

# 2024 Impact Fee Study

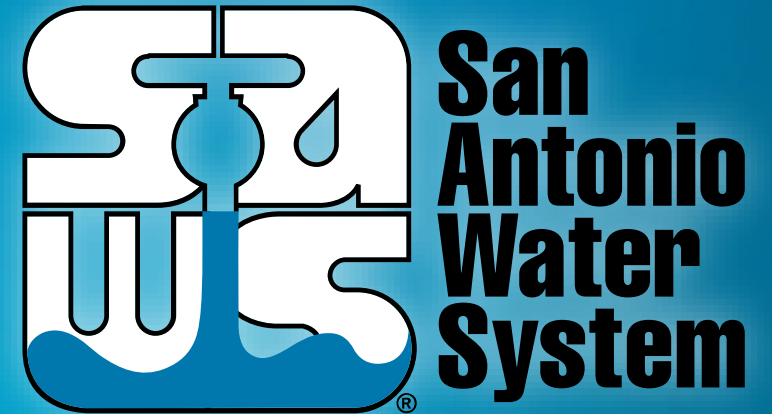
## SAWS Wastewater Collection and Water Delivery Flow CIP

Bob K. Johnson, PMP, P.E.

Manager – Master Planning

CIAC Meeting

September 27, 2023



MAKING SAN ANTONIO  
**WATERFUL** 

# Types of Impact Fees

- Wastewater



- Water

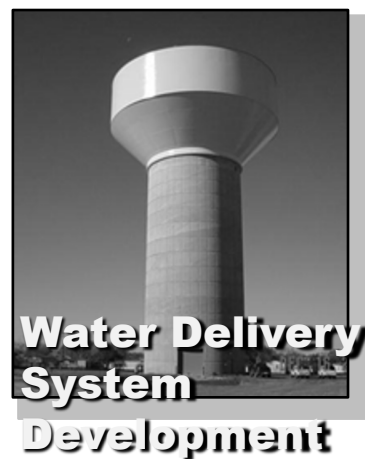


# Types of Impact Fees

- Wastewater

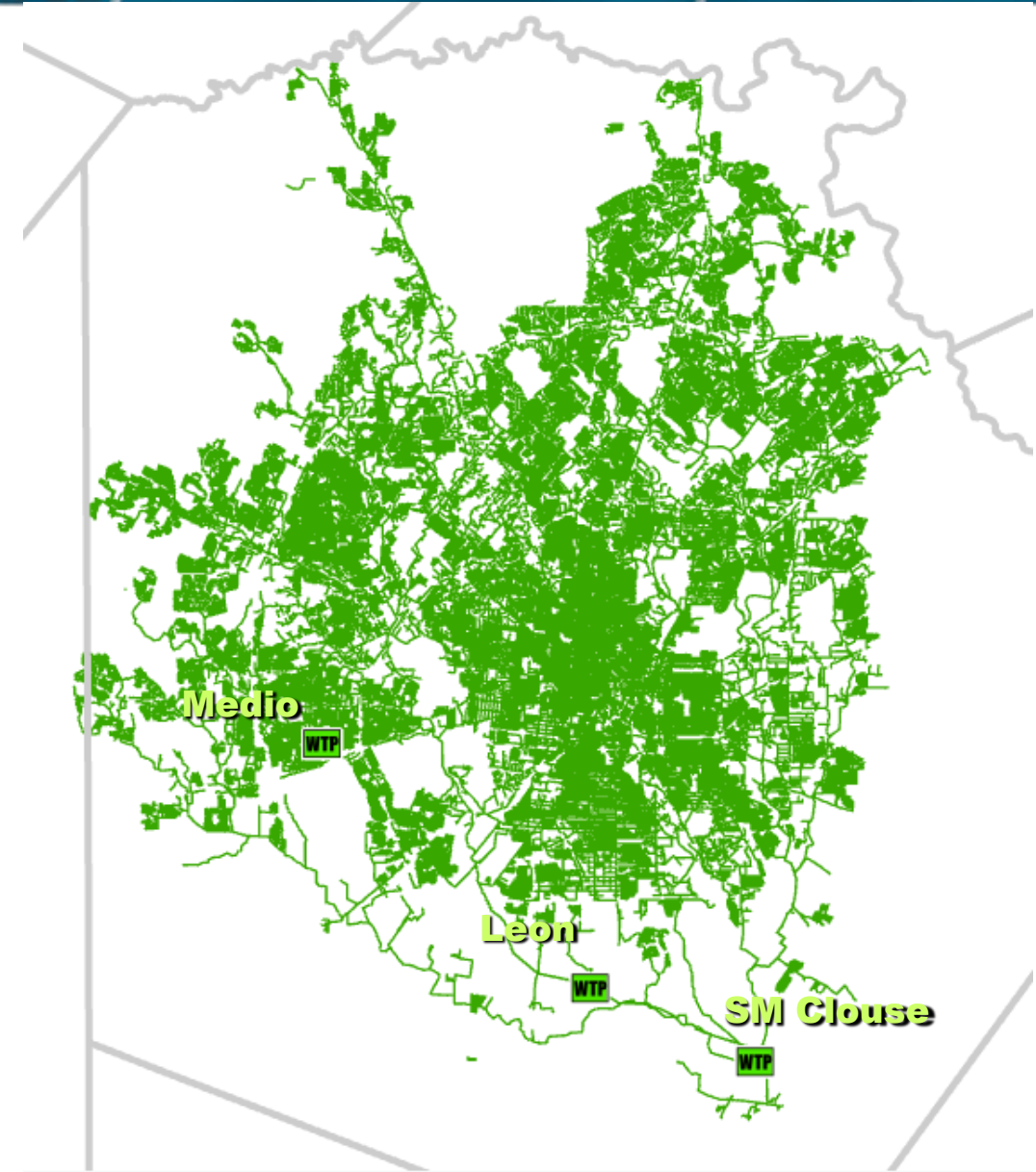


- Water



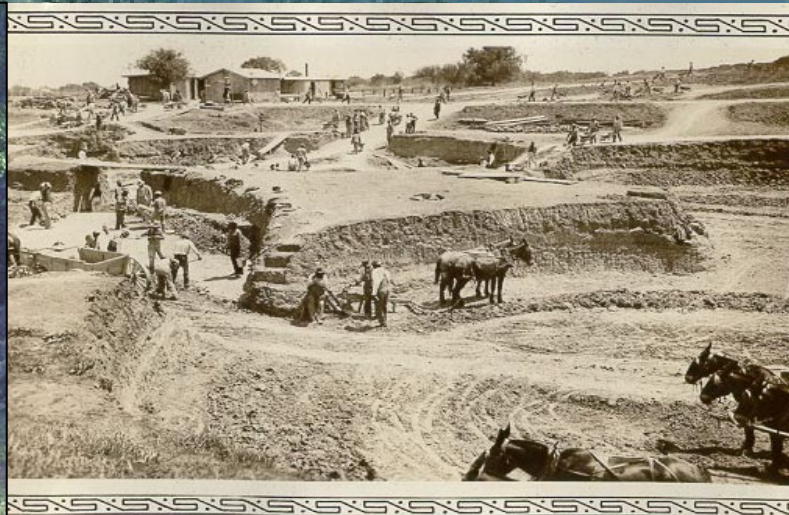
# Wastewater Collection CIP

- Brief History
- Past Studies
- EPA Consent Decree
- Growth Projections
- Capacity Assessment & Alternatives Analysis
- Wastewater Collection CIP



