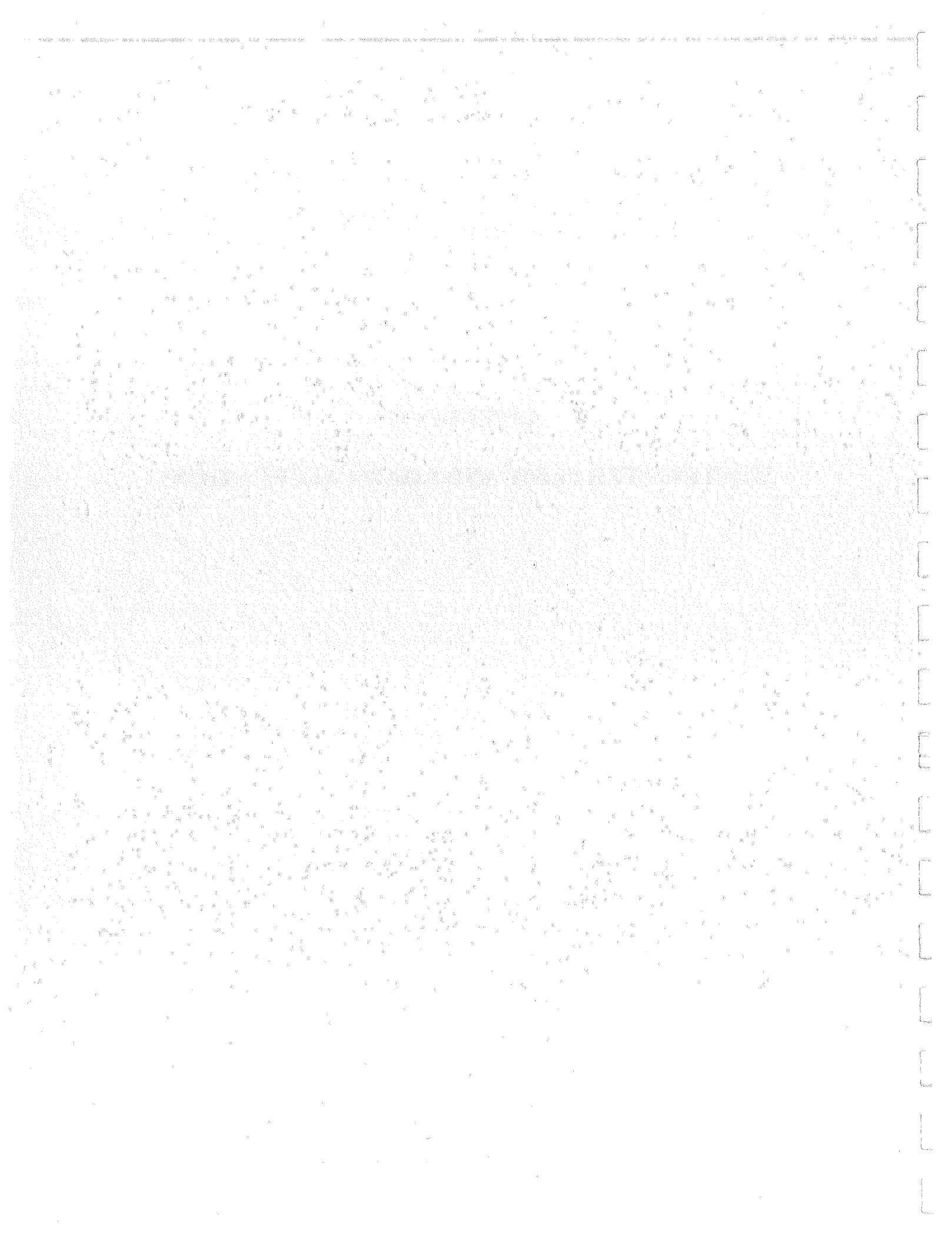


APPENDIX C

WASTEWATER FLOW AND LOAD CALCULATIONS



San Juan County
 UGA Infrastructure Feasibility Study
 MM Flow - Incl UGA

NOTE: this sheet calculates the MM flow for the existing sewer area and for the UGA

Assumptions

Parameter	Value-1994	Value-2000	Value-2015 source
Sanitary unit flow, gpd	66.6	66.6	2001 update, appdx B
Public Auth flow, gpd	6,000	6,000	2001 update, appdx B
Airport flow, gpd	400	800	2001 update, appdx B
UW flow, gpd	3,200	778	2001 update, appdx B
Ferry flow, gpd	incr 1%/yr		2001 update, appdx B
II-old sewers, gpd	incr 1%/yr		2001 update, appdx B
II-new sewers, gpd	900	900	2001 update page 5-3
II-new sewers-buildout, gpd	400	500	2001 update page 5-3
Area, old sewers, acre	396	650	2001 update, appdx B
Area, new sewers, acre	58	246	2001 update page 5-3
Inflow, gpd		36,000	2001 update page 5-3
UGA basin 1 populat	1,747		
UGA basin 2 populat	1,243		
UGA basin 1 area	117 ac		
UGA basin 2 area	126 ac		

Year	Pop--low	Pop--high	Max mth daily avg 1995 Rept	Actual	Projections: flow components, gpd		8	9	10	11	12	13	14	15	16	Sanitary flow - low
					Sanitary flow--low	Sanitary flow--high										
1990	1,492	1,492	0.483	0.483												
1991	1,560	1,560	0.406	0.406												
1992	1,625	1,625	0.474	0.474												
1993	1,730	1,730	0.465	0.465												
1994	1,790	1,790	0.528	0.347	119,214	119,214	6,000	400	3,200		356,400	23,200	36,000	0.544	0.544	0.129
1995	1,810	1,810	0.535	0.551	120,546	120,546	6,000	419	3,232		356,400	27,100	36,000	0.550	0.550	0.130
1996	1,860	1,860	0.547	0.535	123,210	123,210	6,000	438	3,264	748	356,400	31,085	36,000	0.557	0.557	0.134
1997	1,875	1,875	0.554	0.531	124,875	124,875	6,000	457	3,297	755	356,400	35,155	36,000	0.563	0.563	0.135
1998	1,890	1,890	0.560	0.467	125,874	125,874	6,000	476	3,330	763	356,400	39,311	36,000	0.568	0.568	0.136
1999	1,900	1,900	0.573	0.521	126,540	126,540	6,000	495	3,363	771	356,400	43,551	36,000	0.573	0.573	0.137
2000	1,989	1,989	0.581	0.581	132,467	132,467	6,000	514	3,397	778	356,400	47,878	36,000	0.583	0.583	0.143
2005	2,132	2,281	0.636	0.636	142,003	151,933	6,000	610	3,570	818	356,400	70,787	36,000	0.616	0.626	0.153
2010	2,288	2,758	0.699	0.699	152,226	183,688	6,000	705	3,752	860	356,400	95,828	36,000	0.652	0.683	0.164
2015	2,472	3,163	0.767	0.767	164,661	210,680	6,000	800	3,944	904	356,400	123,000	36,000	0.692	0.738	0.176
Buildout	5,120	5,120	-	-	340,992	340,992	6,000	1,200	4,800	1,871	356,400	159,900	36,000	0.907	0.907	0.355
UGA Basin 1 Buildout	1,747				116,350	0	N/A	N/A	N/A	N/A	N/A	76310	N/A	0.19	0.08	
UGA Basin 1 Buildout	1,243				82,784							81770	0.16	0.08		

San Juan County
UGA Infrastructure Feasibility Study
Peak Flow - Incl UGA

NOTE: this sheet calculates the Peak flow for the existing sewer area and for the UGA

Assumptions

Parameter	Value-1994	Value-2000	Value-2015	Peak source
Sanitary unit flow, gpd	66.6		66.6	2001 update table 5-3
Public Auth flow, gpd	6,000		6,000	2001 update, appdx B
Airport flow, gpd	400		800	
UW flow, gpd	3,200		778	2001 update, appdx B
Ferry flow, gpd				2001 update, appdx B
I/O-old sewers, gpd	900		900	2001 update, appdx B
I/O-new sewers, gpd	400		500	2001 update page 5-3
Area, old sewers, acre	396		396	2001 update page 5-3
Area, new sewers, acre	58		246	2001 update, appdx B
Inflow, gpd		36,000	36,000	288000 2001 update page 5-3
Sanitary flow Peaking Factor			4	2001 update, appdx B

UGA Basin 1 populatic 1,747
UGA Basin 2 populatic 1,243
UGA Basin 1 area 117 ac
UGA Basin 2 area 126 ac

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			Projections: flow components, gpd												
Year	Pop.-low	Pop.-high	1995 Rept	Actual	Sanitary flow-low	Public Auth	Airport	UW	Ferry	Sum of Sanitary flow-low	PEAK Sanitary Flow-low	Infiltr old	Infiltr new	Inflow	Total-low, mgd
1990	1,492	1,492	0.483	0.483											
1991	1,560	1,560	0.406	0.406											
1992	1,625	1,625	0.474	0.474											
1993	1,730	1,730	0.465	0.465											
1994	1,790	1,790	0.528	0.347	119,214	6,000	400	3,200		128,814	515,256	1,267,200	87,000	288,000	2.16
1995	1,810	1,810	0.535	0.551	120,546	6,000	419	3,232		130,197	520,788	1,267,200	100,429	288,000	2.18
1996	1,850	1,850	0.547	0.535	123,210	6,000	438	3,264	748	133,860	534,641	1,267,200	113,857	288,000	2.20
1997	1,875	1,875	0.554	0.531	124,875	6,000	457	3,297	755	135,384	541,538	1,267,200	127,286	288,000	2.22
1998	1,890	1,890	0.560	0.467	125,874	6,000	476	3,330	763	136,443	545,772	1,267,200	140,714	288,000	2.24
1999	1,900	1,900	0.573	0.521	126,540	6,000	495	3,363	771	137,169	548,676	1,267,200	154,143	288,000	2.26
2000	1,989	1,989	0.581		132,467	6,000	514	3,397	778	143,157	572,827	1,267,200	167,571	288,000	2.30
2005	2,132	2,281	0.636		141,991	6,000	610	3,570	818	152,989	611,955	1,267,200	234,714	288,000	2.40
2010	2,286	2,758	0.699		152,226	6,000	705	3,752	860	163,543	654,170	1,267,200	301,857	288,000	2.51
2015	2,472	3,163	0.767		164,661	6,000	800	3,944	904	176,308	705,233	1,267,200	369,000	288,000	2.63
Buildout	5,120	5,120	--		340,992	6,000	1,200	4,800	1,871	354,863	1,419,453	1,267,200	369,000	288,000	3.34
UGA Basin 1	1,747				116,350	0	N/A	N/A	N/A	116,350	465,401	N/A	176,100	N/A	0.64
UGA Basin 2	1,243				82,784					82,784	331,135		188,700		0.52

