

Worksheet for Drilling/Operating Permits

Wellborn Special Utility District (BVDO-0284, BVDO-0285)

Wellborn Special Utility District seeks two (2) Drilling/Operating permits for the purpose of:

- **Rural Public Water Supply – Water for public use**

New Wells:

Well #6 (**BVDO-0284**) Located at: N 30.756410° W 96.478019° 0.44 miles NNE of the intersection of Old Hearne Road and Bowman Henry Road in Robertson County

Well #7 (**BVDO-0285**) Located at: N 30.751705° W 96.475443° 0.40 miles E of the intersection of Old Hearne Road and Bowman Henry Road in Robertson County

Tract Size: **Approximately 301.48 acres**

Beneficial Use: **Rural Public Water Supply – Water for public use (both wells)**

Aquifer of Origin: **Simsboro (both wells)**

Well Column: **18” (both wells)**

Rate of Production: **2000 gpm (both wells)**

Max. Annual Production: **Well #6 – 1,974 acre feet/year**

Well #7 – 2,139 acre feet/year

This application meets all the specifications listed in BVGCD Rule 7.1 (c) regarding production-based acreage. Below are the calculations verifying the applicant's compliance:

Well #6

1,974 acre feet/year x .62 = 1,224 gpm on an average annual basis

1,224 x 1'/gpm for Simsboro wells – 1,224' radius from the wellhead

1,224' x 1,224' x 3.14 = 4,704,273 square feet around the well

4,704,273/43,560 = **107.9952 contiguous acres to be assigned to the well.**

Well #7

2,139 acre feet/year x .62 = 1,326 gpm on an average annual basis

1,326 x 1'/gpm for Simsboro wells – 1,326' radius from the wellhead

1,326' x 1,326' x 3.14 = 5,520,987 square feet around the well

5,520,987/43,560 = **126.7444 contiguous acres to be assigned to the well.**

Application is administratively complete.

It is the recommendation by the General Manager to approve the Drilling/Operating permits as presented.