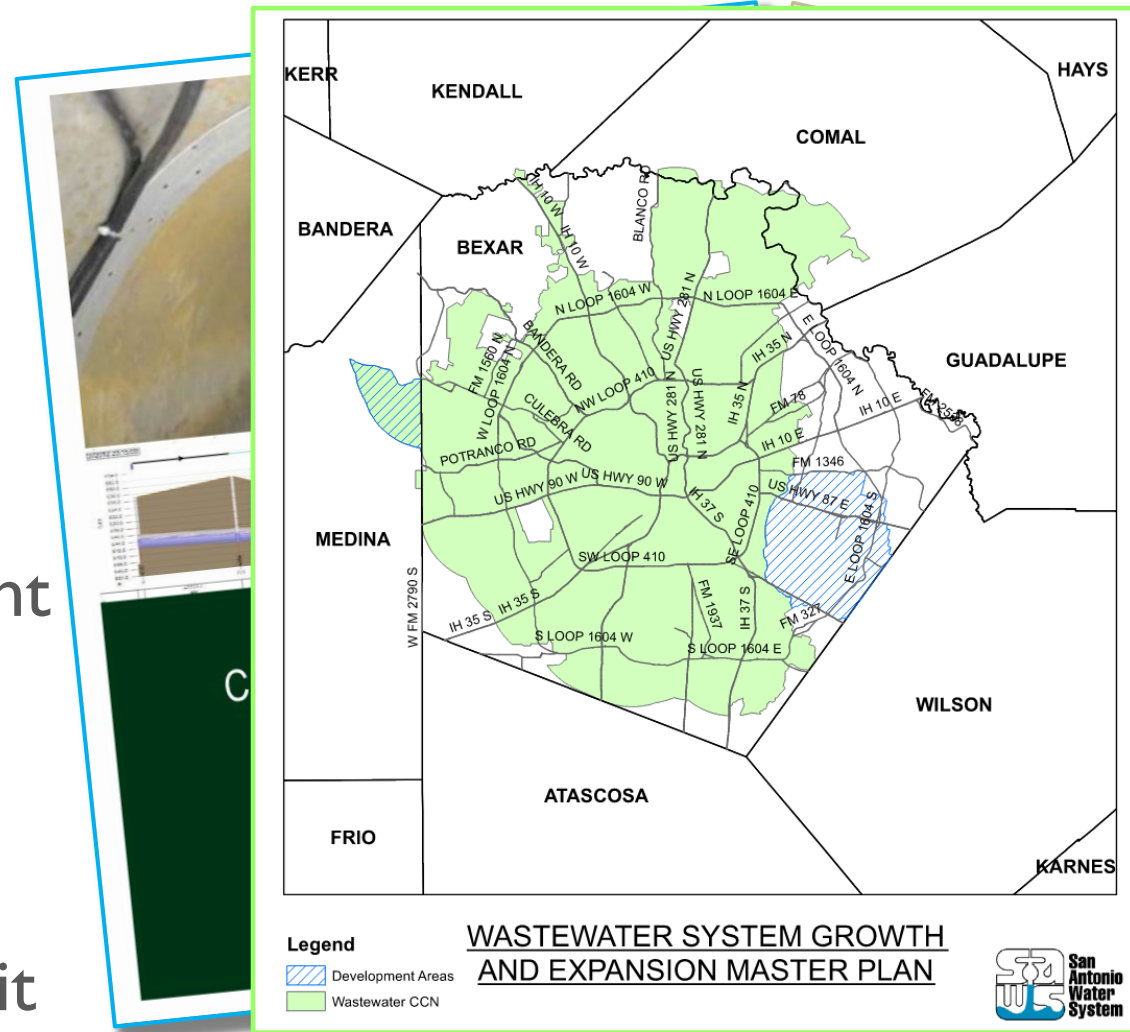
# History of wastewater

- Acequias
- Mitchell Lake
- Rilling Road



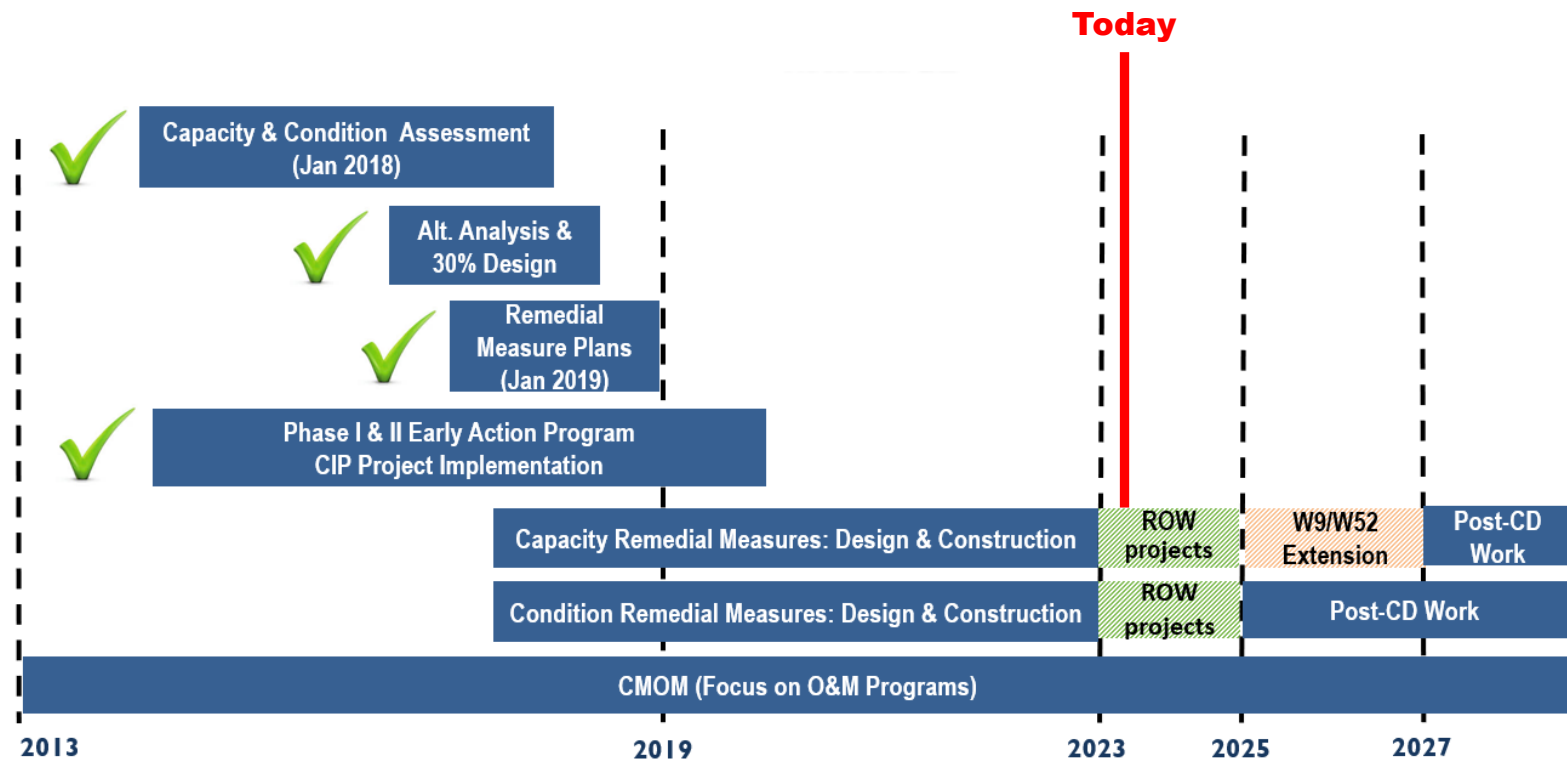
# Past Studies

- 1998 Wastewater Infrastructure Plan
- 2002 – 2013 Flow and Capacity Studies
- 2013 Lodging of EPA Consent Decree
- 2019 Capacity Remedial Measures Plan
- 2020 Capacity Program Audit

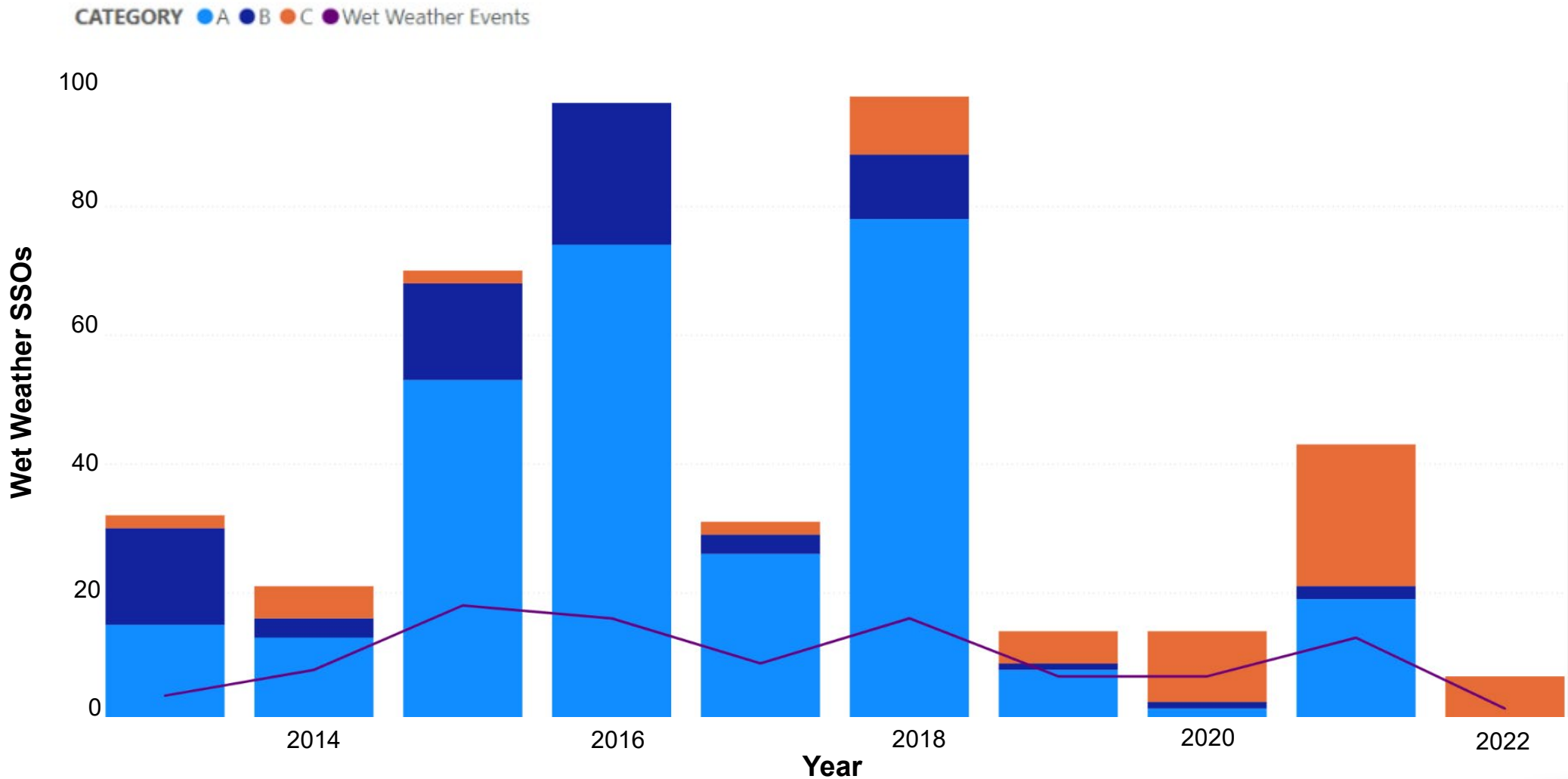


# EPA Consent Decree

- W-I Upper complete
  - Medio Bypass no longer required
- W-9/W-52 are in design
- I/I Reduction Program
- Main Stem (on-hold)
- Rilling Road (postponed)
- CMOM Phase



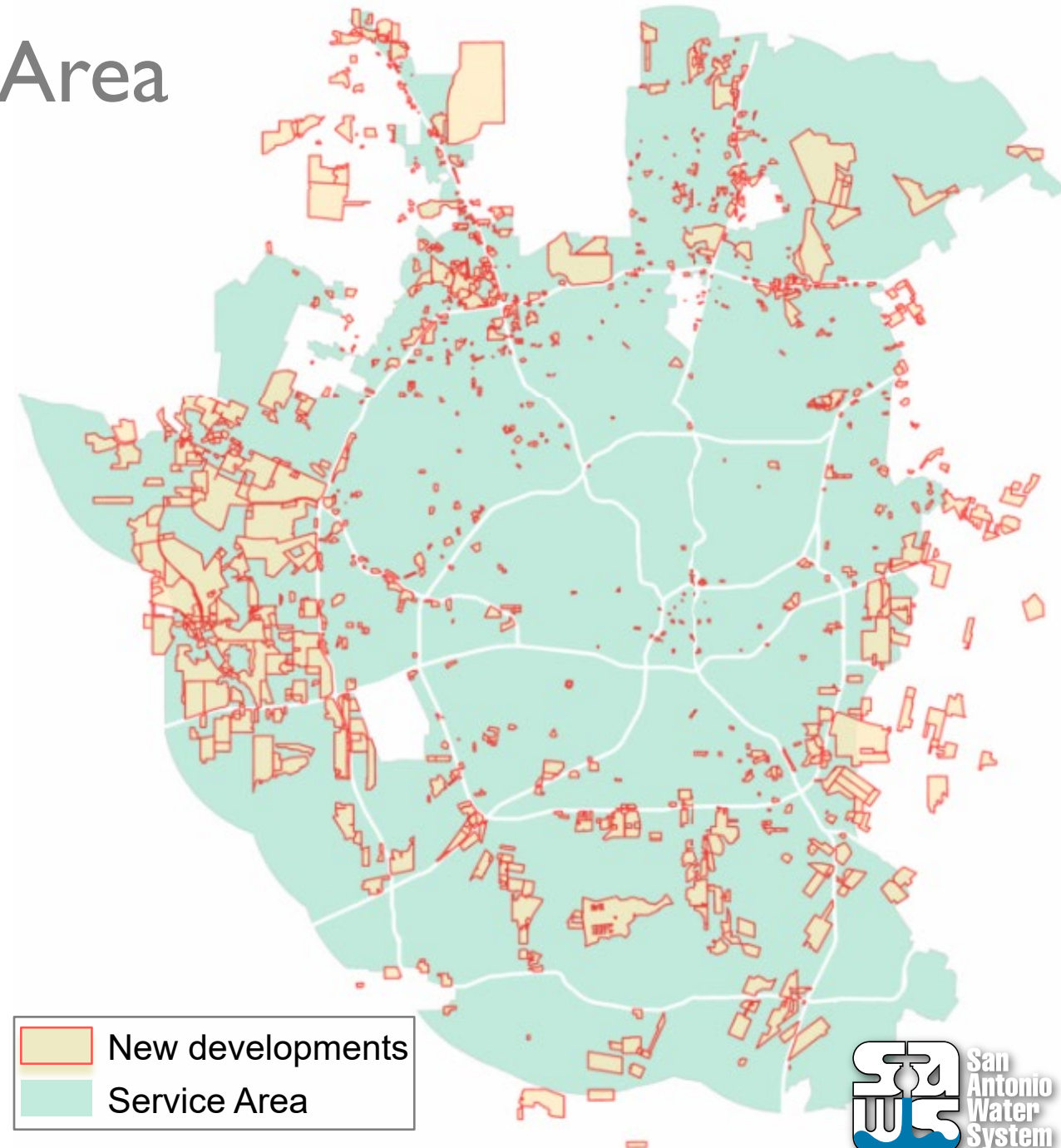
# EPA Consent Decree





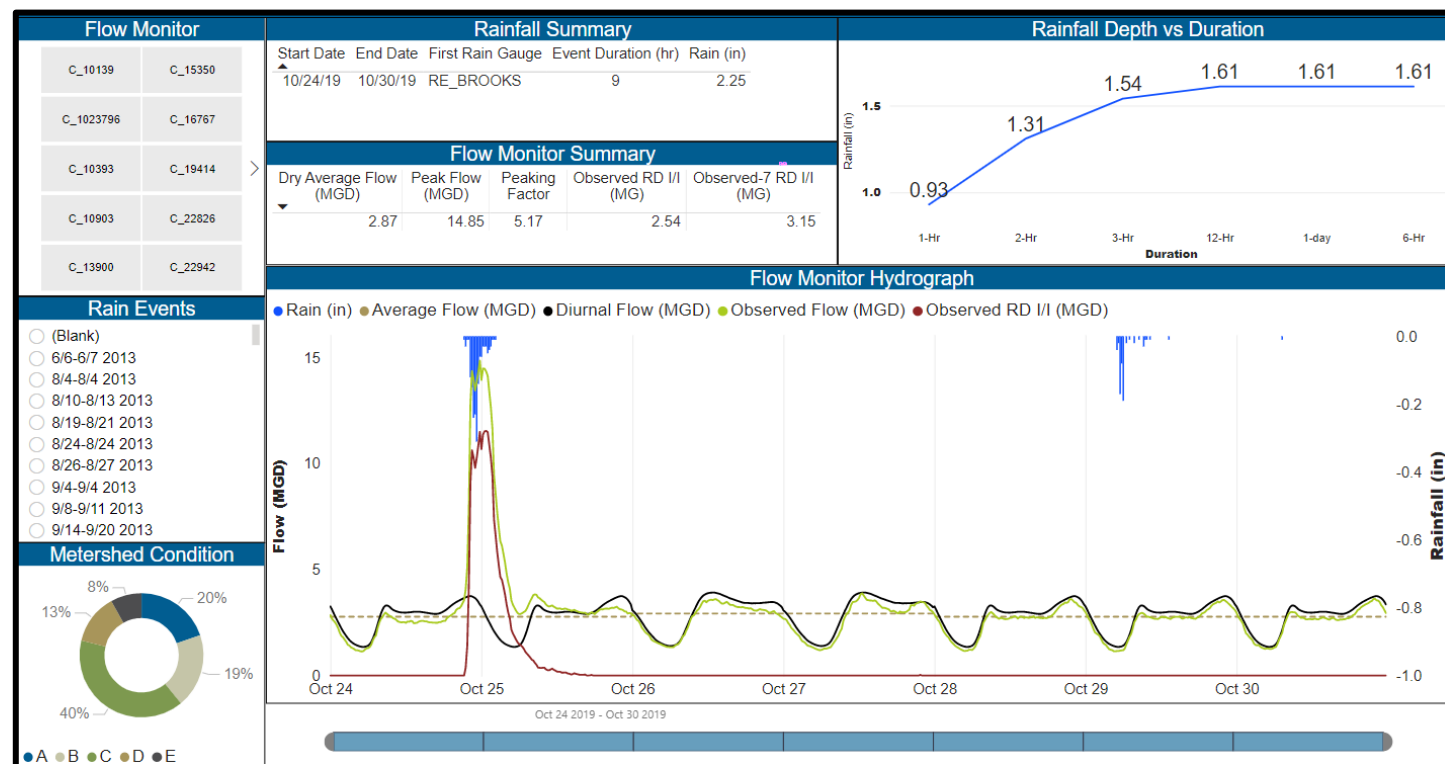
# Growth in SAWS Service Area

- 2,000,000 in 2022
- 2,500,000 by 2036
- 2,900,000 by 2050



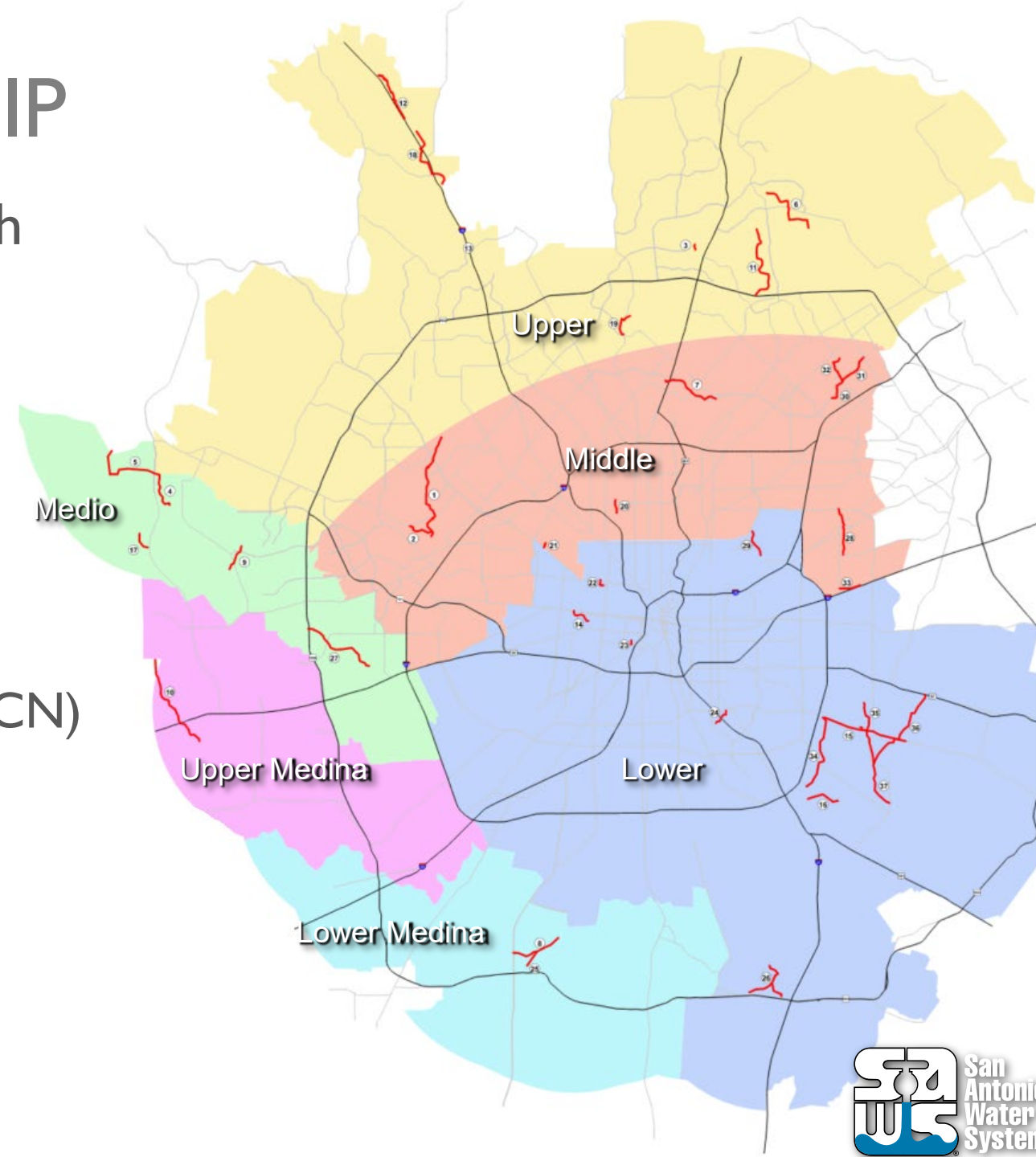
# Capacity Assessment and Alternatives Analysis

- Hydraulic model
- Up to date pipe and manhole asset data
- Flow data
- Calibrate to wet and dry weather events
- Predict impact of storm events
- Planning tool for improvements

