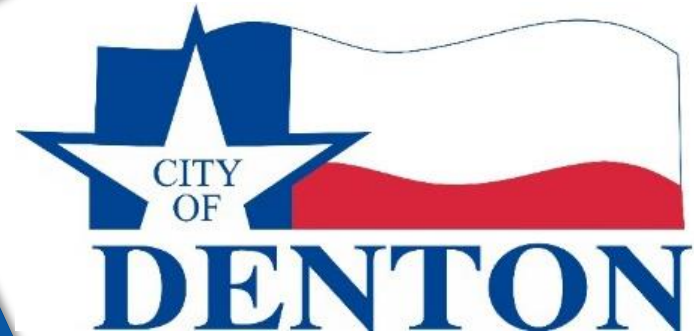


Water Master Plan Project Update

City of Denton



Kimley»Horn

Kimley»Horn

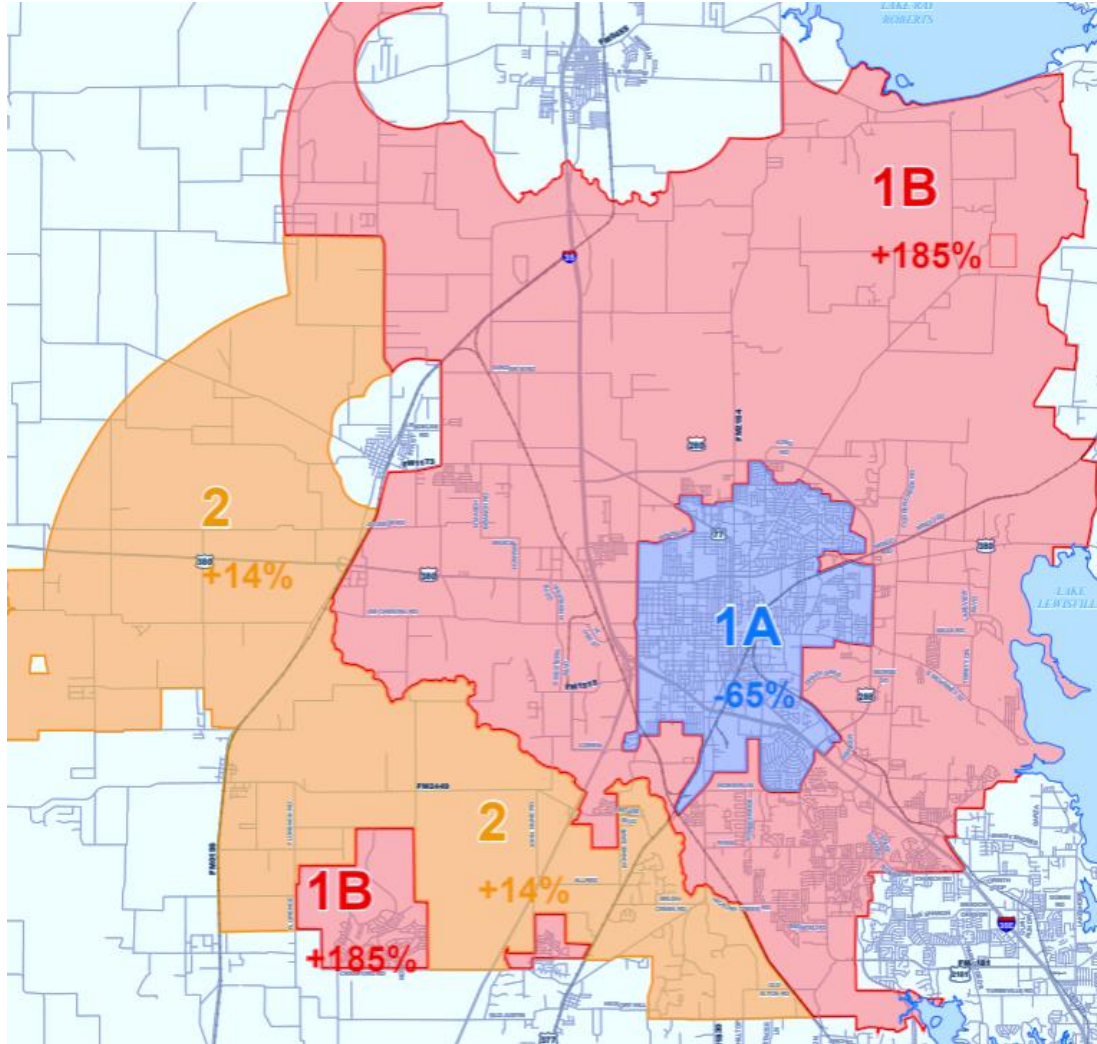
BACKGROUND

- Current Water Master Plan adopted in December 2018
 - Used as a planning tool for Water Utility
 - Details water system expansion needed to accommodate growth
 - Acts as an outline for future water resource needs
 - Includes growth projections and 25-year CIP
 - The Water Master Plan is updated regularly out of necessity
 - 2018 WMP estimated higher infill and lower growth in the outer regions

OBJECTIVE

- Imbalanced growth trends compared to 2018 projections have caused additional needs in:
 - Treatment Capacity
 - Conveyance Infrastructure
- Overall growth rate has exceeded projections, along with pockets of high growth in Western and Northern areas:
 - Initiatives for Industrial land use South of US-380 and West of I-35
 - Hunter and Cole Developments (2020)

