

# 2021 REGION F WATER PLAN

July 20, 2017



# DRAFT NON-MUNICIPAL WATER DEMANDS



# Irrigation Water Demand Projection Methodology

- Baseline methodology is the average of the most recent five-years of water use estimates held constant between 2020 and 2070.
- Counties = total groundwater availability over the planning period < the groundwater portion of the baseline = the draft irrigation projections will begin to decline in 2030 or later, to be compatible with groundwater availability volumes.

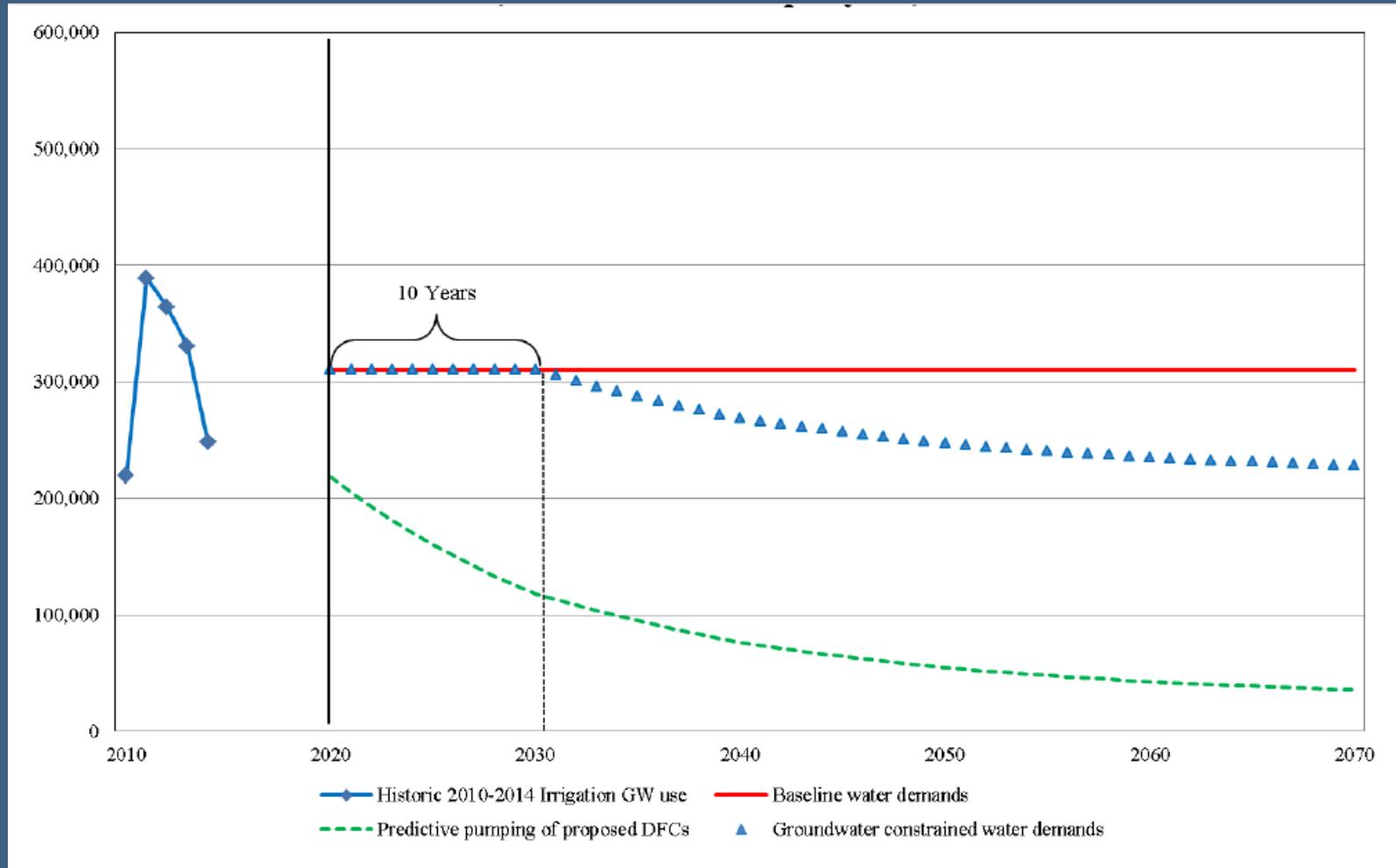


# Irrigation Water Demand Projection Methodology

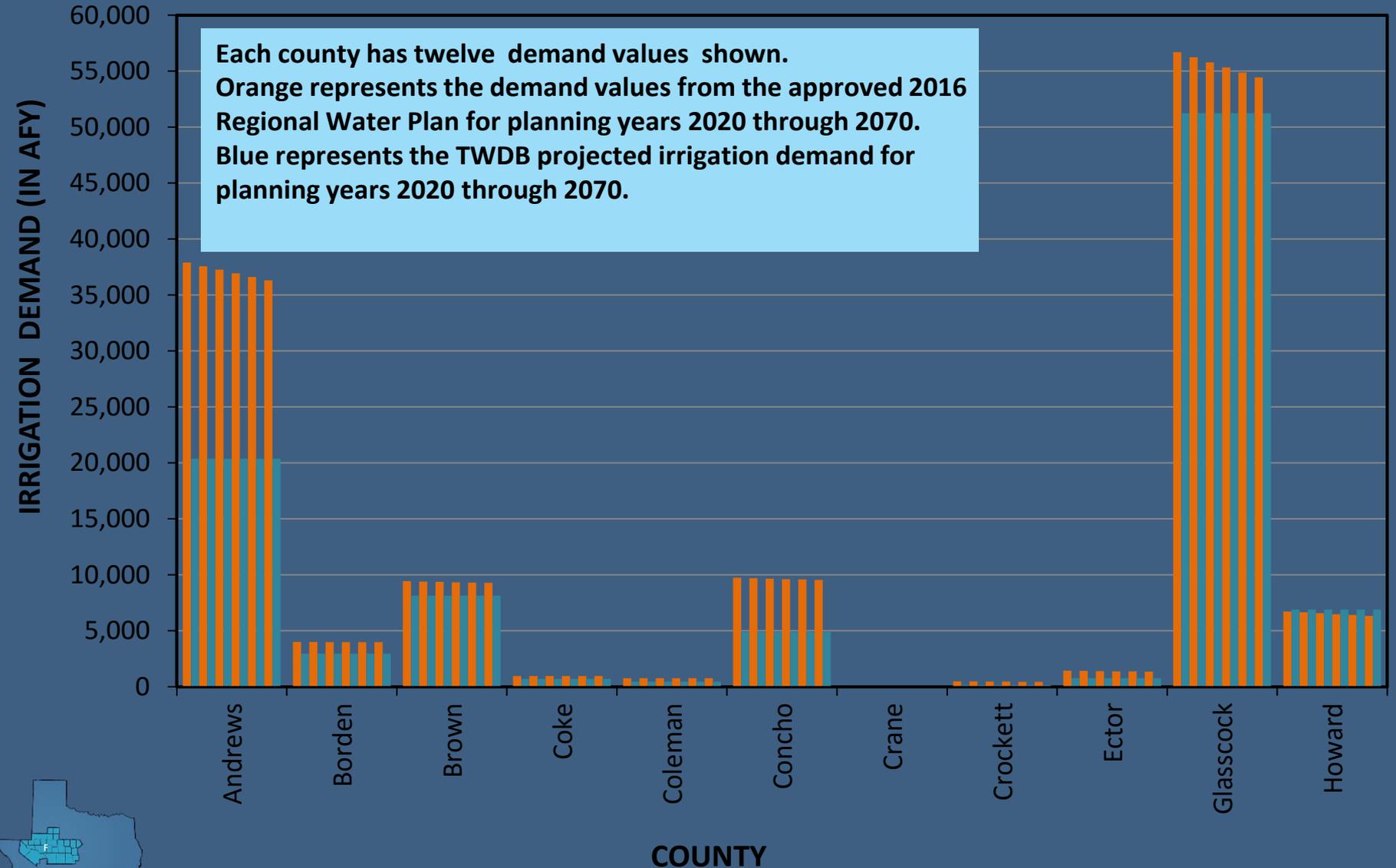
- Groundwater constrained counties is where the groundwater baseline water demand projections exceeds the projected groundwater resource.
- In this scenario, irrigation water demand projections will follow these guidelines:
  - ❖ 2020 demand volume will be held constant for at least one decade.
  - ❖ 2030 demand volumes will parallel the trends of the MAG or the predictive pumping volumes or new DFC's if annual groundwater availability is  $<$  groundwater baseline projections. (see example 1). Impacts Scurry County.



