**Barton Springs Edwards Aquifer**
CONSERVATION DISTRICT

May 21, 2018

*Sent via certified mail, regular mail, and email*

Electro Purification LLC
4605 Post Oak Place Dr.
Houston, TX 77027

RE: **Staff Administrative Completeness Review of a Well Modification Authorization Application and a Production Permit Application submitted by Electro Purification LLC, for authorization to modify and complete wells, and to produce from the Middle Trinity Aquifer for the purpose of wholesale public water supply.**

Dear Mr. Tim Throckmorton:

The above referenced application and the subsequent additional information submittal have been received and reviewed and have been determined to have sufficiently addressed the information requirements in accordance with District Rule 3-1.4(A)(1-10). **Therefore, the application is determined to be administratively complete as of May 21, 2018.**

Please note that the next step in your application process is to publish public notice. To facilitate you in publishing a notice, I have enclosed instructions that describe the District's notice requirements.

Once you have received this letter of an administratively complete determination **appropriate notice must be provided within ten (10) business days** pursuant to District Rule 3-1.4(B)(2), which states:

> *"...Applicants shall publish notice not later than ten (10) business days after receiving an administratively complete determination from the General Manager or the General Manager's designated representative."*

Notice shall be published in one or more newspapers of general circulation in the county in which the subject well(s) are located and by first class mail to all registered well owners with wells located within the radius described in Rule 3-1.4(7)(g) and 3-1.4(8)(1). Upon submitting the notice information for publication, please contact our office to provide the target publication date and to ensure that all requirements are met, and all necessary documentation is provided.

The publication of the notice initiates a **20-day public comment period that begins the day after the date of publication.** Should significant public comment be received by the district, the General Manger may use his discretion to schedule a public hearing.

**The test wells shall either be plugged or modified and permanently completed in accordance with District Rules and Well Construction Standards within nine (9) months from the date of this letter.**

If you have any further questions, please feel free to contact me by phone at (512)282-8441 or by e-mail at vescobar@bseacd.org.

Sincerely,

Vanessa Escobar
Senior Regulatory Compliance Coordinator

Enclosure:

- Instructions for Public Notice
- General Manager's Position Statement

cc:

Kaveh Khorzad
Wet Rock Groundwater Services, LLC
317 Ranch Rd 620 South, Suite 203
Austin, TX 78734

Ed McCarthy
1122 Colorado St., Suite 2399
Austin, Texas 78701

Bill Dugat
Bickerstaff Heath Delgado Acosta LLP
3711 S. Mo-Pac, Suite 300
Austin, TX 78746

# Barton Springs/ Edwards Aquifer Conservation District
## Instructions for Public Notice

### How to publish Public Notice:

1. Within 10 days of receiving an administratively complete letter you must publish public notice in the major newspaper that the District identifies for the region (*e.g. Austin American Statesmen, San Marcos Daily Record, The Wimberley View*):

   Austin American Statesman
   legals@statesman.com
   Deadline: 4 p.m. – 3 Business days before publication date
   512-445-3832

   San Marcos Daily Record
   Ronda Young – Legal Ads
   ryoung@sanmarcosrecord.com
   Deadline: 10 am for posting next day
   512-392-2458

   The Wimberley View
   Taffy Barker
   wimberleyview@gmail.com
   Deadline: Friday at 5 pm to post next week – Go to press on Tuesdays
   512-847-2202

2. Prior to publication, you must draft the language for the public notice and the notice letter and **submit the drafts to District staff for review and approval.** (*see attached samples*)

3. Once the notice language is approved by District staff, you should immediately contact the newspaper to arrange a publication date. When arranging the notice publication you can also request that a publisher's affidavit be mailed or emailed to the District:

   Barton Spring/ Aquifer District
   1124 Regal Row
   Austin, TX 78748
   vescobar@bseacd.org

4. Once you have paid for and scheduled a publish date you should immediately contact District staff to provide the target date that the notice is expected to be printed. District staff can then move forward with publishing notice in a secondary local paper (Hays Free Press, Wimberley View, or Austin Chronicle).
5. Soon after you have arranged a publish date you should finalize the wording in your notice letter and mail them to the appropriate property owners and retail water suppliers. **Be sure to reference the major newspaper publication date in the letters.**
6. The 20-day public comment period is in effect and begins the day after the date that the notice is actually published in the major newspaper.

