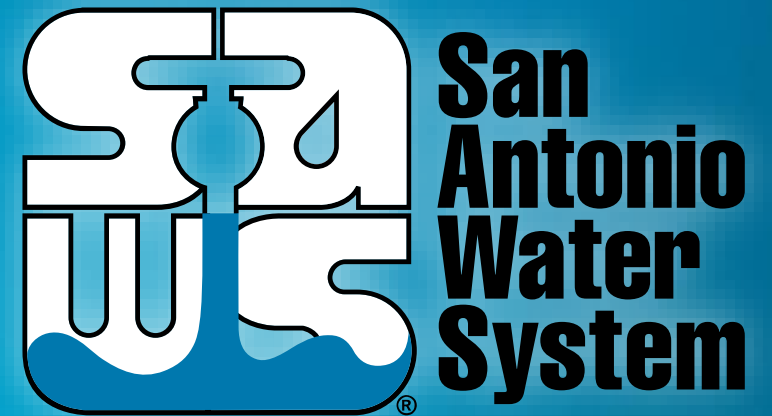


Water Land Use Assumptions Plan (LUAP)

Tracey Lehmann, P.E.
Director of Development



MAKING SAN ANTONIO
WATERFUL

Capital Improvements Advisory Committee
July 25, 2018

Types of Water Impact Fees

Water Flow



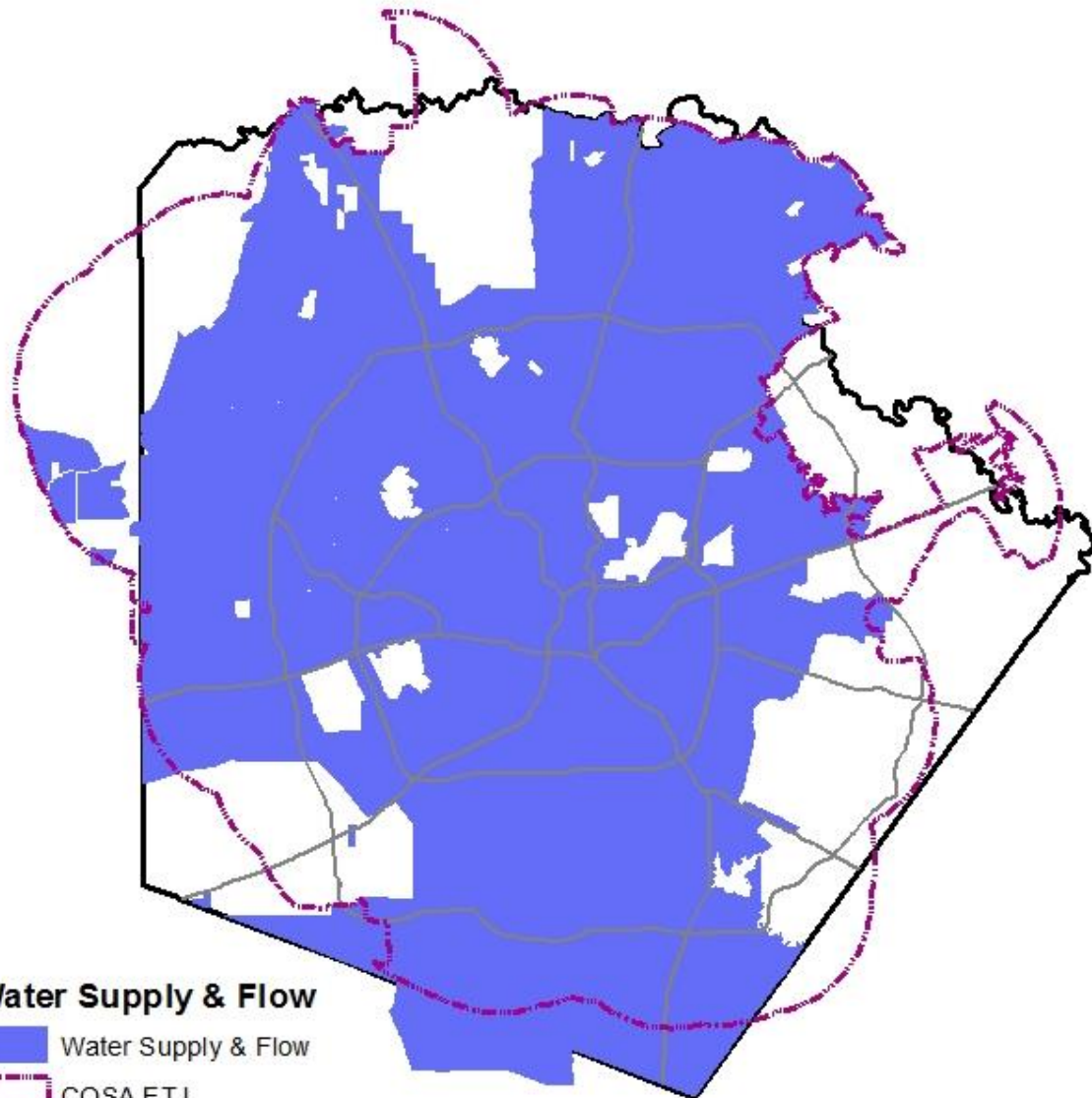