# Groundwater 'constrained' county

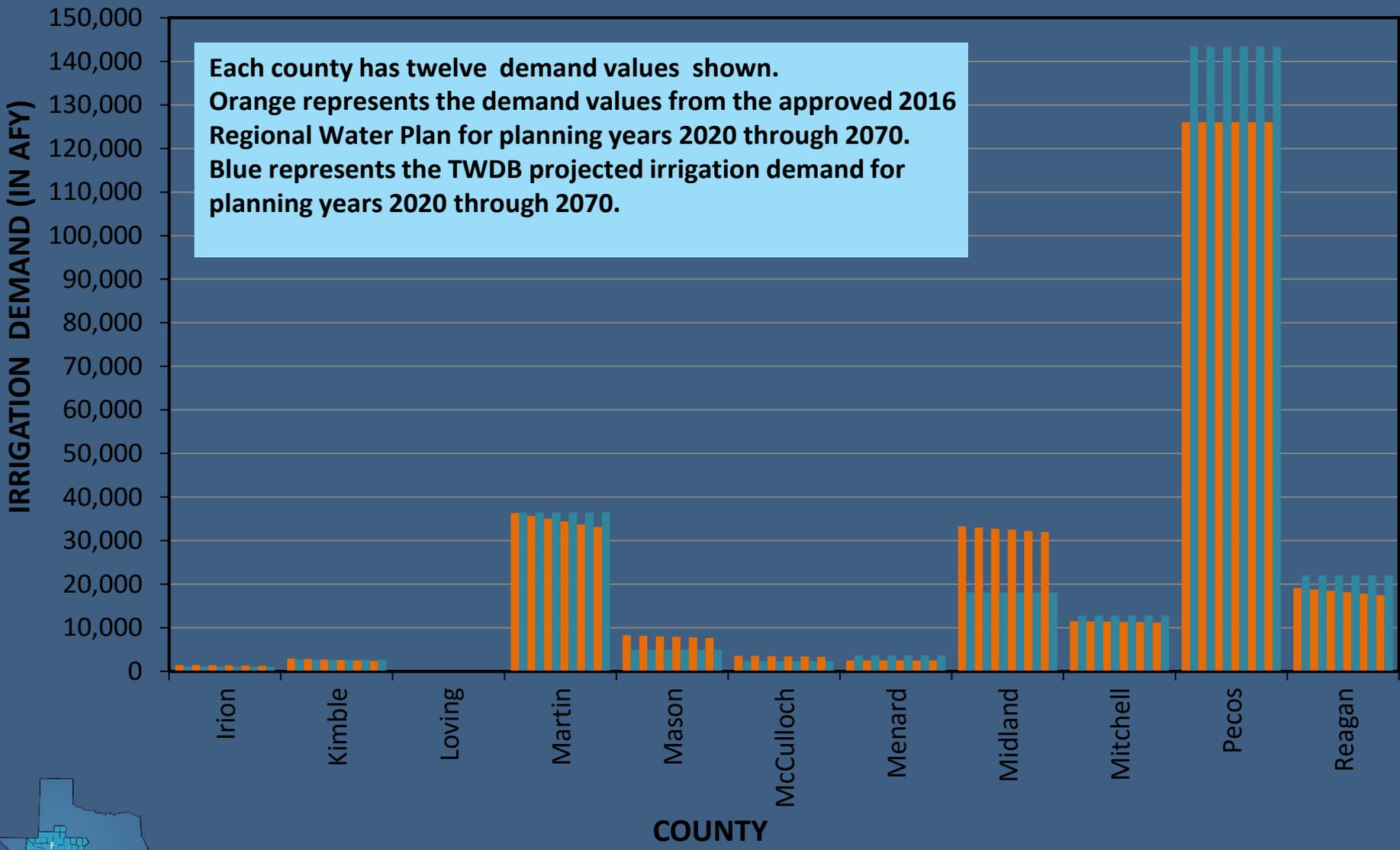


# Irrigation Water Demand Projections

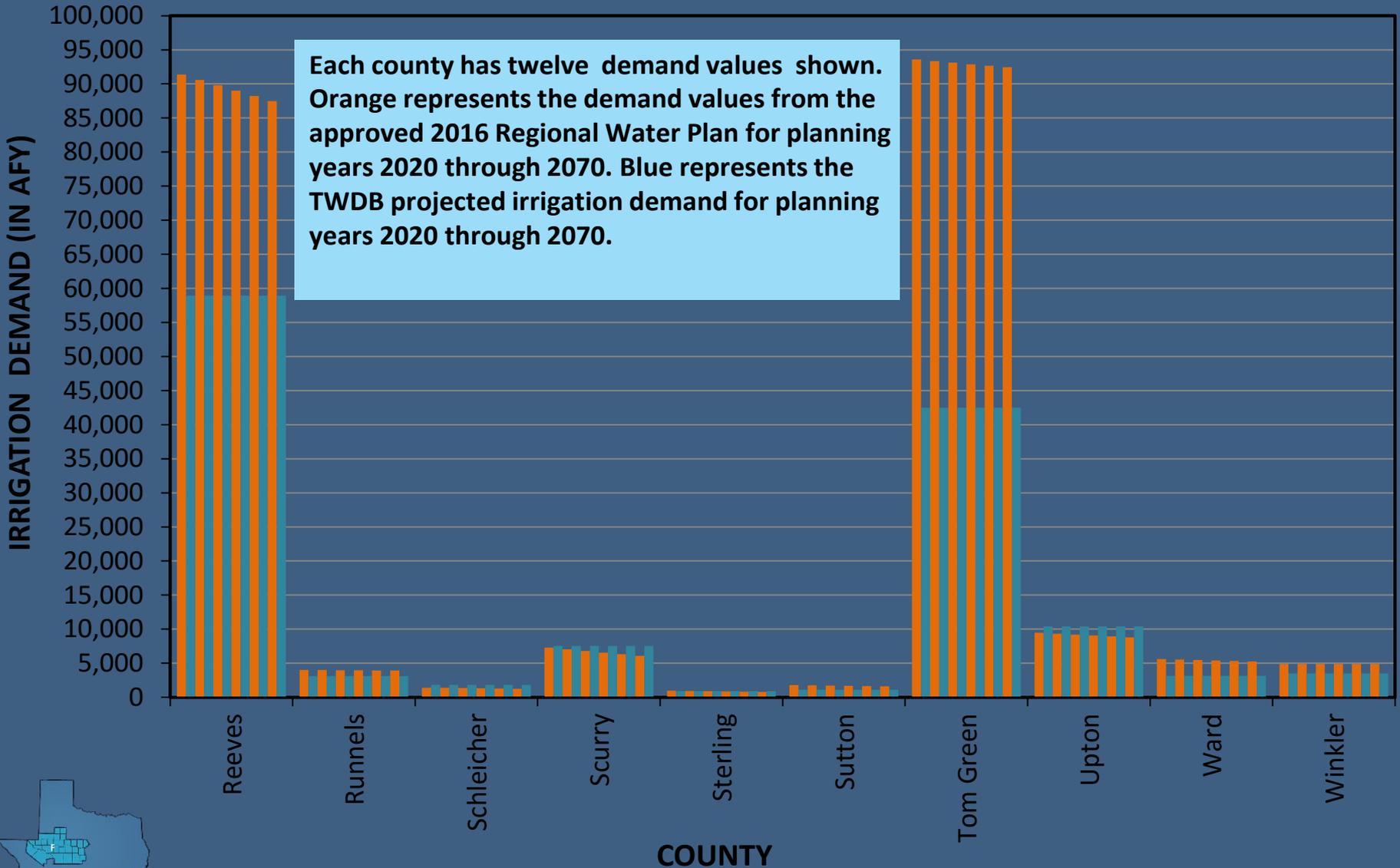


# Irrigation Water Demand Projections

Each county has twelve demand values shown.  
 Orange represents the demand values from the approved 2016 Regional Water Plan for planning years 2020 through 2070.  
 Blue represents the TWDB projected irrigation demand for planning years 2020 through 2070.



