

# San Antonio Water System

Water and Wastewater Impact  
Fee Update

Calculation of Maximum Impact  
Fees per Service Unit

November 5, 2010



# Overview

**Review of Financial Assumptions**

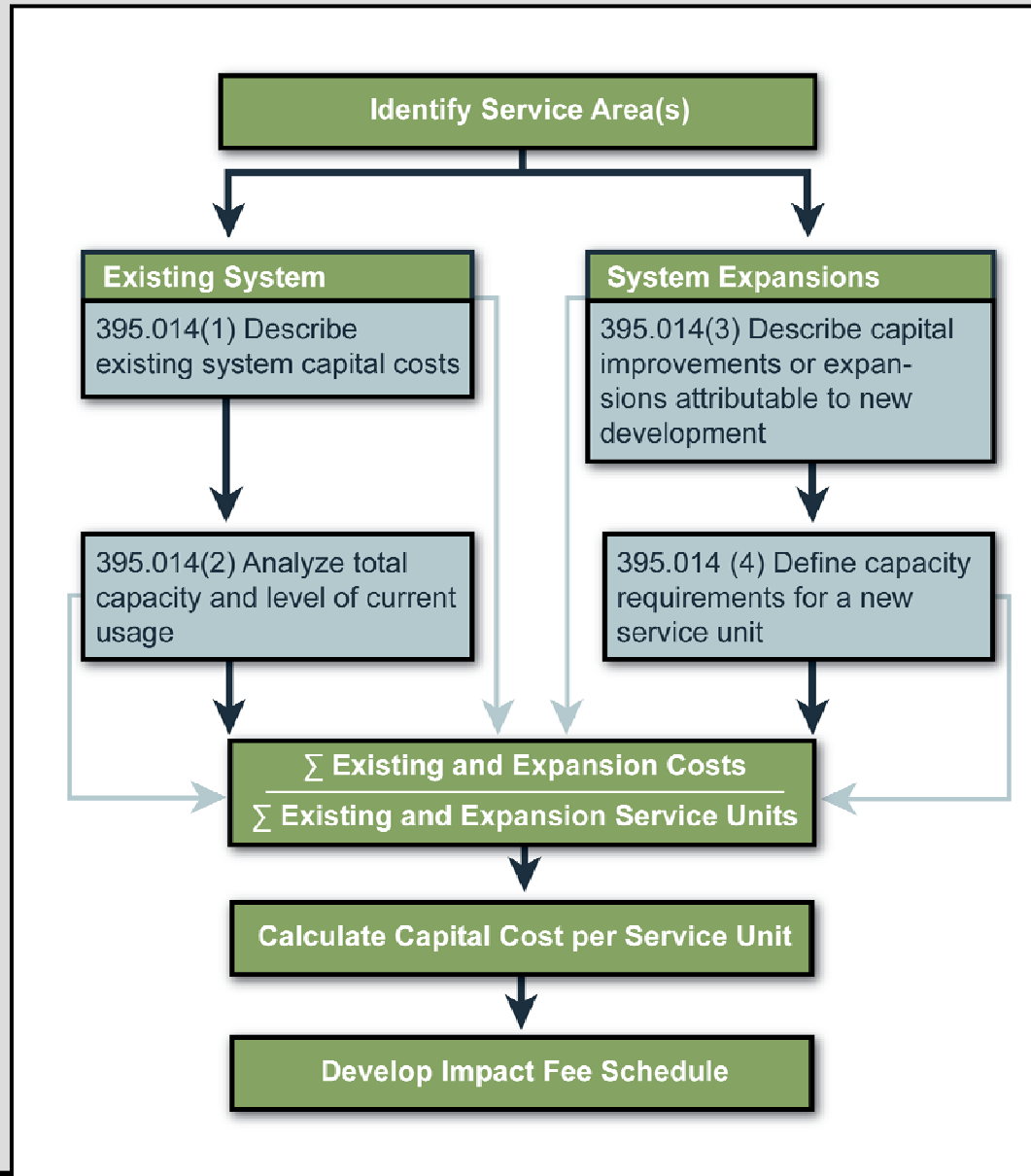
**Sample Calculations**

**Maximum Impact Fees per Service Unit**

# Capital Improvements Plan (CIP) Financial Assumptions

- Existing Infrastructure
  - 35% cash funded
  - 65% debt funded
  - Interest expense is included in impact fee
- Water Delivery Future CIP – 80% cash funded, 20% debt funded
- Water Supply Future CIP – 100% debt funded (interest not included)
- Wastewater Future CIP
  - MRSO – 100% debt funded (interest not included)
  - All other projects – 80% cash funded, 20% debt funded

# Impact Fee Formula



# WATER SAMPLE

# Capacity Criteria: Water Delivery - Flow

- Service area specific demand requirements

Service Area	ADD (gpcd)	MDPF	MHPF
Inside 410	123	1.90	2.65
Outside 410	133	2.17	3.00

- Distribution capacity criteria are based on Maximum Hour Demand:

$$\text{MHD} = \text{ADD} * \text{MHPF}$$

# Capacity Criteria: Outside Loop 410

- Service area specific demands and peaking factors

Line	Description	Value
1	Average Daily Demand (gpcd)	133
2	Maximum Hour Peaking Factor	3.00
3	2011 Population	784,056
4	2011 MHD (mgd) ([1] * [2] * [3] / 1 million)	313
5	2020 Population	953,655
6	2020 MHD (mgd) ([1] * [2] * [6] / 1 million)	381
7	Study Period Increase in MHD (mgd) ([6] – [4])	68

# Available Capacity: Outside Loop 410

- 10% excess capacity is assumed to be consistent
- Capacity = MHD / 90%

