Permit Hearing - Item #10
Ben Daniel

NOTICE OF PERMIT HEARING OF THE CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Notice is hereby given that the Board of Directors for the Clearwater Underground Water Conservation District will conduct a hearing on one Application for Permit as described below at 1:30 p.m. on Wednesday, April 12, 2023, in the Clearwater UWCD Board Room located at 700 Kennedy Court, Belton, Texas, in compliance with the Texas Open Meetings Act.

The hearing will be conducted on the following application: Applicant's File Permit Applicant/Holder and Location of Well/Wells Proposed Annual Groundwater Number/Name Landowner Withdrawai Amount & Purpose of Use Drilling & Operating Ben Daniel The proposed permitted well is Request for a combination Drilling Permit Hearing 90 Elmo Street located at: & Operating Permit on a new well, related to: Florence, TX 76527 N3-23-001P to authorize the Latitude 30.945707° withdrawal from the Lower N3-23-001P (512) 948-5750 Longitude -97.818658° Trinity Aquifer for domestic use New Well not to exceed 0.051 acre-feet or The proposed annual quantity is 16,618 gallons per year. not to exceed 0.051 acre-feet or 16,618 gallons per year total for domestic use The new well is to be completed in the Lower Trinity Aquifer. The new well is located in the **CUWCD Southwest Management** Zone. The well is to be equipped with a maximum 1.25-inch column pipe with a submersible pump rate not to exceed 10 gallons per minute on the 4.369-acre tract located at 2407 Briggs Road, Killeen, TX.

The Applications for Permit and Permit Amendments, if granted, would authorize the permit holders to operate wells within the Clearwater Underground Water Conservation District according to the terms and conditions set forth in the permit. A person wishing to submit a Contested Case Hearing Request under District Rule 6.10.15(d) who is unable to appear at the hearing on the date and time set forth above must also file a motion for continuance with CUWCD demonstrating good cause for the inability to not appear.

For additional information about this application or the permitting process, or to request information on the legal requirements on what MUST be included for a Contested Case Hearing Request to be valid, please contact CUWCD at 700 Kennedy Court (PO Box 1989) Belton, Texas, 76513, 254-933-0120.

ISSUED this 31st day of March 2023 in Belton, Texas, on the recommendation of the General Manager.

I, the undersigned authority, do hereby certify that the above NOTICE OF PERMIT HEARING of the Board of Directors of the Clearwater Underground Water Conservation District is a true and correct copy of said Notice. I have posted a true and correct copy of said Notice at the District office located in Belton, Texas, and said Notice was posted on March 31, 2023, and remained posted continuously for at least 10 (ten) days immediately preceding the day of said hearing; a true and correct copy of said Notice was furnished to the Bell County Clerk, in which the above-named political subdivision is located.

Dated 3/31/2023

Clearwater Underground Water Conservation District

By: Dirk Aaron, General Manager

Application

March 13, 2023

Ben and Kim Daniel 90 Elmo St. Florence, TX 76527

New Address: 2407 Briggs Rd Killeen, TX 76549

To Whom It May Concern,

This letter is to inform CUWCD that we are seeking a permit to drill a Domestic well for residential use only. Our annual water consumption at this new location will mimic our January water bill from the city of Florence. Our registered consumption is around 45 gallons a day for an annual sum of 16,425 gallons. Our new home will, within its design, incorporate many conservation measures such as 1.28 gallon flush toilets, low consumption appliances and fixtures, a rain capture system, and xeriscape landscaping. With these conservation efforts, we feel we can reduce the stated annual consumption by 10-15%. The location of this potential well project is on family land that has been in our family for 6 generations. Living on this property is our dream!

Your consideration is greatly appreciated, Ben and Kim Daniel

Clearwater Underground Water Conservation

PO Box 1989 Belton, TX 76513

Invoice

\$150.00

Balance Due

Invoice #: 191

Invoice Date: 3/23/2023

Due Date: 3/23/2023

Project:

P.O. Number:

Bill To:

Ben Daniel 90 Elmo St

Florence, TX 76527

Date		Description		
/23/2023	Permit Application Fee			150.00
			Tabel	M450.00
			Total	\$150.00
			Payments/Credits	\$0.00