# Frequently Asked Questions

**What types of applications have to provide notice?**

The following types of authorization/permit applications must provide notice:

- Well Drilling Authorizations for which a Hydrogeological Report is required.
- Production Permit applications/ Modification applications authorized by a District individual production permit.
- Transport permit applications
- Major Permit amendments

**Which newspaper should the public notice be published in?**

Publication of public notice shall be the responsibility of the applicant. Notice shall be published in the major local newspaper in a format approved by the District. In addition, the District will be responsible for publication of the same notice in a "local" secondary paper with targeted distribution in the county that the subject well(s) is located.

**Who must be sent a notice by mail?**

Applicants must provide notice by first class mail to the following:

- All retail water providers within a 2- mile radius of the specific proposed well site location. [A larger radius may be necessary as required by Rule].
- All registered well owners within a 2- mile radius of the specific proposed well site location (regardless if they are or are not served by a retail water provider). [A larger distance radius may be necessary as required by Rule].

**What must be included in the notice?**

All public notices must contain the minimum information listed below: (*See Attached Sample*)

- The name and address of the applicant;
- The date the application was filed;
- The location and a description of the well that is the subject of the application; and
- A brief summary of the information in the application.

The applicant shall provide copy of the proposed notice language to the District for review and approval prior to publication. The notice language shall be consistent with the District's format.

**When do I have to publish and send the notices by mail?**

Applicants may not publish notice or provide notice by mail until the application has been determined to be administratively complete. The applicant will be notified in writing once District staff has completed the application review and made the administratively complete determination. District staff will be proactive in coordinating with the applicant to ensure that the notice will be ready to be published and sent within the mandatory timeframes prior to providing the administrative complete determination. Upon receiving the determination, the applicant will be required to publish the public notice and provide notice by publication and mail within ten (10) business days.

**How long is the public response period?**

Public notice initiates a twenty (20) calendar day public response period that begins the day after the notice is published. Under no circumstances will a public hearing be held or action taken on the application by the Board prior to the termination of the twenty (20) day public response period.

# Sample – Austin American Statesmen

*Printed on September 1, 2013*

Acme Inc, 102005 FM 1625 Austin, TX 78669, filed a well drilling authorization application and a production permit application on June 26, 2013 with the Barton Springs/Edwards Aquifer Conservation District (District) for a new nonexempt well and a Historical Trinity Production Permit to withdraw an annual permitted volume of approximately 2,000,000 gallons per year of groundwater from the Middle Trinity aquifer management zone. Acme Inc, will operate the proposed well for commercial use to supply water for their manufacturing operations. The volume of pumpage requested was commensurate with an estimate of reasonable demand for the intended use and upon approval, would be required to comply with the provisions of a Historical Trinity Production Permit.

The well is located at 102005 FM 1625 Austin, TX 78669. Publication of this notice begins a 20-day public response period for which comments, written formal protests and requests for a public hearing will be accepted by the District. Parties interested in formally participating in a hearing on a contested application should refer to District Rule 4-9.13. For further information, please contact the District, 1124 Regal Row, Austin, Texas 78748, (512) 282-8441, bseacd@bseacd.org . You may also contact the applicant, Acme Inc at (512)-585-8744.

