

# SAWS Collection Impact Fee CIP

**Kathleen M. Khyle Price, P.E.**

Manager - Engineering

Wastewater Master Planning

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CIAC Meeting



# Collection Impact Fee CIP Overview

- SAWS Sewer System
- Collection System Hydraulic Model
- Changes from 2011 Impact Fee Study
- Capacity Calculations for 2013 to 2024 CIP
- CIP Values for 2013 to 2024
- Existing Collection System Values
- Eligible Wastewater Collection CIP

# San Antonio Water System

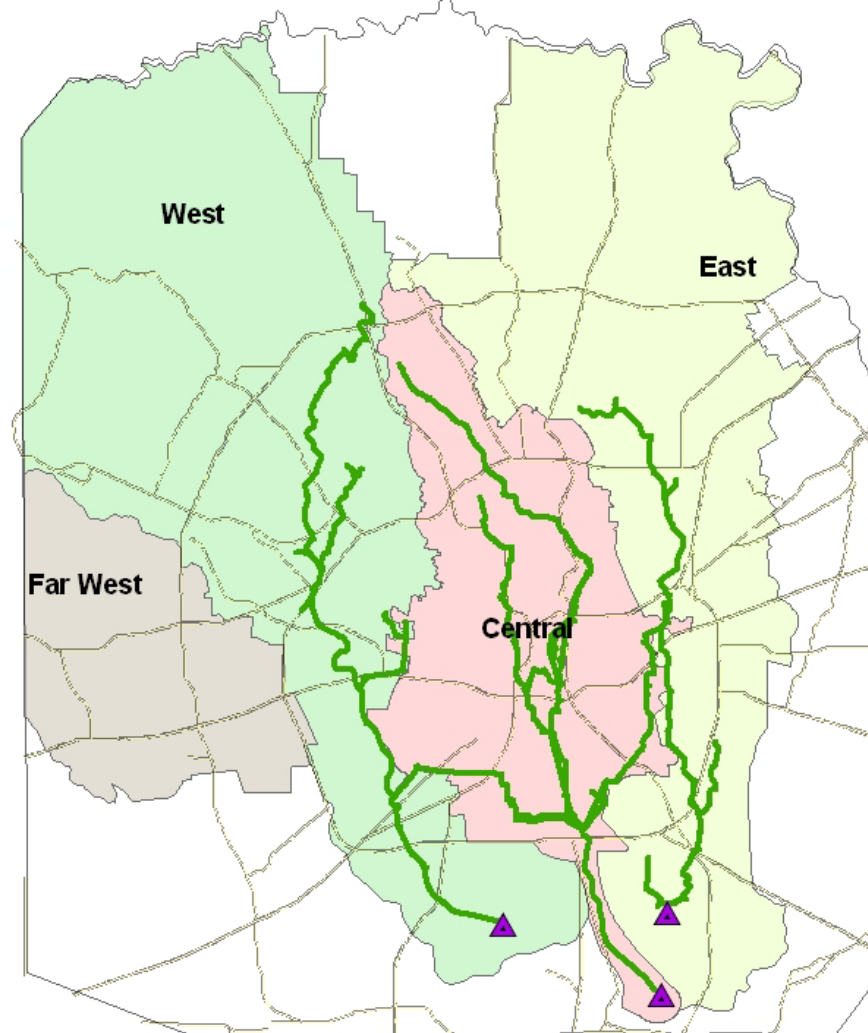
## •SAWS Sewer System

- ~5,200 miles of sewer main
  - ~ 350 miles LD ( $\geq 24$ -inch)
  - ~ 4,850 miles SD
  - Includes ~ 680 miles in EARZ
- 98,000 manholes
- 300 siphons
- 80 miles of force main
- 156 lift stations
- 3 wastewater treatment plants



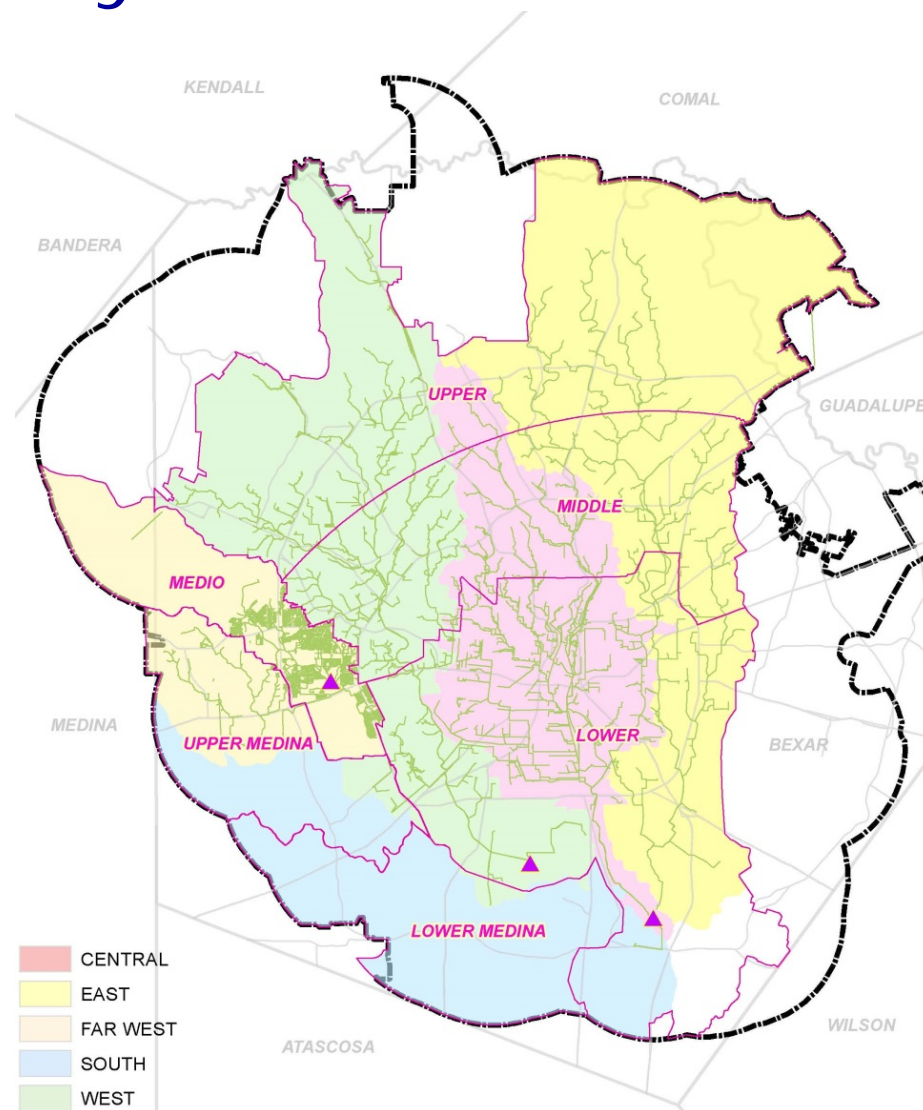
# 1998 Collection System Model

- First Hydraulic Model
- Only large diameter mains (24"+)
- 4% of total system modeled
- HydroWorks software was used