Application for Non-Exempt Well Classification 3

Check one of the following:	Answer the following:	~				
© COMBINATION PERMIT	Is this for a New Well?	Yes	\bigcirc No			
ODRILLING PERMIT	Is this for a Replacement Well?	Yes	No			
OPERATING PERMIT	Do you plan to Export Water Outside District?	O Yes	No			
PERMIT AMENDMENT Are you modifying a Drilling Permit?						
	Are you modifying an Operating Permit?	Oyes	No			
1. Owner Information	E	Talankana	. 512:049 E750			
Well Owner: Ben Daniel Address (Street/P.O. Box, City, State	e, ZIP): 90 Elmo St Florence. TX 76527	_ 1 elepnone	<u>: 512-948-575</u>			
	·):	 [elephone:				
If ownership of Well has changed, na	ame the previous owner: State	te Well #:				
2. Property Location & Proposed We	ell Location					
Owner of Property (if different from	Well Owner):					
The well is located in Management		.	. 07.040050			
Acreage: 4.369 Bell CAD I	Property ID #: 440443 Latitude: 30.945727	Longitu	ide: <u>-97.81865#</u>			
3. Well Description (Submit if State of	f Texas Well Report is Available)					
	ed amount of water, in acre-feet, to be used for each purpo					
	Livestock/Poultry;Agricultur	ral/Irrigation;	•			
** Public Supply; *Total number of houses to be ser	Industrial Other					
	oticed by the wen otice to TCEQ to obtain or modify a Certificate of Conven	ience and Ne	cessity to provide			
	water obtained pursuant to the requested permit.	ionoc una rec	cessity to provide			
b. Estimated distance, in feet, from t	• • • • • • • • • • • • • • • • • • •					
123' N / S Property Line;			otic Leach Field			
	ce; Existing Water Well;	-	•			
	ramination (cemetery, pesticide mixing/loading, petroleum	storage tank,	, etc.)			
c. Estimated Rate of Withdrawal (d. Is the Property subject to floodi	• • •					
e. Is there another well on the pro	•					
f. Is the well part of a multi-well a	- •		_			
If YES, list the State or District W	•• •					
REQUIRED BY LAW: Pump Inst	taller / Well Driller Information					
Name: Hill Country Well Service						
TDLR Pump Installer License #:						
TDLR Well Driller License #: 2334						
Email: imcdearmon1951@gmail.c	com					
Name of Consultant preparing Appli	cation (if applicable):					
Con. Phone: Con	. Fax: Con. Email:					
			1			

4.	Completion Information
	Provide the following information to the extent known and available at the time of application:
	Proposed Total Depth of Well: 650 ft;
	Borehole Diameter (Dia): 10.75 inches (in) from 0 to 30 ft;
	Dia (2) 6.75 in from 30 to 650 ft;
	Casing Material: SDR317 PVC ; Inside Diameter (ID): 4.5 in;
	Screen Type: SDR17032; Screen Dia. 4.5 in from 620 to 640 ft; # of Packers: 3-4
	Pump Type: Submersible ; Power: Electric ; Horsepower Rating: 2 hp ;
	Pump Depth: 600 ft ; Column Pipe ID: 11/4 in.
	Date Completed: N/A Not started yet
	Proposed Water Bearing Formation: Lower Trinity ; Management Zone: Southwest
5.	Operating Permit
	Number of contiguous acres owned or leased on which water is to be produced: 4.369 acres
	Total annual production requested with this operating permit: 0.05 acre-feet 16, 618 gallon
	If exporting water, what is the annual volume requested for export out of the District: N/A Gallons
	What is the annual volume requested for export as a % of total pumpage: N/A %
	If modifying an operating permit, what is the current, permitted annual production: N/A ac-ft
	What is the requested amount of annual production: N/A ac-ft
6.	Attachments
	Include a statement/documentation explaining your requested production.
	If amending an existing permit, explain the requested amendment and the reason for the amendment in a signed and
	dated letter, attached to this application.
	If requesting operating permits or permit renewals for multiple wells, please attach a separate sheet with the
	information requested in Section 5 for each well.
	If applicant plans to export water outside the District, address the following in an attachment and provide
	documents relevant to these issues:
	• The availability of water in the District and in the proposed receiving area during the period requested
	• The projected effect of the proposed export on aquifer conditions, depletion, subsidence, or effects on
	existing permit holders or other groundwater users within the District
	How the proposed export is consistent with the approved regional water plan and certified District
	Management Plan
	For more attachments that may be needed, please see the Full Summary of the Permit Application Process
	document.
7.	Certification
	I hereby certify that the information contained herein is true and correct to the best of my knowledge and belief. I
	certify to abide by the terms of the District Rules, the District Management Plan, and orders of the Board of
	Directors. I agree to comply with all District well plugging and capping guidelines as stated in the District Rules.
	Typed Name of the Owner or Designee: Ben Daniel
	2/10/-
	Signature: Date: $\frac{3/13/23}{}$



CUWCD Map Daniel Proposed Well

Created: March 2nd 2023, 2:49pm



300 ft





CUWCD VIRTUAL BORE

Created: March 2nd 2023, 2:50pm

Latitude: **30.945731**

Longitude: -97.818598

Approximate Ground Surface Elevation:

958.01

Top Elev. (ft)	Bottom Elev. (ft)		Depth to Formation (ft)*	Formation Thickness (ft)*	Formation (Geologic Unit)
958	950.1		O	7.9	Edwards & Commanche Peak Limestone
950.1	907.3		7.9	42.8	Walnut
907.3	458.1		50.8	449.2	Glen Rose
458.1	383.6		499.9	74.4	Hensell & Cow Creek Limestone
383.6	353.7	Yorks	574.4	29.9	Pearsall & Hammett Shale
353.7	289.2		604.3	64.6	Hosston

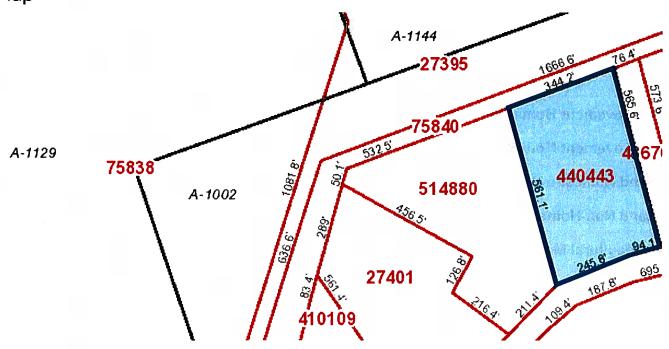
^{*}Depths / Thicknesses are not to scale

Disclaimer: This product is for informational purposes only and has not been prepared for or suitable for legal, engineering, or other purposes. All representations in this virtual bore represent only the approximate relative depths and thicknesses based on geological interpretation and extrapolation of available well data. Additional data may modify one or more of these formation surfaces. The Clearwater Underground Water Conservation District expressly disclaims any and all liability in connection herewith.

Tax Appraisal District of Bell County Property Search

Property ID: 440443 For Year 2023





■ Property Details

Account

Property ID:

440443

Legal Description:

A1002BC J S UNDERWOOD, 1, ACRES 4.369

Geographic ID:

0620400002

Agent:

Type:

Real

Location

Address:

BRIGGS RD KILLEEN, TX 76549

Map ID:

54D12

Neighborhood CD:

RKILBCWRUR

Owner

Owner ID:

922667

Name:

DANIEL, W BEN & KIM L



Staff Report

Application for Combination Drilling/Operating Permit N3-23-001P



Applicant/Owner:

Ben Daniel

90 Elmo Street

Florence, TX 76527

Location of Well:

4.369-acre tract located at 2407 Briggs Road

Killeen TX

Latitude 30.945707°/Longitude -97.818658°

Southwest Management Zone

Proposed Annual	Proposed Use	Aquifer:	Nearest Existing
Withdrawal:			Wells:
		Lower Trinity	
Initial Rate: 10-gpm			6 @ 1/2 mile
Column Pipe: 11/4 inch	Domestic Use for home,		
_	landscape and garden		
Withdrawal:	conjunctively with		
Proposed annual quantity	Rainwater Catchment		Note:
not to exceed 0.051 acre-	system and advanced		2 wells in the Upper
feet or 16,618 gallons per	conservation measures		2 wells in the Middle
year.			2 wells in the Lower
•			

General Information

Ben Daniel has submitted an application to the Clearwater Underground Water Conservation District (CUWCD) on March 13, 2023, for a combination drilling and operating permit to authorize drilling and withdrawal from a proposed new well.

This permit, if approved, will authorize groundwater withdrawal from a new well (#N3-23-001P) to be completed in the Southwest Management Zone described in District Rule 7.1. The proposed well is to be completed in the Lower Trinity Aquifer (Hosston Layer), with a maximum 1.25-inch column pipe on a 4.369-acre tract located at 2407 Briggs Road, Killeen, Texas, Latitude 30.945707°/Longitude -97.818658°, to produce groundwater for domestic use at a proposed annual quantity not to exceed 0.051 acre-feet or 16,618 gallons per year total at a maximum pumping rate not-to-exceed 10 gallons per minute.

This property lies within the City of Georgetown CCN # 12369 (certificate of convenience and necessity). The property also lies within the Extraterritorial Jurisdiction of the City of Killeen. The applicant has investigated with the City of Georgetown for the possibility of public water supply delivery and will testify that public water is currently either not available or unaffordable, thus the

need to pursue groundwater rather than public water supply for the purpose of domestic use for a new home.

Per Rules 6.9 and 6.10

In deciding whether or not to issue a permit, the Board must consider the following:

1. Does the application contain all the information requested, is the application accurate? Does it meet spacing and production limitations identified by District Rules, and does it conformed to all application requirements which include public notification and accompanied by the prescribed fees? (Rule 6.10.24(a)(b), TWC 36.116(a)(1), TWC 36.113(d)(1) and Rule 6.9.1(b)(1)(2)

The application is complete—all requested information has been provided. The application conforms to said rules with all required application fees. In addition, the applicant has met all notification requirements in a proper manner per District Rules.

2) Is the proposed use of water dedicated to a beneficial use? (TWC 36.113(d)(3) and District Rule 6.10.24 (d).

The groundwater produced for this well for domestic use for a new home, landscape, and garden plot.

3) Has the applicant agreed to avoid waste and achieve water conservation? (TWC 36.113(d)(6) and Rule 6.10.24(f)

The applicant should testify they understand per District Rules that by signing the application form the applicant agrees to state compliance with the District's Management Plan

Applicant should testify to the importance of water conservation measures and that options for outside water conservation are very limited and vital to the sustainability of the aquifer. The District hopes that the applicant states in testimony they do not intend to utilize the groundwater for extensive landscape purposes and describes their rainwater catchment system being designed for the home.

4) Has the applicant agreed that reasonable diligence will be used to protect groundwater quality and that the applicant will follow well plugging guidelines at the time of well closure? (TWC 36.113(d)(7) and Rule 6.10.24(g))

The applicant (by signing the application form) should offer testimony that if the well deteriorates over time or becomes damaged in such a way that the well is inoperable that state law and district rules require such a well to be plugged before a replacement well can be drilled.

5) Will the proposed water well comply with spacing and production limitations identified in our rules? (TWC 36.116(a)(1) and Rule 6.10.24(b)) and Rule 9.5.2

The proposed well is located in the Southwest Management Zone described in District Rule 7.1, thus will have a maximum column pipe size not to exceed 1 ¼-inch. Based on this column pipe size, a minimum size tract of 2 acres is required, with a 150-foot spacing requirement from other wells. The 75-foot setback requirement from adjacent property lines be met for this proposed well and the possible future property lines. Testimony per District Rule 9.5 Spacing Requirements that the applicant will adhere all spacing requirements.

The District rules require that we do impose a production limit of .051 acre-ft/year (16,618 gallons per year) determined applicable in the review of today's permit request for a new well. The applicant and/or their representative needs to understand that the operating permit for production does not appear to cause an unacceptable level of decline in water quality of the aquifer, or as may be necessary to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, lessen interference between wells, or control and prevent subsidence.

These issues are considered in Items 6 & 7 below and with staff recommendations to address potential concerns of adjacent property owners.

6) Will the proposed use of water unreasonably affect existing groundwater and surface water resources or existing permit holders?

Based upon available information, there are the following number of wells as defined for domestic use and completed, and active from the Middle Trinity Aquifer.

6 wells are within 1/2 mile,

2 completed in the Glens Rose Layer of the Trinity Aquifer, 2 completed in the Hensell Layer of the Trinity Aquifer, 2 completed in the Hosston Layer of the Trinity Aquifer.

Mike Keester, RW Harden & Associates, has reviewed the application and has determined the anticipated drawdown, and has provided the <u>attached MK report</u>.

His conclusions and recommendations state that the proposed well will primarily be impacted by short-term production. He adds "that the nearest existing wells may experience 1.3 in 1-day (that is, slightly above our negligible metric) drawdown due to the short term production. The long drawdown production analysis shows for 30-day and 1-year are less than 1 foot thus the potential impact is negligible thus reasonable. The Lower Trinity in the area has approximately 400-feet of artesian pressure and with a negligible amount of long-term drawdown, thus the proposed well should be able to produce the proposed amount without significant impact on water levels. Continued water level monitoring will aid in assessing the long-term effects of cumulative groundwater production in the area.

Additionally, the District, to the extent possible, must issue permits up to the point the total volume of exempt and permitted groundwater production will achieve the applicable Desired Future Condition (DFC) per TWC 36.1132(a)(b) and Rule 6.10.25(a)(b)(c)(d)(e).

7) Is the proposed use of water is consistent with the District's Groundwater Water Management Plan related to the approved DFC and the defined available groundwater for permitting?

The District's Management Plan reflects a groundwater availability figure in the Lower Trinity Aquifer of 7193 ac-ft/year Modeled Available Groundwater (then reserve 178 ac-ft/year for exempt well use) thus 7015 ac-ft/year is the Managed Available Groundwater for permitting.

The Board, per the District Management Plan, has evaluated groundwater available for permitting the Lower Trinity Aquifer and most recently evaluated the available groundwater for permitting (consistent with the management plan as stated on pages 9-10).

The requested permit amount relative to the modeled available groundwater MAG determined by the Texas Water Development Board (TWDB) based on the desired future conditions (DFCs) established by the District for the Lower Trinity Aquifer was set by CUWCD based on 330-ft of drawdown over 60 yrs. This was reviewed and again approved by the board in January 2019. To achieve this DFC, the TWDB used a model that indicated the MAG was equal to 7193 acre-feet per year from the Lower Trinity.

A summary of YTD 2023 permit production, HEUP & OP Permit Analysis, pending applications, and *Exempt Well Reservations for the Lower Trinity, per District Report illustrates current Lower Trinity Aquifer permits total 4992.31 ac-ft/year. Currently, the District has a pending permit of 23 ac-ft/year, thus available for permitting is only 2624.39 acre-feet/year. (see attached Lower Trinity Aquifer Status Report, March 2023).

8) What are the Modeled Available Groundwater calculations determined by the Executive Administrator of the Texas Water Development Board?

Refer to #7 above. The modeled available groundwater will not be exceeded by granting this permit. (see attached Lower Trinity Aquifer Status Report, March 2023).

9) What has the Executive Administrator of the Texas Water Development Board's estimate of the current and projected amount of groundwater produced under the exemptions in District Rule 8.3?

Refer to #7 above. Reservation of Modeled available groundwater for <u>exempt well</u> use will not be exceeded by granting this permit. 178 ac-ft/year vs 59 ac-ft estimated to be used annually in the Middle Trinity. (see 2022 district exempt use report)

10) What is the amount of groundwater authorized under permits previously issued by the District?

Refer to #7 above. Existing permits do not exceed the managed available groundwater (modeled available groundwater – exempt well use = Managed Available Groundwater) for the Lower Trinity Aquifer which is 4390.61 ac-ft per year.

What is the reasonable estimate of the amount of groundwater that is produced annually under existing non-exempt permits issued by the District?

The total permitted amounts for non-exempt wells in the Lower Trinity Aquifer in 2022 was 4390.61 ac-feet/yr and the actual production in 2022 was 1842.71 ac-ft/yr (42%) of the permitted amount. (Figures are based upon monthly production reports submitted to Clearwater by the permit holders in 2022).

12) Yearly precipitation and production patterns.

Clearwater is currently in Stage 1 drought management stage based on the PDI system (average running total annual rainfall) over the Aquifer in the District, is currently at **23.661** inches of rain received in the last 365 days (5-6-2023) thus 71.70% of annual expected rainfall of 33 inches. The Lower Trinity permit holders in all of 2022 have used 42% of the total permitted amounts in the Aquifer. Permit holders did not exceed their total permitted amounts in 2020, 2021 and 2022.

The gravity of the current drought is reminiscent of the epic drought of 2011-2013, the significant drought in 2018, 2020 and again in 2022-23. The current drought trends do necessitate the need for all permit applications to be evaluated based on conservative needs and usage that are not contradicted by the current voluntary drought contingency plan stage. The applicant has agreed to take extreme conservative action to maintain a lifestyle of efficient and conservative groundwater use.

Conclusions and Recommendations:

- 1) District GM recommends that the Board approve the permit for the one well for the purpose of the domestic use as described in the application.
- 2) District GM concurs with Keester that the following conditions for the well's construction and for limiting this application permit necessary for the following:
 - To assess actual changes in water levels due to pumping from the proposed well and regional water level declines, the pump installer shall install a measuring tube alongside the column pipe to allow for measurement of the water level using an e-line or other direct measurement method as needed by District Staff.
 - The pump installer shall install a metering device for monthly online reporting of production to confirm the applicant does not exceed the approved amount of production.

Attachments are as follows:

Keester PG Technical Memorandum03/24/2023CUWCD Trinity Aquifer Status Report04/06/2023CUWCD 2021 Exempt Well Estimate of Use Report12/31/2022CUWCD Site MapSee AttachedApplications, fees and Notification AffidavitSee Attached

Trinity Aquifer Status Report - March 2023

<u>DFC Analysis Over Time</u> (2000-Present) Modeled Available Groundwater			HEUP and OP Permit Analysis Relative to the Modeled Available Groundwater		<u>2023 YTD</u> <u>Total Prod.</u> Jan - Feb 4.63%			din <u>a</u> cations	Exempt Well Reservations			
Trinity Aquifer (by layer)	DFC Adopted * Average Drawdown (by layer)	MAG ** Ac-ft	HEUP Ac-ft (by layer)	OP Ac-ft (by layer)	Total Permitted Ac-ft (by layer)	2022 YTD Prod. (by layer)	2023 YTD Prod. (by layer)	Available for Permitting Ac-ft (by layer)	Pending Applications Ac-ft (by layer)	Exempt Well Reserve Ac-ft (by layer)	2022 Exempt Well Use Estimate Ac-ft (by layer)	Available Exempt Use Ac-ft (by layer)
Pawluxy.:	NA	0	0	0	0	0	0	0	0			0
Glen Rose (upper)	- 1.38 ft/yr -83 ft/60 yrs	974	61.9	72.73	134.63	23.79	1.67	146.37	0	693	189	504
Hensell (middle)	-2.28 ft/yr -137 ft/60 yrs	1099	259.3	207.77	467.07	67.06	2.62	73.23	***23.00	548	527	21
Hosston (lower)	-5.50 ft/yr -330 ft/60 yrs	7193	1181.4	3209.21	4390.61	1842.71	226.67	2624.39	0	178	59	119
Total		9266	1502.6	3489.71	4992.31	1933.56 (40.77%)	230.96 (4.63%)	2854.69	23.00	1419	793	626

^{*}Desired Future Conditions (DFC) is the description of how the aquifer should look in the future (60 years).

Big Elm RV Resort N2-22-003P (23.00 ac-ft/yr)

^{**}The Modeled Available Groundwater (MAG) is the estimated amount of water available for permitting assigned to Clearwater UWCD by the Executive Administrator of TWDB.

^{***}Pending applications



CUWCD Exempt Well Use Summary

Aquifer	Total Active Registered Exempt Wells ³	Registered Domestic Wells	Estimated Domestic Use Gallons/Day ^{1,2}	Estimated Domestic Use Ac- ft/Year ^{1,2}	Registered Stock Wells	Estimated Stock Use Gallons/Day	Estimated Stock Use Ac-ft/Year	Total Estimated Use Gailons/Day ⁷	Total Estimated Exempt Well Use Ac-ft/Year ⁷	MAG Reserved Exmpt
Glen Rose (Upper Trinity)	426	349	102,103	114	77.	66,528	1971 - S. C. C. C. 2.75	168,631	189	Well Use
Hensell (Middle Trinity)	972	911	417,446	468	61	52,704	59.	470,150	527	11011 030
Hosston (Lower Trinity)	159	148	43,299	49	11.	9,504	1.1;	52,803	59	
Trinity (Total) ⁶	1,557	1,408	562,848	630	149	128,736	144	691,584	775	1,41
Edwards BFZ	846	715	209,180	234	131	113,184	127	322,364		
Edwards Equivalent	485	386	112,928	126	2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	85,536	ACHERICA MANAGE	198,464		
Buda	28	15	4,388	5	THE STATE WAS A STATE OF THE ST	11,232	PHS 5000 PACE 13	15,620	17	
Lake Waco	8	1 ₀ 6 7 3	878	'e a 1	5	4,320	5	5,198	6	
Austin Chalk	226		41,251	.**,** <u>2*2.</u> ** ** 46			82	114,691	128	
Ozan	161	114	33,352				45	73,960	83	į.
Pecan Gap	67	44	12,873	14	A 513-150-1515-1510-23	19,872	22	32,745	37	
Kemp	15		3,218	4. 00. 44	KIPPERTATION 4	3,456	7-1-7-1-1-1-1-4	6,674	7	
Alluvium	584	377	110,295	124	207	178,848	200	289,143	324	,
Other ⁵	1,574	1,091	319,183	358	483	417,312	467	736,495	825	
CUWCD Total Active	3,977	3,214	1,091,212	1,222	763	659,232	738	1,750,444	1,961	