# Irrigation Water Demand Projections

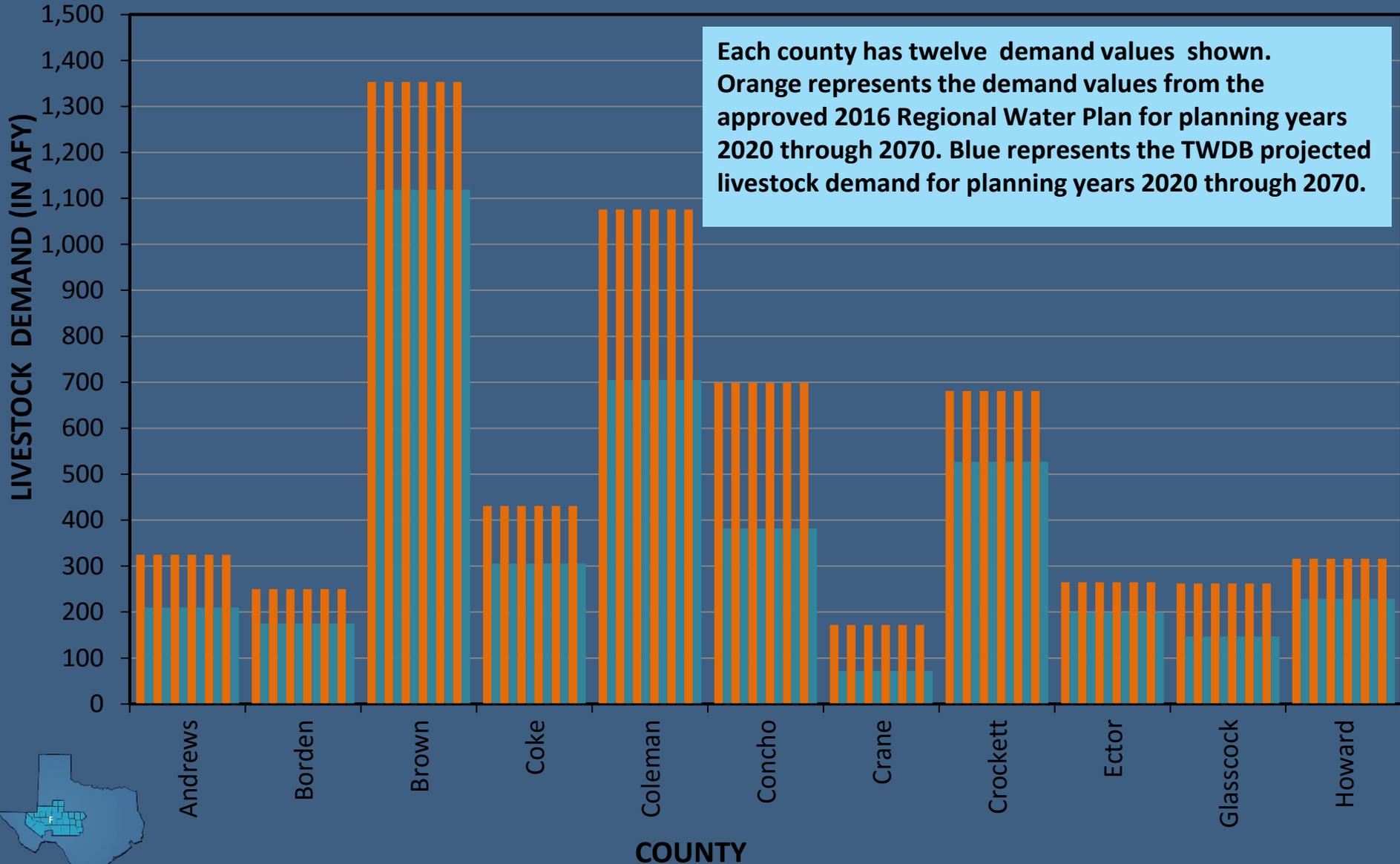


# Livestock Water Demand Projection Methodology

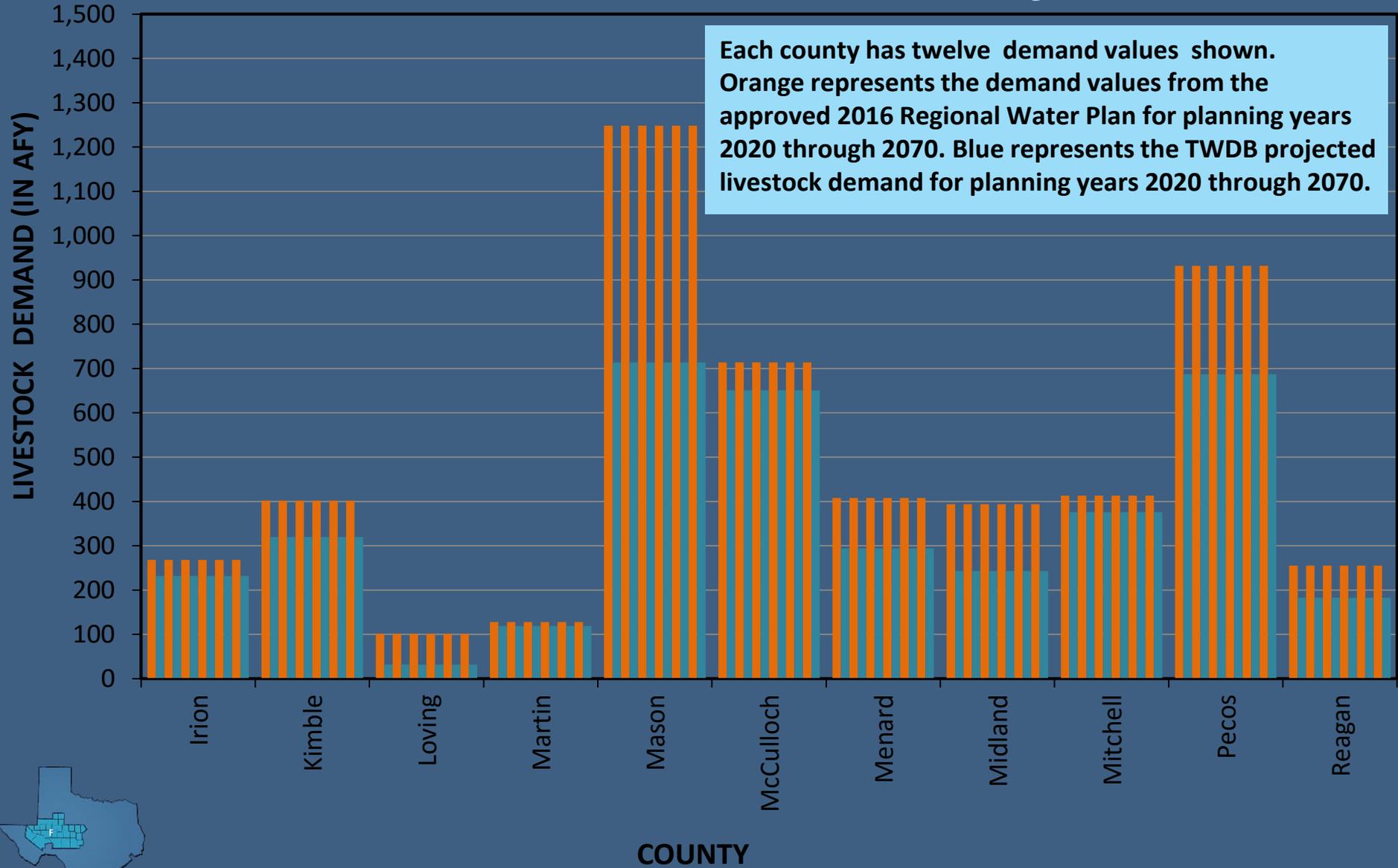
- Water use estimates based on the following combination of data:
  - Water-use survey data
  - TWDB estimates based on
    - ❖ Livestock inventory data from the National Agricultural Statistical Service (NASS)
    - ❖ Texas Department of Agriculture
    - ❖ Per head water use consumption by animal class
- Only county with projected increase = Upton



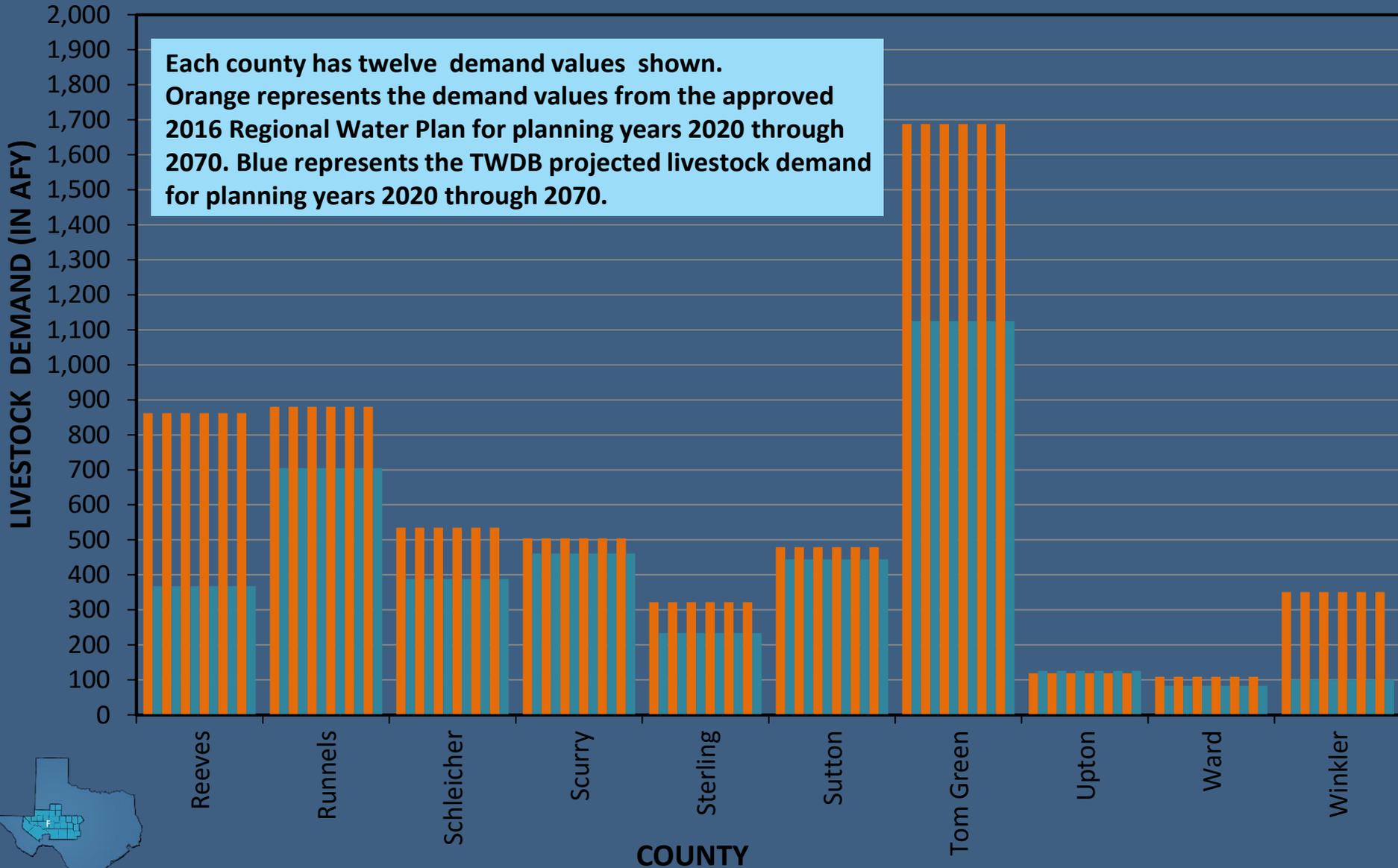
# Livestock Water Demand Projections



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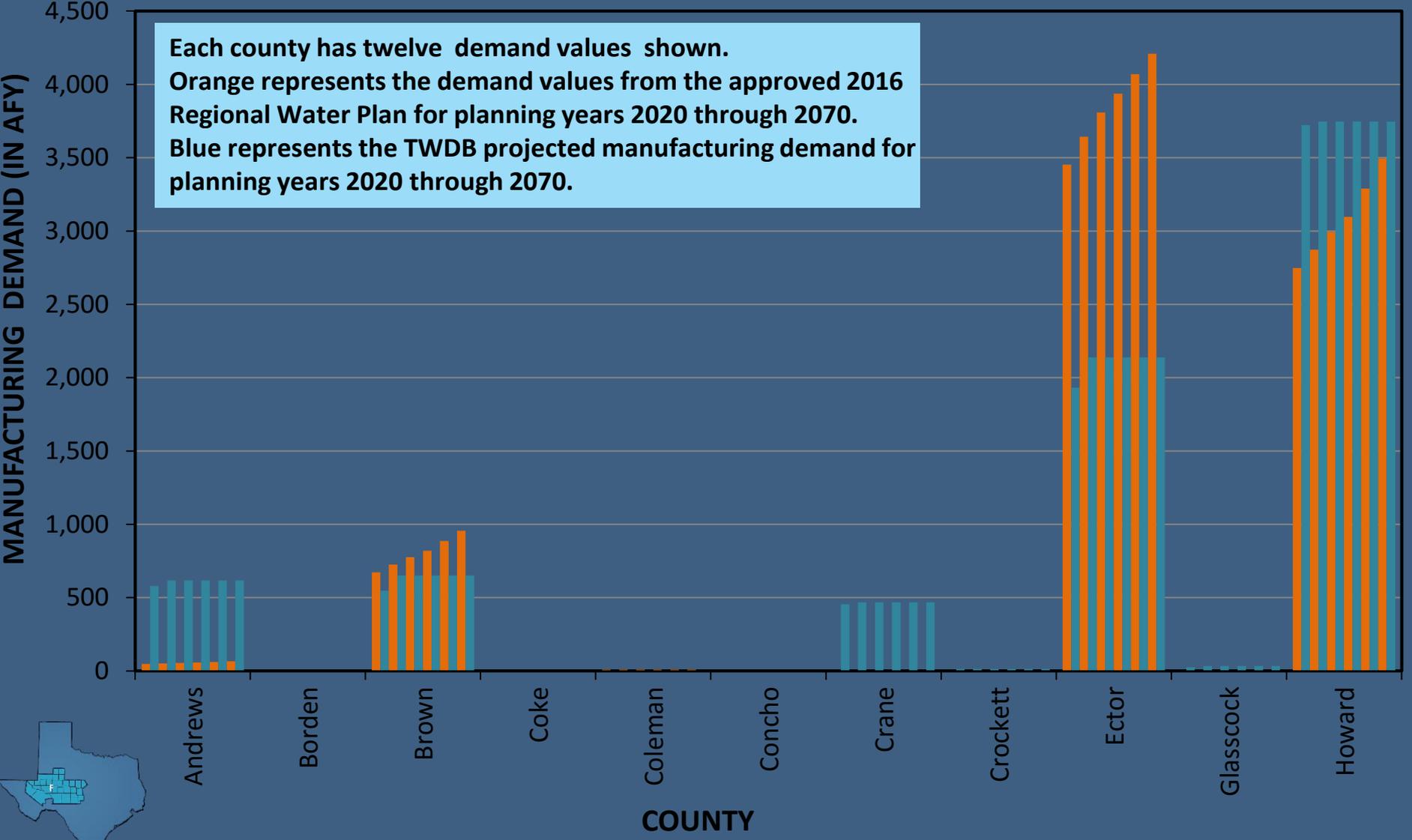
# Manufacturing Water Demand Projection Methodology

- 2020 water demand projection will be based on the highest county aggregated manufacturing water use in the most recent five years of data from the annual water use survey.
- 2020 to 2030 = most recent 10-yr. projections from employment growth from TWC.
- 2040 through 2070 = use held constant.