Water System Development






Water Supply



Map of Water Flow & Water Supply Service Areas



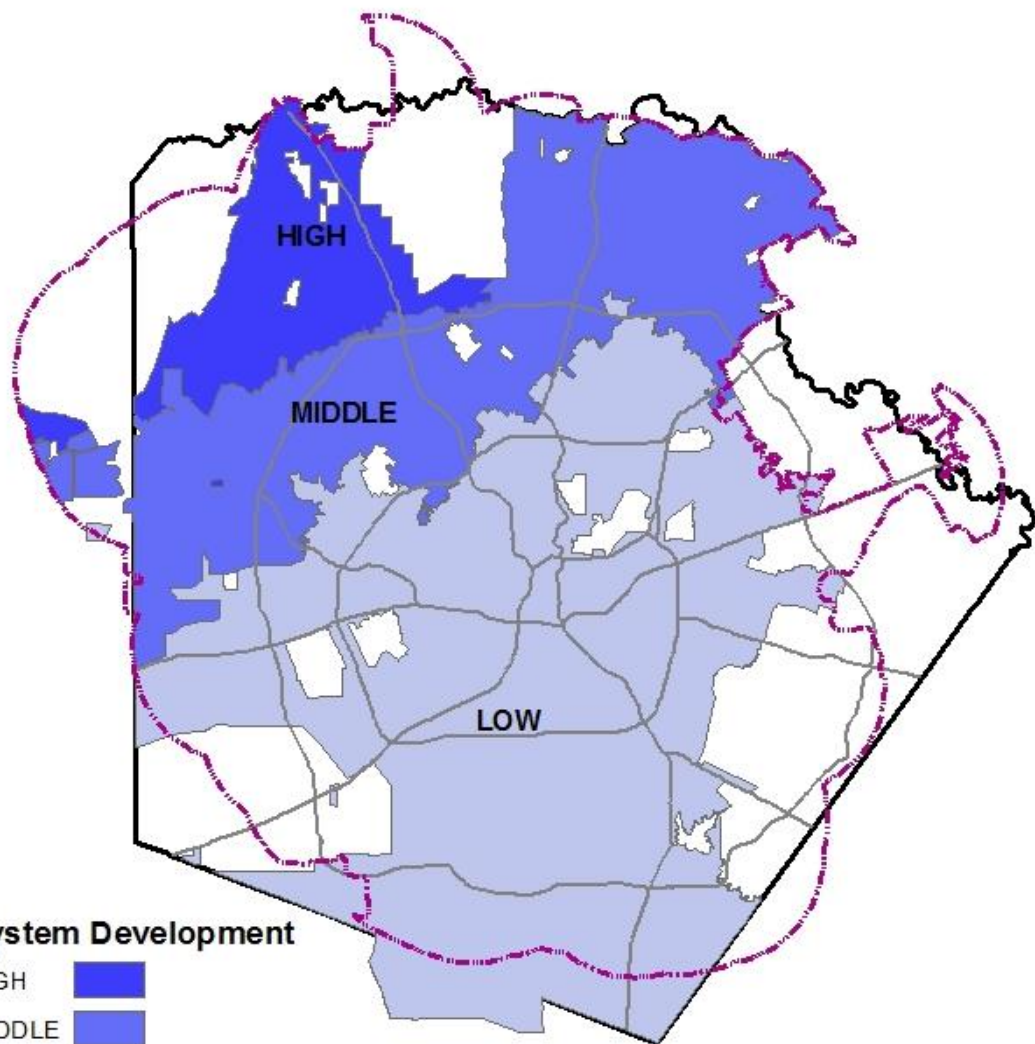
Water Supply & Flow

-  Water Supply & Flow
-  COSA ETJ
-  Bexar County






- Service area unchanged since 2014



Map of System Development Service Areas