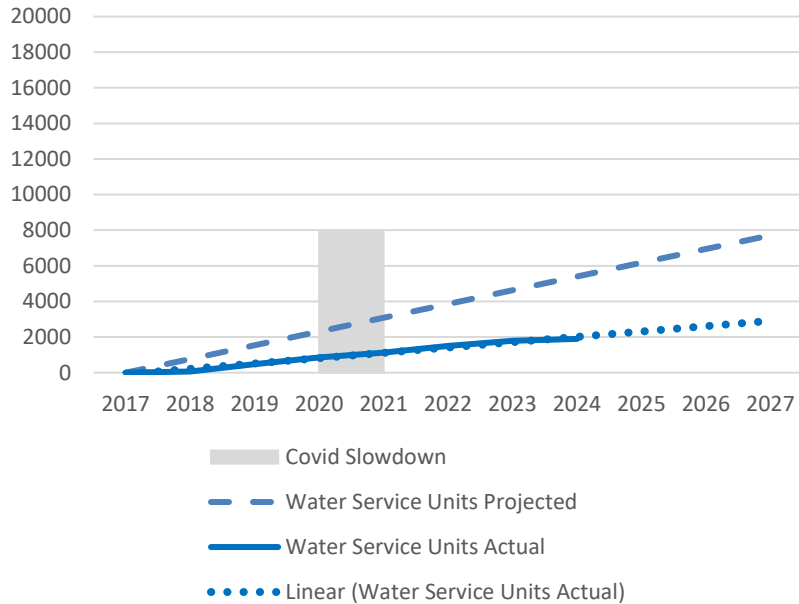
GROWTH TREND HEAT MAP



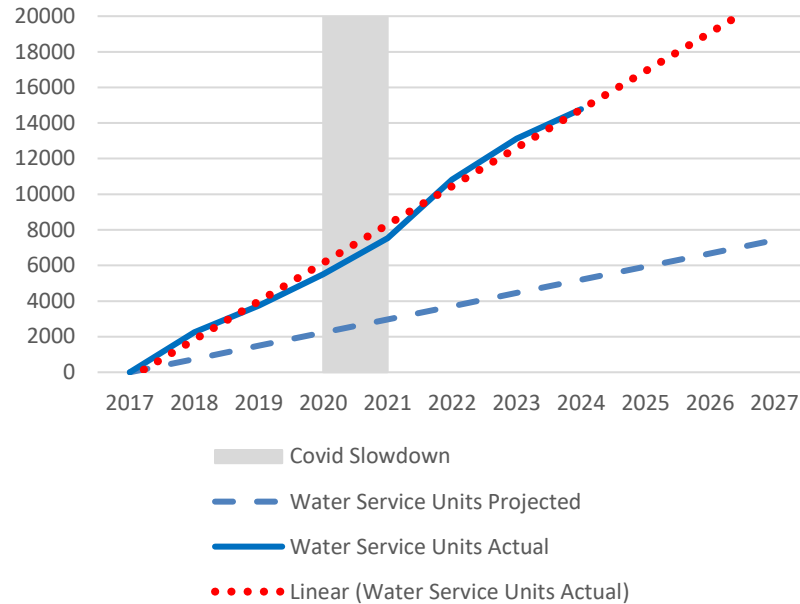
- Development trends between 2018 and today:
 - Infill is occurring more slowly than projected
 - Overall population and growth in the outer regions are occurring much faster than projected
 - Additional treatment capacity & conveyance infrastructure to accommodate the population growth
- Color Key
 - Below Projections
 - Above Projections
 - Far Above Projections

KEY POINTS

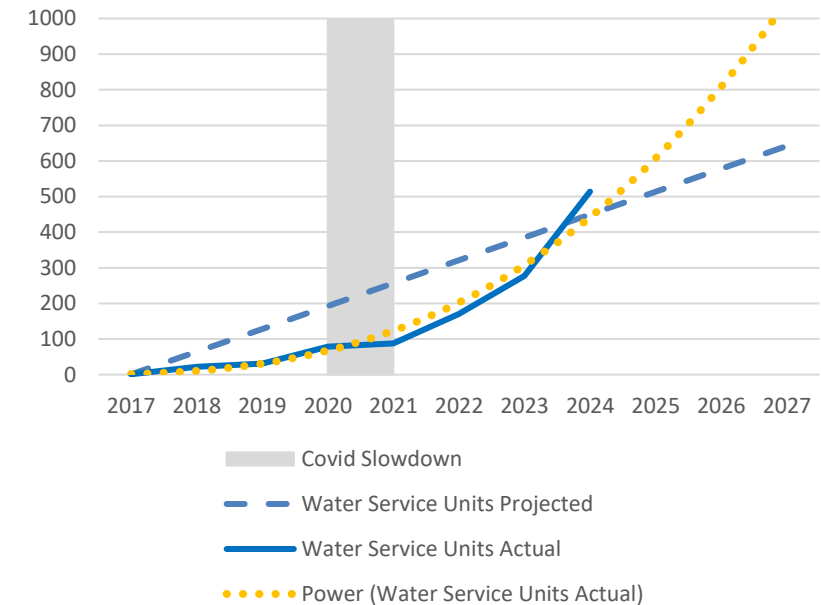
**Water Service Unit - Service Area 1A:
2018-2027 (-65%)**



**Water Service Unit - Service Area 1B:
2018-2027 (+185%)**

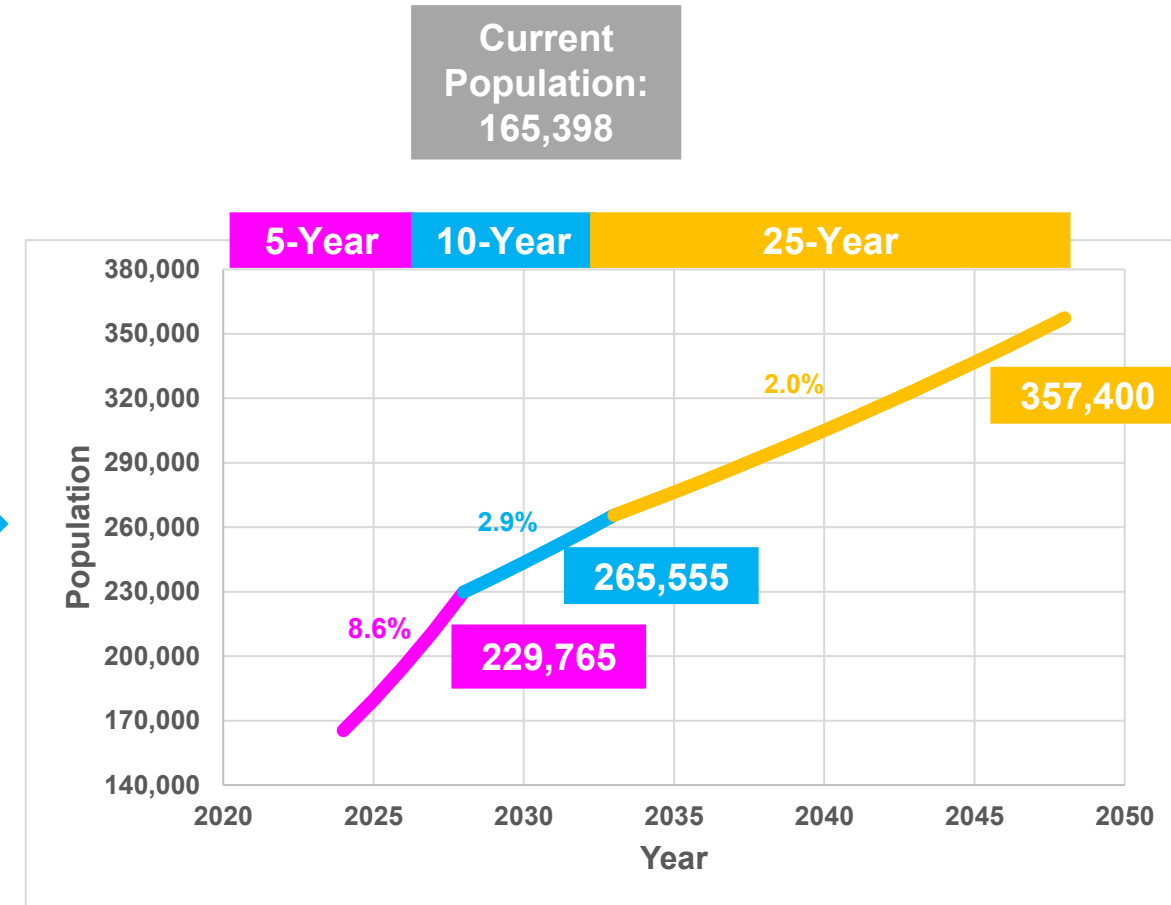
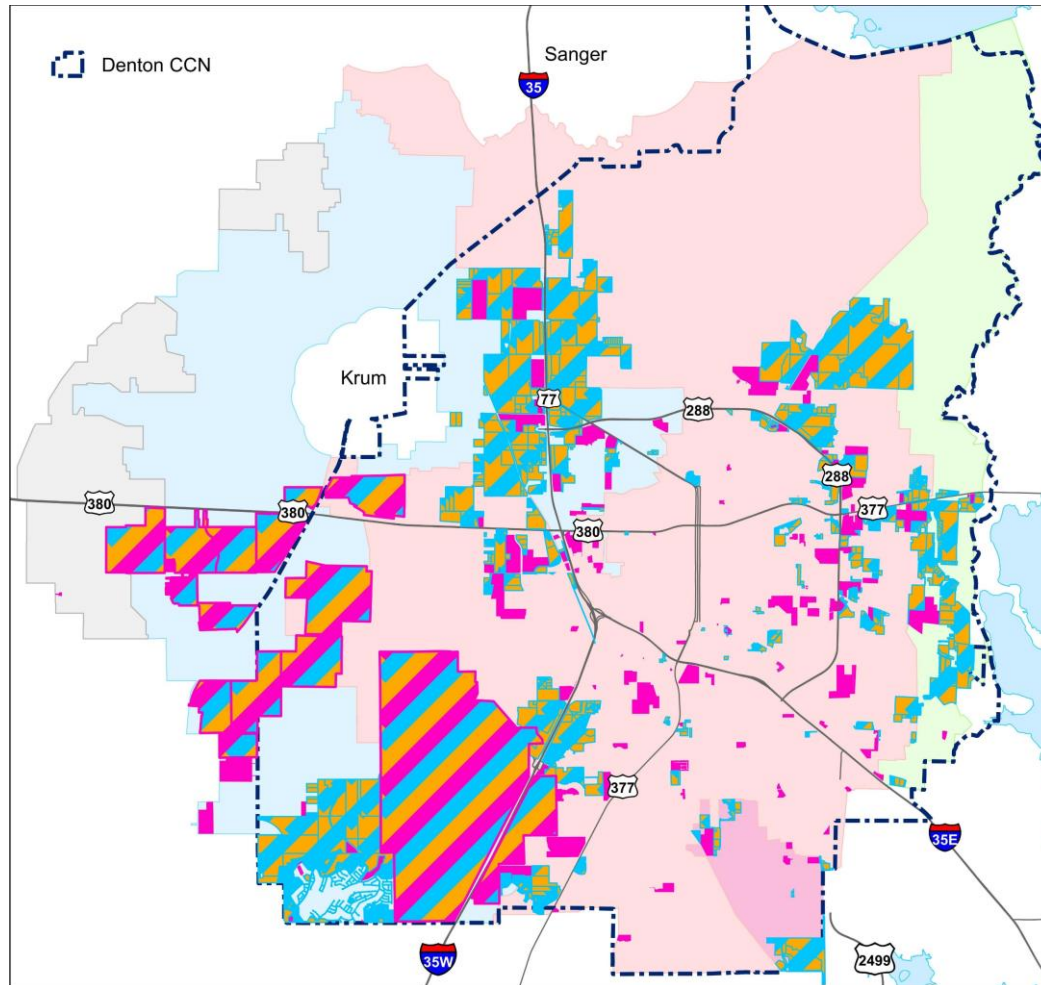


**Water Service Unit - Service Area 2: 2018-
2027 (+14%)**



- Each Service Area has seen different growth rates
 - SA 1A: 65% below projections (linear trend)
 - SA 1B: 185% above projections (linear trend)
 - SA 2: 14% above projections with heavy recent growth (power trend)
 - Growth in 2025 is aggressive and consistent with the trend shown through 2024

GROWTH PROJECTIONS



METHODOLOGY

- Incorporated existing and planned developments
 - Existing developments by using existing customer water meter data
 - The 5-year CIP projects are to serve incoming single and multiphase developments or to remedy existing deficiencies.
 - The 10-year CIP projects are to serve continuing multiphase developments.
 - The 25-year CIP projects are to serve continuing multiphase developments.
- Aligns with the Comprehensive Plan by utilizing the future land use categories shown within the Plan.
- The population numbers were taken from the North Central Texas Council of Governments.
- The Master Plan changes are required to adapt the Treatment and Conveyance systems to the City's evolving needs.
 - Changing needs are caused by the higher population growth projections the city is seeing.
 - Water efforts must meet the Texas Commission on Environmental Quality design and permitting requirements

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CAPITAL IMPROVEMENT PLAN

2018 WMP Projected Cost

	5-Yr	10-Yr	25-Yr
Conveyance	\$43M	\$44M	\$69M
Treatment	-	\$89M	-
Supply	-	-	-
Total	\$43M	\$133M	\$69M

Grand Total: \$245M

WMP update Projected Cost

	5-Yr	10-Yr	25-Yr
Conveyance	\$313M	\$271M	\$40M
Treatment	\$196M	\$98M	\$196M
Supply	-	\$10M	-
Total	\$509M	\$379M	\$236M

Grand Total: \$1.124B

NEXT STEPS

- September 29 – PUB Consideration
- September 30 – Proposed adoption by City Council



Questions