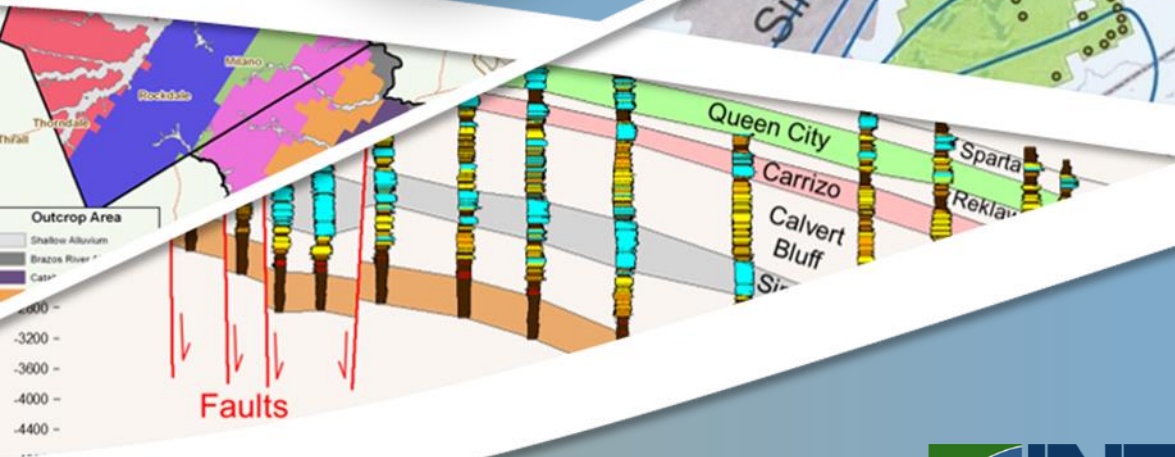


# POSGCD Board Meeting

Presented To:



Presented By:

Steve Young  
Ross Kushnereit  
Lakin Beal



January 10, 2023

# Agenda

- Groundwater Well Program Annual Needs Assessment 2022 (GANA 2022)
- Driller Guidance Document

# GANA 2022

- Purpose

- identify wells where water levels are likely to decline below the elevation of the pump setting within the next 10 years.