- 1. Domestic use estimate assumes 106 gallons/person per day (USGS estimate of domestic use outside of a municipal water system) and 2.76 persons/household (U.S. Census Bureau, Population Estimates Program (PEP) July 1, 2019)
- 2. Benjamin G. Wherley, Ph.D. Associate Professor- Turfgrass Science & Ecology Dept. of Soil and Crop Sciences Texas A&M University estimate of 2,000ft² warm season turfgrass requires 38,855gal/yr/lawn or 106gal/day/lawn; "Ranchette" Avg. lawn size is 13,042ft², 6.5X larger; 6.5 X 106gal/day/lawn= 689gal/day/lawn; ~217 "Ranchette" Middle Trinity Wells; 689 X 217=an additional 150,924gal/day/lawn; 490ac-ft/yr or an 89% increase in Middle Trinity exempt well use from the 2018 estimate of 258ac-ft/yr.
- 3. Exempt well use estimate factors out all plugged, capped, monitor and inactive wells in the database.
- 4. Source of stock water estimates is Texas Agrilife Extension @ 18 gallons water per day per cow. Livestock water use estimates are based on the 2017 Census of Agriculture, USDA National Agricultural Statistics Service. 36,868 cows / 771 stock wells= 48 cows/stock well; 48* 18gpd= 846 gal/day/stock well, 747ac-ft/yr or a 34% increase in annual stock use from the 2018 estimate of 556ac-ft/yr.
- 5. The "Other" designation is the total of minor aquifer and alluvium source designation of the exempt wells.
- 6. Trinity Aquifer wells registered with unknown depth are assigned to the Middle Trinity per Board decision.
- 7. All estimates of groundwater use by exempt well owners is based on assumptions and scientific data, but by no means are they to be interpreted as recommended practices by CUWCD.

Geoscience Analysis



Proposed Well ID: N3-23-001P **Management Zone:** Southwest

Aquifer: Lower Trinity Proposed Annual Production: 0.051 Acre-Feet per Year

Proposed Instantaneous Pumping Rate: Not-to-Exceed 10-Gallons per Minute

The potential effects of the proposed production on local water levels in the aquifer are calculated using the Theis equation¹ which relates water level decline (that is, drawdown) to the pumping rate of a well and properties of the aquifer. While the equation does not account for aquifer conditions which may affect the calculation of long-term water level declines (for example: aquifer recharge, faulting, or changes in aquifer structure), it does provide a very good, reliable, and straightforward method for estimating relatively short-term drawdown in and near a well due to pumping. To assess the potential effects from the proposed production, the equation uses values from the groundwater availability model datasets².

The following table presents the calculated drawdown at the proposed well and at other nearby wells completed in the same aquifer. For 1-Day Drawdown, we applied the proposed instantaneous pumping rate for a period of 24 hours. For 30-Day Drawdown, we assumed peak pumping during the summer of about 15 percent more than the average monthly amount (that is, the proposed annual production rate divided by 12 then multiplied by 1.15). For 1-Year Drawdown, we used the proposed annual production amount.

	Distance from	1-Day Drawdown	30-Day Drawdown	1-Year Drawdown
Well Name	Proposed Well (feet)	(feet)	(feet)	(feet)
N3-23-001P	1	6.9	Negligible	Negligible
E-02-3331G	506	1.3	Negligible	Negligible
E-23-013P	1,157	Negligible	Negligible	Negligible
E-02-3332G	1,557	Negligible	Negligible	Negligible

The predicted drawdown presented above is based on our current understanding of the aquifer hydraulic properties and the estimated production from the proposed well. The predicted drawdown values presented do not include the effects from other wells pumping near the proposed well. Predicted drawdown of less than one (1) foot is considered negligible for analysis purposes due to inherent uncertainty in the aquifer hydraulic characteristics.

Recommendations

To assess actual changes in water levels due to pumping from the proposed well, the well driller should ensure there is a removable plug in the sanitary seal to allow clear access into the well for water level measurement by the District. In addition, if space allows, the pump installer should install a measuring tube alongside the column pipe to allow for measurement of the water level using an e-line or other direct measurement method. Upon discussion and coordination with the District, other automated water level monitoring methods may be considered for installation with

¹ Theis, C.V., 1935, The Relation Between the Lowering of the Piezometric Surface and the Rate and Duration of Discharge of a Well Using Ground-Water Storage: American Geophysical Union Transactions, v. 16, p. 519-524.

² Groundwater availability model (GAM) datasets include the Northern Edwards GAM, the Northern Trinity/Woodbine GAM (for the Upper and Middle Trinity aquifers), and the modified Northern Trinity/Woodbine GAM (for the Lower Trinity Aquifer).



the well. These are in addition to installation of a water meter at the well head to measure and report monthly production in accordance with District Rule 5.5 Metering and Reporting.

Geoscientist Seal

The following licensed professional geoscientist(s) have reviewed the results and recommendations presented in this report of the potential effects due to production from a proposed well.





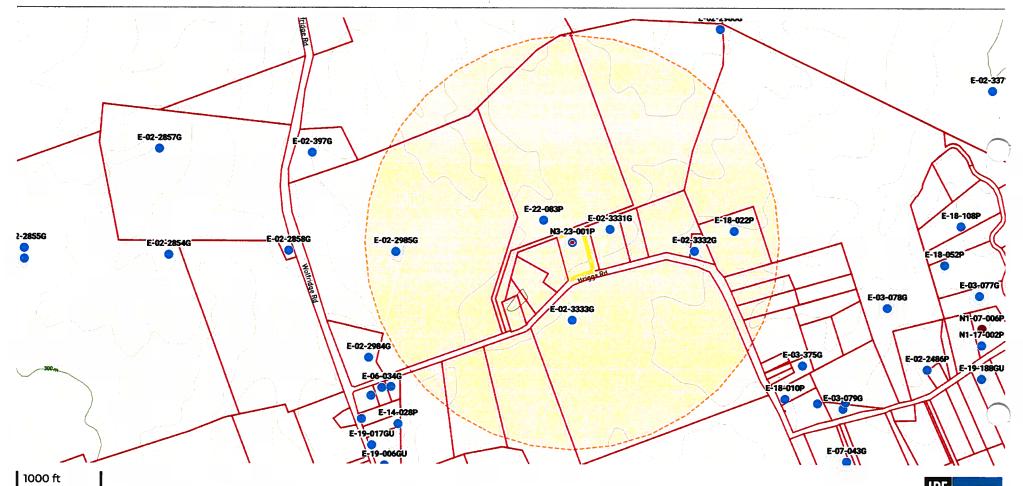
Figure 1: Map illustrating the 0.5-mile radius of the Lower Trinity Wells





CUWCD Map N3-23-001P Radius Map

Created: March 16th 2023, 2:15pm



N3-23-001P Contact List

Wells 1/2 Mile

Prop ID	<u>Name</u>	Address	<u>City</u>	<u>State</u>	<u>Zip</u>	Well#	<u>Status</u>	Depth	<u>Aquifer</u>	<u>Use</u>	<u>Distance</u>
27395	William & Randi Bell	2209 Meadow Brook Dr	Austin	TX	78703	E-22-083P	Capped	610	Middle Trinity	Domestic	462 ft
440746	Roby Whitehead	2351 Briggs Rd	Killeen	TX	76549	E-02-3331G	Active	760	Lower Trinity	Domestic	518 ft
27396	William Daniel	403 Terrapin Dr	Killeen	TX	76542	E-02-3333G	Active	444	Upper Trinity	Domestic	990 ft
365948	Martin & Michele Tierney	2171 Briggs Rd	Killeen	TX	76549	E-02-3332G	Active	680	Lower Trinity	Domestic	1,558 ft
133703	Martin & Michele Tierney	2171 Briggs Rd	Killeen	TX	76549	E-18-022P	Active	560	Middle Trinity	Domestic	2,063 ft
75838	Ruby Moore Trust for Reba Hennigan	PO Box 1160	Florence	TX	76527	E-02-2985G	Active	400	Upper Trinity	Domestic	2,252 ft

Adjacent Property

486704	Roby Whitehead	2351 Briggs Rd	Killeen	TX	76549
514880	Mark & Alexandra Daniel	2567 Pahmeyer Dr	New Braunfels	TX	78130
27395	William & Randi Bell	2209 Meadow Brook Dr	Austin	TX	78703
27396	William Daniel	403 Terrapin Dr	Killeen	TX	76542

Name	Address	City	State	Zip
William & Randi Bell	2209 Meadow Brook Dr	Austin	TX	78703
Roby Whitehead	2351 Briggs Rd	Killeen	TX	76549
William Daniel	403 Terrapin Dr	Killeen	TX	76542
Martin & Michele Tierney	2171 Briggs Rd	Killeen	TX	76549
Ruby Moore Trust for Reba Hennigan	PO Box 1160	Florence	TX	76527
Mark & Alexandra Daniel	2567 Pahmeyer Dr	New Braunfels	TX	78130

March 13, 2023

NOTICE OF APPLICATION FOR DRILLING AND OPERATING PERMIT

Name Address City, TX Zip VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

RE: Application for a Combination Drilling/Operating Permit

To Whom It May Concern:

I, Ben Daniel, have submitted an application to the Clearwater Underground Water Conservation District (CUWCD) on March 13, 2023 for a combination drilling and operating permit on a new well (N3-23-001P) for 0.051 acre-feet or 16,618 gallons per year.

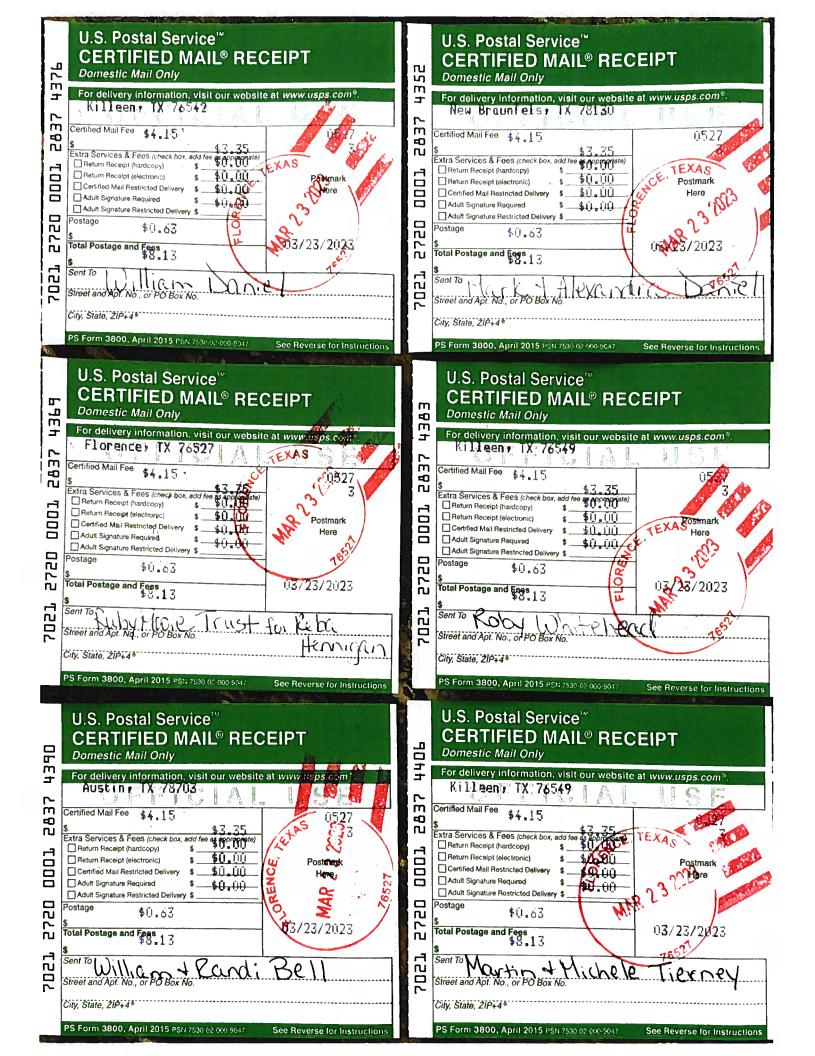
This permit, if approved, will authorize groundwater withdrawal from a new well (#N3-23-001P) to be completed in the Southwest Management Zone described in District Rule 7.1. The proposed well is to be completed in the Lower Trinity Aquifer (Hosston Layer), with a maximum 1.25-inch column pipe on a 4.369-acre tract located at 2407 Briggs Road, Killeen, Texas, Latitude 30.945707°/Longitude -97.818658°, to produce groundwater for domestic use at a proposed annual quantity not to exceed 0.051 acre-feet or 16,618 gallons per year total at a maximum pumping rate not-to-exceed 10 gallons per minute.

This application will be set for hearing before the CUWCD Board upon notice posted at the Bell County Clerk's Office and at the CUWCD Office. If you would like to support, protest, or provide comments on this application, you must appear at the hearing and comply with District Rule 6.10. For additional information about this application or the permitting process, please contact the CUWCD at 700 Kennedy Court, Belton, Texas 76513, 254-933-0120. The applicant may be contacted at 90 Elmo Street, Florence, TX 76527, or by phone at 512-948-5750.

Sincerely,

Ben Daniel





NOTICE OF APPLICATION FOR A COMBINATION DRILLING AND OPERATING PERMIT FROM CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Ben Daniel has submitted an application to the Clearwater Underground Water Conservation District (CUWCD) on March 13, 2023, for a combination drilling and operating permit to authorize drilling and withdrawal from a proposed new well.

This permit, if approved, will authorize groundwater withdrawal from a new well (#N3-23-001P) to be completed in the Southwest Management Zone described in District Rule 7.1. The proposed well is to be completed in the Lower Trinity Aquifer (Hosston Layer), with a maximum 1.25-inch column pipe on a 4.369-acre tract located at 2407 Briggs Road, Killeen, Texas, Latitude 30.945707°/Longitude -97.818658°, to produce groundwater for domestic use at a proposed annual quantity not to exceed 0.051 acre-feet or 16,618 gallons per year total at a maximum pumping rate not-to-exceed 10 gallons per minute.

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Personally appeared before the undersigned authority

Anthony Edwards who being sworn says that the attached ad for: Ben and Kim Daniel published in the Killeen Daily Herald on the following dates, to-wit: March 28, 2023 and at a cost of \$277.90.

Advertising Representative

Subscribed and sworn before me on March 29, 2023.

Notary Public, Bell, Texas



NOTICE OF
APPLICATION FOR
A COMBINATION
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FROM CLEARWATER
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This application will be set for hearing before the CUWCD Board upon notice posted at the Bell County Clerk's Office and at the CUWCD Office. If you would like to support, protest, or provide comments on this application, you must appear at the hearing and comply with District Rule 8.10. For additional information about this application or the permitting process, please contact the CUWCD at 700 Kennedy Court, Belton, Texas 76513, 254-933-0120. The applicant may be contacted at 90 Elmo Street, Florence, TX 76527, or by phone at 512-948-5750.

(Legal notice published in the Killeen Daily Herald on March 28th, 2023.)

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12 **Notices**

Legal Notices

NOTICE OF APPLICATION FOR A COMBINATION DRILLING AND OPERATING PERMIT FROM CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Ben Daniel has submitted an application to the Clearwater Underground Water Conservation District (CUWCD) on March 13, 2023, for a combination drilling and operating permit to authorize drilling and withdrawal from a proposed new well.

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Legal notice published in the Killeen Daily Herald on March 28th, 2023.)

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12 Notices

Legal Notices

Application has been made with The Texas Alcoholic Beverage Commission for a Package Store Permit by Al Business LLC dba Space Liquor to be located at 10640 State Highway 195, Suite 101, Killeen, Bell Co., Texas. Member of said LLC is Arif Mohamed-Member.

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