

NOTICE OF OPEN MEETING OF THE  
SOUTH CENTRAL TEXAS  
REGIONAL WATER PLANNING  
POPULATION AND WATER  
DEMANDS WORK GROUP

TAKE NOTICE that a meeting of the Population and Water Demands Work Group, as established by the South Central Texas Regional Water Planning Group (SCTRWPG) will be held on Wednesday, November 30, 2022, at 2:00 PM both in person and virtually. The in person meeting will be held at the San Antonio River Authority, 201 W. Sheridan Street, San Antonio, TX 78204. You can attend virtually on GotoMeeting at <https://meet.goto.com/662801373>. The following subjects will be considered for discussion and/or action at said meeting.

1. Review Released Draft Data from TWDB
  - a. Manufacturing Projections and Supporting Data
2. Discussion and Appropriate Action Regarding Recommendation for Feedback to TWDB

Comments and submissions may be submitted through email to [khayes@sariverauthority.org](mailto:khayes@sariverauthority.org). Any written documentation can be sent to Tim Andruss, Chair, South Central Texas Regional Water Planning Group, c/o San Antonio River Authority, Attn: Kendall Hayes, 201 W. Sheridan Street, San Antonio, TX 78204. Please direct any questions to Kendall Hayes at (210) 302-3641.

# **Agenda Item 1: Review Released Draft Data from TWDB: Manufacturing Projections and Supporting Data**

# Draft Water Demands: Manufacturing

- Draft data released January 2022
- RWPG Responsibilities:
  - Review and submit revisions via consultant
  - Due to TWDB by **July 2023**, but we can submit any time before then

# 2026 Manufacturing Methodology

Net Use = Gross intake (withdrawals & purchases) - sales to other entities

Baseline = highest county-aggregated manufacturing water use in the most recent five years (2015-2019) + estimated unaccounted water use

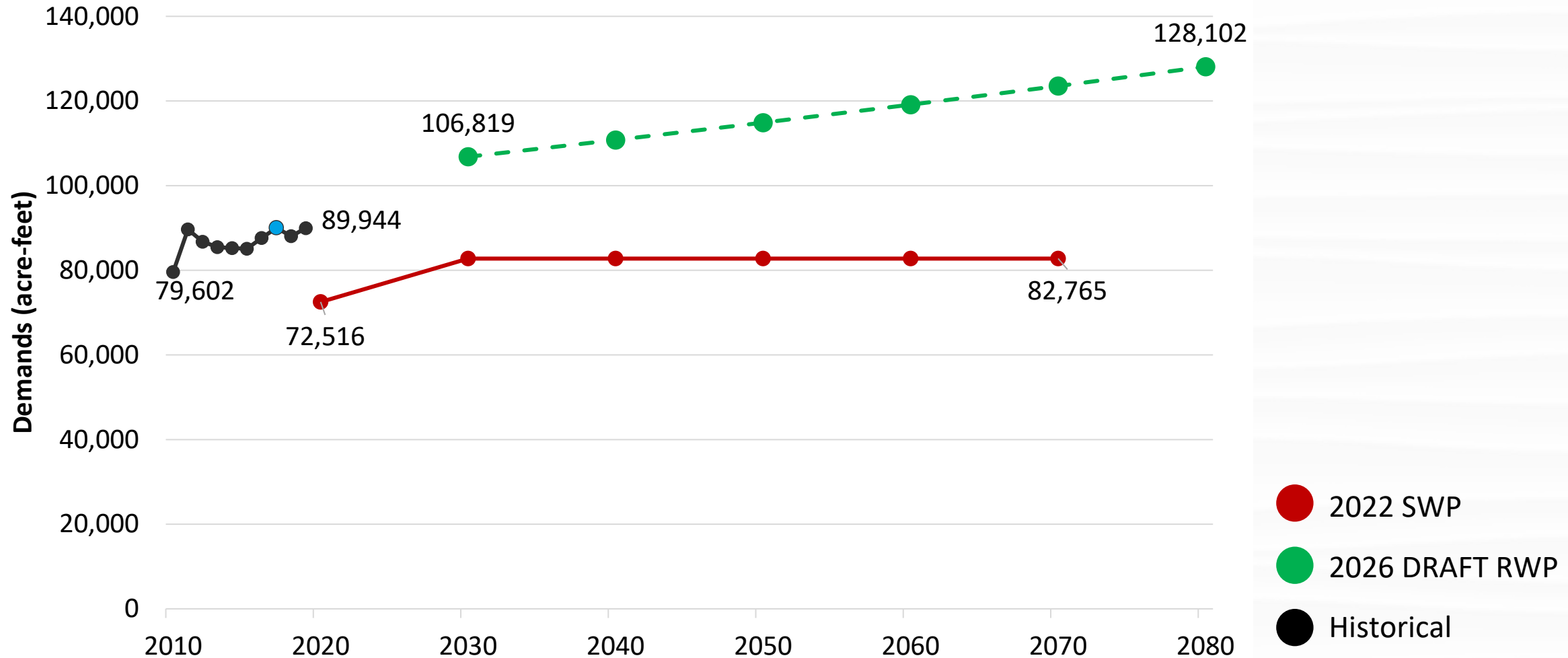
The rate of change of the most recent 10-year historical number of establishments from the U.S. Census Bureau County Business Pattern data or other relevant economic measures available are used as proxy for growth between 2030 and 2080.

[See Handout 1 for detailed methodology.](#)

Category	Annual Growth
Food Manufacturing	2.62%
Beverage and Tobacco Product Manufacturing	9.78%
Textile Mills	1.11%
Textile Product Mills	0.26%
Apparel Manufacturing	-2.74%
Leather and Allied Product Manufacturing	0.35%
Wood Product Manufacturing	0.64%
Paper Manufacturing	-1.03%
Printing and Related Support Activities	-1.23%
Petroleum and Coal Products Manufacturing	-1.05%
Chemical Manufacturing	0.62%
Plastics and Rubber Products Manufacturing	0.32%
Nonmetallic Mineral Product Manufacturing	0.68%
Primary Metal Manufacturing	-0.22%
Fabricated Metal Product Manufacturing	0.37%
Machinery Manufacturing	0.14%
Computer and Electronic Product Manufacturing	-1.13%
Electrical Equipment, Appliance, and Component Manufacturing	0.50%
Transportation Equipment Manufacturing	0.38%
Furniture and Related Product Manufacturing	-1.85%
Miscellaneous Manufacturing	-0.20%
Pipeline Transportation	1.77%
<b>Total</b>	<b>0.37%</b>

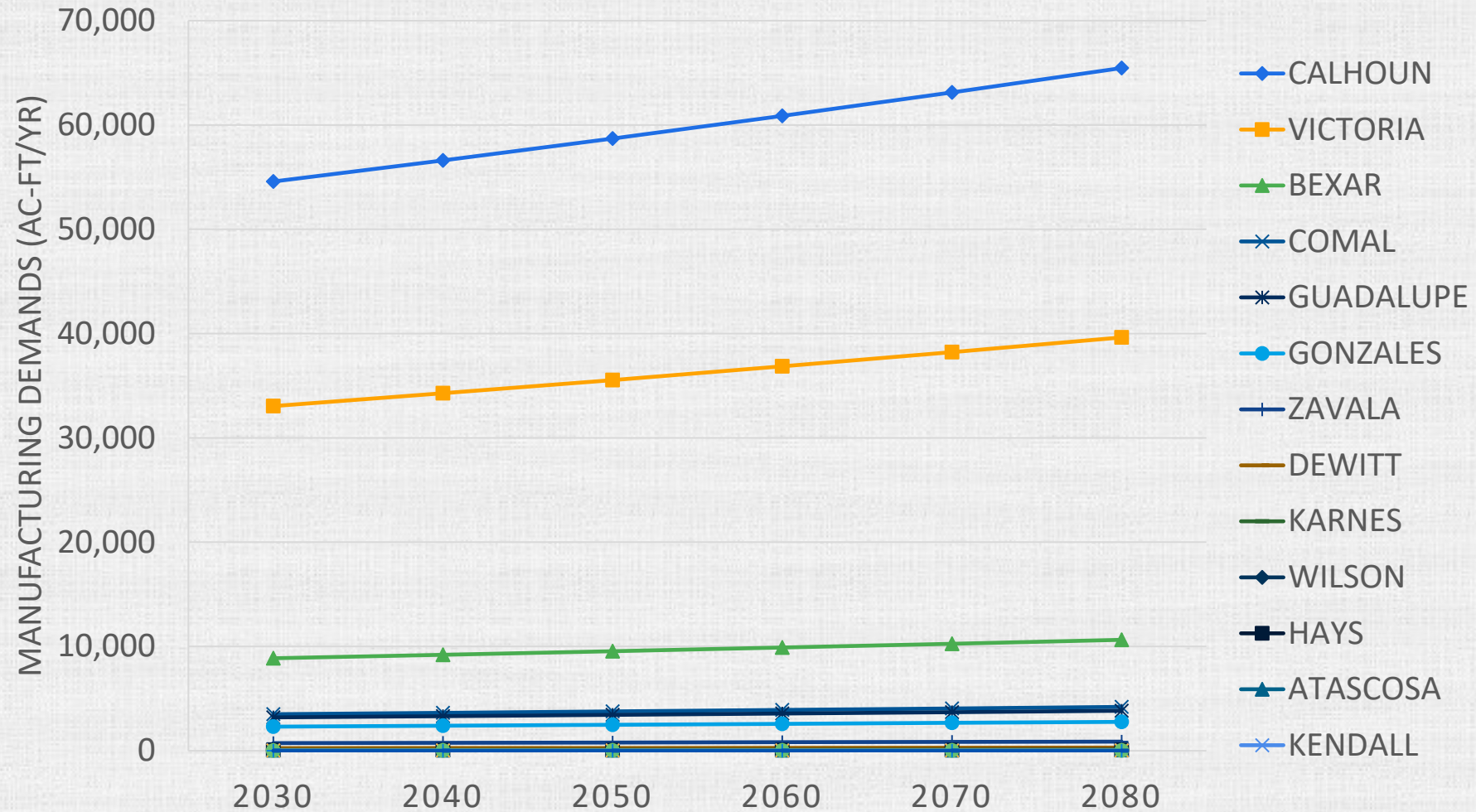
*Source: U.S. Census Bureau County Business Patterns  
Number of Establishments (based on MFG NAICS)*

# Draft Water Demands: Manufacturing Summary



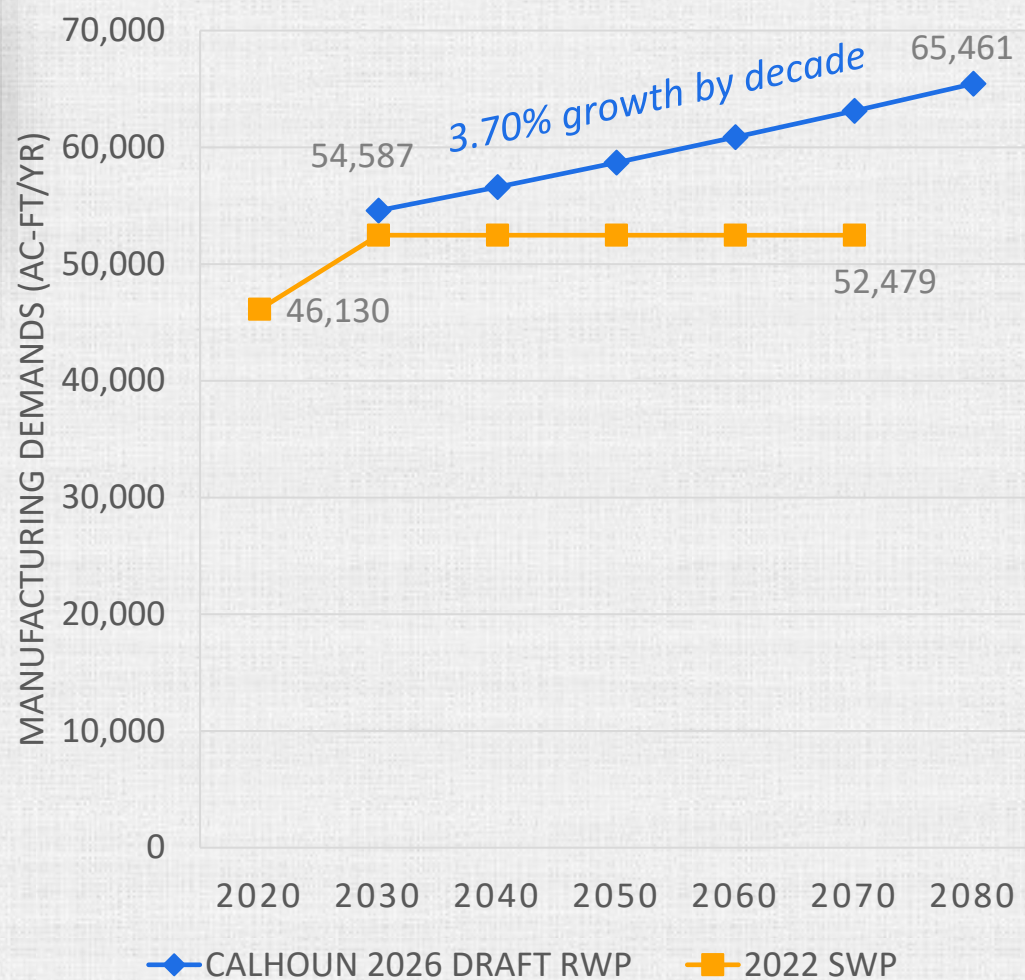


# Draft 2026 Water Demand Projections: Manufacturing



No Manufacturing Data or Demands: Dimmit, Frio, La Salle, Refugio

# Draft Water Demand Projections: Calhoun County Manufacturing



- 2019 Reported Users:  
BRASKEM AMERICAS - SEADRIFT  
FLORIDA GAS TRANSMISSION COMPANY  
FORMOSA PLASTICS CORPORATION USA  
GREEN LAKE FACILITY- INEOS NITRILES USA LLC  
POINT COMFORT OPERATIONS- ALCOA WORLD ALUMINA LLC  
SEADRIFT COKE LP  
SEADRIFT PLANT- UNION CARBIDE CORPORATION
- Water Source: Groundwater, Surface water, Reuse
- Unaccounted Use: 282 ac-ft/yr

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
44,316	44,795	49,524	47,023	48,557



# Draft Water Demand Projections: Calhoun County Manufacturing

- FORMOSA PLASTICS CORPORATION USA
  - Contract amendment with wholesale water provider to account for anticipated increase in demand:

	2030	2040	2050	2060	2070	2080
Formosa Plastics anticipated additional demand in Calhoun County	3,877	4,950	4,950	4,950	4,950	4,950

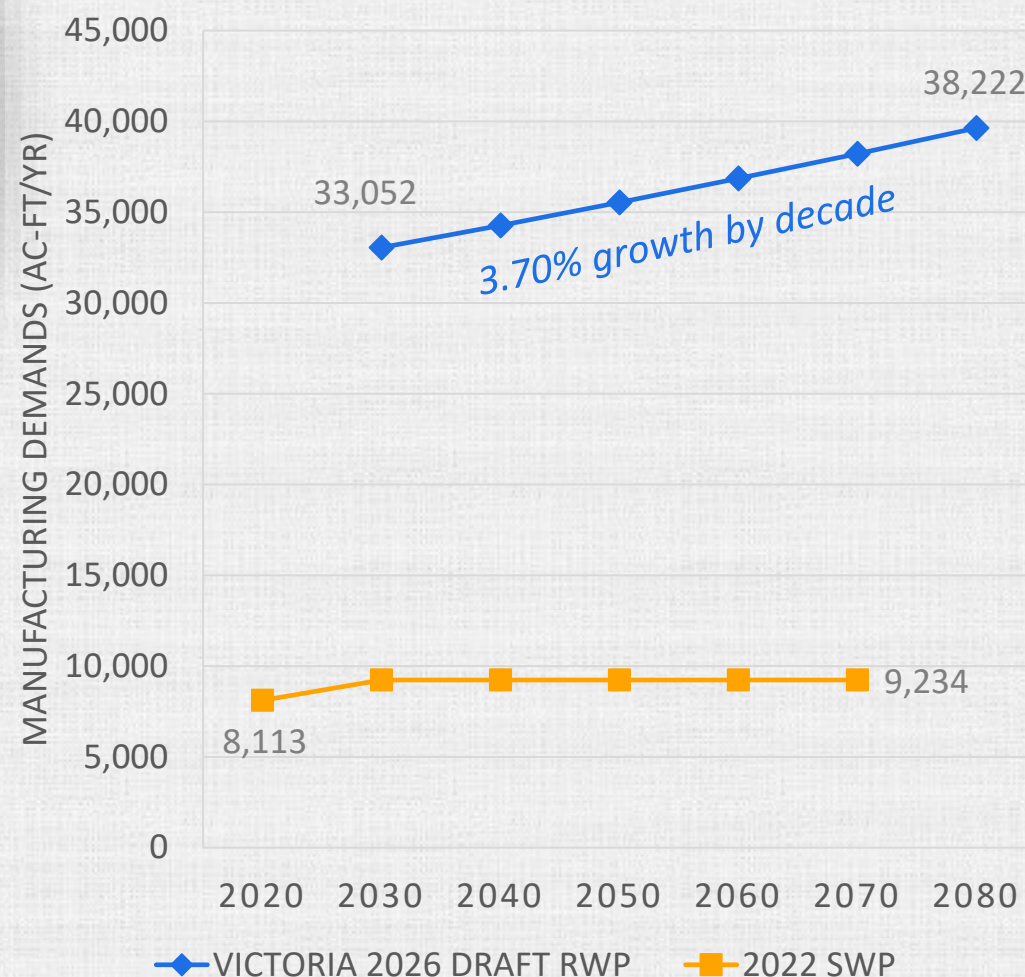
- Over past 5 years, Formosa's water use represented 47-58% of manufacturing water use in Calhoun County.
- Highest county-aggregated manufacturing water use in the most recent five years (2017): 49,524 (Baseline = 49,806)

	2030	2040	2050	2060	2070	2080
2026 Draft Calhoun Projections	54,587	56,607	58,701	60,873	63,125	65,461
Increase from Baseline	4,781	6,801	8,895	11,067	13,319	15,655

Do the demand projections as shown allow for Formosa's growth, or we need to request additional demand to account for growth of other manufacturing facilities in the county?



# Draft Water Demand Projections: Victoria County Manufacturing



- **2019 Reported Users:**  
CATERPILLAR INC-VICTORIA  
EQUISTAR CHEMICALS-VICTORIA PLANT  
HARWELL CUSTOM PROCESSING  
TEXAS CONCRETE PARTNERS  
INVISTA SARL-VICTORIA PLANT  
VICTORIA PLANT-AIR LIQUIDE AMERICA CORPORATION
- **Water Source:** Groundwater, Surface water
- **Unaccounted Use:** 62 ac-ft/yr
- *New user identified in 2019: Equistar Chemicals – Victoria Plant (8,600 ac-ft/yr).*

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
26,345	30,095	27,476	27,905	27,414

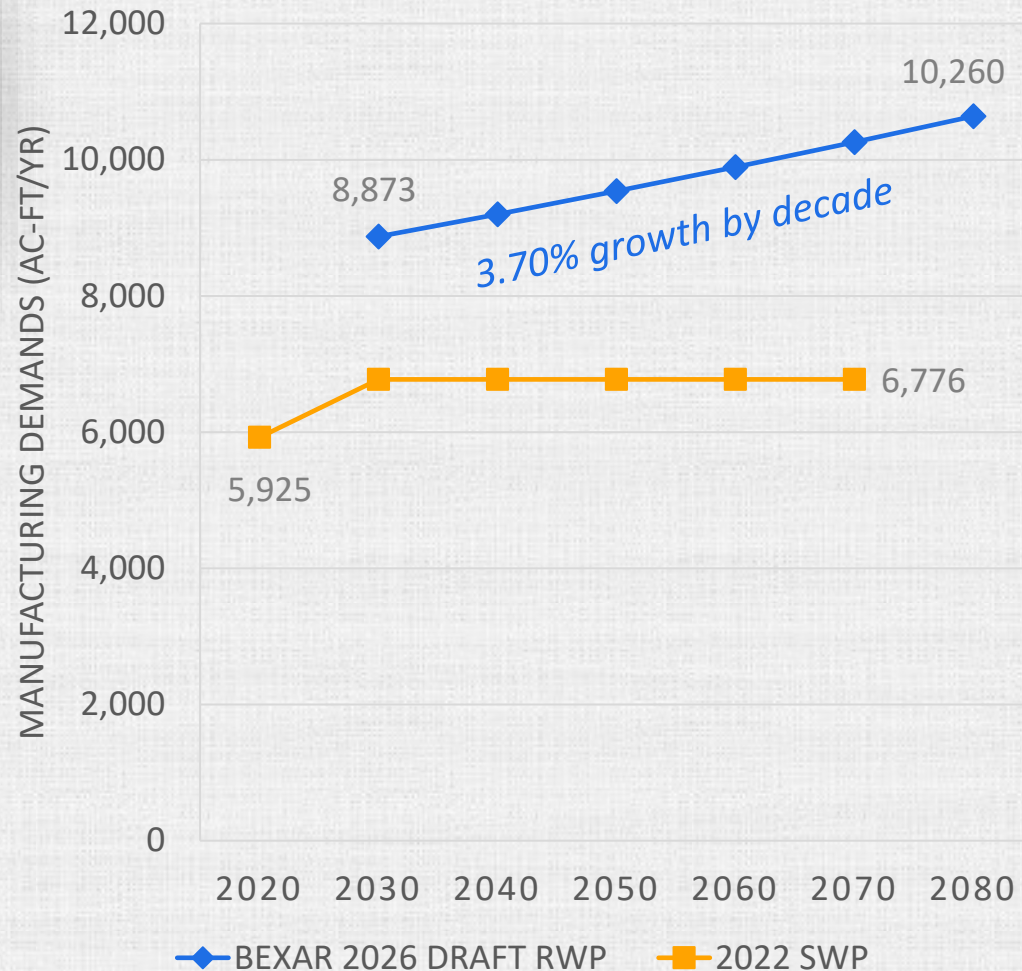
# Draft Water Demand Projections: Victoria County Manufacturing

- INVISTA SARL – VICTORIA PLANT
  - 2021 Plan supporting data – water use for 2010-2015 was ~7,000 - 8,000 AFY
  - 2026 Plan supporting data – water use for 2010-2015 was ~23,000 - 26,000 AFY
  - Response from TWDB:

“In last cycle, the net use for this plant may have been calculated using the amount of water consumed by the plant (reported ~30% annually) rather than the total intake of water. For this cycle, net use is calculated using the total intake minus sales.”



# Draft Water Demand Projections: Bexar County Manufacturing



- **2019 Reported Users:** 65 (list on next slide)
- **Water Source:** Groundwater, Surface water, Reuse
- **Unaccounted Use:** 249 ac-ft/yr

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
6,244	6,585	6,735	7,128	7,847

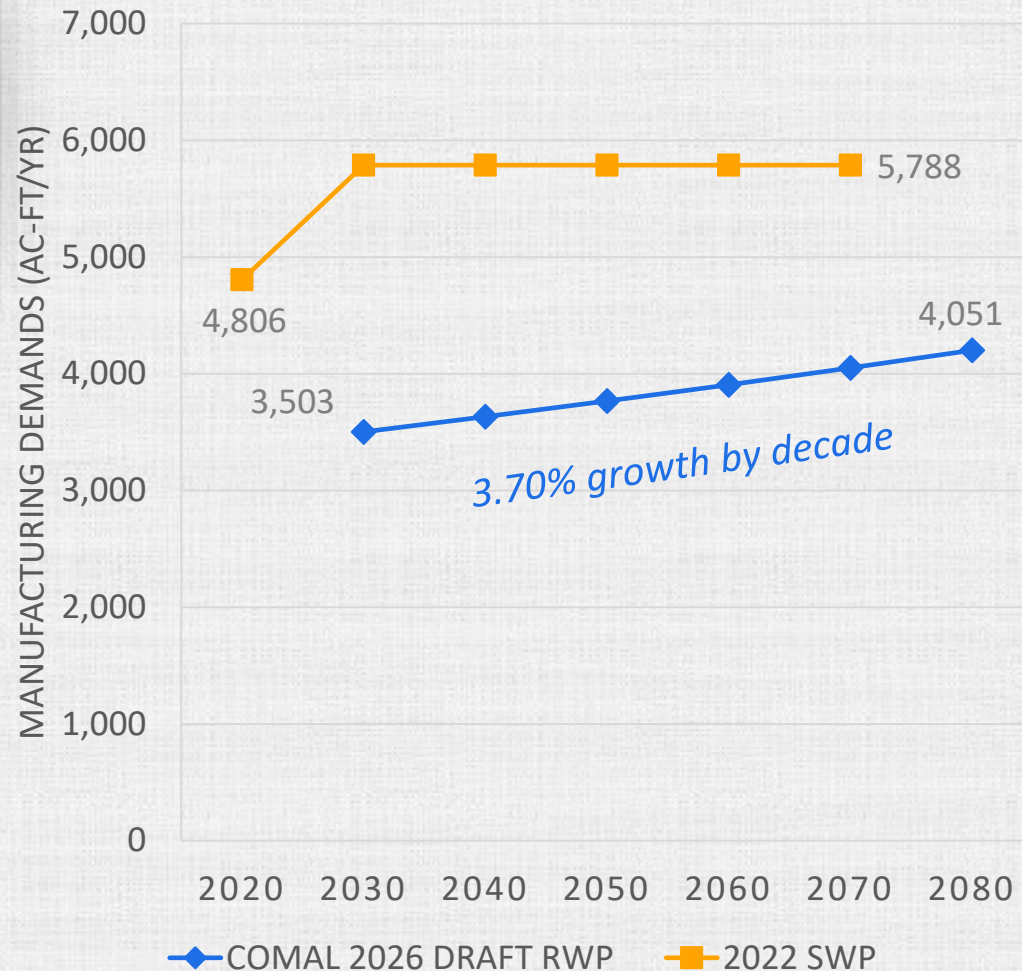
## 2019 Reported Users

# Draft Water Demand Projections: Bexar County Manufacturing

A I ROOT COMPANY	COMPANY INC	SAN ANTONIO PLANT- COCA-COLA SOUTHWEST BEVERAGES
ACME BRICK - CONVERSE PLANT	LAXSON PROVISION COMPANY	SAN ANTONIO PLANT- FIBER GLASS SYSTEMS LP
ALAMO FOAM	LESLIE ROAD PLANT- ALAMO CONCRETE PRODUCTS CO	SAN ANTONIO PLANT- FRITO LAY INC
ALAMO PROCESSORS	LONE STAR BAKERY INC	SAN ANTONIO PLANT- INTERNATIONAL PAPER COMPANY
AT & T CENTER PKWY- ALAMO IRON WORKS	LONGHORN PACKAGING IINC	SAN ANTONIO PLANT- MATHESON TRI GAS INC
BAY VALLEY FOODS LLC	LUBRIZOL ELMENDORF	SAN ANTONIO PLANT- OAK FARMS DAIRY
CAPITAL CEMENT PLANT- CAPITOL AGGREGATES INC	M7 AEORSPACE	SAN ANTONIO PLANT- REDDY ICE LTD
COLUMBIA INDUSTRIES INC	MARION PLANT- TAPRITE FASSCO MANUFACTURING INC	SAN ANTONIO PLANT SARSC- H E BUTT GROCERY COMPANY LP
CONVERSE PLANT- INGRAM READYMIX INC	MARKLE MANUFACTURING COMPANY	SAN ANTONIO PLANT- TAPRITE FASSCO MANUFACTURING INC
DIRECT SOURCE MEATS-COOKED PLANT	MEADOW BURKE PRODUCTS	STERLING FOODS INC
DIRECT SOURCE MEATS-DSM RAW FACILITY	MEYER MACHINE COMPANY	SUNSHINE NUT COMPANY- JOHN B SAN FILIPPO & SON INC
DPT LABORATORIES LTD	MISSION PHARMACAL COMPANY	SURLEAN MEAT CO
DURRSET AMIGOS LTD	MOORE PLASTICS	TEXAS DIVISION- PEPSI COLA BOTTLING COMPANY
EVANS ROAD PLANT- ALAMO CONCRETE PRODUCTS CO	NUSTAR REFINING LLC	THE SAN ANTONIO REFINERY LLC
FLOUR MILLS- PIONEER INC	PLASTIC VACUUM FORMING INC	TOWERJAZZ
FLOWERS BAKING COMPANY OF SAN ANTONIO	REDONDO MANUFACTURING	TOYOTA MOTORS MANUFACTURING TEXAS INC
FM 1604 NE PLANT- ALAMO CEMENT COMPANY	REED CANDLE COMPANY	US GALVANZING INC-SAN ANTONIO PLANT
FRESH FROM TEXAS LLC	REFRESCO BEVERAGES	VP RACING FUELS
GRISSOM ROAD PLANT- BECK READYMIX CONCRETE COMPANY	RINKER HYDRO CONDUIT	WARREN OIL COMPANY LLC
JOYSON SAFETY SYSTEMS	SAN ANTONIO CONTAINER DIVISION- INTERNATIONAL PAPER COMPANY	WHITE RD PLANT 3- ALAMO CONCRETE PRODUCTS CO
KEMPER STREET PLANT- THE NUGGET COMPANY INC	SAN ANTONIO PLANT- BERRIDGE MANUFACTURING COMPANY	
KIOLBASSA PROVISION COMPANY	SAN ANTONIO PLANT- BIMBO BAKERIES USA	
L & H PACKING COMPANY		
LAREDO STREET PLANTS- SAN ANTONIO PACKING		



# Draft Water Demand Projections: Comal County Manufacturing

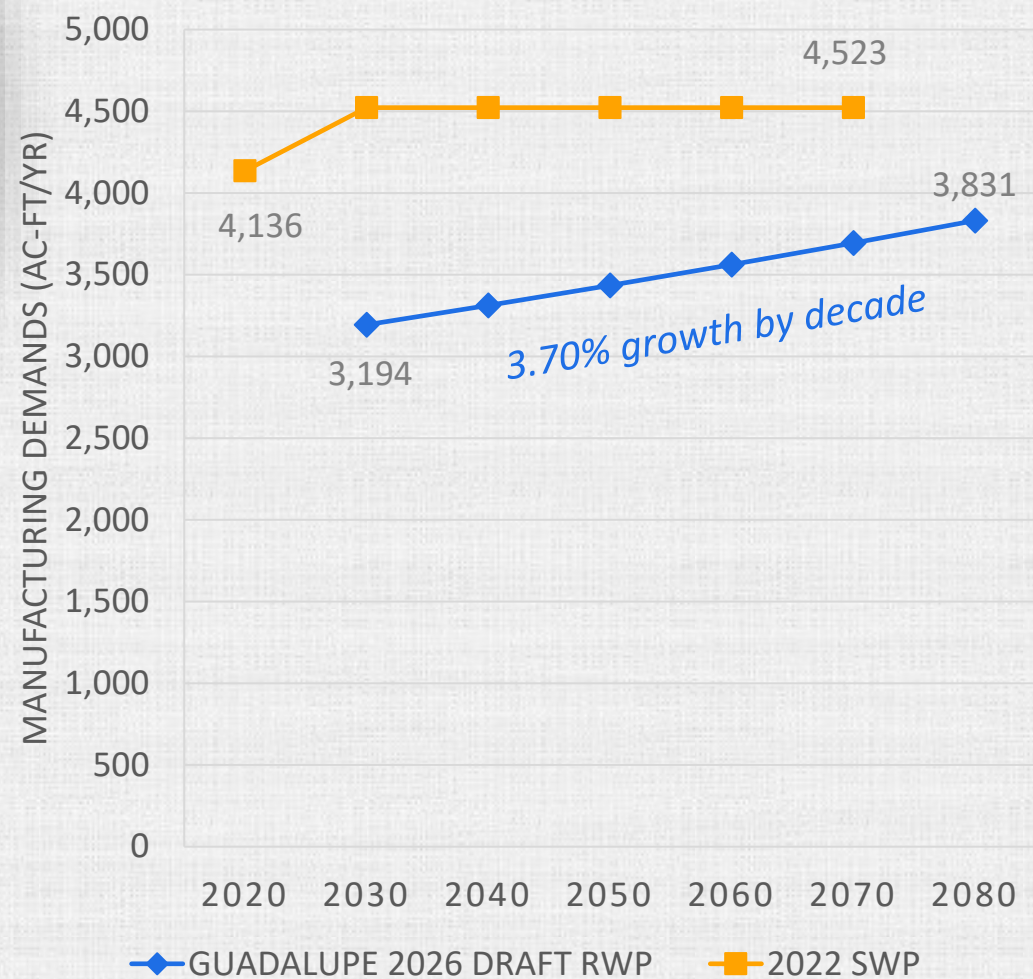


- **2019 Reported Users:**  
 ADM MILLING COMPANY  
 BALCONES PLANT- CEMEX CONSTRUCTION MATERIALS SOUTH LLC  
 BRAUNTEX MATERIALS INC  
 DETEX CORPORATION  
 DOT METAL PRODUCTS  
 HUNTER ROAD CEMENT PLANT- TXI CEMENT  
 NEW BRAUNFELS PLANT- INGRAM READYMIX INC  
 OGDEN PLANT- MERIDIAN BRICK  
 SENIOR FLEXONICS INC  
 THE COLEMAN COMPANY INC  
 TRICON PRECAST LTD
- **Water Source:** Groundwater, Surface water, Reuse
- **Unaccounted Use:** 11 ac-ft/yr

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
3,185	650	710	811	778

*After 2015, large user (BALCONES QUARRY- CEMEX CONSTRUCTION MATERIALS SOUTH LLC) stopped reporting*

