Appendix A

State Well Reports

STATE OF TEXAS WELL REPORT for Tracking #620893

Owner: Aqua Texas Owner Well #: 1

Address: 106 Clayton Ln #400 Grid #: 57-63-9

Austin, TX 78723

Well Location: Ball Park Rd Latitude: 30° 01' 08.65" N

Woodcreek, TX 78676 Longitude: 098° 08' 14.45" W

After turning onto Ball Park Rd from the highway, take an immediate left down the dirt road cut through the

brush and the well will be on your

right hand side

Well County: Hays

Type of Work: New Well Proposed Use: Test Well

Drilling Start Date: 9/23/2022 Drilling End Date: 9/27/2022

 Diameter (in.)
 Top Depth (ft.)
 Bottom Depth (ft.)

 Borehole:
 9.875
 0
 440

Drilling Method: Air Rotary

Borehole Completion: Open Hole

Annular Seal Data: No Data

Seal Method: **Poured** Distance to Property Line (ft.): **232**

Sealed By: **Driller** Distance to Septic Field or other

concentrated contamination (ft.): 150+

Distance to Septic Tank (ft.): 150+

Method of Verification: Google Earth

1058 ft. above sea level

Surface Completion: Surface Sleeve Installed Surface Completion by Driller

Water Level: No Data

Packers: No Data

Type of Pump: No Data

Well Tests: No Test Data Specified

Water Quality:

Strata Depth (ft.)	Water Type
No Data	No Data

Chemical Analysis Made: No

Did the driller knowingly penetrate any strata which

contained injurious constituents?: No

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the

driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in

the report(s) being returned for completion and resubmittal.

Company Information: McKinley Drilling

313 US-90

Hondo, TX 78861

Driller Name: Andrew Stevenson License Number: 59646

Comments: No Data

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description	
0	80	Upper Glen Rose	
80	300	Lower Glen Rose	
300	330	Hensel	
330	420	Cow Creek	
420	440	Hammett Clay	

Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
6.625	Blank	New Plastic (PVC)	SDR 17	0	70

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #620892

Latitude:

Longitude:

Elevation:

Owner: Aqua Texas Owner Well #: 2

Address: 106 Clayton Ln #400 Grid #: 57-63-9

Austin, TX 78723

Well Location: Ball Park Rd

Woodcreek, TX 78676

After turning onto Ball Park Rd from the highway, take an immediate left down the dirt road that is cut through the brush and go past Woodcreek #1 well and this well will be straight

ahead.

Well County: Hays

Type of Work: New Well Proposed Use: Test Well

Drilling Start Date: 9/19/2022 Drilling End Date: 9/22/2022

 Diameter (in.)
 Top Depth (ft.)
 Bottom Depth (ft.)

 Borehole:
 9.875
 0
 440

Drilling Method: Air Rotary

Borehole Completion: Open Hole

Annular Seal Data:

Top Depth (ft.)

Bottom Depth (ft.)

Description (number of sacks & material)

Cement 38 Bags/Sacks

Seal Method: Poured Distance to Property Line (ft.): 234

Sealed By: Driller Distance to Septic Field or other

concentrated contamination (ft.): 150+

Distance to Septic Tank (ft.): 150+

Method of Verification: Google Earth

30° 01' 09.8" N

098° 08' 09.9" W

1084 ft. above sea level

Surface Completion: Surface Sleeve Installed Surface Completion by Driller

Water Level: No Data

Packers: No Data

Type of Pump: No Data

Well Tests: No Test Data Specified

Water Quality:

Strata Depth (ft.)	Water Type
No Data	No Data

Chemical Analysis Made: No

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the

driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in

the report(s) being returned for completion and resubmittal.

Company Information: McKinley Drilling

313 US-90

Hondo, TX 78861

Driller Name: Andrew Stevenson License Number: 59646

Comments: No Data

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description	
0	80	Upper Glen Rose	
80	300	Lower Glen Rose	
300	330	Hensel	
330	420	Cow Creek	
420	440	Hammett Clay	

Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
6.625	Blank	New Plastic (PVC)	SDR 17	0	70

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

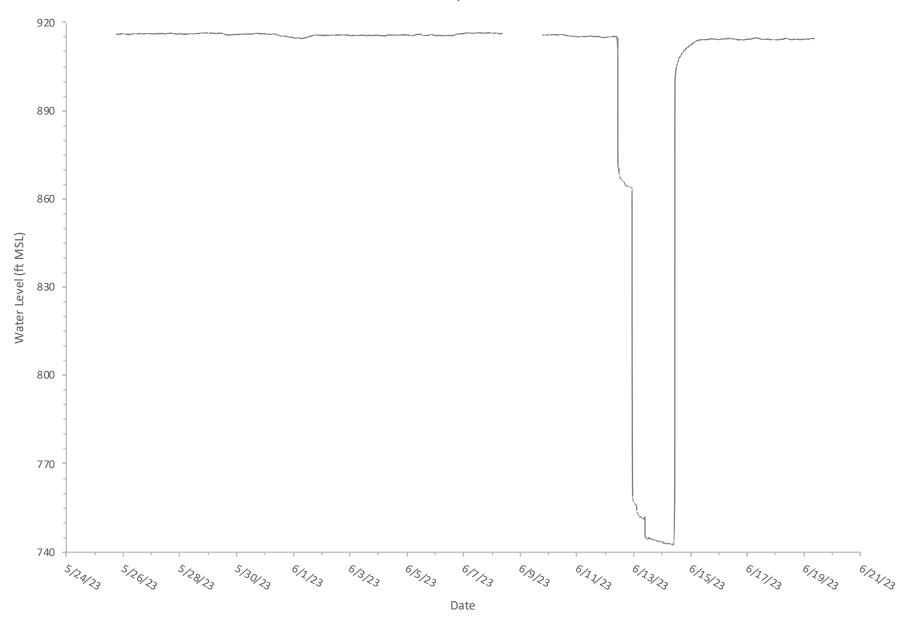
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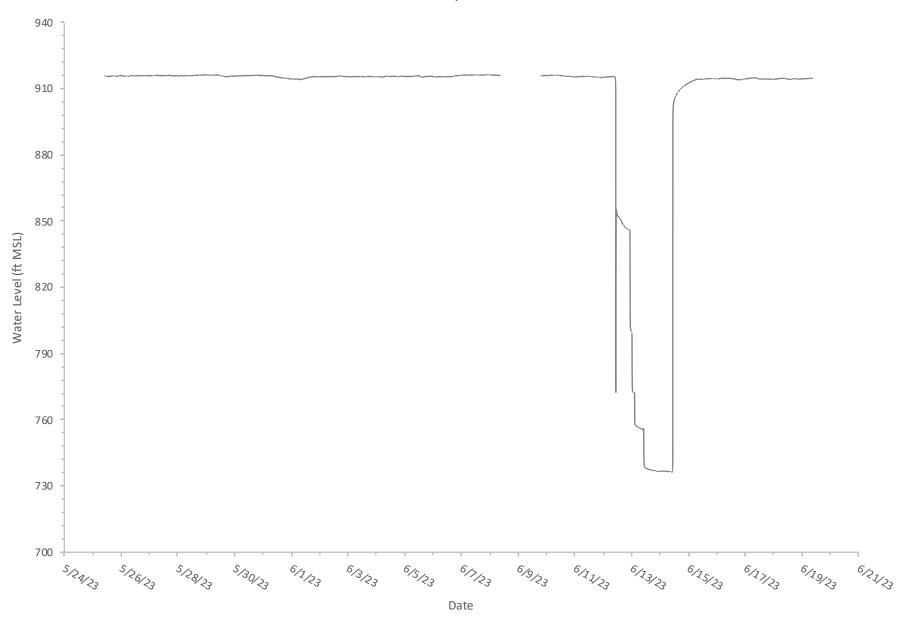
Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540