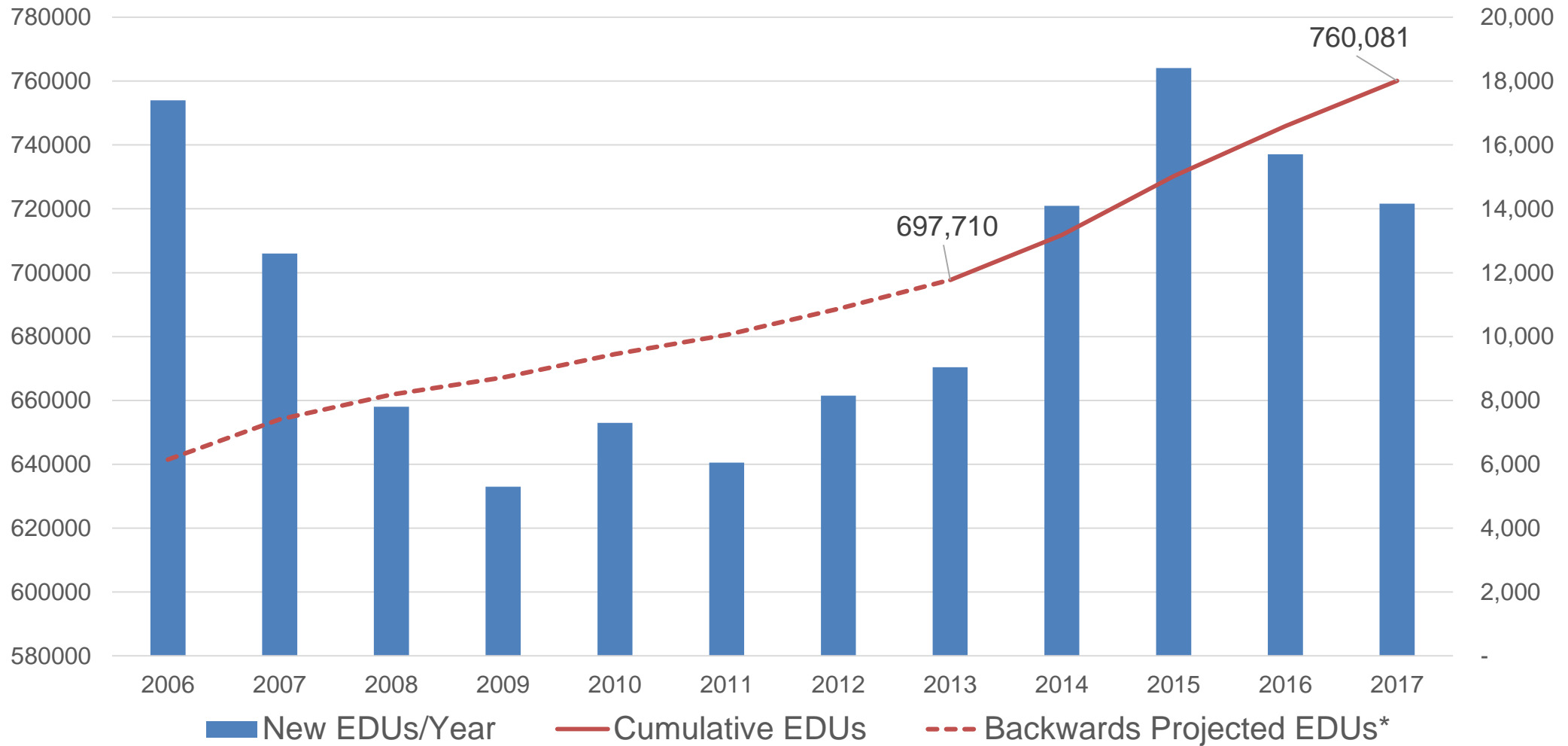
System Development

- HIGH 
- MIDDLE 
- LOW 
-  COSA ETJ
-  Bexar County

- Service area unchanged since 2014

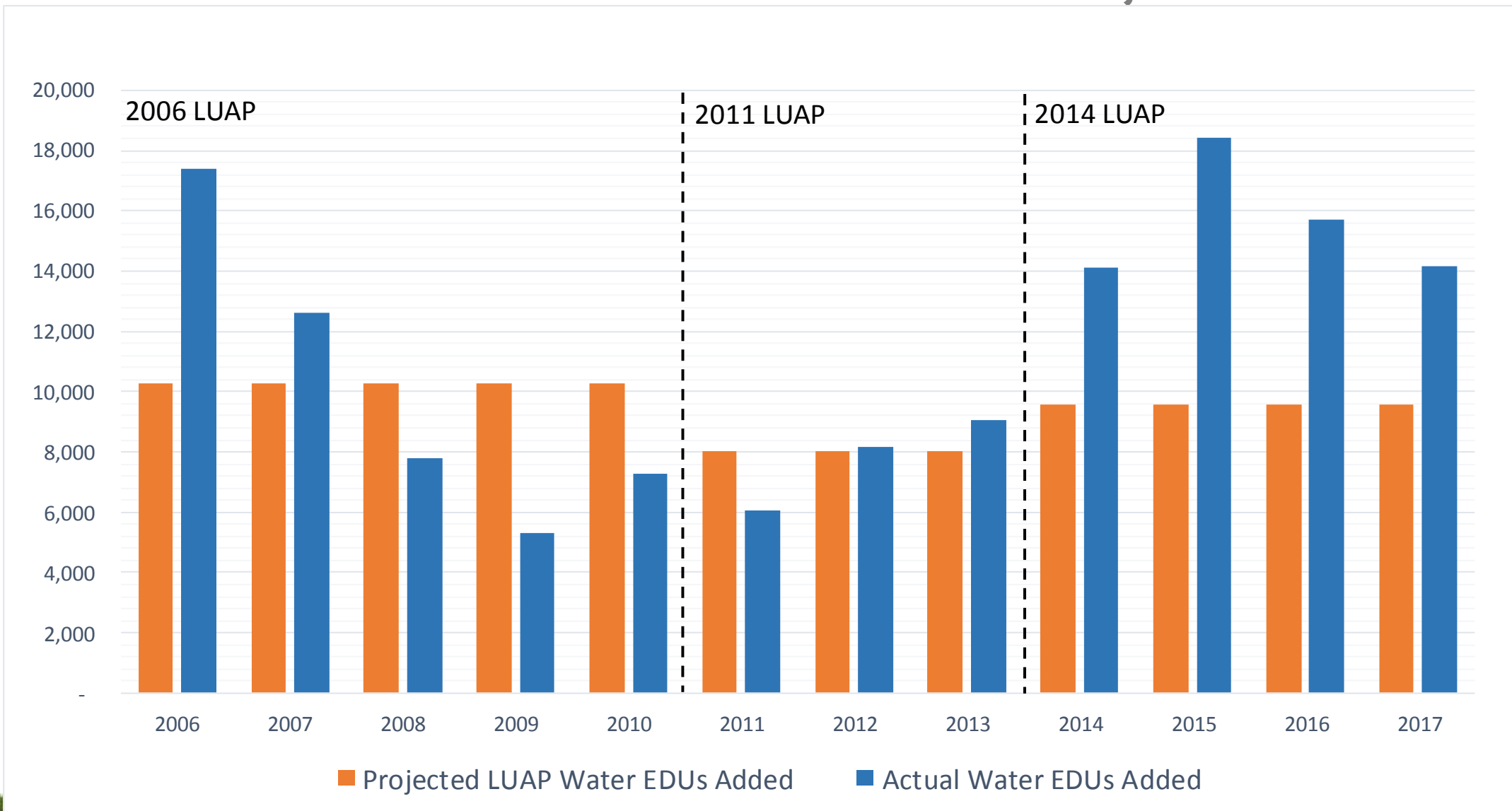


New EDUs/Year Versus Cumulative EDUs



*Projected due to Bexar Met Water Assumption in 2012

Historic Difference Between Actual vs. LUAP Projected EDUs Added

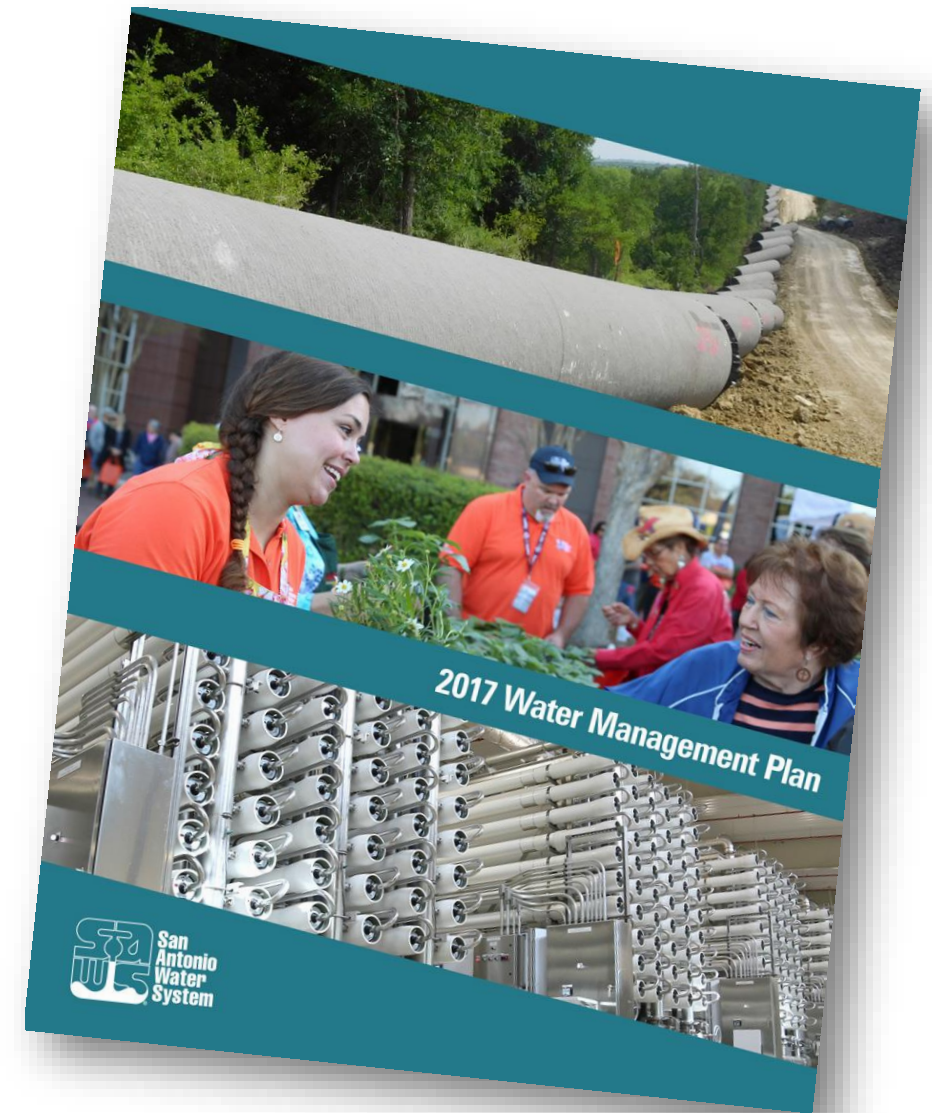


Population Projections

2017 Water Management Plan

- Utilized COSA adopted full migration growth rates from 2015-2040.
- The population from 2017 – 2040 is 1,817,387 to 2,596,769.