# Draft Water Demand Projections: Guadalupe County Manufacturing

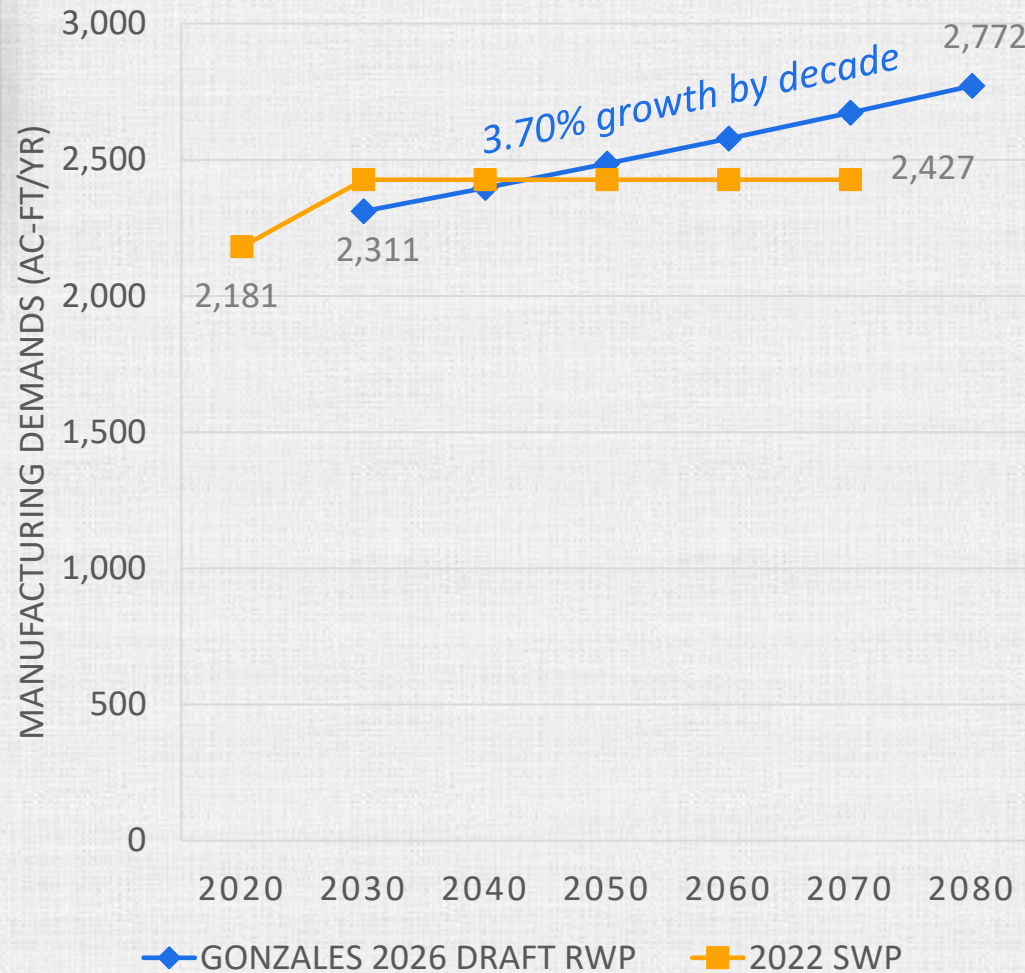


- **2019 Reported Users:**  
ALAMO GROUP TEXAS INC  
CATERPILLAR INC  
CENTRAL TEXAS IRON WORKS - SCHERTZ  
FUJIREBIO DIAGNOSTICS INC  
HEXCEL CORPORATION  
MCQUEENEY PLANT- ACME BRICK COMPANY  
MCQUEENEY PLANT- GEORGIA- PACIFIC GYPSUM LLC  
NIAGARA BOTTLING-SEGUIN  
O.J.R REGIONAL RECLAMATION PLANT  
SEGUIN PLANT- TYSON FOODS INC  
STRUCTURAL METALS INC  
VITESCO TECHNOLOGIES  
XERXES CORPORATION
- **Water Source:** Groundwater, Surface water, Reuse
- **Unaccounted Use:** 15 ac-ft/yr

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
2,029	2,556	2,865	2,763	2,899



# Draft Water Demand Projections: Gonzales County Manufacturing



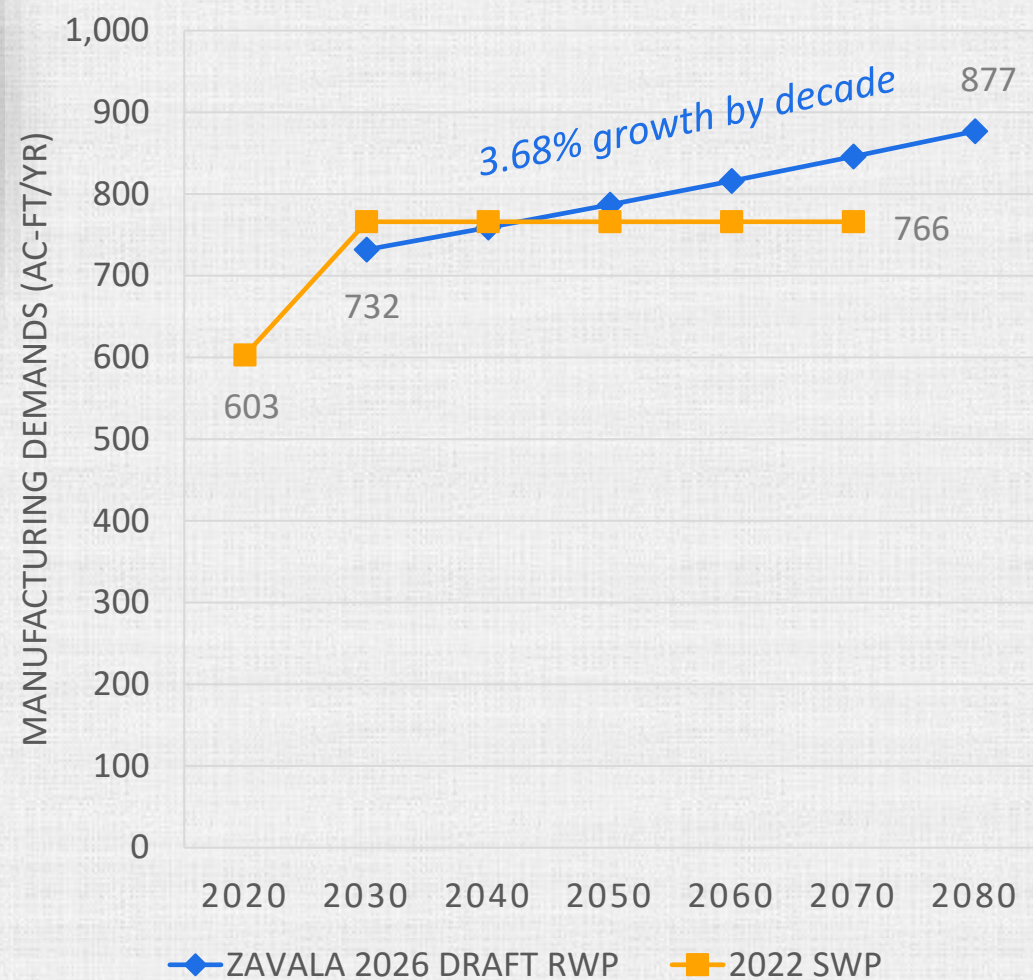
- 2019 Reported Users:

- CAL MAINE FOODS INC
- FEED MILL- TYSON FOODS INC
- GONZALES CHOW PLANT- LAND O LAKES PURINA FEED LLC
- GONZALES HATCHERIES- TYSON FOODS INC
- J B SAUSAGE COMPANY INC
- POULTRY PROCESSING PLANT- HOLMES FOODS INC

- Water Source:** Groundwater, Surface water, Reuse
- Unaccounted Use:** 1 ac-ft/yr

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
1,868	1,897	1,977	2,046	2,108

# Draft Water Demand Projections: Zavala County Manufacturing



- 2019 Reported Users:

DEL MONTE FOODS

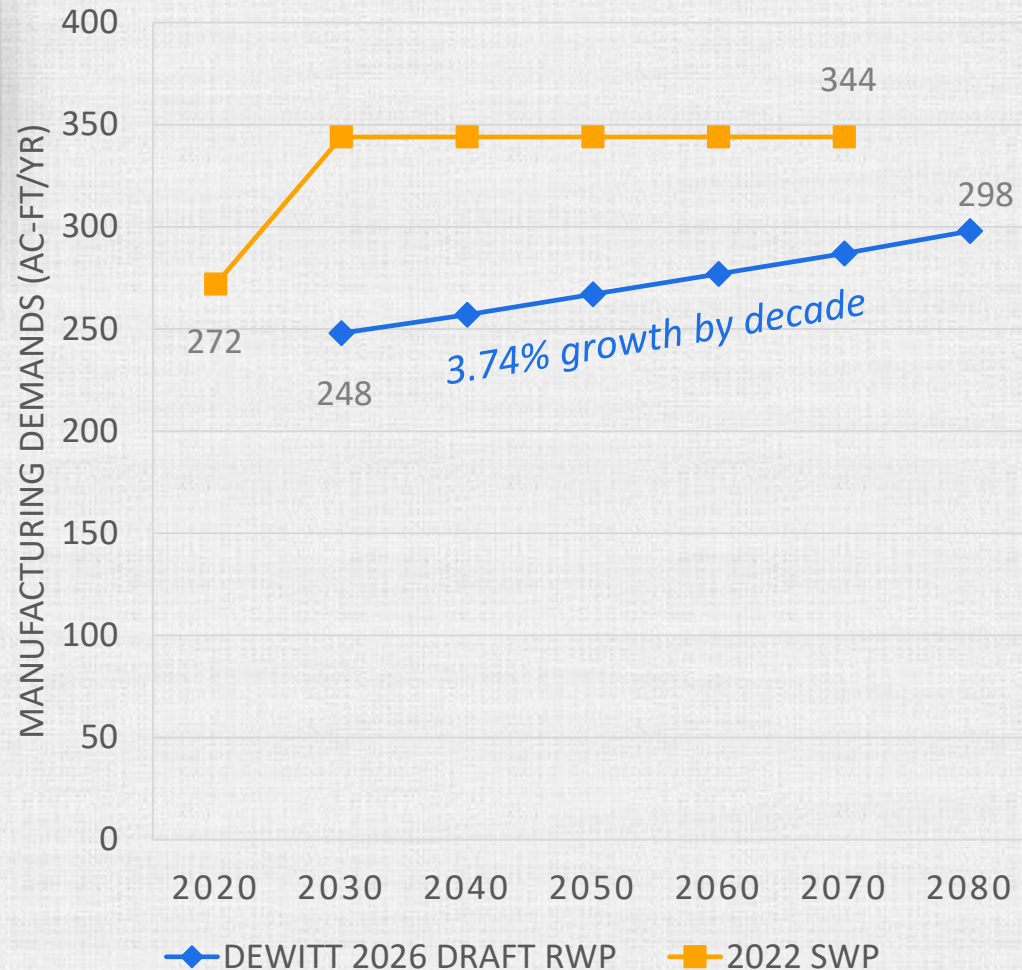
- Water Source:** Groundwater
- Unaccounted Use:** 0 ac-ft/yr
- After 2017, Del Monte Foods significantly reduced water use.*

Historical Water Use Estimates (ac-ft/yr)

2015	2016	2017	2018	2019
668	662	456	92	90



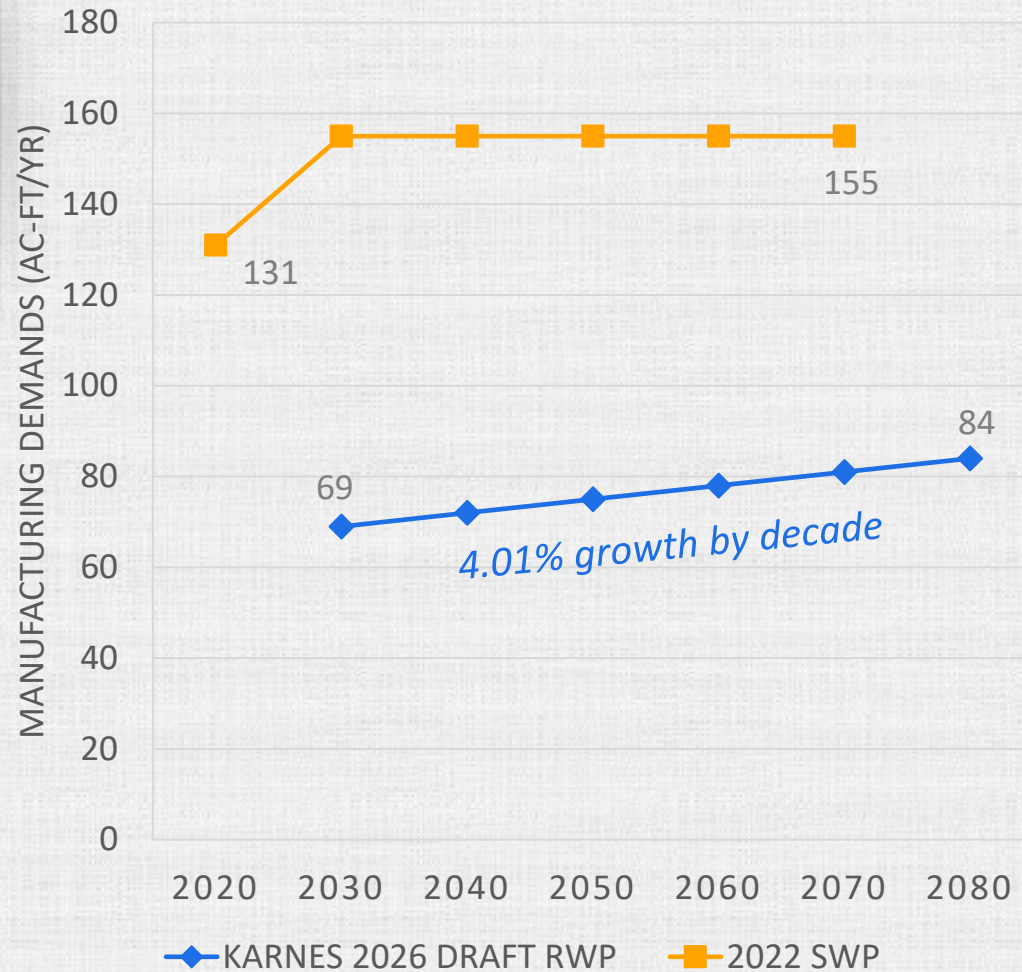
# Draft Water Demand Projections: DeWitt County Manufacturing



- **2019 Reported Users:**  
 ADVANCED DRAINAGE SYSTEM  
 ARMSTRONG PLANT- ENTERPRISE PRODUCTS  
 PLANT 72 CUERO- ALAMO CONCRETE COMPANY  
 REXCO INC-WHITE PIT  
 ROCK HARD MATERIALS LLC-KUNETKA PIT  
 ROCK HARD MATERIALS LLC-STERNIMANN PIT
- **Water Source:** Groundwater
- **Unaccounted Use:** 0 ac-ft/yr
- *After 2016, large user (BRENTX DIVISION- MOUNT VERNON MILLS INC) stopped reporting. Confirmed plant is closed.*

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
226	162	105	132	113

# Draft Water Demand Projections: Karnes County Manufacturing

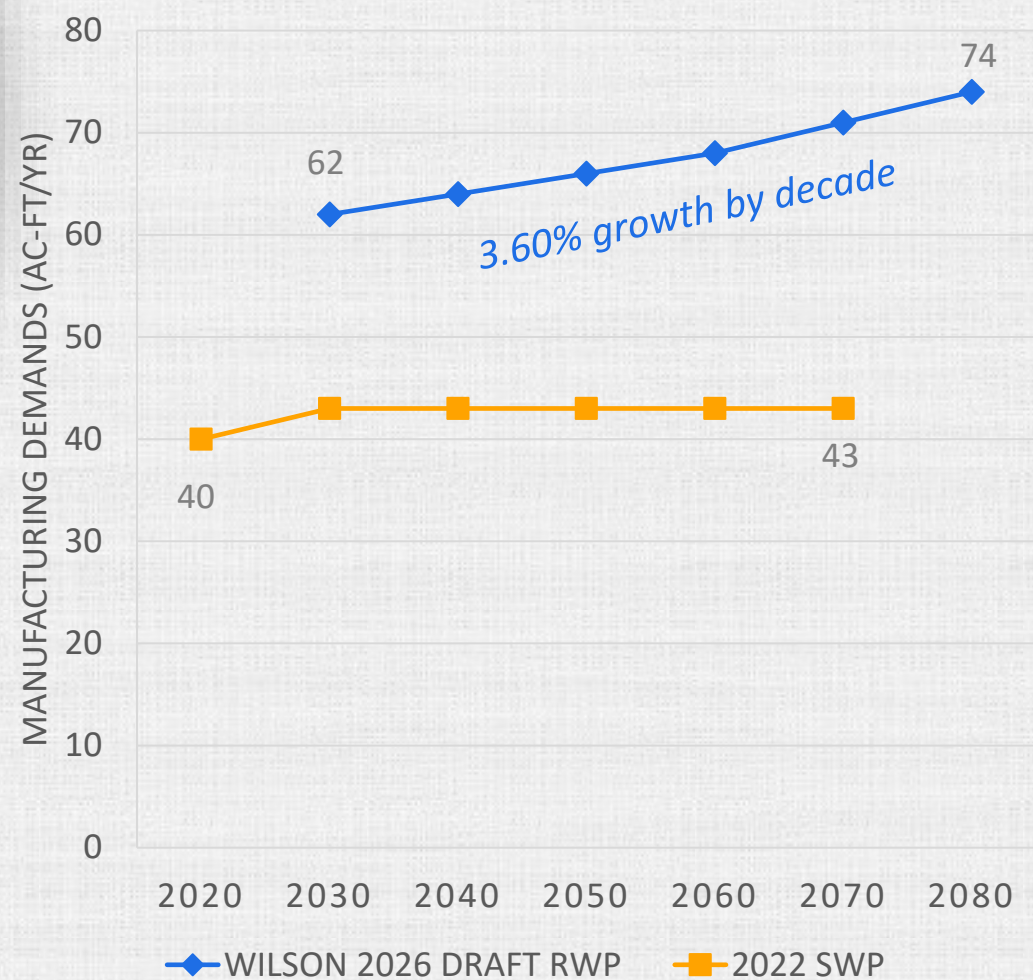


- **2019 Reported Users:**  
ASHLAND SPECIALITY INGREDIENTS
- **Water Source:** Groundwater
- **Unaccounted Use:** 0 ac-ft/yr

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
45	50	50	63	63



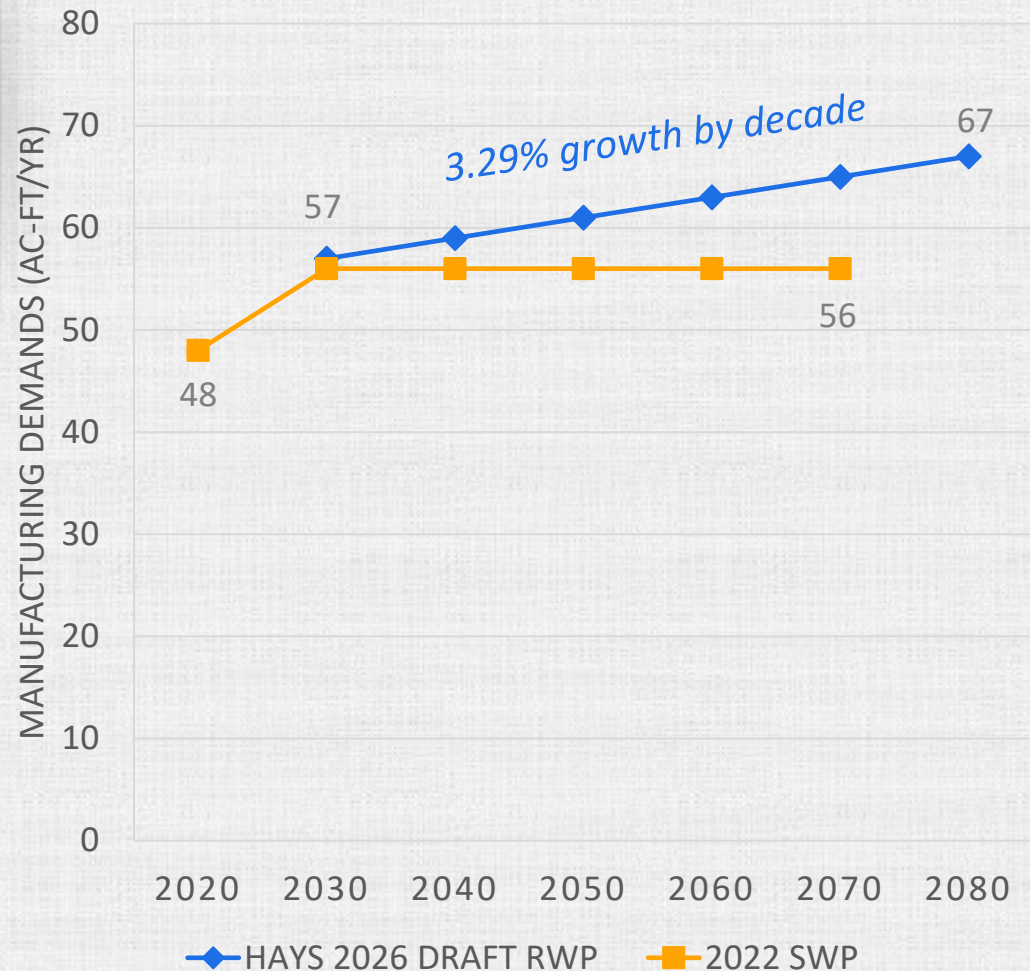
# Draft Water Demand Projections: Wilson County Manufacturing



- **2019 Reported Users:**  
**PROMISED LAND CREAMERY**  
SAN ANTONIO DIV FLORESVILLE PLANT-  
ALAMO CONCRETE PRODUCTS CO  
SASPAMCO PLANT- MISSION CLAY PRODUCTS  
LLC
- **Water Source:** Groundwater
- **Unaccounted Use:** 0 ac-ft/yr
- *After 2017, Promised Land Creamery significantly reduced water use.*

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
49	57	50	9	9

# Draft Water Demand Projections: Hays County Manufacturing



- **2019 Reported Users:**

CFAN

GULF BUSINESS FORMS INC

MENSOR CORPORATION

ROHR INC

SOUTHERN POST COMPANY

THERMON MANUFACTURING COMPANY

- **Water Source:** Groundwater

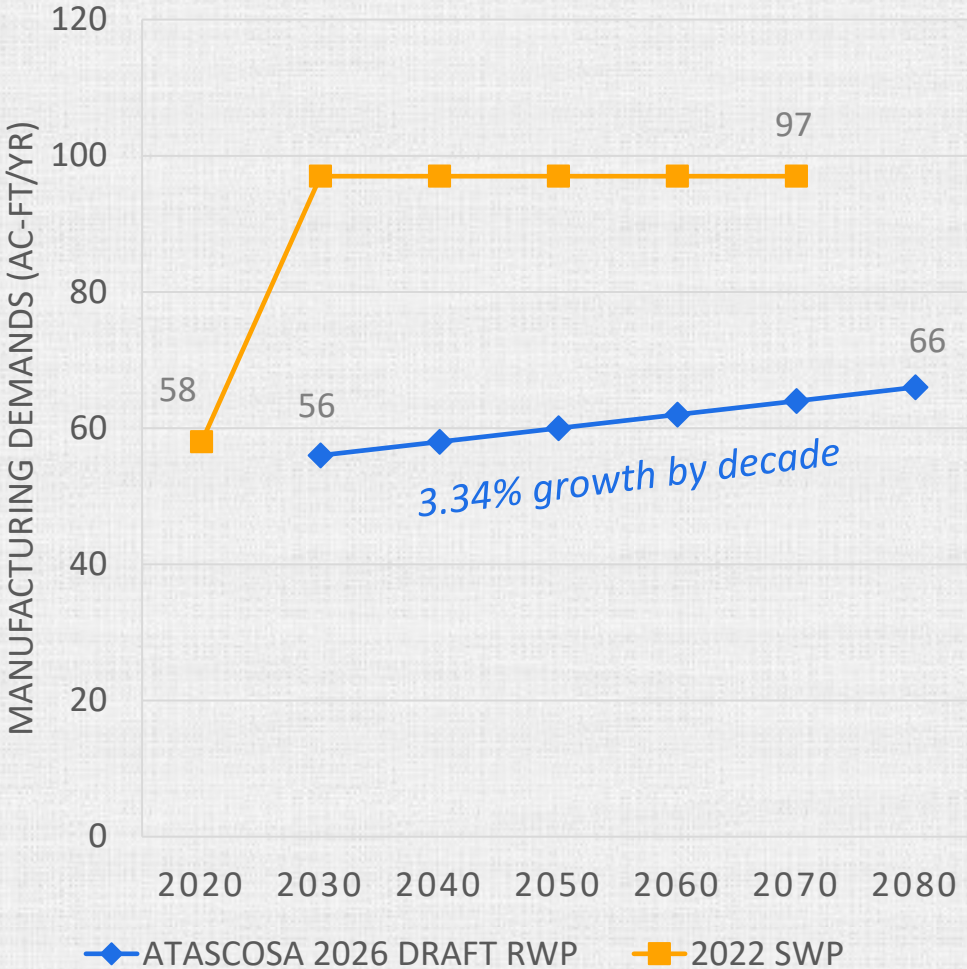
- **Unaccounted Use:** 7 ac-ft/yr

Historical Water Use Estimates (ac-ft/yr)

2015	2016	2017	2018	2019
45	36	32	35	31



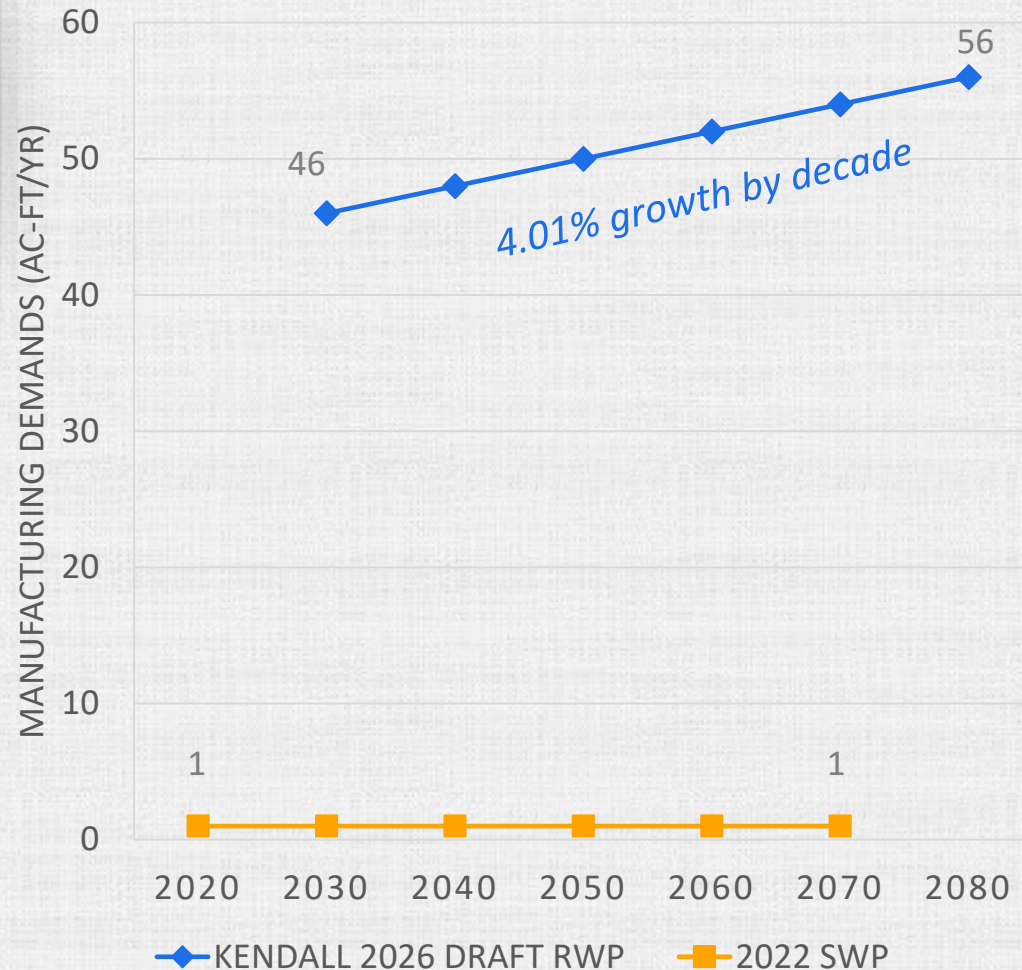
# Draft Water Demand Projections: Atascosa County Manufacturing



- **2019 Reported Users:**  
ERGON ASPHALT & EMULSIONS  
FASHING PLANT 186- REGENCY GAS SERVICES
- **Water Source:** Groundwater
- **Unaccounted Use:** 0 ac-ft/yr
- *Between 2015 & 2019, Regency Gas Services went from reporting ~36 ac-ft/yr to 0 ac-ft/yr.*

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
50	48	51	19	11

# Draft Water Demand Projections: Kendall County Manufacturing



- **2019 Reported Users:**

BOERNE FLAGS

SISTER CREEK VINEYARDS

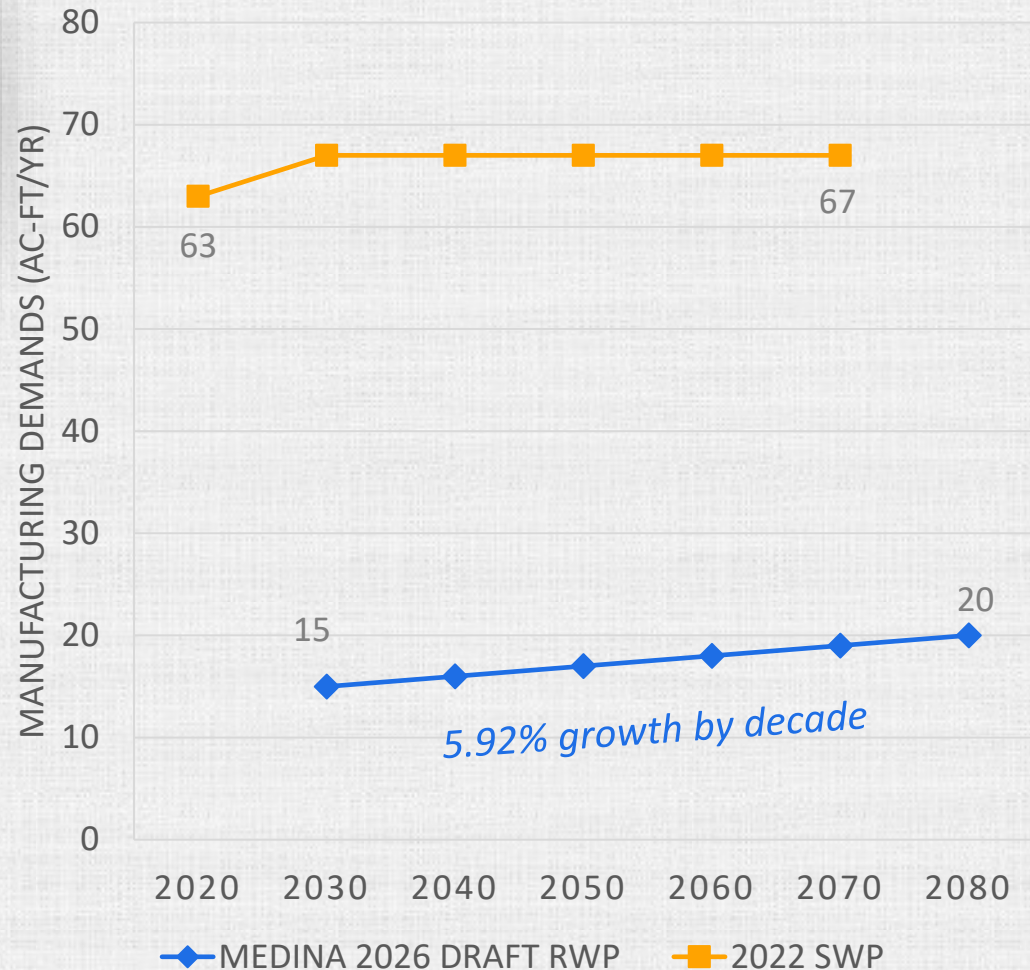
- **Water Source:** Groundwater
- **Unaccounted Use:** 39 ac-ft/yr
- *No unaccounted use in 2021 RWP cycle.*

Historical Water Use Estimates (ac-ft/yr)

2015	2016	2017	2018	2019
2	3	3	3	3



# Draft Water Demand Projections: Medina County Manufacturing

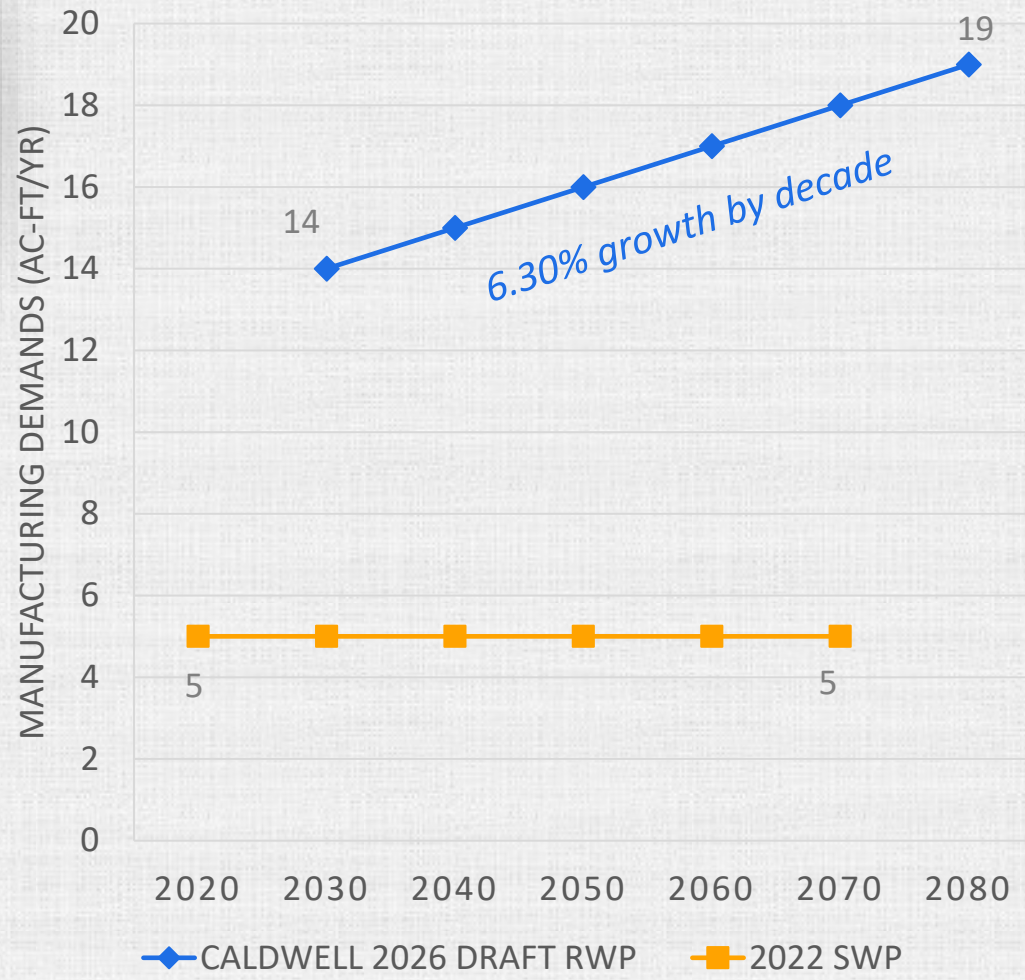


- **2019 Reported Users:**  
SOUTHERN WILD GAME HOLDINGS LLC
- **Water Source:** Groundwater
- **Unaccounted Use:** 3 ac-ft/yr
- *After 2012, user (Blue Line) stopped reporting, but their website announced a 55,000 sq-ft expansion of their facility in Hondo.*

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
11	10	9	9	8



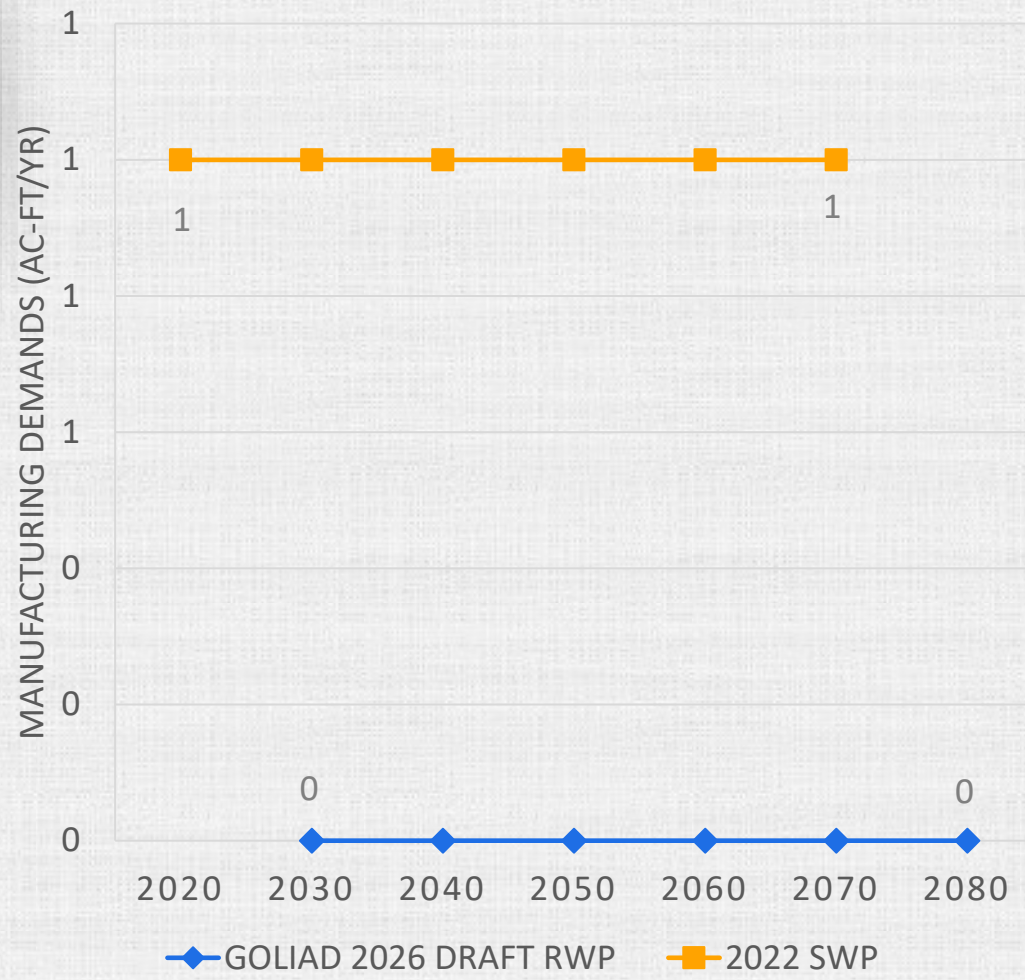
# Draft Water Demand Projections: Caldwell County Manufacturing



- **2019 Reported Users:**  
TXI SAN MARCOS READY MIX- TEXAS INDUSTRIES INC
- **Water Source:** Surface water
- **Unaccounted Use:** 0 ac-ft/yr

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
7	13	0	13	13

# Draft Water Demand Projections: Goliad County Manufacturing



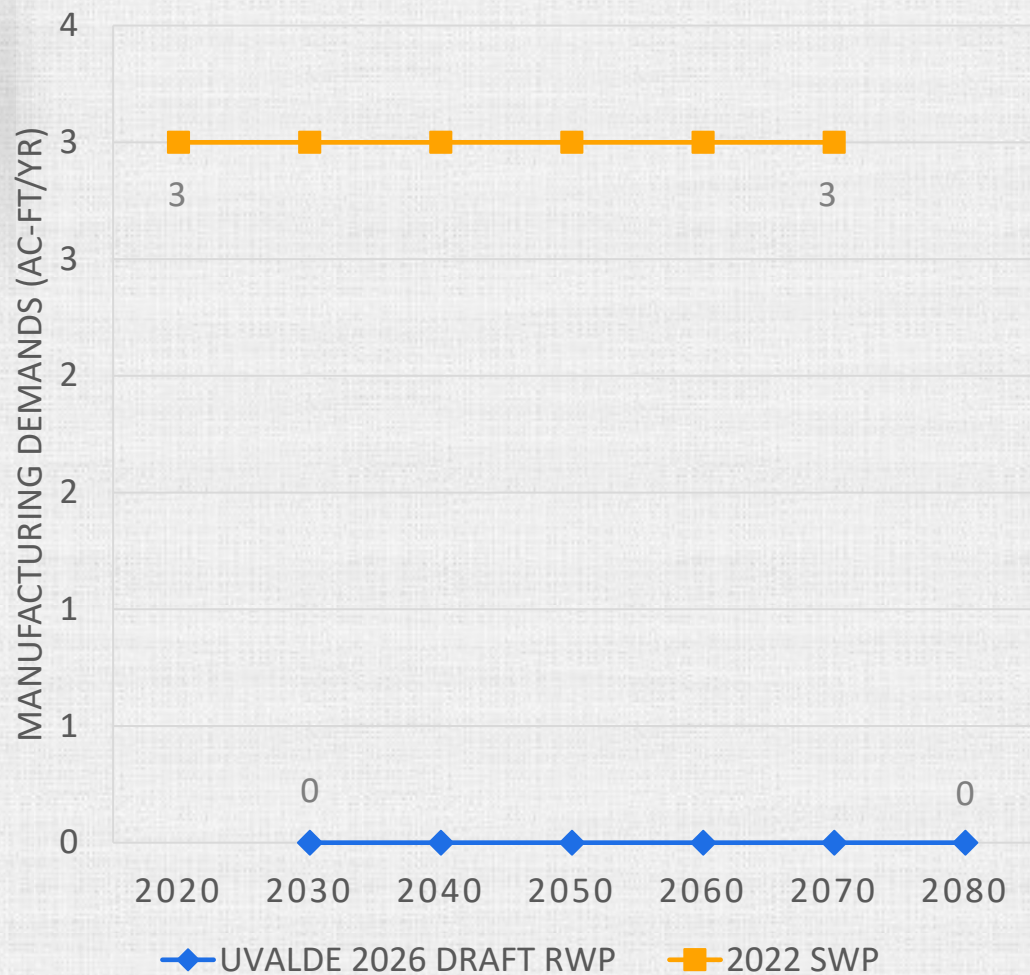
- **2019 Reported User:**  
GOLIAD BREWING COMPANY
- **Water Source:** N/A
- **Unaccounted Use:** 0 ac-ft/yr
- *Goliad Brewing Company reported 0 ac-ft/yr of use.*
- *After 2010, user (PLANT 81 GOLIAD- ALAMO READY MIX CONCRETE) stopped reporting.*

Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
0	0	0	0	0



# Draft Water Demand Projections: Uvalde County Manufacturing

- 2019 Reported Users: None
- Water Source: N/A
- Unaccounted Use: 0 ac-ft/yr
- *After 2013, user (COVERED GATE INC) stopped reporting.*



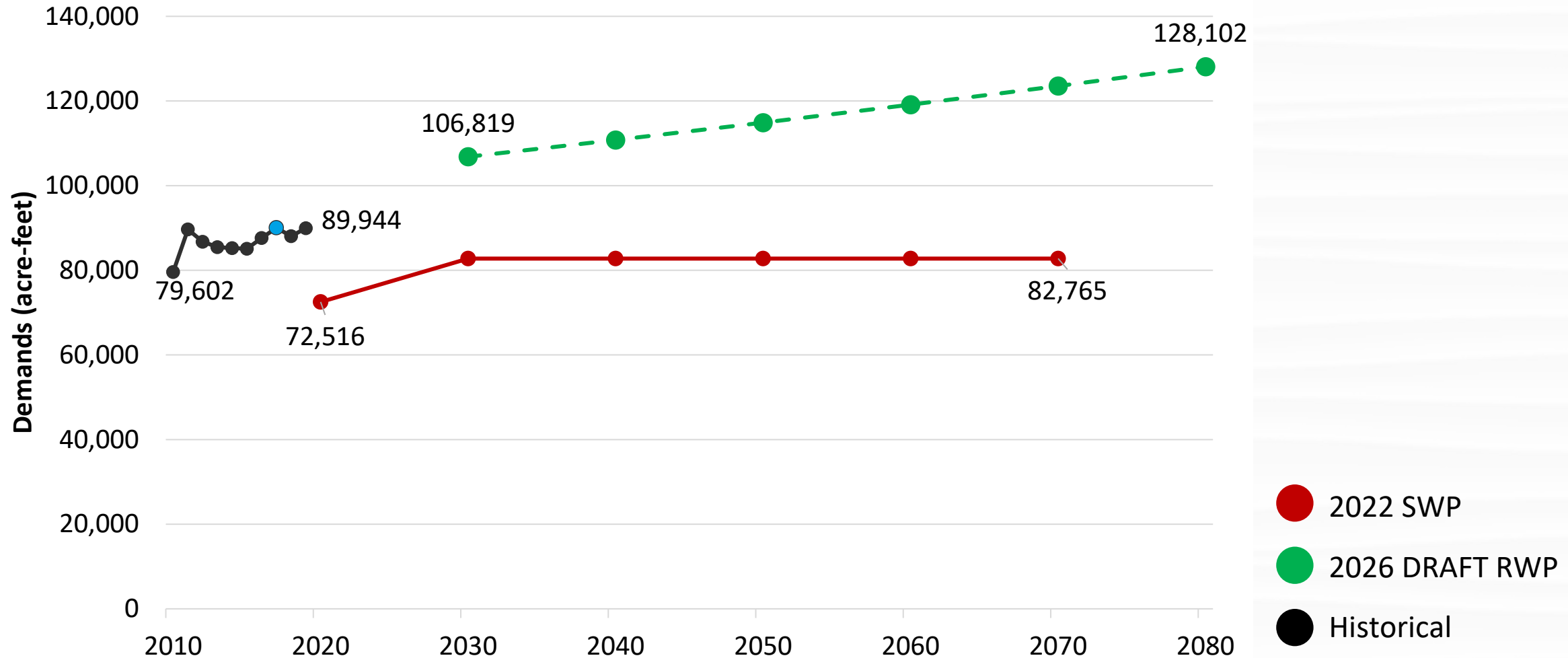
Historical Water Use Estimates (ac-ft/yr)				
2015	2016	2017	2018	2019
0	0	0	0	0



# Draft Water Demands: Manufacturing Summary

2026 DRAFT Regional Water Plan Projections						
County	2030	2040	2050	2060	2070	2080
ATASCOSA	56	58	60	62	64	66
BEXAR	8,873	9,201	9,541	9,894	10,260	10,640
CALDWELL	14	15	16	17	18	19
CALHOUN	54,587	56,607	58,701	60,873	63,125	65,461
COMAL	3,503	3,633	3,767	3,906	4,051	4,201
DEWITT	248	257	267	277	287	298
GOLIAD	0	0	0	0	0	0
GONZALES	2,311	2,397	2,486	2,578	2,673	2,772
GUADALUPE	3,194	3,312	3,435	3,562	3,694	3,831
HAYS	57	59	61	63	65	67
KARNES	69	72	75	78	81	84
KENDALL	46	48	50	52	54	56
MEDINA	15	16	17	18	19	20
UVALDE	0	0	0	0	0	0
VICTORIA	33,052	34,275	35,543	36,858	38,222	39,636
WILSON	62	64	66	68	71	74
ZAVALA	732	759	787	816	846	877
	<b>106,819</b>	<b>110,773</b>	<b>114,872</b>	<b>119,122</b>	<b>123,530</b>	<b>128,102</b>

# Draft Water Demands: Manufacturing Summary



# Draft Manufacturing Water Demand Projections

## Criteria for Adjustment

**One or more** of the following criteria must be verified by the regional water planning group and the Executive Administrator for consideration of revising the manufacturing water demand projections:

1. Evidence of a new or existing facility that has not been included in the TWDB's Water Use Survey.
2. Evidence of an industrial facility that has recently closed its operation in a county.
3. Plans for new construction, or expansion or closure of an existing industrial facility in a county at some future date.
4. Evidence of a long-term projected water demand of a facility or industry within a county that is substantially different than the draft projections.
5. Evidence of errors identified in historical water use, including volumes of reuse (treated effluent) or brackish groundwater that were not included in the draft projections.
6. Evidence that holding demands constant from 2040-2080 would better reflect future efficiencies and water use.



# **Agenda Item 2: Discussion and Appropriate Action Regarding Recommendation for Feedback to TWDB**

# Discussion.

- Proposed revisions for TWDB
- Next Steps
- Next Meeting(s)
- Other topics

# Manufacturing Water Demand Projections Methodology for the 2026 Regional and 2027 State Water Plans

## **Methodology Summary**

The draft manufacturing water demand projections were based upon the highest region-county manufacturing water use in the most recent five years of aggregated data (2015 through 2019) for manufacturing water users from the annual water use survey (WUS). Values from the WUS used in the max year calculation consist of gross intake (withdrawals and purchases) minus any sales to other entities. Within this context, such values are referred to as net use. Similar to the demand projections for the 2021 Regional Water Plans and the 2022 State Water Plan, fresh surface water and groundwater were included in net use. Additionally, volumes of reuse water, such as treated effluent, and brackish groundwater used by manufacturing facilities were included in the historical water use estimates and the water demand projections. However, saline surface water was not included in draft projections. The full intake was included in the baseline (minus sales), not consumptive use. The planning horizon for the sixth planning cycle is 2030 – 2080 and the projected demands apply the 2010-2019 U.S. Census Bureau's County Business Patterns (CBP)<sup>1</sup> statewide rate of change to project future water demands, as described below.

After draft projections (decades 2030 through 2080) for each region-county are provided to the Regional Water Planning Groups (RWPGs), the RWPGs may request alterations to the draft projections, subject to adequate justification, documentation, and EA approval per guidance in *Exhibit C: General Guidelines for Development of the 2026 Regional Water Plans*.

## **Key changes from the previous projection methodology:**

Demands were projected linearly using County Business Patterns historical number of manufacturing establishments, rather than holding projected demands constant for the long-term planning horizon.

## **Baseline Manufacturing Water Demand Projections**

Using the highest water use year (2015 – 2019), the reported facility water use volumes were subtotaled by region and county. This max year amount, plus the calculated unaccounted water use as described below, is the baseline for the projections. Because the WUS focuses on the major water users within the manufacturing category, it may not capture all firms with significant water use. Given this, the baseline water demand was adjusted to add potential non-surveyed water use, i.e. unaccounted water use. This latter value was determined using a combination of the CBP and WUS data. The CBP provides the number of firms within various number of employee categories for nine manufacturing sectors statewide. This data was used to determine the potential number and size of missing firms from the WUS. Once the number of firms for possible addition was determined, an average water use per firm value, which is based on the 2019 WUS, was assigned for each manufacturing sector and firm size. The average water use value was multiplied by the potential number of missing firms in each NAICS sector to determine the statewide unaccounted water use. The unaccounted water use by NAICS was then

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<sup>1</sup> <https://www.census.gov/programs-surveys/cbp/data/datasets.html>



distributed to each county based on percentage of number of employees estimated from the 2019 CBP data.

As an example, the historical manufacturing water use (intake minus sales) plus the calculated unaccounted water use in Hays County, is displayed as Baseline Water Demand in Table 1.

Table 1. Historical manufacturing water use for Hays County, TWDB water use survey

Region	County	Net Use Summary from Water Use Survey (acre-feet per year)						Unaccounted water use	Baseline Water Demand
		2015	2016	2017	2018	2019	Highest County Use (2015)		
K	Hays	134	106	119	119	131	134	+31	165
L	Hays	45	36	32	35	31	45	+7	52
	<b>Total</b>	<b>179</b>	<b>142</b>	<b>151</b>	<b>154</b>	<b>162</b>	<b>179</b>		<b>217</b>

### Near-term (2030) Draft Projection Methodology

Once the baseline volume was established, the draft projections were developed using a statewide production growth proxy representing consistent incremental change to ensure the accommodation of potential near-term economic and manufacturing sector production growth. Since the first projected decade (2030) of the full planning horizon (2030 – 2080) is more than ten years from the baseline water use data, the statewide annual historical water use rate of change from 2010 - 2019 was chosen as the proxy to adjust the baseline value to the initial year of projections value (2030). This is to account for potential changes in production and water use that may occur between the baseline water use value and the first projected decade. Examples of how the near-term water use proxy (associated with manufacturing production growth) for annual rate of water use change is applied to baseline water use are in Table 2.

Table 2. Baseline water use and 2030 projections

Region	County	Baseline (acft)	WUS Average Annual Rate of Change (production growth proxy delta)	2030 (acft)
H	BRAZORIA	217,737	0.96%	238,640
D	CASS	32,985	0.96%	36,152
C	DALLAS	18,420	0.96%	20,188
K	HAYS	165	0.96%	181
L	HAYS	52	0.96%	57
G	MCLENNAN	4,166	0.96%	4,566
A	POTTER	8,272	0.96%	9,066

### Long-term (2040 - 2080) Draft Projection Methodology

For each planning decade after 2030, a statewide manufacturing growth proxy was applied annually to project increases in manufacturing water demands. For the 2026 Regional Water Plans and the 2027 State Water Plan, the growth proxy was based on the CBP historical number of establishments in the manufacturing sector from 2010-2019 (Table 3). The statewide rate of change was applied to all region-county projections for each decade following 2030 (Table 4).

Table 3. Region-County 2030 projections multiplied by the CBP annual growth rate to project 2040 demands

Region	County	2030 (acft)	CBP Historical Average Annual Rate of Change (economic proxy delta)	2040 (acft)
H	BRAZORIA	238,640	0.37%	247,470
D	CASS	36,152	0.37%	37,490
C	DALLAS	20,188	0.37%	20,935
K	HAYS	181	0.37%	188
L	HAYS	57	0.37%	59
G	MCLENNAN	4,566	0.37%	4,735
A	POTTER	9,066	0.37%	9,401

Table 4. Region-County manufacturing water demand projections (acft)

Region	County	2030	2040	2050	2060	2070	2080
H	BRAZORIA	238,640	247,470	256,626	266,121	275,967	286,178
D	CASS	36,152	37,490	38,877	40,315	41,807	43,354
C	DALLAS	20,188	20,935	21,710	22,513	23,346	24,210
K	HAYS	181	188	195	202	209	217
L	HAYS	57	59	61	63	65	67
G	MCLENNAN	4,566	4,735	4,910	5,092	5,280	5,475
A	POTTER	9,066	9,401	9,749	10,110	10,484	10,872

In order to address changes in the manufacturing industry and any changes in water use patterns, the draft manufacturing water demands are re-estimated as part of each 5-year planning cycle. As with any methodology applied statewide, there may be specific cases for which modifications to this general methodology are warranted. In such cases, TWDB staff may modify the methodology as necessary while being consistent with the original intent.

### Major Assumptions

- Baseline considered to be the highest single-year region-county manufacturing water use in the most recent five years of aggregated data (2015 through 2019).
- Historical TWDB annual water use estimates do not capture all manufacturing facilities in Texas, therefore, estimated water use is adjusted using CBP establishment and employee data, and added to the baseline.
- A statewide manufacturing water use growth proxy, including 2010-2019 historical water use estimates and 2010-2019 CBP number of manufacturing establishments, are used to project manufacturing water demands to ensure the accommodation of potential economic and manufacturing sector production growth.

### Key Data Sources

Links to the key data sources in developing the projections:

1. Historical water use (county):

[https://www3.twdb.texas.gov/apps/reports/WU/SumFinal\\_CountyReportWithReuse](https://www3.twdb.texas.gov/apps/reports/WU/SumFinal_CountyReportWithReuse)

2. 2021 RWP Projections (county):

[https://www3.twdb.texas.gov/apps/reports/Projections/2022%20Reports/demand\\_county](https://www3.twdb.texas.gov/apps/reports/Projections/2022%20Reports/demand_county)

3. U.S. Census Bureau's County Business Pattern Data:

<https://www.census.gov/programs-surveys/cbp.html>