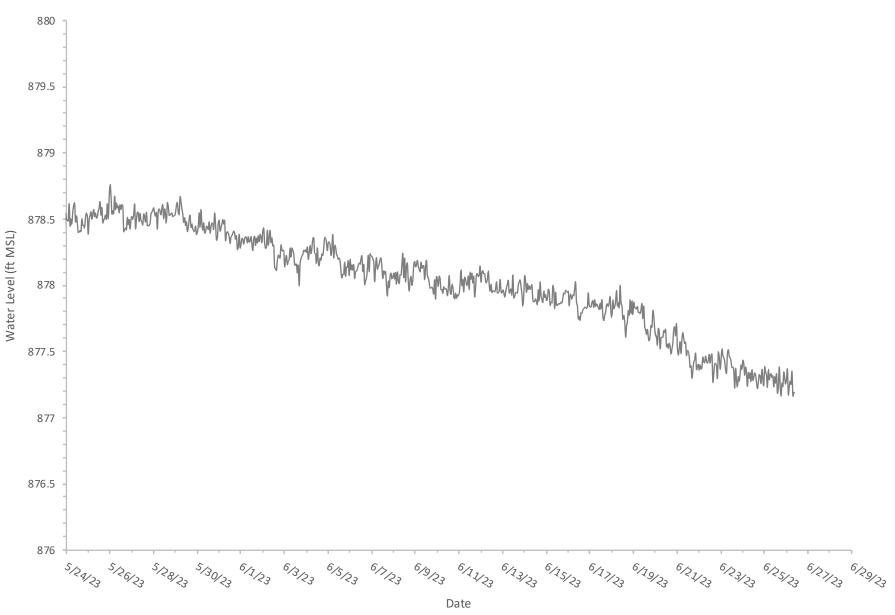
Appendix B

Hydrographs

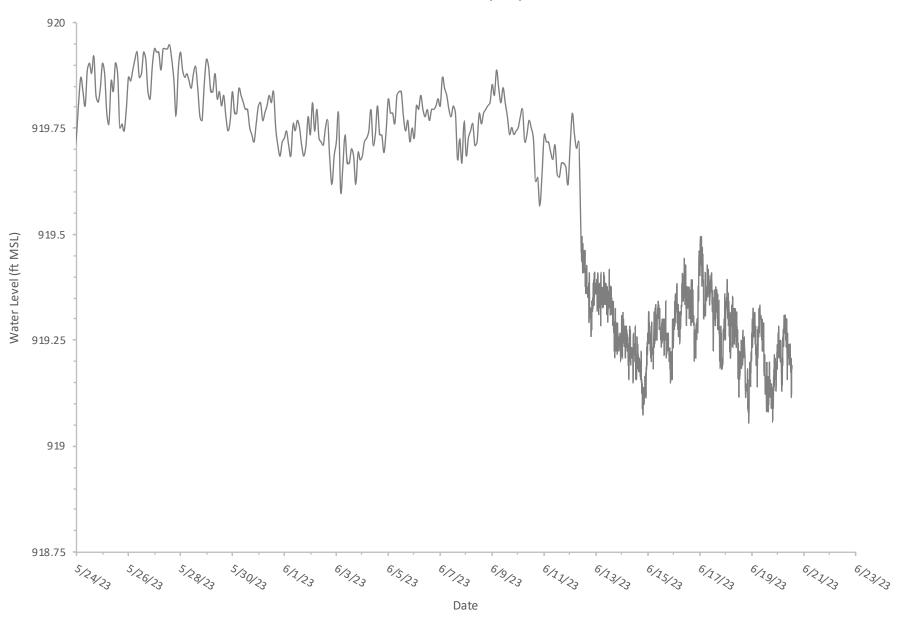


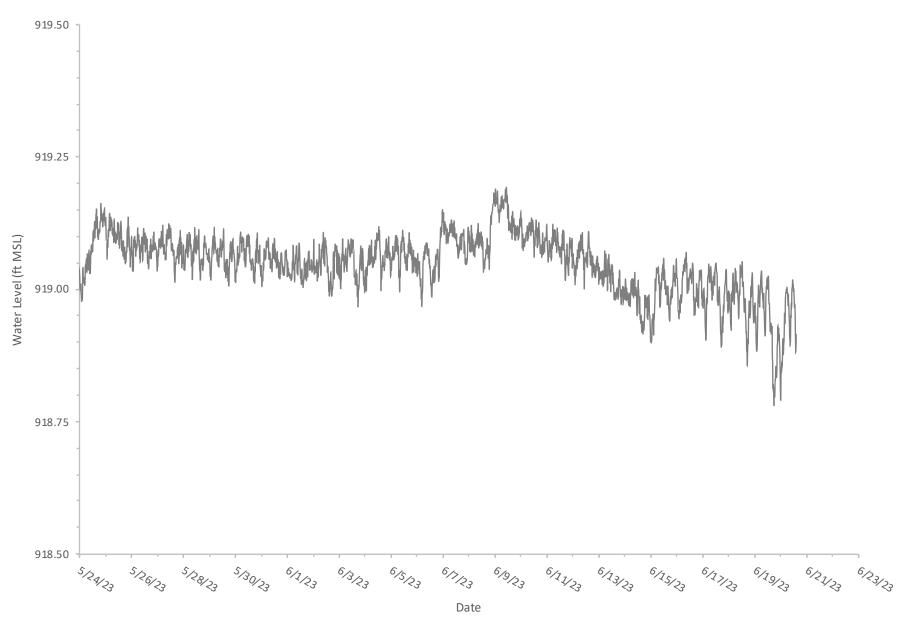


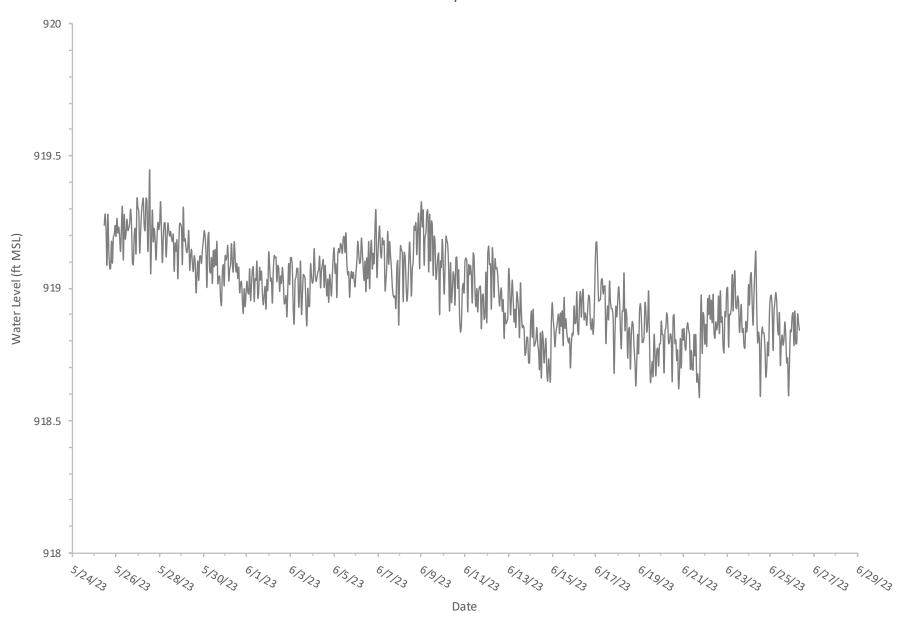


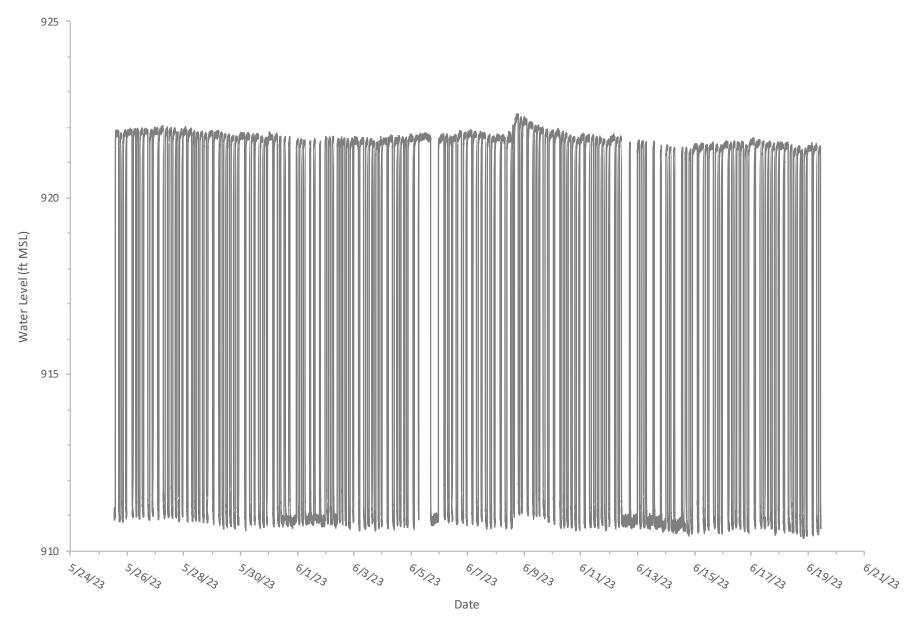


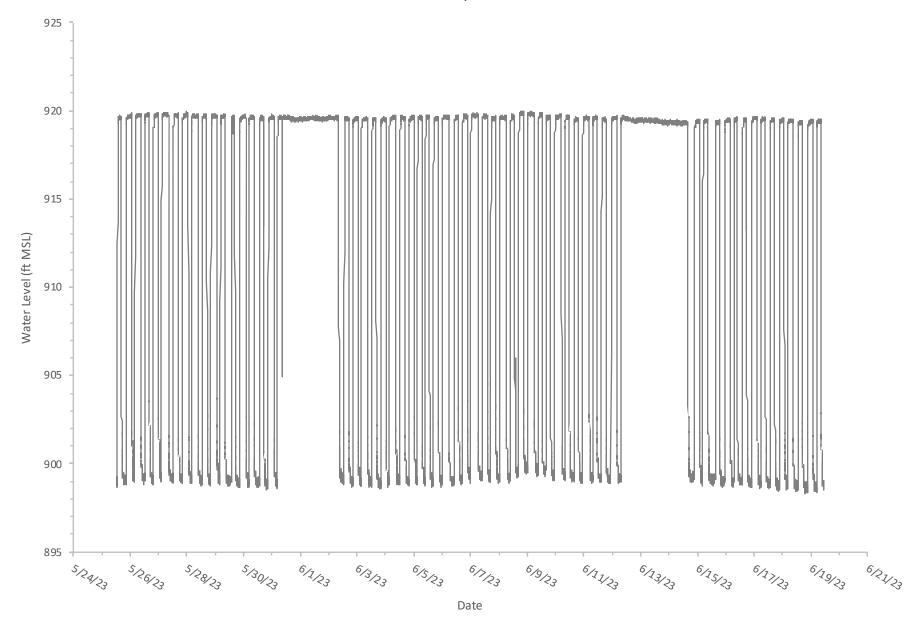


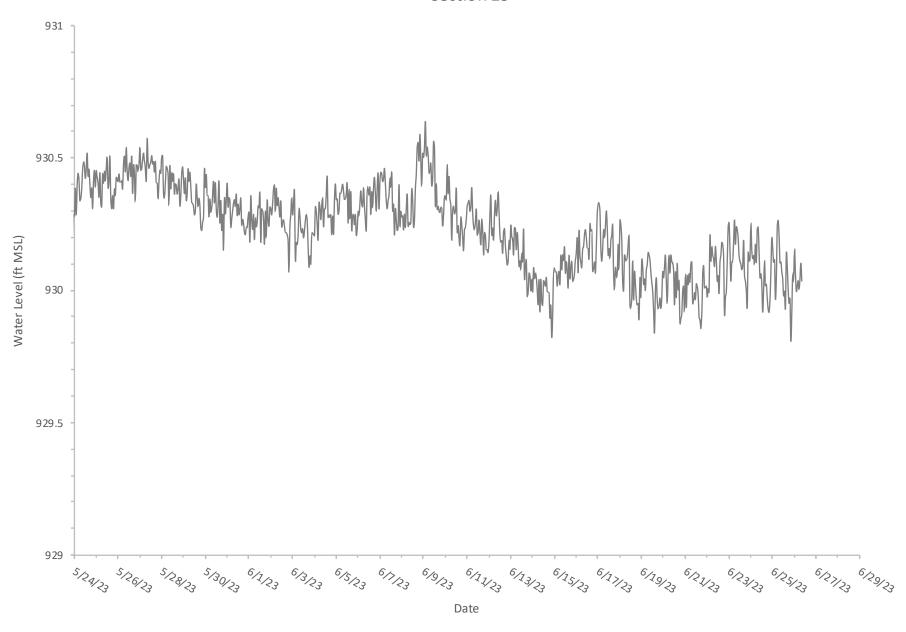




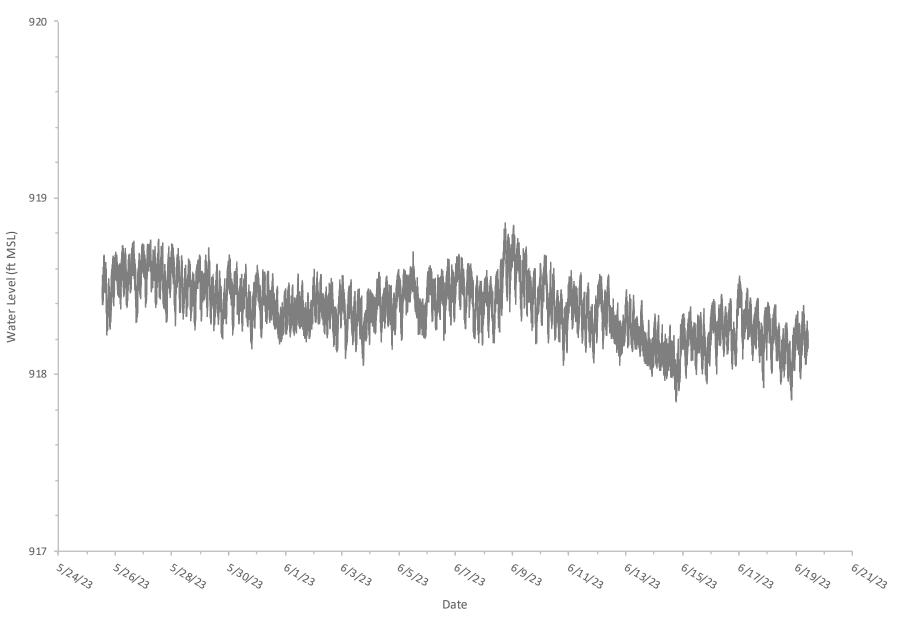




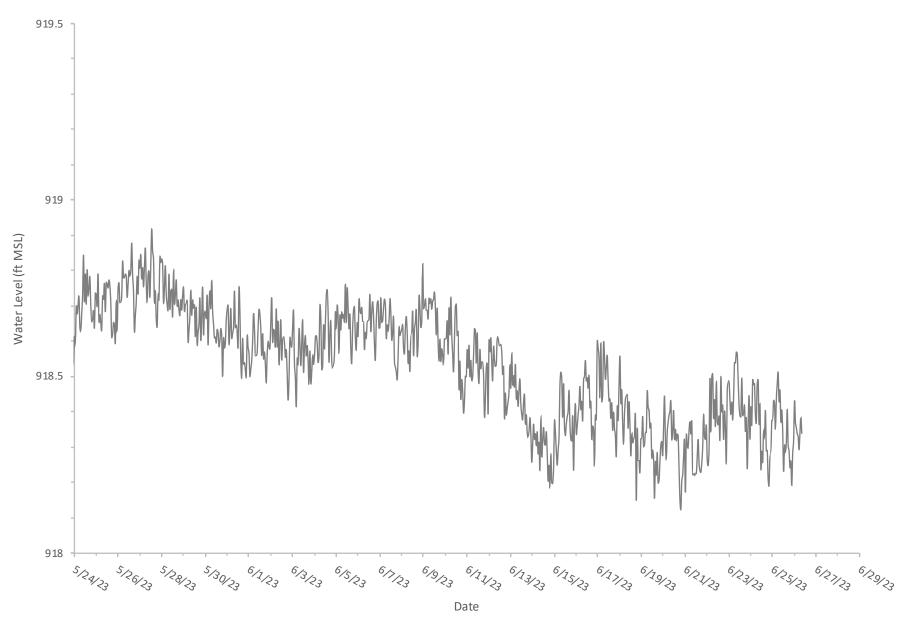


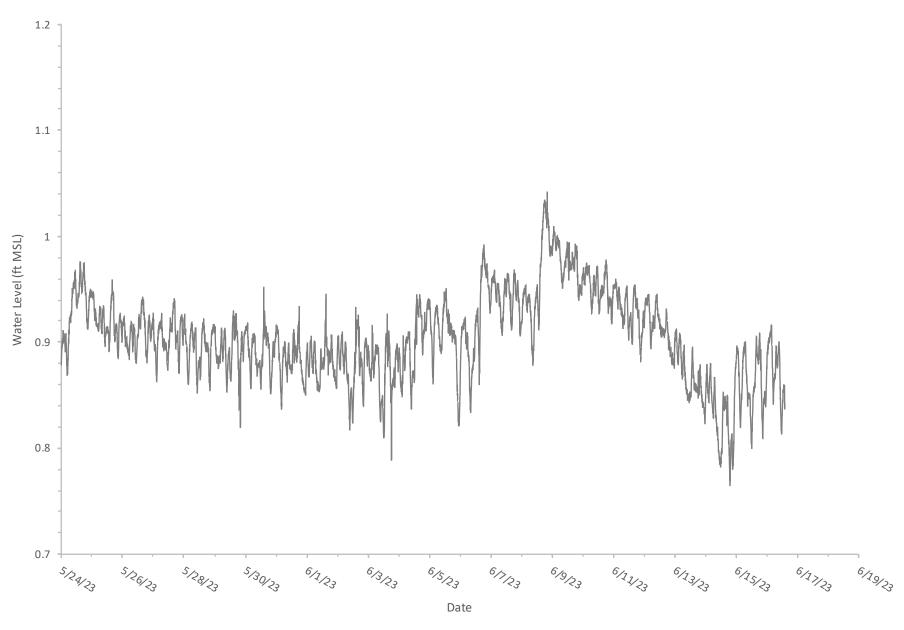




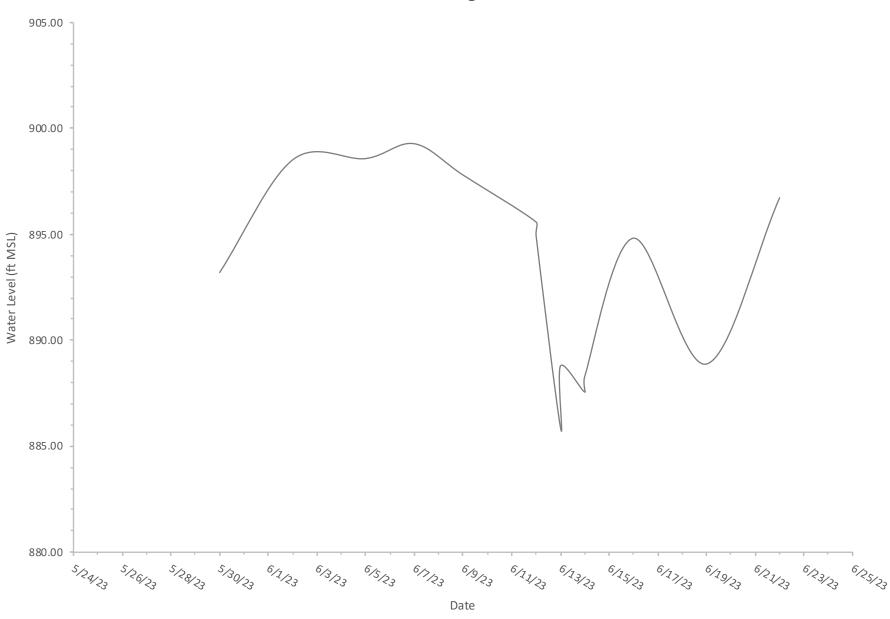




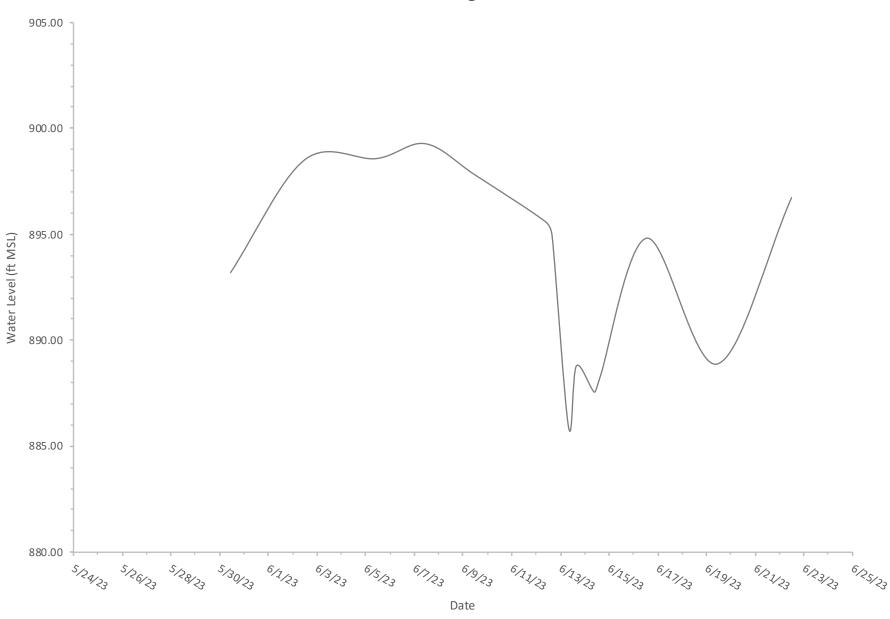




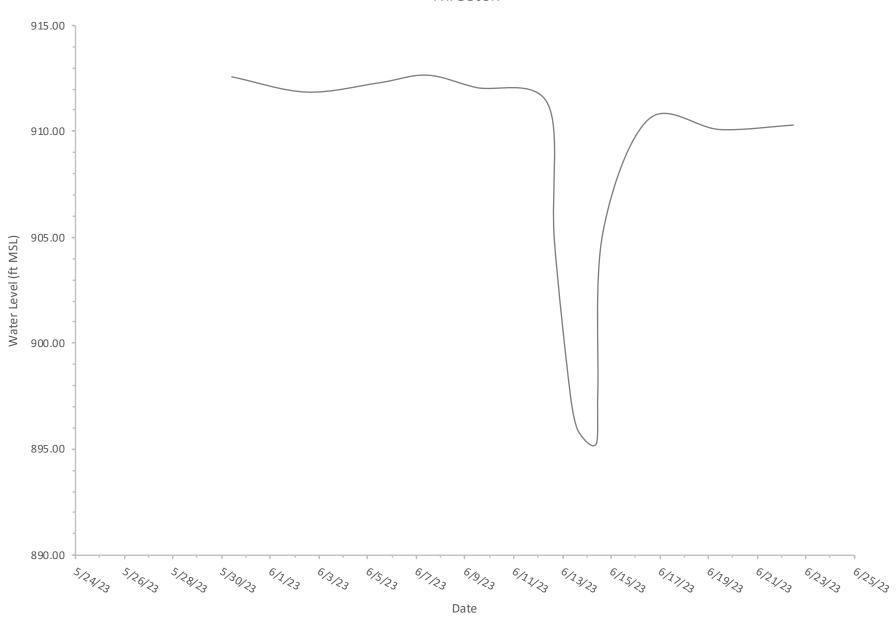


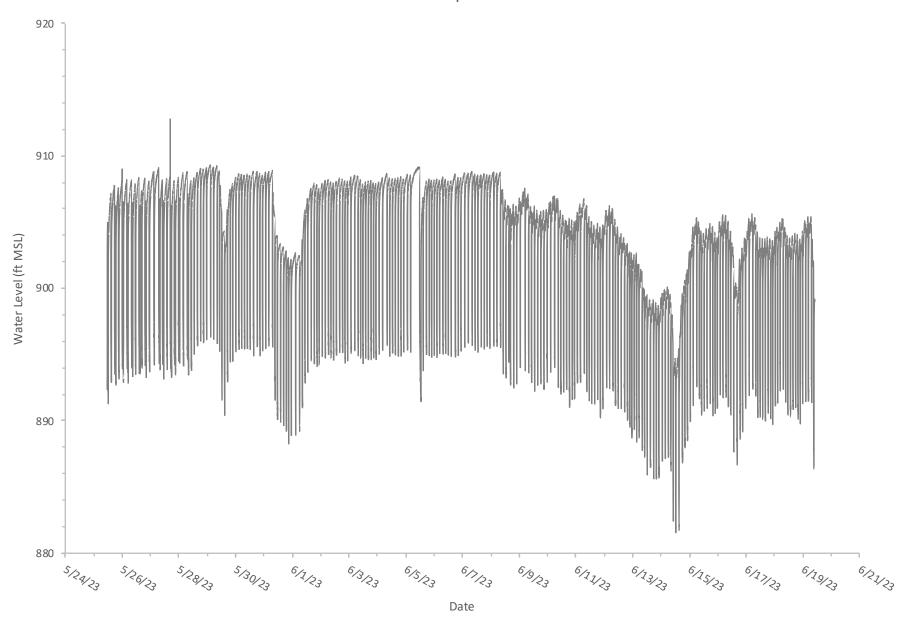


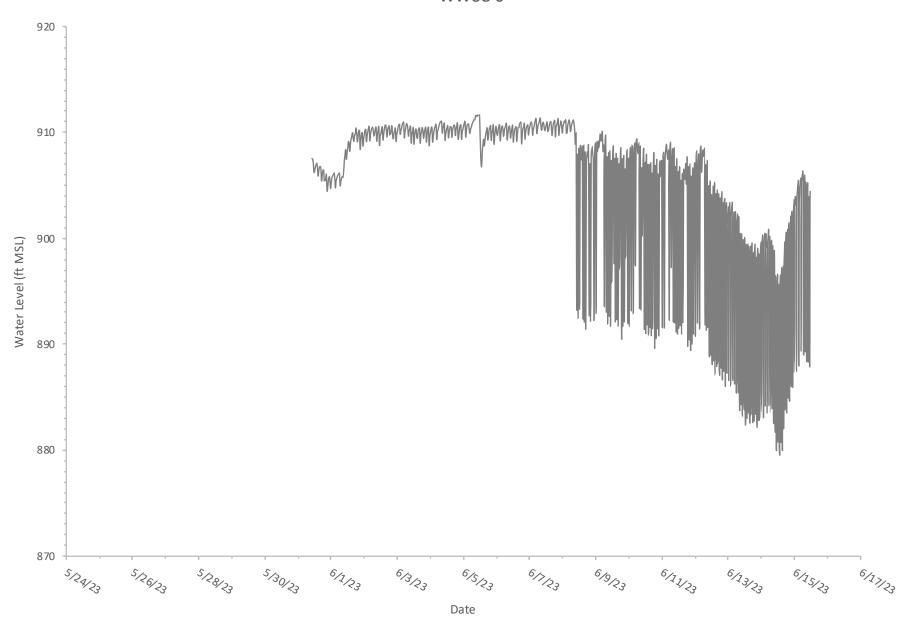


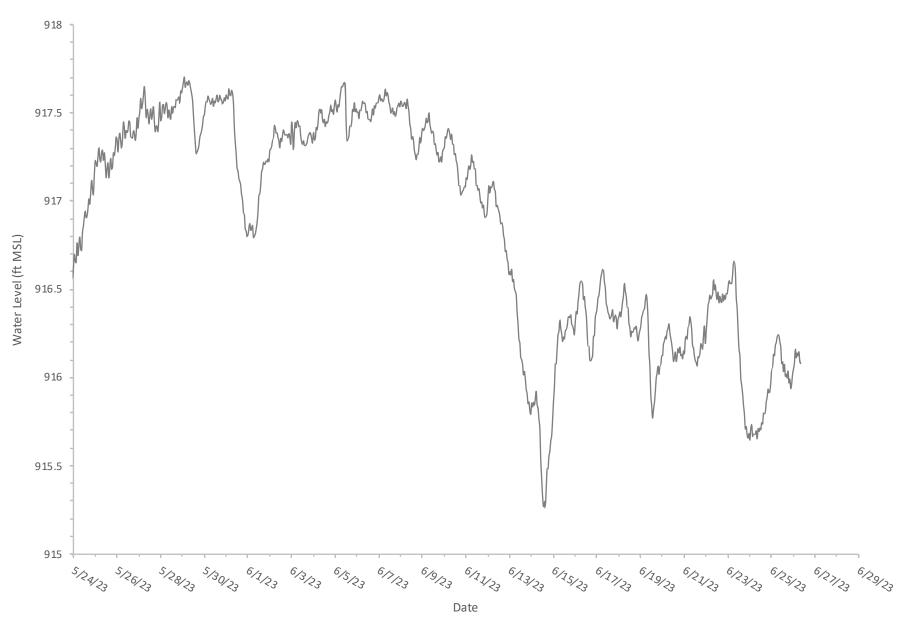




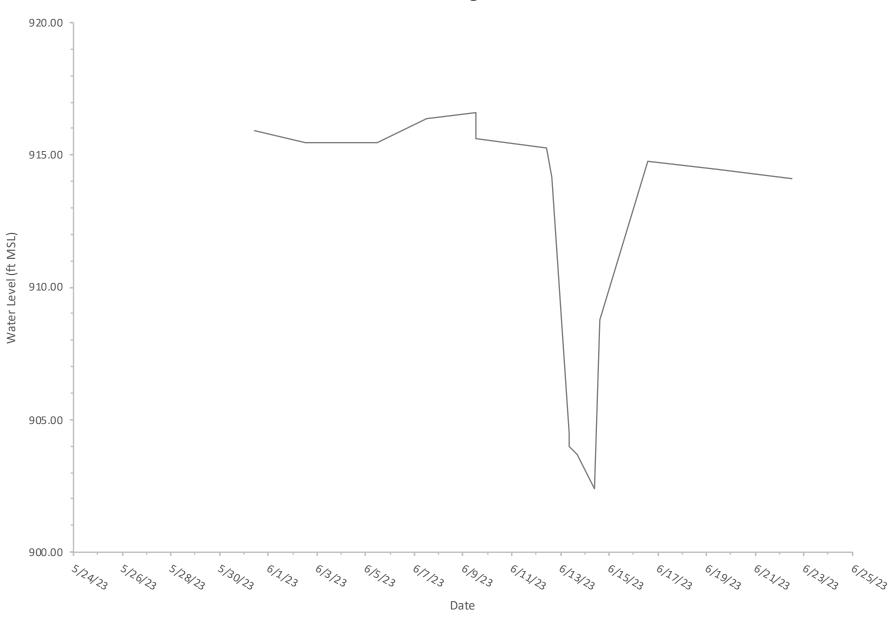


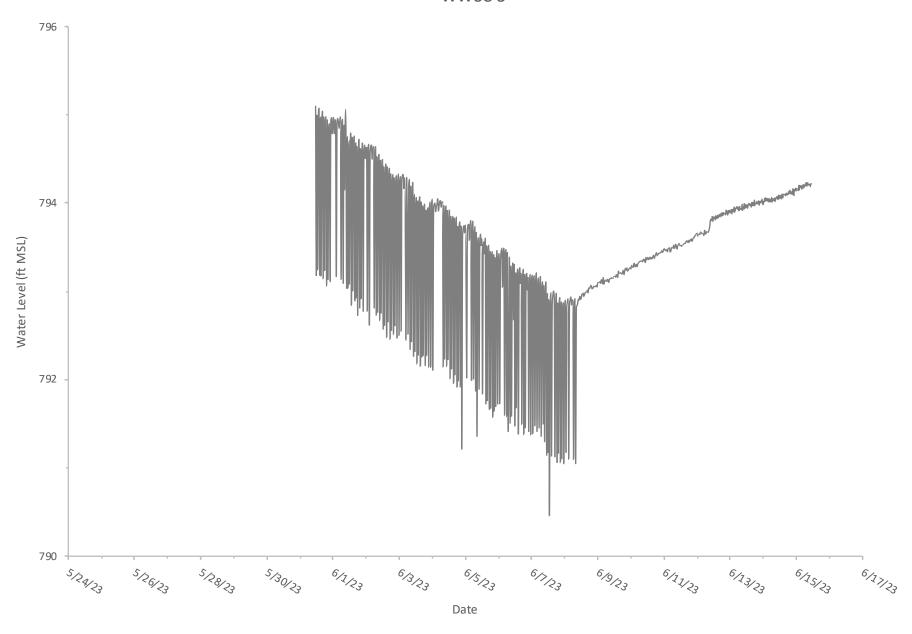




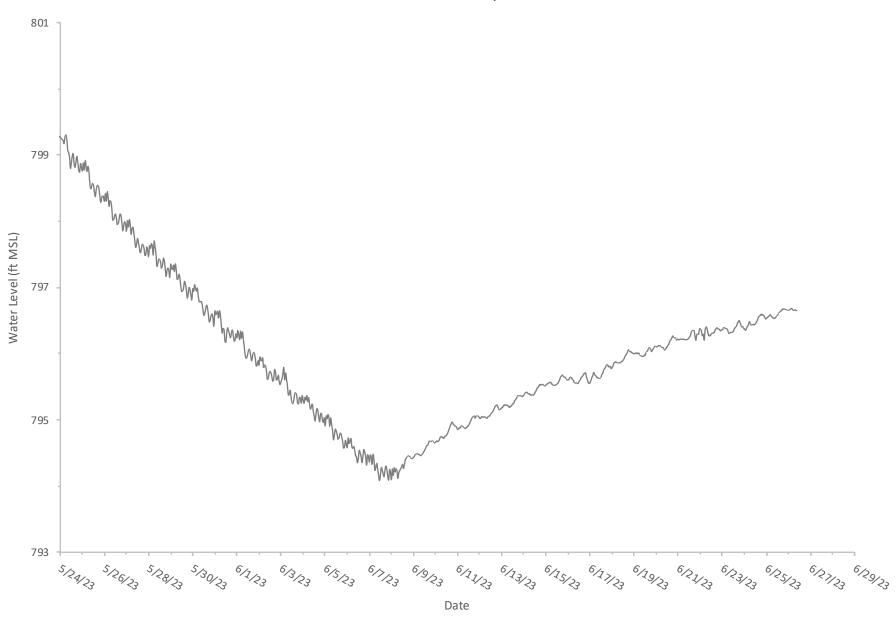












Appendix C

Aquifer Test Design



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

Mr. Charlie Flatten General Manager Hays Trinity Groundwater Conservation District 14101 Hwy 290 W Bldg. 100, Suite 212 Austin, TX 78737 April 18, 2023

RE: Aqua Texas, Inc. Woodcreek Test Wells – Aquifer Testing Design

In September 2022, Aqua Texas, Inc. (Aqua) completed two test wells (State Well Report Nos. 620893 & 60892) in Hays County. The test wells (Woodcreek Test Wells No. 24 and No. 25) were completed in accordance with state and Hays Trinity Groundwater Conservation District (the District) construction and permitting rules. This new well field is intended to secure adequate water for Aqua's existing CCN. The additional wells will ensure Aqua meets the TCEQ minimum capacity required, as stated in the approved alternative capacity requirement, of 0.34 gpm/connection at all times. Aqua is planning to perform an aquifer test, simultaneously pumping both wells, to meet the District's standards and to determine the impact, if any to Jacob's Well or other area wells. This Work Plan has been developed to provide the district with a detailed description of the proposed test design for district review in accordance with district rule 11.1.4.B. The work plan for the aquifer testing will be based on the following objectives:

- 1. Description of the planned location;
- 2. Describe the hydrogeological setting of the project including the producing sub-aquifer of all test wells and observations wells;
- 3. Provide well construction details including casing intervals and completion method;
- 4. Describe aquifer test design including pump depth setting, pumping rate, pumping and recovery phase duration, observation wells and water quality constituents to be analyzed;
- 5. Routing method for the groundwater discharged during the test.

Description of the Site and Wells

The test wells are located on Hays County Appraisal District Property IDs R14311 & R14312 along Farm to Market (FM) Road 2325 approximately 1.6 miles west of the City of Woodcreek, Texas outside of the Jacob's Well Management Zone. Figure 1 provides a location map of the project with coordinates.



Geologic Setting and Sub-Aquifer of Test Wells

