HEADWATERS GROUNDWATER CONSERVATION DISTRICT

ANNUAL REPORT January 2022

METHODOLOGY TO TRACK DISTRICT PROGRESS IN ACHIEVING MANAGEMENT GOALS

This report is created to comply with the District Management Plan, provide an annual review for the GMA 9 committee for joint planning[1], and provide the Headwaters Groundwater Conservation District (the District) Board of Directors information as to the District's performance standards in regards to achieving the Management Plan goals and objectives.

Goal 1 - Provide the most efficient use of groundwater

The rules and procedures adopted by the District related to tracking the production of groundwater in Kerr County are pursuant to: (1) the Texas Water Code Chapter 36. 113-117, (2) the best available science, technical evidence supplied by the Texas Water Development Board[2], (3) the District's monitor well program, (4) and the District's historical data. In 2021 the District updated and revised the Production Cap section of the rules; for all new Public Water Supply Systems, a Livable Minimum Standard is required for all connections, not to exceed the District Production Cap of 80,000 gallons per acre per year.

The District requires an administratively complete application for all new Non-Exempt (Permit) wells, and a registration form for all Exempt Wells drilled in Kerr County. The District also has an ongoing program to register existing wells not registered with the District as they are discovered to give a better understanding of the amount of groundwater being pumped in the County. For year January 2021 through December 2021, 165 applications for new water wells have been filed; 161 Exempt and 4 Permitted. There are approximately 6,325 Exempt wells and 293 Permitted wells in Kerr County.

The District has well spacing guidelines in the District Rules to help prevent interference between wells an recognize property owners' ownership of groundwater, Water Code 36.002. The District staff performs well site visits during drilling, cementing and completion operations.

The District collects data for all new well pump installations, Permit wells are required to install a meter and report the annual production to the District. The total annual production from all Permit wells added to the estimated exempt pumping from Exempt wells is recorded in the District's 2021 Annual Groundwater Report.

[1] https://statutes.capitol.texas.gov/Docs/WA/htm/WA.36.htm#36.108

[2] https://www.twdb.texas.gov/groundwater/docs/GAMruns/GR21-003.pdf

The District's monitor well program continues to gather data to provide a better understanding to be used in future planning for the District, Groundwater Management Area 9, and the Regional Water Planning Group (Region J). The District has drilled and completed 19 monitor wells and with the guidance of a volunteer geology team, plans to drill another monitor well in the Ellenburger Aquifer in 2022. The District currently monitors approximately 40 Trinity, 1 Ellenburger, and 12 Edwards Trinity (Plateau) Aquifer wells. Well levels are provided to the Board of Directors and TWDB each month.

Goal 2 - Controlling and preventing waste of water.

The District's goal is to issue authorization for all wells drilled to be used for a beneficial purpose as described in Water Code[3] 36 001(9), but not fall under the definition of waste, Water Code 36.001 (8). Exempt wells are regulated by pump capacity as stated in Water Code 36.117. Permit wells are issued Operating Permits and are regulated under the District Production Cap.

The District monitors and investigates reported occurrences of waste of groundwater. An article was published in a local newspaper discouraging wasteful practices.

Goal 3 - Addressing conjunctive surface water management issues.

Currently a representative from the District is a member of the regional water planning group (Region J), and participates in the planning group's meetings regarding surface water supplies in the region. Two Region J meetings were held in 2021; May 13, and July 27. The General Manager, Gene Williams, attended both meetings via Zoom. The City of Kerrville has the only conjunctive use Operating Permit issued by the District. The City on average uses 80% surface water.

Goal 4 - Address Natural Resources Issues.

Registration to drill is required for water wells drilled that are associated with any natural resources project. Annual production from these wells must be reported to the District.

A representative has attended all GMA9 meetings in 2021. The District has rules that require all license drillers to monitor the total dissolved solids (TDS) during the drilling process to be able to seal off and report any injurious water encountered. Allowing spillage of any fluids, tailings or cuttings into any body of surface water or adjoining property is prohibited. A water quality analysis is required from all new wells. The District rules provides a guide to proper well spacing to maintain the required distance from any concentrated sources of pollution. (TDLR 76.100)

Goal 5 - Addressing Drought Conditions.

For 2021 the District has monitored the water level in four Drought Index wells monthly, the levels in these wells are used as drought stage triggers. The Palmer Drought Severity Index and the flow rate of the Guadalupe River at Kerrville are also considered when drought stages are initiated. Initiation or termination of drought stages are mailed to all permit well/system operators, posted

[3] https://statutes.capitol.texas.gov/Docs/WA/htm/WA.36.htm

on the District website and published in a local newspaper. The District moved from Stage 2 drought to Stage 1 drought in December 2021.The District Drought Contingency Plan is available on the District website www.hgcd.org

Goal 6 - Addressing Conservation.

The District has a Conservation Plan with several conservation tips and links on the District website. The District will publish a minimum of one article during the year to encourage conservation including not wasting but keeping non-essential use to a minimum. Operating Permits are issued for beneficial purpose and actual service need up to the maximum allowed by the District Production Cap.

Goal 7- Addressing Rainwater Harvesting.

A link is provided on the District Website that discusses rainwater basics, and provides contractors, landowners, and other rainwater harvesting system planning material to be able to capture, store, and use rainwater for landscaping. The District will mention the benefits of rainwater harvesting in at least one newspaper article annually.

Goal 8 - Addressing in a Quantitative Manner the Desired Future Conditions of the Groundwater Resources.

The District completed an annual desired future conditions (DFC) tracking report comparing current DFC monitor well levels to the 2008 base line levels, this report is provided to the HGCD Board of Directors and the GMA9 committee. An annual groundwater report was completed and provided to the HGCD Board of Directors. This report compares the annual operating permit volume and the estimated exempt pumping volume provided by the Texas Water Development to the Modeled Available Groundwater (MAG) assigned to the District in GAM Run 16-023 MAG February 28, 2017.

There are four management goals not applicable to the District.

1) Recharge Enhancement
2) Precipitation Enhancement
3) Brush Control
4) Controlling and Preventing Subsidence