# 2013 Collection System Model

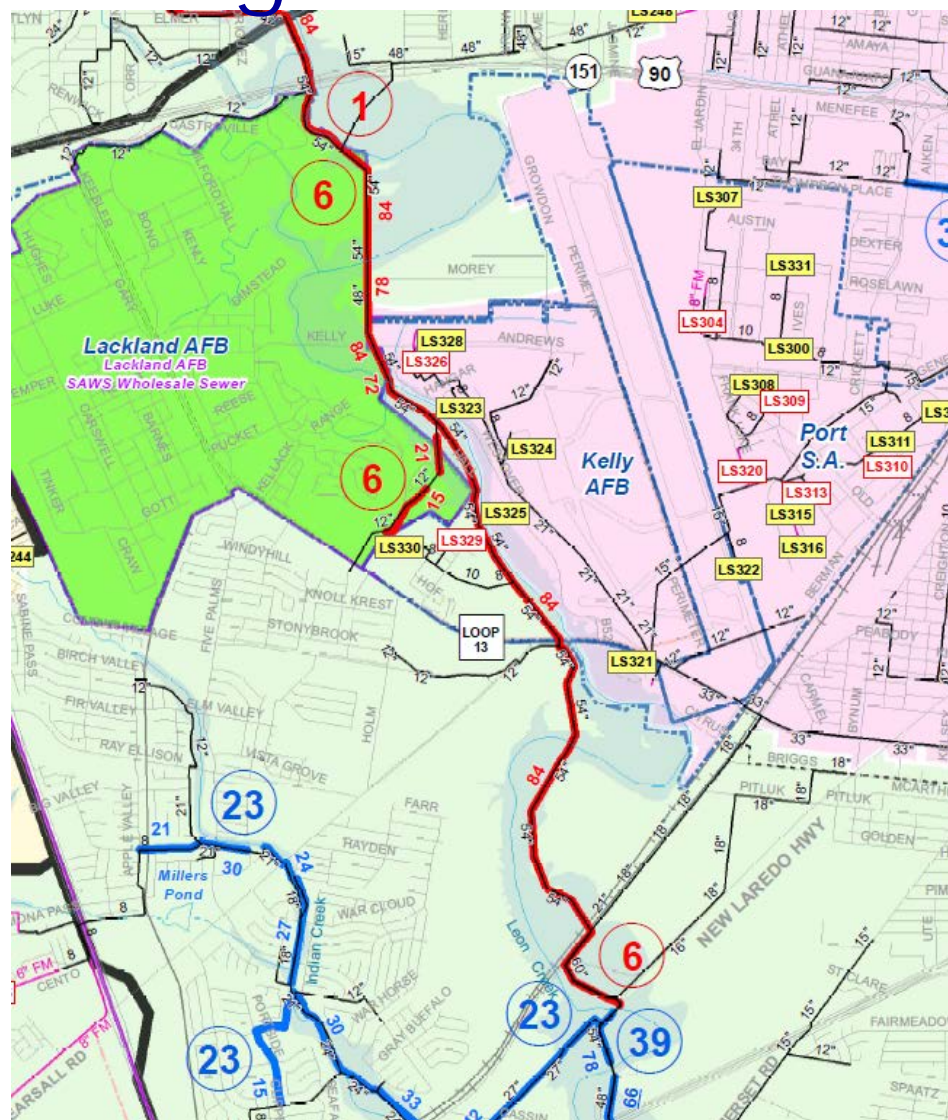
- Primarily large diameter mains (12"+)
- 23% of total system modeled
- InfoWorks CS software used to create models
- Separate models for each basin (Far West, West, Central, and East)
- Currently Building the model for Lower/Upper Medina



# Changes from 2011 Impact Fee Study

- Revised Cost Estimates for all Projects
- 7 Projects Completed
- 2 Projects under Construction
- 10 Projects under Design
- 1 Projects Removed
- 5 New Projects Added

# Changes from 2011 Study-Project W\_6



- W\_6 Western Relief Project 90" Pipeline
  - \$86M vs. \$50M
  - 6 phases/segments
  - Rerouted portions
  - 90" vs 84"
  - Easement Costs
  - Lackland/Environmental Costs
  - Needs be completed by
- Eligible Impact Fee CIP
  - \$11.8 M

# Capacity Calculations for 2013 to 2024 CIP

- Capacity calculation for new projects is based on same methodology as 2011 Impact Fee Study
- Adjustments were made in the flow calculation spreadsheet to reflect the 2014 to 2023 change in EDU's for each project
- W\_6 Western Relief Project = \$78.7 M

Ultimate Flow Capacity = 270.78 MGD = 100%

Existing Flow = 103.5 MGD = 38% capacity

2014 to 2023 Flow = 40.46 MGD = 15% capacity

Post 2023 Flow = 127.18 MGD = 47%

Eligible CIP = \$78.7 M X 15% = \$11.8 M



# CIP Values 2013 to 2014

Service Area	2011-2020			2014-2023		
	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)*
Medio	\$ 38.7	\$ 7.2		\$ 36.4	\$ 5.6	
Upper Medina	\$ 39.0	\$ 5.6		\$ 13.9	\$ 3.0	
Lower Medina	\$ 59.9	\$ 9.3		\$ 31.0	\$ 3.8	
Upper Collection	\$ 100.0	\$ 20.5		\$ 116.7	\$ 20.9	
Middle Collection	\$ 207.3	\$ 12.0		\$ 292.5	\$ 18.7	
Lower Collection	\$ 268.2	\$ 20.3		\$ 264.4	\$ 16.2	
<b>Total</b>	<b>\$ 713.1</b>	<b>\$ 74.9</b>	\$ -	<b>\$ 754.9</b>	<b>\$ 68.2</b>	\$ -
* Costs for growth are expected to be \$ -						

# Existing Collection System Values (Equity)

Service Area	2010 Values			2014 Values		
	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)*
Medio	\$ 21.2	\$ 2.1	\$ 1.0	\$ 14.9	\$ 1.5	
Upper Medina	\$ 7.9	\$ 0.8	\$ 0.3	\$ 31.8	\$ 3.2	
Lower Medina	\$ 1.6	\$ 0.2	\$ 0.1	\$ 26.3	\$ 2.6	
Upper Collection	\$ 94.5	\$ 9.5	\$ 4.3	\$ 73.5	\$ 7.4	
Middle Collection	\$ 166.2	\$ 16.6	\$ 7.6	\$ 131.4	\$ 13.1	
Lower Collection	\$ 154.0	\$ 15.4	\$ 7.1	\$ 257.0	\$ 25.7	
Total	\$ 445.4	\$ 44.6	\$ 20.4	\$ 535.5	\$ 53.5	\$ -

# Eligible Wastewater Collection CIP

Service Area	2014-2023 Eligible Wastewater Collection CIP Costs							
	Existing Capacity (Existing Collection Value)			New CIP Capacity (2014-2023 Collection Projects)			Total Capacity	
	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)	Total Value of Capacity (\$ mil)	Total Value of Eligible Capacity (\$ mil)
Medio Creek	\$ 14.9	\$ 1.5	\$ 1.0	\$ 36.4	\$ 5.6	\$ -	\$ 51.3	\$ 8.1
Upper Medina	\$ 31.8	\$ 3.2	\$ 0.3	\$ 13.9	\$ 3.0	\$ -	\$ 45.7	\$ 6.5
Lower Medina	\$ 26.3	\$ 2.6	\$ 0.1	\$ 30.9	\$ 3.8	\$ -	\$ 57.2	\$ 6.5
Upper Collection	\$ 73.5	\$ 7.4	\$ 4.3	\$ 116.7	\$ 20.9	\$ -	\$ 190.2	\$ 32.6
Middle Collection	\$ 131.4	\$ 13.1	\$ 7.6	\$ 292.5	\$ 18.7	\$ -	\$ 423.9	\$ 39.4
Lower Collection	\$ 257.7	\$ 25.8	\$ 7.1	\$ 264.4	\$ 16.2	\$ -	\$ 522.1	\$ 49.1
Total	\$ 535.5	\$ 53.5	\$ 20.4	\$ 754.8	\$ 68.2	\$ -	\$ 1,290.3	\$ 142.1

\* Numbers are estimated from Previous years, will be revised, but should be similar

# Eligible Wastewater Collection CIP

Service Area	2011-2020		2014-2023	
	Total Value of Capacity (\$ mil)	Total Value of Eligible Capacity (\$ mil)	Total Value of Capacity (\$ mil)	Total Value of Eligible Capacity (\$ mil)
Medio Creek	\$ 59.9	\$ 10.3	\$ 51.30	\$ 8.10
Upper Medina	\$ 46.9	\$ 6.7	\$ 45.70	\$ 6.50
Lower Medina	\$ 61.5	\$ 9.6	\$ 57.20	\$ 6.50
Upper Collection	\$ 194.5	\$ 34.4	\$ 190.20	\$ 32.60
Middle Collection	\$ 373.5	\$ 36.2	\$ 423.90	\$ 39.40
Lower Collection	\$ 422.2	\$ 42.8	\$ 522.10	\$ 49.10
<b>Total</b>	<b>\$ 1,158.5</b>	<b>\$ 140.0</b>	<b>\$ 1,290.30</b>	<b>\$ 142.10</b>

# QUESTIONS ?

# Existing Collection System Values (Equity)

Service Area	2010 Values			2014 Values		
	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)*
Medio	\$ 21.2	\$ 2.1	\$ 1.0	\$ 14.9	\$ 6.6	
Upper Medina	\$ 7.9	\$ 0.8	\$ 0.3	\$ 31.8	\$ 21.5	
Lower Medina	\$ 1.6	\$ 0.2	\$ 0.1	\$ 26.3	\$ 20.4	
Upper Collection	\$ 94.5	\$ 9.5	\$ 4.3	\$ 73.5	\$ 23.4	
Middle Collection	\$ 166.2	\$ 16.6	\$ 7.6	\$ 131.4	\$ 34.2	
Lower Collection	\$ 154.0	\$ 15.4	\$ 7.1	\$ 257.7	\$ 66.3	
Total	\$ 445.4	\$ 44.6	\$ 20.4	\$ 535.5	\$ 172.5	\$ -

# Eligible Wastewater Collection CIP

Service Area	2014-2023 Eligible Wastewater Collection CIP Costs							
	Existing Capacity (Existing Collection Value)			New CIP Capacity (2014-2023 Collection Projects)			Total Capacity	
	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)	Value of Capacity (\$ mil)	Value of Eligible Capacity (\$ mil)	*Eligible Financing Costs (\$ mil)	Total Value of Capacity (\$ mil)	Total Value of Eligible Capacity (\$ mil)
Medio Creek	\$ 14.9	\$ 6.6	\$ 1.0	\$ 36.4	\$ 5.6	\$ -	\$ 51.3	\$ 13.2
Upper Medina	\$ 31.8	\$ 21.5	\$ 0.3	\$ 13.9	\$ 3.0	\$ -	\$ 45.7	\$ 24.8
Lower Medina	\$ 26.3	\$ 20.4	\$ 0.1	\$ 30.9	\$ 3.8	\$ -	\$ 57.2	\$ 24.3
Upper Collection	\$ 73.5	\$ 23.4	\$ 4.3	\$ 116.7	\$ 20.9	\$ -	\$ 190.2	\$ 48.6
Middle Collection	\$ 131.4	\$ 34.2	\$ 7.6	\$ 292.5	\$ 18.7	\$ -	\$ 423.9	\$ 60.5
Lower Collection	\$ 257.7	\$ 66.3	\$ 7.1	\$ 264.4	\$ 16.2	\$ -	\$ 522.1	\$ 89.6
Total	\$ 535.5	\$ 172.4	\$ 20.4	\$ 754.8	\$ 68.2	\$ -	\$ 1,290.3	\$ 261.0

\* Numbers are estimated from Previous years, will be revised, but should be similar

# Eligible Wastewater Collection CIP

**Draft**

2011-2020		2014-2023	
Total Value of Capacity (\$ mil)	Total Value of Eligible Capacity (\$ mil)	Total Value of Capacity (\$ mil)	Total Value of Eligible Capacity (\$ mil)
\$ 59.9	\$ 10.3	\$51.30	\$13.20
\$ 46.9	\$ 6.7	\$45.70	\$24.80
\$ 61.5	\$ 9.6	\$57.20	\$24.30
\$ 194.5	\$ 34.4	\$190.20	\$48.60
\$ 373.5	\$ 36.2	\$423.90	\$60.50
\$ 422.2	\$ 42.8	\$522.10	\$89.60
<b>\$ 1,158.5</b>	<b>\$ 140.0</b>	<b>\$ 1,290.30</b>	<b>\$261.00</b>



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