General Manager's Statement of Position
Revised December 21, 2020

DESCRIPTION OF APPLICATION

Applicant: Electro Purification LLC

Type of Application: Production Permit in Middle Trinity Management Zone

Request: Production Permit to withdraw up to 912,500,000 gallons/year (2.5 million gallons a day) from the Middle Trinity Aquifer for wholesale public water supply. The Production Permit, if approved, would be subject to the rules related to pumpage from wells completed in the Middle Trinity Management Zone.

BACKGROUND

Electro Purification LLC (EP) drilled seven Middle Trinity test wells between 2013-2015 to conduct a hydrogeological evaluation of the aquifer to assess prospective public water supply use. The wells were drilled on private property (Bridges Tract and Odell Tract) in central Hays County. In February 2015, Wet Rock Groundwater Services, LLC (WRGS) produced a report of findings and reported a maximum daily well field production rate of 2.5 million gallons per day (MGD). The well field is located within the Edwards Aquifer Authority's (EAA) jurisdictional boundary where the Trinity Aquifer was previously unregulated. The legislature passed H.B. 3405 on June 19, 2015 adding this territory, shared with the EAA, into the jurisdiction of the Barton Springs/Edwards Aquifer Conservation District (BSEACD).

H.B. 3405 and District rules adopted in July 2015 require all nonexempt, non-Edwards wells to be permitted and provide a three-month period to apply for an interim authorization under a Temporary Permit before conversion to a Regular Permit. EP submitted a Temporary Permit application for 100 ac-ft/year (32,590,000 gallons/year) on September 18, 2015. The General Manager issued the Temporary Permit in November 2015, but in March 2016, EP withdrew the Regular Permit application and instead submitted a General Permit to conduct an aquifer test. In October 2015, District staff began a rule making effort that focused on defining a process for assessing potential unreasonable impacts, and the District Board adopted the rules on April 28, 2016.

EP conducted an aquifer test prior to submitting a Production Permit application. Beginning on October 31, 2016, WRGS performed a series of aquifer tests on three of the existing EP test wells (Bridges No. 1, Bridges No. 2, and Odell No. 2). The three wells were acidized prior to testing and because the wells were not permanently completed, a packer was set to isolate production to

the Cow Creek Member of the Trinity Aquifer (Cow Creek), which is the ultimate target production zone. A hydrogeologic report that ultimately satisfied the District's *Guidelines for Hydrogeologic Reports and Aquifer Tests* was submitted in July 2017 along with a Production Permit application.

APPLICATION REVIEW

Summary of Request and Water Demand

On July 13, 2017, EP submitted a Production Permit application, a Hydrogeologic Report, and seven Well Modification applications. The Production Permit application submitted by EP proposes to produce 912,500,000 gallons/year (2.5 MGD) from the Middle Trinity Aquifer for the purpose of wholesale public water supply. A contract is currently in place between EP and the Goforth Special Utility District (Goforth SUD) for EP to deliver to GoForth SUD, 3 MGD of water produced from the EP Well Field. The original water supply contract was signed in February 2013 and there have been two amendments to the contract since that date.

Verification of Ownership

The applicant provided two memorandums of lease as verification of ownership. EP is leasing the groundwater rights from two landowners in central Hays County. A memorandum of lease between Bridges Brothers Family LP No.1 and EP was recorded with Hays County. The term of the lease is 50 years from an effective date of November 1, 2013 for as long as groundwater is being commercially produced unless it is terminated sooner upon the occurrence of certain events of default outlined in the lease. The Bridges property consists of two tracts of land; tract 1 is 444.7 acres and tract 2 is 479.45 acres for a total of 924.15 acres. A second memorandum of lease between Roy Odell, Eddie Odell, and Nita Leinneweber and EP was recorded with Hays County. The initial term of the lease was for 3 years from the effective date of December 12, 2014, unless extended, and for as long as the groundwater is being commercially produced. The initial term was extended to December 2019. The Odell property consists of 457 acres.

Wells/Receiving Area Location

The well field is located on two properties (Bridges Tract and Odell Tract) located along FM 3237 approximately 9 miles northwest of the City of Kyle and 5.5 miles northeast of Wimberley, in central Hays County (Appendix A). Water produced from the EP well field is proposed to be delivered to Goforth SUD via a 16-inch water pipeline that will extend approximately 11 to 13 miles eastward to the delivery point (Appendix B). The water will not be transported outside of the District boundary.

The EP well field currently consists of seven test wells: Bridges No. 1, Bridges No. 2, Bridges No. 3, Bridges No. 4, Odell No. 1, Odell No. 2, and Odell No. 3 (Appendix C). Initially, three wells

(Bridges No. 1, Bridges No. 2, and Odell No. 2) will be completed to Texas Commission on Environmental Quality (TCEQ) Public Water Supply (PWS) standards; three wells (Bridges No. 3, Bridges No. 4, and Odell No. 2) will be completed as domestic wells until needed for PWS production in future phases; and one well (Odell No. 1) was converted to a Lower Glen Rose monitoring well.

User Conservation Plan (UCP)/User Drought Contingency Plan (UDCP)

EP submitted a UCP and UDCP which contain the required elements in accordance with applicable District Rule 3-6.3 and is consistent with District guidelines. At this time, the maximum mandatory drought curtailment for Historic Middle Trinity Production Permits is 30% off the permitted pumpage volume.

Aquifer Test and Hydrogeological Report

WRGS conducted an aquifer test, and prepared and submitted a hydrogeologic report (WRGS, 2017) and supplemental information (dated November 16, 2017; December 14, 2017) in support of the aquifer test and EP Production Permit application. The report generally satisfied the District's *Aquifer Test and Hydrogeologic Report Guidelines* (BSEACD, 2016). Those guidelines state that the aquifer test must be designed to pump at a rate equivalent to three times the requested annual permitted volume. A total of 14,224,897 gallons were pumped from the three wells during the EP aquifer testing. This volume represented more than five times the requested daily volume (2.5 MGD) and was of sufficient volume and duration to evaluate effects to the aquifer and wells. The aquifer test provided data necessary to evaluate: 1) aquifer properties, 2) potential impacts, and 3) baseline water quality. EP conducted the aquifer test according to District guidelines and consulted and involved the District in all aspects of the test.

The District's Aquifer Science team produced four technical memos from the aquifer test data and hydrogeological report. Those memos include: 1) an evaluation of the aquifer test (BSEACD, 2017); 2) an estimate of aquifer parameters (BSEACD, 2018a); 3) an evaluation of the potential for unreasonable impacts (BSEACD, 2018b); and 4) an evaluation of the potential for unreasonable impacts (BSEACD, 2019-0313_rev). In addition, INTERA Inc. (INTERA) prepared a report in 2018 that provides additional evaluations of the impacts to the aquifers.

Results of the District's evaluations indicate that the Cow Creek in the EP vicinity is a compartmentalized aquifer system with limits on its ability to yield water and to avoid unreasonable impacts from large pumping amounts. Evaluation of the aquifer-test data and modeling of the proposed pumping of 2.5 MGD of groundwater from the existing well field results in substantial drawdown in the Cow Creek and possibly inducing drawdown in the overlying Lower Glen Rose.

The aquifer test was conducted at a time when water levels were above average in central Hays County. When water level declines caused by drought conditions (up to 50 feet) is added to the aggregate drawdown from the tests, water levels in certain monitoring wells could potentially be drawn down below the pump, causing the well to cease production. Modeling has shown that longer periods of pumping will cause even greater drawdown and have a high-risk of leading to the conditions enumerated below.

District rules require the General Manager to assess the EP application for the potential for unreasonable impacts based upon multiple factors. Using this assessment, the General Manager concluded that the proposed production of 2.5 MGD of groundwater from the existing EP wells has the potential for unreasonable impacts based on the following regulatory criteria:

1. Well interference that causes one or more wells to cease to yield water: This condition is very likely, without special permit conditions and avoidance measures.

2. Well interference that significantly decreases yield of other wells to the extent it prevents the wells from providing an authorized, historic, or usable amount or rate of water production: This condition is very likely, without special permit conditions and avoidance measures.

3. Well interference that lowers the water levels below the physical or economically feasible level of pump intakes: This condition is almost certain, without special permit conditions and avoidance measures.

4. Degradation of water quality in other wells such that the native water is unusable for its current purpose: This condition is not determinable based on existing information, but its likelihood is probably spatially and temporally variable.

Consistent with these findings, by letter dated February 20, 2018, the General Manager notified EP of this potential to cause unreasonable impact.

Desired Future Condition (DFC)

Included in the General Manager's evaluation of the potential for unreasonable impacts is the effect of proposed production on the achievement of the DFC. The DFC for the Trinity Aquifer in Groundwater Management Area 10 (GMA 10) is average well drawdown not to exceed 25 feet during average recharge conditions. GMA 10 does not yet have sufficient Trinity data nor methods in place for determining compliance with the current expression of the DFC. Accordingly, the General Manager uses the Modeled Available Groundwater (MAG) as a primary factor in evaluating the DFC.

The Hill Country Groundwater Availability Model (GAM) for the Trinity Aquifer was not extended to include GMA 10. Currently, no numerical models for calculating the MAG for the Trinity Aquifer are available in GMA 10. The Texas Water Development Board (TWDB) used a simple spreadsheet-based approach (GAM run 02-01, GTA Aquifer Assessment 10-06) to estimate the MAG based on the DFC established by GMA 10. The TWDB has not updated and provided the District with an official MAG for the recently annexed "Shared Territory." As a result, the General Manager has determined a MAG using the GMA 10 Hays County MAG.

Because the estimates of the MAG and monitoring compliance with the DFC have a high degree of uncertainty, the permit will be authorized in phases and the General Manager will assess the potential for impacts to the DFC prior to advancing to each phase. As GMA 10 revises DFC expressions, the District will actively participate and suggest DFCs that can be modeled and monitored more readily. In addition, the District will assist in the development of numerical models that are appropriate for more long-term, regional groundwater evaluations. To advance our understanding of impacts of pumping from the EP well field, the District will collect data from select monitor wells in the vicinity of the EP well field and will continue to develop additional monitor wells in the region. Periodic evaluations of these data sets and the use of numerical models will be conducted for indications of the magnitude of drawdowns in these aquifers and changes in DFC-related conditions influenced by pumping from the EP well field.

Long-Term Unreasonable Impacts

Included in the General Manager's evaluation of the potential for unreasonable impacts is the effect of proposed production on (1) depletion of groundwater supply over a long-term basis, including but not limited to chronic reductions in storage or overdraft of an aquifer, and (2) a significant decrease in springflow or baseflows of surface streams including a decrease that may cause an established minimum springflow or environmental flow rate to not be achieved.

Because of the limited historical data and modeling tools as described above, the District is unable to evaluate the long-term, regional components of the unreasonable impact definition for the final phase of the permit at this time. The District will work toward developing the tools and collecting the data necessary to evaluate the long-term, regional impacts of pumping from the EP well field. The permit is phased to limit production prior to advancing to the next phased production volume. The General Manager will perform a re-evaluation of the production from the permitted well field at the authorized production in each new phase to assess whether there are current or potential effects to the aquifer that would cause an unreasonable impact as defined in District Rules.

CONSIDERATIONS FOR ACTION ON REGULAR PRODUCTION PERMITS

The General Manager concludes that the District has used the best available science and has appropriately balanced the conservation and development of groundwater while protecting private property rights as specified in 36.0015(b) of the Texas Water Code. The General Manager has reviewed the application and all supporting documents and evaluations and makes the following determinations:

1. The application satisfies all the requirements, and the required documentation and payment of fees have been satisfied in accordance with District Rules 3-1.4.A and 3-1.55 and therefore, is administratively complete.

2. The measured and modeled projections of drawdown (at 0.5 MGD and 2.5MGD) attributed to pumping from the EP well field indicate that some surrounding wells will cease to yield water at the ground surface, have significantly decreased yields, or experience the lowering of water levels below a reasonable pump intake. Therefore, the proposed groundwater production at 2.5MGD has the potential to cause unreasonable impacts to existing wells. Additionally, groundwater production at 0.50 MGD, after 6 months of groundwater production, has the potential to cause unreasonable impacts to existing wells.

3. In order to reasonably avoid unreasonable impacts, the permit will contain special provisions that include production phases, a Compliance Monitoring Plan (CMP), and an index well with curtailment triggers.