Line	Description	Value
1	2011 MHD (mgd)	313
2	2011 Capacity (mgd) ([1] / 90%)	348
3	2020 MHD (mgd)	381
4	2020 Capacity (mgd) ([3] / 90%)	423
5	Study Period Increase in Capacity (mgd) ([4] – [2])	75



# Eligible Existing CIP: Outside Loop 410

- 2020 MHD > 2011 Capacity
- Insufficient existing capacity available
- Additional future CIP capacity required

Line	Description	Value
1	2011 Capacity (mgd)	348
2	2011 MHD (mgd)	313
3	Available Existing Capacity (mgd) ([1] – [2])	35
4	Eligible Existing Capacity Allocation ([3] / [1])	10%
5	Existing Assets	\$380,230,849
6	Eligible Existing Capacity ([4] * [5])	\$38,023,085

# Eligible Future CIP: Outside Loop 410

- 2020 MHD > 2011 Capacity
- Insufficient existing capacity available
- Additional future CIP capacity required

Line	Description	Value
1	Study Period Increase in MHD (mgd)	68
2	Available Existing Capacity (mgd)	35
3	Remaining MHD (mgd) ([1] – [2])	33
4	Study Period Increase in Capacity (mgd)	75
5	Eligible Future CIP Capacity Allocation ([3] / [4])	44%
6	Future CIP	\$139,307,749
7	Eligible Future CIP Capacity ([5] * [6])	\$60,975,016

# Financing Costs: Outside Loop 410

- Pro rata share of future interest payments on outstanding debt
- Assume 65% of existing asset value is included in outstanding debt

Line	Description	Value
1	Total Outstanding Debt - Revenue Bonds	\$1,759,700,000
2	2011 Total Interest Payment for Existing Revenue Bonds	\$76,399,000
3	Eligible Existing Capacity	\$38,023,085
4	Debt-funded Eligible Existing Capacity ([3] * 65%)	\$24,715,005
5	2011 Eligible Interest ([2] * [4] / [1])	\$1,073,025

- **Sum of Eligible Interest 2011-2040 = \$17,403,257**

# Calculated Impact Fee: Outside Loop 410

Line	Description	Value
1	Eligible Existing Capacity	\$38,023,085
2	Eligible Future CIP Capacity	\$60,975,016
3	Eligible Financing Costs	\$17,403,257
4	Total Eligible CIP ([1] + [2] + [3])	\$116,401,358
5	Change in EDUs (2011 - 2020)	73,920
6	Calculated Impact Fee per EDU ([4] / [5])	\$1,575

# Eligible Existing Debt Service: Outside Loop 410

- Pro rata share of future debt service payments on outstanding debt
- Assume 65% of existing asset value is included in outstanding debt

Line	Description	Value
1	Total Outstanding Debt - Revenue Bonds	\$1,759,700,000
2	2011 Total Debt Service Payment for Existing Revenue Bonds	\$115,894,000
3	Eligible Existing Capacity	\$38,023,085
4	Debt-funded Eligible Existing Capacity ([3] * 65%)	\$24,715,005
5	2011 Eligible Existing Debt Service ([2] * [4] / [1])	\$1,627,732

# Rate Credit: Outside Loop 410

Line	Description	Value
1	2011 Eligible Existing Debt Service	\$1,627,732
2	2011 Beginning Water Delivery Service Units	587,073
3	2020 Year-end Water Delivery Service Units	667,416
4	Water Delivery Annual Growth Rate	1.29%
5	2011 Increase in Water Delivery Service Units ([2] * [4])	7,579
6	2011 Year-end Water Delivery Service Units ([2] + [5])	594,652
7	2011 Eligible Debt Service per Service Unit ([1] / [6])	\$2.74
8	2011 Eligible Rate Credit ([5] * [7])	\$20,746

- **Sum of Eligible Existing Debt Service 2011-2040 = \$3,810,181**

# Eligible Future Debt Service: Outside Loop 410

- Assume 10% of study period CIP is funded annually
- Assume 20% of CIP is funded with debt

Line	Description	Value
1	Eligible Future CIP	\$60,975,016
2	2011 Eligible Debt-funded Future CIP ([1] * 10% * 20%)	\$1,219,500
3	2011 Eligible Future CIP Principal Payment	\$18,664

# Rate Credit: Outside Loop 410

Line	Description	Value
1	2011 Eligible Future CIP Principal Payment	\$18,664
2	2011 Beginning Service Units	341,729
3	2020 Year-end Service Units	415,649
4	Outside Loop 410 Annual Growth Rate	1.98%
5	2011 Increase in Service Units ([2] * [4])	6,758
6	2011 Year-end Service Units ([2] + [5])	348,487
7	2011 Eligible Future CIP Principal Payment per Service Unit ([1] / [6])	\$0.05
8	2011 Eligible Rate Credit ([5] * [7])	\$362

- **Sum of Eligible Future CIP Principal 2011-2040 = \$1,647,154**



# Maximum Impact Fee: Outside Loop 410

Line	Description	Value
1	Calculated Impact Fee per EDU	\$1,575
2	Eligible Existing Debt Service Rate Credit	\$3,810,181
3	Eligible Future CIP Principal Rate Credit	\$1,647,154
4	Change in EDUs (2011 - 2020)	73,920
5	Rate Credit per EDU $(([2] + [3]) / [4])$	\$74
6	Maximum Impact Fee per EDU $([1] - [5])$	\$1,501

# WASTEWATER SAMPLE

# Capacity Criteria: Wastewater Treatment

- Average Daily Flow = 240 gpd/EDU

Service Area	EDUs		ADF (mgd)	
	2010	2020	2010	2020
Medio Creek	33,501	50,735	8	12
Leon Creek / Dos Rios	669,816	759,656	161	182

# Capacity Criteria: Medio Creek

Line	Description	Value
1	Average Daily Flow per EDU (gpd)	240
2	2011 EDUs	33,501
3	2011 ADF (mgd) ([1] * [2] / 1 million)	8
4	2020 EDUs	50,735
5	2020 ADF (mgd) ([1] * [4]) / 1 million)	12
6	Study Period Increase in ADF (mgd) ([5] – [3])	4

- 2011 Capacity at Medio Creek WRC = 16 mgd
- No additional capacity planned during study period

# Eligible CIP: Medio Creek

- 2020 ADF < 2011 Capacity
- Sufficient existing capacity available
- No future CIP required

Line	Description	Value
1	2011 Capacity (mgd)	16
2	Study Period Increase in MHD (mgd)	4
3	Eligible Existing Capacity Allocation ([2] / [1])	25.9%
4	Existing Assets	\$62,770,361
5	Eligible Existing Capacity ([3] * [4])	\$16,226,766

# Financing Costs: Medio Creek

- Pro rata share of future interest payments on outstanding debt
- Assume 65% of existing asset value is included in outstanding debt

Line	Description	Value
1	Total Outstanding Debt - Revenue Bonds	\$1,759,700,000
2	2011 Total Interest Payment for Existing Revenue Bonds	\$76,399,000
3	Eligible Existing Capacity	\$16,226,766
4	Debt-funded Eligible Existing Capacity ([3] * 65%)	\$10,547,398
5	2011 Eligible Interest ([2] * [4] / [1])	\$458,707

- **Sum of Eligible Interest 2011-2040 = \$7,427,030**

# Calculated Impact Fee: Medio Creek

Line	Description	Value
1	Eligible Existing Capacity	\$16,226,766
2	Eligible Financing Costs	\$7,427,030
3	Total Eligible CIP ([1] + [2])	\$23,653,796
4	Change in EDUs (2011 - 2020)	17,234
5	Calculated Impact Fee per EDU ([3] / [4])	\$1,373

# Eligible Debt Service: Medio Creek

- Pro rata share of future debt service payments on outstanding debt
- Assume 65% of existing asset value is included in outstanding debt

Line	Description	Value
1	Total Outstanding Debt - Revenue Bonds	\$1,759,700,000
2	2011 Total Debt Service Payment for Existing Revenue Bonds	\$115,894,000
3	Eligible Existing Capacity	\$16,226,766
4	Debt-funded Eligible Existing Capacity ([3] * 65%)	\$10,547,398
5	2011 Eligible Debt Service ([2] * [4] / [1])	\$694,653



# Rate Credit: Medio Creek

Line	Description	Value
1	2011 Eligible Debt Service	\$694,653
2	2011 Beginning Wastewater Service Units	703,317
3	2020 Year-end Wastewater Service Units	810,391
4	Wastewater Annual Growth Rate	1.43%
5	2011 Increase in Wastewater Service Units ([2] * [4])	10,038
6	2011 Year-end Wastewater Service Units ([2] + [5])	713,355
7	2011 Eligible Debt Service per Service Unit ([1] / [6])	\$0.97
8	2011 Eligible Rate Credit ([5] * [7])	\$9,775

- **Sum of Eligible Debt Service 2011-2040 = \$1,771,073**

# Maximum Impact Fee: Medio Creek

Line	Description	Value
1	Calculated Impact Fee per EDU	\$1,373
2	Eligible Rate Credit	\$1,771,073
3	Change in EDUs (2011 - 2020)	17,234
4	Rate Credit per EDU ([2] / [3])	\$103
5	Maximum Impact Fee per EDU ([1] – [4])	\$1,270

# PROPOSED IMPACT FEES

# Water Delivery Impact Fees

Impact Fee Category	Service Area	Calculated Impact Fee per EDU	Rate Credit per EDU	Maximum Impact Fee per EDU
Flow	Combined	\$1,341	\$75	\$1,266
Flow – Proposed	Inside 410	1,192	82	\$1,110
	Outside 410	1,575	74	1,501
System Development	High Elevation	1,120	56	1,064
	Middle Elevation	879	38	841
	Low Elevation	615	32	583

# Comparison of Water Delivery Impact Fees

Impact Fee Category	Service Area	Proposed Impact Fee per EDU	Current Impact Fee per EDU	Increase / (Decrease)
Flow	Combined	\$1,266	\$1,098	\$168
Flow – Proposed	Inside 410	1,110	1,098	12
	Outside 410	1,501	1,098	403
System Development	High Elevation	1,064	1,356	(292)
	Middle Elevation	841	591	250
	Low Elevation	583	668	(85)

# Water Supply Impact Fees

Impact Fee Category	Service Area	Calculated Impact Fee per EDU	Rate Credit per EDU	Maximum Impact Fee per EDU
Water Supply	All	\$1,839	\$183	\$1,656

# Comparison of Water Supply Impact Fees

Impact Fee Category	Service Area	Proposed Impact Fee per EDU	Current Impact Fee per EDU	Increase / (Decrease)
Water Supply	All	\$1,656	\$1,242	\$414

# Wastewater Impact Fees

Impact Fee Category	Service Area	Calculated Impact Fee per EDU	Rate Credit per EDU	Maximum Impact Fee per EDU
Treatment	Medio Creek	\$1,373	\$103	\$1,270
	Leon Creek / Dos Rios	1,022	29	993
Collection	Medio Creek	597	30	567
	Upper Medina	1,383	252	1,131
	Lower Medina	759	128	631
	Upper Collection	1,744	85	1,659
	Lower Collection	1,067	51	1,016
Collection - Proposed	Upper Collection	1,878	92	1,786
	Middle Collection	1,202	58	1,144
	Lower Collection	579	26	553



# Comparison of Wastewater Impact Fees

Impact Fee Category	Service Area	Proposed Impact Fee per EDU	Current Impact Fee per EDU	Increase / (Decrease)
Treatment	Medio Creek	\$1,270	\$901	\$369
	Leon Creek / Dos Rios	993	453 or 901	540 or 92
Collection	Medio Creek	567	394	173
	Upper Medina	1,131	453 or 901	678 or 230
	Lower Medina	631	413	218
	Upper Collection	1,659	691	968
	Lower Collection	1,016	413	603
Collection - Proposed	Upper Collection	1,786	691	1,095
	Middle Collection	1,144	413	731
	Lower Collection	553	413	140

# DRAFT - Proposed Total Impact Fees

Water Service Area	Wastewater Service Area	Proposed Impact Fee per EDU	Current Impact Fee per EDU	Increase / (Decrease)
Outside / High	Medio Creek	\$5,853	\$4,991	\$862
Outside / High	Upper Collection	7,072	4,840	2,232
Outside / Middle	Medio Creek	5,630	4,226	1,404
Outside / Middle	Upper Collection	6,849	4,075	2,774
Outside / Middle	Lower Collection	5,616	3,797	1,819
Outside / Low	Medio Creek	5,372	4,303	1,069
Outside / Low	Upper Medina	5,936	4,600	1,336
Outside / Low	Lower Medina	5,436	3,874	1,562
Outside / Low	Upper Collection	6,591	4,152	2,439
Outside / Low	Lower Collection	5,358	3,874	1,484
Inside / Middle	Lower Collection	5,225	3,797	1,428
Inside / Low	Medio Creek	4,981	3,205	1,776
Inside / Low	Lower Collection	4,967	3,874	1,093

# DRAFT – Proposed Total Maximum & Minimum Impact Fees

	<b>Proposed</b>	<b>Current</b>	<b>Change</b>	<b>%</b>
Total Minimum (Inside Low/Lower Collection)	\$4,967	\$3,874	\$1,093	28
Total Maximum (Outside High/Upper Collection)	7,072	4,840	2,232	46

*2006 Increase 23%-107%*

# Next Steps

## Discussion of CIP

## Discussion of Service Area Alternatives

- Flow Inside/Outside Loop 410
- Middle Collection Service Area

## Discussion of Proposed Impact Fees

Questions?



*Pathways to Lasting Solutions*



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