City of Helena

Helena Wastewater Collection System Master Plan

APPENDIX C

Summary of Modeled System Capacity Deficiencies

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Pipe ID	Upstream Manhole	Downstream Manhole	Average Day Flow (gpm)		Peak Day Flow (gpm)		Peak Wet Weather Flow		Total Capacity (gpm)	Section Length (ft)	Diameter (in)
			(gpm)	q/Q	(gpm)	q/Q	(gpm)	q/Q			
759	538-4	94-10-1					534	0.80	666	372	10
760	538-5	538-4	365	0.90	412	1.02	529	1.31	404	464	10
881	003-1	91-1-11					331	0.97	340	165	7
899[1]	99-16-37	99-16-38	42	1.00	51	1.00	56	1.00	56	120	12
1183	99-16-17	99-16-18	457[3]	0.88	466[3]	0.90	471[3]	0.91	514	273	12
1202[1]	99-16-40	99-16-41	38	1.00	51	1.00	56	1.00	56	400	12
1359	94-10-2	254-2					542	0.83	650	455	10
1360	94-10-1	94-10-2	367	0.88	414	1.00	538	1.30	415	476	10
1436	533-12	445-4					2,371	1.05	2,265	472	12
1441	445-4	445-4A					2,373	1.53	1,550	715	12
1446	533-10	533-12					2,368	1.27	1,860	320	12
1447	533-8	533-10					2,366	1.42	1,700	317	12
1497	538-6	538-5					524	0.94	560	476	10
1602	445-6	445-7			1,129	0.77	2,379	1.61	1,475	394	12
1603	445-7	445-8			1,127	0.76	2,380	1.60	1,485	287	12
1604	445-8	64-21					2,382	1.56	1,530	310	12
1803	445-5	445-6	943	1.26	1,132	1.51	2,377	3.16	750	400	12
1878	533-6	533-8					2,363	1.24	1,900	320	12
1879	533-2	533-6			1,140	0.76	2,360	1.57	1,500	333	12
1958	376-2	533-2					2,357	0.89	2,660	315	12
2153	254-3	253-1	363	1.04	415	1.19	551	1.57	350	469	8
2239[1]	94-28-1	551-8	408	1.00	494	1.00	982	1.00	982	54	24
2915	254-2	254-3	364	1.41	415	1.61	546	2.12	260	178	8
3063[2]	76-41-5	76-41-4			192	0.78	212	0.86	245	400	10
Total Length										8,485	

[1] Model identifies these pipes as having adverse slopes. This should be field verified.

[2] This pipe is downstream of the Airport lift station so differences between peak day and peak day/wet weather are dampened.

[3] This pipe is the Ft. Harrison gravity main. The average day, peak day and peak wet weather flows include the 415 gpm reserve capacity for Ft. Harrison.