

# 2026 Regional Water Plans Projections Methodology Overview

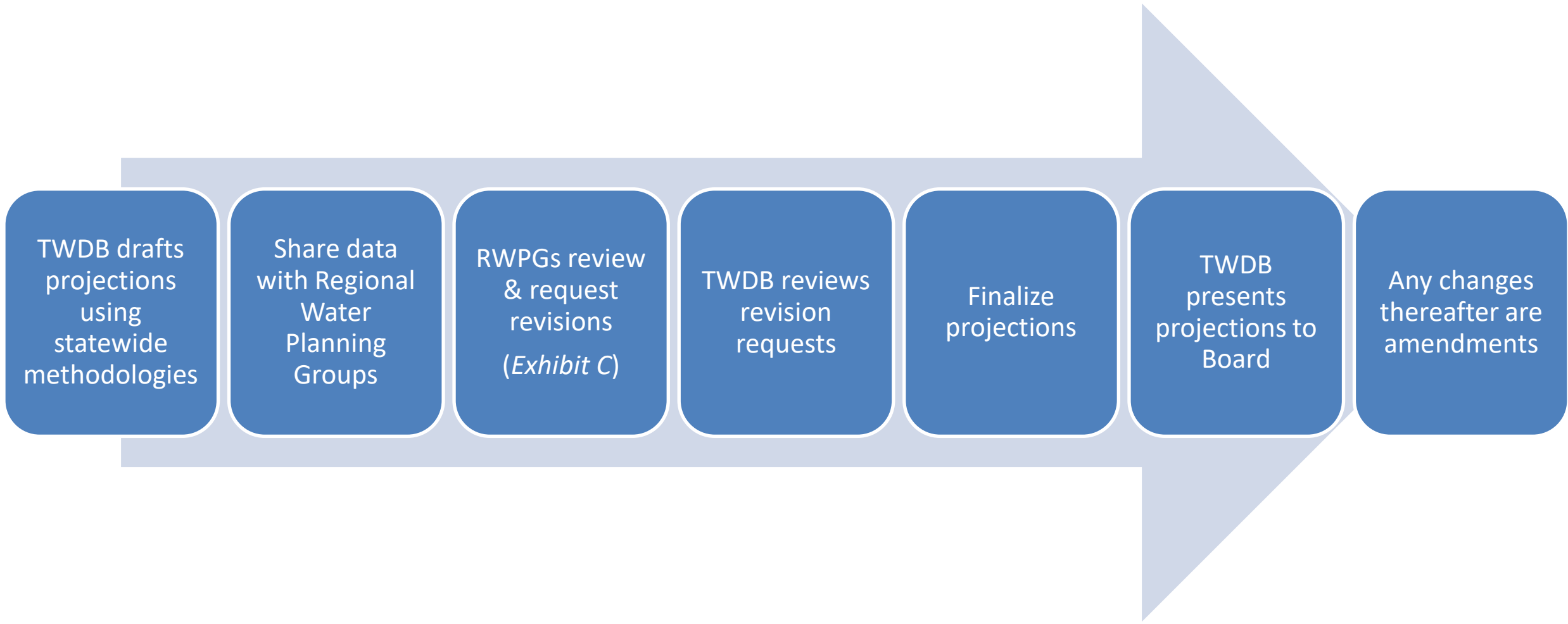
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January 12, 2022  
Rio Grande Region M Planning Group Meeting

# Agenda

- Overview projections process
- Projections data release schedule
- Projections methodologies
  - Non-municipal water demands
  - Population
  - Municipal water demand

# Projections Process



# Projections Release Schedule

Draft Water Demand Projections	Timeline
Livestock Projections + Supporting Data	January 2022
Manufacturing Projections + Supporting Data	January 2022
Steam-Electric Projections + Supporting Data	January 2022
Water User Group List + Historical Population, Connections, Net Use, GPCD	March 2022
<b>DUE:</b> RWPGs review WUG list + historical WUG data	July 2022
Irrigation Projections + Supporting Data	August 2022
Mining Projections + Supporting Data	August 2022
Population Projections + Plumbing Code Savings + Municipal Demand	February 2023
<b>DUE:</b> RWPGs request revisions for non-municipal demand projections	July 2023
<b>DUE:</b> RWPGs request revisions for population and municipal demand projections	August 2023

# Non-Municipal Water Demand Projections Methodologies

Historical: 2015 - 2019

Projections: 2030 - 2080

# Irrigation

Same methodology as 2021 RWPs

Baseline = 5-year average (2015-2019)

Water sources: groundwater, surface water, reuse

- Most-recent Modeled Available Groundwater

# Irrigation

2030 – 2080 held constant

- Except counties where groundwater availability (MAG) is less than the groundwater-portion of the demand projections
- Decline commensurate with groundwater availability

