

EXEMPT WELLS

ISSUE STATEMENT

Exempt wells may disproportionately contribute to groundwater overdraft in the Prescott Active Management Area (AMA), placing aquifers in that AMA at greater risk for long-term viability.

BACKGROUND

Per A.R.S. § 45-454, wells pumping 35 gallons per minute or less to serve non-irrigation uses (“exempt wells”) are generally exempt from groundwater regulations, including metering, water use reporting, and assured water supply and water conservation requirements. Concern about the administrative burden of regulating thousands of small wells and the belief that they would exert a negligible impact on the aquifer led the state legislature to exempt this category of groundwater use from the 1980 Groundwater Management Act (GMA).¹ With respect to the requirements of the GMA, there are several provisions that do apply to exempt well owners:

1. Exempt wells may not pump more than 35 gallons per minute.
2. If used for industrial purposes, exempt wells cannot pump more than 10 acre-feet per year.
3. If used for irrigation purposes, not more than 2 acres can be irrigated using exempt wells.
4. Exempt wells cannot be drilled within 100 feet of a designated water provider’s operating distribution system unless one of the criteria for an exemption is met.
5. Within the AMAs, dry lot subdivisions intending to drill exempt wells must obtain a certificate of assured water supply (CAWS) and demonstrate the physical and continuous availability of groundwater for 100 years (the depth to groundwater cannot exceed 400 feet).²

Before drilling an exempt well, the well owner is not required to demonstrate physical or legal availability of the groundwater supply, with the exception of the final provision noted above. Property owners often drill exempt wells because they are the least expensive alternative and they avoid the regulatory requirements of other water supply options. The downside is that these exempt wells do not provide any assurance of a long-term water supply.³ In the context of the Prescott AMA’s management goal, the proliferation of exempt wells may disproportionately contribute to groundwater overdraft since they are exempt from the GMA requirements that aim to drive the AMA toward the goal of safe-yield.

EXEMPT WELLS IN THE PRESCOTT AMA

Within Arizona, the Prescott AMA contains the highest density of exempt wells.⁴ Approximately 12% of the State’s exempt wells are located in a basin comprising less than 0.5% of the State’s area.^{5,6} Narrowed even further, the

¹ Prescott Active Management Area Groundwater Users Advisory Council Safe-Yield Subcommittee. (2006). Final Report on Safe-Yield Impediments, Opportunities, and Strategic Directive.

² *Id.*

³ *Id.*

⁴ Town of Prescott Valley. (2020). Rainwater Harvesting for Aquifer Recharge Final Report.

⁵ *Id.*

⁶ Arizona Department of Water Resources. (2020). Non-Exempt Wells by AMA. [Data Set]. Provided by Natalie Mast via email on January 15, 2020.

Prescott AMA contains 30% of the exempt wells permitted in all five AMAs but represents only 3% of AMA land area.⁷ According to ADWR, there are now over 12,900 exempt wells in the Prescott AMA, serving over 25,000 people.^{8,9}

ADWR estimates the annual withdrawals of exempt domestic wells in the Prescott AMA to total just over 2,500 acre-feet. This pumping represents approximately 14% of municipal water demand, and 11% of the total water demand in the AMA.¹⁰ However, the potential pumping capacity of Prescott AMA exempt wells totals over 150,000 acre-feet per year.¹¹ That is, if all 12,900 exempt wells were to pump at full capacity over the course of a year, they would extract 150,000 acre-feet of groundwater. Pumping at even half of this capacity is a significant amount. Since exempt well owners are not required to report their actual use to ADWR, potential pump capacity illustrates that exempt wells may represent a larger source of future groundwater withdrawals than anticipated. In recent years, ADWR has estimated an increase in Prescott AMA exempt well pumping of 4% per year, but the number and pumping capacity of exempt wells could lead to even larger increases in unregulated groundwater use in the future.¹²

In contrast, the proportion of water used by exempt wells in other AMAs around the state is much smaller. For instance, Phoenix AMA groundwater pumping by exempt wells is estimated at less than 1% of municipal and total water use.¹³ So, while exempt wells may become a regional problem in areas like the Prescott AMA, their proliferation is not considered one of the top water issues in the other AMAs.¹⁴

FURTHER CONCERNS ABOUT EXEMPT WELLS

Exempt wells continue to pose challenges to water management in a safe-yield AMA like Prescott that currently has no imported water supplies, and these challenges will only grow over time. As existing water supplies that meet the State's Assured Water Supply (AWS) standards for planned subdivisions become more difficult to obtain, development has taken advantage of existing loopholes in order to meet the demands of growth.¹⁵ For example, rather than building a new planned subdivision subject to the AWS rules, a property developer can acquire land through a lot split and drill a new exempt well to access groundwater.¹⁶

⁷ *Id.*

⁸ *Id.*

⁹ Arizona Department of Water Resources. (2020). Prescott AMA Annual Supply and Demand Data, Historic Template and Summary. Accessed March 11, 2020 from <http://infoshare.azwater.gov/docushare/dsweb/Get/Document-10673/Prescott%20AMA%20Historic%20Template%20and%20Summary%20for%20web.xlsx>.

¹⁰ *Id.*

¹¹ Arizona Department of Water Resources. (2020). Non-Exempt Wells by AMA. [Data Set]. Provided by Natalie Mast via email on January 15, 2020.

¹² Arizona Department of Water Resources. (2020). Prescott AMA Annual Supply and Demand Data, Historic Template and Summary. Accessed March 11, 2020 from <http://infoshare.azwater.gov/docushare/dsweb/Get/Document-10673/Prescott%20AMA%20Historic%20Template%20and%20Summary%20for%20web.xlsx>.

¹³ Arizona Department of Water Resources. (2020). Phoenix AMA Annual Supply and Demand Data, Historic Template and Summary. Accessed March 11, 2020 from <http://infoshare.azwater.gov/docushare/dsweb/Get/Document-10671/Phoenix%20AMA%20Historic%20Template%20and%20Summary%20for%20web.xlsx>.

¹⁴ Prescott Active Management Area Groundwater Users Advisory Council Safe-Yield Subcommittee. (2006). Final Report on Safe-Yield Impediments, Opportunities, and Strategic Directive.

¹⁵ Town of Prescott Valley. (2020). Rainwater Harvesting for Aquifer Recharge Final Report.

¹⁶ Prescott Active Management Area Groundwater Users Advisory Council Safe-Yield Subcommittee. (2006). Final Report on Safe-Yield Impediments, Opportunities, and Strategic Directive.

Over time, some effects of groundwater overdraft have been subtle. Some property owners with exempt wells drilled in the past have found they need to deepen their wells to access groundwater, while other wells have gone dry.¹⁷ Uncertainty and concerns are mounting about the quality of water that will inevitably need to be pumped from greater depths. Without action, concern exists that these impacts can lead to diminishing property values and a loss of property tax revenues, while regional infrastructure costs simultaneously increase in order to develop alternative water supplies where feasible. Numerous studies and committees have proposed regulatory structures to limit exempt wells and their impact to both the long-term health of aquifers and sustainable water resource management.¹⁸ In order to address these issues moving forward, it would be best to seek a solution that specifically addresses concerns and issues in the Prescott AMA rather than looking to develop statewide standards.

¹⁷ Upper Verde River Watershed Protection Coalition. (2010). Safe Yield Work Group Final Report.

¹⁸ Upper Verde River Watershed Protection Coalition Board. (2018). Minutes of The Upper Verde River Watershed Protection Coalition Board Held on January 24, 2018.