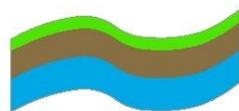


North Texas GCD

Well Spacing Review and Discussion

February 10, 2026



AGS

Advanced Groundwater Solutions, LLC

Purpose of Well Spacing Regulations

- Historically, well spacing rules limit a pumping well's impact on other wells
- Well spacing rules are allowed as a management tool under Chapter 36
- Policy decision to increase spacing to limit overall production

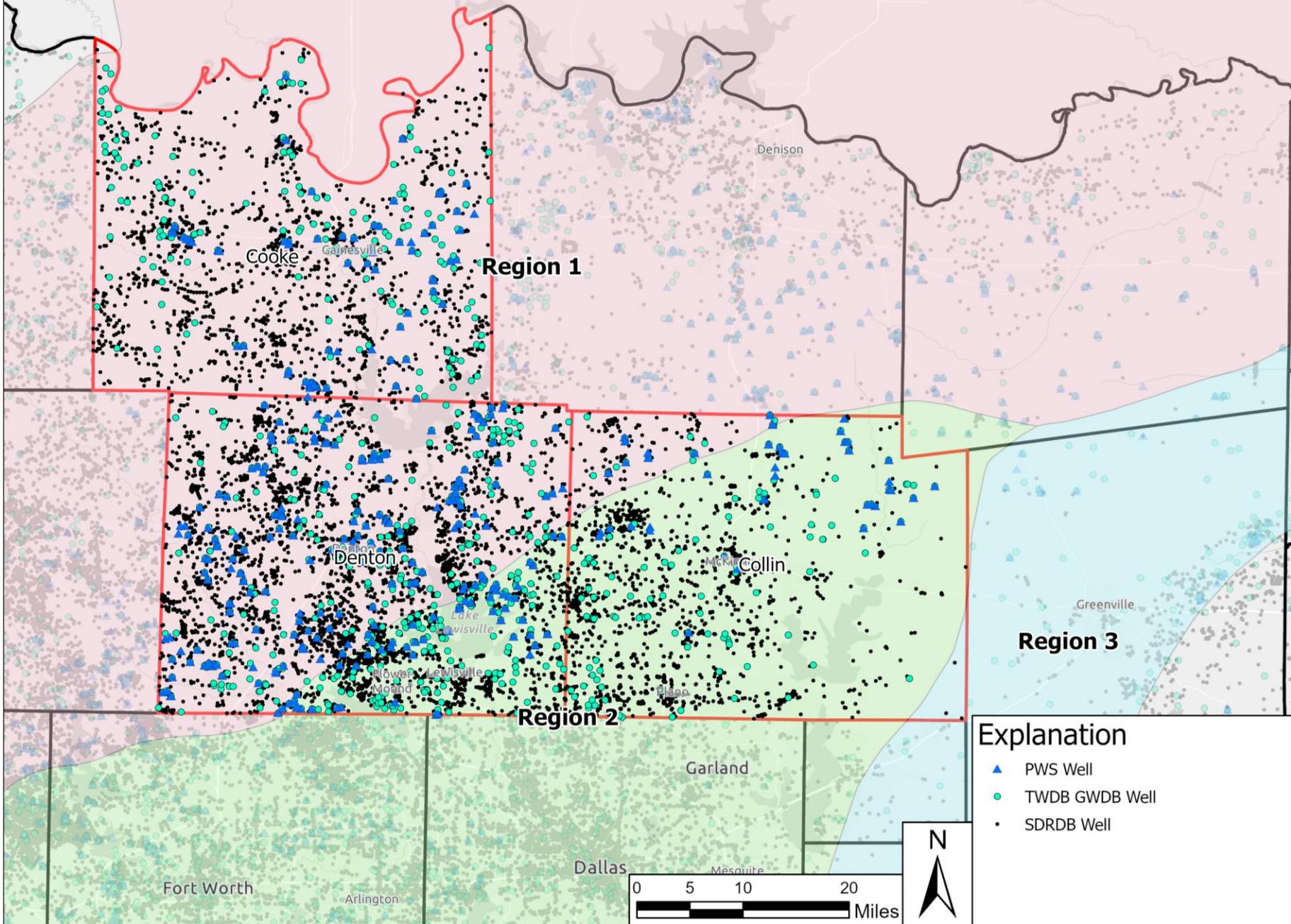
Current Well Spacing Rule

Minimum Spacing Requirements for All New Wells in the District
Applies to all aquifers

Maximum Capacity of Well	Spacing from Property Line	Spacing from Existing Wells Completed in the Same Aquifer (in feet)
17.36 gpm or less	50 feet	100 feet
Greater than 17.36 gpm	50 feet	$1,175 \text{ feet} + [1.2 \times (\text{gpm of proposed well})]$

Purpose: Assess the rules with new data and information

Wells in NTGCD

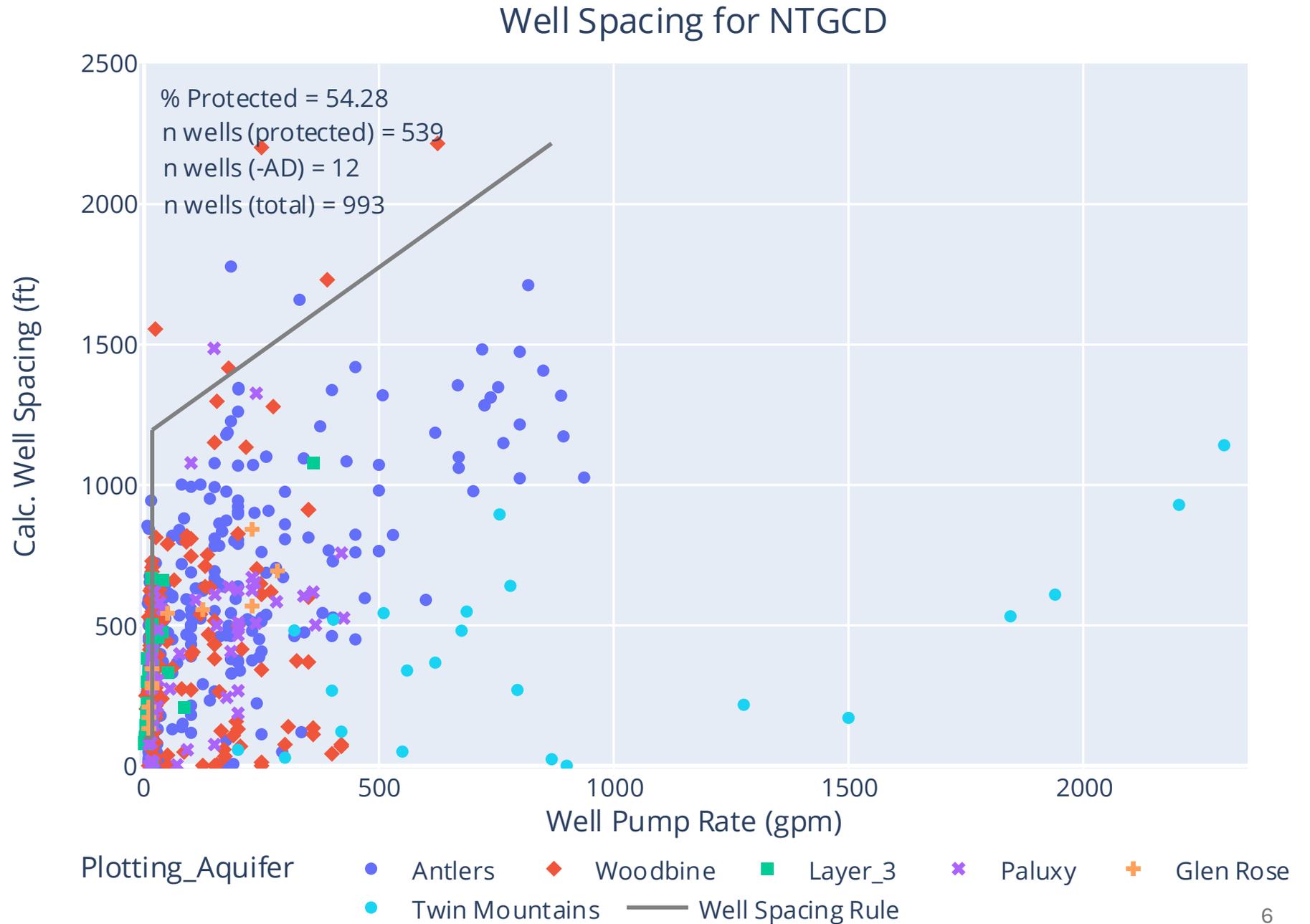


Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community, Sources: Esri, TomTom, Garmin, (c) OpenStreetMap contributors, and the GIS User Community

Some Observations

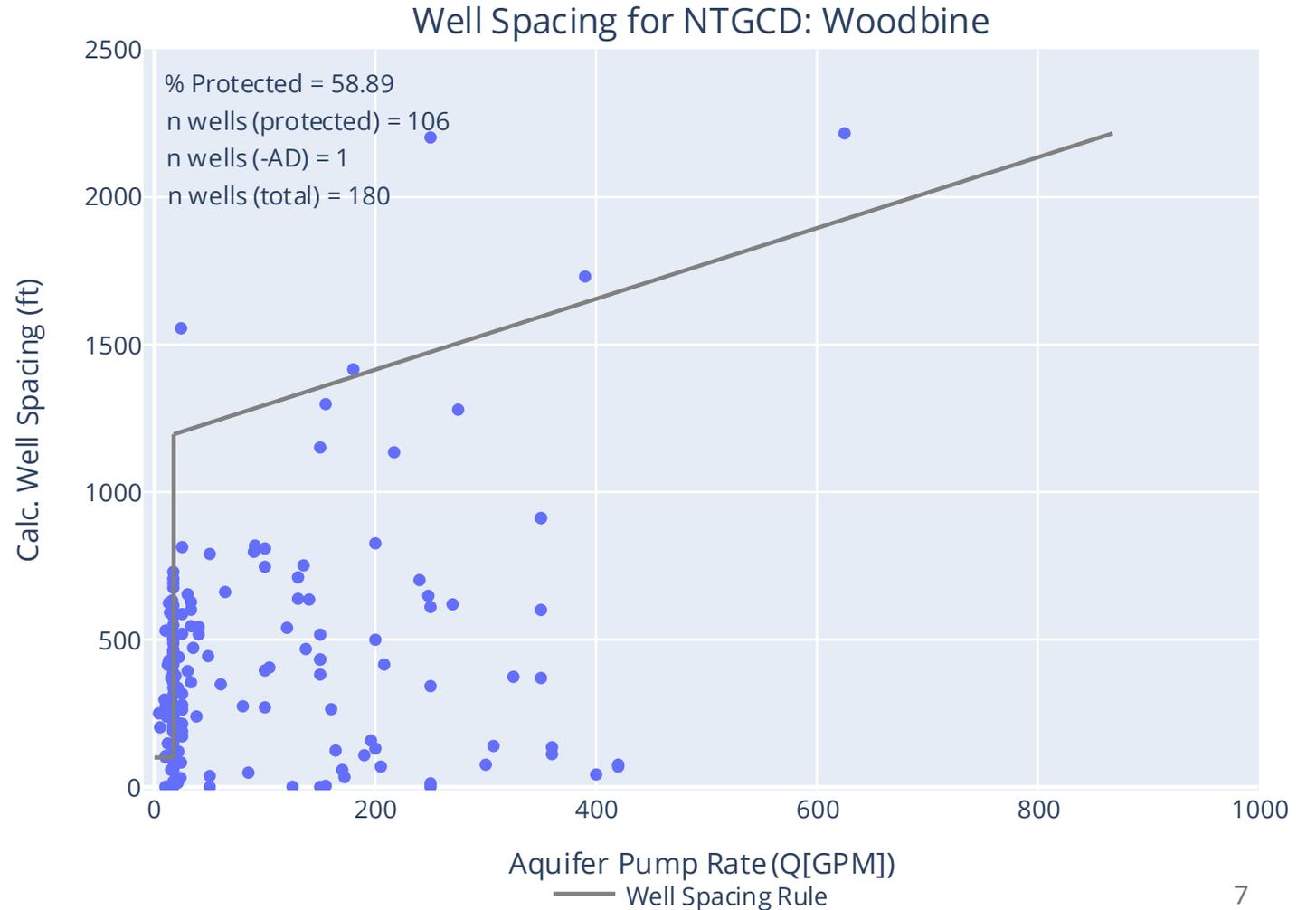
- With current rules, most of the wells that that aren't protected by criteria are small domestic wells.
- Unprotected wells are generally shallower and have less available drawdown than the protected wells
- Of the wells larger than 17.36 gpm that are unprotected, most have available drawdowns of less than 125 ft.
- Available drawdown and the % impact that are allowed are important factors in analysis

Symbolize by Aquifer



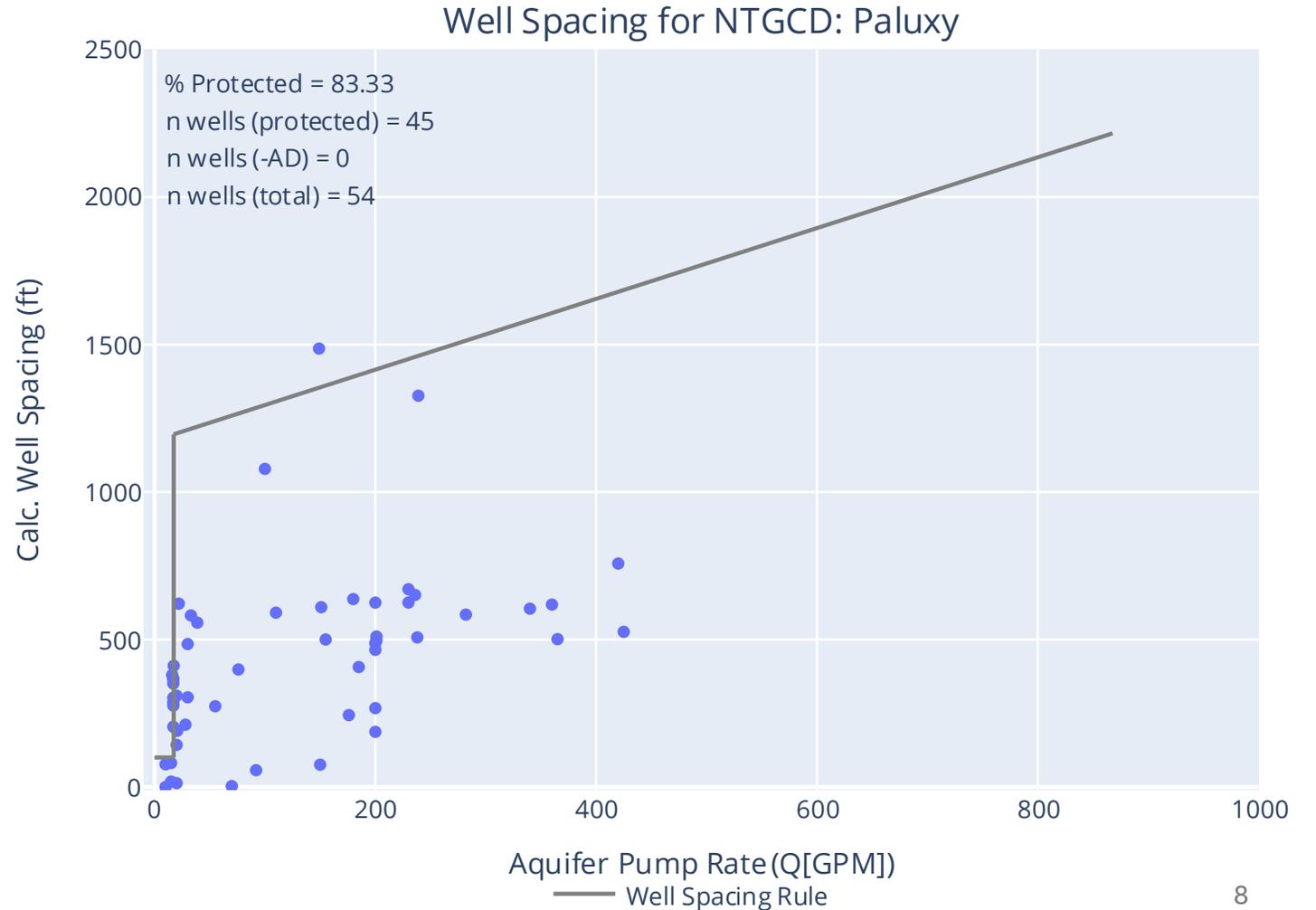
Woodbine Aquifer data

- Limited high-volume wells
- Some unprotected wells with current assumptions



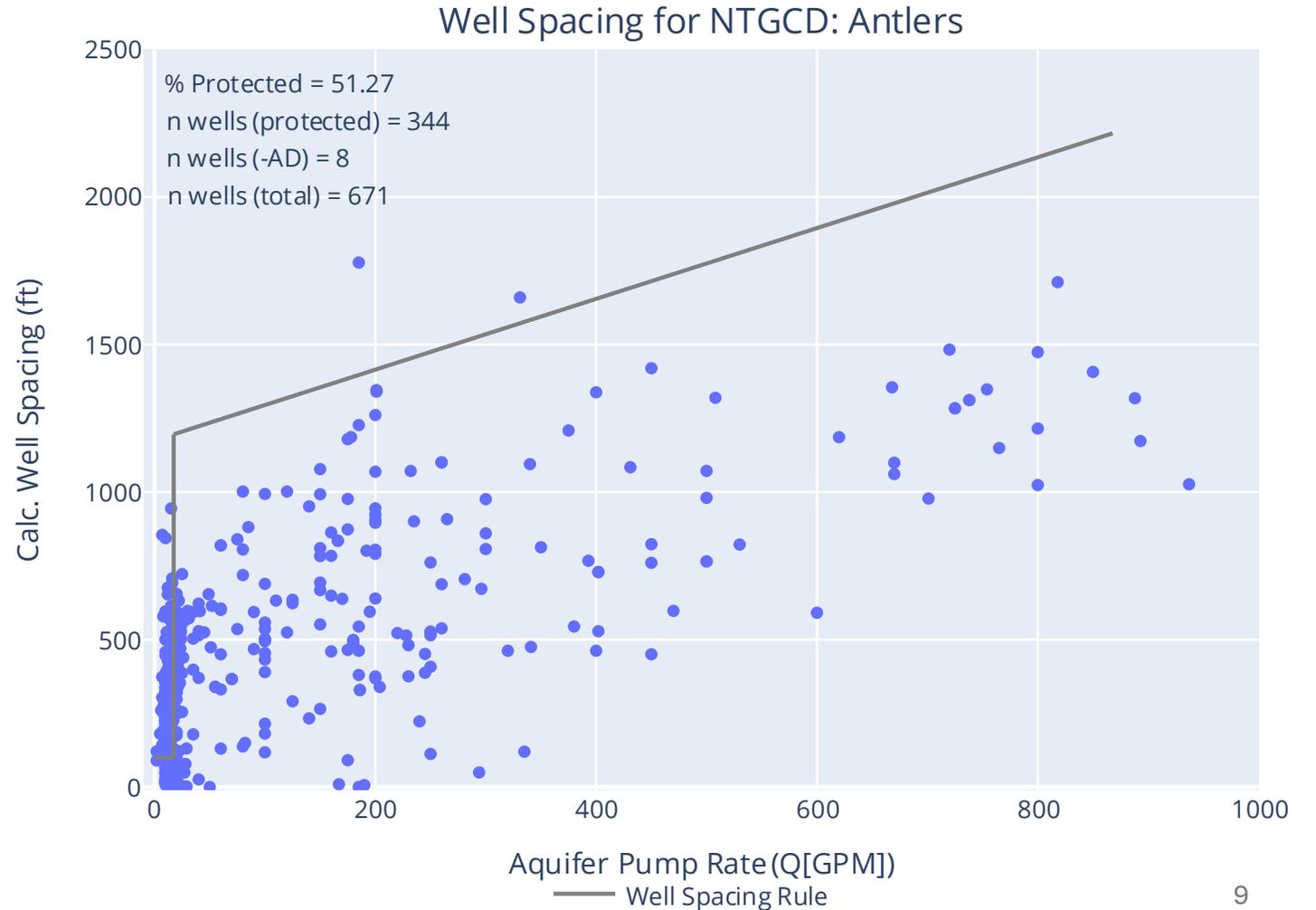
Paluxy Aquifer Data

- Limited high-volume wells
- Generally Protected



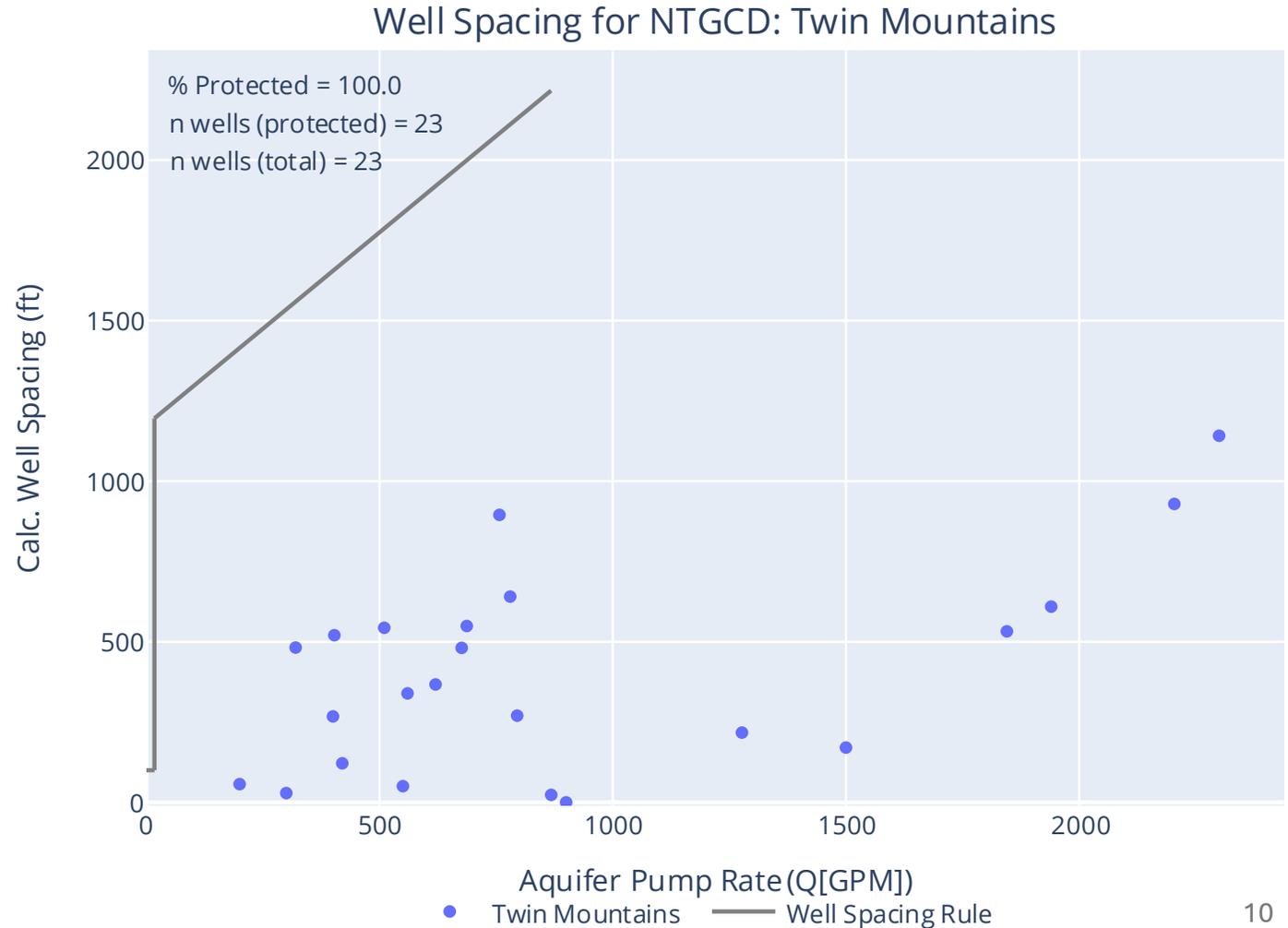
Antlers Aquifer Data

- Wide range of production
- Majority of wells are generally protected



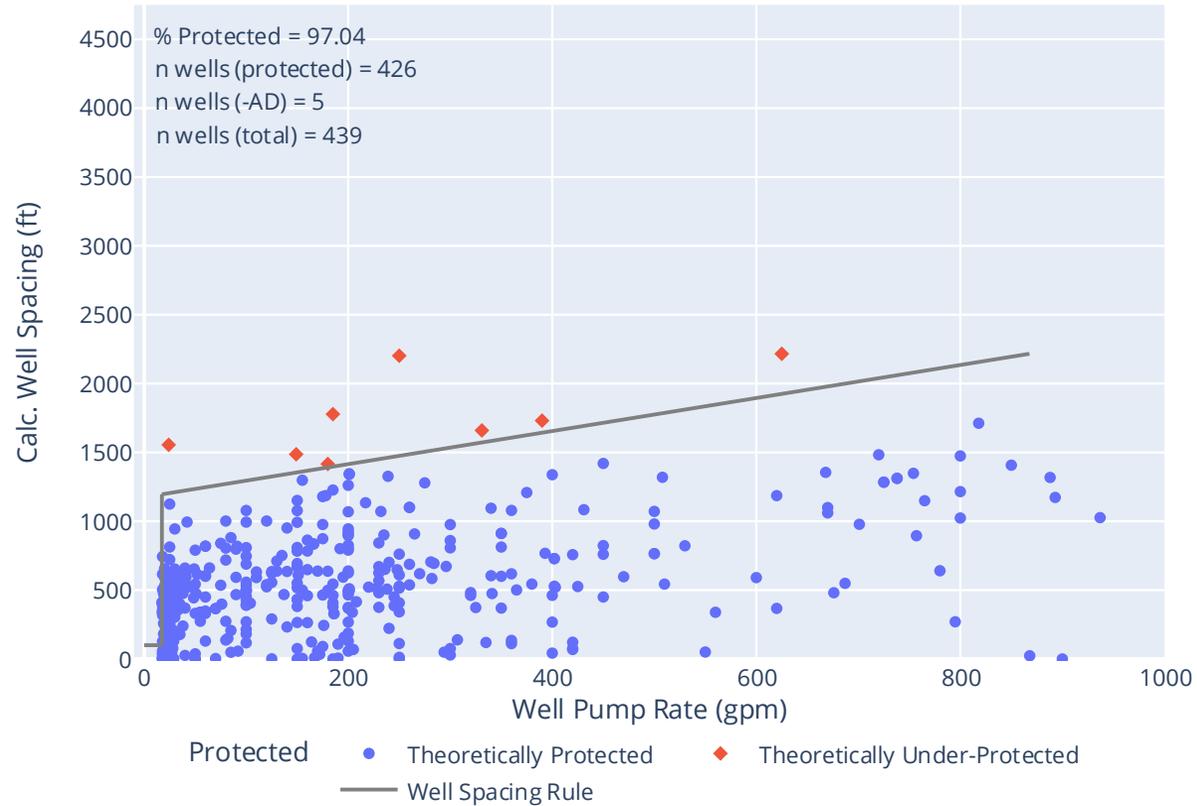
Twin Mountain Aquifer Data

- Limited number but high-volume wells
- All wells protected by current rule and approach/assumptions
- Limited geographic area



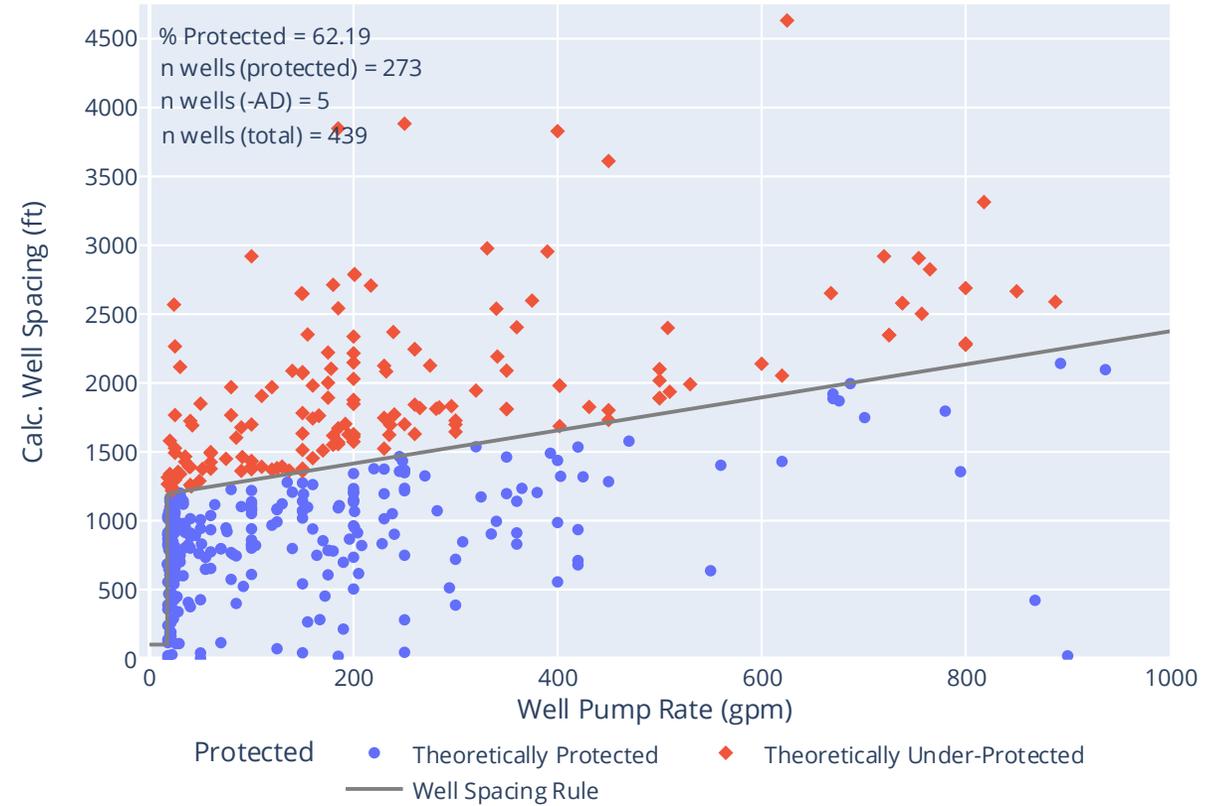
Possible Rules

Current Rule
Well Spacing for NTGCD



- 2%
- 2 days
- Avg. Screen
- Pump Test T
- $Q > 17.36$
- $1175 + 1.2 * \text{GPM}$

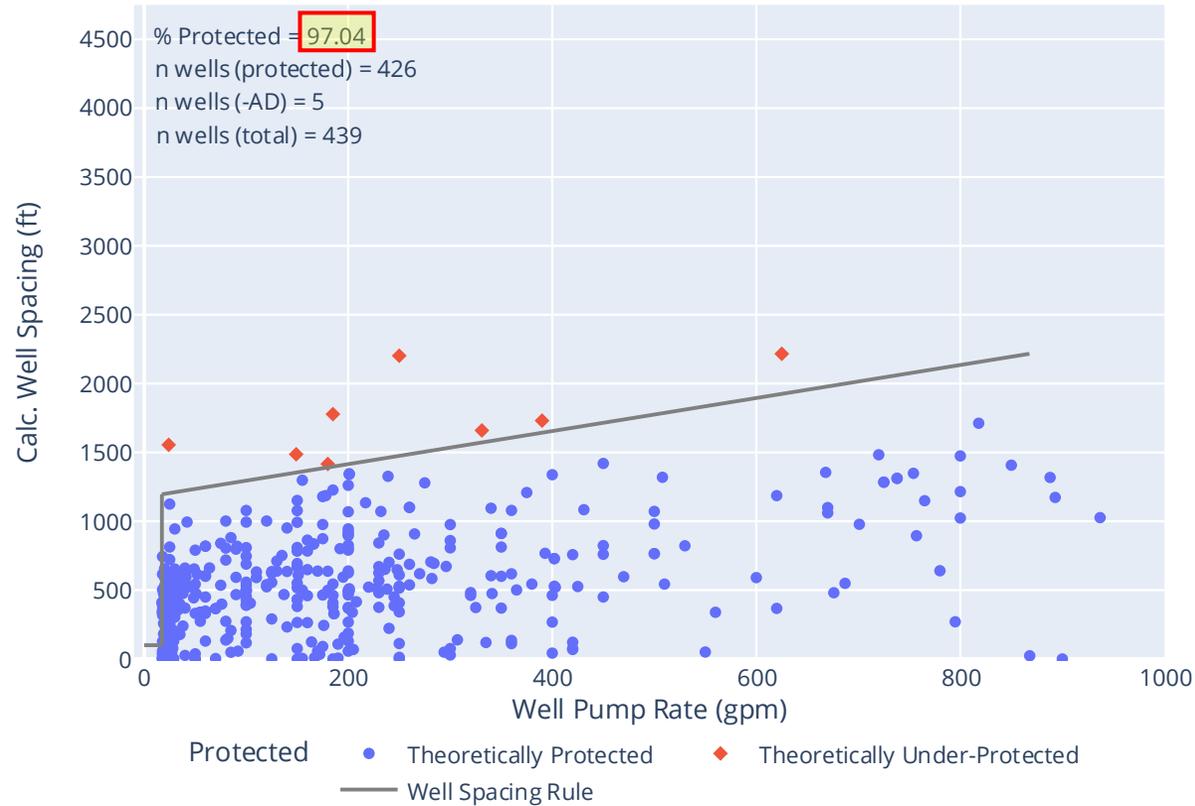
Possible New Rule
Well Spacing for NTGCD



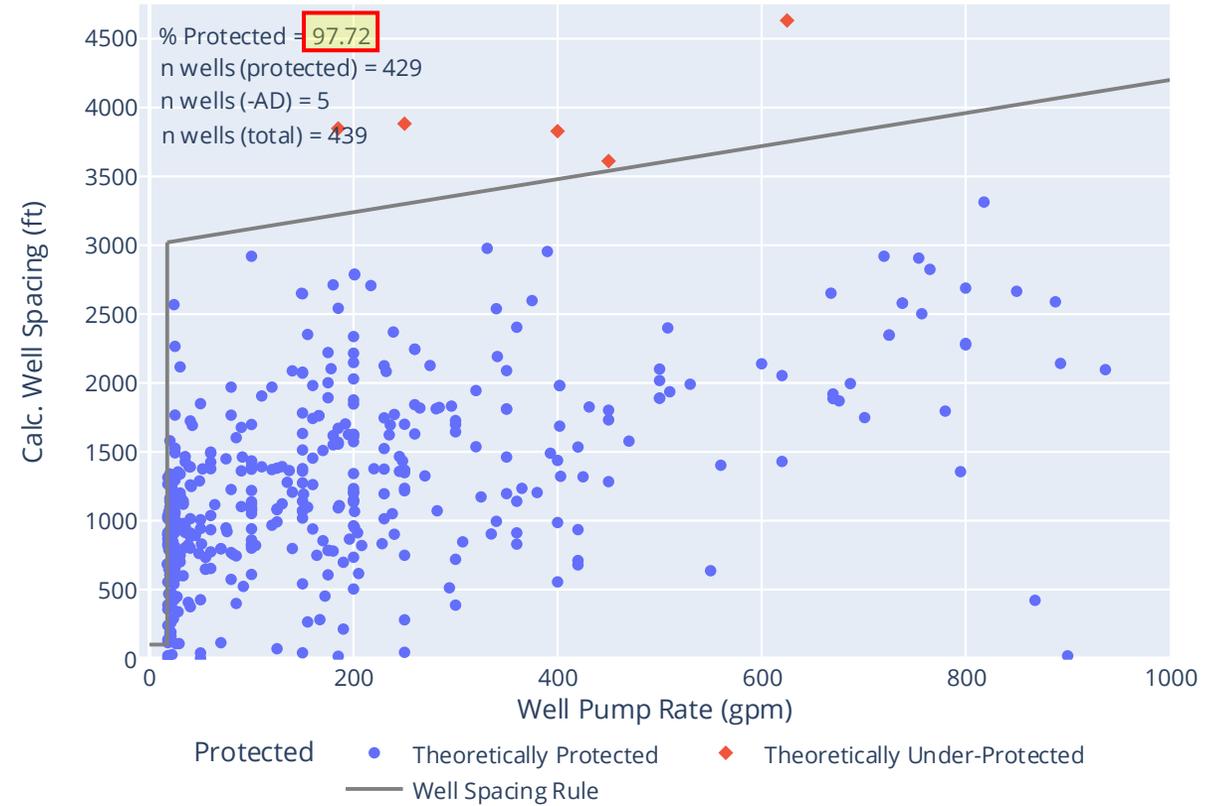
- 1%
- 5 days
- Avg. Screen
- Pump Test T
- $Q > 17.36$
- $1175 + 1.2 * \text{GPM}$

Possible Rule: with new assumptions

Current Rule
Well Spacing for NTGCD



Possible New Rule
Well Spacing for NTGCD



- 2%
- 2 days
- Avg. Screen
- Pump Test T
- $Q > 17.36$
- $1175 + 1.2 * \text{GPM}$

- 1%
- 5 days
- Avg. Screen
- Pump Test T
- $Q > 17.36$
- $2550 + 1.2 * \text{GPM}$

Some Observations

- Technical assessment
 - Illustrates and quantifies hydrogeologic principles
 - Provides a basis for policy decisions
 - Has limitations
- Policy decisions are important in spacing rules

Possible Paths Forward

- No change
- Use one rule for all aquifers and select new assumptions
- Define spacing rules by aquifer

Possible Rules: Combined

Each scenario is considered without exempt wells and fit to > 97+-1% theoretical protection using the source water levels. Excluding layer 3 wells.

	1 day 2%	2 days 2%	2 days 1%	2 days 0.5%	5 days 0.5%	10 days 0.5%
Total Wells	439	439	439	439	439	439
Protected	431	426	428	427	427	427
Protected Present	98	97	97	97	97	97
Spacing rule (using 1.2x slope)	1000	1175	1650	2000	3500	5000

Possible Rules: Aquifer Based Spacing

Each scenario is considered without exempt wells and fit to > **95+-1%** theoretical protection using the source water levels.

		Spacing rule (using 1.2x slope)					
Aquifer	Total # Wells	1 day 2%	2 day 2%	2 day 1%	2 day 0.5%	5 day 0.5%	10 day 0.5%
Woodbine	97	1000	1250	1700	2250	3500	5000
Paluxy	42	750	1000	1250	1500	2500	3500
Antlers	258	750	1100	1700	2250	3500	5000
Twin Mnts	23	<100	<100	650	1200	2300	3500