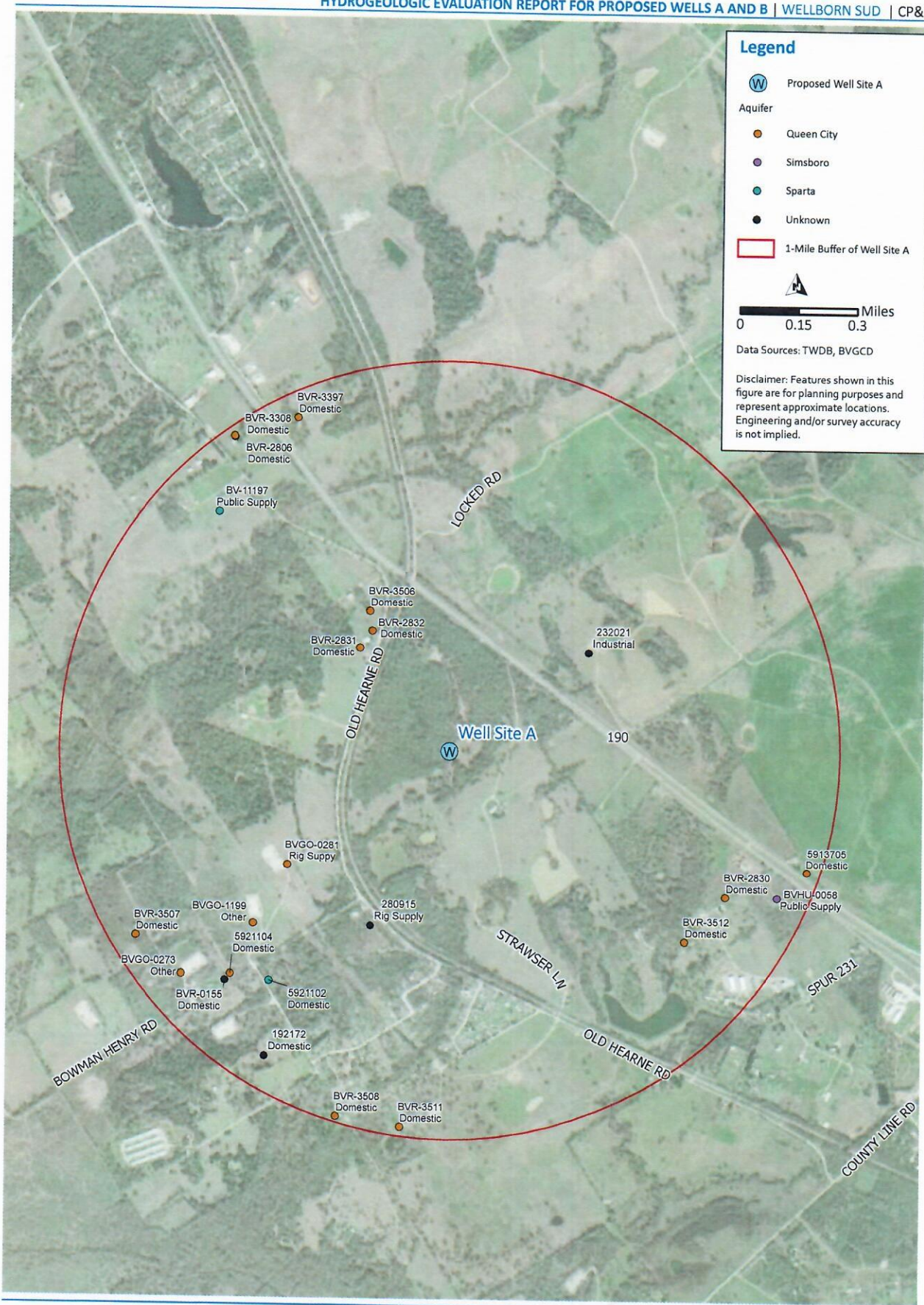


Figure 1 Location of Wells A and B



Last Revised: June 09, 2021 pw //IO-PW-INT_Carollo.local:Carollo_200000/Documents/TX/Wellborn/SpecialUtilityDistrict/200199-000007/03Reports&Studies/ogGIS/Simsboro.aprx/figure 1 Location of Wells

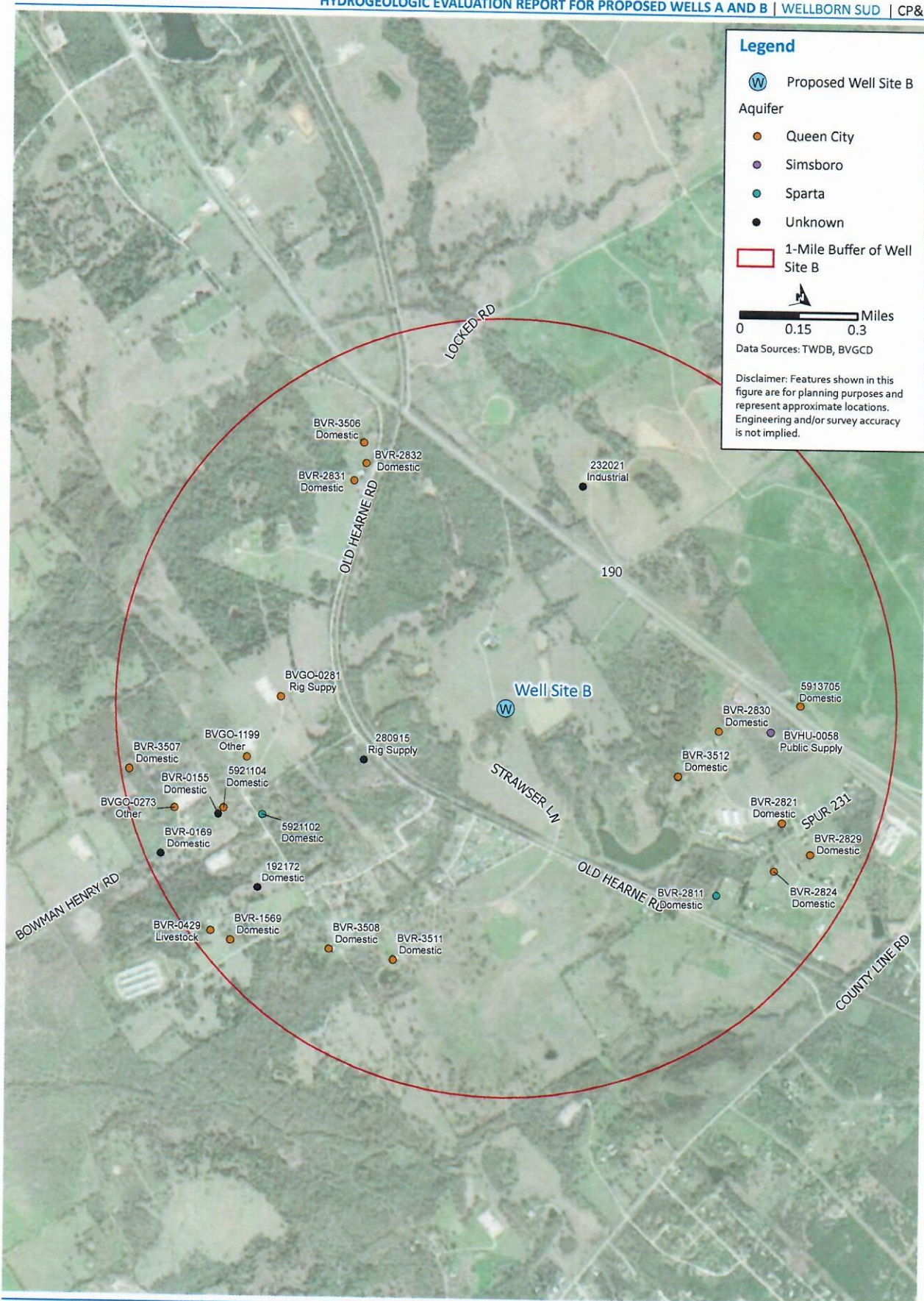
Source: Hydrogeologic Evaluation Report prepared for Wellborn SUD June 2021



Last Revised: June 14, 2021 pw //IO-PW-INT.Carollo.local:Carollo_200000/Documents/TX/Wellborn;SpecialUtilityDistrict/200199-000000/03Reports&Studies/09GIS/Simsboro.aprx/Figure 2 Well Site A

Figure 2 Well Site A

Source: Hydrogeologic Evaluation Report prepared for Wellborn SUD June 2021



Legend

- Ⓜ Proposed Well Site B

Aquifer

- Queen City
- Simsboro
- Sparta
- Unknown

1-Mile Buffer of Well Site B

Miles
 0 0.15 0.3

Data Sources: TWDB, BVGCD

Disclaimer: Features shown in this figure are for planning purposes and represent approximate locations. Engineering and/or survey accuracy is not implied.

Figure 3 Well Site B

Wellborn SUD | BVDO-0284 | Well #6 | Simsboro | 1,974 ac-ft/yr | 1,224' radius



July 7, 2021

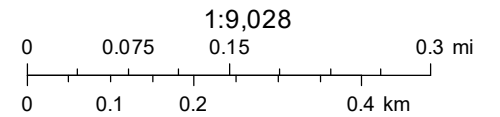
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□ RobertsonCADParcels



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Wellborn SUD | BVDO-0285 | Well #7 | Simsboro | 2,139 ac-ft/yr | 1,326' radius



July 7, 2021

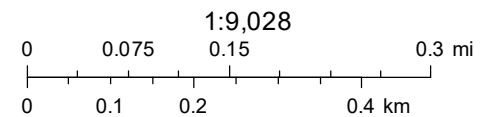
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Ground Water Consultants, LLC

P. O. Box 5667
Katy, Texas 77491
713-444-7238

August 9, 2021

Mr. Alan Day
General Manager
Brazos Valley Groundwater Conservation District
P.O. Box 528
Hearne, Texas 77859

aday@brazosvalleygcd.org

Re: Review of Hydrogeologic Evaluation Report
for Proposed Wells A and B for Wellborn SUD in
Robertson County, Texas

Dear Mr. Day:

Our firm has reviewed a report submitted by the Wellborn SUD regarding the potential impacts from pumping two proposed wells screening sands of the Simsboro Aquifer and located in the very south part of Robertson County. The report was prepared by CP&Y, Inc and Carollo Engineers, Inc. and submitted to address Brazos Valley GCD Rule 8.4(b)(7)(B) for wells capable of producing 800 or more acre-feet per year (ac-ft/yr).

The permit application for the two wells is for an overall withdrawal of 4,113 ac-ft/yr, which is equivalent to an average pumping rate of about 2,550 gallons per minute (gpm) continuously for one year. The proposed instantaneous pumping rate for each well is 2,000 gpm. The proposed locations of the wells are shown on the attached figure, which was provided as part of the hydrogeological evaluation report.

Our comments regarding the report for the three large-capacity wells are included below.

1. As required by the rule referenced previously, the evaluation report addresses the surface geology in proximity to the proposed well locations with the Cook Mountain Formation exposed at land surface and extending about a mile to the northwest and several miles to the southeast. The report also addresses the depth of the proposed well screened intervals of about 2,300 to 2,800 feet and the thickness of the Simsboro Aquifer of about 550 feet in the general area. The report also addresses the question regarding whether the aquifer is confined or unconfined and it is confined in this area with over eighteen hundred feet of artesian head above the top of the aquifer. Hydrologic or hydrogeologic features near the proposed well sites also are discussed by referencing groundwater reports prepared by the Texas Water Development Board and U S Geological Survey.

2. As required by the Rule 8.4(b)(7)(B)(2), a table in the report regarding water wells that are located within one mile of the proposed well locations and screen the same aquifer as the proposed wells. Based on the map provided with the report there is one well located within one mile of proposed Wells A and B that screens sands of the Simsboro Aquifer and it is owned by Wellborn SUD and its well number is BVHU-0058. Copies of the well location maps are attached.
3. As required by Rule 8.4(b)(7)(B)(3), the report includes estimates of the interference drawdown that could be caused by pumping each well at average rates of 1,274 gpm (total of 4,113 ac-ft/yr) for one year and ten years. The estimates of interference drawdown extend out at least five miles from the wells and the estimates were calculated using the Queen City/Sparta Groundwater Availability Model (GAM) prepared by the Texas Water Development Board (TWDB) and updated in 2020. The estimated interference drawdown effects using the GAM range from about 15 to 18 feet at five miles from the wells after 10 years of pumping. The interference drawdown effect within about one mile of the wells using the GAM could reach about 25 feet after 10 years of pumping.

The actual amount of interference drawdown that will occur with the pumping should be monitored using data from the District water-level monitoring program.

4. Ground Water Consultants, LLC(GWC) performed a model simulation with the Queen City/Sparta GAM using the same amounts of pumping in the same locations as in the permit application for the same duration as simulated by Carollo Engineers, Inc. and obtained results that were very similar to the results presented by Carollo. GWC reserves the right to perform additional model simulations in the future and review the results.
5. The evaluation report, in general, addresses the requirements of Rule 8.4(b)(7)(B).

If you have questions concerning our review or require other information that we can provide, please do not hesitate to contact us.

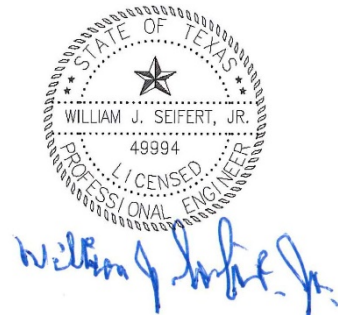
Sincerely yours,



W. John Seifert, Jr. PE
Principal

Enclosures

Transmitted via Electronic and U S Postal Service Mail



Permit No. BVDO-0284



Operating Permit Issued By Direction of the Board of Directors of the Brazos Valley Groundwater Conservation District

This **Operating Permit** is granted to **Wellborn Special Utility District** (Permittee) authorizing the Permittee to operate a water well known as **Well #6** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Rural Public Water Supply** use. Permittee is authorized to operate the Well located at **N 30.756410° and W 96.478019°** to produce water from the **Simsboro Aquifer** at an annual maximum capacity not to exceed **2000 GPM** and a maximum annual production of **1,974 acre feet/year**.

Operating Permit Term:

- (a) An operating and drilling permit for a well or well site will automatically expire within three years from its issuance if the permitted well(s) has not been completed or is not significantly under development.
- (b) Unless specified otherwise by the Board or these Rules, operating permits are effective for five-year terms. At the end of each five-year term, the permit shall be renewed by the Board for an additional five-year term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (c) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of August 5, 2021.

Special Provisions/Notes: None

Permit No. BVDO-0285



**Operating Permit
Issued By Direction of the Board of Directors of the
Brazos Valley Groundwater Conservation District**

This **Operating Permit** is granted to **Wellborn Special Utility District** (Permittee) authorizing the Permittee to operate a water well known as **Well #7** ("Well") at the location specified below within the Brazos Valley Groundwater Conservation District (District) for the beneficial purpose of producing water for **Rural Public Water Supply** use. Permittee is authorized to operate the Well located at **N 30.751705° and W 96.475443°** to produce water from the **Simsboro Aquifer** at an annual maximum capacity not to exceed **2000 GPM** and a maximum annual production of **2,139 acre feet/year**.

Operating Permit Term:

- (a) An operating and drilling permit for a well or well site will automatically expire within three years from its issuance if the permitted well(s) has not been completed or is not significantly under development.
- (b) Unless specified otherwise by the Board or these Rules, operating permits are effective for five-year terms. At the end of each five-year term, the permit shall be renewed by the Board for an additional five-year term, upon submittal of a permit renewal application by the permit holder that provides adequate evidence of continued beneficial use for the permitted amount of water withdrawal. The District shall send notices to permit holders that contain the permit renewal applications, prior to permit expirations.
- (c) The District may amend or revoke an operating permit at any time if there is evidence of:
 - (1) the owner or operator of the well or well system has operated in violation of their permit, District Rules, or Chapter 36 of the Texas Water Code; or
 - (2) a change in the permit is required to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence; or
 - (3) The permitted well(s) has not been completed, is not significantly under construction; or no significant progress is being made toward construction.

This permit is issued and effective as of August 5, 2021.

Special Provisions/Notes: None