# Sample – Letter to Property Owners

September 3, 2013

Mike Adams
1234 FM 1625
Austin, TX 78669

Re: Public Notification of Well Drilling and Production Application by Acme Inc

Mr. Mike Adams,
Acme Inc, 102005 FM 1625 Austin, TX 78669, filed a well drilling authorization application and a production permit application on June 26, 2013 with the Barton Springs/Edwards Aquifer Conservation District (District) for a new nonexempt well and a Historical Trinity Production Permit to withdraw an annual permitted volume of approximately 2,000,000 gallons per year of groundwater from the Middle Trinity aquifer management zone. Acme Inc, will operate the proposed well for commercial use to supply water for their manufacturing operations. The volume of pumpage requested was commensurate with an estimate of reasonable demand for the intended use and upon approval, would be required to comply with the provisions of a Historical Trinity Production Permit.

The well is located at 102005 FM 1625 Austin, TX 78669. Publication of this notice was published on September 1, 2013 in the Austin American Statesmen newspaper which began a 20-day public response period for which comments, written formal protests and requests for a public hearing will be accepted by the District until September 21, 2013. Parties interested in formally participating in a hearing on a contested application should refer to District Rule 4-9.13. For further information, please contact the District, 1124 Regal Row, Austin, Texas 78748, (512) 282-8441, bseacd@bseacd.org . You may also contact the applicant, Acme Inc at (512)-585-8744.

Cordially,
John Smith
General Operations Manager

Public Notice – San Marcos Record

Electro Purification LLC (Applicant), 4605 Post Oak Place Houston, TX 77027, filed an administratively complete Well Modification Authorization Application and a Production Permit Application on July 13, 2017 with the Barton Springs/Edwards Aquifer Conservation District (District) to modify seven test wells and for a Historic Trinity Production Permit to withdraw an annual permitted volume of 912,500,000 gallons/year (2.5 MGD) from the Middle Trinity Aquifer for wholesale public water supply.

The well field is located on two properties located along FM 3237 approximately 9 miles northwest of the City of Kyle and 5.5 miles northeast of Wimberley, in central Hays County. The physical address on the application is 7205 Old Kyle Road, Wimberley, TX 78676 (Lat 30°02'46.50", Long 98°00' 56.28").

The General Manager (GM) and staff have reviewed and determined that the permit application satisfies all District requirements and is administratively complete. The GM has developed a Statement of Position recommending the Board of Directors (Board) approve a phased Trinity Production Permit with Special Provisions. The GM proposes to authorize up to 182,500,000 gallons/year (0.5 MGD) in an initially authorized production Phase I. The GM will consider authorizing additional phase of production from the well field conditioned on the Applicant satisfying permit-specified requirements. The proposed additional phases are: Phase II at 1 MGD, Phase III at 1.5 MGD, and Phase IV at 2.5 MGD.

If approved by the Board, the Applicant will be required to comply with the drought curtailments of a Historical Trinity Production Permit for the authorized phase, as well as, the terms outlined in the proposed Special Provisions. The Special Provisions include a Compliance Monitoring Plan, Impact Avoidance Plan, and Mitigation Plan. The application, GM's Preliminary Decision, GM's Statement of Position, and proposed Special Provisions are available on the District's website at www.bseacd.org .

The Board may grant a contested case hearing on the application if a written hearing request is filed within 20-days after the publication date of this notice. To request a contested case hearing, you must submit in writing to the District the information required under District Rule 4-9.13. For a party desiring for the hearing to be conducted by the State Office of Administrative Hearings (SOAH) the request must include the statement: "[I/we] request that the SOAH conduct the hearing." Note that a party requesting that SOAH conduct the hearing shall pay all costs associated with the contract for a SOAH hearing and will be required to deposit with the District an amount determined by the District to pay the SOAH contract amount.

You may also file written comments within 20-days after the publication date of this notice without requesting a contested case hearing. Comments or requests for a contested case hearing must be submitted to the District in writing by mail or hand delivery to 1124 Regal Row, Austin, Texas 78748; facsimile (512)-282-7016; or, e-mail bseacd@bseacd.org.

For further information, please contact the District, 1124 Regal Row, Austin, Texas 78748, (512) 282-8441, bseacd@bseacd.org. You may also contact the applicant's representative, Edmond McCarthy at 512-904-2310.

# General Manager's Statement of Position

**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 three 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); and 3) an evaluation of the potential for unreasonable impacts (BSEACD, 2018b). 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. The District has set triggers to ensure that the confined Cow Creek and Lower Glen Rose formations will not be dewatered.

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 phases 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 attributed to the full requested pumping volume (2.5 MGD) 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 has the potential to cause unreasonable impacts to existing wells.

3. In order to avoid unreasonable impacts and to ensure that the aquifer will not be dewatered, the permit will contain special provisions that include production phases, a Compliance Monitoring Plan (CMP), an Impact Avoidance Plan (IAP), and a Mitigation Plan (MP).

4. The pumpage volume to be authorized for Phase 1 (182,500,000 gallons/year or 0.5 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, an IAP, and if the applicant elected, an MP. The General Manager can then include the applicant's proposed measures and

additional measures to avoid the potential for unreasonable impacts. The measures recommended by the General Manager include the incorporation of production phases, a CMP, IAP, and an MP.

- **Phase Permitting**: Incremental steps in pumping volumes that have criteria for no unreasonable impacts before proceeding to larger volumes. The proposed production phases are: Phase I, .5 MGD; Phase II, 1 MGD; Phase III, 1.5 MGD; and Phase IV, 2.5 MGD. Specific conditions must be met before advancing beyond Stage I.

- **Compliance Monitoring Plan (CMP)**: The CMP includes a monitoring well network (Appendix D) that utilizes a specified index well (Rolling Oaks Index Well) with mandatory compliance actions such as trigger curtailments (Appendix E) to ensure that the Cow Creek and the Lower Glen Rose Formations will not be dewatered, as well as the installation of monitoring wells to measure drawdown and water quality around the EP well field.

- **Impact Avoidance Plan (IAP)**: The IAP includes avoidance actions that are measures and commitments on the part of the permittee to *avoid anticipated* unreasonable impacts. Avoidance actions include preemptive lowering/replacing of pumps or deepening/replacing eligible wells within the avoidance impact area. The implementation of all avoidance actions shall be closely coordinated with the District staff to ensure that the described measures are implemented consistently with the District's expectations.

- **Mitigation Plan (MP):** The MP is intended to be a commitment by the permittee to mitigate any *unanticipated* unreasonable impacts after all reasonable preemptive avoidance measures have been exhausted. Per District Rules, mitigation may be proposed by the applicant, and must be agreed upon by both the applicant and the District. The proposed MP has been preliminarily agreed upon by the applicant and the General Manager but is subject to District Board approval.

**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 0.5 MGD (182,500,00 gallons per year) in an initially authorized production Phase 1. 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 additional phases of production from this well field, conditioned on the Permittee requesting

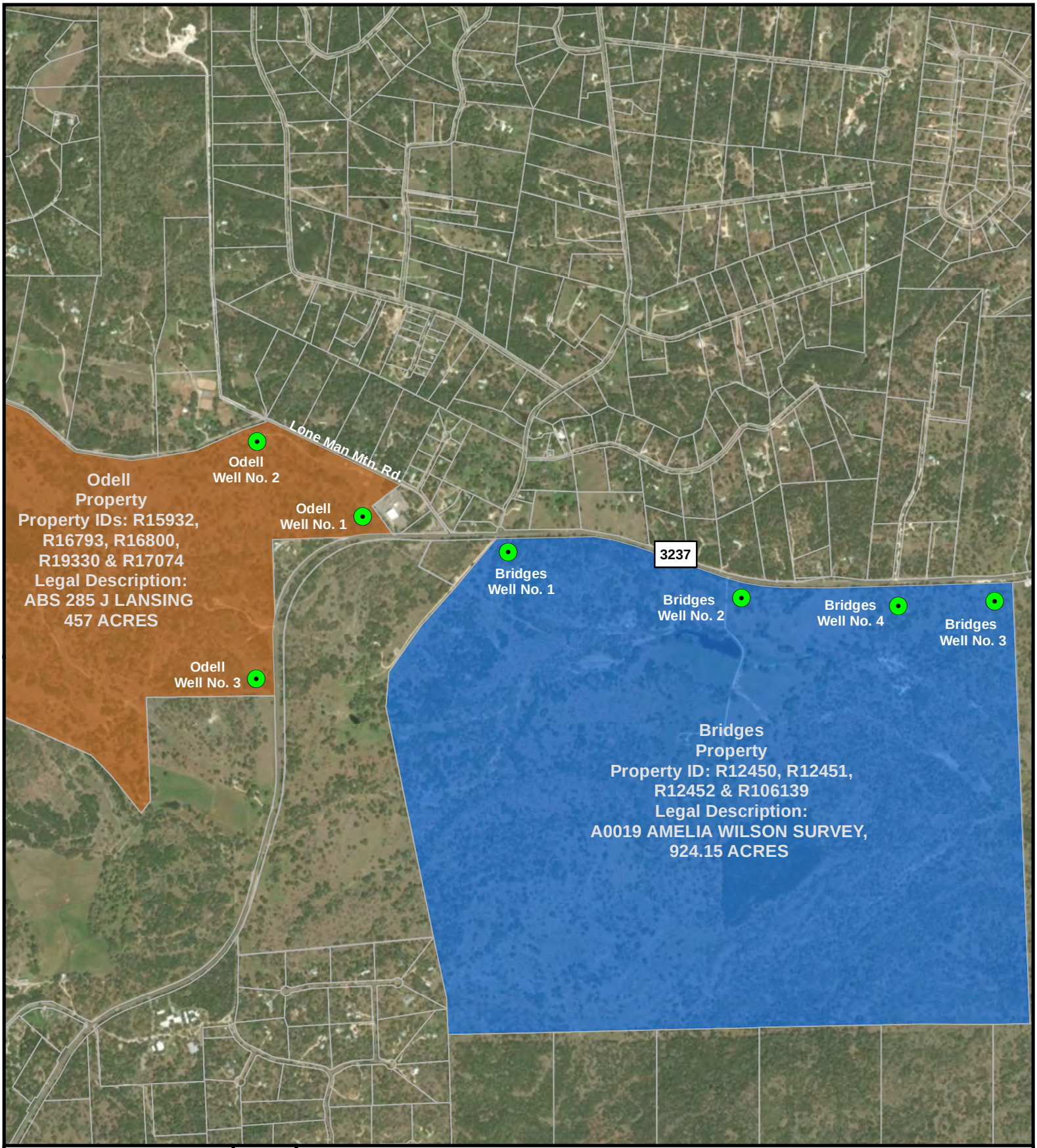
the next higher phase of production as described in the proposed special permit provisions, and on its satisfying the permit-specified requirements to receive authorization by BSEACD for the higher production rates in each phase. The authorized production in each phase will be the basis for assessing production fees and for applying mandatory curtailments under BSEACD's drought management program. Nominally, there would be three additional phases: Phase II at 1 MGD, Phase III at 1.5 MGD, and Phase IV at 2.5 MGD.

Therefore, the General Manager recommends approval of the phased permit with special provisions. The proposed special permit provisions are enclosed.

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

Enclosure – Proposed 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

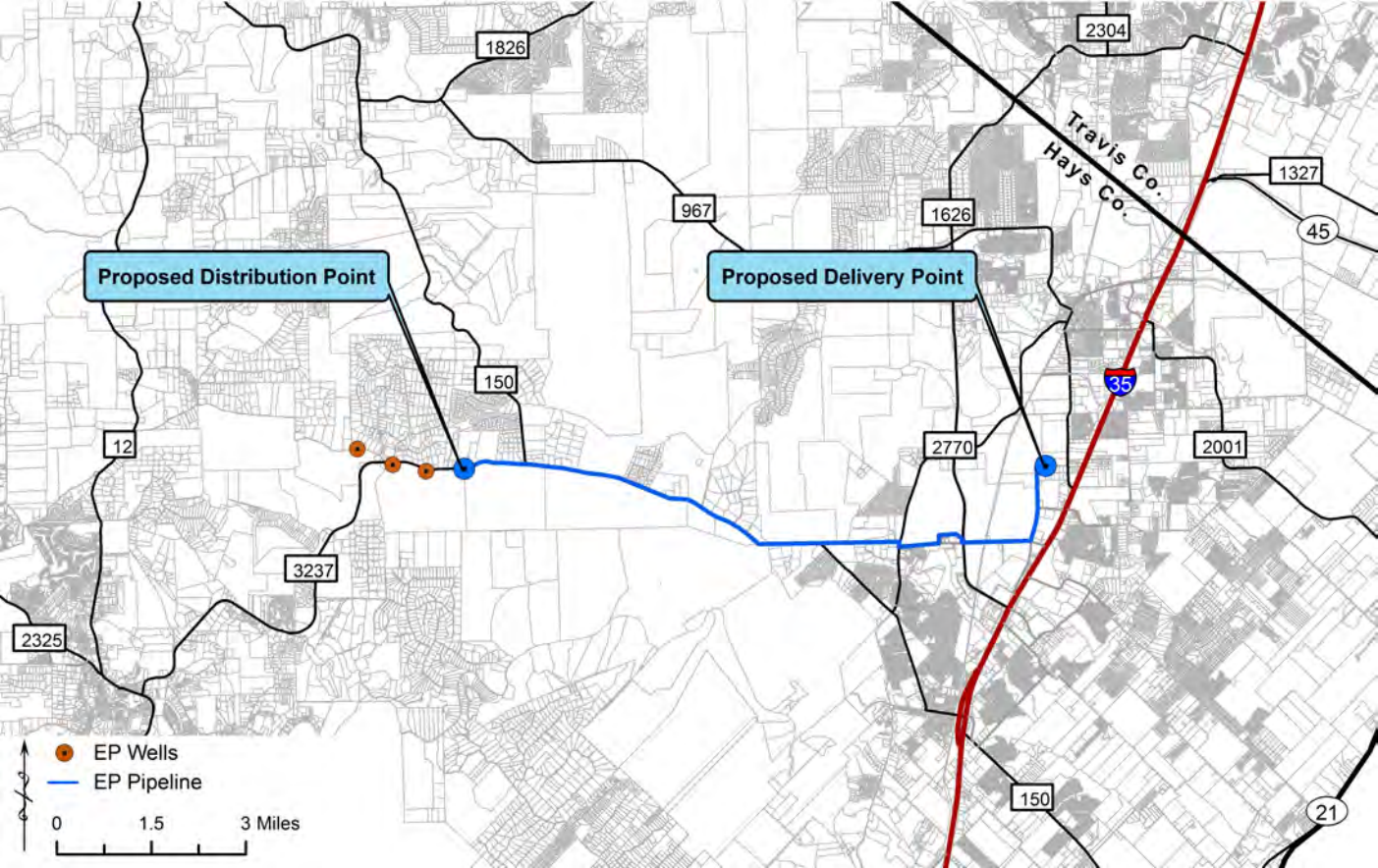
# Odell/Bridges Well Field - Plat Map

**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**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Proposed Delivery Point
Travis Co.
