



BRAZOS VALLEY GROUNDWATER CONSERVATION DISTRICT

Socioeconomic Impact Study

March 2026

WestWater
RESEARCH

Overview

Goal:

- Estimate the economic effects within Brazos and Robertson Counties due to the establishment of different GMA 12 DFC levels.
- Findings will inform DFC decision-making process at GMA 12

Approach:

- Apply the change in modeled groundwater pumping from 2030-2080 under two scenarios to project future water supply available for development
- Apportion the supply among residential, commercial, and industrial water uses (data centers, power, home building)
- Estimate direct impacts for each scenario
- Estimate secondary impacts for each scenario
- Calculate the difference in economic output over the modeling period

Direct impacts:

- Higher construction activity including data centers, power (nuclear and CC), residential homes.
- Higher annual spending in each of the growing sectors.
- Higher groundwater pumping costs

Indirect and Induced Impacts (IMPLAN):

- More jobs
- Higher indirect spending (B2B)
- Higher induced output (household and business spending)

Regulatory Framework

- Texas Water Code (TWC) § 36.108 – Joint Planning
 - Districts shall consider “the nine factors” when developing DFCs
 - “socioeconomic impacts reasonably expected to occur”
 - Report accompanying a DFC adoption must provide the policy and technical justifications for each DFC
- TWC § 36.1083 – Appeal Process
 - Requires the Texas Water Development Board (TWDB) to:
 - consider the administrative completeness of the proposed DFC
 - conduct a study containing scientific and technical analysis of the desired future condition, including:
 - consideration of the explanatory report provided to the TWDB under § 36.108
 - the nine factors described under § 36.108
 - any relevant information provided in the petition or available to the TWDB

Scenario Framework

PS4-2 Pumping

- DFC Drawdown: 284 feet
- Baseline scenario, more restrictive.
- Less groundwater available for development. Represents the more water-restrictive alternative under consideration by GMA 12