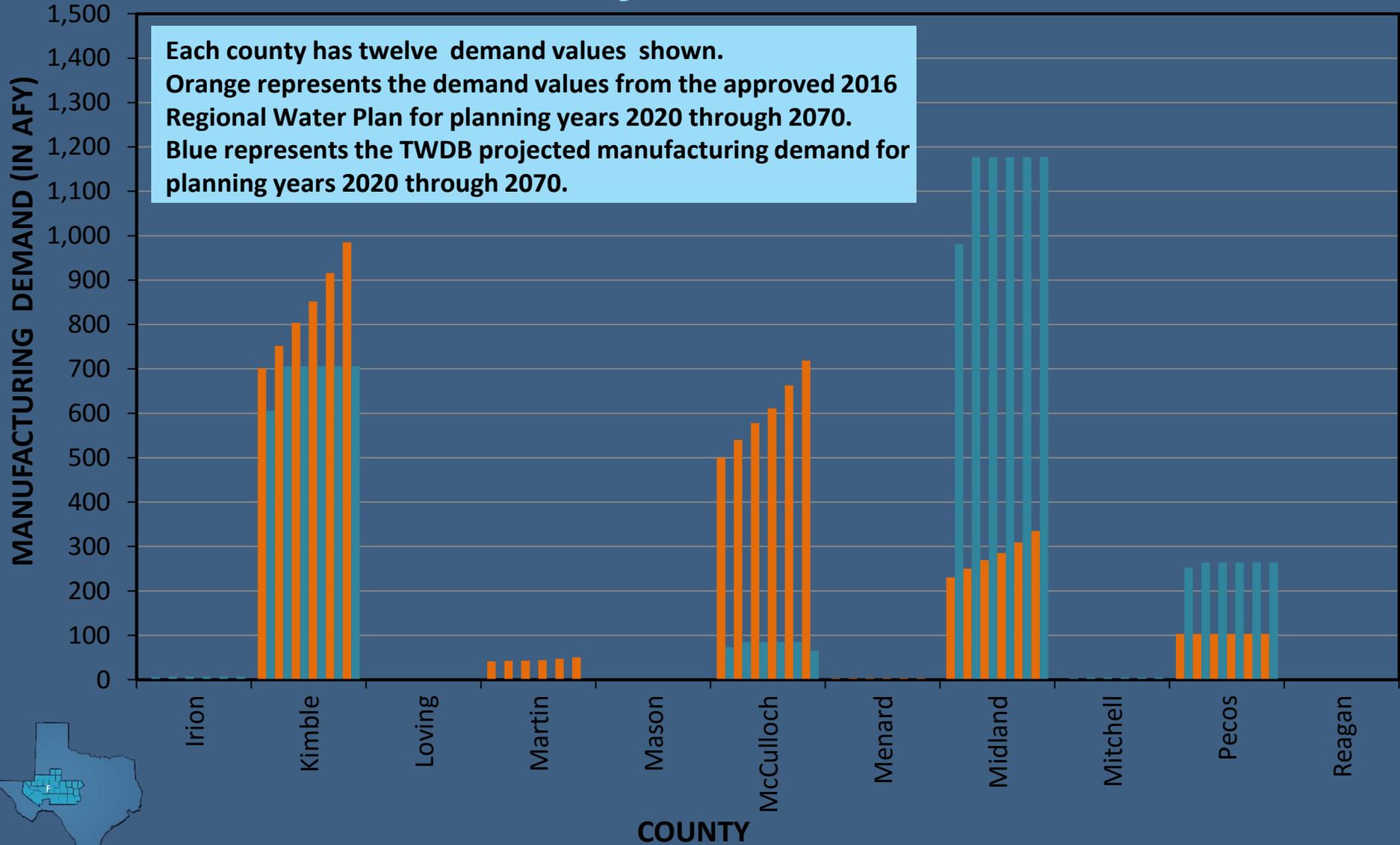


# Manufacturing Water Demand Projections

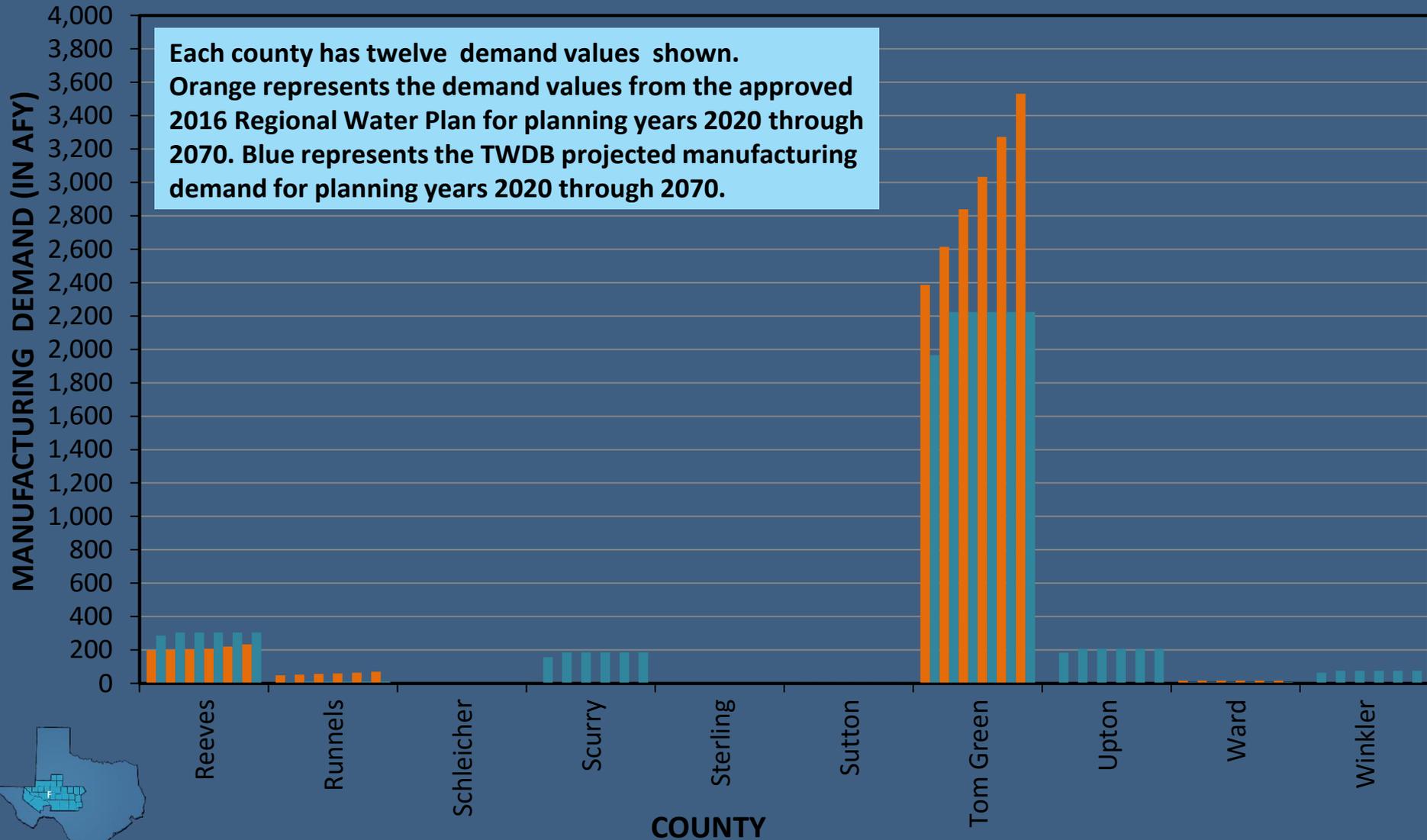
Each county has twelve demand values shown.  
 Orange represents the demand values from the approved 2016 Regional Water Plan for planning years 2020 through 2070.  
 Blue represents the TWDB projected manufacturing demand for planning years 2020 through 2070.



# Manufacturing Water Demand Projections



# Manufacturing Water Demand Projections

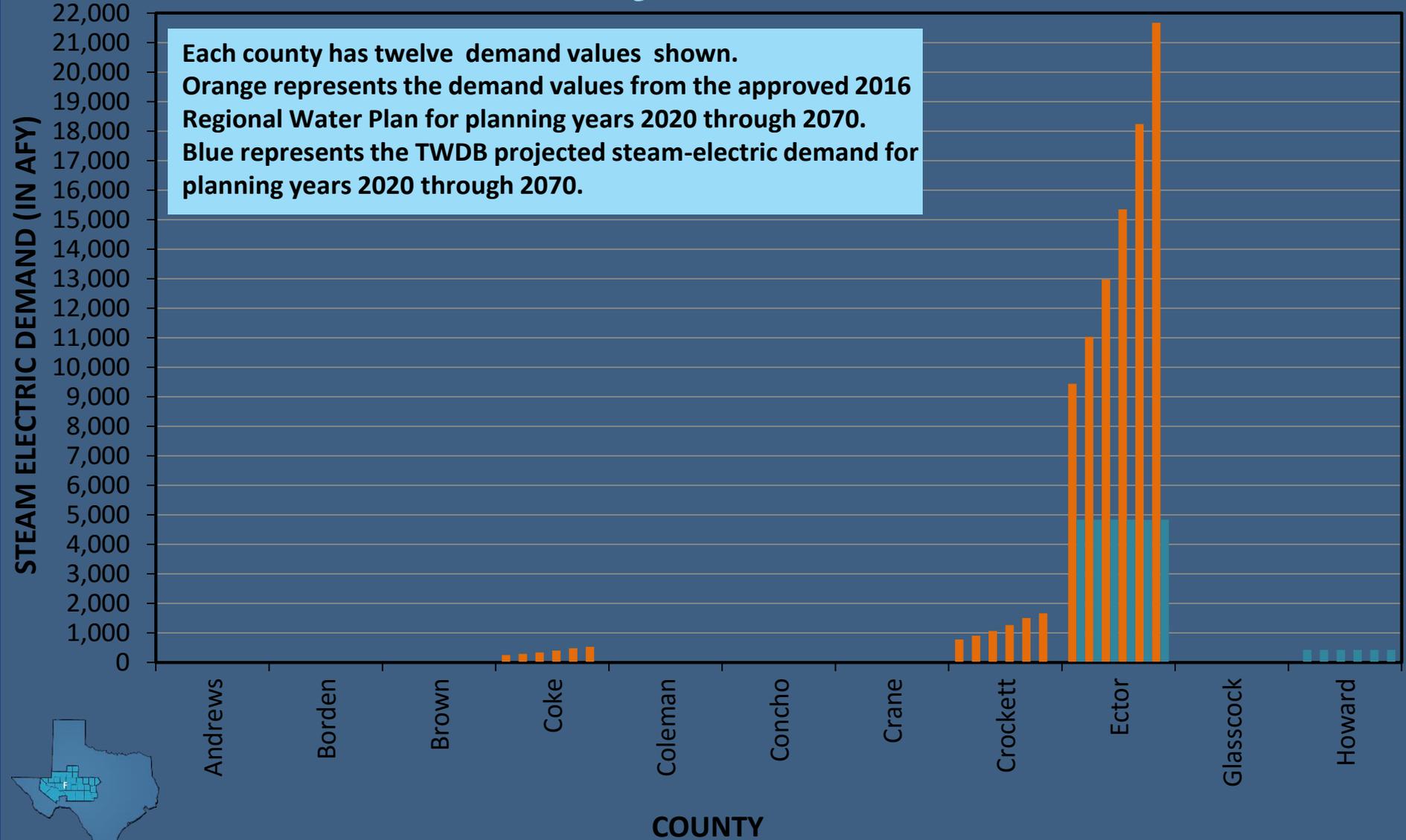


# Steam-Electric Power Water Demand Projection Methodology

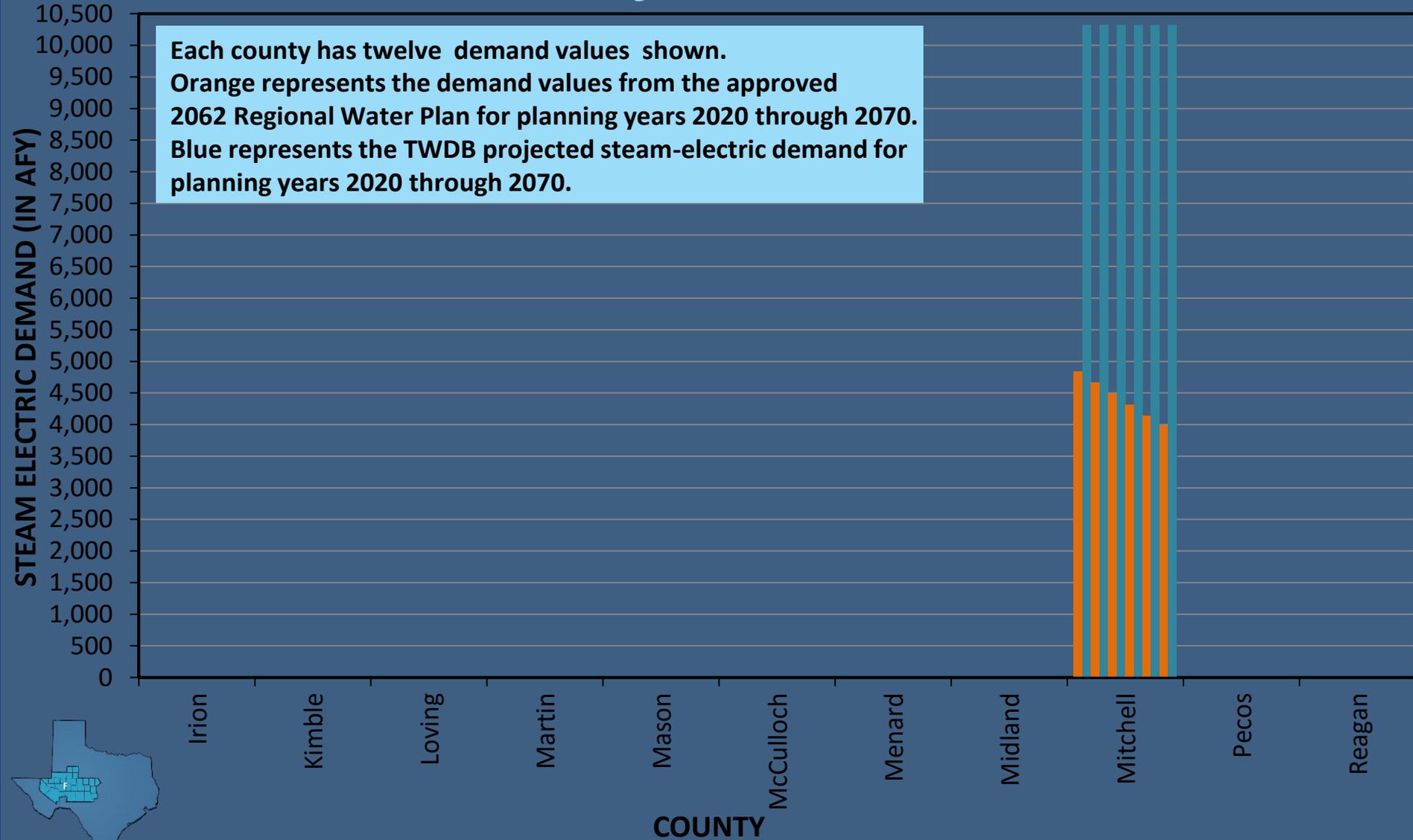
- 2020 demand projections based on the highest county aggregated SEP water use in the most recent five years of reported data.
- Future facilities listed in state & federal reports will be added to the demand projections from operation date to 2070.
- Facilities scheduled to retire will be subtracted.



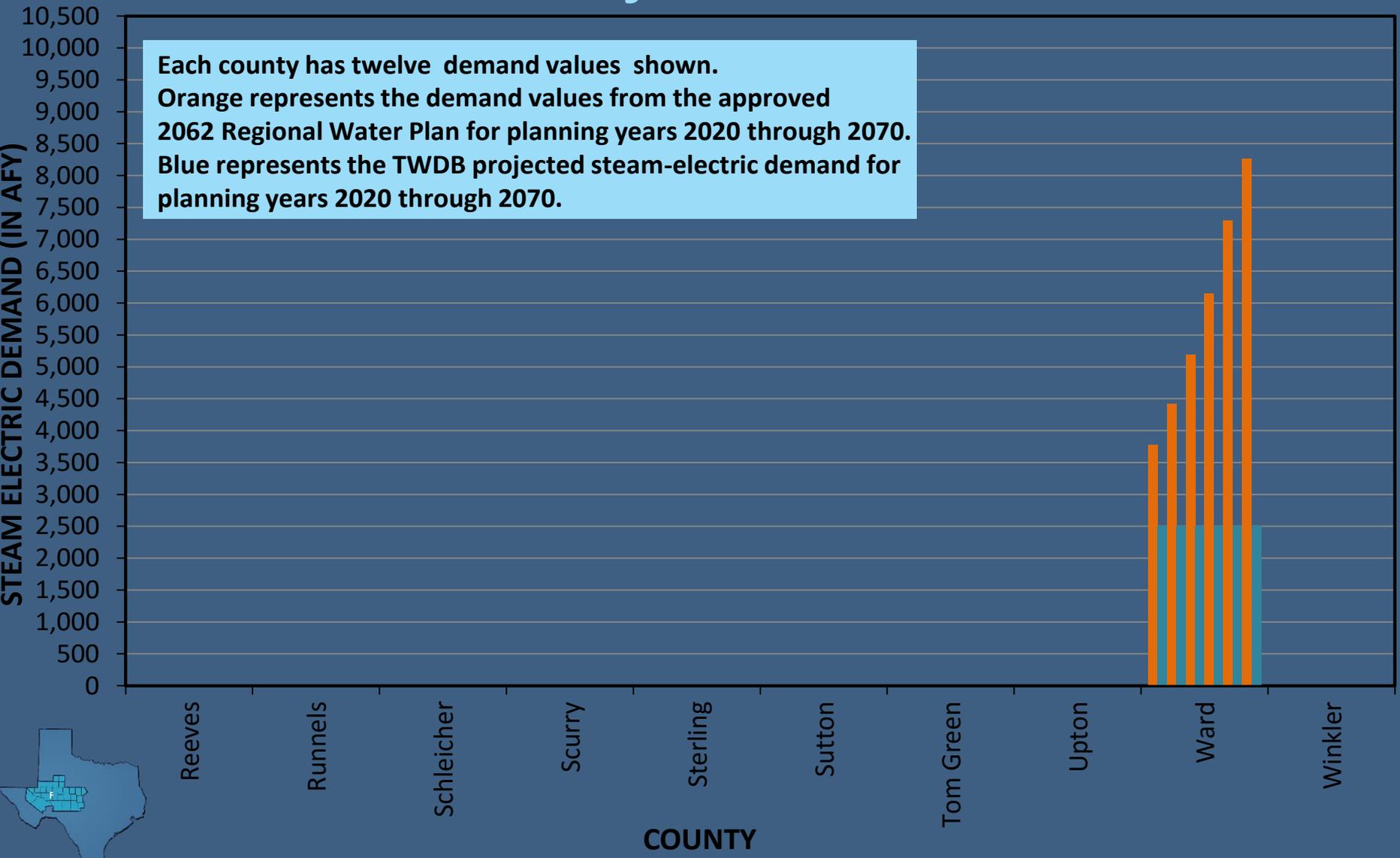
# Steam-Electric Power Water Demand Projections



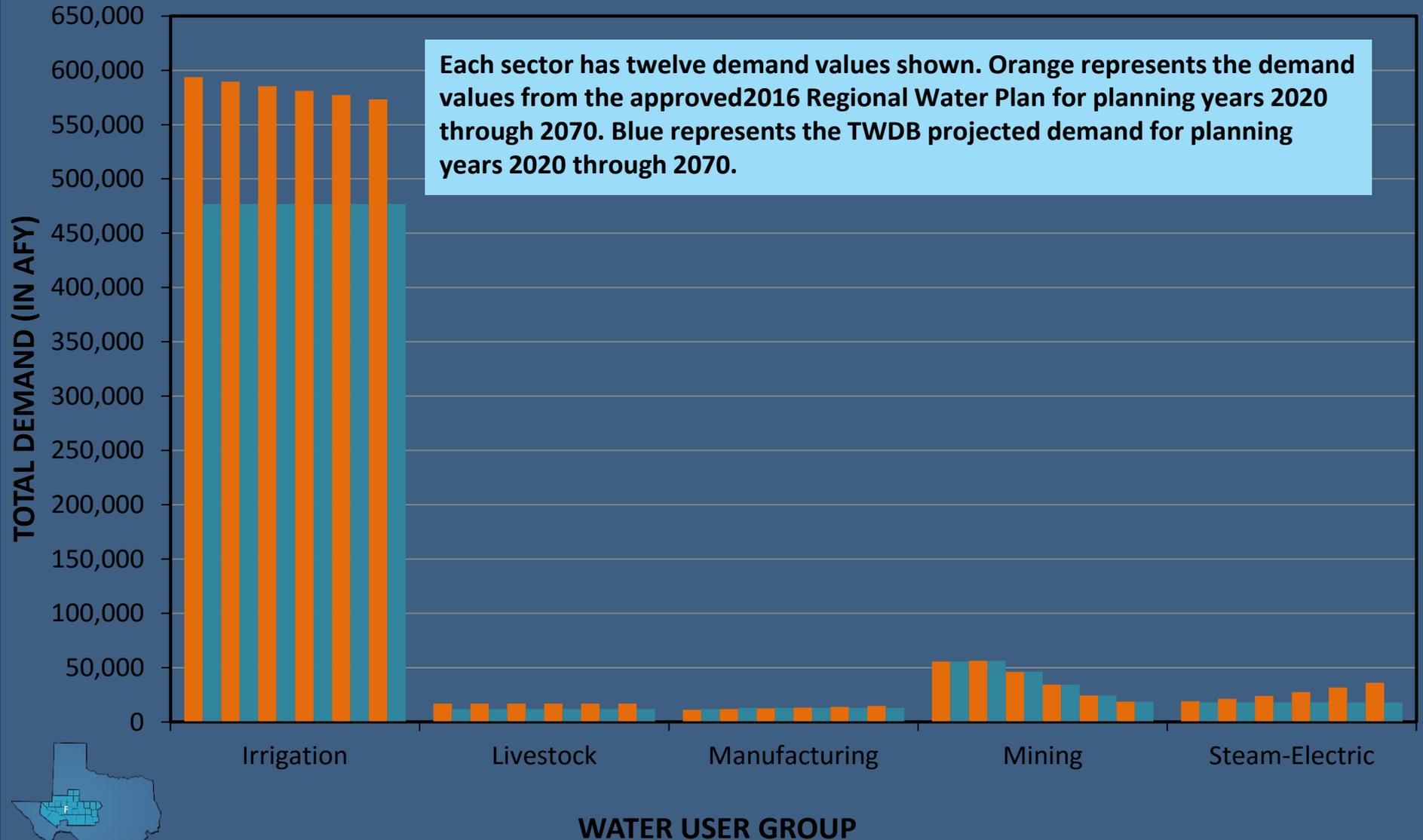
# Steam-Electric Power Water Demand Projections