4. The pumpage volume to be authorized for Phase 1 (91,250,000 gallons/year or 0.25 MGD) and Phase II (182,500,000 gallons/year or 0.50 MGD of the EP permit will not exceed the MAG estimate for the Middle Trinity Aquifer and therefore, will not likely cause a failure to achieve the applicable DFC in accordance with District Rule 3-1.6(A)(10). This volume also has a very low potential to cause unreasonable impacts.

Summary of Special Provisions

The General Manager's preliminary decision is that the proposed groundwater production has the potential to cause unreasonable impacts to existing wells. This determination triggered provisions in District Rules requiring the applicant to provide a CMP, and if elected by the applicant a Mitigation Plan (MP). The District Rules also allow the General Manager to consider incorporating the applicant's proposed additional measures to avoid or mitigate the potential for unreasonable impacts if an agreement can be reached between the applicant and GM.

The measures ultimately recommended by the General Manager in this position statement include the incorporation of production phases, a CMP, and an index well with curtailment triggers as a reasonable approach to avoiding unreasonable impacts.

- **Reduced Volume:** The General Manager's current evaluations, conducted by the Aquifer Science Team (Appendix F), indicates that a reduced volume of 0.25 MGD would have very little to no potential for unreasonable impacts and therefore would not necessitate additional extraordinary avoidance measures. Those evaluations also indicate that the Phase 2 volume of 0.5 MGD has very little to no potential for unreasonable impacts. However, the volume of 0.5 MGD, if produced after a duration of 6 months, could produce a greater potential for unreasonable impacts if: 1) avoidance measures have not been completed before the end of a 6-month Phase I; 2) if water-level data indicate that natural drought drawdown estimates would be greater than 70 ft in the Cow Creek; or 3) if the actual pumping distribution and magnitude differs substantially from the wells tested in the aquifer test or modeled in our predictive evaluations.

  The District's well records and analysis indicate that wells in the surrounding EP area are numerous and that any preemptive avoidance work and/or subsequent mitigation work such as lowering of pumps and deepening of eligible wells would require an extensive investigation process, and would be resource intensive for both the District and the applicant to implement. The GM has determined that the level of avoidance and mitigation necessary to avoid unreasonable impacts is unreasonable. The GM does not recommend that the District provide the extraordinary resource commitments to oversee the implementation and administration of the comprehensive avoidance and mitigation plans, which cannot be required absent an agreement. The GM can consider alternative approaches to avoiding impacts. The most reasonable approach to avoiding impacts is to issue a reduced volume permit that does not show the potential for causing a significant amount of unreasonable impacts.

- **Phased Authorized Volume**: Incremental steps in pumping volumes that have criteria for causing no unreasonable impacts before proceeding to an increased Phase II volume. Specific conditions must be met before advancing beyond Phase I. The proposed production phases are:
  - Phase I 250,000 gallons per day (0.25 MGD) = **91,250,000 gallons per year**
  - Phase II 500,000 gallons per day (0.50 MGD) = **182,500,000 gallons per year**

- **Compliance Monitoring Plan (CMP)**: The CMP includes a monitoring well network (Appendix D) that utilizes a specified index well (Wood-01 well) with mandatory compliance actions of

trigger curtailments (Appendix E) to ensure that adequately completed wells will not go dry, as well as the equipping and installation of monitoring wells to measure drawdown and water quality around the EP well field.

STATEMENT OF POSITION

EP has submitted a permit application to withdraw up to 2.5 MGD (912,500,000 gallons per year) of groundwater in the Middle Trinity Aquifer from a well field in Hays County within the BSEACD territorial jurisdiction. In response to this application, the General Manager proposes to authorize up to 0.25 MGD (91,250,000 gallons per year) in an initially authorized production Phase 1. The General Manager determined that this Phase I production volume of 0.25 MGD has very little to no potential to cause unreasonable impacts. The General Manager has also determined that the Phase 2 the volume of 0.5 MGD, if produced after a duration of 6 months, could produce a greater potential for unreasonable impacts if avoidance measures have not been completed before the end of a 6-month Phase I. The District's preferred approach to avoiding or mitigating any potential unreasonable impacts is to rely on the monitoring efforts and index well curtailment triggers to prevent or avoid those unreasonable impacts from occurring.

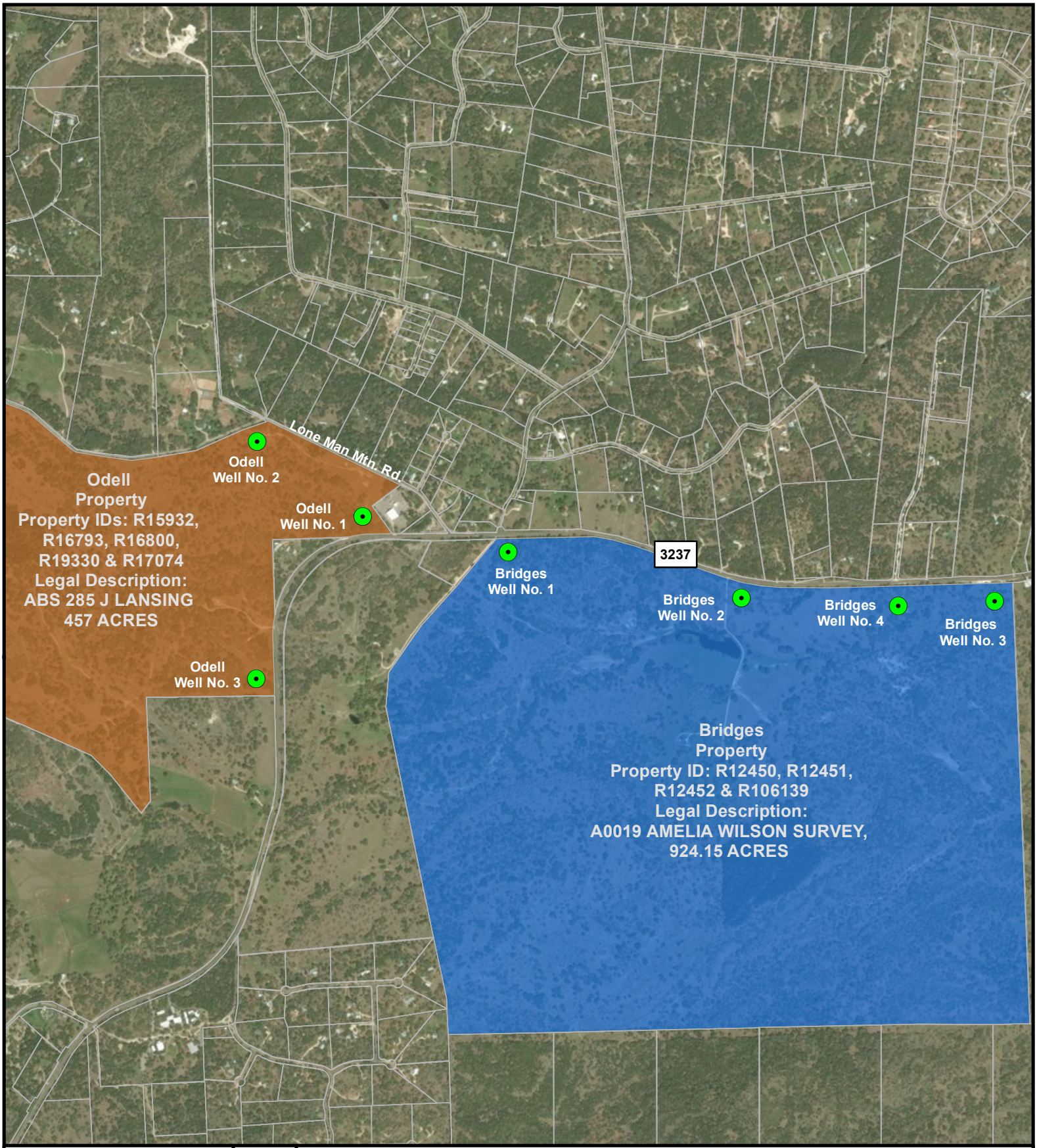
The General Manager will consider authorizing additional phases of production from this well field, conditioned on the Permittee requesting the next higher phase of production as described in the proposed special permit provisions, and on it satisfying the permit-specified requirements to receive authorization by the District for the higher production rates in each phase. The authorized production in each phase will be the basis for assessing production fees and for applying mandatory curtailments under BSEACD's drought management program.

Therefore, the General Manager recommends approval of the phased permit with a reduced volume and special provisions for monitoring and trigger curtailments. The proposed special permit provisions are enclosed as Appendix G.

EP's submissions and the General Manger's responses and technical memorandums are posted on the District's website (www.bseacd.org).

Appendix A - EP Trinity Well Field Survey Plat Map 5-9-18
Appendix B - Proposed EP Distribution Map 5-17-18
Appendix C - EP Well Field 5-17-18
Appendix D - Map of EP Area Monitor Well Network 12-16-2020
Appendix E - Index Well Diagram (Wood-01) 12-15-2020
Appendix F - BSEACD Technical Memo 2019-0313_rev
Appendix G - December 21, 2020 Special Provisions

