

SAWS Land Use Assumptions Plan

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Planner IV

May 1, 2013

CIAC Meeting



Land Use Assumptions Plan

- Population and Equivalent Dwelling Units
- Projections Process
- Service Area Changes Since 2010
- Land Use Assumptions Plan

Impact Fee Formula

$$\textit{Maximum Impact Fees} = \frac{\textit{Cost of Growth}}{\textit{EDUs from LUAP}} - \textit{Rate Credit}$$

Data Inputs

- Population and Persons Per Household
- Connections (meter size and type)
- Water Consumption
- Water & Wastewater Master Plans (inputs to modeling)
- SAWS 50 Year Water Management Plan
- CCN and Utility Service Applications, Loan Applications, Surveys

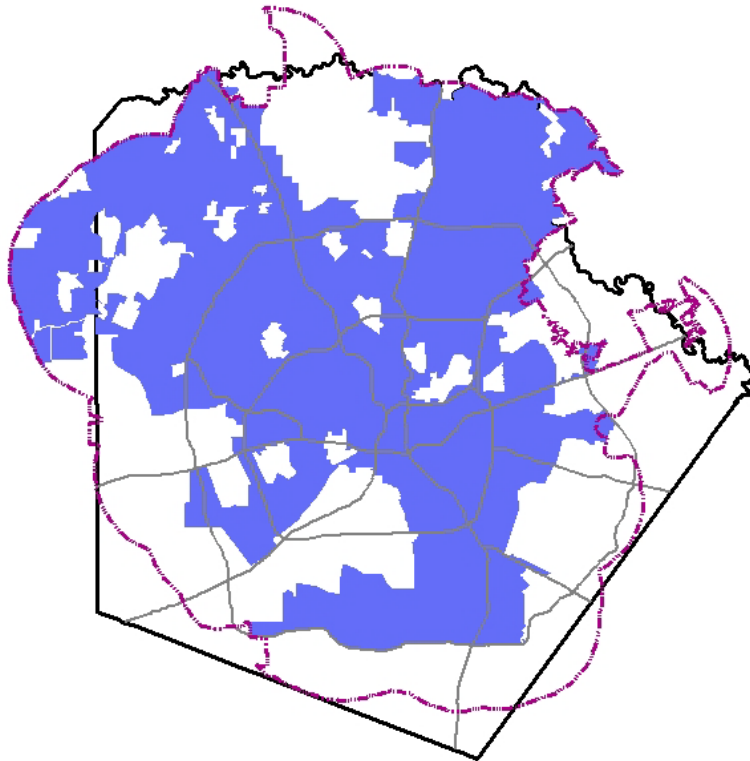
Projections Process Allocations within Bexar County

- Transportation/Land Use model
 - By Alamo Area Council of Governments
 - 900 Transportation Analysis Zones (TAZ)
 - Review & Approval by Metropolitan Planning Organization
- Coordination with Local Sources
 - Utility Service Agreements, Master Development Plans
 - City of San Antonio, Bexar County, MPO, CPS Energy, Texas Dept. of Transportation

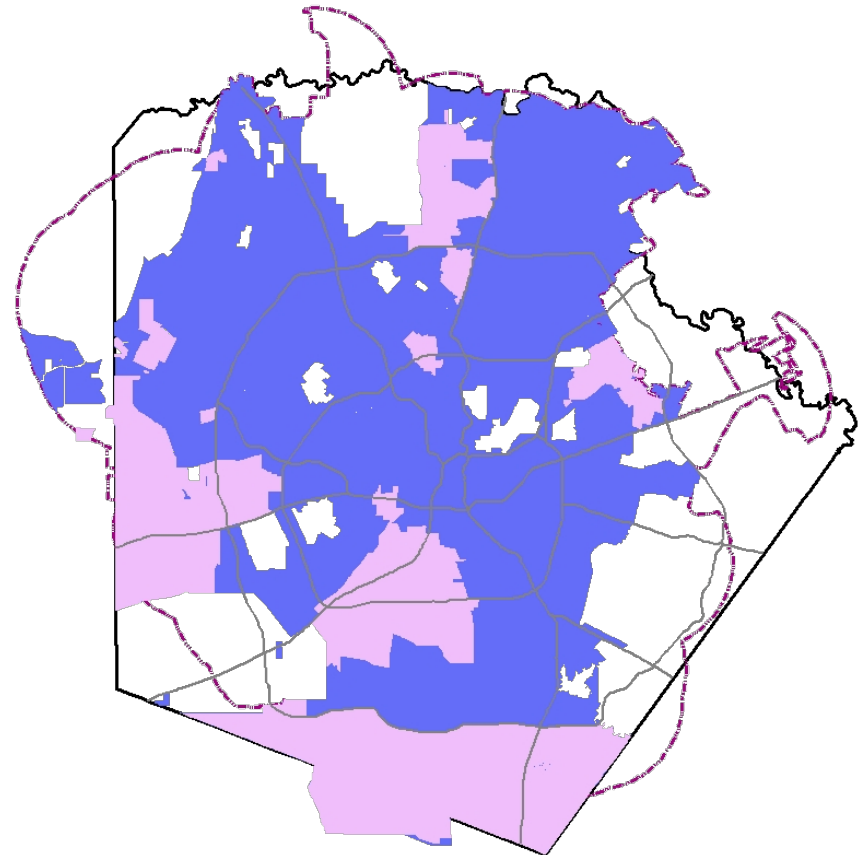
Equivalent Dwelling Unit Calculations

- Demand is Projected by Converting Population to EDUs
- LUAP Shows the Area Intended for Utility Service
- Shows the Change in Demand for that Area for a 10 Year Period
- EDU Represents Equivalent Average use From a Household
- EDU Calculation Includes Meter Sizes and Apartment Units

2010-2012 Water Service Area Change

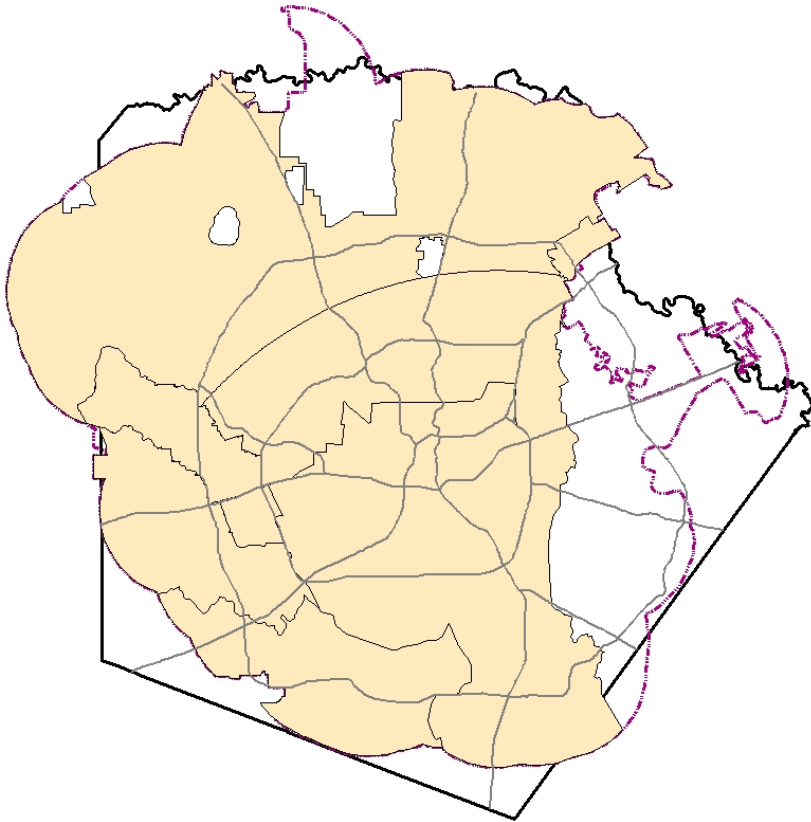


2010

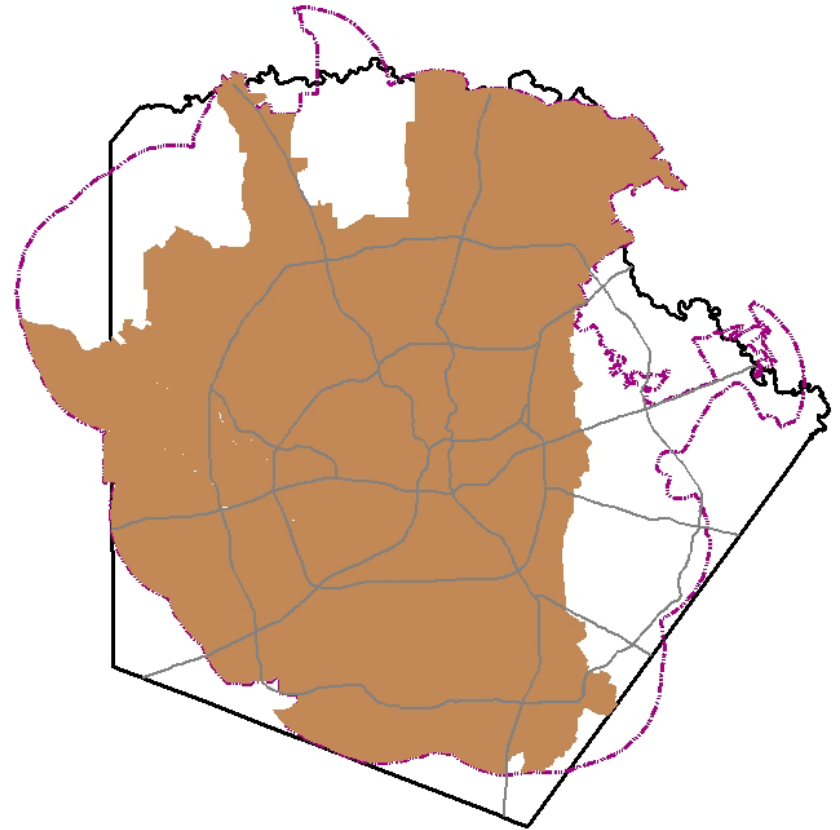


2012

2010-2012 Sewer Service Area Change



2010



2012

2010-2012 Land Use Area Change

| Land Use | 2010 Land Use | | 2012 Land Use | | | |
|---------------|---------------|------------|----------------|------------|----------------|------------|
| | Water % | Sewer % | Water Acres | Sewer % | Water Acres | Sewer % |
| Commercial | 13% | 10% | 118,043 | 20% | 116,605 | 21% |
| Industrial | 1% | 1% | 5,675 | 1% | 5,675 | 1% |
| Residential | 34% | 29% | 124,447 | 21% | 122,866 | 23% |
| Undevelopable | 10% | 13% | 76,875 | 13% | 67,865 | 12% |
| Vacant | 42% | 47% | 261,106 | 45% | 230,217 | 42% |
| | 379,177 | 544,332 | | 586,147 | | 543,228 |

Land use numbers not in impact fee calculation

LUAP EDU Calculation - Water

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------------|----------------|----------------------|----------------|-------------------------|----------------|-----------------|----------------|
| | Active Meter | Apartment | (2 - 3) | Non-apartments | (4 * 5) | Apartment Units | (6 + 7) |
| <u>Meter Size</u> | <u>Count</u> | <u>Master Meters</u> | <u>Meters</u> | <u>EDU/Meter Size</u> | <u>EDU</u> | 183,463 | |
| 5/8 | 394,855 | 1,456 | 393,399 | 1 | 393,399 | | |
| 3/4 | 37,219 | 182 | 37,037 | 1.5 | 55,556 | | |
| 1 | 12,669 | 583 | 12,086 | 2 | 24,172 | 93% occupancy | |
| 1 1/2 | 7,022 | 344 | 6,678 | 5 | 33,390 | 170,621 | |
| 2 | 4,554 | 619 | 3,935 | 14 | 55,090 | | |
| 3 | 853 | 210 | 643 | 30 | 19,290 | | |
| 4 | 562 | 222 | 340 | 50 | 17,000 | | |
| 6 | 210 | 197 | 13 | 105 | 1,365 | | |
| 8 | 81 | 40 | 41 | 135 | 5,535 | | |
| 10 | 18 | 7 | 11 | 190 | 2,090 | 1/2 units | |
| Total | 458,043 | 3,860 | 454,183 | | 606,887 | 85,310 | 692,197 |
| 2012 population | | 1,659,593 | | Population/EDU = | | 2.40 | |

Population to EDU factor: 2.40

LUAP EDU Calculation - Wastewater

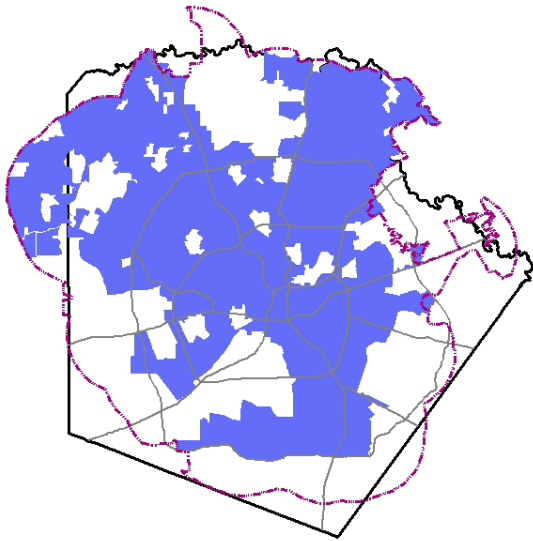
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------------------------------------|---------------------------|--------------------------------|---------------------------------------|-------------------------|-----------------------|------------------------|---------------|----------------|
| | | | (2 (total) - 3(total))* 4 percentages | | | (5 * 6) | | (7 + 8) |
| | Active Meter Count | Apartment Master Meters | Non-apartments | | | Apartment Units | | |
| Meter Size | | | Percent by Size* | Meters | EDU/Meter Size | EDUs | 182,223 | |
| 5/8 | | | 87.98% | 384,606 | 1 | 384,606 | | |
| 3/4 | | | 6.30% | 34,571 | 1.5 | 51,857 | | |
| 1 | | | 2.76% | 9,374 | 2 | 18,748 | | |
| 1 1/2 | | | 1.57% | 5,132 | 5 | 25,660 | | |
| 2 | | | 0.99% | 3,336 | 14 | 46,704 | | |
| 3 | | | 0.19% | 758 | 30 | 22,740 | | |
| 4 | | | 0.13% | 511 | 50 | 25,550 | 93% occupancy | |
| 6 | | | 0.05% | 196 | 105 | 20,580 | 169,467 | |
| 8 | | | 0.02% | 71 | 135 | 9,585 | | |
| 10 | | | 0.01% | 29 | 190 | 5,510 | | |
| Adjustment for SARA and Leon Springs | | | | | | (20,047) | 1/2 units | |
| Total | 395,227 | 3,798 | | 438,584 | | 591,493 | 84,734 | 676,226 |
| 2012 population | | 1,552,024 | | Population/EDU = | | 2.30 | | |

Population to EDU factor: 2.30

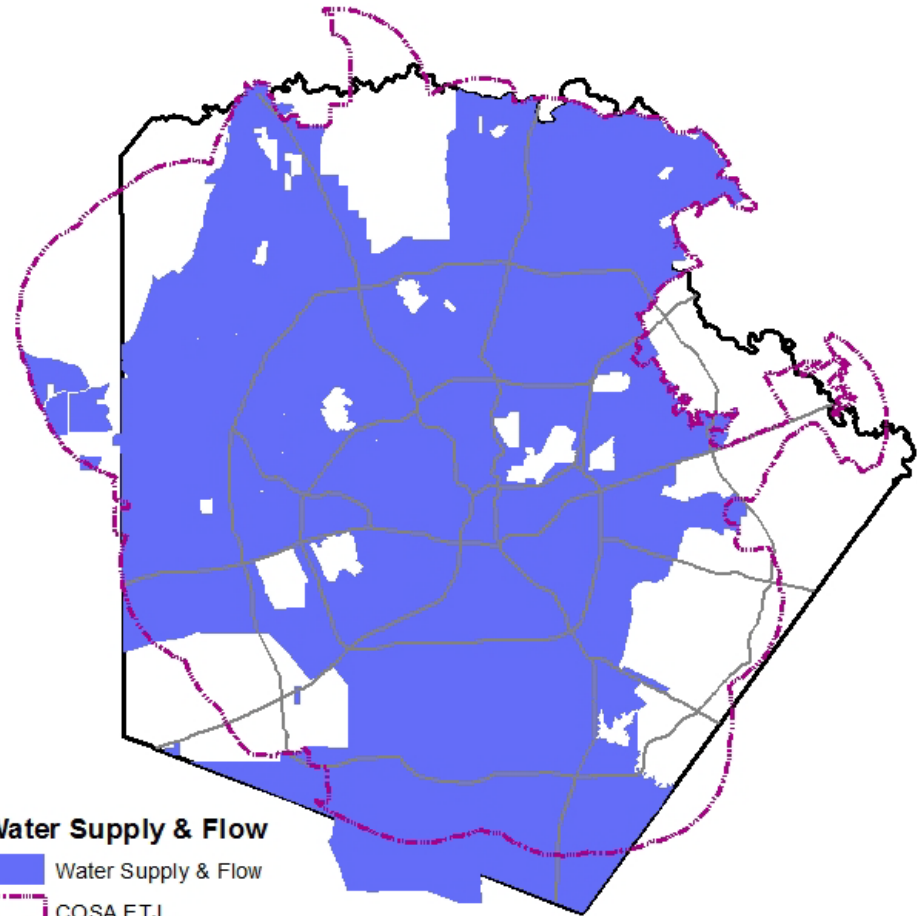
Five Impact Fees & Service Areas

- Water
 - Supply (water sources)
 - System Development (water tanks, pumps, transmission mains)
 - Flow (water distribution lines)
- Wastewater
 - Treatment (water recycling centers)
 - Collection (sewer mains)




Water Supply Service Area



Existing



Water Supply & Flow

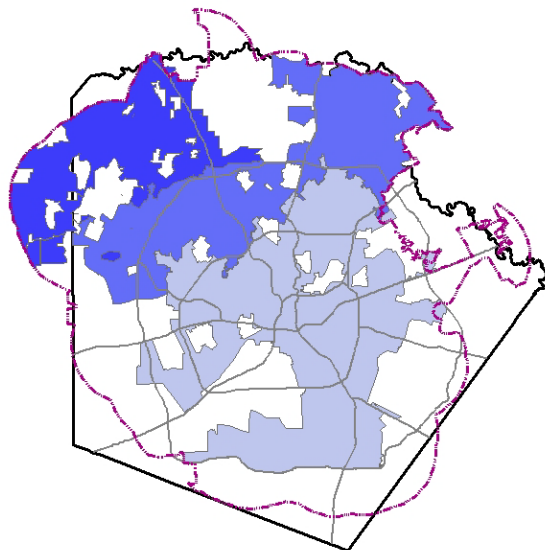
-  Water Supply & Flow
-  COSA ETJ
-  Bexar County