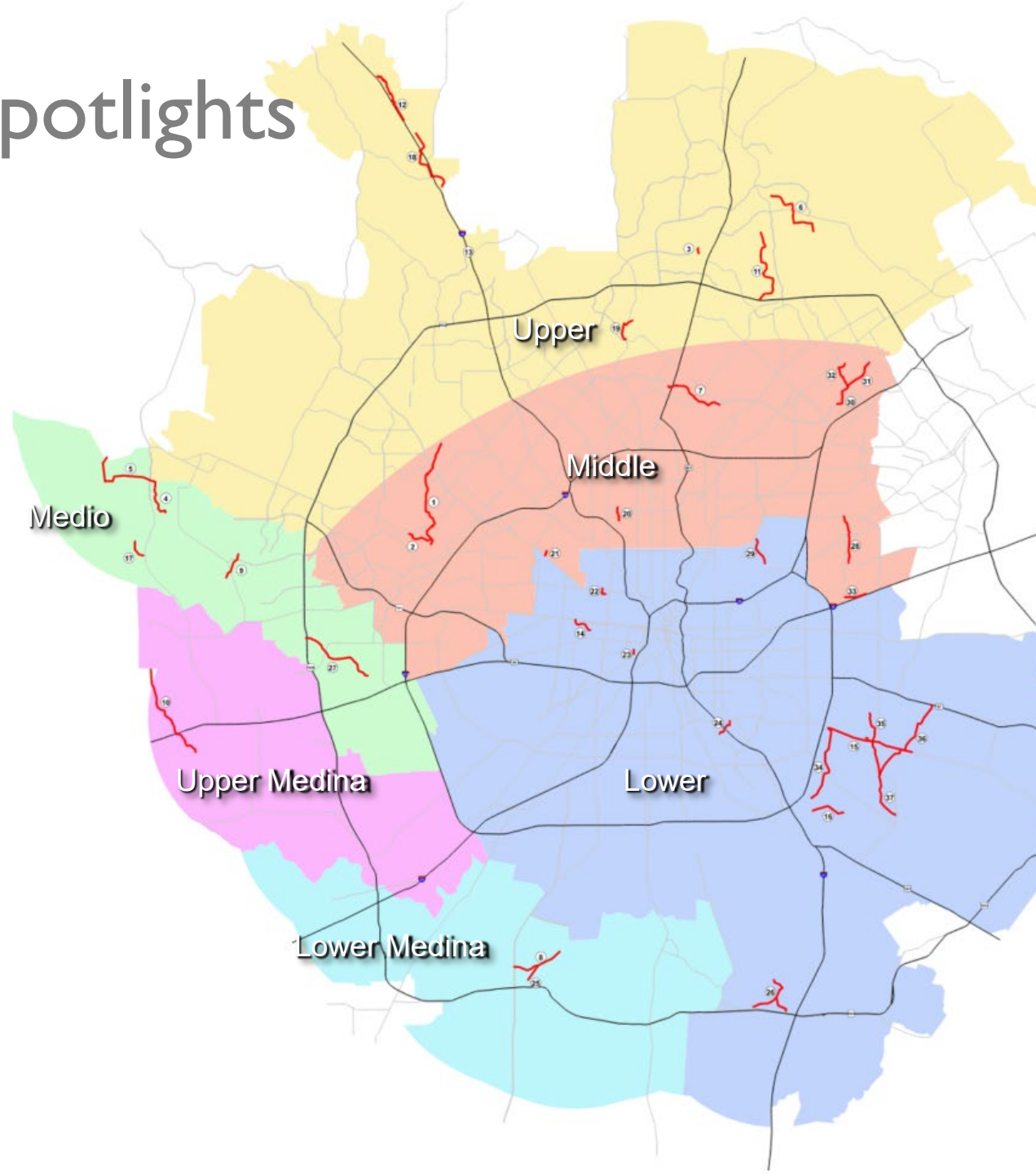


# Wastewater Collection CIP

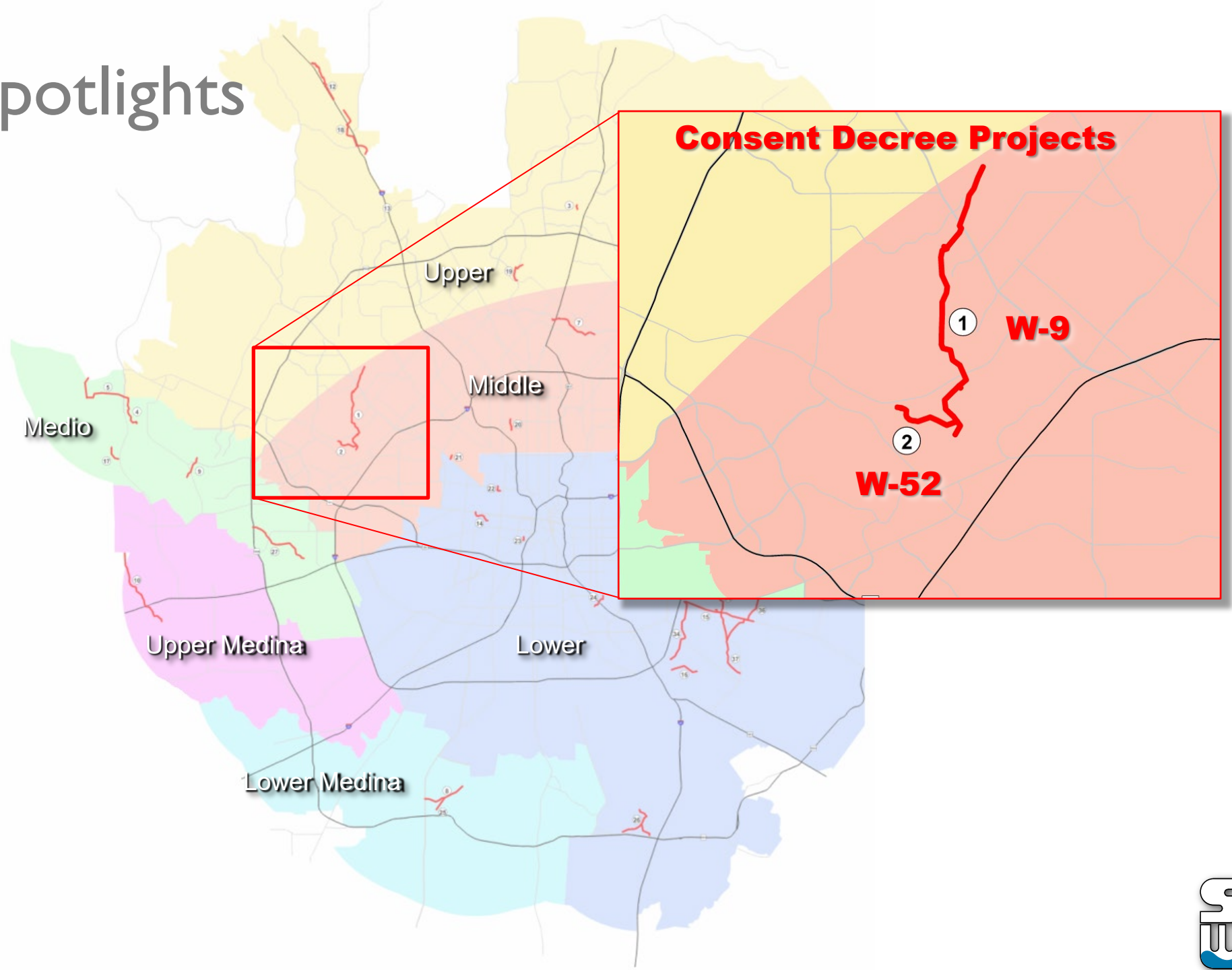
- CIP Needed for 10 years of growth
- Most CD projects constructed
- New projects
  - Continued Capacity program
  - Development through USAs
- New growth areas:
  - SE Bexar County (outside current CCN)
  - Medina County



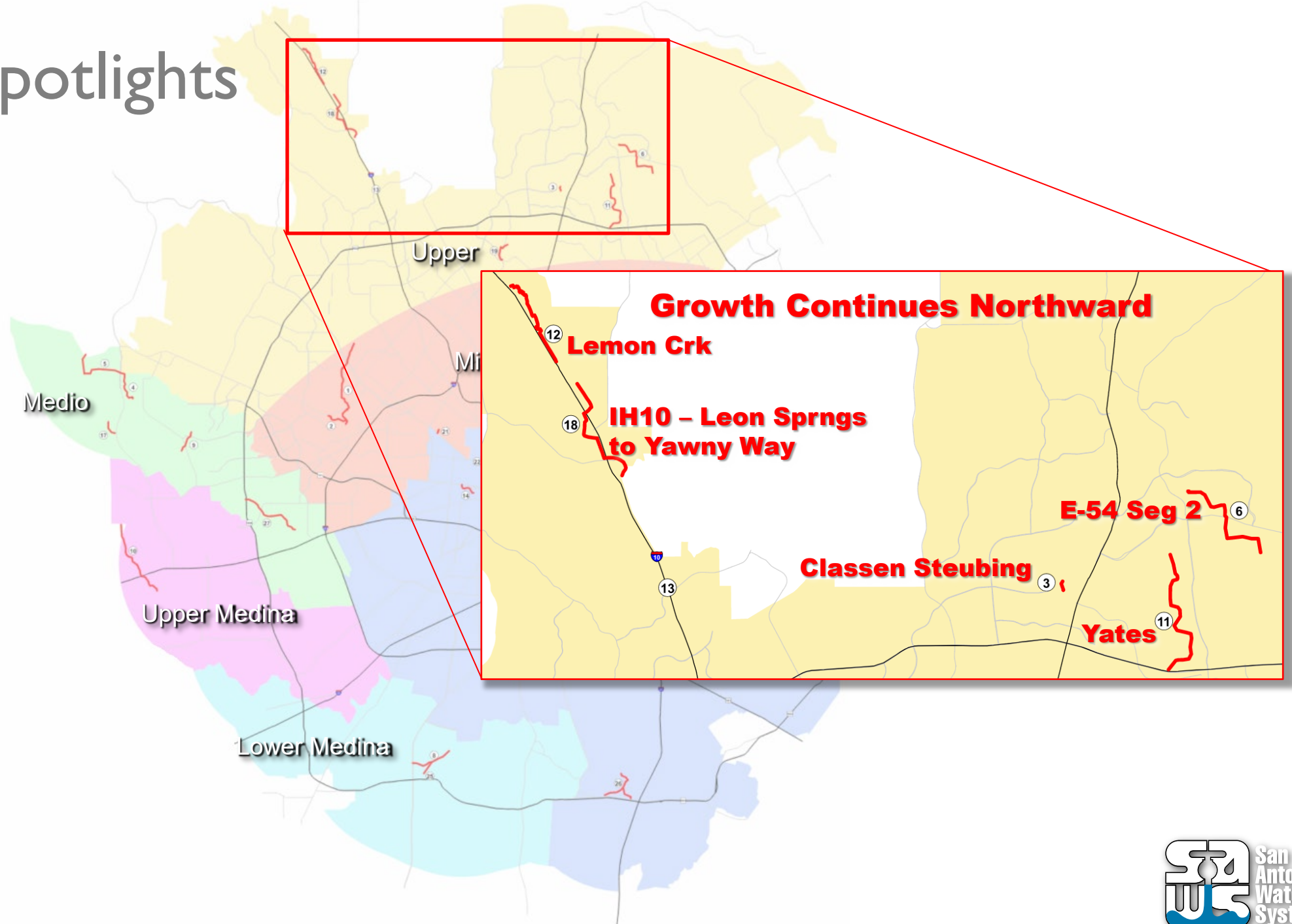
# Project Spotlights



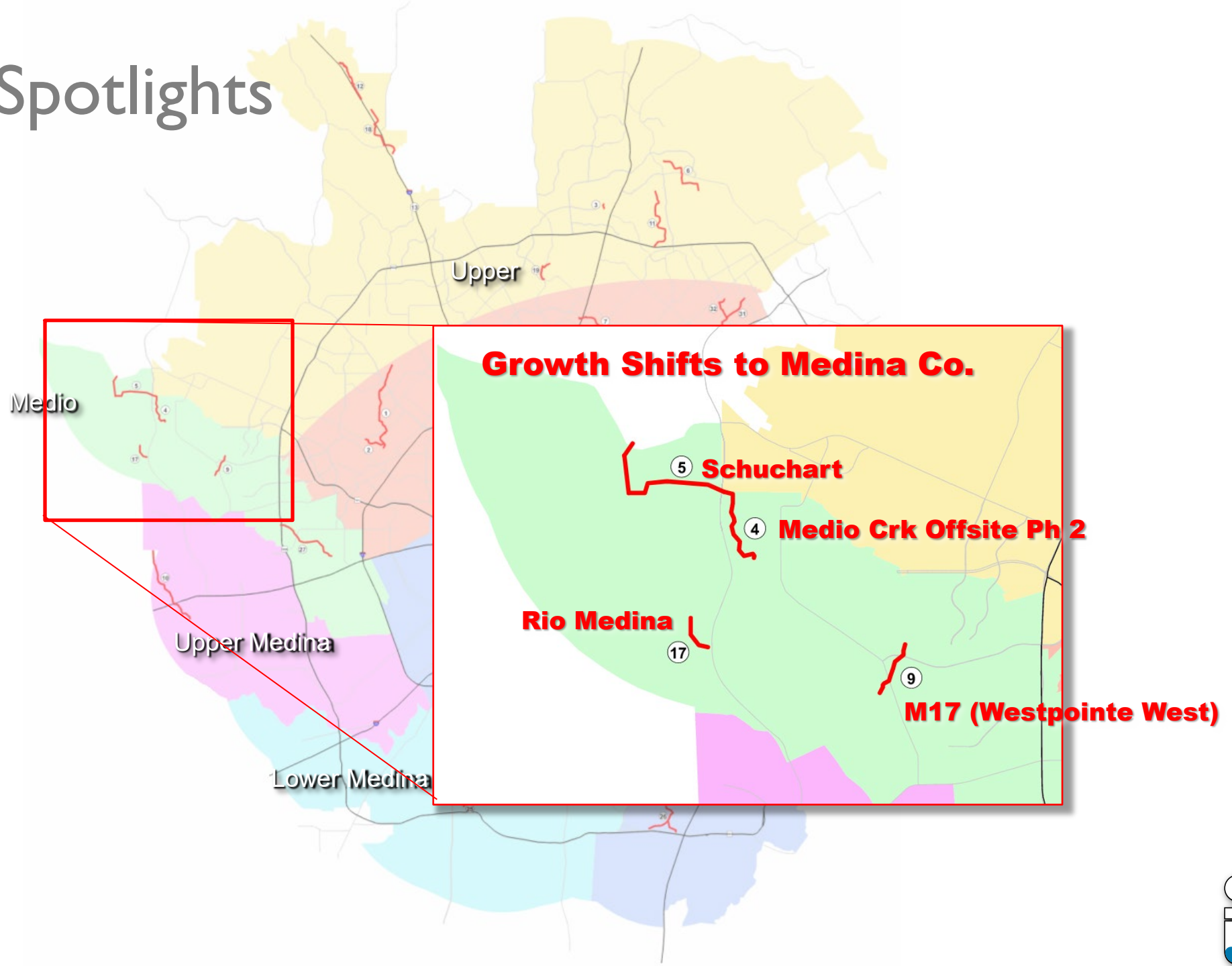
# Project Spotlights



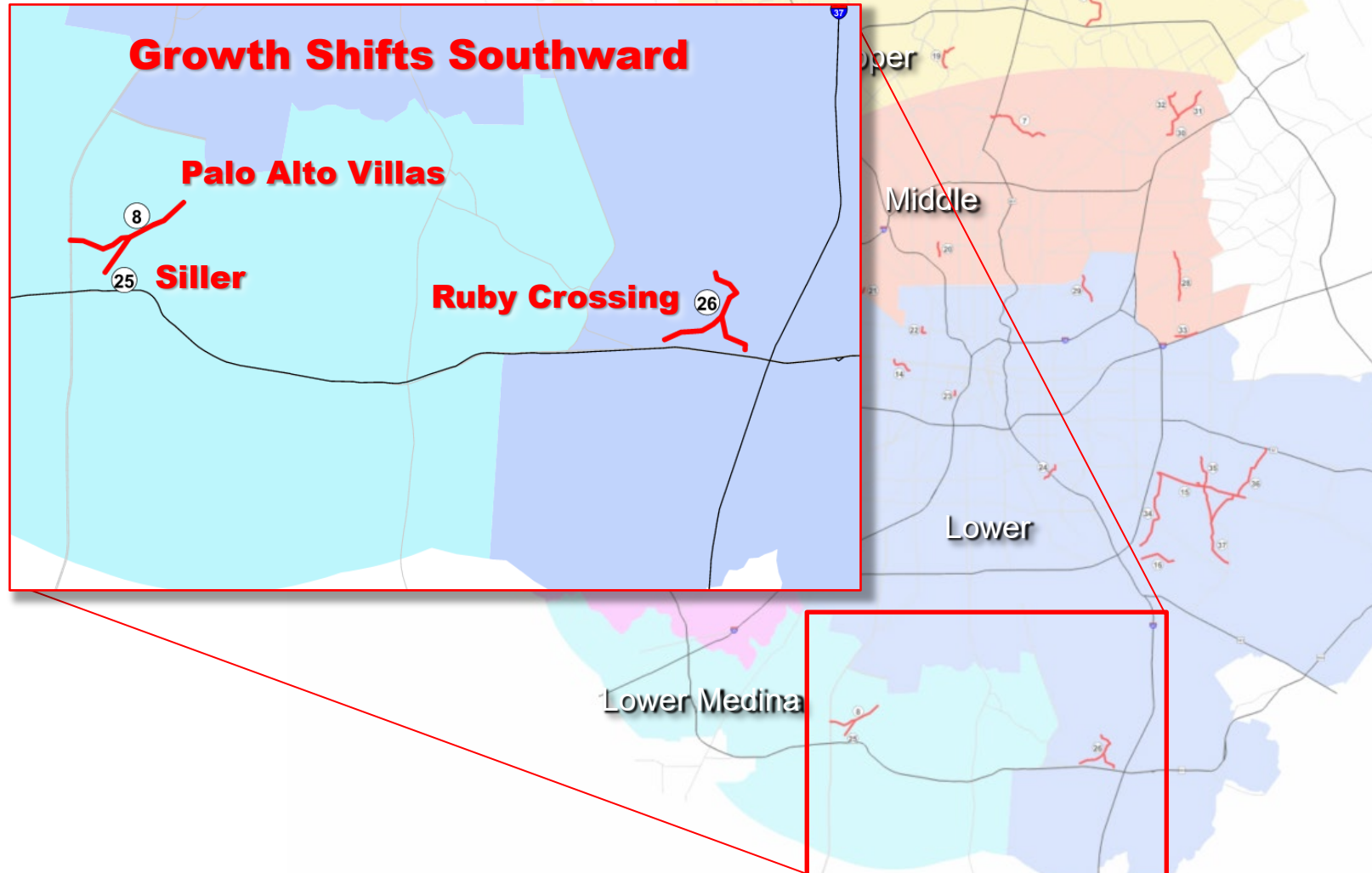
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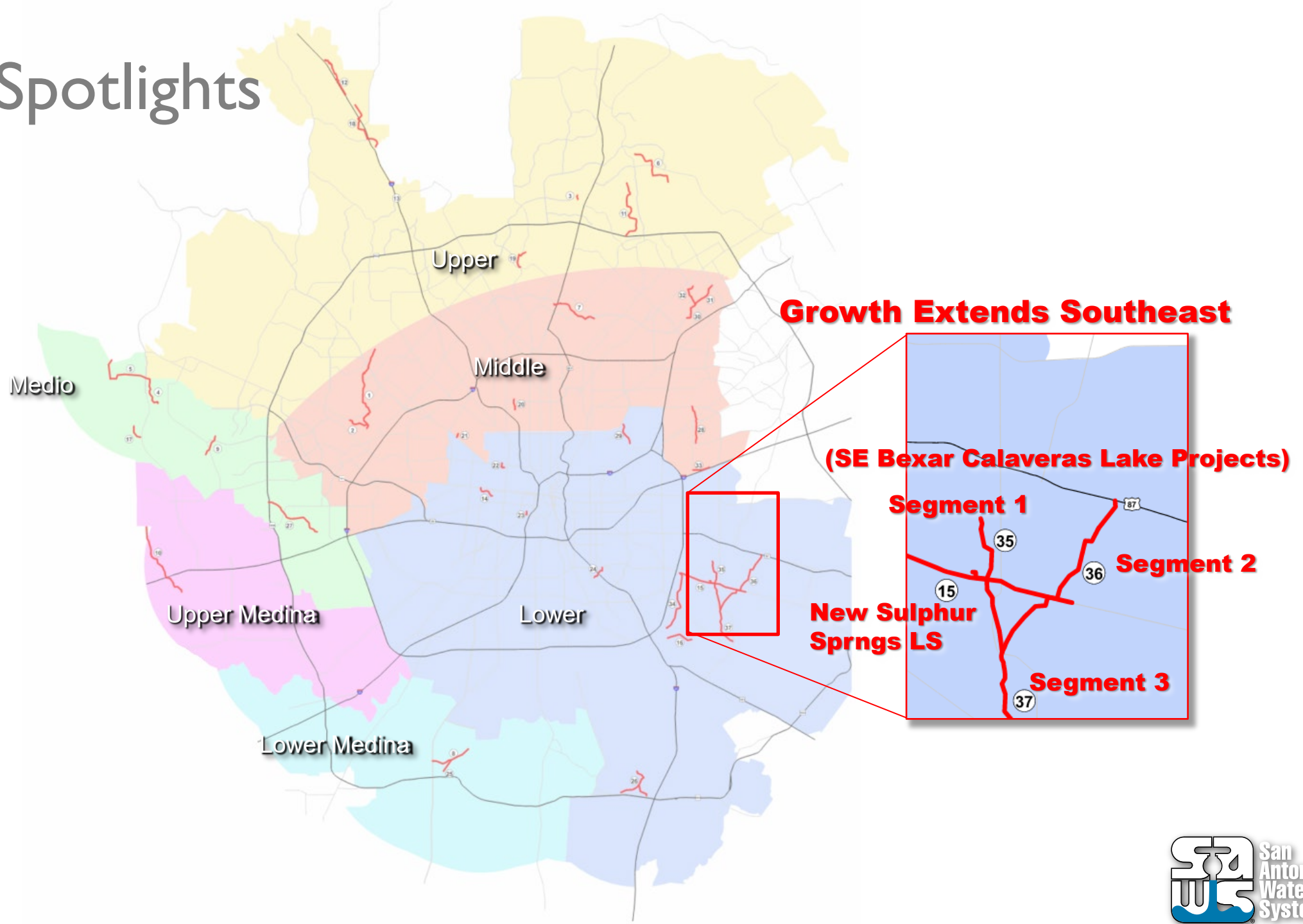


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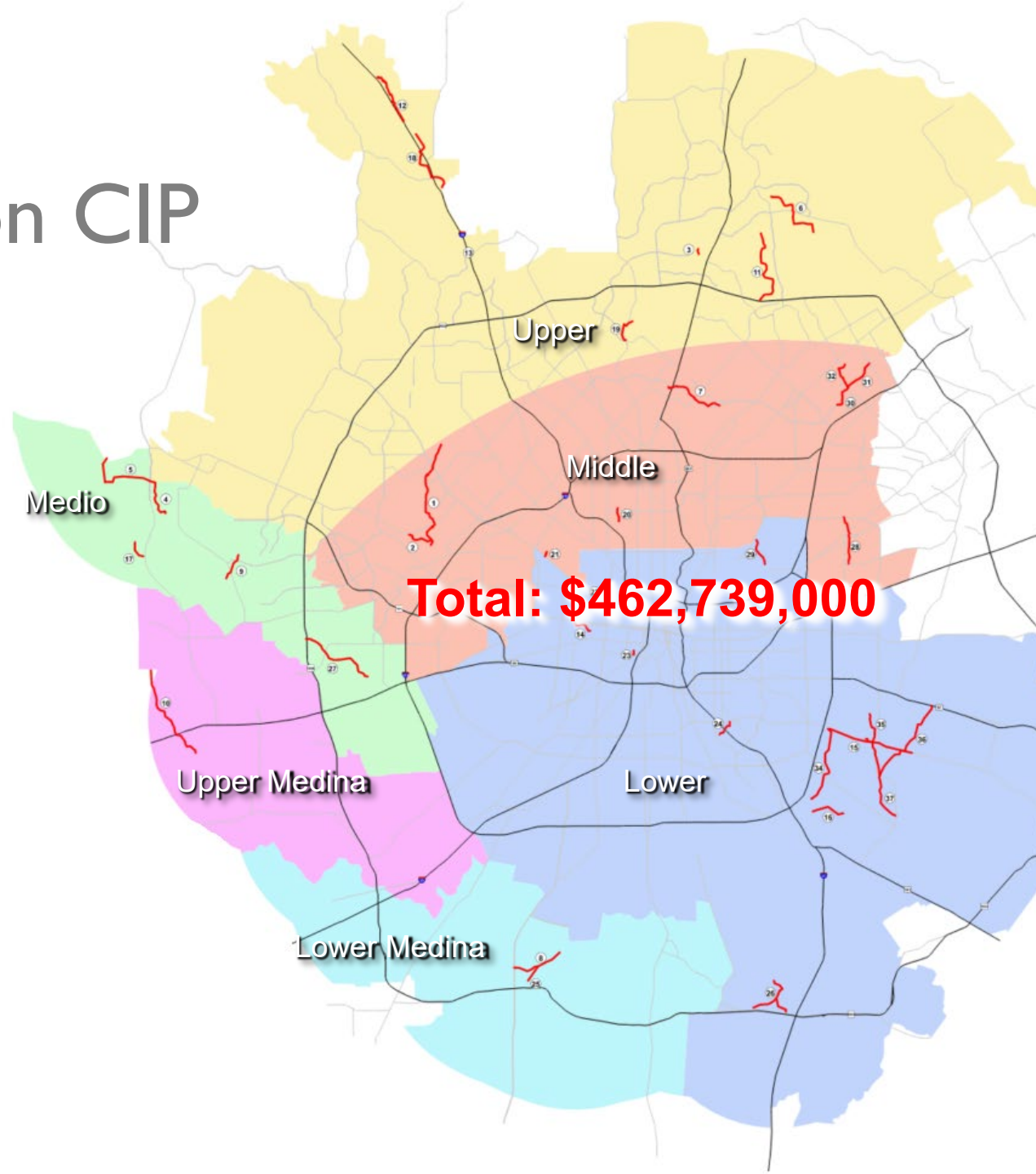




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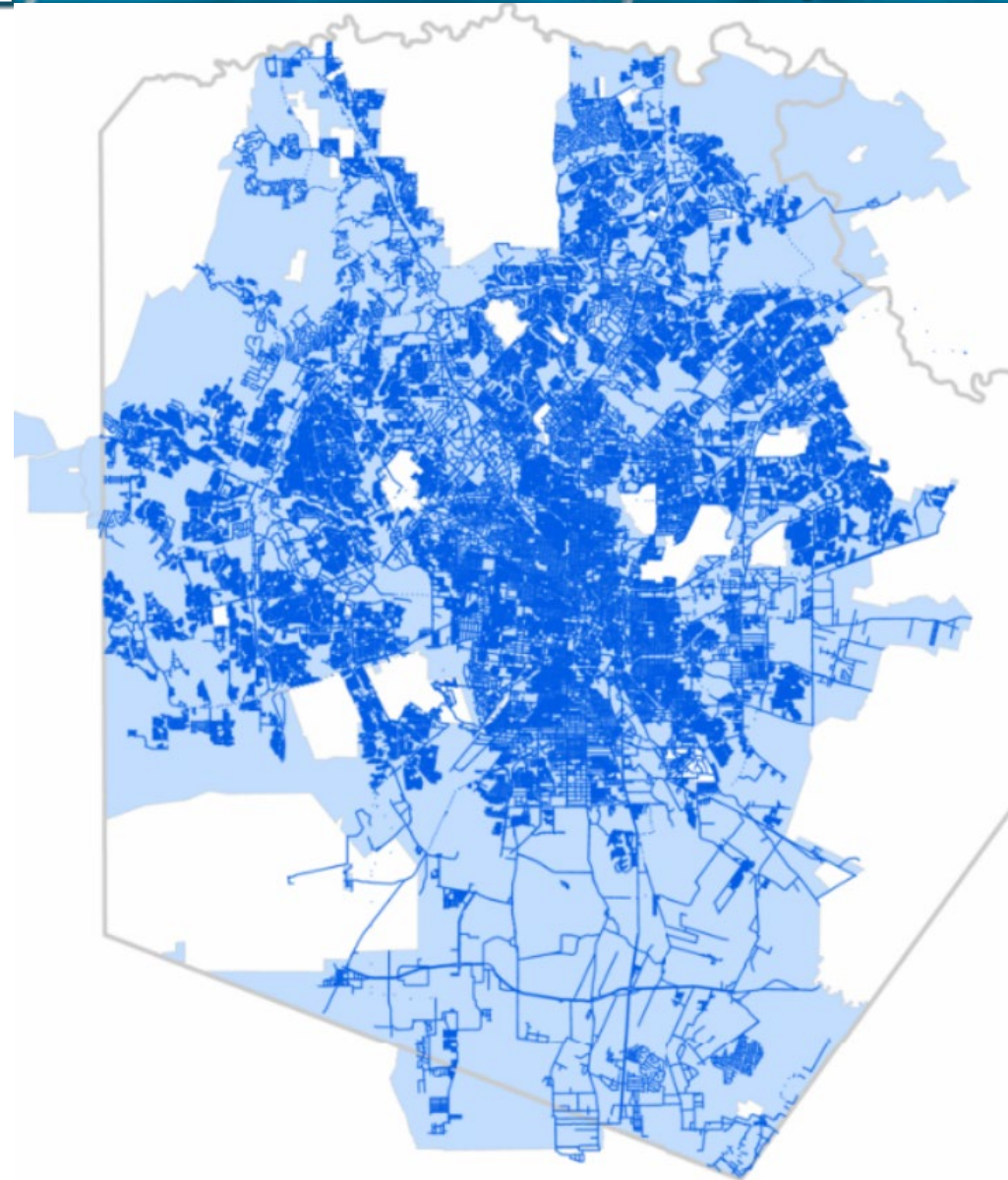


# Cost of Collection CIP



# Water Delivery – Flow CIP

- Brief History
- Growth Projections
- Past Studies
- PWIP
- Capital Improvements
- Impact Fee CIP



A historical black and white photograph of a two-story brick building. A large, dark pipe runs horizontally across the middle of the building. A man in a light-colored shirt and dark trousers stands in the foreground, looking towards the camera. To the right, a large, powerful stream of water is being discharged from a pipe, creating a large splash. The building has several windows, some with shutters. The overall scene suggests an industrial or utility site from the late 19th or early 20th century.

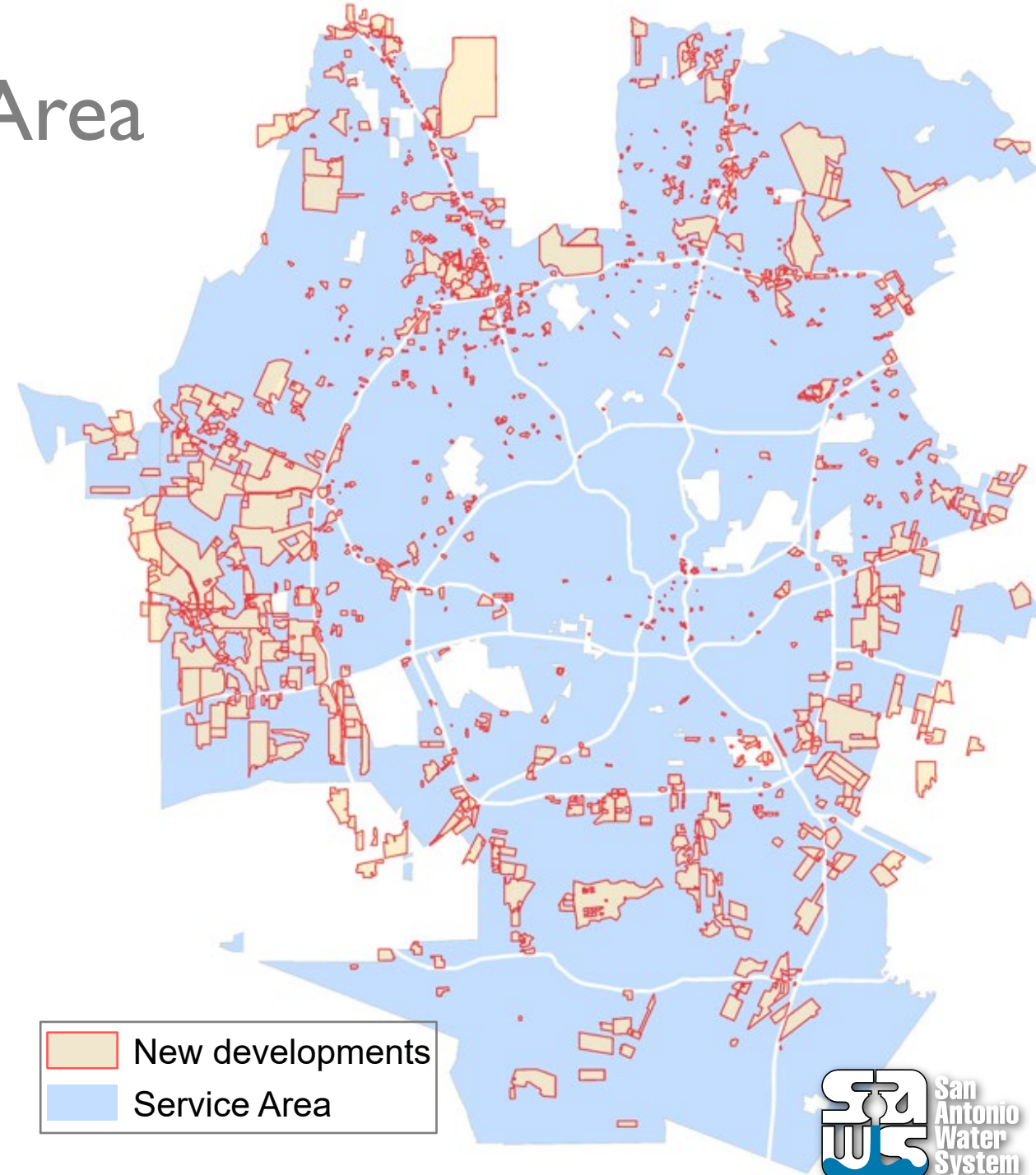
# History of Water (in San Antonio)

- Springs
- River
- Brackenridge Well
- City Water Board
- San Antonio Water System

Market Street Artesian Well

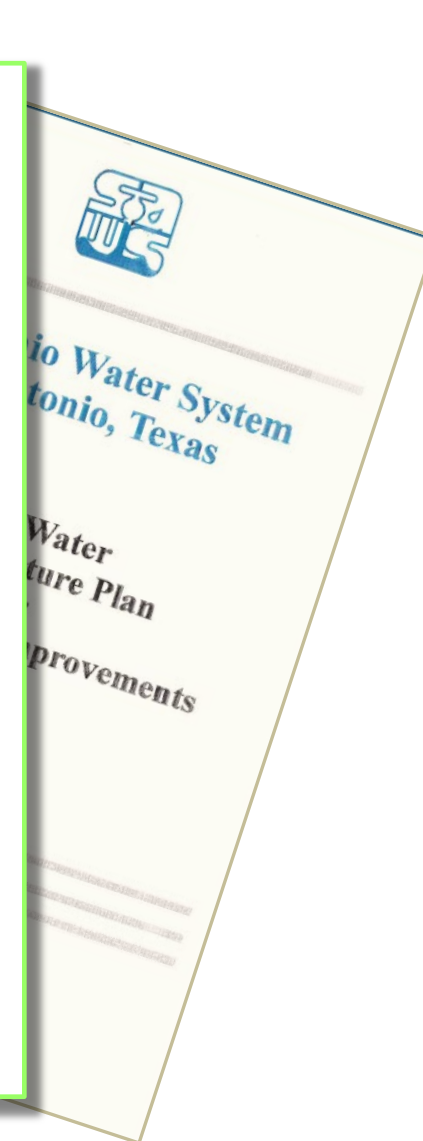
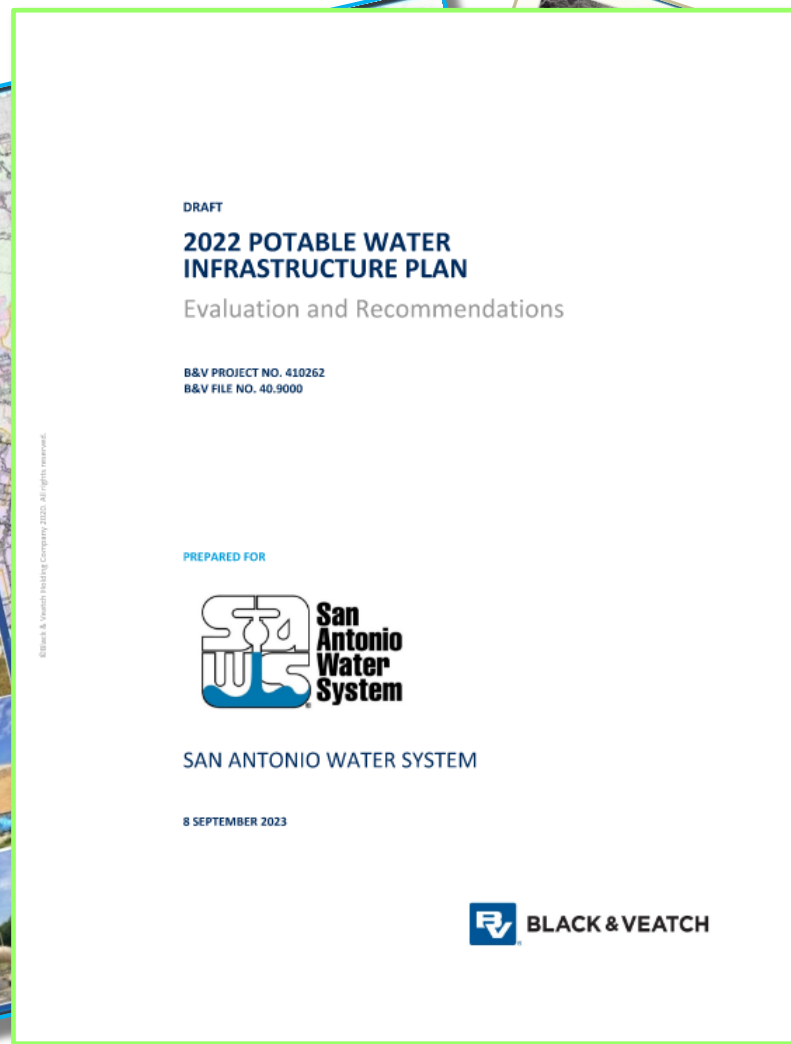
# Growth in SAWS Service Area

- Population
  - 2,000,000 in 2022
  - 2,500,000 by 2036
  - 2,900,000 by 2050
- Challenges
  - Supply and Integration
  - Distribution and storage



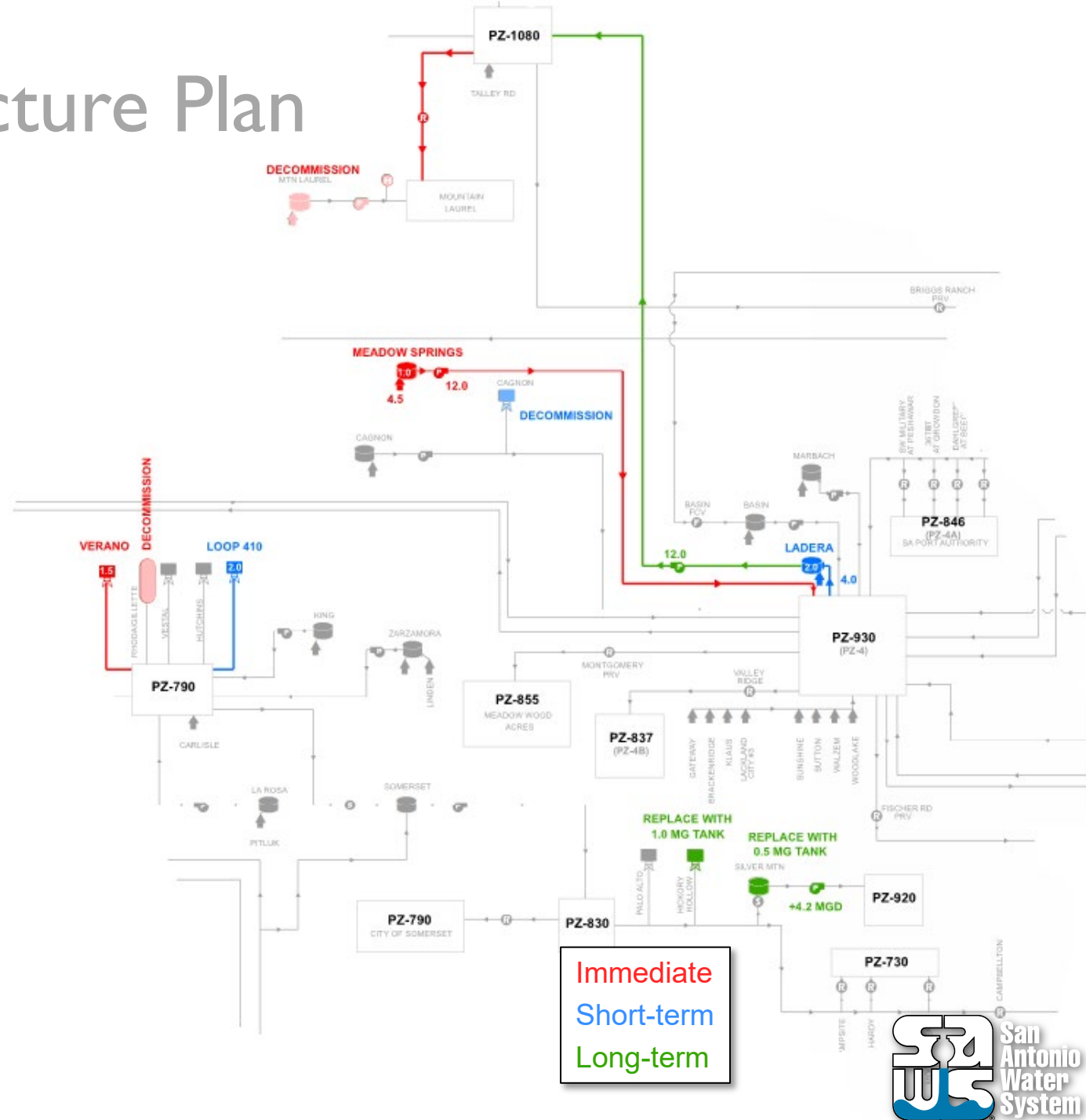
# Master Plan History

- 1998 Infrastructure Plan
- 2003 Infrastructure Plan
- 2008 Infrastructure Plan
- 2012 BexarMet Integration
- 2017 Infrastructure Plan
- 2022 Potable Water Infrastructure Plan



# Potable Water Infrastructure Plan (PWIP)

- Emergency Preparedness Plan
- Hydraulic Model Update and Calibrated
- Existing & Future System Evaluation
- Recommendations and Capital Improvements



# PWIP

## Emergency Preparedness

- 2021 Winter Storm Evaluation
- SB3 requirements
  - Critical Load Report
  - Emergency Preparedness Plan
- Implementation of Resiliency
  - Back-up Power Supplies
  - Coordinated activities with CPS
  - Major undertaking in process

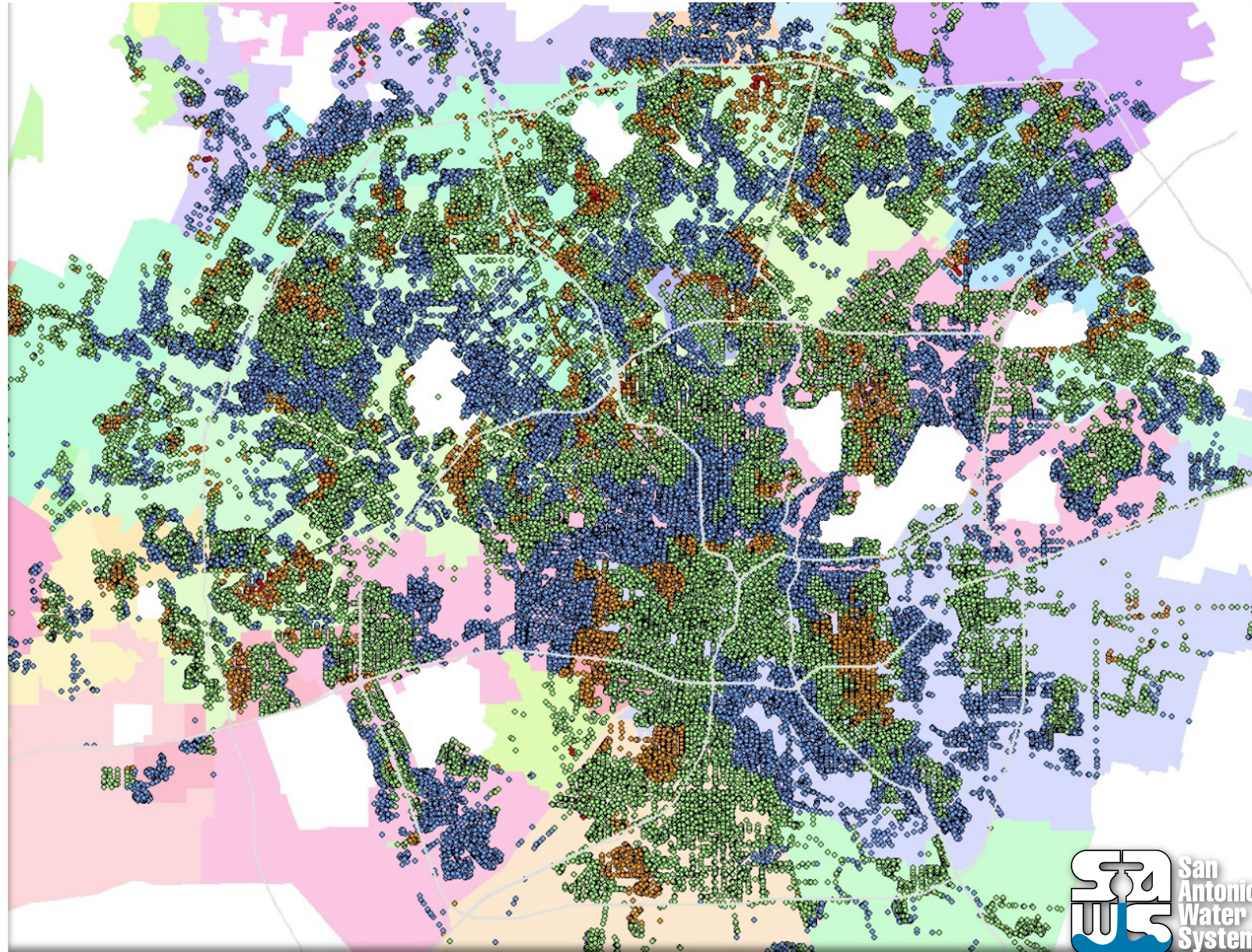




# PWIP

## Model Update/Calibration

- All-pipes Model
- GIS Interface
- Calibration
  - By PZs
  - Tank levels
  - PS discharge
  - Pressures
- Simulate operations
- Predict future needs

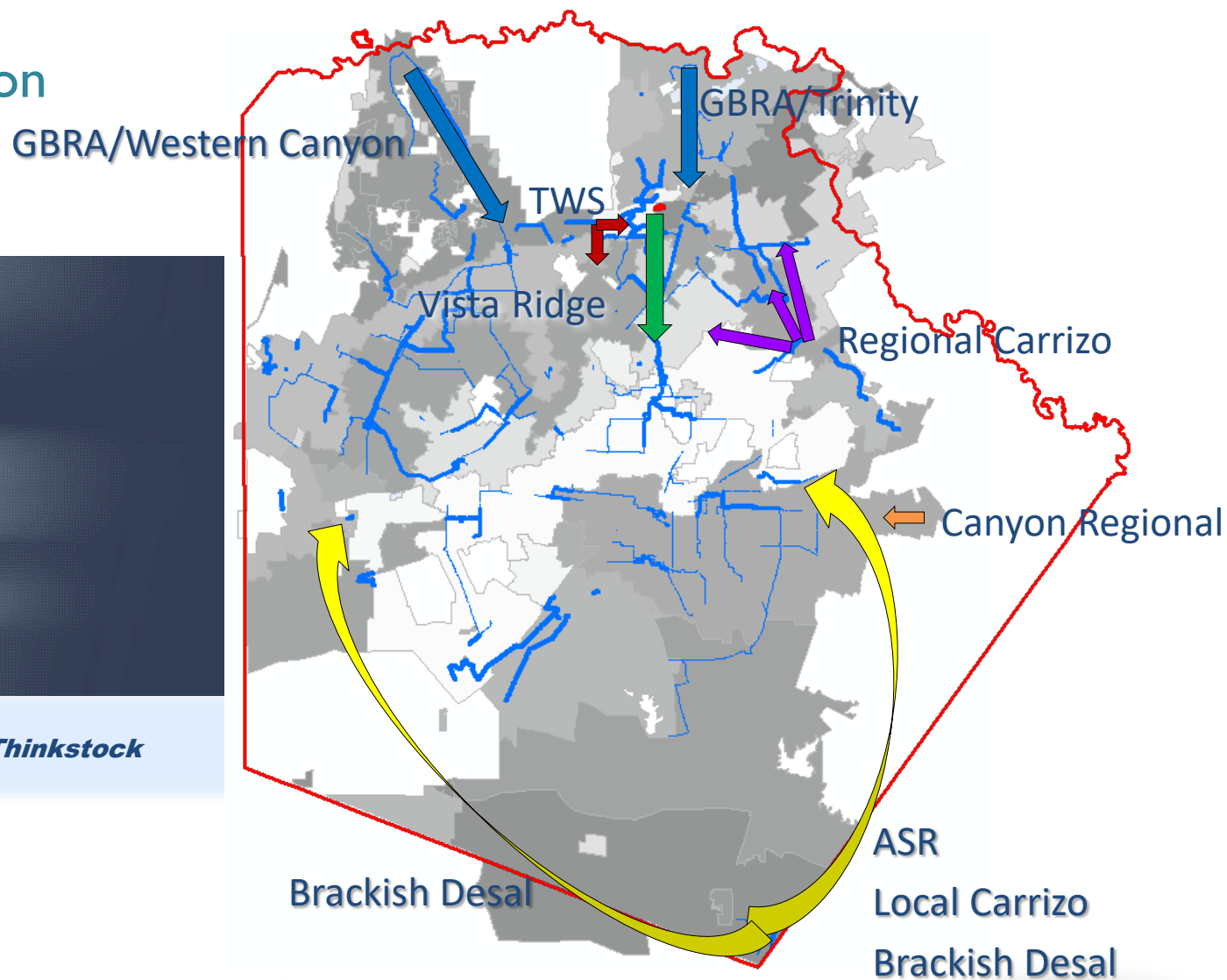


# PWIP

## Existing and Future System Evaluation



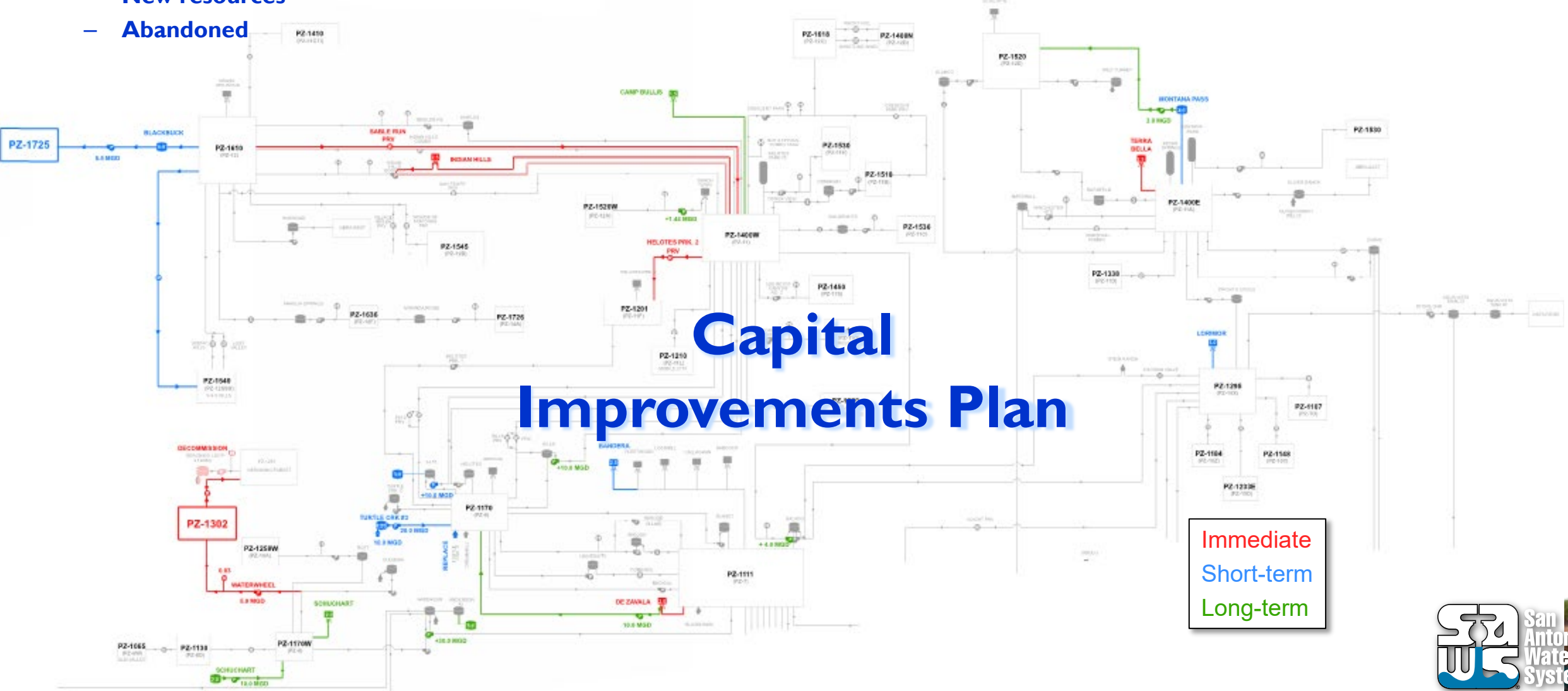
*Animation by Lisa Larson-Walker. Photo by Thinkstock*



- **Consider increased demands**
  - Population and usage patterns
  - By pressure zone
- **Water Supplies**
  - New resources
  - Abandoned

- **Assess Capacities**
  - Match future needs
  - Storage
  - Transmission/Distribution
  - Pumping

- **Capital Improvements**
  - Immediate: 2026
  - Short-term: 2039
  - Long-term: 2050

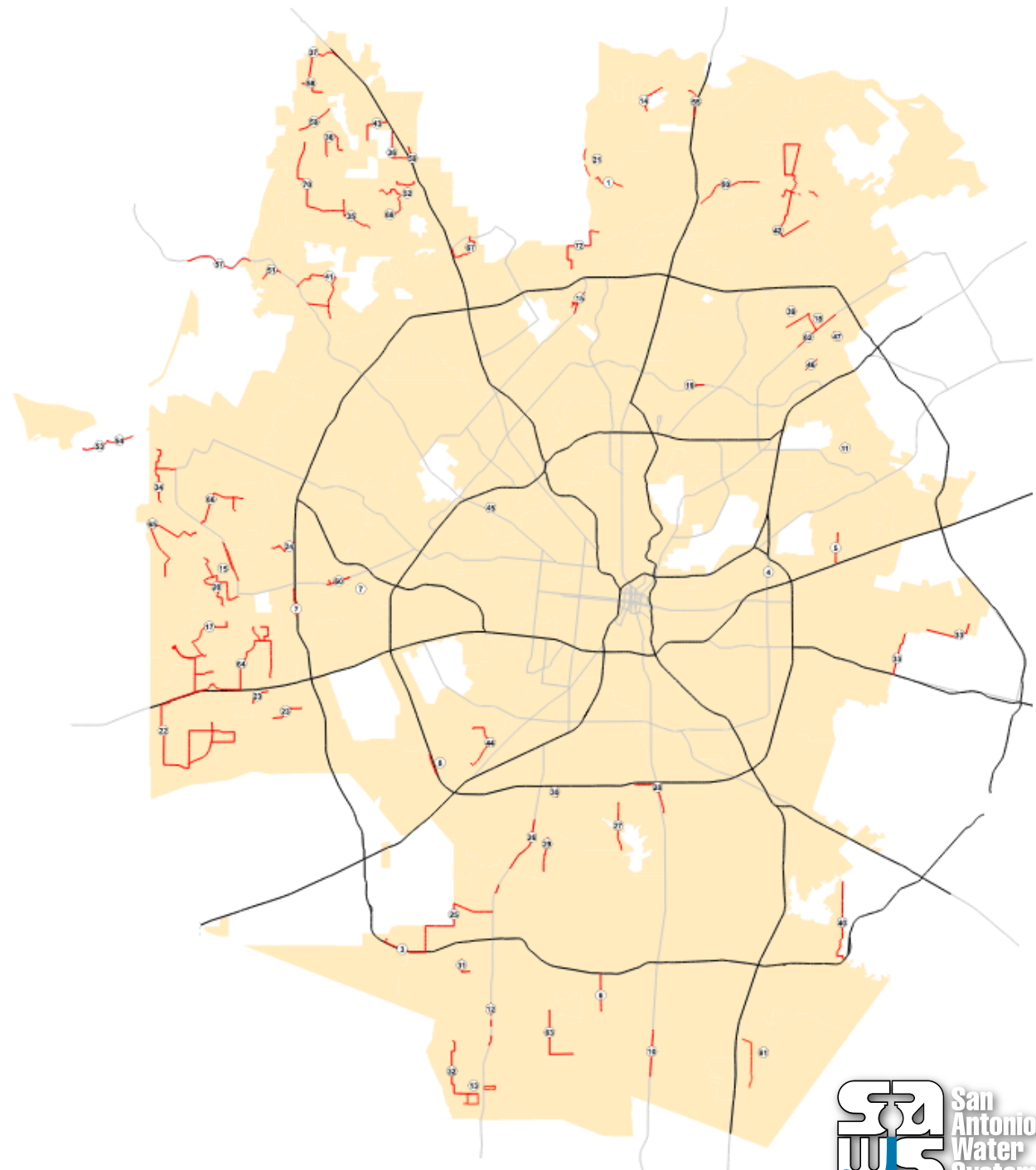


# Capital Improvements Plan

Immediate  
Short-term  
Long-term

# Water Delivery - Flow CIP

- CIP needed for 10 years of growth
- Mostly outside I604
- Needed to distribute water,
  - Smaller mains (<24")
  - Necessary to help the system grow
  - not major arterial mains
- Projects carried over from last Impact Fee Study
- Updated with Potable Water Infrastructure Plan



# Project Locations

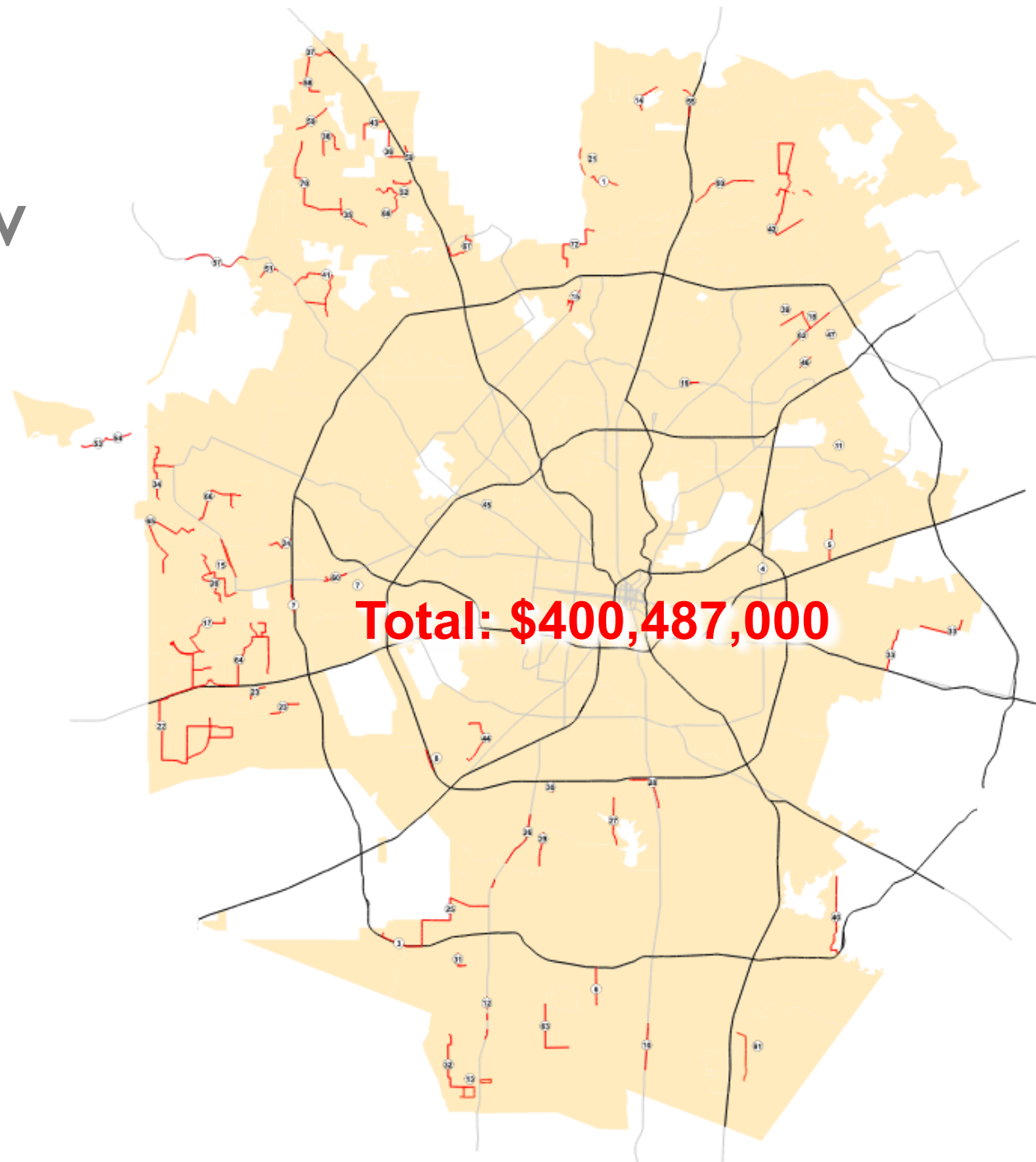
**Far West**

**North**

**South**



# Cost of WD - Flow CIP



# Questions?

*Contact Info:*

*Bobby King Johnson; [bkjohnson@saws.org](mailto:bkjohnson@saws.org); (210) 233-3493*

# 2024 Impact Fee Study

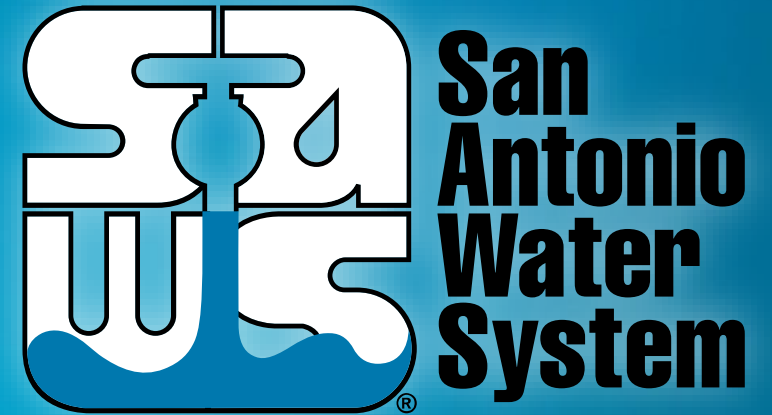
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