APPENDIX A



Scale: 0 700 1,400 Feet

Drawn By: KK Date: 5-9-18

Quad Name and No:
Driftwood, TX 30098 A-1

Projection:
UTM NAD 83 Zone 14

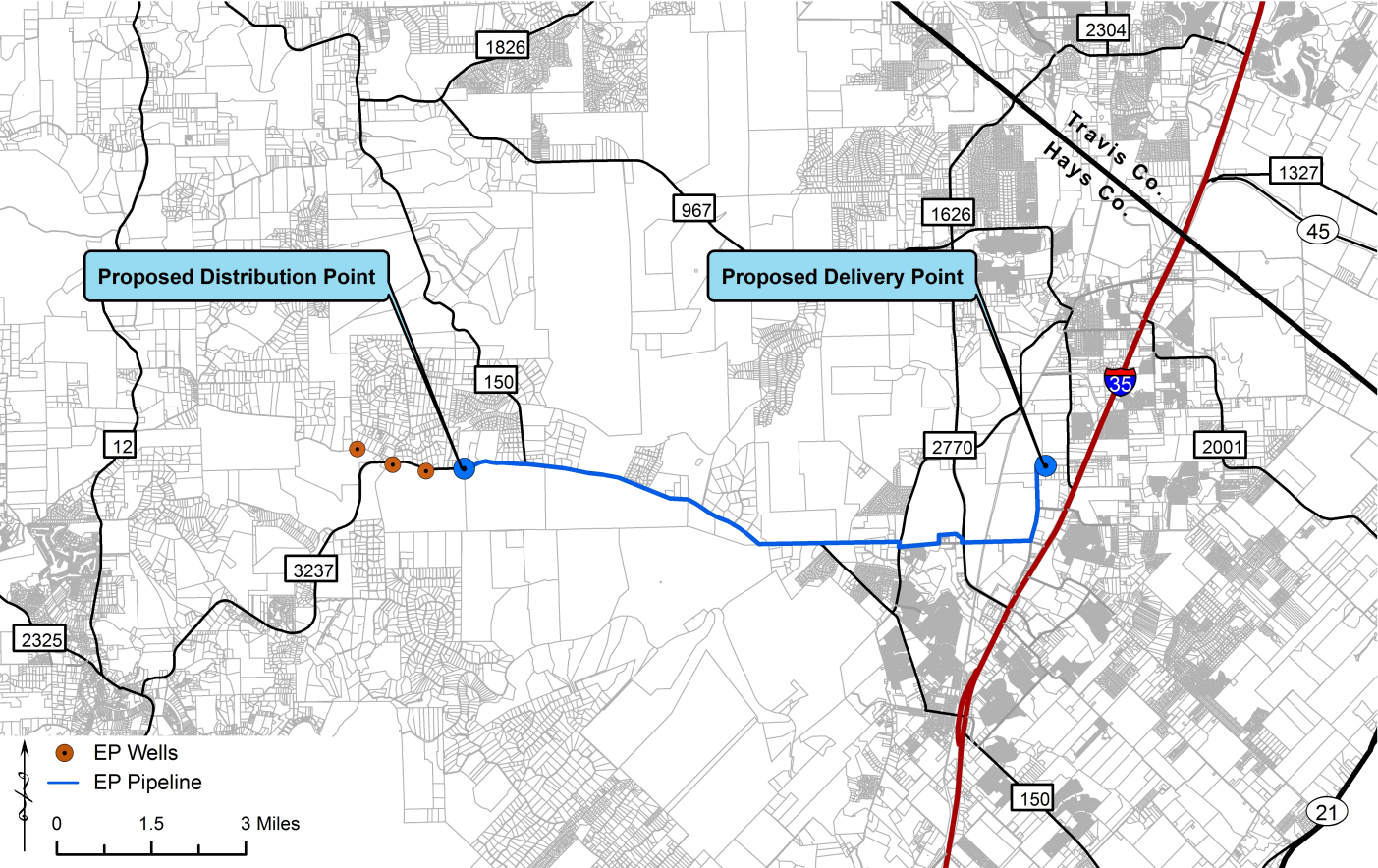
Odell/Bridges Well Field - Plat Map

Electro Purification, LLC

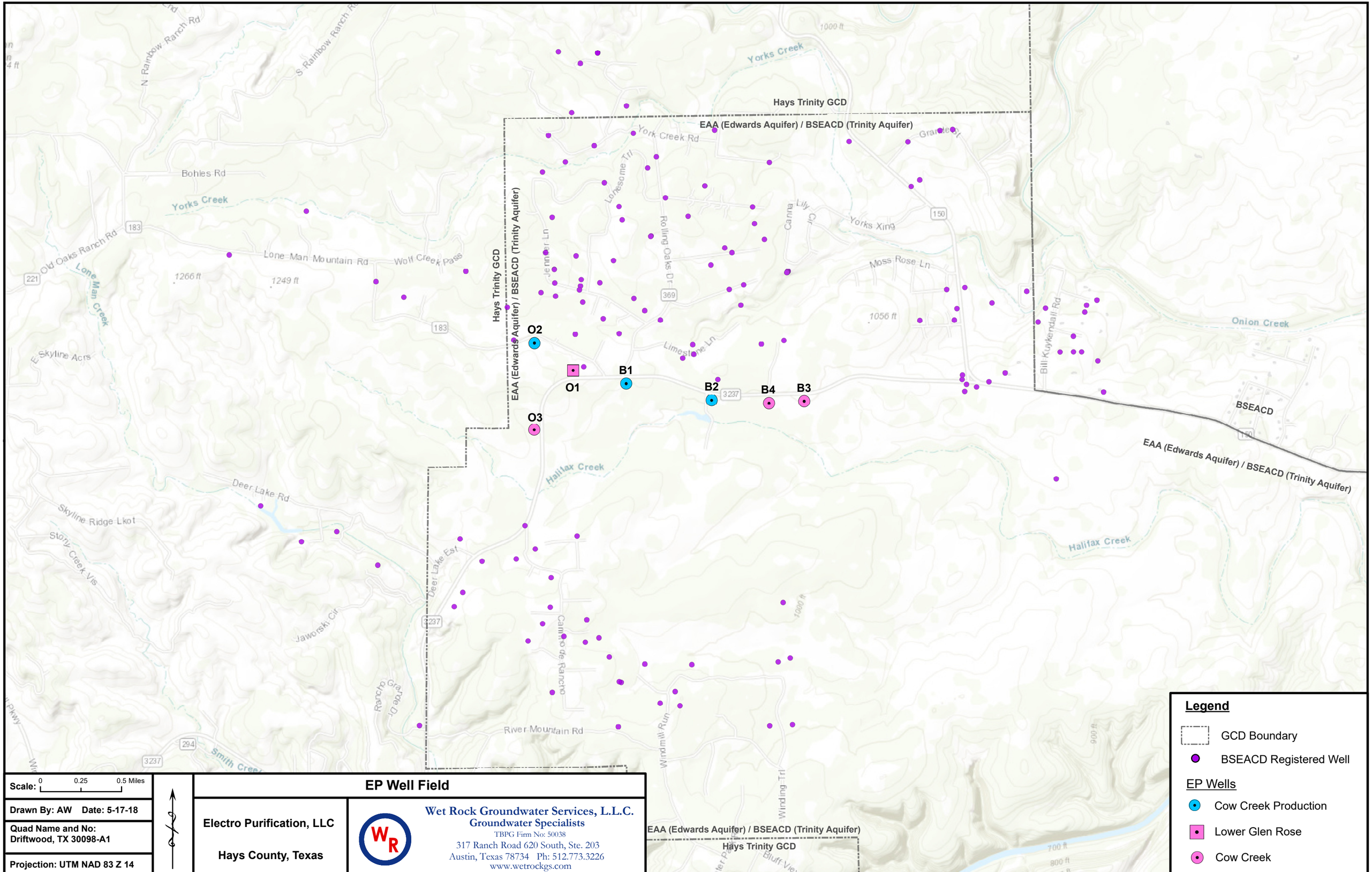
Hays County, Texas

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Ste. 203
Austin, Texas 78734 Ph: 512.773.3226
www.wetrockgs.com

APPENDIX B


Proposed Distribution Point
Proposed Delivery Point
1826
967
1626
2304
Travis Co.
Hays Co.
1327
45
150
12
35
2770
2001
3237
2325
150
21
EP Wells
EP Pipeline
0
1.5
3 Miles

APPENDIX C



Scale: 0 0.25 0.5 Miles

Drawn By: AW Date: 5-17-18

Quad Name and No:
Driftwood, TX 30098-A1

Projection: UTM NAD 83 Z 14

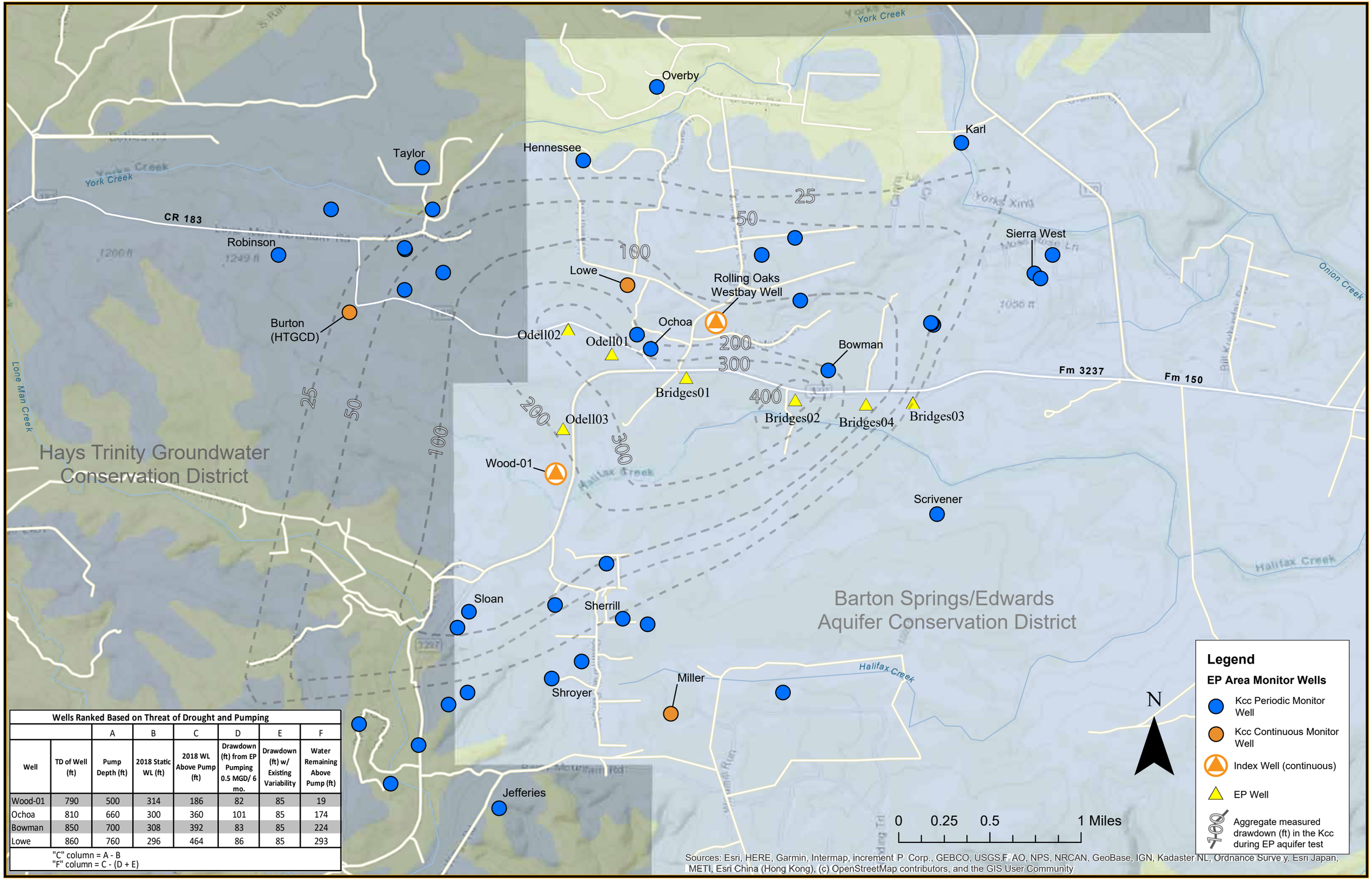
EP Well Field

Electro Purification, LLC

Hays County, Texas

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Ste. 203
Austin, Texas 78734 Ph: 512.773.3226
www.wetrockgs.com

APPENDIX D



Wells Ranked Based on Threat of Drought and Pumping

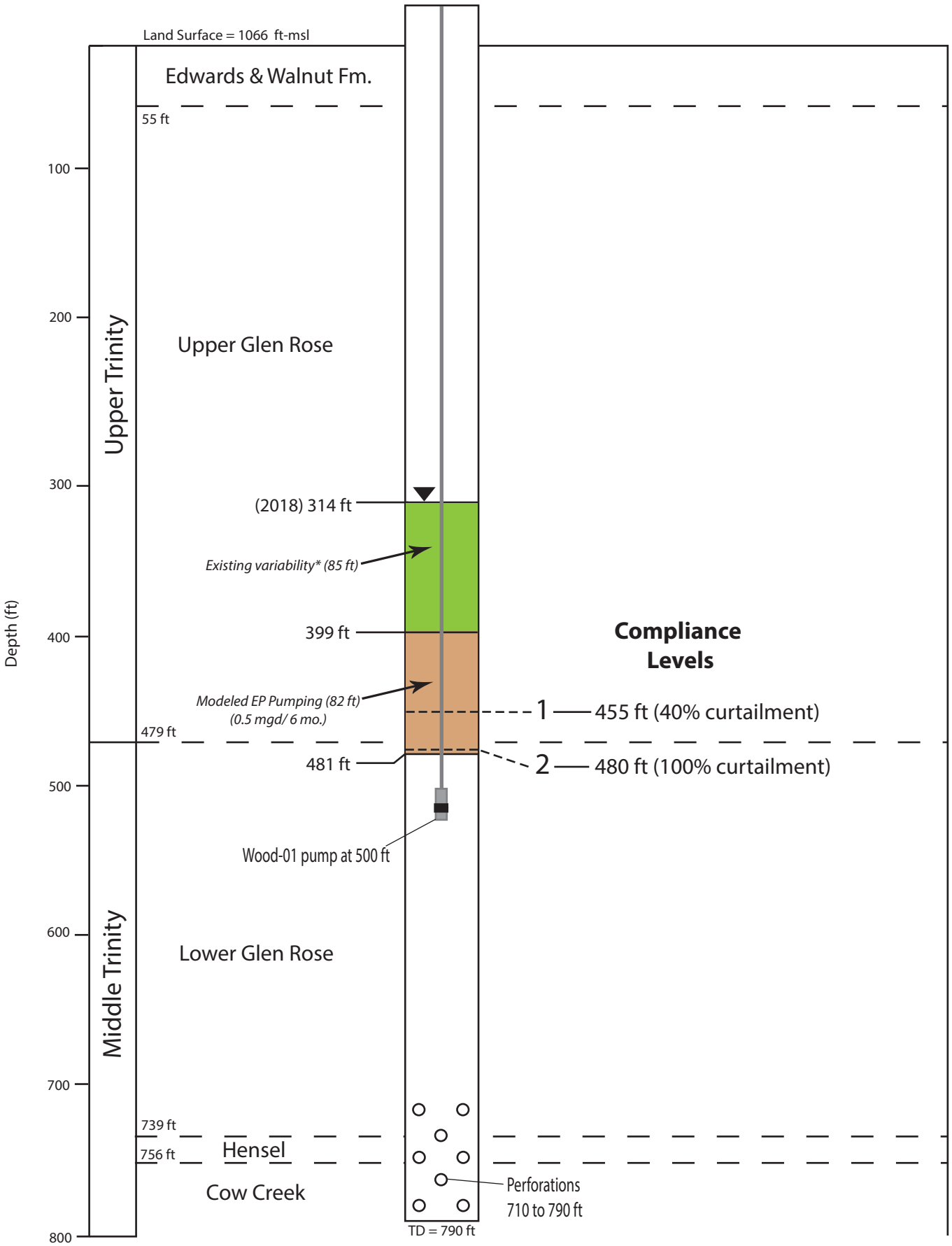
		A	B	C	D	E	F
Well	TD of Well (ft)	Pump Depth (ft)	2018 Static WL (ft)	2018 WL Above Pump (ft)	Drawdown (ft) from EP Pumping 0.5 MGD/ 6 mo.	Drawdown (ft) w/ Existing Variability	Water Remaining Above Pump (ft)
Wood-01	790	500	314	186	82	85	19
Ochoa	810	660	300	360	101	85	174
Bowman	850	700	308	392	83	85	224
Lowe	860	760	296	464	86	85	293

"C" column = A - B
"F" column = C - (D + E)

BSEACD map date December 15, 2020.

APPENDIX E

Wood-01 Index Monitor well
(57-64-907)



*Note: * Existing variability of 85 ft consists of 70 ft of drawdown due to drought, 10 ft of drawdown due to pumping of the Wood-01 well, and 5 ft of drawdown due to local and regional pumping.*

12/15/20

APPENDIX F

BSEACD Technical Memo 2019—0313_rev
March 2019

Evaluation of Potential Unreasonable Impacts from EP Phase I Pumping

Brian Hunt, P.G.,

Brian A. Smith, Ph.D., P.G.

STATE OF TEXAS
BRIAN B. HUNT
GEOLOGY
No. 4949
LICENSED
PROFESSIONAL GEOSCIENTIST
6/11/19

STATE OF TEXAS
BRIAN A. SMITH
GEOLOGY
No. 4955
LICENSED
PROFESSIONAL GEOSCIENTIST
6/11/19

Introduction

It was determined that the 2.5 million gallons per day (MGD) volume requested by EP has the potential to cause an unreasonable impact on surrounding water-supply wells (Hunt and Smith, 2018). A review of the EP aquifer test data and surrounding water-supply wells indicated that drawdown from EP pumping would result in a water level below the pump level in certain wells, and thus be unreasonably impacted by EP's pumping (**Table 1;** Hunt and Smith, 2018). The findings were based primarily on measured data from the EP aquifer test (WRGS, 2017a; BSEACD, 2017) and did not need modeled values to make the determination, although modeling further supported those results and resulted in broader and larger magnitude potential unreasonable impacts (Hunt and Smith, 2018).

The question was posed to the Aquifer Science team from the BSEACD general manager as to what volume could EP produce from the existing well field that would not result in potential unreasonable impacts during Phase I pumping, assuming a 6-month duration of Phase I. It was also assumed that avoidance measures, such as lowering pumps, would be completed during Phase I. An evaluation was done prior to the draft recommendation by the General Manager, but no formal notes were published. This technical memorandum is meant to document those evaluations and re-evaluate those results with the benefit of new additional water-level data since the evaluations were done in early 2018.

Methods

Analytical models with the same aquifer parameters used in the evaluation of potential unreasonable impacts (Hunt and Smith, 2018) were run to address the question of impacts using incremental amounts of pumping at the EP well field. Additional information on methods, aquifer parameters, and proportional pumping rates for each well are described in BSEACD (2018) and Hunt and Smith (2018). The analytical models used in these evaluations yield similar results to other analytical models (Oliver, 2018; WRGS, 2017b). The evaluation for the potential for unreasonable impact summarized in Hunt and Smith (2018) assumed about 50 ft of natural decline in water level due to drought. However, recent data (**Figure 4**) from some of the monitor wells indicates that the natural decline of water levels due to drought (April 2017 to August 2018) was at about 65 feet. Therefore, this value is being used in the analyses for unreasonable impacts.

Results

An evaluation of the effects of pumping for a 6-month period at 10%, 20%, and 30% of the total requested 2.5 MGD (**Table 2**) is documented in this memo. Results of the drawdown evaluation are presented in **Tables 3, 4, and 5**, and **Figures 1, 2, and 3**. Results of the evaluation indicate that 10% (0.25 MGD) and 20% (0.5 MGD) of the requested pumping volume have very little to no potential for unreasonable impact to water levels (Tables 3 and 4). Results of the evaluation indicate that

a pumping rate of 30% of the requested volume (0.75 MGD) has the potential for unreasonable impacts to water levels in the Woods #1 well (**Table 5**). It is estimated that the temporary pump in the Escondida well would be above the water level in all three scenarios. However, the pump setting for this well was for well testing purposes and represents a shallower than normal placement of the pump. A final, permanent setting of the pump would likely be much deeper. Accordingly, we did not use the Escondida well to determine the potential for unreasonable impacts for Phase I evaluations. Water-level drawdowns that do not go below the level of a pump are not considered to be unreasonable impacts (**Table 4**).

Conclusion

The results of our evaluations indicate that the 0.5 MGD volume for a 6-month Phase I has a very little to no potential for unreasonable impacts. However, 0.5 MGD could produce a greater potential for unreasonable impacts if: 1) avoidance measures have not been completed before the end of a 6-month Phase I; 2) if water-level data indicate that natural drought drawdown estimates would be greater than 65 ft in the Cow Creek; or* 3) if the actual pumping distribution and magnitude differs substantially from those modeled in **Table 2**.

**corrects the original memo error (replaced the "and" with an "or") as only one of these conditions needs to be met. Correction made by authors 6/10/2019.*

References:

BSEACD, 2017, Hydrogeologic Setting and Data Evaluation: 2016 Electro Purification Aquifer Test, Cow Creek Well Field: Hays County, Texas. Barton Springs Edwards Aquifer Conservation District, Technical Memo 2017-1010, 39 p.

BSEACD, 2018, Aquifer Parameter Estimation for the EP Well Field, Hays County, Texas. Barton Springs Edwards Aquifer Conservation District, Technical Memo 2018-0213, 28 p.

Hunt, B.B. and Smith, B.A., 2018, Evaluation of the Potential for Unreasonable Impacts from the EP Well Field, Hays County, Texas. Barton Springs/Edwards Aquifer Conservation District. Technical Memo 2018-0219. 13 p.

Oliver, W., 2018, Recalibration and Predictive Simulations of the Analytic Element Tool to Evaluate the Trinity Aquifer in Hays, County, Texas. Technical Memorandum. April 18, 2018.

Wet Rock Geological Services (WRGS), 2017a, Hydrogeologic Report of the Electro Purification, LLC Cow Creek Well Field: Hays County, Texas. Report of Findings, July 2017, WRGS 17-001, 80 p + appendices

Wet Rock Geological Services (WRGS), 2017b, Administrative Completeness Review of a Production Permit Application by Electro Purification LLC, for authorization to produce groundwater from the Middle Trinity aquifer. Letter in response to BSEACD. December 14, 2017, 29p + appendices

Table 1. *Results of aggregated aquifer-test drawdown relative to pump depth within monitor wells. Table modified from Hunt and Smith (2018).*

Well Name	*Well Depth (ft)*	*Pump Intake Depth (ft)*	*Static Water Level depth (ft)**	*Static. Water relative to pump (ft)*	*Aquifer Test Aggregate Drawdown (ft)*	*Aquifer Test Drawdown: Water relative to pump (ft)*
Bowman	850	700	291	409	205	204
Wood #1	790	500	285	215	192	23
Ochoa	810	660	261	399	212	187
Lowe	860	760	248	512	159	353
Escondida	930	460**	343	117	99	18

*10/21/2016, high and wet conditions

**temporary pump depth for testing purposes

Table 2. *Requested pumping rate and reduced proportional pumping rates*

Volume (MGD)	*Bridges1*	*Bridges2*	*Bridges3*	*Bridges4*	*Odell1*	*Odell2*	*Odell3*	*Total (gpm)*
2.5	645	148	48	66	95	560	175	1737
0.75	194	44	14	20	29	168	53	521
0.5	129	30	10	13	19	112	35	347
0.25	65	15	5	7	10	56	18	174

Table 3. *Table showing drawdown relative to pump in monitor wells following 6 months of pumping at 0.25 MGD.*

Well Name	*Well Depth (ft)*	*Pump Intake Depth (ft)*	*Static "drought" Water Level depth (ft)**	*Static drought: Water relative to pump (ft)*	*0.25 MGD Drawdown (ft)*	*0.25 MGD Water relative to pump (ft)*
Bowman	850	700	391	309	41	268
Wood #1	790	500	385	115	40	75
Ochoa	810	660	361	299	51	248
Lowe	860	760	348	412	43	369
Escondida	930	460	443	17	27	-10

*10/21/2016, high and wet conditions, add 100 ft to account for drought

*note the Wood 01 August 2018 static depth was 338 ft

Table 4. *Table showing drawdown relative to pump in monitor wells following 6 months of pumping at 0.5 MGD.*

Well Name	*Well Depth (ft)*	*Pump Intake Depth (ft)*	*Static "drought" Water Level depth (ft)**	*Static drought: Water relative to pump (ft)*	*0.5 MGD Drawdown (ft)*	*0.5 MGD Water relative to pump (ft)*
Bowman	850	700	391	309	83	226
Wood #1	790	500	385	115	82	33
Ochoa	810	660	361	299	101	198
Lowe	860	760	348	412	86	326
Escondida	930	460	443	17	54	-37

*10/21/2016, high and wet conditions, add 100 ft to account for drought

*note the Wood 01 August 2018 static depth was 338 ft

Table 5. *Table showing drawdown relative to pump in monitor wells following 6 months of pumping at 0.75 MGD.*

Well Name	*Well Depth (ft)*	*Pump Intake Depth (ft)*	*Static "drought" Water Level depth (ft)**	*Static drought: Water relative to pump (ft)*	*0.75 MGD Drawdown (ft)*	*0.75 MGD Water relative to pump (ft)*
Bowman	850	700	391	309	122	187
Wood #1	790	500	385	115	121	-6
Ochoa	810	660	361	299	152	147
Lowe	860	760	348	412	128	284
Escondida	930	460	443	17	81	-64

*10/21/2016, high and wet conditions, add 100 ft to account for drought

*note the Wood 01 August 2018 static depth was 338 ft

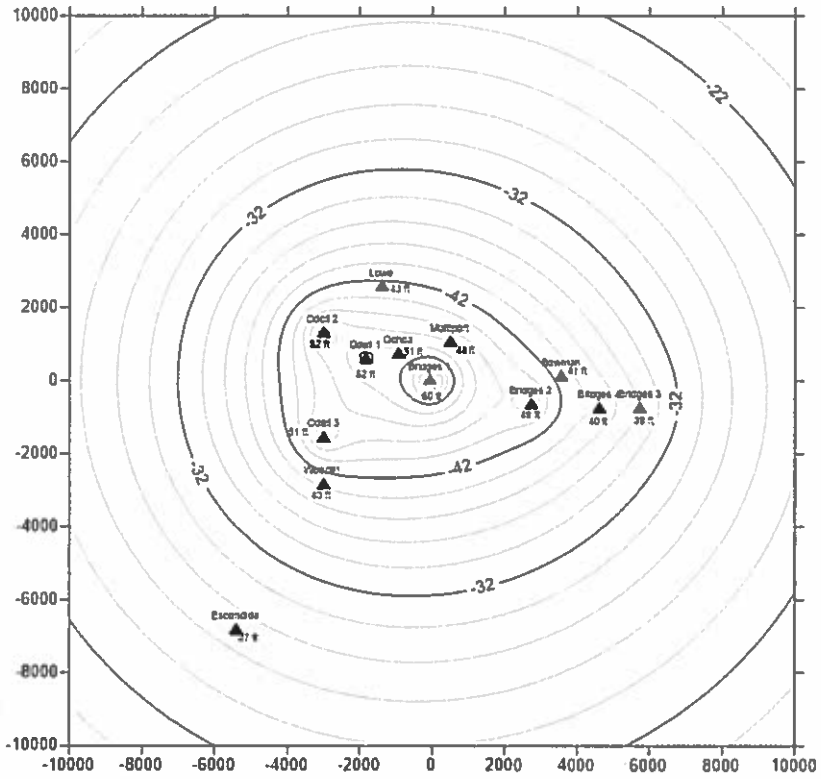


Figure 1. *Modeled drawdown from 0. 25 MGD for 6 months. Contours are 2-ft intervals.*

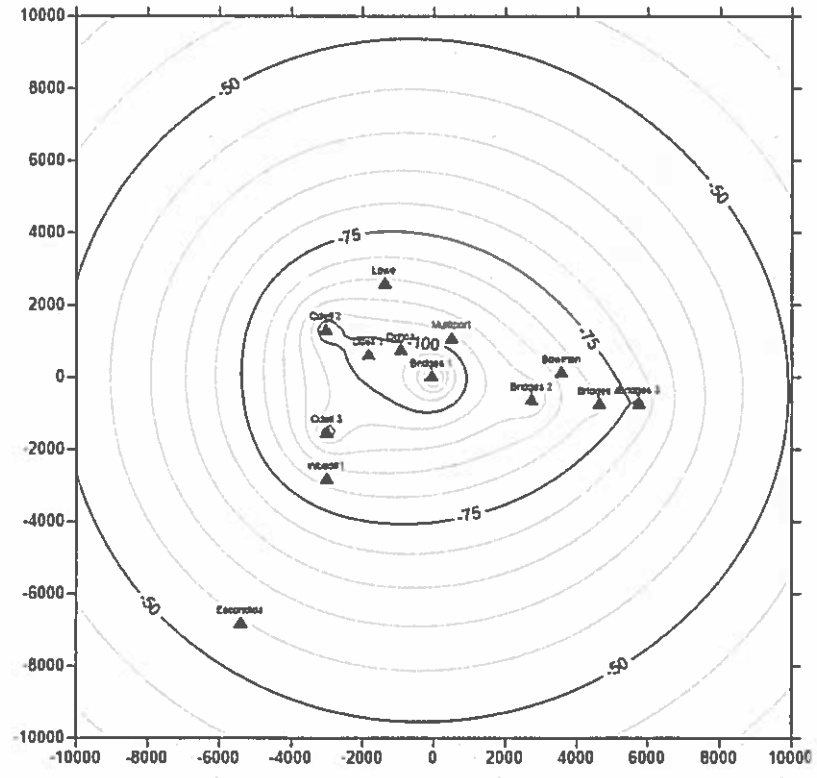


Figure 2. *Modeled drawdown from 0. 5 MGD for 6 months. Contours are 5-ft intervals.*

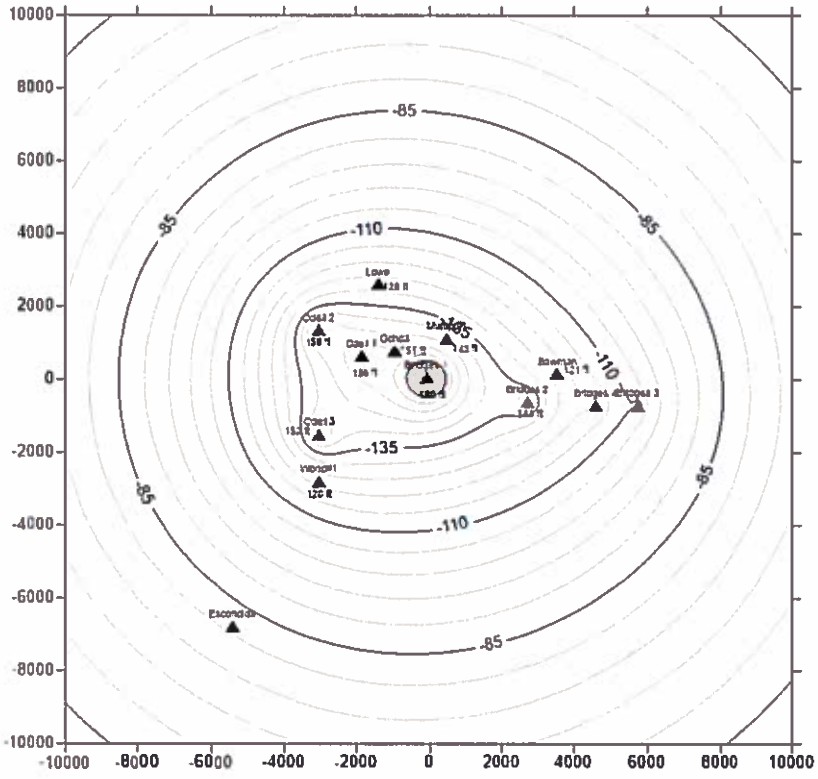


***Figure 3.** Modeled drawdown from 0. 75 MGD for 6 months. Contours are 5-ft intervals.*

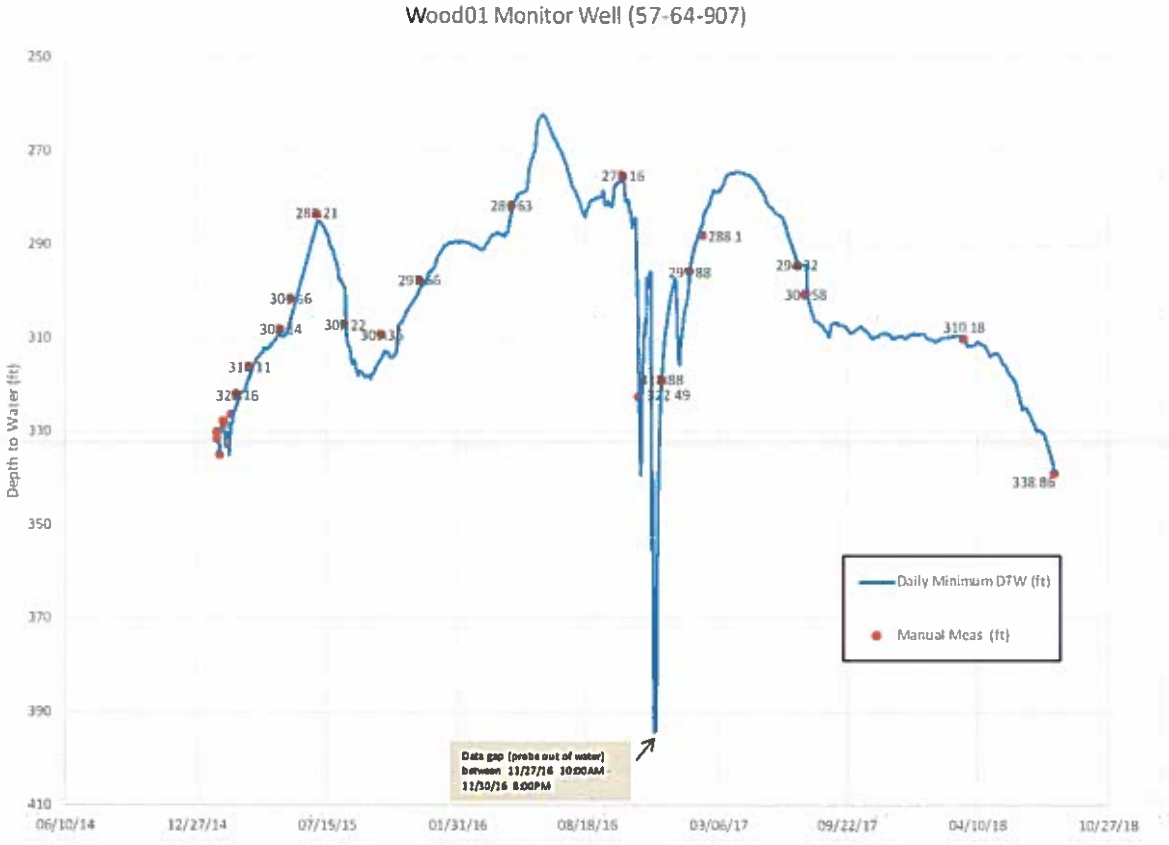


***Figure 4.** Measured water levels at the Woods #1 (Cow Creek) monitor well.*

APPENDIX G

ELECTRO PURIFICATION LLC
(Trinity Production Permit)

PROPOSED SPECIAL PROVISIONS
Revised December 21, 2020

SPECIAL PROVISIONS

Revised December 21, 2020

SECTION 1. BACKGROUND

Electro Purification LLC (EP) drilled seven Middle Trinity test wells between 2013-2015 to conduct a hydrogeological evaluation of the aquifer to assess prospective public water supply use. The wells were drilled on private property (Bridges Tract and Odell Tract) in central Hays County. In February 2015, Wet Rock Groundwater Services, LLC (WRGS) produced a report of findings and reported a maximum daily well field production rate of 2.5 million gallons per day (MGD). The well field is located within the Edwards Aquifer Authority's (EAA) jurisdictional boundary where the Trinity Aquifer was previously unregulated. The legislature passed H.B. 3405 on June 19, 2015 adding this territory, shared with the EAA, into the jurisdiction of the Barton Springs/Edwards Aquifer Conservation District (BSEACD).

H.B. 3405 and District rules adopted in July 2015 require all nonexempt, non-Edwards wells to be permitted and provide a three-month period to apply for an interim authorization under a Temporary Permit before conversion to a Regular Permit. EP submitted a Temporary Permit application for 100 ac-ft/year (32,590,000 gallons/year) on September 18, 2015. The General Manager issued the Temporary Permit in November 2015, but in March 2016, EP withdrew the Regular Permit application and instead submitted a General Permit to conduct an aquifer test. In October 2015, District staff began a rule making effort that focused on defining a process for assessing potential unreasonable impacts, and the District Board adopted the rules on April 28, 2016.

EP conducted an aquifer test prior to submitting a Production Permit application. Beginning on October 31, 2016, WRGS performed a series of aquifer tests on three of the existing EP test wells (Bridges No. 1, Bridges No. 2, and Odell No. 2). The three wells were acidized prior to testing and because the wells were not permanently completed, a packer was set to isolate production to the Cow Creek Member of the Trinity Aquifer (Cow Creek), which is the ultimate target production zone. A hydrogeologic report that ultimately satisfied the District's *Guidelines for Hydrogeologic Reports and Aquifer Tests* was submitted in July 2017 along with a Production Permit application.

In response to this application, the General Manager proposes Special Provisions to authorize up to 0.25 MGD (91,250,000 gallons per year) in an initially authorized production Phase I. The General Manager determined that this Phase I production volume has very little to no potential to cause unreasonable impacts. The General Manager will consider authorizing an additional phase of production from this well field, conditioned on the Permittee requesting the next higher phase of production as described in the proposed special permit provisions, and on its satisfying the permit-specified requirements to receive authorization for the higher production rates in the next phase. The authorized production in each phase will be the basis for assessing production fees and for applying mandatory curtailments under the District's drought management program.

SECTION 2. INTRODUCTION

The special provisions set forth in this document serve to protect the private property rights of all groundwater users by conserving, protecting, and managing the groundwater resources within the District. Theses permit provisions are considered to be a "living document" and are subject to change based upon the General Manager's further evaluations using best available science, tools, and data. Due to the potential for unreasonable impacts this permit includes additional measures described herein to monitor actual aquifer conditions, as a method of avoiding unreasonable impacts.

1. Production Phases. These provisions designate the use of a phased permit structure with conditional volume increases. The General Manager will consider authorizing an additional phase of production from this well field, conditioned on the Permittee satisfying the permit-specified requirements to receive authorization to advance to Phase II. The authorized production in each phase will be the basis for assessing production fees and for applying mandatory curtailments under BSEACD's drought management program. The production phases are:
   - Phase I 250,000 gallons per day (0.25 MGD) = 91,250,000 gallons per year
   - Phase II 500,000 gallons per day (0.50 MGD) = 182,500,000 gallons per year

2. Compliance Monitoring Plan (CMP): These provisions designate the use of a CMP, which prescribe the protective measures and details relating to designated index well(s), permit compliance triggers, mandatory compliance response actions, and a monitor well network. These provisions further describe the details of the index well(s) to be employed and the associated Response Actions for each Trigger/Permit Compliance Level. Planning and implementation of all permit compliance actions shall be closely coordinated with the GM to ensure that the described measures are implemented consistently with the GM's expectations.

3. Adaptive Management: The adaptive management elements inherent and outlined within these provisions are a critical management tool that enables the General Manager to effectively conserve, protect, and manage the groundwater resources within the District. The conditional nature of the production phases provides the Permittee with an authorization to produce a reasonable amount of groundwater while allowing the General Manager to develop further scientific evaluations based on monitoring actual aquifer responses and collecting data. These prescribed monitoring and data collection efforts will inform continuous and repeatable evaluations using the best available science and tools.

   These provisions are structured such that the General Manager can adapt the management of this permit and modify the plans based on the use of actual data and new scientific evaluations. Throughout these provisions there are safeguard guard elements that are designed to avoid unreasonable impacts. These safeguards also serve to protect all well owners and ensure that they will have reliable access to groundwater resources.

It is General Manager's intent to protect the groundwater resources by the sustainable production of the aquifer and to prevent unreasonable impacts. At any time during the life of this permit, the General Manager may reopen these permit provisions and amend the requirements as necessary to avoid or prevent unreasonable impacts. Production volume increases beyond Phase 1 are not certain to occur and at any point during the life of the permit any authorized production can be reduced or ceased by the General Manager.

SECTION 3. DEFINITION OF TERMS

"Adequately Completed Well" – a well that is equipped, maintained, and completed to withstand natural water level variability and drawdown attributed to drought conditions, seasonal increases in local pumping, normal pumping usage, and pumping from neighboring existing wells in the area of influence.

"Avoidance" - any proactive measures, including mitigation measures considered under a mitigation plan, taken to prevent, reduce, or remedy potential unreasonable impacts on an operational well, which was adequately completed to withstand natural variability. The potential unreasonable impacts are reasonably anticipated and may be avoided through reasonable avoidance measures.

"Compliance Monitoring Plan" - a document that captures the purpose, description, and details of the compliance monitor well network and index well trigger levels. This plan serves to provide data needed to assess the actual impacts of a Permittee's groundwater production on the aquifer over time, and compliance with permit conditions in place to avoid unreasonable impacts.

"Index Well(s)" - a designated observation or monitoring well or wells that is used to measure the water level and/or quality of water within the aquifer. For the purposes of these provisions, "Wood-01 Primary Index Well" is designated as the primary index well for permit compliance. The Secondary Index Well (Rolling Oaks multiport well) does not have permit compliance triggers. Details describing the index wells are found in the Compliance Monitoring Plan Appendix A, Section 7 of these provisions.

"Mitigation" - any reactive measures taken by a Permittee to reduce or remedy actual or imminent unreasonable impacts on an operational well, which was adequately completed to withstand natural variability. The imminent unreasonable impacts were unanticipated at the time that groundwater production was authorized and are avoidable through reasonable mitigating measures.

"Overdraft" or "Condition of Long-term Overdraft" - the condition of a groundwater aquifer basin or sub-basin in which the amount of water withdrawn results in negative effects or unreasonable impacts. Overdraft can be characterized by groundwater levels that decline over a period of years and never fully recovers, even in wet years.

"Permit Compliance Level" - a water-level threshold also referred to as a "trigger" that requires mandatory response actions from the Permittee for permit compliance.

"Response Action(s)" - a mandatory measure that the Permittee must comply with and implement per the terms and conditions of this permit and its special provisions. Specific response actions are described in Appendix A, Section 8 of these provisions.

"Trigger" - a designated water level in an index well that prompts a response action once the measured water level is reached. For compliance purposes, the measured water level shall be calculated as a 10 -day rolling average of the daily minimum depth to water level (maximum water level elevation) (measured depth to water, in feet, from land surface) measurements. Once a Trigger has been reached, the Permittee must implement the appropriate response action. Specific Triggers are described in Appendix A, Section 8 of these provisions.

"Unreasonable Impacts" - the term has the meaning as defined in District Rule 2-1.

SECTION 4. GENERAL PROVISIONS

1. **Production Fees.** After the effective date of permit issuance and upon receipt of the initial permit certificate and invoice, the Permittee must submit timely payment of production fees on the authorized amount of production. Likewise, upon the effective date of each approved permit phase authorization and receipt of the phased permit certificate and invoice, the permittee must submit timely payment of production fees on the new authorized production. Permittee may render payment in monthly or quarterly installments, or in an annual lump sum. Nonpayment of fees following a past-due notice may result in revocation, termination, cancelation, modification, or amendment of the permit pursuant to District Rule 3-1.13; and may also result in the assessment of late fees.

2. **Texas Commission on Environmental Quality (TCEQ) Public Water Supply (PWS) - Documentation**. Prior to producing any groundwater from the well(s), the Permittee must submit documentation from the TCEQ authorizing the Permittee to operate the well(s) as a TCEQ-approved Public Water System, if an authorization is required by TCEQ.

3. **User Drought Contingency Plan (UDCP).** Permittee shall sign and submit a Drought Target Chart within 30 days of permit issuance. Permittee must submit an updated Drought Chart within 30 days of authorization and approval of each phase.

4. **Export Outside of the District.** Transport outside of the District is not authorized under this permit. The Permittee shall follow the standard permit process and shall submit an amendment application if any portion of the existing or future production volumes are to be transported outside of the District. Prior to transporting of groundwater, a permit amendment application for transport will be processed in accordance with District Rule 3-1.4 and Rule 3-1.3.1, as amended. The permit amendment will be considered by the Board after notice and opportunity for hearing. If approved, additional transport fees will apply, and the permit term may be amended.

5. **Customer Contracts - Change in Existing Contract.** Permittee is required to submit written notification to the GM of any new contracts or cancellation, termination, modification, or amendment of existing contracts that change or affect the volume of water supplied by Permittee. The notification must be provided within 30 days after such change. If the Permittee's current customer contract (Goforth contract submitted and referenced in the 7/13/17 application materials) expires, terminates, or is no longer effective, then the Permit will expire without notice and hearing.

6. **Change in Ownership.** Permittee is required to submit written notification to the GM informing the GM of any change affecting the ownership interests of the Permittee, including but not limited to any new lease agreements; or cancellation, modification, or amendment of existing lease agreements. The notification and documentation demonstrating an ownership interest must be provided within 30 days after such change. Any permit revisions or adjustments to the permit provisions that are necessary to be consistent with the

groundwater ownership interests, must be approved by the Board through a permit amendment.

7. Reports. The Permittee will provide a quarterly data report on each pumping and non-pumping well on the permittee's property. The report should include any continuous water-level data for the well, the average monthly pumping rate (gpm) for the well, and any water quality results collected from the well.

8. Permit Compliance. District rules and policies that are implemented, adopted or amended after the effective date of this permit shall apply to this permit. Special provisions of this permit shall be revised as deemed necessary by the General Manager. If the Permittee fails to satisfy any of the permit provisions, the GM will pursue enforcement actions, including but not limited to seeking a Board Order to revoke, suspend, terminate, cancel, modify, or amend the permit in whole or in part pursuant Rule 3-1.13 (A).

9. Aquifer Testing Evaluations. At the time that the permittee is required to perform a TCEQ-required pump test on any of the seven proposed production wells, the permittee will provide a 60-day written advanced notice to the General Manager and will coordinate the logistics and timing of the aquifer test with District staff.

    a. The Permittee shall conduct an aquifer test of all of its existing public water supply wells, such that groundwater is produced simultaneously from those production wells, and at a duration (no less than 36 hrs) and at rate that is representative of three times the Phase 1 volume (0.25 MGD) from that well field or at a greater rate if the Permittee desires;
    b. The Permittee shall coordinate with the General Manager on any monitoring (water level, water quality sampling) that will take place during the aquifer test;
    c. The Permittee shall continuously monitor all of its own pumping and non-pumping wells during the aquifer test and routinely collect water quality samples;
    d. The Permittee shall complete all the public water supply wells, in accordance with the District's well construction standards prior to commencing the aquifer testing of any of those public water supply wells;
    e. The permittee shall equip all of the compliance monitor wells described in Appendix A, Section 4, prior to commencing the aquifer testing.

    Documented data that is collected during this testing process may be evaluated by the GM and utilized to further refine or adjust the these special provisions. Based on further evaluation of new data, the GM may amend or adjust these special provisions as necessary without notice and hearing. However, if the Permittee disagrees with the proposed adjustments, then Permittee may request a GM-initiated amendment to be considered by the District Board.

10. Occurrence of Unreasonable Impacts. If the GM determines through evaluations and investigations, using best available science, that production from the permitted wells is causing "unreasonable impacts" then the GM will require immediate cessation of pumping

until the Board, after notice and opportunity for hearing, approves a GM-initiated amendment to permanently reduce the Permittee's full permit volume to a rate that will reasonably avoid recurrence of unreasonable impacts. Special provisions of the permit will be adjusted when the permit is amended to avoid the recurrence of unreasonable impacts. The GM may consider mitigation measures to timely remedy the unanticipated unreasonable impacts. Such mitigation measures shall be reserved only after all reasonable preemptive avoidance measures have been exhausted and shall serve as a contingency for the occurrence of unreasonable impacts that were unanticipated and unavoidable through reasonable measures. Any and all mitigation measures shall be agreed to by the affected well owner(s) and an agreement shall be in place between the Permittee and well owner prior to the GM considering any mitigation measures or plans.

12. Prevailing Requirements. Where there may be inconsistency between District Rules and these permit provisions, the more stringent of the requirements apply.

13. Declaration of Compliance. Due to the conditional nature of the production phases and the provisional adaptive management described throughout the permit provisions, any groundwater production authorized by this permit shall not be considered by the Permittee as a firm water supply. Therefore, immediate threats to public health and safety or other emergencies of the customers are not valid reasons to continue production during District-declared drought nor are they valid reasons to for the Permittee to violate compliance with any of these permit provisions. Prior to producing any groundwater from the well, the Permittee will certify and provide a declaratory statement acceptable to the District demonstrating that its customer(s) have Alternative Water Supplies to meet their service requirements.

SECTION 5. RE-EVALUATION OF DESIRED FUTURE CONDITIONS (DFC) AND DISTRICT RULES

1. The amount of groundwater authorized under this permit for purposes of determining achievement of the applicable DFC is Phase I – 250,000 gallons per day (0.25 MGD) -91,250,000 gallons per year with the potential to advance to Phase II - 500,000 gallons per day (0.5 MGD) -182,500,000 gallons per year.

2. Prior to advancing to the next phased production volume, the GM will assess the potential for impacts to the DFC.

3. Prior to advancing to the next phased production volume, the GM will assess the potential for impacts and whether the occurrence of those anticipated impacts is permissible in accordance with the District policy and management rules in place at the time of that phase advancement request.

4. This permit does not authorize a reservation of the DFCs or the associated modeled available groundwater (MAG) in the volumes associated with future phases. Prior to advancing to the next phased-production volume, the GM will reevaluate the production from the permitted well field at the authorized production in the new phase along with the then-total authorized pumping associated with the applicable DFC to assess whether there are current or potential effects to the aquifer that would cause or would be a major contributor to a failure to achieve the then-applicable DFC. This evaluation will include a review of the factors listed and conditions described under Texas Water Code (TWC) section 36.1132, as amended, that exist at the time of the evaluation. The District will utilize the best available science, data and most current tools to perform this evaluation, including but not limited to applicable numerical models, analytical models, water levels, spring flow data, river gauge data and Texas Water Development Board (TWDB) exempt use estimates.

5. If at any time the GM determines that production under the current phase of the permit is causing or is a major contributor to a failure to achieve the applicable DFC or is inconsistent with the District policy and management rules in place at the time of active production, then the GM may initiate an amendment after notice and opportunity for hearing, for the Board to consider reducing or curtailing the authorized production volume.

SECTION 6. PRODUCTION PHASES

Authorized Production Volume

Upon the initial permit issuance effective date, the Permittee is authorized to commence production of groundwater at the Phase I volume. All applicable drought curtailments will apply to the authorized Phase 1 volume. Phased volume increases are contingent upon the satisfaction of conditions outlined in these permit provisions.

- Phase I - 250,000 gallons per day (0.25 MGD) = 91,250,000 gallons per year
- Phase II - 500,000 gallons per day (0.5 MGD) = 182,500,000 gallons per year

Prerequisites Conditions for Phase II Volume Increase

1. Water levels in the index well must not have reached a Compliance Level 1 Trigger due to the Permittee's pumping activity.
2. Permittee must have produced a 6-month average of at least 70% of the current phase annual permitted volume.
3. Permittee must be actively producing groundwater for at least 6 calendar months prior to the request.
4. Permittee must have executed contracts in place that will support use of all of the next phase permit volume.
5. Permittee's existing production must be in compliance with the applicable DFC and with the District policy and management rules in place at the time of active production.

Process for Considering Phase II Volume Increase

Any future phase of production will be subject to the District Rules and Management Plan in place at the time that the phase increase request is made to the District. The GM may grant authorization and approval for the Permittee to advance to the next phase of production, without public notice and hearing. Approval may be delayed if the District is in a declared drought stage. Before proceeding to the next phase of production from an existing phase, the following provisions shall be satisfied:

1. Permittee Submits Request for Volume Increase
   a. The Permittee must notify the GM in writing of its request to move to the next volume phase and shall submit an administrative application fee for reviewing and evaluating new information related to the volume increase request. In accordance with the District's fee schedule additional special fees may be assessed for extraordinary time and effort required for technical and administrative review.
   b. Using recently collected data from previous phases, the permittee shall submit a written report that addresses whether there will be unreasonable impacts due to the new proposed production. The evaluation should address each factor as defined in the term "unreasonable impacts." The evaluation should use numerical models if available and analytical models to project the extent of any impacts. The Permittee shall provide any data that was used to support that evaluation including an estimate of wells that may potentially be impacted.

2. General Manager Response and Request for Information
   The General Manager will acknowledge receipt by responding to the Permittee's written request and may request additional information and data from the Permittee.

3. Evaluation of Impacts and Technical Review
   Within 90 days of receiving the written request, the General Manager will perform an evaluation of the proposed production from the permitted well field in the new phase to assess whether there are current or potential effects to the aquifer that would cause an unreasonable impact as defined in District Rules or impacts to the DFC.

4. Revisions of Permit Special Provisions.
   Within 90 days of receiving the written request, the Permittee and the District will coordinate and complete final revisions to the plans *(Compliance Monitoring Plan),* if the GM determines those revisions to be necessary to address documented aquifer conditions projected to be caused by the Permittee's production in the next phase.

   a. Updated plans must be consistent with District Rules in place at the time of the request and agreed upon by the General Manager.
   b. Updated plans shall consider the additional area and extent of potential impacts given the scope of the next production phase.
   c. Updated plans may incorporate additional monitoring wells and/or additional index wells, changes in monitoring or index wells, or any additional equipment or sampling necessary. If an additional index well or changes in index wells is necessary, the General Manager and technical staff will identify appropriate triggers for each index well.

5. Advancement to Next Phase. The General Manager will issue an approval letter and a revised permit stating that the Permittee is authorized to produce the next Phase volume once the GM has determined that all monitoring, measures have been completed by the Permittee to the satisfaction of the GM. Upon receiving the revised permit provisions, the Permittee shall implement any monitoring, measures prescribed within the revised permit provisions. The Permittee shall not produce the new phase volumes of groundwater until the General Manager has issued a written formal statement describing that all monitoring, measures have been completed by the Permittee to the satisfaction of the GM.

SECTION 7. PRODUCTION CHART: MONTHLY ALLOCATIONS AND DROUGHT CURTAILMENTS

The Permittee will be issued an initial production chart by the GM for the Phase I volume of the permit. The production chart will reflect the target monthly allocations as well as the applicable drought curtailments. As the permit is advanced with increased production phases, the Permittee will be provided information to produce an updated production chart reflecting the new authorized and curtailed volumes, and provide it to the GM.

When drawdown in the primary index well reaches a Compliance Level Trigger, the Permittee will be issued a revised production chart that reflects the permit compliance production curtailments that are in effect as a result of reaching that Compliance Level Trigger. This revised production chart shall replace all other previous production charts in place. Upon receipt of a mailed notification letter and the production chart, the Permittee must comply with the curtailed monthly pumping allocations to begin on the first day of the month following notification. The GM will assess whether drought curtailments are in effect at the time of the production chart revision and will select with whichever curtailment is more stringent at the time.

As the drawdown in the primary index well recovers to a water level more shallow than a particular Compliance Level Trigger, then the Permittee will no longer be required to comply with the revised production chart and may return to a production chart reflecting previous allocations and non-curtailment volumes.

Appendix A: Compliance Monitoring Plan

Section 1. Purpose

This Compliance Monitoring Plan (CMP) serves to prescribe the protective measures and details relating to designated index well(s), permit compliance triggers, mandatory compliance response actions, and a monitor well network. These provisions further describe the details of the index well(s) to be employed by the associated Response Actions for each Permit Compliance Level. Planning and implementation of all permit compliance actions shall be closely coordinated with the GM to ensure that the described measures are implemented consistently with the GM's expectations.

Section 2. Monitor Well Network

The District has established a robust monitoring network and has installed a sophisticated multiport index well in preparation for monitoring efforts associated with this permit. The District will continue to maintain an adequate monitor well network in the EP area of approximately 63 total continuous and periodic monitor wells, which includes specific EP compliance monitoring wells identified in Section 4 below. The Permittee will be responsible for purchasing or reimbursing the District for any costs associated with equipping, maintaining, repairing, and replacing all monitoring equipment such as pressure transducers, related telemetry equipment, and cell/web hosting fees it's monitoring wells identified in Section 4. Wells identified in the monitor well network are subject to change due to access or other circumstances beyond the control of the District or the well owner and may be replaced by alternate monitoring sites. Figure A-1 depicts the monitor well network including the EP compliance monitoring wells.

SECTION 3. MONITORING OBJECTIVES

The compliance monitoring plan objectives for this permit focus on establishment of a monitor well network and the collection of data and information from the various aquifers, for the purpose of informing evaluations and decisions pertaining to potential unreasonable impacts. In addition, the data will be used to better characterize the hydrogeology for the aquifers and ultimately improve modeling tools. The designated methods for implementing these objectives and achieving an adequate monitoring program for this permit include but are not limited to the following:

1. *Prioritize the establishment of an index well with compliance triggers that are protective of the formations with the highest vulnerability for unreasonable impacts.*
    a. Highest Risk – Cow Creek Formation (Middle Trinity Aquifer)
    b. Moderate Risk – Lower Glen Rose Formation (Middle Trinity Aquifer)
    c. Low Risk – Upper Glen Rose Formation (Upper Trinity); and Sligo (Lower Trinity Aquifer)

2. *Continue data collection from the monitor well network*. In general, the planned data collection efforts will be tiered with more emphasis focused on the geographically and hydrogeologically delineated areas and formations that have a higher risk for unreasonable impacts. The monitoring and data collection efforts will be used to measure the actual impacts of the pumping project on the aquifer(s) over time once the Permittee commences production under its Permit.
    a. Monitor and measure - *Water Levels, Water Quality, Well Yields*
    b. Equip select wells for continuous monitoring, with telemetry and hosted data
    c. Equip select wells for continuous monitoring, with periodic data downloads
    d. Identify select wells for periodic or as needed manual monitoring (i.e. drought, aquifer testing)

SECTION 4. EP COMPLIANCE MONITORING WELLS

The well listed below are identified as the EP compliance monitoring wells. These wells are a part of the District's larger monitor well network. Within 90 days of permit issuance, or prior to the TCEQ pump test, whichever comes first, the Permittee shall fully fund the installation of monitoring equipment at the following wells:

1. Primary Index Well (Wood-01 Well) – the permittee will cover all costs associated with equipping and installing monitoring equipment in the primary index well. The permittee shall be responsible for purchasing and ensuring the proper installation of monitoring equipment necessary to collect and transmit water level data to a website accessible to the permittee, the public and the GM for the purpose of evaluating compliance with the trigger/ permit compliance levels. This will include a pressure transducer, telemetry equipment, an appropriate data hosting software and platform (cell/web hosting site) and any additional equipment the GM deems necessary. The required software should be

designed specifically for time series monitoring purposes and should have functionality for processing data and displaying data

2. Secondary Index Well (Rolling Oaks multi-port well: Upper & Middle Trinity Zones) – The permittee will cover the cost of equipping and installing a pressure transducer.

3. EP Odell No. 1 Well (Lower Glen Rose Formation) - The Permittee will cover costs associated with equipping and installing a pressure transducer.

4. EP Bridges No. 3 Well (Upper Glen Rose Formation) - The Permittee will cover costs associated with equipping and installing a pressure transducer.

5. EP Public Water Supply Wells (Cow Creek Formation)- The Permittee will cover costs associated with equipping and installing pressure transducers and flow cell devices capable of measuring water quality parameters in all the public water supply wells.

SECTION 5. EP WELL ACCESS

The Permittee agrees to ensure 24-hour access by authorized District personnel to all wells within the Permittee's (EP) well field and will cooperate with the District in its efforts to secure the right to 24-hour access to third-party owned monitoring wells, for data collection and water quality sampling. Within 90 days of the permit effective date, the Permittee shall convey a binding access agreement acceptable to the District that allows the District to access the EP wells with prior notification.

SECTION 6. INSTALLATION, MAINTENANCE AND DATA COLLECTION OF MONITORING WELLS

1. All monitoring equipment shall be installed within 90 days of permit issuance or prior to the TCEQ pump test, whichever comes first. The Permittee is responsible for purchase all required equipment within 30 days of permit issuance and the District and permittee will work in cooperation for installing all equipment in the monitoring wells.

2. The District is responsible for operating, repairing/replacing and maintaining the equipment, as well as, compiling, collecting, and archiving data from the index wells.

3. The Permittee is responsible for operating, repairing/replacing, and maintaining the equipment, as well as, compiling, collecting, and archiving data from all wells on the permittee's property. The Permittee is responsible for sending the data report from the wells quarterly or upon request. The report should include any continuous water-level data for the well, the average monthly pumping rate (gpm) for the well, and any water quality results collected from the well.

4. The domestic monitor well owner(s), not the Permittee nor the District, are responsible for normal wear and tear, well maintenance, pump servicing, or other repairs resulting from the owners' normal use of the well.

5. The Permittee shall be responsible for expenses and/or reimbursement for maintaining, repairing, and replacing all monitoring equipment (such as pressure transducers, related telemetry equipment, and cell/web hosting fees) for the all monitoring wells (including index wells) identified in section 4. All materials and equipment shall be new, free from defects, and fit for the intended purpose.

6. Thirty (30) days prior to the annual permit renewal, the Permittee will provide documentation that the any fees associated with data hosting software and online platforms have been paid. The purchase of additional software is necessary because the District does not have the software functionality that is necessary to manage the data collection and processing associated with this permit.

7. If maintenance, repairs or replacement of any part the monitoring wells is reasonably necessary or convenient for the continuous and adequate performance of the well, the General Manager shall provide notice and the Permittee shall either purchase necessary equipment or shall make repairs and replacements as soon as practicable.

8. Within 90 days of permit issuance and within 30 day prior to each annual permit renewal, the Permittee will make an annually recurring resource commitment to the District in the amount of $2,500 for water quality sampling or any other service necessary for monitoring.

SECTION 7. INDEX WELLS.

Primary Index Well – Wood-01 Well

The District designated a primary index well (Wood-01 Well) for the purpose of monitoring aquifer conditions in the Middle Trinity Aquifer. The well is completed in the Cow Creek Formation of the Middle Trinity Aquifer at a depth of 790 ft, with casing at 710 ft, and the pump depth of 500 ft. It is a domestic well that is operational and in use as an exempt well. The well is located in Hays County (30.0508417, -98.0220833) approximately 0.25 miles from the Permittee's well field.

Secondary Index Well – Rolling Oaks Multiport Well

The District has designed and incurred costs to install a sophisticated multiport monitoring well. This multi-port well is designated as a secondary index well (Rolling Oaks Index Well) for the purpose of monitoring aquifer conditions in fourteen hydrogeologic units in the Upper and Middle Trinity Aquifer. The well is located in Hays County (30.0508417, -98.0220833) approximately 0.25 miles from the Permittee's well field. (see Figure A-1).

The secondary index well will be monitored for water-level changes in the fourteen zones and to correlate data water-level changes with the primary index well. There are no triggers or response actions associated with the secondary well at this time. However, if the primary index well is no longer an adequate or accessible well for compliance purposes, the permit may be amended to designate the Rolling Oaks Index Well to serve as the primary index well.

Based on additional science and data that becomes available, such as through the TCEQ aquifer test, if the primary index well is determined to no longer be an adequate or accessible well for compliance purposes and/or data indicates a Lower Glen Rose and/or Upper Glen Rose index well is necessary, the permit may be amended by the GM, after consultation with EP, without public notice and hearing, to designate a new or additional primary or secondary index well(s). The Permittee may be required to cover in full or in part, all costs associated with establishing a new or an additional adequate index well.

SECTION 8. TRIGGERS AND RESPONSE ACTIONS

The following Permit Compliance Levels, Response Actions, and Triggers apply to the Wood-01 Primary Index Well only. If data collected from the index wells has been determined by the GM to be inaccurate, that data shall not be used to determine compliance with these permit provisions.

When the water level in the primary index well approaches a designated Trigger, the GM will conduct an evaluation of the data to assess the actual data and actual impacts on the aquifer as compared to the modeled effects and impacts of pumping. The GM will coordinate with the Permittee to schedule a meeting and to review the data. This meeting will also serve to communicate details about the relevant Response Actions in place, as well as to communicate the need for the Permittee to prepare for the upcoming Response Actions that will be required if deeper Triggers are subsequently reached.

When the water level in the primary index well reaches a designated Trigger, the GM will notify the Permittee via certified mail within (10) business days of reaching the Trigger. This notification will include the revised production chart following mandatory curtailments applied to the authorized volume. Upon receipt of the notification and the revised pumping chart, the Permittee must provide the GM with a signed revised pumping chart and must comply with the curtailed monthly pumping allocation to begin on the first day of the month following notification.

Table 1: Summary of Specific Compliance Levels in Wood-01 Monitor Well

Trigger Compliance Level	Depth to Water (ft-bgs*)	Permit Action	Note
1	455 ft	Temporary curtailment of 40% of the authorized permit volume.	This level accounts for existing variability (~85ft**) and drawdown from the EP well field at 0.5 MGD after about 4 months (~ 56ft).
2	480 ft	Temporary curtailment of 100% of the authorized permit volume.	This level is deemed a reasonable pump intake level of 20ft above the pump and below this level an unreasonable impact occurs to the Wood-01 index well and likely surrounding wells after 0.5MGD after 6 months.
*bgs – below ground surface **Drawdown values are relative to average water-level conditions measured in 2018			

Permit Compliance Level 1

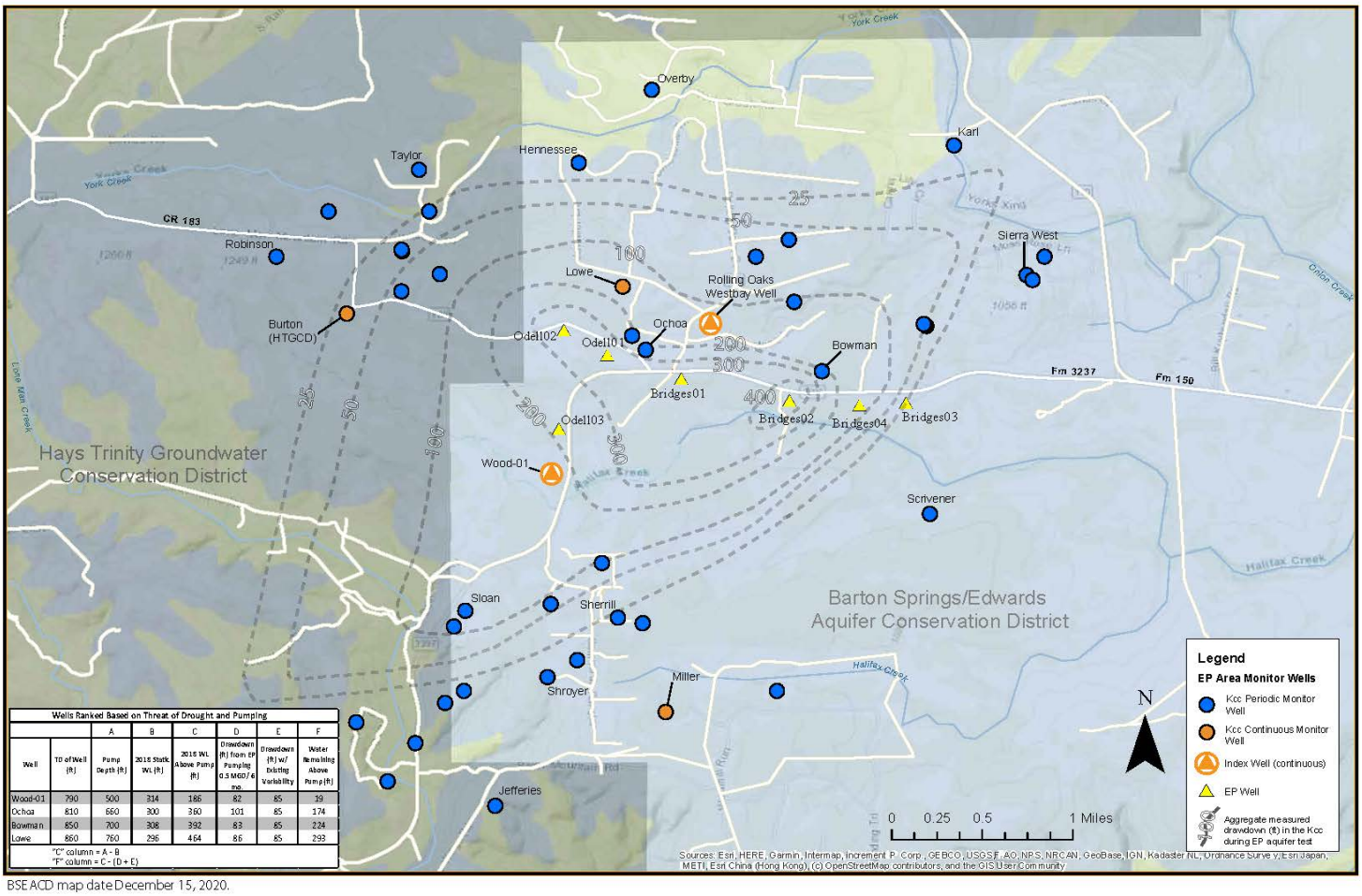
- Trigger 2 - A 10-day rolling average of the daily minimum to depth water level, that is equal to or greater than 445 ft (below land surface) bls.
- Response Action - When drawdown in the Wood-01 Primary Index Well reaches the 10 day rolling average water level that is equal to or greater than 445 ft bls, the Permittee shall comply with a temporary monthly curtailment of 40% of authorized permit volume. When the drawdown in the Wood-01 Primary Index Well recovers to a 10-day rolling average water level that is less than 445 ft bls, the mandatory temporary monthly curtailment of 40% shall be completely relaxed to 0%. Upon that recovery, authorization for the full current phase permit volume will be restored, provided that drought-triggered curtailments do not apply.

Permit Compliance Level 2

- Trigger 4 - A 10-day rolling average of the daily minimum to depth water level, that is equal to or greater than 480 ft bls.
- Response Action - When drawdown in the Rolling Oaks Index Well reaches the 10-day average water level that is equal to or greater than 480 ft bls, the Permittee shall comply with a temporary monthly curtailment of 100% of authorized permit volume. When the drawdown in the Wood-01 Primary Index Well recovers to a 10-day rolling average water level that is less than 480 ft bls, the mandatory temporary monthly curtailment of 100% shall be relaxed to 40%. Upon a full recovery above Trigger 1, authorization for the full current phase permit volume will be restored, provided that drought-triggered curtailments do not apply.

FIGURE A-1 MAP OF EP MONITOR WELL NETWORK

EP Area Monitor Well Network Map
12/15/2020



Wells Ranked Based on Threat of Drought and Pumping

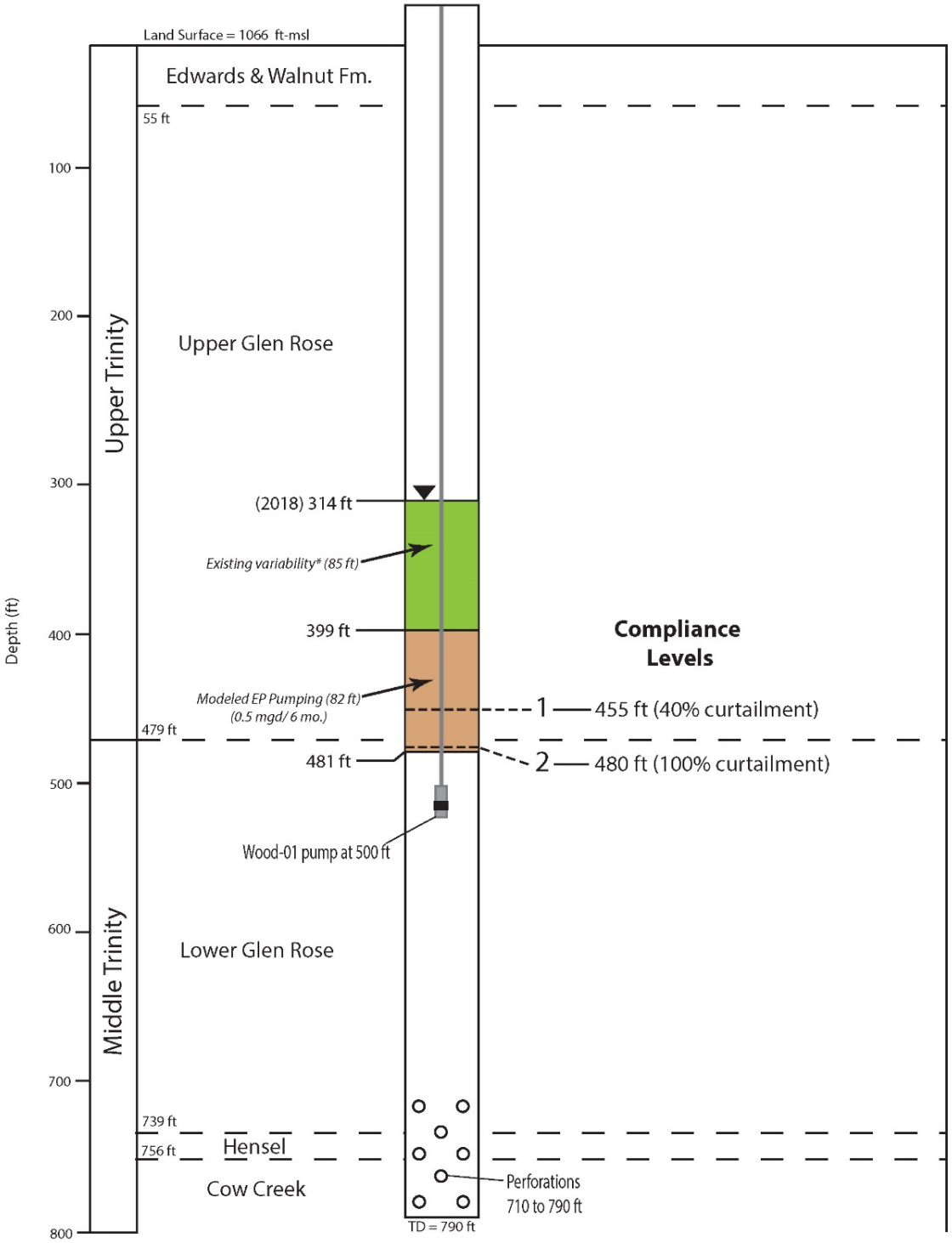
		A	B	C	D	E	F
Well	TD of Well (ft)	Pump Depth (ft)	2016 Static WL (ft)	2016 WL Above Pump (ft)	Drawdown (ft) from EP Pumping 0.5 MGD / 6 mo.	Drawdown (ft) w/ Existing Variability	Water Remaining Above Pump (ft)
Wood-01	790	500	314	186	82	85	19
Ochoa	810	660	300	360	101	85	174
Bowman	850	700	308	392	83	85	224
Lowe	860	760	296	464	86	85	293

"C" column = A - B
"F" column = C - (D + E)

BSEACD map date December 15, 2020.

FIGURE A-2. WELL DIAGRAM OF PRIMARY INDEX WELL WITH COMPLIANCE TRIGGERS

Wood-01 Index Monitor well
(57-64-907)



*Note: * Existing variability of 85 ft consists of 70 ft of drawdown due to drought, 10 ft of drawdown due to pumping of the Wood-01 well, and 5 ft of drawdown due to local and regional pumping.*

12/15/20