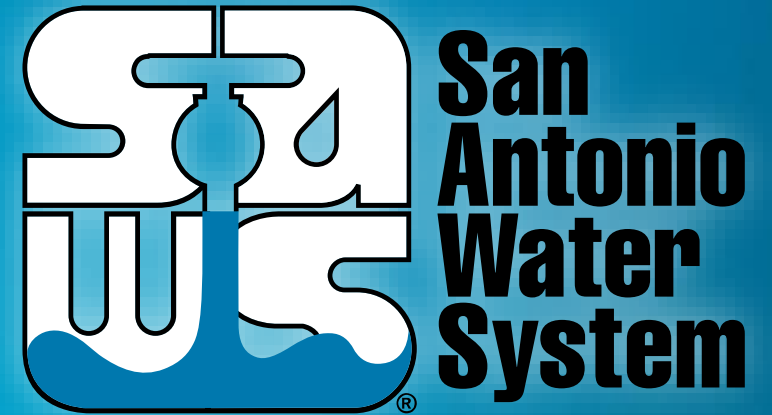


# Capital Improvement Plan (CIP) Water Supply

Tracey Lehmann, P.E.  
Director of Development



MAKING SAN ANTONIO  
**WATERFUL**

Capital Improvements Advisory Committee  
October 3, 2018

# Impact Fee Components



Water Supply



Water Delivery  
System Development



Water Delivery  
Flow

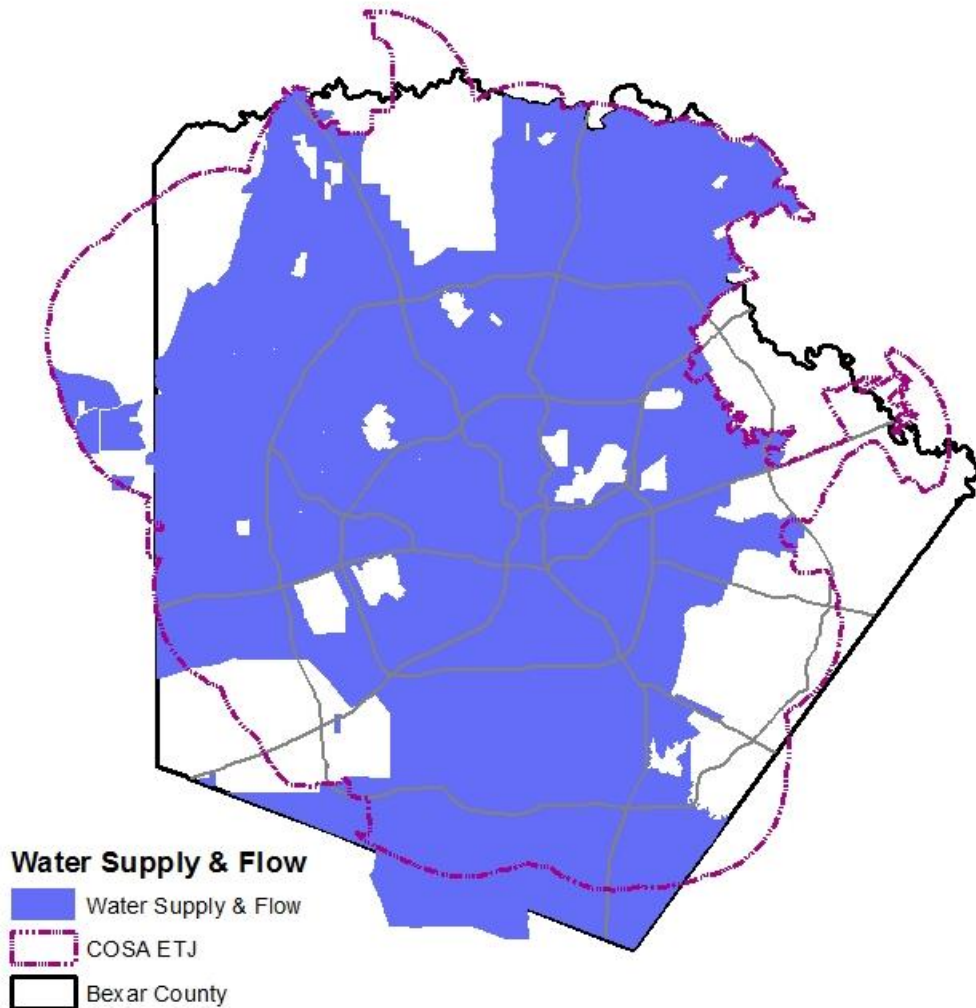


Wastewater  
Collection



Wastewater  
Treatment

# Water Supply Service Area



- Service area unchanged since 2014

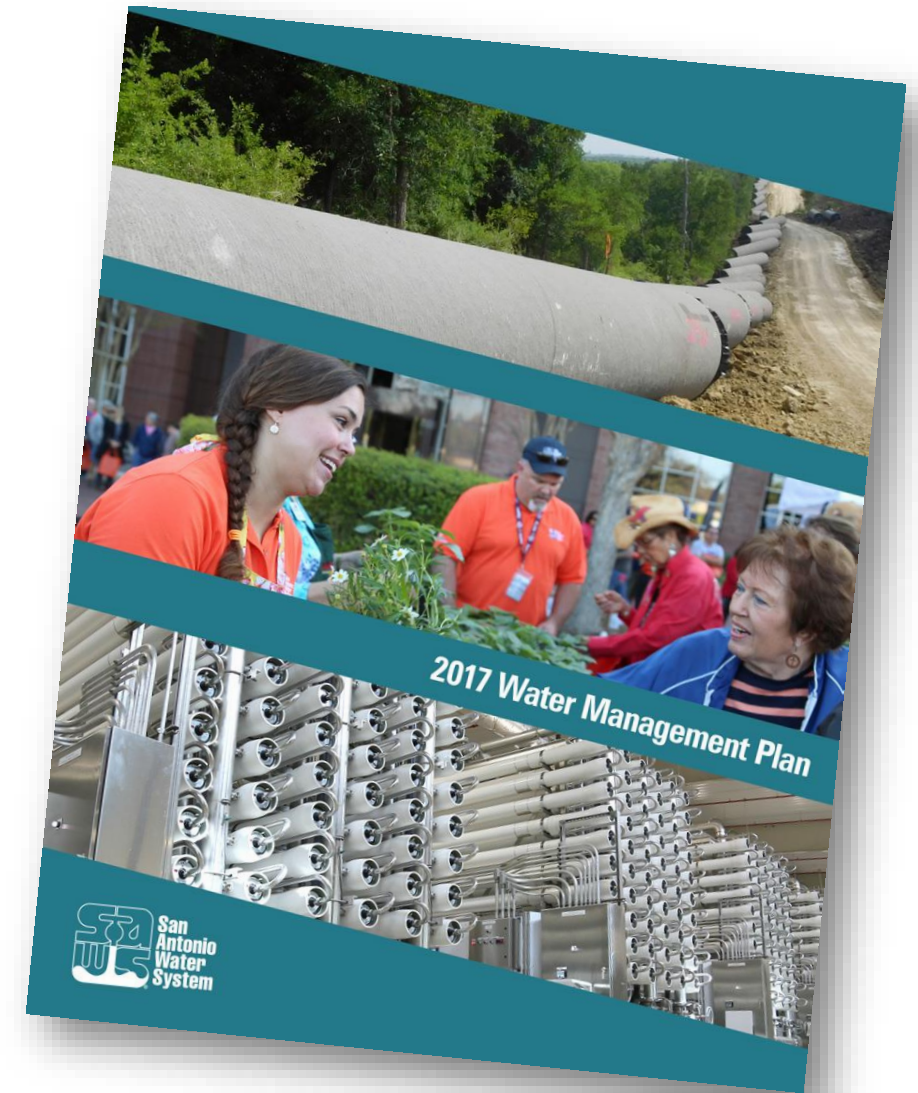
# Water Supply CIP Based on 2017 Water Management Plan

## Existing Supplies:

- Edwards
- Aquifer Storage & Recovery
- Local Carrizo
- Regional Carrizo (through SSLGC)
- Trinity
- GBRA (Canyon Lake)
- Desalination
- Canyon Regional Water Authority
- Medina System Surface Water

## CIP - 2019-2028:

- Vista Ridge



# Impact Fee Calculation

Today's focus

$$\text{Calculated Impact Fee} = \frac{\text{Cost of Eligible CIP}}{\text{Added EDUs}}$$

- LUAP provides number of added EDUs
- CIP provides cost of eligible capital improvements
  - Extensions and expansions
  - Facilities and wellfields
- Study period for LUAP and CIP is 10 years
  - How many EDUs are expected to be added in 10-year study period? **141,770**
  - What is the cost of the capacity that is required to serve these added EDUs?

# Water Supply Equity Value

Existing water supply system value is  
**\$1,118,491,949**

- Valuation method is Original Cost (OC)
- Value is not depreciated
- Value excludes infrastructure (tanks, wells, etc.) for Edwards water (already included in System Development CIP)

# Allocation of Water Supply Equity to Impact Fee

## Allocation is based on annual demand

- 1 acre foot (AF) = 325,851 gallons
- 1 EDU = 290 gallons/day
- 1 AF/year = 3.08 EDUs
- 1 EDU = 0.3248 AF/year
  
- 2018 population is 1,851,348; 2028 population is 2,190,178
- 774,623 cumulative EDUs in 2018; 916,392 cumulative EDUs in 2028
- *Annual Demand (AD) = Cumulative EDUs \* 0.3248 AF/EDU*
- 2018 AD = 774,623 EDUs \* 0.3248  $\frac{AF}{EDU}$  = **251,629 AF**
- 2028 AD = 916,392 EDUs \* 0.3248  $\frac{AF}{EDU}$  = **297,682 AF**

# Allocation of Water Supply Equity to Impact Fee

Water supplies for impact fee study based on average available supplies assuming a drought of record occurs between 2019 and 2028

- 2018 *AD* = **251,629 AF**
- 2018 *Capacity* = **281,495 AF**

Unused portion of Water Supply assets is allocated to impact fee calculation

- $Allocation = \frac{2018\ Capacity - 2018\ AD}{2018\ Capacity}$
- $Allocation = \frac{281,495\ AF - 251,629\ AF}{281,495\ AF} = \mathbf{10.6\%}$



# Water Supply CIP Value

Water Supply 2019 to 2028 CIP is Approximately  
**\$1,130,000,000**

- Central Water Integration Infrastructure within SAWS:  
\$200 million
- Pipeline, Pump Stations, Wellfield to SAWS:  
\$930 million

# Allocation of Water Supply CIP to Impact Fee

Water supplies for impact fee study based on average available supplies assuming a drought of record occurs between 2019 and 2028

- 2018 Capacity = 281,495 AF
- 2028 AD = 297,682 AF
- 2028 Capacity = 281,495 AF + 50,000 AF = 331,495 AF

Capacity required to serve 2028 AD:

- $Allocation = \frac{2028 AD - 2018 Capacity}{2028 Capacity - 2018 Capacity}$
- $Allocation = \frac{297,682 AF - 281,495 AF}{331,495 AF - 281,495 AF} = 32.4\%$

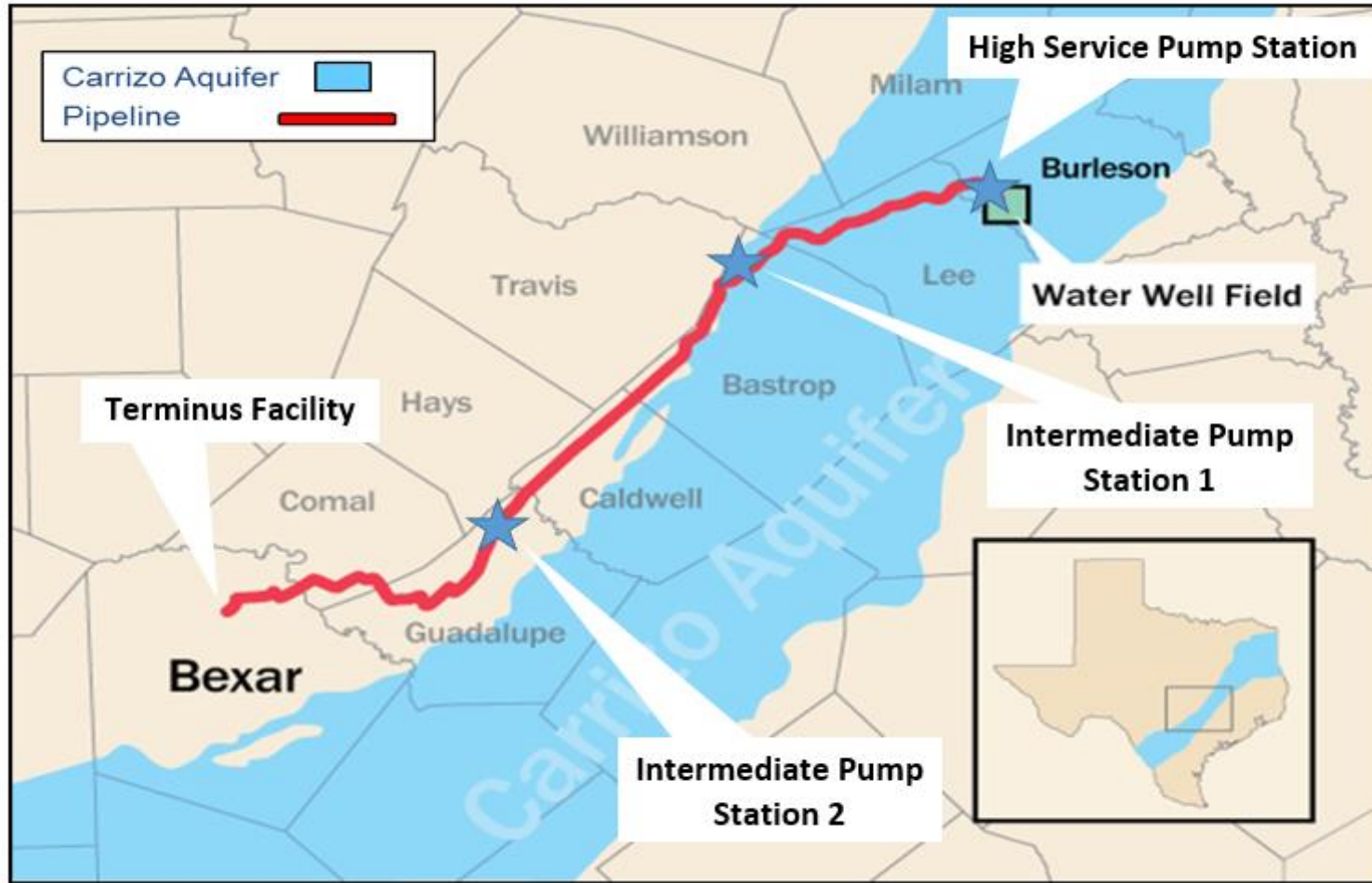
# Water Supply CIP – Eligible Value

Description	Total Cost	Eligible %	Eligible Cost*
Existing Assets	\$1,118,491,949	10.6%	\$118,560,147
CIP Projects	\$1,130,000,000	32.4%	\$366,120,000
<b>TOTAL</b>	<b>\$2,248,491,949</b>	<b>21.6%</b>	<b>\$484,680,147</b>

\* Costs shown do not include financing charges

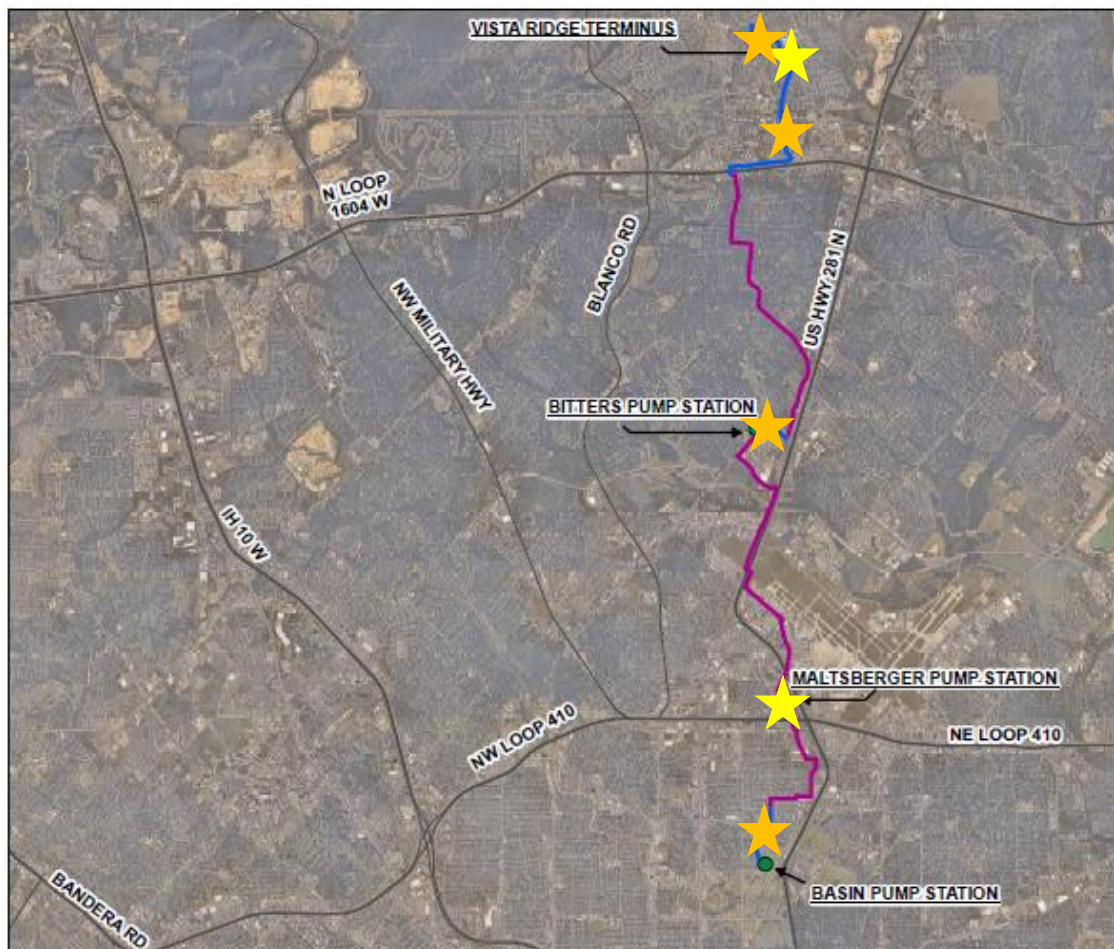
# Water Supply CIP

## Vista Ridge Water Supply Project

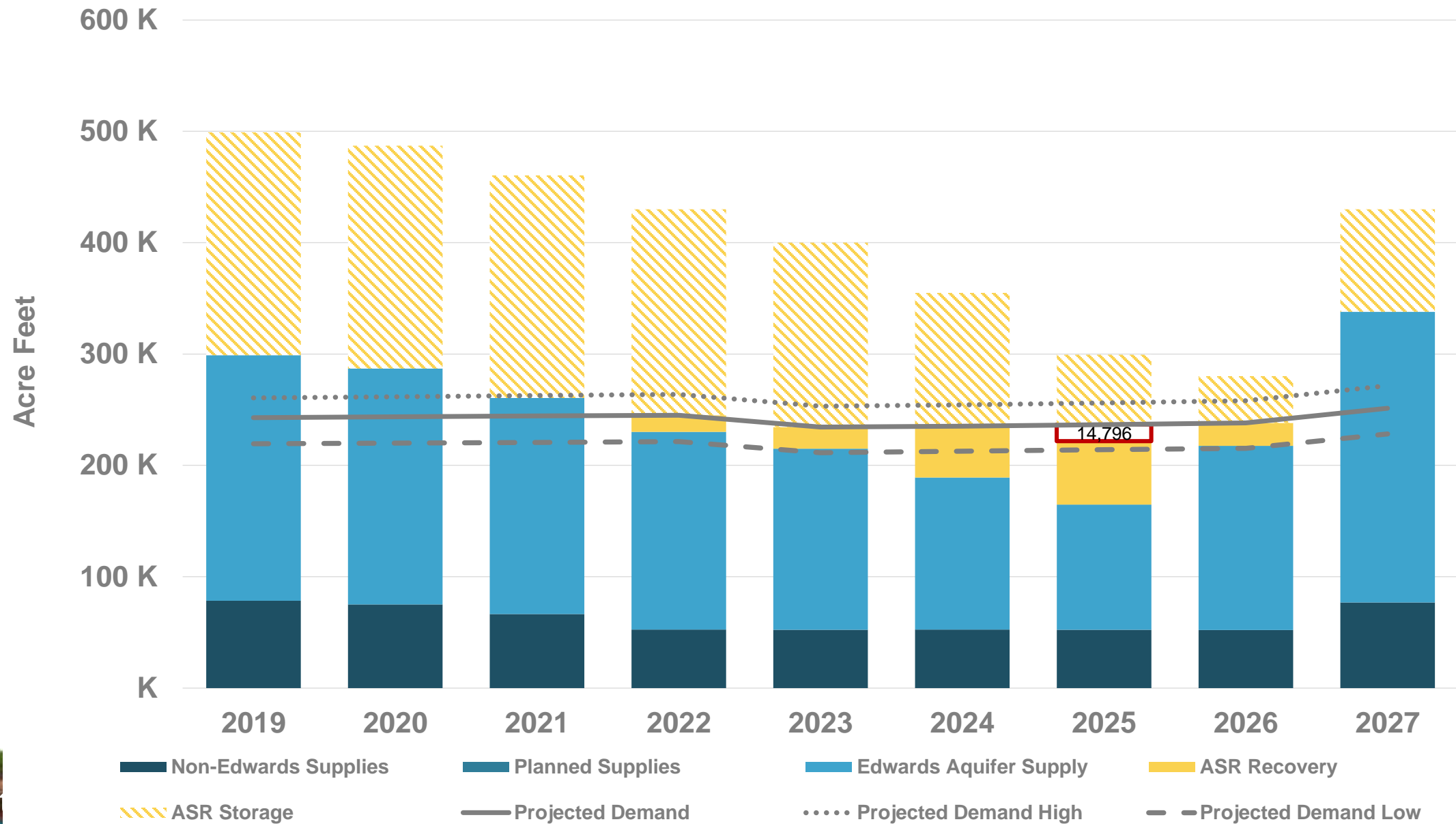


# Water Supply CIP

## Central Water Integration Project

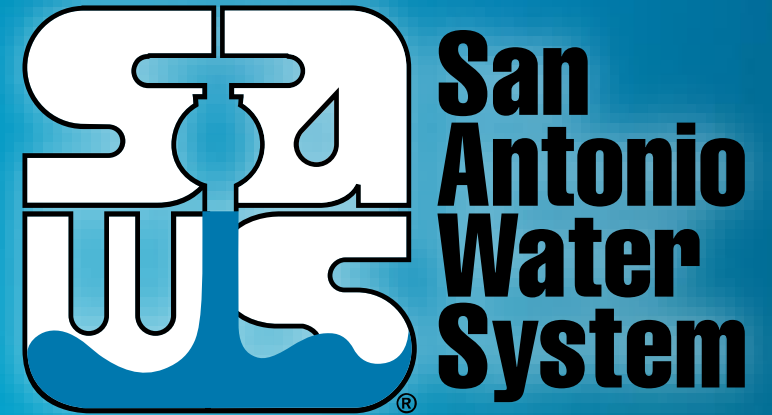


	Local					Medina		Reg Carriz	ASR	
	<u>Edwards</u>	<u>Carrizo</u>	<u>Trinity</u>	<u>GBRA</u>	<u>CRWA</u>	<u>Plant</u>	<u>Desal</u>	<u>SSLGC</u>	<u>Recovery</u>	
2019	220,702	9,900	16,100	8,524	6,300	13,000	13,440	11,057	0	
2020	211,934	9,900	16,100	8,286	6,300	10,000	13,440	11,057	0	
2021	194,152	9,900	16,100	8,048	6,300	1,500	13,440	11,057	0	
2022	177,545	9,900	4,000	7,810	6,300	0	13,440	11,057	0	
2023	162,773	9,900	4,000	7,561	6,300	0	13,440	11,057	0	
2024	136,579	9,900	4,000	7,333	6,800	0	13,440	11,057	0	
2025	112,507	9,900	4,000	7,095	6,800	0	13,440	11,057	25,609	
2026	165,404	9,900	4,000	6,857	6,800	0	13,440	11,057	0	
2027	261,128	9,900	16,100	6,619	6,800	13,000	13,440	11,057	0	
2028	281,146	9,900	16,100	6,381	6,800	13,000	13,440	11,057	0	
Average (Ac-ft)	192,387	9,900	10,050	7,451	6,550	5,050	13,440	11,057	*25,609	281,495



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