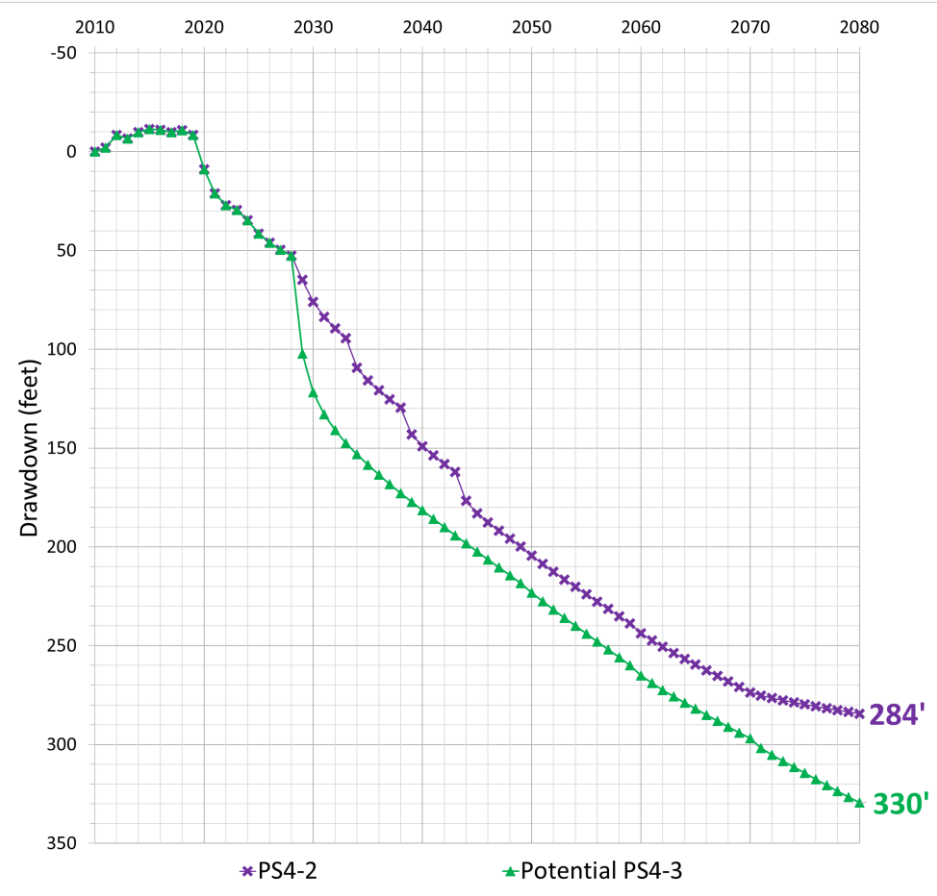
Potential PS4-3 Pumping

- DFC Drawdown: 330 feet
- Alternative scenario, less restrictive.
- More groundwater available for development. Enables additional pumping capacity to support housing, power generation, and data centers.

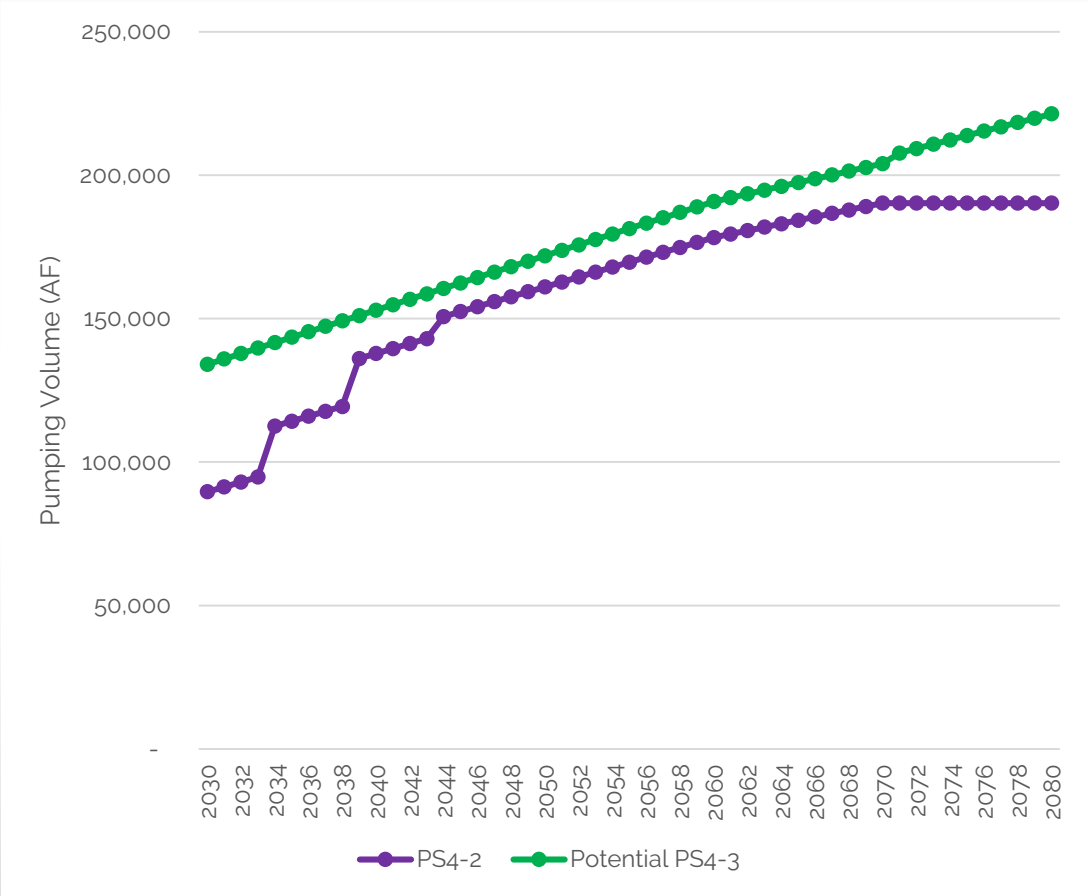
Incremental Supply: Nearly 1 million AF additional groundwater over a 50-year analysis period (2030-2080), or approximately 19,000 AF/yr, on average.

Model Run Comparison

SIMSBORO ANNUAL DRAWDOWN

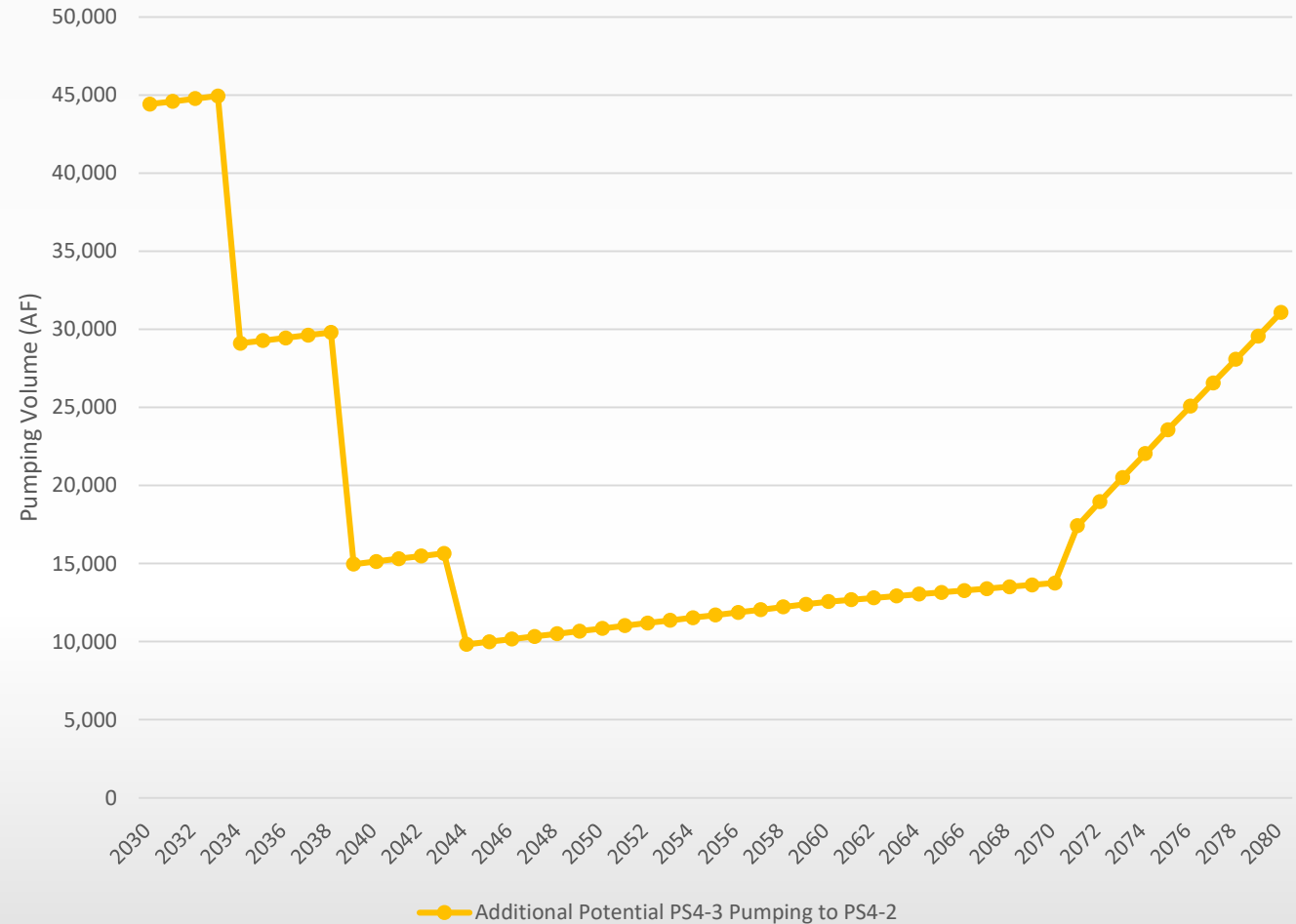


SIMSBORO ANNUAL PUMPING



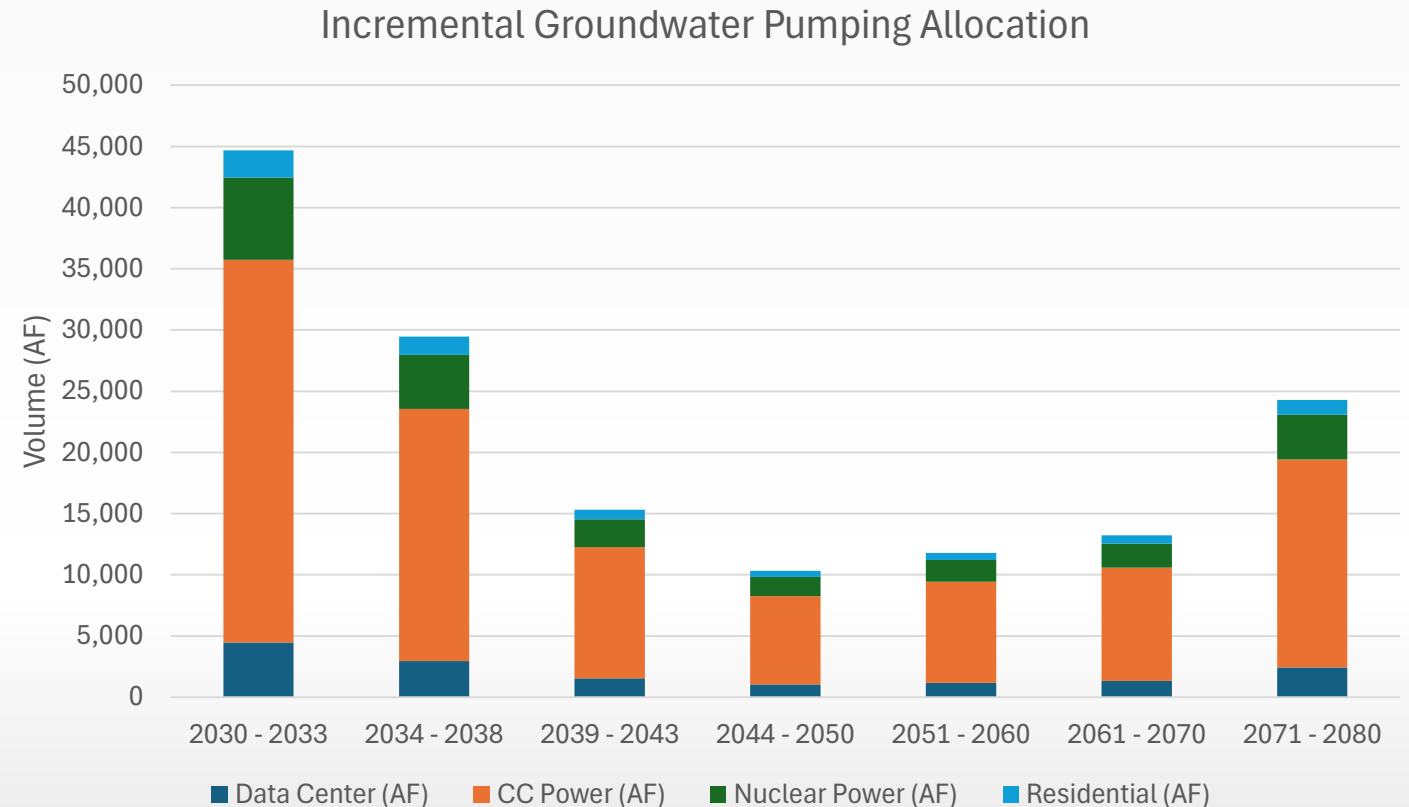
Additional Simsboro Pumping

- Potential PS4-3 is treated as the incremental demand scenario—reflecting the pumping volumes that would occur if water users were able to meet their reasonably anticipated needs from the Simsboro Aquifer
- The larger groundwater pumping in early years means that economic development activity occurs sooner under Potential PS4-3 than PS4-2 although that impact lessens in future years as groundwater pumping increases in PS4-2.



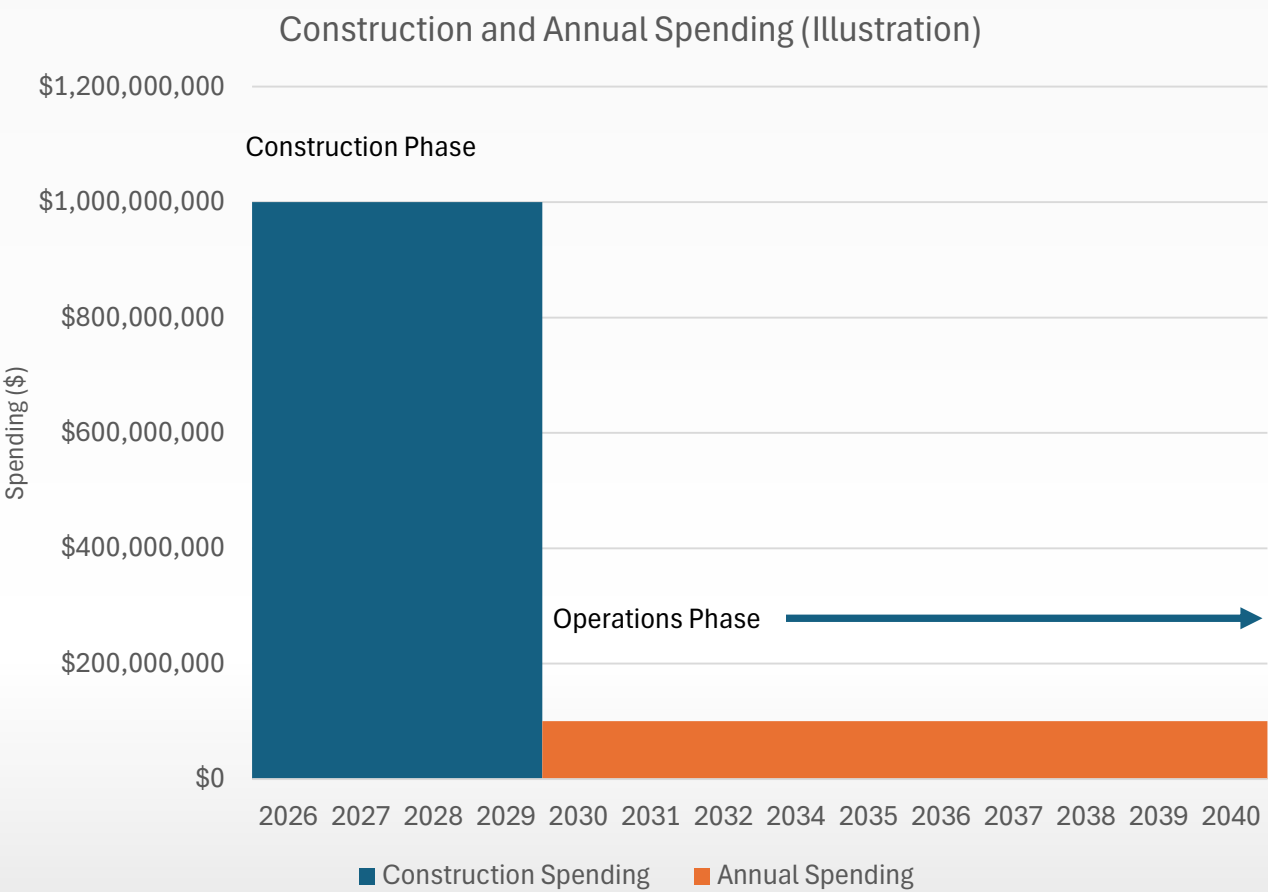
Simsboro Groundwater Allocation

- The incremental groundwater supply within each period was allocated as follows:
 - Data Centers = 10%
 - CC Power = 70%
 - Nuclear Power = 15%
 - Residential = 5%
- Total allocation to data centers of nearly 3,100 AF/yr (by 2080) is equivalent to approximately 2.4 GW of new capacity (TX reportedly has approximately 6.5 MW currently under construction).
- Additional 22,000 AF/yr to CC Power would provide approximately 680 MW of new capacity. Assumes some development of "behind the meter" facilities to support data center needs.
- 15% allocation to nuclear totals 4,700 AF/yr, on average. Would provide an estimated capacity of 170 MW.
- Incremental water available for residential use is equivalent to approximately 4,400 new homes. Allocation was set to capture the expected increase in employment at new data centers and power facilities.



Direct Economic Impacts

- **Construction Spending**
 - Incurred in the period prior to groundwater pumping
 - Estimated for each sector using published sources
 - Converted to \$/AF
 - Applied during the assumed construction period
- **Annual Spending**
 - Estimated annual operating costs for each sector
 - Converted to \$/AF
 - Applied to cumulative pumping for each sector throughout analysis period



Direct Economic Impacts

- Pumping Costs**

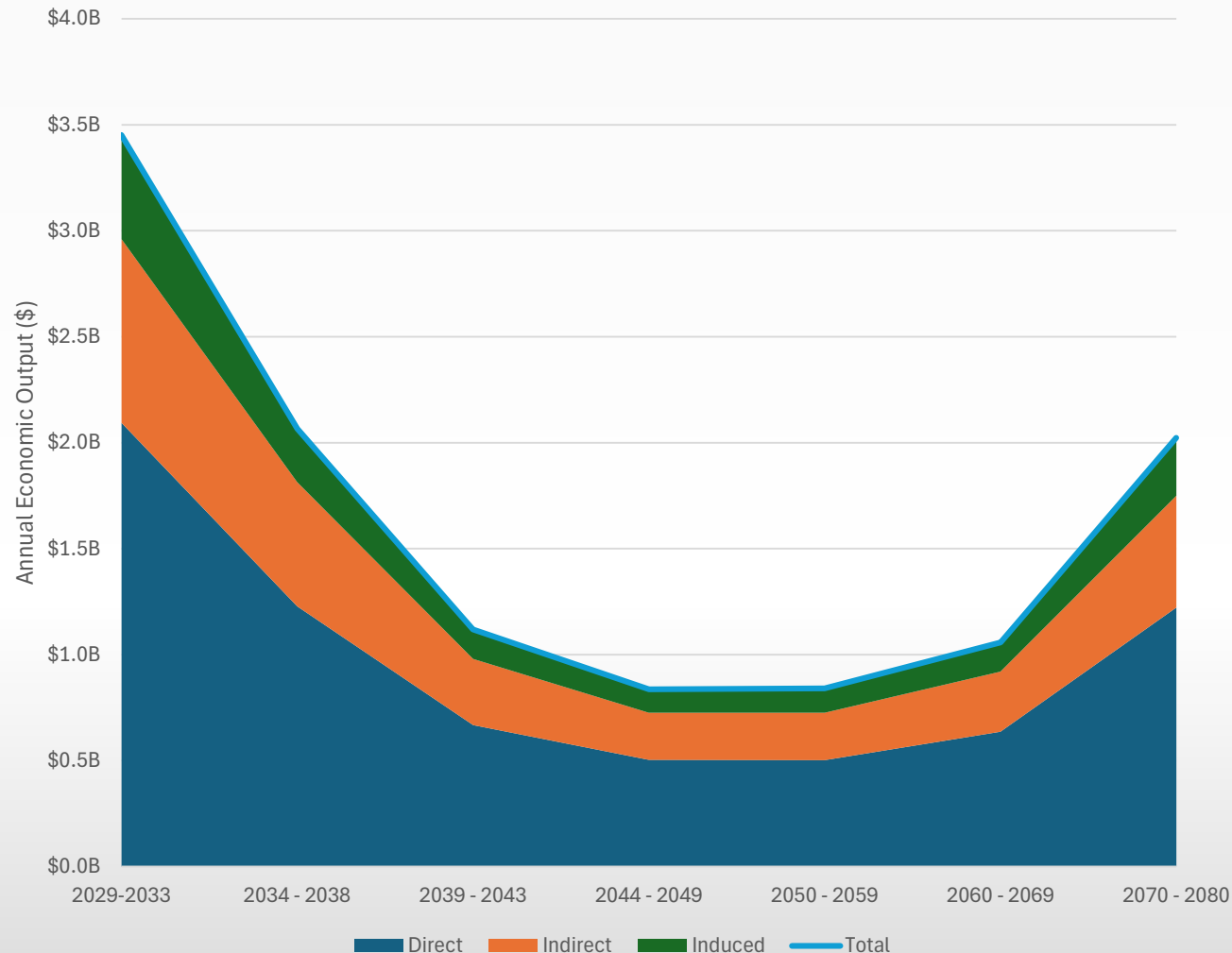
- Potential PS4-3 generally results in deeper projected depth-to-water conditions and higher pumping volumes than PS4-2, which increases pumping costs overall
- Overall impact is small relative to the economic gains unlocked by additional groundwater

	2030	2040	2050	2060	2070	2080
Average additional change in depth to water	45	24	20	22	34	45
Average annual additional lift cost	\$784,874	\$557,211	\$805,442	\$1,341,847	\$3,168,564	\$5,040,263

- Annual Direct Output by Sector**

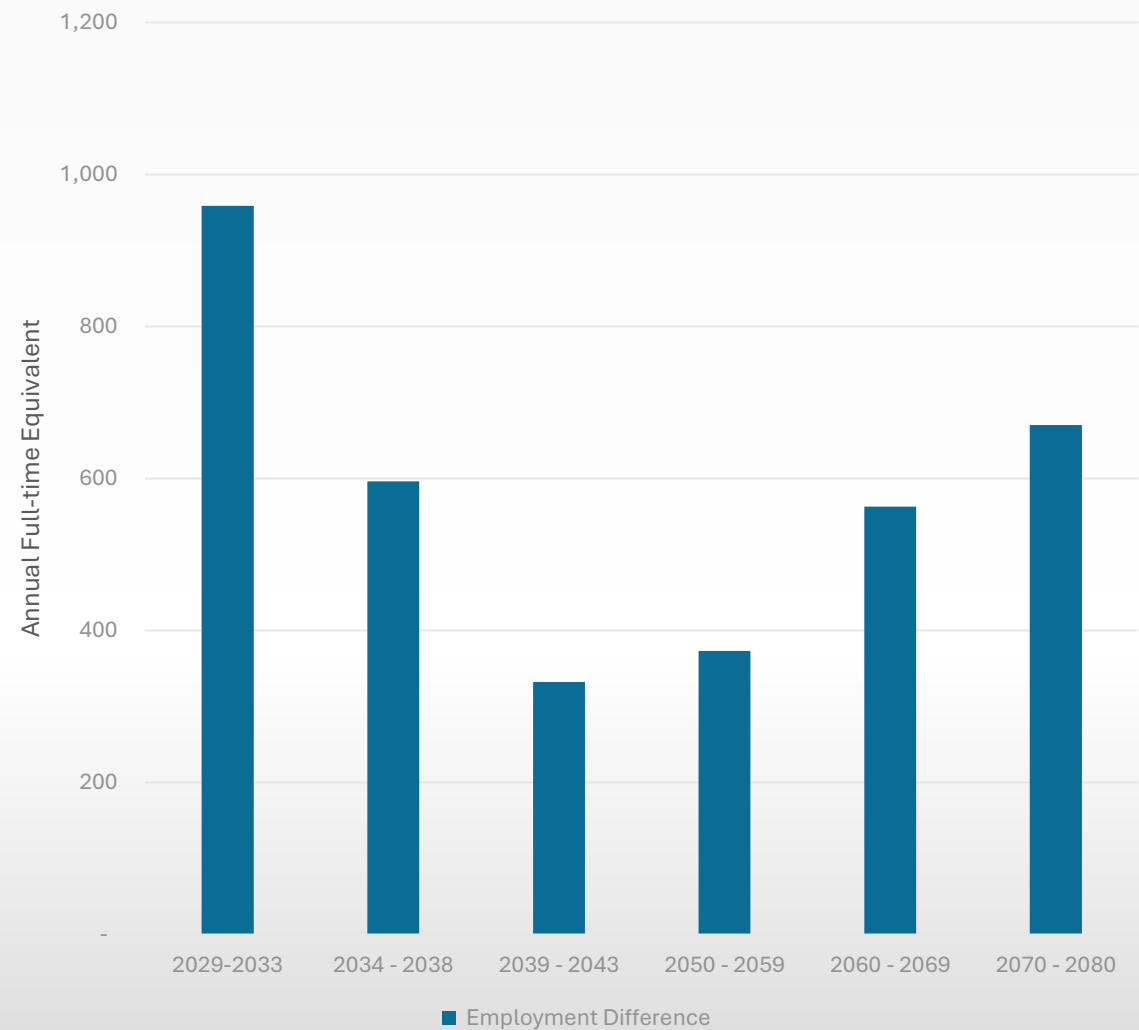
Scenario	Impact Sector	2029 - 2033	2034 - 2038	2039 - 2043	2044 - 2049	2050 - 2059	2060 - 2069	2070 - 2080
PS4-2	Construction	\$0.54 B	\$0.31 B	\$0.19 B	\$0.11 B	\$0.11 B	\$0.08 B	\$0.00 B
	Residential Op	\$0.06 B	\$0.15 B	\$0.23 B	\$0.29 B	\$0.33 B	\$0.39 B	\$0.41 B
	Data Centers Op	\$0.68 B	\$1.80 B	\$2.74 B	\$3.36 B	\$3.92 B	\$4.51 B	\$4.78 B
	Power Op	\$0.08 B	\$0.20 B	\$0.30 B	\$0.37 B	\$0.44 B	\$0.50 B	\$0.53 B
	Total	\$1.35 B	\$2.46 B	\$3.47 B	\$4.14 B	\$4.80 B	\$5.48 B	\$5.72 B
Potential PS4-3	Construction	\$0.92 B	\$0.12 B	\$0.12 B	\$0.12 B	\$0.12 B	\$0.09 B	\$0.10 B
	Residential Op	\$0.18 B	\$0.25 B	\$0.29 B	\$0.32 B	\$0.37 B	\$0.43 B	\$0.49 B
	Data Centers Op	\$2.11 B	\$2.98 B	\$3.36 B	\$3.77 B	\$4.38 B	\$5.04 B	\$5.71 B
	Power Op	\$0.23 B	\$0.33 B	\$0.37 B	\$0.42 B	\$0.49 B	\$0.56 B	\$0.63 B
	Total	\$3.44 B	\$3.68 B	\$4.14 B	\$4.64 B	\$5.36 B	\$6.11 B	\$6.93 B

Total Economic Impacts



- Total impacts to output over time in Brazos and Robertson Counties.
- The **largest impacts occur in the 2030 decade**, with earlier construction of data centers, nuclear and combined cycle power plants in Potential PS4-3.
- Impacts lessen as PS4-2 catches up with Potential PS4-3 in terms of pumping, economic benefit due to Potential PS4-3 pumping is <\$1 B in these timesteps.
- Additional pumping result in a total economic impact **\$79.4 billion** (unadjusted) through 2080.

Employment



- Following similar trends to output, employment in the district is greatly augmented by additional water supplies under Potential PS4-3 pumping.
- Employment is measured in IMPLAN by full-time equivalents (FTEs).
- Through 2080, the additional groundwater pumping provides **268,000** job-years.

Conclusions

**Total
Output
Impact:**

\$79.4 Billion

**Total
Employment
Impact:**

**268,000 Job-
Years
~ 5,150 FTEs**

**Total
Tax Revenue
Impact:**

\$9.8 Billion

**Total
New Homes
Supported:**

4,400 Homes

- Potential PS4-3 accelerates and enables economic development in the near term by enabling earlier construction of data centers, power facilities and housing that PS4-2 delays or inhibits.
- Impacts narrow in the middle of the analysis period as PS4-2 catches up in pumping, but rebounds in later periods as the permanent pumping gap widens.
- Pumping costs are increased in Potential PS4-3 due to the higher ground pumping lift required, however the estimated effects on rate-payer income are a small fraction of the economic output the additional water enables.

Thank You

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