2017	2020	2030	2040
1,817,387	1,919,271	2,257,905	2,596,769

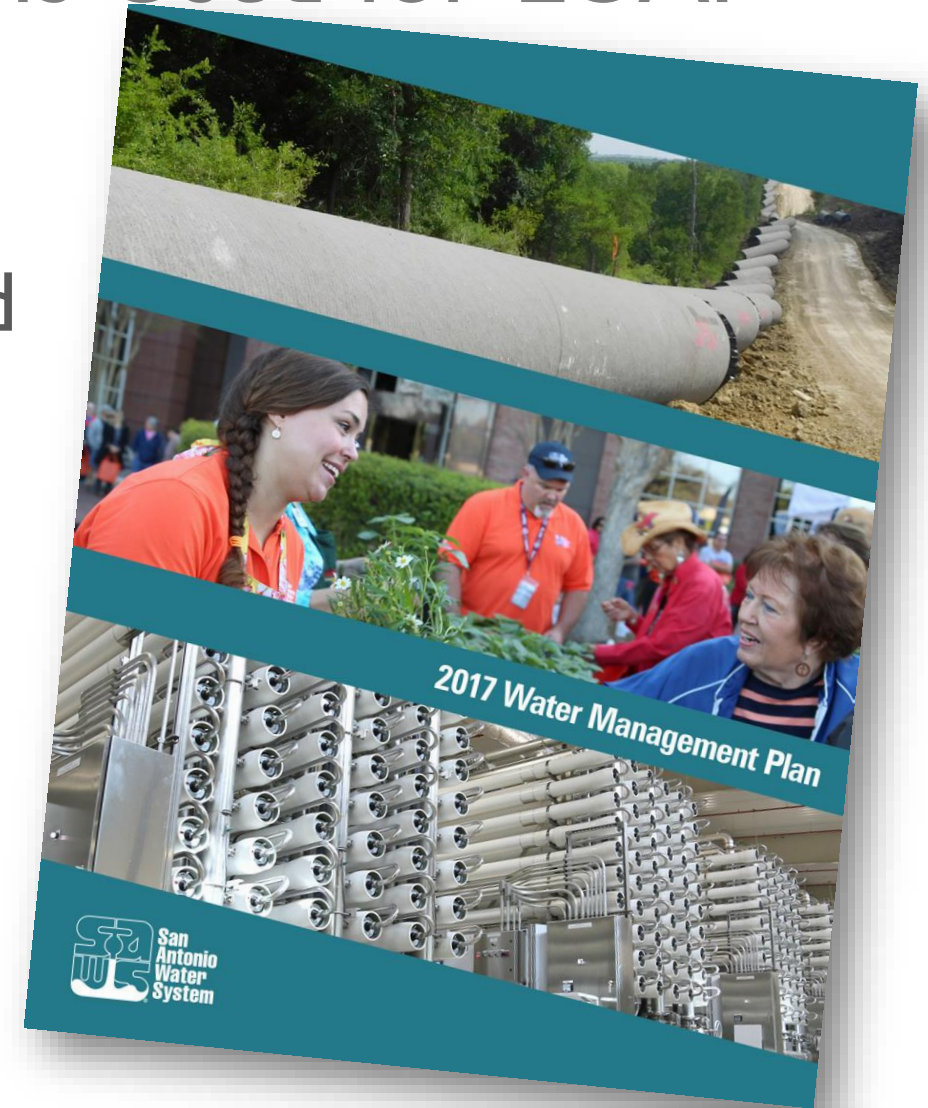


2017 WMP Population Projections Used for LUAP

Population Projection Development

The population projections for the 2017 Water Management Plan were developed using the:

- 2016 SAWS Population Estimate
- COSA 2014 Adopted Population Projection (AACOG/MPO) growth rates

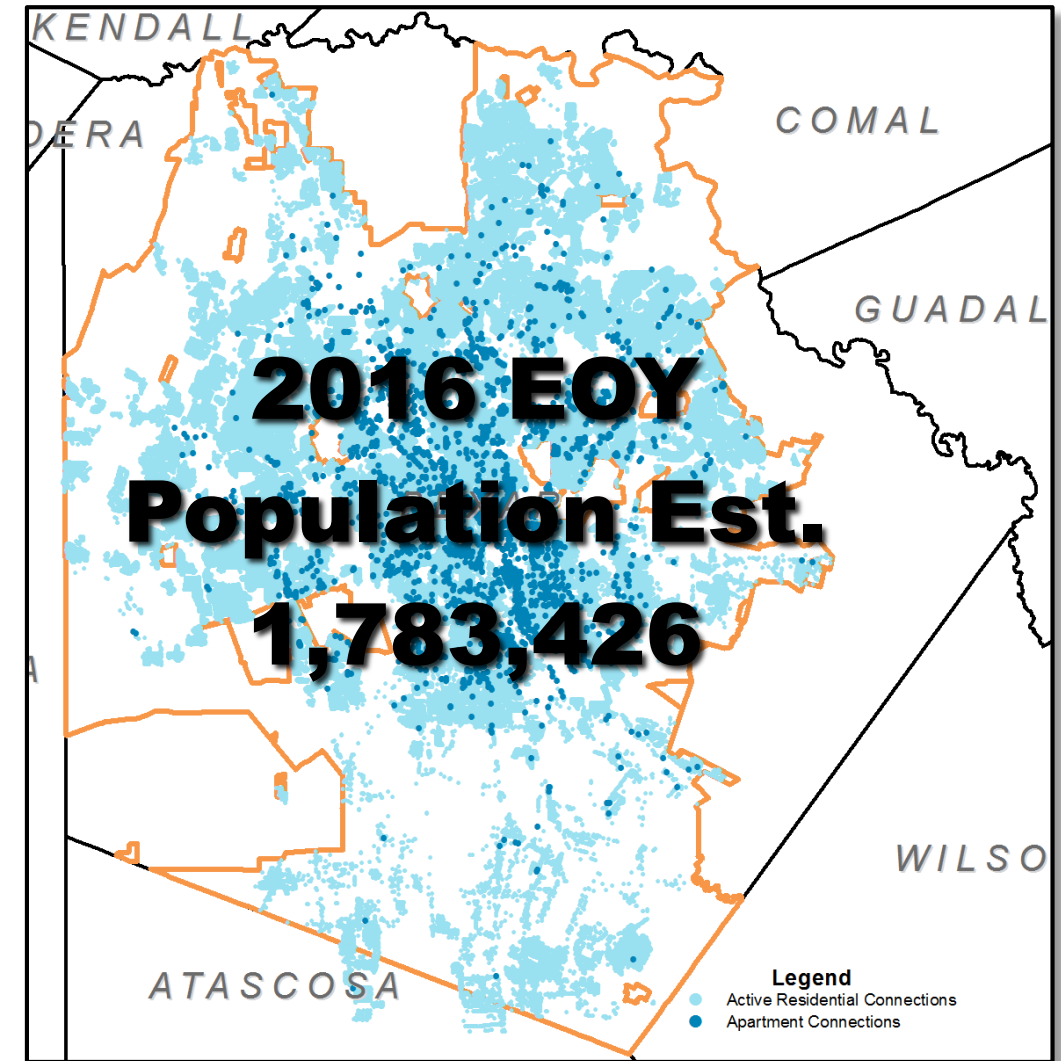


2016 End-of-Year Population Estimate

Population Projection Development

Data used to determine SAWS EOY Population Estimate

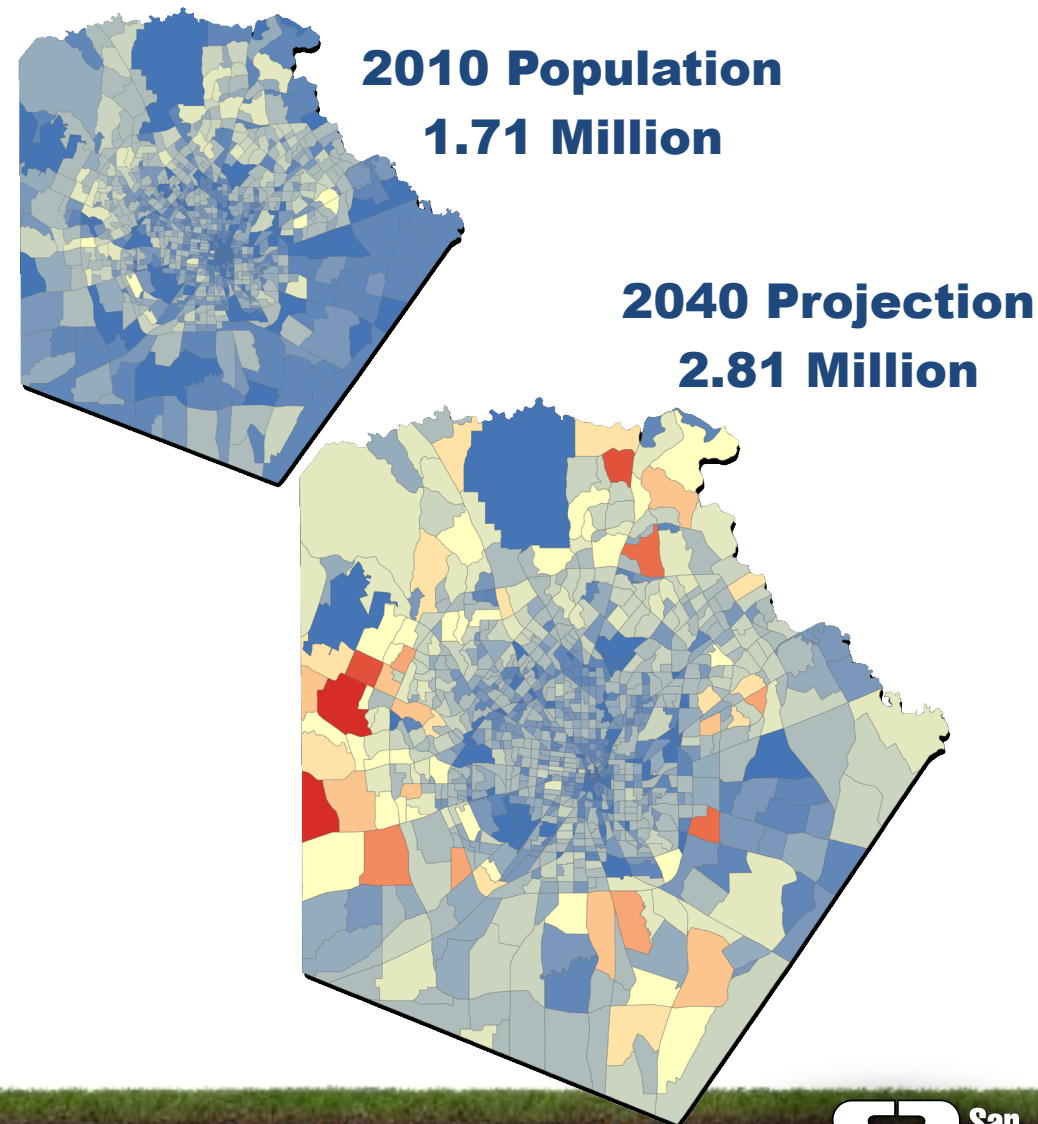
- Active Residential Connections – **453,921**
- Active Apartment Connections with associated Units – **202,468**
- SAWS Persons per connection factor – **2.77**
- Multifamily Occupancy rate **93.8%** (Marcus & Millichap market Report 3rd Qtr. 2016)