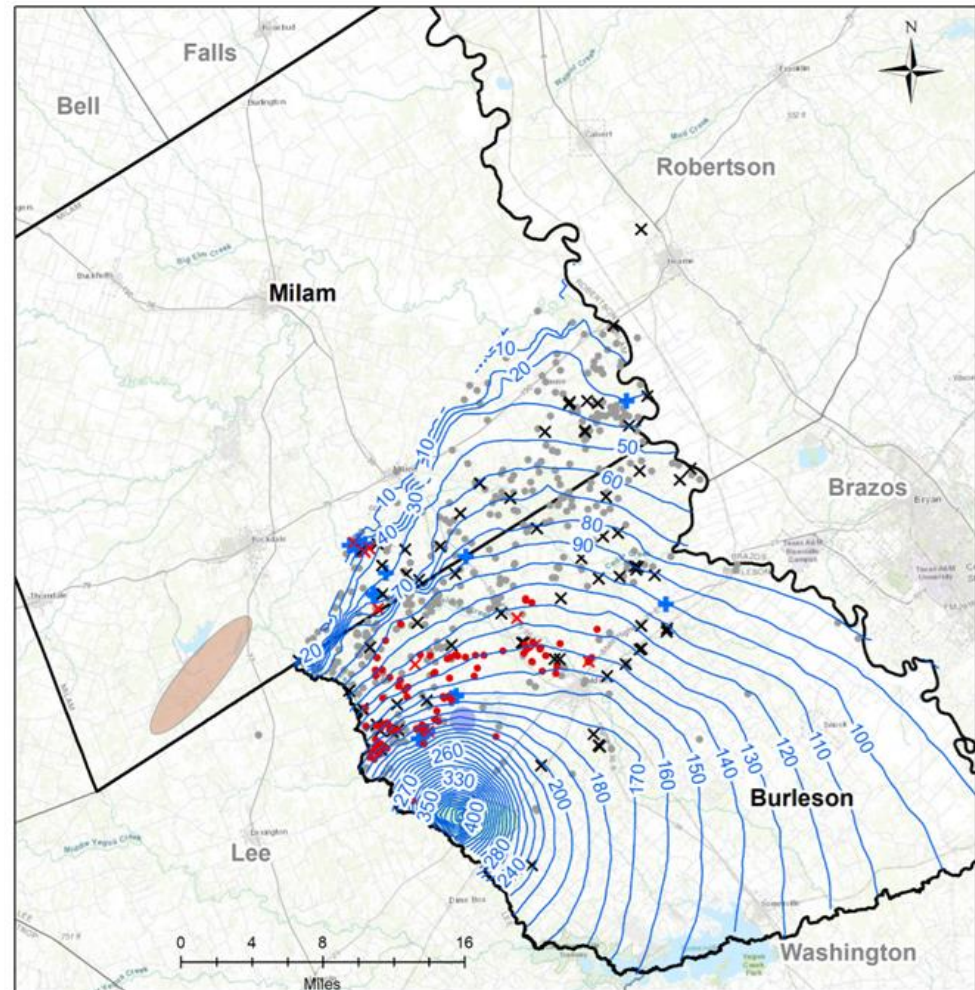
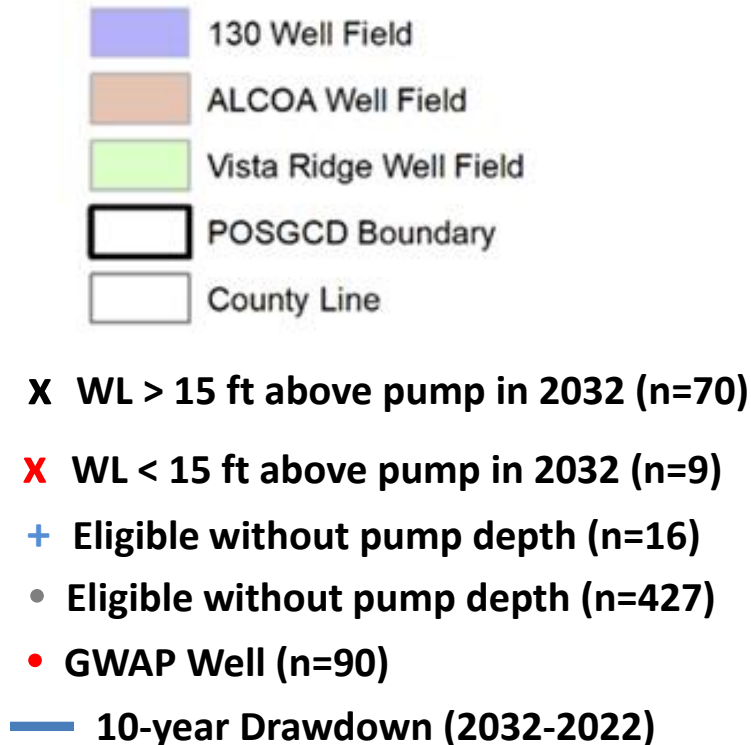
- Eligibility

- exempt well or low-capacity permitted well
- not completed in Trinity, Yegua-Jackson, or alluvial aquifer

Aquifer	Has Pump Depth Information	No Pump Depth Information	Total Eligible Permitted (Low Capacity) Wells
Sparta	172	1058	1230
Queen City	197	1055	1252
Carrizo	184	427	611
Calvert Bluff	245	591	836
Simsboro	89	390	479
Hooper	210	556	766
<b>TOTAL</b>	<b>1097</b>	<b>4077</b>	<b>5174</b>

# Carrizo Aquifer Wells

## Simulated Drawdown in 10 years





# Simsboro Aquifer Wells



x WL > 15 ft above pump in 2032 (n=73)

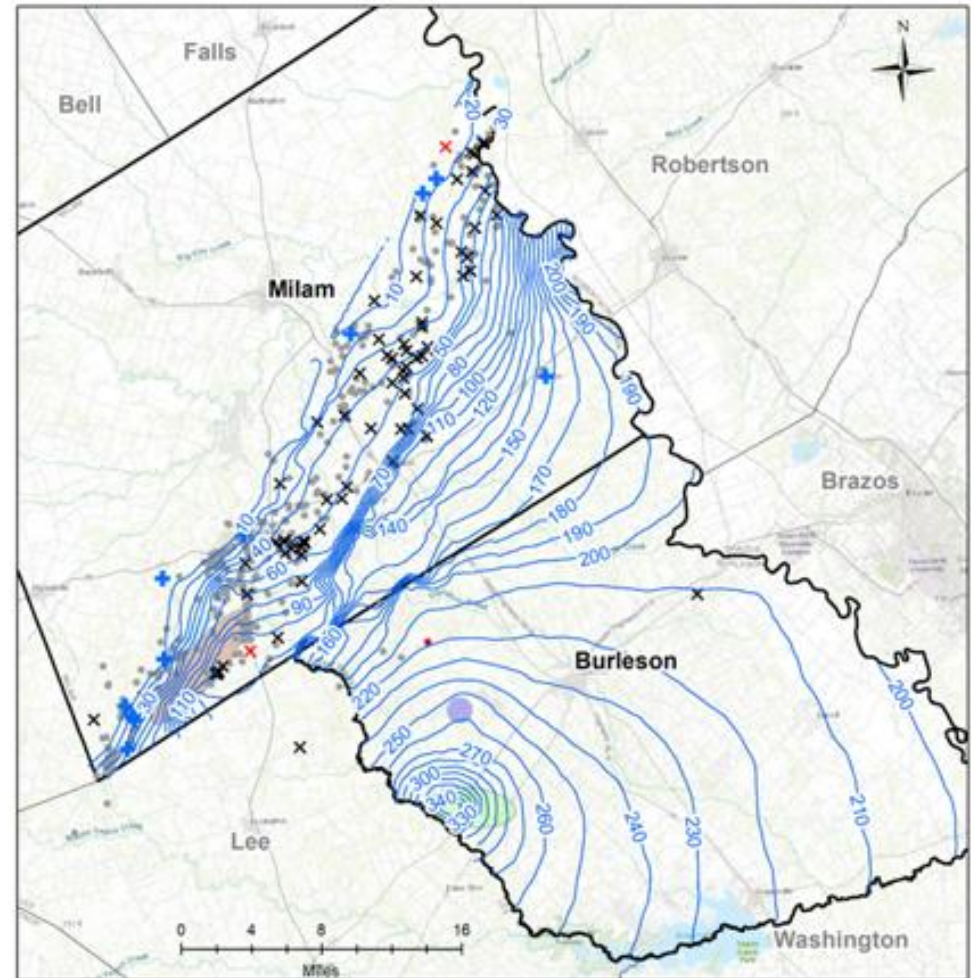
x WL < 15 ft above pump in 2032 (n=3)

+ Eligible without pump depth (n=12)

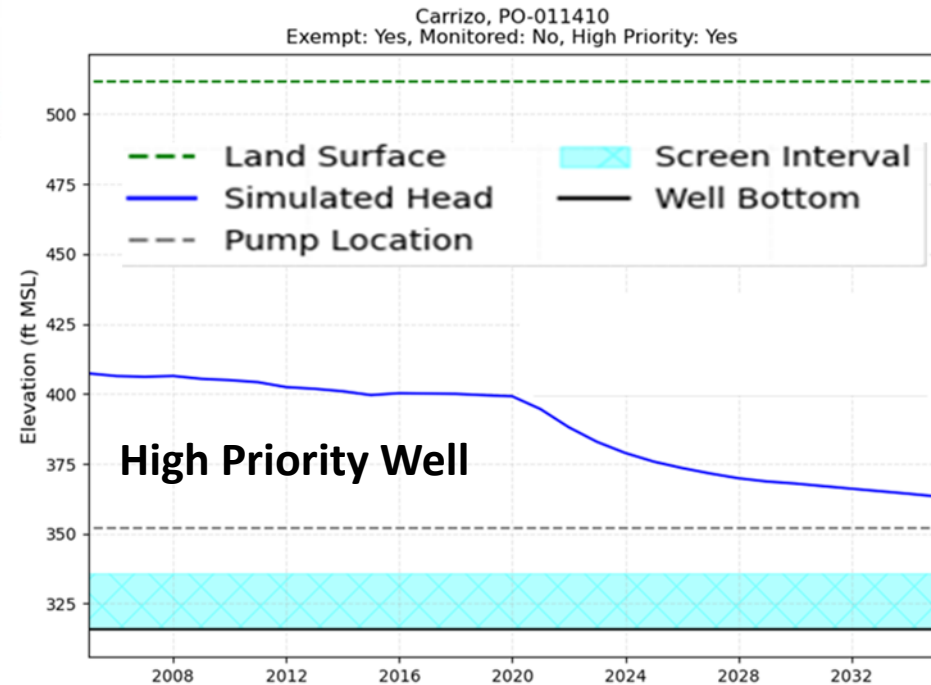
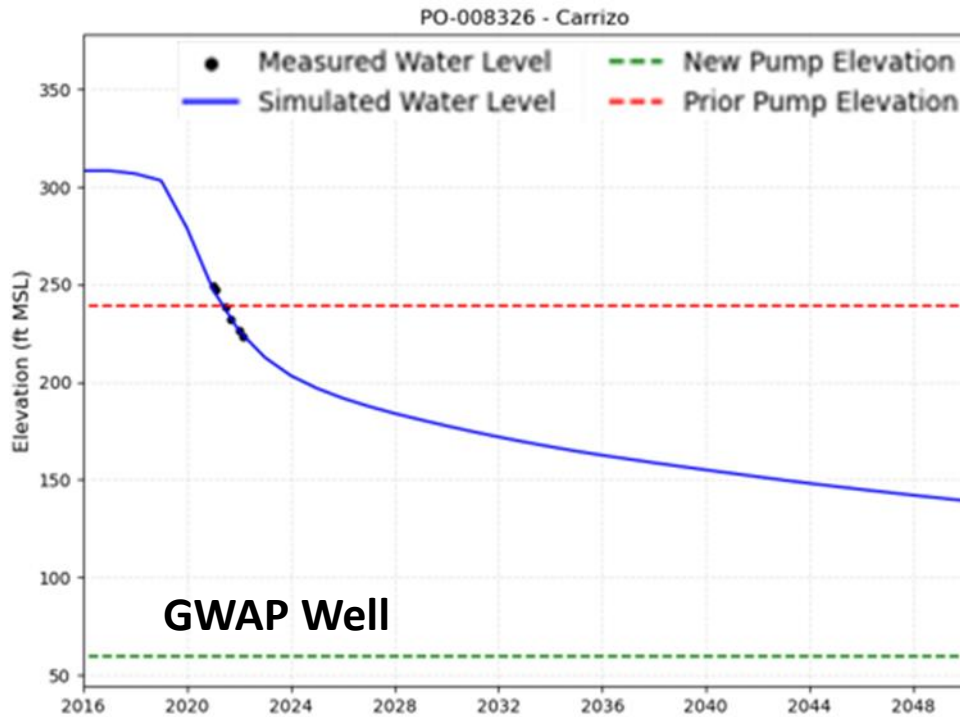
• Eligible without pump depth (n=390)

• GWAP Well (n=1)

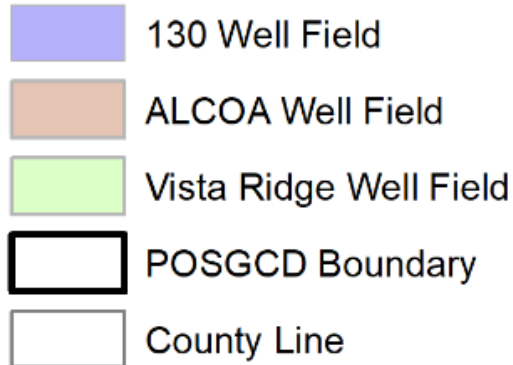
— 10-year Drawdown (2032-2022)



# Example Hydrographs

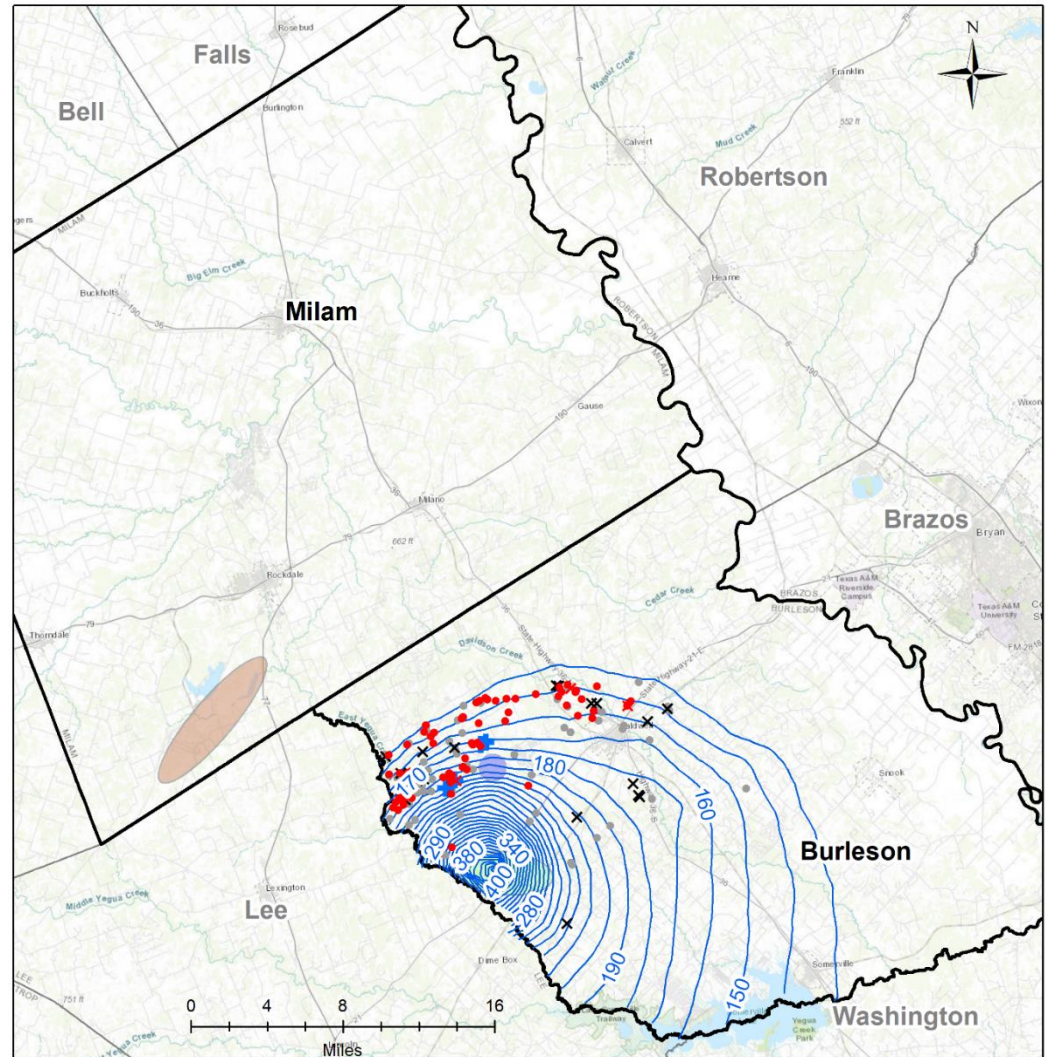


# Predictions for Carrizo Aquifer



## Eligible Wells

- × WL > 15 ft above pump in 2032 (n=23)
- × WL < 15 ft above pump in 2032 (n=3)
- + WL < 15 ft above pump in 2022 (n=4)
- No Pump Depth Information (n=70)
- GWAP (n=77)
- 10 Year Drawdown



# Findings

## Estimate of Number of Future GWAP Wells

Aquifer	Number of Wells		
	High-Priority	Moderate-Priority	Total
Sparta	3	0	3
Queen City	1	0	1
Carrizo	9	44	53
Calvert Bluff	7	1	8
Simsboro	3	0	3
Hooper	3	0	3
<b>TOTAL</b>	<b>26</b>	<b>45</b>	<b>71</b>

## GRAPHS & TABLES (Socio-economic impact at local scale)

Appendix A: Location of Exempt Wells by Aquifer

Appendix B: Location of Low-Capacity Permitted Wells by Aquifer

Appendix C: Tabulation of High-Priority wells and wells of concern

Appendix D: Hydrographs for High-Priority Wells

Appendix E: Hydrographs of for Wells of Concern

Appendix F: Tabulation of Moderate-Priority Wells

Appendix G: Hydrographs for Moderate-Priority Wells

Appendix H: Tabulation of Wells Serviced by the Groundwater Assistance Program (GWAP)

Appendix I: Hydrographs for Wells Serviced by the Groundwater Assistance Program (GWAP)



# Driller's Guidance Document

- Purpose

- provide well design criteria that need to be followed in order for new wells to be eligible for GWAP funding

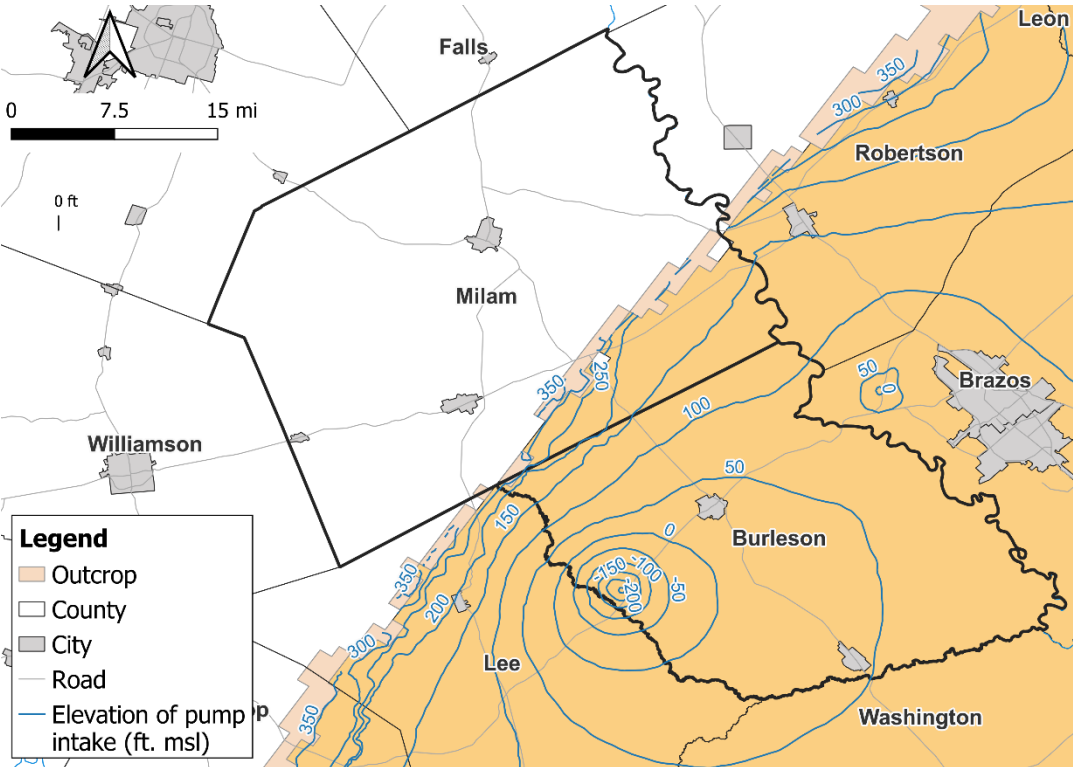
- Current Well Design Criteria

- maximum elevation of a pump intake for the Carrizo-Wilcox Aquifer based on predicted drawdown for next 30 years
- criteria for pump intake elevation are specific to each of the four aquifers that comprise the Carrizo-Wilcox Aquifer:

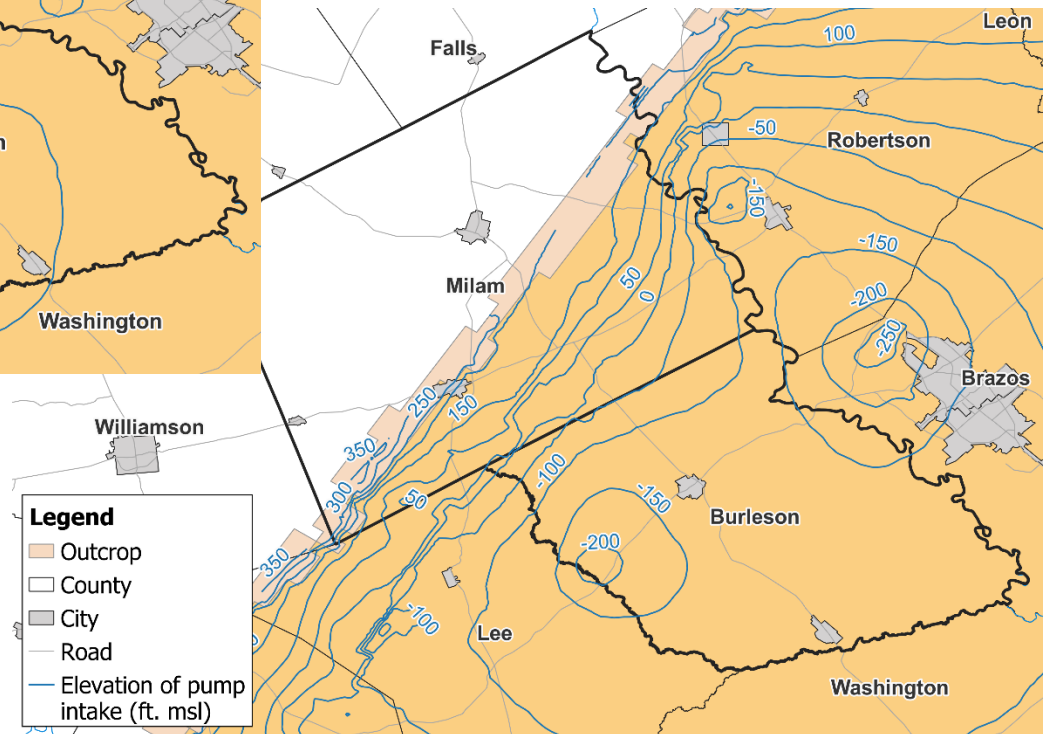
Carrizo Aquifer,  
Calvert Bluff Aquifer,  
Simsboro Aquifer,  
Hooper Aquifer.

# Maximum Elevation for Pump Intake

## Carrizo Aquifer



## Simsboro Aquifer





Questions ?