



GROUNDWATER PROTECTION IN TEXAS: ENSURING THE *QUALITY* OF THE RESOURCE

The protection of the groundwater resources located in Texas is a crucial issue that has implications for the citizens of Texas both now and in the future. With the rapid growth Texas is experiencing, every effort needs to be made to ensure future groundwater supplies are available to meet the increasing water demands. Preventing the contamination of the groundwater resources of Texas is a key part of the water supply equation. Groundwater conservation districts (GCDs) are charged in Chapter 36 of the Texas Water Code with the “conservation, preservation, **protection**, recharging, and prevention of waste of groundwater.”

One of the biggest threats to water quality is the substantial number of abandoned water wells and abandoned oil and gas wells that currently exist. If not properly addressed, these abandoned wells deteriorate over time and can provide a conduit to groundwater resources that can lead to significant contamination. Specifically, contaminants or lower quality water from one aquifer or formation can migrate into the deteriorated well bore and then move laterally through deteriorated well casing into useable, higher-quality groundwater resources, even if the surface seal is in good condition.

The Texas Department of Licensing and Regulation (TDLR) estimates there are approximately 150,000 abandoned water wells in Texas. A number of GCDs across Texas have stepped up to provide well plugging programs and financial resources to plug and cap the abandoned water wells within their boundaries. On the oil and gas well front, the Railroad Commission of Texas (RRC) has stated there are approximately 7,000 orphaned oil and gas wells in Texas. The full number of wells is unknown and is likely much higher due to the lack of record-keeping by state agencies during the early years of oil and gas activity in Texas.

P-13 Wells: Jurisdictional Issue

The Texas Natural Resources Code grants jurisdiction to the RRC over all oil and gas wells in Texas. The RRC’s jurisdiction includes power to exercise authority and pursue rules enforcement over “orphaned wells,” “abandoned wells,” “inactive wells,” and wells actively operated for the production of oil and gas, amongst others.

For many years and continuing today, the RRC has allowed for oil and gas wells that were originally drilled under its jurisdiction to be reconditioned for the production of groundwater (“P-13 Wells”). The process of recompleting an oil and gas well for groundwater production involves “plugging back” a well to a depth consistent with the subsurface groundwater bearing formation, which is typically much shallower than the relevant oil and gas bearing formation and then perforating the casing to allow production of that groundwater. When oil and gas wells are no

longer productive, operators may offer to transfer these inactive wells to the landowner for use as a water well. The RRC allows landowners to apply to “plug back” any oil or gas well in order to recondition the well for groundwater production by submitting an application form, known as RRC “Form P-13.”

Once the RRC has approved the reconditioning of a well for groundwater production, there is a question of whether the RRC continues to have jurisdiction over the converted P-13 Well. One interpretation of the current Texas law suggests that RRC relinquishes jurisdiction upon granting a Form P-13 application. Another interpretation of the current Texas statutory law is the RRC maintains jurisdiction over P-13 Wells. In the latter case, it is unclear which state agency would then have jurisdiction over groundwater contamination associated with that well. The implications of either interpretation is far reaching, and affects landowners, mineral owners, groundwater owners and users, and local GCDs. Jurisdiction over groundwater contamination in Texas is shared between the RRC and the Texas Commission on Environmental Quality (TCEQ), with RRC responsible for groundwater contamination associated with oil and gas activities and TCEQ responsible for groundwater contamination from all other sources. This adds another dimension to the jurisdictional landscape.

If RRC does not maintain jurisdiction over P-13 Wells, and the plugging or casing on such a well fails such that hydrocarbons commingle with groundwater, both the water and the hydrocarbons could be contaminated and would be considered waste under the Texas Natural Resources Code and the Texas Water Code. If RRC has no jurisdiction over P-13 Wells, the wells are not eligible for remediation through Oil & Gas Regulation and Cleanup Fund (discussed below). Further, the liability for any problems associated with that well has been shifted from the oil and gas operator to the current landowner - who may or may not have known at the time they acquired title to the property of the liability associated with the P-13 Well on their property.

Access to Increased RRC Funding

One of the most significant hurdles to addressing orphaned oil and gas wells and former oil and gas wells that have been converted to P-13 Wells is the high cost associated with the plugging efforts. Local landowners are not always in a position to plug these types of wells located on their property, especially the deeper and more problematic wells. State agencies and local governmental entities are always trying to identify sources of funding to pay for the entities’ well remediation efforts.

The Texas Legislature created the Oil & Gas Regulation and Cleanup Fund (OGRC Fund) to enable the RRC to plug orphaned oil and gas wells and address abandoned oilfield sites. This the OGRC Fund is funded by regulatory fees paid to the RRC by the oil and gas industry and RRC uses the fund to plug wells pursuant to a priority system. Currently, the OGRC Fund is not being used by the RRC to address plugging of any P-13 Wells. Some abandoned and orphaned wells that are not P-13 Wells appear to be significant sources of groundwater contamination, yet those wells have similarly not been prioritized for plugging under OGRC Fund. The OGRC Fund is expected to receive a significant amount of additional funds from the federal government due to the passage

of the Infrastructure Investment and Jobs Act signed into law in November 2021 by President Biden. The Biden administration announced in 2022 Texas will be eligible to receive \$343 million dollars to clean up abandoned oil and gas wells across Texas, which would be the biggest allocation in the United States.

Abandoned Water Well Plugging Programs

Abandoned water wells exist throughout Texas and pose a threat to groundwater quality. A substantial number of GCDs were created after Senate Bill 1 was passed by the Texas Legislature in 1997. Since that time, more and more abandoned water wells have been identified as GCDs carry out their groundwater management duties.

There are two basic ways to stop the threat of contamination. A well can be capped if there are plans for using it in the future or it can be plugged and sealed permanently. Older wells are particularly vulnerable since they often have been inadequately sealed or may have deteriorated well casings. Improperly plugged wells may also cause aquifer contamination. Chapter 36 of the Texas Water Code grants GCDs the authority to require a landowner to permanently close or cap an open or uncovered water well if that well is not in actual use. If the landowner does not do so in compliance with district rules, the district may close or cap the well safely. While any costs incurred in that process constitute a lien on the land where the well is located, in many situations that lien would be insufficient to cover the high costs of plugging particularly problematic wells.

Some GCDs have created water well plugging programs to help landowners plug abandoned water wells when their funding allows. The Edwards Aquifer Authority (EAA) is an example of a robust plugging program. The EAA has information on over 2,400 plugged wells within the EAA's boundaries. Like many GCDs, the EAA's rules require wells that have been abandoned be addressed to avoid creating a pathway for pollution into the aquifer. In Bexar County, the EAA works with the San Antonio Water Systems (SAWS) to identify and plug abandoned wells. The EAA researches historical databases from SAWS and the state, in addition to systematic canvassing of landowners to register and inspect all Edwards Aquifer wells. The EAA has funded a needs-based abandoned well closure assistance program to assist well owners with proper plugging of wells. The EAA has also developed an abandoned well risk assessment tool to rank potential impacts to groundwater quality.

Currently, there is no statewide abandoned water well plugging program to address the estimated 150,000 abandoned water wells. In addition to posing a risk of contamination to groundwater, landowners and property purchasers may be taking on liability without knowledge of the existence of – and threats associated with - these wells.

Considerations

With the goal of groundwater quality protection, there are several considerations:

1. It may be beneficial to clarify the extent of RRC's jurisdiction over oil and gas wells once they have been reconditioned as P-13 Wells.
2. It may be beneficial to clarify that the OGRC fund and other federal funds can be used to address P-13 Wells and other converted wells, and to remediate associated well sites.
3. With shared jurisdiction over groundwater quality between RRC and TCEQ, coordination could potentially be improved to ensure that all cases of groundwater contamination are appropriately addressed at the state level if RRC does not assert jurisdiction.
4. The creation and funding of a statewide well plugging program for water wells that have been abandoned, are deteriorated or were improperly plugged could help address the groundwater threats associated with these wells.
5. Increased seller disclosure requirements regarding all wells located on the property during the real estate could assist potential buyers in better understanding the possible risks and/or potential liability associated with reconditioned oil and gas wells and other water wells.