2014 COSA Adopted Population Projections

Population Projection Development

- Developed by AACOG/MPO finalized in 2014 and adopted by COSA
- Used full migration scenario
- Population increase of 1.1 million from 2010 to 2040



Utilizing COSA Adopted Population Projection

Population Projection Development

Using the 2016 EOY Population Est. of **1,783,426** and the growth rates from the Projections adopted by the COSA in 2014 provided SAWS with a 2040 population projection of **2,596,769**

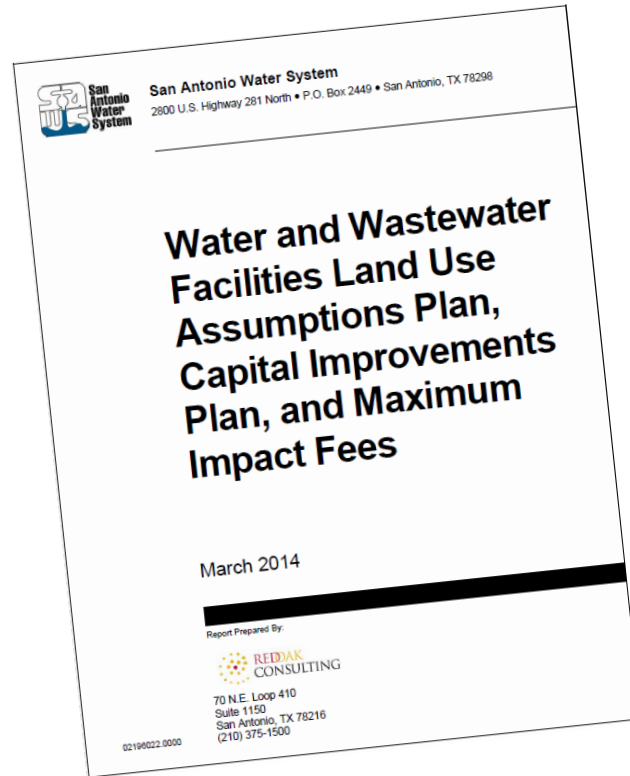
**2017 EOY Population Estimate :
1,819,116**

2016 EOY Pop Est.
1,783,426

Year	COSA Growth Rate	Population Projection
2017	1.90%	1,817,387
2018	1.87%	1,851,348
2019	1.83%	1,885,309
2020	1.80%	1,919,271
2021	1.76%	1,953,134
2022	1.73%	1,986,998
2023	1.70%	2,020,861
2024	1.68%	2,054,724
2025	1.65%	2,088,588
2026	1.62%	2,122,451
2027	1.60%	2,156,315
2028	1.57%	2,190,178

Year	COSA Growth Rate	Population Projection
2029	1.55%	2,224,041
2030	1.52%	2,257,905
2031	1.50%	2,291,791
2032	1.48%	2,325,678
2033	1.46%	2,359,564
2034	1.44%	2,393,451
2035	1.42%	2,427,337
2036	1.40%	2,461,224
2037	1.38%	2,495,110
2038	1.36%	2,528,996
2039	1.34%	2,562,883
2040	1.32%	2,596,769

Calculation of LUAP



Year	Water EDUs/Year
2013	9,043
2014	14,093
2015	18,405
2016	15,708
2017	14,165



Year	COSA Growth Rate	Population Projection
2017	1.90%	1,817,387
2018	1.87%	1,851,348
2019	1.83%	1,885,309
2020	1.80%	1,919,271
2021	1.76%	1,953,134
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2028	1.57%	2,190,178

-----Population-----		-----EDUs-----		
2014	2023	2014	2023	Change
1,674,505	1,904,466	697,710	793,528	95,817

Calculation of LUAP

Year	Data from 2014-2023 Land Use Assumptions Plan (LUAP)			Counter Services Data New EDUs/Year	Cumulative EDUs	Population/ EDU (WMP Pop/ EDUs)	Data from 2017 Water Management Plan (WMP)			Proposed 2019-2028 Water LUAP 141,770 Total EDUs	
	EDUs	Pop/EDU	Population				Population	Growth Rate	Annual EDUs @ 2.39		Cumulative EDUs @2.39
2013	697,710	2.40	1,674,505	9,043	697,710	2.40	1,671,625		699,425	774,623	
2014	707,292			14,093	711,803	2.41	1,712,446	2.44%	17,080		716,505
2015	716,874			18,405	730,208	2.39	1,742,390	1.75%	12,529		729,033
2016	726,456			15,708	745,916	2.39	1,783,426	2.36%	17,170		746,203
2017	736,038			14,165	760,081	2.39	1,819,116	2.00%	14,933		761,136
2018	745,620						1,851,348	1.77%	13,486		774,623
2019	755,202						1,885,309	1.83%	14,210		788,832
2020	764,784						1,919,271	1.80%	14,210		803,042
2021	774,366						1,953,134	1.76%	14,169		817,211
2022	783,948						1,986,998	1.73%	14,169		831,380
2023	793,528	2.40	1,904,466				2,020,861	1.70%	14,169		845,549
2024							2,054,724	1.68%	14,169		859,717
2025							2,088,588	1.65%	14,169		873,886
2026							2,122,451	1.62%	14,169		888,055
2027							2,156,315	1.60%	14,169		902,224
2028							2,190,178	1.57%	14,169	916,393	916,393