Water Supply EDU Change

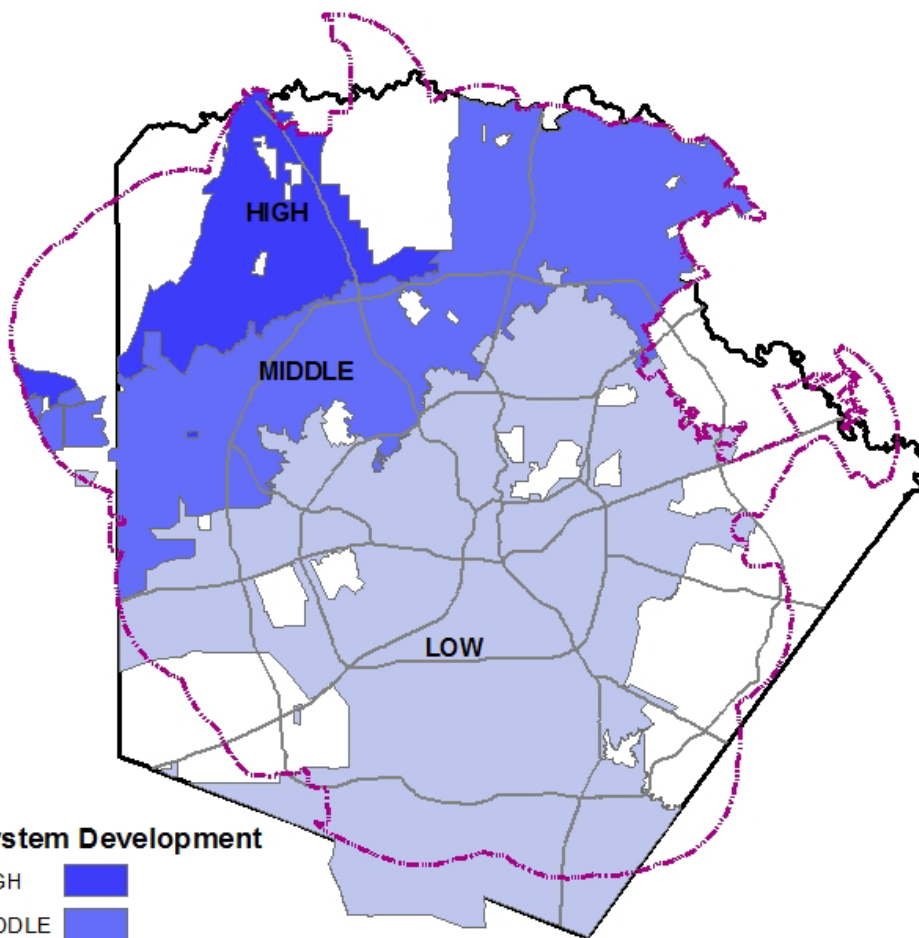
| Population | 2014 | 2023 | Change |
|------------|-----------|-----------|----------------|
| | 1,674,505 | 1,904,466 | 229,961 |

| EDUs | 2014 | 2023 | Change |
|------|---------|---------|---------------|
| | 697,711 | 793,528 | 95,817 |






System Development Service Areas



Existing



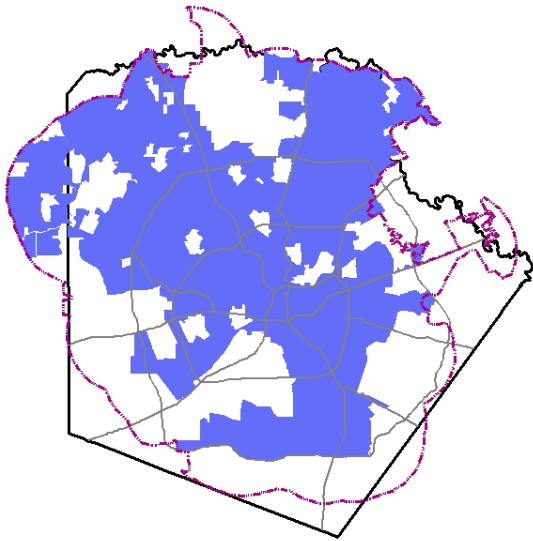
System Development

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

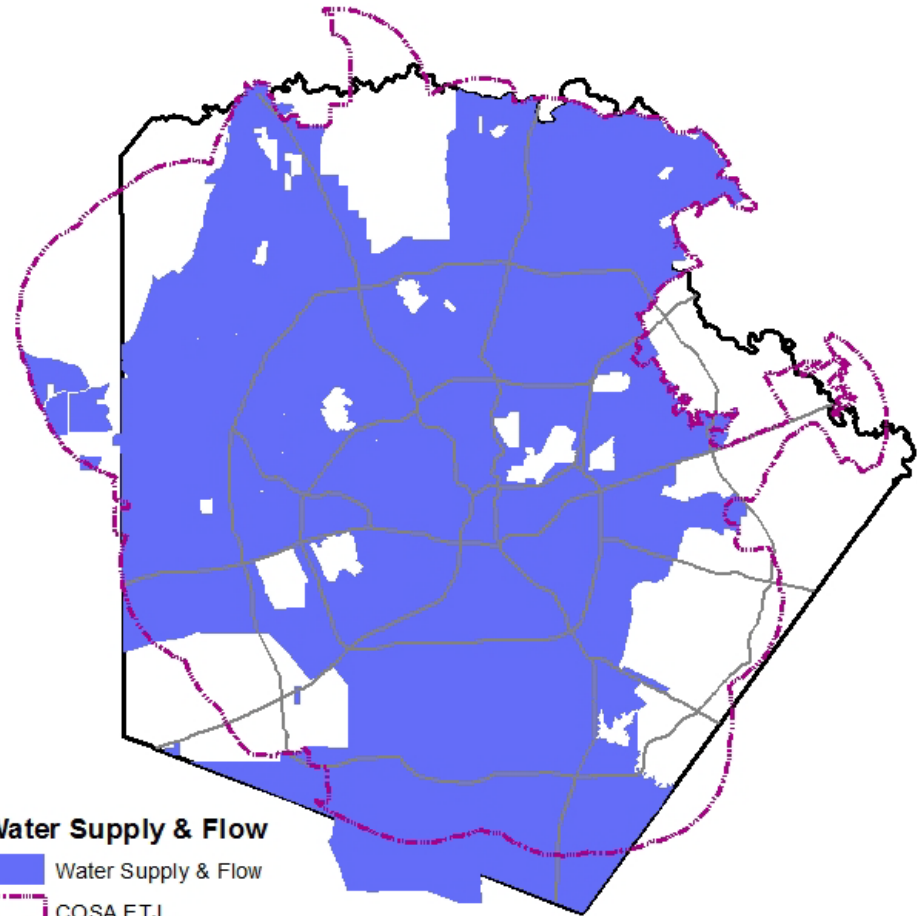
System Development EDU Change

| Service Area | 2014 | 2023 | Change |
|--------------|---------|---------|---------------|
| High | 18,645 | 27,428 | 8,783 |
| Middle | 224,409 | 269,674 | 45,265 |
| Low | 454,657 | 496,426 | 41,769 |




Water Flow Service Area



Existing



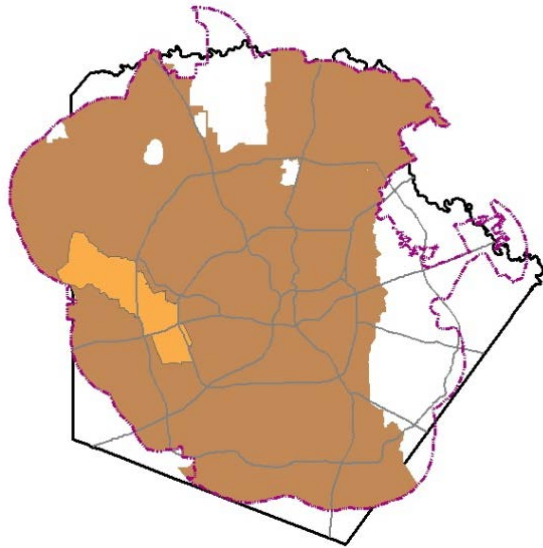
Water Supply & Flow

-  Water Supply & Flow
-  COSA ETJ
-  Bexar County

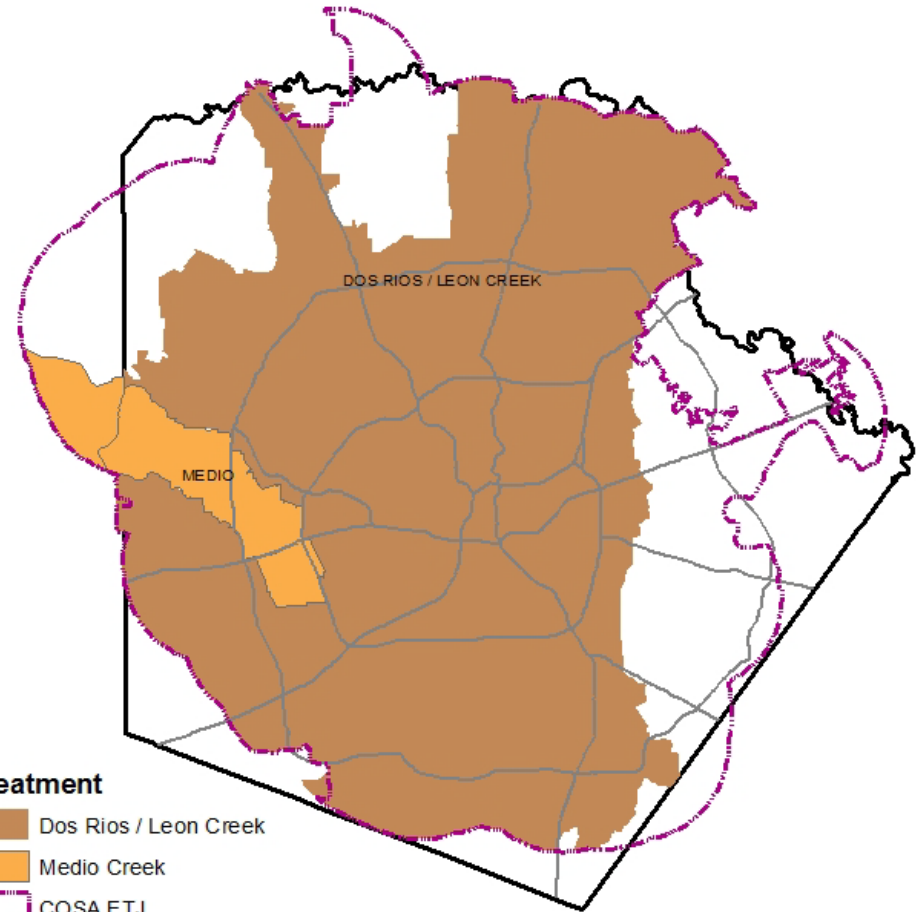
Water Flow EDU Change




| EDUs | 2014 | 2023 | Change |
|------|---------|---------|---------------|
| | 697,710 | 793,528 | 95,817 |

Wastewater Treatment Service Areas



Existing



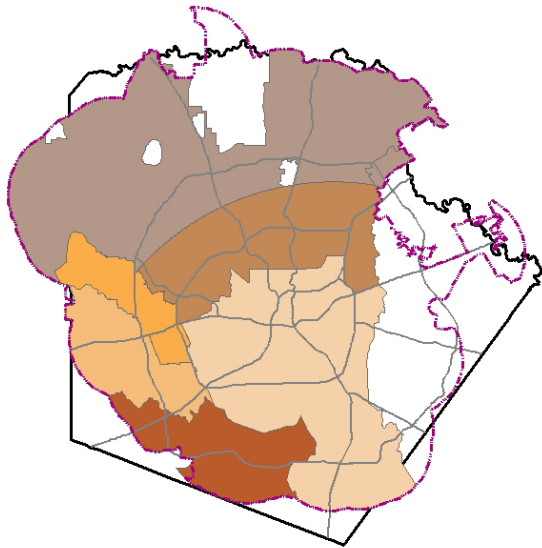
- Treatment**
-  Dos Rios / Leon Creek
 -  Medio Creek
 -  COSA ETJ
 -  Bexar County

Wastewater Treatment EDU Change

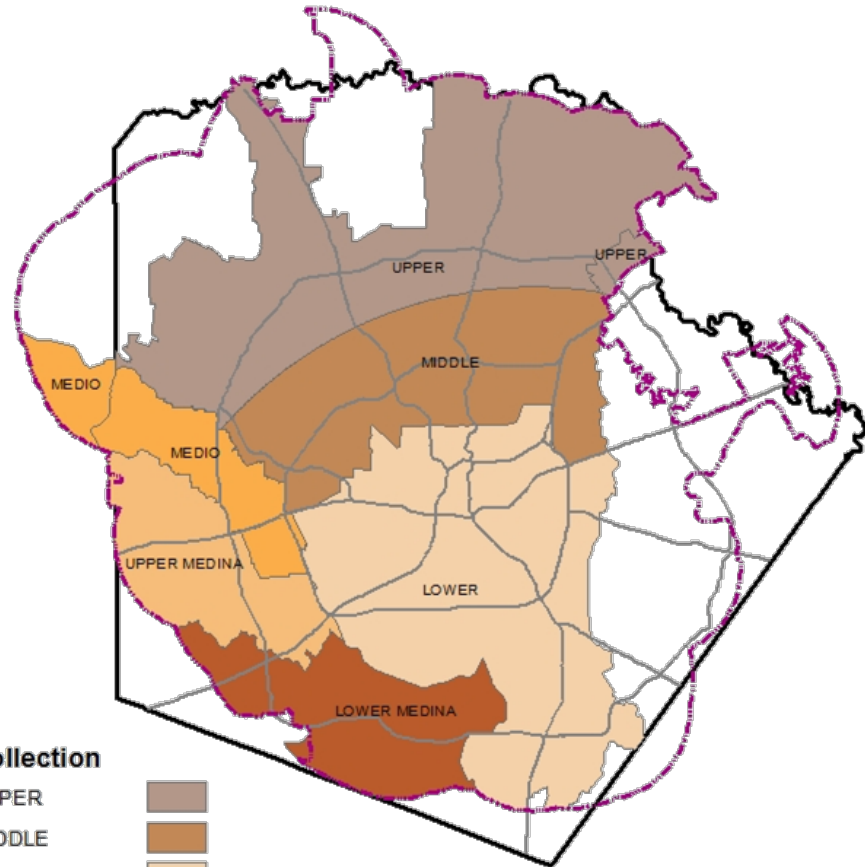
| Population | 2014 | 2023 | Change |
|---------------|-----------|-----------|----------------|
| Dos Rios/Leon | 1,474,671 | 1,682,002 | 207,331 |
| Medio | 92,266 | 113,389 | 21,123 |

| EDUs | 2014 | 2023 | Change |
|---------------|---------|---------|---------------|
| Dos Rios/Leon | 641,161 | 731,307 | 90,146 |
| Medio | 40,116 | 49,300 | 9,184 |
| Total | 681,277 | 780,607 | 99,330 |

Collection Service Areas



Existing

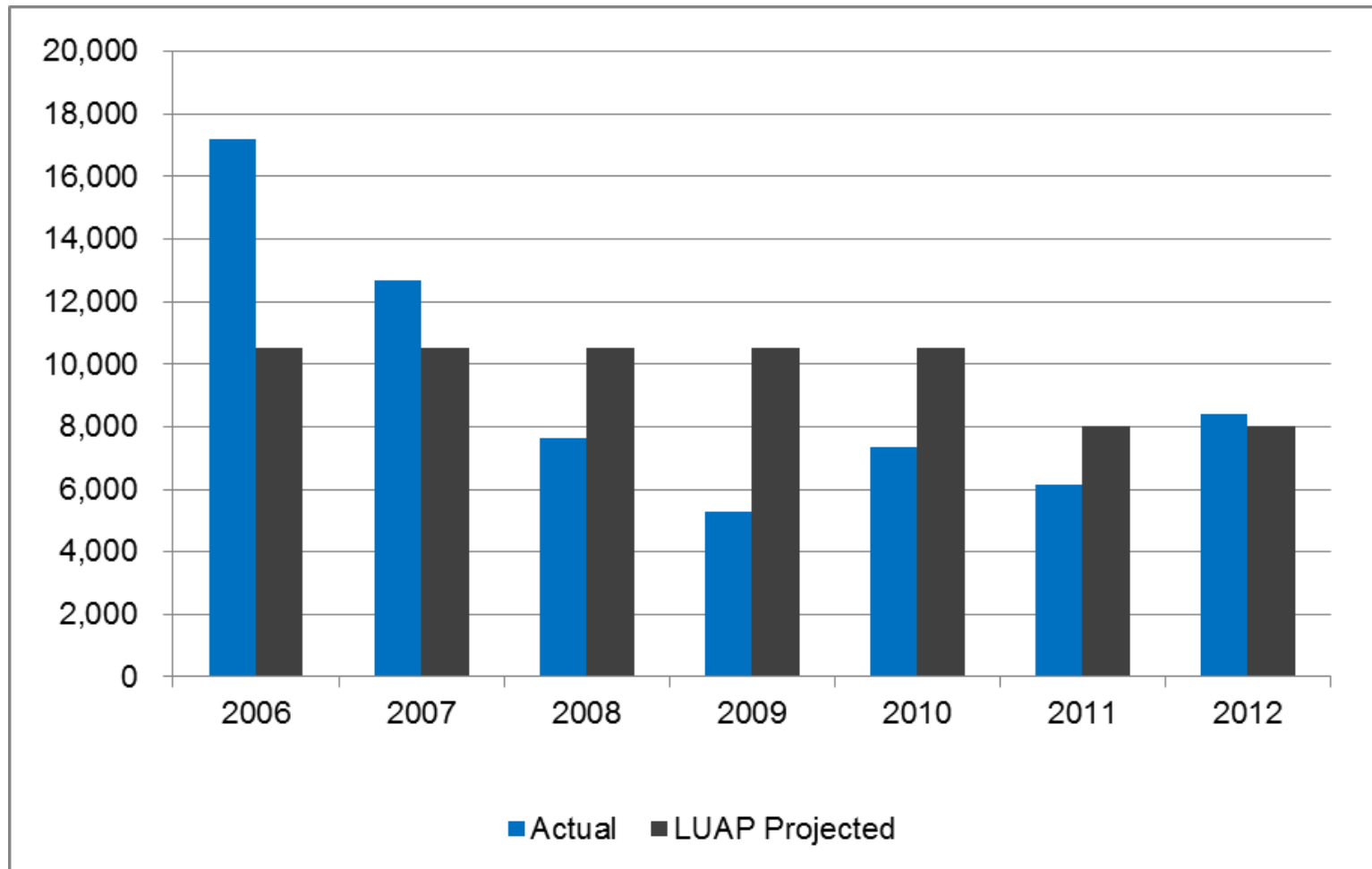


- Collection**
- UPPER
 - MIDDLE
 - LOWER
 - UPPER MEDINA
 - LOWER MEDINA
 - MEDIO
 - COSA ETJ
 - Bexar County

Wastewater Collection EDU Change

| Service Area | 2014 | 2023 | Change |
|--------------|---------|---------|---------------|
| Upper | 153,858 | 190,943 | 37,085 |
| Middle | 237,604 | 250,124 | 12,520 |
| Lower | 221,912 | 239,067 | 17,155 |
| Medio | 40,116 | 49,300 | 9,184 |
| Upper Medina | 19,184 | 38,662 | 19,478 |
| Lower Medina | 8,602 | 12,512 | 3,910 |

Historical Water EDU Change



LUAP Summary

| | 2011 – 2020 | 2014 – 2023 |
|------------|-------------|-------------|
| Water | 80,343 | 95,817 |
| Wastewater | 107,075 | 99,330 |

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