Draft projections will be released in August 2022

# Livestock

Same methodology as 2021 RWPs

Baseline = 5-year average (2015-2019)

- County water use estimates, based on USDA inventory \* water use coefficients
- Water Use Survey facilities

Follows same projection trend as 2021 RWPs

- 2070 – 2080 held constant

Draft projections release in January 2022

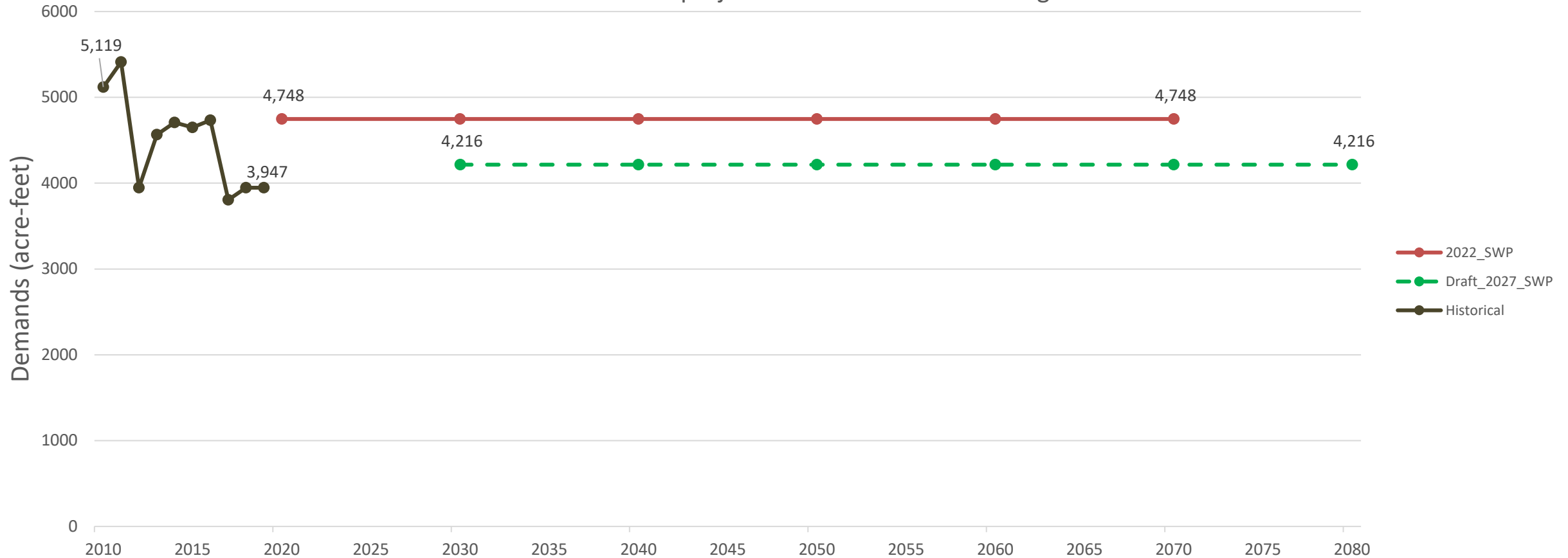


# Livestock Water Use Coefficients

TWDB Category	USDA Data Type	2026 RWP Water Use (gallons/head/day)	2021 RWP Water Use (gallons/head/day)
Cattle	Milk	55	75
	Fed & Other Cattle	15	15
Chickens	Layers	0.09	0.086
	Pullets, Replacement		
	Roosters	0.09	0.077
	Broilers		
Equine	Horses & Ponies	12	12
	Mules, Burros, & Donkeys		
Hogs	Hogs	5	11
Sheep	Sheep	2	2
Goats	Milk	2	0.5
	Meat & Other		
	Angora		
Turkeys	Turkeys	0.2	0.2

# Livestock Projections: Compare 2021 RWP to Draft 2026 RWP

Livestock water use and demand projections for all counties in Region M.



# Manufacturing

Baseline = highest county water use (2015-2019) + unaccounted water use estimates

- Historical water use survey
- U.S. Census Bureau County Business Patterns (CBP) historical number of establishments

Water Sources: fresh and brackish groundwater, fresh surface water, reuse

- Total intake

Draft projections release in January 2022

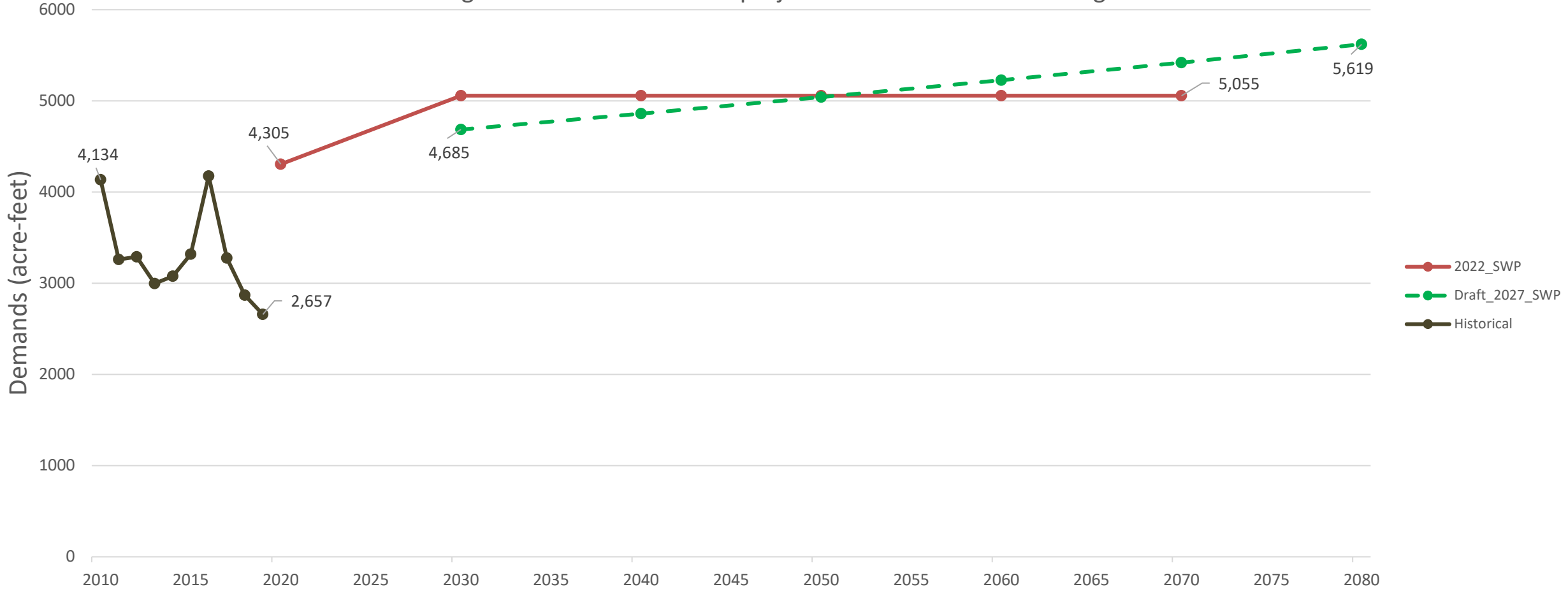
# Manufacturing

Baseline \* 2010-2019 historical water use survey rate of change = 2030

CBP 2010-2019 historical number of establishments rate of change used to project each decade 2040-2080

# Manufacturing Projections: Compare 2021 RWP to Draft 2026 RWP

Manufacturing water use and demand projections for all counties in Region M.



# Mining

Study funded by USGS

Contracted UT Bureau of Economic Geology

Update to the 2011 study

Comprehensive and quantitative assessment of mining water use in Texas

- Oil and gas, aggregates, and coal and lignite
- Historical estimates
- Projections for the 2026 Regional Water Plans

August 2022

<https://www.twdb.texas.gov/waterplanning/data/projections/MiningStudy/index.asp>

# Steam-Electric Power

Baseline = highest county water use (2015-2019) + estimated water use for non-responses and proposed facilities

- Historical water use survey
- U.S. Energy Information Administration 860 form – NAICS: 22

If a facility retires before 2020, then the water use is removed from the projections

If RWPGs requested to remove a facility in the previous plan, then facility was removed in the new draft projections

# Steam-Electric Power

Water sources: fresh and brackish groundwater, fresh surface water, reuse

- Consumptive use

2030 – 2080 held constant

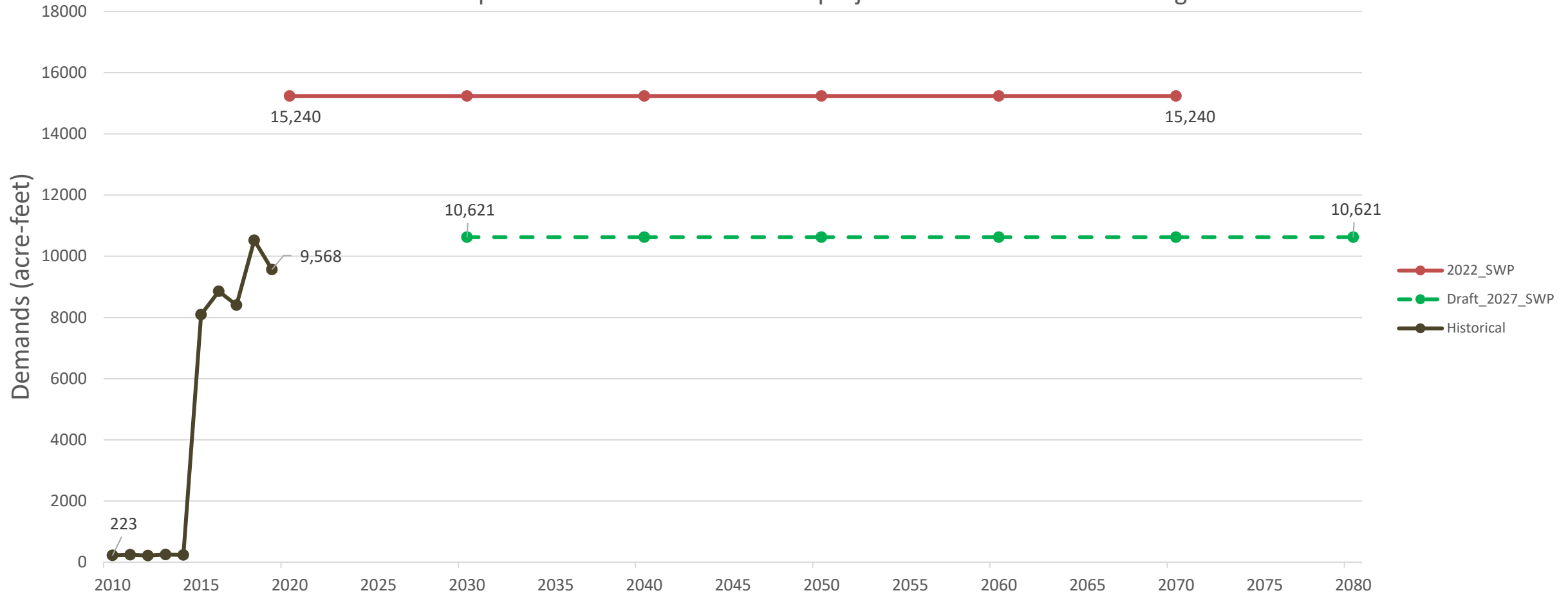
Same methodology as the 2021 RWP's

Draft projections release in January 2022



# Steam-Electric Power Projections: Compare 2021 RWP to Draft 2026 RWP

Steam-electric power water use and demand projections for all counties in Region M.



# Municipal Projections Methodology

Historical: 2010 - 2020

Projections: 2030 - 2080

# Water User Groups

- Municipal WUGs: utility water use of 100 acre-feet or more
  - 31 TAC § 357.10(43)
- WUGs in the 2021 RWPs will be carried over, as long as they have active public water systems
- All new utilities will be evaluated based on water use from 2015-2019

# Region M – Municipal WUG Counts

- 2021 RWP: 64 WUGs
- 2026 RWP draft: 64 WUGs
- Including 8 County-Other WUGs

# Population Projections

- Based on Texas Demographic Center's projections for counties in Texas
  - 3 migration scenarios
- Distributed to WUGs
  - Historical 2010-2020 share of growth or share of population
- Difference this planning cycle: if a county's population is projected by TDC to decline, then the TWDB's county population projections will also decline
- 2030 – 2080

# Municipal Demand Projections: GPCD

- Gallons per Capita Daily
- Dry-year
- Baseline GPCD = historical
  - Draft: 2021 RWP WUG GPCD
  - New WUGs draft: 2018
- Baseline GPCD minus plumbing code savings already implemented
  - Account for passive savings between historical and projected (2030)
- Water sources: groundwater + surface water
  - Water Use Survey

# Municipal Demand Projections: PC Savings

- Plumbing Code Savings
- Update this planning cycle
- Residential:
  - Toilets
  - Showerheads
  - Dishwashers
  - Clothes washers
- Will include commercial toilet and urinal water efficiency savings
- 2030 – 2080

# Municipal Demand Projections

$$\text{Projected Demand} = (\text{Population} * (\text{GPCD} - \text{PC Savings}) * 365) / 325,851$$



# Water Sources

Source	Groundwater		Surface Water				Reuse
	Fresh	Brackish	Fresh	Saline	Consumptive Use Percentage	Seawater	Reuse
Irrigation	X	X	X	X			X
Livestock	X	X	X	X			
Manufacturing	X	X	X				X
Mining	X	X	X	X			X
Steam-electric	X	X	X		X		X
Municipal	X	X	X	X			

# Questions?

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Stay connected:

