

Agenda Items 8a. and 8b. General TWDB Update and Presentation on the TWDB methodology for development of the non-municipal demands

Agenda Item 8a. is to review general planning updates and significant new requirements from the Texas Water Development Board (TWDB) for the 2026 Regional Water Plans. Agenda Item 8b. is to review the methodology used by the TWDB to develop projections of non-municipal demands for Region F. Non-municipal demands are divided into five categories: irrigation, livestock, manufacturing, mining, and steam electric power.

Attachments:

1. Presentation on TWDB Updates and Significant New Requirements for the 2026 Regional Water Plans
2. Presentation on Non-municipal Demand Projections by TWDB

Region F TWDB Update 11-3-22

1. RWP Contract Amendments

- Amendment to include anticipated total project cost, full scope of work, and updated contract guidance documents
- To be sent to RWPG political subdivisions for execution

2. Interregional Planning Council

- Meeting on November 9 in Austin with a virtual component
- More information available online at:
<http://www.twdb.texas.gov/waterplanning/rwp/ipc/2027IPC.asp>

3. New Educational Materials

- [Water supply and flood mitigation strategies one-pager](#)
- [RWPG Member Guide](#)
- [Administrative Guidance for RWPG Sponsors](#)

Region F TWDB Update 11-3-22

4. Regional Water Planning Rulemaking

- April 11, 2022, TWDB Board adopted amendments to regional water planning rules (31 TAC Chapter 357) and state water planning rules (31 TAC Chapter 358).
- Proposed rules published December 31, 2021, in Texas Register; public comment period ended January 31, 2022; effective May 1, 2022.
- Board item with detailed information available on the TWDB website: <https://www.twdb.texas.gov/board/2022/04/Board/Brd04.pdf>
- Rules available on Secretary of State site: [https://texreg.sos.state.tx.us/public/readtac\\$ext.ViewTAC?tac_view=3&ti=31&pt=10](https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=3&ti=31&pt=10)

Significant new requirements for the 2026 RWPs

- Task 3: Exhibit C, Section 2.3 (Water Availability and Existing Supplies)
 - Technical Memorandum and RWPs must include methodology for calculating anticipated sedimentation rate and revising the area-capacity rating curves
 - Reuse availability presented as a separate subsection in Chapter 3
 - Hydrologic variance requests for surface water must use template checklist

Significant new requirements for the 2026 RWPs (cont.)

- Task 4B: Exhibit C, Section 2.11 (Identification of infeasible WMSs in the 2021 RWP)
 - Required by SB 1511, 86th Texas Legislature
 - Analysis must be completed prior to **March 4, 2024**
 - Results presented at public meeting where RWPG also presents methodology for identifying potentially feasible WMSs in 2026 RWP
 - Infeasible WMSs to be listed in Technical Memorandum
 - If infeasible WMSs identified, amend 2021 plans to:
 - Remove infeasible WMS or WMSP,
 - Revise infeasible WMS or WMSP to make feasible, and/or
 - Incorporate new WMS or WMSP
 - RWPG-adopted amendments due **June 4, 2024**

Significant new requirements for the 2026 RWPs (cont.)

- Task 4B: Exhibit C, Section 2.11 (cont.)
 - Review WMSs and WMSPs in the previous RWP and coordinate with project sponsors to determine implementation status and determine infeasibility
 - At a minimum, review status of strategies and projects with an online decade of 2020 in the 2021 RWPs.
 - Required to be online and delivering water by **January 5, 2023**
 - Additional near-term strategies and projects that have lengthy permitting or construction processes should also be reviewed for infeasibility
 - Affirmative steps by the sponsor may include but not limited to:
 - spending money on the strategy or project,
 - voting to spend money on the strategy or project, or
 - applying for a federal or state permit for the strategy or project

Significant new requirements for the 2026 RWPs (cont.)

- Task 4C: Exhibit C, Section 2.12.1 (Technical Memorandum)
 - Include summary of region's interregional coordination efforts to date
 - Include list of identified infeasible WMSs and WMSPs resulting from new Task 4B
- Task 5B: Exhibit C, Section 2.5 (Evaluation/Recommendation of Strategies & Projects)
 - Guidance added to address HB 807, 87th Texas Legislature (ASR assessments and GPCD goals)
 - Conservation WMSs required to be split out for water loss mitigation vs water use reduction
 - New subsection documenting implementation status of certain WMS types

Significant new requirements for the 2026 RWPs (cont.)

- Task 7: Exhibit C, Section 2.7 (Drought response information)
 - Guidance added to address HB 807, 87th Texas Legislature (unnecessary or counterproductive drought response)
 - RWPGs to identify rather than recommend drought response triggers & actions
 - New guidance to optionally address droughts worse than drought of record
 - New subsection required to address how the planning group is addressing uncertainty and droughts worse than drought of record (if applicable), and what additional measures not included in the plan could be available during a drought worse than drought of record

Significant new requirements for the 2026 RWPs (cont.)

- Task 9: Exhibit C, Section 2.9 (Implementation)
 - Reduced content of implementation survey
 - Guidance added to address HB 807, 87th Texas Legislature (progress in achieving economies of scale)
- Task 10: Exhibit C, Section 2.10, 2.13, 2.14 (Adoption and deliverables)
 - Initially Prepared Plan and final RWP must document summary of region's interregional coordination efforts
 - State Database Reports (DB27) to be included in Initially Prepared Plan and final RWP via hyperlinks to TWDB's Database Reports application, in lieu of hard copies

Important Reminders

- Infrastructure finance survey and related chapter removed
- RWPG task to prioritize recommended projects removed
- Due to removal of IFR chapter, 2026 RWPs will have 10 chapters
 - Implementation and comparison of previous plan now Chapter 9
- Documents available on the 2026 RWP Document Page:
 - General copy of first amended SOW
 - First amended Exhibit C
 - Summary of major revisions to Exhibit C
 - https://www.twdb.texas.gov/waterplanning/rwp/planningdocu/2026/document_s.asp



2026 Regional Water Plans Non-Municipal Projections Methodology Overview

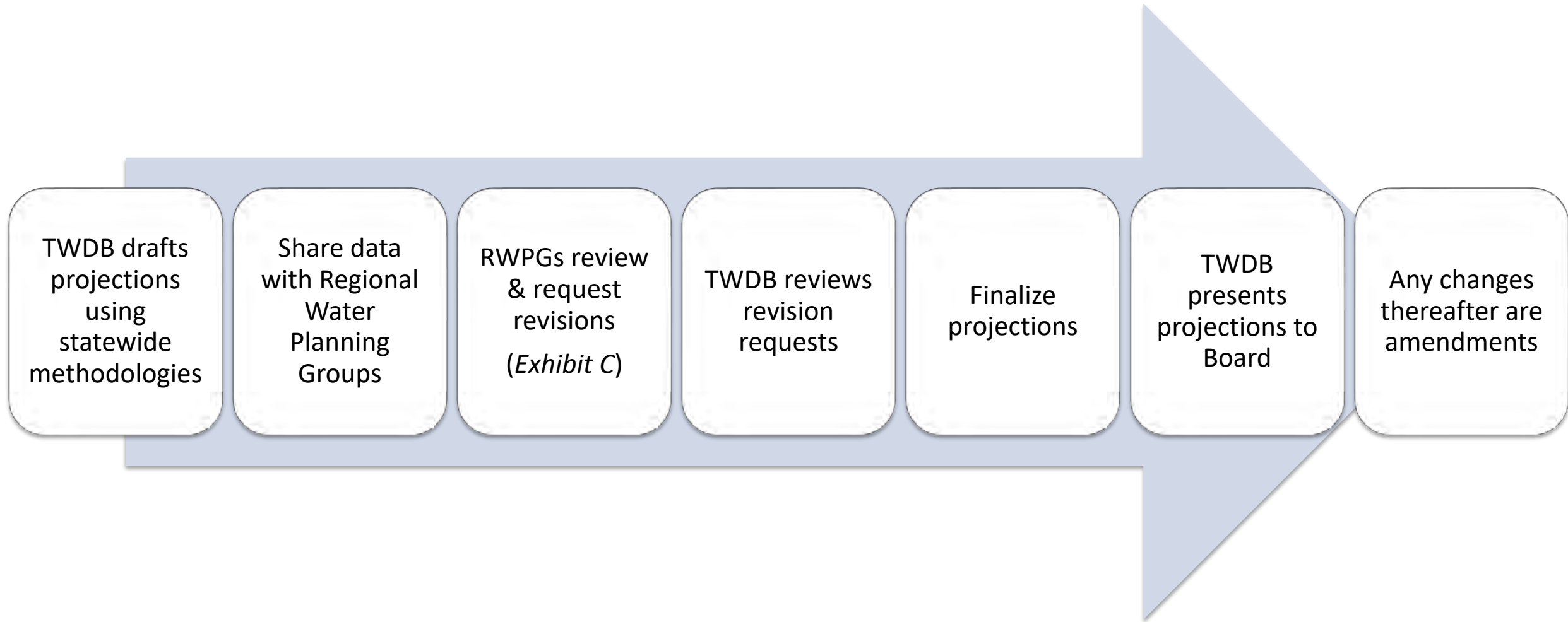
Katie Dahlberg
Manager, Projections & Socioeconomic Analysis
Water Supply Planning

November 3, 2022
Region F Planning Group Meeting

Agenda

- Overview projections process
- Projections data release schedule
- Non-municipal water demand projection methodologies
 - Irrigation
 - Livestock
 - Manufacturing
 - Mining
 - Steam-Electric Power

Projections Process



Projections Timeline

Draft Water Demand Projections	Timeline
Livestock, Manufacturing, Steam-Electric Projections + Supporting Data	January 20, 2022
Water User Group List + Historical Population, Connections, Net Use, GPCD	March 16, 2022
RWPGs reviewed and revised WUG list	July 29, 2022
Irrigation, Mining Projections + Supporting Data	August 23, 2022
Non-municipal Basin Splits	August 23, 2022
Population Projections + Plumbing Code Savings + Municipal Demand Projections	February 2023
DUE: RWPGs request revisions for non-municipal demand projections	July 14, 2023
DUE: RWPGs request revisions for population and municipal demand projections	August 11, 2023
TWDB Board Meeting to Adopt Projections	Fall 2023
DUE: Technical Memorandum	March 4, 2024

Non-Municipal Water Demand Projections Methodologies

Historical: 2015 - 2019

Projections: 2030 - 2080

Irrigation

Baseline = 5-year average (2015-2019)

Irrigated crops, self-supplied golf courses

Water sources: groundwater, surface water, reuse

Irrigation

Same methodology as 2021 RWPs

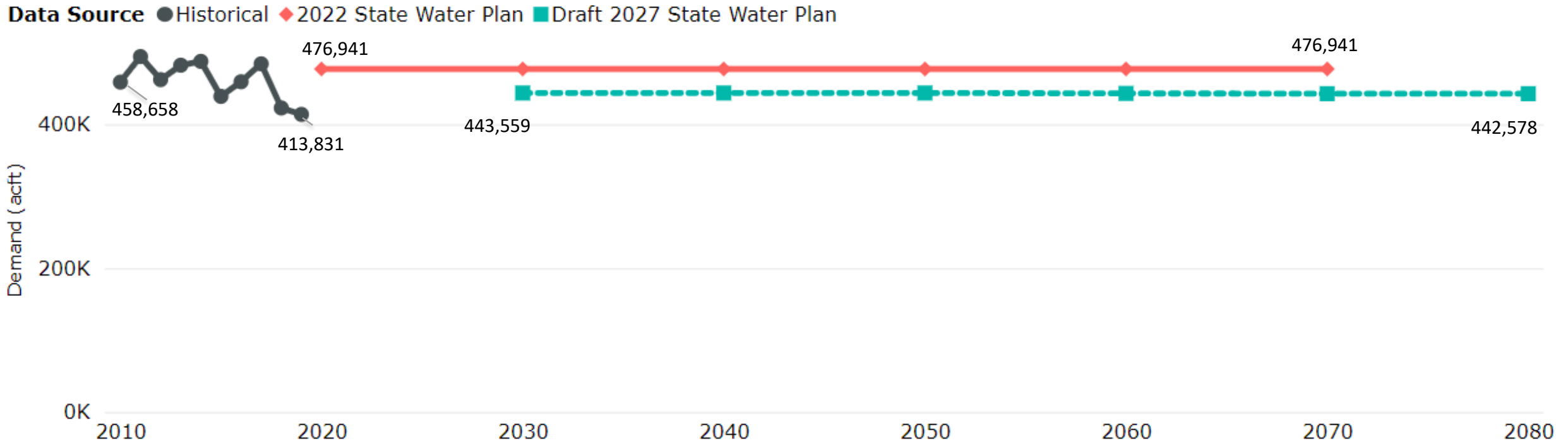
2030 – 2080 held constant

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

MAGs updated: GMAs 2, 3, 7

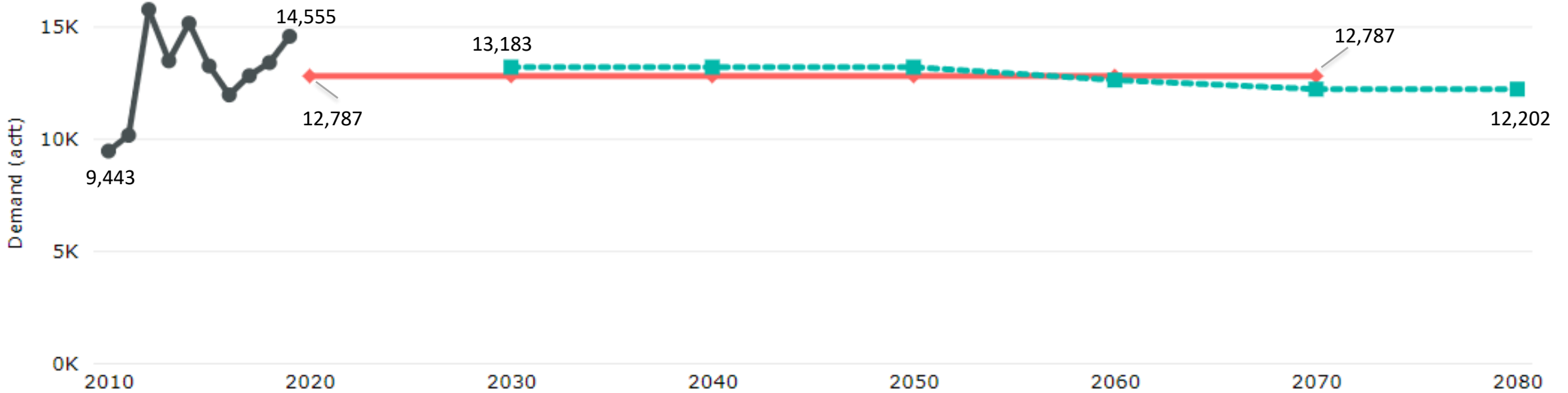
- MAGs not yet updated for GMA: 8

Irrigation Projections – Region F: Compare 2021 RWP to Draft 2026 RWP



Mitchell County

Data Source ● Historical ◆ 2022 State Water Plan ■ Draft 2027 State Water Plan



Region	County	Basin	Total Groundwater Availability (MAG + Non-MAG) used to identify MAG constrained counties					
			2030	2040	2050	2060	2070	2080
F	MITCHELL	COLORADO	14,776	13,358	12,310	11,733	11,329	11,329

Livestock

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 RWP

- 2070 – 2080 held constant

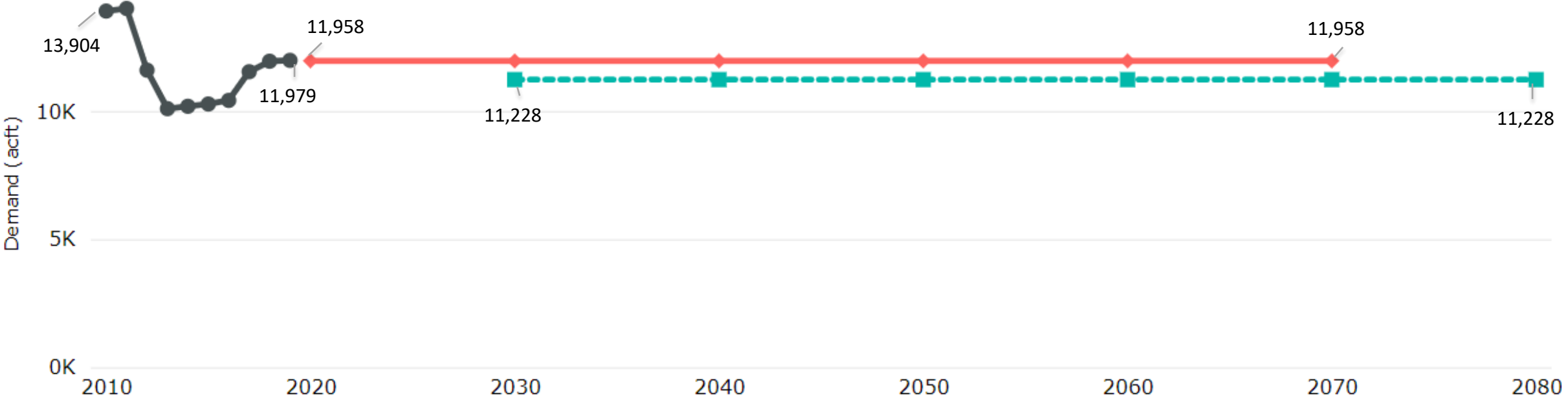
Same methodology as 2021 RWP

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 – Region F: Compare 2021 RWP to Draft 2026 RWP

Data Source ● Historical ◆ 2022 State Water Plan ■ Draft 2027 State Water Plan



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

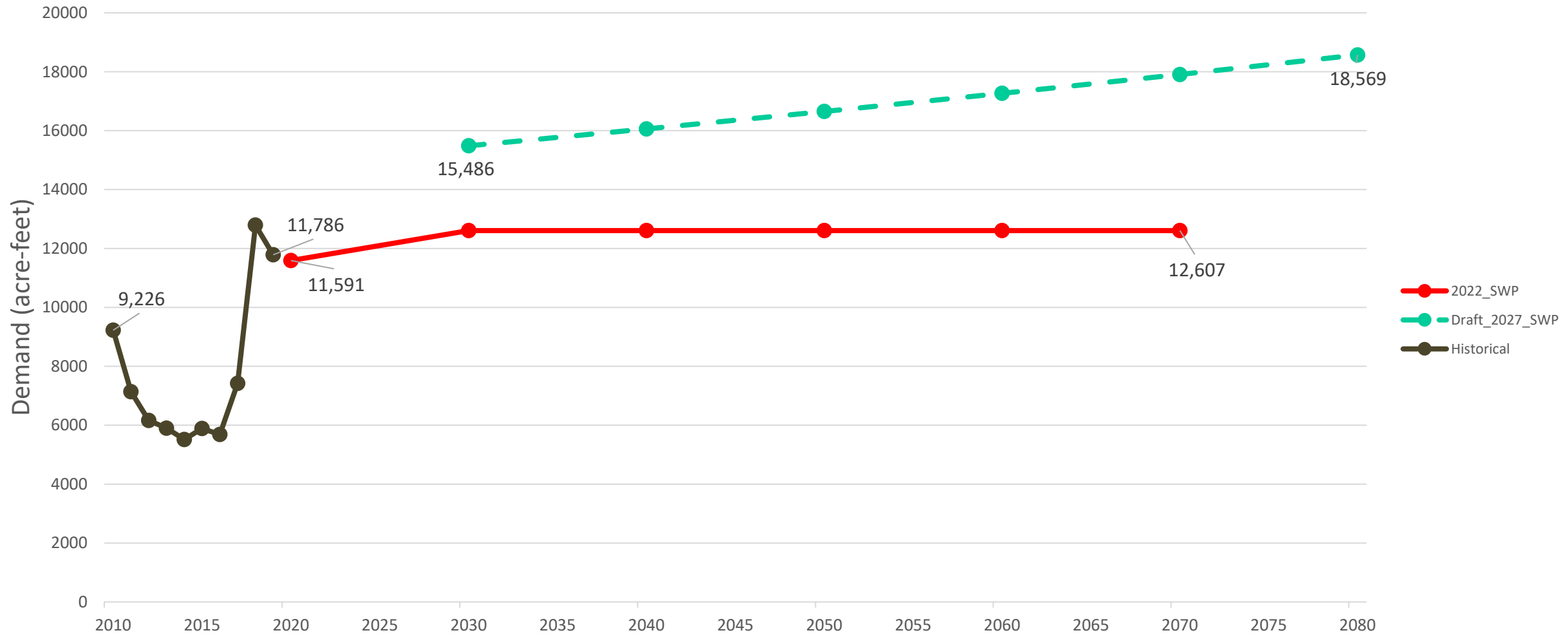
- Total intake

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 – Region F: Compare 2021 RWP to Draft 2026 RWP



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

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

Mining

Projection Methodologies

Oil and Gas: total recoverable resources

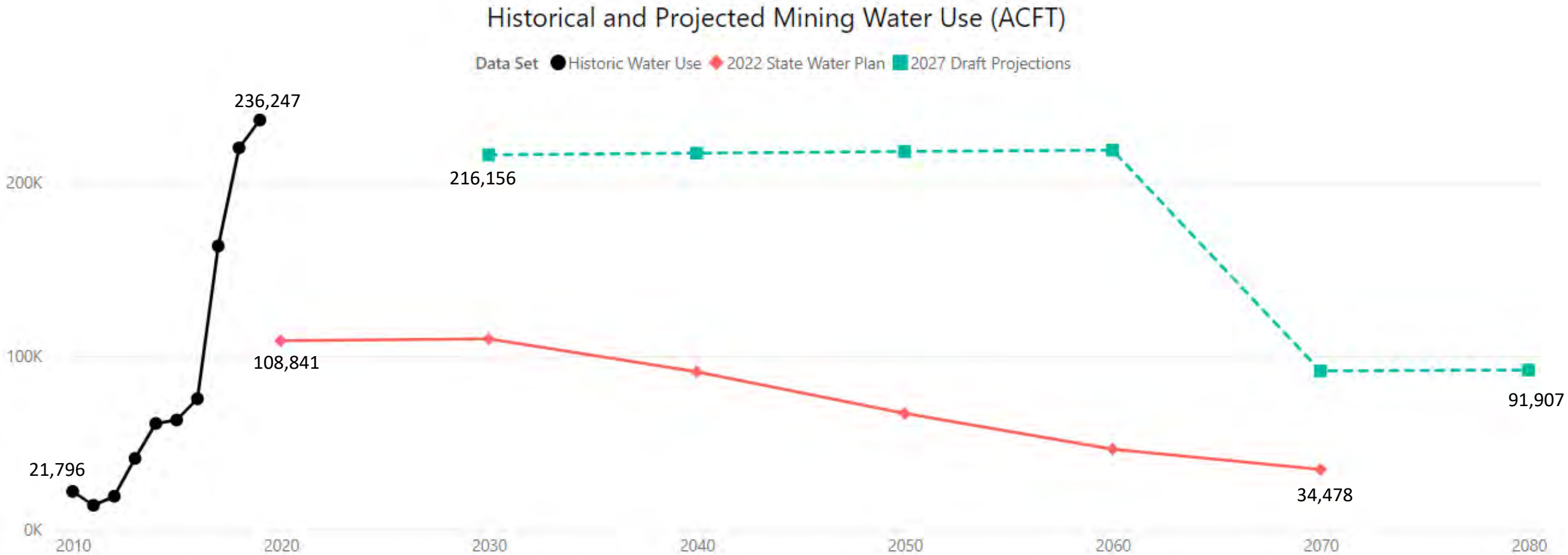
- Well inventory, volume of water per well, average number of wells drilled each year
- Distributed over the planning horizon

Aggregates: function of statewide population

Coal: each coal mine is tied to a coal power plant

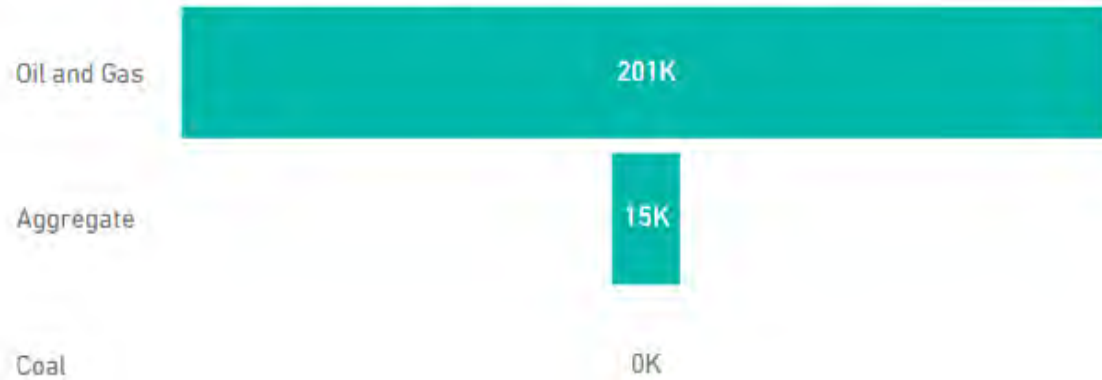
- Life of the coal mine or life of the power plant

Mining Projections – Region F: Compare 2021 RWP to Draft 2026 RWP

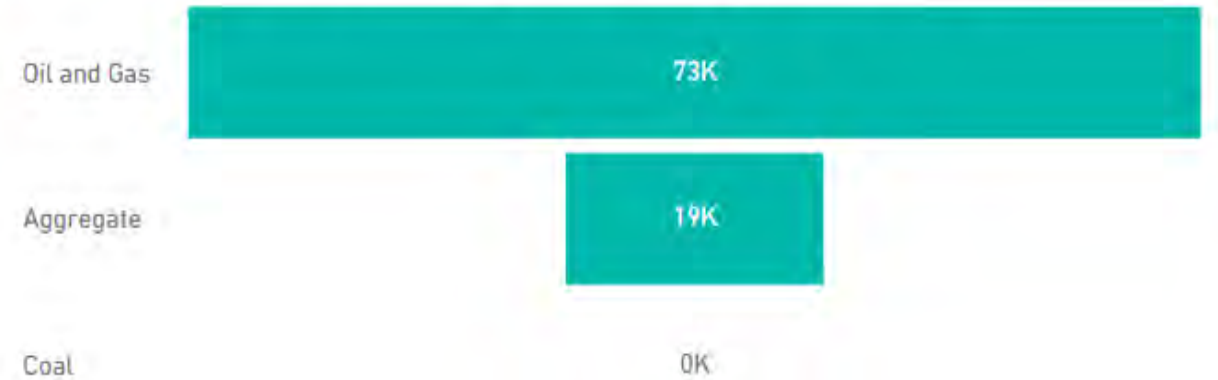


Mining Projections – Region F: by Mining Type

2030 Mining Water Use by Type (ACFT)



2080 Mining Water Use by Type (ACFT)



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 draft projections

Steam-Electric Power

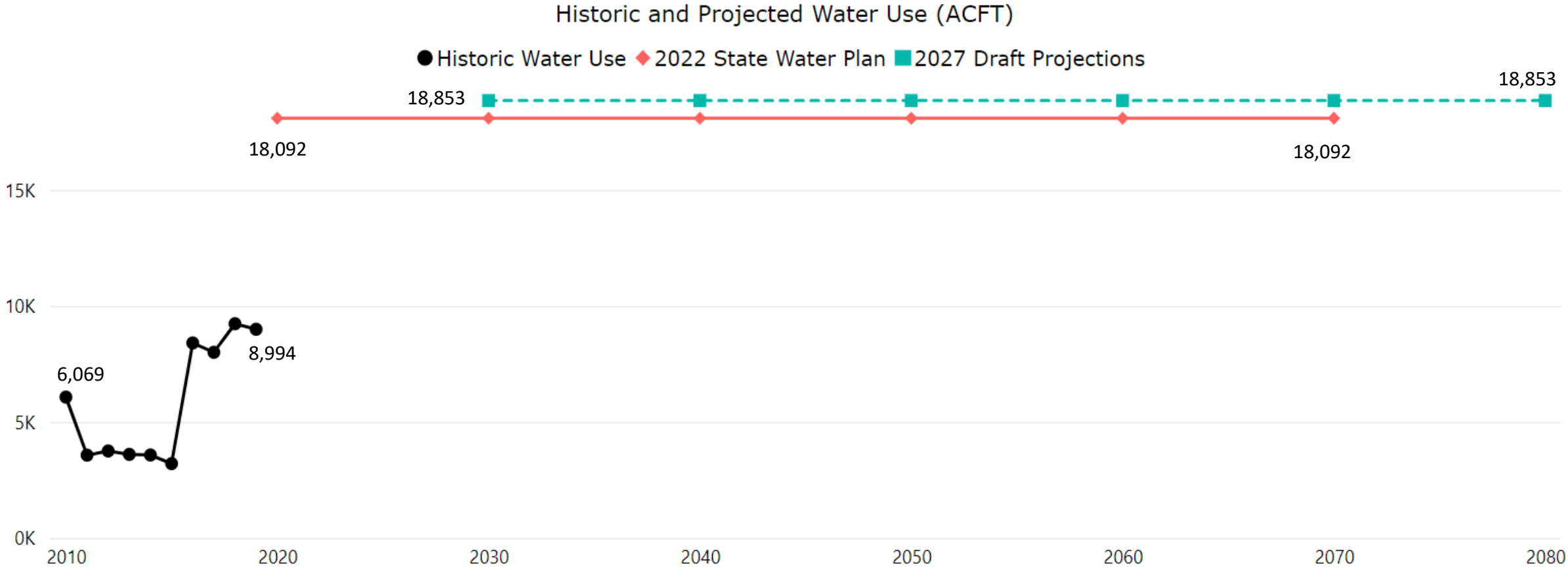
Water sources: fresh and brackish groundwater, fresh surface water, reuse

- Consumptive use

2030 – 2080 held constant

Same methodology as the 2021 RWPs

Steam-Electric Power Projections – Region F: Compare 2021 RWP to Draft 2026 RWP



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

2026 RWP Draft Projections

<https://www.twdb.texas.gov/waterplanning/data/projections/2027/projections.asp>

The screenshot shows the Texas Water Development Board website. The header includes the logo, a search bar, and social media icons. The navigation menu is highlighted on 'Water Planning'. The main content area is divided into four columns: STATE WATER PLAN, REGIONAL WATER PLANNING, PLANNING DATA, and WATER USE SURVEY. The 'Population & Water Demand Projections' link is highlighted in the 'PLANNING DATA' column.

STATE WATER PLAN	REGIONAL WATER PLANNING	PLANNING DATA	WATER USE SURVEY
Interactive State Water Plan	Planning Group Meeting Schedule	Regional Water Planning Database	Online Water Use Survey
2022 State Water Plan	Planning Group Information	Planning Data Dashboard	Printable Water Use Survey
2017 State Water Plan	6th Planning Cycle Information (2026 RWPs)	Population & Water Demand Projections	Historical Water Use Estimates
2012 State Water Plan	2021 Regional Water Plans & Previous Plans	Socio-Economic Impact Analysis	Data Dashboard
2007 State Water Plan	Educational Information	Other Data Resources	Historical Groundwater Pumpage
2002 State Water Plan	Frequently Asked Questions		Service Boundary Editor
1997 State Water Plan			

Questions?

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Stay connected:

