM4053_01	Glencoe	J-722	J-0543	84.11	150	100	0.00	0.00	0.0
WM4053_02	Glencoe	J-0632	J-0586	611.63	150	100	0.00	0.00	0.0
WM4053_03	Glencoe	J-0045	J_Hyd-G077	136.44	150	100	2.93	0.17	0.1
WM4053_04	Glencoe	J_Hyd-G077	J-703	104.84	150	100	2.93	0.17	0.1
WM4053_05	Glencoe	J-0165	J-727	19.07	200	110	-0.96	0.03	0.0
WM4053_06	Glencoe	J_Hyd-G085	J-0581	131.21	150	100	0.93	0.05	0.0
WM4054_01	Glencoe	J_Hyd-G095	J-0098	44.85	150	100	0.00	0.00	0.0
WM4054_02	Glencoe	J-0098	WVG153	2.73	150	100	0.00	0.00	0.0
WM4054_03	Glencoe	WVG153	J_Hyd-G098	40.38	150	100	0.00	0.00	0.0
WM4054_04	Glencoe	J_Hyd-G098	J-724	91.69	150	100	0.00	0.00	0.0
WM4055_01	Glencoe	J-0165	J-0166	4.18	200	110	0.96	0.03	0.0
WM4055_02	Glencoe	J-0166	J_Hyd-G069	17.94	200	110	0.96	0.03	0.0
WM4055_03	Glencoe	J_Hyd-G069	J-0364	83.89	200	110	0.96	0.03	0.0
WM4055_04	Glencoe	J-0364	WVG164	14.54	200	110	-0.83	0.03	0.0
WM4056_01	Glencoe	J-0306	J-0291	9.23	200	110	2.27	0.07	0.0
WM4056_02	Glencoe	J-0291	WVG056	8.53	200	110	2.27	0.07	0.0
WM4056_03	Glencoe	WVG056	J_Hyd-G071	6.29	200	110	2.27	0.07	0.0
WM4056_04	Glencoe	J_Hyd-G071	J_Hyd-G070	141.64	200	110	2.27	0.07	0.0
WM4056_05(1)	Glencoe	J_Hyd-G070	J-700	14.39	200	110	2.27	0.07	0.0
WM4056_05(2)	Glencoe	J-700	WVG164	2.83	200	110	0.83	0.03	0.0
WM4059_01	Glencoe	J-0071	J-0072	2.21	150	100	1.91	0.11	0.0
WM4059_02	Glencoe	J-0072	WVG086	4.07	150	100	1.91	0.11	0.0
WM4059_03	Glencoe	WVG086	J-0004	0.64	150	100	1.91	0.11	0.0
WM4059_04	Glencoe	J-0004	WVG159	85.81	150	100	1.91	0.11	0.0
WM4059_05	Glencoe	WVG159	J-0054	1.75	150	100	1.91	0.11	0.0
WM4060C_01	Glencoe	J-0264	WVG070	100.69	200	110	2.00	0.06	0.0
WM4060C_02	Glencoe	WVG070	J-0222	5.50	100	100	2.00	0.25	0.0
WM4061C_01	Glencoe	J-0222	WVG175	13.49	200	110	7.06	0.22	0.0
WM4061C_02	Glencoe	WVG175	J-0566	109.30	200	110	7.06	0.22	0.1
WM4062C(1)	Glencoe	J-0390	J-0368	107.52	200	110	-7.06	0.22	0.1
WM4062C(2)	Glencoe	J-0368	J-0566	1.97	200	110	-7.06	0.22	0.0
WM4063C(1)	Glencoe	J-0390	J-692	10.67	200	110	6.75	0.21	0.0
WM4063C(2)	Glencoe	J-692	J-0579	118.60	200	110	5.40	0.17	0.0
WM4064C	Glencoe	J-0579	J-0402	125.69	200	110	5.40	0.17	0.0
WM4066_01	Glencoe	J-0481	J_Hyd-G097	73.16	150	100	-0.09	0.01	0.0
WM4066_02	Glencoe	J_Hyd-G097	WVG001	67.96	150	100	-0.09	0.01	0.0
WM4067_01	Glencoe	J-0546	J_Hyd-G086	4.52	150	100	-1.04	0.06	0.0
WM4067_02	Glencoe	J_Hyd-G086	J_Hyd-G056	136.36	150	100	-1.04	0.06	0.0
WM4067_03	Glencoe	J-0435	J_Hyd-G056	152.58	150	100	1.04	0.06	0.0
WM4068_01	Glencoe	J-0272	J-0273	7.81	200	110	0.61	0.02	0.0
WM4068_02	Glencoe	J-0273	J-0175	10.81	200	110	0.61	0.02	0.0
WM4068_03	Glencoe	J-0435	WVG015	24.20	150	100	0.61	0.03	0.0
WM4068_04	Glencoe	WVG015	J-0272	79.45	150	100	0.61	0.03	0.0
WM4069_02	Glencoe	WVG027	J-0076	2.31	200	110	0.65	0.02	0.0
WM4069_03	Glencoe	J-0076	J-0271	7.68	200	110	0.65	0.02	0.0
WM4069_04	Glencoe	J-0271	J_Hyd-G057	136.22	200	110	0.65	0.02	0.0
WM4069_05	Glencoe	J_Hyd-G057	WVG004	8.11	200	110	0.65	0.02	0.0
WM4069_06	Glencoe	WVG004	J-0175	4.98	200	110	0.65	0.02	0.0
WM4070_01	Glencoe	J-700	WVG152	8.78	150	100	1.44	0.08	0.0
WM4070_02	Glencoe	WVG152	J_Hyd-G096	110.01	150	100	1.44	0.08	0.0
WM4070_03	Glencoe	J_Hyd-G096	J-0427	29.19	150	100	1.44	0.08	0.0
WM4070_04	Glencoe	J-0427	WVG165	22.83	150	100	-2.76	0.16	0.0
WM4071_01	Glencoe	J-0384	J-0524	163.12	150	100	-1.24	0.07	0.0
WM4071_02	Glencoe	J-0524	J-0503	64.16	150	100	-1.24	0.07	0.0
WM4071_03	Glencoe	J-0503	J_Hyd-G073	51.20	150	100	-1.24	0.07	0.0
WM4071_04	Glencoe	J_Hyd-G073	J-0256	17.07	150	100	-1.24	0.07	0.0
WM4072_01	Glencoe	J-0255	J-0342	102.78	150	100	-0.48	0.03	0.0
WM4072_02	Glencoe	J-0342	J-0333	12.07	150	100	-0.48	0.03	0.0
WM4074_01	Glencoe	J-0124	WVG057	3.42	250	120	-0.80	0.02	0.0
WM4074_02	Glencoe	J-0084	WVG172	2.45	150	100	-1.90	0.11	0.0
WM4074_03	Glencoe	WVG172	J-0025	49.15	150	100	-1.90	0.11	0.0
WM4074_04	Glencoe	J-0025	WVG057	52.74	150	100	0.80	0.05	0.0
WM4075_01	Glencoe	J-0332	J-698	11.44	200	110	2.37	0.08	0.0
WM4075_02	Glencoe	J-0124	WVG059	4.81	150	100	2.37	0.13	0.0
WM4075_03	Glencoe	WVG059	J-0060	1.83	150	100	2.37	0.13	0.0
WM4075_04	Glencoe	J-0060	WVG170	3.49	150	100	2.37	0.13	0.0
WM4075_05	Glencoe	WVG170	J-0332	102.63	150	100	2.37	0.13	0.0
WM4075_06	Glencoe	J-0333	J_Hyd-G074	15.51	150	100	0.33	0.02	0.0
WM4075_07	Glencoe	J_Hyd-G074	J-0507	82.01	150	100	0.33	0.02	0.0
WM4075_08(1)	Glencoe	J-0507	J-707	6.31	150	100	0.33	0.02	0.0
WM4075_08(2)	Glencoe	J-707	WVG028	45.56	150	100	1.25	0.07	0.0
WM4075_09	Glencoe	WVG028	J_Hyd-G075	3.61	150	100	1.25	0.07	0.0

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4075_10	Glencoe	J_Hyd-G075	J-0252	19.39	150	100	1.25	0.07	0.0
WM4076_01	Glencoe	WVG169	J-698	4.82	200	110	-3.75	0.12	0.0
WM4076_02	Glencoe	WVG169	J-0044	105.78	150	100	3.75	0.21	0.1
WM4077	Glencoe	J-0044	J-0045	1.64	150	100	2.93	0.17	0.0
WM4079_01	Glencoe	J-0178	WVG035	4.43	150	100	-2.67	0.15	0.0
WM4079_02	Glencoe	WVG035	J-718	110.51	150	100	-2.67	0.15	0.0
WM4080_01	Glencoe	J-0099	WVG019	2.84	200	110	2.21	0.07	0.0
WM4080_02	Glencoe	J-0580	J_Hyd-G051	129.47	200	110	0.00	0.00	0.0
WM4081_01	Glencoe	WVG019	J_Hyd-G050	103.90	200	110	2.21	0.07	0.0
WM4081_02(1)	Glencoe	J_Hyd-G050	J-720	84.40	200	110	2.21	0.07	0.0
WM4081_02(2)	Glencoe	J-720	J-0580	19.71	200	110	0.00	0.00	0.0
WM4082_01	Glencoe	J-0099	J-0106	11.28	200	110	-2.21	0.07	0.0
WM4082_02	Glencoe	J-0106	J_Hyd-G049	24.29	200	110	-2.22	0.07	0.0
WM4082_03	Glencoe	J_Hyd-G049	J-0144	83.33	200	110	-2.22	0.07	0.0
WM4083_01	Glencoe	J-0144	WVG011	10.85	200	110	0.94	0.03	0.0
WM4083_02	Glencoe	WVG011	J_Hyd-G048	5.58	200	110	0.94	0.03	0.0
WM4083_03	Glencoe	J_Hyd-G048	WVG036	85.97	200	110	0.94	0.03	0.0
WM4083_04	Glencoe	WVG036	J-0178	5.16	200	110	0.94	0.03	0.0
WM4084_01	Glencoe	J-0178	J_Hyd-G047	44.27	200	110	2.69	0.09	0.0
WM4084_02	Glencoe	J_Hyd-G047	WVG030	33.12	200	110	2.69	0.09	0.0
WM4085_01	Glencoe	WVG030	WVG046	90.09	200	110	2.69	0.09	0.0
WM4085_02	Glencoe	WVG046	J_Hyd-G046	6.34	200	110	2.69	0.09	0.0
WM4085_03	Glencoe	J_Hyd-G046	J-0179	12.04	200	110	2.69	0.09	0.0
WM4085_04	Glencoe	J-0284	J-0285	8.41	200	110	4.85	0.15	0.0
WM4086_01	Glencoe	J-0179	WVG200	4.45	200	110	7.53	0.24	0.0
WM4086_02	Glencoe	WVG200	WVG048	97.18	200	110	7.53	0.24	0.1
WM4086_03	Glencoe	WVG048	J_Hyd-G045	1.59	200	110	7.53	0.24	0.0
WM4086_04(1)	Glencoe	J_Hyd-G045	J-695	8.56	200	110	7.53	0.24	0.0
WM4086_04(2)	Glencoe	J-695	WVG050	7.32	200	110	7.98	0.25	0.0
WM4087	Glencoe	WVG050	J-0036	103.33	200	110	7.98	0.25	0.1
WM4088_01	Glencoe	J-0036	J_Hyd-G044	15.50	200	110	9.71	0.31	0.0
WM4088_02	Glencoe	J_Hyd-G044	J_Hyd-G043	102.76	200	110	9.71	0.31	0.1
WM4088_03	Glencoe	J_Hyd-G043	J-0198	13.93	200	110	9.71	0.31	0.0
WM4089_01	Glencoe	J-0198	WVG054	4.87	200	110	7.28	0.23	0.0
WM4089_02	Glencoe	WVG054	J-0389	104.26	200	110	2.90	0.09	0.0
WM4090_01	Glencoe	J-0389	J_Hyd-G042	35.45	200	110	3.35	0.11	0.0
WM4090_02	Glencoe	J_Hyd-G042	J_Hyd-G041	123.12	200	110	3.35	0.11	0.0
WM4090_03	Glencoe	J_Hyd-G041	J-0306	113.59	200	110	3.35	0.11	0.0
WM4091_01	Glencoe	J-0410	J_Hyd-G052	20.75	150	100	-2.40	0.14	0.0
WM4091_02	Glencoe	J_Hyd-G052	WVG012	81.54	150	100	-2.40	0.14	0.0
WM4092_01(1)	Glencoe	WVG012	J-713	7.73	150	100	-2.40	0.14	0.0
WM4092_01(2)	Glencoe	J-713	WVG013	8.18	150	100	1.88	0.11	0.0
WM4092_02	Glencoe	WVG013	J_Hyd-G053	42.46	150	100	1.88	0.11	0.0
WM4092_03	Glencoe	J_Hyd-G053	WVG161	39.94	150	100	1.88	0.11	0.0
WM4093(1)	Glencoe	WVG161	J-718	17.09	150	100	1.88	0.11	0.0
WM4093(2)	Glencoe	J-718	WVG032	49.53	150	100	-0.79	0.04	0.0
WM4094_01	Glencoe	WVG039	J-0139	3.71	150	100	3.49	0.20	0.0
WM4094_02	Glencoe	J-0139	J-0336	11.56	150	100	3.49	0.20	0.0
WM4094_03	Glencoe	J-0336	J-0331	39.62	150	100	3.49	0.20	0.0
WM4094_04	Glencoe	J-0331	J-0286	42.02	150	100	0.79	0.04	0.0
WM4094_05	Glencoe	J-0286	WVG032	30.10	150	100	0.79	0.04	0.0
WM4095_01	Glencoe	J-0201	WVG044	10.01	150	100	-4.97	0.28	0.0
WM4095_02	Glencoe	WVG044	WVG041	98.34	150	100	-4.97	0.28	0.1
WM4095_03	Glencoe	WVG041	J-0211	5.17	150	100	-4.97	0.28	0.0
WM4095_04	Glencoe	J-0211	WVG040	8.79	150	100	-4.97	0.28	0.0
WM4095_05	Glencoe	WVG040	J-0005	2.73	150	100	0.00	0.00	0.0
WM4095_06(1)	Glencoe	WVG040	J-715	6.18	150	100	-4.97	0.28	0.0
WM4095_06(2)	Glencoe	J-715	WVG039	2.36	150	100	3.49	0.20	0.0
WM4096_01	Glencoe	WVG043	J-0201	4.96	150	100	-3.15	0.18	0.0
WM4096_02	Glencoe	J-0564	WVG043	106.76	150	100	-3.15	0.18	0.1
WM4097_01	Glencoe	J-0529	J-0425	68.18	50	100	0.00	0.00	0.0
WM4097_02	Glencoe	J-0424	J-0425	22.42	50	100	0.00	0.00	0.0
WM4098_01	Glencoe	J-0111	WVG129	3.15	150	100	-5.35	0.30	0.0
WM4098_02	Glencoe	WVG129	J-0172	4.26	150	100	-5.35	0.30	0.0
WM4098_03	Glencoe	J-0172	J-0239	6.15	150	100	-5.35	0.30	0.0
WM4098_04	Glencoe	J-0239	J_Hyd-G024	62.71	150	100	-5.35	0.30	0.1
WM4098_05	Glencoe	J_Hyd-G024	J-0265	21.45	150	100	-5.35	0.30	0.0
WM4098_06	Glencoe	J-0265	J-0116	7.41	150	100	-5.35	0.30	0.0
WM4098_07	Glencoe	J-0116	WVG188	3.18	150	100	-5.35	0.30	0.0
WM4098_08	Glencoe	WVG188	J-0126	5.05	150	100	-5.35	0.30	0.0
WM4099_01	Glencoe	J-0354	WVG189	13.18	150	100	-2.94	0.17	0.0
WM4099_02	Glencoe	WVG189	J_Hyd-G025	91.45	150	100	-2.94	0.17	0.0
WM4099_03	Glencoe	J_Hyd-G025	J-0236	3.77	150	100	-2.94	0.17	0.0
WM4099_04	Glencoe	J-0236	J-0059	6.09	150	100	-2.94	0.17	0.0
WM4099_05	Glencoe	J-0059	WVG199	1.83	150	100	-2.94	0.17	0.0
WM4099_06	Glencoe	WVG199	WVG131	5.28	150	100	-2.94	0.17	0.0
WM4099_07	Glencoe	WVG131	J-0111	4.06	150	100	-2.94	0.17	0.0
WM4101_01	Glencoe	WVG187	WVG132	101.68	150	100	1.56	0.09	0.0
WM4101_02	Glencoe	WVG132	J-709	2.48	150	100	1.56	0.09	0.0
WM4101_03(1)	Glencoe	WVG187	J-811	1.61	150	100	-1.56	0.09	0.0
WM4102_01	Glencoe	J-709	WVG133	13.28	150	100	4.60	0.26	0.0
WM4102_02	Glencoe	WVG133	WVG147	97.08	150	100	4.60	0.26	0.1
WM4102_03	Glencoe	WVG147	J-0321	13.28	150	100	4.60	0.26	0.0
WM4103	Glencoe	J-0321	J-0568	110.36	150	100	3.04	0.17	0.1
WM4104_01	Glencoe	J-0568	J_Hyd-G088	35.37	150	100	3.04	0.17	0.0
WM4104_02	Glencoe	J_Hyd-G088	J_Hyd-G089	114.83	150	100	3.04	0.17	0.1
WM4104_03	Glencoe	J_Hyd-G089	WVG150	58.22	150	100	3.04	0.17	0.0
WM4104_04	Glencoe	WVG150	WVG190	30.53	150	100	3.04	0.17	0.0
WM4104_05	Glencoe	WVG190	J_Hyd-G090	61.89	150	100	1.24	0.07	0.0
WM4104_06	Glencoe	J_Hyd-G090	WVG151	122.12	150	100	1.24	0.07	0.0
WM4104_07	Glencoe	WVG151	J_Hyd-G091	7.91	150	100	0.00	0.00	0.0
WM4107_01	Glencoe	J-735	WVG186	1.65	150	100	0.00	0.00	0.0
WM4107_02	Glencoe	WVG186	J_Hyd-G004	130.23	150	100	0.00	0.00	0.0
WM4108_01	Glencoe	J-0205	WVG103	5.09	200	110	6.32	0.20	0.0
WM4108_02	Glencoe	J-734	WVG103	119.43	200	110	-6.32	0.20	0.1
WM4109_01	Glencoe	WVG102	WVG104	108.82	200	110	-7.90	0.25	0.1
WM4109_02	Glencoe	WVG104	J-0187	4.57	200	110	-7.90	0.25	0.0
WM4109_03	Glencoe	WVG102	J-0205	9.87	200	110	7.90	0.25	0.0
WM4110_01	Glencoe	J-0187	J-0358	89.06	200	110	-7.58	0.24	0.1

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM4110_02	Glencoe	J-0358	WVG181	13.95	200	110	-7.58	0.24	0.0
WM4110_03	Glencoe	WVG181	J-0011	1.00	200	110	-7.58	0.24	0.0
WM4110_04(2)(2	Glencoe	J-815	J-0093	4.88	200	110	-10.50	0.33	0.0
WM4111_01	Glencoe	J-0093	J-0080	2.63	200	110	-10.50	0.33	0.0
WM4111_02	Glencoe	J-0080	WVG183	2.38	200	110	-10.50	0.33	0.0
WM4111_03	Glencoe	WVG183	WVG191	91.38	200	110	-10.50	0.33	0.1
WM4111_04	Glencoe	WVG191	J-0227	5.56	200	110	-10.50	0.33	0.0
WM4112_01	Glencoe	J-0063	WVG108	120.28	200	110	-7.73	0.25	0.1
WM4112_02	Glencoe	WVG108	J-0089	2.53	200	110	-7.73	0.25	0.0
WM4113_01	Glencoe	J-0089	WVG010	10.60	200	110	-9.27	0.30	0.0
WM4113_02	Glencoe	WVG010	WVG120	100.04	200	110	-9.27	0.30	0.1
WM4114	Glencoe	WVG107	J-0063	1.84	150	100	-7.73	0.44	0.0
WM4115_01	Glencoe	J-0123	WVG139	3.41	150	100	10.54	0.60	0.0
WM4115_02	Glencoe	WVG139	J_Hyd-H_T-718	3.84	150	100	10.54	0.60	0.0
WM4115_04	Glencoe	J_Hyd-H_T-718	J-0262	93.36	150	100	10.54	0.60	0.4
WM4115_05(2)	Glencoe	J-825	J-0559	106.02	150	100	6.20	0.35	0.2
WM4115_06	Glencoe	J-0559	J-0089	104.29	150	100	6.20	0.35	0.2
WM4116_01	Glencoe	J_Hyd-G001	WVG117	58.22	150	100	0.90	0.05	0.0
WM4116_02	Glencoe	WVG117	J-0213	16.86	150	100	0.90	0.05	0.0
WM4116_03	Glencoe	J-0360	J_Hyd-G001	121.50	150	100	0.90	0.05	0.0
WM4117	Glencoe	J-0360	J-0409	20.60	150	100	-3.32	0.19	0.0
WM4118_01	Glencoe	J-0590	J_Hyd-G002	142.34	150	100	0.00	0.00	0.0
WM4118_02	Glencoe	J_Hyd-G002	J-0091	4.87	150	100	0.00	0.00	0.0
WM4120	Glencoe	J-0235	J_Hyd-G018	41.76	150	100	0.00	0.00	0.0
WM4121_01	Glencoe	WVG185	J-0235	6.04	150	100	0.00	0.00	0.0
WM4121_02	Glencoe	WVG185	J_Hyd-G019	101.74	150	100	0.00	0.00	0.0
WM4124_01	Glencoe	J-0067	J-0494	44.34	300	120	-20.25	0.29	0.0
WM4124_02	Glencoe	J-0066	J_Hyd-G084	333.82	300	120	-20.53	0.29	0.1
WM4124_03	Glencoe	J-0066	J-0067	2.04	300	120	11.77	0.17	0.0
WM4125_01	Glencoe	J-0146	J-0202	57.31	300	120	-30.67	0.43	0.1
WM4125_02	Glencoe	J-0006	WVG196	53.16	150	100	19.44	1.10	0.8
WM4125_03	Glencoe	WVG122	J-0267	7.87	150	100	19.44	1.10	0.1
WM4125_04	Glencoe	WVG122	WVG196	48.20	150	100	-19.44	1.10	0.7
WM4125_05	Glencoe	J-0337	J-0338	11.59	300	120	54.07	0.76	0.0
WM4125_06	Glencoe	J-0338	J-0180	21.85	300	120	54.07	0.76	0.1
WM4125_07	Glencoe	J-0180	J-0146	229.84	300	120	33.43	0.47	0.2
WM4125_08	Glencoe	J-0145	J-0017	4.06	300	120	61.20	0.87	0.0
WM4126_01	Glencoe	J-0017	WVG143	1.42	200	110	-9.18	0.29	0.0
WM4126_02	Glencoe	WVG143	J-0013	1.00	200	110	-9.18	0.29	0.0
WM4126_03	Glencoe	J-0013	J-0047	1.67	200	110	-9.18	0.29	0.0
WM4126_04	Glencoe	J-0047	J-0038	2.12	200	110	-9.18	0.29	0.0
WM4126_05	Glencoe	J-0038	J-0039	1.57	200	110	-9.18	0.29	0.0
WM4126_06	Glencoe	J-0168	J-0169	4.23	200	110	11.46	0.36	0.0
WM4126_07	Glencoe	J-0039	J-0544	87.81	200	110	-9.18	0.29	0.1
WM4128C_01	Glencoe	J-0252	WVG029	6.68	150	100	3.15	0.18	0.0
WM4129C_01	Glencoe	J-0115	J-0084	3.18	150	100	0.00	0.00	0.0
WM4129C_02	Glencoe	J-0084	J-0252	8.39	150	100	1.90	0.11	0.0
WM4143C	Glencoe	J-0373	J-0451	80.71	200	110	-5.32	0.17	0.0
WM4145C_01	Glencoe	J-0451	J_Hyd-G013	25.95	200	110	-5.94	0.19	0.0
WM4145C_02	Glencoe	J_Hyd-G013	J-0032	1.48	150	100	-5.94	0.34	0.0
WM4147C_01	Glencoe	J-0316	J-0191	48.55	200	110	8.17	0.26	0.0
WM4147C_02	Glencoe	J-0191	J_Hyd-G012	75.68	200	110	-4.73	0.15	0.0
WM4147C_03	Glencoe	J_Hyd-G012	J-0303	9.12	150	100	-4.73	0.27	0.0
WM4147C_04	Glencoe	J-0032	J-0128	88.99	200	110	-4.57	0.15	0.0
WM4147C_05	Glencoe	J-0128	J-0303	27.37	200	110	-4.57	0.15	0.0
WM4148C_01	Glencoe	J-0316	J_Hyd-G011	10.01	200	110	-4.88	0.16	0.0
WM4148C_02	Glencoe	WVG097	J_Hyd-G011	89.00	200	110	4.88	0.16	0.0
WM4149_01	Glencoe	J-715	WVG042	11.98	250	120	-27.08	0.55	0.0
WM4149_02	Glencoe	WVG042	J-0111	70.85	250	120	-27.08	0.55	0.1
WM4153C_01	Glencoe	J-0071	J_Hyd-G010	2.62	150	100	0.00	0.00	0.0
WM4153C_02	Glencoe	WVG158	J_Hyd-G010	52.89	150	100	0.00	0.00	0.0
WM4153C_03	Glencoe	J-0402	J_Hyd-G087	11.71	200	110	5.13	0.16	0.0
WM4153C_04	Glencoe	J_Hyd-G087	J-0452	14.25	200	110	5.13	0.16	0.0
WM4153C_05(1)	Glencoe	J-0452	J-722	58.28	200	110	3.21	0.10	0.0
WM4153C_05(2)	Glencoe	J-722	J_Hyd-G082	28.48	200	110	3.21	0.10	0.0
WM4153C_06	Glencoe	J_Hyd-G082	J_Hyd-G006	142.80	200	110	3.21	0.10	0.0
WM4153C_07	Glencoe	WV-348	J_Hyd-G005	108.11	200	110	2.25	0.07	0.0
WM4153C_08	Glencoe	J_Hyd-G005	J_Hyd-G063	100.69	200	110	2.25	0.07	0.0
WM4153C_09	Glencoe	J_Hyd-G063	J_Hyd-G058	130.80	200	110	2.25	0.07	0.0
WM4153C_10	Glencoe	J_Hyd-G058	J-0627	10.14	200	110	2.25	0.07	0.0
WM4156	Glencoe	J-0367	J-0368	16.07	150	100	0.00	0.00	0.0
WM4157_01	Glencoe	J-0554	J_Hyd-G092	93.03	150	100	-1.35	0.08	0.0
WM4157_02	Glencoe	J_Hyd-G092	J-692	5.66	150	100	-1.35	0.08	0.0
WM4159_01	Glencoe	J-0384	WVG022	17.17	150	100	0.00	0.00	0.0
WM4159_02	Glencoe	WVG022	G072	40.39	150	100	0.00	0.00	0.0
WM4160_01	Glencoe	J-0360	WVG116	14.15	150	100	2.42	0.14	0.0
WM4160_02	Glencoe	WVG116	J-0235	99.50	150	100	2.42	0.14	0.0
WM4162_01	Glencoe	J-0191	WVG094	4.72	150	100	12.90	0.73	0.0
WM4162_02	Glencoe	WVG094	J-0529	83.93	200	110	12.90	0.41	0.1
WM4162_03	Glencoe	J-0529	J-713	78.46	200	110	11.97	0.38	0.1
WM4167_01	Glencoe	J-0288	J-0488	67.16	150	100	-1.69	0.10	0.0
WM4167_02	Glencoe	J-0488	J-0354	40.17	150	100	-1.69	0.10	0.0
WM4178L.B	Glencoe	J-705	WVG165	107.96	150	100	2.76	0.16	0.0
WM4181L.B	Glencoe	J-0178	J-707	123.47	100	100	0.92	0.12	0.1
WM4182L.B_01	Glencoe	J-0353	WVG045	13.16	150	100	2.70	0.15	0.0
WM4182L.B_02	Glencoe	WVG045	WVG171	101.55	150	100	2.70	0.15	0.0
WM4182L.B_03	Glencoe	J-0025	WVG171	1.26	150	100	-2.70	0.15	0.0
WM4184L.B_01	Glencoe	J-0331	WVG037	11.11	150	100	2.70	0.15	0.0
WM4184L.B_02	Glencoe	WVG037	J-0353	103.47	150	100	2.70	0.15	0.0
WM4196L.B_01	Glencoe	J-0145	J-0146	3.84	300	120	-61.20	0.87	0.0
WM4196L.B_02	Glencoe	J-0202	WVG197	5.00	300	120	-30.67	0.43	0.0
WM4196L.B_03	Glencoe	WVG197	J-0067	333.26	300	120	-30.67	0.43	0.3
P-234	Melborne	J_Hyd-M017	J-0531	3.11	150	100	2.60	0.15	0.0
P-237	Melborne	WVM004	J-0037	11.15	200	110	4.66	0.15	0.0
P_Hyd-M002	Melborne	J_Hyd-M002	M002	4.54	150	100	0.00	0.00	0.0
P_Hyd-M003	Melborne	J_Hyd-M003	M003	3.46	150	100	0.00	0.00	0.0
P_Hyd-M004	Melborne	J_Hyd-M004	M004	2.69	150	100	0.00	0.00	0.0
P_Hyd-M005	Melborne	J_Hyd-M005	M005	4.60	150	100	0.00	0.00	0.0
P_Hyd-M006	Melborne	J_Hyd-M006	M006	1.58	150	100	0.00	0.00	0.0

2041 PHD Pipe Results									
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P_Hyd-M007	Melborne	J_Hyd-M007	M007	3.19	150	100	0.00	0.00	0.0
P_Hyd-M008	Melborne	J_Hyd-M008	M008	1.77	150	100	0.00	0.00	0.0
P_Hyd-M009	Melborne	J_Hyd-M009	M009	4.67	150	100	0.00	0.00	0.0
P_Hyd-M010	Melborne	J_Hyd-M010	M010	6.09	150	100	0.00	0.00	0.0
P_Hyd-M011	Melborne	J_Hyd-M011	M011	1.88	150	100	0.00	0.00	0.0
P_Hyd-M012	Melborne	J_Hyd-M012	M012	3.91	150	100	0.00	0.00	0.0
P_Hyd-M013	Melborne	J_Hyd-M013	M013	2.29	150	100	0.00	0.00	0.0
P_Hyd-M014	Melborne	J_Hyd-M014	M014	1.98	150	100	0.00	0.00	0.0
P_Hyd-M015	Melborne	J_Hyd-M015	M015	2.99	150	100	0.00	0.00	0.0
P_Hyd-M016	Melborne	J_Hyd-M016	M016	2.30	150	100	0.00	0.00	0.0
P_Hyd-M017	Melborne	J_Hyd-M017	M017	4.21	150	100	0.00	0.00	0.0
P_Hyd-M018	Melborne	J_Hyd-M018	M018	0.81	150	100	0.00	0.00	0.0
P_Hyd-M019	Melborne	J_Hyd-M019	M019	3.99	150	100	0.00	0.00	0.0
P_Hyd-M020	Melborne	J_Hyd-M020	M020	3.90	150	100	0.00	0.00	0.0
P_Hyd-M021	Melborne	J_Hyd-M021	M021	3.76	150	100	0.00	0.00	0.0
P_Hyd-M022	Melborne	J_Hyd-M022	M022	4.35	150	100	0.00	0.00	0.0
P_Hyd-M023	Melborne	J_Hyd-M023	M023	1.95	150	100	0.00	0.00	0.0
WM2002C	Melborne	J-0237	WVM022	6.14	150	100	-0.43	0.02	0.0
WM2030C_13	Melborne	J_Hyd-M002	J_Hyd-M003	206.11	150	100	2.71	0.15	0.1
WM2110C_01	Melborne	J-0158	WVM011	12.91	150	100	0.00	0.00	0.0
WM2110C_02	Melborne	WVM011	J_Hyd-M008	99.39	150	100	0.00	0.00	0.0
WM2111C_04	Melborne	WVM032	J_Hyd-M017	17.49	150	100	2.60	0.15	0.0
WM6000_01	Melborne	J-0176	WVM003	95.00	150	100	-2.19	0.12	0.0
WM6000_02	Melborne	WVM003	J-0192	32.55	150	100	-2.19	0.12	0.0
WM6001_01	Melborne	J-0065	WVA023	2.02	150	100	0.00	0.00	0.0
WM6001_02	Melborne	WVA023	WVM030	47.35	150	100	0.00	0.00	0.0
WM6002C_01	Melborne	J-0105	J-0403	19.22	150	100	1.99	0.11	0.0
WM6002C_02	Melborne	WVM022	J-0403	98.89	150	100	-0.43	0.02	0.0
WM6002_01	Melborne	WVM025	J_Hyd-M020	2.65	150	100	-1.82	0.10	0.0
WM6002_02	Melborne	J-0177	WVM025	4.37	150	100	-1.82	0.10	0.0
WM6002_03	Melborne	J_Hyd-M020	WVM007	98.53	150	100	-1.82	0.10	0.0
WM6002_04	Melborne	WVM007	J-0125	18.26	150	100	-1.82	0.10	0.0
WM6003C_01	Melborne	J-0192	WVM001	4.73	150	100	-2.71	0.15	0.0
WM6003C_02	Melborne	J_Hyd-M003	WVM001	187.86	150	100	2.71	0.15	0.1
WM6003_01	Melborne	J-0176	WVM027	4.36	150	100	2.38	0.13	0.0
WM6003_02	Melborne	WVM027	J_Hyd-M022	26.82	150	100	2.38	0.13	0.0
WM6003_03	Melborne	J_Hyd-M022	J-0407	20.47	150	100	2.38	0.13	0.0
WM6003_04	Melborne	J_Hyd-M023	J-0407	158.98	150	100	-0.51	0.03	0.0
WM6003_05	Melborne	J_Hyd-M023	J-0493	43.36	150	100	0.51	0.03	0.0
WM6004C_01	Melborne	J-0192	WVM002	14.53	150	100	0.53	0.03	0.0
WM6004C_02	Melborne	WVM002	J_Hyd-M004	4.18	150	100	0.53	0.03	0.0
WM6004C_03	Melborne	J_Hyd-M004	J_Hyd-M005	170.61	200	110	0.53	0.02	0.0
WM6004_01	Melborne	J-0065	J_Hyd-M021	8.68	150	100	0.19	0.01	0.0
WM6004_02	Melborne	J_Hyd-M021	WVM028	111.82	150	100	0.19	0.01	0.0
WM6004_03	Melborne	WVM028	J-0176	16.14	150	100	0.19	0.01	0.0
WM6005C_01	Melborne	J-0125	WVM005	3.45	200	110	-5.18	0.16	0.0
WM6005C_02	Melborne	WVM005	J-0430	23.41	200	110	-5.18	0.16	0.0
WM6005C_03	Melborne	Standpipe	J-0430	46.70	200	110	0.00	0.00	0.0
WM6005C_04	Melborne	J_Hyd-M005	J-0037	34.61	200	110	0.53	0.02	0.0
WM6005C_05	Melborne	J-0430	J-0037	4.98	200	110	-5.18	0.16	0.0
WM6005C_06	Melborne	Standpipe	WVM004	31.50	200	110	4.66	0.15	0.0
WM6005_01	Melborne	J-0177	WVM026	4.51	150	100	0.19	0.01	0.0
WM6005_02	Melborne	WVM026	J-0065	110.26	150	100	0.19	0.01	0.0
WM6006C_01	Melborne	J-0125	WVM006	15.98	200	110	3.36	0.11	0.0
WM6006C_02	Melborne	WVM006	J_Hyd-M006	43.26	200	110	3.36	0.11	0.0
WM6006C_03	Melborne	J_Hyd-M006	WVM008	67.74	200	110	3.36	0.11	0.0
WM6006C_04	Melborne	WVM008	J-0105	26.02	200	110	3.36	0.11	0.0
WM6006_01	Melborne	J-0203	J_Hyd-M019	5.07	150	100	0.09	0.00	0.0
WM6006_02	Melborne	J_Hyd-M019	J-0177	132.87	150	100	0.09	0.00	0.0
WM6007SC_01	Melborne	J-0312	WVM013	15.69	150	100	0.36	0.02	0.0
WM6007SC_02	Melborne	WVM013	J_Hyd-M016	68.32	150	100	0.36	0.02	0.0
WM6007SC_03	Melborne	J_Hyd-M016	J-0156	12.36	150	100	0.36	0.02	0.0
WM6007SC_04	Melborne	J-0156	J-0498	46.76	150	100	1.54	0.09	0.0
WM6008SCC_01	Melborne	J-0403	J-0434	101.45	150	100	1.56	0.09	0.0
WM6008SCC_02	Melborne	J-0434	J-0108	24.19	150	100	1.56	0.09	0.0
WM6008SCC_03	Melborne	J-0108	J-0109	3.08	150	100	1.56	0.09	0.0
WM6008SC_01	Melborne	J-0230	J-0237	128.60	150	100	-1.39	0.08	0.0
WM6008SC_02	Melborne	J-0237	J-0203	15.29	150	100	-0.96	0.05	0.0
WM6009SC_01	Melborne	J-0158	WVM010	4.02	150	100	1.37	0.08	0.0
WM6009SC_02	Melborne	WVM010	J_Hyd-M009	52.80	150	100	1.37	0.08	0.0
WM6009SC_03	Melborne	J_Hyd-M009	J_Hyd-M010	84.25	150	100	1.37	0.08	0.0
WM6009SC_04	Melborne	J_Hyd-M010	J-0248	6.77	150	100	1.37	0.08	0.0
WM6010C_01	Melborne	J-0105	WVM009	3.01	150	100	1.37	0.08	0.0
WM6010C_02	Melborne	WVM009	J_Hyd-M007	38.17	150	100	1.37	0.08	0.0
WM6010C_03	Melborne	J_Hyd-M007	J-0158	66.46	150	100	1.37	0.08	0.0
WM6010SCC	Melborne	J_Hyd-M012	J-0159	72.47	150	100	0.41	0.02	0.0
WM6010SC_01	Melborne	J-0500	J-0230	48.94	150	100	-0.48	0.03	0.0
WM6010SC_02	Melborne	J-0502	J-0500	50.61	150	100	-0.48	0.03	0.0
WM6010SC_03	Melborne	J-0396	WVM014	18.01	150	100	0.00	0.00	0.0
WM6010SC_04	Melborne	WVM014	J-0248	103.75	150	100	0.00	0.00	0.0
WM6011C_01	Melborne	J-0413	J_Hyd-M018	65.91	150	100	1.41	0.08	0.0
WM6011C_02	Melborne	J_Hyd-M018	WVM012	9.39	150	100	1.41	0.08	0.0
WM6011C_03	Melborne	WVM012	J-0312	9.52	150	100	1.41	0.08	0.0
WM6011SC_01	Melborne	J-0413	J-0414	20.96	150	100	1.18	0.07	0.0
WM6011SC_02	Melborne	J-0156	J-0157	3.99	150	100	-1.18	0.07	0.0
WM6011SC_03	Melborne	J-0157	WVM031	10.91	150	100	-1.18	0.07	0.0
WM6011SC_04	Melborne	J-0414	WVM031	93.52	150	100	1.18	0.07	0.0
WM6013C_01	Melborne	WVM023	J-0203	14.89	150	100	1.05	0.06	0.0
WM6013C_02	Melborne	J-0312	WVM023	99.33	150	100	1.05	0.06	0.0
WM6013SC_01	Melborne	J-0498	J_Hyd-M015	64.17	150	100	1.54	0.09	0.0
WM6013SC_02	Melborne	J-0230	WVM020	14.69	150	100	-1.54	0.09	0.0
WM6013SC_03	Melborne	WVM020	J_Hyd-M015	35.71	150	100	-1.54	0.09	0.0
WM6015SC_01	Melborne	J-0502	J_Hyd-M014	55.20	150	100	0.48	0.03	0.0
WM6015SC_02	Melborne	J_Hyd-M014	WVM021	51.37	150	100	0.48	0.03	0.0
WM6015SC_03	Melborne	WVM021	J-0159	4.03	150	100	0.48	0.03	0.0
WM6016SCC_01	Melborne	J-0159	WVM017	33.77	150	100	0.89	0.05	0.0
WM6016SCC_02	Melborne	WVM017	J-0189	4.61	150	100	0.89	0.05	0.0
WM6016SC_01	Melborne	J-0476	J_Hyd-M011	37.38	150	100	-0.47	0.03	0.0
WM6016SC_02	Melborne	J_Hyd-M011	J-0189	91.52	150	100	-0.47	0.03	0.0

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM6017SCC_01	Melborne	WVM018	J_Hyd-M013	113.47	150	100	0.42	0.02	0.0
WM6017SCC_02	Melborne	J-0189	WVM018	10.70	150	100	0.42	0.02	0.0
WM6018SCC	Melborne	J-0109	J_Hyd-M012	27.44	150	100	0.41	0.02	0.0
WM6018SC_01	Melborne	J-0248	J-0249	6.36	150	100	1.37	0.08	0.0
WM6018SC_02	Melborne	J-0249	WVM015	15.24	150	100	-0.47	0.03	0.0
WM6018SC_03	Melborne	WVM015	J-0476	105.12	150	100	-0.47	0.03	0.0
WM6018SC_04	Melborne	WVM019	J-0230	5.70	150	100	-0.53	0.03	0.0
WM6018SC_05	Melborne	WVM019	J-0109	104.89	150	100	0.53	0.03	0.0
WM6019C	Melborne	J-0531	J-0413	70.43	150	100	2.60	0.15	0.0
P-319	Wardsville	WVW007	J_Hyd-W015	1.13	150	100	-0.10	0.01	0.0
P_Hyd-W001	Wardsville	J_Hyd-W001	W001	5.48	150	90	0.00	0.00	0.0
P_Hyd-W002	Wardsville	J_Hyd-W002	W002	4.70	150	90	0.00	0.00	0.0
P_Hyd-W003	Wardsville	J_Hyd-W003	W003	5.65	150	90	0.00	0.00	0.0
P_Hyd-W004	Wardsville	J_Hyd-W004	W004	3.86	150	90	0.00	0.00	0.0
P_Hyd-W005	Wardsville	J_Hyd-W005	W005	6.90	150	90	0.00	0.00	0.0
P_Hyd-W006	Wardsville	J_Hyd-W006	W006	3.88	150	90	0.00	0.00	0.0
P_Hyd-W007	Wardsville	J_Hyd-W007	W007	1.75	150	90	0.00	0.00	0.0
P_Hyd-W008	Wardsville	J_Hyd-W008	W008	1.93	150	90	0.00	0.00	0.0
P_Hyd-W009	Wardsville	J_Hyd-W009	W009	3.07	150	90	0.00	0.00	0.0
P_Hyd-W010	Wardsville	J_Hyd-W010	W010	1.19	150	90	0.00	0.00	0.0
P_Hyd-W011	Wardsville	J_Hyd-W011	W011	6.93	150	90	0.00	0.00	0.0
P_Hyd-W012	Wardsville	J_Hyd-W012	W012	2.69	150	90	0.00	0.00	0.0
P_Hyd-W013	Wardsville	J_Hyd-W013	W013	2.70	150	90	0.00	0.00	0.0
P_Hyd-W014	Wardsville	J_Hyd-W014	W014	1.95	150	90	0.00	0.00	0.0
P_Hyd-W015	Wardsville	J_Hyd-W015	W015	6.64	150	90	0.00	0.00	0.0
P_Hyd-W016	Wardsville	J_Hyd-W016	W016	5.24	150	90	0.00	0.00	0.0
P_Hyd-W017	Wardsville	J_Hyd-W017	W017	10.85	150	90	0.00	0.00	0.0
P_Hyd-W018	Wardsville	J_Hyd-W018	W018	2.15	150	90	0.00	0.00	0.0
P_Hyd-W019	Wardsville	J_Hyd-W019	W019	2.50	150	90	0.00	0.00	0.0
P_Hyd-W020	Wardsville	WVW055	W020	4.99	150	90	0.00	0.00	0.0
P_Hyd-W021	Wardsville	J_Hyd-W021	W021	3.07	150	90	0.00	0.00	0.0
P_Hyd-W022	Wardsville	J_Hyd-W022	W022	4.10	150	90	0.00	0.00	0.0
P_Hyd-W023	Wardsville	J_Hyd-W023	W023	5.14	150	90	0.00	0.00	0.0
P_Hyd-W024	Wardsville	J_Hyd-W024	W024	5.95	150	90	0.00	0.00	0.0
P_Hyd-W025	Wardsville	J_Hyd-W025	W025	6.22	150	90	0.00	0.00	0.0
P_Hyd-W026	Wardsville	J_Hyd-W026	W026	6.37	150	90	0.00	0.00	0.0
P_Hyd-W027	Wardsville	J_Hyd-W027	W027	3.79	150	90	0.00	0.00	0.0
P_Hyd-W028	Wardsville	J_Hyd-W028	W028	3.84	150	90	0.00	0.00	0.0
P_Hyd-W029	Wardsville	J_Hyd-W029	W029	6.11	150	90	0.00	0.00	0.0
P_Hyd-W030	Wardsville	J_Hyd-W030	W030	3.82	150	90	0.00	0.00	0.0
P_Hyd-W031	Wardsville	J_Hyd-W031	W031	5.06	150	90	0.00	0.00	0.0
P_Hyd-W032	Wardsville	J_Hyd-W032	W032	7.29	150	90	0.00	0.00	0.0
P_Hyd-W033	Wardsville	J_Hyd-W033	W033	6.07	150	90	0.00	0.00	0.0
P_Hyd-W034	Wardsville	J_Hyd-W034	W034	5.18	150	90	0.00	0.00	0.0
P_Hyd-W035	Wardsville	J_Hyd-W035	W035	4.26	150	90	0.00	0.00	0.0
P_Hyd-W036	Wardsville	J_Hyd-W036	W036	3.12	150	90	0.00	0.00	0.0
P_Hyd-W037	Wardsville	J_Hyd-W037	W037	1.94	150	90	0.00	0.00	0.0
P_Hyd-W038	Wardsville	J_Hyd-W038	W038	1.51	150	90	0.00	0.00	0.0
P_Hyd-W039	Wardsville	J_Hyd-W039	W039	0.69	150	90	0.05	0.00	0.0
P_Hyd-W040	Wardsville	J_Hyd-W040	W040	5.52	150	90	0.00	0.00	0.0
P_Hyd-W041	Wardsville	J_Hyd-W041	W041	5.79	150	90	0.00	0.00	0.0
P_Hyd-W042	Wardsville	J_Hyd-W042	W042	3.43	150	90	0.00	0.00	0.0
P_Hyd-W043	Wardsville	J_Hyd-W043	W043	11.13	150	90	0.00	0.00	0.0
P_Hyd-W044	Wardsville	J_Hyd-W044	W044	5.49	150	90	0.00	0.00	0.0
P_Hyd-W045	Wardsville	J_Hyd-W045	W045	6.88	150	90	0.00	0.00	0.0
P_Hyd-W046	Wardsville	J_Hyd-W046	W046	5.95	150	90	0.00	0.00	0.0
P_Hyd-W047	Wardsville	J_Hyd-W047	W047	6.10	150	90	0.00	0.00	0.0
SWM_GIS.Water	Wardsville	W039	J_Hyd-W039	0.69	150	90	0.05	0.00	0.0
WM1009C_01	Wardsville	J_Hyd-W001	J_Hyd-W002	94.93	200	100	0.00	0.00	0.0
WM1009C_02	Wardsville	J_Hyd-W002	J-0446	25.09	200	100	0.00	0.00	0.0
WM1010C_01	Wardsville	J-0031	WVW001	14.43	200	100	-2.82	0.09	0.0
WM1010C_02	Wardsville	WVW001	J_Hyd-W010	1.27	200	100	-2.82	0.09	0.0
WM1010C_03	Wardsville	J_Hyd-W010	J-0438	55.92	200	100	-2.82	0.09	0.0
WM1010C_04	Wardsville	J-0438	J-0439	24.67	200	100	-2.82	0.09	0.0
WM1010C_05	Wardsville	J-0439	J_Hyd-W011	28.71	200	100	-2.82	0.09	0.0
WM1010C_06	Wardsville	J_Hyd-W011	J-0550	94.48	200	100	-2.82	0.09	0.0
WM1010C_07	Wardsville	J-0550	J_Hyd-W047	140.43	200	100	-3.49	0.11	0.0
WM1010C_08	Wardsville	J_Hyd-W047	J_Hyd-W045	152.33	200	100	-3.49	0.11	0.0
WM1010C_09	Wardsville	J_Hyd-W045	J-0160	109.76	200	100	-3.49	0.11	0.0
WM1010C_10	Wardsville	J-0160	J-0161	4.04	200	100	-3.49	0.11	0.0
WM1010C_11	Wardsville	J-0161	J_Hyd-W046	92.10	200	100	-3.49	0.11	0.0
WM1010C_12	Wardsville	J_Hyd-W046	J-0553	96.02	200	100	-3.49	0.11	0.0
WM1010C_13	Wardsville	J-0553	J_Hyd-R021M	1022.49	200	100	-3.49	0.11	0.2
WM1010_01	Wardsville	J-0643	J-0597	2259.98	300	110	8.01	0.11	0.2
WM1010_02	Wardsville	J-0597	J-0456	167.81	300	110	8.01	0.11	0.0
WM1064C_01	Wardsville	J-0245	WVW067	6.24	200	100	0.00	0.00	0.0
WM1064C_02	Wardsville	WVW067	J-0022	1.26	200	100	0.00	0.00	0.0
WM1064C_03	Wardsville	J-0022	J_Hyd-W028	5.40	200	100	0.00	0.00	0.0
WM1064C_04	Wardsville	J-0022	J-0069	2.10	200	100	0.00	0.00	0.0
WM1064C_05	Wardsville	J-0069	J-0307	79.42	200	100	0.00	0.00	0.0
WM1065C_01	Wardsville	J-0035	WVR006	1.51	150	90	-8.01	0.45	0.0
WM1065C_02	Wardsville	WVR006	J-686	1.59	150	90	-8.01	0.45	0.0
WM1065C_03	Wardsville	J_Hyd-W044	J-0504	618.26	300	110	-8.01	0.11	0.1
WM1065C_04	Wardsville	J-0504	J-0035	51.23	300	110	-8.01	0.11	0.0
WM1066C_01(1)	Wardsville	J-0456	J-686	2.75	300	110	8.01	0.11	0.0
WM1066C_01(2)	Wardsville	J-686	J-0242	25.10	300	110	0.00	0.00	0.0
WM1066C_02	Wardsville	J-0242	WVR003	6.22	300	110	0.00	0.00	0.0
WM3000C_01	Wardsville	J-0061	WVW033	17.06	300	110	-3.39	0.05	0.0
WM3000C_02	Wardsville	WVW033	J-0343	64.42	300	110	-3.39	0.05	0.0
WM3000_01	Wardsville	J-728	WVW066	78.11	150	90	0.06	0.00	0.0
WM3000_02	Wardsville	WVW066	J-0122	3.40	150	90	0.06	0.00	0.0
WM3001C_01	Wardsville	J-0506	WVW031	51.53	200	100	-2.00	0.06	0.0
WM3001C_02	Wardsville	WVW031	J-0040	1.58	200	100	-2.00	0.06	0.0
WM3001C_03	Wardsville	J-0040	J-0083	3.94	200	100	-2.00	0.06	0.0
WM3001_01	Wardsville	J_Hyd-W040	WVW036	53.55	150	90	-0.35	0.02	0.0
WM3001_02	Wardsville	WVW036	J-0188	4.61	150	90	-0.35	0.02	0.0
WM3002C_01	Wardsville	J-0297	WVW022	10.56	200	100	-1.02	0.03	0.0
WM3002C_02	Wardsville	WVW022	J_Hyd-W030	4.30	200	100	-1.02	0.03	0.0
WM3002C_03	Wardsville	J_Hyd-W030	J-0506	74.51	200	100	-1.02	0.03	0.0

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3002_01	Wardsville	J-0251	WVW028	10.95	150	90	-0.35	0.02	0.0
WM3002_02	Wardsville	WVW028	J_Hyd-W040	87.52	150	90	-0.35	0.02	0.0
WM3003C_01	Wardsville	J-0307	WVW025	9.26	200	100	-0.54	0.02	0.0
WM3003C_02	Wardsville	WVW025	J_Hyd-W029	22.49	200	100	-0.54	0.02	0.0
WM3003C_03	Wardsville	J_Hyd-W029	J-0297	87.53	200	100	-0.54	0.02	0.0
WM3003_01	Wardsville	J-0429	J_Hyd-W041	101.52	150	90	-0.60	0.03	0.0
WM3003_02	Wardsville	J_Hyd-W041	J-0251	15.68	150	90	-0.60	0.03	0.0
WM3004C_01	Wardsville	J-0349	J-0308	12.47	300	110	-8.01	0.11	0.0
WM3004C_02	Wardsville	J-0308	WVW061	9.36	300	110	-8.01	0.11	0.0
WM3004C_03	Wardsville	WVW061	J_Hyd-W032	49.83	300	110	-8.01	0.11	0.0
WM3004_01	Wardsville	J-0283	WVW056	9.15	150	90	0.78	0.04	0.0
WM3004_02	Wardsville	WVW056	J_Hyd-W021	79.20	150	90	0.78	0.04	0.0
WM3004_03	Wardsville	J_Hyd-W021	WVW054	2.33	150	90	0.78	0.04	0.0
WM3004_04	Wardsville	WVW054	J-0218	6.54	150	90	0.78	0.04	0.0
WM3004_05	Wardsville	J-0217	J-0218	5.41	150	90	-0.78	0.04	0.0
WM3005C_01	Wardsville	J-0234	WVW053	13.96	300	110	-6.64	0.09	0.0
WM3005C_02	Wardsville	WVW053	J-0349	82.84	300	110	-6.64	0.09	0.0
WM3005_01	Wardsville	J-0028	WVW057	27.93	150	90	0.53	0.03	0.0
WM3005_02	Wardsville	WVW057	J_Hyd-W022	4.65	150	90	0.53	0.03	0.0
WM3005_03	Wardsville	J_Hyd-W022	J-0283	61.43	150	90	0.53	0.03	0.0
WM3006C_01	Wardsville	J-0050	J_Hyd-W031	24.70	300	110	-5.34	0.08	0.0
WM3006C_02	Wardsville	J_Hyd-W031	J-0234	88.41	300	110	-5.34	0.08	0.0
WM3006_01	Wardsville	WVW043	J_Hyd-W023	18.88	150	90	0.14	0.01	0.0
WM3006_02	Wardsville	J_Hyd-W023	J-0027	87.15	150	90	0.14	0.01	0.0
WM3006_03	Wardsville	J-0027	J-0028	1.30	150	90	-0.44	0.02	0.0
WM3006_04	Wardsville	WVW043	J-0154	9.51	150	90	-0.14	0.01	0.0
WM3007C_01	Wardsville	J-0343	WVW064	12.09	300	110	-4.02	0.06	0.0
WM3007C_02	Wardsville	WVW064	J-0018	68.86	300	110	-4.02	0.06	0.0
WM3007_01	Wardsville	J-0247	J_Hyd-W025	104.21	150	90	0.14	0.01	0.0
WM3007_02	Wardsville	J-0154	J_Hyd-W025	62.02	150	90	-0.14	0.01	0.0
WM3008_01	Wardsville	J-0247	J_Hyd-W026	91.00	150	90	0.71	0.04	0.0
WM3008_02	Wardsville	WVW019	J-0238	11.66	150	90	0.71	0.04	0.0
WM3008_03	Wardsville	J_Hyd-W026	WVW019	34.82	150	90	0.71	0.04	0.0
WM3009_01	Wardsville	J-0238	J-0485	57.20	150	90	-0.01	0.00	0.0
WM3009_02	Wardsville	J_Hyd-W027	J-0485	39.51	150	90	0.01	0.00	0.0
WM3009_03	Wardsville	J_Hyd-W027	J-0460	29.49	150	90	-0.01	0.00	0.0
WM3010_01	Wardsville	J_Hyd-W019	J-0055	103.28	150	90	0.00	0.00	0.0
WM3010_02	Wardsville	J-0055	J-0056	1.79	150	90	0.00	0.00	0.0
WM3011	Wardsville	WVW046	J_Hyd-W019	82.16	150	90	0.00	0.00	0.0
WM3012_01	Wardsville	J-0088	WVW045	2.49	150	90	0.16	0.01	0.0
WM3012_02	Wardsville	WVW045	J_Hyd-W018	55.58	150	90	0.16	0.01	0.0
WM3012_03	Wardsville	J_Hyd-W018	J-0068	71.53	150	90	0.16	0.01	0.0
WM3013_01	Wardsville	J-0223	WVW014	17.55	150	90	0.30	0.02	0.0
WM3013_02	Wardsville	WVW014	J_Hyd-W017	91.23	150	90	0.30	0.02	0.0
WM3013_03	Wardsville	J_Hyd-W017	J-0444	24.98	150	90	0.30	0.02	0.0
WM3013_04	Wardsville	J-0444	J-0311	33.46	150	90	0.30	0.02	0.0
WM3013_05	Wardsville	J-0311	J-0088	9.52	150	90	0.30	0.02	0.0
WM3014_01	Wardsville	J-0131	J_Hyd-W016	12.42	150	90	-0.10	0.01	0.0
WM3014_02	Wardsville	J_Hyd-W016	J-0174	113.19	150	90	-0.10	0.01	0.0
WM3014_03	Wardsville	J-0131	J-0132	3.57	150	90	0.00	0.00	0.0
WM3016	Wardsville	WVW009	J-0034	2.74	150	90	-0.61	0.03	0.0
WM3017_01	Wardsville	J-0029	J-0030	1.33	150	90	0.90	0.05	0.0
WM3017_02	Wardsville	J-0029	WVW008	85.97	150	90	-0.71	0.04	0.0
WM3017_03	Wardsville	WVW008	J-0258	6.92	150	90	-0.71	0.04	0.0
WM3017_04	Wardsville	J-0258	WVW009	114.37	150	90	-0.61	0.03	0.0
WM3018_01	Wardsville	J_Hyd-W012	WVW002	103.92	150	90	-0.92	0.05	0.0
WM3018_02	Wardsville	J-0031	WVW002	1.39	150	90	0.92	0.05	0.0
WM3018_03	Wardsville	J_Hyd-W012	J-0023	108.22	150	90	0.92	0.05	0.0
WM3018_04	Wardsville	J-0023	J-0024	1.26	150	90	0.00	0.00	0.0
WM3019C	Wardsville	J_Hyd-W033	J_Hyd-W044	138.80	300	110	-8.01	0.11	0.0
WM3020	Wardsville	J_Hyd-W035	J-0308	44.57	150	90	0.00	0.00	0.0
WM3020C_01	Wardsville	J-0228	J-0229	5.61	300	110	-8.01	0.11	0.0
WM3020C_02	Wardsville	J-0229	J_Hyd-W033	48.18	300	110	-8.01	0.11	0.0
WM3021_01	Wardsville	J-0234	WVW052	5.86	150	90	0.34	0.02	0.0
WM3021_02	Wardsville	WVW052	J_Hyd-W036	57.41	150	90	0.00	0.00	0.0
WM3022_01	Wardsville	J-0051	WVW039	3.85	150	90	0.00	0.00	0.0
WM3022_02	Wardsville	WVW039	J_Hyd-W037	120.90	150	90	0.00	0.00	0.0
WM3022_03	Wardsville	J-0050	J-0051	1.72	300	110	0.68	0.01	0.0
WM3023C_01	Wardsville	WVW034	J_Hyd-W003	91.07	200	100	-1.26	0.04	0.0
WM3023C_02	Wardsville	J_Hyd-W003	WVW032	52.82	200	100	-1.26	0.04	0.0
WM3023C_03	Wardsville	WVW032	J-0082	11.99	200	100	-1.26	0.04	0.0
WM3023C_04	Wardsville	J-0082	J-0083	2.41	300	110	-1.26	0.02	0.0
WM3023_01	Wardsville	J-0122	J_Hyd-W039	135.47	150	90	-0.64	0.04	0.0
WM3023_02	Wardsville	J_Hyd-W039	WVW063	13.80	150	90	-0.64	0.04	0.0
WM3023_03	Wardsville	WVW063	J-0002	1.04	150	90	0.00	0.00	0.0
WM3023_04	Wardsville	WVW063	J-0343	21.64	150	90	-0.64	0.04	0.0
WM3023_05	Wardsville	J-0122	J_Hyd-W038	9.17	150	90	0.00	0.00	0.0
WM3025_01	Wardsville	J-0297	WVW023	15.43	150	90	0.25	0.01	0.0
WM3025_02	Wardsville	WVW023	J_Hyd-W043	67.26	150	90	0.25	0.01	0.0
WM3025_03	Wardsville	J_Hyd-W043	WVW029	72.48	150	90	0.25	0.01	0.0
WM3025_04	Wardsville	WVW029	J-0251	6.56	150	90	0.25	0.01	0.0
WM3026_01	Wardsville	J-0238	WVW020	6.15	150	90	-0.24	0.01	0.0
WM3026_02	Wardsville	WVW020	WVW021	100.45	150	90	-0.24	0.01	0.0
WM3026_03	Wardsville	WVW021	J-0297	8.86	150	90	-0.24	0.01	0.0
WM3027_01	Wardsville	J-0307	WVW026	14.56	150	90	0.53	0.03	0.0
WM3027_02	Wardsville	WVW026	J_Hyd-W042	125.13	150	90	0.53	0.03	0.0
WM3027_03	Wardsville	J_Hyd-W042	J-0429	22.83	150	90	0.53	0.03	0.0
WM3028_01	Wardsville	J-0460	WVW027	79.81	150	90	-0.01	0.00	0.0
WM3028_02	Wardsville	WVW027	J-0307	9.37	150	90	-0.01	0.00	0.0
WM3029C	Wardsville	J_Hyd-W032	J-0228	58.86	300	110	-8.01	0.11	0.0
WM3030	Wardsville	J-0055	WVW055	10.06	150	90	0.00	0.00	0.0
WM3031_01	Wardsville	J-0283	WVW058	8.32	150	90	-1.37	0.08	0.0
WM3031_02	Wardsville	WVW058	J_Hyd-W034	48.91	150	90	-1.37	0.08	0.0
WM3031_03	Wardsville	J_Hyd-W034	WVW059	49.21	150	90	-1.37	0.08	0.0
WM3031_04	Wardsville	WVW059	J-0349	16.87	150	90	-1.37	0.08	0.0
WM3033_01	Wardsville	J-0028	WVW049	8.75	150	90	-0.96	0.05	0.0
WM3033_02	Wardsville	WVW049	WVW051	98.98	150	90	-0.96	0.05	0.0
WM3033_03	Wardsville	WVW051	J-0234	16.36	150	90	-0.96	0.05	0.0
WM3034_01	Wardsville	J-0068	WVW046	2.10	150	90	0.00	0.00	0.0

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM3034_02	Wardsville	J-0068	J-0081	10.14	150	90	0.16	0.01	0.0
WM3034_03	Wardsville	J-0081	WVW047	2.39	150	90	0.16	0.01	0.0
WM3034_04	Wardsville	WVW047	WVW048	73.09	150	90	0.16	0.01	0.0
WM3034_05	Wardsville	WVW048	J-0027	10.74	150	90	-0.57	0.03	0.0
WM3035C_01	Wardsville	J-0062	WVW030	2.56	200	100	0.13	0.00	0.0
WM3035C_02	Wardsville	WVW030	J_Hyd-W004	21.12	200	100	0.13	0.00	0.0
WM3035C_03	Wardsville	J_Hyd-W004	WVW018	79.59	200	100	0.13	0.00	0.0
WM3035C_04	Wardsville	WVW018	J-0247	8.72	200	100	0.13	0.00	0.0
WM3035C_05	Wardsville	J-0061	J-0083	2.95	200	100	3.25	0.10	0.0
WM3035C_06	Wardsville	J-0061	J-0062	1.83	300	110	0.13	0.00	0.0
WM3035_01	Wardsville	J-0154	WVW042	3.97	150	90	-0.64	0.04	0.0
WM3035_02	Wardsville	WVW042	WVW038	106.74	150	90	-0.64	0.04	0.0
WM3035_03	Wardsville	WVW038	J-0012	1.00	150	90	-0.64	0.04	0.0
WM3035_04	Wardsville	J-0018	J-0012	1.10	300	110	0.64	0.01	0.0
WM3035_05	Wardsville	J-0018	J-0050	12.34	300	110	-4.66	0.07	0.0
WM3036C_01	Wardsville	J-0247	WVW016	6.26	200	100	-0.72	0.02	0.0
WM3036C_02	Wardsville	WVW016	J_Hyd-W005	3.42	200	100	-0.72	0.02	0.0
WM3036C_03	Wardsville	J_Hyd-W005	J-0423	67.48	200	100	-0.72	0.02	0.0
WM3036C_04	Wardsville	J-0423	J-0042	22.05	200	100	-0.72	0.02	0.0
WM3036C_05	Wardsville	J-0042	J_Hyd-W006	1.59	200	100	-0.72	0.02	0.0
WM3036C_06	Wardsville	J_Hyd-W006	J-0223	34.03	200	100	-0.72	0.02	0.0
WM3036_01	Wardsville	J-0088	WVW044	12.77	150	90	0.15	0.01	0.0
WM3036_02	Wardsville	WVW044	J_Hyd-W024	61.63	150	90	0.15	0.01	0.0
WM3036_03	Wardsville	J_Hyd-W024	WVW041	62.52	150	90	0.15	0.01	0.0
WM3036_04	Wardsville	WVW041	J-0154	8.37	150	90	-0.64	0.04	0.0
WM3037C_01	Wardsville	J-0223	J-0174	5.52	200	100	-1.02	0.03	0.0
WM3037C_02	Wardsville	J-0174	WVW011	4.34	200	100	-1.12	0.04	0.0
WM3037C_03	Wardsville	WVW011	J_Hyd-W007	52.35	200	100	-1.12	0.04	0.0
WM3037C_04	Wardsville	J_Hyd-W007	J_Hyd-W008	96.68	200	100	-1.12	0.04	0.0
WM3037C_05	Wardsville	J_Hyd-W008	WVW010	3.99	200	100	-1.12	0.04	0.0
WM3037C_06	Wardsville	WVW010	J-0120	4.52	200	100	-1.12	0.04	0.0
WM3037C_07	Wardsville	J-0120	J-0121	3.38	200	100	-1.12	0.04	0.0
WM3037C_08	Wardsville	J-0121	J-0033	7.19	200	100	-1.12	0.04	0.0
WM3037C_09	Wardsville	J-0033	J-0034	1.48	200	100	-1.12	0.04	0.0
WM3037_01	Wardsville	J-0258	WVW007	11.40	150	90	-0.10	0.01	0.0
WM3037_02	Wardsville	J_Hyd-W015	WVW015	149.19	150	90	-0.10	0.01	0.0
WM3037_03	Wardsville	WVW015	J-0131	4.69	150	90	-0.10	0.01	0.0
WM3039C_01	Wardsville	J-0034	J-0313	67.18	200	100	-1.73	0.06	0.0
WM3039C_02	Wardsville	J-0313	J_Hyd-W009	9.84	200	100	-1.89	0.06	0.0
WM3039C_03	Wardsville	J_Hyd-W009	WVW003	75.53	200	100	-1.89	0.06	0.0
WM3039C_04	Wardsville	WVW003	J-0031	3.69	200	100	-1.89	0.06	0.0
WM3039_01	Wardsville	J-0023	J_Hyd-W014	21.87	150	90	0.19	0.01	0.0
WM3039_02	Wardsville	J_Hyd-W014	J_Hyd-W013	134.93	150	90	0.19	0.01	0.0
WM3039_03	Wardsville	J_Hyd-W013	WVW006	7.63	150	90	0.19	0.01	0.0
WM3039_04	Wardsville	WVW006	J-0029	2.85	150	90	0.19	0.01	0.0
WM3041C_01	Wardsville	J-0446	WVW035	27.23	200	100	-0.84	0.03	0.0
WM3041C_02(1)	Wardsville	WVW035	J-728	10.26	200	100	-0.84	0.03	0.0
WM3041C_02(2)(	Wardsville	J-728	J-0188	3.98	200	100	-0.90	0.03	0.0
WM3041C_02(2)(	Wardsville	J-0188	WVW034	4.02	200	100	-1.26	0.04	0.0
P_Hyd-A001	Appin	J_Hyd-A001	A001	2.16	150	100	0.00	0.00	0.0
P_Hyd-A002	Appin	J_Hyd-A002	A002	3.25	150	100	0.00	0.00	0.0
P_Hyd-A003	Appin	J_Hyd-A003	A003	1.26	150	100	0.00	0.00	0.0
P_Hyd-A004	Appin	J_Hyd-A004	A004	8.01	150	100	0.00	0.00	0.0
P_Hyd-A005	Appin	J_Hyd-A005	A005	2.77	150	100	0.00	0.00	0.0
P_Hyd-A006	Appin	J_Hyd-A006	A006	3.67	150	100	0.00	0.00	0.0
P_Hyd-A007	Appin	J_Hyd-A007	A007	3.11	150	100	0.00	0.00	0.0
P_Hyd-A008	Appin	J_Hyd-A008	A008	3.87	150	100	0.00	0.00	0.0
P_Hyd-A009	Appin	J_Hyd-A009	A009	3.13	150	100	0.00	0.00	0.0
P_Hyd-A010	Appin	J_Hyd-A010	A010	4.30	150	100	0.00	0.00	0.0
P_Hyd-A011	Appin	J_Hyd-A011	A011	3.08	150	100	0.00	0.00	0.0
WM2039_04	Appin	J_Hyd-R015E	J-0592	1807.30	200	110	3.92	0.12	0.3
WM2047C_01	Appin	WVR028	WVR053	1957.59	200	110	1.46	0.05	0.1
WM2089C_01	Appin	J-0355	J-0277	21.32	200	110	-7.54	0.24	0.0
WM2089C_02	Appin	J-0277	J-0278	8.12	200	110	-7.54	0.24	0.0
WM2089C_03	Appin	J-0278	J_Hyd-A007	52.72	200	110	-7.54	0.24	0.0
WM2089C_04	Appin	J_Hyd-A007	J-0304	888.44	200	110	-7.54	0.24	0.5
WM2090C_01	Appin	J-0015	J_Hyd-A011	1.06	200	110	0.00	0.00	0.0
WM2090C_02	Appin	J_Hyd-A011	WVA008	178.39	200	110	0.00	0.00	0.0
WM2090C_03	Appin	WVA008	J-0219	6.16	200	110	0.00	0.00	0.0
WM2090C_04	Appin	J-0015	WVR026	6.89	200	110	0.00	0.00	0.0
WM2090C_05	Appin	WVR026	J-0246	6.25	200	110	0.00	0.00	0.0
WM2090C_06	Appin	J-0246	J-0639	984.73	200	110	0.00	0.00	0.0
WM5000C	Appin	J-0185	J-0378	85.38	200	110	2.42	0.08	0.0
WM5000_01	Appin	J-0244	J_Hyd-A003	201.84	150	100	0.00	0.00	0.0
WM5000_02	Appin	J-0244	J-0185	6.24	150	100	0.00	0.00	0.0
WM5001C_01	Appin	J-0219	WVA006	138.25	200	110	-2.50	0.08	0.0
WM5001C_02	Appin	WVA006	J_Hyd-A009	5.56	200	110	-2.50	0.08	0.0
WM5001C_03	Appin	J_Hyd-A009	J-0254	6.79	200	110	-2.50	0.08	0.0
WM5001_01	Appin	WVA015	WVA013	125.45	150	100	-1.44	0.08	0.0
WM5001_02	Appin	WVA013	J-0152	11.83	150	100	-1.44	0.08	0.0
WM5001_03	Appin	J-0318	WVA015	14.13	150	100	-1.44	0.08	0.0
WM5002C	Appin	J-0254	J-0140	127.36	200	110	-4.69	0.15	0.0
WM5002_01	Appin	J-0152	J_Hyd-A005	3.94	150	100	-1.72	0.10	0.0
WM5002_02	Appin	J_Hyd-A005	WVA010	106.59	150	100	-1.72	0.10	0.0
WM5002_03	Appin	WVA010	J-0221	14.76	150	100	-1.72	0.10	0.0
WM5003C_01	Appin	J-0140	J_Hyd-A008	3.71	200	110	-5.69	0.18	0.0
WM5003C_02	Appin	J_Hyd-A008	J-0355	96.83	200	110	-5.69	0.18	0.0
WM5003_01	Appin	J-0221	WVA012	5.45	300	120	-1.86	0.03	0.0
WM5003_02	Appin	J_Hyd-A006	WVA012	63.78	150	100	1.86	0.11	0.0
WM5003_03	Appin	J_Hyd-A006	J-0322	26.27	150	100	-1.86	0.11	0.0
WM5004_01	Appin	J-0359	WVA019	17.34	150	100	0.00	0.00	0.0
WM5004_02	Appin	WVA019	J-0280	27.46	150	100	0.00	0.00	0.0
WM5004_03	Appin	J-0280	J-0281	8.22	150	100	0.00	0.00	0.0
WM5005C	Appin	J-0378	WVR028	42.73	200	110	1.46	0.05	0.0
WM5005_01	Appin	J-0119	WVA018	8.26	150	100	0.00	0.00	0.0
WM5005_02	Appin	J_Hyd-A001	J_Hyd-A002	182.10	150	100	0.00	0.00	0.0
WM5005_03	Appin	J_Hyd-A002	WVA021	57.26	150	100	0.00	0.00	0.0
WM5005_04	Appin	WVA021	J-0009	3.68	150	100	0.00	0.00	0.0
WM5005_05	Appin	J-0009	J-0010	0.95	200	110	0.00	0.00	0.0

