

Minutes

City of Johnson City, Texas
City Council

The City of Johnson City City Council met for a Regular Meeting on Tuesday, **June 20, 2023** at 6:00 p.m. in the City Hall Council Chamber, 303 E. Pecan Drive, Johnson City, Texas 78636. This was an open meeting, subject to the open meeting laws of the State of Texas.

Present: Stephanie Fisher, Mayor
Shelton Coleman, Mayor Pro Tem
Gayla Guthrie
Patricia Dildine
Kari Thomas
Teresa Babb

Staff Present: Rick Schroder, CAO
Whitney Walston, City Secretary
Elizabeth Elleson, City Attorney

Citizens Present: Bob and Lin Corrigan
Lynn Moore

1. Call to order.

Mayor Fisher called the meeting to order at 6:00 pm. Councilmember Babb led the invocation.

OPEN SESSION:

2. **Citizens to be heard.**

Bob Corrigan spoke about the Polk Cemetery restoration.

CONSENT AGENDA (ITEM NOS. 3 - 4):

3. **Approval of rescheduling the July 4, 2023 Regular Meeting of the Johnson City City Council from July 4, 2023 to July 11, 2023 in observance of Independence Day. (Staff)**
4. **Approval of an Ordinance of the City Council of the City of Johnson City, Texas authorizing certain budget amendments pertaining to the adopted Fiscal Year Ending (FYE) 2023 Budgets; incorporating recitals; authorizing the Chief Administrative Officer to take all necessary steps to implement the provisions of this Ordinance; providing for severability; repealing all ordinances in conflict herewith; and setting an effective date. (Staff)**

Councilmember Coleman made the motion to approve the consent agenda as presented. Councilmember Guthrie seconded the motion. All were in favor and the consent agenda was approved.

ITEMS FOR INDIVIDUAL CONSIDERATION:

5. **Pursuant to Municipal Code of Ordinances Chapter 10 *Subdivision Regulation*, Article 10.03 *Stormwater Detention and Drainage*, Section 10.03.007 *Fee-in-Lieu of Detention*, discussion of and action on a request by 603 Hwy. 281, LLC for the payment of a Fee-in-Lieu of Detention in the amount of \$3,090.73 related to a 50' x 25' (1,250 sq. ft.) addition to an existing laundromat located at 505 S. U.S. Hwy. 281, Johnson City, Texas 78636, more particularly described as BCAD Property ID No. 7521. (Applicant)**

Councilmember Dildine made the motion to approve the fee-in-lieu of detention. Councilmember Coleman seconded the motion. All were in favor and the motion was approved.

6. **Discussion of and action on the selection of employee and retiree medical insurance benefits for Fiscal Year Ending (FYE) 2024. (Staff)**

Councilmember Dildine made the motion to continue with the current employee and retiree medical insurance plan. Councilmember Guthrie seconded the motion. Councilmember Dildine withdrew her motion and recused herself based on personal benefit. Councilmember Babb motion to select the plan with no change from the FYE 2023 plan. Councilmember Guthrie seconded the motion. All were in favor and the motion passed with Councilmember Dildine recusing herself.

7. **Discussion of and action on an Ordinance of the City Council of the City of Johnson City, Texas establishing and amending fees, costs, and fines charged by the City of Johnson City, Texas and related to Municipal Solid Waste Collection; adopting savings, repealer, and penalty clauses; and adopting an effective date. (Staff)**

Councilmember Coleman motioned to table the item. Councilmember Babb seconded the motion. All were in favor and the item was tabled.

8. **Discussion of and action on the submittal of a Permit Amendment Application to the Blanco-Pedernales Groundwater Conservation District for an increase in water production for the City of Johnson City, Texas, including, but not limited to, a Hydrogeological Testing Report and other Permit Amendment Application requirements. (Staff)**

Councilmember Dildine motioned to proceed with the application submittal. Councilmember Coleman seconded the motion. All were in favor and the motion passed.

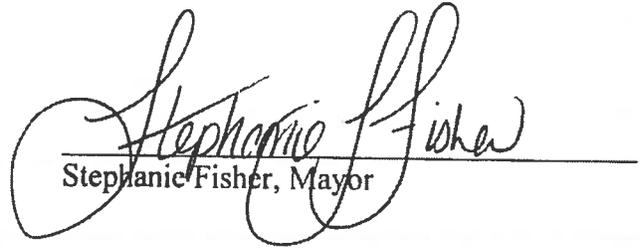
9. **Discussion of and action on a Geophysical Survey of the James Polk Johnson Cemetery located near the intersection of W. Pecan Dr. and N. Ave. L, including, but not limited to, a Monument Restoration Quote from Texas Cemetery Restoration, LLC for monument leveling, cleaning, and related repairs. (Staff)**

Councilmember Babb made the motion to table the item. Councilmember Dildine seconded the motion. All were in favor and the item was tabled.

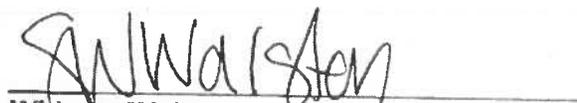
10. **Discussion of a cost sharing agreement between the City of Johnson City, Texas and the North Blanco Co. Emergency Services District No. 1 for the removal of a sewer lift station at 204 Ranch Road 2766 / 105 Bill Watson Drive, Johnson City, Texas 78636, more particularly described as BCAD Property ID No. 5886. (Staff)**

The council directed staff to obtain informal bids and set up a meeting with ESD1 to discuss. The Mayor requested to also attend the meeting.

With no further business before the council, the meeting was adjourned at 7:13 pm.

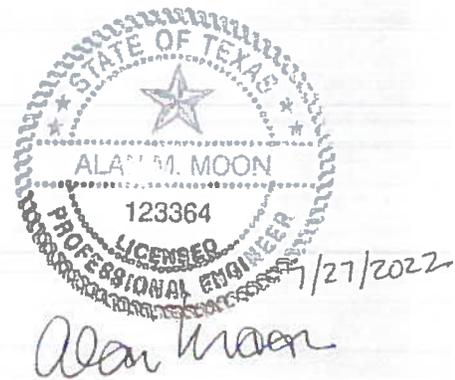

Stephanie Fisher, Mayor

ATTEST:


Whitney Walston, City Secretary

Capital Improvements Plan and Impact Fee Study 2022 Update

City of Johnson City



JULY 2022
QUIDDITY JOB NO. 0A830-0011-00



capacity (with the largest pump out of service) of 2 gpm per connection or enough firm booster pump capacity to meet the maximum day peak hour demand. The City’s water plants have enough supply, elevated storage, ground storage, and booster pump capacity to serve the existing system. The existing system water plant capacity analysis is presented in Attachment B.

3.2 FUTURE SYSTEM EVALUATION

3.2.1 METHODOLOGY OF PROJECTED WATER DEMANDS

To determine the projected water demands, the projected connections based on the future developments and timelines were utilized. The water unit demands by type of connection were applied to the projected connections, where applicable, and unit demands were established for Mixed Use and Industrial connections based upon Quiddity’s experience with similar types of developments within the region.

3.2.2 5-YEAR PROJECTIONS

Table 3-5 presents the projected average daily flows for the 5-year anticipated buildout.

Table 3-5 5-Year Projected Average Day Flow

Connection Type	Connections	Unit Demand (gpd/conn)	Total Demand (gpd)
Existing Single Family Residential	724	115	83,260
New Single Family Residential	201	225	45,225
Existing Multi Family Residential	4	910	3,640
Multi Family (Apartments)	400	200	80,000
Commercial	133	190	25,270
Commercial (RV Parks)	4	20,000	80,000
Industrial	2	2,000	4,000
Institutional	77	215	16,555
Accountability/Losses	20%		67,160
Total	1,535		405,540

3.2.3 10-YEAR PROJECTIONS

Table 3-6 presents the projected average daily flows for the 10-year anticipated buildout.

Table 3-6 10-Year Projected Average Day Flow

Connection Type	Connections	Unit Demand (gpd/conn)	Total Demand (gpd)
Existing Single Family Residential	724	115	83,260
New Single Family Residential	660	225	148,500
Multi Family Residential	221	910	201,110
Multi Family (Apartments)	400	200	80,000
Commercial	203	190	38,570
Commercial (RV Parks)	4	20,000	80,000
Industrial	2	2,000	4,000
Institutional	87	215	18,705
Mixed Use	124	200	24,800
Accountability/Losses	10%		67,460
Total	2,405		746,835

The total demand is expected to more than double from the 5-year projected demand.

3.2.4 FUTURE SYSTEM CAPACITY ANALYSIS

The City's water plants do not have enough water supply, elevated storage, ground storage, and booster pump capacity to serve the projected 5-year and 10-year buildouts. The City needs to build a 100,000 gallon elevated storage tank and a 320 gallon per minute (gpm) well to serve the 5-year buildout. The City also needs to build a 100,000 gallon ground storage tank, a 330 gpm well, and two (2) - 300 gpm booster pumps in the 10-year buildout. The 5-year and 10-year water plant capacity analyses are presented in Attachments C and D, respectively.

3.3 CAPITAL IMPROVEMENTS PLAN (CIP)

Quiddity collaborated with City Staff to identify and include projects in the Water CIP that are needed to not only serve new development, but also to assist with operations and better serve the existing customers. Previous CIPs were utilized as reference for improvement and rehabilitation projects that were planned, but not completed, to date. However, not all projects in the CIP can be utilized for impact fees; only those that serve new or future development can be funded through impact fees. Table 3-7 presents the Water CIP. Cost estimates are included in Attachment E for construction projects that can be funded

Rick Schroder

From: gm@blancogw.org
Sent: Wednesday, May 29, 2024 4:10 PM
To: Rick Schroder
Cc: Stephanie Fisher; Brent J Sultemeier
Subject: Water Availability Study for City of Johnson City
Attachments: Hydrogeological Testing Specifications BPGCD.docx

Rick,

Following up our meeting last week, your subsequent email of 5/22, and your request for guidance on conducting groundwater availability studies, please find the attached and freshly updated "Technical Specifications For Hydrogeological Testing Of Water Wells, & Water Availability Report Submission to BPGCD.

If you have any questions, please do not hesitate to contact me.

Best Regards,

George

George L. Cofran, BSEE, MBA
General Manager & Director-Precinct 3
Blanco-Pedernales Groundwater Conservation District
601 West Main Street, Johnson City, Texas 78636
Office: 830-868-9196, Mobile: 281-300-7177
<https://bpgcd.org> gm@blancogw.org



TECHNICAL SPECIFICATIONS FOR HYDROGEOLOGICAL TESTING OF WATER WELLS, & WATER AVAILABILITY REPORT SUBMISSION

This document provides specifications for hydrogeological testing being conducted within Blanco County in compliance with current District Rules, and may be incorporated in hydrogeological testing and Water Availability Reports required by Regulations promulgated by Blanco County or the TCEQ. Any requests for variances, modification of the testing procedures, use of alternative testing methods, or other special requests by persons involved in or planning hydrogeological testing must be pre-approved in writing by the General Manager of the Blanco-Pedernales Groundwater Conservation District.

George Cofran, BSEE, MBA
General Manager



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Overview

Upon the completion of production wells and aquifer monitoring wells (observation wells), a Texas Licensed Professional Engineer or a Texas Licensed Professional Geoscientist shall, if required by District, Blanco County, or the TCEQ, conduct a hydrogeological test to assess groundwater availability and quality by determining:

1. The maximum drawdown of the water level in the well at the requested pumping rate for the length of the test (To aid in projecting the maximum drawdown, the preliminary test required in 2.2 below should be run as long as necessary to project the maximum drawdown, usually about 2 hours);
2. The hydraulic properties of the production zone aquifer;
3. The degree of hydraulic connection between aquifers;
4. That the wells have been completed in the proper geological strata; and
5. To recognize the presence of hydraulic boundaries and recharge structures.

1. Test Procedure

1.1. Pre-Test Period

Approximately 48 hours before the initiation of the pump test, all controllable activities on the site which could possibly affect the aquifer such as drilling and pumping, should be stopped to allow the aquifer to normalize.

1.2. Preliminary Pump Test

The preliminary pump test is conducted to obtain data to project the maximum drawdown at the proposed pumping rate to ensure the drawdown will not drop below 10 feet above the pump depth. The test will also check equipment for any problems before the actual pump testing begins. Water levels should be measured according to the schedule found in 2.5.2. The test should run for about 2 hours or until enough data is obtained for calculating the approximate drawdown expected for a 24-hour test or the length of testing required by the TCEQ for a Public Water Supply well. The details of the preliminary pump test are to be included in the pump test report.

1.3. Observation Wells

1. One or more observation wells must be located at a reasonable distance from the pumped well. A minimum distance from the pumped well is 300 feet or greater, but less than 700 feet. A distance greater than 700 feet will require written, pre-approval from the District. The distance from the monitor well to the pumped well must be measured and reported in the pump test report.
2. Observation wells with a minimum diameter of four inches are required for all water level measurement including down-hole water level recorders.
3. All wells must be open to the same water bearing zone, remain open during the entire test, and penetrate the entire production interval so that the flow toward the pumping well is horizontal and drawdown values are not affected by partial penetration. If complete penetration of the production interval is not possible for all wells involved in the test, the District must be consulted and written pre-approval obtained prior to starting the testing.



4. Each producing zone (if more than one zone) of the aquifer, as determined from the resistivity log or grab samples, must be tested for water quality to prevent comingling of waters of different quality. To the greatest extent possible, if more than one production zone is incorporated in the well completion plan, the well should be completed in such a manner as to produce formation water of the comparable quality.
5. Well numbers and reference points for water level measurements should be clearly marked on each well casing used in the test.

1.4. Pumping Well

1. The well should be pumped at its proposed requested yield so that the hydraulic characteristics of the well and the aquifer can be evaluated.
2. The well must be equipped to allow a water level measuring line to be lowered into the well.
3. The water must be discharged in such a way that it cannot return to the water bearing formation.
4. A constant pumping rate is necessary. The discharge pipe should be equipped with a flow meter and a flow control valve to adjust the flow rate.
5. In the event of pump failure, recovery of water levels should be monitored to determine when the test can be repeated. Before repeating the test the well water shall recover to the original static water level or when it has stabilized to plus or minus 0.1 of a foot for 12 hours.
- 6.

1.5. Fluid Handling

Fluids pumped to the surface during hydrologic testing of a production area shall not be willfully or negligently released in a way that causes suffering, or allows groundwater to flow into any river, creek, natural watercourse, depression, lake, reservoir, drain, sewer, street, highway, road, or road ditch, or onto any land other than that of the owner of the well unless such discharge is authorized by permit, rule, or order issued by the Texas Commission on Environmental Quality under Texas Water Code.

1.6. Water Level Measurements

1. Antecedent Conditions – Water level measurements should be taken, either with continuous water level recorders or periodically with tape or sonic tool, in the pumping well and in all observation wells 24 hours prior to the test to establish the initial static water level. Water levels must be measured to the nearest tenth (0.1) of a foot. All possible outside influences such as pumpage of nearby wells, barometric changes, and changes in stream flow, should be observed, recorded, and if possible, controlled to the extent that they have little or no influence on the groundwater level during the test. If the water levels fluctuate during this time interval, observations should be continued until the local usage trends are clearly established. These data should be used to adjust the actual test data to approximate equilibrium conditions. Water level measurements made using an electrical (E-line) and



sonic meter are to be made according to the schedule found in number 2 of this section. The sonic meter must be calibrated using an E-line before and after the test.

2. Test Measurements – Rapid changes in the initial static water level occur when the pump test is started. Therefore, readings should be taken as often as possible in as many observation wells as possible. Data points shall be recorded and reported as outlined in the table below.

Time Interval (minutes)	Measuring Frequency
0 – 2	Every 30 seconds
2 – 5	Every minute
6 – 10	Every two (2) minutes
11 – 30	Every five (5) minutes
31 – 60	Every ten (10) minutes
61 – 120	Every twenty (20) minutes
121 – End of Test	Every thirty (30) minutes

The same schedule should be used during the recovery period.

1.7. Duration of the Test

Ideally, the well is pumped at a constant discharge rate until the radius of influence ceases to expand. The minimum pumping time recommended is 1,440 minutes, or 24 hours, at a constant discharge rate (Duration of testing may need to be longer in order to satisfy TCEQ testing requirements for public water supply wells).

1. Data should be plotted graphically in the field to detect accurately the onset of any recharge boundary conditions.
2. If such effects begin to appear, the duration of the test should be increased until a definite straight line appears on the field plot of drawdown vs time and drawdown vs log of time.
3. Pumping may be discontinued if the pumping rate remains constant for at least four hours and a straight-line trend is observed on a plot of water level vs a logarithm of time during pumping. This provision may not be accepted by the TCEQ when testing is part of their requirements for public water supply well approval.
4. Recovery data must be collected for 24 hours following the test or until water levels have recovered to within 90% of the pretesting level.
5. Near the completion of the test, water samples must be collected for laboratory analyses in containers furnished by the laboratory. The required parameters can be found in the District Rules, Chapter 36 Rules, and/or TCEQ public water supply well requirements.
6. Field tests should be made at several intervals during the pump test for pH, TDS, and water temperature. These values should be reported to the District with other pump test data.



2. Reporting Results, Analysis, and Summary of Pump Test Data

Data collected shall be analyzed using generally established and accepted methods to determine transmissivity and permeability of the production zone aquifer. The following shall be submitted with any hydrogeological report submitted to the District in compliance with current District Rules:

1. One hard copy and one copy on a USB drive containing the data listed below. The hard copy must be spiral bound or in a three-ring binder so it will lay flat when opened.
2. Map locating the monitor and pumped wells, with Production Area acreage indicated;
3. USGS topographic map of the area at a scale suitable show the well location and property boundaries;
4. Discussion of local geology and hydrogeology, with maps, cross sections, or other graphics;
5. Pumped well and observation well construction information including any available Driller's well reports, complete with total depth, bore hole diameters and depths, casing size, casing information with screened intervals, pump depth, etc.
6. Hydrographs for the pump test including arithmetic graph (time in min vs drawdown in feet), a plot of drawdown vs logarithm of time, and recovery. All graphs must contain pumping rates, time of pump start and finish, and recovery start and finish;
7. A table providing the following;
 - a. hydraulic conductivity in gpd/ft^2
 - b. transmissivity in gpd/ft
 - c. specific capacity in gpm/ft
 - d. storage coefficient
8. Electric logs from the pumped well and observation wells if run (3 copies each)
9. All pump test raw data with name and well no, aquifer thickness assumed, and pumping rate average used.
10. Hydrologic boundaries and recharge areas if known and/or located (graphics preferred).
11. A chart of the drawdown in feet for 10 and 30 years of pumping at the well, the property lines, the nearest affected water well, and at one and 2 miles radius from the pumping well. Calculations shall not include recharge to the aquifer.
12. Weather conditions during the test, including rainfall, temperature, and barometric pressure.
13. Water quality testing results.

Credits:

These specifications were developed with the cooperation and input from the Bandera County River Authority and Groundwater District Staff, including General Manager Dave Mauk and Geologist David Jeffery, PG. They graciously provided a draft version of a BCRAGD Technical Guideline for Hydrologic Testing in Bandera County.

Ron Fieseler, PG, a consulting geologist for the Blanco-Pedernales Groundwater Conservation District, reviewed and modified the BCRAGD document to address the specific needs of the BPGCD Rules, Policies, and local hydrological and geological characteristics.

Blanco-Pedernales Groundwater Conservation District

601 West Main, P.O. Box 1516 Johnson City, Texas 78636 (830) 868-9196 FAX (830) 868-0376
manager@blancogw.org

Permit Amendment Application

Instructions: This form is used for well Operating Permit and Transport Permit amendments only and shall be filled out as completely as possible. In accordance with District Rule 3.3(C) and 3.4(F), a permit holder may apply for an amendment to their maximum permitted production volumes.

Please Check Appropriate Box(s): () Application for an increase in production. Requires payment of an Application Fee of \$100.
() Application for a decrease in production. Does not require payment of an application fee.
() Application for a change in type of use. Does not require payment of an application fee.

Well Inspection: District staff shall inspect each well permitted by the District. Property access for inspections is authorized by Texas Water Code, Chapter 36.123 and shall be scheduled with the well owner and conducted in accordance with District Rule 3 and Rule 4.5. Inspections may include confirming well location, measuring water level, confirming pumping capability, water sampling, geological survey, or any other well-related inspection activity deemed necessary by the District.

Well Owner

Name: _____

Mailing Address: _____
(Street or P.O. Box) (City) (ZIP)

Daytime Phone: _____ Alternate Phone: _____

Contact Person (if other than owner): _____ Phone: _____

Permit Information

This Permit Amendment Application is for a: () Single Well System () Multi-Well System

District Well Registration #: _____ State or Temporary Well #: _____

Well Currently Used For: () Public Water Supply () Irrigation () Testing () Monitor () Industrial

Other (please specify in detail) _____

() If a change in use is proposed, provide details of usage: _____

Operating Permit Amendment Applications must provide:

Current Permitted Maximum Annual Production Volume: _____ Gallons per Year

Requested Change: () Increase () Decrease of: _____ Gallons per Year

Requested Maximum Annual Production Volume: _____ Gallons per Year

Required Attachment for all applications:

() Annual Groundwater Production Calculations. Annual groundwater production requests shall be based, if possible, on historical records, current metered usage, or other accurate measurement methods. If such documentation is not available, the applicant shall provide production calculations based on type of use, pumping capabilities, pumping times, pumping frequency, and other pertinent data to substantiate approximate groundwater production. Well owners may wish to contact the District for consultation and assistance when calculating or estimating annual groundwater production needs.

Owner's or Applicant's Sworn Statement

I hereby swear and affirm that the information given herein is true and accurate to the best of my knowledge and belief, and that I am aware of, knowledgeable of, and will comply with all District Rules.

Owner's or Applicant's Signature _____

Date _____

To Be Completed by District Personnel Only

Well Registration #: _____ State or Temp. Well #: _____

If a Multi-Well System list other wells: _____

Application Fee: _____ Paid By: _____

Current Well Uses: () Public Water Supply () Irrigation () Testing () Monitor () Industrial
() Other: _____

Proposed Changes in Well Uses: _____

Is well located in CGDA: () Yes () No Name of CGDA: _____

Permit Action and Specifications

Date Application was Administratively Complete: _____ () Admin. Approved () Ref. to Board

Date Application was Ref. to Board: _____ Public Hearing Date: _____

Board Action: () Approved as Filed () Modified or with Special Conditions () Denied Date: _____

Operating Permit Maximum Permitted Annual Production: _____ Gallons

Existing Special Permit Conditions: _____

New Special Permit Conditions: _____

Staff Inspection Notes: _____

Signed by: _____ Date: _____

Rick Schroder

From: Rick Schroder
Sent: Wednesday, August 21, 2024 9:01 AM
To: mike@ktgroundwater.com
Subject: Water Availability Study / BPGCD Permit Amendment
Attachments: Hydrogeological Testing Specifications BPGCD.docx

Hello,

You are receiving this email because the City of Johnson City, TX Utility Department is interested in increasing its permitted maximum annual production volume from 150 million gallons per year to 272,594,775 gallons per year, an increase of 122,594,775 gallons.

This increase is based upon the City's Capital Improvements Plan and Impact Fee Study adopted in July 2022, which estimates the 10-year projected average day flow of 746,835 gallons per day. Please see page 8 of the document below:

<https://storage.googleapis.com/proudcity/johnsoncitytx/uploads/2022/07/22-0702-COJC-CIP-and-Impact-Fee-Study-20220721-FINAL.pdf>

The Blanco Pedernales Groundwater Conservation District has provided us with the attached Hydrogeological Testing Specifications to produce a water availability study and amend the City's current pumping permit.

Please provide a proposal for this work.

If you have any questions, please reach out to myself and/or BJ Sulzemeier, Public Works Director, cc'd onto this email.

Best,



Rick A. Schroder
Chief Administrative Officer
303 E. Pecan Dr. (Physical) | P.O. Box 369 (Mailing) | Johnson City, Texas 78636
(830) 868-7111, Ext. 8 | (830) 868-7718 (Fax) | www.johnsoncitytx.org
Yesterday is not ours to recover, but tomorrow is ours to win or lose. – President LBJ

OPEN MEETINGS ACT / CONFIDENTIALITY NOTICE: City Councilpersons and members of other Johnson City boards and / or commissions shall not "reply all" to this e-mail message. Please reply only to the original sender of this e-mail message. This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential or privileged information. Any unauthorized review, use, disclosure, or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message.



2804 Paradise Ridge Cove
Round Rock, Texas 78665
(512) 621-7237
KTGroundwater.com
TBPG Firm No. 50705

October 1, 2024

Mr. Rick A. Schroder
Johnson City Chief Administrative Officer
303 E. Pecan Dr.
Johnson City, TX 78636

via email: rschroder@johnsoncitytx.org

RE: Proposal to provide professional hydrogeologic consulting services to support Blanco Pedernales Groundwater Conservation District permitting – Blanco County, Texas

Dear Mr. Schroder,

We understand that the City of Johnson City (“City”) is seeking to increase permitted groundwater production from the Blanco Pedernales Groundwater Conservation District (“BPGCD”). Based on the City’s Capital Improvement Plan, the City intends to increase permitted annual production by 122,594,775 gallons from the City’s five active production wells. The following provides our proposed Scope of Services, Schedule, and Cost to assist you with meeting the permitting requirements of the BPGCD as outlined in their Rule 3.4.A.

I. SCOPE OF SERVICES

The Scope of Services is presented in sequential tasks, though portions may be conducted concurrently. Throughout the project, we will provide you with regular progress updates. Our proposed Scope of Services is based on the available testing data from the existing public water supply wells along with collection of raw water samples for analyses meeting District requirements. The proposed work does not include field work to duplicate pumping tests conducted in accordance with Texas Commission on Environmental Quality (“TCEQ”) public water supply well requirements.

Task 1 – Compile Background Data and Water Sampling

We will begin by compiling data on the City’s existing public water supply wells. We will work with you to copy the portions of existing submittal documents for inclusion in the permit application. Task 1 work includes a site visit to the City and each of the existing wells to copy necessary documents and record the current condition of each well.

During the site visit to each well, we will collect a raw water sample for laboratory analysis. The water quality sampling is specifically to meet the requirements of BPGCD Rule 3.4.A.(5)(n). For cost estimate purposes, we anticipate laboratory analysis of five raw water samples (one from each of the five active wells).

Task 1 Cost Estimate – \$24,900
(Lab Cost for 5 Samples – \$19,750)

Task 2 – Preparation of a Hydrogeological Testing Report

Using the data collected for each well, we will prepare a hydrogeological testing report for submittal as part of the permit application. We will prepare the hydrogeological testing report to meet the reporting requirements described in the “Technical Specifications for Hydrogeological Testing of Water Wells, & Water Availability Report Submission” dated May 28, 2024. Hydraulic properties of the aquifer will be based on the existing data from the TCEQ required 36-hour pumping test for each well. Using the derived hydraulic properties, we will prepare predictions of the anticipated impact from the additional production on aquifer conditions. Water quality data will be provided from the laboratory analyses.

We will provide the City with a draft report for review prior to finalizing. We will provide City staff with the opportunity to provide comment and discuss the report and what it means with regard to the permit application. Following incorporation of comments from the City, we will finalize the report for inclusion with the permit application.

Task 2 Cost Estimate – \$8,500

Task 3 – District Permitting Support

We will work with the City to finalize and submit the permit application to amend the City’s authorized groundwater production. We will prepare the draft permit application forms and cover letter to accompany the application. We will prepare applicable maps



needed for the application and work with the City to acquire administrative information needed to complete the applications. We will then provide the completed draft application documents to the City for required signatures and submission to the BPGCD.

Following submission of the permit application packet, we will work with the City to address questions raised by the BPGCD as part of their administrative completeness review process. We will then attend the hearing on the permit application at the BPGCD offices to support the City's application. This task does not include a contested permit. In the uncommon circumstance where the permit amendment is contested and a Contested Case Hearing is required per BPGCD Rule 8.5, we will work with the City to identify the anticipated additional cost.

Task 3 Cost Estimate - \$7,500

II. TIME REQUIRED

Once authorized, we will commence Task 1 project work by obtaining publicly available data and scheduling the site visit to obtain copies the TCEQ documents and collect the samples. We anticipate conducting the site visit and collecting the samples within 2-3 weeks following the notice to proceed. With the typical laboratory turnaround time, Task 2 and Task 3 work would be completed within 6-8 weeks following the notice to proceed.

District review of the application for administrative completeness is generally complete within 30-60 days. The application must then be heard by the BPGCD Board within 60 days following it being declared administratively complete.

Delays caused by major changes in the project plans or by circumstances beyond our control could extend the time of completion.

III. PAYMENT

We believe the services described above can be accomplished for \$40,900. Terms of payment are net 30 days. Overdue accounts are subject to an interest charge of 1.5 percent per month and services will stop whenever payment is overdue more than 90 days.

Payments for our services, like other professional services, are based on the actual time spent on your behalf and are measured by standard hourly rates in effect at the time the services are performed. For those assigned to your team, those hourly rates currently range from \$250 for principals, \$130 to \$200 for hydrogeologists, and \$70 to \$130 for



field technicians. Individuals are assigned to a project based on the type of services involved and the experience and expertise of the individual.

Routine expenses such as telephone and copies are included in the rates above. Outside expenses such as laboratory analysis or other special services incurred directly in connection with the project are billed at cost plus 5 percent to cover handling and administration. Reimbursable expenses billed at cost include airfares, automobile rental, and other travel or per diem costs for projects more than 100 miles from the office site.

The scope described under Part I represents our estimate of the services required based on the information provided. As the project proceeds and additional facts are discovered, it may be necessary to perform additional services and some items described may not be needed. For these reasons, we can provide only an estimate of the time and cost of completing the services.

IV. LIMITATION OF LIABILITY

In recognition of the relative risks and benefits of the project to both the City of Johnson City and KT Groundwater, the risks have been allocated such that the City of Johnson City agrees, to the fullest extent permitted by law, to limit the liability of KT Groundwater and its officers, employees, and sub-consultants, to the City of Johnson City and all of the City of Johnson City's contractors and consultants, for any and all claims, losses, costs, damages of any nature whatsoever; or claims expenses from any cause or causes, including attorneys' fees and costs and expert witness fees and costs, so that the total aggregate liability of KT Groundwater to the City of Johnson City shall not exceed the total amount of \$100,000 or the total fees billed to this project, whichever is more. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

V. SPECIAL SERVICES

Services in addition to those described under Part I will be performed or obtained for the City of Johnson City's account upon request and approval at rates currently in effect. Special services may include, but are not limited to, expert testimony, appearances at public meetings, soil investigations, topographic and land surveys, including establishment of boundaries, well drilling, well and aquifer testing, electric logging, water quality sampling and analysis, preparation of construction drawings and specifications, material testing, data management, environmental permitting, and regulatory compliance.



VI. AUTHORIZATION

Acceptance of this proposal and authorization to proceed with the services can be indicated by signing one copy and returning it to us for our files. The terms of this proposal will be honored for a period of 90 days.

We look forward to discussing this proposal with you and if you have any questions or concerns about the services offered in the proposal, please call us at (512) 621-7237.

Thank you for providing us the opportunity to provide you with this proposal.

Sincerely,
KT Groundwater, LLC



Michael Keester, P.G.
Principal

For: _____
Contracting Agency

By: _____
Authorized Signature/Title

Printed Name: _____

Date: _____





Wet Rock Groundwater Services, L.L.C.

Groundwater Specialists

TBPG Firm No: 50038

317 Ranch Road 620 South, Suite 303

Austin, Texas 78734 • Ph: 512-773-3226

www.wetrockgs.com

June 6, 2024

Mr. Rick Schroder
Chief Administrative Officer
City of Johnson City
P.O. Box 369
Johnson City, Texas 78363

RE: Hydrogeological Testing and Water Availability Report

Dear Mr. Schroder:

Wet Rock Groundwater Services, LLC (WRGS) proposes to complete hydrogeological testing and a water availability report pursuant to the Blanco Pedernales Groundwater Conservation District's (BPGCD) "Technical Specifications for Hydrogeological Testing of Water Wells & Water Availability Report Submission." The testing and report are required to support a proposed increase in Johnson City's (the City) permitted annual production volume from 150,000,000 gallons/yr to 272,594,775 gallons/yr.

It is our understanding that the City has five permitted wells with the BPGCD. Phone correspondence with the BPGCD's consultant (Mr. Ron Fieseler) indicated that likely two aquifer tests would need to be conducted. The BPGCD would ultimately need to approve the number of tests. This proposal assumes the testing of two wells.

To satisfy the BPGCD's rules, the water availability report will include:

- Aquifer testing of two wells with minimum 24-hour pumping period per well;
- Schematic of well construction;
- Lithologic description of geology;
- Location maps;
- Discussion of hydrogeological setting;
- Discussion of water quality;
- Review and analysis of existing aquifer test conducted on each well; and
- Discussion of water availability including interference analysis modeling the proposed impacts after 10 and 30 years; of production at the wells.

Upon completion of the water availability report, we will provide you with an electronic copy of the report sealed by a licensed geoscientist.

The aquifer test will consist of a minimum 24-hour pumping phase with a 24-hour recovery phase. The aquifer test will include pumping one well while measuring water levels within the pumping well and up to two observation wells. Water levels shall be measured throughout the test and flow rate will be measured during the first few hours of the test until pumping rate and water level stabilizes and then at the

end of the test. The testing will require the use of transducers within the pumping well and observation well which monitor the water levels. Field water quality measurements will also be collected during the test.

Based upon the results of the aquifer test, we will be able to calculate the site-specific properties of the aquifer at the wells and use these results to model the anticipated water levels after thirty years of pumping.

Items included:

- 1) Providing pressure transducer(s) for acquiring water level data and conducting two (2) 24- hour aquifer tests. For each test, pressure transducers will be placed in the pumping well and up to two other observation wells. This includes a full analysis on the test to calculate the hydrogeologic properties of the aquifer;
- 2) Site visit prior to commencement of the aquifer test to determine whether the existing wells have a 1-inch PVC pipe for placement of pressure transducers in the existing wells. If the wells do not have a 1-inch PVC pipe; then it will be the responsibility of the City to have a well drilling contractor install the required 1-inch PVC pipe in each well being tested and monitored. Access to the observation wells will also be the City's responsibility;
- 3) Coordination with the City to plan the aquifer test and discharge of water. If water is being discharged onto neighboring properties, then approval from the property owner is required. It is the responsibility of the City to acquire landowner approval and discharge of water;
- 4) Collection and analysis by an approved laboratory of required water quality samples; and
- 5) Completion of the Water Availability Report.

Items not included:

- 1) Information regarding the permit will be needed to complete the study. We will require your permitted amount requested and proposed pumping rates for each well with the BPGCD. This proposal includes creating a groundwater model to determine the impacts of production from your requested permit. This proposal includes one groundwater model run at the requested rate. If additional model runs at other rates are requested, then this will be billed based upon our Hourly Rates;
- 2) Permit fees, postage or any other fees;
- 3) For the aquifer test, a test pump, 1-inch PVC e-line tube, flow meter, power, water sample and discharge piping are required for the pumping well. These are not included in this proposal and should be provided by the City;
- 4) Any other meetings not included above. This includes any additional meetings with the BPGCD. If additional meetings above that is required to plan the testing or other work not directly stated in this proposal will be required then this will be billed at our Hourly Rate Schedule (attached);
- 5) Necessary equipment other than the pressure transducers to complete the aquifer test. The City shall be responsible for providing all other necessary equipment except for the pressure transducers to complete the pumping tests. This includes setting a required 1-inch PVC line with perforations at the bottom 20 feet and a cap at the base for setting our transducers;



- 6) This proposal assumes constructing the model for one (1) model run based upon the proposed permitted volume provided to us by the Owner. If additional modeling runs are required, then this work will be billed at our hourly rates;
- 7) Any design or plans and specifications for the wells; and
- 8) We do not guarantee any well yield or water quality of the well.

Invoicing

WRGS proposes our services for a fixed fee of \$39,000.00.

Invoices will be billed monthly based upon a percentage of work completed with a 15-day due date from the date of the invoice. Invoices past due for over 30 days from the date of the invoice will result in a stoppage of work until all overdue invoices are paid in full. If additional work is required this will be billed at our Hourly Rate Schedule (attached)

I appreciate the opportunity to provide you with this proposal. If you have any questions regarding the proposal, please feel free to call me at 512-773-3226 so that I can better explain the process involved in this project.

Respectfully Proposed by,

Accepted By:

Wet Rock Groundwater Services, L.L.C.

Print Name: _____



Signed: _____

Kaveh Khorzad, P.G.
President/ Senior Hydrogeologist

Date: _____



HOURLY RATE SCHEDULE

Wet Rock Groundwater Services, LLC's hourly rates for each employee effective Jan. 1, 2024 are:

<u>PROFESSIONAL SERVICES</u>	<u>HOURLY RATES</u>
Principal\Senior Hydrogeologist:	\$220
Senior Staff Hydrogeologist:	\$200
Staff Hydrogeologist:	\$180
Administrative Assistant:	\$100

NOTES

1. Travel: Mileage charged at the federal government rate (currently \$0.67/mile);
2. Expenses are billed at cost. Reimbursable expenses include travel expenses (hotels, meals, airline tickets, etc.).
3. Rates shown include all salaries, payroll taxes, insurance and overhead but do not include reimbursable expenses. If pertinent, associated reimbursable expenses will be addressed within each individual contract;
4. Invoices are payable within a 15-day due date from the date of the invoice. Invoices past due for over 30 days after the invoice date will result in a stoppage of work until all overdue invoices are paid in full. Accounts unpaid for more than 30 days after the invoice date accrue 1.25 percent interest per month (15 percent annual rate) from the date of the invoice; and
5. Rates are subject to review and/or increase annually.