Geophysical logs were performed on the pilot hole of each well and drill cuttings were collected during drilling of the pilot holes. Both the drill cuttings and geophysical logs have been submitted to the District. Formations were interpreted by Wet Rock Groundwater Services, LLC. (WRGS) from the geophysical log and drill cuttings and discussions with the District.

From the log of Well No. 24, the formations are as follows:

- Upper Glen Rose Formation (Upper Trinity Aquifer): Surface to 64 ft. below ground level (bgl);
- Lower Glen Rose Formation (Middle Trinity Aquifer): 64 to 296 ft. bgl;
- Hensell (Middle Trinity Aquifer): 296 to 330 ft. bgl;
- Cow Creek Limestone (Middle Trinity Aquifer): 330 to 422 ft. bgl;
- Hammett Shale (Confining Layer): 422 to the total depth (TD).

From the log of Well No. 25, the formations are as follows:

- Upper Glen Rose Formation (Upper Trinity Aquifer): Surface to 62 ft. bgl;
- Lower Glen Rose Formation (Middle Trinity Aquifer): 62 to 294 ft. bgl;
- Hensell (Middle Trinity Aquifer): 294 to 329 ft. bgl;
- Cow Creek Limestone (Middle Trinity Aquifer) 329 to 420 ft. bgl;
- Hammett Shale (Confining Layer): 420 to the total depth (TD).

Well Construction

The test wells were constructed in September 2022 by McKinley Drilling (McKinley) using air rotary drilling techniques and completed within the Lower Glen Rose formation and Cow Creek member of the Middle Trinity Aquifer. According to the State Well Reports, the wells are constructed with 6 5/8-inch PVC casing from +2 to 70 feet below ground level (ft. bgl) cemented to 70 ft. bgl; sealing off the Upper Trinity Aquifer, with a 9 7/8-inch open borehole from 70 to 440 ft. bgl.

Aquifer Test Design and Operation

Aqua is planning to perform an aquifer test, pumping both Woodcreek test wells simultaneously to measure the hydraulic parameters of the aquifer underlying the project and to determine impact to Jacob's Well or other area wells. All testing will be compliant with the District's Rule 11 Aquifer Test/Performance Test and Report. Below describes the methodology of the proposed aquifer test:

- The pumping phase will last for a minimum of 48 hours. The pumping phase will have one pumping rate step. The wells will initially pump at a rate for 12 hours then stepped up for the remainder of the 48 hours. Each step will persist until a consistent pumping-level trend is observed;
- Both wells will be pumped simultaneously during the test; Test Well No. 24 will be pumped at approximately 120 gpm for the first 12 hours of the pumping phase and will be stepped up to pump at approximately 240 gpm for the remained of the 48 hours; Test Well No. 25 will be pumped at approximately 75 gpm for the first 12 hours of the pumping phase and will be stepped up to pump at approximately 150 gpm for the remainder of the 48 hours. These final pumping rates reflect the



- calculated maximum pumping rate of each well. The rate will remain steady for the duration of the test unless a reduction is needed to keep the pumping level above the pump;
- Discharge rate from the pumping well will be determined by a calibrated flow meter attached to the discharge column on the well head;
- Both test pumps will be set at approximately 350 ft below ground level;
- During the aquifer tests, both test wells will be monitored using a pressure transducer recording at one-minute intervals.
- Woodcreek Utility 2 Well No. 21 will not pump for the first 48 hours of the test. After the first 48 hours the well will return to a normal pumping cycle schedule if needed. Although pumping an observation well during a test is against rule 11.6.4.B, Well No. 21 must be pumped to supply water to the surrounding area but will provide valuable data pertaining to the impact within the Jacobs Well Management Zone.
- To gather pre-test background water level data, all wells will be monitored for fourteen days prior to the commencement of the pumping test;
- The recovery period for the aquifer test will continue until 90% recovery is achieved.
- Aqua will coordinate with the District to develop an agreed upon number and location of observation wells offsite that will be monitored and measured by the District and data provided to Aqua. Wells used as observation wells will have evidence to show that each well is completed within a specific aquifer/formation. Evidence of each well's completion will be documented by a downhole video survey or gamma/resistivity/caliper log. A table of proposed monitoring wells is included in attached figures.
- To provide redundancy and verifiable measurements during no flow conditions at Jacobs Well, the Edwards Aquifer Authority (EAA) will install a pressure transducer within a 1 1/2 -inch PVC pipe with holes drilled at the base into the spring. Monitoring of Jacob's Well will be the responsibility of the District to provide data to Aqua;
- All time and dates of the transducers used in the monitoring will be synced and set to a common recording start time and time steps prior to beginning the fourteen days of background monitoring;
- A water quality sample will be taken during the aquifer test sampled for the following constituents pursuant to section 11.7.1.B.: calcium, magnesium, manganese, iron, potassium, chloride, sodium, fluoride, silica, sulfate, nitrate (as nitrogen, bicarbonate, carbonate, conductivity, pH, total hardness, total dissolved solids, lead, arsenic, mercury and phosphorus as well as nitrite, aluminum, copper and zinc;
- Temperature, Conductivity, and pH values shall be measured in the field during the pumping phase of the test until stable for two hours of pumping and at the end of the pumping phase. Conductivity values should be considered stable when they are within plus or minus 10%. pH values should be considered stable when they are within plus or minus 0.1 standard pH units;
- Every 4 hours during the aquifer test, during normal business hours, the discharging water shall be described based on clarity, color and smell.



Water Discharge

Water discharged from the test will be discharged across the well site onto the adjacent Aqua owned property. From previous testing, water flows across the site to the gravel road to the west owned by Aqua (Figure 2). The two properties along with an expected discharge path are displayed in Figure 2. If the discharge does move south towards the Wimberley ISD property, a drainage culvert is present which drains to the gravel road. The discharge from the test will not influence the test results by locally recharging the aquifer as the Middle Trinity Aquifer is under confined conditions at the site.

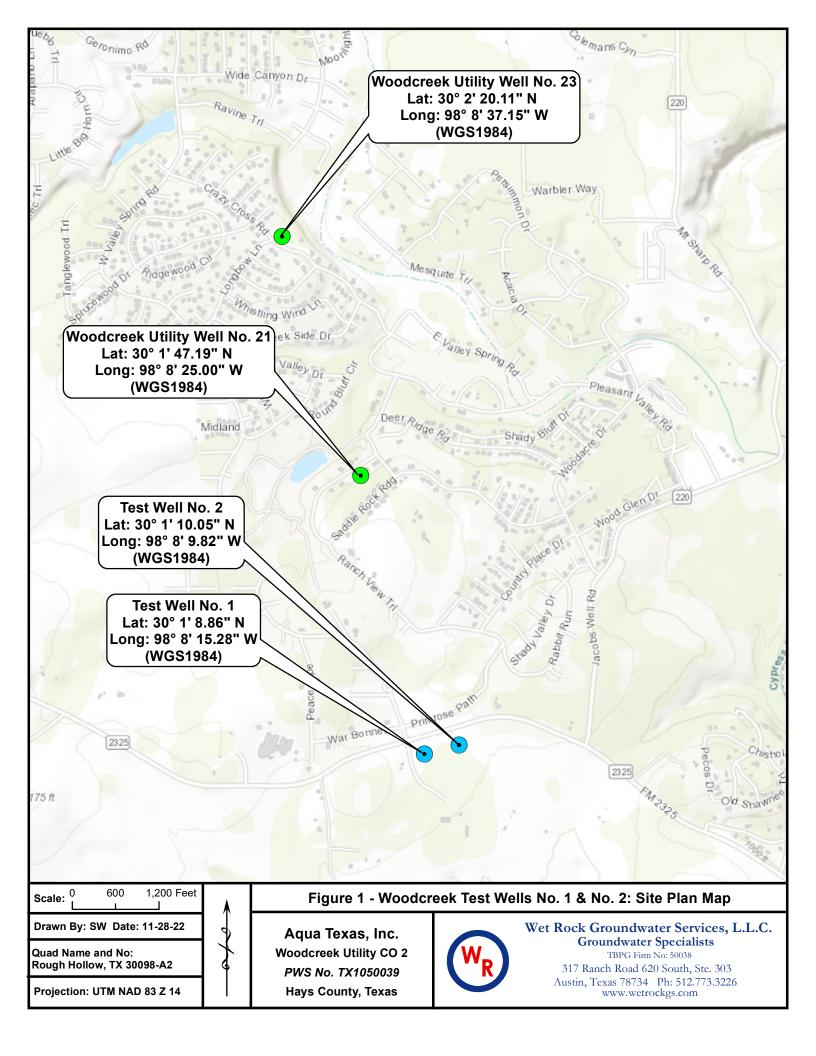
Please call me at 817-733-8611 if you have any questions or require additional information.

Respectfully,

Wet Rock Groundwater Services, L.L.C.

Samuel Watson, P.G. Staff Hydrogeologist





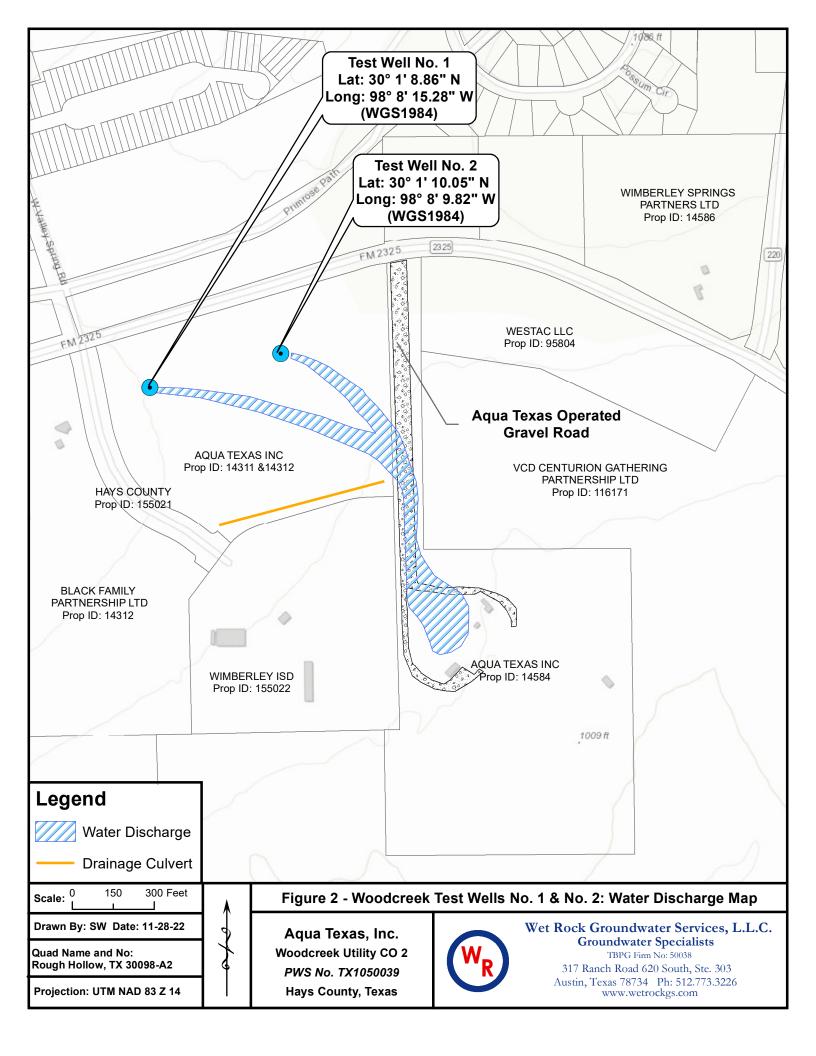


Table of Proposed Monitoring Sites

BSEACD: Barton Springs Edwards Aquifer Conservation District; EAA: Edwards Aquifer Authority; HTGCD: Hays Trinity Groundwater Conservation District; JW: Jacob's Well; PT: Pressure Transducer (device used to continuously measure water levels); SWN: State Well Number; WC: Woodcreek; WL: Water Level; WSP: Wimberley Springs Partners; WWSC: Wimberley Water Supply Corporation, USGS: United States Geological Survey.

SWN or Tracking Number	Well Name	Well Depth	Monitoring Org	Proposed Monitoring Type
620893	Aqua Test Well #1	440	Wet Rock, Aqua	Continuous PT, Pumpage Volume, Pump start/stop
620892	Aqua Test Well #2	440	Wet Rock, Aqua	Continuous PT, Pumpage Volume, Pump start/stop
5764702	Aqua WC #22	400	Wet Rock, Aqua	Continuous PT, Pumpage Volume, Pump start/stop
5763904	Aqua WC #21	400	Wet Rock, Aqua	Continuous PT, Pumpage Volume, Pump start/stop
	Aqua WC #11	400	Wet Rock, Aqua	Continuous PT, Pumpage Volume, Pump start/stop
	WSP Park Well (#1512)	284	Wet Rock, Aqua	Continuous PT
5763902	WSP Bullfrog (#1513)	370	Wet Rock, Aqua	Continuous PT
5764705	WWSC #1, Mt Baldy Monitor Well	400	TWDB	Continuous PT
5763604	Arapahoe (LT)	680	HTGCD	Continuous PT
5764716	Graham	153	HTGCD	Continuous PT
5763901	WSP Sec 25 (#1511)	300	HTGCD	Continuous PT
5764703	WSP Maint 2 (#1509)	450	HTGCD	Continuous PT
5763908	Aqua WC #23	284	HTGCD	Continuous PT
340422	Private Well	430	HTGCD	Frequent WL
5763909	Private Well	365	HTGCD	Frequent WL
121536	Private Well	390	HTGCD	Frequent WL
5763905	Jacob's Well Spring	0	EAA, USGS	Continuous PT, Realtime Gauge
5764707	WWSC #3	400	BSEACD, WWSC	Continuous PT, Pumpage Volume, Pump start/stop
5764712	WWSC #6 Eagle Rock	350	BSEACD, WWSC	Continuous PT, Pumpage Volume, Pump start/stop
604846	JW Dual Completion Monitor Well	238	BSEACD	Continuous PT
604845	JW Westbay Multiport Monitor Well	Cow Creek	BSEACD	Continuous PT

Note: Map and table of proposed monitoring sites compiled by the Watershed Association in collaboration with well owners, Hays Trinity Groundwater Conservation District, Barton Springs Edwards Aquifer Conservation District, Edwards Aquifer Authority, Watershed Association, Aqua Texas, and Wimberley Water Supply Corporation.

Appendix D

Aquifer Test Data Sheet

Woodcreek Utility CO Well No. 24 - Aquifer Test (June 12, 2023)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	Temperature (F)	Water Level (ft bgl)	Water Level (ft MSL)	Drawdown (ft)	Pump Rate (gpm)	Specific Capacity (gpm/ft)	Comments
6/12/23 10:19 AM	0		72.6638	145.00	915.00	0			Pump Start
6/12/23 10:20 AM	1		72.635	166.92	893.08	21.92	120	5.47	Meter: 2,973,800 gallons
6/12/23 10:24 AM	5		72.7196	183.23	876.77	38.22	120	3.14	
6/12/23 10:29 AM	10		72.6962	187.40	872.60	42.39	120	2.83	
6/12/23 10:34 AM	15		72.7178	188.69	871.31	43.69	120	2.75	
6/12/23 10:39 AM	20		72.8024	189.14	870.87	44.13	120	2.72	pH: 6.76 / EC: 0.62
6/12/23 10:49 AM	30		72.8474	190.07	869.93	45.06	120	2.66	
6/12/23 11:19 AM	60		73.0058	189.78	870.22	44.78	120	2.68	pH: 7.07 / EC: 0.62
6/12/23 12:19 PM	120		73.0634	192.83	867.17	47.82	120	2.51	pH: 7.17 / EC: 0.63
6/12/23 1:19 PM	180		73.0436	193.31	866.69	48.30	120	2.48	pH: 7.22 / EC: 0.63
6/12/23 2:19 PM	240		73.076	193.74	866.26	48.73	120	2.46	pH: 7.23 / EC: 0.62
6/12/23 3:19 PM	300		73.0796	194.16	865.84	49.16	120	2.44	pH: 7.32 / EC: 0.63
6/12/23 4:19 PM	360		73.0922	194.86	865.14	49.86	120	2.41	
6/12/23 5:19 PM	420		73.0904	195.21	864.79	50.21	120	2.39	
6/12/23 6:19 PM	480		73.0724	195.65	864.35	50.64	120	2.37	
6/12/23 7:19 PM	540		73.0256	195.47	864.53	50.46	120	2.38	
6/12/23 8:19 PM	600		73.1066	195.82	864.18	50.81	120	2.36	
6/12/23 9:19 PM	660		73.1372	195.90	864.10	50.89	120	2.36	
6/12/23 10:19 PM	720		73.2272	196.18	863.82	51.18	240	4.69	
6/12/23 11:19 PM	780		73.3892	302.07	757.93	157.07	230	1.46	
6/13/23 12:19 AM	840		72.9464	303.24	756.76	158.23	230	1.45	
6/13/23 1:19 AM	900		72.9626	303.65	756.35	158.65	230	1.45	
6/13/23 2:19 AM	960		72.9104	305.15	754.85	160.15	230	1.44	
6/13/23 3:19 AM	1,020		72.9896	306.81	753.19	161.81	230	1.42	
6/13/23 4:19 AM	1,080		72.9284	307.62	752.38	162.62	230	1.41	
6/13/23 5:19 AM	1,140		73.0382	307.98	752.02	162.98	230	1.41	
6/13/23 6:19 AM	1,200		72.9752	308.09	751.91	163.09	230	1.41	
6/13/23 7:19 AM	1,260		72.8474	308.42	751.58	163.42	230	1.41	
6/13/23 8:19 AM	1,320		72.8528	308.67	751.33	163.67	230	1.41	
6/13/23 9:19 AM	1,380		72.8924	308.20	751.80	163.19	230	1.41	pH: 7.54 / EC: 0.62
6/13/23 10:19 AM	1,440		72.9158	315.07	744.93	170.07	230	1.35	pH: 7.53 / EC: 0.62
6/13/23 11:19 AM	1,500		72.8942	315.26	744.74	170.25	230	1.35	pH: 7.51 / EC: 0.62
6/13/23 12:19 PM	1,560		72.8888	314.94	745.06	169.94	230	1.35	
6/13/23 1:19 PM	1,620		72.887	315.31	744.69	170.30	230	1.35	
6/13/23 2:19 PM	1,680		72.9158	315.37	744.63	170.37	230	1.35	
6/13/23 3:19 PM	1,740		72.8618	315.61	744.40	170.60	230	1.35	

Note: bgl = below ground level Column Pipe Diameter = 3 in Motor: 40 HP MSL = Mean Sea Level Pump Setting = 336 ft. EC = Electrical conductivity (mS/cm)

Woodcreek Utility CO Well No. 24 - Aquifer Test (June 12, 2023)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	Temperature (F)	Water Level (ft bgl)	Water Level (ft MSL)	Drawdown (ft)	Pump Rate (gpm)	Specific Capacity (gpm/ft)	Comments
6/13/23 4:19 PM	1,800		72.8762	315.67	744.33	170.67	230	1.35	
6/13/23 5:19 PM	1,860		72.8402	315.92	744.08	170.92	230	1.35	
6/13/23 6:19 PM	1,920		72.8834	315.99	744.01	170.99	230	1.35	
6/13/23 7:19 PM	1,980		72.8978	316.01	743.99	171.01	230	1.34	
6/13/23 8:19 PM	2,040		72.8492	316.25	743.75	171.25	230	1.34	
6/13/23 9:19 PM	2,100		72.86	316.30	743.70	171.29	230	1.34	
6/13/23 10:19 PM	2,160		72.914	316.27	743.73	171.26	230	1.34	
6/13/23 11:19 PM	2,220		72.8672	316.41	743.59	171.41	230	1.34	
6/14/23 12:19 AM	2,280		72.9176	316.52	743.48	171.51	230	1.34	
6/14/23 1:19 AM	2,340		72.8744	316.80	743.20	171.80	230	1.34	
6/14/23 2:19 AM	2,400		72.9572	317.01	742.99	172.01	230	1.34	
6/14/23 3:19 AM	2,460		72.9068	316.93	743.07	171.93	230	1.34	
6/14/23 4:19 AM	2,520		72.8708	316.96	743.04	171.96	230	1.34	
6/14/23 5:19 AM	2,580		72.9032	317.08	742.93	172.07	230	1.34	
6/14/23 6:19 AM	2,640		73.022	317.16	742.84	172.16	230	1.34	
6/14/23 7:19 AM	2,700		72.8816	317.31	742.69	172.30	230	1.33	
6/14/23 8:19 AM	2,760		72.9158	317.44	742.56	172.43	230	1.33	
6/14/23 9:19 AM	2,820		72.8726	317.48	742.52	172.48	230	1.33	
6/14/23 10:19 AM	2,880		72.9662	317.50	742.50	172.49	230	1.33	
6/14/23 10:32 AM	2,893	0	72.8978	317.52	742.48	172.52	230	1.33	Meter: 3,554,200 gallons
6/14/23 10:41 AM	2,902	9	72.9428	161.79	898.21	16.79	0		> 90% recovery

Note: bgl = below ground level Column Pipe Diameter = 3 in Motor: 40 HP MSL = Mean Sea Level Pump Setting = 336 ft. EC = Electrical conductivity (mS/cm)

Woodcreek Utility CO Well No. 25 - Aquifer Test (June 12, 2023)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	Temperature (F)	Water Level (ft bgl)	Water Level (ft MSL)	Drawdown (ft)	Pump Rate (gpm)	Specific Capacity (gpm/ft)	Comments
6/12/23 10:19 AM	0		72.379	135.74	915.26	0			Pump Start
6/12/23 10:20 AM	1		72.354	146.86	904.14	11.12	180	16.19	Meter: 0000000 gallons
6/12/23 10:24 AM	5		72.135	244.93	806.07	109.19	180	1.65	
6/12/23 10:29 AM	10		71.715	266.85	784.15	131.11	70	0.53	pH: 6.25 / EC: 0.62
6/12/23 10:34 AM	15		72.093	215.20	835.80	79.46	70	0.88	
6/12/23 10:39 AM	20		72.301	198.75	852.25	63.01	70	1.11	
6/12/23 10:49 AM	30		72.451	195.97	855.03	60.23	80	1.33	
6/12/23 11:19 AM	60		72.403	197.20	853.80	61.45	80	1.30	pH: 7.01 / EC: 0.62
6/12/23 12:19 PM	120		72.32	198.18	852.82	62.44	80	1.28	pH: 7.17 / EC: 0.63
6/12/23 1:19 PM	180		72.324	199.79	851.21	64.05	80	1.25	pH: 7.34 / EC: 0.61
6/12/23 2:19 PM	240		72.308	200.19	850.81	64.45	80	1.24	pH: 7.31 / EC: 0.63
6/12/23 3:19 PM	300		72.324	200.99	850.02	65.24	80	1.23	pH: 7.34 / EC: 0.62
6/12/23 4:19 PM	360		72.321	201.99	849.01	66.25	80	1.21	
6/12/23 5:19 PM	420		72.33	203.13	847.87	67.39	80	1.19	
6/12/23 6:19 PM	480		72.317	203.89	847.11	68.15	80	1.17	
6/12/23 7:19 PM	540		72.295	204.22	846.78	68.47	80	1.17	
6/12/23 8:19 PM	600		72.309	204.62	846.38	68.88	80	1.16	
6/12/23 9:19 PM	660		72.307	204.84	846.16	69.10	80	1.16	
6/12/23 10:19 PM	720		72.325	205.18	845.82	69.44	150	2.16	
6/12/23 11:19 PM	780		72.336	250.73	800.27	114.99	150	1.30	
6/13/23 12:19 AM	840		72.324	276.65	774.35	140.90	150	1.06	
6/13/23 1:19 AM	900		72.33	278.54	772.46	142.80	150	1.05	
6/13/23 2:19 AM	960		72.283	287.69	763.31	151.95	150	0.99	
6/13/23 3:19 AM	1,020		72.3	293.71	757.29	157.97	150	0.95	
6/13/23 4:19 AM	1,080		72.308	294.07	756.93	158.33	150	0.95	
6/13/23 5:19 AM	1,140		72.328	294.31	756.69	158.57	150	0.95	
6/13/23 6:19 AM	1,200		72.305	294.62	756.38	158.87	150	0.94	
6/13/23 7:19 AM	1,260		72.282	294.94	756.06	159.20	150	0.94	
6/13/23 8:19 AM	1,320		72.305	295.30	755.70	159.55	150	0.94	
6/13/23 9:19 AM	1,380		72.309	295.49	755.52	159.74	150	0.94	pH: 7.51 / EC: 0.62
6/13/23 10:19 AM	1,440		72.293	311.35	739.65	175.61	160	0.91	pH: 7.52 / EC: 0.62
6/13/23 11:19 AM	1,500		72.305	312.63	738.37	176.89	160	0.90	pH: 7.52 / EC: 0.62
6/13/23 12:19 PM	1,560		72.316	312.80	738.20	177.06	160	0.90	
6/13/23 1:19 PM	1,620		72.321	313.11	737.89	177.36	160	0.90	
6/13/23 2:19 PM	1,680		72.274	313.46	737.55	177.71	160	0.90	
6/13/23 3:19 PM	1,740		72.291	313.56	737.44	177.82	160	0.90	

Note: bgl = below ground level Column Pipe Diameter = 3 in Motor: 40 HP MSL = Mean Sea Level Pump Setting = 357 ft. EC = Electrical conductivity (mS/cm)

Woodcreek Utility CO Well No. 25 - Aquifer Test (June 12, 2023)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	Temperature (F)	Water Level (ft bgl)	Water Level (ft MSL)	Drawdown (ft)	Pump Rate (gpm)	Specific Capacity (gpm/ft)	Comments
6/13/23 4:19 PM	1,800		72.325	313.66	737.34	177.92	160	0.90	
6/13/23 5:19 PM	1,860		72.295	313.82	737.19	178.07	160	0.90	
6/13/23 6:19 PM	1,920		72.317	314.04	736.96	178.30	160	0.90	
6/13/23 7:19 PM	1,980		72.324	314.15	736.85	178.41	160	0.90	
6/13/23 8:19 PM	2,040		72.297	314.20	736.80	178.46	160	0.90	
6/13/23 9:19 PM	2,100		72.288	314.38	736.62	178.64	160	0.90	
6/13/23 10:19 PM	2,160		72.359	314.45	736.55	178.71	160	0.90	
6/13/23 11:19 PM	2,220		72.319	314.46	736.54	178.71	160	0.90	
6/14/23 12:19 AM	2,280		72.3	314.32	736.68	178.57	160	0.90	
6/14/23 1:19 AM	2,340		72.313	314.34	736.67	178.59	160	0.90	
6/14/23 2:19 AM	2,400		72.307	314.32	736.68	178.58	160	0.90	
6/14/23 3:19 AM	2,460		72.293	314.31	736.69	178.57	160	0.90	
6/14/23 4:19 AM	2,520		72.27	314.34	736.66	178.60	160	0.90	
6/14/23 5:19 AM	2,580		72.301	314.28	736.72	178.54	160	0.90	
6/14/23 6:19 AM	2,640		72.297	314.28	736.72	178.54	160	0.90	
6/14/23 7:19 AM	2,700		72.297	314.52	736.48	178.78	160	0.89	
6/14/23 8:19 AM	2,760		72.304	314.51	736.49	178.77	160	0.89	
6/14/23 9:19 AM	2,820		72.321	314.75	736.25	179.01	160	0.89	
6/14/23 10:19 AM	2,880		72.303	314.93	736.07	179.19	160	0.89	
6/14/23 10:31 AM	2,892	0	72.307	314.90	736.10	179.16	160	0.89	Meter: 423,200 gallons
6/14/23 10:42 AM	2,903	11	72.407	151.97	899.03	16.23	0		> 90% recovery

Note: bgl = below ground level Column Pipe Diameter = 3 in Motor: 40 HP MSL = Mean Sea Level Pump Setting = 357 ft. EC = Electrical conductivity (mS/cm)

Appendix E

Water Quality



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information				
Frank Morgan Peerless Equipment, Ltd. 313 US Hwy 90 E Hondo, TX 78861	Project Name: Woodcreek Sample ID: Well 24 Matrix: Drinking Water Date/Time Taken: 06/14/2023 1020	PCS Sample #: 723874 Page 1 of 3 Date/Time Received: 06/14/2023 15:35 Report Date: 06/29/2023 Approved by: Chuck Wallgren, Plesident				

, I	316 7.3 <1 24 648 µm	mg/L S.U. mg/L mg/L nhos/cm at 25	N/A N/A 1 2	06/19/2023 10:27 06/23/2023 14:02 06/15/2023 11:20 06/15/2023 15:14	SM 2340B (Calc) SM 4500-H+ B SM 2320 B EPA 300.0	DJL CWW BMR JAS
, I	<1 24	mg/L mg/L	2	06/15/2023 11:20 06/15/2023 15:14	SM 2320 B EPA 300.0	JAS
		mg/L	1 2 ° C 1	06/15/2023 15:14	EPA 300.0	JAS
		_	2 ° C 1			
	648 un	nhos/cm at 25	°C 1	0.6/10/0000 11 00	C1 / C T / CD	~
	0.10	imos, em at 25	C I	06/19/2023 11:32	SM 2510B	CWW
	0.8	mg/L	0.2	06/15/2023 15:14	EPA 300.0	JAS
	< 0.2	mg/L	0.2	06/15/2023 15:14	EPA 300.0	JAS
3	< 0.1	mg/L	0.10	06/19/2023 05:15	SM 4500-P/B/E	JAS
	Precision		ssurance Sumr LCL	nary MS MSD UCL	LCS LCS Limit	Blank
			Quality As	Quality Assurance Sum	Quality Assurance Summary	Quality Assurance Summary

Test Description	Precision	Quality Ass Limit	surance Sumn LCL	nary MS	MSD	UCL	LCS	LCS Limit	Blank	
Total Hardness as CaCO3 (Calc)	N/A	N/A	N/A			N/A				
pH	N/A	N/A	N/A			N/A				
Carbonate	1	10	95	97	98	107	104	85 - 115		_
Chloride IC	2	10	95	100	98	102	99	85 - 115		
Conductivity, Specific	N/A	N/A	N/A			N/A				
Nitrate-N IC	<1	20	70	96	96	130	92	85 - 115		_
Nitrite-N IC	1	10	86	94	96	106	102	85 - 115		
Phosphorus, Total	2	10	91	*104	102	103	102	85 - 115		

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are abailable on request.

These analytical results relate only to the sample tested.

All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.

RL = Reporting Limits

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210-340-0343

^{*}Approved for release per QA Plan, Exception to Limits - QAM Section 13-4

[!] Parameter not NELAP certifiable

R Spike recovery outside control limits due to matrix effect - LCS within limits

Informational purposes only - pH outside hold time



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Frank Morgan Peerless Equipment, Ltd. 313 US Hwy 90 E Hondo, TX 78861	Project Name: Woodcreek Sample ID: Well 24 Matrix: Drinking Water Date/Time Taken: 06/14/2023 1020	PCS Sample #: 723874 Page 2 of 3 Date/Time Received: 06/14/2023 15:35 Report Date: 06/29/2023

Test Description	Flag	Result	Units	RL	Analysis I	ate/Time	Method	Analyst
Total Dissolved Solids		380	mg/L	10	06/15/202	3 15:05	SM 2540C	PML
Fluoride IC		0.49	mg/L	0.20	06/15/202	3 15:14	EPA 300.0	JAS
Alkalinity, Bicarbonate	!	302	mg/L	10	06/15/202	3 11:20	SM 2320 B	BMR
Nitrogen, Total		0.8	mg/L	1	06/15/202	3 15:14	Calculation	CFW
Arsenic/ICP MS		< 0.0005	mg/L	0.0005	06/22/202	3 09:46	EPA 200.8	DJL
Calcium/ICP (Total)		85.8	mg/L	1.00	06/19/202	3 10:27	EPA 200.7 / 6010 B	DJL
Lead/ICP MS		0.0020	mg/L	0.0005	06/22/202	3 09:46	EPA 200.8	DJL
Iron/ICP (Total)		< 0.010	mg/L	0.010	06/19/202	3 14:14	EPA 200.7 / 6010 B	DJL
Test Description		Precision	Quality As Limit	ssurance Summ LCL	ary MS MS	D UCL	LCS LCS Limit	Blank
Total Dissolved Solids		4	10	N/A	N/A N/	A N/A		
D1 11 TO		-1	1.0	0.7	0.5	105	06 05 115	

TO A TO	D		surance Sumi	nary	MED	UCL	1.00	LCS Limit	Blank
Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS LIMIT	DIAIIK
Total Dissolved Solids	4	10	N/A	N/A	N/A	N/A			
Fluoride IC	<1	10	87	95	95	105	96	85 - 115	
Alkalinity, Bicarbonate	1	10	95	97	98	107	104	85 - 115	
Nitrogen, Total	N/A	N/A	N/A			N/A			
Arsenic/ICP MS	3	20	70	105	109	130	106	85 - 115	
Calcium/ICP (Total)	2	20	75	*N/C	*N/C	125	92	85 - 115	
Lead/ICP MS	3	20	70	104	107	130	103	85 - 115	
Iron/ICP (Total)	<1	20	75	101	101	125	105	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are abailable on request.

! Parameter not NELAP certifiable

These analytical results relate only to the sample tested.

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RL = Reporting Limits

*N/C = Not Calculated, Sample Concentration Greater than 5 times the Spike Level

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^{*}Approved for release per QA Plan, Exception to Limits - QAM Section 13-4



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information				
Frank Morgan Peerless Equipment, Ltd. 313 US Hwy 90 E Hondo, TX 78861	Project Name: Woodcreek Sample ID: Well 24 Matrix: Drinking Water Date/Time Taken: 06/14/2023 1020	PCS Sample #: 723874 Page 3 of 3 Date/Time Received: 06/14/2023 15:35 Report Date: 06/29/2023				

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Magnesium/ICP (Total)	24.8	mg/L	1.00	06/19/2023 10:27	EPA 200.7 / 6010 B	DJL
Potassium/ICP (Total)	1.44	mg/L	1.00	06/19/2023 10:27	EPA 200.7 / 6010 B	DJL
Sodium/ICP (Total)	11.3	mg/L	1.00	06/19/2023 10:27	EPA 200.7 / 6010 B	DJL
Manganese/ICP (Total)	< 0.010	mg/L	0.010	06/19/2023 14:14	EPA 200.7 / 6010 B	DJL
Silica as SiO2	10.6	mg/L	1.07	06/19/2023 10:27	EPA 200.7 / 6010B	DJL
Mercury/CVAA (Total)	< 0.002	mg/L	0.002	06/22/2023 10:45	EPA 245.1	EMV

Test Description	Precision	Quality As Limit	surance Sumi LCL	mary MS	MSD	UCL	LCS	LCS Limit	Blank
Magnesium/ICP (Total)	2	20	75	96	99	125	96	85 - 115	
Potassium/ICP (Total)	2	20	75	101	102	125	99	85 - 115	
Sodium/ICP (Total)	3	20	75	*N/C	*N/C	125	96	85 - 115	
Manganese/ICP (Total)	<1	20	75	101	101	125	100	85 - 115	
Silica as SiO2	5	20	70	*N/C	*N/C	130	112	85 - 115	
Mercury/CVAA (Total)	<1	20	75	86	86	125	103	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are abailable on request.

*Approved for release per QA Plan, Exception to Limits - QAM Section 13-4

These analytical results relate only to the sample tested.

All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.

RL = Reporting Limits

* $N/C = Not \ Calculated$, Sample Concentration Greater than 5 times the Spike Level

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Pollution Control Services Mineral Analysis QA Check - Stabler Formula

PCS Sample#: 723874

Cation Results

me/L	0.0000	0.4916	4.2814	2.0386	0.0369	0.0000	6.8485
mg/L	<0.010 Iron/ICP (Total)	11.3 Sodium/ICP (Total)	85.8 Calcium/ICP (Total)	24.8 Magnesium/ICP (Total)	1.44 Potassium/ICP (Total)	<0.010 Manganese/ICP (Total)	Sum Cations (me/L):
ш	8					\	

Anion Results

me/L	0.0129	6.0424	0.6768	0.0258	6.7579
mg/L	0.8 Nitrate-N_IC	302 Alkalinity, Bicarbonate	24 Chloride_IC	0.49 Fluoride_IC	Sum Anions (me/L):

%Error: 0.6659

Chain of Custody Number
7 2 3 8 7 4

MULTIPLE SAMPL	LE ANALY	212 KEQ	OFP	1 A	ND CHAIN	UF	C Ui	STODY FORM						Stamp	l''' sar	nple and C	OC as si	ame r	iumbei	r
CUSTOMER INFORMA	ATION				REPORT	' INF	OR	MATION												
Name: Peerless Equipmen	1+				Attention:	8					Phone:				F	ax:				
SAMPLE INFORMÁTIO									Re	que	sted A	nalysis								
Project Information:			Collec	ted By	/:											Instruct	ions/Con	nmen	ts:	
Woodcreek					Matrix			Container	_ું											
Report "Soils" ☐ As Is ☐ Dry	Wt.		ne 3/L	7.	DW-Drinking				3											
			ılori I mg	site (Water; NPW-Non- potable water;	၂ ျ	ber		Altolded						1					
Client / Field Sample (D.	Colle	ctea	d Cl idua	npos b	WW-Wastewater;	Туре	Number	Preservative												
Client / Field Sample ID	Date	Time	U						See							PCS	Samp	le N	umb	er
Well 24	Start: 06-23-14	Start: 10:20cm		СС	DW NPW Soil	□P □G		□ H ₂ SO ₄ □ HNO ₃ □ H ₃ PO ₄ □ NaOH									38			
Well of	End:	End:		□G	☐ Sludge ☐ LW ☐ Other	□ 0		□ ICE □								OS □B M	N DHEM	Other:		
	Start:	Start:			☐ DW ☐ NPW ☐ WW ☐ Soil	□P □G		□ H ₂ SO ₄ □ HNO ₃ □ H ₃ PO ₄ □ NaOH												
	End:	End:			Sludge LW	<u></u> 0		□ ICE □								□S □B □	IN □HEM	Other:		
	Start:	Start:			□ DW □ NPW □ WW □ Soil	□P □G		□H ₂ SO ₄ □ HNO ₃ □H ₃ PO ₄ □ NaOH												
	End:	End:			Sludge LW Other			□ICE □									IN DHEM	Other:		
	Start:	Start:		□с	☐ DW ☐ NPW ☐ WW ☐ Soil	□P □G		□ H ₂ SO ₄ □ HNO ₃ □ H ₃ PO ₄ □ NaOH												
	End:	End:		□G	☐ Sludge ☐ LW ☐ Other	□ 0		DICE D								□S□B□	IN □HEM	Other:		
	Start:	Start:		□С	□ DW □ NPW □ WW □ Soil	□P □G		□H ₂ SO ₄ □HNO ₃ □H ₃ PO ₄ □N2OH												
	End:	End:		∏G	☐ Sludge ☐ LW ☐ Other			□ICE □	:								IN □HEM	Other:		
	Start:	Start:		□с	□ DW □ NPW □ WW □ Soil	□P □G		□ H ₂ SO ₄ □ HNO ₃ □ H ₃ PO ₄ □ NaOH												
	End:	End:		□G	☐ Sludge ☐ LW ☐ Other	ПО		□ICE □								□S□B□	IN □HEM	Other:		
	Start:	Start:		□c	☐ WW ☐ Soil	□P □G		 H₂SO₄												
	End:	End:		∏G	Other	□○		□ICE □								□S □B □	IN □HEM	Other:		
	Start:	Start:		С	□ WW □ Soil	□P □G		 H₂SO₄												
	End:	End:		□G	Sludge []LW []Other			□ ICE □								□S □B □	IN □HEM	Other:		
Required Turnaround: 🗆 R	outine (6-10 day	s) <i>EXPEDIT</i>	r E : (Se	е Ѕитс	harge Schedule)	□ < 3	8 Hrs	. □ < 16 Hrs. □ < 24 H	rs. 🗆	1 5 da	ıys 🗆 O	ther:	$\gamma = R$	Rush Charg	es Au	thorized by:				
Sample Archive/Disposal:	Laboratory Star	ndard 🗆 Hold		_		taine	er Ty	pe: P = Plastic, G = Glas						-		arrier ID: _				
Relinquished By:	16		Date	1	6114/2 Time:	15	33		lu	~	M		~	Dat	_	14.7	4		153	5
Rëlinquished By:		7	Date		Time:			Received By:	-		7777			Dat	e:		Tim	e:		
Rev. Multiple Sample COC_20180628								\ \ /												

calculated maximum pumping rate of each well. The rate will remain steady for the duration of the test unless a reduction is needed to keep the pumping level above the pump;

- to Discharge rate from the pumping well will be determined by a calibrated flow meter attached the discharge column on the well head;
- Both test pumps will be set at approximately 350 ft below ground level;
- During the aquifer tests, both test wells will be monitored using a pressure transducer recording at one-minute intervals.
- hours the well will return to a normal pumping cycle schedule if needed. Although pumping an observation well during a test is against rule 11.6.4.B, Well No. 21 must be pumped to supply water to the surrounding area but will provide valuable data pertaining to the impact within the Jacobs Woodcreek Utility 2 Well No. 21 will not pump for the first 48 hours of the test. After the first 48 Well Management Zone.
- To gather pre-test background water level data, all wells will be monitored for fourteen days prior to the commencement of the pumping test;
- The recovery period for the aquifer test will continue until 90% recovery is achieved.
- observation wells offsite that will be monitored and measured by the District and data provided to within a specific aquifer/formation. Evidence of each well's completion will be documented by a Wells used as observation wells will have evidence to show that each well is completed downhole video survey or gamma/resistivity/caliper log. A table of proposed monitoring wells is Aqua will coordinate with the District to develop an agreed upon number and included in attached figures.
- To provide redundancy and verifiable measurements during no flow conditions at Jacobs Well, the Edwards Aquifer Authority (EAA) will install a pressure transducer within a 1 1/2 -inch PVC pipe with holes drilled at the base into the spring. Monitoring of Jacob's Well will be the responsibility of the District to provide data to Aqua;
- All time and dates of the transducers used in the monitoring will be synced and set to a common recording start time and time steps prior to beginning the fourteen days of background monitoring;
- A water quality sample will be taken during the aquifer test sampled for the following constituents pursuant to section 11.7.1.B.: calcium, magnesium, manganese, iron, potassium, chloride, sodium, silica, sulfate, nitrate (as nitrogen) bicarbonate, carbonate, conductivity, pH, total hardness, total dissolved solids, lead, arsenic, mercury and phosphorus as well as nitrite, aluminum, copper and zinc;
- Temperature, Conductivity, and pH values shall be measured in the field during the pumping phase values should be considered stable when they are within plus or minus 10%. pH values should be of the test until stable for two hours of pumping and at the end of the pumping phase. Conductivity considered stable when they are within plus or minus 0.1 standard pH units;
- Every 4 hours during the aquifer test, during normal business hours, the discharging water shall be described based on clarity, color and smell.

3

Sample Log-In Checklist DCN: SL-001, Rev. 1 Effective Date: 6/07/2022

Pollution Control Services Sample Log-In Checklist

7 L 8 L C (2) N Clauses 30 d	723874
аш	Checklist Completed by:
Sample Delivery to Lab Via: Client Drop Off Commercial Carrier: Bus UPS L PCS Field Services: Collection/Pick Up Other:	Lone StarFedExUSPS
Sample Kit/Cooler? Yes No Sample Kit/Cooler: Intact? Yes No Custody Seals on Sample Kit/Cooler: Not Present IfPresent, Intact Broken Sample Containers Intact; Unbroken and Not Leaking? Yes No Custody Seals on Sample Bottles: Not Present IfPresent, Intact Broken COC Present with Shipment or Delivery or Completed at Drop Off? Yes No Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: Has COC been properly Signed when Received/Relinquished? Yes No Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes No Sufficient Sample Volumes for Analysis Requested? Yes No Zero Headspace in VOA Vial? Yes No	If Present, Intact Broken No Present, Intact Broken Off? Yes No n provided by client/sampler? Yes: Yes No Preservation, etc.? Yes No
or Required or Submitted samples ves No ves No ves No ber: Vaughan 180700958;	Observed/Corrected / / P °C Samples received same day as collected? Yes No
Acid Preserved Sample - If present, is pH <2? Base Preserved Sample - If present, is pH > 12? Yes No	** H ₂ SO ₄ HNO ₃ H ₃ PO ₄ rements? Yes No Time (HEM pH checked at analysis). rved Preservative Used Log # Log #
Adjusted by Tech/Analyst: LAAU Date (2.14.23 Time: 1426)	
Person Notified: Notified Date: Notified Date: Time: Method of Contact Unable to Contact Regarding / Comments: Contacted by: Contacte	Bove/ Discrepancies/ Revision Comments E-Mail Fax (Lab Director)
Actions taken to correct problems/discrepancies:	
Receiving qualifier needed (requires client notification above) Temp. Receiving qualifier entered into LIMS at login Initial/Date: Revision Comments:	Holding Time Initails:



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Frank Morgan Peerless Equipment, Ltd. 313 US Hwy 90 E Hondo, TX 78861	Project Name: Woodcreek Sample ID: Well 25 Matrix: Drinking Water Date/Time Taken: 06/14/2023 1020	PCS Sample #: 723875 Page 1 of 3 Date/Time Received: 06/14/2023 15:35 Report Date: 06/29/2023 Approved by: Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analy	sis Dat	te/Time	Metho	od	Analyst	
Total Hardness as CaCO3 (Calc)		311	mg/L	N/A	06/19	9/2023	10:27	SM 234	OB (Calc)	DJL	
рН	!, I	7.3	S.U.	N/A	06/23	3/2023	14:04	SM 450	0-H+ B	CWW	
Carbonate	,	<1	mg/L	1	06/15	5/2023	11:20	SM 232	0 B	BMR	
Chloride IC		23	mg/L	2	06/15	5/2023	16:07	EPA 300	0.0	JAS	
Conductivity, Specific		606 μmh	os/cm at 25	°C 1	06/19	9/2023	11:30	SM 251	0B	CWW	
Nitrate-N IC		0.9	mg/L	0.2	06/15	5/2023	16:07	EPA 300	0.0	JAS	
Nitrite-N IC		< 0.2	mg/L	0.2	06/15	5/2023	16:07	EPA 300	0.0	JAS	
Phosphorus, Total		< 0.1	mg/L	0.10	06/19	9/2023	05:30	SM 450	0-P/B/E	JAS	
Test Description		Precision	Quality As Limit	ssurance Sumn LCL	mary MS	MSD	UCL	LCS	LCS Limit	Blank	
Total Hardness as CaCO3 (Calc)		N/A	N/A	N/A			N/A				
рН		N/A	N/A	N/A			N/A				
Carbonate		1	10	95	97	98	107	104	85 - 115		
Chloride IC		2	10	95	100	98	102	99	85 - 115		
Conductivity, Specific		N/A	N/A	N/A			N/A				
• • •											

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are abailable on request.

70

86

91

96

94

102

20

10

10

<1

<1

Nitrate-N IC

Nitrite-N IC

Phosphorus, Total

These analytical results relate only to the sample tested.

130

106

103

All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.

102

102

RL = Reporting Limits

96

96

102

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85 - 115

85 - 115

85 - 115

[!] Parameter not NELAP certifiable

I Informational purposes only - pH outside hold time



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Frank Morgan Peerless Equipment, Ltd. 313 US Hwy 90 E Hondo, TX 78861	Project Name: Woodcreek Sample ID: Well 25 Matrix: Drinking Water Date/Time Taken: 06/14/2023 1020	PCS Sample #: 723875 Page 2 of 3 Date/Time Received: 06/14/2023 15:35 Report Date: 06/29/2023

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Total Dissolved Solids		364	mg/L	10	06/16/2023 14:55	SM 2540C	PML
Fluoride IC		0.32	mg/L	0.20	06/15/2023 16:07	EPA 300.0	JAS
Alkalinity, Bicarbonate	!	298	mg/L	10	06/15/2023 11:20	SM 2320 B	BMR
Nitrogen, Total		0.9	mg/L	1	06/15/2023 16:07	Calculation	CFW
Arsenic/ICP MS		< 0.0005	mg/L	0.0005	06/22/2023 09:46	EPA 200.8	DJL
Calcium/ICP (Total)		85.2	mg/L	1.00	06/19/2023 10:27	EPA 200.7 / 6010 B	DJL
Lead/ICP MS		0.0016	mg/L	0.0005	06/22/2023 09:46	EPA 200.8	DJL
Iron/ICP (Total)		< 0.010	mg/L	0.010	06/19/2023 14:14	EPA 200.7 / 6010 B	DJL
Test Description		Precision	Quality As Limit	ssurance Summ LCL	ary MS MSD UCL	LCS LCS Limit	Blank
Total Dissolved Solids	· · · · · · · · · · · · · · · · · · ·	<1	10	N/A	N/A N/A N/A	106	

Test Description	Precision	Quality As Limit	LCL	mary MS	MSD	UCL	LCS	LCS Limit	Blank
Total Dissolved Solids	<1	10	N/A	N/A	N/A	N/A	106		
Fluoride IC	<1	10	87	95	95	105	96	85 - 115	
Alkalinity, Bicarbonate	1	10	95	97	98	107	104	85 - 115	
Nitrogen, Total	N/A	N/A	N/A			N/A			
Arsenic/ICP MS	3	20	70	105	109	130	106	85 - 115	
Calcium/ICP (Total)	2	20	75	*N/C	*N/C	125	92	85 - 115	
Lead/ICP MS	3	20	70	104	107	130	103	85 - 115	
Iron/ICP (Total)	<1	20	75	101	101	125	105	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are abailable on request.

These analytical results relate only to the sample tested.

All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.

RL = Reporting Limits

 $*N/C = Not \ Calculated$, Sample Concentration Greater than 5 times the Spike Level

Web Site: www.pcslab.net eMail: chuck@pcslab.net

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1532 Universal City Blvd, Suite 100 Universal City, TX 78148-3318 210-340-0343

^{*}Approved for release per QA Plan, Exception to Limits - QAM Section 13-4

[!] Parameter not NELAP certifiable



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Frank Morgan Peerless Equipment, Ltd. 313 US Hwy 90 E Hondo, TX 78861	Project Name: Woodcreek Sample ID: Well 25 Matrix: Drinking Water Date/Time Taken: 06/14/2023 1020	PCS Sample #: 723875 Page 3 of 3 Date/Time Received: 06/14/2023 15:35 Report Date: 06/29/2023

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Magnesium/ICP (Total)	23.8	mg/L	1.00	06/19/2023 10:27	EPA 200.7 / 6010 B	DJL
Potassium/ICP (Total)	1.76	mg/L	1.00	06/19/2023 10:27	EPA 200.7 / 6010 B	DJL
Sodium/ICP (Total)	11.0	mg/L	1.00	06/19/2023 10:27	EPA 200.7 / 6010 B	DJL
Manganese/ICP (Total)	< 0.010	mg/L	0.010	06/19/2023 14:14	EPA 200.7 / 6010 B	DJL
Silica as SiO2	10.2	mg/L	1.07	06/19/2023 10:27	EPA 200.7 / 6010B	DJL
Mercury/CVAA (Total)	< 0.002	mg/L	0.002	06/22/2023 10:45	EPA 245.1	EMV

			surance Sumi	nary	N. FOID	XICI	1.00	T CC T : :	DII-
Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Magnesium/ICP (Total)	2	20	75	96	99	125	96	85 - 115	
Potassium/ICP (Total)	2	20	75	101	102	125	99	85 - 115	
Sodium/ICP (Total)	3	20	75	*N/C	*N/C	125	96	85 - 115	
Manganese/ICP (Total)	<1	20	75	101	101	125	100	85 - 115	
Silica as SiO2	5	20	70	*N/C	*N/C	130	112	85 - 115	
Mercury/CVAA (Total)	<1	20	75	86	86	125	103	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are abailable on request.

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These analytical results relate only to the sample tested.

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Pollution Control Services Mineral Analysis QA Check - Stabler Formula

PCS Sample#: 723875

Cation Results

me/L	0.0000	0.4785	4.2515	1.9564	0.0451	0.0000	6.7315
mg/L	<0.010 Iron/ICP (Total)	11.0 Sodium/ICP (Total)	85.2 Calcium/ICP (Total)	23.8 Magnesium/ICP (Total)	1.76 Potassium/ICP (Total)	<0.010 Manganese/ICP (Total)	Sum Cations (me/L):

Anion Results

me/L	0.0145	5.9624	0.6486	0.0168	6.6423
mg/L	0.9 Nitrate-N_IC	298 Alkalinity, Bicarbonate	23 Chloride_IC	0.32 Fluoride_IC	Sum Anions (me/L):

%Error: 0.6670

Chain of Custody Number
7 2 3 8 7 5

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMA		OID ILEQ	0130	1 11				MATION									
Name: Peerless Equit					Attention					F	hone:				Fax:		
SAMPLE INFORMATIO	ON								Rec	ques	ted Ana	llysis					
Project Information:			Colle	cted By	/ :										Instru	ctions/Com	ments:
Woodcreek					Matrix			Container]ન્ડ્ર								
Report "Soils" ☐ As Is ☐ Dry	Wt.		ine g/L	10	DW-Drinking Water; NPW-Non-				Athehed								
	Colle	ected	Chlorine lual mg/L	site	potable water;	Type	ıber	D	玉								
Client / Field Sample ID			Field C Residu	Composite or Grab	WW-Wastewater; LW-Liquid Waste	Ty	Number	Preservative									
	Date	Time		ပိပၱ					18						PC	S Sampl	e Number
Well 95	Start: 15	Start:		ПС	□ DW □ NPW □ WW □ Soil	□P □G		☐ H ₂ SO ₄ ☐ HNO ₃ ☐ H ₃ PO ₄ ☐ NaOH							7	238	75
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	Start:	Start:		ПС	□ DW □ NPW □ WW □ Soil	□P □G		□H ₂ SO ₄ □HNO ₃ □H ₃ PO ₄ □NaOH									
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Required Turnaround: R	outine (6-10 day	s) <i>EXPEDIT</i>	r E: (Se	ee Surc	harge Schedule)	□ < 8	8 Hrs	. □ < 16 Hrs. □ < 24 Hr	s. 🗆 5	5 day	's 🗆 Oth	er:	Rus	h Charges	Authorized b	y:	
Sample Archive/Disposal:	Laboratory Star	ndard 🗆 Hold	for cli	ent picl	cup Cor	ıtaine	er Ty	pe: P = Plastic, G = Glass.	O =	Oth	ir/				Carrier ID:		nguese -
Relinquished By:	Elit		Date	6.1	4.23 Time:	15	:36	Received By:	u	4	leal	1		Date:	- uri		1000
Relinquished By:		200	Date	:	Time:			Received By:	-					Date:		Time	:

calculated maximum pumping rate of each well. The rate will remain steady for the duration of the test unless a reduction is needed to keep the pumping level above the pump;

- Ç a calibrated flow meter attached Discharge rate from the pumping well will be determined by the discharge column on the well head;
- Both test pumps will be set at approximately 350 ft below ground level;
- During the aquifer tests, both test wells will be monitored using a pressure transducer recording at one-minute intervals.
- observation well during a test is against rule 11.6.4.B, Well No. 21 must be pumped to supply water Woodcreek Utility 2 Well No. 21 will not pump for the first 48 hours of the test. After the first 48 hours the well will return to a normal pumping cycle schedule if needed. Although pumping an to the surrounding area but will provide valuable data pertaining to the impact within the Jacobs Well Management Zone.
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- pursuant to section 11.7.1.B.: calcium, magnesium, manganese, iron, potassium, chloride, sodium, hardness, total dissolved solids, lead, arsenic, mercury and phosphorus as well as nitrite, aluminum, A water quality sample will be taken during the aquifer test sampled for the following constituents silica, sulfate, nitrate (as nifrogen, bicarbonate, carbonate, conductivity, pH, copper and zinc;
- Temperature, Conductivity, and pH values shall be measured in the field during the pumping-phase. of the test until stable for two hours of pumping and at the end of the pumping phase. Conductivity values should be considered stable when they are within plus or minus 10%. pH values should be considered stable when they are within plus or minus 0.1 standard pH units;
- Every 4 hours during the aquifer test, during normal business hours, the discharging water shall be described based on clarity, color and smell.

Groundwater Specialists

Sample Log-In Checklist DCN: SL-001, Rev. 1 Effective Date: 6/07/2022

Pollution Control Services Sample Log-In Checklist

PCS Sample No(s) 7 2 5 8 7 9 COC No.	723875
iame: Flexiless Equip.	Checklist Completed by: LMW
Sample Delivery to Lab Via: Client Drop Off Commercial Carrier: Bus UPS Lone Star FedEx PCS Field Services: Collection/Pick Up Other:	SxUSPS
Cit/C t and sottl sottl r pe r pe n R n R e Ini	? Yes:No:
Sample Preservation: **Cooling: Not Required	collected? Yes No
Acid Preserved Sample - If present, is pH < 2? Yes No ++ H2SO4 Base Preserved Sample - If present, is pH > 12? Yes No NaOH Other Preservation: If Present, Meets Requirements? Yes No Sample Preservation: Date Time OH paper used to check sample preservation (PCS log #): (HEM pH check preserved/Adjusted by Lab: Lab # Parameters Preserved Preservative Used Preserved Preserved Preservative Used Preserved/Adjusted by Lab: Lab # Parameters Preserved Preservative Used Preserved Preservative Used Preserved Preserved Preservative Used Preserved	H ₂ SO ₄ HNO ₃ H ₃ PO ₄ NaOH s No (HEM pH checked at analysis). Servative Used Log # COLT 13763 17504
Adjusted by Tech/Analyst: LALL Date (414.23 Time: 1620)	
Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ Revision Comments Person Notified Date: Notified Date: Time: Contacted by: Left Voice Mail E-Mail Fax	cies/ RevisionComments
Unable to Contact Authorized Laboratory to Proceed :	(Lab Director)
Actions taken to correct problems/discrepancies:	
Receiving qualifier needed (requires client notification above) Temp. Holding Time_Receiving qualifier entered into LIMS at login Initial/Date:	Initails: