

# Red River GCD Board Meeting

February 20, 2020

## Agenda Item 9

💧 Presentation and discussion regarding Aquifer Uses or Conditions, Supply Needs & Management Strategies, and Private Property Rights factors as they relate to Desired Future Conditions pursuant to Texas Water Code Section 36.108(d)

# GMA 8 Schedule to Discuss Nine Factors

November 2019		
Environmental Impacts	Subsidence Impacts	Hydrological Conditions
February 2020		
Aquifer Uses or Conditions	Supply Needs & Management Strategies	Private Property Rights
May 2020		
Socioeconomic Impacts	DFC Feasibility	Other Relevant Information

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## Aquifer Uses or Conditions

- Aquifer uses
  - District production records*
  - Type of uses*
  
- Aquifer Conditions
  - Water levels*
  - DFC assessment*

# 2018 Aquifer Use in Red River GCD

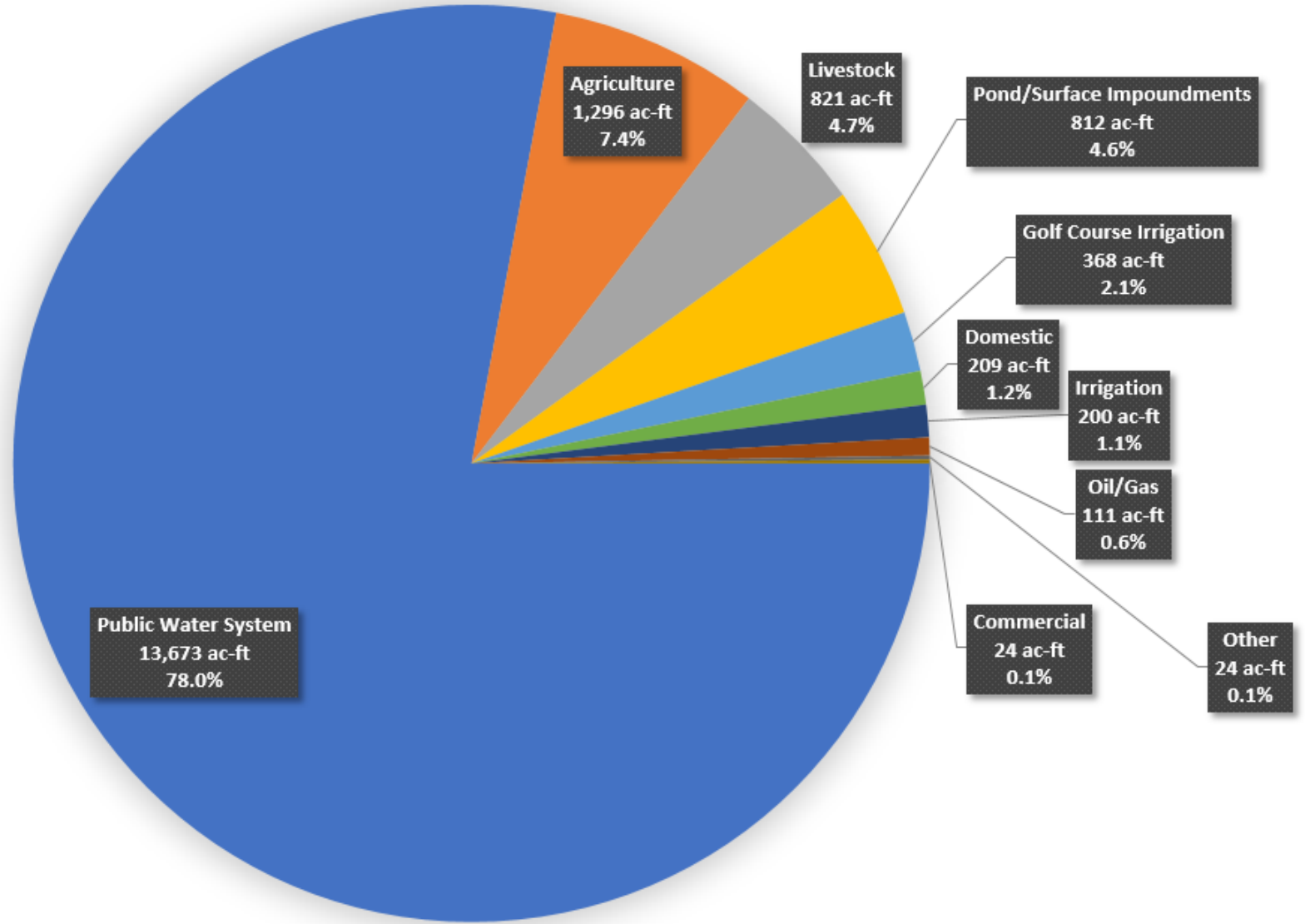
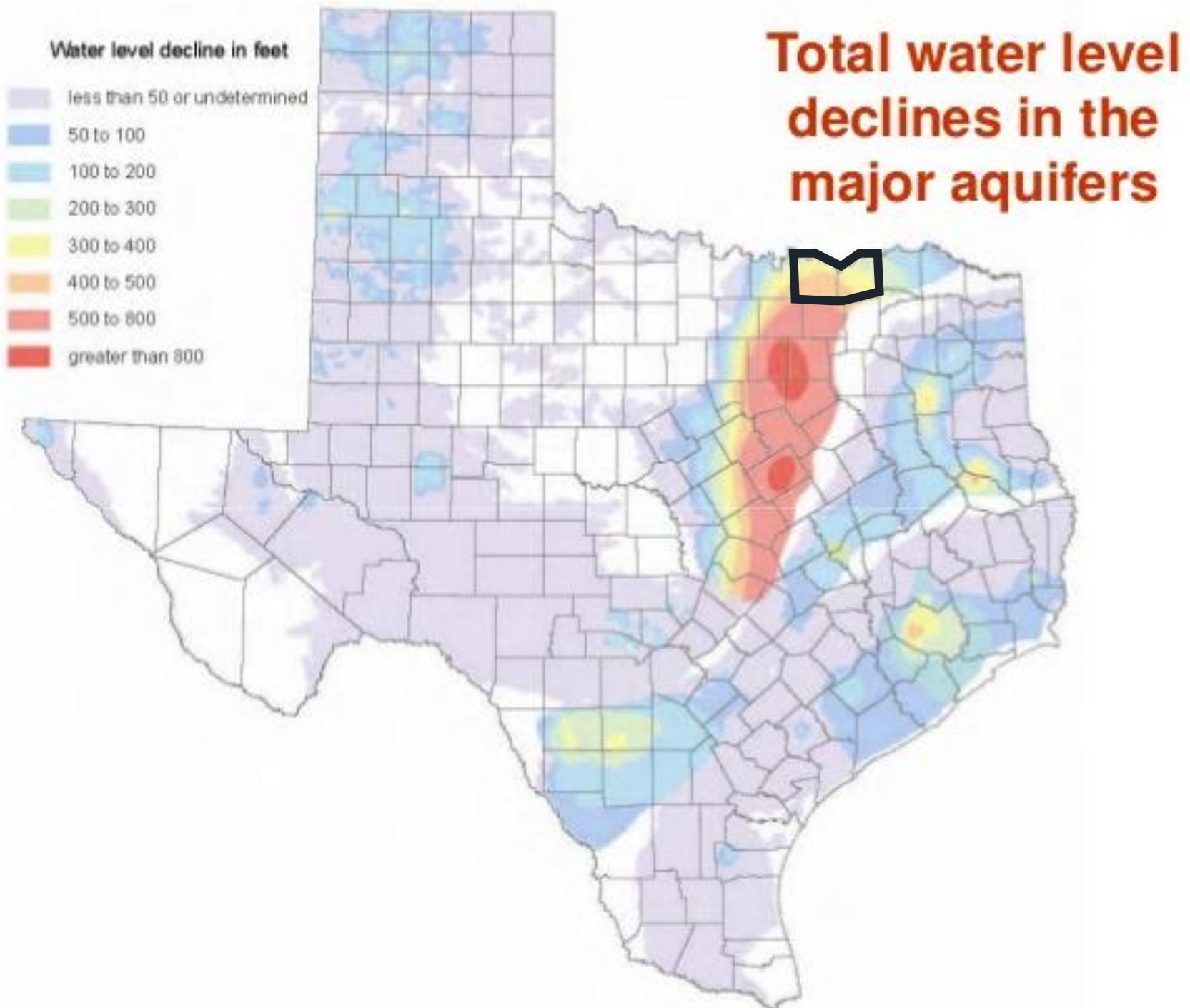


Chart courtesy of RRGCD staff



**RRGCD  
Desired  
Future  
Conditions**

**SUMMARY OF ANNUAL AVERAGE DFC  
(Drawdown in feet per year)  
BASED ON 60-YEAR DFCS**

<b>COUNTY</b>	<b>WOODBINE</b>	<b>PALUXY</b>	<b>ANTLERS</b>
<b>Fannin</b>	4.1	11.5	N/A
<b>Grayson</b>	2.7	N/A	5.8

# RRGCD Water Level Data

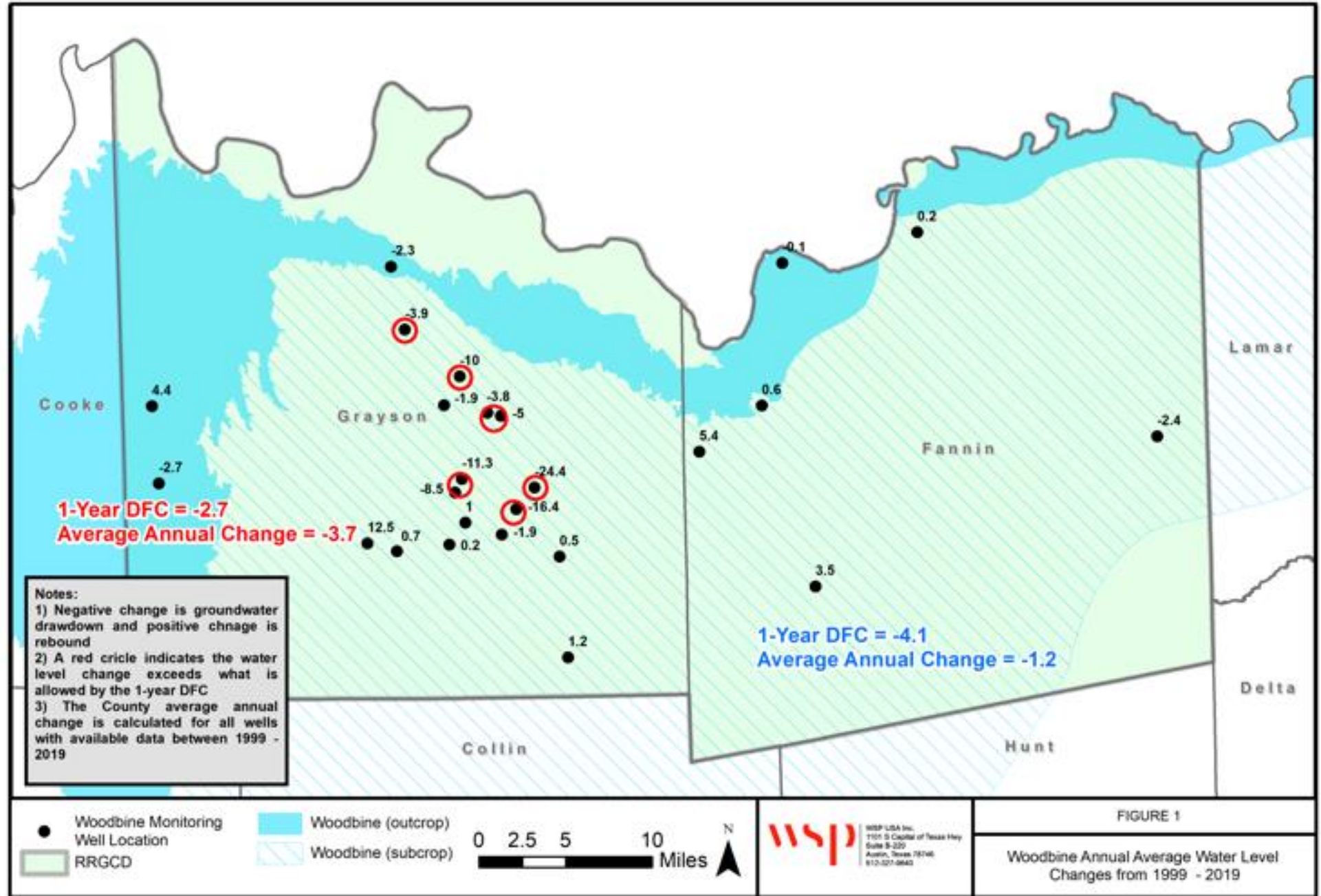
## WATER LEVEL DATA AVAILABILITY (Number of wells) BY COUNTY AND AQUIFER

<b>COUNTY/ AQUIFER</b>	<b>WOODBINE</b>	<b>PALUXY</b>	<b>ANTLERS</b>
<b>Fannin</b>	6	1	No DFC
<b>Grayson</b>	19	No DFC	17



# RRGCD DFC Status

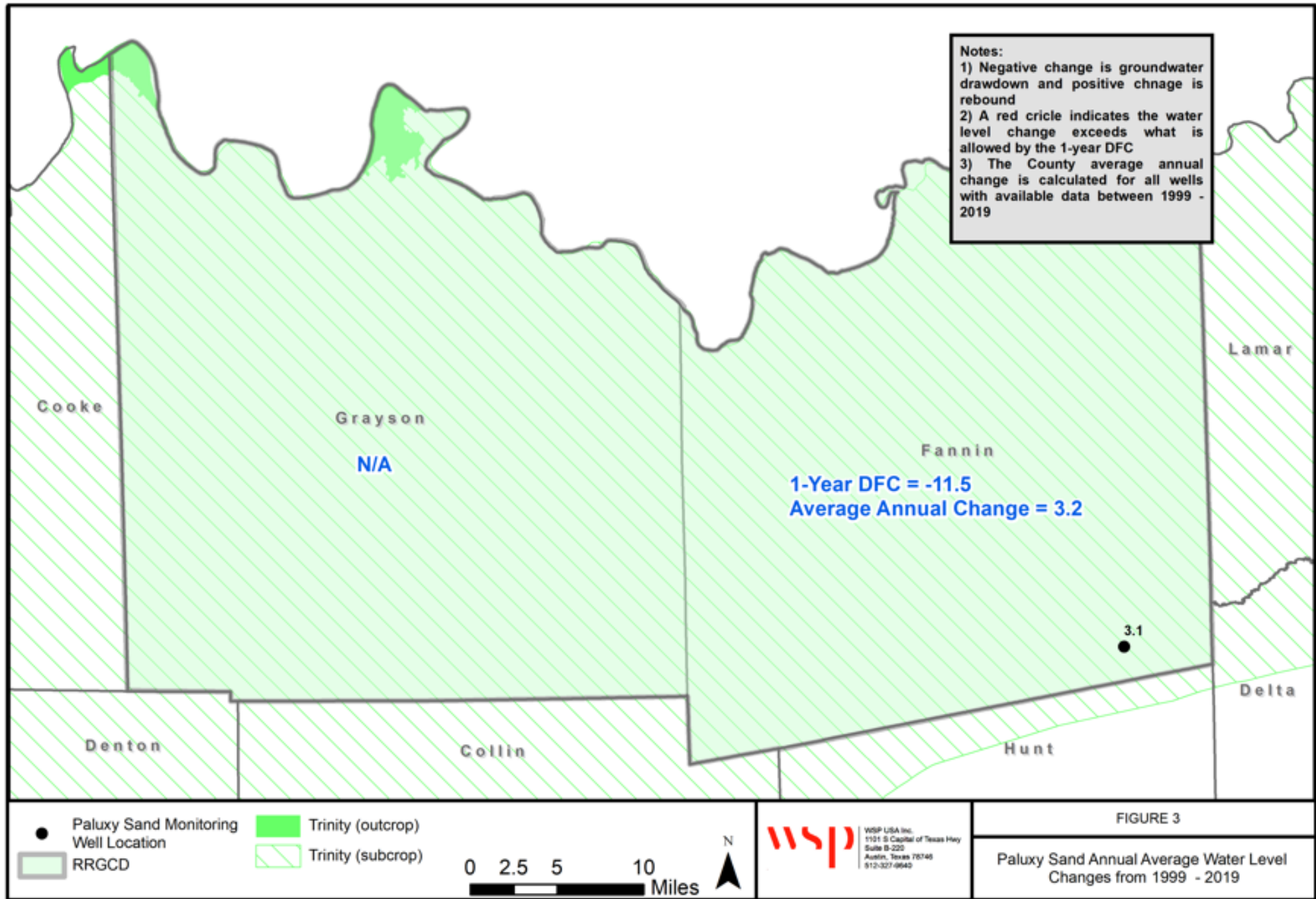
# Woodbine Aquifer



At a glance

# RRGCD DFC Status

# Paluxy Aquifer



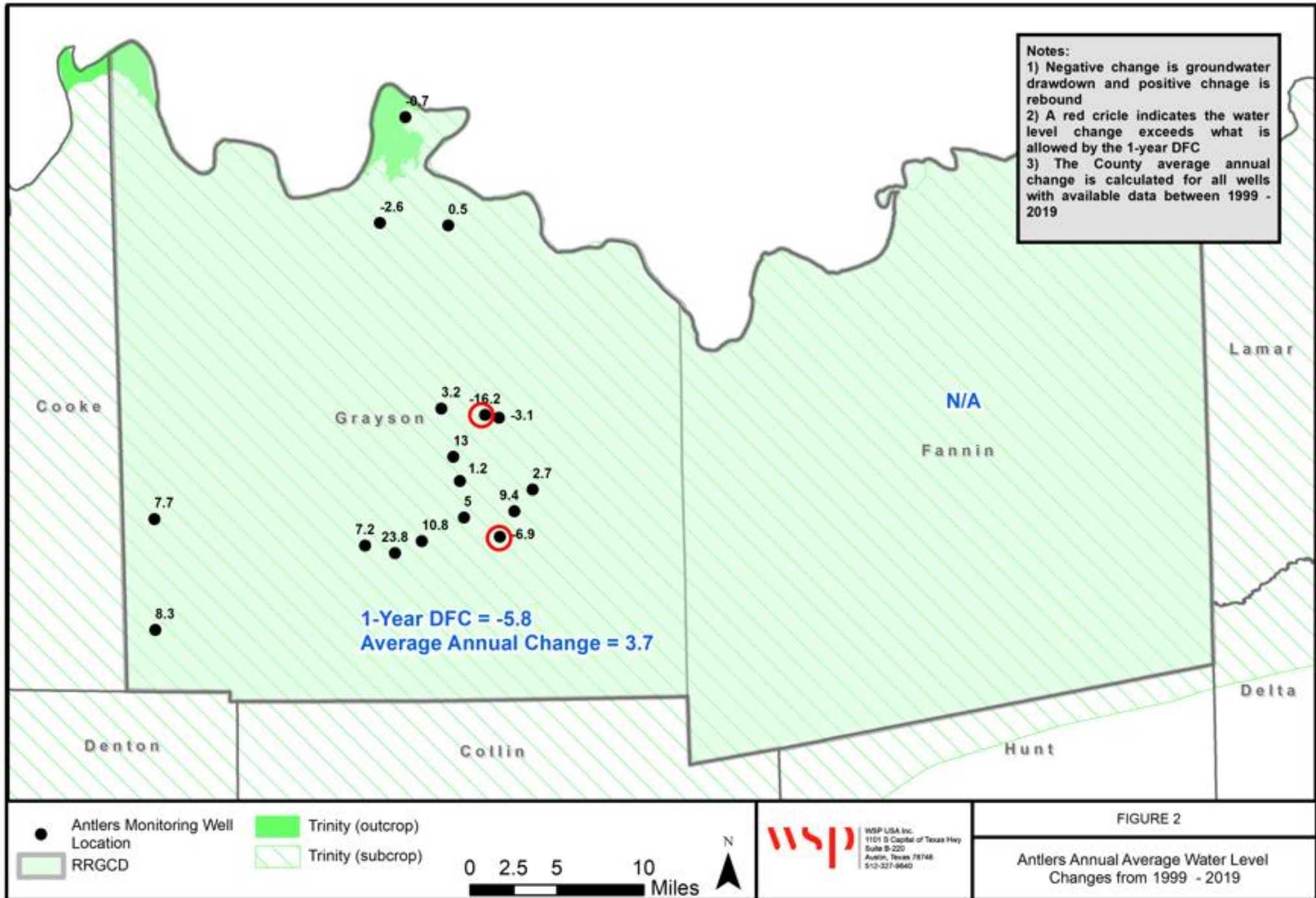
**wsp** WSP USA Inc.  
1101 S. Capital of Texas Hwy  
Suite B-220  
Austin, Texas 78748  
512-327-0640



At a glance

# RRGCD DFC Status

# Antlers Aquifer



# Supply Needs & Management Strategies

—Taken from 2017 State Water Plan

—Supply Needs

—*Need = Supply is less than Future Demand*

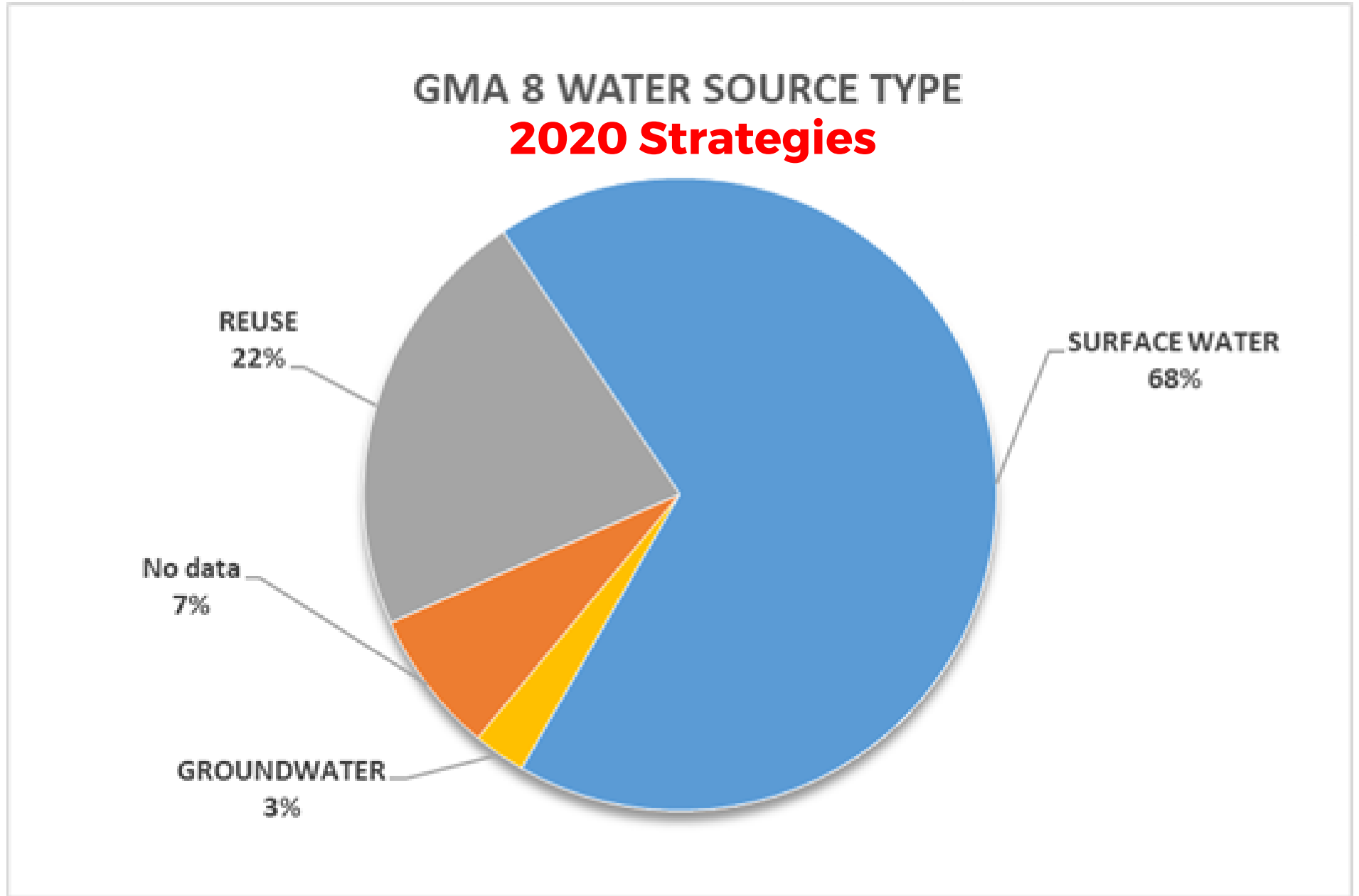
—*Need = Current Supply - Future Demands*

—Management Strategies

—*Infrastructure strategies to meet needs*

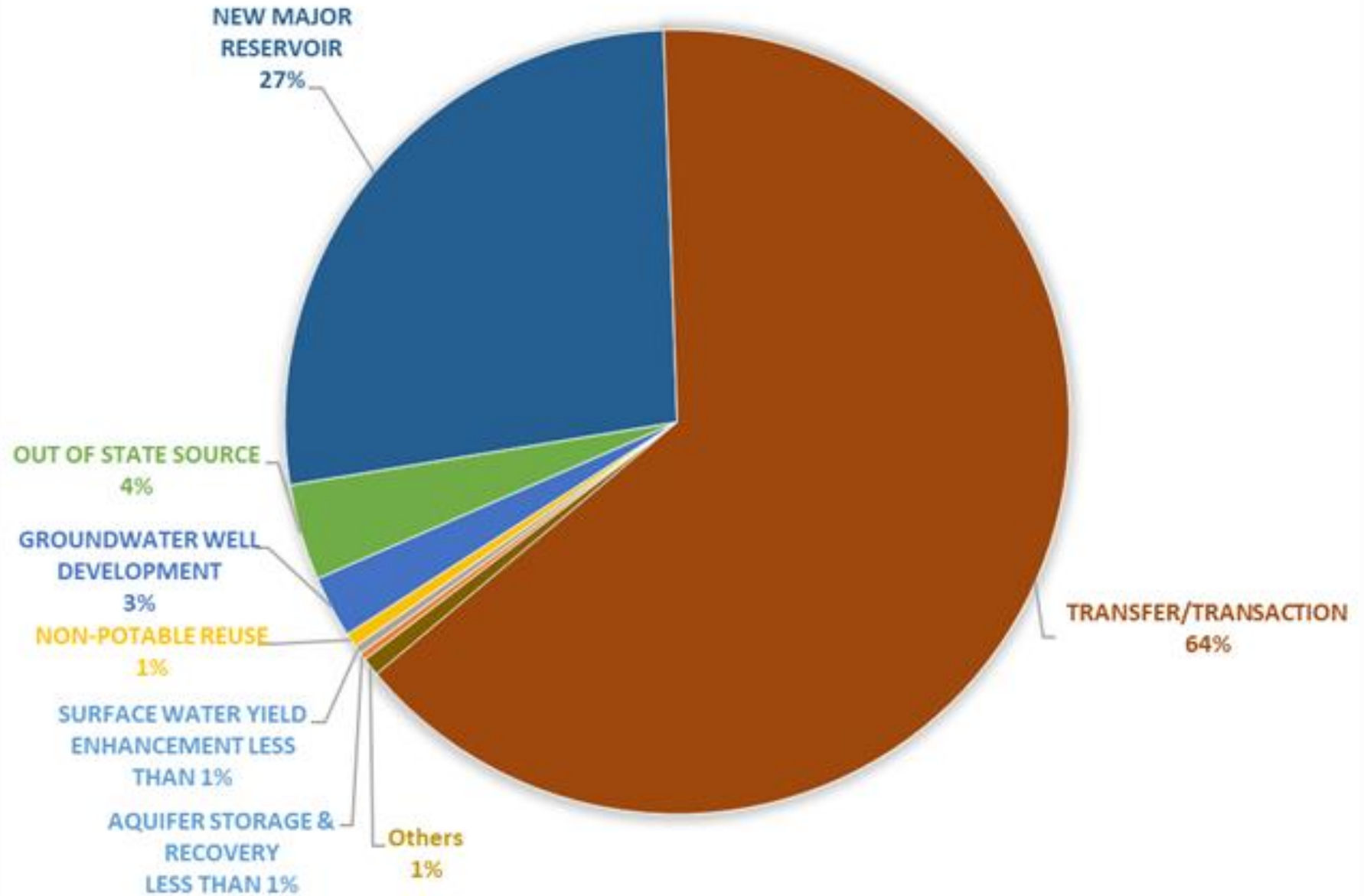
—*2020 and 2050 strategies*

# Water Sources for New Strategies in GMA 8



# Sources for New Strategies in GMA 8

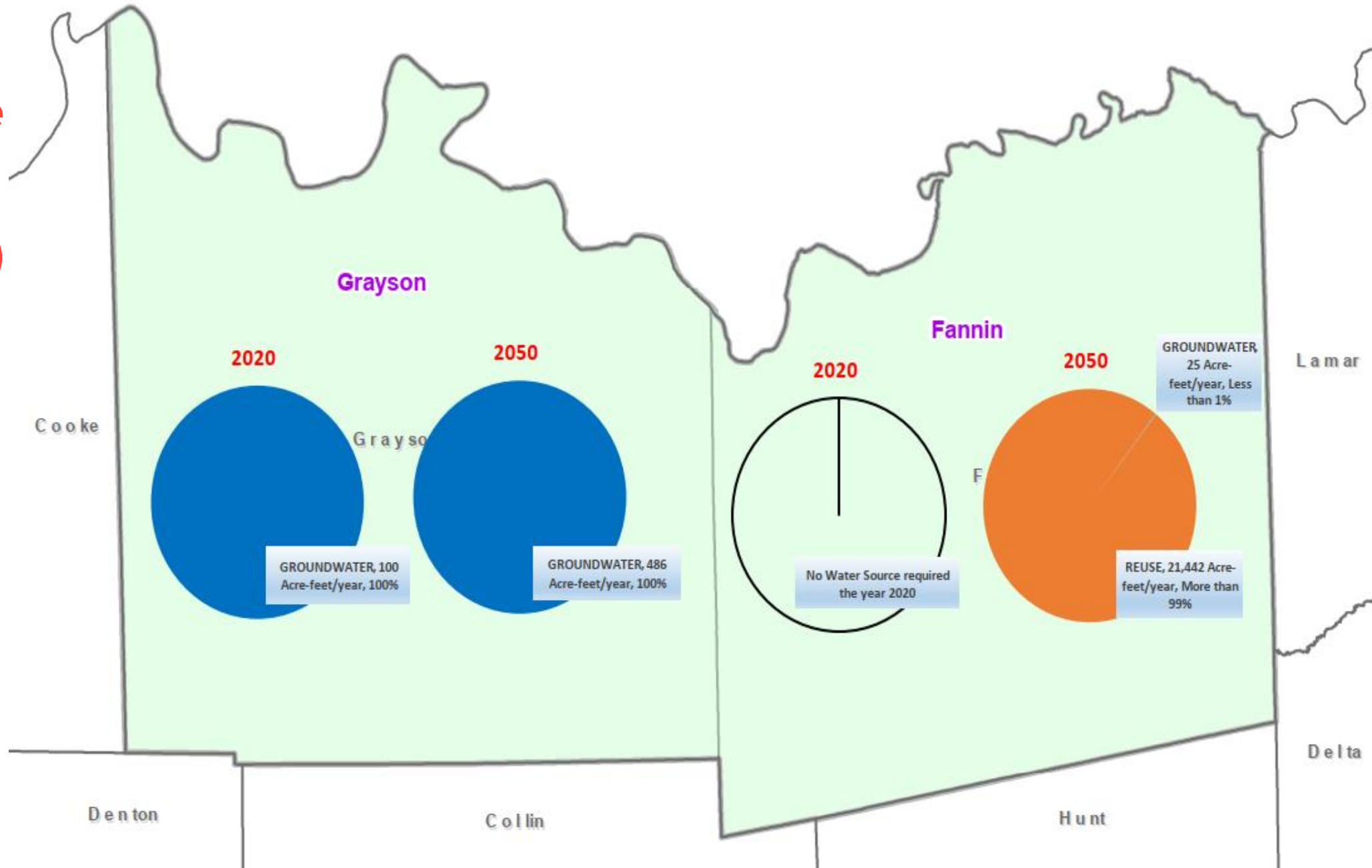
## 2020 Strategies



At a glance

# Water Source Type with Strategy Volume (AFY) 2020 and 2050.

## 2017 Water Plan

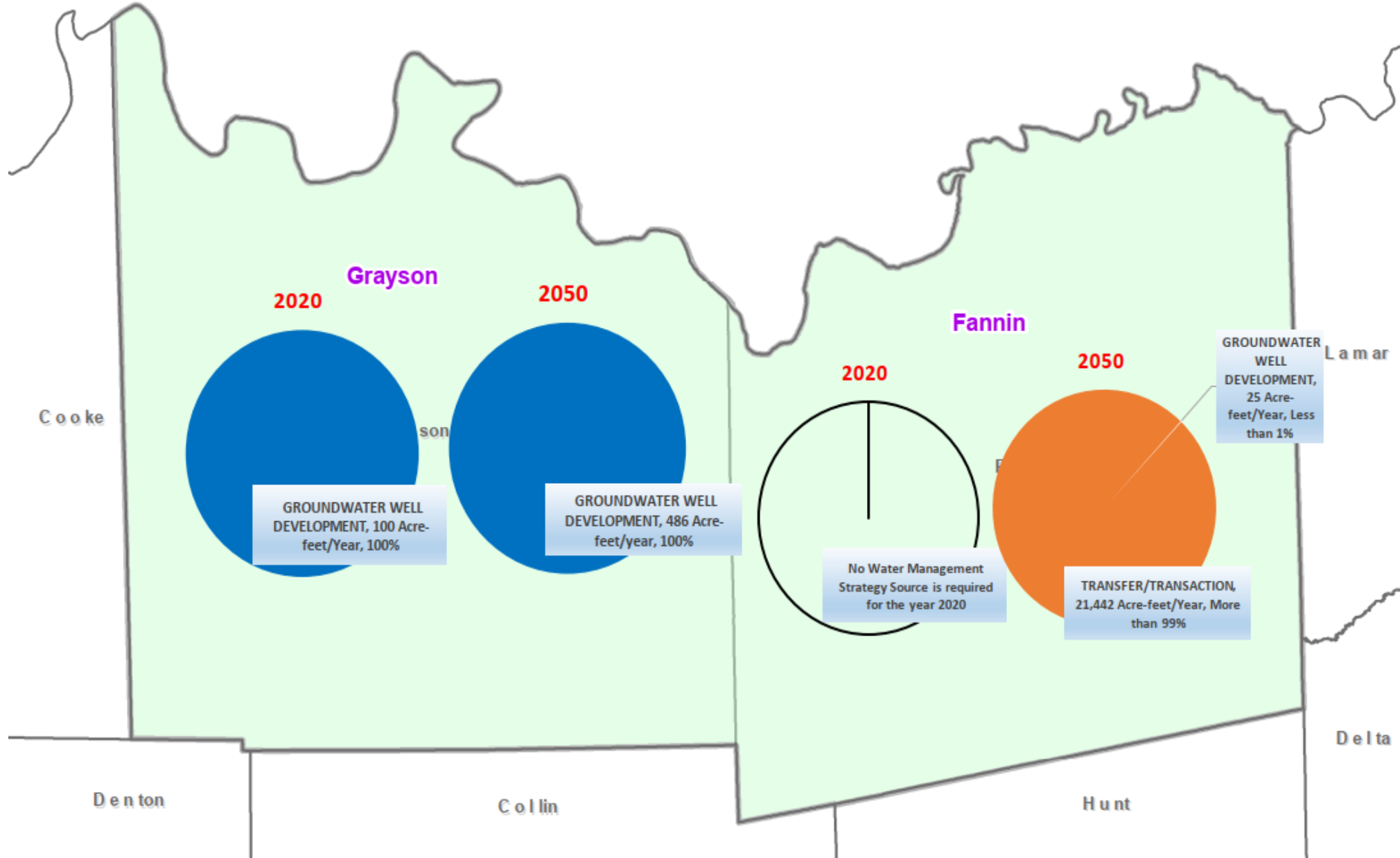




At a glance

# Water Management Strategy Source with Strategy Volume (AFY)

## 2017 State Water Plan

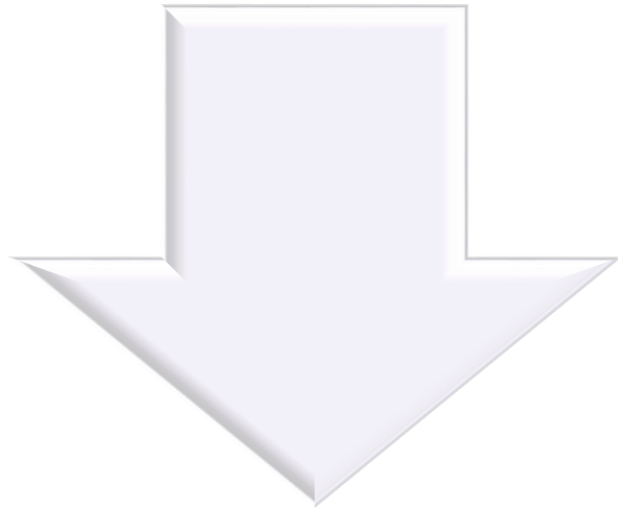




# Standard for Desired Future Conditions



Highest Practicable Level  
of Groundwater  
Production

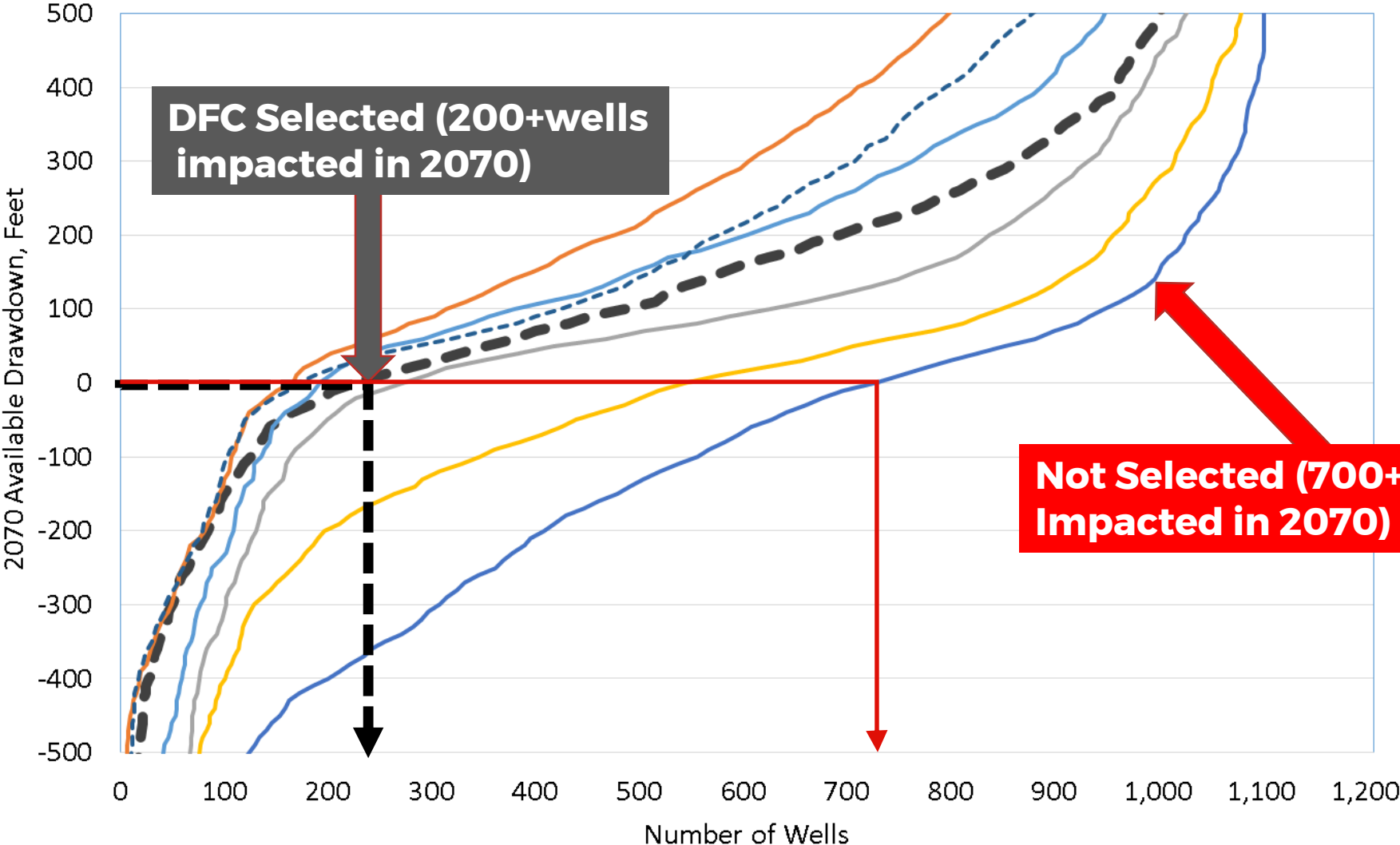


Conservation, Preservation,  
Protection, Recharging,  
and Prevention of Waste of  
Groundwater, and Control  
of Subsidence

# Private Property Rights Issues identified in the Current Explanatory Report

- 💧 Existing uses within the GCD
- 💧 Projected future uses within the GCD
- 💧 Investment-backed expectations of existing users and property owners within the GCD
- 💧 Long-term viability of groundwater resources in area
- 💧 Availability of water to all properties and ability to allocate MAG through rules after DFC adoption
- 💧 Whether immediate cutbacks would be required in setting a particular DFC or whether cutbacks, if any, would need to occur over a certain timeframe
- 💧 For outcrop areas, how the outcrop depletes rapidly in dry times, and whether drought rules or triggers based on the DFC/MAG for the outcrop could be beneficial to ensure viability of the resource during dry times
- 💧 Economic consequences to existing users (i.e., cost to drop pumps, reconfigure or drill new wells upon water table dropping, etc.). Also consider the reverse—economic consequences of less water available to protect the existing users from the economic consequences relevant to existing users—reaching a balance between these two dynamics
- 💧 Review the sustainability GAM run versus additional GAM runs that provide for more pumping from an aquifer, and how those two differ with respect to private property rights
- 💧 Focus on finding a balance, as that balance is defined by each GCD, between all of these considerations

# Public Water Supply Well Impacts



Thank you!

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