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM5005_06	Appin	J-0010	J-0378	15.89	200	110	0.00	0.00	0.0
WM5006C_01	Appin	J-0318	J_Hyd-A010	80.91	200	110	-2.50	0.08	0.0
WM5006C_02	Appin	J_Hyd-A010	WVA007	8.74	200	110	-2.50	0.08	0.0
WM5006C_03	Appin	WVA007	J-0219	14.62	200	110	-2.50	0.08	0.0
WM5006_01	Appin	J-0152	WVA014	4.55	150	100	0.29	0.02	0.0
WM5006_02	Appin	J-0254	WVA005	14.70	150	100	-0.29	0.02	0.0
WM5006_03	Appin	WVA005	WVA014	85.73	150	100	-0.29	0.02	0.0
WM5008_01	Appin	J-0140	WVA003	15.05	150	100	1.00	0.06	0.0
WM5008_02	Appin	WVA003	J-0361	14.45	150	100	1.00	0.06	0.0
WM5008_03	Appin	J-0361	WVA011	68.77	150	100	1.00	0.06	0.0
WM5008_04	Appin	WVA011	J-0221	7.70	150	100	1.00	0.06	0.0
WM5009_01	Appin	J-0322	J-0323	10.27	150	100	-1.86	0.11	0.0
WM5009_02	Appin	J-0355	WVA001	13.48	150	100	1.86	0.11	0.0
WM5009_03	Appin	J-0323	WVA001	84.78	150	100	-1.86	0.11	0.0
WM5010C_01	Appin	WVA020	J-0359	14.01	200	110	-2.42	0.08	0.0
WM5010C_02	Appin	J-0359	J_Hyd-A004	37.21	200	110	-2.42	0.08	0.0
WM5010C_03	Appin	J_Hyd-A004	WVA016	58.77	200	110	-2.42	0.08	0.0
WM5010C_04	Appin	WVA016	J-0318	10.02	200	110	-2.42	0.08	0.0
WM5010C_05	Appin	WVA020	J-0185	4.51	200	110	2.42	0.08	0.0
WM5011_01	Appin	J-0221	J-0479	58.91	150	100	1.13	0.06	0.0
WM5011_02	Appin	J-0479	J-0480	38.55	150	100	1.13	0.06	0.0
WM5016_01	Appin	J-0480	WVA017	109.22	150	100	0.00	0.00	0.0
WM5016_02	Appin	WVA017	J-0119	3.36	150	100	0.00	0.00	0.0
WM5018	Appin	J-0560	J-0119	104.65	150	100	0.00	0.00	0.0
WM5019C_01	Appin	J-0404	J-0345	19.32	200	110	0.00	0.00	0.0
WM5019C_02	Appin	J-0345	J-0346	12.16	200	110	0.00	0.00	0.0
WM5019C_03	Appin	J-0346	WVA009	109.80	200	110	0.00	0.00	0.0
WM5019C_04	Appin	WVA009	J-0219	5.41	200	110	0.00	0.00	0.0
P-233	Rural	J-0299	J_Hyd-R006E	1.74	150	100	2.60	0.15	0.0
P-235	Rural	J-0634	J-752	4.00	50	130	-3.95	2.01	0.4
P-236	Rural	J-0335	J_Hyd-R005E	15.68	150	100	1.14	0.06	0.0
P-238	Rural	WVR039	J-0525	2.51	200	110	2.71	0.09	0.0
P-239	Rural	J_Hyd-R021M	WVR007	1.46	200	110	-3.49	0.11	0.0
P-937	Rural	J-0519	J-0520	68.34	18	130	0.00	0.00	0.0
P_Hyd-R001E	Rural	J_Hyd-R001E	R001E	4.14	150	100	0.00	0.00	0.0
P_Hyd-R002E	Rural	J_Hyd-R002E	R002E	2.23	150	100	0.00	0.00	0.0
P_Hyd-R003E	Rural	J_Hyd-R003E	R003E	3.03	150	100	0.00	0.00	0.0
P_Hyd-R004E	Rural	J_Hyd-R004E	R004E	6.82	150	100	0.00	0.00	0.0
P_Hyd-R005E	Rural	J_Hyd-R005E	R005E	8.61	150	100	0.00	0.00	0.0
P_Hyd-R006E	Rural	J_Hyd-R006E	R006E	4.58	150	100	0.00	0.00	0.0
P_Hyd-R007E	Rural	J_Hyd-R007E	R007E	3.56	150	100	0.00	0.00	0.0
P_Hyd-R008E	Rural	J_Hyd-R008E	R008E	2.58	150	100	0.00	0.00	0.0
P_Hyd-R009E	Rural	J_Hyd-R009E	R009E	7.00	150	100	0.00	0.00	0.0
P_Hyd-R010E	Rural	J_Hyd-R010E	R010E	2.16	150	100	0.00	0.00	0.0
P_Hyd-R011E	Rural	J_Hyd-R011E	R011E	2.25	150	100	0.00	0.00	0.0
P_Hyd-R012E	Rural	J_Hyd-R012E	R012E	1.76	150	100	0.00	0.00	0.0
P_Hyd-R013E	Rural	J_Hyd-R013E	R013E	5.77	150	100	0.00	0.00	0.0
P_Hyd-R014E	Rural	J_Hyd-R014E	R014E	3.99	150	100	0.00	0.00	0.0
P_Hyd-R015E	Rural	J_Hyd-R015E	R015E	3.40	150	100	0.00	0.00	0.0
P_Hyd-R016E	Rural	J_Hyd-R016E	R016E	6.25	150	100	0.00	0.00	0.0
P_Hyd-R017M	Rural	J_Hyd-R017M	R017M	6.10	150	100	0.00	0.00	0.0
P_Hyd-R018M	Rural	J_Hyd-R018M	R018M	1.92	150	100	0.00	0.00	0.0
P_Hyd-R019M	Rural	J_Hyd-R019M	R019M	0.87	150	100	0.00	0.00	0.0
P_Hyd-R020M	Rural	J_Hyd-R020M	R020M	4.05	150	100	0.00	0.00	0.0
P_Hyd-R021M	Rural	J_Hyd-R021M	R021M	5.88	150	100	0.00	0.00	0.0
P_Hyd-R026E	Rural	J_Hyd-R026E	R026E	3.60	150	100	0.00	0.00	0.0
P_Hyd-R027W	Rural	J_Hyd-R027W	R027W	10.01	150	100	0.00	0.00	0.0
P_Hyd-R028E	Rural	J_Hyd-R028E	R028E	2.63	150	100	0.00	0.00	0.0
P_Hyd-R029W	Rural	J_Hyd-R029W	R029W	161.23	150	100	0.00	0.00	0.0
P_Hyd-R030M	Rural	J_Hyd-R030M	R030M	58.13	150	100	0.00	0.00	0.0
P_Hyd-R031M	Rural	J_Hyd-R031M	R031M	4.46	150	100	0.00	0.00	0.0
P_Hyd-R032M	Rural	J_Hyd-R032M	R032M	15.28	150	100	0.00	0.00	0.0
P_Hyd-R033E	Rural	J_Hyd-R033E	R033E	7.67	150	100	0.00	0.00	0.0
WM1010C_14	Rural	WVR007	WVR008	50.55	200	110	-3.49	0.11	0.0
WM1011C_01	Rural	WVR008	J_Hyd-R020M	457.55	200	110	-3.49	0.11	0.1
WM1011C_02	Rural	J_Hyd-R020M	J_Hyd-R019M	757.63	200	110	-3.49	0.11	0.1
WM1011C_03	Rural	J_Hyd-R019M	J_Hyd-R018M	317.29	200	110	-3.49	0.11	0.0
WM1011C_04	Rural	J_Hyd-R018M	WVR009	881.46	200	110	-3.49	0.11	0.1
WM1011C_05	Rural	J-0086	J-0260	7.07	200	110	-3.49	0.11	0.0
WM1011C_06	Rural	WVR009	J_Hyd-R017M	6.62	200	110	-3.49	0.11	0.0
WM1011C_07	Rural	J_Hyd-R017M	J-0086	2.48	200	110	-3.49	0.11	0.0
WM1011C_08	Rural	PRV-1	J-0260	21.84	300	120	11.51	0.16	0.0
WM1011_01	Rural	WVR050	J-0633	615.40	300	120	8.01	0.11	0.0
WM1011_02	Rural	J-0232	WVR050	5.77	150	100	8.01	0.45	0.0
WM1011_03	Rural	J-0633	J-0643	1830.27	300	120	8.01	0.11	0.1
WM1012C_01	Rural	J-0231	J_Hyd-R031M	80.50	300	120	27.18	0.38	0.1
WM1012C_02	Rural	J_Hyd-R031M	J-0397	294.47	300	120	27.18	0.38	0.2
WM1012C_03	Rural	J-0397	J-0398	18.34	300	120	27.18	0.38	0.0
WM1012C_04	Rural	J-0398	J-0441	604.41	300	120	27.18	0.38	0.4
WM1012C_05	Rural	J-0441	J-0442	24.83	300	120	27.18	0.38	0.0
WM1012C_06	Rural	J-0442	J-0547	90.95	300	120	27.18	0.38	0.1
WM1012C_07	Rural	J-0547	J-0422	1548.63	300	120	27.18	0.38	1.0
WM1012C_08	Rural	J-0422	J-0163	21.99	300	120	27.18	0.38	0.0
WM1012_01	Rural	J-0329	J-0330	11.08	50	130	0.00	0.00	0.0
WM1012_02	Rural	J-0330	J-0300	1185.95	50	130	0.00	0.00	0.0
WM1012_03	Rural	J-0300	J-0301	9.00	50	130	0.00	0.00	0.0
WM1012_04	Rural	J-0301	J-0616	285.01	50	130	0.00	0.00	0.0
WM1013C_01	Rural	J-0164	WVR019	1176.14	300	120	27.18	0.38	0.8
WM1013C_02	Rural	J-0163	J-0164	4.12	300	120	27.18	0.38	0.0
WM1013C_03	Rural	WVR019	J_Hyd-R030M	388.90	300	120	27.18	0.38	0.3
WM1013C_04	Rural	J_Hyd-R030M	J-0170	21.89	300	120	27.18	0.38	0.0
WM1013C_05	Rural	J-0170	J-0171	4.24	300	120	27.18	0.38	0.0
WM1013C_06	Rural	J-0171	J-0379	16.49	300	120	27.18	0.38	0.0
WM1013C_07	Rural	J-0379	J-0149	372.44	300	120	27.18	0.38	0.3
WM1013C_08	Rural	J-0149	J-0150	3.91	300	120	27.18	0.38	0.0
WM1013C_09	Rural	J-0150	J-0129	27.49	300	120	27.18	0.38	0.0
WM1013C_10	Rural	J-0129	J-0130	3.55	300	120	27.18	0.38	0.0
WM1013C_11	Rural	J-0130	J-0595	201.38	300	120	27.18	0.38	0.1
WM1021C_01	Rural	WVR020	J-0577	121.69	300	120	27.18	0.38	0.1

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM1021C_02(1)	Rural	J-0577	J-0519	660.77	300	120	27.18	0.38	0.4
WM1021C_02(2)(	Rural	J-0519	J-752	22.88	300	120	27.18	0.38	0.0
WM1026C_01	Rural	J-0408	WVR013	20.55	150	100	0.00	0.00	0.0
WM1026C_02	Rural	WVR013	J-0645	2396.11	150	100	0.00	0.00	0.0
WM1075C_02	Rural	J_Hyd-R029W	J_Hyd-R027W	3137.12	350	120	38.68	0.40	1.9
WM1075C_03	Rural	J_Hyd-R027W	J-0629	4074.92	350	120	38.68	0.40	2.5
WM1075C_04	Rural	J-0629	J-0431	496.33	350	120	38.68	0.40	0.3
WM1075C_05	Rural	J-0431	J-0432	23.51	350	120	38.68	0.40	0.0
WM1075C_06	Rural	J-0432	J-0613	1094.09	350	120	38.68	0.40	0.7
WM1075C_07	Rural	J-0613	J-0416	258.33	350	120	38.68	0.40	0.2
WM1075C_08(1)	Rural	J-0416	J-0466	12.01	300	120	38.68	0.55	0.0
WM1075C_08(2)	Rural	J-0466	WVR010	9.40	300	120	27.18	0.38	0.0
WM1075C_09	Rural	WVR010	J-0231	5.73	300	120	27.18	0.38	0.0
WM1075C_10	Rural	PRV-1	J-0466	31.58	300	120	-11.51	0.16	0.0
WM1086_01	Rural	J-0383	J-0199	63.41	300	120	8.01	0.11	0.0
WM1086_02	Rural	J-0199	J-0200	4.92	300	120	8.01	0.11	0.0
WM1086_03	Rural	J-0200	J-0266	7.51	300	120	8.01	0.11	0.0
WM1086_04	Rural	J-0266	J-0224	8.04	300	120	8.01	0.11	0.0
WM1086_05	Rural	J-0224	J-0225	5.54	300	120	8.01	0.11	0.0
WM1086_06	Rural	J-0225	J-0610	279.39	300	120	8.01	0.11	0.0
WM1086_07	Rural	J-0610	J-0611	236.26	300	120	8.01	0.11	0.0
WM1086_08	Rural	J-0611	J-0626	363.27	300	120	8.01	0.11	0.0
WM1086_09	Rural	J-0626	J-0232	348.32	300	120	8.01	0.11	0.0
WM1086_10	Rural	J-0260	J-0383	17.08	200	110	8.01	0.26	0.0
WM1087_01	Rural	J-0232	WVR051	12.83	200	110	0.00	0.00	0.0
WM1087_02	Rural	WVR051	J-0276	8.01	200	110	0.00	0.00	0.0
WM1087_03	Rural	J-0276	J-0293	8.73	200	110	0.00	0.00	0.0
WM1087_04	Rural	J-0293	J-0365	39.13	200	110	0.00	0.00	0.0
WM1087_05	Rural	J-0365	J-0366	14.54	200	110	0.00	0.00	0.0
WM1087_06	Rural	J-0366	J-0607	301.23	200	110	0.00	0.00	0.0
WM1087_07	Rural	J-0607	J-0206	227.17	200	110	0.00	0.00	0.0
WM1087_08	Rural	J-0206	J-0182	5.10	200	110	0.00	0.00	0.0
WM1087_09	Rural	J-0182	J-0183	4.50	200	110	0.00	0.00	0.0
WM1087_10	Rural	J-0183	J-0233	5.81	200	110	0.00	0.00	0.0
WM1087_11	Rural	J-0233	WVR012	785.82	200	110	0.00	0.00	0.0
WM1087_12	Rural	WVR012	J-0374	15.48	200	110	0.00	0.00	0.0
WM1087_13	Rural	J-0366	J-0329	62.78	50	130	0.00	0.00	0.0
WM1088_01	Rural	J-0374	J-0623	321.50	200	110	0.00	0.00	0.0
WM1088_02	Rural	J-0623	J-0530	924.91	200	110	0.00	0.00	0.0
WM1088_03	Rural	J-0530	WVR014	69.85	200	110	0.00	0.00	0.0
WM1089_01	Rural	WVR014	J-0309	9.37	200	110	0.00	0.00	0.0
WM1089_02(1)	Rural	J-0309	J-0408	31.72	200	110	0.00	0.00	0.0
WM1089_02(2)	Rural	J-0408	J_Hyd-R032M	6.61	200	110	0.00	0.00	0.0
WM1089_03	Rural	J_Hyd-R032M	WVR015	244.84	200	110	0.00	0.00	0.0
WM1089_04	Rural	WVR015	J-0193	5.52	200	110	0.00	0.00	0.0
WM1089_05	Rural	J-0193	J-0194	4.77	200	110	0.00	0.00	0.0
WM1097C_01	Rural	J-0595	J-0596	165.95	300	120	27.18	0.38	0.1
WM1097C_02	Rural	J-0596	J-0614	269.97	300	120	27.18	0.38	0.2
WM1097C_03	Rural	J-0614	J-0617	300.03	300	120	27.18	0.38	0.2
WM1097C_04	Rural	J-0617	J-0392	683.41	300	120	27.18	0.38	0.5
WM1098C	Rural	J-0392	WVR020	538.86	300	120	27.18	0.38	0.4
WM2025_01	Rural	J-0391	J-0356	287.21	150	100	0.00	0.00	0.0
WM2025_02	Rural	J-0356	J-0357	13.93	150	100	0.00	0.00	0.0
WM2025_03	Rural	J-0357	J_Hyd-R033E	230.73	150	100	0.00	0.00	0.0
WM2025_04	Rural	J-0391	J-0392	17.92	150	100	0.00	0.00	0.0
WM2030C_01	Rural	J-0263	J-0207	7.29	200	110	2.71	0.09	0.0
WM2030C_02	Rural	J-0207	J-0090	5.11	200	110	2.71	0.09	0.0
WM2030C_03	Rural	J-0090	WVR039	2.54	200	110	2.71	0.09	0.0
WM2030C_04	Rural	J-0525	WVR060	64.33	150	100	2.71	0.15	0.0
WM2030C_05	Rural	WVR060	J-0369	135.29	150	100	2.71	0.15	0.1
WM2030C_06	Rural	J-0369	J-0020	14.81	150	100	2.71	0.15	0.0
WM2030C_07	Rural	J-0020	J_Hyd-R009E	1.18	150	100	2.71	0.15	0.0
WM2030C_08	Rural	J_Hyd-R009E	J-0604	243.33	150	100	2.71	0.15	0.1
WM2030C_09	Rural	J-0604	J-0605	220.12	150	100	2.71	0.15	0.1
WM2030C_10	Rural	J-0605	J-0257	263.84	150	100	2.71	0.15	0.1
WM2030C_11	Rural	J-0257	WVR040	6.86	150	100	2.71	0.15	0.0
WM2030C_12	Rural	WVR040	J_Hyd-M002	689.84	150	100	2.71	0.15	0.3
WM2036_01	Rural	J-0100	J-0462	239.86	200	110	-11.46	0.36	0.3
WM2036_04	Rural	J-0618	J-0619	303.91	200	110	11.46	0.36	0.4
WM2036_05	Rural	J-0619	J-0624	603.05	200	110	11.46	0.36	0.7
WM2036_06	Rural	J-0624	J-0463	327.67	200	110	11.46	0.36	0.4
WM2036_07	Rural	J-0463	J-0464	30.58	200	110	11.46	0.36	0.0
WM2036_08	Rural	J-0464	J-0461	41.99	200	110	11.46	0.36	0.1
WM2036_09	Rural	J-0461	J-0462	30.21	200	110	11.46	0.36	0.0
WM2037_01	Rural	J-0325	J-0073	26.45	200	110	-11.46	0.36	0.0
WM2037_02	Rural	J-0073	J-0074	2.30	200	110	-11.46	0.36	0.0
WM2037_03	Rural	J-0074	J-0638	1562.44	200	110	-11.46	0.36	1.8
WM2037_04	Rural	J-0638	WVR052	826.51	200	110	-11.46	0.36	0.9
WM2037_05	Rural	WVR052	J-0100	3.90	200	110	-11.46	0.36	0.0
WM2038_01	Rural	J-0376	J-0545	89.85	200	110	-11.46	0.36	0.1
WM2038_02	Rural	J-0545	WVR024	2310.40	200	110	-11.46	0.36	2.6
WM2038_03	Rural	WVR024	J-0210	5.19	200	110	-11.46	0.36	0.0
WM2038_04	Rural	J-0210	J-0325	10.57	200	110	-11.46	0.36	0.0
WM2039_01	Rural	J-688	WVR025	1.73	200	110	3.92	0.12	0.0
WM2039_02	Rural	WVR025	J-0315	9.84	200	110	3.92	0.12	0.0
WM2039_03	Rural	J-0315	J_Hyd-R015E	53.54	200	110	3.92	0.12	0.0
WM2039_05	Rural	J-0592	J-0593	154.11	200	110	3.92	0.12	0.0
WM2039_06	Rural	J-0593	WVR031	431.61	200	110	3.92	0.12	0.1
WM2039_07	Rural	WVR031	J-0362	20.22	200	110	3.92	0.12	0.0
WM2040_01	Rural	J-0362	J_Hyd-R014E	14.45	200	110	3.92	0.12	0.0
WM2040_02	Rural	J_Hyd-R014E	J-0599	560.06	200	110	3.92	0.12	0.1
WM2040_03	Rural	J-0599	J-0600	185.21	200	110	3.92	0.12	0.0
WM2040_04	Rural	J-0600	J-0636	706.37	200	110	3.92	0.12	0.1
WM2040_05	Rural	J-0636	WVR034	947.99	200	110	3.92	0.12	0.2
WM2040_06	Rural	WVR034	J_Hyd-R013E	20.02	200	110	3.92	0.12	0.0
WM2041_01	Rural	J_Hyd-R013E	J-0118	4.50	200	110	1.14	0.04	0.0
WM2041_02	Rural	J-0118	WVR035	3.31	200	110	1.14	0.04	0.0
WM2041_03	Rural	WVR035	J-0341	11.80	150	100	1.14	0.06	0.0
WM2041_04	Rural	J-0341	J_Hyd-R008E	1161.30	150	100	1.14	0.06	0.1

2041 PHD Pipe Results									
ID	Zone	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	HL/1000 (m/k-m)
WM2041_05	Rural	J_Hyd-R008E	WVR044	1217.52	150	100	1.14	0.06	0.1
WM2041_06	Rural	WVR044	J-0335	11.48	150	100	1.14	0.06	0.0
WM2042_01	Rural	J-0241	WVR047	6.16	100	100	0.00	0.00	0.0
WM2042_02	Rural	WVR047	J-0117	3.28	100	100	0.00	0.00	0.0
WM2042_03	Rural	J-0117	J-0053	90.84	100	100	0.00	0.00	0.0
WM2042_04	Rural	J-0053	WVR056	1.74	50	100	0.00	0.00	0.0
WM2043_01	Rural	J-0208	J_Hyd-R002E	5.14	150	100	0.00	0.00	0.0
WM2043_02	Rural	J_Hyd-R002E	J-0057	289.87	150	100	0.00	0.00	0.0
WM2043_03	Rural	J-0057	J_Hyd-R003E	1.81	150	100	0.00	0.00	0.0
WM2043_04	Rural	J_Hyd-R003E	J-0282	8.32	150	100	0.00	0.00	0.0
WM2043_05	Rural	J-0282	J_Hyd-R028E	276.99	150	100	0.00	0.00	0.0
WM2047C_02	Rural	WVR053	J-0319	110.95	200	110	1.46	0.05	0.0
WM2047C_03	Rural	J-0319	J_Hyd-R016E	10.19	200	110	1.46	0.05	0.0
WM2047C_04	Rural	J_Hyd-R016E	J-0113	3.18	200	110	1.46	0.05	0.0
WM2047C_05	Rural	J-0113	J-0186	5.93	200	110	1.46	0.05	0.0
WM2048C_01	Rural	J-0186	WVR029	4.53	200	110	1.46	0.05	0.0
WM2048C_02	Rural	WVR029	J-0103	2.95	200	110	1.46	0.05	0.0
WM2048C_03	Rural	J-0103	WVR030	1818.80	200	110	1.46	0.05	0.1
WM2048C_04	Rural	WVR030	WVR032	608.74	200	110	1.46	0.05	0.0
WM2048C_05	Rural	WVR032	J-0151	3.93	200	110	1.46	0.05	0.0
WM2048C_06	Rural	J-0151	J-0215	5.40	200	110	1.46	0.05	0.0
WM2048C_07	Rural	J-0215	J-0077	9.76	200	110	1.46	0.05	0.0
WM2049C_01	Rural	J-0077	J-0078	2.32	200	110	1.46	0.05	0.0
WM2049C_02	Rural	J-0078	WVR033	3.59	200	110	1.46	0.05	0.0
WM2049C_03	Rural	WVR033	J_Hyd-R007E	995.72	200	110	1.46	0.05	0.0
WM2049C_04	Rural	J_Hyd-R007E	J-0352	1408.71	200	110	1.46	0.05	0.0
WM2049C_05	Rural	J-0019	WVR046	1.14	200	110	-1.46	0.05	0.0
WM2049C_06	Rural	WVR046	J-0110	3.14	200	110	-1.46	0.05	0.0
WM2049C_07	Rural	J-0110	J-0352	13.14	200	110	-1.46	0.05	0.0
WM2089C_05	Rural	J-0304	J-0137	9.13	200	110	-7.54	0.24	0.0
WM2089C_06	Rural	J-0137	J-0138	3.61	200	110	-7.54	0.24	0.0
WM2089C_07(1)	Rural	J-0138	J-688	5.16	200	110	-7.54	0.24	0.0
WM2089C_07(2)	Rural	J-688	J-0376	10.48	200	110	-11.46	0.36	0.0
WM2097_01	Rural	J-0100	WVR024	2.85	100	100	0.00	0.00	0.0
WM2097_02	Rural	WVR024	J-0625	347.23	100	100	0.00	0.00	0.0
WM2111C_01	Rural	J_Hyd-R006E	J-0064	8.81	150	100	2.60	0.15	0.0
WM2111C_02	Rural	J-0064	WVR042	1.98	150	100	2.60	0.15	0.0
WM2111C_03	Rural	WVR042	WVM032	932.63	150	100	2.60	0.15	0.3
WM2111_01	Rural	J-0405	J-0631	583.42	200	110	2.78	0.09	0.1
WM2111_02	Rural	J-0631	J-0563	549.68	200	110	2.78	0.09	0.1
WM2111_03	Rural	J-0563	J-0536	105.89	200	110	2.78	0.09	0.0
WM2111_04	Rural	J-0536	J_Hyd-R010E	76.85	200	110	2.71	0.09	0.0
WM2111_05	Rural	J_Hyd-R010E	WVR038	3.57	200	110	2.71	0.09	0.0
WM2111_06	Rural	WVR038	J-0243	6.22	200	110	2.71	0.09	0.0
WM2111_07	Rural	J-0243	J-0370	14.97	200	110	2.71	0.09	0.0
WM2111_08	Rural	J-0370	J-0263	36.29	200	110	2.71	0.09	0.0
WM2112C_01	Rural	J_Hyd-R005E	WVR043	17.41	150	100	2.60	0.15	0.0
WM2112C_02	Rural	WVR043	J-0326	1341.21	150	100	2.60	0.15	0.5
WM2112C_03	Rural	J-0326	J-0298	10.58	150	100	2.60	0.15	0.0
WM2112C_04	Rural	J-0298	J-0299	8.97	150	100	2.60	0.15	0.0
WM2112_01	Rural	J_Hyd-R013E	WVR036	20.22	200	110	2.78	0.09	0.0
WM2112_02	Rural	WVR036	J_Hyd-R012E	11.04	200	110	2.78	0.09	0.0
WM2112_03	Rural	J_Hyd-R012E	J-0582	131.98	200	110	2.78	0.09	0.0
WM2112_04	Rural	J-0582	J-0573	1091.55	200	110	2.78	0.09	0.1
WM2112_05	Rural	J-0573	J-0574	114.04	200	110	2.78	0.09	0.0
WM2112_06	Rural	J-0574	J_Hyd-R011E	120.36	200	110	2.78	0.09	0.0
WM2112_07	Rural	J_Hyd-R011E	J-0351	12.71	200	110	2.78	0.09	0.0
WM2112_08	Rural	J-0351	WVR037	15.56	200	110	2.78	0.09	0.0
WM2112_09	Rural	WVR037	J-0405	20.43	200	110	2.78	0.09	0.0
WM2113C_01	Rural	J_Hyd-R004E	J_Hyd-R005E	813.28	150	100	1.46	0.08	0.1
WM2113C_02	Rural	WVR054	WVR055	86.32	150	100	-1.46	0.08	0.0
WM2113C_03	Rural	WVR055	J-0483	97.84	150	100	-1.46	0.08	0.0
WM2113C_04	Rural	WVR054	J_Hyd-R004E	21.71	150	100	1.46	0.08	0.0
WM2113C_05	Rural	J-0483	J-0484	39.50	150	100	-1.46	0.08	0.0
WM2113C_06	Rural	J-0484	WVR045	285.24	150	100	-1.46	0.08	0.0
WM2113C_07	Rural	WVR045	J-0019	39.17	150	100	-1.46	0.08	0.0
WM2114C	Rural	J-0208	J_Hyd-R001E	498.34	150	100	0.00	0.00	0.0
WM2114_01	Rural	J-0077	J_Hyd-R026E	4.87	200	110	0.00	0.00	0.0
WM2114_02	Rural	J_Hyd-R026E	J-0637	713.60	200	110	0.00	0.00	0.0
WM2118C	Rural	J-0241	J-0208	215.87	150	100	0.00	0.00	0.0
WM2119C	Rural	J-0019	J-0241	176.56	150	100	0.00	0.00	0.0

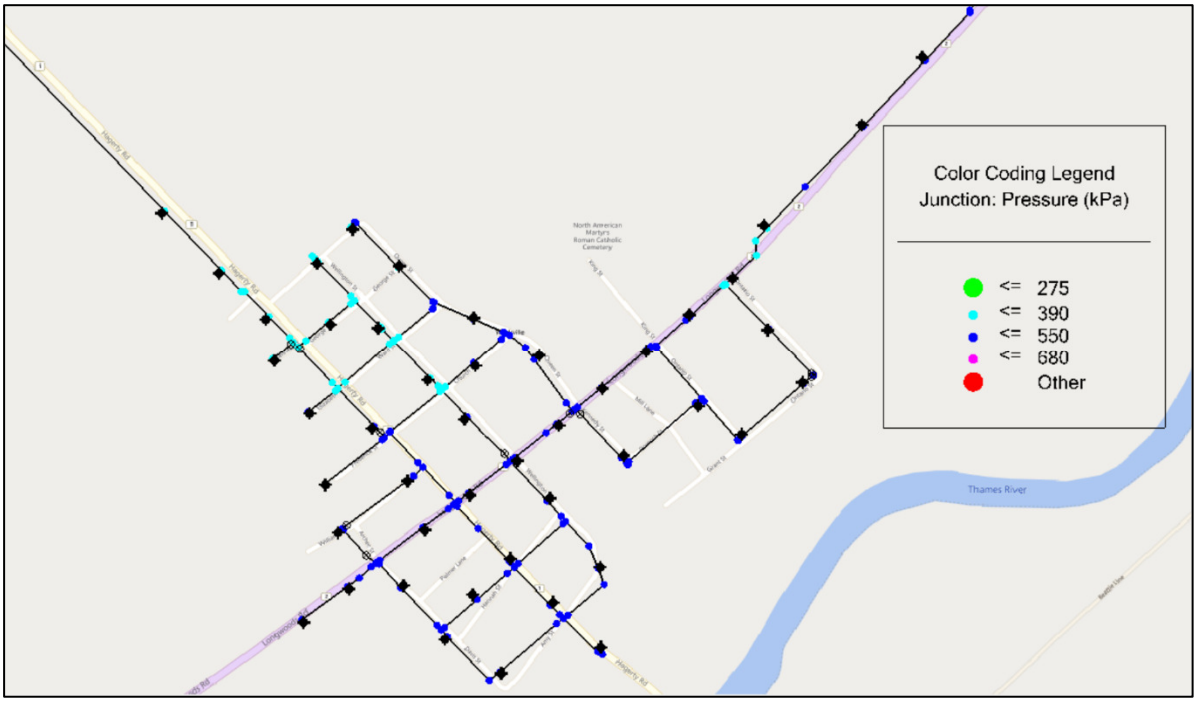


Figure B1 – Wardsville Junction Pressure Results, 2021 Average Day Demand Scenario

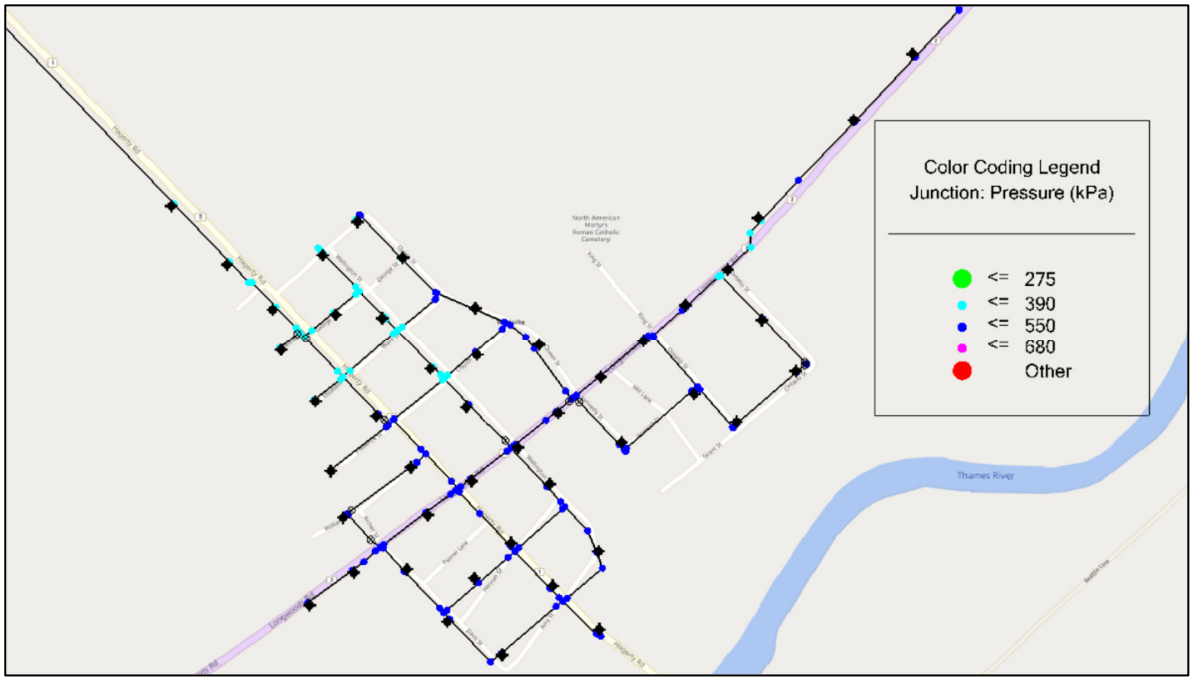


Figure B2 – Wardsville Junction Pressure Results, 2021 Maximum Day Demand Scenario

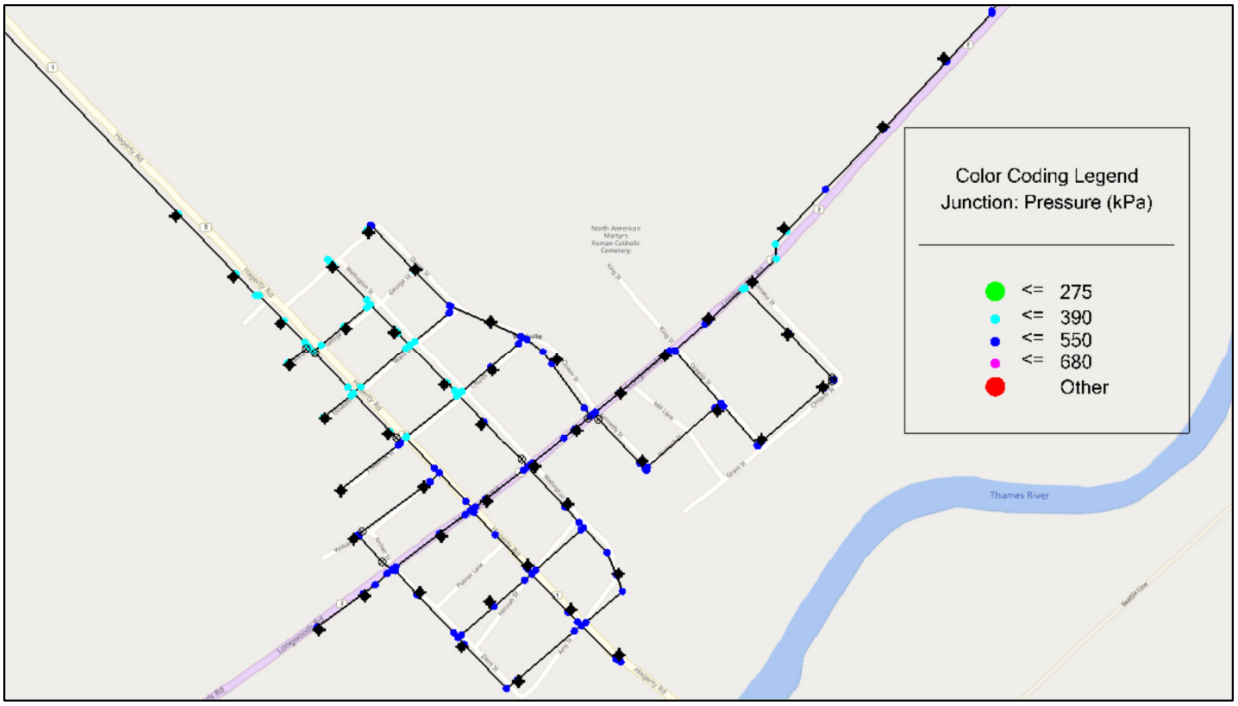


Figure B3 – Wardsville Junction Pressure Results, 2021 Peak Hour Demand Scenario

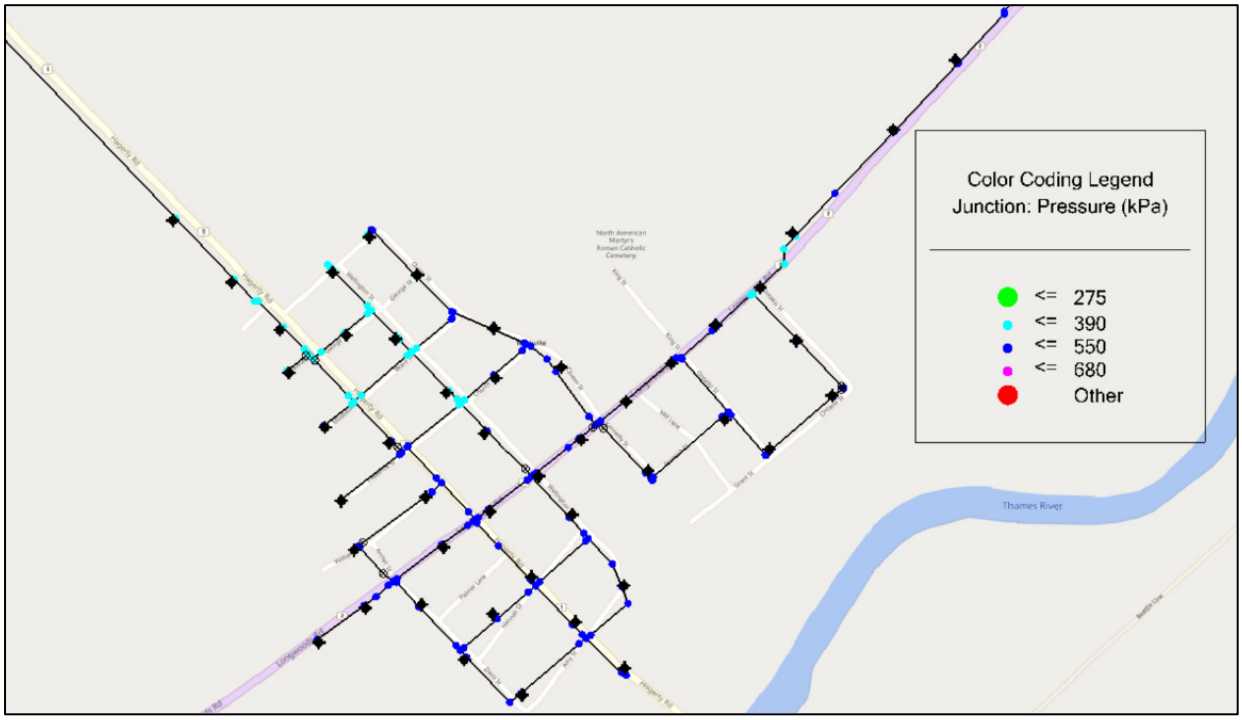


Figure B4 – Wardsville Junction Pressure Results, 2041 Average Day Demand Scenario

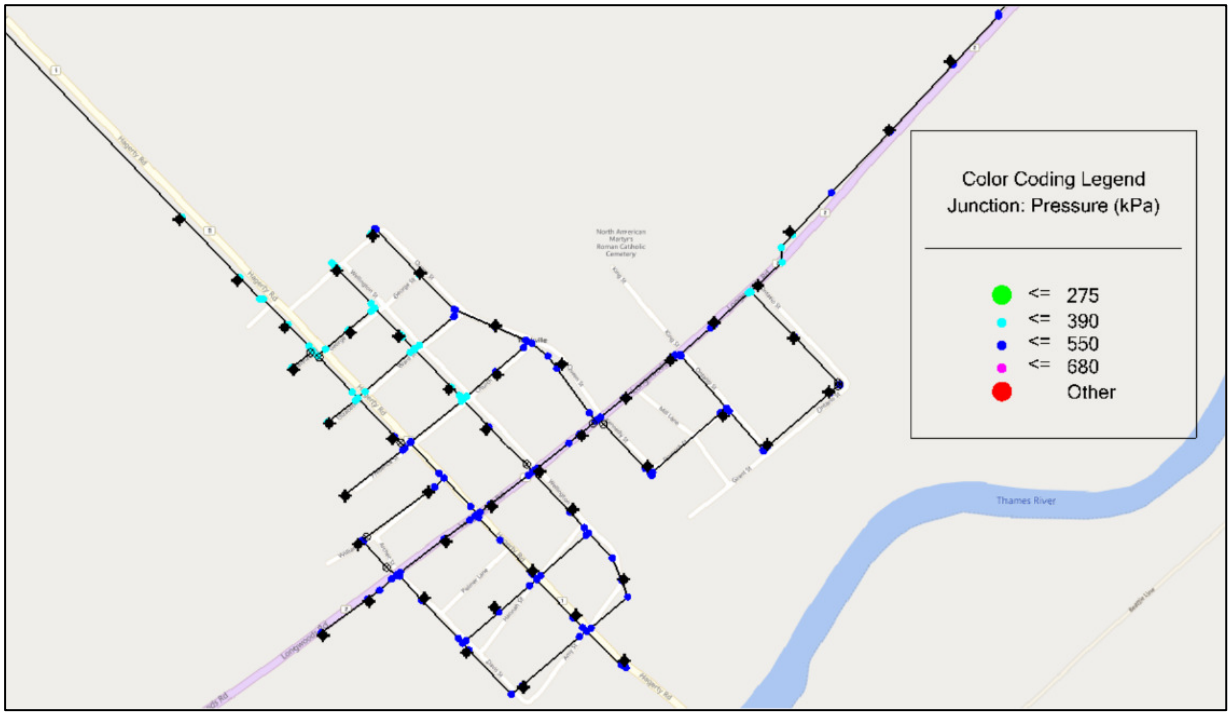


Figure B5 – Wardsville Junction Pressure Results, 2041 Maximum Day Demand Scenario

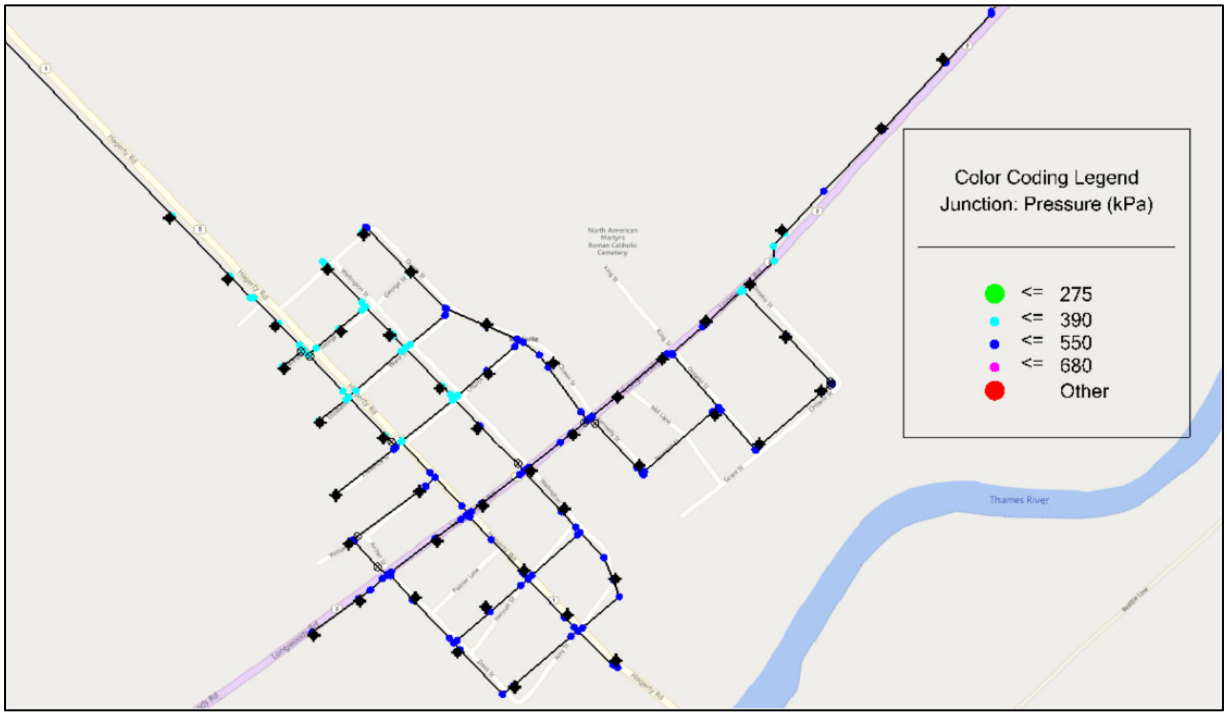


Figure B6 – Wardsville Junction Pressure Results, 2041 Peak hour Demand Scenario

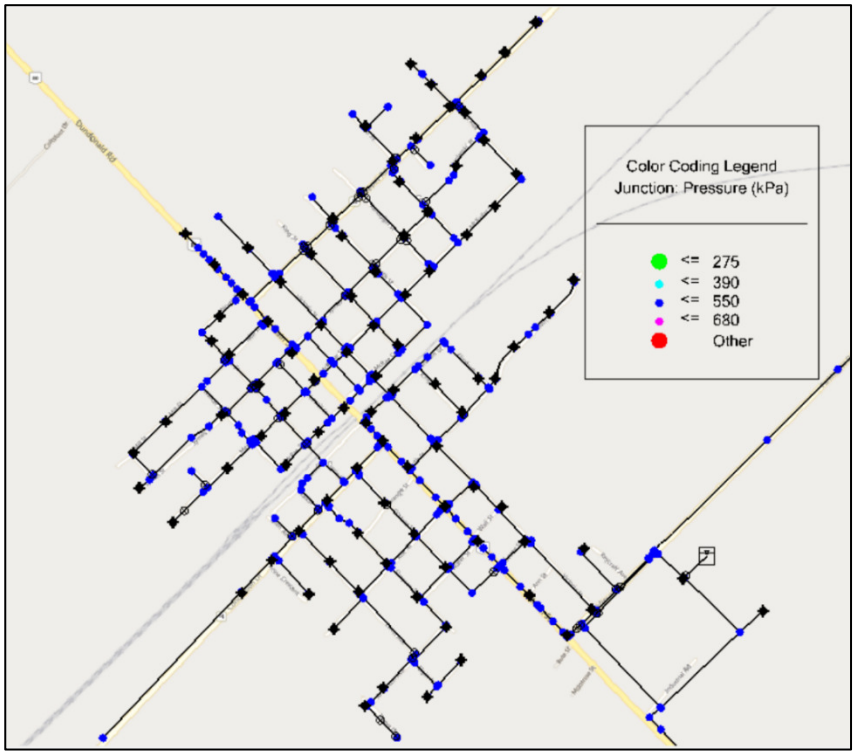


Figure B7 – Glencoe Junction Pressure Results, 2021 Average Day Demand Scenario

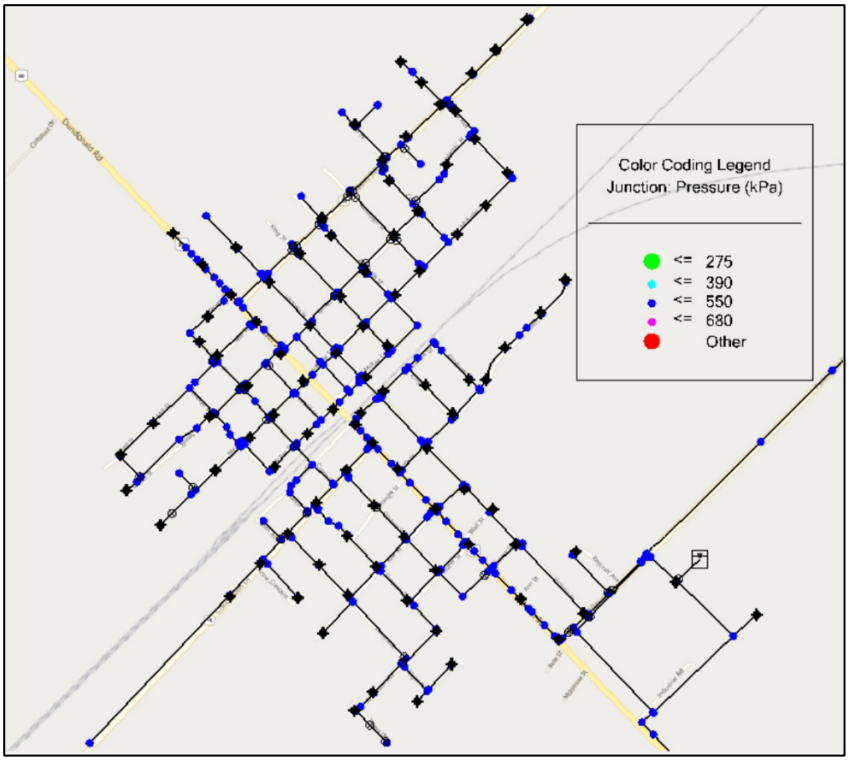


Figure B8 – Glencoe Junction Pressure Results, 2021 Maximum Day Demand Scenario

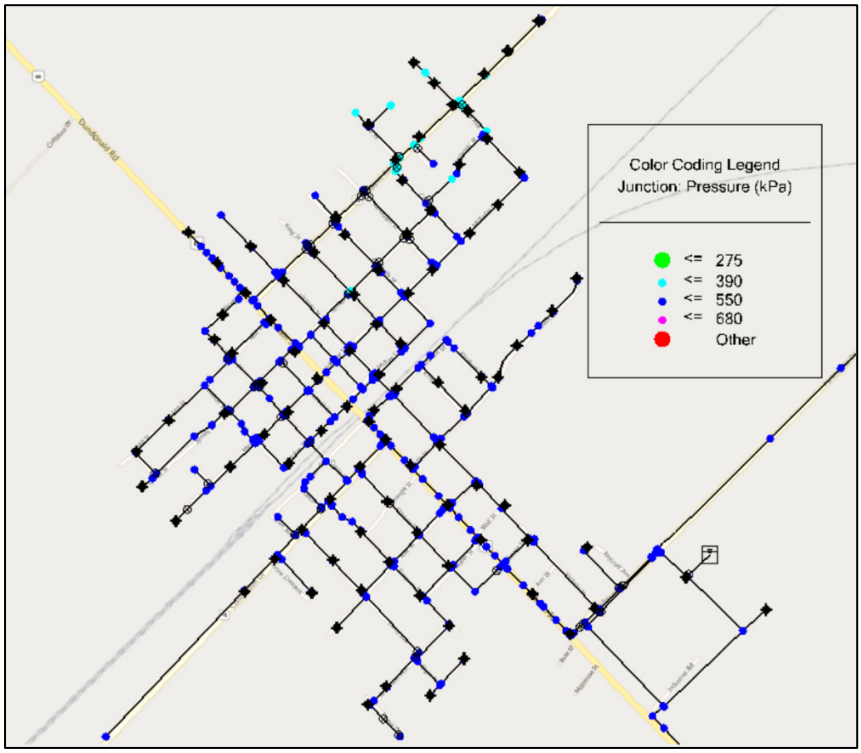


Figure B9 – Glencoe Junction Pressure Results, 2021 Peak Hour Demand Scenario

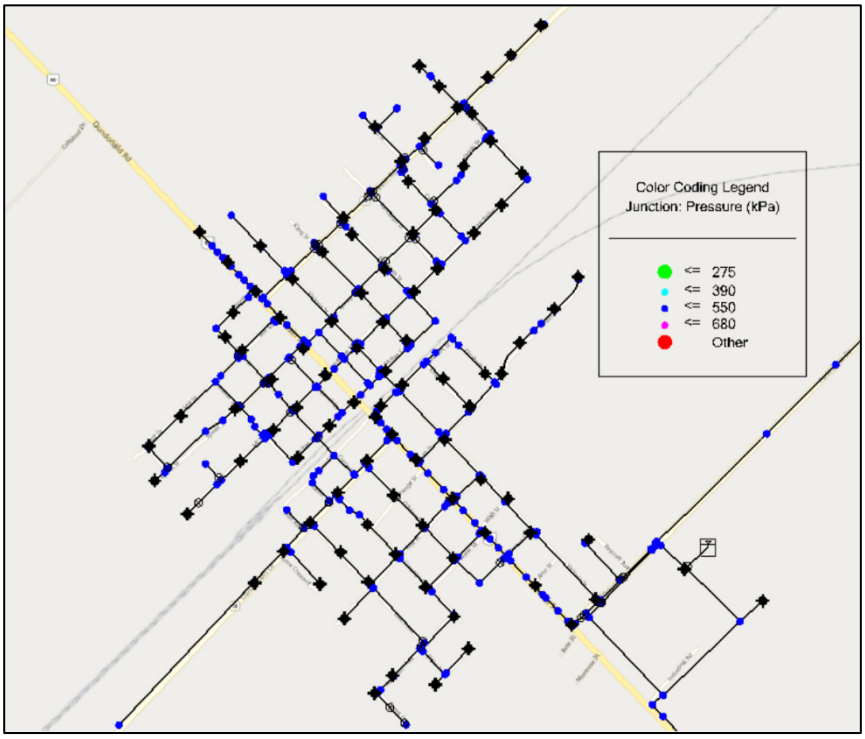


Figure B10 – Glencoe Junction Pressure Results, 2041 Average Day Demand Scenario

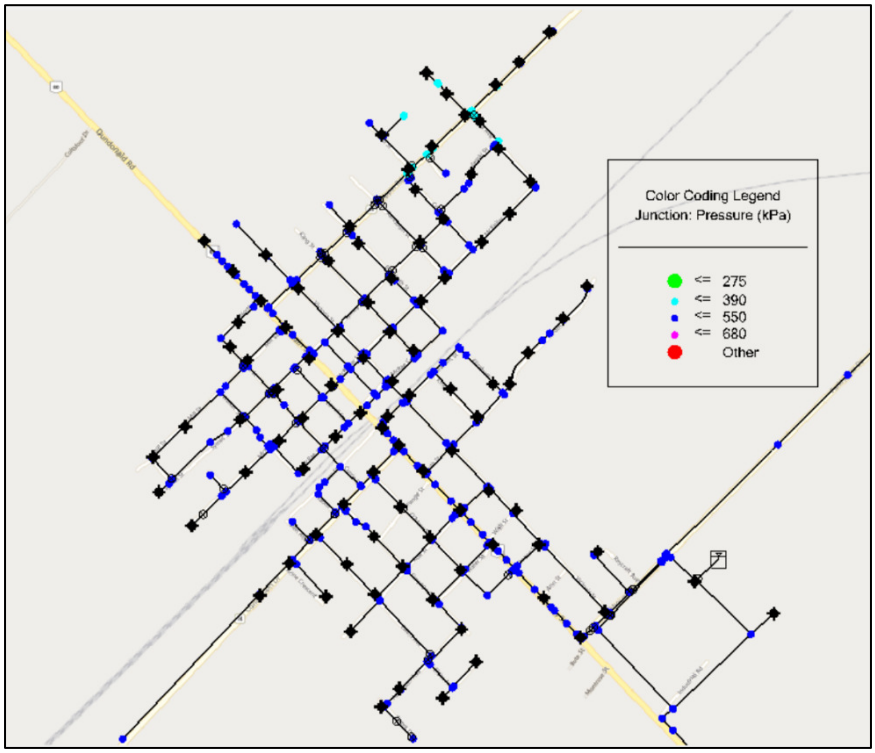


Figure B11 – Glencoe Junction Pressure Results, 2041 Maximum Day Demand Scenario

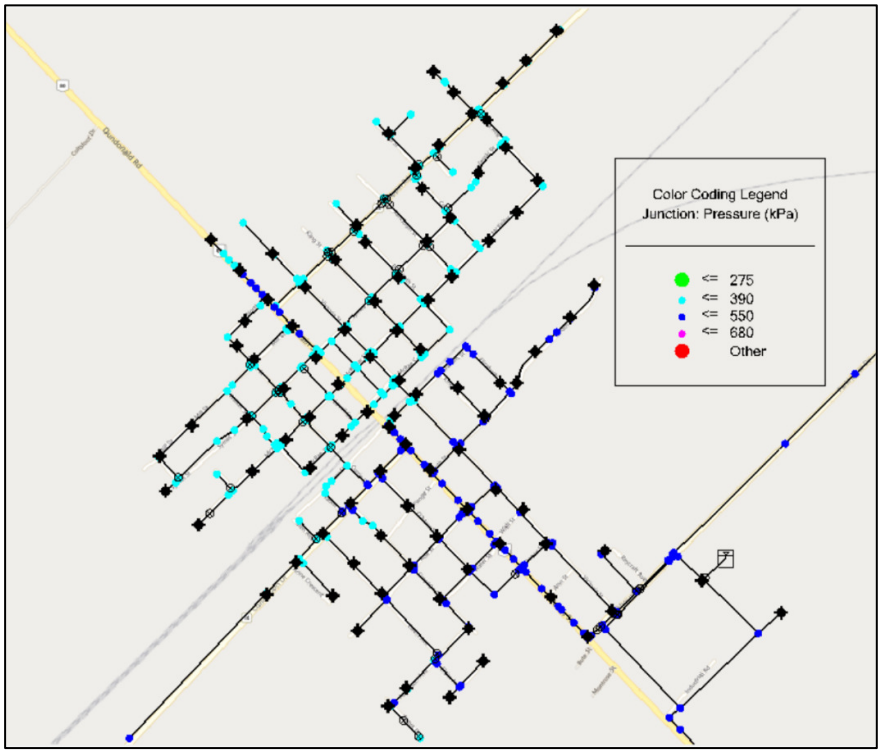


Figure B12 – Glencoe Junction Pressure Results, 2041 Peak Hour Demand Scenario

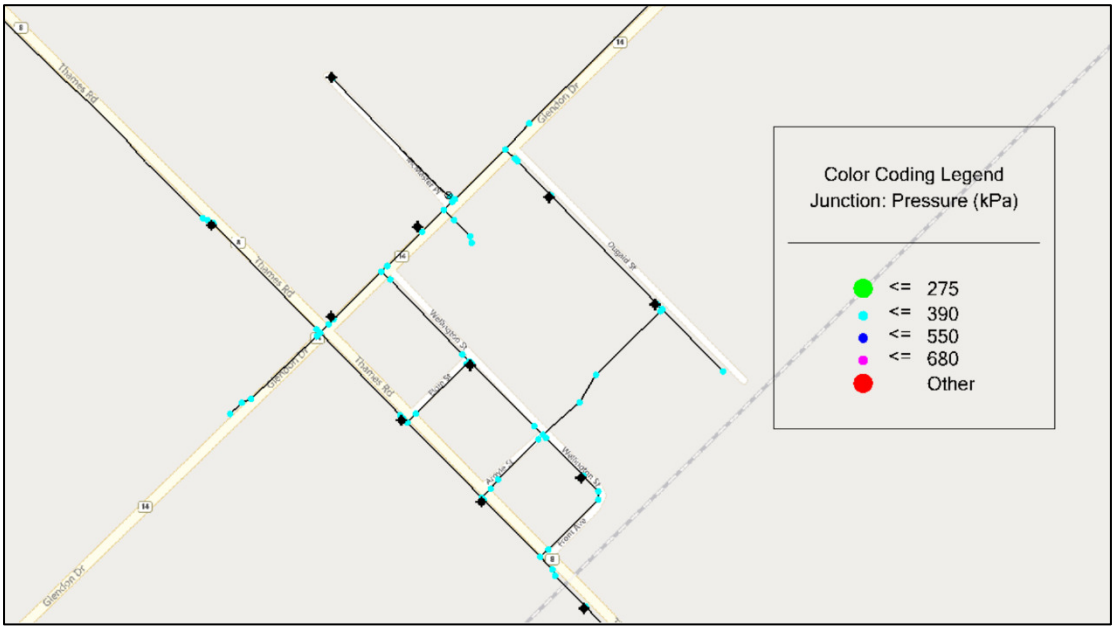


Figure B13 – Appin Junction Pressure Results, 2021 Average Day Demand Scenario

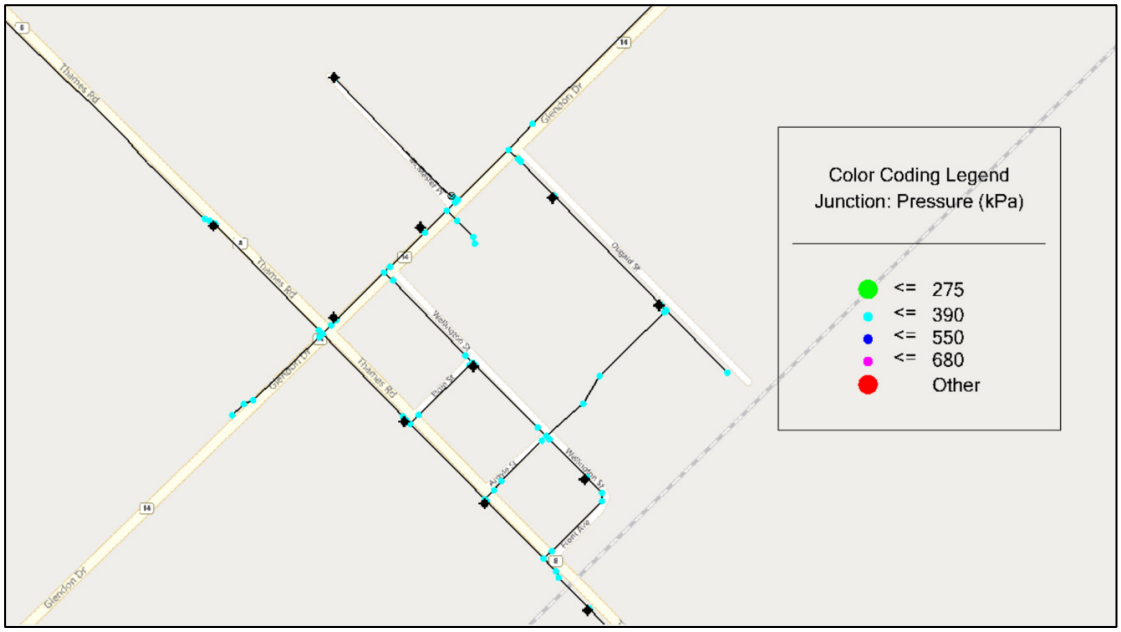


Figure B14 – Appin Junction Pressure Results, 2021 Maximum Day Demand Scenario

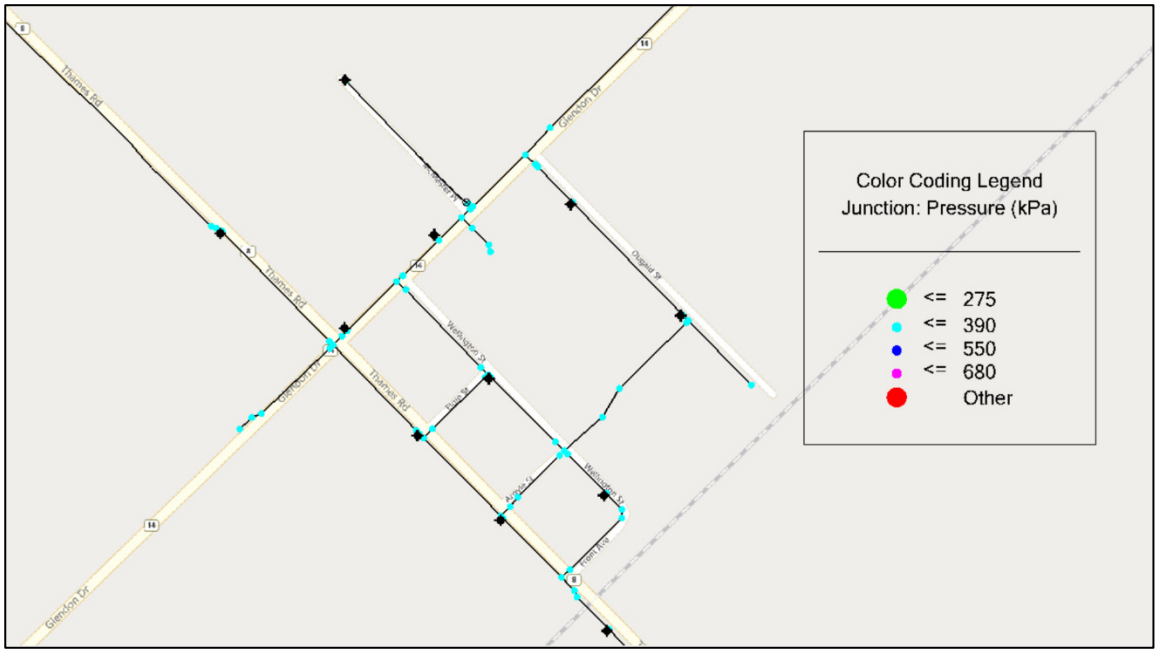


Figure B15 – Appin Junction Pressure Results, 2021 Peak Hour Demand Scenario

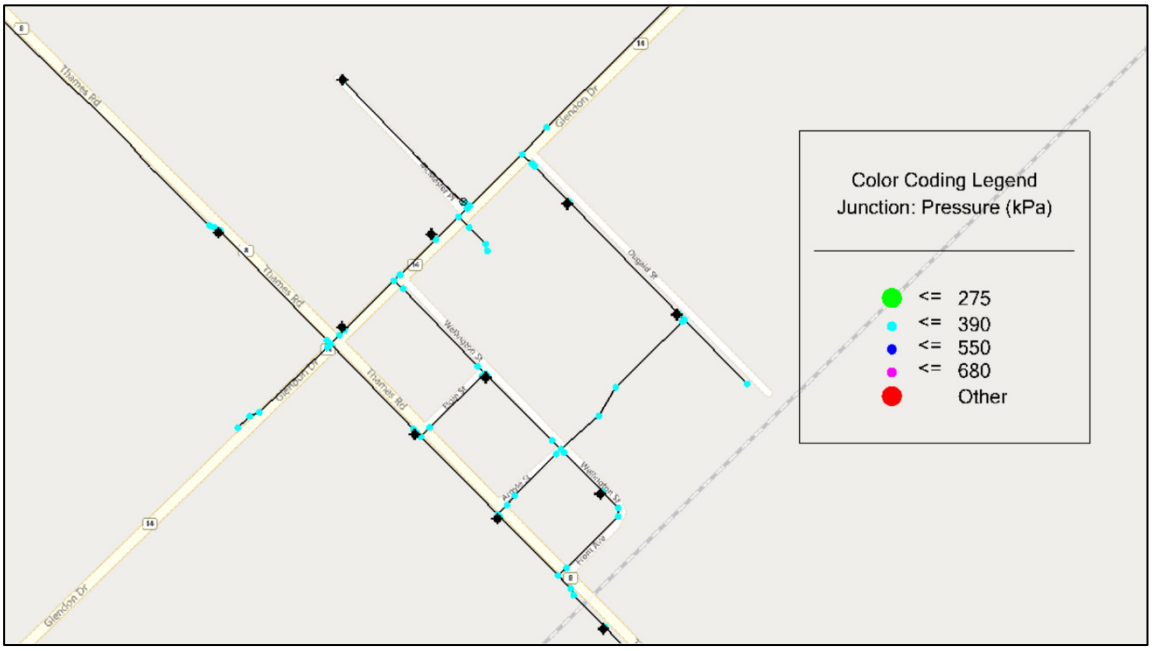


Figure B16 – Appin Junction Pressure Results, 2041 Average Day Demand Scenario

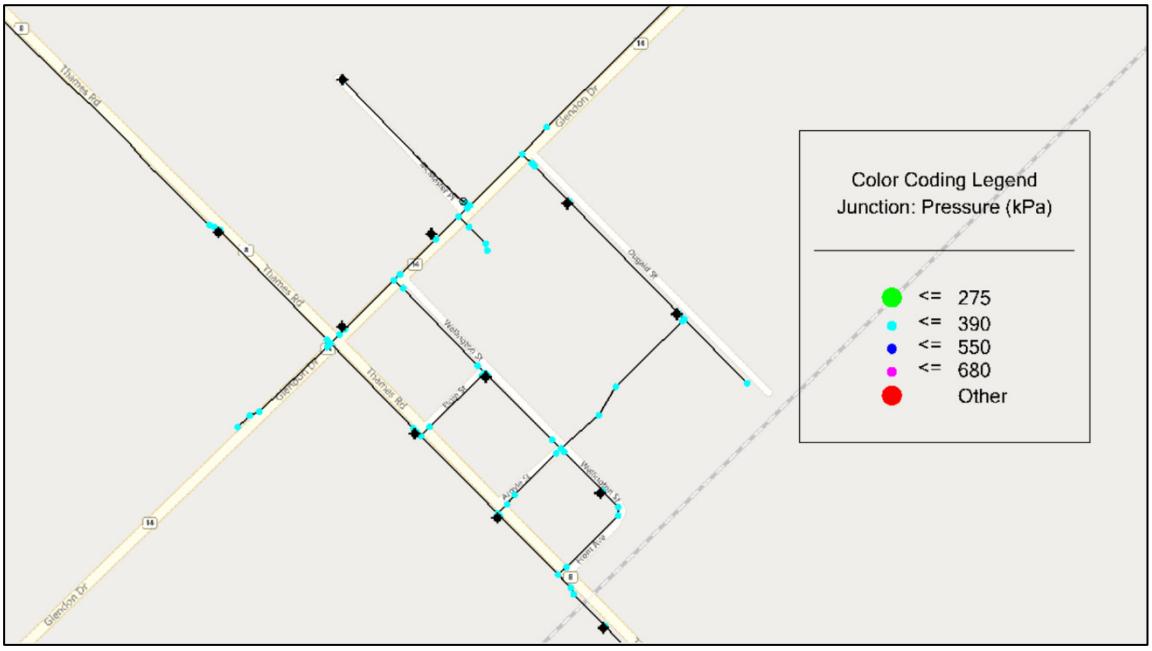


Figure B17 – Appin Junction Pressure Results, 2041 Maximum Day Demand Scenario

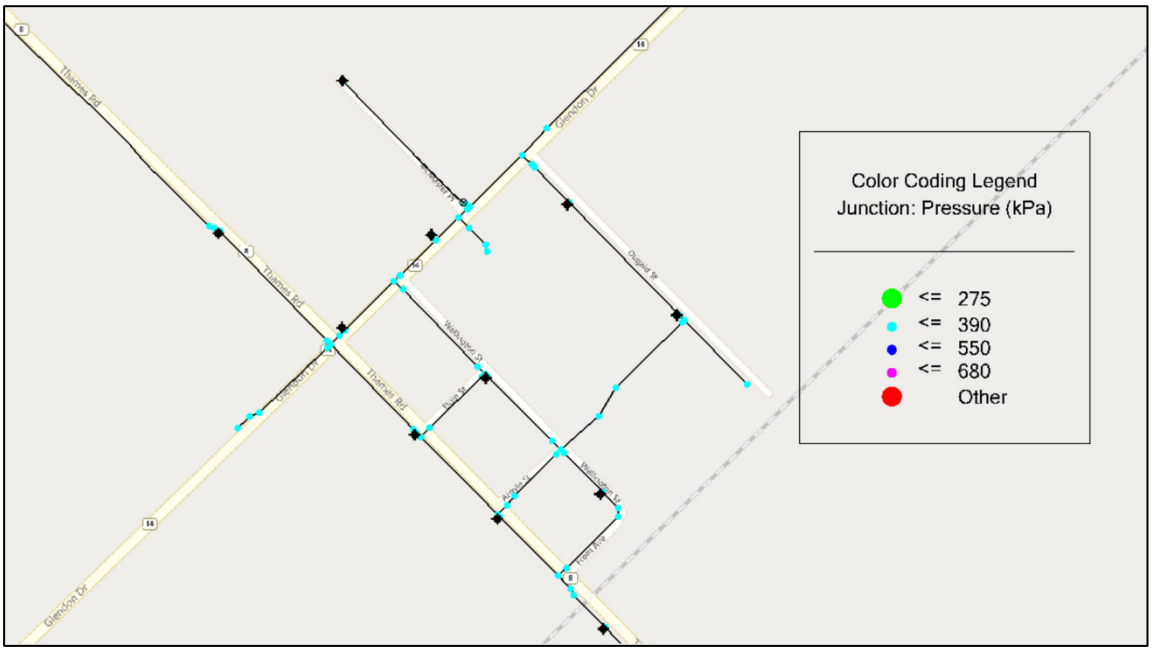


Figure B18 – Appin Junction Pressure Results, 2041 Peak Hour Demand Scenario

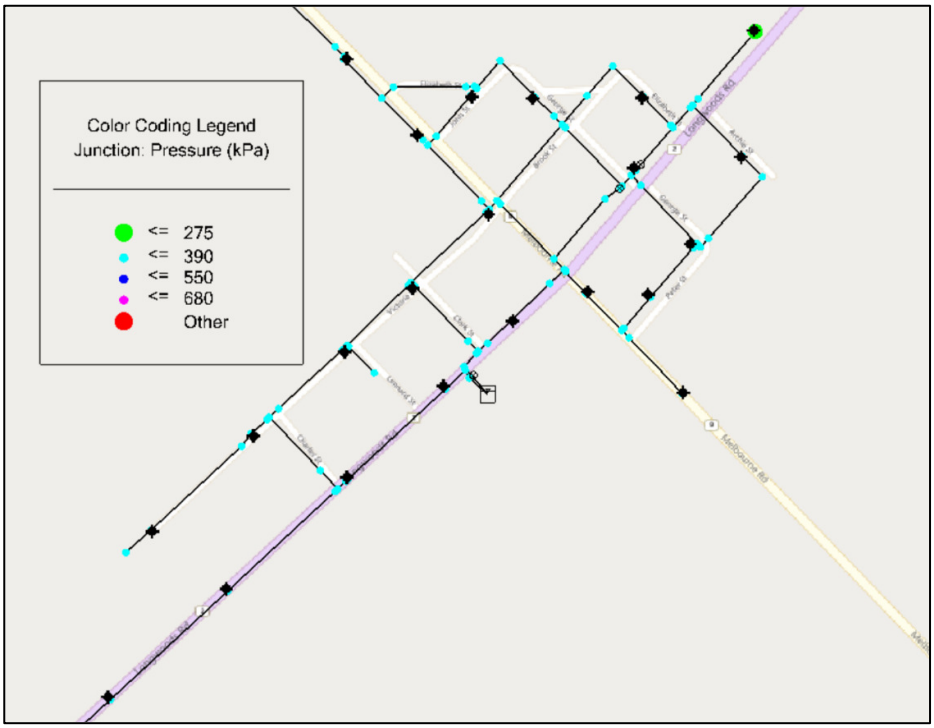


Figure B19 – Melbourne Junction Pressure Results, 2021 Average Day Demand Scenario

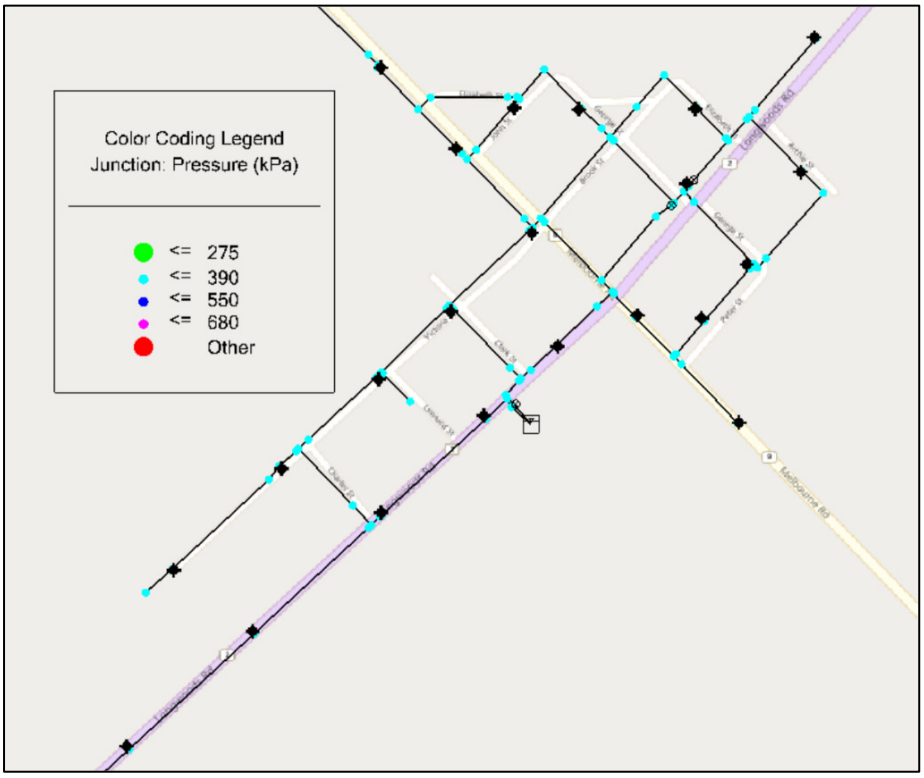


Figure B20 – Melbourne Junction Pressure Results, 2021 Maximum Day Demand Scenario

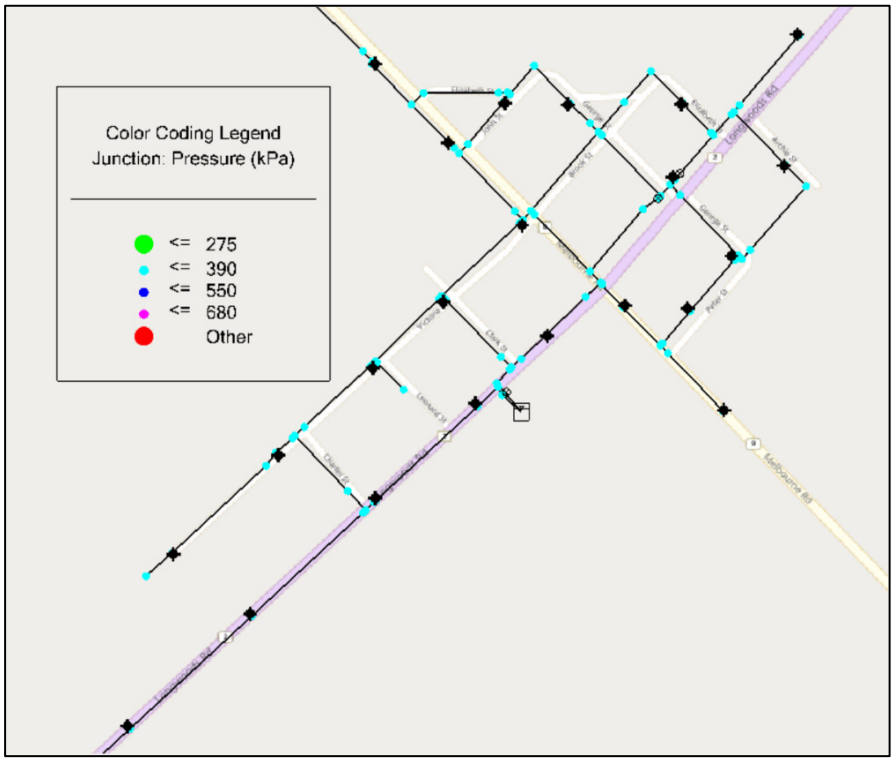


Figure B21 – Melbourne Junction Pressure Results, 2021 Peak Hour Demand Scenario

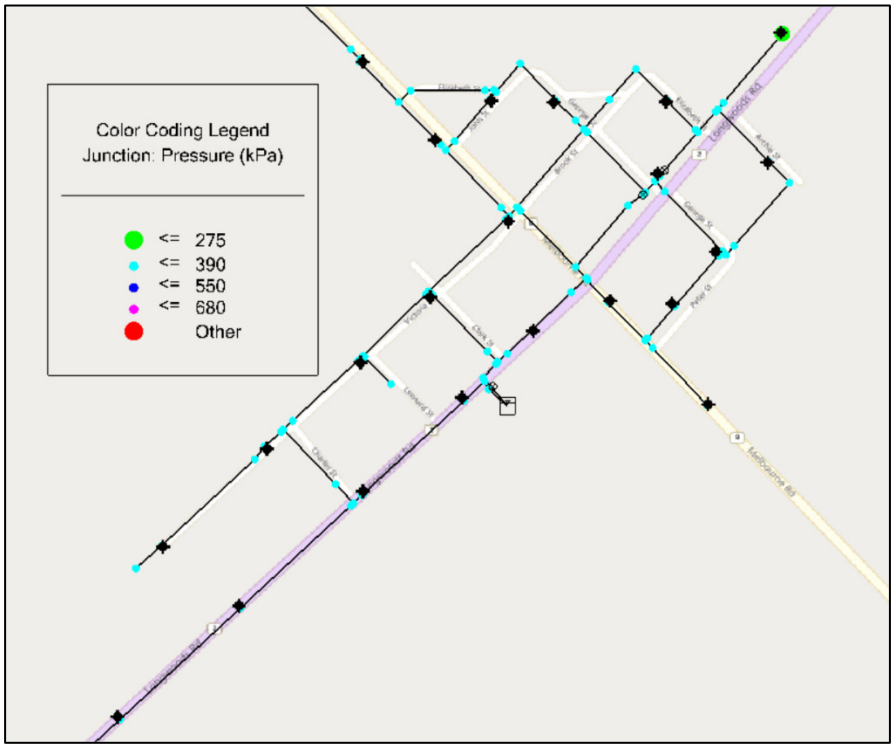


Figure B22 – Melbourne Junction Pressure Results, 2041 Average Day Demand Scenario

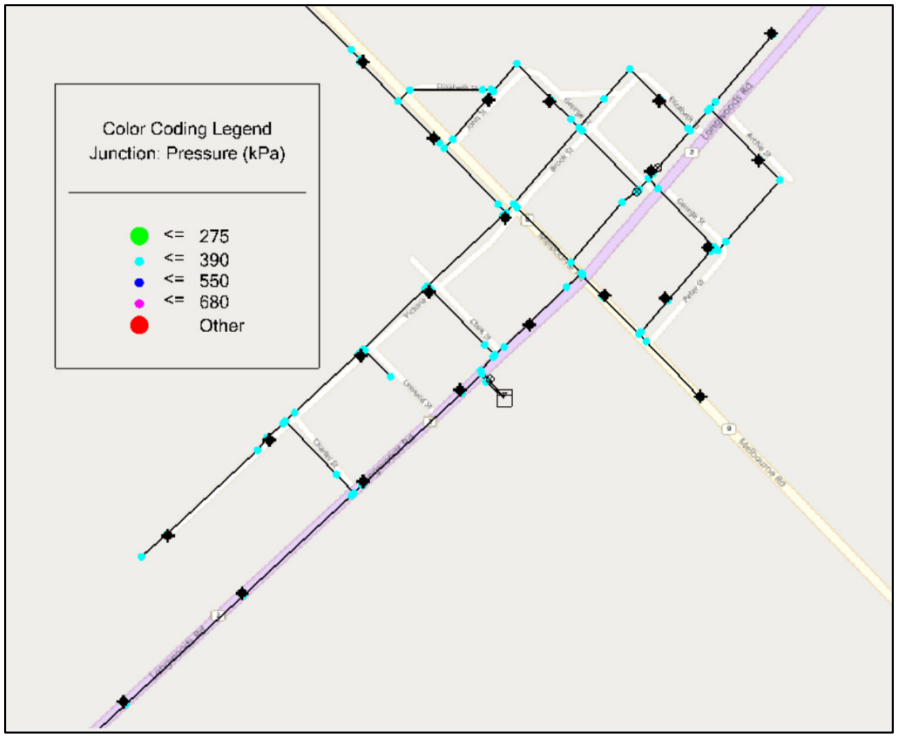


Figure B23 – Melbourne Junction Pressure Results, 2041 Maximum Day Demand Scenario

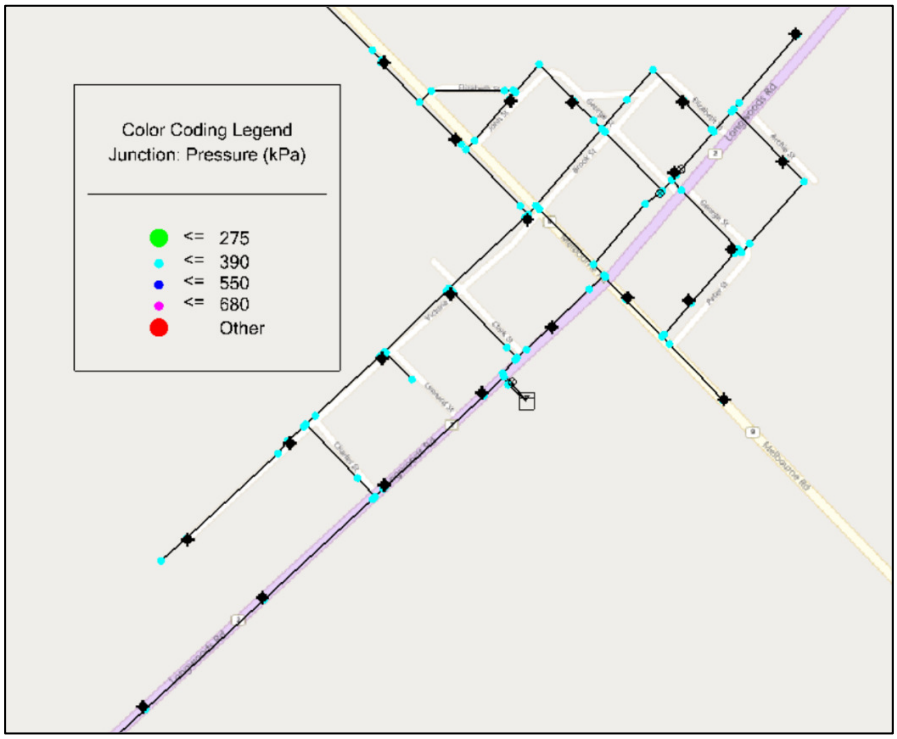


Figure B24 – Melbourne Junction Pressure Results, 2041 Peak Hour Demand Scenario

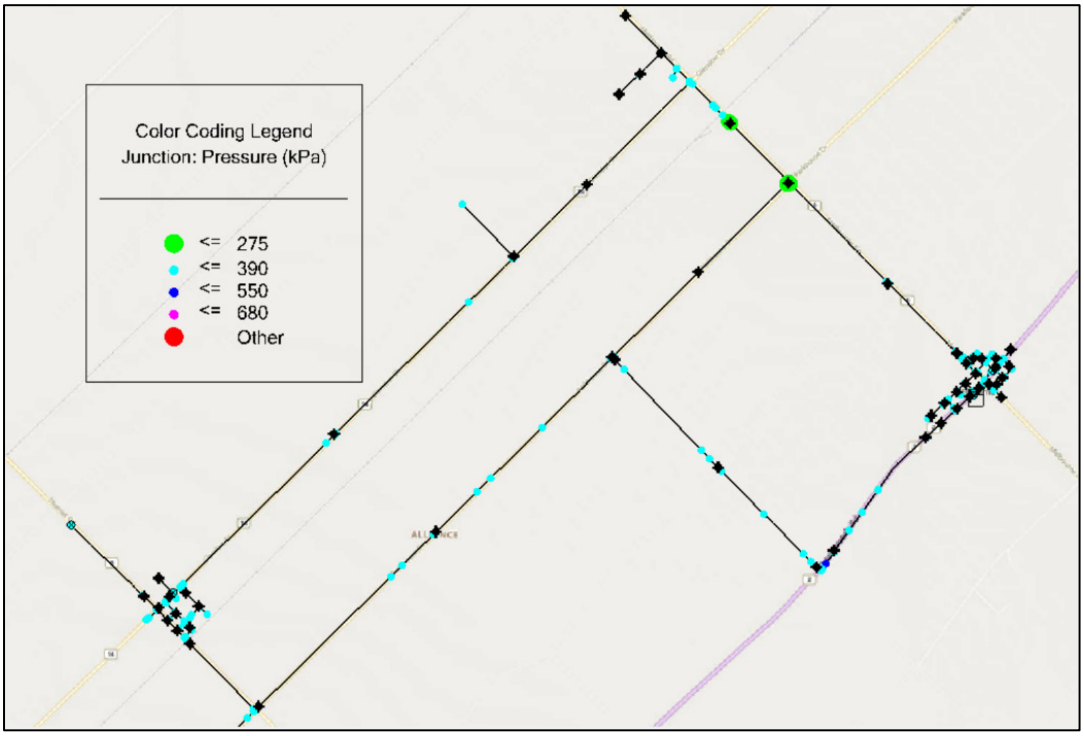


Figure B25 – Appin, Melbourne & Rural Junction Pressure Results, 2021 Peak Hour Demand Scenario

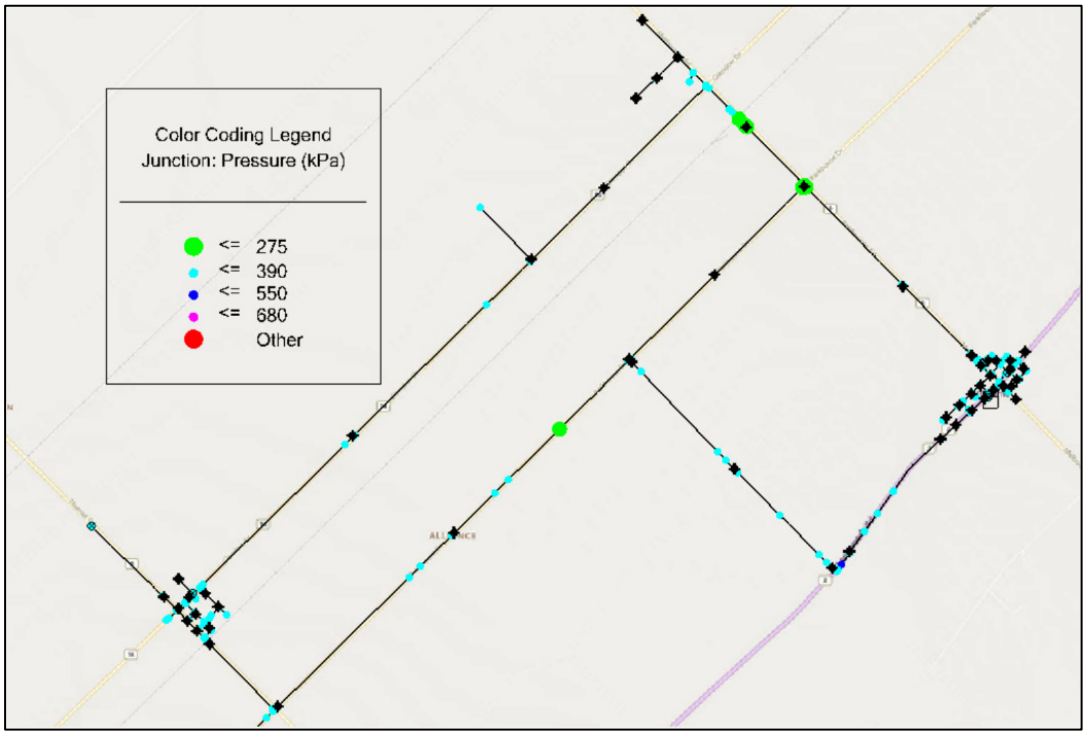


Figure B26 – Appin, Melbourne & Rural Junction Pressure Results, 2041 Peak Hour Demand Scenario

APPENDIX

C

FIRE FLOW RESULTS

2021 MDD+FF												
Label	Zone	Elevation (m)	Pressure (kPa)	Fire Flow (Needed) (L/s)	Fire Flow (Available) (L/s)	Hydraulic Grade (m)	Pressure (Residual Lower Limit) (kPa)	Pressure (Zone Lower Limit) (kPa)	Pressure (Calculated Residual) (kPa)	Pressure (Calculated Zone Lower Limit) (kPa)	Junction w/ Minimum Pressure (System)	Junction w/ Minimum Pressure (Zone)
G004	Glencoe	221.2	409	100.0	60.8	263	140	140	140	141	J-742	J_Hyd-G004
G041	Glencoe	220.9	410	100.0	101.2	263	140	140	140	144	J-742	J_Hyd-G041
G042	Glencoe	220.4	415	100.0	107.3	263	140	140	140	146	J-742	J_Hyd-G042
G005	Glencoe	222.3	396	100.0	81.1	263	140	140	140	153	J-742	J_Hyd-G005
G006	Glencoe	222.5	395	100.0	92.6	263	140	140	140	153	J-742	G098
G013	Glencoe	221.0	410	100.0	110.2	263	140	140	147	140	J-742	G015
G085	Glencoe	221.1	409	100.0	127.1	263	140	140	143	140	J-742	J-0581
G063	Glencoe	220.8	410	100.0	76.4	263	140	140	140	147	J-742	J-0627
G058	Glencoe	221.2	407	100.0	68.5	263	140	140	140	147	J-742	J-0627
G015	Glencoe	221.8	403	100.0	77.2	263	140	140	140	147	J-742	J-0586
G051	Glencoe	221.2	408	100.0	77.7	263	140	140	140	142	J-742	J_Hyd-G051
G008	Glencoe	220.7	412	100.0	101.9	263	140	140	140	148	J-742	J_Hyd-G008
G049	Glencoe	220.5	415	100.0	126.5	263	140	140	143	140	J-742	J-720
G096	Glencoe	221.3	406	100.0	83.4	263	140	140	140	144	J-742	J_Hyd-G096
G069	Glencoe	222.2	397	100.0	96.0	263	140	140	140	145	J-742	J-0165
G070	Glencoe	221.6	403	100.0	95.2	263	140	140	140	157	J-742	J_Hyd-G070
G071	Glencoe	220.7	412	100.0	99.7	263	140	140	140	143	J-742	J_Hyd-G071
G010	Glencoe	221.5	404	100.0	57.6	263	140	140	140	140	J-742	J-0054
G098	Glencoe	222.7	392	100.0	63.2	263	140	140	140	143	J-742	J_Hyd-G098
G095	Glencoe	221.9	400	100.0	52.1	263	140	140	140	141	J-742	J_Hyd-G095
G054	Glencoe	221.0	410	100.0	109.9	263	140	140	140	151	J-742	WVG032
G080	Glencoe	221.9	401	100.0	128.8	263	140	140	140	145	J-742	J_Hyd-G080
G094	Glencoe	220.3	417	100.0	36.1	263	140	140	141	140	J-742	J-0584
G019	Glencoe	220.6	414	100.0	35.0	263	140	140	140	143	J-742	J_Hyd-G019
G065	Glencoe	219.6	426	100.0	150.9	263	140	140	140	144	J-742	J_Hyd-G004
G066	Glencoe	220.2	419	100.0	136.0	263	140	140	140	155	J-742	J_Hyd-G066
G023	Glencoe	220.1	420	100.0	110.2	263	140	140	140	149	J-742	J_Hyd-G023
G012	Glencoe	220.2	419	100.0	141.8	263	140	140	140	141	J-742	G015
G028	Glencoe	221.4	406	100.0	57.8	263	140	140	140	145	J-742	J-0437
G020	Glencoe	221.3	407	100.0	103.0	263	140	140	140	151	J-742	J_Hyd-G020
G018	Glencoe	220.4	416	100.0	37.5	263	140	140	140	141	J-742	J_Hyd-G018
G097	Glencoe	221.6	404	100.0	91.8	263	140	140	140	145	J-742	J_Hyd-G097
G044	Glencoe	220.9	411	100.0	121.9	263	140	140	140	143	J-742	J-0602
G045	Glencoe	221.7	403	100.0	126.1	263	140	140	140	154	J-742	G098
G003	Glencoe	221.5	406	100.0	56.8	263	140	140	140	143	J-742	J_Hyd-G003
G083	Glencoe	220.5	428	100.0	429.8	264	140	140	140	282	J-742	G098
G084	Glencoe	218.5	447	100.0	100.8	264	140	140	140	378	J-742	J_Hyd-G098
G046	Glencoe	221.5	405	100.0	134.3	263	140	140	140	149	J-742	G098
G086	Glencoe	221.5	404	100.0	67.8	263	140	140	140	140	J-742	J_Hyd-G086
G087	Glencoe	222.1	398	100.0	99.6	263	140	140	140	157	J-742	J_Hyd-G087
G082	Glencoe	222.5	394	100.0	93.7	263	140	140	140	162	J-742	J_Hyd-G082
G092	Glencoe	221.3	407	100.0	107.3	263	140	140	140	152	J-742	J-0554
H_T-718	Glencoe	219.7	428	100.0	187.8	263	140	140	140	160	J-742	J_Hyd-H_T-718
G055	Glencoe	220.9	411	100.0	126.9	263	140	140	140	144	J-742	WVG041
G027	Glencoe	221.4	405	100.0	119.6	263	140	140	140	151	J-742	J_Hyd-G027
G053	Glencoe	220.8	412	100.0	115.6	263	140	140	140	147	J-742	J_Hyd-G053
G088	Glencoe	219.2	428	100.0	54.7	263	140	140	140	140	J-742	WVG150
G068	Glencoe	218.8	432	100.0	74.7	263	140	140	140	143	J-742	J_Hyd-G068
G029	Glencoe	220.0	420	100.0	54.4	263	140	140	140	142	J-742	J_Hyd-G029
G062	Glencoe	220.5	426	100.0	68.9	264	140	140	140	163	J-742	J_Hyd-G062
G081	Glencoe	218.8	434	100.0	163.4	263	140	140	140	161	J-742	J_Hyd-G098
G078	Glencoe	219.4	436	100.0	326.6	264	140	140	140	196	J-742	J_Hyd-G098
G052	Glencoe	220.7	413	100.0	104.1	263	140	140	140	144	J-742	J_Hyd-G052
G093	Glencoe	220.5	416	100.0	51.4	263	140	140	140	143	J-742	J_Hyd-G093
G061	Glencoe	219.2	430	100.0	162.7	263	140	140	140	152	J-742	G004
G060	Glencoe	219.3	429	100.0	148.5	263	140	140	140	152	J-742	J_Hyd-G060
G059	Glencoe	219.8	423	100.0	109.9	263	140	140	140	149	J-742	J_Hyd-G059
G014	Glencoe	221.2	409	100.0	91.3	263	140	140	142	140	J-742	G015
G048	Glencoe	220.3	417	100.0	130.7	263	140	140	140	160	J-742	J-720
G011	Glencoe	219.9	421	100.0	144.9	263	140	140	140	157	J-742	J_Hyd-G011
G064	Glencoe	219.5	426	100.0	142.5	263	140	140	140	164	J-742	J_Hyd-G064
G043	Glencoe	220.6	413	100.0	112.6	263	140	140	146	140	J-742	J-0602
G067	Glencoe	219.2	429	100.0	158.4	263	140	140	145	140	J-742	G098
G002	Glencoe	219.7	425	100.0	109.6	263	140	140	140	148	J-742	J-0590
G001	Glencoe	220.6	415	100.0	39.1	263	140	140	140	140	J-742	J-0584
G050	Glencoe	221.1	409	100.0	100.3	263	140	140	140	141	J-742	J-720
G056	Glencoe	221.0	409	100.0	73.3	263	140	140	140	145	J-742	J_Hyd-G056
G073	Glencoe	220.7	413	100.0	99.7	263	140	140	140	145	J-742	J_Hyd-G073
G072	Glencoe	221.4	405	100.0	58.0	263	140	140	140	186	J-742	WVG022
G075	Glencoe	221.4	406	100.0	104.7	263	140	140	140	178	J-742	J_Hyd-G075
G057	Glencoe	220.9	411	100.0	117.6	263	140	140	140	148	J-742	J_Hyd-G057
G009	Glencoe	221.5	404	100.0	93.3	263	140	140	140.0	150	J-742	J_Hyd-G009
G077	Glencoe	221.4	406	100.0	91.0	263	140	140	140.0	147	J-742	J_Hyd-G077
G021	Glencoe	221.0	409	100.0	109.5	263	140	140	140.0	153	J-742	J_Hyd-G021
G076	Glencoe	221.9	401	100.0	132.0	263	140	140	140.0	150	J-742	G098
G091	Glencoe	218.5	435	100.0	34.0	263	140	140	140.0	142	J-742	J_Hyd-G091
G090	Glencoe	218.8	432	100.0	37.8	263	140	140	140.0	142	J-742	J_Hyd-G090
G047	Glencoe	221.2	408	100.0	122.5	263	140	140	140.0	172	J-742	J_Hyd-G047
G089	Glencoe	219.1	429	100.0	44.9	263	140	140	142.0	140	J-742	WVG150
G026	Glencoe	221.1	409	100.0	119.2	263	140	140	140.0	161	J-742	J_Hyd-G026
G025	Glencoe	221.5	405	100.0	120.1	263	140	140	140.0	147	J-742	J_Hyd-G025
G022	Glencoe	219.5	425	100.0	45.0	263	140	140	140.0	142	J-742	J_Hyd-G022
G024	Glencoe	221.8	403	100.0	122.2	263	140	140	140.0	148	J-742	J_Hyd-G024
G079	Glencoe	218.7	436	100.0	156.5	263	140	140	140.0	197	J-742	G098
G016	Glencoe	221.0	409	100.0	95.4	263	140	140	140.0	147	J-742	J_Hyd-G016
G074	Glencoe	220.6	413	100.0	107.8	263	140	140	140.0	171	J-742	J_Hyd-G074
G_H-1	Glencoe	220.5	414	100.0	84.2	263	140	140	140.0	143	J-742	J-753
G_H-2	Glencoe	221.4	406	100.0	95.6	263	140	140	140.0	144	J-742	J-762
G_H-3	Glencoe	219.7	422	100.0	115.3	263	140	140	156.0	140	J-742	J-762
G_H-4	Glencoe	219.9	421	100.0	124.1	263	140	140	149.0	140	J-742	WVG027
G_H-5	Glencoe	220.1	420	100.0	133.8	263	140	140	150.0	140	J-742	J-0126
G_H-6	Glencoe	218.5	435	100.0	146.8	263	140	140	160.0	140	J-742	J-0126
G_H-7	Glencoe	218.1	439	100.0	156.1	263	140	140	140.0	144	J-742	J-0126
G_H-8	Glencoe	217.7	444	100.0	168.8	263	140	140	164.0	140	J-742	G098
G_H-9	Glencoe	217.4	448	100.0	174.3	263	140	140	146.0	140	J-742	G098
G_H-10	Glencoe	217.9	445	100.0	163.5	263	140	140	140.0	161	J-742	J-826
G_H-11	Glencoe	219.6	429	100.0	154.6	263	140	140	140.0	149	J-742	J-0267
M018	Melborne	221.8	291	100.0	77.5	252	140	140	140.0	142	J-742	J_Hyd-M018
M017	Melborne	222.3	287	100.0	56.9	252	140	140	140.0	144	J-742	WVM032
M002	Melborne	219.0	322	100.0	45.7	252	140	140	140.0	143	J-742	J_Hyd-M002
M019	Melborne	221.4	295	100.0	103.2	252	140	140	140.0	153	J-742	J_Hyd-M019
M009	Melborne	222.9	280	100.0	63.9	252	140	140	140.0	146	J-742	J_Hyd-M009
M023	Melborne	220.3	305	100.0	40.9	252	140	140	140.0	143	J-742	J_Hyd-M023
M020	Melborne	220.7	302	100.0	111.9	252	140	140	140.0	155	J-742	J_Hyd-M020
M007	Melborne	221.8	291	100.0	89.5	252	140	140	140.0	148	J-742	J_Hyd-M007
M010	Melborne	221.9	290	100.0	61.7	252	140	140	140.0	147	J-742	J_Hyd-M010
M006	Melborne	222.3	286	100.0	147.7	252	140	140	140.0	148	J-742	M013
M005	Melborne	221.4	294	100.0	173.5	252	140	140	140.0	178	J-742	J_Hyd-M005
M004	Melborne	221.2	297	100.0	108.2	252	140	140	140.0	186	J-742	J_Hyd-M004
M014	Melborne	222.2	287	100.0	75.3	252	140	140	140.0	144	J-742	J_Hyd-M014
M022	Melborne	220.2	307	100.0	69.3	252	140	140	140.0	142	J-742	J-0407
M021	Melborne	222.0	289	100.0	79.7	252	140	140	140.0	147	J-742	J_Hyd-M021

2021 MDD+FF												
Label	Zone	Elevation (m)	Pressure (kPa)	Fire Flow (Needed) (L/s)	Fire Flow (Available) (L/s)	Hydraulic Grade (m)	Pressure (Residual Lower Limit) (kPa)	Pressure (Zone Lower Limit) (kPa)	Pressure (Calculated Residual) (kPa)	Pressure (Calculated Zone Lower Limit) (kPa)	Junction w/ Minimum Pressure (System)	Junction w/ Minimum Pressure (Zone)
M011	Melborne	223.2	277	100.0	62.1	252	140	140	140.0	142	J-742	J_Hyd-M011
M013	Melborne	223.6	274	100.0	42.7	252	140	140	140.0	141	J-742	J_Hyd-M013
M016	Melborne	222.7	283	100.0	74.9	252	140	140	140.0	144	J-742	J_Hyd-M016
M008	Melborne	222.5	284	100.0	46.0	252	140	140	140.0	141	J-742	J_Hyd-M008
M003	Melborne	219.6	314	100.0	57.3	252	140	140	140.0	142	J-742	J_Hyd-M003
M012	Melborne	221.5	293	100.0	84.6	252	140	140	140.0	149	J-742	J_Hyd-M012
M015	Melborne	223.3	276	100.0	77.5	252	140	140	140.0	146	J-742	J_Hyd-M015
W039	Wardsville	205.9	435	100.0	76.3	250	140	140	152.0	140	J-742	WVW048
W042	Wardsville	195.7	535	100.0	76.3	250	140	140	168.0	140	J-742	WVW048
W027	Wardsville	198.5	508	100.0	76.3	250	140	140	163.0	140	J-742	WVW048
W026	Wardsville	199.9	495	100.0	76.3	250	140	140	180.0	140	J-742	WVW048
W028	Wardsville	194.6	547	100.0	76.3	250	140	140	214.0	140	J-742	WVW048
W029	Wardsville	200.8	486	100.0	76.3	250	140	140	191.0	140	J-742	WVW048
W037	Wardsville	208.1	414	100.0	53.4	250	140	140	140.0	140	J-742	J_Hyd-W037
W036	Wardsville	210.8	387	100.0	59.6	250	140	140	140.0	146	J-742	J_Hyd-W036
W035	Wardsville	211.5	381	100.0	62.6	250	140	140	140.0	147	J-742	J_Hyd-W035
W033	Wardsville	211.1	385	100.0	73.7	250	140	140	140.0	159	J-742	J_Hyd-W022
W044	Wardsville	212.2	374	100.0	75.7	250	140	140	140.0	152	J-742	J_Hyd-W044
W038	Wardsville	207.2	423	100.0	68.3	250	140	140	140.0	143	J-742	J_Hyd-W038
W031	Wardsville	210.4	391	100.0	76.3	250	140	140	144.0	140	J-742	J_Hyd-W022
W032	Wardsville	211.4	382	100.0	75.4	250	140	140	140.0	147	J-742	J_Hyd-W022
W012	Wardsville	209.0	405	100.0	61.1	250	140	140	145.0	140	J-742	J_Hyd-W012
W013	Wardsville	200.0	494	100.0	69.9	250	140	140	149.0	140	J-742	J_Hyd-W012
W015	Wardsville	201.1	483	100.0	74.3	250	140	140	156.0	140	J-742	J_Hyd-W012
W016	Wardsville	199.3	500	100.0	76.1	250	140	140	145.0	140	J-742	WVW002
W025	Wardsville	208.9	407	100.0	70.5	250	140	140	140.0	152	J-742	J_Hyd-W025
W020	Wardsville	211.1	385	100.0	40.1	250	140	140	140.0	144	J-742	WVW055
W019	Wardsville	210.8	388	100.0	50.3	250	140	140	141.0	140	J-742	WVW055
W034	Wardsville	211.8	379	100.0	66.0	250	140	140	140.0	149	J-742	J_Hyd-W034
W022	Wardsville	212.1	376	100.0	66.4	250	140	140	140.0	144	J-742	J_Hyd-W022
W023	Wardsville	211.8	378	100.0	67.8	250	140	140	140.0	149	J-742	J_Hyd-W023
W002	Wardsville	200.2	491	100.0	76.3	250	140	140	184.0	140	J-742	WVW048
W001	Wardsville	199.6	497	100.0	76.3	250	140	140	146.0	140	J-742	WVW048
W046	Wardsville	208.5	411	100.0	66.1	250	140	140	147.0	140	J-742	J-0553
W021	Wardsville	212.0	376	100.0	49.0	250	140	140	140.0	143	J-742	J-0217
W005	Wardsville	200.3	490	100.0	76.4	250	140	140	229.0	140	J-742	WVW048
W009	Wardsville	207.1	424	100.0	72.6	250	140	140	166.0	140	J-742	WVW002
W018	Wardsville	208.0	416	100.0	69.1	250	140	140	141.0	140	J-742	WVW055
W024	Wardsville	210.2	394	100.0	67.3	250	140	140	140.0	150	J-742	J_Hyd-W024
W004	Wardsville	200.3	491	100.0	76.3	250	140	140	238.0	140	J-742	WVW048
W040	Wardsville	198.9	504	100.0	76.3	250	140	140	184.0	140	J-742	WVW048
W041	Wardsville	197.7	516	100.0	76.3	250	140	140	182.0	140	J-742	WVW048
W043	Wardsville	198.5	508	100.0	76.3	250	140	140	163.0	140	J-742	WVW048
W030	Wardsville	198.8	505	100.0	76.3	250	140	140	233.0	140	J-742	WVW048
W014	Wardsville	204.0	455	100.0	64.5	250	140	140	140.0	143	J-742	J_Hyd-W014
W017	Wardsville	204.9	446	100.0	72.9	250	140	140	140.0	151	J-742	WVW048
W047	Wardsville	207.1	425	100.0	69.0	250	140	140	140.0	150	J-742	J_Hyd-W045
W045	Wardsville	209.9	397	100.0	65.9	250	140	140	140.0	152	J-742	J_Hyd-W045
W006	Wardsville	200.0	494	100.0	76.9	250	140	140	231.0	140	J-742	WVW048
W007	Wardsville	202.9	466	100.0	76.2	250	140	140	202.0	140	J-742	WVW002
W008	Wardsville	206.2	433	100.0	74.4	250	140	140	174.0	140	J-742	WVW002
W010	Wardsville	211.1	385	100.0	70.5	250	140	140	140.0	142	J-742	J-0438
W011	Wardsville	211.6	380	100.0	66.6	250	140	140	140.0	157	J-742	J-0439
W003	Wardsville	200.1	493	100.0	76.3	250	140	140	223.0	140	J-742	WVW048
A001	Appin	224.8	290	100.0	21.8	254	140	140	140.0	141	J-742	J_Hyd-A001
A006	Appin	225.0	289	100.0	26.8	254	140	140	140.0	141	J-742	J_Hyd-A006
A003	Appin	225.1	286	100.0	22.2	254	140	140	140.0	140	J-742	J_Hyd-A003
A004	Appin	225.1	287	100.0	26.1	254	140	140	144.0	140	J-742	J-0010
A011	Appin	224.1	297	100.0	26.3	254	140	140	146.0	140	J-742	J-0246
A002	Appin	225.6	282	100.0	24.3	254	140	140	140.0	141	J-742	J_Hyd-A002
A010	Appin	223.8	299	100.0	26.4	254	140	140	156.0	140	J-742	J-0009
A007	Appin	224.8	291	100.0	27.4	255	140	140	147.0	140	J-742	J-0009
A009	Appin	223.5	303	100.0	26.7	254	140	140	160.0	140	J-742	J-0009
A005	Appin	224.4	294	100.0	26.7	254	140	140	147.0	140	J-742	J-0010
A008	Appin	223.8	300	100.0	26.9	254	140	140	157.0	140	J-742	J-0009
R019M	Rural	215.7	342	100.0	70.2	251	140	140	140.0	141	J-742	J_Hyd-R019M
R009E	Rural	215.4	368	100.0	35.6	253	140	140	141.0	140	J-742	J-0369
R006E	Rural	223.0	287	100.0	29.6	252	140	140	140.0	141	J-742	J_Hyd-R006E
R004E	Rural	227.9	253	100.0	20.0	254	140	140	140.0	141	J-742	J_Hyd-R004E
R002E	Rural	224.9	284	100.0	16.4	254	140	140	155.0	140	J-742	J_Hyd-R001E
R007E	Rural	226.0	274	100.0	21.1	254	140	140	140.0	141	J-742	J_Hyd-R007E
R030M	Rural	215.8	501	100.0	104.5	267	140	140	140.0	244	J-742	WVR043
R017M	Rural	215.4	346	100.0	109.7	251	140	140	140.0	165	J-742	J-0408
R018M	Rural	209.0	408	100.0	80.9	251	140	140	190.0	140	J-742	R019M
R020M	Rural	216.4	335	100.0	59.1	251	140	140	140.0	145	J-742	J_Hyd-R020M
R021M	Rural	215.0	348	100.0	58.3	251	140	140	140.0	140	J-742	WVR007
R010E	Rural	217.6	348	100.0	33.5	253	140	140	149.0	140	J-742	J-0536
R027W	Rural	207.0	654	100.0	121.4	274	140	140	143.0	140	J-742	J-0408
R029W	Rural	213.5	608	100.0	72.5	276	140	140	140.0	245	J-742	WVR043
R031M	Rural	215.8	533	100.0	115.6	270	140	140	158.0	140	J-742	J-0408
R016E	Rural	224.1	295	100.0	23.7	254	140	140	147.0	140	J-742	WVR053
R001E	Rural	225.7	276	100.0	13.4	254	140	140	148.0	140	J-742	J_Hyd-R001E
R003E	Rural	223.3	300	100.0	16.4	254	140	140	140.0	140	J-742	J_Hyd-R001E
R028E	Rural	222.9	303	100.0	15.1	254	140	140	140.0	141	J-742	J_Hyd-R028E
R013E	Rural	225.1	279	100.0	29.9	254	140	140	142.0	140	J-742	J-0582
R032M	Rural	218.6	314	100.0	27.1	251	140	140	145.0	141	J-742	J-0408
R011E	Rural	216.3	363	100.0	31.9	253	140	140	191.0	140	J-742	J-0582
R033E	Rural	217.3	472	100.0	40.4	265	140	140	141.0	145	J-742	J_Hyd-R033E
R012E	Rural	225.1	279	100.0	29.8	254	140	140	144.0	140	J-742	J-0582
R014E	Rural	225.2	284	100.0	28.4	254	140	140	146.0	140	J-742	J-0599
R015E	Rural	222.2	320	100.0	33.4	255	140	140	158.0	140	J-742	WVR053
R026E	Rural	224.4	290	100.0	22.2	254	140	140	146.0	140	J-742	J_Hyd-R007E
R005E	Rural	228.1	247	100.0	23.6	253	140	140	140.0	142	J-742	J_Hyd-R005E
R008E	Rural	225.4	275	100.0	23.6	254	140	140	140.0	141	J-742	J_Hyd-R008E
				Min	**13**							
				Max	**430**							

2041 MDD+FF												
Label	Zone	Elevation (m)	Pressure (kPa)	Fire Flow (Needed) (L/s)	Fire Flow (Available) (L/s)	Hydraulic Grade (m)	Pressure (Residual Lower Limit) (kPa)	Pressure (Zone Lower Limit) (kPa)	Pressure (Calculated Residual) (kPa)	Pressure (Calculated Zone Lower Limit) (kPa)	Junction w/ Minimum Pressure (System)	Junction w/ Minimum Pressure (Zone)
G004	Glencoe	221.2	401	100.0	58.3	262	140	140	140	141	J-742	J_Hyd-G004
G041	Glencoe	220.9	400	100.0	93.5	262	140	140	140	143	J-742	J_Hyd-G041
G042	Glencoe	220.4	404	100.0	98.9	262	140	140	140	145	J-742	J_Hyd-G042
G005	Glencoe	222.3	385	100.0	75.5	262	140	140	140	151	J-742	J_Hyd-G005
G006	Glencoe	222.5	384	100.0	85.5	262	140	140	140	151	J-742	G098
G013	Glencoe	221.0	402	100.0	103.5	262	140	140	147	140	J-742	G015
G085	Glencoe	221.1	399	100.0	116.8	262	140	140	144	140	J-742	J-0581
G063	Glencoe	220.8	400	100.0	71.5	262	140	140	140	145	J-742	J-0627
G058	Glencoe	221.2	396	100.0	64.4	262	140	140	140	146	J-742	J-0627
G015	Glencoe	221.8	394	100.0	73.4	262	140	140	140	147	J-742	J-0586
G051	Glencoe	221.2	399	100.0	73.6	262	140	140	140	141	J-742	J_Hyd-G051
G008	Glencoe	220.7	402	100.0	94.3	262	140	140	140	147	J-742	J_Hyd-G008
G049	Glencoe	220.5	405	100.0	117.0	262	140	140	144	140	J-742	J-720
G096	Glencoe	221.3	396	100.0	77.8	262	140	140	140	143	J-742	J_Hyd-G096
G069	Glencoe	222.2	387	100.0	88.4	262	140	140	140	144	J-742	J-0165
G070	Glencoe	221.6	392	100.0	87.9	262	140	140	140	154	J-742	J-0364
G071	Glencoe	220.7	402	100.0	92.1	262	140	140	140	143	J-742	J_Hyd-G071
G010	Glencoe	221.5	394	100.0	54.4	262	140	140	141	140	J-742	J-0054
G098	Glencoe	222.7	382	100.0	59.4	262	140	140	140	143	J-742	J_Hyd-G098
G095	Glencoe	221.9	390	100.0	49.4	262	140	140	140	141	J-742	J_Hyd-G095
G054	Glencoe	221.0	400	100.0	102.6	262	140	140	140	149	J-742	WVG032
G080	Glencoe	221.9	391	100.0	118.1	262	140	140	140	145	J-742	J_Hyd-G080
G094	Glencoe	220.3	407	100.0	34.1	262	140	140	141	140	J-742	J-0584
G019	Glencoe	220.6	404	100.0	33.4	262	140	140	140	143	J-742	J_Hyd-G019
G065	Glencoe	219.6	417	100.0	140.8	262	140	140	140	142	J-742	J_Hyd-G004
G066	Glencoe	220.2	410	100.0	127.3	262	140	140	140	153	J-742	J_Hyd-G066
G023	Glencoe	220.1	412	100.0	103.9	262	140	140	140	148	J-742	J_Hyd-G023
G012	Glencoe	220.2	410	100.0	131.9	262	140	140	141	140	J-742	G015
G028	Glencoe	221.4	396	100.0	55.0	262	140	140	140	144	J-742	J-0437
G020	Glencoe	221.3	396	100.0	95.5	262	140	140	140	150	J-742	J_Hyd-G020
G018	Glencoe	220.4	406	100.0	35.7	262	140	140	140	141	J-742	J_Hyd-G018
G097	Glencoe	221.6	394	100.0	86.0	262	140	140	140	144	J-742	J_Hyd-G097
G044	Glencoe	220.9	401	100.0	112.0	262	140	140	140	140	J-742	J-0602
G045	Glencoe	221.7	393	100.0	115.9	262	140	140	140	149	J-742	J_Hyd-G098
G003	Glencoe	221.5	397	100.0	54.6	262	140	140	140	142	J-742	J_Hyd-G003
G083	Glencoe	220.5	426	100.0	420.6	264	140	140	140	266	J-742	G098
G084	Glencoe	218.5	445	100.0	99.7	264	140	140	140	363	J-742	G098
G046	Glencoe	221.5	395	100.0	123.4	262	140	140	140	144	J-742	G098
G086	Glencoe	221.5	395	100.0	64.3	262	140	140	140	140	J-742	J_Hyd-G086
G087	Glencoe	222.1	388	100.0	91.8	262	140	140	140	155	J-742	J_Hyd-G087
G082	Glencoe	222.5	384	100.0	86.6	262	140	140	140	160	J-742	J_Hyd-G082
G092	Glencoe	221.3	396	100.0	99.1	262	140	140	140	150	J-742	J-0554
H_T-718	Glencoe	219.7	421	100.0	177.1	263	140	140	140	158	J-742	J_Hyd-H_T-718
G055	Glencoe	220.9	401	100.0	117.5	262	140	140	140	144	J-742	WVG041
G027	Glencoe	221.4	396	100.0	110.4	262	140	140	140	150	J-742	J_Hyd-G027
G053	Glencoe	220.8	402	100.0	107.8	262	140	140	140	147	J-742	J_Hyd-G053
G088	Glencoe	219.2	419	100.0	51.9	262	140	140	141	140	J-742	WVG150
G068	Glencoe	218.8	423	100.0	71.0	262	140	140	140	142	J-742	J_Hyd-G068
G029	Glencoe	220.0	411	100.0	52.0	262	140	140	140	141	J-742	J_Hyd-G029
G062	Glencoe	220.5	423	100.0	68.1	264	140	140	140	163	J-742	J_Hyd-G062
G081	Glencoe	218.8	426	100.0	153.1	262	140	140	140	153	J-742	G098
G078	Glencoe	219.4	434	100.0	314.3	264	140	140	140	182	J-742	G098
G052	Glencoe	220.7	404	100.0	97.7	262	140	140	140	143	J-742	J_Hyd-G052
G093	Glencoe	220.5	407	100.0	49.6	262	140	140	140	143	J-742	J_Hyd-G093
G061	Glencoe	219.2	422	100.0	151.9	262	140	140	140	145	J-742	J_Hyd-G098
G060	Glencoe	219.3	420	100.0	139.0	262	140	140	140	150	J-742	J_Hyd-G060
G059	Glencoe	219.8	414	100.0	104.0	262	140	140	140	148	J-742	J_Hyd-G059
G014	Glencoe	221.2	400	100.0	86.4	262	140	140	143	140	J-742	G015
G048	Glencoe	220.3	407	100.0	121.2	262	140	140	140	156	J-742	J-720
G011	Glencoe	219.9	413	100.0	135.0	262	140	140	140	155	J-742	J_Hyd-G011
G064	Glencoe	219.5	418	100.0	133.7	262	140	140	140	161	J-742	J_Hyd-G064
G043	Glencoe	220.6	402	100.0	103.0	262	140	140	147	140	J-742	J-0602
G067	Glencoe	219.2	421	100.0	144.7	262	140	140	151	140	J-742	G098
G002	Glencoe	219.7	417	100.0	103.9	262	140	140	140	147	J-742	J-0590
G001	Glencoe	220.6	405	100.0	36.9	262	140	140	141	140	J-742	J-0584
G050	Glencoe	221.1	400	100.0	94.0	262	140	140	140	141	J-742	J-720
G056	Glencoe	221.0	399	100.0	69.4	262	140	140	140	145	J-742	J_Hyd-G056
G073	Glencoe	220.7	403	100.0	93.4	262	140	140	140	144	J-742	J_Hyd-G073
G072	Glencoe	221.4	396	100.0	55.3	262	140	140	140	183	J-742	WVG022
G075	Glencoe	221.4	396	100.0	97.6	262	140	140	140	174	J-742	J_Hyd-G075
G057	Glencoe	220.9	401	100.0	109.1	262	140	140	140	147	J-742	J_Hyd-G057
G009	Glencoe	221.5	393	100.0	86.5	262	140	140	140.0	149	J-742	J_Hyd-G009
G077	Glencoe	221.4	396	100.0	84.8	262	140	140	140.0	147	J-742	J_Hyd-G077
G021	Glencoe	221.0	399	100.0	101.4	262	140	140	140.0	151	J-742	J_Hyd-G021
G076	Glencoe	221.9	392	100.0	121.1	262	140	140	140.0	146	J-742	G098
G091	Glencoe	218.5	425	100.0	32.2	262	140	140	140.0	141	J-742	J_Hyd-G091
G090	Glencoe	218.8	422	100.0	35.8	262	140	140	140.0	142	J-742	J_Hyd-G090
G047	Glencoe	221.2	398	100.0	113.5	262	140	140	140.0	168	J-742	J_Hyd-G047
G089	Glencoe	219.1	420	100.0	42.6	262	140	140	142.0	140	J-742	WVG150
G026	Glencoe	221.1	399	100.0	110.1	262	140	140	140.0	158	J-742	J_Hyd-G026
G025	Glencoe	221.5	396	100.0	111.5	262	140	140	140.0	146	J-742	J_Hyd-G025
G022	Glencoe	219.5	416	100.0	42.7	262	140	140	140.0	141	J-742	J_Hyd-G022
G024	Glencoe	221.8	394	100.0	114.1	262	140	140	140.0	147	J-742	J_Hyd-G024
G079	Glencoe	218.7	429	100.0	147.8	263	140	140	140.0	184	J-742	G098
G016	Glencoe	221.0	399	100.0	89.4	262	140	140	140.0	146	J-742	J_Hyd-G016
G074	Glencoe	220.6	404	100.0	100.7	262	140	140	140.0	167	J-742	J_Hyd-G074
G_H-1	Glencoe	220.5	404	100.0	79.5	262	140	140	140.0	143	J-742	J-753
G_H-2	Glencoe	221.4	396	100.0	89.5	262	140	140	140.0	143	J-742	J-762
G_H-3	Glencoe	219.7	412	100.0	106.6	262	140	140	157.0	140	J-742	J-762
G_H-4	Glencoe	219.9	411	100.0	114.6	262	140	140	150.0	140	J-742	WVG027
G_H-5	Glencoe	220.1	411	100.0	124.4	262	140	140	151.0	140	J-742	J-0126
G_H-6	Glencoe	218.5	427	100.0	135.8	262	140	140	162.0	140	J-742	J-0126
G_H-7	Glencoe	218.1	431	100.0	145.3	262	140	140	142.0	140	J-742	J-0126
G_H-8	Glencoe	217.7	436	100.0	154.1	262	140	140	172.0	140	J-742	G098
G_H-9	Glencoe	217.4	440	100.0	158.8	262	140	140	159.0	140	J-742	J_Hyd-G098
G_H-10	Glencoe	217.9	438	100.0	154.9	263	140	140	140.0	159	J-742	J-826
G_H-11	Glencoe	219.6	423	100.0	146.9	263	140	140	140.0	147	J-742	J-0267
M018	Melborne	221.8	291	100.0	77.4	252	140	140	140.0	142	J-742	J_Hyd-M018
M017	Melborne	222.3	287	100.0	56.9	252	140	140	140.0	144	J-742	WVM032
M002	Melborne	219.0	321	100.0	45.6	252	140	140	140.0	143	J-742	J_Hyd-M002
M019	Melborne	221.4	295	100.0	103.0	252	140	140	140.0	153	J-742	J_Hyd-M019
M009	Melborne	222.9	280	100.0	63.8	252	140	140	140.0	146	J-742	J_Hyd-M009
M023	Melborne	220.3	305	100.0	40.5	252	140	140	140.0	143	J-742	J_Hyd-M023
M020	Melborne	220.7	302	100.0	111.7	252	140	140	140.0	155	J-742	J_Hyd-M020
M007	Melborne	221.8	291	100.0	89.4	252	140	140	140.0	148	J-742	J_Hyd-M007
M010	Melborne	221.9	290	100.0	61.6	252	140	140	140.0	147	J-742	J_Hyd-M010
M006	Melborne	222.3	286	100.0	147.5	252	140	140	140.0	148	J-742	J_Hyd-M013
M005	Melborne	221.4	294	100.0	173.2	252	140	140	140.0	178	J-742	J_Hyd-M005

2041 MDD+FF												
Label	Zone	Elevation (m)	Pressure (kPa)	Fire Flow (Needed) (L/s)	Fire Flow (Available) (L/s)	Hydraulic Grade (m)	Pressure (Residual Lower Limit) (kPa)	Pressure (Zone Lower Limit) (kPa)	Pressure (Calculated Residual) (kPa)	Pressure (Calculated Zone Lower Limit) (kPa)	Junction w/ Minimum Pressure (System)	Junction w/ Minimum Pressure (Zone)
M004	Melborne	221.2	297	100.0	108.0	252	140	140	140.0	186	J-742	J_Hyd-M004
M014	Melborne	222.2	287	100.0	75.2	252	140	140	140.0	143	J-742	J_Hyd-M014
M022	Melborne	220.2	307	100.0	68.9	252	140	140	140.0	141	J-742	J-0407
M021	Melborne	222.0	289	100.0	79.5	252	140	140	140.0	147	J-742	J_Hyd-M021
M011	Melborne	223.2	277	100.0	62.1	252	140	140	140.0	142	J-742	J_Hyd-M011
M013	Melborne	223.6	273	100.0	42.7	252	140	140	140.0	141	J-742	J_Hyd-M013
M016	Melborne	222.7	283	100.0	74.8	252	140	140	140.0	144	J-742	J_Hyd-M016
M008	Melborne	222.5	284	100.0	45.9	252	140	140	140.0	141	J-742	J_Hyd-M008
M003	Melborne	219.6	314	100.0	57.2	252	140	140	140.0	142	J-742	J_Hyd-M003
M012	Melborne	221.5	293	100.0	84.5	252	140	140	140.0	149	J-742	J_Hyd-M012
M015	Melborne	223.3	276	100.0	77.4	252	140	140	140.0	146	J-742	J_Hyd-M015
W039	Wardsville	205.9	435	100.0	76.2	250	140	140	152.0	140	J-742	WVW048
W042	Wardsville	195.7	535	100.0	76.2	250	140	140	168.0	140	J-742	WVW048
W027	Wardsville	198.5	508	100.0	76.2	250	140	140	163.0	140	J-742	WVW048
W026	Wardsville	199.9	495	100.0	76.2	250	140	140	181.0	140	J-742	WVW048
W028	Wardsville	194.6	546	100.0	76.2	250	140	140	214.0	140	J-742	WVW048
W029	Wardsville	200.8	486	100.0	76.2	250	140	140	191.0	140	J-742	WVW048
W037	Wardsville	208.1	414	100.0	53.3	250	140	140	140.0	140	J-742	J_Hyd-W037
W036	Wardsville	210.8	387	100.0	59.5	250	140	140	140.0	146	J-742	J_Hyd-W036
W035	Wardsville	211.5	381	100.0	62.5	250	140	140	140.0	147	J-742	J_Hyd-W035
W033	Wardsville	211.1	385	100.0	73.6	250	140	140	140.0	159	J-742	J_Hyd-W022
W044	Wardsville	212.2	374	100.0	75.6	250	140	140	140.0	152	J-742	J_Hyd-W044
W038	Wardsville	207.2	423	100.0	68.3	250	140	140	140.0	143	J-742	J_Hyd-W038
W031	Wardsville	210.4	391	100.0	76.2	250	140	140	144.0	140	J-742	J_Hyd-W022
W032	Wardsville	211.4	382	100.0	75.3	250	140	140	140.0	147	J-742	J_Hyd-W022
W012	Wardsville	209.0	405	100.0	61.0	250	140	140	145.0	140	J-742	J_Hyd-W012
W013	Wardsville	200.0	493	100.0	69.8	250	140	140	150.0	140	J-742	J_Hyd-W012
W015	Wardsville	201.1	483	100.0	74.2	250	140	140	157.0	140	J-742	J_Hyd-W012
W016	Wardsville	199.3	500	100.0	76.0	250	140	140	145.0	140	J-742	WVW002
W025	Wardsville	208.9	407	100.0	70.4	250	140	140	140.0	152	J-742	J_Hyd-W025
W020	Wardsville	211.1	385	100.0	40.1	250	140	140	140.0	144	J-742	WVW055
W019	Wardsville	210.8	388	100.0	50.2	250	140	140	141.0	140	J-742	WVW055
W034	Wardsville	211.8	378	100.0	65.9	250	140	140	140.0	149	J-742	J_Hyd-W034
W022	Wardsville	212.1	375	100.0	66.3	250	140	140	140.0	144	J-742	J_Hyd-W022
W023	Wardsville	211.8	378	100.0	67.7	250	140	140	140.0	149	J-742	J_Hyd-W023
W002	Wardsville	200.2	491	100.0	76.2	250	140	140	184.0	140	J-742	WVW048
W001	Wardsville	199.6	497	100.0	76.2	250	140	140	146.0	140	J-742	WVW048
W046	Wardsville	208.5	411	100.0	66.0	250	140	140	147.0	140	J-742	J-0553
W021	Wardsville	212.0	376	100.0	49.0	250	140	140	140.0	143	J-742	J-0217
W005	Wardsville	200.3	490	100.0	76.3	250	140	140	229.0	140	J-742	WVW048
W009	Wardsville	207.1	424	100.0	72.5	250	140	140	166.0	140	J-742	WVW002
W018	Wardsville	208.0	416	100.0	69.0	250	140	140	141.0	140	J-742	W020
W024	Wardsville	210.2	394	100.0	67.2	250	140	140	140.0	150	J-742	J_Hyd-W024
W004	Wardsville	200.3	491	100.0	76.2	250	140	140	238.0	140	J-742	WVW048
W040	Wardsville	198.9	504	100.0	76.2	250	140	140	184.0	140	J-742	WVW048
W041	Wardsville	197.7	515	100.0	76.2	250	140	140	183.0	140	J-742	WVW048
W043	Wardsville	198.5	508	100.0	76.2	250	140	140	164.0	140	J-742	WVW048
W030	Wardsville	198.8	505	100.0	76.2	250	140	140	233.0	140	J-742	WVW048
W014	Wardsville	204.0	455	100.0	64.4	250	140	140	140.0	143	J-742	J_Hyd-W014
W017	Wardsville	204.9	446	100.0	72.8	250	140	140	140.0	151	J-742	WVW048
W047	Wardsville	207.1	424	100.0	68.9	250	140	140	140.0	150	J-742	J_Hyd-W045
W045	Wardsville	209.9	397	100.0	65.9	250	140	140	140.0	152	J-742	J_Hyd-W045
W006	Wardsville	200.0	493	100.0	76.8	250	140	140	231.0	140	J-742	WVW048
W007	Wardsville	202.9	466	100.0	76.1	250	140	140	202.0	140	J-742	WVW002
W008	Wardsville	206.2	433	100.0	74.3	250	140	140	174.0	140	J-742	WVW002
W010	Wardsville	211.1	385	100.0	70.4	250	140	140	140.0	142	J-742	J-0438
W011	Wardsville	211.6	380	100.0	66.5	250	140	140	140.0	157	J-742	J-0439
W003	Wardsville	200.1	492	100.0	76.2	250	140	140	223.0	140	J-742	WVW048
A001	Appin	224.8	289	100.0	21.7	254	140	140	140.0	141	J-742	J_Hyd-A001
A006	Appin	225.0	288	100.0	26.7	254	140	140	140.0	141	J-742	J_Hyd-A006
A003	Appin	225.1	286	100.0	22.1	254	140	140	140.0	140	J-742	J_Hyd-A003
A004	Appin	225.1	286	100.0	26.0	254	140	140	144.0	140	J-742	J-0009
A011	Appin	224.1	296	100.0	26.2	254	140	140	146.0	140	J-742	J-0246
A002	Appin	225.6	281	100.0	24.2	254	140	140	140.0	141	J-742	J_Hyd-A002
A010	Appin	223.8	299	100.0	26.3	254	140	140	156.0	140	J-742	J-0009
A007	Appin	224.8	290	100.0	27.3	254	140	140	147.0	140	J-742	J-0009
A009	Appin	223.5	302	100.0	26.6	254	140	140	160.0	140	J-742	J-0009
A005	Appin	224.4	293	100.0	26.6	254	140	140	147.0	140	J-742	J-0009
A008	Appin	223.8	300	100.0	26.8	254	140	140	157.0	140	J-742	J-0009
R019M	Rural	215.7	342	100.0	70.2	251	140	140	140.0	141	J-742	J_Hyd-R019M
R009E	Rural	215.4	367	100.0	35.6	253	140	140	141.0	140	J-742	J-0369
R006E	Rural	223.0	287	100.0	29.5	252	140	140	140.0	141	J-742	J_Hyd-R006E
R004E	Rural	227.9	252	100.0	19.9	254	140	140	140.0	141	J-742	J_Hyd-R004E
R002E	Rural	224.9	283	100.0	16.4	254	140	140	155.0	140	J-742	J_Hyd-R001E
R007E	Rural	226.0	273	100.0	21.1	254	140	140	140.0	141	J-742	J_Hyd-R007E
R030M	Rural	215.8	499	100.0	103.3	267	140	140	140.0	243	J-742	WVR043
R017M	Rural	215.4	346	100.0	108.6	251	140	140	140.0	164	J-742	J-0408
R018M	Rural	209.0	408	100.0	80.9	251	140	140	190.0	140	J-742	R019M
R020M	Rural	216.4	335	100.0	59.1	251	140	140	140.0	145	J-742	J_Hyd-R020M
R021M	Rural	215.0	348	100.0	58.2	251	140	140	140.0	140	J-742	WVR007
R010E	Rural	217.6	347	100.0	33.5	253	140	140	149.0	140	J-742	J-0536
R027W	Rural	207.0	652	100.0	120.0	274	140	140	147.0	140	J-742	J-0408
R029W	Rural	213.5	606	100.0	72.0	275	140	140	140.0	244	J-742	WVR043
R031M	Rural	215.8	531	100.0	114.3	270	140	140	158.0	140	J-742	J-0408
R016E	Rural	224.1	294	100.0	23.7	254	140	140	147.0	140	J-742	WVR053
R001E	Rural	225.7	275	100.0	13.4	254	140	140	148.0	140	J-742	J_Hyd-R001E
R003E	Rural	223.3	299	100.0	16.3	254	140	140	141.0	140	J-742	J_Hyd-R001E
R028E	Rural	222.9	303	100.0	15.0	254	140	140	140.0	141	J-742	J_Hyd-R028E
R013E	Rural	225.1	279	100.0	29.8	254	140	140	142.0	140	J-742	J-0582
R032M	Rural	218.6	314	100.0	27.1	251	140	140	145.0	141	J-742	J-0408
R011E	Rural	216.3	362	100.0	31.8	253	140	140	191.0	140	J-742	J-0582
R033E	Rural	217.3	469	100.0	40.1	265	140	140	141.0	145	J-742	J_Hyd-R033E
R012E	Rural	225.1	279	100.0	29.7	254	140	140	144.0	140	J-742	J-0582
R014E	Rural	225.2	283	100.0	28.3	254	140	140	147.0	140	J-742	J-0599
R015E	Rural	222.2	320	100.0	33.3	255	140	140	158.0	140	J-742	WVR053
R026E	Rural	224.4	289	100.0	22.2	254	140	140	146.0	140	J-742	J_Hyd-R007E
R005E	Rural	228.1	247	100.0	23.6	253	140	140	140.0	142	J-742	J_Hyd-R005E
R008E	Rural	225.4	275	100.0	23.5	253	140	140	140.0	141	J-742	J_Hyd-R008E
				Min	**13**							
				Max	**421**							

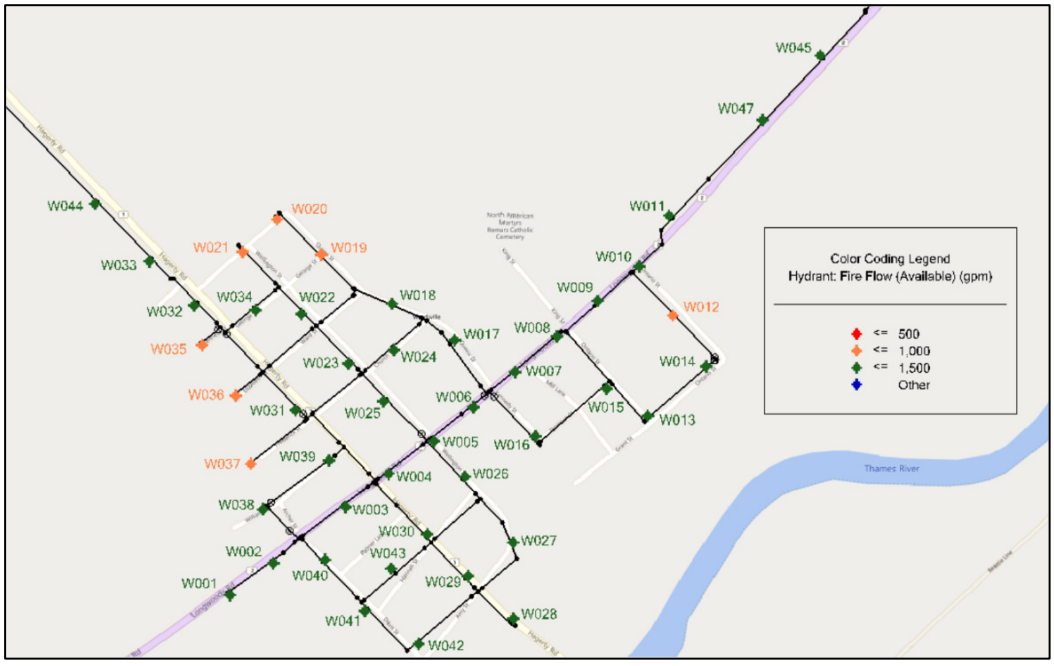


Figure C1 – Wardsville, 2021 MDD+FF

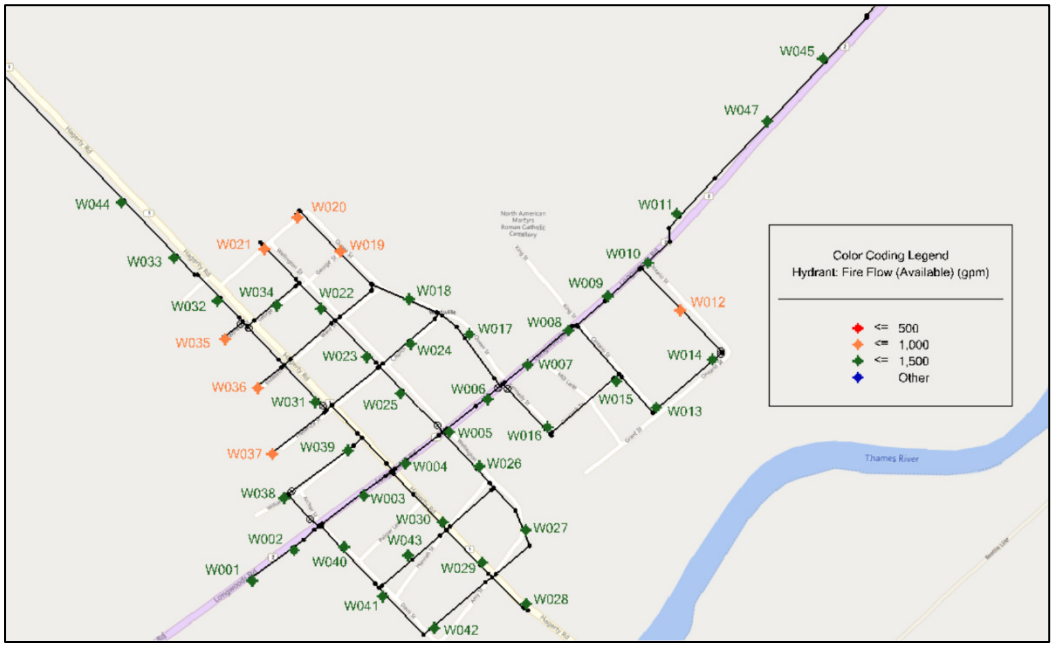


Figure C2 – Wardsville, 2041 MDD+FF

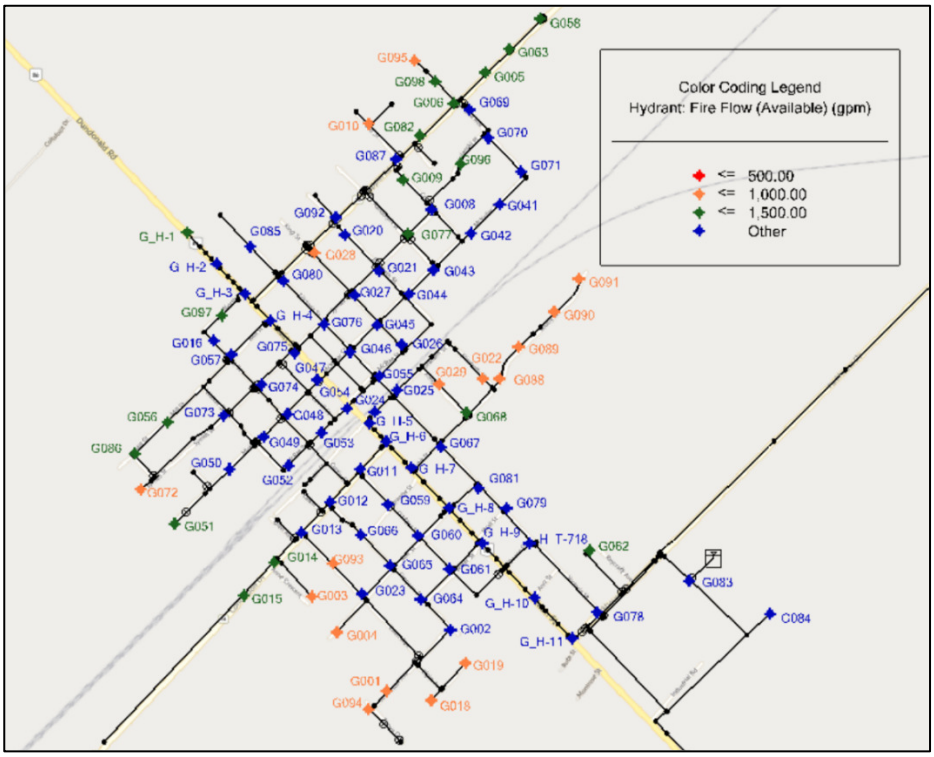


Figure C3 – Glencoe, 2021 MDD+FF

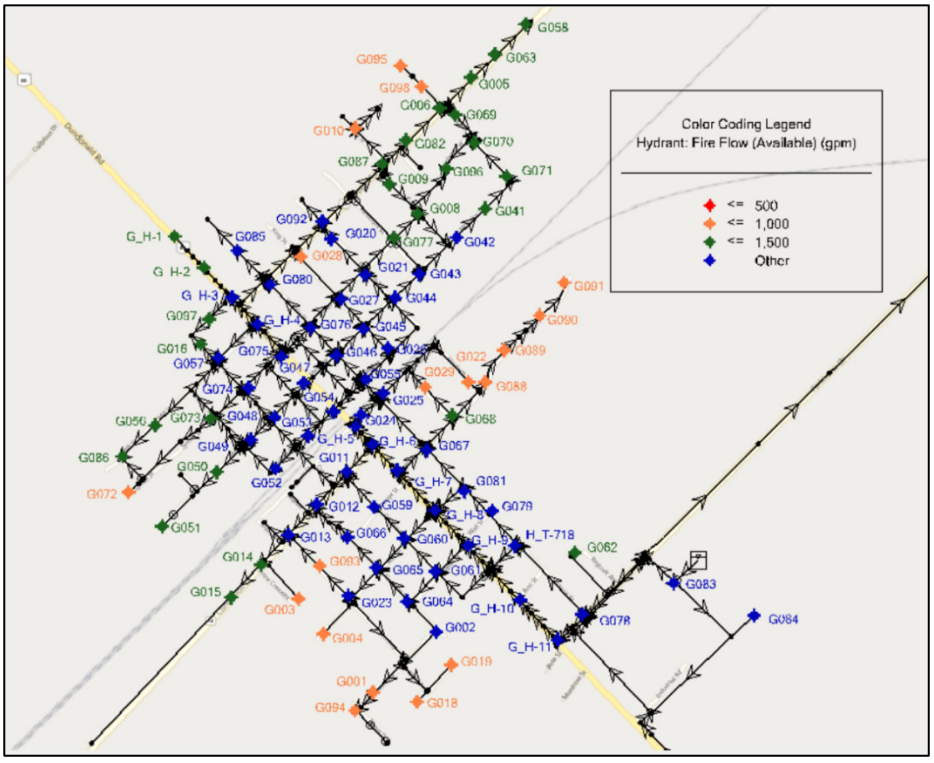


Figure C4 – Glencoe, 2041 MDD+FF

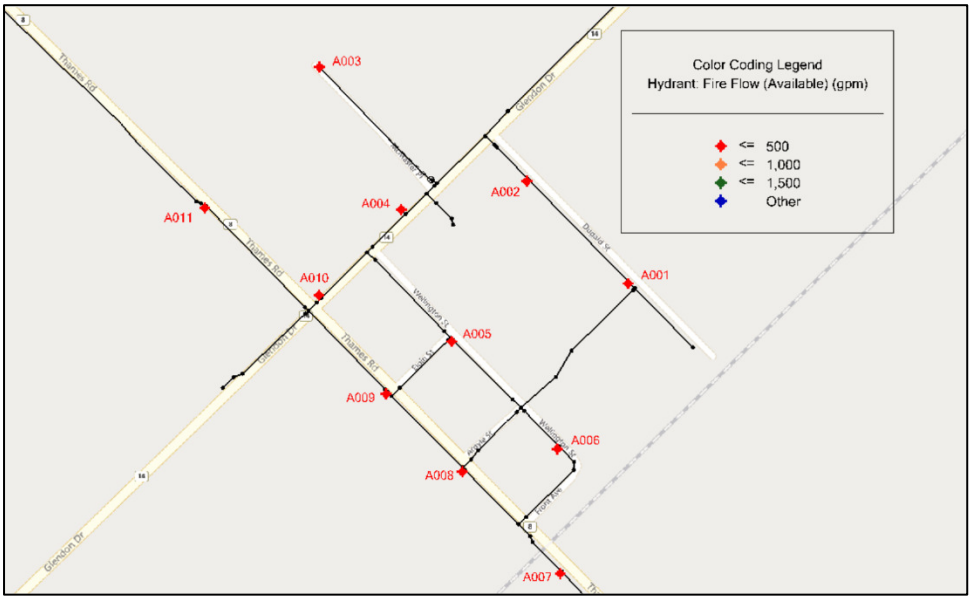


Figure C5 – Appin, 2021 MDD+FF

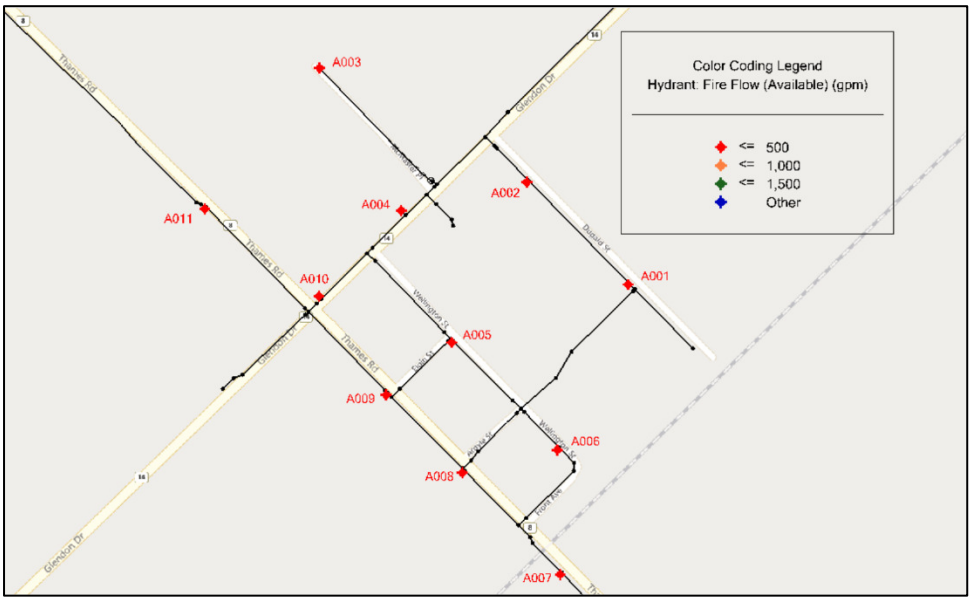


Figure C6 – Appin, 2041 MDD+FF

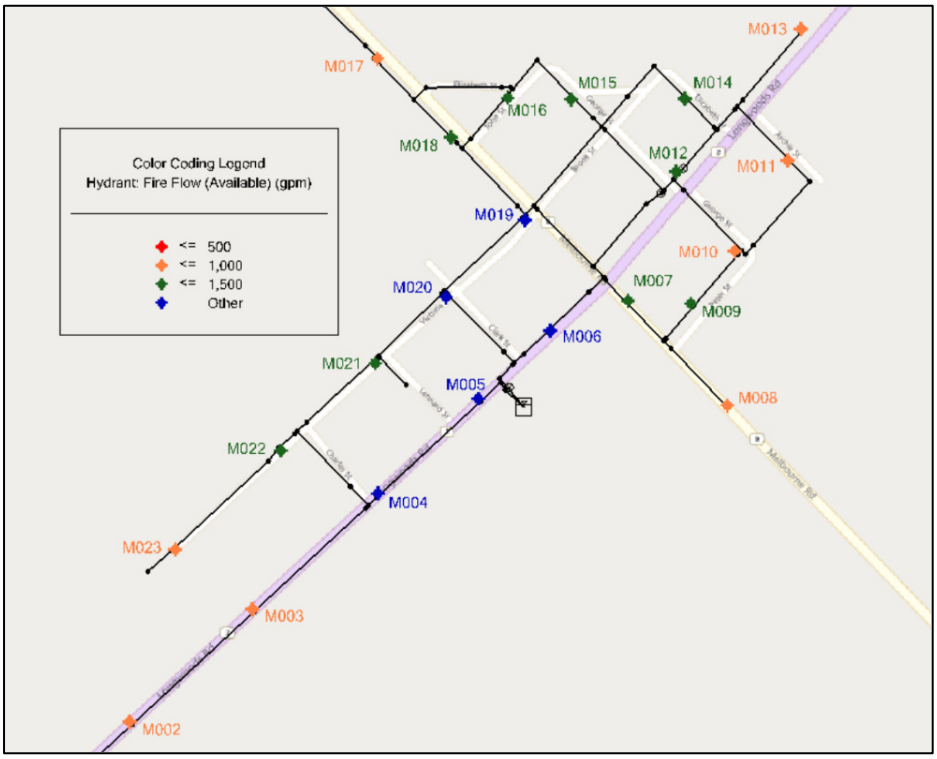


Figure C7 – Melbourne, 2021 MDD+FF

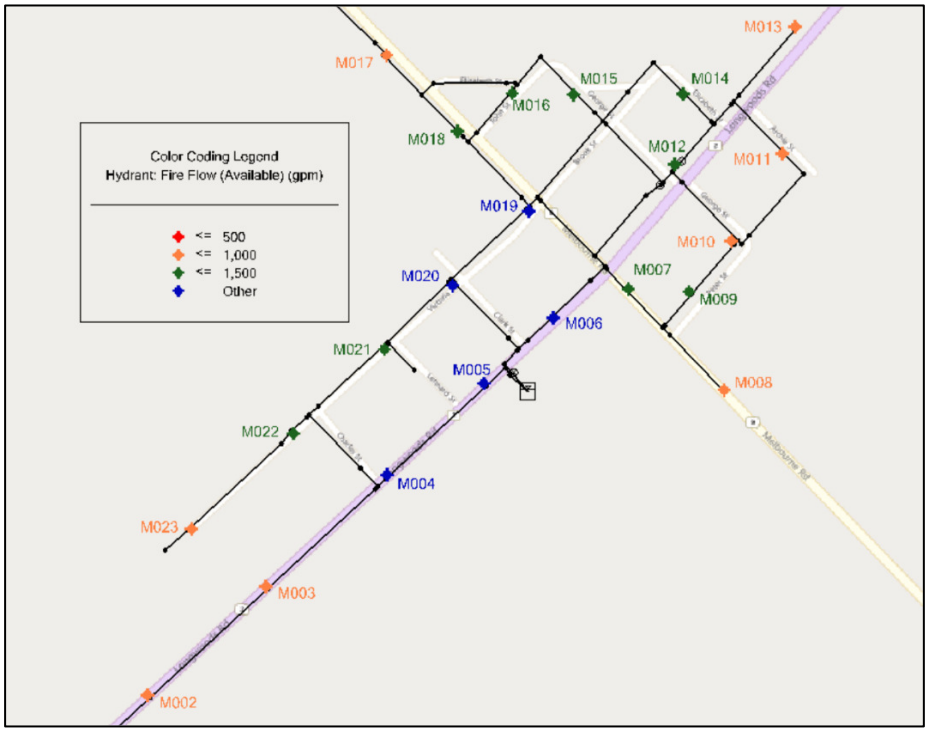


Figure C8 – Melbourne, 2041 MDD+FF

APPENDIX

D

MODEL CALIBRATION

Table D1: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G062

G062				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	400	317	58	108
Model Curve	396	201	57	69

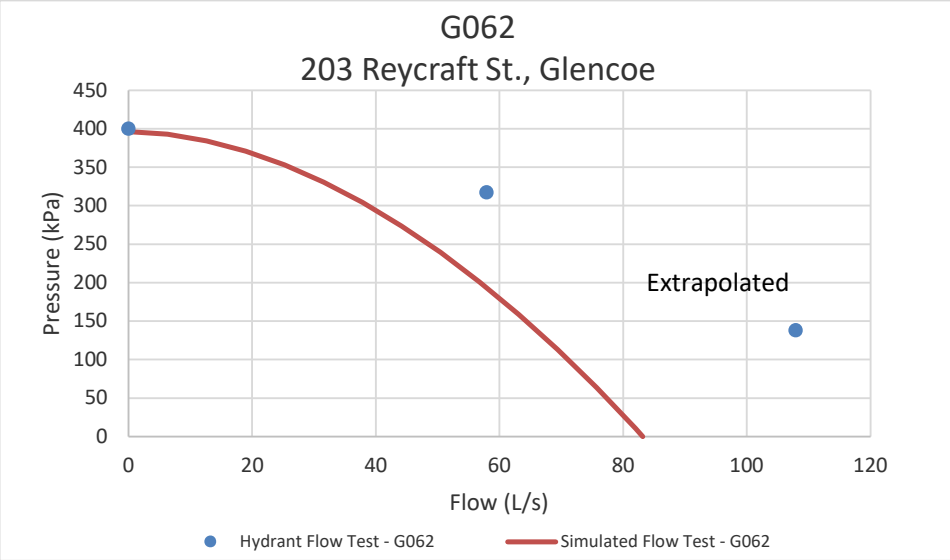


Figure D1: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G062

Table D2: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G005

G005				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	400	317	54	100
Model Curve	400	306	50	88

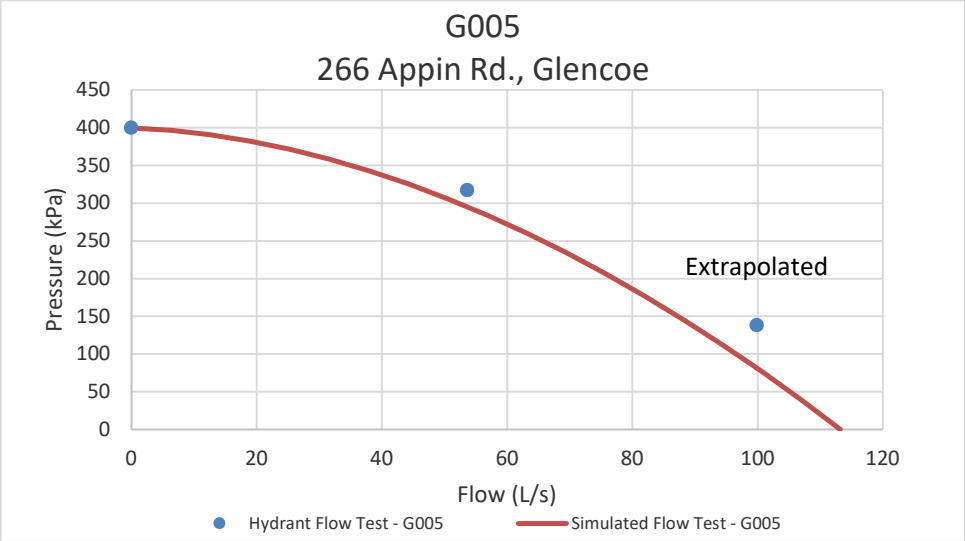


Figure D2: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G005

Table D3: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G097

G097				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	400	345	57	157
Model Curve	398	269	57	82

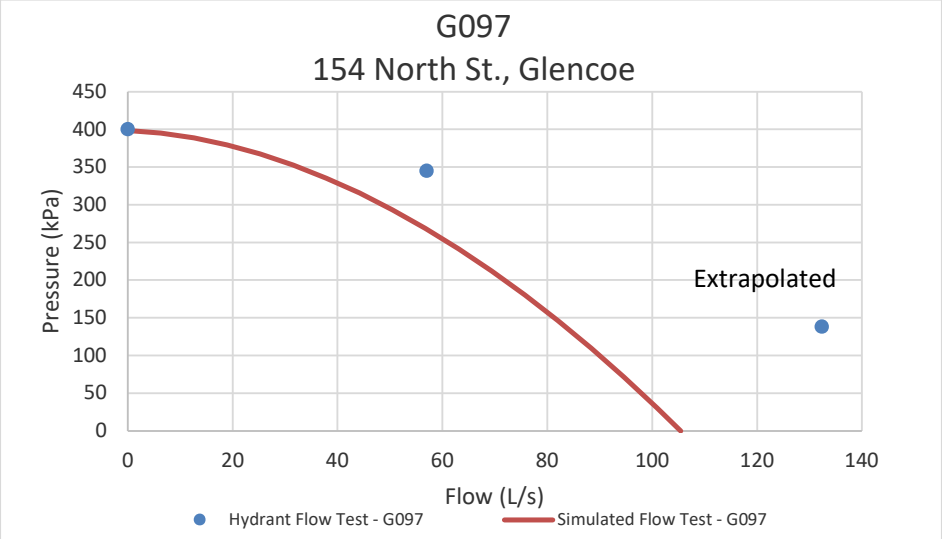


Figure D3: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G097

Table D4: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G015

G015				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	400	372	55	154
Model Curve	393	355	57	82

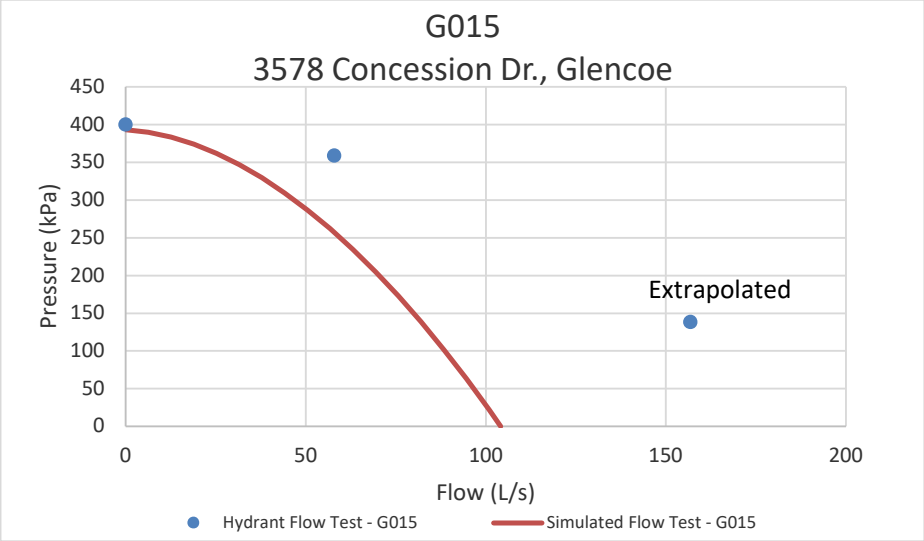


Figure D4: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G015

Table D5: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G036

G036				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	414	372	55	154
Model Curve	413	355	57	139

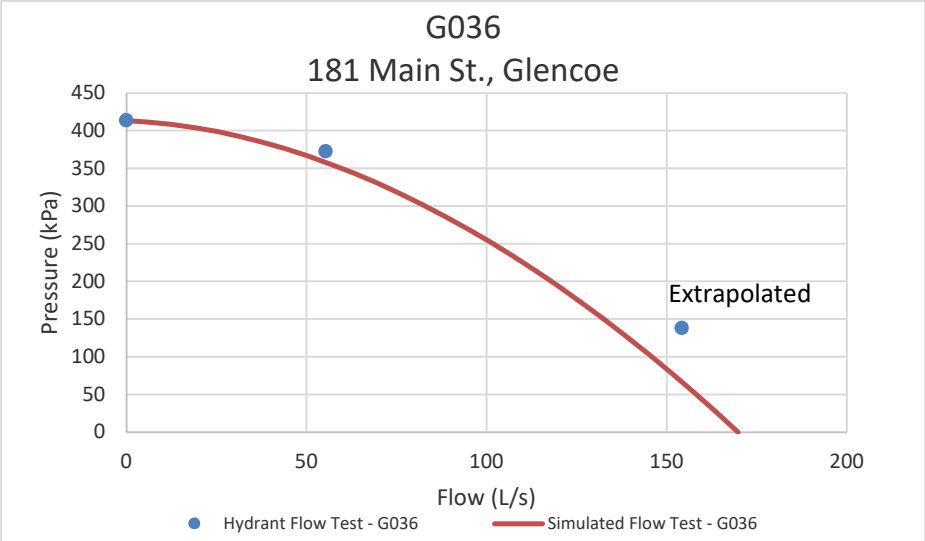


Figure D5: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant G036

Table D6: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant W029

W029				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	427	276	54	76
Model Curve	487	313	57	82

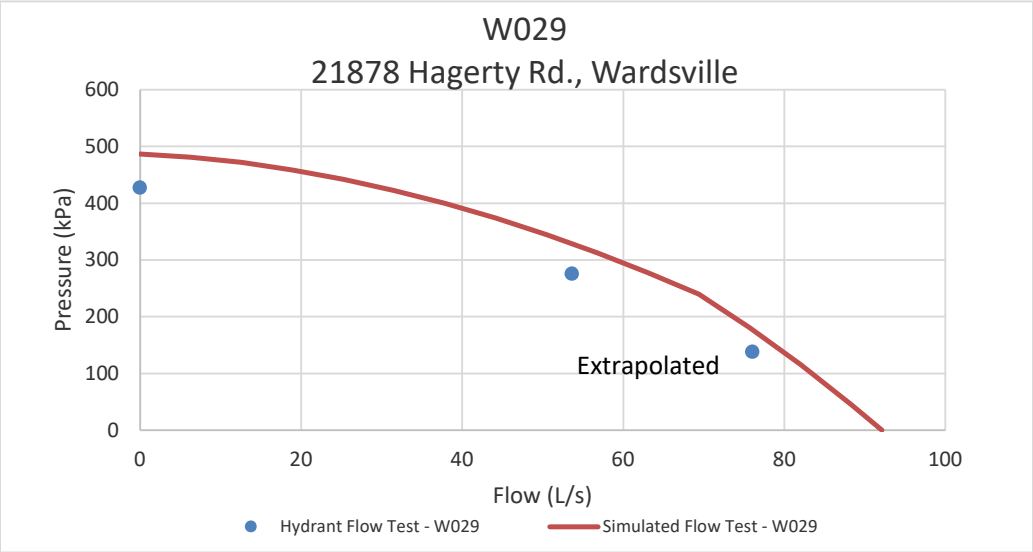


Figure D6: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant W029

Table D7: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant W047

W047				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	400	331	26	53
Model Curve	426	376	25	69

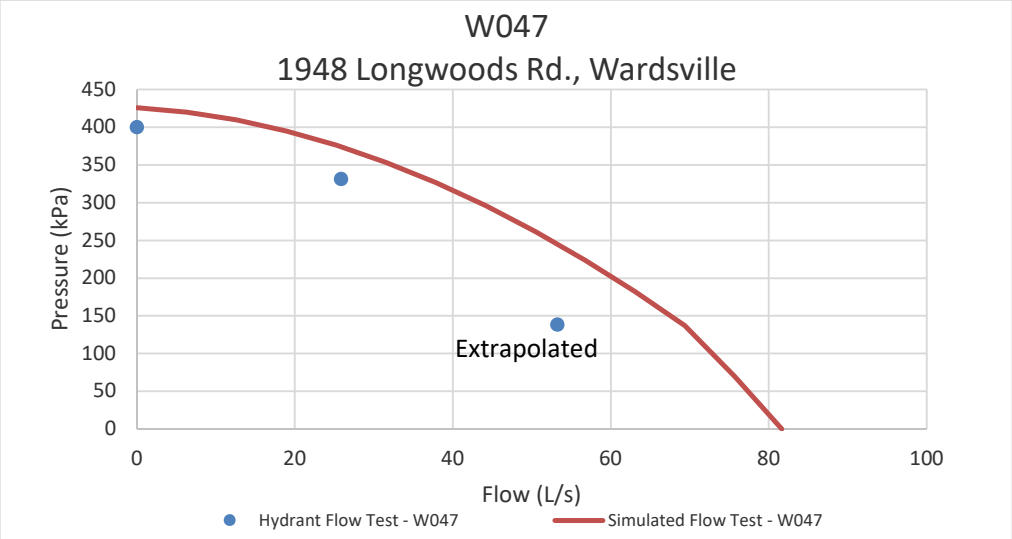


Figure D7: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant W047

Table D8: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant W033

W033				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	400	276	44	66
Model Curve	386	285	44	76

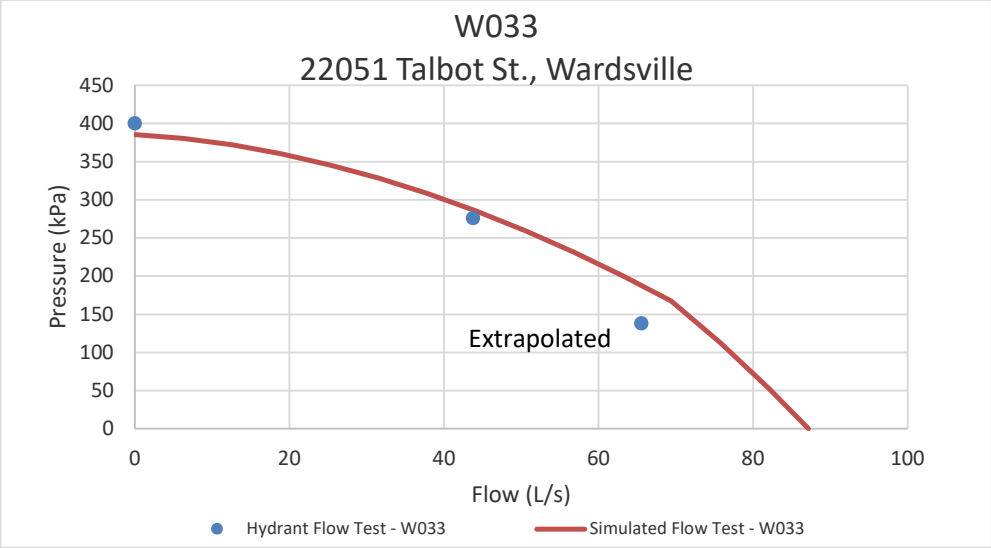


Figure D8: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant W033

Table D9: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant W019

W019				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	400	276	42	62
Model Curve	389	196	44	50

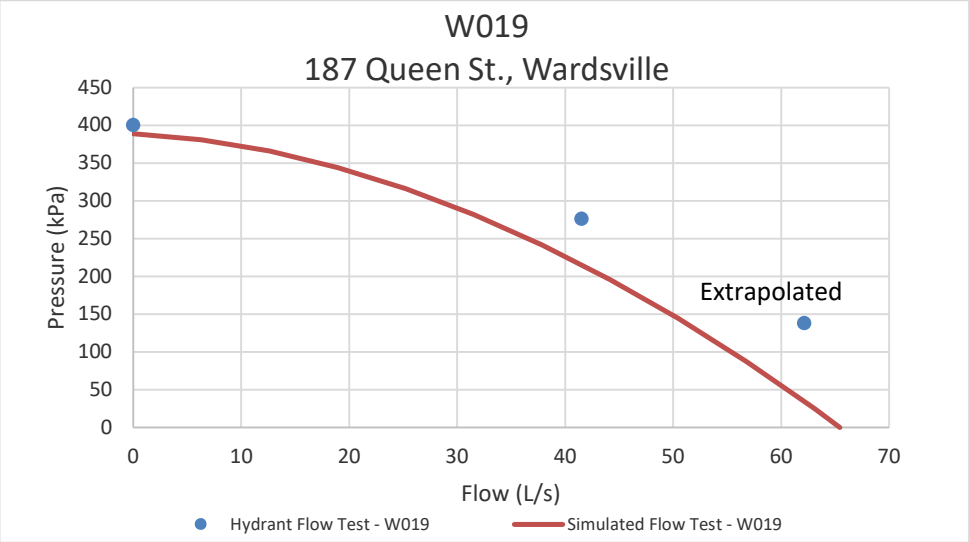


Figure D9: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant W019

Table D10: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant M003

M003				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	345	303	52	123
Model Curve	343	209	50	63

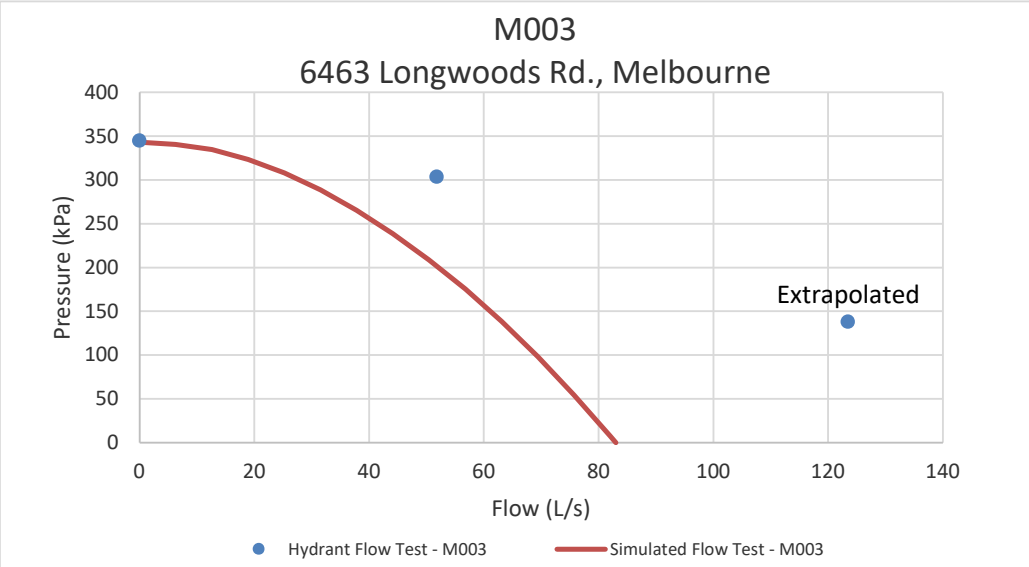


Figure D10: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant M003

Table D11: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant M011

M011				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	345	303	46	109
Model Curve	333	265	44	76

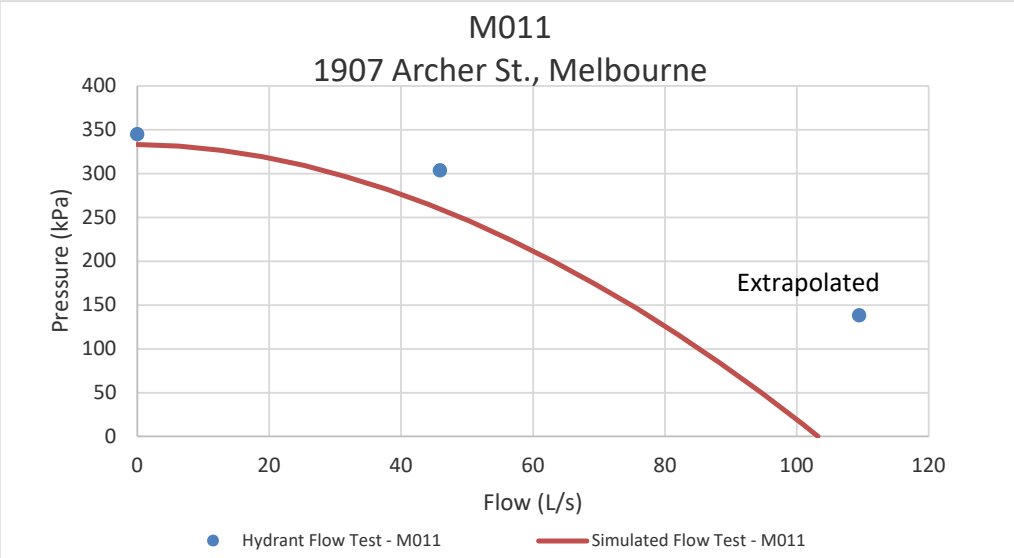


Figure D11: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant M011

Table D12: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant M018

M018				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	345	290	44	94
Model Curve	341	289	44	95

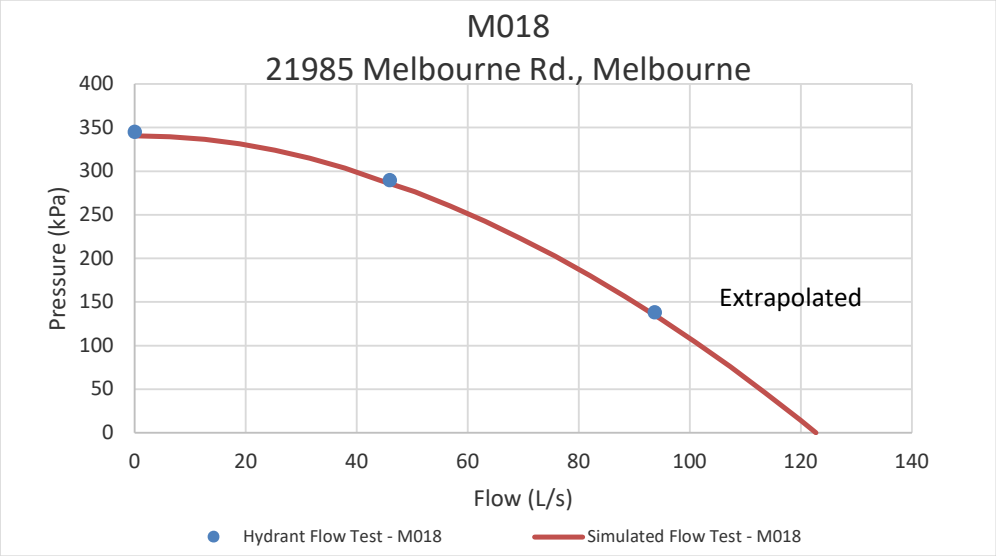


Figure D12: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant M018

Table D13: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant M004

M018				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	345	303	49	117
Model Curve	313	279	50	114

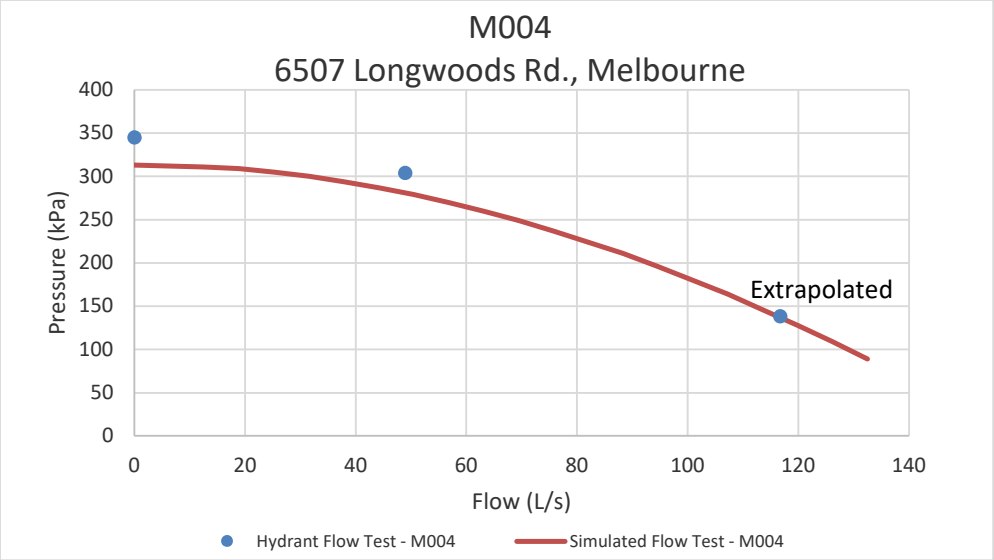


Figure D13: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant M004

Table D14: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant R006E

R006E				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	345	207	39	49
Model Curve	345	117	38	0

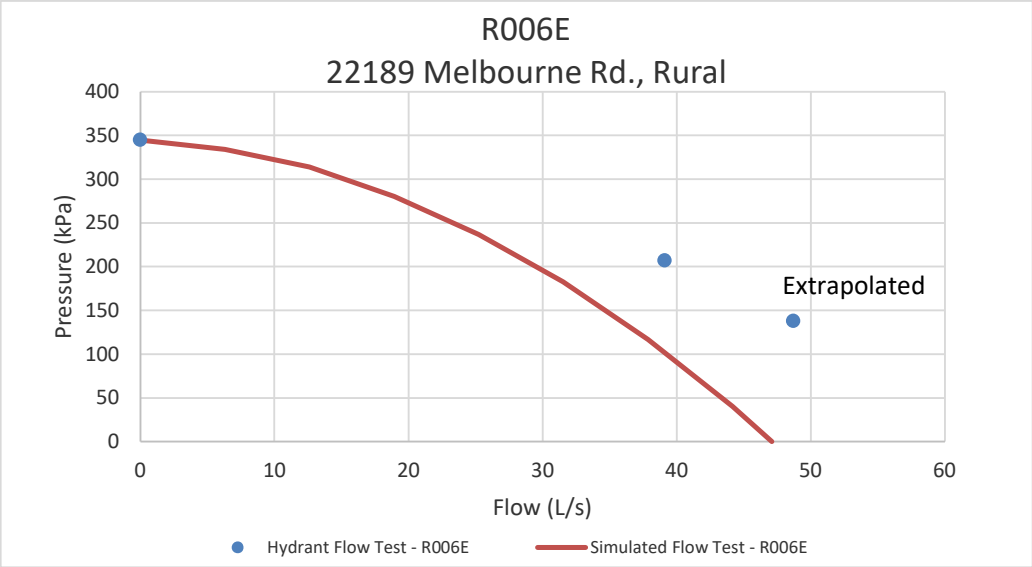


Figure D14: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant R006E

Table D15: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant R020M

R020M				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	345	290	38	77
Model Curve	335	239	38	57

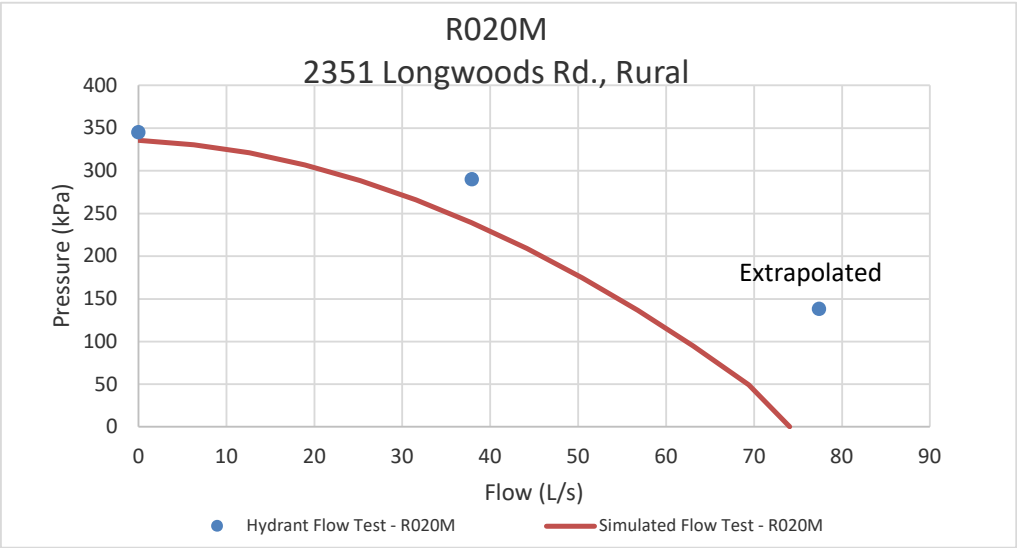


Figure D15: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant R020M

Table D16: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant R017M

R017M				
Source	**Static Pressure (kPa)**	**Residual Pressure (kPa)**	**Test Flow (L/s)**	**Theoretical Flow Available at 20 psi Residual (L/s)**
Hydrant Test	345	317	34	101
Model Curve	346	340	38	107

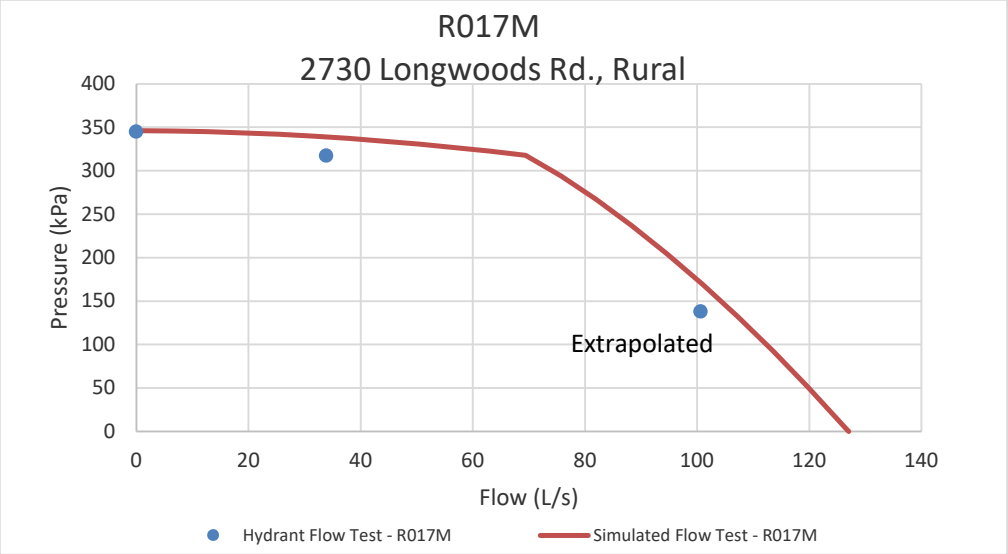
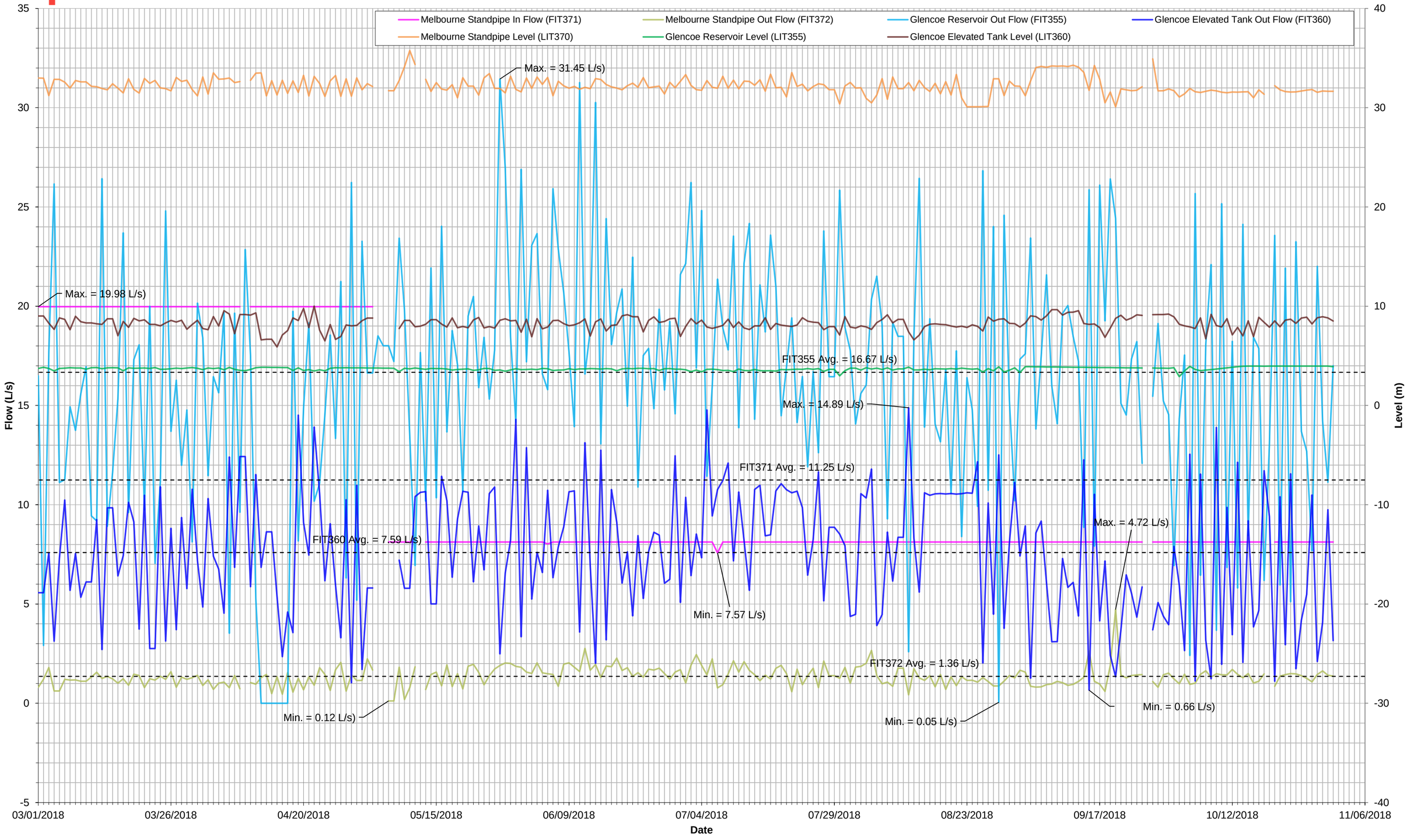
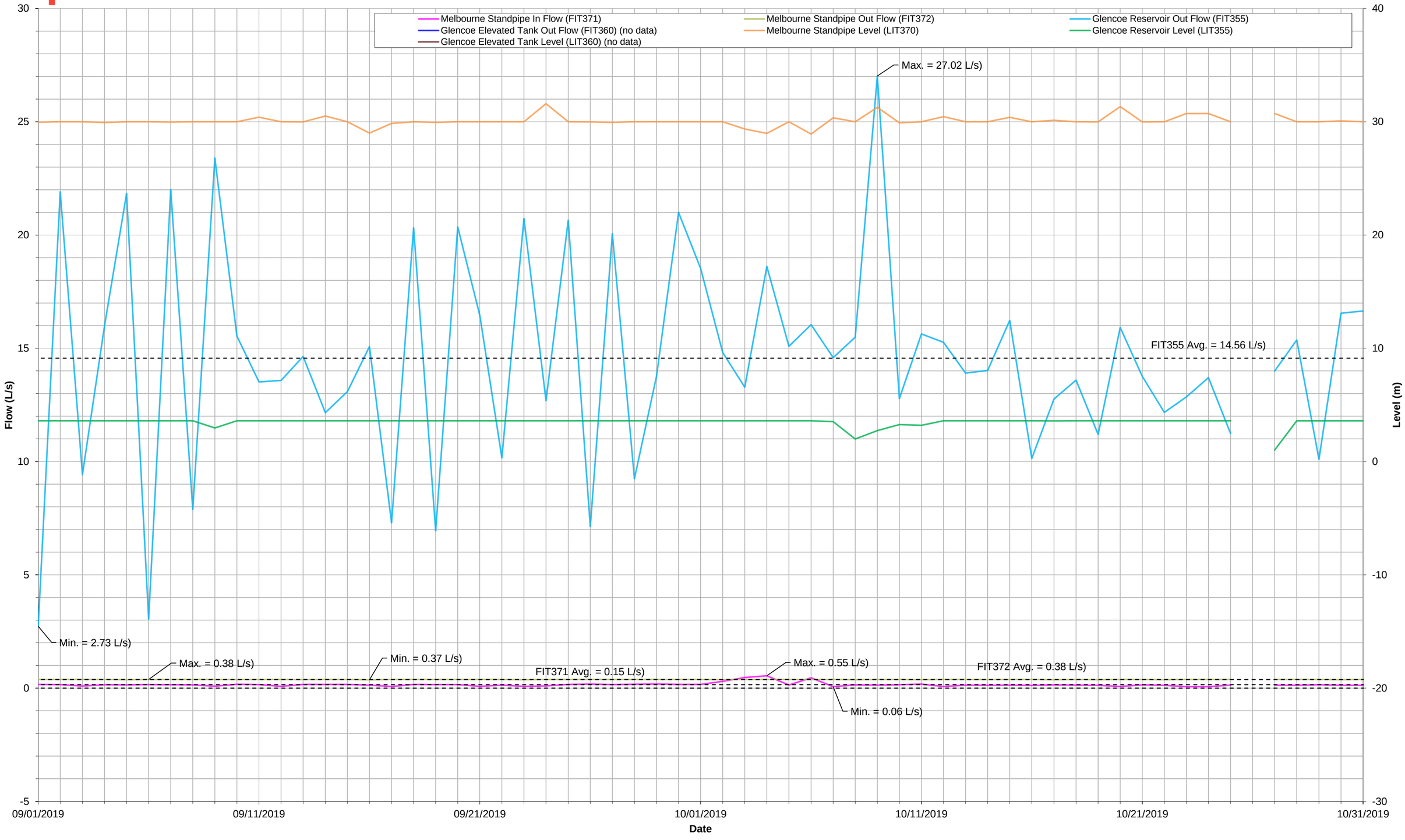


Figure D16: Hydrant Flow Test vs. Simulated Flow Test Results @ Hydrant R017M

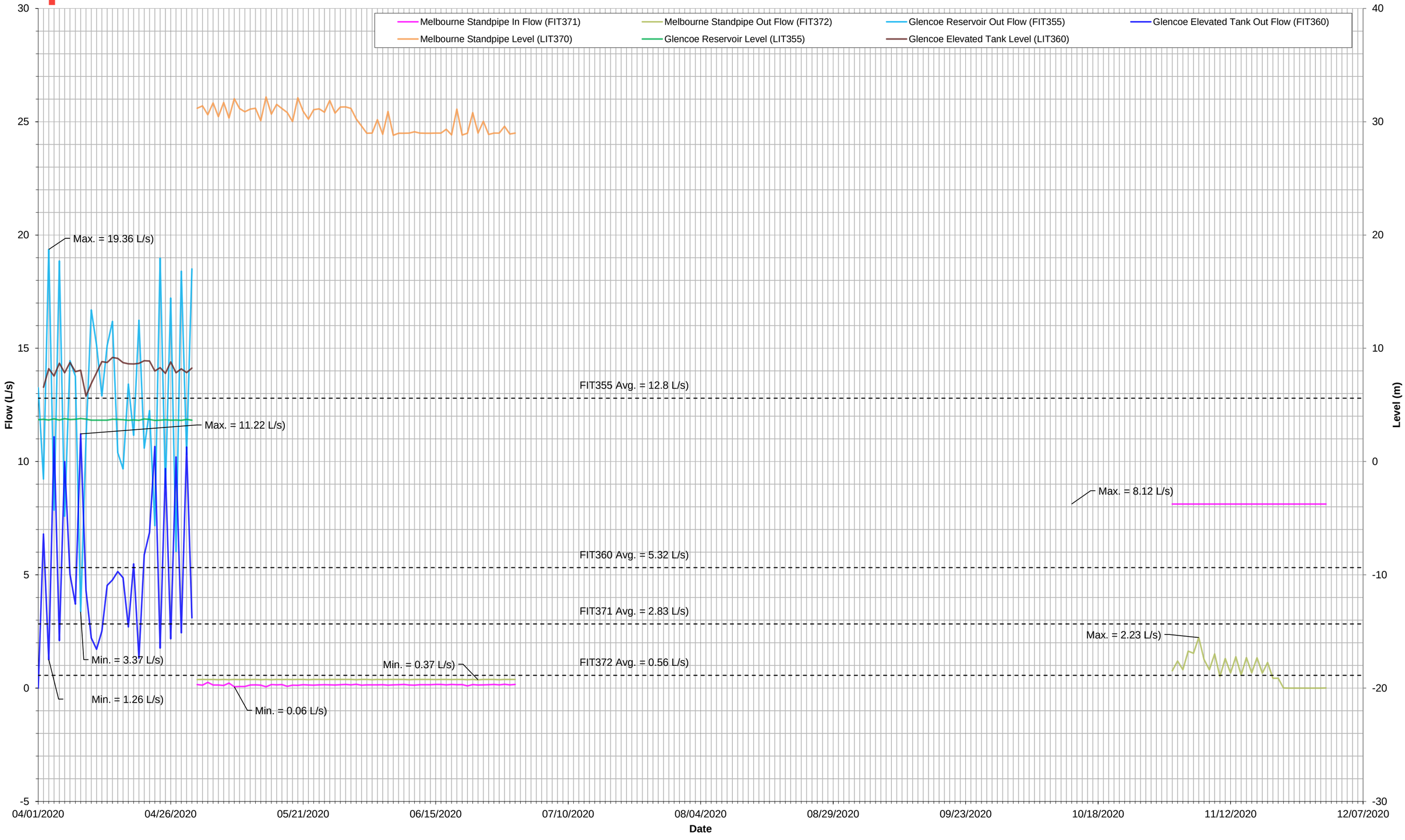
Flow Monitoring (2018)



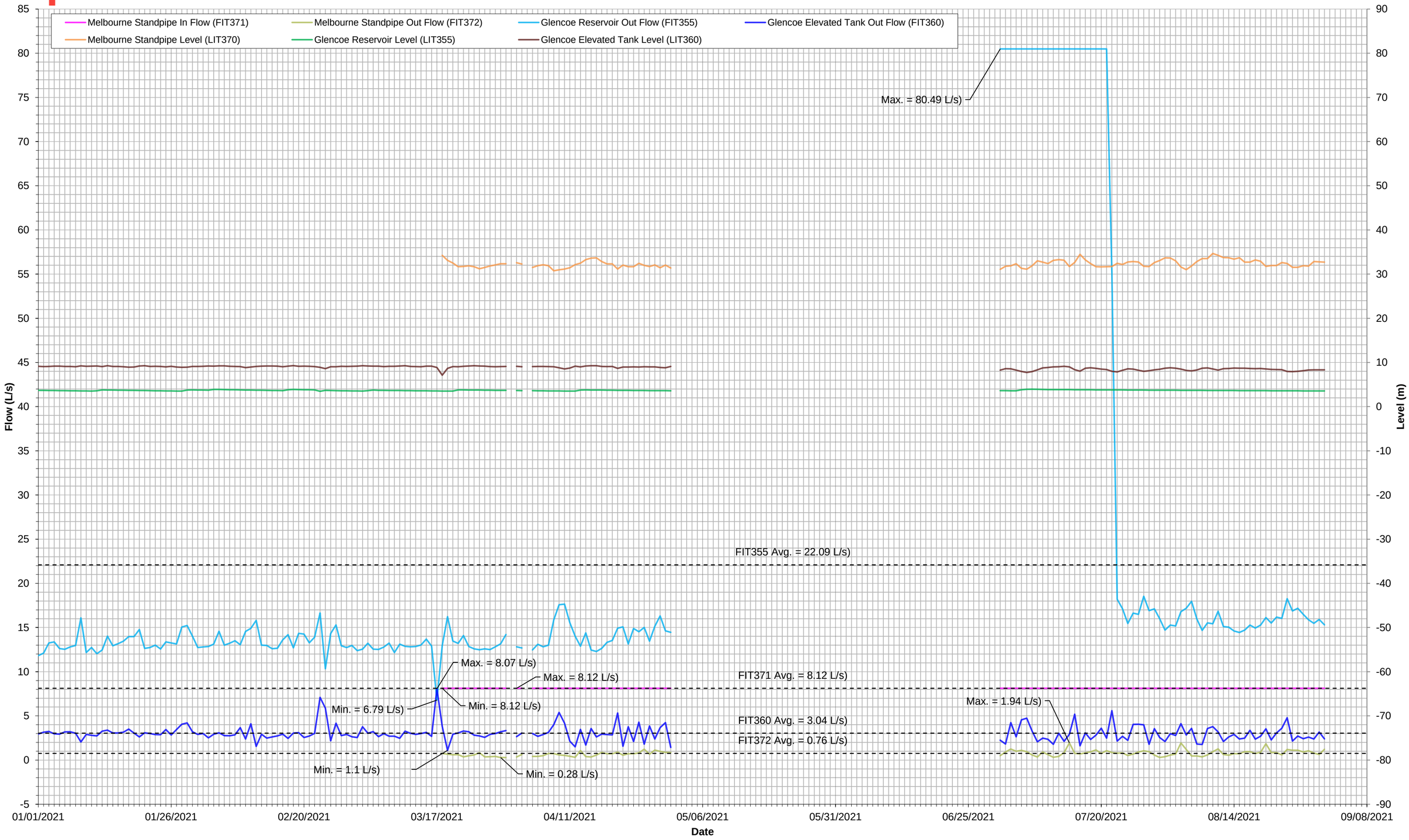
Flow Monitoring (2019)



Flow Monitoring (2020)



Flow Monitoring (2021)



APPENDIX

E WASTEWATER CALCULATION & SEWER NETWORK LAYOUT

SW Middlesex Wastewater Calculation - Glencoe

Unit Rates and Area		
Residential	275	L/Person/Day
Non-Residential	22500	L/Ha/Day
I/I	0.100	L/ha/s
Proposed Area		Ha

Note: the sewage design rate of 350 L/Person/Day was reduced to 275 L/Person/Day (25% Reduction)

Catchment	Polygon	Number of Manholes	Manholes	Total No. of Jobs (Commercial Population)	Residential Population	Total Persons	Dry Weather Flow (L/s)	Proposed Area (Ha)	Commercial /Industiral Area (Hectare)	P (in 1000)
15	12	3	MH177, MH170, MH172	0	86	86	0.27	6.6	0.0	0.09
16	13	3	MH115, MH116, MH117B	0	60	60	0.19	7.2	0.0	0.06
17	14	3	MH117C, MH101, MH113	79	96	175	0.49	10.0	0.7	0.18
18	15	1	MH103	0	22	22	0.07	3.5	0.0	0.02
19	16	2	MH108A, MH106	8	28	36	0.11	2.6	0.1	0.04
20	17	2	MH126, MH111A	4	50	54	0.17	3.1	0.0	0.05
21	18	5	MH127, MH112, MH133, MH143, MH124	5	96	101	0.32	6.3	0.1	0.10
22	19	2	MH135, MH121	66	50	116	0.37	8.1	0.8	0.12
23	20	2	MH089, MH148	9	80	89	0.28	4.4	0.1	0.09
24	21	2	MH092, MH095	0	100	100	0.32	6.8	0.0	0.10
25	22	2	MH156, MH163	43	78	121	0.34	6.8	0.4	0.12
26	23	2	MH151, MH190	81	0	81	0.18	10.7	0.7	0.08
27	24	2	MH059A, MH060A	21	66	87	0.28	6.8	0.3	0.09
28	25	2	MH048, MH065C	38	62	100	0.32	7.2	0.5	0.10
29	26	3	MH063A, MH079A, MH076B	57	32	89	0.29	6.2	0.7	0.09
30	27	3	MH056, MH064, MH054	32	64	96	0.31	6.0	0.4	0.10
31	28	3	MH082, MH075A, MH083B	55	80	135	0.43	5.4	0.7	0.14
32	29	4	MH042, MH071, MH068, MH012	37	58	95	0.29	5.8	0.4	0.10
33	30	2	MH011A, MH055C	0	34	34	0.11	2.6	0.0	0.03
34	31	2	MH016A, MH023	45	62	107	0.31	5.8	0.4	0.11
35	32	2	MH181, MH187	0	64	64	0.20	4.0	0.0	0.06
36	33	2	MH041A, MH045	0	86	86	0.27	6.1	0.0	0.09
37	34	3	MH006B, MH-68, MH001	0	68	68	0.22	9.8	0.0	0.07
38	35	4	MH029, MH017, MH037, MH026	0	152	152	0.48	11.2	0.0	0.15
39	36	1	MH034	48	10	58	0.19	6.9	0.6	0.06
40	37	2	MH-66, MH031	95	26	121	0.38	12.1	1.1	0.12
41	Poly4	1	MH-191	6	28	34	0.10	12.3	0.1	0.03
Glencoe Sub-Total								**7.3**	**183.9**	**8.0**

SW Middlesex Wastewater Calculation - Wardsville

Unit Rates and Area		
Residential	210	L/Person/Day
Non-Residential	22500	L/Ha/Day
I/I	0.100	L/ha/s
Proposed Area		Ha

Note: the sewage design rate of 350 L/Person/Day was reduced to 210 L/Person/Day (40% Reduction)

Catchment	Polygon	Number of Manholes	Manholes	Assigned Manhole	Total No. of Jobs (Commercial Population)	Residential Population	Total Persons	Dry Weather Flow (L/s)	Proposed Area (Ha)	Commercial/Industiral Area (Hectare)	P (in 1000)
1	1	2	H1, D4	MH_H1	0	36	36	0.09	4.6	0.0	0.04
2	2	1	I1	MH_I1	1	22	23	0.06	5.5	0.0	0.02
3	3	1	D3	MH_D3	0	28	28	0.07	2.1	0.0	0.03
4	4	2	D1, G1	MH_G1	8	26	34	0.09	2.5	0.1	0.03
5	5	1	MH4	MH4	8	20	28	0.07	2.8	0.1	0.03
6	6	2	L1, A3	MH_L1	0	24	24	0.06	2.1	0.0	0.02
7	7	1	A2	MH_A2	0	12	12	0.03	1.0	0.0	0.01
8	8	2	M1, B4	MH_M1	11	18	29	0.08	4.1	0.1	0.03
9	9	2	K1, B3	MH_K1	0	26	26	0.06	2.5	0.0	0.03
10	10	2	J1, B2	MH_J1	6	36	42	0.11	2.4	0.1	0.04
11	Poly1	2	B1, B1.5	MH_B1	23	14	37	0.09	4.3	0.2	0.04
12	11	3	F1, F2, E2	MH_F1	0	32	32	0.08	3.7	0.0	0.03
13	Poly2	1	E1	MH_E1	0	26	26	0.06	3.4	0.0	0.03
14	Poly3	2	C4, C3	MH_C4	0	24	24	0.06	3.3	0.0	0.02
Wardsville Sub-Total								**1.0**	**44.3**	**0.6**	**0.40**

SW Middlesex Wastewater Calculation - Future Developments

Unit Rates and Area		
Residential	350	L/Person/Day
Non-Residential	22500	L/Ha/Day
I/I	0.100	L/ha/s
Proposed Area		Ha

Catchment	Development No.	Assigned Manhole	Total No. of Jobs (Commercial Population'	Residential Population	Total Persons	Dry Weather Flow (L/s)	Proposed Area (Ha)	Commercia /Industiral Area (Hectare)	P (in 1000)	*Modified Peaking Factor*	Peak Flow (L/s)	I/I (L/s)	Design Flow=Peak +I/I (L/s)	Wet Weather Flow (L/s)	Existing/Proposed Pipe	From MH	To MH	Slope (m/m)	Diameter (mm)	Length (m)	Theoretical Flow Capacity (L/s)
1	39T-SM2001	MH137	0	505	505	2.05	13.7	0.0	0.51	*3.97*	8.13	1.37	9.50	3.42	CO-68	MH137	MH138	0.004	200	85.8	22.54
2	39T SM2101 & P5-2021	MH033	0	108	108	0.44	4.0	0.0	0.11	*4.00*	1.85	0.40	2.24	0.83	SS4056	MH033	MH034	0.003	250	68.6	34.70
3	39T-86001	MH187	0	75	75	0.30	4.3	0.0	0.07	*4.00*	1.29	0.43	1.72	0.73	CO-77	MH187	MH186	0.004	150	42.7	10.58
4	39T-SM1301		0	31	31	0.12	2.6	0.0	0.03	*4.00*	0.54	0.26	0.80	0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	SPA 3-2020	MH055B	0	25	25	0.10	0.8	0.0	0.02	*4.00*	0.43	0.08	0.52	0.18	SS4149C	MH055B	MH055A	0.003	250	91.8	34.70
6	Wardsville - 1-4 Unit Townhouse Development	MH_C5	0	10	10	0.04	1.3	0.0	0.01	*4.00*	0.18	0.13	0.31	0.17	WV_C006	MH_C5	T-7	0.042	75	62.0	6.08
7	Melbourne - Lot Severance		0	7	7	0.03	0.7	0.0	0.01	*4.00*	0.12	0.07	0.19	0.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	Glencoe - South Street Phase 3	MH183	0	102	102	0.41	3.1	0.0	0.10	*4.00*	1.75	0.31	2.06	0.72	CO-74	MH183	MH184	0.004	200	98.2	22.54
9	Glencoe - Industrial Development	MH040	264	0	264	0.60	2.3	2.3	0.26	*4.00*	2.45	0.46	2.90	1.05	SS4088	MH040	MH041	0.003	250	124.8	34.70
10	Glencoe - Tanya Drive Phase 1+2	MH176	0	105	105	0.43	2.9	0.0	0.11	*4.00*	1.80	0.29	2.10	0.72	SS4002	MH176	MH175	0.002	200	79.5	15.50
11	Glencoe - John Street	MH006C	0	27	27	0.11	1.1	0.0	0.03	*4.00*	0.48	0.11	0.59	0.22	SS4065	MH006C	MH006A	0.004	200	99.0	22.54
12	Glencoe - Residential Subdivision 40 Lots	MH016A	0	142	142	0.58	5.8	0.0	0.14	*4.00*	2.42	0.58	3.00	1.16	CO-29	MH016A	MH016	0.003	200	71.5	19.30
13	Glencoe - Children's Centre	MH011A	56	0	56	0.05	0.0	0.2	0.06	*4.00*	0.24	0.02	0.26	0.08	SS4167L.B	MH011A	MH011	0.003	200	83.4	19.30
14	Glencoe - Lot Severance	MH041	0	3	3	0.01	0.1	0.0	0.00	*4.00*	0.06	0.01	0.07	0.02	SS4042	MH041	MH085	0.001	400	114.5	65.99
15	Glencoe - Industrial Park	J-6	0	0	0	0.42	0.0	1.6	0.00	*4.00*	1.90	0.16	2.06	0.58	CO-94	MH-191	MH193	0.0015	200	421.2	13.27
16	Glencoe - Industrial Park	J-6	0	0	0	1.19	0.0	4.6	0.00	*4.00*	5.37	0.46	5.83	1.65	CO-94	MH-191	MH193	0.0015	200	421.2	13.27
		Totals:		**320**	**1139**	**1459**	**5.26**	**43**	**9**			**21.73**	**5.14**	**26.25**							

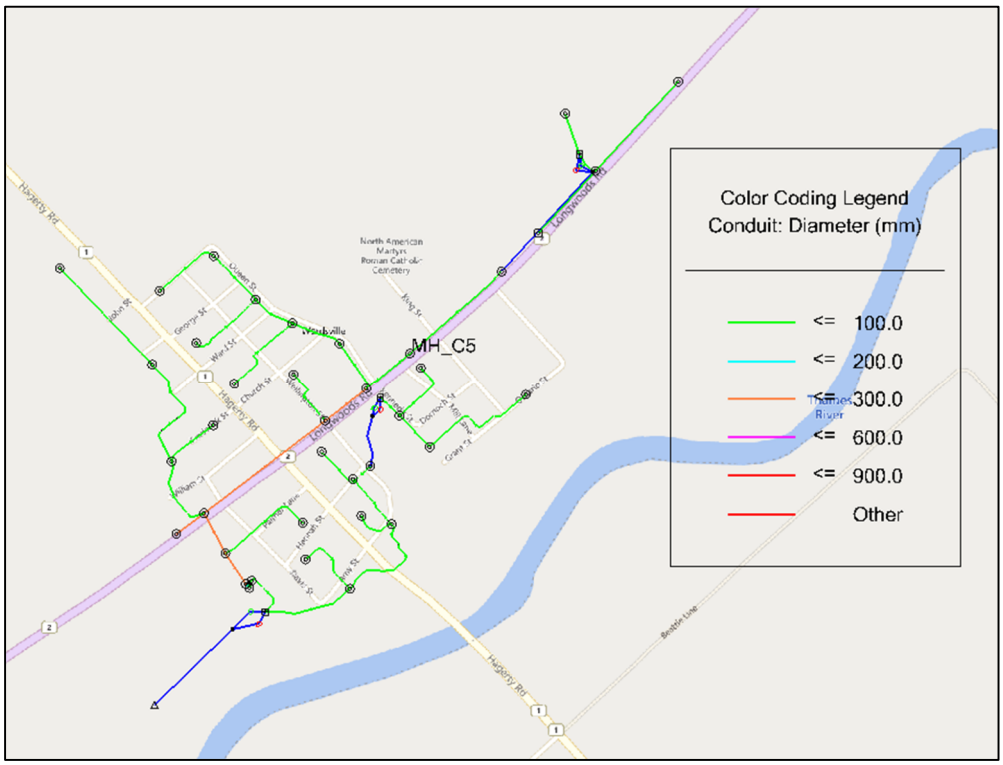


Figure E1 – Sewer Model Layout with Maintenance Hole ID with Wastewater Loadings for the Village of Wardsville

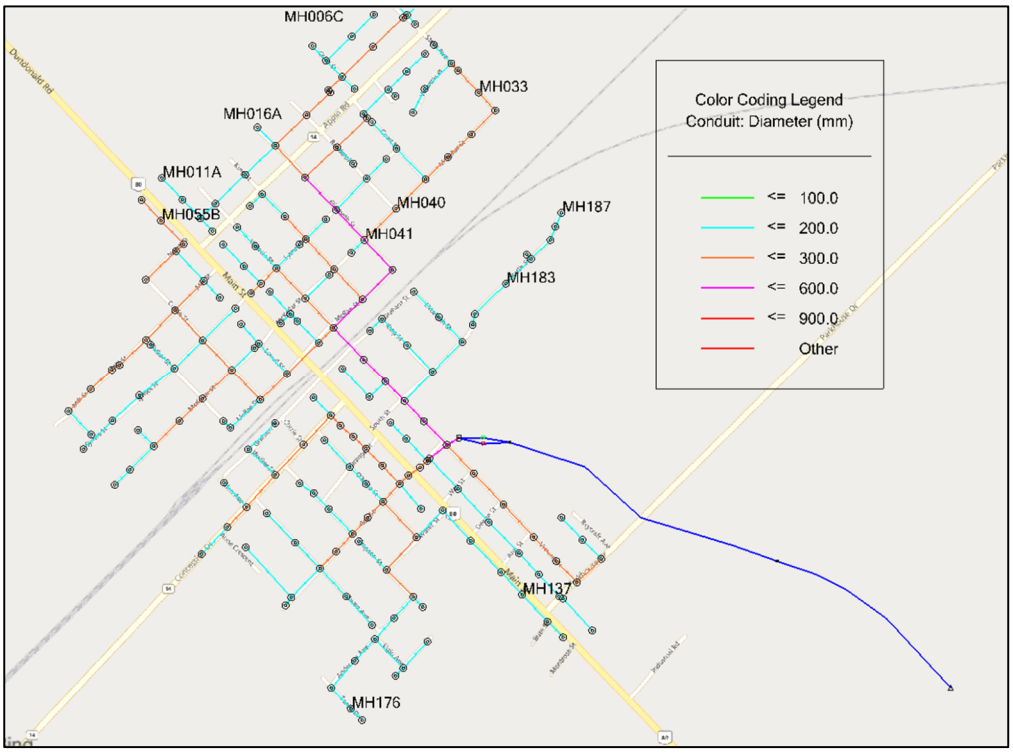


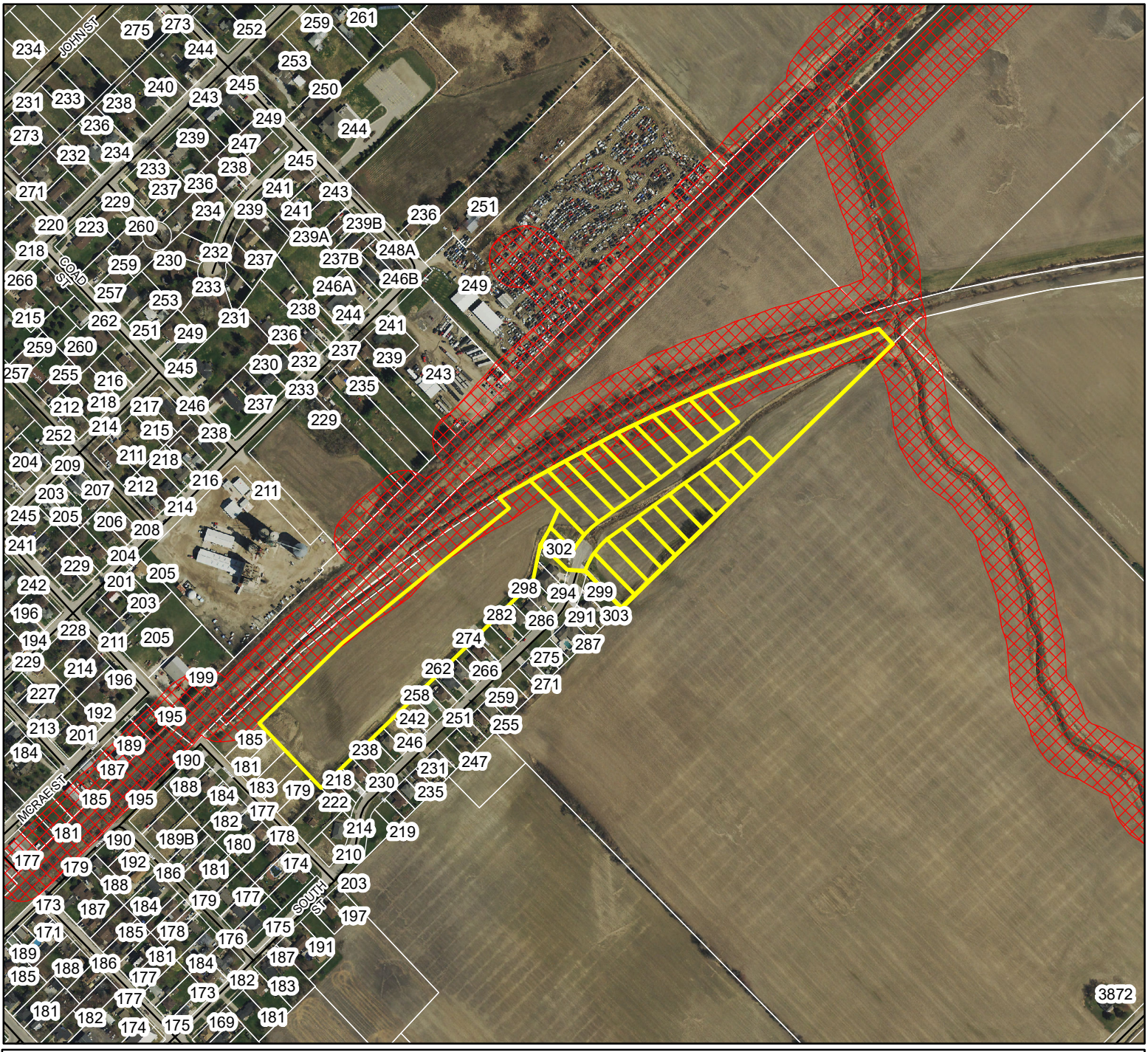
Figure E2 – Sewer Model Layout with Maintenance Hole ID with Wastewater Loadings for the Village of Glencoe

Draft Plan of Subdivision 39T-86001- South Street Phase Two Redline Amendment

Mike Ansari (Owner)
Jeff Thomas (Development Engineering) (Agent)

Part of Lot 7, Registrar's Compiled Plan No. 431
Municipality of Southwest Middlesex

Municipality of SOUTHWEST MIDDLESEX
KEY MAP



middlesex county

Subject Lands

CA Regulated Areas

1:5,919.58

Metres
0 60 120 240

Disclaimer: This map is for illustrative purposes only. Do not rely on it as being a precise indicator of routes, locations of features, nor as a guide to navigation.

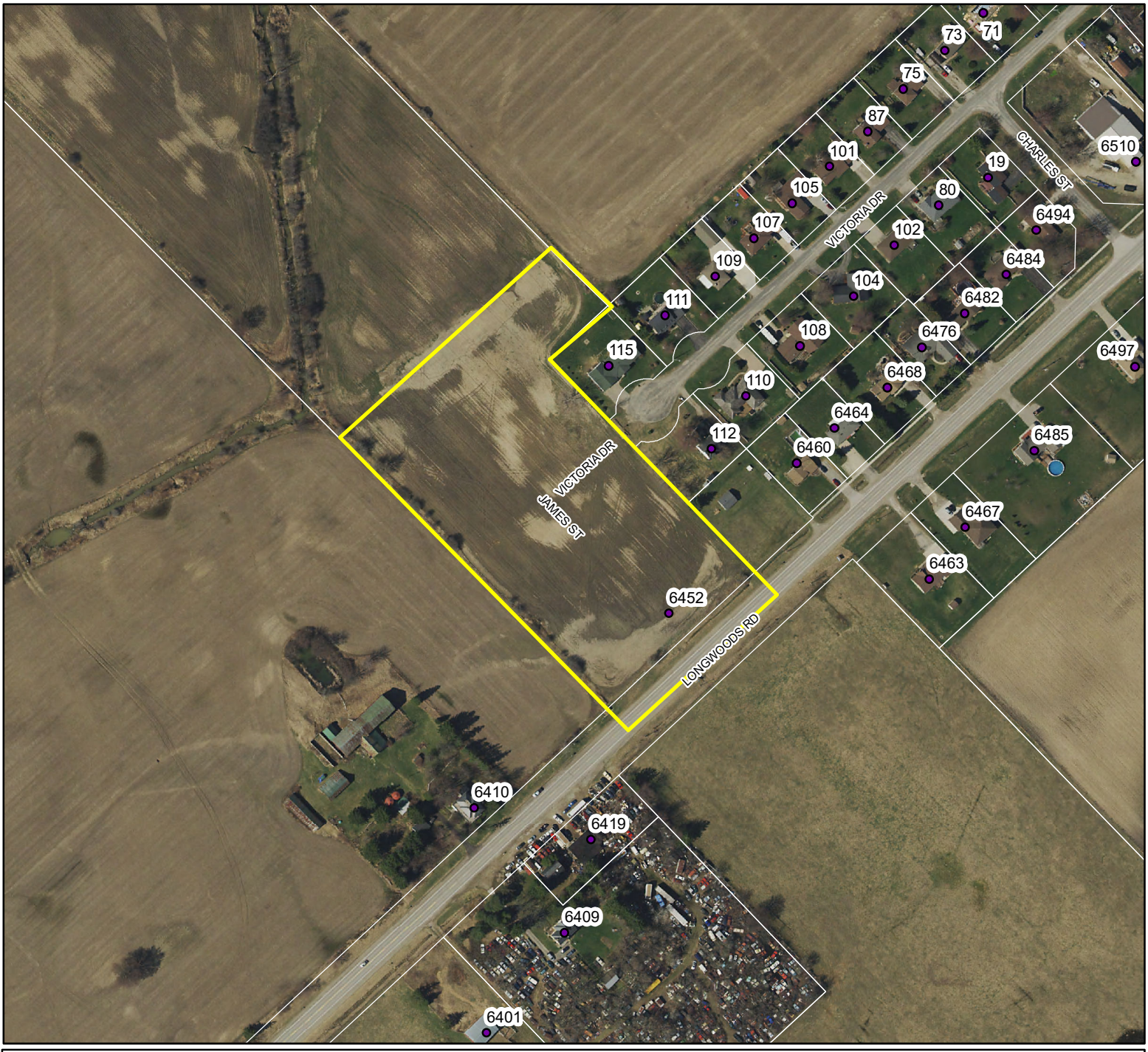
Published by the County of Middlesex
Planning Department
399 Ridout Street North, London, ON N6A 2P1
(519) 434-7321
August 2020

REMOVAL OF HOLDING SYMBOL

Owners: Vibrent Properties Inc.

Range 1, North Part Lot 2, Melbourne
Municipality of Southwest Middlesex (Ekfrid)

Municipality of SOUTHWEST MIDDLESEX
KEY MAP



middlesex county

Lands to be rezoned from HR-H-1 to HR

1:3,000

0 30 60 120 Metres

Disclaimer: This map is for illustrative purposes only. Do not rely on it as being a precise indicator of routes, locations of features, nor as a guide to navigation.

Published by the County of Middlesex
Planning Department
399 Ridout Street North, London, ON N6A 2P1
(519) 434-7321
Junel 2020

APPLICATIONS FOR PLAN OF SUBDIVISION AND ZONING BY-LAW AMENDMENT: 39T SM2101 & P5-2021

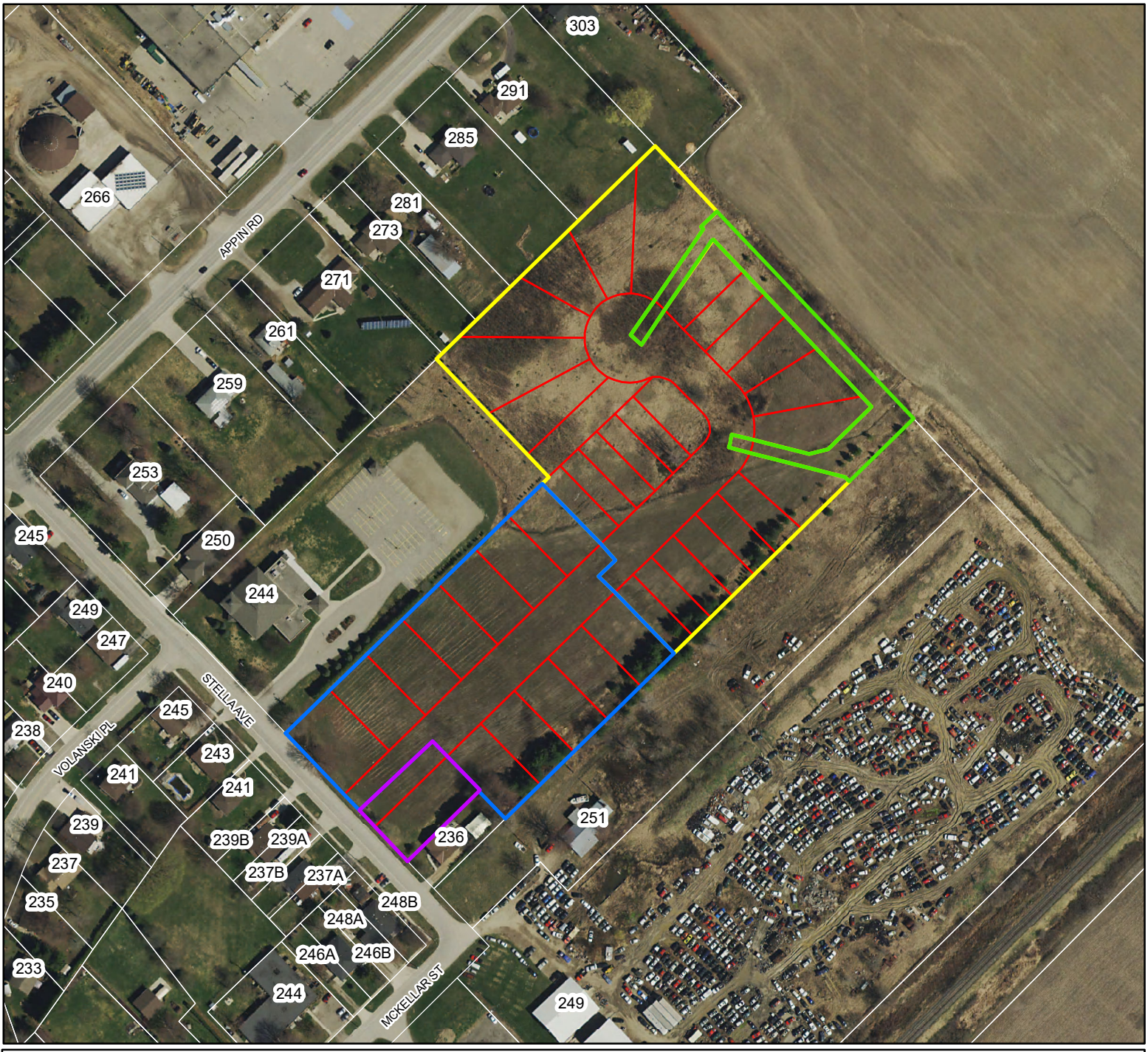
Applicant: Utopia Custom Homes (Owner)

Agent: Strik Baldinelli Moniz Ltd.

Registrar's Compiled Plan 431, Part Lot 13,
Registered Plan 33R11167 Parts 1, 2 & 3
Municipality of Southwest Middlesex (Glencoe)

SWM
SOUTHWEST MIDDLESEX

Municipality of SOUTHWEST MIDDLESEX
KEY MAP



middlesex county

Lands to be rezoned to 'Open Space (OS)'

Lands to be rezoned to 'Site Specific Residential Second Density - Holding Provision One (R2-# H-1)'

Lands to be rezoned to 'Residential Second Density - Holding Provision One (R2(H-1))'

Lands to be rezoned to 'Residential First Density -Holding Provision One (R1(3) H-1)'

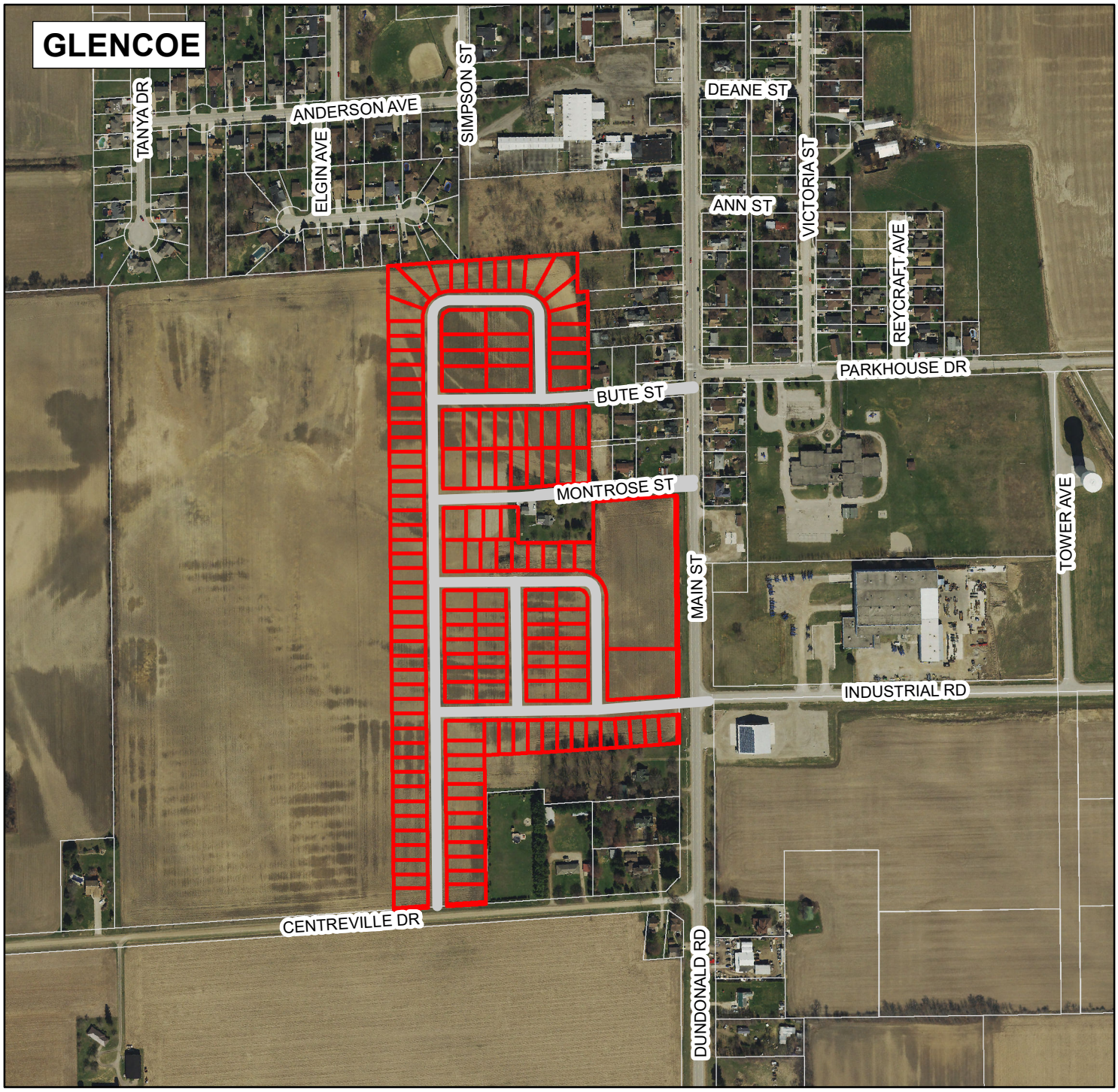
Draft Subdivision

1:2,500

Metres
0 25 50 100

Disclaimer: This map is for illustrative purposes only. Do not rely on it as being a precise indicator of routes, locations of features, nor as a guide to navigation.

Published by the County of Middlesex
Planning Department
399 Ridout Street North, London, ON N6A 2P1
(519) 434-7321
March 2021



LOCATION MAP

Description:
PROPOSED PLAN OF SUBDIVISION
DOBIE SUBDIVISION
MUNICIPALITY OF SOUTHWEST MIDDLESEX

File Number: 39T-SM2001

Prepared by: Planning Department,
The County of Middlesex, July 23, 2020.

LEGEND

Subject Lands

1:6,000

0 60 120 180 240 300

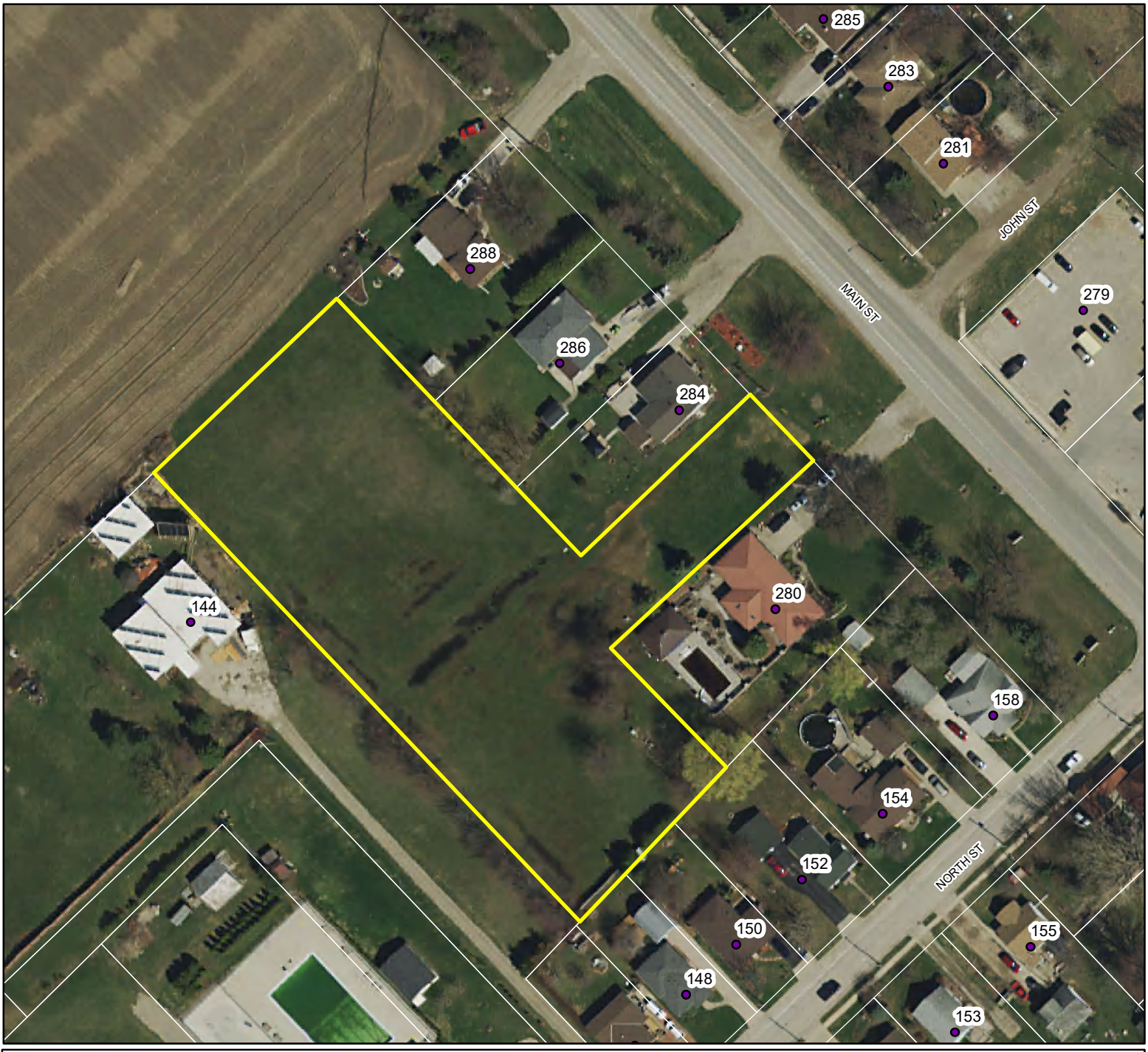
Metres

APPLICATION FOR ZONING BY-LAW AMENDMENT: P5-2020

Owners: Harvey & Kathy Wernham
Agent: Strik, Baldinelli, Moniz Ltd.
280 Main Street
Concession 2, North Part Lot 1,
RP 34R885 Part 2, Reg Comp Plan 413 Lot 5
Municipality of Southwest Middlesex (Glencoe)

SWM
SOUTHWEST MIDDLESEX

Municipality of SOUTHWEST MIDDLESEX
KEY MAP



middlesex county

Published by the County of Middlesex
Planning Department
399 Ridout Street North, London, ON N6A 2P1
(519) 434-7321
April 2020

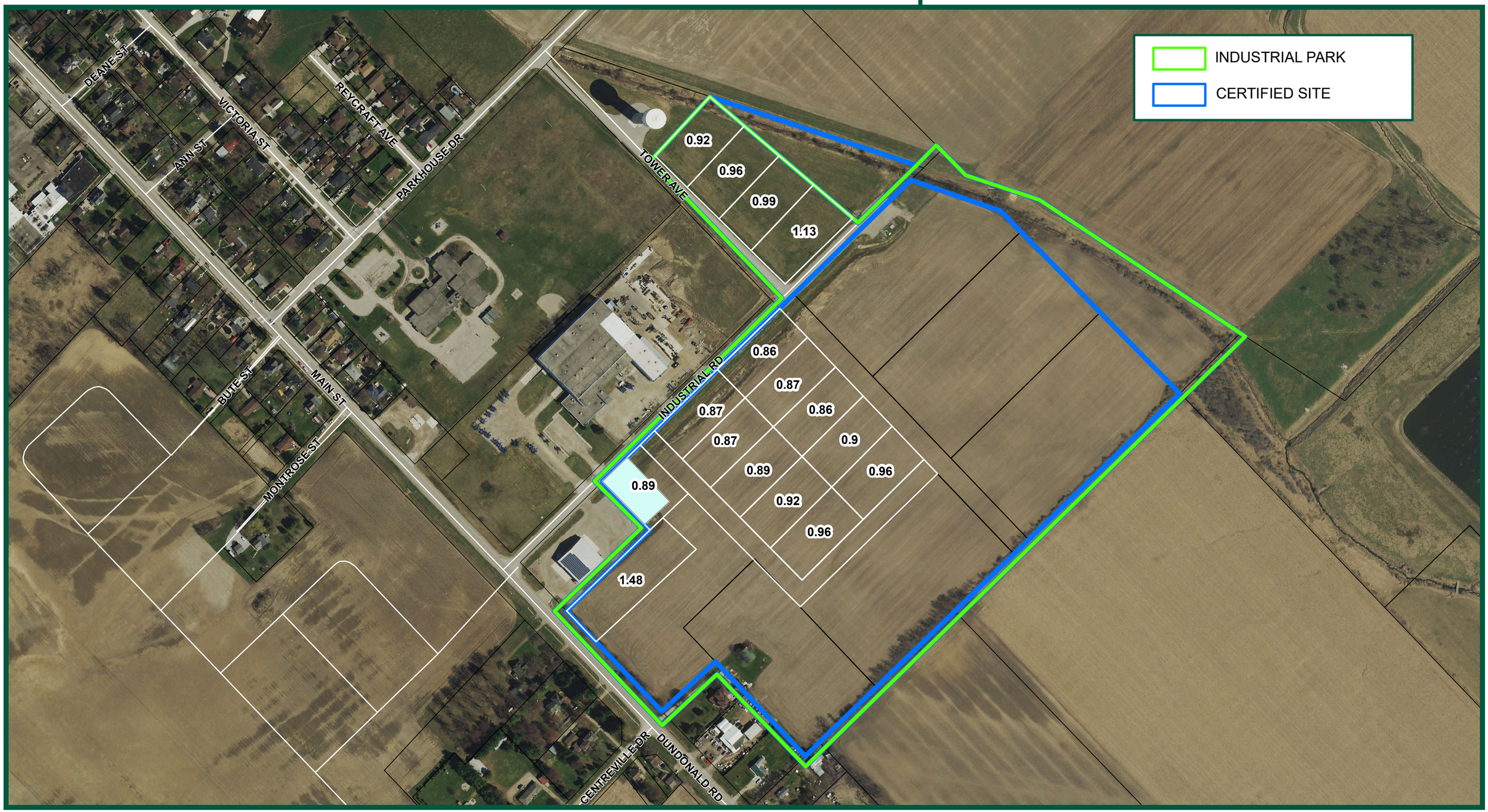
Lands to be severed and rezoned to R3-4-H-2 zone

1:1,200
Metres
0 10 20 40

Disclaimer: This map is for illustrative purposes only. Do not rely on it as being a precise indicator of routes, locations of features, nor as a guide to navigation.

MUNICIPALITY OF SOUTHWEST MIDDLESEX

MAIN STREET & INDUSTRIAL ROAD, GLENCOE
LOT 24, RANGE 2 NORTH OF THE LONGWOODS ROAD





EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION

DETAILS	
DESIGN	CSL
DRAWN BY	PM
CHECKED	CSL
APPROVED	CSL
DATE	FEB. 2021

No.	REVISIONS	DATE	CONSULTANT

CONSULTANT OR DIVISION

SPRIET ASSOCIATES
LONDON LIMITED
CONSULTING ENGINEERS
155 YORK STREET -- LONDON (519) 672-4100 -- N6A 1A8

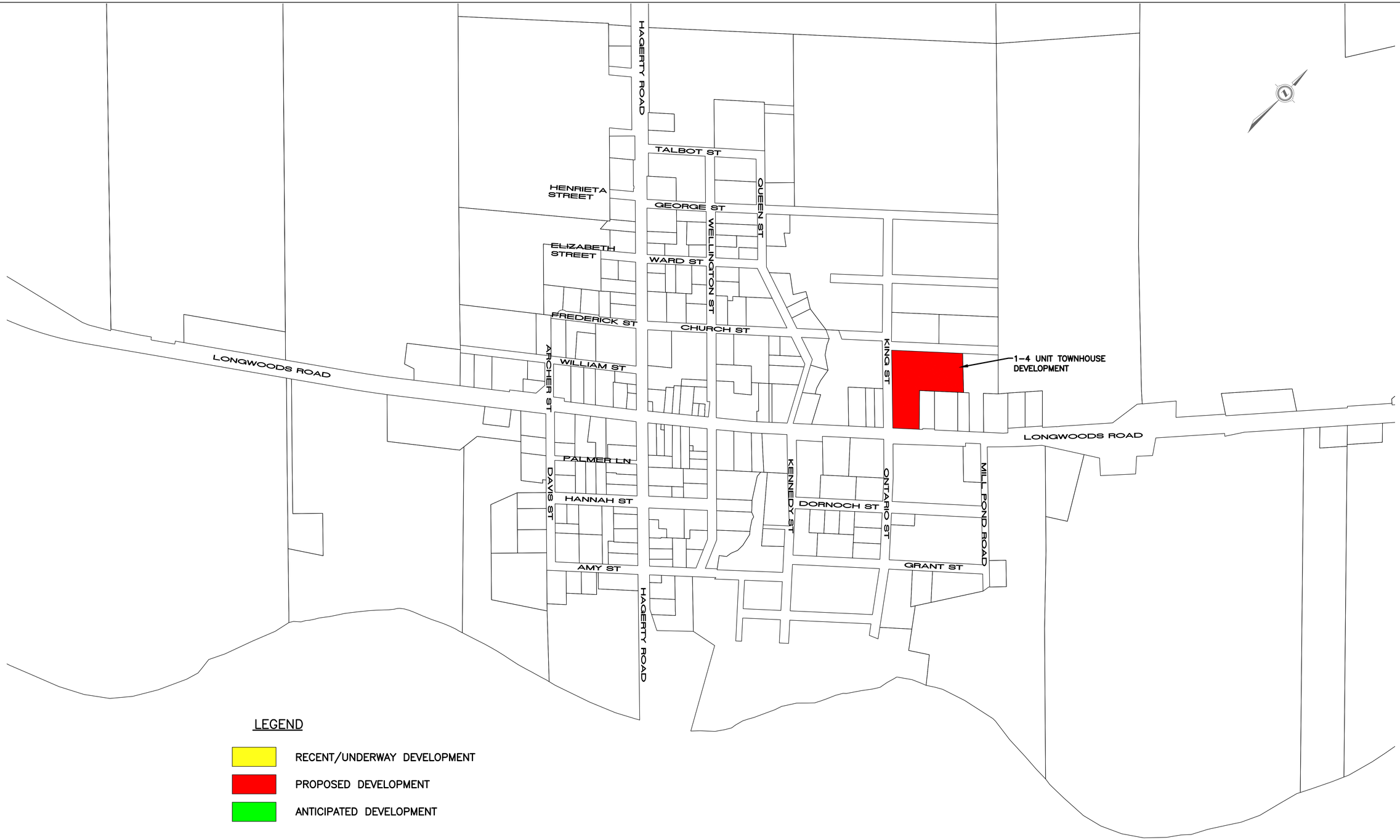
ENGINEER'S STAMP

SWM
SOUTHWEST MIDDLESEX

SCALE
HORZ. 1:4000
VERT. 1:50
40.0m 0 80.0m
HORIZONTAL
0.5 0 1m
VERTICAL

TITLE
RFP#2021-001
MUNICIPAL WASTEWATER AND WATER SYSTEMS MASTER SERVICING STUDY
RECENT, PROPOSED AND ANTICIPATED DEVELOPMENTS
GLENCOE
APPENDIX E

PROJECT No. 220253
SHEET No. 1
PLAN FILE No.



EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION

DETAILS	
DESIGN	CSL
DRAWN BY	PM
CHECKED	CSL
APPROVED	CSL
DATE	FEB. 2021

No.	REVISIONS	DATE	CONSULTANT

CONSULTANT OR DIVISION

SPRIET ASSOCIATES
LONDON LIMITED
CONSULTING ENGINEERS
155 YORK STREET -- LONDON (519) 672-4100 -- N6A 1A8

ENGINEER'S STAMP

SWM
SOUTHWEST MIDDLESEX

SCALE
HORZ. 1:3000
VERT. 1:50
30.0m 0 60.0m
HORIZONTAL
0.5 0 1m
VERTICAL

TITLE
RFP#2021-001
MUNICIPAL WASTEWATER AND WATER SYSTEMS MASTER SERVICING STUDY
RECENT, PROPOSED AND ANTICIPATED DEVELOPMENTS
WARDSVILLE
APPENDIX E

PROJECT No. 220253
SHEET No. 2
PLAN FILE No.



EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT
					DESIGN CSL				
					DRAWN BY PM				
					CHECKED CSL				
					APPROVED CSL				
					DATE FEB. 2021				

CONSULTANT OR DIVISION

SPRIET ASSOCIATES
LONDON LIMITED
CONSULTING ENGINEERS
155 YORK STREET -- LONDON (519) 672-4100 -- N6A 1A8

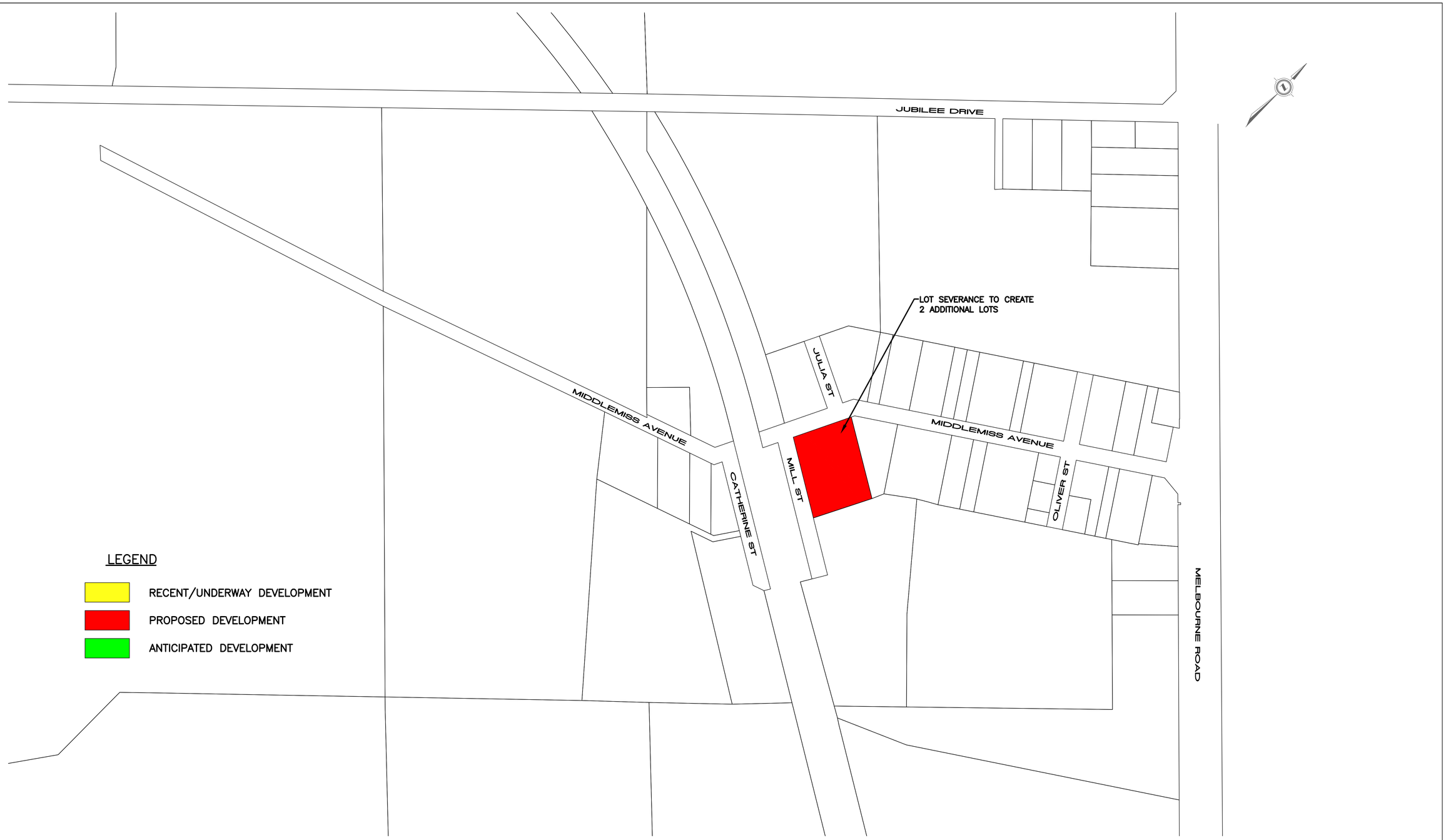
ENGINEER'S STAMP

SWM
SOUTHWEST MIDDLESEX

SCALE
HORZ. 1:2000
VERT. 1:50
20.0m 0 40.0m
HORIZONTAL
0.5 0 1m
VERTICAL

TITLE
RFP#2021-001
MUNICIPAL WASTEWATER AND WATER SYSTEMS MASTER SERVICING STUDY
RECENT, PROPOSED AND ANTICIPATED DEVELOPMENTS MELBOURNE
APPENDIX E

PROJECT No. 220253
SHEET No. 3
PLAN FILE No.



EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT
					DESIGN CSL				
					DRAWN BY PM				
					CHECKED CSL				
					APPROVED CSL				
					DATE FEB. 2021				

CONSULTANT OR DIVISION

SPRIET ASSOCIATES
LONDON LIMITED
CONSULTING ENGINEERS
155 YORK STREET -- LONDON (519) 672-4100 -- N6A 1A8

ENGINEER'S STAMP

SWM
SOUTHWEST MIDDLESEX

SCALE
HORZ. 1:2000
VERT. 1:50
20.0m 0 40.0m
HORIZONTAL
0.5 0 1m
VERTICAL

TITLE
RFP#2021-001
MUNICIPAL WASTEWATER AND WATER SYSTEMS MASTER SERVICING STUDY
RECENT, PROPOSED AND ANTICIPATED DEVELOPMENTS MELBOURNE (MIDDLEMISS)
APPENDIX E

PROJECT No. 220253
SHEET No. 4
PLAN FILE No.

APPENDIX

F

MANHOLE AND CONDUIT RESULTS

SW Middlesex Master Servicing Plan
2021 DWF
Manhole Table - Wardsville

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH_E1	200.750	199.700	0.06	199.71	0.01	FALSE
MH_A2	211.100	209.600	0.03	209.61	0.01	FALSE
MH_F1	204.900	203.500	0.08	203.51	0.01	FALSE
MH1	201.750	200.500	1.22	200.53	0.03	FALSE
MH_B4	205.600	204.300	0.27	204.32	0.02	FALSE
MH_B3	208.200	206.900	0.27	206.92	0.02	FALSE
MH_B2	210.700	208.700	0.20	208.72	0.02	FALSE
MH_J1	212.000	210.750	0.11	210.76	0.01	FALSE
MH_B1.5	210.000	209.000	0.09	209.01	0.01	FALSE
MH_A3	204.700	203.200	0.10	203.21	0.01	FALSE
MH_B1	212.250	211.000	0.09	211.01	0.01	FALSE
MH_C5	205.400	203.800	0.94	203.83	0.03	FALSE
MH_C4	212.000	210.500	0.93	210.53	0.03	FALSE
MH_C3	210.000	208.500	0.00	208.50	0.00	FALSE
MH_C2	207.000	205.600	0.01	205.60	0.00	FALSE
MH_C1	210.750	209.200	0.00	209.20	0.00	FALSE
MH_L1	212.300	211.000	0.06	211.01	0.01	FALSE
MH4	200.500	199.000	1.48	199.03	0.03	FALSE
MH5	198.750	197.230	1.55	197.26	0.03	FALSE
MH_I1	198.750	197.800	0.06	197.81	0.01	FALSE
MH_H1	199.000	197.500	0.09	197.51	0.01	FALSE
MH_K1	211.750	211.000	0.06	211.01	0.01	FALSE
MH-36	201.000	197.900	0.00	197.90	0.00	FALSE
MH-38	195.500	194.600	1.55	194.64	0.04	FALSE
MH-40	212.000	199.300	0.00	199.30	0.00	FALSE
MH-41	195.500	194.928	1.55	194.96	0.04	FALSE
MH_M1	212.300	209.000	0.08	209.01	0.01	FALSE
MH-56	201.000	199.700	1.30	199.74	0.04	FALSE
Main_Clarifier-1	196.000	194.763	1.55	194.81	0.05	FALSE
MH-73	212.000	210.000	0.01	210.00	0.00	FALSE
MH-36	201.000	197.900	0.00	197.90	0.00	FALSE
MH-38	195.500	194.600	2.00	194.65	0.05	FALSE
MH-40	212.000	199.300	0.00	199.30	0.00	FALSE
MH-41	195.500	194.928	2.00	194.97	0.04	FALSE
MH_M1	212.300	209.000	0.08	209.01	0.01	FALSE
MH-56	201.000	199.700	1.75	199.74	0.04	FALSE
Main_Clarifier-1	196.000	194.763	2.00	194.82	0.06	FALSE
MH-73	212.000	210.000	0.01	210.00	0.00	FALSE

SW Middlesex Master Servicing Plan
2021 DWF
Gravity Main Table - Wardsville

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
WV_SW004	MH-38	MPS_WetWell	100	103.42	0.02	1.55	0.74	21.10	31.10	0.03
CO-6	T-21	MH-38	100	8.39	0.013	1.55	0.64	25.80	34.60	0.03
CO-4	Main_Clarifier-1	T-21	100	11.46	0.004	1.55	0.42	45.40	47.20	0.05
CO-3	MH-41	Main_Clarifier-1	150	11.88	0.02	1.55	0.71	7.20	18.20	0.03
WV_SW003	MH5	MH-41	300	80.87	0.028	1.55	0.73	0.90	6.90	0.02
WV_SW004	MH4	MH5	300	99.22	0.018	1.49	0.61	1.20	7.50	0.02
WV_SW001	MH-56	MH4	300	334.41	0.002	1.30	0.28	2.90	11.80	0.04
WV_SW005	MH1	MH-56	300	114.79	0.007	1.22	0.42	1.50	8.60	0.03
WV_D006	MH_D4	MPS_WetWell	75	200.85	0.005	1.17	0.41	68.90	61.00	0.05
WV_D002	T-15	MH_D4	75	131.59	0.017	1.07	0.64	34.60	40.50	0.03
WV_D003	T-12	T-15	75	67.95	0.027	1.07	0.76	27.00	35.50	0.03
WV_D005	MH_D3	T-12	75	53.97	0.003	1.07	0.32	84.50	70.60	0.05
WV_D001	T-20	MH_D3	75	119.97	0.005	1.00	0.39	61.60	56.70	0.04
WV_C001	T-7	MH1	75	61.83	0.011	0.94	0.53	36.80	42.00	0.03
WV_C006	MH_C5	T-7	75	61.97	0.042	0.94	0.86	19.10	29.50	0.02
WV_C005	MH_C4	MH_C5	75	270.44	0.025	0.94	0.71	24.80	33.90	0.03
WV_D004	MH_D1	T-20	75	52.73	0.005	0.90	0.38	54.30	52.50	0.04
WV_B005	MH_B4	MH1	75	119.90	0.03	0.28	0.53	6.60	17.50	0.01
WV_B004	MH_B3	MH_B4	75	114.22	0.023	0.27	0.49	7.60	18.60	0.01
WV_B003	MH_B2	MH_B3	75	97.59	0.018	0.21	0.41	6.30	17.10	0.01
WV_SW007	MH_F2	PSD	75	57.03	0.017	0.15	0.36	4.90	15.10	0.01
WV_J001	MH_J1	MH_B2	75	174.35	0.012	0.11	0.30	4.30	14.10	0.01
WV_A003	MH_A3	MH4	75	168.81	0.025	0.10	0.37	2.80	11.40	0.01
WV_B002	MH_B1.5	MH_B2	75	132.95	0.002	0.09	0.16	8.10	19.10	0.01

SW Middlesex Master Servicing Plan
2021 WWF
Manhole Table - Wardsville

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH_A1	212.300	211.000	0.00	211.00	0.00	FALSE
MH_D4	195.700	193.500	1.29	193.55	0.05	FALSE
MH_D3	199.250	197.700	1.15	197.76	0.06	FALSE
MH_D2	199.700	198.280	0.14	198.30	0.02	FALSE
MH_G1	200.250	199.000	0.13	199.01	0.01	FALSE
MH_D1	200.000	198.500	0.90	198.54	0.04	FALSE
MH_F2	199.800	198.600	0.22	198.62	0.02	FALSE
MH_E2	200.400	199.000	0.10	199.01	0.01	FALSE
MH_E1	200.750	199.700	0.09	199.71	0.01	FALSE
MH_A2	211.100	209.600	0.05	209.61	0.01	FALSE
MH_F1	204.900	203.500	0.11	203.51	0.01	FALSE
MH1	201.750	200.500	1.38	200.53	0.03	FALSE
MH_B4	205.600	204.300	0.41	204.32	0.02	FALSE
MH_B3	208.200	206.900	0.40	206.92	0.02	FALSE
MH_B2	210.700	208.700	0.30	208.72	0.02	FALSE
MH_J1	212.000	210.750	0.16	210.76	0.01	FALSE
MH_B1.5	210.000	209.000	0.13	209.02	0.02	FALSE
MH_A3	204.700	203.200	0.15	203.21	0.01	FALSE
MH_B1	212.250	211.000	0.13	211.01	0.01	FALSE
MH_C5	205.400	203.800	0.97	203.83	0.03	FALSE
MH_C4	212.000	210.500	0.96	210.53	0.03	FALSE
MH_C3	210.000	208.500	0.00	208.50	0.00	FALSE
MH_C2	207.000	205.600	0.01	205.60	0.00	FALSE
MH_C1	210.750	209.200	0.00	209.20	0.00	FALSE
MH_L1	212.300	211.000	0.09	211.01	0.01	FALSE
MH4	200.500	199.000	1.78	199.03	0.03	FALSE
MH5	198.750	197.230	1.87	197.26	0.03	FALSE
MH_I1	198.750	197.800	0.08	197.81	0.01	FALSE
MH_H1	199.000	197.500	0.13	197.51	0.01	FALSE
MH_K1	211.750	211.000	0.09	211.01	0.01	FALSE
MH-36	201.000	197.900	0.00	197.90	0.00	FALSE
MH-38	195.500	194.600	1.87	194.64	0.04	FALSE
MH-40	212.000	199.300	0.00	199.30	0.00	FALSE
MH-41	195.500	194.928	1.87	194.97	0.04	FALSE
MH_M1	212.300	209.000	0.11	209.01	0.01	FALSE
MH-56	201.000	199.700	1.50	199.74	0.04	FALSE
Main_Clarifier-1	196.000	194.763	1.87	194.82	0.05	FALSE
MH-73	212.000	210.000	0.00	210.00	0.00	FALSE

SW Middlesex Master Servicing Plan
2021 WWF
Gravity Main Table - Wardsville

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
WV_SW002	MH-40	MH4	300	75.77	0.004	0.00	0.05	0.00	0.50	0.00
WV_C004	MH_C3	MH_C2	75	185.52	0.016	0.01	0.13	0.20	3.10	0.00
WV_C002	T-5	MH_C2	75	118.91	0.026	0.01	0.18	0.20	3.30	0.00
0 (Polyline)-25	MH-36	MH_D3	75	87.60	0.002	0.00	0.05	0.20	3.50	0.00
WV_SW005	MH_C2	W-8	75	51.75	0.056	0.01	0.26	0.30	3.90	0.00
CO-98	MH-73	W-8	75	95.42	0.073	0.00	0.19	0.00	1.60	0.00
WV_C003	MH_C1	T-5	75	150.99	0.003	0.00	0.07	0.30	4.10	0.00
WV_A001	MH_A1	MH_A2	75	293.60	0.005	0.01	0.10	0.50	5.20	0.00
WV_A004	T-2	T-3	75	43.01	0.076	0.06	0.46	0.90	6.60	0.00
WV_A005	T-3	MH_A3	75	76.64	0.033	0.06	0.35	1.40	8.20	0.01
WV_L001	MH_L1	MH_A3	75	123.84	0.063	0.09	0.49	1.50	8.50	0.01
WV_SW003	MH5	MH-41	300	80.87	0.028	1.87	0.77	1.10	7.50	0.02
WV_M001	MH_M1	MH-56	75	135.74	0.069	0.12	0.55	1.80	9.40	0.01
WV_F001	MH_F1	T-17	75	67.88	0.069	0.12	0.56	1.90	9.40	0.01
WV_SW004	MH4	MH5	300	99.22	0.018	1.78	0.65	1.40	8.20	0.02
WV_K001	MH_K1	MH_B3	75	199.53	0.021	0.10	0.34	2.90	11.70	0.01
WV_SW005	MH1	MH-56	300	114.79	0.007	1.38	0.43	1.70	9.10	0.03
WV_H001	MH_H1	MH_D4	75	155.68	0.026	0.13	0.41	3.50	12.80	0.01
WV_A002	MH_A2	T-2	75	154.63	0.004	0.06	0.16	3.70	13.20	0.01
WV_A003	MH_A3	MH4	75	168.81	0.025	0.15	0.42	4.10	13.70	0.01
WV_B001	MH_B1	MH_B1.5	75	151.25	0.013	0.13	0.32	4.80	14.80	0.01
WV_SW001	MH-56	MH4	300	334.41	0.002	1.51	0.29	3.40	12.60	0.04
WV_J001	MH_J1	MH_B2	75	174.35	0.012	0.17	0.33	6.30	17.10	0.01
WV_SW006	MH_E2	MH_F2	75	95.86	0.004	0.10	0.20	6.70	17.60	0.01

SW Middlesex Master Servicing Plan
2021 WWF_Peak
Manhole Table - Wardsville

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH_A1	212.300	211.000	0.00	211.01	0.01	FALSE
MH_D4	195.700	193.500	2.44	194.68	1.18	TRUE
MH_D3	199.250	197.700	1.88	197.94	0.24	TRUE
MH_D2	199.700	198.280	0.54	198.39	0.11	TRUE
MH_G1	200.250	199.000	0.53	199.03	0.03	FALSE
MH_D1	200.000	198.500	0.90	198.54	0.04	FALSE
MH_F2	199.800	198.600	0.89	198.63	0.03	FALSE
MH_E2	200.400	199.000	0.41	199.03	0.03	FALSE
MH_E1	200.750	199.700	0.37	199.73	0.03	FALSE
MH_A2	211.100	209.600	0.21	209.62	0.02	FALSE
MH_F1	204.900	203.500	0.46	203.52	0.02	FALSE
MH1	201.750	200.500	2.90	200.54	0.04	FALSE
MH_B4	205.600	204.300	1.62	204.34	0.04	FALSE
MH_B3	208.200	206.900	1.61	206.94	0.04	FALSE
MH_B2	210.700	208.700	1.20	208.74	0.04	FALSE
MH_J1	212.000	210.750	0.64	210.78	0.03	FALSE
MH_B1.5	210.000	209.000	0.53	209.04	0.04	FALSE
MH_A3	204.700	203.200	0.60	203.23	0.03	FALSE
MH_B1	212.250	211.000	0.51	211.02	0.02	FALSE
MH_C5	205.400	203.800	1.25	203.84	0.04	FALSE
MH_C4	212.000	210.500	1.22	210.54	0.04	FALSE
MH_C3	210.000	208.500	0.00	208.50	0.00	FALSE
MH_C2	207.000	205.600	0.05	205.61	0.01	FALSE
MH_C1	210.750	209.200	0.00	209.21	0.01	FALSE
MH_L1	212.300	211.000	0.34	211.02	0.02	FALSE
MH4	200.500	199.000	4.48	199.05	0.05	FALSE
MH5	198.750	197.230	4.85	197.28	0.05	FALSE
MH_I1	198.750	197.800	0.33	197.83	0.03	FALSE
MH_H1	199.000	197.500	0.52	197.52	0.02	FALSE
MH_K1	211.750	211.000	0.37	211.02	0.02	FALSE
MH-36	201.000	197.900	0.00	197.94	0.04	FALSE
MH-38	195.500	194.600	4.86	194.67	0.07	FALSE
MH-40	212.000	199.300	0.00	199.30	0.00	FALSE
MH-41	195.500	194.928	4.86	194.99	0.06	FALSE
MH_M1	212.300	209.000	0.45	209.02	0.02	FALSE
MH-56	201.000	199.700	3.38	199.76	0.06	FALSE
Main_Clarifier-1	196.000	194.763	4.86	194.90	0.13	FALSE
MH-73	212.000	210.000	0.00	210.00	0.00	FALSE

SW Middlesex Master Servicing Plan
2021 WWF_Peak
Gravity Main Table - Wardsville

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
WV_D005	MH_D3	T-12	75	53.97	0.003	1.88	0.43	148.90	(N/A)	0.00
WV_D006	MH_D4	MPS_WetWell	75	200.85	0.005	2.46	0.56	145.60	(N/A)	0.00
CO-4	Main_Clarifier-1	T-21	100	11.46	0.004	4.86	0.62	142.50	(N/A)	0.00
WV_D001	T-20	MH_D3	75	119.97	0.005	1.46	0.33	90.40	74.50	0.00
CO-6	T-21	MH-38	100	8.39	0.013	4.86	0.85	81.20	68.40	0.01
WV_SW004	MH-38	MPS_WetWell	100	103.42	0.02	4.88	1.00	66.30	59.50	0.01
WV_D002	T-15	MH_D4	75	131.59	0.017	1.91	0.74	61.50	56.70	0.01
WV_D004	MH_D1	T-20	75	52.73	0.005	0.91	0.38	54.60	52.70	0.01
WV_C001	T-7	MH1	75	61.83	0.011	1.26	0.58	49.50	49.70	0.04
WV_D003	T-12	T-15	75	67.95	0.027	1.89	0.89	47.80	48.70	0.01
WV_B002	MH_B1.5	MH_B2	75	132.95	0.002	0.54	0.25	47.60	48.50	0.04
WV_B004	MH_B3	MH_B4	75	114.22	0.023	1.62	0.80	44.90	46.90	0.04
WV_D007	MH_D2	T-20	75	10.54	0.003	0.54	0.12	40.30	44.10	0.01
WV_F002	T-17	MH_F2	75	80.29	0.002	0.48	0.26	39.80	43.90	0.01
WV_B005	MH_B4	MH1	75	119.90	0.03	1.64	0.89	39.10	43.40	0.01
WV_B003	MH_B2	MH_B3	75	97.59	0.018	1.21	0.68	37.30	42.20	0.01
WV_E001	MH_E1	MH_E2	75	272.82	0.003	0.41	0.25	33.40	39.70	0.06
WV_C005	MH_C4	MH_C5	75	270.44	0.025	1.25	0.77	33.10	39.60	0.02
WV_I001	MH_I1	MH5	75	221.77	0.003	0.36	0.24	29.40	37.10	0.02
WV_SW007	MH_F2	PSD	75	57.03	0.017	0.90	0.61	28.80	36.70	0.02
WV_G001	MH_G1	MH_D2	75	115.16	0.006	0.54	0.37	28.50	36.50	0.02
WV_SW006	MH_E2	MH_F2	75	95.86	0.004	0.42	0.30	26.90	35.40	0.02
WV_C006	MH_C5	T-7	75	61.97	0.042	1.26	0.93	25.60	34.40	0.05
WV_J001	MH_J1	MH_B2	75	174.35	0.012	0.66	0.49	25.40	34.30	0.03

SW Middlesex Master Servicing Plan
2041 DWF
Manhole Table - Wardsville

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH-38	195.500	194.600	1.59	194.64	0.04	FALSE
Main_Clarifier-1	196.000	194.763	1.59	194.81	0.05	FALSE
MH-41	195.500	194.928	1.59	194.96	0.04	FALSE
MH5	198.750	197.230	1.59	197.26	0.03	FALSE
MH4	200.500	199.000	1.52	199.03	0.03	FALSE
MH-56	201.000	199.700	1.34	199.74	0.04	FALSE
MH1	201.750	200.500	1.26	200.53	0.03	FALSE
MH_D4	195.700	193.500	1.16	193.55	0.05	FALSE
MH_D3	199.250	197.700	1.07	197.75	0.05	FALSE
MH_C5	205.400	203.800	0.98	203.83	0.03	FALSE
MH_C4	212.000	210.500	0.93	210.53	0.03	FALSE
MH_D1	200.000	198.500	0.90	198.54	0.04	FALSE
MH_B4	205.600	204.300	0.27	204.32	0.02	FALSE
MH_B3	208.200	206.900	0.27	206.92	0.02	FALSE
MH_B2	210.700	208.700	0.20	208.72	0.02	FALSE
MH_F2	199.800	198.600	0.15	198.61	0.01	FALSE
MH_J1	212.000	210.750	0.11	210.76	0.01	FALSE
MH_A3	204.700	203.200	0.10	203.21	0.01	FALSE
MH_D2	199.700	198.280	0.09	198.29	0.01	FALSE
MH_G1	200.250	199.000	0.09	199.01	0.01	FALSE
MH_B1.5	210.000	209.000	0.09	209.01	0.01	FALSE
MH_H1	199.000	197.500	0.09	197.51	0.01	FALSE
MH_B1	212.250	211.000	0.09	211.01	0.01	FALSE
MH_F1	204.900	203.500	0.08	203.51	0.01	FALSE
MH_M1	212.300	209.000	0.08	209.01	0.01	FALSE
MH_E2	200.400	199.000	0.07	199.01	0.01	FALSE
MH_E1	200.750	199.700	0.06	199.71	0.01	FALSE
MH_K1	211.750	211.000	0.06	211.01	0.01	FALSE
MH_L1	212.300	211.000	0.06	211.01	0.01	FALSE
MH_I1	198.750	197.800	0.06	197.81	0.01	FALSE
MH_A2	211.100	209.600	0.03	209.61	0.01	FALSE
MH-73	212.000	210.000	0.01	210.00	0.00	FALSE
MH_C2	207.000	205.600	0.01	205.60	0.00	FALSE
MH_A1	212.300	211.000	0.00	211.00	0.00	FALSE
MH_C3	210.000	208.500	0.00	208.50	0.00	FALSE
MH_C1	210.750	209.200	0.00	209.20	0.00	FALSE
MH-36	201.000	197.900	0.00	197.90	0.00	FALSE
MH-40	212.000	199.300	0.00	199.30	0.00	FALSE

SW Middlesex Master Servicing Plan
2041 DWF
Gravity Main Table - Wardsville

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
WV_SW002	MH-40	MH4	300	75.77	0.004	0.00	0.04	0.00	0.40	0.00
CO-98	MH-73	W-8	75	95.42	0.073	0.01	0.29	0.20	3.50	0.00
WV_C004	MH_C3	MH_C2	75	185.52	0.016	0.00	0.11	0.10	2.70	0.00
WV_C002	T-5	MH_C2	75	118.91	0.026	0.01	0.16	0.10	2.70	0.00
0 (Polyline)-25	MH-36	MH_D3	75	87.60	0.002	0.00	0.05	0.20	2.80	0.00
WV_SW005	MH_C2	W-8	75	51.75	0.056	0.01	0.25	0.20	3.10	0.00
WV_C003	MH_C1	T-5	75	150.99	0.003	0.00	0.06	0.20	3.50	0.00
WV_A001	MH_A1	MH_A2	75	293.60	0.005	0.01	0.09	0.40	4.30	0.00
WV_SW003	MH5	MH-41	300	80.87	0.028	1.59	0.74	1.00	6.90	0.02
WV_A004	T-2	T-3	75	43.01	0.076	0.04	0.41	0.60	5.50	0.00
WV_SW004	MH4	MH5	300	99.22	0.018	1.53	0.62	1.20	7.60	0.02
WV_SW005	MH1	MH-56	300	114.79	0.007	1.26	0.42	1.60	8.70	0.03
WV_A005	T-3	MH_A3	75	76.64	0.033	0.04	0.31	0.90	6.90	0.01
WV_L001	MH_L1	MH_A3	75	123.84	0.063	0.06	0.44	1.00	7.10	0.01
WV_M001	MH_M1	MH-56	75	135.74	0.069	0.08	0.49	1.20	7.80	0.01
WV_F001	MH_F1	T-17	75	67.88	0.069	0.08	0.49	1.30	7.80	0.01
WV_SW001	MH-56	MH4	300	334.41	0.002	1.34	0.28	3.00	12.00	0.04
WV_K001	MH_K1	MH_B3	75	199.53	0.021	0.07	0.31	2.00	9.60	0.01
WV_H001	MH_H1	MH_D4	75	155.68	0.026	0.09	0.36	2.40	10.60	0.01
WV_A002	MH_A2	T-2	75	154.63	0.004	0.04	0.15	2.50	10.90	0.01
WV_A003	MH_A3	MH4	75	168.81	0.025	0.10	0.37	2.80	11.40	0.01
WV_B001	MH_B1	MH_B1.5	75	151.25	0.013	0.09	0.29	3.20	12.30	0.01
CO-3	MH-41	Main_Clarifier-1	150	11.88	0.02	1.59	0.72	7.40	18.30	0.03
WV_J001	MH_J1	MH_B2	75	174.35	0.012	0.11	0.30	4.30	14.10	0.01

SW Middlesex Master Servicing Plan
2041 WWF
Manhole Table - Wardsville

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH_A1	212.300	211.000	0.00	211.00	0.00	FALSE
MH_D4	195.700	193.500	1.29	193.55	0.05	FALSE
MH_D3	199.250	197.700	1.15	197.76	0.06	FALSE
MH_D2	199.700	198.280	0.14	198.30	0.02	FALSE
MH_G1	200.250	199.000	0.13	199.01	0.01	FALSE
MH_D1	200.000	198.500	0.90	198.54	0.04	FALSE
MH_F2	199.800	198.600	0.22	198.62	0.02	FALSE
MH_E2	200.400	199.000	0.10	199.01	0.01	FALSE
MH_E1	200.750	199.700	0.09	199.71	0.01	FALSE
MH_A2	211.100	209.600	0.05	209.61	0.01	FALSE
MH_F1	204.900	203.500	0.11	203.51	0.01	FALSE
MH1	201.750	200.500	1.42	200.53	0.03	FALSE
MH_B4	205.600	204.300	0.41	204.32	0.02	FALSE
MH_B3	208.200	206.900	0.40	206.92	0.02	FALSE
MH_B2	210.700	208.700	0.30	208.72	0.02	FALSE
MH_J1	212.000	210.750	0.16	210.76	0.01	FALSE
MH_B1.5	210.000	209.000	0.13	209.02	0.02	FALSE
MH_A3	204.700	203.200	0.15	203.21	0.01	FALSE
MH_B1	212.250	211.000	0.13	211.01	0.01	FALSE
MH_C5	205.400	203.800	1.01	203.83	0.03	FALSE
MH_C4	212.000	210.500	0.96	210.53	0.03	FALSE
MH_C3	210.000	208.500	0.00	208.50	0.00	FALSE
MH_C2	207.000	205.600	0.01	205.60	0.00	FALSE
MH_C1	210.750	209.200	0.00	209.20	0.00	FALSE
MH_L1	212.300	211.000	0.09	211.01	0.01	FALSE
MH4	200.500	199.000	1.81	199.03	0.03	FALSE
MH5	198.750	197.230	1.91	197.26	0.03	FALSE
MH_I1	198.750	197.800	0.08	197.81	0.01	FALSE
MH_H1	199.000	197.500	0.13	197.51	0.01	FALSE
MH_K1	211.750	211.000	0.09	211.01	0.01	FALSE
MH-36	201.000	197.900	0.00	197.90	0.00	FALSE
MH-38	195.500	194.600	1.91	194.64	0.04	FALSE
MH-40	212.000	199.300	0.00	199.30	0.00	FALSE
MH-41	195.500	194.928	1.91	194.97	0.04	FALSE
MH_M1	212.300	209.000	0.11	209.01	0.01	FALSE
MH-56	201.000	199.700	1.54	199.74	0.04	FALSE
Main_Clarifier-1	196.000	194.763	1.91	194.82	0.05	FALSE
MH-73	212.000	210.000	0.00	210.00	0.00	FALSE

SW Middlesex Master Servicing Plan
2041 WWF
Gravity Main Table - Wardsville

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
WV_SW002	MH-40	MH4	300	75.77	0.004	0.00	0.05	0.00	0.50	0.00
CO-98	MH-73	W-8	75	95.42	0.073	0.00	0.19	0.00	1.60	0.00
WV_C004	MH_C3	MH_C2	75	185.52	0.016	0.01	0.13	0.20	3.10	0.00
WV_C002	T-5	MH_C2	75	118.91	0.026	0.01	0.18	0.20	3.30	0.00
0 (Polyline)-25	MH-36	MH_D3	75	87.60	0.002	0.00	0.05	0.20	3.50	0.00
WV_SW005	MH_C2	W-8	75	51.75	0.056	0.01	0.26	0.30	3.90	0.00
WV_C003	MH_C1	T-5	75	150.99	0.003	0.00	0.07	0.30	4.10	0.00
WV_A001	MH_A1	MH_A2	75	293.60	0.005	0.01	0.10	0.50	5.20	0.00
WV_SW003	MH5	MH-41	300	80.87	0.028	1.91	0.78	1.20	7.60	0.02
WV_A004	T-2	T-3	75	43.01	0.076	0.06	0.46	0.90	6.60	0.00
WV_SW004	MH4	MH5	300	99.22	0.018	1.82	0.65	1.40	8.30	0.02
WV_SW005	MH1	MH-56	300	114.79	0.007	1.42	0.44	1.80	9.20	0.03
WV_A005	T-3	MH_A3	75	76.64	0.033	0.06	0.35	1.40	8.20	0.01
WV_L001	MH_L1	MH_A3	75	123.84	0.063	0.09	0.49	1.50	8.50	0.01
WV_M001	MH_M1	MH-56	75	135.74	0.069	0.12	0.55	1.80	9.40	0.01
WV_F001	MH_F1	T-17	75	67.88	0.069	0.12	0.56	1.90	9.40	0.01
WV_SW001	MH-56	MH4	300	334.41	0.002	1.55	0.29	3.50	12.80	0.04
WV_K001	MH_K1	MH_B3	75	199.53	0.021	0.10	0.34	2.90	11.70	0.01
WV_H001	MH_H1	MH_D4	75	155.68	0.026	0.13	0.41	3.50	12.80	0.01
WV_A002	MH_A2	T-2	75	154.63	0.004	0.06	0.16	3.70	13.20	0.01
WV_A003	MH_A3	MH4	75	168.81	0.025	0.15	0.42	4.10	13.70	0.01
WV_B001	MH_B1	MH_B1.5	75	151.25	0.013	0.13	0.32	4.80	14.80	0.01
CO-3	MH-41	Main_Clarifier-1	150	11.88	0.02	1.91	0.75	8.90	20.10	0.03
WV_J001	MH_J1	MH_B2	75	174.35	0.012	0.17	0.33	6.30	17.10	0.01

SW Middlesex Master Servicing Plan
2041 WWF_Peak
Manhole Table - Wardsville

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH_A1	212.300	211.000	0.00	211.01	0.01	FALSE
MH_D4	195.700	193.500	2.44	194.68	1.18	TRUE
MH_D3	199.250	197.700	1.88	197.94	0.24	TRUE
MH_D2	199.700	198.280	0.54	198.39	0.11	TRUE
MH_G1	200.250	199.000	0.53	199.03	0.03	FALSE
MH_D1	200.000	198.500	0.90	198.54	0.04	FALSE
MH_F2	199.800	198.600	0.89	198.63	0.03	FALSE
MH_E2	200.400	199.000	0.41	199.03	0.03	FALSE
MH_E1	200.750	199.700	0.37	199.73	0.03	FALSE
MH_A2	211.100	209.600	0.21	209.62	0.02	FALSE
MH_F1	204.900	203.500	0.46	203.52	0.02	FALSE
MH1	201.750	200.500	3.08	200.54	0.04	FALSE
MH_B4	205.600	204.300	1.62	204.34	0.04	FALSE
MH_B3	208.200	206.900	1.61	206.94	0.04	FALSE
MH_B2	210.700	208.700	1.20	208.74	0.04	FALSE
MH_J1	212.000	210.750	0.64	210.78	0.03	FALSE
MH_B1.5	210.000	209.000	0.53	209.04	0.04	FALSE
MH_A3	204.700	203.200	0.60	203.23	0.03	FALSE
MH_B1	212.250	211.000	0.51	211.02	0.02	FALSE
MH_C5	205.400	203.800	1.42	203.84	0.04	FALSE
MH_C4	212.000	210.500	1.22	210.54	0.04	FALSE
MH_C3	210.000	208.500	0.00	208.50	0.00	FALSE
MH_C2	207.000	205.600	0.05	205.61	0.01	FALSE
MH_C1	210.750	209.200	0.00	209.21	0.01	FALSE
MH_L1	212.300	211.000	0.34	211.02	0.02	FALSE
MH4	200.500	199.000	4.66	199.05	0.05	FALSE
MH5	198.750	197.230	5.03	197.28	0.05	FALSE
MH_I1	198.750	197.800	0.33	197.83	0.03	FALSE
MH_H1	199.000	197.500	0.52	197.52	0.02	FALSE
MH_K1	211.750	211.000	0.37	211.02	0.02	FALSE
MH-36	201.000	197.900	0.00	197.94	0.04	FALSE
MH-38	195.500	194.600	5.04	194.67	0.07	FALSE
MH-40	212.000	199.300	0.00	199.30	0.00	FALSE
MH-41	195.500	194.928	5.04	194.99	0.06	FALSE
MH_M1	212.300	209.000	0.45	209.02	0.02	FALSE
MH-56	201.000	199.700	3.55	199.76	0.06	FALSE
Main_Clarifier-1	196.000	194.763	5.04	194.91	0.14	FALSE
MH-73	212.000	210.000	0.00	210.00	0.00	FALSE

SW Middlesex Master Servicing Plan
2041 WWF_Peak
Gravity Main Table - Wardsville

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
WV_D005	MH_D3	T-12	75	53.97	0.003	1.88	0.43	148.90	(N/A)	0.00
CO-4	Main_Clarifier-1	T-21	100	11.46	0.004	5.04	0.64	147.70	(N/A)	0.00
WV_D006	MH_D4	MPS_WetWell	75	200.85	0.005	2.46	0.56	145.60	(N/A)	0.00
WV_D001	T-20	MH_D3	75	119.97	0.005	1.46	0.33	90.40	74.50	0.00
CO-6	T-21	MH-38	100	8.39	0.013	5.04	0.86	84.10	70.20	0.01
WV_SW004	MH-38	MPS_WetWell	100	103.42	0.02	5.05	1.01	68.60	60.80	0.01
WV_D002	T-15	MH_D4	75	131.59	0.017	1.91	0.74	61.50	56.70	0.01
WV_C001	T-7	MH1	75	61.83	0.011	1.44	0.59	56.40	53.70	0.01
WV_D004	MH_D1	T-20	75	52.73	0.005	0.91	0.38	54.60	52.70	0.04
WV_D003	T-12	T-15	75	67.95	0.027	1.89	0.89	47.80	48.70	0.01
WV_B002	MH_B1.5	MH_B2	75	132.95	0.002	0.54	0.25	47.60	48.50	0.04
WV_B004	MH_B3	MH_B4	75	114.22	0.023	1.62	0.80	44.90	46.90	0.04
WV_D007	MH_D2	T-20	75	10.54	0.003	0.54	0.12	40.30	44.10	0.01
WV_F002	T-17	MH_F2	75	80.29	0.002	0.48	0.26	39.80	43.90	0.01
WV_B005	MH_B4	MH1	75	119.90	0.03	1.64	0.89	39.10	43.40	0.01
WV_B003	MH_B2	MH_B3	75	97.59	0.018	1.21	0.68	37.30	42.20	0.01
WV_E001	MH_E1	MH_E2	75	272.82	0.003	0.41	0.25	33.40	39.70	0.06
WV_C005	MH_C4	MH_C5	75	270.44	0.025	1.25	0.77	33.10	39.60	0.02
WV_I001	MH_I1	MH5	75	221.77	0.003	0.36	0.24	29.40	37.10	0.02
WV_C006	MH_C5	T-7	75	61.97	0.042	1.43	0.97	29.10	36.90	0.02
WV_SW007	MH_F2	PSD	75	57.03	0.017	0.90	0.61	28.80	36.70	0.02
WV_G001	MH_G1	MH_D2	75	115.16	0.006	0.54	0.37	28.50	36.50	0.02
WV_SW006	MH_E2	MH_F2	75	95.86	0.004	0.42	0.30	26.90	35.40	0.05
WV_J001	MH_J1	MH_B2	75	174.35	0.012	0.66	0.49	25.40	34.30	0.03

SW Middlesex Master Servicing Plan
2021 DWF
Manhole Table - Glencoe

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH001	221.285	220.322	0.26	220.34	0.01	FALSE
MH001A	222.504	219.919	0.00	219.92	0.00	FALSE
MH002	222.580	219.773	0.28	219.79	0.01	FALSE
MH002A	222.700	220.090	0.00	220.09	0.00	FALSE
MH002B	222.230	220.310	0.00	220.31	0.00	FALSE
MH003	221.285	219.654	0.28	219.67	0.02	FALSE
MH004	221.894	219.331	0.28	219.35	0.02	FALSE
MH005	223.114	219.298	0.00	219.30	0.00	FALSE
MH006	223.114	218.971	0.45	218.99	0.02	FALSE
MH006A	221.894	219.243	0.16	219.26	0.01	FALSE
MH006B	222.199	219.608	0.07	219.62	0.01	FALSE
MH006C	221.285	219.610	0.08	219.62	0.01	FALSE
MH007	224.942	218.749	0.45	218.77	0.02	FALSE
MH008	224.638	218.639	0.45	218.66	0.02	FALSE
MH009	221.483	218.401	0.46	218.42	0.02	FALSE
MH011	221.285	219.331	0.06	219.77	0.44	FALSE
MH011A	221.894	219.547	0.05	220.01	0.46	FALSE
MH012	222.504	219.755	0.07	219.76	0.01	FALSE
MH013	222.504	219.395	0.14	219.41	0.01	FALSE
MH014	222.199	219.199	0.14	219.21	0.01	FALSE
MH015	221.285	218.285	0.15	218.31	0.02	FALSE
MH016	221.483	218.023	0.77	218.05	0.03	FALSE
MH016A	221.587	218.401	0.15	218.41	0.01	FALSE
MH017	222.199	219.992	0.12	220.00	0.01	FALSE
MH018	222.199	219.563	0.12	219.57	0.01	FALSE
MH019	222.504	219.941	0.00	219.94	0.00	FALSE
MH020	222.504	219.261	0.13	219.27	0.01	FALSE
MH021	222.504	218.792	0.13	218.80	0.01	FALSE
MH022	222.504	218.685	0.13	218.70	0.01	FALSE
MH023	223.779	219.238	0.15	219.25	0.01	FALSE
MH024	223.650	218.359	0.30	218.37	0.02	FALSE
MH025	221.434	217.713	1.08	217.75	0.03	FALSE
MH026	221.285	219.264	0.12	219.27	0.01	FALSE
MH027	221.894	218.773	0.12	218.78	0.01	FALSE
MH028	221.742	217.521	1.22	217.56	0.04	FALSE
MH029	222.493	220.221	0.12	220.23	0.01	FALSE
MH030	221.884	219.767	0.12	219.78	0.01	FALSE
MH031	222.471	220.392	0.19	220.40	0.01	FALSE
MH032	222.541	219.468	0.32	219.49	0.02	FALSE
MH032A	222.251	219.392	0.32	219.41	0.02	FALSE
MH033	221.611	219.151	0.33	219.17	0.02	FALSE
MH034	221.007	218.935	0.52	218.96	0.02	FALSE
MH035	220.748	218.660	0.52	218.68	0.02	FALSE
MH036	221.154	218.407	0.53	218.43	0.02	FALSE
MH037	222.330	219.953	0.12	219.96	0.01	FALSE
MH038	221.419	219.346	0.13	219.36	0.01	FALSE
MH039	221.139	218.191	0.66	218.22	0.02	FALSE
MH040	220.989	217.795	0.67	217.82	0.03	FALSE

MH041	221.404	217.274	2.04	217.32	0.04	FALSE
MH041A	221.648	219.599	0.14	219.61	0.01	FALSE
MH042	222.797	219.974	0.07	219.99	0.01	FALSE
MH043	222.166	219.919	0.08	219.93	0.01	FALSE
MH044	222.339	219.825	0.08	219.83	0.01	FALSE
MH045	222.886	219.992	0.14	220.00	0.01	FALSE
MH046	222.346	219.264	0.22	219.28	0.02	FALSE
MH047	222.193	218.938	0.23	218.95	0.02	FALSE
MH048	221.468	219.761	0.16	219.77	0.01	FALSE
MH049	222.199	219.169	0.17	219.18	0.01	FALSE
MH050	221.742	218.913	0.17	218.93	0.01	FALSE
MH051	221.440	218.664	0.17	218.68	0.01	FALSE
MH052	221.410	218.603	0.17	218.62	0.01	FALSE
MH053	221.181	218.316	0.18	218.33	0.01	FALSE
MH054	221.849	219.739	0.10	219.75	0.01	FALSE
MH055	221.986	218.965	0.17	218.98	0.01	FALSE
MH055A	221.837	219.063	0.06	219.07	0.01	FALSE
MH055B	221.407	219.322	0.06	219.33	0.01	FALSE
MH055C	221.407	219.547	0.05	219.56	0.01	FALSE
MH056	221.102	219.246	0.10	219.26	0.01	FALSE
MH057	221.684	218.404	0.28	218.42	0.02	FALSE
MH058	221.251	217.920	0.47	217.94	0.02	FALSE
MH059	222.000	219.925	0.14	219.94	0.01	FALSE
MH059A	222.000	220.100	0.14	220.11	0.01	FALSE
MH060	221.833	219.322	0.29	219.34	0.02	FALSE
MH060A	221.071	219.426	0.14	219.44	0.01	FALSE
MH061	221.500	219.057	0.29	219.07	0.02	FALSE
MH062	221.041	218.731	0.30	218.75	0.02	FALSE
MH063	221.011	217.258	1.18	217.29	0.03	FALSE
MH063A	221.285	219.230	0.10	219.24	0.01	FALSE
MH064	221.578	218.578	0.10	218.59	0.01	FALSE
MH065	221.102	218.475	0.28	218.49	0.02	FALSE
MH065A	221.087	218.907	0.17	218.92	0.01	FALSE
MH065B	221.410	219.316	0.17	219.33	0.01	FALSE
MH065C	221.675	219.758	0.16	219.77	0.01	FALSE
MH066	221.142	217.609	0.77	217.64	0.03	FALSE
MH067	222.574	219.200	0.00	219.20	0.00	FALSE
MH067A	221.599	219.328	0.00	219.33	0.00	FALSE
MH068	222.574	219.584	0.07	220.00	0.42	FALSE
MH069	222.574	219.081	0.08	219.59	0.51	FALSE
MH070	222.574	218.792	0.08	218.80	0.01	FALSE
MH071	222.324	220.184	0.07	220.19	0.01	FALSE
MH072	222.251	219.743	0.08	219.75	0.01	FALSE
MH073	222.218	220.066	0.00	220.07	0.00	FALSE
MH074	222.422	218.563	0.17	218.58	0.01	FALSE
MH075	222.007	218.228	0.32	218.25	0.02	FALSE
MH075A	222.172	220.340	0.14	220.35	0.01	FALSE
MH076B	221.578	219.005	0.10	219.28	0.27	FALSE
MH077	221.274	218.304	0.10	218.31	0.01	FALSE
MH079	221.209	219.151	0.10	219.16	0.01	FALSE
MH079A	221.344	219.377	0.10	219.39	0.01	FALSE

MH080	221.212	216.887	1.29	216.92	0.04	FALSE
MH081	221.206	216.621	1.40	216.66	0.04	FALSE
MH082	221.274	220.008	0.14	220.02	0.01	FALSE
MH083	221.274	219.529	0.29	219.55	0.02	FALSE
MH083A	221.274	219.404	0.29	219.42	0.01	FALSE
MH083B	221.274	219.791	0.14	219.80	0.01	FALSE
MH084	221.274	216.262	1.71	216.30	0.03	FALSE
MH085	221.142	217.024	2.04	217.07	0.04	FALSE
MH086	221.687	216.853	2.28	216.90	0.05	FALSE
MH087	221.501	215.951	4.33	216.01	0.06	FALSE
MH088	220.779	215.750	4.33	215.82	0.07	FALSE
MH089	220.210	219.600	0.14	219.61	0.01	FALSE
MH090	220.210	218.825	0.14	218.84	0.01	FALSE
MH091	220.194	215.655	4.48	215.72	0.06	FALSE
MH092	220.837	218.639	0.16	218.65	0.01	FALSE
MH093	220.873	218.447	0.16	218.46	0.01	FALSE
MH094	220.029	217.758	0.17	217.77	0.01	FALSE
MH095	221.874	218.133	0.16	218.15	0.01	FALSE
MH096	221.386	217.710	0.16	217.72	0.01	FALSE
MH097	219.487	217.341	0.17	217.35	0.01	FALSE
MH098	219.166	216.865	0.35	216.88	0.02	FALSE
MH099	219.706	215.558	4.84	215.62	0.06	FALSE
MH100	218.649	215.415	4.84	215.48	0.06	FALSE
MH101	222.188	219.188	0.16	219.96	0.77	FALSE
MH102	221.578	218.578	0.17	219.09	0.51	FALSE
MH103	220.646	214.580	0.07	219.40	4.82	FALSE
MH104	221.874	218.679	0.24	218.69	0.02	FALSE
MH105	221.274	218.340	0.32	218.37	0.03	FALSE
MH105A	221.274	218.996	0.06	219.00	0.01	FALSE
MH106	221.274	218.274	0.06	218.28	0.01	FALSE
MH107	220.359	217.359	0.39	217.57	0.21	FALSE
MH108	221.274	218.274	0.32	218.29	0.01	FALSE
MH108A	221.274	219.274	0.06	219.28	0.01	FALSE
MH111	220.703	218.465	0.09	218.47	0.01	FALSE
MH111A	221.172	218.673	0.08	218.68	0.01	FALSE
MH112	220.215	218.212	0.15	218.22	0.01	FALSE
MH113	221.071	219.230	0.16	219.24	0.01	FALSE
MH114	221.011	218.825	0.17	218.84	0.01	FALSE
MH115	220.614	218.782	0.06	218.79	0.01	FALSE
MH116	220.553	218.094	0.13	218.11	0.01	FALSE
MH117	220.523	217.804	0.55	217.83	0.02	FALSE
MH117A	221.000	218.359	0.24	218.37	0.01	FALSE
MH117B	221.000	219.035	0.06	219.04	0.01	FALSE
MH117C	221.000	219.000	0.16	219.01	0.01	FALSE
MH118	220.000	217.606	0.55	217.63	0.02	FALSE
MH119	220.492	217.871	0.30	217.89	0.02	FALSE
MH120	220.157	217.636	0.30	217.65	0.02	FALSE
MH121	220.242	217.841	0.19	217.85	0.01	FALSE
MH122	220.047	217.246	0.50	217.27	0.02	FALSE
MH123	219.189	216.880	0.57	216.91	0.03	FALSE
MH124	220.102	218.203	0.06	218.21	0.01	FALSE

MH125	220.370	217.402	0.72	217.43	0.03	FALSE
MH125A	221.091	217.237	0.72	217.26	0.02	FALSE
MH126	220.227	218.206	0.08	218.22	0.01	FALSE
MH127	220.520	217.795	0.15	217.81	0.01	FALSE
MH128	220.148	217.542	0.16	217.56	0.01	FALSE
MH129	219.170	216.481	0.79	216.51	0.03	FALSE
MH130	219.852	215.942	1.68	215.98	0.04	FALSE
MH132	220.155	217.441	0.39	217.46	0.02	FALSE
MH132A	220.155	217.307	0.39	217.33	0.02	FALSE
MH133	220.155	217.149	0.46	217.17	0.02	FALSE
MH134	220.155	217.008	0.46	217.03	0.02	FALSE
MH135	220.000	219.362	0.19	219.38	0.01	FALSE
MH136	220.000	219.105	0.19	219.12	0.01	FALSE
MH137	220.000	218.697	0.19	218.71	0.01	FALSE
MH138	220.000	218.331	0.20	218.35	0.02	FALSE
MH139	220.000	217.999	0.20	218.01	0.01	FALSE
MH140	219.301	217.109	0.21	217.12	0.01	FALSE
MH143	221.000	216.957	0.06	216.97	0.01	FALSE
MH145	220.155	215.814	2.21	215.86	0.05	FALSE
MH146	220.478	215.768	2.21	215.81	0.04	FALSE
MH147	219.939	215.597	2.22	215.64	0.04	FALSE
MH148	219.686	217.500	0.14	217.51	0.01	FALSE
MH149	219.686	217.274	0.14	217.29	0.01	FALSE
MH150	219.686	215.478	2.36	215.53	0.05	FALSE
MH151	219.000	217.920	0.09	217.93	0.01	FALSE
MH153	219.573	217.703	0.10	217.71	0.01	FALSE
MH153A	220.000	217.730	0.10	217.74	0.01	FALSE
MH154	219.573	217.500	0.10	217.51	0.01	FALSE
MH155	219.573	217.368	0.11	217.38	0.01	FALSE
MH156	219.573	216.883	0.28	216.90	0.02	FALSE
MH157	219.573	216.381	0.29	216.40	0.02	FALSE
MH158	219.573	215.463	2.66	215.51	0.04	FALSE
MH159	220.020	217.790	0.10	217.80	0.01	FALSE
MH160	219.989	217.481	0.10	217.49	0.01	FALSE
MH161	220.127	217.246	0.11	217.26	0.01	FALSE
MH162	219.758	216.990	0.11	217.00	0.01	FALSE
MH163	220.578	216.682	0.29	216.70	0.02	FALSE
MH164	219.389	216.323	0.30	216.34	0.02	FALSE
MH165	219.151	215.254	7.81	215.35	0.09	FALSE
MH170	221.000	219.150	0.09	219.16	0.01	FALSE
MH171	221.000	219.100	0.19	219.12	0.02	FALSE
MH172	220.000	219.300	0.09	219.31	0.01	FALSE
MH173	220.492	217.962	0.10	217.98	0.01	FALSE
MH175	222.000	218.429	0.10	218.44	0.01	FALSE
MH176	222.000	218.560	0.09	218.57	0.01	FALSE
MH177	222.000	218.650	0.09	218.66	0.01	FALSE
MH189	219.000	217.970	0.10	217.98	0.01	FALSE
MH190	220.000	218.100	0.09	218.11	0.01	FALSE
MH-66	221.285	220.364	0.19	220.38	0.02	FALSE
MH-68	221.285	220.010	0.07	220.02	0.01	FALSE

SW Middlesex Master Servicing Plan
2021 DWF
Gravity Main Table - Glencoe

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
SS4170L.B	MH015	MH016	200	117.177	0.000	0.15	0.09	2.40	10.60	0.00
CO-82(1)	MH165	W-11	600	37.974	0.000	7.81	0.24	6.60	17.40	0.00
SS4061C	MH042	MH043	200	47.625	0.001	0.08	0.1	0.70	5.90	0.00
SS4035	MH043	MH044	200	89.208	0.001	0.08	0.1	0.80	6.20	0.00
CO-8	MH173	MH119	200	82.858	0.001	0.11	0.11	1.00	7.00	0.00
SS4008	MH064	MH065	200	94.767	0.001	0.11	0.11	1.00	7.10	0.00
SS4041	MH028	MH041	350	115.841	0.001	1.22	0.23	2.20	10.30	0.00
SS4146C	MH105	MH108	250	115.615	0.001	0.32	0.12	2.30	10.40	0.00
SS4174L.B	MH-66	MH001	200	63.827	0.001	0.19	0.11	2.30	10.50	0.01
SS4112	MH123	MH129	250	123.6	0.001	0.58	0.2	2.50	10.90	0.01
SS4096	MH085	MH086	400	117.677	0.001	2.05	0.27	2.60	11.10	0.01
SS4042	MH041	MH085	400	114.495	0.001	2.04	0.26	2.70	11.20	0.01
SS4095	MH086	MH087	400	113.838	0.001	2.29	0.27	3.00	11.90	0.01
SS4027	MH091	MH099	450	76.618	0.001	4.49	0.32	4.40	14.30	0.01
CO-32	MH088	MH091	450	86.616	0.001	4.34	0.3	4.60	14.60	0.01
SS4110	MH145	MH146	300	33.49	0.001	2.21	0.28	6.20	16.90	0.01
SS4031	MH162	MH163	250	124.112	0.002	0.12	0.15	0.40	4.60	0.01
CO-39	MH051	MH052	250	25.29	0.002	0.17	0.16	0.60	5.60	0.01
SS4045	MH189	MH159	200	74.801	0.002	0.10	0.14	0.60	5.60	0.01
SS4195LO.B	MH153A	MH153	200	11.748	0.002	0.10	0.14	0.60	5.60	0.01
SS4195L.B	MH153	MH154	200	83.938	0.002	0.10	0.14	0.60	5.70	0.01
CO-79	MH177	MH176	200	44.684	0.002	0.09	0.13	0.60	5.70	0.01
SS4121	MH172	MH171	200	100.257	0.002	0.10	0.13	0.70	5.80	0.01
SS4120	MH170	MH171	200	30.51	0.002	0.09	0.12	0.70	6.00	0.01

SW Middlesex Master Servicing Plan
2021 WWF
Manhole Table - Glencoe

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH001	221.285	220.322	0.65	220.34	0.02	FALSE
MH001A	222.504	219.919	0.00	219.92	0.00	FALSE
MH002	222.580	219.773	0.68	219.79	0.02	FALSE
MH002A	222.700	220.090	0.01	220.09	0.00	FALSE
MH002B	222.230	220.310	0.00	220.31	0.00	FALSE
MH003	221.285	219.654	0.68	219.68	0.03	FALSE
MH004	221.894	219.331	0.69	219.36	0.03	FALSE
MH005	223.114	219.298	0.00	219.30	0.00	FALSE
MH006	223.114	218.971	1.10	219.00	0.03	FALSE
MH006A	221.894	219.243	0.38	219.26	0.02	FALSE
MH006B	222.199	219.608	0.18	219.62	0.01	FALSE
MH006C	221.285	219.610	0.19	219.62	0.01	FALSE
MH007	224.942	218.749	1.11	218.77	0.03	FALSE
MH008	224.638	218.639	1.11	218.67	0.03	FALSE
MH009	221.483	218.401	1.12	218.43	0.03	FALSE
MH011	221.285	219.331	0.14	219.77	0.44	FALSE
MH011A	221.894	219.547	0.13	220.01	0.47	FALSE
MH012	222.504	219.755	0.18	219.77	0.01	FALSE
MH013	222.504	219.395	0.34	219.41	0.02	FALSE
MH014	222.199	219.199	0.34	219.21	0.02	FALSE
MH015	221.285	218.285	0.36	218.32	0.03	FALSE
MH016	221.483	218.023	1.89	218.06	0.04	FALSE
MH016A	221.587	218.401	0.38	218.42	0.02	FALSE
MH017	222.199	219.992	0.30	220.01	0.02	FALSE
MH018	222.199	219.563	0.31	219.58	0.02	FALSE
MH019	222.504	219.941	0.00	219.94	0.00	FALSE
MH020	222.504	219.261	0.32	219.28	0.02	FALSE
MH021	222.504	218.792	0.33	218.81	0.02	FALSE
MH022	222.504	218.685	0.33	218.70	0.02	FALSE
MH023	223.779	219.238	0.38	219.25	0.02	FALSE
MH024	223.650	218.359	0.73	218.38	0.02	FALSE
MH025	221.434	217.713	2.65	217.76	0.05	FALSE
MH026	221.285	219.264	0.30	219.28	0.02	FALSE
MH027	221.894	218.773	0.31	218.79	0.02	FALSE
MH028	221.742	217.521	2.99	217.58	0.06	FALSE
MH029	222.493	220.221	0.30	220.24	0.02	FALSE
MH030	221.884	219.767	0.31	219.79	0.02	FALSE
MH031	222.471	220.392	0.47	220.41	0.02	FALSE
MH032	222.541	219.468	0.79	219.50	0.03	FALSE
MH032A	222.251	219.392	0.80	219.42	0.03	FALSE
MH033	221.611	219.151	0.80	219.18	0.03	FALSE
MH034	221.007	218.935	1.27	218.97	0.03	FALSE
MH035	220.748	218.660	1.29	218.69	0.03	FALSE
MH036	221.154	218.407	1.30	218.44	0.04	FALSE
MH037	222.330	219.953	0.30	219.97	0.02	FALSE
MH038	221.419	219.346	0.31	219.36	0.02	FALSE
MH039	221.139	218.191	1.63	218.23	0.04	FALSE
MH040	220.989	217.795	1.64	217.83	0.04	FALSE

MH041	221.404	217.274	5.00	217.34	0.07	FALSE
MH041A	221.648	219.599	0.34	219.62	0.02	FALSE
MH042	222.797	219.974	0.18	219.99	0.02	FALSE
MH043	222.166	219.919	0.19	219.94	0.02	FALSE
MH044	222.339	219.825	0.20	219.84	0.01	FALSE
MH045	222.886	219.992	0.34	220.01	0.02	FALSE
MH046	222.346	219.264	0.55	219.29	0.02	FALSE
MH047	222.193	218.938	0.57	218.96	0.02	FALSE
MH048	221.468	219.761	0.40	219.78	0.02	FALSE
MH049	222.199	219.169	0.41	219.19	0.02	FALSE
MH050	221.742	218.913	0.42	218.93	0.02	FALSE
MH051	221.440	218.664	0.43	218.69	0.02	FALSE
MH052	221.410	218.603	0.43	218.62	0.02	FALSE
MH053	221.181	218.316	0.44	218.34	0.02	FALSE
MH054	221.849	219.739	0.25	219.75	0.01	FALSE
MH055	221.986	218.965	0.42	218.98	0.02	FALSE
MH055A	221.837	219.063	0.15	219.08	0.01	FALSE
MH055B	221.407	219.322	0.14	219.33	0.01	FALSE
MH055C	221.407	219.547	0.13	219.56	0.01	FALSE
MH056	221.102	219.246	0.25	219.26	0.01	FALSE
MH057	221.684	218.404	0.69	218.43	0.03	FALSE
MH058	221.251	217.920	1.16	217.95	0.03	FALSE
MH059	222.000	219.925	0.35	219.94	0.02	FALSE
MH059A	222.000	220.100	0.34	220.12	0.02	FALSE
MH060	221.833	219.322	0.71	219.35	0.03	FALSE
MH060A	221.071	219.426	0.34	219.45	0.02	FALSE
MH061	221.500	219.057	0.72	219.08	0.02	FALSE
MH062	221.041	218.731	0.73	218.76	0.03	FALSE
MH063	221.011	217.258	2.91	217.31	0.05	FALSE
MH063A	221.285	219.230	0.23	219.24	0.01	FALSE
MH064	221.578	218.578	0.25	218.60	0.02	FALSE
MH065	221.102	218.475	0.70	218.50	0.03	FALSE
MH065A	221.087	218.907	0.42	218.93	0.02	FALSE
MH065B	221.410	219.316	0.41	219.34	0.02	FALSE
MH065C	221.675	219.758	0.40	219.78	0.02	FALSE
MH066	221.142	217.609	1.90	217.65	0.04	FALSE
MH067	222.574	219.200	0.00	219.20	0.00	FALSE
MH067A	221.599	219.328	0.00	219.33	0.00	FALSE
MH068	222.574	219.584	0.18	220.01	0.42	FALSE
MH069	222.574	219.081	0.19	219.60	0.52	FALSE
MH070	222.574	218.792	0.20	218.81	0.01	FALSE
MH071	222.324	220.184	0.18	220.20	0.01	FALSE
MH072	222.251	219.743	0.19	219.76	0.01	FALSE
MH073	222.218	220.066	0.00	220.07	0.00	FALSE
MH074	222.422	218.563	0.42	218.58	0.02	FALSE
MH075	222.007	218.228	0.80	218.26	0.03	FALSE
MH075A	222.172	220.340	0.35	220.36	0.02	FALSE
MH076B	221.578	219.005	0.23	219.28	0.28	FALSE
MH077	221.274	218.304	0.24	218.32	0.01	FALSE
MH079	221.209	219.151	0.24	219.17	0.01	FALSE
MH079A	221.344	219.377	0.23	219.39	0.01	FALSE

MH080	221.212	216.887	3.17	216.94	0.06	FALSE
MH081	221.206	216.621	3.44	216.68	0.06	FALSE
MH082	221.274	220.008	0.35	220.02	0.02	FALSE
MH083	221.274	219.529	0.72	219.55	0.02	FALSE
MH083A	221.274	219.404	0.72	219.43	0.02	FALSE
MH083B	221.274	219.791	0.35	219.81	0.02	FALSE
MH084	221.274	216.262	4.19	216.31	0.05	FALSE
MH085	221.142	217.024	5.02	217.09	0.07	FALSE
MH086	221.687	216.853	5.61	216.93	0.07	FALSE
MH087	221.501	215.951	10.62	216.04	0.09	FALSE
MH088	220.779	215.750	10.64	215.85	0.10	FALSE
MH089	220.210	219.600	0.34	219.62	0.02	FALSE
MH090	220.210	218.825	0.35	218.84	0.02	FALSE
MH091	220.194	215.655	11.01	215.76	0.10	FALSE
MH092	220.837	218.639	0.39	218.66	0.02	FALSE
MH093	220.873	218.447	0.40	218.47	0.02	FALSE
MH094	220.029	217.758	0.41	217.78	0.02	FALSE
MH095	221.874	218.133	0.39	218.15	0.02	FALSE
MH096	221.386	217.710	0.40	217.73	0.02	FALSE
MH097	219.487	217.341	0.41	217.36	0.02	FALSE
MH098	219.166	216.865	0.85	216.89	0.03	FALSE
MH099	219.706	215.558	11.88	215.65	0.10	FALSE
MH100	218.649	215.415	11.89	215.51	0.10	FALSE
MH101	222.188	219.188	0.40	219.96	0.77	FALSE
MH102	221.578	218.578	0.41	219.10	0.52	FALSE
MH103	220.646	214.580	0.17	219.41	4.83	FALSE
MH104	221.874	218.679	0.60	218.70	0.02	FALSE
MH105	221.274	218.340	0.78	218.38	0.04	FALSE
MH105A	221.274	218.996	0.15	219.01	0.01	FALSE
MH106	221.274	218.274	0.14	218.28	0.01	FALSE
MH107	220.359	217.359	0.95	217.58	0.22	FALSE
MH108	221.274	218.274	0.79	218.30	0.02	FALSE
MH108A	221.274	219.274	0.14	219.29	0.01	FALSE
MH111	220.703	218.465	0.21	218.48	0.01	FALSE
MH111A	221.172	218.673	0.21	218.69	0.01	FALSE
MH112	220.215	218.212	0.38	218.23	0.02	FALSE
MH113	221.071	219.230	0.40	219.25	0.02	FALSE
MH114	221.011	218.825	0.41	218.85	0.02	FALSE
MH115	220.614	218.782	0.16	218.79	0.01	FALSE
MH116	220.553	218.094	0.33	218.11	0.02	FALSE
MH117	220.523	217.804	1.35	217.84	0.03	FALSE
MH117A	221.000	218.359	0.58	218.38	0.02	FALSE
MH117B	221.000	219.035	0.16	219.05	0.01	FALSE
MH117C	221.000	219.000	0.40	219.02	0.02	FALSE
MH118	220.000	217.606	1.36	217.64	0.03	FALSE
MH119	220.492	217.871	0.74	217.90	0.03	FALSE
MH120	220.157	217.636	0.75	217.66	0.02	FALSE
MH121	220.242	217.841	0.46	217.86	0.02	FALSE
MH122	220.047	217.246	1.22	217.28	0.03	FALSE
MH123	219.189	216.880	1.40	216.92	0.04	FALSE
MH124	220.102	218.203	0.16	218.21	0.01	FALSE

MH125	220.370	217.402	1.76	217.44	0.04	FALSE
MH125A	221.091	217.237	1.76	217.27	0.03	FALSE
MH126	220.227	218.206	0.21	218.22	0.01	FALSE
MH127	220.520	217.795	0.38	217.81	0.02	FALSE
MH128	220.148	217.542	0.38	217.56	0.02	FALSE
MH129	219.170	216.481	1.94	216.52	0.04	FALSE
MH130	219.852	215.942	4.12	216.01	0.06	FALSE
MH132	220.155	217.441	0.95	217.47	0.03	FALSE
MH132A	220.155	217.307	0.96	217.34	0.03	FALSE
MH133	220.155	217.149	1.12	217.18	0.03	FALSE
MH134	220.155	217.008	1.13	217.05	0.04	FALSE
MH135	220.000	219.362	0.46	219.38	0.02	FALSE
MH136	220.000	219.105	0.46	219.13	0.02	FALSE
MH137	220.000	218.697	0.48	218.72	0.02	FALSE
MH138	220.000	218.331	0.49	218.35	0.02	FALSE
MH139	220.000	217.999	0.50	218.02	0.02	FALSE
MH140	219.301	217.109	0.51	217.13	0.02	FALSE
MH143	221.000	216.957	0.16	216.97	0.01	FALSE
MH145	220.155	215.814	5.43	215.89	0.08	FALSE
MH146	220.478	215.768	5.44	215.83	0.06	FALSE
MH147	219.939	215.597	5.44	215.66	0.06	FALSE
MH148	219.686	217.500	0.34	217.52	0.02	FALSE
MH149	219.686	217.274	0.35	217.29	0.02	FALSE
MH150	219.686	215.478	5.80	215.55	0.07	FALSE
MH151	219.000	217.920	0.22	217.94	0.02	FALSE
MH153	219.573	217.703	0.24	217.72	0.02	FALSE
MH153A	220.000	217.730	0.24	217.75	0.02	FALSE
MH154	219.573	217.500	0.25	217.52	0.02	FALSE
MH155	219.573	217.368	0.26	217.38	0.02	FALSE
MH156	219.573	216.883	0.70	216.91	0.03	FALSE
MH157	219.573	216.381	0.71	216.41	0.03	FALSE
MH158	219.573	215.463	6.53	215.53	0.07	FALSE
MH159	220.020	217.790	0.24	217.81	0.02	FALSE
MH160	219.989	217.481	0.25	217.50	0.02	FALSE
MH161	220.127	217.246	0.26	217.26	0.02	FALSE
MH162	219.758	216.990	0.27	217.01	0.02	FALSE
MH163	220.578	216.682	0.71	216.71	0.03	FALSE
MH164	219.389	216.323	0.73	216.35	0.03	FALSE
MH165	219.151	215.254	19.17	215.39	0.14	FALSE
MH170	221.000	219.150	0.22	219.17	0.02	FALSE
MH171	221.000	219.100	0.46	219.12	0.02	FALSE
MH172	220.000	219.300	0.22	219.32	0.02	FALSE
MH173	220.492	217.962	0.25	217.98	0.02	FALSE
MH175	222.000	218.429	0.24	218.44	0.01	FALSE
MH176	222.000	218.560	0.23	218.58	0.02	FALSE
MH177	222.000	218.650	0.22	218.67	0.02	FALSE
MH189	219.000	217.970	0.23	217.99	0.02	FALSE
MH190	220.000	218.100	0.22	218.12	0.02	FALSE
MH-66	221.285	220.364	0.47	220.40	0.03	FALSE
MH-68	221.285	220.010	0.18	220.02	0.01	FALSE

SW Middlesex Master Servicing Plan
2021 WWF
Gravity Main Table - Glencoe

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
SS4053	MH019	MH020	200	27.44	0.025	0.00	0.12	0.00	0.60	0.00
SS4074	MH067	MH070	250	38.80	0.011	0.00	0.09	0.00	0.70	0.00
CO-15	MH001A	MH002	200	34.13	0.004	0.00	0.06	0.00	1.10	0.00
CO-80	MH005	MH006	200	48.73	0.007	0.01	0.08	0.00	1.20	0.00
SS4054	MH002B	MH002A	200	56.60	0.004	0.01	0.07	0.00	1.40	0.00
SS4075	MH073	MH074	200	93.37	0.005	0.01	0.10	0.00	1.70	0.00
CO-14	MH002A	MH002	200	58.90	0.005	0.01	0.10	0.10	1.80	0.00
SS4073	MH067A	MH066	200	128.74	0.006	0.02	0.11	0.10	1.90	0.00
SS4107	MH117B	MH117A	200	27.69	0.024	0.16	0.36	0.30	4.10	0.01
CO-30	MH044	MH046	250	85.72	0.007	0.21	0.24	0.40	4.80	0.01
SS4185L.B	MH106	MH107	200	69.42	0.01	0.15	0.27	0.40	4.80	0.01
SS4150C	MH055C	MH055B	250	78.63	0.003	0.14	0.16	0.40	4.80	0.01
CO-28	MH055	MH055A	250	29.16	0.003	0.16	0.18	0.50	4.90	0.01
SS4149C	MH055B	MH055A	250	91.82	0.003	0.15	0.17	0.50	5.00	0.01
SS4066	MH054	MH055	250	116.37	0.007	0.27	0.26	0.50	5.30	0.01
CO-37	MH070	MH074	250	61.01	0.004	0.21	0.20	0.60	5.50	0.01
SS4005	MH103	MH104	200	92.93	0.008	0.18	0.26	0.60	5.70	0.01
SS4011	MH105A	MH105	200	104.06	0.006	0.16	0.23	0.60	5.70	0.01
CO-9	MH115	MH116	200	107.37	0.006	0.17	0.23	0.60	5.70	0.01
CO-58	MH011	MH013	200	72.38	0.005	0.15	0.21	0.60	5.80	0.01
SS4079	MH077	MH081	200	115.62	0.015	0.26	0.35	0.60	5.80	0.01
CO-62	MH012	MH013	200	49.39	0.007	0.19	0.25	0.70	5.80	0.01
SS4014	MH124	MH123	200	111.77	0.006	0.17	0.23	0.70	5.90	0.01
SS4155	MH006B	MH006A	200	56.50	0.006	0.18	0.24	0.70	6.00	0.01

SW Middlesex Master Servicing Plan
2021 WWF_Peak
Manhole Table - Glencoe

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH001	221.285	220.322	2.28	220.36	0.04	FALSE
MH001A	222.504	219.919	0.00	219.92	0.00	FALSE
MH002	222.580	219.773	2.34	219.81	0.04	FALSE
MH002A	222.700	220.090	0.01	220.10	0.01	FALSE
MH002B	222.230	220.310	0.00	220.31	0.00	FALSE
MH003	221.285	219.654	2.34	219.70	0.05	FALSE
MH004	221.894	219.331	2.37	219.38	0.05	FALSE
MH005	223.114	219.298	0.00	219.30	0.00	FALSE
MH006	223.114	218.971	3.73	219.02	0.05	FALSE
MH006A	221.894	219.243	1.31	219.28	0.03	FALSE
MH006B	222.199	219.608	0.62	219.63	0.02	FALSE
MH006C	221.285	219.610	0.65	219.64	0.03	FALSE
MH007	224.942	218.749	3.75	218.80	0.05	FALSE
MH008	224.638	218.639	3.75	218.70	0.06	FALSE
MH009	221.483	218.401	3.77	218.46	0.06	FALSE
MH011	221.285	219.331	0.49	219.78	0.45	FALSE
MH011A	221.894	219.547	0.47	220.02	0.48	FALSE
MH012	222.504	219.755	0.64	219.78	0.02	FALSE
MH013	222.504	219.395	1.15	219.43	0.03	FALSE
MH014	222.199	219.199	1.17	219.23	0.03	FALSE
MH015	221.285	218.285	1.20	218.34	0.06	FALSE
MH016	221.483	218.023	6.38	218.10	0.07	FALSE
MH016A	221.587	218.401	1.34	218.44	0.04	FALSE
MH017	222.199	219.992	1.05	220.02	0.03	FALSE
MH018	222.199	219.563	1.06	219.59	0.03	FALSE
MH019	222.504	219.941	0.00	219.94	0.00	FALSE
MH020	222.504	219.261	1.09	219.29	0.03	FALSE
MH021	222.504	218.792	1.11	218.82	0.03	FALSE
MH022	222.504	218.685	1.12	218.72	0.03	FALSE
MH023	223.779	219.238	1.34	219.27	0.03	FALSE
MH024	223.650	218.359	2.50	218.40	0.04	FALSE
MH025	221.434	217.713	8.94	217.81	0.09	FALSE
MH026	221.285	219.264	1.05	219.29	0.03	FALSE
MH027	221.894	218.773	1.07	218.80	0.03	FALSE
MH028	221.742	217.521	10.06	217.62	0.10	FALSE
MH029	222.493	220.221	1.05	220.25	0.03	FALSE
MH030	221.884	219.767	1.06	219.80	0.03	FALSE
MH031	222.471	220.392	1.64	220.43	0.03	FALSE
MH032	222.541	219.468	2.75	219.52	0.05	FALSE
MH032A	222.251	219.392	2.76	219.44	0.05	FALSE
MH033	221.611	219.151	2.78	219.20	0.05	FALSE
MH034	221.007	218.935	4.42	219.00	0.06	FALSE
MH035	220.748	218.660	4.45	218.72	0.06	FALSE
MH036	221.154	218.407	4.47	218.47	0.07	FALSE
MH037	222.330	219.953	1.05	219.98	0.03	FALSE
MH038	221.419	219.346	1.07	219.38	0.03	FALSE
MH039	221.139	218.191	5.59	218.26	0.07	FALSE
MH040	220.989	217.795	5.62	217.87	0.07	FALSE

MH041	221.404	217.274	16.93	217.40	0.13	FALSE
MH041A	221.648	219.599	1.19	219.63	0.04	FALSE
MH042	222.797	219.974	0.64	220.01	0.03	FALSE
MH043	222.166	219.919	0.65	219.95	0.03	FALSE
MH044	222.339	219.825	0.67	219.85	0.02	FALSE
MH045	222.886	219.992	1.19	220.02	0.03	FALSE
MH046	222.346	219.264	1.89	219.31	0.04	FALSE
MH047	222.193	218.938	1.92	218.98	0.04	FALSE
MH048	221.468	219.761	1.40	219.79	0.03	FALSE
MH049	222.199	219.169	1.42	219.21	0.04	FALSE
MH050	221.742	218.913	1.44	218.95	0.04	FALSE
MH051	221.440	218.664	1.46	218.70	0.04	FALSE
MH052	221.410	218.603	1.46	218.64	0.04	FALSE
MH053	221.181	218.316	1.49	218.35	0.04	FALSE
MH054	221.849	219.739	0.89	219.76	0.02	FALSE
MH055	221.986	218.965	1.43	219.00	0.04	FALSE
MH055A	221.837	219.063	0.51	219.08	0.02	FALSE
MH055B	221.407	219.322	0.49	219.34	0.02	FALSE
MH055C	221.407	219.547	0.47	219.57	0.02	FALSE
MH056	221.102	219.246	0.89	219.27	0.03	FALSE
MH057	221.684	218.404	2.36	218.45	0.05	FALSE
MH058	221.251	217.920	3.91	217.98	0.06	FALSE
MH059	222.000	219.925	1.23	219.96	0.03	FALSE
MH059A	222.000	220.100	1.21	220.14	0.04	FALSE
MH060	221.833	219.322	2.47	219.37	0.05	FALSE
MH060A	221.071	219.426	1.21	219.47	0.04	FALSE
MH061	221.500	219.057	2.50	219.10	0.04	FALSE
MH062	221.041	218.731	2.52	218.78	0.05	FALSE
MH063	221.011	217.258	9.81	217.36	0.10	FALSE
MH063A	221.285	219.230	0.83	219.26	0.03	FALSE
MH064	221.578	218.578	0.89	218.62	0.04	FALSE
MH065	221.102	218.475	2.39	218.52	0.05	FALSE
MH065A	221.087	218.907	1.45	218.94	0.04	FALSE
MH065B	221.410	219.316	1.42	219.35	0.04	FALSE
MH065C	221.675	219.758	1.40	219.79	0.04	FALSE
MH066	221.142	217.609	6.38	217.68	0.08	FALSE
MH067	222.574	219.200	0.00	219.20	0.00	FALSE
MH067A	221.599	219.328	0.00	219.33	0.01	FALSE
MH068	222.574	219.584	0.64	220.02	0.43	FALSE
MH069	222.574	219.081	0.66	219.61	0.52	FALSE
MH070	222.574	218.792	0.68	218.82	0.02	FALSE
MH071	222.324	220.184	0.64	220.21	0.02	FALSE
MH072	222.251	219.743	0.65	219.77	0.03	FALSE
MH073	222.218	220.066	0.00	220.07	0.00	FALSE
MH074	222.422	218.563	1.39	218.60	0.04	FALSE
MH075	222.007	218.228	2.68	218.28	0.05	FALSE
MH075A	222.172	220.340	1.24	220.37	0.03	FALSE
MH076B	221.578	219.005	0.83	219.29	0.29	FALSE
MH077	221.274	218.304	0.85	218.33	0.02	FALSE
MH079	221.209	219.151	0.83	219.18	0.03	FALSE
MH079A	221.344	219.377	0.83	219.40	0.02	FALSE

MH080	221.212	216.887	10.69	216.99	0.10	FALSE
MH081	221.206	216.621	11.59	216.73	0.10	FALSE
MH082	221.274	220.008	1.24	220.04	0.03	FALSE
MH083	221.274	219.529	2.51	219.57	0.05	FALSE
MH083A	221.274	219.404	2.51	219.45	0.04	FALSE
MH083B	221.274	219.791	1.24	219.82	0.03	FALSE
MH084	221.274	216.262	14.16	216.36	0.10	FALSE
MH085	221.142	217.024	16.96	217.15	0.13	FALSE
MH086	221.687	216.853	18.94	216.99	0.14	FALSE
MH087	221.501	215.951	35.85	216.12	0.17	FALSE
MH088	220.779	215.750	35.88	215.94	0.19	FALSE
MH089	220.210	219.600	1.20	219.63	0.03	FALSE
MH090	220.210	218.825	1.22	218.85	0.03	FALSE
MH091	220.194	215.655	37.13	215.84	0.19	FALSE
MH092	220.837	218.639	1.38	218.67	0.03	FALSE
MH093	220.873	218.447	1.39	218.48	0.04	FALSE
MH094	220.029	217.758	1.41	217.79	0.04	FALSE
MH095	221.874	218.133	1.38	218.17	0.03	FALSE
MH096	221.386	217.710	1.40	217.75	0.04	FALSE
MH097	219.487	217.341	1.42	217.38	0.04	FALSE
MH098	219.166	216.865	2.89	216.92	0.05	FALSE
MH099	219.706	215.558	40.07	215.74	0.18	FALSE
MH100	218.649	215.415	40.09	215.60	0.18	FALSE
MH101	222.188	219.188	1.40	219.98	0.79	FALSE
MH102	221.578	218.578	1.43	219.11	0.53	FALSE
MH103	220.646	214.580	0.61	219.42	4.84	FALSE
MH104	221.874	218.679	2.07	218.72	0.04	FALSE
MH105	221.274	218.340	2.64	218.41	0.07	FALSE
MH105A	221.274	218.996	0.51	219.02	0.02	FALSE
MH106	221.274	218.274	0.49	218.29	0.02	FALSE
MH107	220.359	217.359	3.19	217.60	0.24	FALSE
MH108	221.274	218.274	2.66	218.31	0.04	FALSE
MH108A	221.274	219.274	0.49	219.30	0.02	FALSE
MH111	220.703	218.465	0.74	218.49	0.03	FALSE
MH111A	221.172	218.673	0.73	218.70	0.03	FALSE
MH112	220.215	218.212	1.31	218.25	0.03	FALSE
MH113	221.071	219.230	1.40	219.27	0.04	FALSE
MH114	221.011	218.825	1.43	218.86	0.04	FALSE
MH115	220.614	218.782	0.55	218.80	0.02	FALSE
MH116	220.553	218.094	1.13	218.13	0.04	FALSE
MH117	220.523	217.804	4.64	217.87	0.06	FALSE
MH117A	221.000	218.359	2.00	218.40	0.04	FALSE
MH117B	221.000	219.035	0.55	219.05	0.02	FALSE
MH117C	221.000	219.000	1.40	219.04	0.04	FALSE
MH118	220.000	217.606	4.65	217.67	0.06	FALSE
MH119	220.492	217.871	2.50	217.92	0.05	FALSE
MH120	220.157	217.636	2.52	217.68	0.04	FALSE
MH121	220.242	217.841	1.61	217.88	0.04	FALSE
MH122	220.047	217.246	4.16	217.31	0.06	FALSE
MH123	219.189	216.880	4.77	216.96	0.08	FALSE
MH124	220.102	218.203	0.56	218.22	0.02	FALSE

MH125	220.370	217.402	6.01	217.48	0.07	FALSE
MH125A	221.091	217.237	6.02	217.30	0.06	FALSE
MH126	220.227	218.206	0.73	218.23	0.03	FALSE
MH127	220.520	217.795	1.31	217.83	0.03	FALSE
MH128	220.148	217.542	1.33	217.58	0.04	FALSE
MH129	219.170	216.481	6.55	216.55	0.07	FALSE
MH130	219.852	215.942	13.96	216.06	0.12	FALSE
MH132	220.155	217.441	3.20	217.49	0.05	FALSE
MH132A	220.155	217.307	3.21	217.36	0.05	FALSE
MH133	220.155	217.149	3.78	217.21	0.06	FALSE
MH134	220.155	217.008	3.80	217.08	0.07	FALSE
MH135	220.000	219.362	1.61	219.40	0.04	FALSE
MH136	220.000	219.105	1.62	219.14	0.04	FALSE
MH137	220.000	218.697	1.65	218.73	0.04	FALSE
MH138	220.000	218.331	1.67	218.37	0.04	FALSE
MH139	220.000	217.999	1.70	218.03	0.03	FALSE
MH140	219.301	217.109	1.73	217.15	0.04	FALSE
MH143	221.000	216.957	0.56	216.98	0.02	FALSE
MH145	220.155	215.814	18.37	215.96	0.15	FALSE
MH146	220.478	215.768	18.38	215.88	0.11	FALSE
MH147	219.939	215.597	18.39	215.71	0.11	FALSE
MH148	219.686	217.500	1.20	217.53	0.03	FALSE
MH149	219.686	217.274	1.21	217.30	0.03	FALSE
MH150	219.686	215.478	19.63	215.62	0.14	FALSE
MH151	219.000	217.920	0.79	217.95	0.03	FALSE
MH153	219.573	217.703	0.82	217.73	0.03	FALSE
MH153A	220.000	217.730	0.82	217.76	0.03	FALSE
MH154	219.573	217.500	0.84	217.53	0.03	FALSE
MH155	219.573	217.368	0.86	217.40	0.03	FALSE
MH156	219.573	216.883	2.38	216.93	0.05	FALSE
MH157	219.573	216.381	2.41	216.43	0.05	FALSE
MH158	219.573	215.463	22.07	215.59	0.12	FALSE
MH159	220.020	217.790	0.83	217.82	0.03	FALSE
MH160	219.989	217.481	0.85	217.51	0.03	FALSE
MH161	220.127	217.246	0.87	217.28	0.03	FALSE
MH162	219.758	216.990	0.89	217.02	0.03	FALSE
MH163	220.578	216.682	2.41	216.73	0.05	FALSE
MH164	219.389	216.323	2.44	216.37	0.05	FALSE
MH165	219.151	215.254	64.66	215.50	0.24	FALSE
MH170	221.000	219.150	0.79	219.18	0.03	FALSE
MH171	221.000	219.100	1.61	219.15	0.05	FALSE
MH172	220.000	219.300	0.79	219.33	0.03	FALSE
MH173	220.492	217.962	0.84	218.00	0.04	FALSE
MH175	222.000	218.429	0.82	218.46	0.03	FALSE
MH176	222.000	218.560	0.80	218.59	0.03	FALSE
MH177	222.000	218.650	0.79	218.68	0.03	FALSE
MH189	219.000	217.970	0.81	218.00	0.03	FALSE
MH190	220.000	218.100	0.79	218.13	0.03	FALSE
MH-66	221.285	220.364	1.64	220.42	0.06	FALSE
MH-68	221.285	220.010	0.62	220.03	0.02	FALSE

SW Middlesex Master Servicing Plan
2021 WWF_Peak
Gravity Main Table - Glencoe

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
CO-15	MH001A	MH002	200	34.13	0.004	0.01	0.08	0.00	1.50	0.00
SS4054	MH002B	MH002A	200	56.60	0.004	0.01	0.09	0.10	2.00	0.00
SS4074	MH067	MH070	250	38.80	0.011	0.01	0.11	0.00	1.00	0.00
CO-80	MH005	MH006	200	48.73	0.007	0.01	0.11	0.00	1.60	0.00
SS4075	MH073	MH074	200	93.37	0.005	0.02	0.12	0.10	2.30	0.00
SS4053	MH019	MH020	200	27.44	0.025	0.01	0.13	0.00	1.00	0.00
CO-14	MH002A	MH002	200	58.90	0.005	0.03	0.13	0.10	2.60	0.01
SS4073	MH067A	MH066	200	128.74	0.006	0.03	0.13	0.10	2.70	0.01
SS4170L.B	MH015	MH016	200	117.177	0.000	1.22	0.16	19.00	29.60	0.01
SS4061C	MH042	MH043	200	47.625	0.001	0.65	0.19	5.80	16.40	0.02
SS4035	MH043	MH044	200	89.208	0.001	0.67	0.19	6.30	17.00	0.02
CO-8	MH173	MH119	200	82.858	0.001	0.86	0.21	7.90	19.00	0.02
SS4008	MH064	MH065	200	94.767	0.001	0.91	0.21	8.40	19.60	0.02
SS4174L.B	MH-66	MH001	200	63.827	0.001	1.66	0.21	19.70	30.10	0.02
SS4146C	MH105	MH108	250	115.615	0.001	2.66	0.22	18.80	29.30	0.02
SS4120	MH170	MH171	200	30.51	0.002	0.80	0.23	6.00	16.60	0.02
CO-64	MH190	MH189	200	85.277	0.002	0.81	0.23	6.30	17.00	0.02
SS4196L.B	MH151	MH153A	200	121.242	0.002	0.82	0.23	6.30	17.00	0.02
SS4150C	MH055C	MH055B	250	78.63	0.003	0.49	0.24	1.50	8.60	0.02
SS4149C	MH055B	MH055A	250	91.82	0.003	0.51	0.24	1.60	8.80	0.02
SS4167L.B	MH011A	MH011	200	83.438	0.003	0.49	0.24	2.80	11.50	0.02
SS4097	MH108A	MH105A	200	104.968	0.003	0.51	0.24	3.00	11.90	0.02
SS4002	MH176	MH175	200	79.468	0.002	0.82	0.24	6.20	16.80	0.02
CO-65	MH154	MH155	200	81.042	0.002	0.86	0.24	6.50	17.30	0.02

SW Middlesex Master Servicing Plan
2041 DWF
Manhole Table - Glencoe

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH001	221.285	220.322	0.26	220.34	0.01	FALSE
MH001A	222.504	219.919	0.00	219.92	0.00	FALSE
MH002	222.580	219.773	0.28	219.79	0.01	FALSE
MH002A	222.700	220.090	0.00	220.09	0.00	FALSE
MH002B	222.230	220.310	0.00	220.31	0.00	FALSE
MH003	221.285	219.654	0.28	219.67	0.02	FALSE
MH004	221.894	219.331	0.28	219.35	0.02	FALSE
MH005	223.114	219.298	0.00	219.30	0.00	FALSE
MH006	223.114	218.971	0.56	218.99	0.02	FALSE
MH006A	221.894	219.243	0.27	219.26	0.02	FALSE
MH006B	222.199	219.608	0.07	219.62	0.01	FALSE
MH006C	221.285	219.610	0.19	219.62	0.01	FALSE
MH007	224.942	218.749	0.56	218.77	0.02	FALSE
MH008	224.638	218.639	0.56	218.66	0.02	FALSE
MH009	221.483	218.401	0.57	218.42	0.02	FALSE
MH011	221.285	219.331	0.11	219.77	0.44	FALSE
MH011A	221.894	219.547	0.11	220.01	0.46	FALSE
MH012	222.504	219.755	0.07	219.76	0.01	FALSE
MH013	222.504	219.395	0.19	219.41	0.01	FALSE
MH014	222.199	219.199	0.19	219.21	0.01	FALSE
MH015	221.285	218.285	0.20	218.31	0.02	FALSE
MH016	221.483	218.023	1.51	218.06	0.04	FALSE
MH016A	221.587	218.401	0.73	218.43	0.03	FALSE
MH017	222.199	219.992	0.12	220.00	0.01	FALSE
MH018	222.199	219.563	0.12	219.57	0.01	FALSE
MH019	222.504	219.941	0.00	219.94	0.00	FALSE
MH020	222.504	219.261	0.13	219.27	0.01	FALSE
MH021	222.504	218.792	0.13	218.80	0.01	FALSE
MH022	222.504	218.685	0.13	218.70	0.01	FALSE
MH023	223.779	219.238	0.15	219.25	0.01	FALSE
MH024	223.650	218.359	0.30	218.37	0.02	FALSE
MH025	221.434	217.713	1.82	217.76	0.04	FALSE
MH026	221.285	219.264	0.12	219.27	0.01	FALSE
MH027	221.894	218.773	0.12	218.78	0.01	FALSE
MH028	221.742	217.521	1.96	217.57	0.05	FALSE
MH029	222.493	220.221	0.12	220.23	0.01	FALSE
MH030	221.884	219.767	0.12	219.78	0.01	FALSE
MH031	222.471	220.392	0.19	220.40	0.01	FALSE
MH032	222.541	219.468	0.32	219.49	0.02	FALSE
MH032A	222.251	219.392	0.32	219.41	0.02	FALSE
MH033	221.611	219.151	0.76	219.18	0.03	FALSE
MH034	221.007	218.935	0.96	218.96	0.03	FALSE
MH035	220.748	218.660	0.96	218.69	0.03	FALSE
MH036	221.154	218.407	0.96	218.44	0.03	FALSE
MH037	222.330	219.953	0.12	219.96	0.01	FALSE
MH038	221.419	219.346	0.13	219.36	0.01	FALSE
MH039	221.139	218.191	1.10	218.22	0.03	FALSE
MH040	220.989	217.795	1.70	217.83	0.04	FALSE

MH041	221.404	217.274	3.83	217.33	0.06	FALSE
MH041A	221.648	219.599	0.14	219.61	0.01	FALSE
MH042	222.797	219.974	0.07	219.99	0.01	FALSE
MH043	222.166	219.919	0.08	219.93	0.01	FALSE
MH044	222.339	219.825	0.08	219.83	0.01	FALSE
MH045	222.886	219.992	0.14	220.00	0.01	FALSE
MH046	222.346	219.264	0.22	219.28	0.02	FALSE
MH047	222.193	218.938	0.23	218.95	0.02	FALSE
MH048	221.468	219.761	0.16	219.77	0.01	FALSE
MH049	222.199	219.169	0.17	219.18	0.01	FALSE
MH050	221.742	218.913	0.17	218.93	0.01	FALSE
MH051	221.440	218.664	0.17	218.68	0.01	FALSE
MH052	221.410	218.603	0.17	218.62	0.01	FALSE
MH053	221.181	218.316	0.18	218.33	0.01	FALSE
MH054	221.849	219.739	0.10	219.75	0.01	FALSE
MH055	221.986	218.965	0.27	218.98	0.02	FALSE
MH055A	221.837	219.063	0.16	219.08	0.01	FALSE
MH055B	221.407	219.322	0.16	219.33	0.01	FALSE
MH055C	221.407	219.547	0.05	219.56	0.01	FALSE
MH056	221.102	219.246	0.10	219.26	0.01	FALSE
MH057	221.684	218.404	0.38	218.42	0.02	FALSE
MH058	221.251	217.920	0.57	217.94	0.02	FALSE
MH059	222.000	219.925	0.14	219.94	0.01	FALSE
MH059A	222.000	220.100	0.14	220.11	0.01	FALSE
MH060	221.833	219.322	0.29	219.34	0.02	FALSE
MH060A	221.071	219.426	0.14	219.44	0.01	FALSE
MH061	221.500	219.057	0.29	219.07	0.02	FALSE
MH062	221.041	218.731	0.30	218.75	0.02	FALSE
MH063	221.011	217.258	1.28	217.29	0.04	FALSE
MH063A	221.285	219.230	0.10	219.24	0.01	FALSE
MH064	221.578	218.578	0.10	218.59	0.01	FALSE
MH065	221.102	218.475	0.28	218.49	0.02	FALSE
MH065A	221.087	218.907	0.17	218.92	0.01	FALSE
MH065B	221.410	219.316	0.17	219.33	0.01	FALSE
MH065C	221.675	219.758	0.16	219.77	0.01	FALSE
MH066	221.142	217.609	0.87	217.64	0.03	FALSE
MH067	222.574	219.200	0.00	219.20	0.00	FALSE
MH067A	221.599	219.328	0.00	219.33	0.00	FALSE
MH068	222.574	219.584	0.07	220.00	0.42	FALSE
MH069	222.574	219.081	0.08	219.59	0.51	FALSE
MH070	222.574	218.792	0.08	218.80	0.01	FALSE
MH071	222.324	220.184	0.07	220.19	0.01	FALSE
MH072	222.251	219.743	0.08	219.75	0.01	FALSE
MH073	222.218	220.066	0.00	220.07	0.00	FALSE
MH074	222.422	218.563	0.17	218.58	0.01	FALSE
MH075	222.007	218.228	0.32	218.25	0.02	FALSE
MH075A	222.172	220.340	0.14	220.35	0.01	FALSE
MH076B	221.578	219.005	0.10	219.28	0.27	FALSE
MH077	221.274	218.304	0.10	218.31	0.01	FALSE
MH079	221.209	219.151	0.10	219.16	0.01	FALSE
MH079A	221.344	219.377	0.10	219.39	0.01	FALSE

MH080	221.212	216.887	1.39	216.92	0.04	FALSE
MH081	221.206	216.621	1.50	216.66	0.04	FALSE
MH082	221.274	220.008	0.14	220.02	0.01	FALSE
MH083	221.274	219.529	0.29	219.55	0.02	FALSE
MH083A	221.274	219.404	0.29	219.42	0.01	FALSE
MH083B	221.274	219.791	0.14	219.80	0.01	FALSE
MH084	221.274	216.262	1.80	216.30	0.03	FALSE
MH085	221.142	217.024	3.83	217.08	0.06	FALSE
MH086	221.687	216.853	4.07	216.92	0.06	FALSE
MH087	221.501	215.951	6.21	216.02	0.07	FALSE
MH088	220.779	215.750	6.22	215.83	0.08	FALSE
MH089	220.210	219.600	0.14	219.61	0.01	FALSE
MH090	220.210	218.825	0.14	218.84	0.01	FALSE
MH091	220.194	215.655	6.37	215.73	0.08	FALSE
MH092	220.837	218.639	0.16	218.65	0.01	FALSE
MH093	220.873	218.447	0.16	218.46	0.01	FALSE
MH094	220.029	217.758	0.17	217.77	0.01	FALSE
MH095	221.874	218.133	0.16	218.15	0.01	FALSE
MH096	221.386	217.710	0.16	217.72	0.01	FALSE
MH097	219.487	217.341	0.88	217.37	0.03	FALSE
MH098	219.166	216.865	1.06	216.90	0.03	FALSE
MH099	219.706	215.558	7.44	215.63	0.08	FALSE
MH100	218.649	215.415	7.44	215.49	0.08	FALSE
MH101	222.188	219.188	0.16	219.96	0.77	FALSE
MH102	221.578	218.578	0.17	219.09	0.51	FALSE
MH103	220.646	214.580	0.07	219.40	4.82	FALSE
MH104	221.874	218.679	0.24	218.69	0.02	FALSE
MH105	221.274	218.340	0.32	218.37	0.03	FALSE
MH105A	221.274	218.996	0.06	219.00	0.01	FALSE
MH106	221.274	218.274	0.06	218.28	0.01	FALSE
MH107	220.359	217.359	0.39	217.57	0.21	FALSE
MH108	221.274	218.274	0.32	218.29	0.01	FALSE
MH108A	221.274	219.274	0.06	219.28	0.01	FALSE
MH111	220.703	218.465	0.09	218.47	0.01	FALSE
MH111A	221.172	218.673	0.08	218.68	0.01	FALSE
MH112	220.215	218.212	0.15	218.22	0.01	FALSE
MH113	221.071	219.230	0.16	219.24	0.01	FALSE
MH114	221.011	218.825	0.17	218.84	0.01	FALSE
MH115	220.614	218.782	0.06	218.79	0.01	FALSE
MH116	220.553	218.094	0.13	218.11	0.01	FALSE
MH117	220.523	217.804	0.55	217.83	0.02	FALSE
MH117A	221.000	218.359	0.24	218.37	0.01	FALSE
MH117B	221.000	219.035	0.06	219.04	0.01	FALSE
MH117C	221.000	219.000	0.16	219.01	0.01	FALSE
MH118	220.000	217.606	0.55	217.63	0.02	FALSE
MH119	220.492	217.871	0.73	217.90	0.03	FALSE
MH120	220.157	217.636	0.73	217.66	0.02	FALSE
MH121	220.242	217.841	0.19	217.85	0.01	FALSE
MH122	220.047	217.246	0.92	217.28	0.03	FALSE
MH123	219.189	216.880	1.00	216.92	0.04	FALSE
MH124	220.102	218.203	0.06	218.21	0.01	FALSE

MH125	220.370	217.402	0.72	217.43	0.03	FALSE
MH125A	221.091	217.237	0.72	217.26	0.02	FALSE
MH126	220.227	218.206	0.08	218.22	0.01	FALSE
MH127	220.520	217.795	0.15	217.81	0.01	FALSE
MH128	220.148	217.542	0.16	217.56	0.01	FALSE
MH129	219.170	216.481	3.26	216.53	0.05	FALSE
MH130	219.852	215.942	4.15	216.01	0.06	FALSE
MH132	220.155	217.441	0.39	217.46	0.02	FALSE
MH132A	220.155	217.307	0.39	217.33	0.02	FALSE
MH133	220.155	217.149	0.46	217.17	0.02	FALSE
MH134	220.155	217.008	0.46	217.03	0.02	FALSE
MH135	220.000	219.362	0.19	219.38	0.01	FALSE
MH136	220.000	219.105	0.19	219.12	0.01	FALSE
MH137	220.000	218.697	2.24	218.74	0.04	FALSE
MH138	220.000	218.331	2.24	218.38	0.05	FALSE
MH139	220.000	217.999	2.25	218.04	0.04	FALSE
MH140	219.301	217.109	2.26	217.15	0.04	FALSE
MH143	221.000	216.957	0.06	216.97	0.01	FALSE
MH145	220.155	215.814	4.69	215.89	0.07	FALSE
MH146	220.478	215.768	4.69	215.82	0.06	FALSE
MH147	219.939	215.597	4.69	215.65	0.05	FALSE
MH148	219.686	217.500	0.14	217.51	0.01	FALSE
MH149	219.686	217.274	0.14	217.29	0.01	FALSE
MH150	219.686	215.478	4.84	215.55	0.07	FALSE
MH151	219.000	217.920	0.09	217.93	0.01	FALSE
MH153	219.573	217.703	0.10	217.71	0.01	FALSE
MH153A	220.000	217.730	0.10	217.74	0.01	FALSE
MH154	219.573	217.500	0.10	217.51	0.01	FALSE
MH155	219.573	217.368	0.11	217.38	0.01	FALSE
MH156	219.573	216.883	0.28	216.90	0.02	FALSE
MH157	219.573	216.381	0.29	216.40	0.02	FALSE
MH158	219.573	215.463	5.13	215.52	0.06	FALSE
MH159	220.020	217.790	0.10	217.80	0.01	FALSE
MH160	219.989	217.481	0.10	217.49	0.01	FALSE
MH161	220.127	217.246	0.11	217.26	0.01	FALSE
MH162	219.758	216.990	0.11	217.00	0.01	FALSE
MH163	220.578	216.682	0.29	216.70	0.02	FALSE
MH164	219.389	216.323	0.30	216.34	0.02	FALSE
MH165	219.151	215.254	12.88	215.37	0.12	FALSE
MH170	221.000	219.150	0.09	219.16	0.01	FALSE
MH171	221.000	219.100	0.19	219.12	0.02	FALSE
MH172	220.000	219.300	0.09	219.31	0.01	FALSE
MH173	220.492	217.962	0.53	217.99	0.03	FALSE
MH175	222.000	218.429	0.52	218.45	0.02	FALSE
MH176	222.000	218.560	0.52	218.59	0.03	FALSE
MH177	222.000	218.650	0.09	218.66	0.01	FALSE
MH189	219.000	217.970	0.10	217.98	0.01	FALSE
MH190	220.000	218.100	0.09	218.11	0.01	FALSE
MH-66	221.285	220.364	0.19	220.38	0.02	FALSE
MH-68	221.285	220.010	0.07	220.02	0.01	FALSE

SW Middlesex Master Servicing Plan
2041 DWF
Gravity Main Table - Glencoe

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
SS4053	MH019	MH020	200	27.44	0.025	0.00	0.09	0.00	0.40	0.00
SS4074	MH067	MH070	250	38.80	0.011	0.00	0.07	0.00	0.50	0.00
CO-15	MH001A	MH002	200	34.13	0.004	0.00	0.05	0.00	0.70	0.00
CO-80	MH005	MH006	200	48.73	0.007	0.00	0.07	0.00	0.80	0.00
SS4054	MH002B	MH002A	200	56.60	0.004	0.00	0.05	0.00	1.00	0.00
SS4075	MH073	MH074	200	93.37	0.005	0.00	0.07	0.00	1.10	0.00
CO-14	MH002A	MH002	200	58.90	0.005	0.01	0.08	0.00	1.20	0.00
SS4073	MH067A	MH066	200	128.74	0.006	0.01	0.08	0.00	1.30	0.00
SS4107	MH117B	MH117A	200	27.69	0.024	0.06	0.28	0.10	2.70	0.01
CO-30	MH044	MH046	250	85.72	0.007	0.08	0.18	0.20	3.10	0.01
SS4185L.B	MH106	MH107	200	69.42	0.01	0.06	0.20	0.20	3.20	0.01
SS4150C	MH055C	MH055B	250	78.63	0.003	0.06	0.12	0.20	3.20	0.01
CO-28	MH055	MH055A	250	29.16	0.003	0.16	0.18	0.50	5.00	0.01
SS4149C	MH055B	MH055A	250	91.82	0.003	0.16	0.17	0.50	5.20	0.01
SS4066	MH054	MH055	250	116.37	0.007	0.11	0.20	0.20	3.50	0.01
CO-37	MH070	MH074	250	61.01	0.004	0.09	0.15	0.20	3.60	0.01
SS4005	MH103	MH104	200	92.93	0.008	0.07	0.19	0.30	3.70	0.01
SS4011	MH105A	MH105	200	104.06	0.006	0.07	0.17	0.30	3.80	0.01
CO-9	MH115	MH116	200	107.37	0.006	0.07	0.18	0.30	3.80	0.01
CO-58	MH011	MH013	200	72.38	0.005	0.12	0.19	0.50	5.10	0.01
SS4079	MH077	MH081	200	115.62	0.015	0.10	0.27	0.30	3.80	0.01
CO-62	MH012	MH013	200	49.39	0.007	0.08	0.19	0.30	3.80	0.01
SS4014	MH124	MH123	200	111.77	0.006	0.07	0.17	0.30	3.90	0.01
SS4155	MH006B	MH006A	200	56.50	0.006	0.07	0.18	0.30	3.90	0.01

SW Middlesex Master Servicing Plan
2041 WWF
Manhole Table - Glencoe

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH001	221.285	220.322	0.65	220.34	0.02	FALSE
MH001A	222.504	219.919	0.00	219.92	0.00	FALSE
MH002	222.580	219.773	0.68	219.79	0.02	FALSE
MH002A	222.700	220.090	0.01	220.09	0.00	FALSE
MH002B	222.230	220.310	0.00	220.31	0.00	FALSE
MH003	221.285	219.654	0.68	219.68	0.03	FALSE
MH004	221.894	219.331	0.69	219.36	0.03	FALSE
MH005	223.114	219.298	0.00	219.30	0.00	FALSE
MH006	223.114	218.971	1.21	219.00	0.03	FALSE
MH006A	221.894	219.243	0.49	219.26	0.02	FALSE
MH006B	222.199	219.608	0.18	219.62	0.01	FALSE
MH006C	221.285	219.610	0.30	219.63	0.02	FALSE
MH007	224.942	218.749	1.22	218.78	0.03	FALSE
MH008	224.638	218.639	1.22	218.67	0.03	FALSE
MH009	221.483	218.401	1.23	218.44	0.03	FALSE
MH011	221.285	219.331	0.20	219.77	0.44	FALSE
MH011A	221.894	219.547	0.19	220.02	0.47	FALSE
MH012	222.504	219.755	0.18	219.77	0.01	FALSE
MH013	222.504	219.395	0.39	219.42	0.02	FALSE
MH014	222.199	219.199	0.40	219.22	0.02	FALSE
MH015	221.285	218.285	0.41	218.32	0.03	FALSE
MH016	221.483	218.023	2.64	218.07	0.05	FALSE
MH016A	221.587	218.401	0.96	218.43	0.03	FALSE
MH017	222.199	219.992	0.30	220.01	0.02	FALSE
MH018	222.199	219.563	0.31	219.58	0.02	FALSE
MH019	222.504	219.941	0.00	219.94	0.00	FALSE
MH020	222.504	219.261	0.32	219.28	0.02	FALSE
MH021	222.504	218.792	0.33	218.81	0.02	FALSE
MH022	222.504	218.685	0.33	218.70	0.02	FALSE
MH023	223.779	219.238	0.38	219.25	0.02	FALSE
MH024	223.650	218.359	0.73	218.38	0.02	FALSE
MH025	221.434	217.713	3.40	217.77	0.06	FALSE
MH026	221.285	219.264	0.30	219.28	0.02	FALSE
MH027	221.894	218.773	0.31	218.79	0.02	FALSE
MH028	221.742	217.521	3.73	217.58	0.06	FALSE
MH029	222.493	220.221	0.30	220.24	0.02	FALSE
MH030	221.884	219.767	0.31	219.79	0.02	FALSE
MH031	222.471	220.392	0.47	220.41	0.02	FALSE
MH032	222.541	219.468	0.79	219.50	0.03	FALSE
MH032A	222.251	219.392	0.80	219.42	0.03	FALSE
MH033	221.611	219.151	1.24	219.18	0.03	FALSE
MH034	221.007	218.935	1.71	218.97	0.04	FALSE
MH035	220.748	218.660	1.72	218.70	0.04	FALSE
MH036	221.154	218.407	1.73	218.45	0.04	FALSE
MH037	222.330	219.953	0.30	219.97	0.02	FALSE
MH038	221.419	219.346	0.31	219.36	0.02	FALSE
MH039	221.139	218.191	2.07	218.23	0.04	FALSE
MH040	220.989	217.795	2.68	217.84	0.05	FALSE

MH041	221.404	217.274	6.79	217.35	0.08	FALSE
MH041A	221.648	219.599	0.34	219.62	0.02	FALSE
MH042	222.797	219.974	0.18	219.99	0.02	FALSE
MH043	222.166	219.919	0.19	219.94	0.02	FALSE
MH044	222.339	219.825	0.20	219.84	0.01	FALSE
MH045	222.886	219.992	0.34	220.01	0.02	FALSE
MH046	222.346	219.264	0.55	219.29	0.02	FALSE
MH047	222.193	218.938	0.57	218.96	0.02	FALSE
MH048	221.468	219.761	0.40	219.78	0.02	FALSE
MH049	222.199	219.169	0.41	219.19	0.02	FALSE
MH050	221.742	218.913	0.42	218.93	0.02	FALSE
MH051	221.440	218.664	0.43	218.69	0.02	FALSE
MH052	221.410	218.603	0.43	218.62	0.02	FALSE
MH053	221.181	218.316	0.44	218.34	0.02	FALSE
MH054	221.849	219.739	0.25	219.75	0.01	FALSE
MH055	221.986	218.965	0.52	218.99	0.02	FALSE
MH055A	221.837	219.063	0.25	219.08	0.02	FALSE
MH055B	221.407	219.322	0.24	219.34	0.02	FALSE
MH055C	221.407	219.547	0.13	219.56	0.01	FALSE
MH056	221.102	219.246	0.25	219.26	0.01	FALSE
MH057	221.684	218.404	0.79	218.43	0.03	FALSE
MH058	221.251	217.920	1.26	217.95	0.03	FALSE
MH059	222.000	219.925	0.35	219.94	0.02	FALSE
MH059A	222.000	220.100	0.34	220.12	0.02	FALSE
MH060	221.833	219.322	0.71	219.35	0.03	FALSE
MH060A	221.071	219.426	0.34	219.45	0.02	FALSE
MH061	221.500	219.057	0.72	219.08	0.02	FALSE
MH062	221.041	218.731	0.73	218.76	0.03	FALSE
MH063	221.011	217.258	3.01	217.31	0.05	FALSE
MH063A	221.285	219.230	0.23	219.24	0.01	FALSE
MH064	221.578	218.578	0.25	218.60	0.02	FALSE
MH065	221.102	218.475	0.70	218.50	0.03	FALSE
MH065A	221.087	218.907	0.42	218.93	0.02	FALSE
MH065B	221.410	219.316	0.41	219.34	0.02	FALSE
MH065C	221.675	219.758	0.40	219.78	0.02	FALSE
MH066	221.142	217.609	2.00	217.65	0.04	FALSE
MH067	222.574	219.200	0.00	219.20	0.00	FALSE
MH067A	221.599	219.328	0.00	219.33	0.00	FALSE
MH068	222.574	219.584	0.18	220.01	0.42	FALSE
MH069	222.574	219.081	0.19	219.60	0.52	FALSE
MH070	222.574	218.792	0.20	218.81	0.01	FALSE
MH071	222.324	220.184	0.18	220.20	0.01	FALSE
MH072	222.251	219.743	0.19	219.76	0.01	FALSE
MH073	222.218	220.066	0.00	220.07	0.00	FALSE
MH074	222.422	218.563	0.42	218.58	0.02	FALSE
MH075	222.007	218.228	0.80	218.26	0.03	FALSE
MH075A	222.172	220.340	0.35	220.36	0.02	FALSE
MH076B	221.578	219.005	0.23	219.28	0.28	FALSE
MH077	221.274	218.304	0.24	218.32	0.01	FALSE
MH079	221.209	219.151	0.24	219.17	0.01	FALSE
MH079A	221.344	219.377	0.23	219.39	0.01	FALSE

MH080	221.212	216.887	3.27	216.94	0.06	FALSE
MH081	221.206	216.621	3.54	216.68	0.06	FALSE
MH082	221.274	220.008	0.35	220.02	0.02	FALSE
MH083	221.274	219.529	0.72	219.55	0.02	FALSE
MH083A	221.274	219.404	0.72	219.43	0.02	FALSE
MH083B	221.274	219.791	0.35	219.81	0.02	FALSE
MH084	221.274	216.262	4.29	216.32	0.05	FALSE
MH085	221.142	217.024	6.80	217.10	0.08	FALSE
MH086	221.687	216.853	7.40	216.94	0.08	FALSE
MH087	221.501	215.951	12.51	216.05	0.10	FALSE
MH088	220.779	215.750	12.52	215.86	0.11	FALSE
MH089	220.210	219.600	0.34	219.62	0.02	FALSE
MH090	220.210	218.825	0.35	218.84	0.02	FALSE
MH091	220.194	215.655	12.89	215.76	0.11	FALSE
MH092	220.837	218.639	0.39	218.66	0.02	FALSE
MH093	220.873	218.447	0.40	218.47	0.02	FALSE
MH094	220.029	217.758	0.41	217.78	0.02	FALSE
MH095	221.874	218.133	0.39	218.15	0.02	FALSE
MH096	221.386	217.710	0.40	217.73	0.02	FALSE
MH097	219.487	217.341	1.13	217.37	0.03	FALSE
MH098	219.166	216.865	1.56	216.90	0.04	FALSE
MH099	219.706	215.558	14.48	215.66	0.11	FALSE
MH100	218.649	215.415	14.49	215.52	0.11	FALSE
MH101	222.188	219.188	0.40	219.96	0.77	FALSE
MH102	221.578	218.578	0.41	219.10	0.52	FALSE
MH103	220.646	214.580	0.17	219.41	4.83	FALSE
MH104	221.874	218.679	0.60	218.70	0.02	FALSE
MH105	221.274	218.340	0.78	218.38	0.04	FALSE
MH105A	221.274	218.996	0.15	219.01	0.01	FALSE
MH106	221.274	218.274	0.14	218.28	0.01	FALSE
MH107	220.359	217.359	0.95	217.58	0.22	FALSE
MH108	221.274	218.274	0.79	218.30	0.02	FALSE
MH108A	221.274	219.274	0.14	219.29	0.01	FALSE
MH111	220.703	218.465	0.21	218.48	0.01	FALSE
MH111A	221.172	218.673	0.21	218.69	0.01	FALSE
MH112	220.215	218.212	0.38	218.23	0.02	FALSE
MH113	221.071	219.230	0.40	219.25	0.02	FALSE
MH114	221.011	218.825	0.41	218.85	0.02	FALSE
MH115	220.614	218.782	0.16	218.79	0.01	FALSE
MH116	220.553	218.094	0.33	218.11	0.02	FALSE
MH117	220.523	217.804	1.35	217.84	0.03	FALSE
MH117A	221.000	218.359	0.58	218.38	0.02	FALSE
MH117B	221.000	219.035	0.16	219.05	0.01	FALSE
MH117C	221.000	219.000	0.40	219.02	0.02	FALSE
MH118	220.000	217.606	1.36	217.64	0.03	FALSE
MH119	220.492	217.871	1.16	217.91	0.03	FALSE
MH120	220.157	217.636	1.17	217.67	0.03	FALSE
MH121	220.242	217.841	0.46	217.86	0.02	FALSE
MH122	220.047	217.246	1.64	217.29	0.04	FALSE
MH123	219.189	216.880	1.82	216.93	0.05	FALSE
MH124	220.102	218.203	0.16	218.21	0.01	FALSE

MH125	220.370	217.402	1.76	217.44	0.04	FALSE
MH125A	221.091	217.237	1.76	217.27	0.03	FALSE
MH126	220.227	218.206	0.21	218.22	0.01	FALSE
MH127	220.520	217.795	0.38	217.81	0.02	FALSE
MH128	220.148	217.542	0.38	217.56	0.02	FALSE
MH129	219.170	216.481	4.41	216.54	0.06	FALSE
MH130	219.852	215.942	6.59	216.02	0.08	FALSE
MH132	220.155	217.441	0.95	217.47	0.03	FALSE
MH132A	220.155	217.307	0.96	217.34	0.03	FALSE
MH133	220.155	217.149	1.12	217.18	0.03	FALSE
MH134	220.155	217.008	1.13	217.05	0.04	FALSE
MH135	220.000	219.362	0.46	219.38	0.02	FALSE
MH136	220.000	219.105	0.46	219.13	0.02	FALSE
MH137	220.000	218.697	2.52	218.74	0.05	FALSE
MH138	220.000	218.331	2.53	218.38	0.05	FALSE
MH139	220.000	217.999	2.55	218.04	0.04	FALSE
MH140	219.301	217.109	2.56	217.16	0.05	FALSE
MH143	221.000	216.957	0.16	216.97	0.01	FALSE
MH145	220.155	215.814	7.91	215.91	0.10	FALSE
MH146	220.478	215.768	7.91	215.84	0.07	FALSE
MH147	219.939	215.597	7.91	215.67	0.07	FALSE
MH148	219.686	217.500	0.34	217.52	0.02	FALSE
MH149	219.686	217.274	0.35	217.29	0.02	FALSE
MH150	219.686	215.478	8.27	215.57	0.09	FALSE
MH151	219.000	217.920	0.22	217.94	0.02	FALSE
MH153	219.573	217.703	0.24	217.72	0.02	FALSE
MH153A	220.000	217.730	0.24	217.75	0.02	FALSE
MH154	219.573	217.500	0.25	217.52	0.02	FALSE
MH155	219.573	217.368	0.26	217.38	0.02	FALSE
MH156	219.573	216.883	0.70	216.91	0.03	FALSE
MH157	219.573	216.381	0.71	216.41	0.03	FALSE
MH158	219.573	215.463	9.00	215.54	0.08	FALSE
MH159	220.020	217.790	0.24	217.81	0.02	FALSE
MH160	219.989	217.481	0.25	217.50	0.02	FALSE
MH161	220.127	217.246	0.26	217.26	0.02	FALSE
MH162	219.758	216.990	0.27	217.01	0.02	FALSE
MH163	220.578	216.682	0.71	216.71	0.03	FALSE
MH164	219.389	216.323	0.73	216.35	0.03	FALSE
MH165	219.151	215.254	24.24	215.41	0.16	FALSE
MH170	221.000	219.150	0.22	219.17	0.02	FALSE
MH171	221.000	219.100	0.46	219.12	0.02	FALSE
MH172	220.000	219.300	0.22	219.32	0.02	FALSE
MH173	220.492	217.962	0.68	218.00	0.03	FALSE
MH175	222.000	218.429	0.66	218.45	0.02	FALSE
MH176	222.000	218.560	0.65	218.59	0.03	FALSE
MH177	222.000	218.650	0.22	218.67	0.02	FALSE
MH189	219.000	217.970	0.23	217.99	0.02	FALSE
MH190	220.000	218.100	0.22	218.12	0.02	FALSE
MH-66	221.285	220.364	0.47	220.40	0.03	FALSE
MH-68	221.285	220.010	0.18	220.02	0.01	FALSE

SW Middlesex Master Servicing Plan
2041 WWF
Gravity Main Table - Glencoe

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
SS4053	MH019	MH020	200	27.44	0.025	0.00	0.12	0.00	0.60	0.00
SS4074	MH067	MH070	250	38.80	0.011	0.00	0.09	0.00	0.70	0.00
CO-15	MH001A	MH002	200	34.13	0.004	0.00	0.06	0.00	1.10	0.00
CO-80	MH005	MH006	200	48.73	0.007	0.01	0.08	0.00	1.20	0.00
SS4054	MH002B	MH002A	200	56.60	0.004	0.01	0.07	0.00	1.40	0.00
SS4075	MH073	MH074	200	93.37	0.005	0.01	0.10	0.00	1.70	0.00
CO-14	MH002A	MH002	200	58.90	0.005	0.01	0.10	0.10	1.80	0.00
SS4073	MH067A	MH066	200	128.74	0.006	0.02	0.11	0.10	1.90	0.00
SS4107	MH117B	MH117A	200	27.69	0.024	0.16	0.36	0.30	4.10	0.01
CO-30	MH044	MH046	250	85.72	0.007	0.21	0.24	0.40	4.80	0.01
SS4185L.B	MH106	MH107	200	69.42	0.01	0.15	0.27	0.40	4.80	0.01
SS4150C	MH055C	MH055B	250	78.63	0.003	0.14	0.16	0.40	4.80	0.01
CO-28	MH055	MH055A	250	29.16	0.003	0.26	0.20	0.70	6.20	0.02
SS4149C	MH055B	MH055A	250	91.82	0.003	0.25	0.19	0.80	6.40	0.02
SS4066	MH054	MH055	250	116.37	0.007	0.27	0.26	0.50	5.30	0.01
CO-37	MH070	MH074	250	61.01	0.004	0.21	0.20	0.60	5.50	0.01
SS4005	MH103	MH104	200	92.93	0.008	0.18	0.26	0.60	5.70	0.01
SS4011	MH105A	MH105	200	104.06	0.006	0.16	0.23	0.60	5.70	0.01
CO-9	MH115	MH116	200	107.37	0.006	0.17	0.23	0.60	5.70	0.01
CO-58	MH011	MH013	200	72.38	0.005	0.21	0.23	0.90	6.70	0.01
SS4079	MH077	MH081	200	115.62	0.015	0.26	0.35	0.60	5.80	0.01
CO-62	MH012	MH013	200	49.39	0.007	0.19	0.25	0.70	5.80	0.01
SS4014	MH124	MH123	200	111.77	0.006	0.17	0.23	0.70	5.90	0.01
SS4155	MH006B	MH006A	200	56.50	0.006	0.18	0.24	0.70	6.00	0.01

SW Middlesex Master Servicing Plan
2041 WWF_Peak
Manhole Table - Glencoe

Label	Elevation (Rim) (m)	Elevation (Invert) (m)	Flow (Total Out) (L/s)	Hydraulic Grade Line (In) (m)	Depth (In) (m)	Is Surcharged?
MH001	221.285	220.322	2.28	220.36	0.04	FALSE
MH001A	222.504	219.919	0.00	219.92	0.00	FALSE
MH002	222.580	219.773	2.34	219.81	0.04	FALSE
MH002A	222.700	220.090	0.01	220.10	0.01	FALSE
MH002B	222.230	220.310	0.00	220.31	0.00	FALSE
MH003	221.285	219.654	2.34	219.70	0.05	FALSE
MH004	221.894	219.331	2.37	219.38	0.05	FALSE
MH005	223.114	219.298	0.00	219.30	0.00	FALSE
MH006	223.114	218.971	4.21	219.03	0.06	FALSE
MH006A	221.894	219.243	1.79	219.28	0.04	FALSE
MH006B	222.199	219.608	0.62	219.63	0.02	FALSE
MH006C	221.285	219.610	1.12	219.64	0.03	FALSE
MH007	224.942	218.749	4.23	218.80	0.05	FALSE
MH008	224.638	218.639	4.23	218.70	0.06	FALSE
MH009	221.483	218.401	4.25	218.46	0.06	FALSE
MH011	221.285	219.331	0.72	219.79	0.45	FALSE
MH011A	221.894	219.547	0.70	220.03	0.48	FALSE
MH012	222.504	219.755	0.64	219.78	0.02	FALSE
MH013	222.504	219.395	1.39	219.43	0.04	FALSE
MH014	222.199	219.199	1.40	219.23	0.03	FALSE
MH015	221.285	218.285	1.43	218.35	0.06	FALSE
MH016	221.483	218.023	9.52	218.11	0.09	FALSE
MH016A	221.587	218.401	3.76	218.46	0.06	FALSE
MH017	222.199	219.992	1.05	220.02	0.03	FALSE
MH018	222.199	219.563	1.06	219.59	0.03	FALSE
MH019	222.504	219.941	0.00	219.94	0.00	FALSE
MH020	222.504	219.261	1.09	219.29	0.03	FALSE
MH021	222.504	218.792	1.11	218.82	0.03	FALSE
MH022	222.504	218.685	1.12	218.72	0.03	FALSE
MH023	223.779	219.238	1.34	219.27	0.03	FALSE
MH024	223.650	218.359	2.50	218.40	0.04	FALSE
MH025	221.434	217.713	12.07	217.82	0.11	FALSE
MH026	221.285	219.264	1.05	219.29	0.03	FALSE
MH027	221.894	218.773	1.07	218.80	0.03	FALSE
MH028	221.742	217.521	13.20	217.64	0.12	FALSE
MH029	222.493	220.221	1.05	220.25	0.03	FALSE
MH030	221.884	219.767	1.06	219.80	0.03	FALSE
MH031	222.471	220.392	1.64	220.43	0.03	FALSE
MH032	222.541	219.468	2.75	219.52	0.05	FALSE
MH032A	222.251	219.392	2.76	219.44	0.05	FALSE
MH033	221.611	219.151	4.63	219.21	0.06	FALSE
MH034	221.007	218.935	6.27	219.01	0.08	FALSE
MH035	220.748	218.660	6.29	218.74	0.08	FALSE
MH036	221.154	218.407	6.32	218.49	0.08	FALSE
MH037	222.330	219.953	1.05	219.98	0.03	FALSE
MH038	221.419	219.346	1.07	219.38	0.03	FALSE
MH039	221.139	218.191	7.44	218.27	0.08	FALSE
MH040	220.989	217.795	9.91	217.89	0.10	FALSE

MH041	221.404	217.274	24.43	217.43	0.16	FALSE
MH041A	221.648	219.599	1.19	219.63	0.04	FALSE
MH042	222.797	219.974	0.64	220.01	0.03	FALSE
MH043	222.166	219.919	0.65	219.95	0.03	FALSE
MH044	222.339	219.825	0.67	219.85	0.02	FALSE
MH045	222.886	219.992	1.19	220.02	0.03	FALSE
MH046	222.346	219.264	1.89	219.31	0.04	FALSE
MH047	222.193	218.938	1.92	218.98	0.04	FALSE
MH048	221.468	219.761	1.40	219.79	0.03	FALSE
MH049	222.199	219.169	1.42	219.21	0.04	FALSE
MH050	221.742	218.913	1.44	218.95	0.04	FALSE
MH051	221.440	218.664	1.46	218.70	0.04	FALSE
MH052	221.410	218.603	1.46	218.64	0.04	FALSE
MH053	221.181	218.316	1.49	218.35	0.04	FALSE
MH054	221.849	219.739	0.89	219.76	0.02	FALSE
MH055	221.986	218.965	1.87	219.01	0.04	FALSE
MH055A	221.837	219.063	0.94	219.09	0.03	FALSE
MH055B	221.407	219.322	0.92	219.35	0.03	FALSE
MH055C	221.407	219.547	0.47	219.57	0.02	FALSE
MH056	221.102	219.246	0.89	219.27	0.03	FALSE
MH057	221.684	218.404	2.80	218.45	0.05	FALSE
MH058	221.251	217.920	4.34	217.98	0.06	FALSE
MH059	222.000	219.925	1.23	219.96	0.03	FALSE
MH059A	222.000	220.100	1.21	220.14	0.04	FALSE
MH060	221.833	219.322	2.47	219.37	0.05	FALSE
MH060A	221.071	219.426	1.21	219.47	0.04	FALSE
MH061	221.500	219.057	2.50	219.10	0.04	FALSE
MH062	221.041	218.731	2.52	218.78	0.05	FALSE
MH063	221.011	217.258	10.24	217.36	0.10	FALSE
MH063A	221.285	219.230	0.83	219.26	0.03	FALSE
MH064	221.578	218.578	0.89	218.62	0.04	FALSE
MH065	221.102	218.475	2.39	218.52	0.05	FALSE
MH065A	221.087	218.907	1.45	218.94	0.04	FALSE
MH065B	221.410	219.316	1.42	219.35	0.04	FALSE
MH065C	221.675	219.758	1.40	219.79	0.04	FALSE
MH066	221.142	217.609	6.82	217.69	0.08	FALSE
MH067	222.574	219.200	0.00	219.20	0.00	FALSE
MH067A	221.599	219.328	0.00	219.33	0.01	FALSE
MH068	222.574	219.584	0.64	220.02	0.43	FALSE
MH069	222.574	219.081	0.66	219.61	0.52	FALSE
MH070	222.574	218.792	0.68	218.82	0.02	FALSE
MH071	222.324	220.184	0.64	220.21	0.02	FALSE
MH072	222.251	219.743	0.65	219.77	0.03	FALSE
MH073	222.218	220.066	0.00	220.07	0.00	FALSE
MH074	222.422	218.563	1.39	218.60	0.04	FALSE
MH075	222.007	218.228	2.68	218.28	0.05	FALSE
MH075A	222.172	220.340	1.24	220.37	0.03	FALSE
MH076B	221.578	219.005	0.83	219.29	0.29	FALSE
MH077	221.274	218.304	0.85	218.33	0.02	FALSE
MH079	221.209	219.151	0.83	219.18	0.03	FALSE
MH079A	221.344	219.377	0.83	219.40	0.02	FALSE

MH080	221.212	216.887	11.13	216.99	0.11	FALSE
MH081	221.206	216.621	12.03	216.73	0.11	FALSE
MH082	221.274	220.008	1.24	220.04	0.03	FALSE
MH083	221.274	219.529	2.51	219.57	0.05	FALSE
MH083A	221.274	219.404	2.51	219.45	0.04	FALSE
MH083B	221.274	219.791	1.24	219.82	0.03	FALSE
MH084	221.274	216.262	14.59	216.36	0.10	FALSE
MH085	221.142	217.024	24.45	217.18	0.15	FALSE
MH086	221.687	216.853	26.43	217.02	0.16	FALSE
MH087	221.501	215.951	43.77	216.14	0.19	FALSE
MH088	220.779	215.750	43.80	215.96	0.21	FALSE
MH089	220.210	219.600	1.20	219.63	0.03	FALSE
MH090	220.210	218.825	1.22	218.85	0.03	FALSE
MH091	220.194	215.655	45.06	215.86	0.21	FALSE
MH092	220.837	218.639	1.38	218.67	0.03	FALSE
MH093	220.873	218.447	1.39	218.48	0.04	FALSE
MH094	220.029	217.758	1.41	217.79	0.04	FALSE
MH095	221.874	218.133	1.38	218.17	0.03	FALSE
MH096	221.386	217.710	1.40	217.75	0.04	FALSE
MH097	219.487	217.341	4.46	217.40	0.06	FALSE
MH098	219.166	216.865	5.93	216.94	0.07	FALSE
MH099	219.706	215.558	51.04	215.76	0.20	FALSE
MH100	218.649	215.415	51.05	215.63	0.21	FALSE
MH101	222.188	219.188	1.40	219.98	0.79	FALSE
MH102	221.578	218.578	1.43	219.11	0.53	FALSE
MH103	220.646	214.580	0.61	219.42	4.84	FALSE
MH104	221.874	218.679	2.07	218.72	0.04	FALSE
MH105	221.274	218.340	2.64	218.41	0.07	FALSE
MH105A	221.274	218.996	0.51	219.02	0.02	FALSE
MH106	221.274	218.274	0.49	218.29	0.02	FALSE
MH107	220.359	217.359	3.19	217.60	0.24	FALSE
MH108	221.274	218.274	2.66	218.31	0.04	FALSE
MH108A	221.274	219.274	0.49	219.30	0.02	FALSE
MH111	220.703	218.465	0.74	218.49	0.03	FALSE
MH111A	221.172	218.673	0.73	218.70	0.03	FALSE
MH112	220.215	218.212	1.31	218.25	0.03	FALSE
MH113	221.071	219.230	1.40	219.27	0.04	FALSE
MH114	221.011	218.825	1.43	218.86	0.04	FALSE
MH115	220.614	218.782	0.55	218.80	0.02	FALSE
MH116	220.553	218.094	1.13	218.13	0.04	FALSE
MH117	220.523	217.804	4.64	217.87	0.06	FALSE
MH117A	221.000	218.359	2.00	218.40	0.04	FALSE
MH117B	221.000	219.035	0.55	219.05	0.02	FALSE
MH117C	221.000	219.000	1.40	219.04	0.04	FALSE
MH118	220.000	217.606	4.65	217.67	0.06	FALSE
MH119	220.492	217.871	4.31	217.94	0.07	FALSE
MH120	220.157	217.636	4.33	217.70	0.06	FALSE
MH121	220.242	217.841	1.61	217.88	0.04	FALSE
MH122	220.047	217.246	5.96	217.32	0.08	FALSE
MH123	219.189	216.880	6.57	216.97	0.09	FALSE
MH124	220.102	218.203	0.56	218.22	0.02	FALSE

MH125	220.370	217.402	6.01	217.48	0.07	FALSE
MH125A	221.091	217.237	6.02	217.30	0.06	FALSE
MH126	220.227	218.206	0.73	218.23	0.03	FALSE
MH127	220.520	217.795	1.31	217.83	0.03	FALSE
MH128	220.148	217.542	1.33	217.58	0.04	FALSE
MH129	219.170	216.481	16.48	216.60	0.12	FALSE
MH130	219.852	215.942	23.89	216.11	0.16	FALSE
MH132	220.155	217.441	3.20	217.49	0.05	FALSE
MH132A	220.155	217.307	3.21	217.36	0.05	FALSE
MH133	220.155	217.149	3.78	217.21	0.06	FALSE
MH134	220.155	217.008	3.80	217.08	0.07	FALSE
MH135	220.000	219.362	1.61	219.40	0.04	FALSE
MH136	220.000	219.105	1.62	219.14	0.04	FALSE
MH137	220.000	218.697	9.78	218.79	0.09	FALSE
MH138	220.000	218.331	9.80	218.44	0.11	FALSE
MH139	220.000	217.999	9.83	218.08	0.08	FALSE
MH140	219.301	217.109	9.85	217.21	0.10	FALSE
MH143	221.000	216.957	0.56	216.98	0.02	FALSE
MH145	220.155	215.814	28.30	216.00	0.19	FALSE
MH146	220.478	215.768	28.31	215.91	0.14	FALSE
MH147	219.939	215.597	28.32	215.74	0.14	FALSE
MH148	219.686	217.500	1.20	217.53	0.03	FALSE
MH149	219.686	217.274	1.21	217.30	0.03	FALSE
MH150	219.686	215.478	29.56	215.65	0.17	FALSE
MH151	219.000	217.920	0.79	217.95	0.03	FALSE
MH153	219.573	217.703	0.82	217.73	0.03	FALSE
MH153A	220.000	217.730	0.82	217.76	0.03	FALSE
MH154	219.573	217.500	0.84	217.53	0.03	FALSE
MH155	219.573	217.368	0.86	217.40	0.03	FALSE
MH156	219.573	216.883	2.38	216.93	0.05	FALSE
MH157	219.573	216.381	2.41	216.43	0.05	FALSE
MH158	219.573	215.463	32.00	215.61	0.15	FALSE
MH159	220.020	217.790	0.83	217.82	0.03	FALSE
MH160	219.989	217.481	0.85	217.51	0.03	FALSE
MH161	220.127	217.246	0.87	217.28	0.03	FALSE
MH162	219.758	216.990	0.89	217.02	0.03	FALSE
MH163	220.578	216.682	2.41	216.73	0.05	FALSE
MH164	219.389	216.323	2.44	216.37	0.05	FALSE
MH165	219.151	215.254	85.56	215.53	0.28	FALSE
MH170	221.000	219.150	0.79	219.18	0.03	FALSE
MH171	221.000	219.100	1.61	219.15	0.05	FALSE
MH172	220.000	219.300	0.79	219.33	0.03	FALSE
MH173	220.492	217.962	2.65	218.03	0.07	FALSE
MH175	222.000	218.429	2.62	218.48	0.05	FALSE
MH176	222.000	218.560	2.60	218.62	0.06	FALSE
MH177	222.000	218.650	0.79	218.68	0.03	FALSE
MH189	219.000	217.970	0.81	218.00	0.03	FALSE
MH190	220.000	218.100	0.79	218.13	0.03	FALSE
MH-66	221.285	220.364	1.64	220.42	0.06	FALSE
MH-68	221.285	220.010	0.62	220.03	0.02	FALSE

SW Middlesex Master Servicing Plan
2041 WWF_Peak
Gravity Main Table - Glencoe

Label	Start Node	Stop Node	Diameter (mm)	Length (Scaled) (m)	Slope (Calculated) (m/m)	Flow (L/s)	Velocity (m/s)	Flow / Capacity (Design) (%)	Depth (Normal) / Rise (%)	Depth (Normal) (m)
SS4053	MH019	MH020	200	27.44	0.025	0.01	0.13	0.00	1.00	0.00
SS4074	MH067	MH070	250	38.80	0.011	0.01	0.11	0.00	1.00	0.00
CO-15	MH001A	MH002	200	34.13	0.004	0.01	0.08	0.00	1.50	0.00
CO-80	MH005	MH006	200	48.73	0.007	0.01	0.11	0.00	1.60	0.00
SS4054	MH002B	MH002A	200	56.60	0.004	0.01	0.09	0.10	2.00	0.00
SS4075	MH073	MH074	200	93.37	0.005	0.02	0.12	0.10	2.30	0.00
CO-14	MH002A	MH002	200	58.90	0.005	0.03	0.13	0.10	2.60	0.01
SS4073	MH067A	MH066	200	128.74	0.006	0.03	0.13	0.10	2.70	0.01
SS4107	MH117B	MH117A	200	27.69	0.024	0.56	0.53	1.10	7.40	0.01
CO-30	MH044	MH046	250	85.72	0.007	0.69	0.35	1.40	8.30	0.02
SS4185L.B	MH106	MH107	200	69.42	0.010	0.50	0.39	1.50	8.50	0.02
SS4150C	MH055C	MH055B	250	78.63	0.003	0.49	0.24	1.50	8.60	0.02
CO-28	MH055	MH055A	250	29.16	0.003	0.95	0.31	2.80	11.40	0.03
SS4149C	MH055B	MH055A	250	91.82	0.003	0.94	0.29	3.00	11.90	0.03
SS4066	MH054	MH055	250	116.37	0.007	0.92	0.38	1.90	9.60	0.02
CO-37	MH070	MH074	250	61.01	0.004	0.70	0.29	1.90	9.60	0.02
SS4005	MH103	MH104	200	92.93	0.008	0.63	0.37	2.20	10.20	0.02
SS4011	MH105A	MH105	200	104.06	0.006	0.54	0.32	2.10	10.10	0.02
CO-9	MH115	MH116	200	107.37	0.006	0.58	0.34	2.20	10.20	0.02
CO-58	MH011	MH013	200	72.38	0.005	0.74	0.34	3.20	12.20	0.02
SS4079	MH077	MH081	200	115.62	0.015	0.87	0.51	2.20	10.30	0.02
CO-62	MH012	MH013	200	49.39	0.007	0.65	0.37	2.30	10.50	0.02
SS4014	MH124	MH123	200	111.77	0.006	0.58	0.33	2.30	10.60	0.02
SS4155	MH006B	MH006A	200	56.50	0.006	0.64	0.35	2.40	10.70	0.02

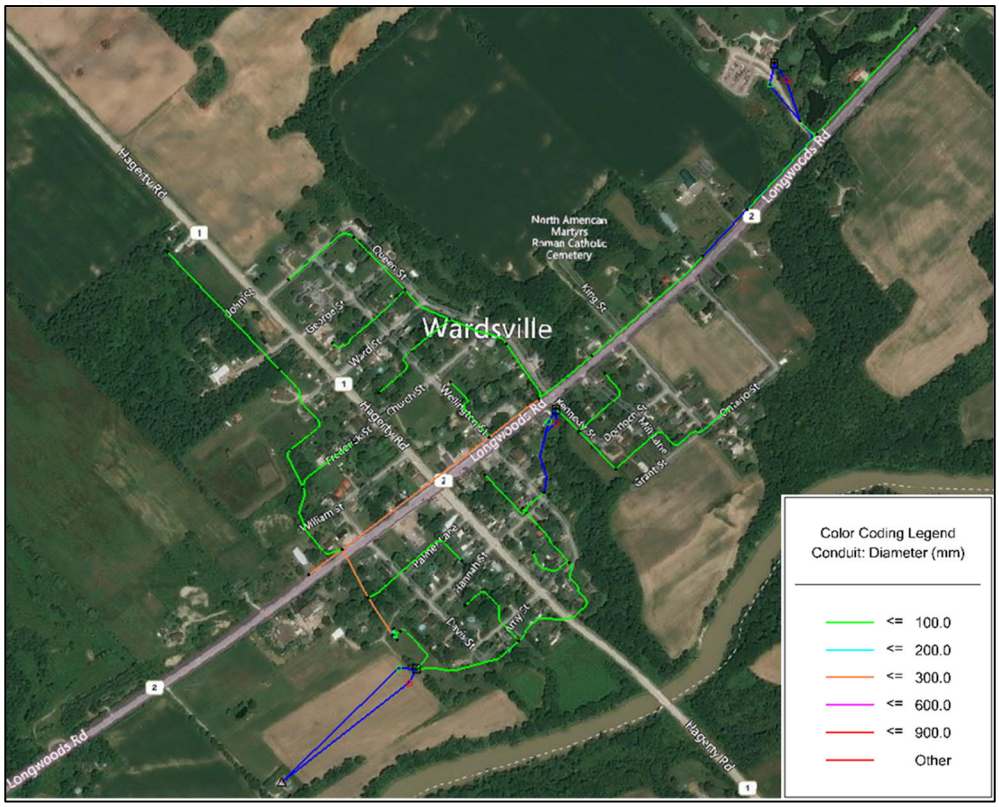


Figure F1 – Sewer Model Layout with Pipe Diameter for the Village of Wardsville



Figure F2 – Sewer Model Layout with Pipe Diameter for the Village of Glencoe

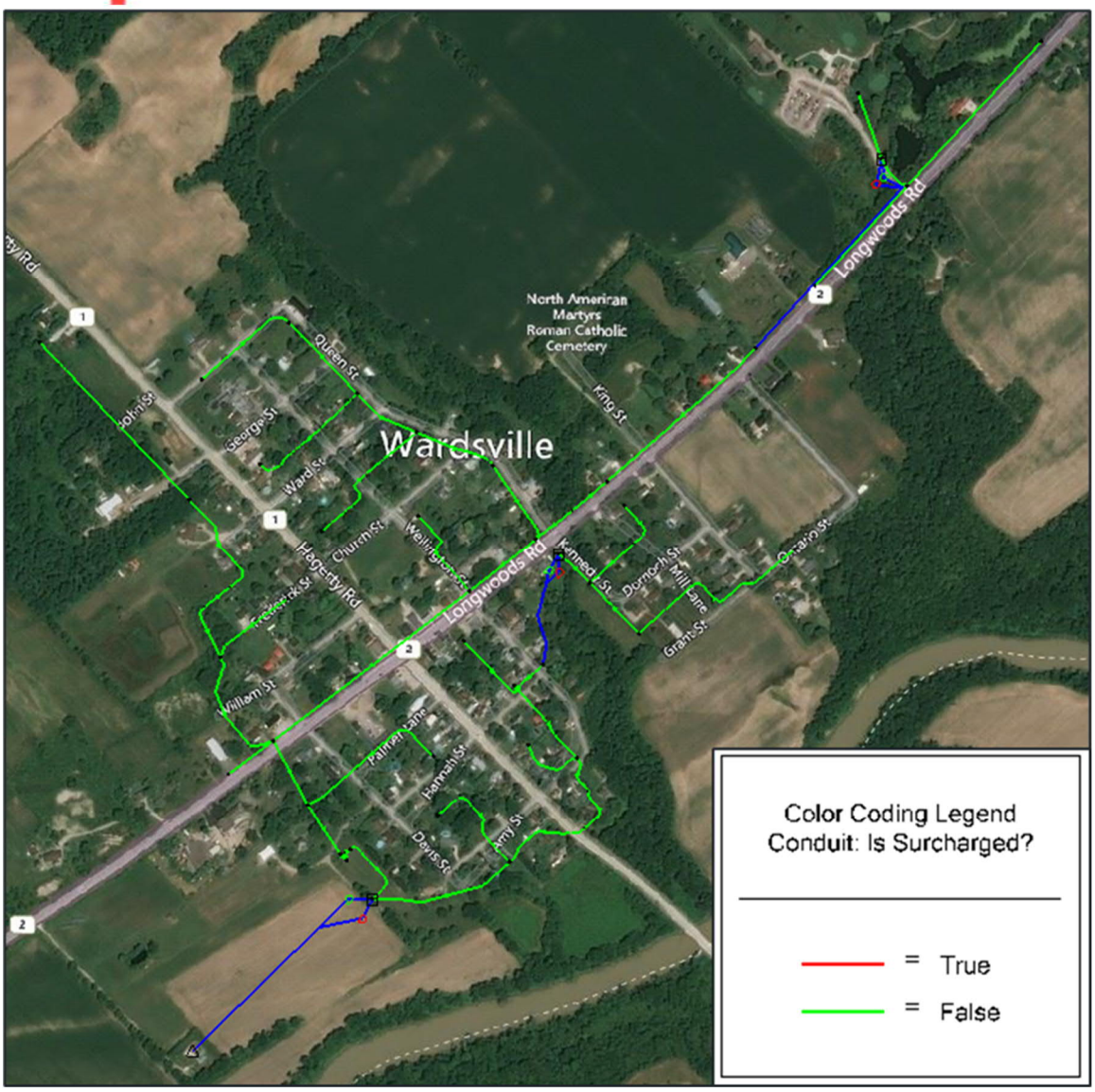


Figure F3 – Simulated Conduit Surcharge in the Village of Wardsville under 2041 DWF Condition

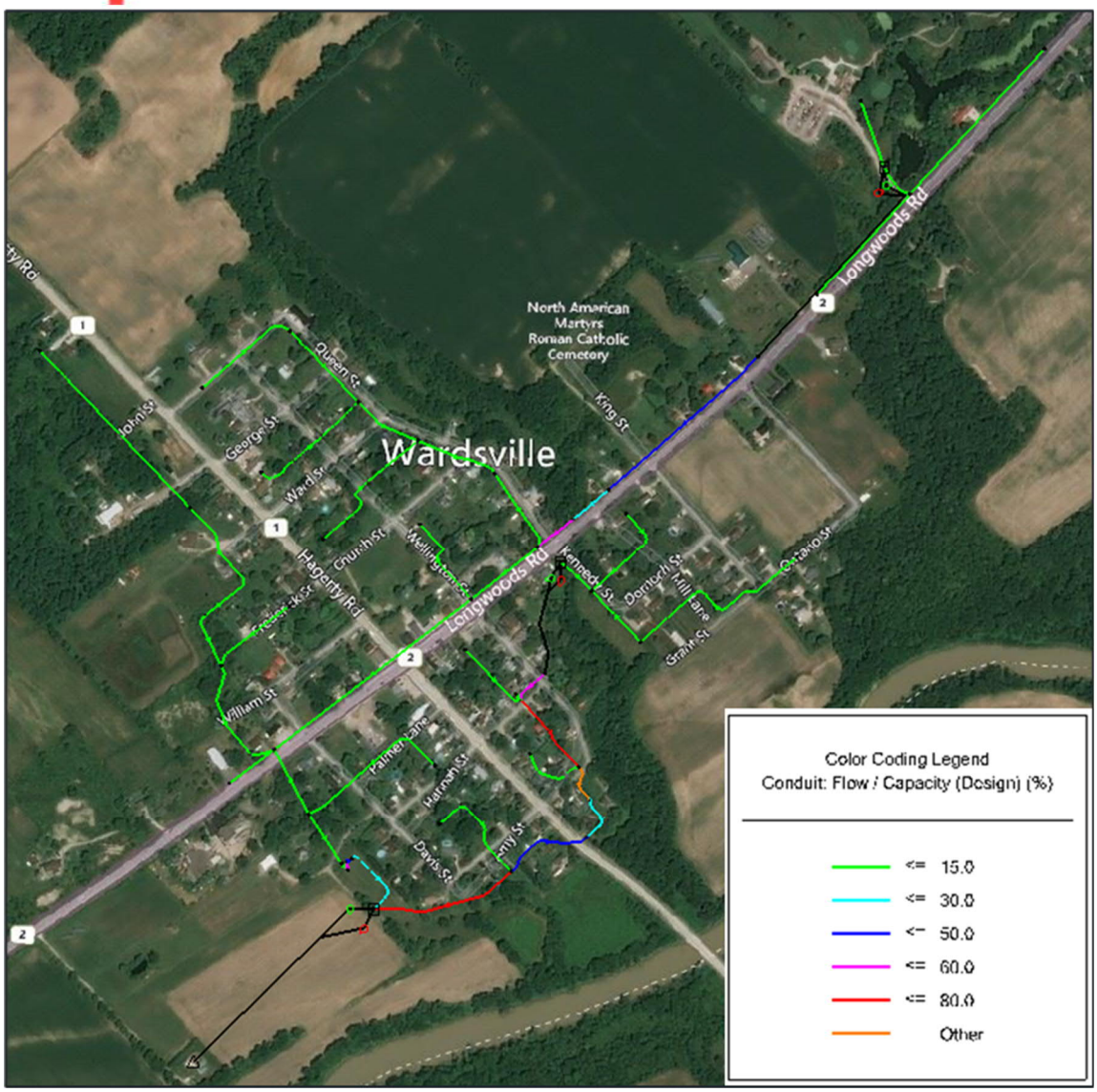


Figure F4 – Simulated q/Q Ratio in the Village of Wardsville under 2041 DWF Condition



Figure F5 – Simulated Conduit Surcharge in the Village of Wardsville under 2041 WWF_Peak Condition



Figure F6 – Simulated q/Q Ratio in the Village of Wardsville under 2041 WWF_Peak Condition

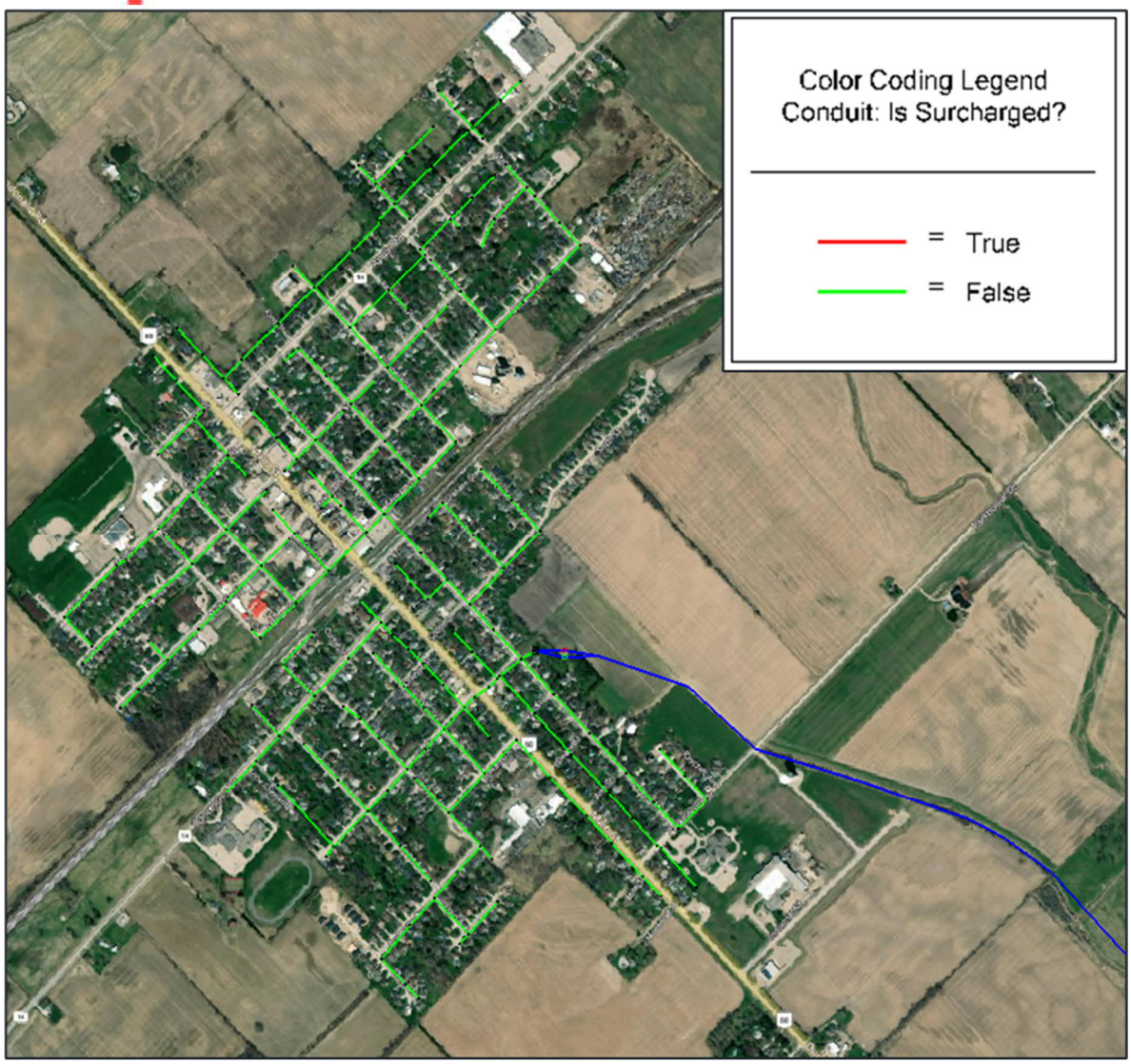


Figure F7 – Simulated Conduit Surcharge in the Village of Glencoe under 2041 WWF_Peak Condition

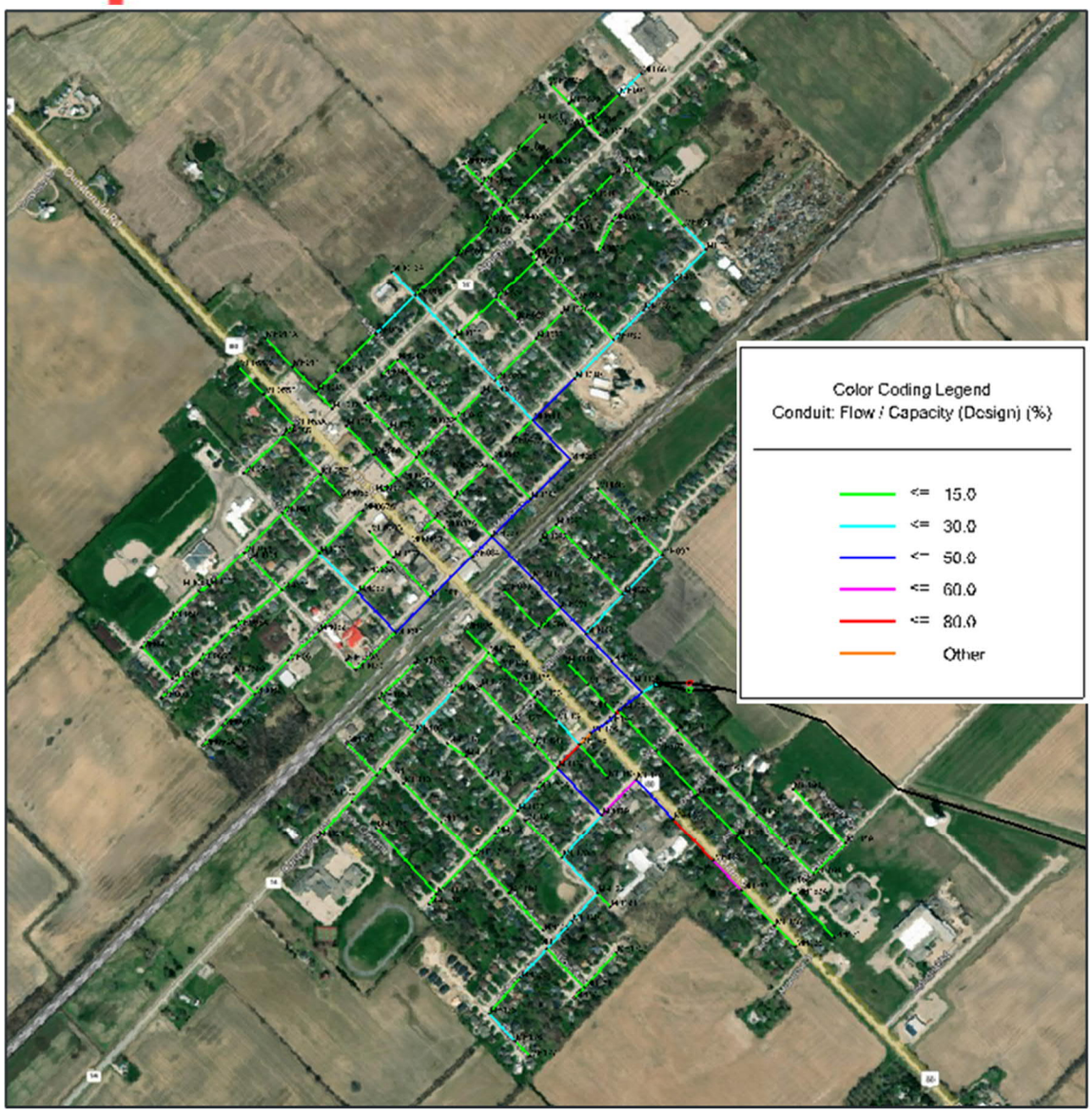


Figure F8 – Simulated q/Q Ratio in the Village of Glencoe under 2041 WWF_Peak Condition

APPENDIX

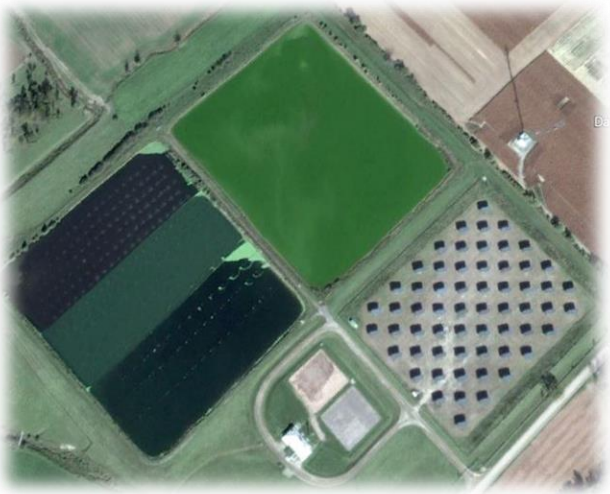
G WASTEWATER TREATMENT PLANT CAPACITY MEMO

MUNICIPALITY OF SOUTHWEST MIDDLESEX

MUNICIPAL WASTEWATER AND WATER MASTER SERVICING PLAN

GLENCOE AND WARDSVILLE WASTEWATER TREATMENT PLANTS CAPACITY REVIEW





MUNICIPAL WASTEWATER AND WATER MASTER SERVICING PLAN

GLENCOE AND WARDSVILLE WASTEWATER TREATMENT PLANTS CAPACITY REVIEW

MUNICIPALITY OF SOUTHWEST MIDDLESEX

REVISION 1

PROJECT NO.: 211-06377-00
DATE: JUNE 13, 2022

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TABLE OF CONTENTS

1 INTRODUCTION 1

2 BACKGROUND AND OBJECTIVES 1

2.1.1 Sources of Data 1

3 GLENCOE SEWAGE TREATMENT PLANT ... 2

3.1 Treatment Process 2

3.2 Process Design Summary 2

3.3 Effluent Quality Requirements 5

3.4 Plant Design Parameters 6

3.5 Historical Review 6

3.5.1 Wastewater Flow 6

3.5.2 Effluent Wastewater Characteristics 7

3.5.3 Sludge Generation 13

4 WARDSVILLE SEWAGE TREATMENT PLANT 14

4.1 Treatment Process 14

4.2 Process Design Summary 14

4.3 Effluent Quality Requirements 17

4.4 Plant Design Parameters 18

4.5 Historical Review 19

4.5.1 Wastewater Flow 19

4.5.2 Effluent Wastewater Characteristics 20

4.5.3 Sludge Generation 25

5 FUTURE FLOWS 27

6 PROCESS UNITS DESIGN BASIS 27

7 GLENCOE WWTP PROCESS CAPACITY ASSESSMENT 28

7.1 Septage and Biosolids Storage (Cell No. 1) 28

7.2 Aerated Lagoon (Cell No. 2) 29
7.3 Submerged Attached Growth Reactor (SAGR) 30
7.4 Chemical Addition Systems 30
7.5 Tertiary Treatment - Clarifier 32
7.6 Tertiary Treatment – Filters 32
7.7 Summary 33
8 WARDSVILLE WWTP PROCESS CAPACITY ASSESSMENT 35
8.1 Preliminary Treatment System 35
8.2 Secondary Treatment System – Aeration tank 35
8.3 Secondary Clarifier 36
8.4 Oxygenation 36
8.5 Filtration 37
8.6 Chemical Addition 38
8.7 UV Disinfection 39
8.8 Sludge Treatment 40
8.8.1 Aerobic Digesters 40
8.8.2 Sludge Holding Tank 40
8.9 Summary 41
9 CONCLUSIONS 43
BIBLIOGRAPHY 44

TABLES

TABLE 1: PROCESS DESIGN SUMMARY FOR THE GLENCOE WWTP.....2
TABLE 2: EFFLUENT OBJECTIVES FOR GLENCOE WWTP.....5
TABLE 3: EFFLUENT LIMITS FOR GLENCOE WWTP .6
TABLE 4: DESIGN PARAMETERS FOR THE GLENCOE WASTEWATER TREATMENT PLANT 6
TABLE 5: HISTORICAL WASTEWATER FLOWS AT THE GLENCOE WASTEWATER TREATMENT PLANT 7
TABLE 6: FINAL EFFLUENT CONCENTRATIONS AT THE GLENCOE WWTP FOR 2019 TO 2021. 8
TABLE 7: FINAL EFFLUENT LOADINGS AT THE GLENCOE WWTP FOR 2019 TO 2021. 8
TABLE 8: REPORTED SLUDGE VOLUMES TRANSFERRED TO THE EAST LAGOON AT THE GLENCOE WWTP 13
TABLE 9: PROCESS DESIGN SUMMARY FOR THE WARDSVILLE WWTP 14
TABLE 10: EFFLUENT OBJECTIVES FOR WARDSVILLE WWTP 17
TABLE 11: EFFLUENT LIMITS FOR WARDSVILLE WWTP.....17
TABLE 12: EFFLUENT LOADING LIMITS FOR WARDSVILLE WWTP 18
TABLE 13: DESIGN PARAMETERS FOR THE WARDSVILLE WWTP 19
TABLE 14: HISTORICAL WASTEWATER FLOWS AT THE WARDSVILLE WASTEWATER TREATMENT PLANT 19
TABLE 15: FINAL EFFLUENT CONCENTRATION AT THE WARDSVILLE WWTP FOR 2019 TO 2021. 21
TABLE 16: FINAL EFFLUENT LOADINGS AT THE WARDSVILLE WWTP FOR 2019 TO 2021. 21
TABLE 17: REPORTED SLUDGE VOLUMES AT THE WARDSVILLE WWTP 26
TABLE 18: FUTURE WASTEWATER FLOW TO THE GLENCOE AND WARDSVILLE WWTPS 27

TABLE 19: MOE RECOMMENDED DESIGN BASIS FOR PROCESS UNITS.....27
TABLE 20: FUTURE SLUDGE VOLUME TRANSFERRED TO THE EAST LAGOON AT THE GLENCOE WWTP 28
TABLE 21: GLENCOE WWTP AERATION SYSTEM DESIGN PARAMETER.....29
TABLE 22: INCOMING WASTEWATER CHARACTERISTICS AT THE GLENCOE WWTP (2019-2021) 29
TABLE 23: INFLUENT DESIGN CONCENTRATION FOR SAGR SYSTEM 30
TABLE 24: THEORETICAL ALUM DOSING REQUIREMENTS.....31
TABLE 25: ALUM DOSING REQUIREMENTS AT PEAK HOURLY FLOW 31
TABLE 26: NOVA MODEL UL 1351 DISC FILTER FEED CHARACTERISTICS.....33
TABLE 27: DISC FILTERS PERFORMANCE AT DESIGN CONDITIONS 33
TABLE 28: CAPACITY ASSESSMENT SUMMARY FOR GLENCOE WWTP.....33
TABLE 29: AERATION TANK OPERATION FOR THE PERIOD 2019 TO 2021.....35
TABLE 30: AIR REQUIREMENTS FOR THE AERATION SYSTEM 36
TABLE 31: SAND FILTERS PERFORMANCE AT DESIGN CONDITIONS 38
TABLE 32: THEORETICAL ALUM DOSING REQUIREMENTS.....38
TABLE 33: ALUM DOSING REQUIREMENTS AT PEAK HOURLY FLOW 39
TABLE 34: ASSESSMENT OF THE CAPACITY OF THE AEROBIC DIGESTER 40
TABLE 35: ASSESSMENT OF THE CAPACITY OF THE HOLDING TANK.....41
TABLE 36: CAPACITY ASSESSMENT SUMMARY.....41

FIGURES

FIGURE 1: AVERAGE DAY AND MAXIMUM DAY FLOWS FOR THE GLENCOE WWTP FOR 2019 TO 2021 7
FIGURE 2: MONTHLY CBOD5 EFFLUENT CONCENTRATION FOR THE

GLENCOE WWTP FOR 2019 TO 2021 9
FIGURE 3: MONTHLY TSS EFFLUENT CONCENTRATIONS FOR THE GLENCOE WWTP FOR 2019 TO 2021 9
FIGURE 4: MONTHLY EFFLUENT TP CONCENTRATION FOR THE GLENCOE WWTP FOR 2019 TO 2021 10
FIGURE 5: MONTHLY EFFLUENT TAN CONCENTRATIONS AT GLENCOE WWTP FOR 2019 TO 2021.....10
FIGURE 6: MONTHLY AVERAGE EFFLUENT CBOD5 LOADING FOR THE GLENCOE WWTP FOR 2019 TO 2021.....11
FIGURE 7: MONTHLY AVERAGE EFFLUENT TSS LOADING FOR THE GLENCOE WWTP FOR 2019 TO 2021.....11
FIGURE 8: MONTHLY AVERAGE EFFLUENT TP LOADING FOR THE GLENCOE WWTP FOR 2019 TO 2021.....12
FIGURE 9: MONTHLY AVERAGE EFFLUENT TAN LOADING FOR THE GLENCOE WWTP FOR 2019 TO 2021.....12
FIGURE 10: AVERAGE DAY AND MAXIMUM DAY FLOWS FOR THE WARDSVILLE WWTP FOR 2019 TO 2021 20
FIGURE 11: MONTHLY CBOD5 EFFLUENT CONCENTRATION FOR THE WARDSVILLE WWTP FOR 2019 TO 2021 22
FIGURE 12: MONTHLY TSS EFFLUENT CONCENTRATIONS FOR THE WARDSVILLE WWTP FOR 2019 TO 2021 22
FIGURE 13: MONTHLY EFFLUENT TP CONCENTRATION FOR THE WARDSVILLE WWTP FOR 2019 TO 2021 23
FIGURE 14: MONTHLY EFFLUENT TAN CONCENTRATIONS AT WARDSVILLE WWTP FOR 2019 TO 2021 23
FIGURE 15: MONTHLY AVERAGE EFFLUENT CBOD5 LOADING FOR THE WARDSVILLE WWTP FOR 2019 TO 2021.....24

FIGURE 16: MONTHLY AVERAGE EFFLUENT TSS LOADING FOR THE WARDSVILLE WWTP FOR 2019 TO 2021.....24
FIGURE 17: MONTHLY AVERAGE EFFLUENT TP LOADING FOR THE WARDSVILLE WWTP FOR 2019 TO 2021.....25
FIGURE 18: MONTHLY AVERAGE EFFLUENT TAN LOADING FOR THE WARDSVILLE WWTP FOR 2019 TO 2021.....25
FIGURE 19: PROCESS CAPACITY CHART FOR GLENCOE WWTP.....34
FIGURE 20: PROCESS CAPACITY CHART FOR WARDSVILLE WWTP 42

1 INTRODUCTION

WSP Canada has been retained by The Municipality of Southwest Middlesex (referred to as the "Municipality") to provide engineering consultancy services for the municipal wastewater and water master servicing plan. The purpose of this report is to provide a capacity assessment of the major process units at the Glencoe and Wardsville wastewater treatment plants to ensure there is capacity to service the needs to 2041 (future).

2 BACKGROUND AND OBJECTIVES

The Municipality of Southwest Middlesex is a Municipality within the County of Middlesex and is located halfway between London and Chatham. With an overall population of 5,924, the Municipality is serviced by two wastewater treatment plants – Glencoe Wastewater Treatment Plant (WWTP) and Wardsville WWTP. The Glencoe WWTP has a rated capacity of 1,723 m^3/d and is operated in accordance with the Amended ECA No. 8720-9NFLAB issued on May 26, 2016. The WWTP is comprised of a septage receiving station, septage and biosolids storage, inlet structure, aerated lagoon, submerged attached growth reactors (SAGR), chemical addition systems, tertiary treatment, and effluent outfall.

The Wardsville WWTP has a rated capacity of 300 m^3/d and is operated in accordance with the Amended ECA No. 0992-BWXTKG issued on January 15, 2021. The WWTP includes preliminary treatment system, influent flow measurement and sampling point, secondary treatment systems, post-secondary treatment system, supplementary treatment systems, disinfection system, final effluent flow measurement and sampling point, sludge management system, and final effluent disposal facilities.

The objective of this report is to:

1. Review the historical performance of the Glencoe and Wardsville Wastewater Treatment Plants
2. Provide a capacity assessment of the major process units of both plants

2.1.1 SOURCES OF DATA

The following data sources were available and used to inform the capacity review:

1. Amended Environmental Compliance Approval No. 8720-9NFLAB issued on May 26, 2016 (for the Glencoe WWTP)
2. Amended Environmental Compliance Approval No. 0992-BWXTKG issued on January 15, 2021 (for the Wardsville WWTP)
3. 2019 – 2021 Annual Reports for Glencoe and Wardsville WWTPs
4. 2011 Operations and Maintenance (OM) Manual for the Glencoe WWTP
5. 2016 Operations and Maintenance (OM) Manual for the Wardsville WWTP
6. 2013 Evaluation of the Waste Treatment Performance at the Glencoe WWTP
7. As-built drawings for Glencoe WWTP

3 GLENCOE SEWAGE TREATMENT PLANT

3.1 TREATMENT PROCESS

According to the Amended ECA No. 8720-9NFLAB, the Glencoe WWTP has a rated capacity of 1,723 m^3/d. Based on the 2011 operations manual, the plant was originally designed for a capacity of 946 m^3/d, and was subsequently upgraded for the current rated capacity of 1,723 m3/d. The plant is currently comprised of a septage receiving station, septage and biosolids storage (non-aerated lagoon), inlet structure, aerated lagoon, submerged attached growth reactors, chemical addition systems, tertiary treatment, and effluent outfall

Wastewater enters the plant via an 8” forcemain and is then directed to a partially mixed aerated lagoon which has three aeration zones separated by two floating baffles. Aeration is provided using a fine bubble aeration system. Two duty air blowers are used to provide the air requirements for the lagoon. The effluent from the aerated lagoon is directed to a flow splitter which feeds two submerged attached growth reactor (SAGR) reactors for nitrification. The SAGR system is equipped with an aerated gravel bed which serves as the solid media on which bacterial growth occurs. One duty and one standby blower supplies air to the SAGR system. The standby blower also functions as a standby blower for the lagoon. The effluent from the SAGR system flows to the flocculation tanks by gravity. Alum is dosed in the effluent at the SAGR discharge point to assist phosphorus removal. Polymer is also added to the effluent prior to flocculation tanks. The effluent leaving the flocculation tanks flows by gravity to the clarifier which is equipped with a lamella plate settler. Settled solids are removed from the clarifier and are pumped to the non-aerated lagoon for storage and digestion. The supernatant from this lagoon can be decanted into the aerated lagoon for treatment. The clarified effluent is directed to one of two disc filters for tertiary treatment before it is finally discharged to Newbiggen Creek. The flow of the final effluent is monitored using a parshall flume. The backwash water from the filters is recycled to the non-aerated lagoon for treatment through the plant.

3.2 PROCESS DESIGN SUMMARY

A summary of the mechanical equipment and process train is outlined in **Table 1**. This includes the number, dimensions, and design and operating volumes/capacity for the existing process trains.

Table 1: Process Design Summary for the Glencoe WWTP

Unit Process	Design Parameter
Septage Receiving Station	
Screen	
Number	1
Diameter	480 mm
Openings Size	6.4 mm
Screw Compactor	
Number	1
Power	1.5 kW (based on OM manual)

Septage Storage Tank	
Number	1
Capacity	78 m^3
Septage Pump	
Type	Submersible pumps
Number	2 (1 duty and 1 standby)
Pump Capacity (each)	16.8 L/s @ 10.4m TDH
Septage and Biosolid Storage	
Lagoon (Cell 1)	
Type	Single cell facultative lagoon
Number	1
Volume	85,050 m^3 (based on the ECA)
Top Surface Area	56700 m^2
Average Operation Depth	1.5 m
Freeboard	0.9 m
Aerated Lagoon	
Aerated Lagoon (Cell 2)	
Type	Partially mixed aerated lagoon equipped with fine bubble aeration system
Number	1
Top Surface Area	56,700 m^2
Average Operation Depth	2.3 m
Volume	124,039 m^3 (based on As-Built drawings)
Number of Aeration Zones	3
Type of Diffusers	MixAir Technologies (MAT) fine bubble membrane diffuser
Number of Diffusers in First Zone	160 (based on the equipment's manual)
Number of Diffusers in Second Zone	50 (based on the equipment's manual)
Number of Diffusers in Third Zone	32 (based on the equipment's manual)
Type of Baffle Curtain	Geomembrane floating baffle curtain
Number of Baffle Curtain	2
Submerged Attached Growth Reactors	
Submerged Attached Growth Reactor (SAGR)	
Type of operation	Two SAGR beds operating in parallel
Number	2
Side Water Depth (SWD)	2.4 m
Length x Width	45 m x 45 m
Perforated Influent Distribution Piping	
Number (for each SAGR)	4
Diameter	250 mm
Course Bubble Diffusers	

Number (for each SAGR)	18 runs
Perforated Effluent Collection Piping Number (for each SAGR) Diameter	 1 300 mm
Blower for the SAGR Type Number Capacity	 Positive displacement blower 1 20.9 m^3/min @ 35.2 kPa (based on the ECA)
Blower for the Aerated Lagoon Type Number Capacity (each)	 Positive displacement blowers 3 (one common standby for aerated lagoon and SAGR) 54.1 m^3/min @ 57.2 kPa (based on the ECA)
Chemical Addition Systems	
Phosphorus Removal Chemical Storage Tank Number Capacity	 1 10,000 L
Chemical Dosing Pump Number Pump Capacity (each)	 2 (1 duty and 1 standby) 19 L/hr
Polymer Storage Drum Number Capacity	 1 150 L
Polymer Dosing Pump Number Pump Capacity	 1 2.2 L/h
Tertiary Treatment	
Chemical Flocculation Tank Number Capacity	 1 12.5 m^3
Polymer Flocculation Tank Number Capacity	 1 12.5 m^3
Clarifier Type Number Side Water Depth (SWD) Length x Width Lamella Plate Settling area Design Surface Overflow rate (SOR)	 Rectangular clarifier equipped with aerated flash mixing lamella plate settlers 1 3.6 m (based on the ECA) 3.8 m x 3.6 m (based on the ECA) 89 m^2

	19.31 $m^3/m^2/d$
Submersible Sludge Pump Number Capacity	 1 0.5 L/s @ 9 m TDH
Disc Filter Type of Operation Number Total Surface Area per Filter Capacity (each) Washwater Pump Number (for each disc filter) Capacity	 Parallel operating tangentially fed rotating disc filters 2 2.92 m^2 Peak Flow Rate of 1,878 m^3/d (based on As-Built drawings and operator's feedback) 1 1.3 L/s @ 56 m TDH
Backwash Pump Number Pump Capacity (each)	 2 (1 duty and 1 standby) 3.8 L/s @ 9 m TDH
Effluent Outfall (based on the ECA)	
Effluent Sewer – Section 1 Diameter Length	 300 mm (based on the ECA) 53 m
Effluent Sewer - Section 2 Diameter Length	 525 mm (based on the ECA) 60.4 m
Effluent Sewer Section 3 Diameter Length	 600 mm 81.9 m

3.3 EFFLUENT QUALITY REQUIREMENTS

According to the Amended ECA No. 8720-9NFLAB issued on May 26, 2016, the effluent objectives and limits for the Glencoe WWTP are shown in **Table 2 and 3**, respectively.

Table 2: Effluent Objectives for Glencoe WWTP

Parameter	Average Concentration Objective (mg/L)
cBOD5	7.0
Total suspended solids (TSS)	7.0
Total phosphorous (TP)	0.3

Total Ammonia Nitrogen (TAN)	1.0
E. coli	100 organisms/100 mL Monthly Geometric Mean Density
Effluent pH	6.5 to 8.5 inclusive

Table 3: Effluent Limits for Glencoe WWTP

Parameter	Average Limit Concentration (mg/L)	Average Waste Loading (kg/d)
cBOD5	13.7	23.6
Total suspended solids (TSS)	13.7	23.6
Total phosphorous (TP)	0.55	0.95
Total Ammonia Nitrogen (TAN)	3.0	5.17
E. coli	200 organisms/100 mL Monthly Geometric Mean Density	-
Effluent pH	6.0 to 9.5 inclusive	-

3.4 PLANT DESIGN PARAMETERS

According to the ECA No. 8720-9NFLAB and the 2011 Operations & Maintenance (O&M) Manual for the Glencoe WWTP, the design parameters for the plant are summarized in **Table 4**.

Table 4: Design Parameters for the Glencoe Wastewater Treatment Plant

Parameter	Value
Rated Average Daily Flow	1,723 (m^3/d)
Peak hourly Flow	1,878 (m^3/d) [(1)]
Effluent Quality Requirements	See Table 2 and 3 above for the ECA requirements

[(1)] The peak hourly flow is based on the 2011 O&M Manual and As-built drawings

3.5 HISTORICAL REVIEW

Annual Performance Reports for 2019 to 2021 for the Glencoe WWTP were used to review the wastewater flow and effluent characteristics for the plant.

3.5.1 WASTEWATER FLOW

The average day (ADF) and maximum daily flows (MDF) for the period 2019 to 2021, along with the 3-year average for the same period are shown in **Table 5**. According to the 2019 Annual Report, a MDF of 8,778 m^3/d was reported in May 2019. It should be noted that this value was considered an outlier, and was not considered in the calculation of 2019 MDF for the plant.

As shown Table 5, the MDF values are higher than the design peak hourly flow (PHF) of 1,878 m^3/d (See Table 4) for the plant. However, based on feedback received from Ontario Clean Water Agency (OCWA),

these flows have been buffering out in the lagoons which have also been using as an equalization system to buffer the flow through the plant.

Table 5: Historical Wastewater Flows at the Glencoe Wastewater Treatment Plant

Year	ADF (m^3/d)	MDF (m^3/d)
2019	693	2,290
2020	633	2,896
2021	690	3,111
3-year average	672	-

For the three-year period from 2019 to 2021, the average flow accounts for 39% of the rated capacity (1,723 m^3/d) of the plant. This is also illustrated in **Figure 1**. Peak flow information was not provided for the plant, but in lieu of this data, the maximum day flows are also shown on **Figure 1**. As shown in **Figure 1**, over this three (3) year period, there were many instances where the max day flows exceeded the rated capacity.

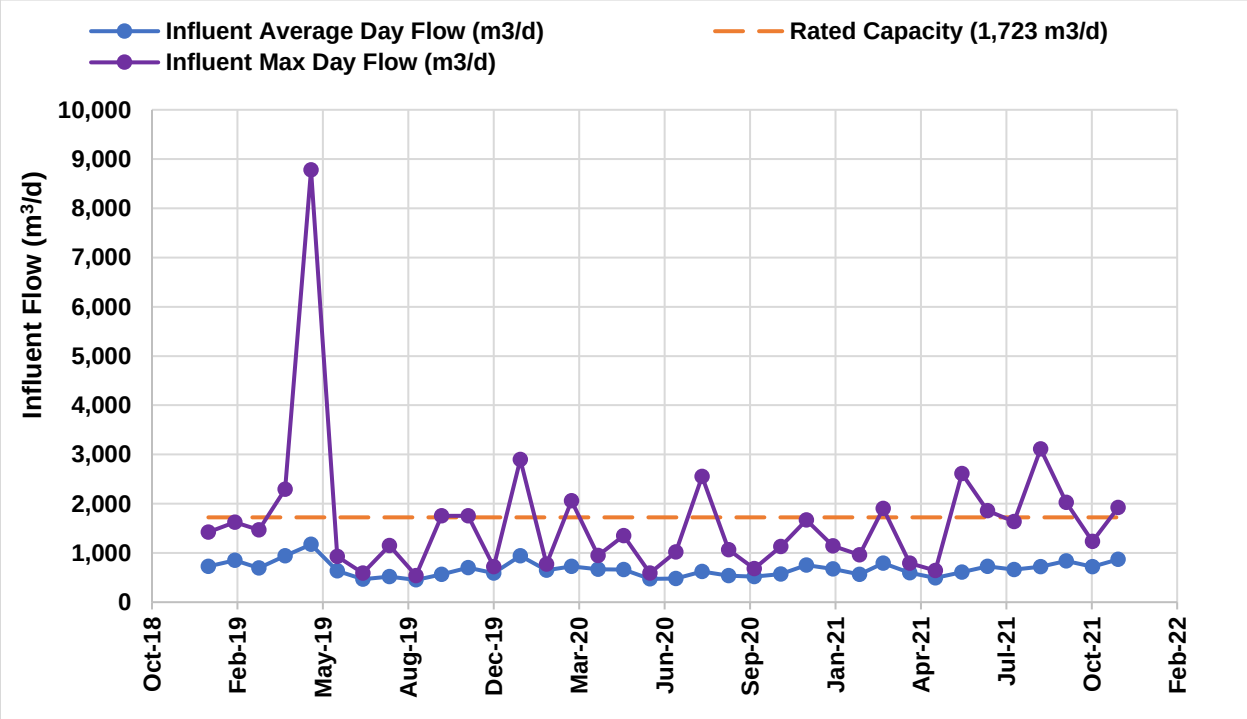


Figure 1: Average Day and Maximum Day Flows for the Glencoe WWTP for 2019 to 2021

3.5.2 EFFLUENT WASTEWATER CHARACTERISTICS

The effluent characteristics (concentrations and loadings) for the period 2019 to 2021 are outlined in **Table 6** and **Table 7**. **Figure 2** to **Figure 5** graphically illustrate the monthly averages for the effluent parameters

(cBOD5, TSS, TP and Ammonia-N). The performance of the plant was assessed by comparing the concentrations and loadings to the effluent objectives and limits specified in the ECA for the Glencoe WWTP.

Table 6: Final Effluent Concentrations at the Glencoe WWTP for 2019 to 2021.

Year	cBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TAN (mg/L)
2019	2.25	4.30	0.17	0.16
2020	2.02	7.23	0.23	0.27
2021	2.12	4.63	0.22	0.14
3-year Average	2.13	5.38	0.21	0.19
Effluent Objective	7.0	7.0	0.3	1.0
Effluent Limit	13.7	13.7	0.55	3.0

Table 7: Final Effluent Loadings at the Glencoe WWTP for 2019 to 2021.

Year	cBOD5 (kg/d)	TSS (kg/d)	TP (kg/d)	TAN (kg/d)
2017	1.46	2.71	0.12	0.11
2018	1.28	4.79	0.15	0.18
2019	1.32	3.09	0.13	0.10
3-year Average	1.36	3.53	0.14	0.13
Effluent Load Limit	23.6	23.6	0.95	5.17

Review of the average historical data shows that cBOD5 and TAN concentrations were consistently less than the ECA effluent objectives and limits for both concentrations and loadings. The plant reported only one instance in February 2020 where the TAN concentration exceeded the effluent objective. This exceedance was due to high influent flow and filter screen issues at the time, which was resolved by decreasing the flows. Review of the monthly data showed that from 2019 to 2021, there have been effluent objective exceedances in the final effluent for TSS and TP concentrations. However, these concentrations were lower than the ECA concentration limits during this time. Instances of effluent objective exceedances were determined to be associated with high influent flows and/or chemical dosage issues which were addressed by making adjustment to the chemical dose. Effluent TP and TSS loadings were consistently in compliance with the loading limits specified in the ECA. This is illustrated in the effluent concentrations in **Figures 2 to 5**, and effluent loadings in **Figures 6 to 9**.

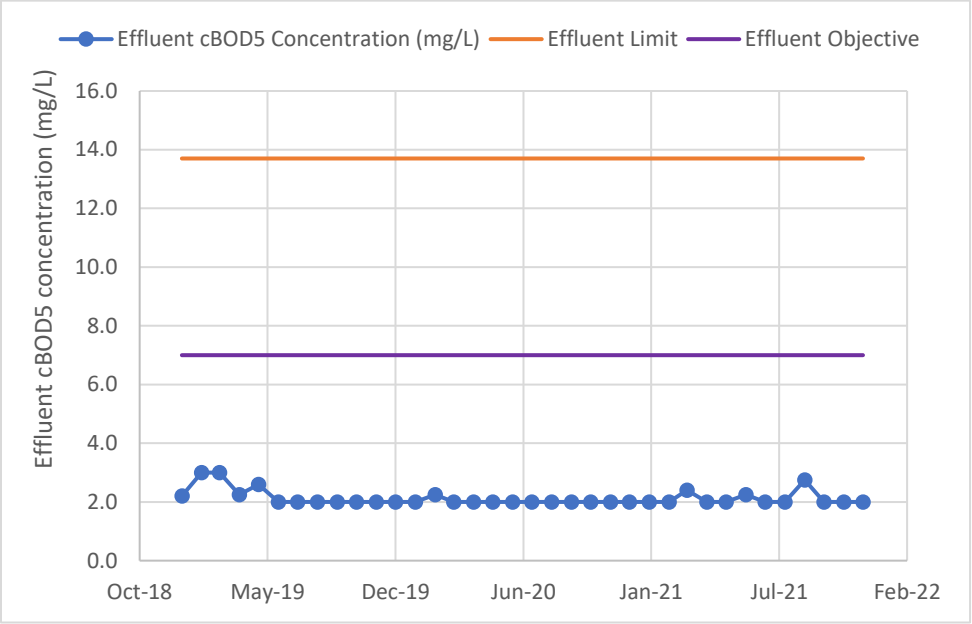


Figure 2: Monthly cBOD5 Effluent Concentration for the Glencoe WWTP for 2019 to 2021

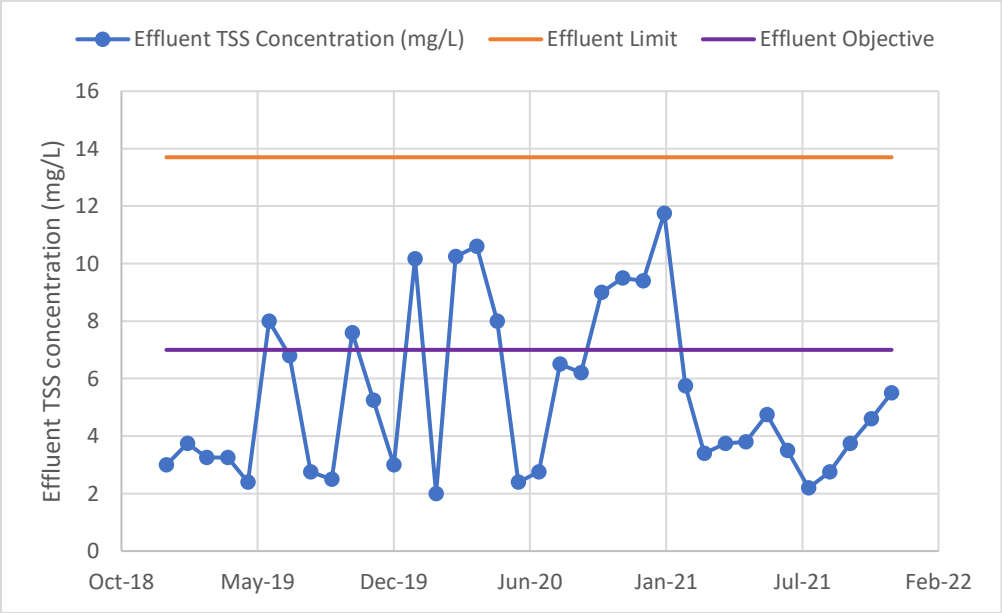


Figure 3: Monthly TSS Effluent Concentrations for the Glencoe WWTP for 2019 to 2021

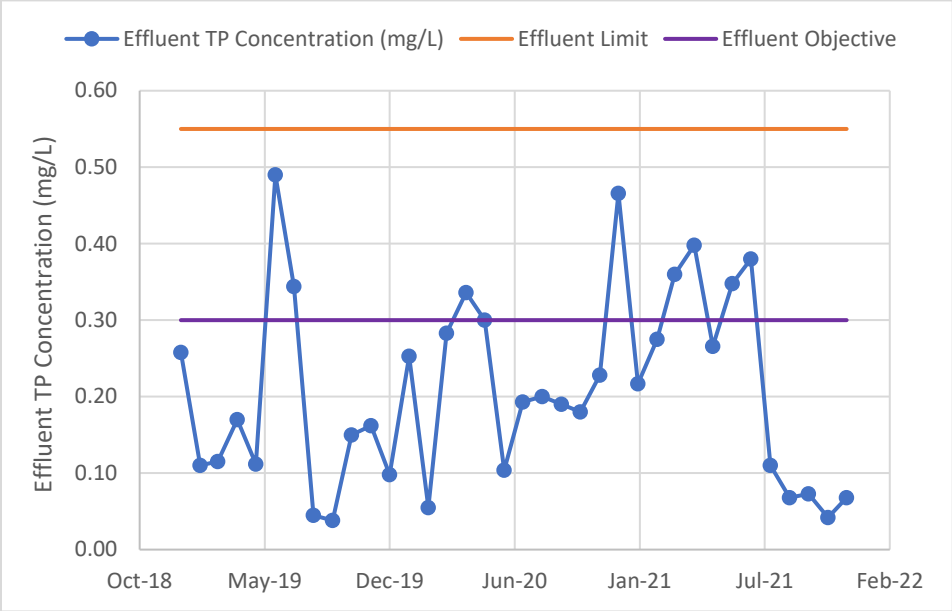


Figure 4: Monthly Effluent TP Concentration for the Glencoe WWTP for 2019 to 2021

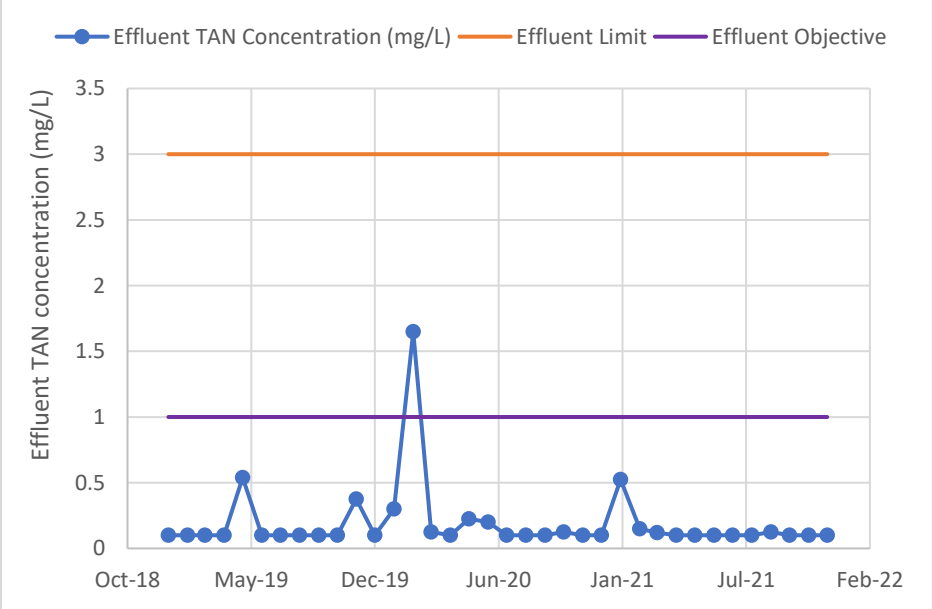


Figure 5: Monthly Effluent TAN Concentrations at Glencoe WWTP for 2019 to 2021

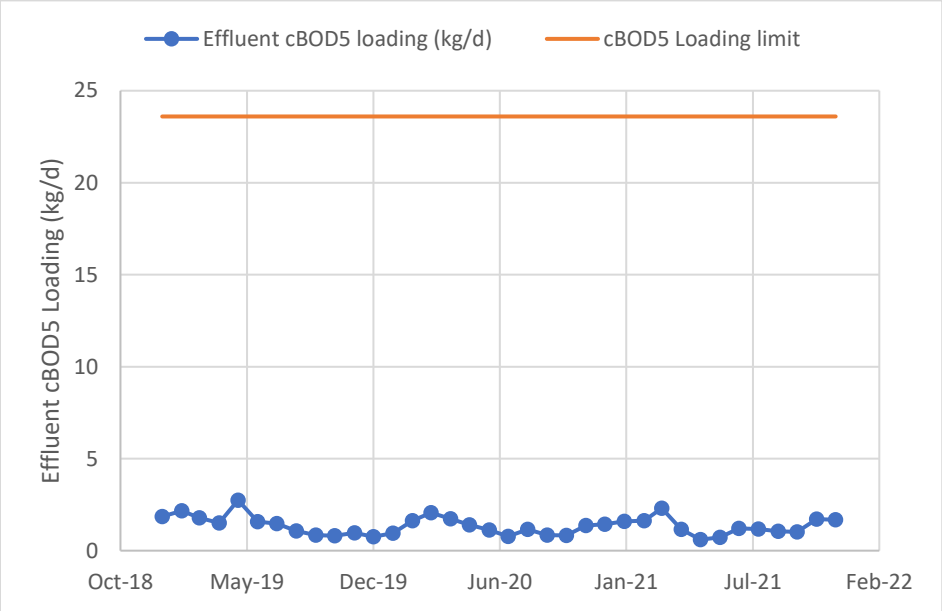


Figure 6: Monthly Average Effluent cBOD5 Loading for the Glencoe WWTP for 2019 to 2021

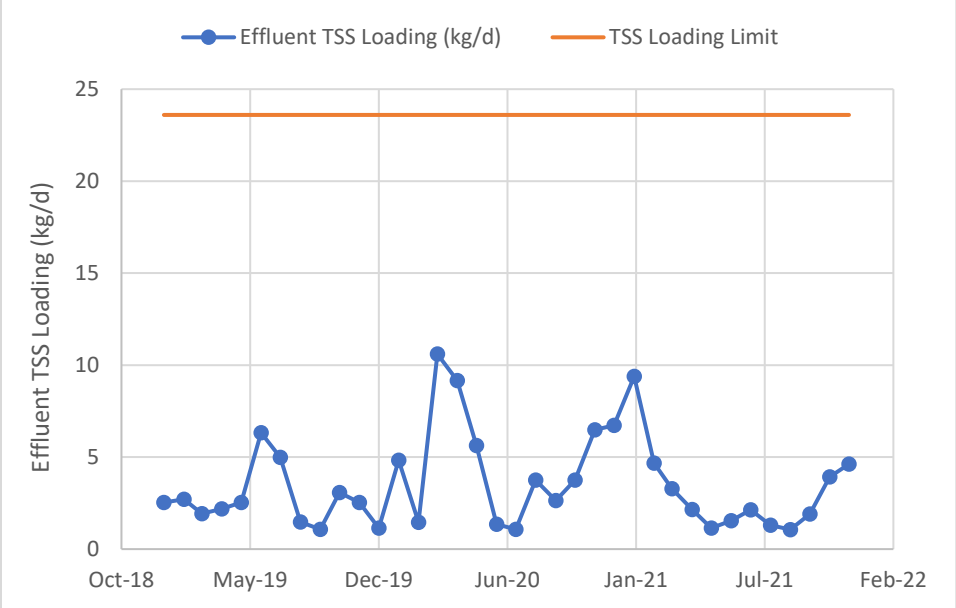


Figure 7: Monthly Average Effluent TSS Loading for the Glencoe WWTP for 2019 to 2021

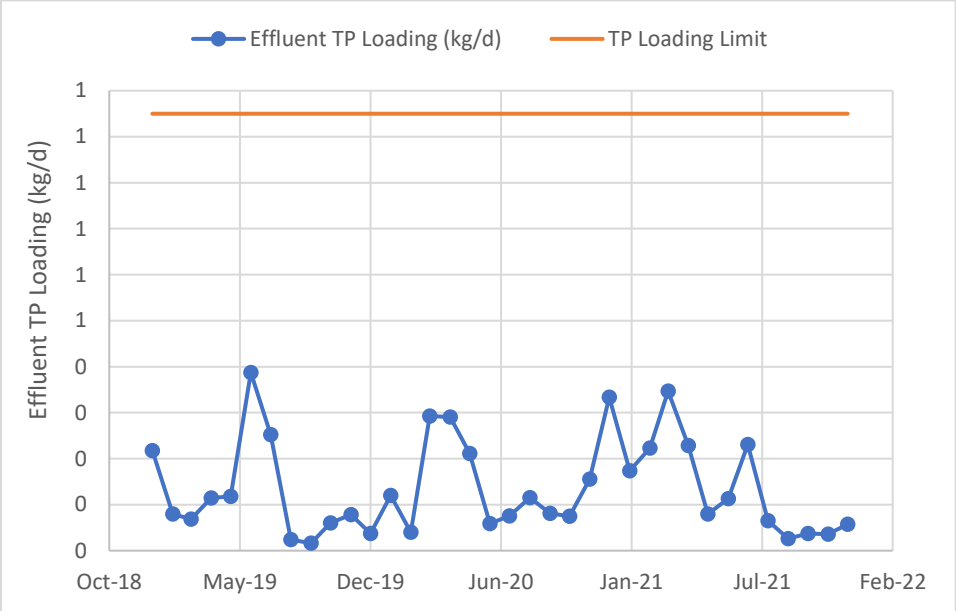


Figure 8: Monthly Average Effluent TP Loading for the Glencoe WWTP for 2019 to 2021

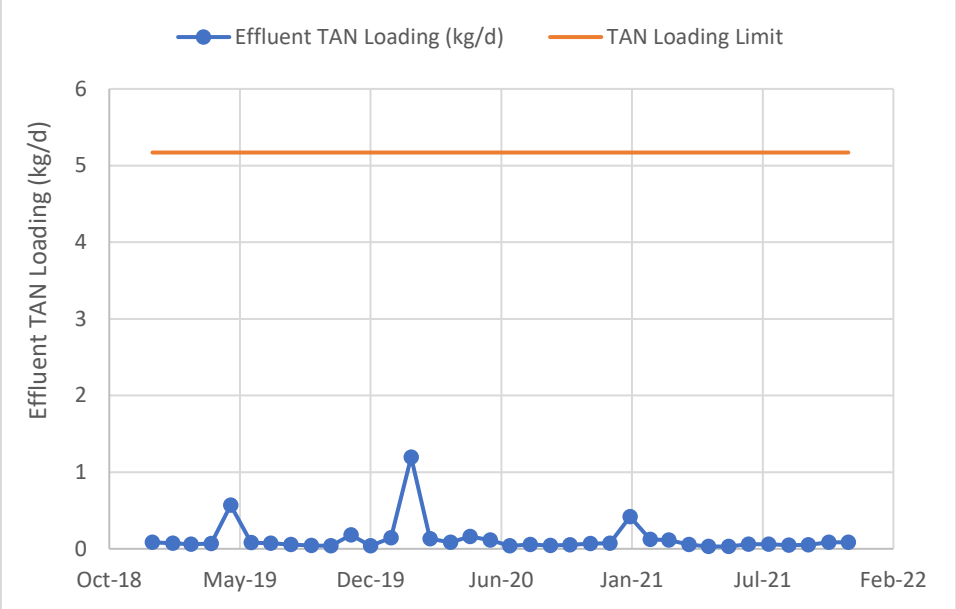


Figure 9: Monthly Average Effluent TAN Loading for the Glencoe WWTP for 2019 to 2021

3.5.3 SLUDGE GENERATION

The sludge generated from the wastewater treatment process is directed to the non-aerated lagoon for storage and digestion. This lagoon also received sludge from the Wardsville WWTP in 2019 and 2021. According to the 2021 plant's annual report, dredging is not required at this time as the amount of sludge is currently manageable. **Table 8** summarises the volume of sludge transferred to the lagoon. Based on feedback received from OCWA, this volume does not include the sludge received from the Wardsville WWTP.

Table 8: Reported sludge volumes transferred to the east lagoon at the Glencoe WWTP

Year	Sludge Volume (m^3)
2019	21,750
2020	21,750
2021	21,750

4 WARDSVILLE SEWAGE TREATMENT PLANT

4.1 TREATMENT PROCESS

According to the Amended ECA No. 0992-BWXTKG, the Wardsville WWTP has a rated capacity of 300 m^3/d with a peak flow rate of 1,100 m^3/d. Treatment at the plant includes preliminary treatment, influent flow measurement and sampling point, secondary and post-secondary treatment systems, supplementary treatment, disinfection system, final effluent flow measurement and sampling point, sludge management system, and a final effluent disposal facility.

Sewage is pumped via a forcemain to the facility and flows to a splitter box which is equipped with a manually cleaned bar screen. Sewage is then directed into two parallel extended aeration treatment trains through two sluice gates located in the splitter box. The secondary treatment for each train includes an extended aeration tank, and a secondary clarifier. Each train is also equipped with a continuous backwash upflow granular sand filter for post-secondary treatment. The two aeration tanks are equipped with fine bubble diffusers. Mixed liquor from the aeration tanks flows to the secondary clarifiers through a stilling well where alum is injected for phosphorous removal. Sludge from the secondary clarifiers is returned to the head of the aeration tanks by air lift sludge pumps. Based on operator observation and the concentration of mixed liquor suspended solids (MLSS) in the aeration tanks, a waste sludge airlift pump is turned on and a portion of activated sludge is sent to the aerobic digester as waste activated sludge. The clarified effluent from the secondary clarifiers flows to two continuous backwash filters. Filtered effluent from each train is combined and directed into a post aeration tank. This tank is equipped with a fine bubble diffuser aeration system to maintain a minimum dissolved oxygen (DO) concentration of 5 mg/L in the effluent before it is directed to the ultraviolet (UV) disinfection system. One bank of low-pressure UV lamps in a channel are used for final disinfection before the water is conveyed to the outfall for final discharge to the Thames River. Chemical addition using aluminum sulphate (alum) is used for total phosphorous and solids removal with the alum dosed in the aeration tanks. Soda Ash is also added at the splitter box for alkalinity control of incoming sewage.

In the solids train of the treatment process, waste activated sludge from the secondary clarifiers is pumped to an aerobic digester for stabilization. The digested sludge is then pumped to an aerated sludge holding tank prior to being hauled to another facility for further treatment. Both aerobic digester and sludge holding tank are equipped with coarse bubble diffusers for aeration.

4.2 PROCESS DESIGN SUMMARY

A summary of the mechanical equipment and process train is outlined in **Table 9**. This includes the number, dimensions, and design and operating volumes/capacity for the existing process trains.

Table 9: Process Design Summary for the Wardsville WWTP

Unit Process	Design Parameter
Preliminary Treatment System	

Bar screen	
Type	Manually raked bar screen
Number	1
Capacity	Peak instantaneous flow rate of 1,100 m^3/d
Secondary Treatment System	
Extended Aeration Tanks	
Type	Each equipped with a submersible mixer and fine bubble aeration system
Number	2 (in parallel)
SWD	4 m (based on 2016 O&M manual)
Length x Width	9 m x 4.5 m
Tank capacity (each)	162 $m^3/$
Air Blower	
Number	2 (1 duty and 1 standby)
Capacity	348 m^3/h
Secondary Clarifier	
Type	Rectangular Clarifier
Number	2
SWD	4.5 m
Length x Width	4.5 m x 4.5 m
Design Capacity (each)	550 m^3/d
Return Activated Sludge Airlift Pump	
Number	2
Post-Secondary Treatment System	
Sand Filter	
Type	Deep bed upflow continuous backwash sand filters
Number	2 filtration cells
Design Capacity (each)	Peak Hourly Flow Rate of 550 m^3/d
Compressor	
Number	2 (1 duty and 1 standby)
Capacity (each)	40.78 m^3/h
Backwash/Reject Water Pumping Station	
Inground Wet Well	
Number	1
Depth	4.5 m
Length x Width	1.5 m x 5.6 m
Submersible Solids Handling Pumps	
Number	2 (1 duty and 1 standby)

Capacity (each)	2.2 m^3/h @ 6 m TDH
Supplementary Treatment Systems	
Phosphorus Removal Chemical Storage Tank Number Capacity	 1 3,400 L (according to the O& M manual and Annual Performance Reports)
Metering Pump Number Pump Capacity (each)	 2 (1 duty and 1 standby) 500 mL/min
Transfer Pump Number Capacity	 1 Information not available
Alkalinity Addition Chemical Storage Tank Number Capacity	 1 1,500 L
Metering Pump Number Pump Capacity (each)	 2 (1 duty and 1 standby) 500 mL/min
Disinfection System	
UV Disinfection Type No. of UV channels No. of UV banks No. of Modules per Bank No. of Lamps per Module Total No. of Lamps Type of Lamp Design Capacity UV Transmission Design Dose	 Trojan UV3300K-PTP 1 1 6 2 12 low pressure UV lamps Peak flow of 1,100 m^3/d 65% minimum 30 mJ/cm^2 Bioassay Validated
Post Aeration Tank Type Number Depth Length x Width	 Rectangular1 4.5 m 1.0 m x 9.0 m
Air Blower Number Capacity	 1 (servicing post aeration tank and digester) 348 m^3/h
Sludge Management System	

Primary Aerobic Digester Type Number Depth Length x Width Capacity	 Equipped with a coarse bubble aeration system 1 4.5 m 2 m x 9.3 m 83.7 m^3
Aerated Sludge Holding Tank Type Number Dimension Effective Volume	 Equipped with coarse bubble aeration system 1 19.3 m x 3 m x 4.5 m 260 m^3
Aeration Blower Number Capacity	 2 (1 duty and 1 standby) 8 m^3/min @ 41 kPa
Final Effluent Disposal Facilities	
Effluent Sewer from the UV Chamber to the Outfall Capacity	 Peak Instantaneous flow of 1,100 m^3/d (based on the 2016 O&M Manual)

4.3 EFFLUENT QUALITY REQUIREMENTS

In accordance with the Amended ECA No. 0992-BWXTKG issued on January 15, 2021, the effluent quality parameters are outlined. **Table 10** shows the effluent objectives, while **Table 11** shows the effluent limits. The effluent loading limits are also shown in **Table 12**.

Table 10: Effluent Objectives for Wardsville WWTP

Parameter	Averaging Calculator	Concentration Objective (mg/L)
cBOD5	Monthly Average Effluent Concentration	5.0
Total suspended solids (TSS)	Monthly Average Effluent Concentration	5.0
Total phosphorous (TP)	Monthly Average Effluent Concentration	0.3 (April 1 to October 31) 0.8 (November 1 to March 31)
Total (Ammonia + Ammonium) Nitrogen	Monthly Average Effluent Concentration	2.0 (April 1 to October 31) 4.0 (November 1 – March 31)
E. coli	Monthly Geometric Mean Density	200[(1)] organisms/100 mL
Effluent pH	Single Sample Result	6.5 to 8.5 inclusive

[(1)] If the MPN method is used for E. coli analysis the limit shall be 200 MPN/100 mL

Table 11: Effluent Limits for Wardsville WWTP

Parameter	Averaging Calculator	Monthly Limit (mg/L)	Single Sample Result Limit (mg/L)
cBOD5	Monthly Average Effluent Concentration	10.0	15.0
Total suspended solids (TSS)	Monthly Average Effluent Concentration	10.0	15.0
Total phosphorous (TP)	Monthly Average Effluent Concentration	0.5 (April 1 to October 31) 1.0 (November 1 to March 31)	1.0 (April 1 to October 31) 1.5 (November 1 to March 31)
Total Ammonia Nitrogen (TAN)	Monthly Average Effluent Concentration	3.0 (April 1 to October 31) 5.0 (November 1 to March 31)	4.5 (April 1 to October 31) 7.5 (November 1 to March 31)
E. coli	Monthly Geometric Mean Density	200[(1)] organisms/100 mL (April 1 to October 31) 1000[(1)] organisms/100 mL (November 1 to March 31)	N/A
Effluent pH	Single Sample Result	N/A	Between 6.0 – 9.5 inclusive
Dissolved Oxygen	Single Sample Result	N/A	Minimum 4.0 mg/L

[(1)] If the MPN method is used for E. coli analysis the limit shall be 200 MPN/100 mL from April 1 to October 31 and 1000 MPN/100 mL from November 1 to March 31.

Table 12: Effluent Loading Limits for Wardsville WWTP

Final Effluent Parameter	Averaging Calculator	Limit (kg/d)
cBOD5	Monthly Average Daily Effluent Loading	3.0
Total suspended solids (TSS)	Monthly Average Daily Effluent Loading	3.0
Total phosphorous (TP)	Monthly Average Daily Effluent Loading	0.15 (April 1 to October 31) 0.3 (November 1 to March 31)
Total Ammonia Nitrogen (TAN)	Monthly Average Daily Effluent Loading	0.9 (April 1 to October 31) 1.5 (November 1 to March 31)

4.4 PLANT DESIGN PARAMETERS

According to the Wardsville ECA No. 0992-BWXTKG, the design parameters for the WWTP are shown in **Table 13** below.

Table 13: Design Parameters for the Wardsville WWTP

Parameter	Value
Rated Average Daily flow	300 (m^3/d)
Peak Hourly Flow (PHF)	550 (m^3/d)
Peak Instantaneous Flow (PIF)	1,100 (m^3/d)
Effluent Quality Requirements	See Table 10, 11, and 12 above for the ECA requirements

4.5 HISTORICAL REVIEW

Data from the Annual Performance Reports for 2019 to 2021 for Wardsville WWTP were used to provide a review of the wastewater flow and effluent characteristics for the plant.

4.5.1 WASTEWATER FLOW

The average day (ADF) and maximum daily flows (MDF) for the period 2019 to 2021, and the 3-year average for the same period are shown in **Table 14.**

Table 14: Historical Wastewater Flows at the Wardsville Wastewater Treatment Plant

Year	ADF (m^3/d)	MDF (m^3/d)
2019	98	326.5
2020	92	178.5
2021	103	349.2
3-year average	**98**	-

Figure 10 shows the reported monthly average day and maximum day influent flows for the period 2019 – 2021 in comparison to the current rated capacity (300 m^3/d) of the plant. The ADF flows account for 33% of the rated capacity of the plant. As shown in **Figure 10**, over this three (3) year period, there were only three instances where the max day flow exceeded the rated capacity, however, it should be noted these max day flows were much lower than the peak capacity of the plant (1,100 m^3/d).

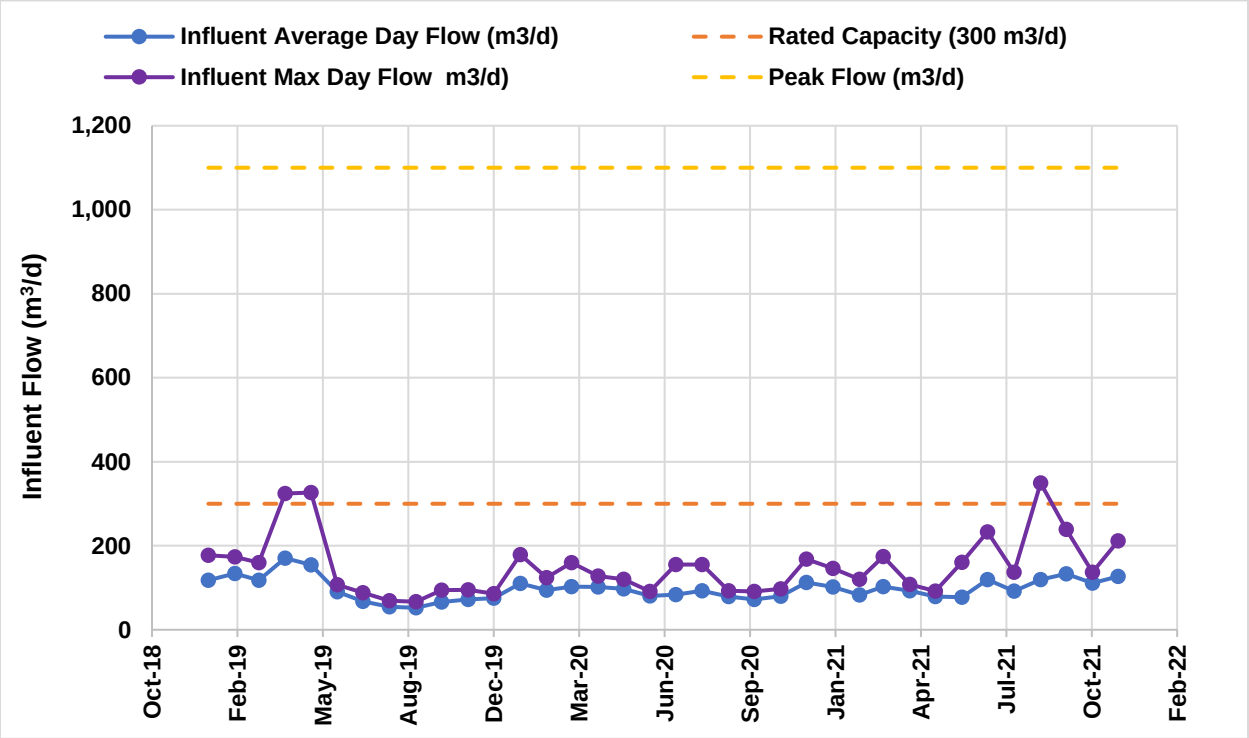


Figure 10: Average Day and Maximum Day Flows for the Wardsville WWTP for 2019 to 2021

4.5.2 EFFLUENT WASTEWATER CHARACTERISTICS

The effluent characteristics for the period 2019 to 2021 are outlined in **Table 15** with the average concentrations for the parameters of interest. The effluent loadings are shown in **Table 16**. The performance of the plant was assessed by comparing the concentrations and loadings to the effluent objectives and limits specified in the ECA for the Wardsville WWTP. Review of the historical data shows that BOD5 and TAN concentrations were typically in compliance with the ECA objectives and limits except for one instance in August 2019 where the effluent TAN was slightly higher than the effluent objective specified in the ECA.

Effluent TSS concentration was higher than the TSS objective in multiple instances in 2019 and 2020. However, TSS concentration has been consistently in compliance with the effluent discharge limits.

The data also showed that from 2019 to 2021, there have been objective exceedances in the final effluent for TP effluent concentrations mostly in summer times. However, there were only three instances where the effluent TP concentrations exceeded the effluent TP limit specified in the ECA. These instances were in April and October of 2019 and September of 2020.

Table 15: Final Effluent Concentration at the Wardsville WWTP for 2019 to 2021.

Year	cBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)		TAN (mg/L)	
			Apr-Oct	Nov-Mar	Apr-Oct	Nov-Mar
2019	2.26	4.29	0.39	0.30	0.81	0.39
2020	2.04	4.54	0.32	0.44	0.24	0.14
2021	2.26	3.08	0.32	0.39	0.10	0.26
3-year Average	2.19	3.97	0.34	0.38	0.39	0.26
Effluent Objective	5.0	5.0	0.3	0.8	2.0	4.0
Effluent Monthly Limit	10.0	10.0	0.5	1.0	3.0	5.0

Table 16: Final Effluent Loadings at the Wardsville WWTP for 2019 to 2021.

Year	cBOD5 (kg/d)	TSS (kg/d)	TP (kg/d)		TAN (kg/d)	
			Apr-Oct	Nov-Mar	Apr-Oct	Nov-Mar
2019	0.23	0.46	0.04	0.03	0.06	0.05
2020	0.19	0.43	0.03	0.04	0.02	0.01
2021	0.23	0.33	0.03	0.04	0.01	0.02
3-year Average	0.22	0.40	0.03	0.04	0.03	0.03
Effluent Load Limit	3.0	3.0	0.15	0.3	0.9	1.5

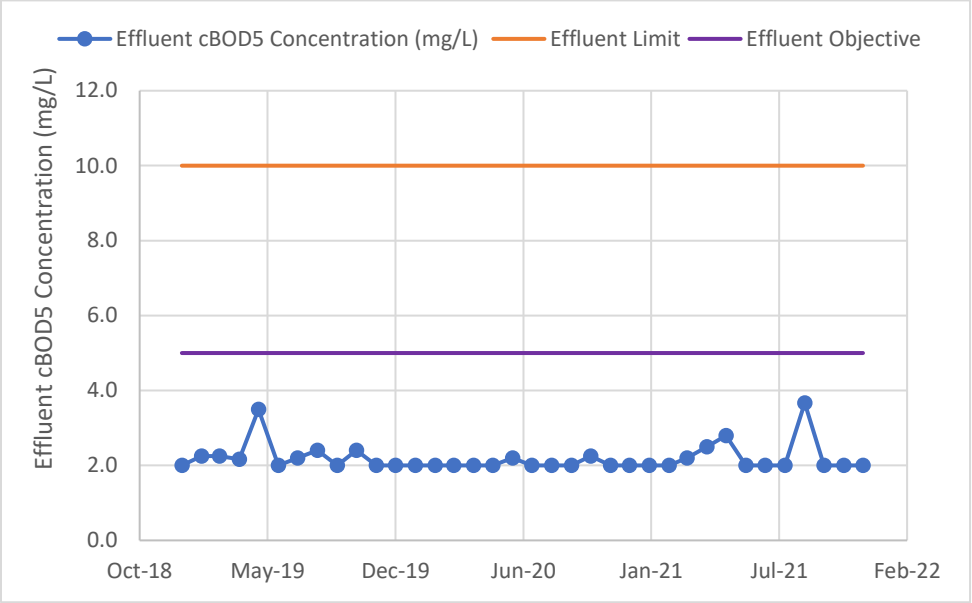


Figure 11: Monthly cBOD5 Effluent Concentration for the Wardsville WWTP for 2019 to 2021

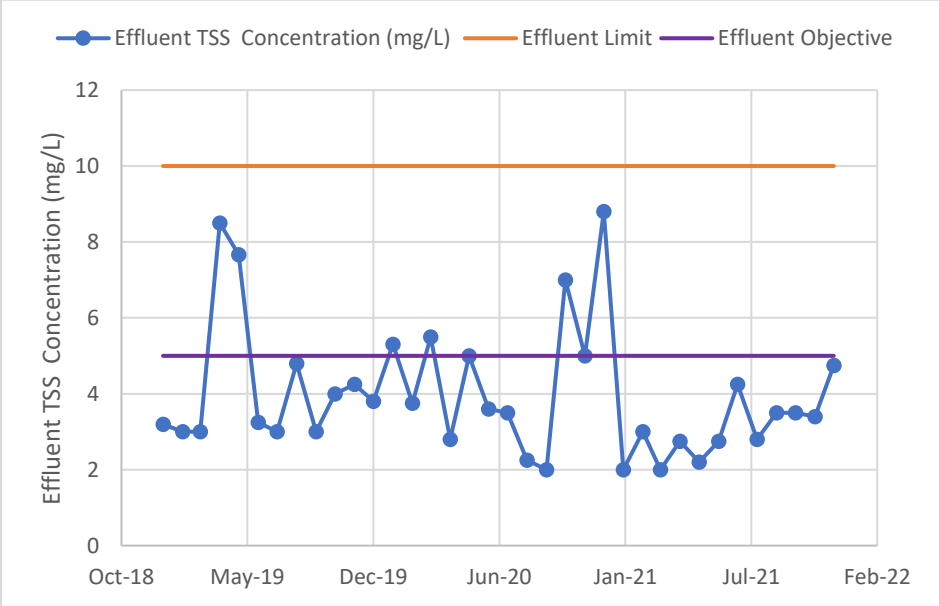


Figure 12: Monthly TSS Effluent Concentrations for the Wardsville WWTP for 2019 to 2021

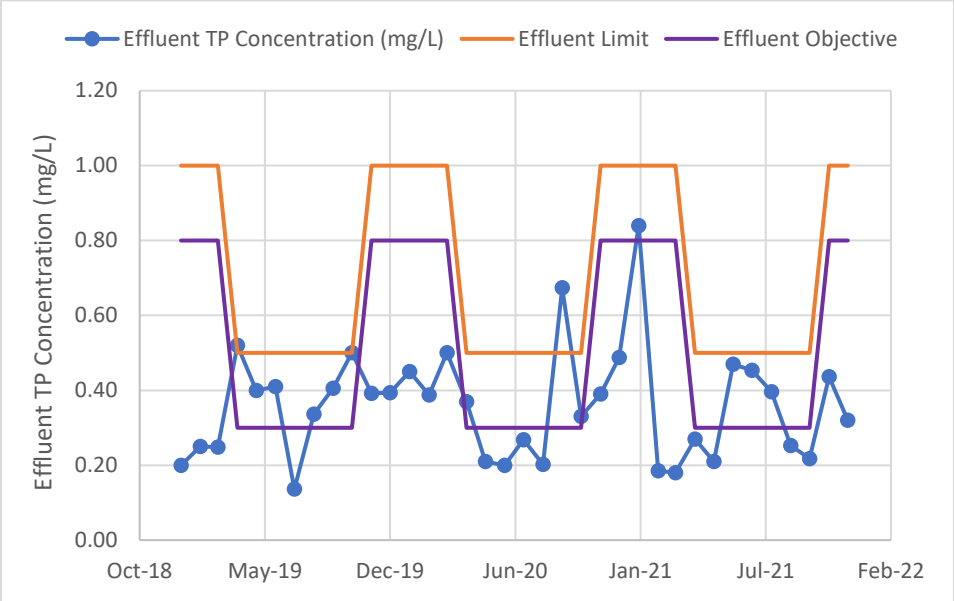


Figure 13: Monthly Effluent TP Concentration for the Wardsville WWTP for 2019 to 2021

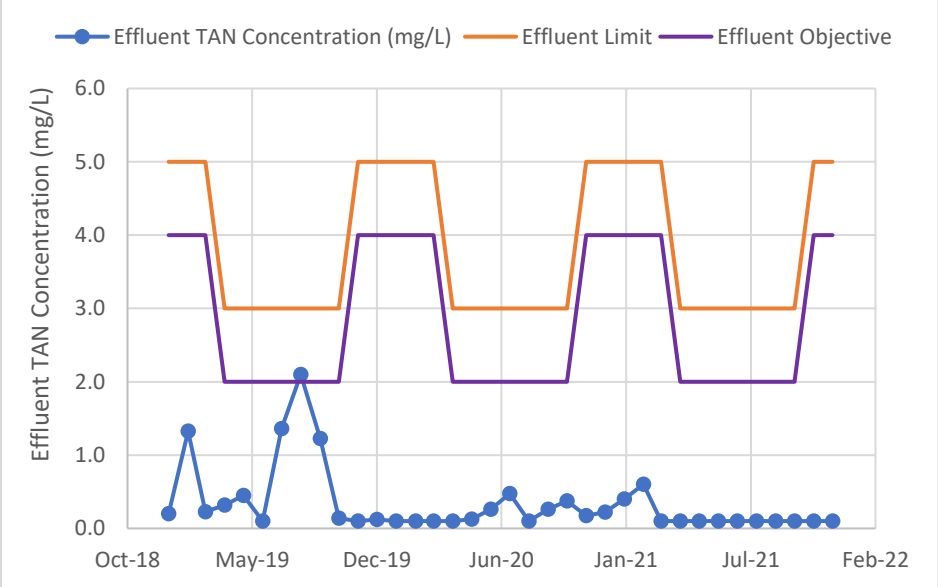


Figure 14: Monthly Effluent TAN Concentrations at Wardsville WWTP for 2019 to 2021

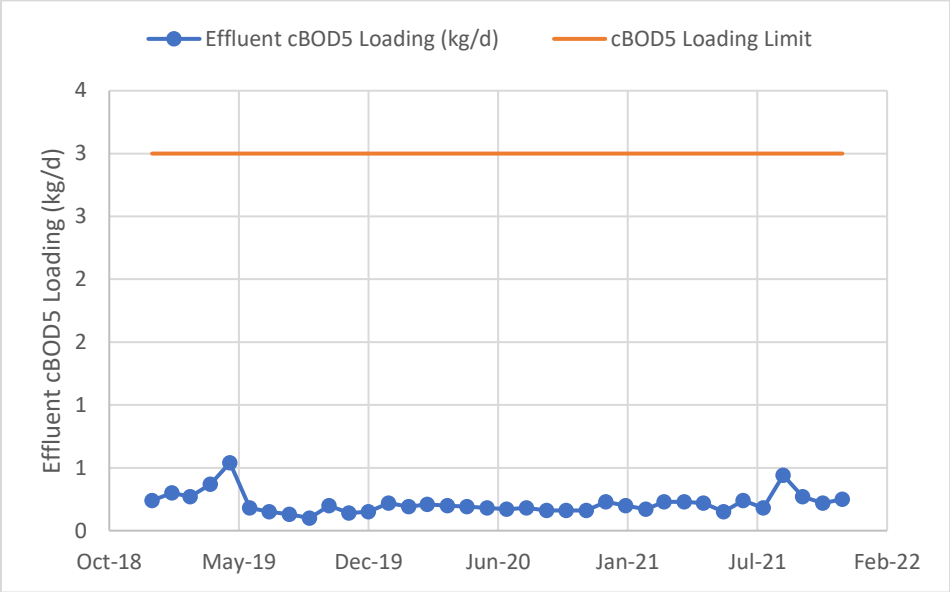


Figure 15: Monthly Average Effluent cBOD5 Loading for the Wardsville WWTP for 2019 to 2021

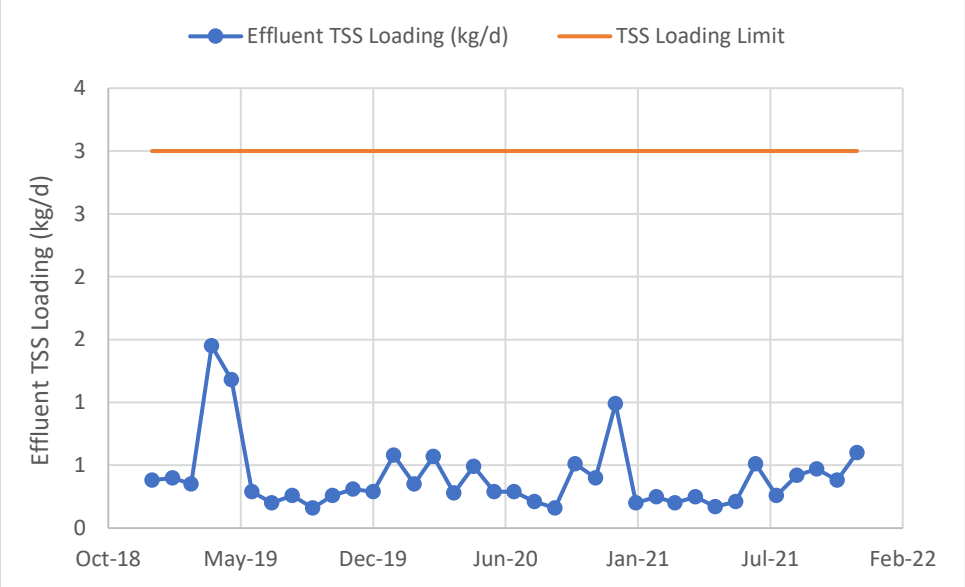


Figure 16: Monthly Average Effluent TSS Loading for the Wardsville WWTP for 2019 to 2021

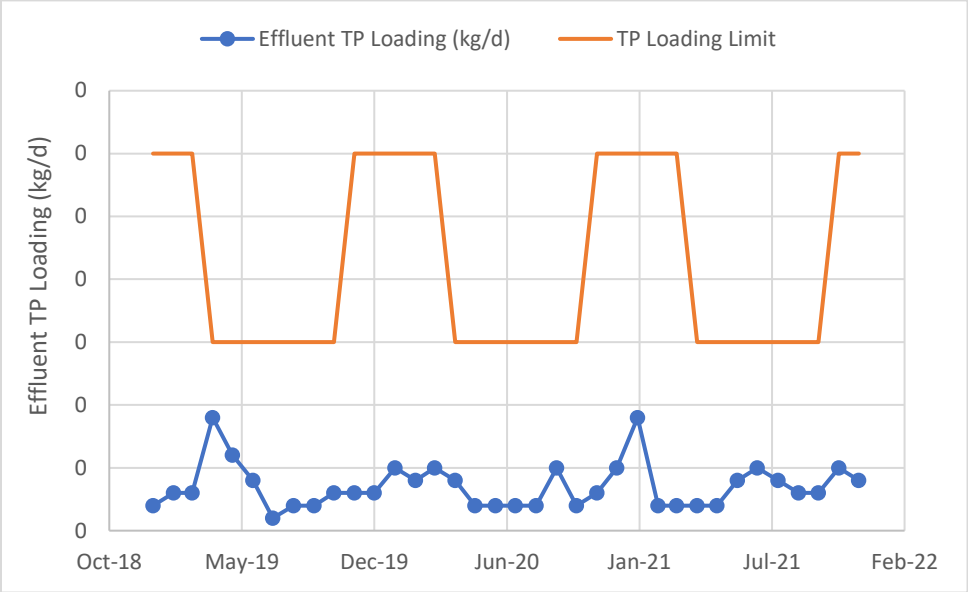


Figure 17: Monthly Average Effluent TP Loading for the Wardsville WWTP for 2019 to 2021

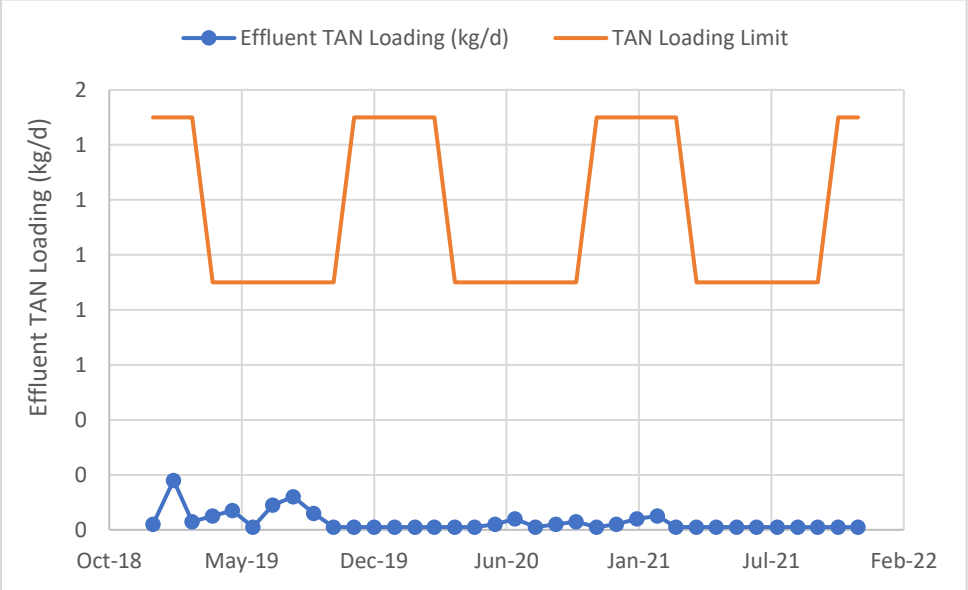


Figure 18: Monthly Average Effluent TAN Loading for the Wardsville WWTP for 2019 to 2021

4.5.3 SLUDGE GENERATION

The waste activated sludge (WAS) from the clarifiers is sent to the aerobic digester which is sized to achieve 45 days of sludge retention time (SRT), inclusive of the SRT for the aeration tanks. Digested sludge (biosolids) is then sent to the aerated sludge holding tank prior to being hauled to another facility for further

processing. Based on the Annual Performance Reports for 2019 and 2021, biosolids from the Wardsville WWTP were transported to the Glencoe WWTP for disposal. **Table 17** shows the volume of sludge generated and transported to Glencoe WWTP from the Wardsville WWTP.

Table 17: Reported Sludge Volumes at the Wardsville WWTP

Year	Volume of sludge generated at Wardsville WWTP (m^3)	Volume of sludge transferred to Glencoe WWTP (m^3)
2019	n.a.	250
2020	109	No sludge removed
2021	n.a.	120

n.a. – Information not available

5 FUTURE FLOWS

The Sanitary Sewer Analysis was used to inform the future (2041) average dry weather flows to the Glencoe and Wardsville WWTPs.

For the purpose of assessing the capacity of the process units, the projected peak hour and instantaneous flows were estimated using a peaking factor based on the rated PHF: ADF and PIF: ADF flows, respectively. The ADF, PHF, and PIF flows were shown in Table 4 and Table 13 for Glencoe and Wardsville WWTPs, respectively. These values are shown in the **Table 18**.

Table 18: Future Wastewater Flow to the Glencoe and Wardsville WWTPs

Parameter	Glencoe WWTP	Wardsville WWTP
Current Rated Capacity, m^3/d	1,723	300
Projected Average Dry Weather Flow (ADWF), m^3/d	1,113	238.5
Projected Peak Hourly Peaking Factor (PHF:ADF)	1.1	1.8
Projected Peak Hourly Flow (PHF), m^3/d	1,213	437.3
Projected Peak Instantaneous Peaking Factor (PIF:ADF)	-	3.7
Projected Peak Instantaneous Flow, m^3/d	-	874.5

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6 PROCESS UNITS DESIGN BASIS

In Ontario, wastewater treatment plants are designed in accordance with the Ministry of Environment Design Guidelines for Sewage Works. **Table 19** shows the recommended design basis for each of the major process units as applicable to the Glencoe and Wardsville WWTPs.

Table 19: MOE Recommended Design Basis for Process Units

Process	Design Basis
Screening	Peak instantaneous flow
Grit Removal	Peak hour flow
Primary Treatment	Peak daily flow
Aeration with nitrification	Average BOD5 loading based on average day flow Peak daily TKN loading (based on design peak daily flow)
Secondary Sedimentation	Peak hourly flow and Peak daily solids Loading
Disinfection	Peak hourly flow
Effluent Filtration	Peak hourly flow
Sludge Treatment	Maximum monthly mass loading and flows

7 GLENCOE WWTP PROCESS CAPACITY ASSESSMENT

An evaluation of the major unit processes at the WWTP is necessary to determine the capacity of the components to meet the effluent requirements with changes in flow and loading. The plant operations and maintenance manual, historical operational data for 2019 to 2021, and plant design criteria were used for the evaluation. A process capacity chart is provided to graphically illustrate the capacity of the different units.

7.1 SEPTAGE AND BIOSOLIDS STORAGE (CELL NO. 1)

According to the O&M manual, solids processing at the Glencoe WWTP involves pumping of the clarifier sludge and filter reject to the septage/reject tank and then to a sludge storage lagoon (Cell No. 1). This lagoon is used for storage of septage, biosolids, and raw wastewater in the event of an emergency or if the aerated lagoon (Cell No. 2) is out of service for maintenance. The supernatant from the storage lagoon is discharged into the Cell No. 2 for treatment. The lagoon also receives sludge from the Wardsville WWTP and material from the lagoon is only removed for final disposal when required.

According to the ECA, the storage lagoon has the capacity of 85,050 m^3. However, the As-Built drawings show the capacity of 59,000 m^3. For the purpose of this report, it is considered that the lagoon has the capacity of 85,050 m^3 as it aligns with the dimensions provided for the lagoon. Based on the Annual Reports for 2019 to 2021, the annual volume of sludge that was transferred to the lagoon was 21,750 m^3. The future volume of sludge was estimated using a factor based on the historical volume of transferred sludge per average daily influent wastewater to the plant. These values are shown in the **Table 20**. Considering the future sludge volume, the lagoon is expected to have enough capacity for storage of projected sludge. It should be noted that this evaluation is based on the volume of sludge that will be produced at the plant and does not include the volume of septage that will be sent to the lagoon. Based on the annual reports, the volume of sludge has been manageable during the past three years, and dredging is not required. Information on the frequency of hauling on an as needed basis and quality of the sludge was not available.

Table 20: Future Sludge Volume transferred to the east lagoon at the Glencoe WWTP

Parameter	Value
3-year average Sludge Volumes (m^3)	21,750
3-year average ADF (m^3/d)	672
Projected Sludge Factor	32.4
Projected ADF (m^3/d)	1,113
Projected Sludge Volume (m^3)	36,017

7.2 AERATED LAGOON (CELL NO. 2)

Raw sewage enters a partially mixed aerated facultative lagoon (Cell No. 2) which is divided into three aeration zones using two floating baffle curtains. The aeration cell has a top surface aera of 56,700 m^2, an average operating depth of 2.3 m, and a total volume of 124,039 m^3. The first aeration zone has the operating volume of 50,388 m^3 and the second and third aeration zones have the operating volume of 35,217 m^3 and 35,378 m^3, respectively. Fine bubble membrane diffusers are used for aerating the lagoon. **Table 21** outlines the aeration system design parameters in accordance with the supplier's operation and maintenance manual. **Table 22** indicates the characteristics of incoming wastewater to the plant for the period 2019-2021.

Table 21: Glencoe WWTP Aeration System Design Parameter

Parameter	Influent	Effluent Limit	Effluent Objective
Design Average Daily Flow (m^3/day)	1,723	-	-
BOD (mg/l)	284	<13.7	<7
TKN (mg/l)	47	<3 (Ammonia)	<1 (ammonia)
TSS (mg/l)	300	<13.7	<7

Table 22: Incoming Wastewater Characteristics at the Glencoe WWTP (2019-2021)

Year	BOD (mg/l)	TSS (mg/l)	TKN (mg/l)
2019	218.0	178.8	43.6
2020	254.2	214.0	48.3
2021	248.6	154.6	43.3
Average	240.3	182.5	45.1

Table 21 shows the design average daily flow and the design wastewater characteristics for the partial mix aeration system at the Glencoe WWTP. The projected average flow for the plant in 2041 is 1,113 m^3/d which is less than the design ADF for the aeration system. Furthermore, the historical incoming wastewater quality during the last three years were consistently lower than the aeration system design basis. Based on the review of the operations manual, it is expected the design of the aeration system is governed by the requirement for provision of adequate pressure to supply diffused aeration throughout the lagoon, rather than uniquely by oxygen demand requirements. As such, the aeration system is expected to provide adequate oxygen for the proposed flow. According to the MOE Design Guideline for Sewage Works, the minimum retention time for an aerated facultative lagoon is 4 to 5 days. Considering the future flow and the

volume of each aeration zone, the retention time will be adequate. Based on all the above-mentioned discussions, the aerated lagoon is expected to have adequate capacity at the future flows.

7.3 SUBMERGED ATTACHED GROWTH REACTOR (SAGR)

Following the aerated lagoon, wastewater a flow splitter where it is divided equally between the two parallel SAGR cells. Each cell has the approximate dimensions of 45 m (W) x 45 m (L) and a side water depth (SWD) of 2.4 m and is filled with gravel bed, lined with a geomembrane, and insulated with a layer of peat or mulch. The purpose of the SAGR is to provide supplemental ammonia removal (nitrification) in cold to moderate temperature. A minimum dissolved oxygen concentration of 2 mg/L and BOD concentrations of less than 30 mg/L is required for nitrifying bacteria. Aeration is provided by 18 coarse bubble diffusers runs in each cell. One duty and one common standby positive displacement blowers supply air to the diffusers.

According to the feedback received from the supplier, the capacity of the SAGR system is dependent on the performance of the upstream lagoon and limited by either the BOD load, ammonia load or flow. If the effluent BOD and ammonia concentrations are consistently lower than the original design parameters, rerating the SAGR could be considered. However, since this system is performing well, the maximum capacity (1,723 m^3/d) will not be changed. According to the operation and maintenance manual for the SAGR system, the influent design parameters for the unit are outlined in **Table 23**.

Table 23: Influent Design Concentration for SAGR system

Parameter	BOD	NH3	TSS
Influent Concentration (mg/L)	25	47	30

In the absence of information on the quality of the influent into the SAGR units, 1,723 m^3/d is assumed to be the maximum capacity of the units. This is below the projected ADF for the plant and indicates there is sufficient capacity for 2041 projections.

7.4 CHEMICAL ADDITION SYSTEMS

Chemical addition using aluminum sulphate (alum) is used for total phosphorous removal with the alum dosed in the effluent at the SAGR discharge point. The facility has one chemical storage tank with a volume of 10,000 L. Two metering pumps (one duty, one standby), each with rated capacity of 19 L/hr are used for alum dosing.

Based on the feedback received from the plant's operator (OCWA), average alum dosing is 100 mg/L. This is lower than the MOE Design Guidelines recommended values of 110 mg/L to 225 mg/L as $Al_2(SO_4)_3.14H_2O$. It must be noted that over the past years, there have been some exceedances of the TSS and TP effluent objectives at the plant. These exceedances were reported to be associated with high influent flows and inadequate chemical dosage which were addressed by making adjustment to the chemical dose. The plant has had ongoing issues with reaching capacity while maintaining compliance with the effluent limit.

This has been addressed with an additional alum feed point at the Victoria Street Pump Station to lower the effluent TP concentration during the high flow events.

The theoretical alum dosing requirements were calculated using the TP load at the projected average day flow. As shown in **Table 24**, the required alum dosage was estimated to be 176.6 mg/L which is higher than current alum dosage at the plant. Given the results of the theoretical calculation and previous operating challenges at the plant, it is recommended to increase the alum dosing.

Considering the projected TP load, the existing chemical storage tank would provide 68 days of storage. Based on the theoretical dosing and the historical dosing at the plant, the chemical storage has sufficient capacity.

Table 24: Theoretical Alum Dosing Requirements

Parameter	Value
Projected ADF, m^3/d	1113
Influent TP [(1)], g/m^3	4.6
TP Load, kg/d	5.1
Mol of Al per mol P [(2)]	4
Mass of Alum per mass of P	38.4
Mass of liquid alum for TP load, kg/d	197
Density of 48% Liquid alum [(3)], kg/m^3	1,335
Liquid alum for TP load, m^3/d	0.15
Alum dose, g/m^3	176.6

(1) Influent TP concentration from 2021 annual report
(2) Molar ratio of Al required per mol of P to achieve effluent P concentrations less than 0.3 mg/L
(3) Liquid alum as $Al_2(SO_4)_3.14H_2O$

The capacity of the chemical dosing pumps was assessed using the projected peak hourly flow (PHF) of 1,213 m^3/d. At this flow, alum dosing was determined to be 0.16 m^3/d (see **Table 25**). Comparing this dosing rate with the rated capacity of each pump (0.46 m^3/d), its expected that the dosing pumps have enough capacity for the future flows.

Table 25: Alum Dosing Requirements at Peak Hourly Flow

Parameter	Value
Design PHF, m^3/d	1,213
Influent TP [(1)], g/m^3	4.6
TP Load, kg/d	5.6
Mass of Alum per mass of P	38.4
Liquid Alum Required, kg/d	214.3

Density of 48% Alum	1335
Liquid Alum dose, m^3/d	0.16
Capacity of metering pump, m^3/d	0.46

(1) Influent TP concentration from 2021 annual report

7.5 TERTIARY TREATMENT - CLARIFIER

Tertiary treatment at the Glencoe WWTP is comprised of a chemical flocculation tank, a polymer flocculation tank, a clarifier, and disc filters. The effluent from the SAGR system flows to the flocculation tanks by gravity. Each flocculation tank has a capacity of 12.5 m^3. The tanks are equipped with two variable speed mixers, each with the power of 1.5 KW. The effluent leaving the flocculation tanks flows by gravity to the clarifier which is equipped with aerated flash mixing lamella plate settler where flocs are allowed to settle by gravity. The clarifier is a Lighthouse Model PC-960 plate clarifier that provides a total projected area of 89.2 m^2 to give a design surface overflow rate (SOR) of 19.3 $m^3/m^2.d$. According to the ECA, the dimensions of the clarifier are 3.6 m wide by 3.8 m long by 3.6 m high (side water depth). The accumulated sludge is pumped to the reject tank on a daily basis. Based on the actual sludge production at the plant, operators can modify the timer that controls the operation of the sludge transfer pump. According to the MOE Design Guidelines for Sewage Works, the secondary clarifier should not exceed the design SOR of 33 to 50 $m^3/m^2.d$, depending on the type of treatment process. Considering the projected future PHF of 1,213 m^3/d, the SOR for the clarifiers was estimated to be 13.6 $m^3/m^2.d$. This SOR is below the recommended design criteria which indicates the clarifier will have sufficient capacity for the future flow.

7.6 TERTIARY TREATMENT – FILTERS

The effluent filtration system is comprised of two disc filters which operate in parallel. Each unit comprises of two circular discs covered with a woven wire stainless steel micronic mesh (10 micron pore size) and provide a total surface area per filter of 2.92 m^2. Filter backwash from the filters is directed to the reject tank prior to being sent to the non-aerated lagoon.

According to Section 15.2.4 of the MOE Design Guidelines, the filters should be sized to accommodate the peak hourly flows. It should be noted that according to the ECA, each filter has been designed for a peak flow rate of 1,083 m3/d. However, this peak flow is less than the rated capacity of the plant (1,723 m^3/d). Furthermore, the 2011 Operation Manual and the As-Built drawings state that each disc filter has an average day design capacity of 1,083 m^3/day and peak hourly flow of 1,878 m^3/day. As such and for the purpose of this report, it is considered that each filter has been designed to handle a peak hourly flow of 1,878 m^3/d which is higher than the projected peak hourly flow (1,213 m^3/d).

According to the 2011 Operations & Maintenance manual for the plant, the design peak loading rate for the disc filters is 694 $m^3/day \cdot m^2$. Using the future peak hour flow of 1,213 m^3/d, the projected filtration rate was calculated to 415 $m^3/day \cdot m^2$ which is less than the design value (694 $m^3/day \cdot m^2$).

Table 26 provides the design influent characteristics for the disc filters based on information from the manufacturer. in accordance with the Nova shop drawing and preselection documentation.

Table 26: NOVA Model UL 1351 Disc Filter Feed Characteristics

Parameter	Influent	Effluent
TSS	20 mg/L	< 5 mg/L
TP	1.0 – 2.0 mg/L	0.3 mg/L (monthly average)

Note: This table is copied from the Nova shop drawing and preselection documentation.

Considering TSS of 20 mg/L and the design peak hourly flow of 1,878 m^3/d, the discs filters are capable of processing 38 kg/d and achieving a discharge TSS concentration of < 5mg/L with only one filter in operation. Assuming a TSS of 20 mg/L, the projected solids loading rate at peak flow condition would be 8.3 kg/d which is less than the maximum solids loading rate the filters are designed to handle. As such, the tertiary filters installed at the plant were determined to have sufficient hydraulic and solids loading capacity for the future flows.

Table 27: Disc Filters Performance at Design Conditions

Parameter	At Peak Flow Conditions	Design Value
Flow, m^3/d	1,213	1,878
Each Filter area, m^2	2.92	
Filtration rate, $m^3/m^2.d$	415	694
TSS concentration, g/m^3	20	20(1)
Solids Loading, kg/d	24	38
Solids Loading rate, kg TSS/m^2/d	8.3	12.9

(1) Maximum influent TSS concentration based on the Nova shop drawing and preselection documentation

7.7 SUMMARY

In accordance with the MOE Design Guidelines, the capacity of the process units is based on different flow parameters such as average day flow, peak hourly or peak instantaneous flows (see **Table 19**). To compare the major process units, the equivalent average day flow was calculated using the peaking factors associated with the future flows. The summary of the capacity assessment is shown in **Table 28** while the process capacity chart is shown in **Figure 19**.

Table 28: Capacity Assessment Summary for Glencoe WWTP

Treatment Unit	Design Basis	Average Day Flow (m^3/d)	Peak Flow (m^3/d)	Equivalent Average Day Flow (m^3/d)
Aerated Lagoon	Average Daily Flow	1,723		1,723
SAGR	Average Daily Flow (1)	1,723		1,723
Lamella Clarifier (SOR)	Peak hourly flow (2)		2,937	2,695

Filtration System - Disc Filters	Peak hourly flow [2]		1,878	1,723

[1] Based on feedback from the supplier
[2] Based on 2008 MOE Design Guideline

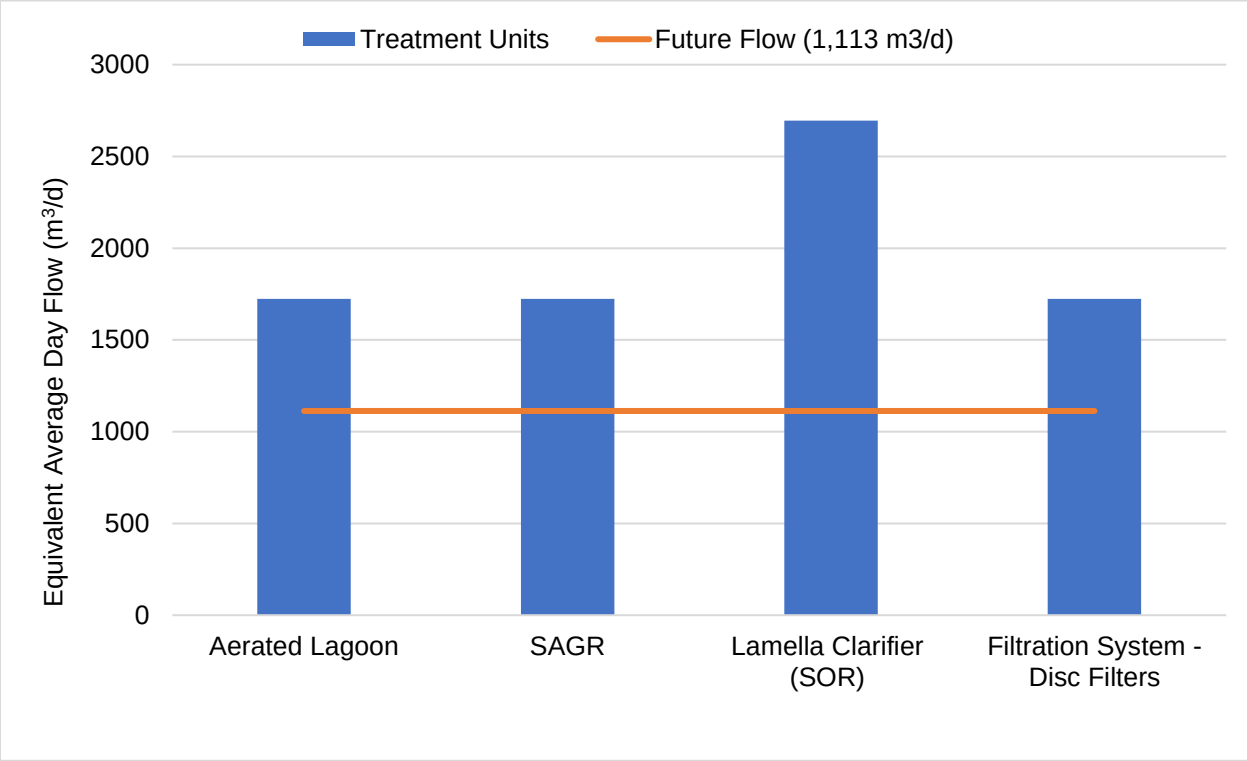


Figure 19: Process Capacity Chart for Glencoe WWTP

8 WARDSVILLE WWTP PROCESS CAPACITY ASSESSMENT

8.1 PRELIMINARY TREATMENT SYSTEM

Preliminary treatment at the Wardsville WWTP is provided using a manually cleaned bar screen which is located in the screening channel. According to the ECA, the screen has been sized to accommodate the peak flow of 1,100 m^3/d. Based on the projected future peak flow of 874.5 m^3/d, the screen has the capacity to handle a peak flow through the plant.

8.2 SECONDARY TREATMENT SYSTEM – AERATION TANK

Secondary treatment is achieved using an extended aeration process in two parallel trains. Each train includes an aeration tank followed by a secondary clarifier. Each aeration tank is equipped with fine bubble diffusers which are designed to achieve a dissolved oxygen (DO) concentration of 2 mg/L. Each tank has an operating water depth of 4 m providing a volume of 162 m^3. The two tanks provide a total volume of 302 m^3. According to the 2016 operation manual for the plant, the operational MLSS in the aeration tanks was in the range of 2,500 to 3,000 mg/L. This is in accordance with the typical design values for an extended aeration system of 2,000 – 5,000 mg/L for MLSS.

Table 29 provides a summary of the operating conditions of the aeration tanks for the period 2019 to 2021. Each organic loading rate (OLR) value is compared to typical values based on the MOE Design Guidelines for an extended aeration process. Based on the review of the data, it must be noted that the parameters are all within the typical range for an extended aeration process.

Table 29: Aeration Tank Operation for the period 2019 to 2021

Parameter	2019	2020	2021	Typical Design Values
ADF, m^3/d	97.5	92.2	103.4	
BOD5 load, kg/d (1)	10.55	13.72	14.32	
OLR, kg BOD5/m^3.d	0.11	0.15	0.14	0.10 – 0.30(2) 0.17 – 0.24(3)

(1) Data from annual report
(2) Metcalfe & Eddy
(3) Table 12-1, MOE Design Guidelines for Sewage works
OLR – Organic Loading Rate (kg BOD5/m^3.d)

Return activated sludge (RAS) from the secondary clarifiers is returned to the head of the aeration tanks using two airlift sludge pumps. Based on the operator's judgement and testing of the MLSS concentration,

some activated sludge is wasted and sent to the aerobic digester as waste activated sludge. It should be noted that MLSS, RAS, and waste activated sludge (WAS) data were not available for the plant.

8.3 SECONDARY CLARIFIER

Secondary clarification is provided by two rectangular clarifiers with the dimensions of 4.5 m in length, 4.5 m wide and 4.5 m side water depth (SWD). The total surface area for settling is 40.5 m^2. Each clarifier is equipped with a floating skimmer to remove scum from the surface of the clarifier and a sludge removal mechanism to remove settled sludge from the bottom. Each clarifier has been sized to accommodate a peak flow of 550 m^3/d. According to the MOE Design Guidelines, for extended aeration with single stage nitrification treatment process, final clarifiers should not exceed a surface overflow rate of 40 m^3/m^2.d and the solids loading rate of 170 kg/m^2.d. The future peak hourly flow for the Wardsville plant was estimated to be 437.3 m^3/d. This provides an SOR of 10.8 m^3/m^2.d which is lower than the recommended SOR level. As such, the secondary clarifiers will provide sufficient hydraulic capacity for the future flows. It is also noted that with one clarifier out of service, the SOR would be 21.6 m^3/m^2.d. Since this SOR is also lower than the recommended SOR, it indicates that one clarifier is able to handle all the flows coming through the plant should one clarifier be taken off-line. Assuming that 150% of incoming wastewater is returned to the head of the aeration tank as return activated sludge (RAS), the projected SLR would be 81 kg/m^2.d which is less than the recommended SLR. This indicates the existing clarifiers will have sufficient capacity to meet the recommended solids loading rate at future flows.

8.4 OXYGENATION

Oxygenation for the aeration tanks is supplied by two blowers, each with a capacity of 348 m^3/h, which are operated as one duty and one standby blower. Each aeration tank is equipped with fine bubble diffusers and a submersible mixer. **Table 30** outlines the oxygen and air requirements at the projected average day flow and peak day flow. The air flow requirements at average and peak flows are 164 m^3/h and 303 m^3/h, respectively. This shows the existing blower will have sufficient capacity to meet the air flow requirements at both average flow and peak flow conditions.

In terms of mixing within the two aeration tanks, air requirements for mixing will be 178 m^3/h. This is based on the tank surface area of 40.5 m^2 for each tank and using an air requirement of 0.61 L/m^2.s for fine bubble diffusers according to the MOE Design Guidelines. The existing one duty blower would have provided sufficient capacity to meet the mixing requirements with the tanks.

Table 30: Air Requirements for the Aeration System

Parameter	At Average Day Flow (ADF)	At Peak Hour Flow (PHF)
Projected ADF, m^3/d	238.5	----
Design PHF, m^3/d	-----	437.3
Influent BOD5[(1)], g/m^3	138.4	138.4
Influent TKN, g/m^3	45.9	45.9
Influent BOD load, kg/d	33	61

Parameter	At Average Day Flow (ADF)	At Peak Hour Flow (PHF)
Influent TKN load, kg/d	10.9	20
Mass of O_2 required for BOD [3], kg O_2/ kg BOD	1.5	1.5
Mass of O_2 required for TKN [4], kg O_2/kg TKN	4.6	4.6
Mass of oxygen for BOD load, kg O_2/d	50	91
Mass of oxygen for TKN load, kg O_2/d	50	92
Actual Oxygen Requirement (AOR), kg O_2/d	100	183
AOR/SOR	0.37	0.37
Standard Oxygen Requirement (SOR), kg O_2/d	270	495
Oxygen Content of Air, %	23	23
Water depth, m	4.0	4.0
SOTE (%/m)	6.6	6.6
SOTE, %	26	26
Air flow, kg Air/d	4,407	8,151
Air flow [5], Nm^3/d	3,672	6,792
Air flow, scfm	97	179
Air flow, m^3/h	164	303

[1] Influent BOD concentration from 2021 annual report
[2] Influent TKN concentration from 2021 annual report
[3], [4] Oxygen requirements for an extended aeration process from Table 12-1, MOE Design Guidelines
[5] Based on air density of 1.20 kg/m^3 at 20 deg. C and 1 atm

8.5 FILTRATION

The effluent filtration system is comprised of two filtration cells, equipped with deep bed upflow continuous backwash granular sand filter. Each filter has been designed for a peak flow of 550 m^3/d and has a surface area of 2.25 m^2. Based on feedback from the filter supplier, each filter has the filtration rate of 10 m/hr (2.8 L/(m^2.s) and a maximum solids loading rate of 6.1 kg/m^2/d.

With one unit out of service and using the future peak hour flow of 437.3 m^3/d, the filtration rate was calculated to 2.2 L/(m^2.s).This indicates the filtration system has adequate capacity for the future flows, even with one unit of service.

Considering a peak solid loading of 13.75 kg/d based on a 25 mg/L TSS concentration in the influent, the solids loading rate of filter was less than the maximum solids loading rate the filters are designed to handle. As such, the filters installed at the plant were determined to have sufficient hydraulic and solids loading capacity for the future flows. This information is summarized in the following table.

Table 31: Sand Filters Performance at Design Conditions

Parameter	At Peak Flow Conditions	Design Value
Flow, m^3/d	437	550
Each Filter area, m^2	2.25	
Filtration rate, $L/m^2.s$	2.2	2.8(1)
TSS concentration, g/m^3	25	25(1)
Solids Loading, kg/d	11	13.75
Solids Loading rate, kg $TSS/m^2/d$	4.9	6.1

(1) Filtration rate and Maximum influent TSS concentration of the installed filters are based on the information received from the supplier

8.6 CHEMICAL ADDITION

Chemical addition using aluminum sulphate (alum) is used for total phosphorous removal with the alum injected into the end of aeration tanks. The facility has one Alum storage tank with a volume of 3,400 L. Two metering pumps (one duty, one standby) are used to dose in the aeration tanks, each with rated capacity of 500 mL/min. Carrier water is added to the alum system to avoid blockages and freezing of the alum lines.

Based on the feedback received from the plant's operator (OCWA), average alum dosing is 100 mg/L. This is lower than the MOE Design Guidelines recommended values of 110 mg/L to 225 mg/L as $Al_2(SO_4)_3.14H_2O$. It must be noted that in 2021, there have been a few exceedances of the TP effluent objective, although no exceedances were reported for the TP effluent limit. Adjustments were made to the alum dosing protocol to address these exceedances.

The theoretical dosing requirements were calculated using the TP load at the projected average day flow. As shown in **Table 32**, the required alum dosage was estimated to be 265 mg/l which is higher than current alum dosage at the plant. Given the results of the theoretical calculation and previous operating challenges at the plant, it is recommended that the applied alum dose should be increased.

Considering the projected TP load, the existing chemical storage tank would provide about 72 days of storage. Based on the theoretical dosing and the historical dosing at the plant, the chemical storage has sufficient capacity.

Table 32: Theoretical Alum Dosing Requirements

Parameter	Value
Projected ADF, m^3/d	238.5
Influent TP (1), g/m^3	6.9
TP Load, kg/d	1.6
Mol of Al per mol P (2)	4

Mass of Alum per mass of P	38.4
Mass of liquid alum for TP load, kg/d	63
Density of 48% Liquid alum [3], kg/m^3	1,335
Liquid alum for TP load, m^3/d	0.05
Alum dose, g/m^3	265

[1] Influent TP concentration from 2021 annual report
[2] Molar ratio of Al required per mol of P to achieve effluent P concentrations less than 0.5 mg/L
[3] Liquid alum as $Al2(SO_4)_3.14H_2O$

The capacity of the chemical dosing pumps was assessed using the design PHF of 437.3 m^3/d. At this flow, alum dosing was determined to be 0.09 m^3/d (see **Table 33**). Comparing this dosing rate with the rated capacity of each pump (0.72 m^3/d), its expected that the dosing pumps have enough capacity for the future flows.

Table 33: Alum Dosing Requirements at Peak Hourly Flow

Parameter	Value
Design PHF, m^3/d	437
Influent TP [1], g/m^3	6.9
TP Load, kg/d	3.0
Mass of Alum per mass of P	4
Liquid Alum Required, kg/d	115.9
Density of 48% Alum	1335
Liquid Alum dose, m^3/d	0.09
Capacity of metering pump, m^3/d	0.72

[1] Influent TP concentration from 2021 annual report

8.7 UV DISINFECTION

The UV disinfection system at the Wardsville WWTP is a Trojan UV3300K-PTP model that consists of 1 bank with 6 modules, each with two lamps. The UV system is equipped with low pressure lamps designed to provide a design dose of 30 mJ/cm^2 with a minimum UV transmission of 65%. The system has been designed for the peak flow of 1,100 m^3/d. According to the MOE Design Guidelines, disinfection unit should be sized to accommodate the design peak hourly flow. The design peak flow of 1,100 m^3/d exceeds the projected future peak hourly flow of 437.3 m^3/d and as such it is expected that the existing UV system has adequate capacity to accommodate the future flows through the plant.

8.8 SLUDGE TREATMENT

Solids processing at the Wardsville WWTP involves stabilizing the waste activated sludge in an aerobic digester and then transferring the digested sludge (biosolids) to an aerated sludge holding tank. The biosolids are eventually removed from the holding tank and hauled to another facility for further processing. According to the plant annual reports, produced biosolids at Wardsville WWTP are disposed at the Glencoe WWTP.

8.8.1 AEROBIC DIGESTERS

The WWTP has one aerobic digester with the dimensions of 9.3 m (L) x 2 m (W) x 4.5 m (D) and is equipped with a coarse bubble aeration system. The capacity of the digester is 83.7 m^3. According to the Annual Report, 120 m^3 of sludge was transported from the Wardsville WWTP to Glencoe WWTP in 2021. This indicates the WWTP has a digested sludge generation rate of 0.33 m^3/d According to the MOE Design Guidelines, the aerobic digester unit should be sized to achieve a minimum sludge retention time (SRT) of 45 days, which includes the SRT for both the digester and the aeration tanks. Based on the 2016 Operation & Maintenance manual, sludge is thickened in the digester for 2 to 3 hours prior to being pumped to the holding tank. As such, the concentration of digested sludge is assumed to be 2%. Assuming a VSS concentration of 60%, WAS concentration of 0.6%, and VSS reduction rate of 40%, the existing digester would provide 25 days of sludge retention time. The SRT in the aeration tank is estimated to be 40 days. Therefore, the total SRT, including both digester and aeration tanks would be 65 days which is higher than the minimum recommended value (45 days). In conclusion, the existing digester is expected to have sufficient capacity for the future flows. This information is summarized in the following **Table 34**.

Table 34: Assessment of the Capacity of the Aerobic Digester

Parameter	Value
2021 Hauled Sludge Flow (m^3/d)	0.33
Concentration of Hauled Sludge	2%
2021 Mass of Hauled Sludge (kg/d)	6.61
Ratio of Hauled Sludge to 2021 ADF (kg/m^3)	0.06
VSS/TSS	60%
VSS Reduction Rate	40%
WAS Concentration	0.6%
Projected WAS (m^3/d)	3.34
SRT in Aeration Tanks (days)	40
SRT in Digester (days)	25

8.8.2 SLUDGE HOLDING TANK

The digested sludge is transferred from the aerobic digester to an aerated sludge holding tank with the dimension of 19.3 m (L) x 3 m (W) x 4.5 m (D) and an effective volume of 260 m^3. The tank is aerated using coarse bubble aeration system. The ratio of the hauled sludge flow to the average day flow in 2021 was used to estimate the hauled sludge flow at the future average day flow of 238.5 m^3/d. These calculations

are summarised in **Table 35** which shows that the holding tank would provide sufficient storage time (around 11 months) at future flows.

Table 35: Assessment of the Capacity of the Holding Tank

Parameter	Value
2021 Hauled Sludge Flow (m^3/d)	0.33
2021 ADF (m^3/d)	130.4
Ratio of Hauled Sludge to 2021 ADF	0.0032
Projected Hauled Sludge Flow (m^3/d)	0.76
Holding Tank Storage Time (months)	11

8.9 SUMMARY

The process units at the plant would have been sized based on average day flow, peak hourly flow and peak instantaneous flow data in accordance with the MOE Design Guidelines. In assessing the capacity of the units to handle the future flows at the plant, the equivalent average day flow for each unit was calculated using the peaking factors associated with the future flows. The summary of the capacity assessment is shown in **Table 36** while the process capacity chart is shown in **Figure 20**. Based on the capacity review, the existing process units will have sufficient capacity for the future flows.

Table 36: Capacity Assessment Summary

Treatment Unit	MOE Design Basis	Average Day Flow (m^3/d)	Peak Flow (m^3/d)	Equivalent Average Day Flow (m^3/d)
Screening	Peak instantaneous flow		1,100	300
Secondary Treatment - aeration tanks	Average daily flow	300		300
Secondary Clarifier (SOR)	Peak hourly flow		1,620	884
Secondary Clarifier (SLR)	Peak day flow + RAS return		1,530	834
Filtration system – Sand Filter	Peak hourly flow[(a)]		550[(1)]	300
UV Disinfection	Peak hourly flow		1,100	600

[(1)] Maximum flow the units are capable of handling based on feedback from the supplier

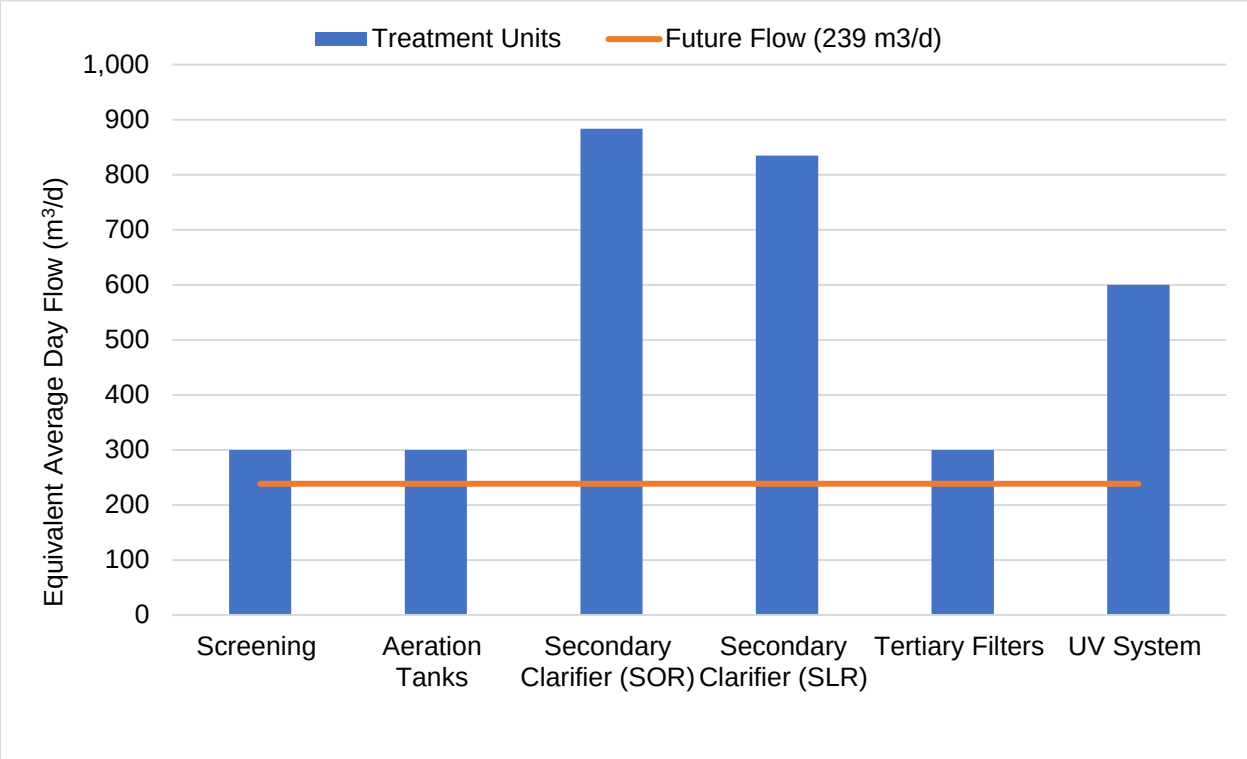


Figure 20: Process Capacity Chart for Wardsville WWTP

9 CONCLUSIONS AND RECOMMENDATIONS

In summary, the capacity review of the treatment process at the Glencoe WWTP and Wardsville WWTP for the 2041 flow projection indicated that:

- Current average flow to the Glencoe WWTP for the last three years was 672 m^3/d. This is approximately 39% of the current rated capacity (1,723 m^3/d) of the plant. The capacity review of the treatment process indicated that all the process units have sufficient capacity for a projected future average flow of 1,113 m^3/d.
- Current average flow to the Wardsville WWTP for the last three years was 98 m^3/d. This is approximately 33% of the current rated capacity of the plant. The capacity review has shown that all the process components have sufficient capacity to meet the projected future average flow of 239 m^3/d.

According to the feedback received from the OCWA, the average alum dosing for each plant was 100 mg/L which is lower than the MOE Design Guidelines recommended values (110 mg/L to 225 mg/L). The theoretical dosing rates were estimated to be 176.6 mg/L for Glencoe WWTP and 265 mg/L for Wardsville WWTP. These values are higher than the historical dosing rate. Review of the Annual Reports for both plants also showed that there were some exceedances of the effluent TP objective which required have required adjustments to the alum dosing at both plants. Based on the theoretical calculations, it is recommended that consideration should be given to increasing the alum dosing at each plant. Bench testing of the coagulant and polymer from a variety of chemical suppliers should be undertaken to ensure the chemicals that provide optimum performance is selected

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- Ministry of Environment, Conservation and Parks (2008). Design Guidelines for Sewage Works
- Metcalf & Eddy (2003). Wastewater Engineering Treatment and Reuse, McGraw Hill Edition.

APPENDIX

H

PLANNING REVIEW MEMO

MEMO

TO: Antoine Lahaie, P.Eng. (WSP)

FROM: Matthew Rodrigues, MCIP, RPP (WSP)

SUBJECT: **Municipality of Southwest Middlesex Municipal Wastewater and Water Master Servicing Study**

DATE: **July 21, 2022**

1.0 INTRODUCTION & BACKGROUND

The Municipality of Southwest Middlesex (the “Municipality”) is undertaking a wastewater and water Master Servicing Study (the “Study”) for all lands within Southwest Middlesex. The Master Servicing Study will evaluate the ability of existing and planned water and wastewater infrastructure within the Municipality to service its existing population, service the forecasted growth, and evaluate/develop recommended servicing strategies efficiently and effectively.

The Southwest Middlesex Official Plan was first adopted in 2007 and guides growth across the community. A key component of the Official Plan includes population and employment growth projections, as well as policies to direct this planned growth. Water and wastewater servicing must be planned and appropriately sized to allow for the safe and efficient growth of a community, and the location of this infrastructure must be tied to the amount and location of growth projected to occur over the life of the Southwest Middlesex Official Plan.

This Memo summarizes several critical policies and plans that direct planning for water and wastewater and will inform the Study – including the 2020 Provincial Policy Statement (2020 PPS), the County of Middlesex Official Plan (and ongoing Official Plan Update), and the Municipality of Southwest Middlesex Official Plan, to understand their implications on growth and infrastructure. This Memo also explores current and future development applications and growth areas to identify those geographies where growth is occurring, and the nature of growth being experienced (e.g., development typology).

2.0 PROVINCIAL POLICY STATEMENT

The 2020 Provincial Policy Statement provides direction on matters of Provincial interest related to land use planning and development. It sets out policies concerning the creation of healthy communities, wise use and management of resources and protection of public health and safety. The 2020 PPS also establishes policies for the provision of

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infrastructure, public services, sewer & water services, and transportation facilities. The Southwest Middlesex Official Plan is required to be consistent with the 2020 PPS.

Regarding growth management, the PPS directs that sufficient land be made available for a time horizon of up to 25 years and permits infrastructure planning to be conducted beyond the 25-year time horizon (1.1.2). Overall, land use patterns within settlement areas and new development in designated growth areas should allow for the efficient use of infrastructure (1.1.3.2(b), 1.1.3.6). Further, the PPS requires that municipalities establish phasing policies to ensure orderly progression of development and the timely provision of infrastructure to meet current and projected needs (1.1.3.7).

Since the current Official Plan came into effect the PPS was updated to establish new policies related to the expansion or adjustment of settlement areas (1.1.3.8, 1.1.3.9) and requires, in part, that municipalities demonstrate that the planned infrastructure is suitable over the long term.

Section 1.6 of the PPS contains specific policies as they relate to infrastructure and public service facilities. The following provides a summary of key water and wastewater servicing related matters:

- Infrastructure and public service facilities systems, shall be provided in a coordinated, integrated, and financially viable manner that considers impacts from a changing climate, while accommodating projected needs (1.6.1);
- The use of existing infrastructure should be optimized before considering the development of new infrastructure (1.6.3);
- Municipal sewage services and water services are the preferred form of servicing for settlement areas. Within settlement areas with existing municipal sewage and water services, intensification and redevelopment shall be promoted where feasible (1.6.6.2);
- Where municipal services are not available, private communal sewage services and water services are the preferred form of servicing for multi-unit/lot development (1.6.6.3);
- At the time of the official plan review, municipalities should assess the long-term impacts of individual on-site sewage and water services on the environmental health and character of rural settlement areas (1.6.6.4); and,
- Partial services shall only be permitted in certain circumstances (1.6.6.5).

Generally, full municipal services are the most preferred form of servicing, followed by private communal services, individual on-site services, and partial services (i.e., a combination of municipal / communal and individual services).

3.0 COUNTY POLICY CONTEXT

The Municipality of Southwest Middlesex is one of the eight local municipalities located within Middlesex County. As the upper-tier government, one of the County's functions is to provide guidance to its local municipalities in the preparation of local Official Plans and to establish a coordinated approach to major infrastructure projects. All planning decisions within the County, including the adoption of local municipal Official Plan policies, must conform with the County Official Plan. This section provides a summary of

key County planning policies and initiatives that impact growth and infrastructure planning.

3.1 COUNTY OF MIDDLESEX OFFICIAL PLAN

The Middlesex County Official Plan ("County OP") was first adopted in 1997 and approved in 1999. A comprehensive review updated the Official Plan through Amendment No. 2 in 2006. The Comprehensive Review that is currently being undertaken by the County will result in an update to the Official Plan that is consistent with the 2020 PPS.

The County OP sets out the planning framework, general policies and land use policies for the County, with a planning horizon to 2026. The policy framework provides direction to lower-tier municipalities on matters including managing growth, protecting resources and natural heritage, and coordination between municipalities on cross-boundary (inter-municipal) issues such as servicing and infrastructure. All lower-tier Official Plans are required to conform to the County OP.

Section 2.4 – Physical Service & Utilities is the primary section of the County OP that gives direction related to infrastructure. It addresses transportation, communications and transmission infrastructure, waste management, sanitary sewers and water, alternative and renewable energy systems, and groundwater management and protection. The following provides an overview of the key policies related to each of these areas as it relates to the Master Servicing Study.

Water & Wastewater Infrastructure

- The County OP notes that the County does not fund or maintain sanitary sewer or water systems; however, it promotes efficient and environmentally responsible development which is supported on the basis of appropriate types and levels of water supply and sewage disposal.
- The County encourages new development to proceed on the basis of full municipal services. Where partial municipal services are considered, the supporting studies shall address all servicing options (2.4.5).
- The County shall encourage development on municipal water and sanitary sewer systems. Where local municipalities do not provide or demonstrate a strong potential to provide full municipal water and sewage treatment facilities, development other than infilling will require a Settlement Capability Study (2.4.5.1.a).
- The County shall encourage improvement of existing systems and the installation of new systems in Settlement Areas throughout the County, where technically and financially feasible (2.4.5.1.c).
- The County shall require site specific development proposals to be accompanied by an evaluation of servicing options within the Settlement Areas. The evaluation shall address the County's preferred servicing hierarchy: (2.4.5.1.e)
    - i) extension from existing municipal system;
    - ii) extension from existing communal system;
    - iii) new municipal or communal system; and,
    - iv) individual septic systems and private wells.

- The County shall encourage local municipalities to implement suitable and economically viable methods of reducing urban storm water runoff and to improve its quality (2.4.5.1.j)

Growth Management

Section 2.3 of the County Official Plan establishes growth management policies which project population and employment growth until 2026. As part of the County's ongoing Official Plan Review, the County will extend the population forecast and identify a new planning horizon. The County Official Plan recognizes that growth must be managed, in part, to coincide with the availability of appropriate types and levels of services. Section 2.3.2 establishes the County's Growth Management Hierarchy which consists of several settlement area types – the focus areas for growth and development. The Hierarchy includes the three following components:

- **Urban Areas**: These are areas of the County which will accommodate future growth through population projections and must either have full municipal services or demonstrate the potential to provide full municipal services.
- **Community Areas:** These are areas of the County which will accommodate future projected population growth and must currently serve a community function and demonstrate the potential to provide a level of servicing to support future growth.
- **Hamlets in Agricultural Areas:** These are existing local designated hamlets not identified as Urban or Community Areas. It is assumed that municipal services will not be provided in these areas; therefore, future growth shall match that level of service (e.g., private/individual services).

Overall, it is the goal of the County Official Plan to direct future development within settlement areas on the basis of full municipal services, with consideration for other methods of servicing (e.g., partial services) permitted on an interim basis where justified.

3.2 5-YEAR OFFICIAL PLAN REVIEW

The County of Middlesex is currently completing an Official Plan Review. The *Planning Act* requires the County to review its Official Plan every five years to ensure that the policies in the Official Plan remain relevant and reflect the community's changing needs.

The updated Official Plan will be consistent with the 2020 PPS and will incorporate new Provincial legislation, implement new County policy initiatives and plans, and guide growth and development over a 25-year horizon (from 2021-2046). The County's updated growth forecasts to the year 2046 are discussed in detail in Section 5.0 of this Memo.

4.0 LOCAL POLICY CONTEXT

The Municipality of Southwest Middlesex Official Plan is a key tool for managing growth, planning for infrastructure, and determining appropriate land uses. This section summarizes the key growth and servicing policies of the Municipality's Official Plan. Informed by this review, this section also includes a summary of preliminary policy opportunities for the Municipality to consider as part of its subsequent Official Plan Review.

4.1 MUNICIPALITY OF SOUTHWEST MIDDLESEX OFFICIAL PLAN

The Southwest Middlesex Official Plan (OP) was first adopted by Council in 2007 and has since been consolidated in 2019. The Official Plan provides a framework for the land use decisions in the Municipality. It sets out the planning framework, general policies and land use policies for the Municipality, with a planning horizon to 2026.

Growth Management

Section 1.8 of the Official Plan establishes the growth management strategy for Southwest Middlesex up until 2026. The Official Plan is intended to direct the majority of future growth to the settlement area of Glencoe, minimize the loss of agricultural land, protect natural heritage, and make efficient use of infrastructure.

The Municipality is comprised of the Urban Area of Glencoe, along with the Community Area of Wardsville as the two primary areas for growth and development. Four hamlets are also situated within the Municipality and are not intended for major growth. The hierarchy for growth and development includes the following:

- **Urban Area of Glencoe:** Glencoe is the largest settlement in the municipality and is located in the geographic centre of Southwest Middlesex. Glencoe is serviced by a municipal water supply system and municipal sanitary sewage system. Glencoe is identified in the County OP as an urban area.
- **Community Area of Wardsville:** Wardsville is serviced by a municipal water supply and municipal sanitary sewage system. Wardsville can accommodate development, but demand is expected to be limited due to its location away from large population and employment centres. Wardsville is identified in the County OP as an urban area but qualifies as a community area in the Southwest Middlesex OP.
- **Hamlets of Appin, Melbourne, Middlemiss and Pratt Siding:** All hamlets excluding Middlemiss are serviced by a municipal water supply system. All four settlement areas are identified as urban or community areas in the County OP but qualify as hamlets in the Southwest Middlesex OP. Growth is significantly limited within the hamlets in the absence of a municipal sanitary sewage system.
- **Rural Area:** New residential development is strictly limited and is directed to areas specifically designated for these purposes and existing ‘lots of record’. The creation of new residential lots in the rural area is limited to the disposal of surplus farm dwellings and to areas designated Rural Residential.

Water and Wastewater Infrastructure

Sections 6.3 and 6.4 of the Municipality’s Official Plan describe the level of servicing provided by the Municipality and the servicing hierarchy for water and wastewater systems. Southwest Middlesex is serviced by the West Elgin Primary Water Supply System, a regional system serving a number of communities in Elgin County, Middlesex County and Chatham-Kent (managed by the Tri-County Water Management Committee and operated by the Ontario Clean Water Agency (OCWA)). There are two municipal sanitary sewage systems in the Municipality, one serving the Glencoe Urban Area and another serving the Wardsville Community Area.

The following provides an overview of the key policies related to servicing:

- While services to rural area residents, farms and other uses along its route is feasible, the Municipality shall ensure that the integrity of the trunk main to service Settlement Areas both inside and outside Southwest Middlesex is maintained. (6.3.1)
- The municipal water supply system shall be monitored to ensure an adequate, secure and potable water supply to those being served by it. Improvements shall be undertaken, and measures adopted as necessary to ensure the supply remains adequate and secure and water quality standards are met. (6.3.3)
- Improvements will be made to the municipal sanitary sewage systems when the need arises to accommodate future development. (6.4.2)
- When 90% of the design capacity of a municipal sanitary sewage system is reached, the process of expanding the plant to meet future needs shall be initiated. Until such time as a commitment is made to expand the plant and the necessary regulatory approvals have been obtained, no further approvals shall be given to developments which require connection to, or which otherwise increase the load on the system. (6.4.3)
- Development shall be permitted on private, sanitary waste disposal systems in accordance with the requirements of the Ontario Building Code as administered by the Municipality or, in the case of systems generating more than 10,000 L/day, in accordance with the requirements of the Ministry of Environment except where connection to a municipal sanitary sewage system is available or otherwise mandatory. (6.4.4)
- Where the nature or scale of development warrants, the Municipality may require the completion of a hydrogeology study to ensure that the development does not adversely impact ground water resources. (6.4.5)

The Official Plan also establishes the Municipality's servicing hierarchy, which outlines how development in different areas of the Municipality will be serviced. The servicing hierarchy distinguishes between services within the settlement areas (urban and community) and the rural areas.

- **Settlement Areas:**
  - All development within settlement areas. except for Middlemiss shall be connected to, and serviced by, the municipal water supply system. (6.3.2)
  - All development within the Glencoe Urban Area and the Wardsville Community Area shall be connected to and serviced by the municipal sanitary sewage system. (6.4.1)
- **Rural Areas:** Where necessary to address failed private on-site water supply systems, the Municipality may consider extension of the municipal water supply system to service areas outside the settlement areas on a cost recovery basis. (6.3.4)

Overall, the Municipality's servicing hierarchy does not contemplate the extension of municipal services to additional settlement areas, except in instances to address failed private on-site water supply system and does not contemplate the use of private communal servicing systems.

4.2 OFFICIAL PLAN POLICY OPPORTUNITIES

The Municipality of Southwest Middlesex will soon be undertaking an Official Plan Review. This process presents an opportunity to holistically review the Municipality's policies as they relate to infrastructure and servicing, amongst other matters. This section provides a brief summary of some key considerations in that regard.

Communal Servicing

Communal servicing means water and wastewater works that can be described as small-scale infrastructure, independent of municipal systems, to service clusters of development. Communal sewage services are separate from and unconnected to full municipal services which are connected to large, centralized treatment plants that may serve entire municipalities.

Policy 1.6.6.3 of the PPS directs that where municipal services are not available, planned, or feasible, "private communal sewage services and private communal water services are the preferred form of servicing for multi-unit/lot development. This is a new policy direction established in the 2020 PPS. It replaced a more flexible policy that stated, "municipalities may allow the use of private communal sewage services and private communal water services", where municipal services are not available, planned or feasible. The most important goals for sewage and water services are sustainability, feasibility and safety. Integration of servicing, land-use policy and development are critical to properly achieve these goals. The County of Middlesex Official Plan states that new development in Urban Areas shall be fully serviced by municipal or communal servicing systems (2.3.8.1), and that development in community areas is intended to take place on municipal or communal servicing (2.3.8.2).

The Municipality of Southwest Middlesex Official Plan does not currently address communal servicing within its servicing hierarchy. Through the Official Plan Review, there is an opportunity to review this policy against the 2020 PPS to reflect the increased priority placed on communal services within the servicing hierarchy. Consideration should be given to the balance between the Municipality's planned and recent investments in trunk infrastructure and the adoption of communal servicing.

Stormwater Management

The 2020 PPS directs that planning for stormwater management is to be integrated with planning for water and wastewater servicing, and to ensure that stormwater systems are optimized, feasible, and financially viable over the long term (1.6.6.7). Through the OPR, the Municipality's OP should be updated to reflect the integration of stormwater management with the planning for water and wastewater servicing in accordance with the PPS.

5.0 POPULATION GROWTH AND FUTURE DEVELOPMENT

The intent of this Study is to complete a review of, and determine the performance of, existing infrastructure and its ability to accommodate the Municipality's projected growth rate to the 20-year horizon. It is also important to note that the 2020 Provincial Policy Statement now requires that municipalities plan for a 25-year planning horizon (to the

year 2046). To that end, the County of Middlesex has undertaken an update to its population and housing forecasts to reflect the 25-year planning horizon. The forecasts provided by the County are provided to the local municipalities, including Southwest Middlesex, with the flexibility to select projects that suit local conditions.

5.1 DATA SOURCES & FOUNDATIONS

Population and housing forecasts, developed by Watson and Associates were approved by County Council in January 2021 and include low, reference and high growth scenarios. The 25-year scenarios reflect recent development trends within the County and expected demographic and socioeconomic trends. The forecasts anticipate the majority of future housing across the County will be single detached homes (low density) but the proportion of medium and high-density units built will increase in the future. Additionally, it is anticipated that the average household density (Person Per Unit, PPU) will continue to decline over the next 25 years across the County.

It should be noted that some municipalities within the County have already selected a preferred growth scenario. For example, Middlesex Centre and Strathroy-Caradoc have each followed the high growth scenario in reviewing their respective Official Plans. This is due to the high rates of growth being experienced in these communities.

5.2 POPULATION AND HOUSING FORECASTS

The 25-year population and housing forecasts for Southwest Middlesex have been established by the County for consideration as part of its ongoing Official Plan Update and the Municipality's subsequent Official Plan Review. It is acknowledged that the Master Servicing Study will consider a 2041 planning horizon

Population Forecasts

The population of the Municipality of Southwest Middlesex is expected to continue to grow under all three scenarios. The Municipality's 2016 population (including the census undercount) was 5,900 residents. The forecasted 2046 population under each scenario is forecasted as follows:

- **Low Scenario:** 6,100 residents (+200 from 2016)
- **Reference Scenario:** 6,400 residents (+500 from 2016)
- **High Scenario:** 6,590 residents (+670 from 2016)

It is acknowledged that the Master Servicing Study will consider a 2041 planning horizon. Under the low scenario, the population forecasts for both 2041 and 2046 remain the same. Under the reference scenario, it is forecast that population may decline from 6,500 to 6,400 from 2041 to 2046. Under the high scenario, it is also forecast that the population may decline from 6,660 to 6,590 from 2041 to 2046.

Housing Forecasts

Across all three population forecast scenarios, the Municipality of Southwest Middlesex is expected to grow by 440 and 710 households, predominantly within single and semi-detached housing. The housing forecast also establishes an estimated Persons Per Unit (PPU) count which represents the average number of people within a household. Over

the planning horizon, the average PPU for the County are forecast to continue to decline largely as a result of an anticipated increase in the number of young adults and children moving to the County and looking to purchase new homes. Under all scenarios, the Municipality is expected to contain 7% of the County's total housing supply.

The low housing growth forecast for Southwest Middlesex prepared by the County can be summarized as follows:

- Between 2016 and 2046, an additional 440 households will be in the Municipality;
- Most of this household growth between 2016 and 2046 will be within single and semi-detached housing units (420 out of a total 440 units) with the remainder within apartment-style units; and,
- Overall, the Municipality's persons per unit count is decreasing over the planning horizon (from 2.46 in 2021 to 2.18 in 2046), meaning that less people will be living in each dwelling unit.

The reference housing growth forecast for Southwest Middlesex prepared by the County can be summarized as follows:

- Between 2016 and 2046, an additional 600 households will be in Southwest Middlesex;
- Most of this household growth between 2016 and 2046 will be within single and semi-detached housing units (570 out of a total 600 units) with the remainder within apartment-style units; and,
- Overall, the Municipality's persons per unit count is decreasing over the planning horizon (from 2.51 in 2021 to 2.17 in 2046), meaning that less people will be living in each dwelling unit.

The high housing growth forecast for Southwest Middlesex prepared by the County can be summarized as follows:

- Between 2016 and 2046, an additional 710 households will be in Southwest Middlesex;
- Most of this household growth between 2016 and 2046 will be within single and semi-detached housing units (670 out of a total 710 units) with the remainder within apartment-style units; and,
- Overall, the Municipality's persons per unit count is decreasing over the planning horizon (from 2.49 in 2021 to 2.15 in 2046), meaning that less people will be living in each dwelling unit.

At this time, it is not known which forecast scenario (low, reference, or high) will be considered within the context of the Municipality's Official Plan Review. Each forecast assumes that most growth will occur as single or semi-detached housing units. Therefore, for the purposes of evaluating capacity requirements for critical water and wastewater infrastructure, it can be assumed that the total growth in residential units between 2016 and 2046 will be:

- **Low Growth Scenario:** 440 units
- **Reference Growth Scenario:** 600 units
- **High Growth Scenario:** 710 units

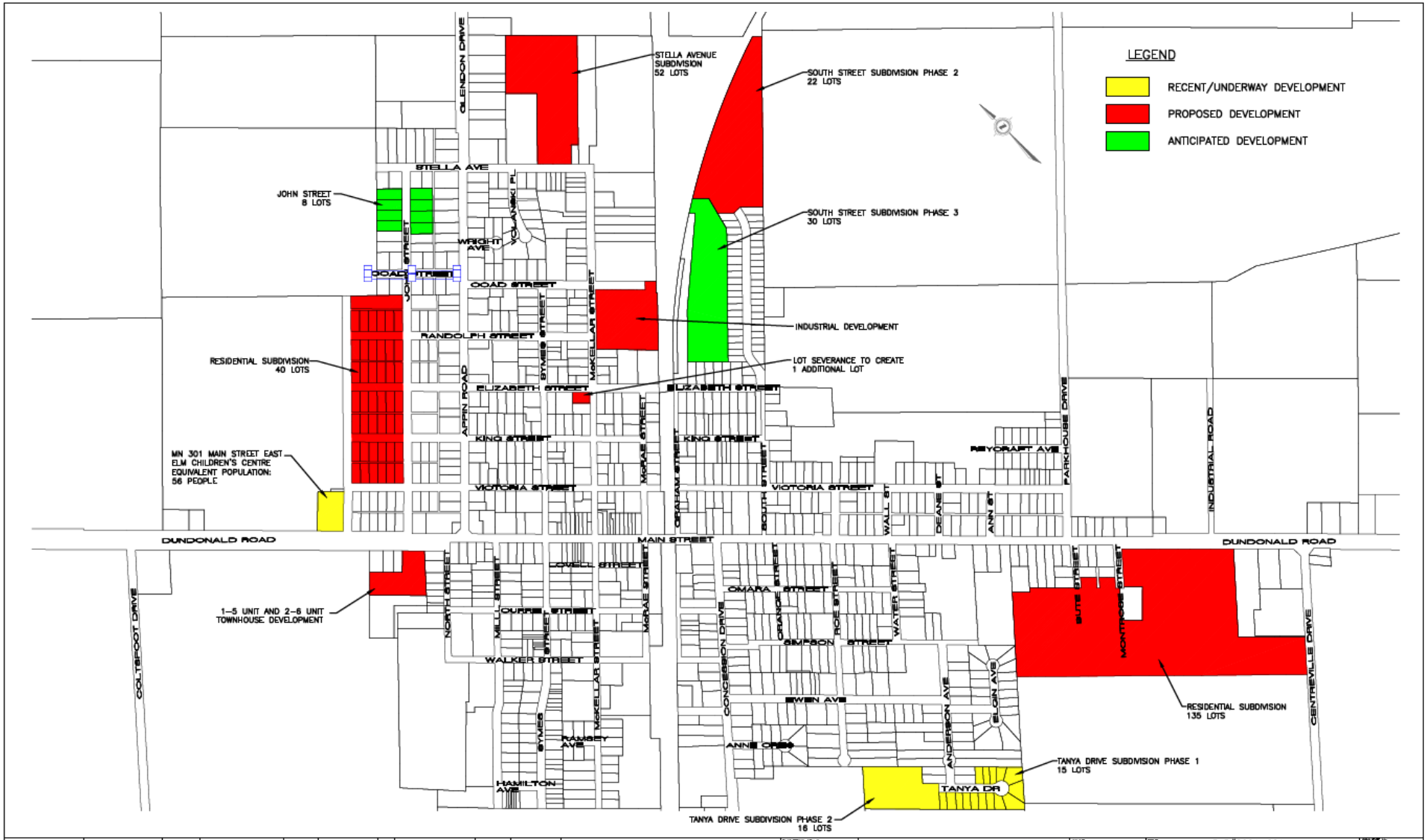
6.0 UNDERSTANDING GROWTH IN SOUTHWEST MIDDLESEX

6.1 PROPOSED & APPROVED DEVELOPMENTS

To help understand where and how the Municipality of Southwest Middlesex is experiencing growth within its settlement areas, a review of residential development applications has been conducted to determine the number of approved and future proposed dwelling units. This assessment includes:

Development	Status	# of Approved Units
Glencoe		
Dobie Subdivision	Draft Approved	119 single detached units 16 semi-detached units 1 medium density block
Sunset Estates	Site Plan	17 townhouse units
South Street Subdivision Phase Two	Draft Approved	22 single detached units
South Street Subdivision Phase Three	Proposed	30 single detached units
Stella Avenue Subdivision	Proposed	26 single detached units 26 semi-detached units
John Street Development	Proposed	8 single detached units
West of John Street Subdivision	Proposed	40 single detached units
Melbourne		
Victoria Street Subdivision	Draft Approved	9 single detached units
Wardsville		
Wardsville Townhomes	Site Plan	4 townhouse units
Middlemiss		
Mill Street Severance	Proposed	2 single detached units

The significant majority of both approved and future development within Southwest Middlesex is comprised of single and semi-detached units. There are a total 256 single detached and 42 semi-detached units within the development pipeline of approximately 319 units – representing 93% of proposed and approved units. Within the Dobie Subdivision, there is one block reserved for medium density development; however, the specific development typology (i.e., townhouses vs. mid-rise development) is not known at this time.



EXISTING SERVICES	DRAWING # SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT

SPRIET ASSOCIATES
LONDON LIMITED
CONSULTING ENGINEERS

SWM
SOUTHWEST MIDDLESEX

RFP#2021-001
MUNICIPAL WASTEWATER AND WATER SYSTEMS MASTER SERVICING STUDY

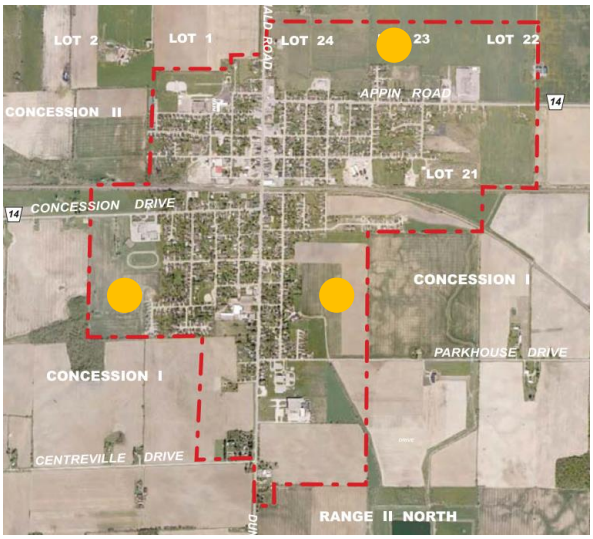
RECENT, PROPOSED AND ANTICIPATED DEVELOPMENTS
GLENCOE
APPENDIX E

PROJECT No. 220253
SHEET No. 1

6.2 FUTURE GROWTH OPPORTUNITIES

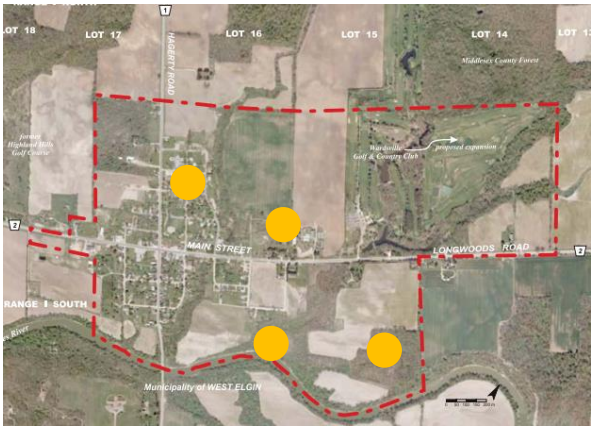
In the coming years, the Municipality will be required to review its Official Plan to be consistent with the 2020 PPS and conform to the County's updated Official Plan. The Official Plan Review may result in an expansion or adjustment to the settlement area boundaries in Southwest Middlesex. At this time, it is unknown how much additional land will be considered or its exact location within the Municipality. For the purposes of this Study, infrastructure analysis should consider the location of approved and proposed developments, as well as the 2046 planning horizon established by the County's population and employment forecasts.

There is also an opportunity through this Memo to review the current Urban and Community Settlement Area boundaries established within the Municipality's Official Plan to understand where larger-scale greenfield residential growth could occur over the planning horizon. This desktop review of future growth opportunities looks at lands currently designated residential within the Municipality's existing settlement area boundaries (denoted by yellow dots in the figures, below). This review does not consider infill opportunities or any future Settlement Area boundary expansions that may occur through the Municipality's future Official Plan Review / Comprehensive Review.



Glencoe (Urban Area)

- North of Appin Road
- South of Concession Drive
- North of Parkhouse Drive



Wardsville (Community Area)

- North of Longwoods Road, East of Paint Creek
- East of Hagerty Road
- South of Main Street, East of Ontario Street
- South of Longwoods Road

The Municipality's Official Plan contemplates the majority of growth being directed to Glencoe and Wardsville as fully serviced (municipal water and wastewater) communities. The Official Plan also directs growth away from the hamlets, and limits development to small scale, infill development. Hamlets are planned as areas where full municipal services will not be provided in the foreseeable future. Therefore, for the purposes of this Study, it is anticipated that urban boundary of Glencoe may evolve in the medium term, and that the boundaries of the remaining settlements will remain as delineated today.

7.0 NEXT STEPS

This Memo summarizes several critical policies and plans to inform the Master Servicing Study to understand their implications on growth and infrastructure and also explores current and future development applications and growth areas to identify those geographies where growth is occurring, and the nature of growth being experienced (e.g., development typology). The findings of this Memo should be confirmed with Municipal and County staff to ensure that the most recent development applications and growth pattern information has been captured. It would also be desirable to confirm the timing of the Municipality's future Official Plan Review and the types of issues and opportunities that may be considered through that process.

We view this Master Servicing Study as a key technical input into the Municipality's future Official Plan Review and Comprehensive Review, which will be required to plan for growth for the next 25 years, and conform with the Provincial Policy Statement, 2020 – which in part addresses requirements related to infrastructure and servicing. The Official Plan Policy Opportunities discussed in Section 4.2 should be considered as part of the broader Official Plan Review process.

As the Master Servicing Study advances, more information may become available as it relates to growth forecasts; should this occur, there will be a need to confirm assumptions for capacity requirements established in this Memo.



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