# Steam-Electric Power Water Demand Projections



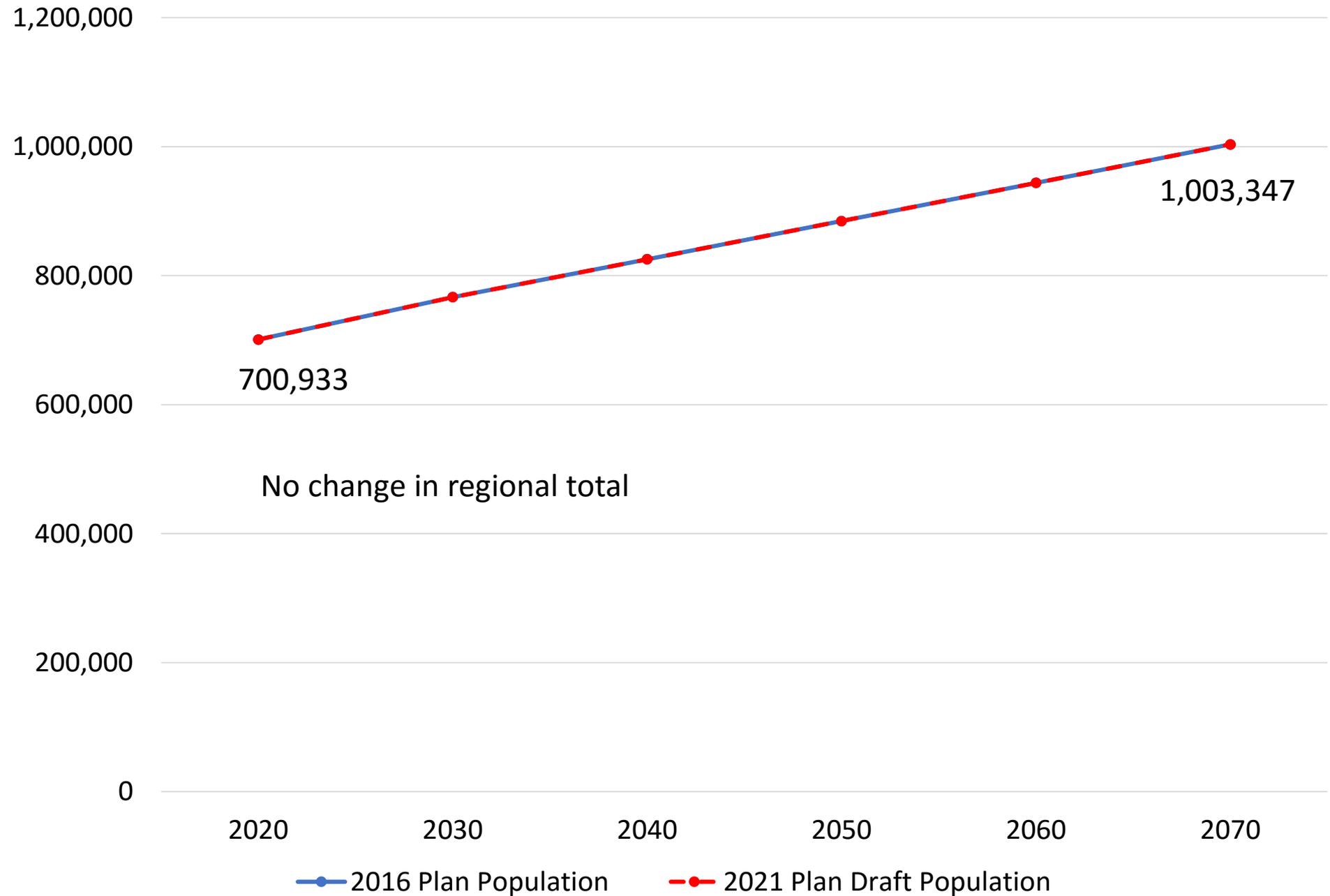
# Regional Water Demand Projections



# DRAFT POPULATION AND MUNICIPAL DEMANDS

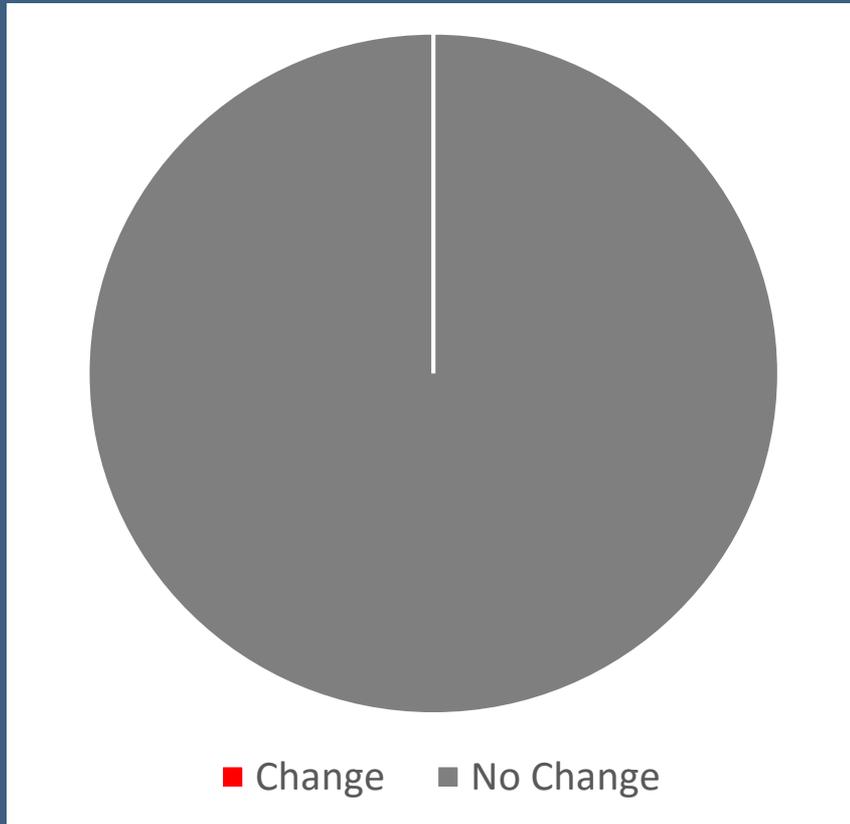


# Region F Population Projections

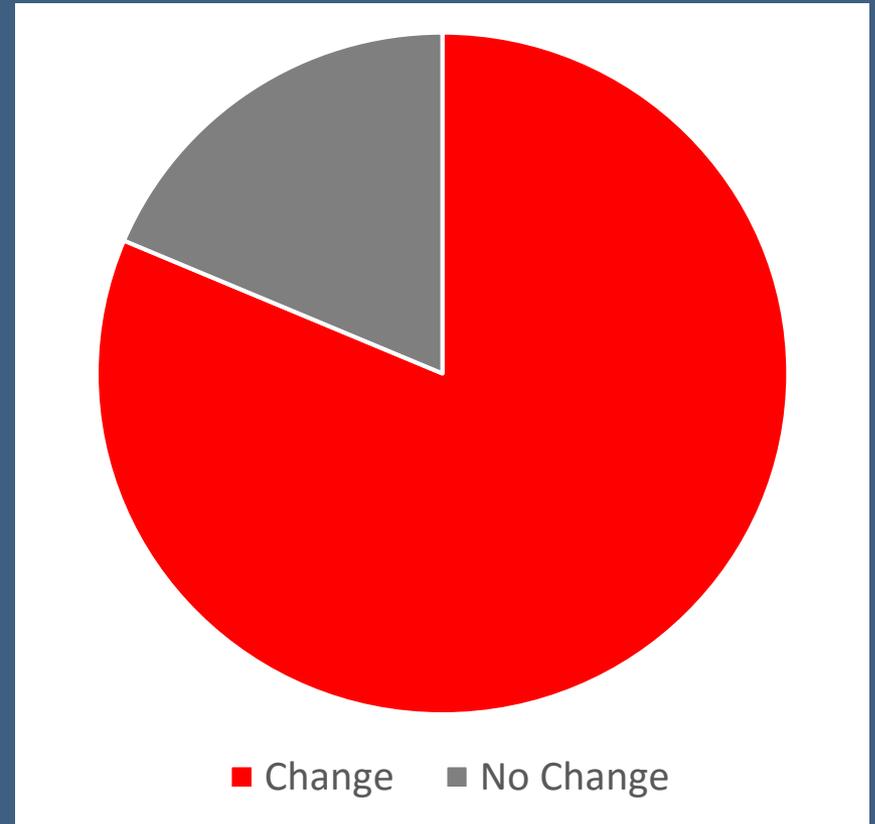


# Population Shifts from Previous Plan

## Counties



## Water User Groups



81% of WUGs had population changes



# Water User Group Changes

## No longer WUGs

- Ector County Utility District

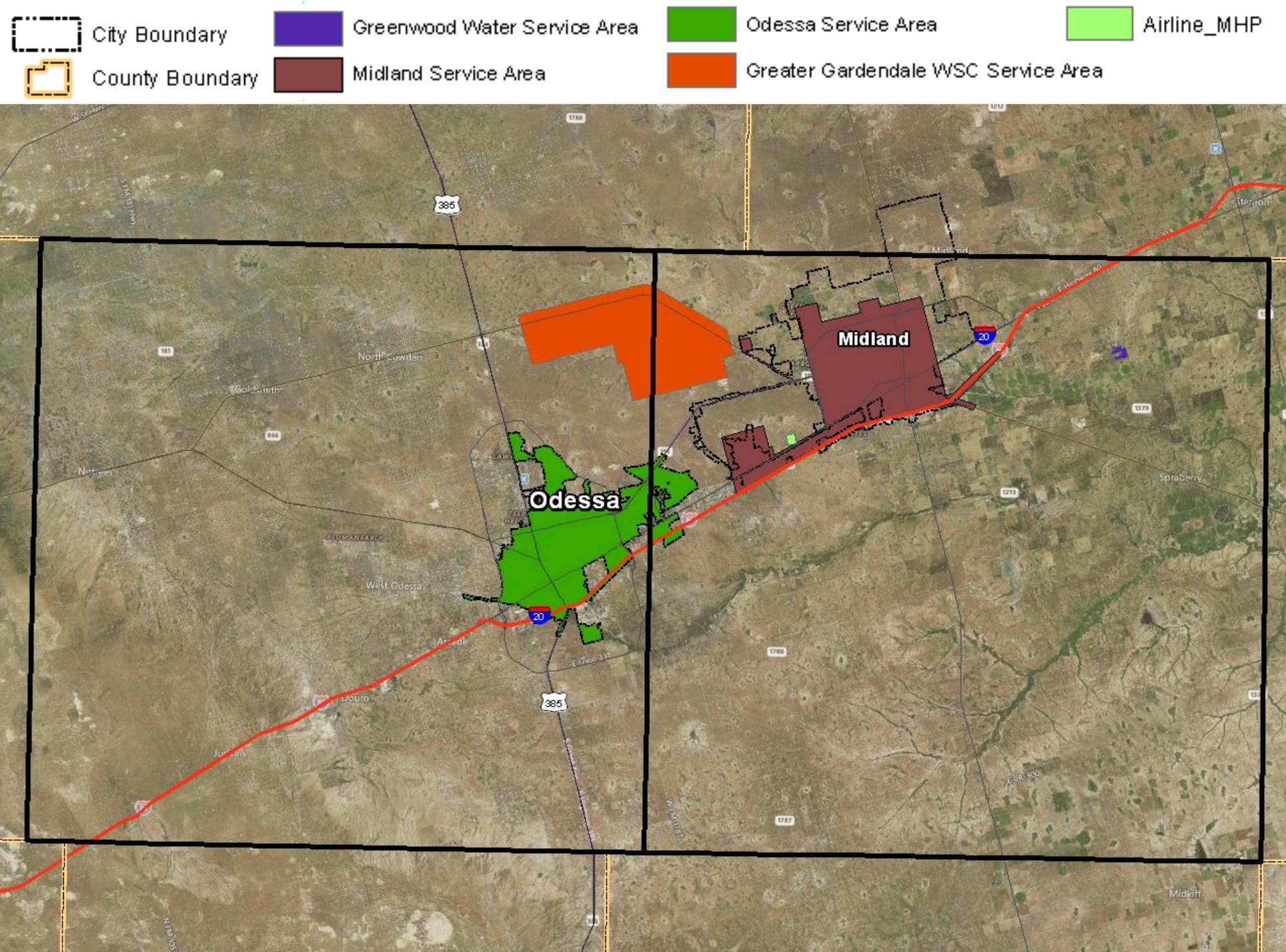
## New WUGs

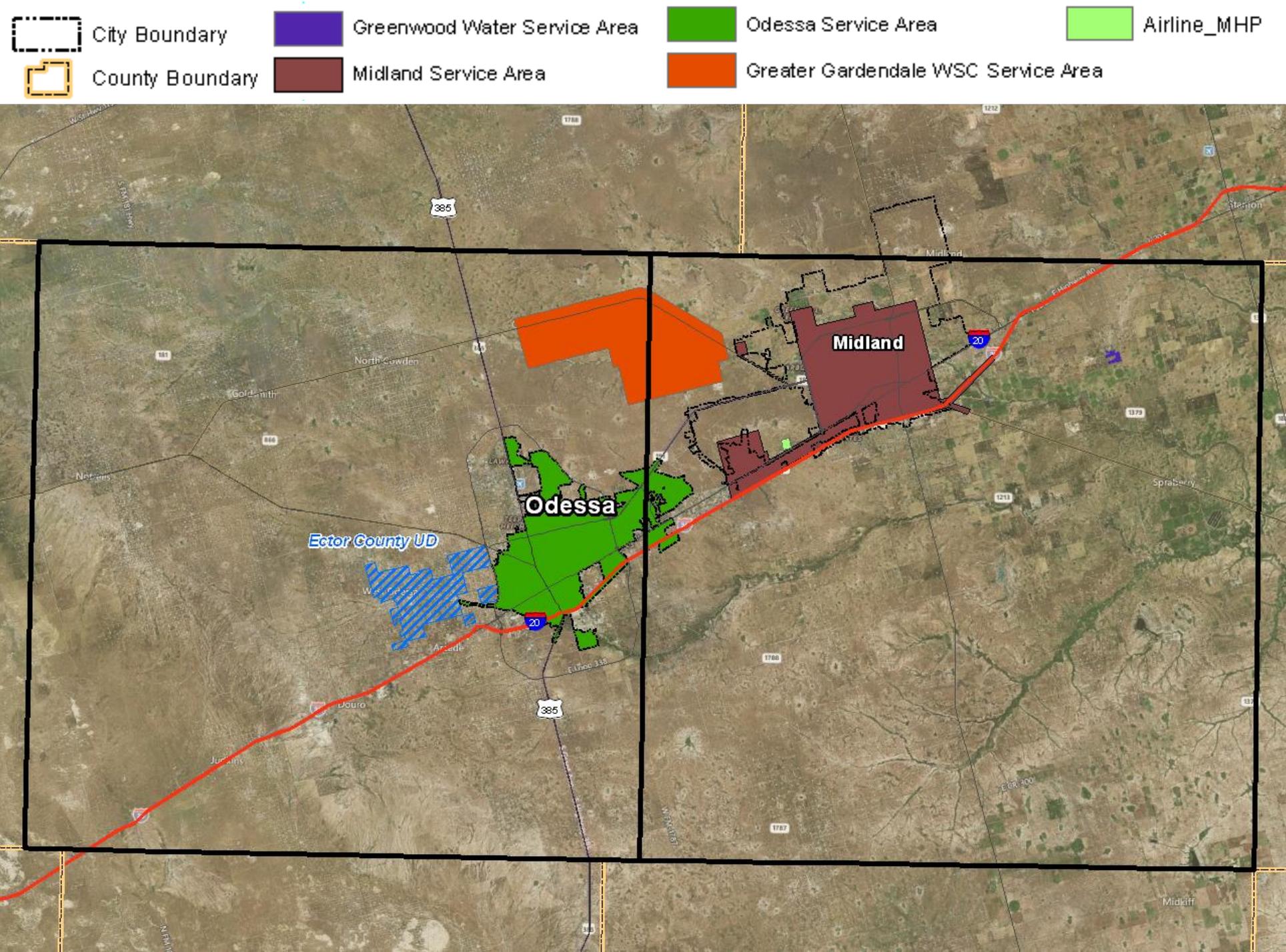
- Airline Mobile Home Park Ltd (Midland)
- Greenwood Water (Midland)
- Mitchell County Utility (Mitchell)
- Pecos County Fresh Water (Pecos)
- Balmorhea (Reeves)
- North Runnels WSC (Runnels)
- Dads San Angelo State Supported Living Center (Tom Green)
- Goodfellow Air Force Base (Tom Green)
- Tom Green County FWSD 3 (Tom Green)
- Barstow (Ward)
- Grandfalls (Ward)
- Southwest Sandhills WSC (Ward)
- Wickett (Ward)



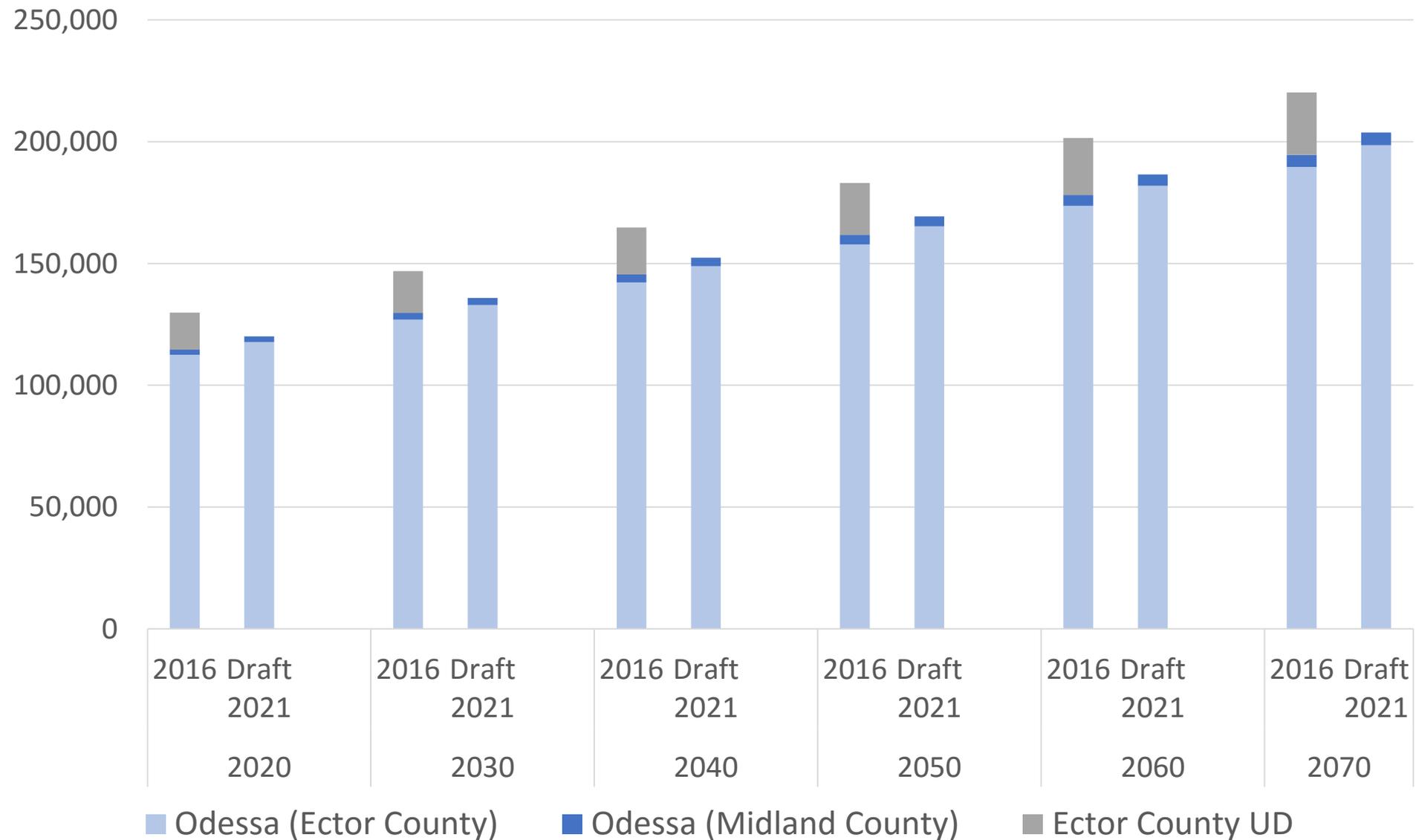
Water User Groups (WUGs)  
now defined by RETAIL service area  
NOT city limits

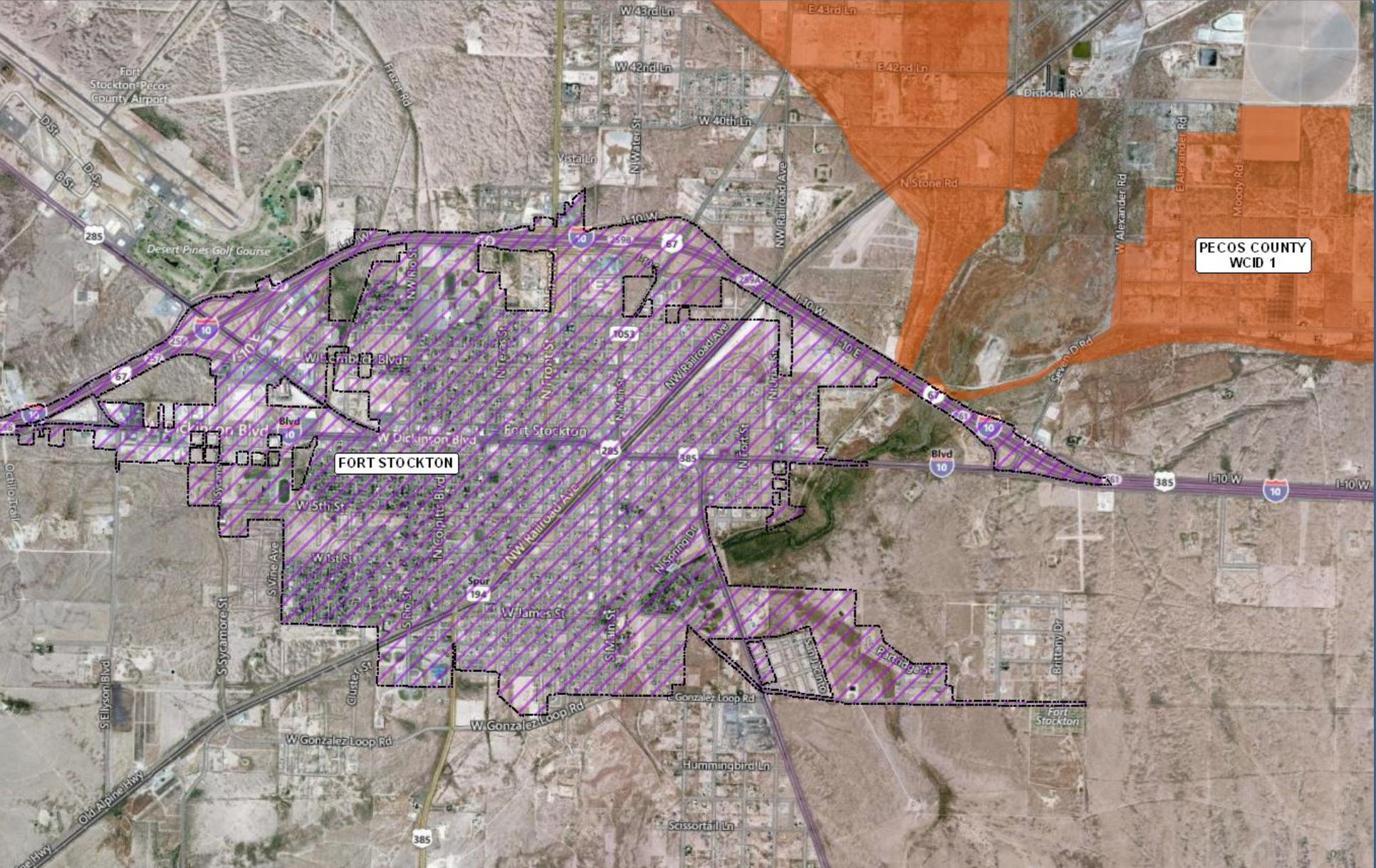






# Odessa and Ector County UD Population Projections





PECOS COUNTY  
WCID 1

FORT STOCKTON



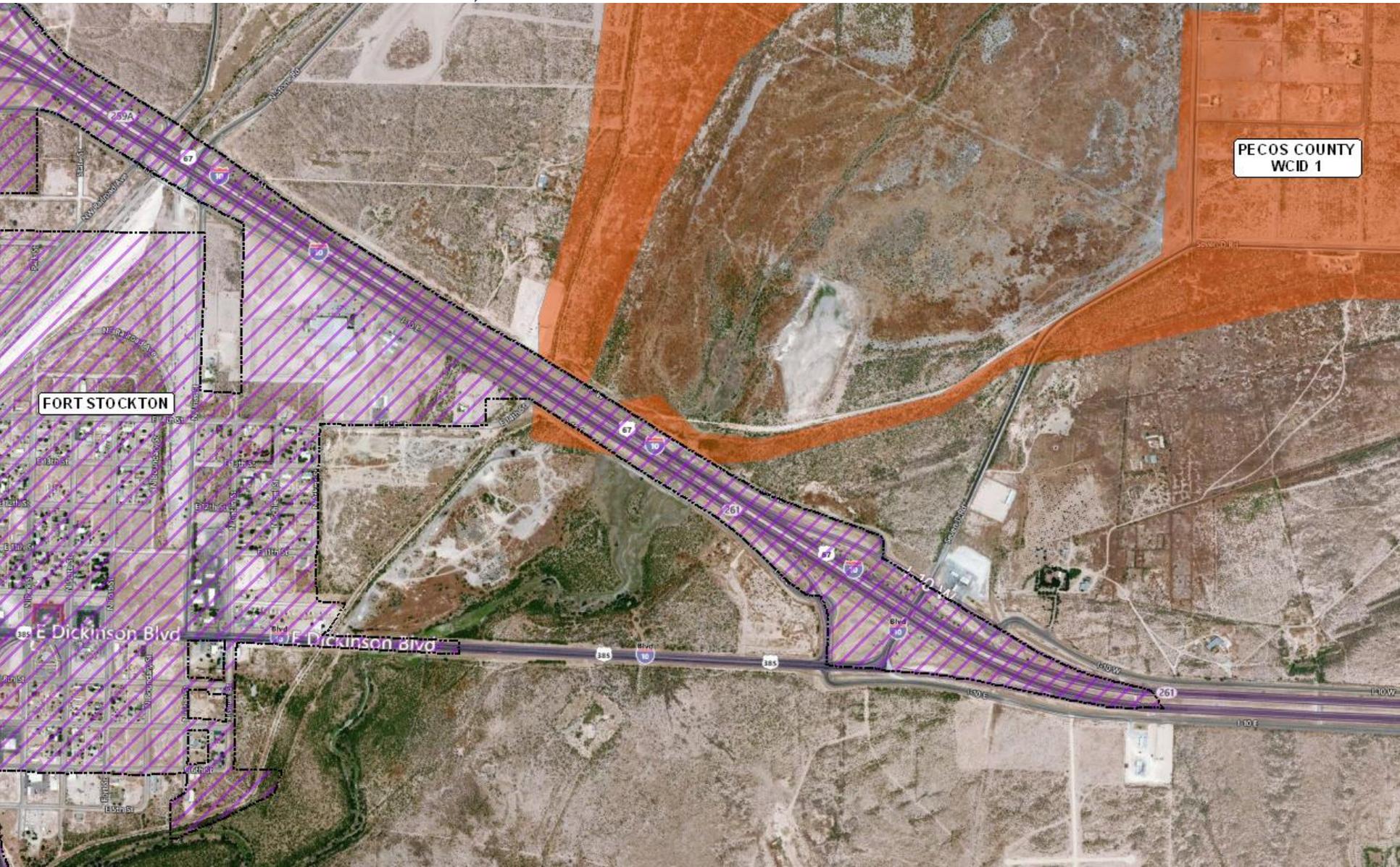
	Fort Stockton Service Area		City Boundary
	Pecos Co. WCID 1 Service Area		

**2020**

432 people Pecos WCID #1 → Fort Stockton

**2070**

574 people Pecos WCID #1 → Fort Stockton



**2020**

↓ 375 people

**2070**

↓ 581 people

# Snyder

Hermleigh

84



Snyder Service Area



City Boundary



County - Other



County Boundary



# Municipal Water Demands

- Same base per capita use as last plan (mostly 2011)
- Population assumed the per capita of the water user group they joined
- Overall, municipal demands essentially the same (0.4% higher than in the 2016 Plan)



# SUB-WUGS



# Sub-WUG

*At the discretion of each RWPG*, certain WUGs may be subdivided into 'sub-WUG' level units for purposes of doing more detailed accounting

RWPG can still plan for more detailed entities without official designation as a sub-WUG but will not be shown separately in the state online database. Does **NOT** impact an entity's ability to apply for funding.



# Sub-WUG

To be an official sub-WUG, it must be identified and submitted to the TWDB by September 1, 2017



# MUNICIPAL WATER USER GROUP SURVEY



# Municipal Survey

- Sending surveys this week
  - Population
  - Per Capita Demands
  - Water Demand Projections
  - Current and Future Water Supplies
- Responses due Friday, August 25<sup>th</sup>



# MAJOR WATER PROVIDERS



# Wholesale Water Provider (WWP)

## TWDB Definitions

### In the 2016 Plan:

An entity that had contracts to sell more than 1,000 acre-feet of water wholesale in any one year during the five years immediately preceding the adoption of the last RWP.

### In the 2021 Plan:

Any entity that delivers or sells water wholesale (treated or raw) or that the RWPG expects or recommends to deliver or sell water wholesale during the period covered by the plan.

The RWPG will identify Major Water Providers (MWP) for the region.



# Major Water Provider (MWP)

A water user group or a wholesale water provider of particular significance to the region's water supply *as determined by the regional water planning group.*



# Major Water Provider (MWP)

Proposed definition for Region F:

An entity that currently provides significant water supplies (>5,000 acre-feet per year) to other users and which will continue to develop new supplies to meet the future needs of those whom they supply.



# Major Water Provider (MWP)

## 2016 Plan WWPs

- CRMWD
- BCWID #1
- Odessa
- San Angelo
- UCRA
- Great Plains Water Supply System
- University Lands

## 2021 Plan MWPs under proposed definition

- CRMWD
- BCWID #1
- Great Plains Water Supply System



# Questions?