Averages

14,283

2.39

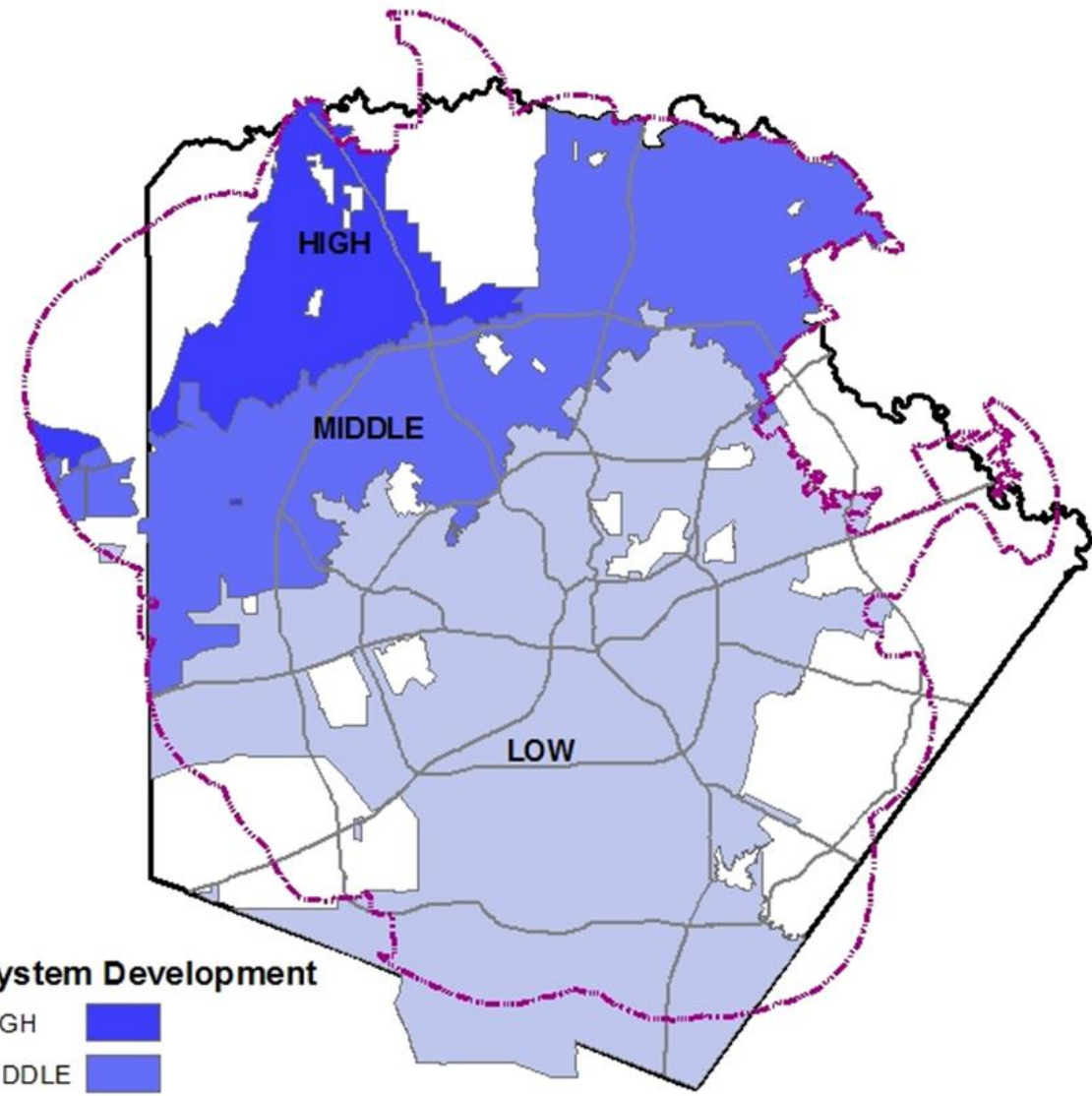
1.818%

14,465






LUAP

Service Areas

- Water Supply: 141,770 EDUs
- Flow: 141,770 EDUs
- System Development:
 - High Elevation: 6,845 EDUs
 - Middle Elevation: 56,478 EDUs
 - Low Elevation: 78,447 EDUs

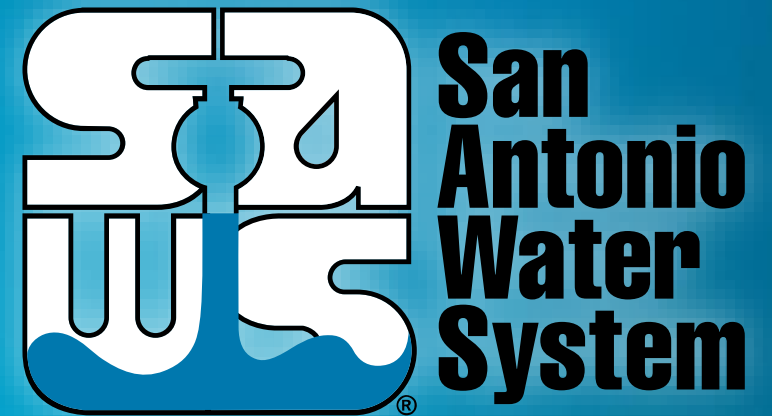


System Development

- HIGH 
- MIDDLE 
- LOW 
-  COSA ETJ
-  Bexar County

Water Land Use Assumptions Plan (LUAP)

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