Hays Co.
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1626
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1327
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3237
2325
150
21
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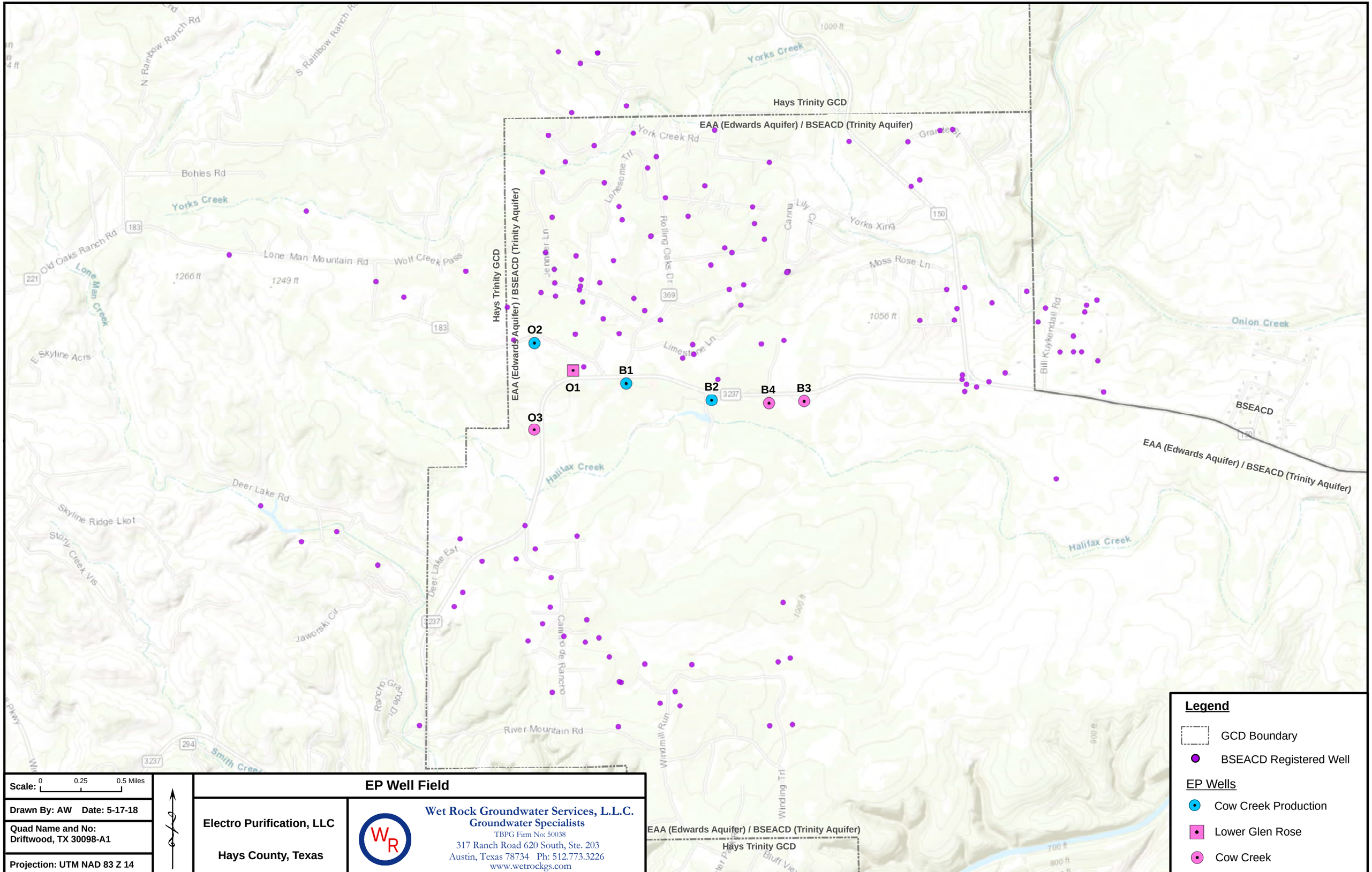
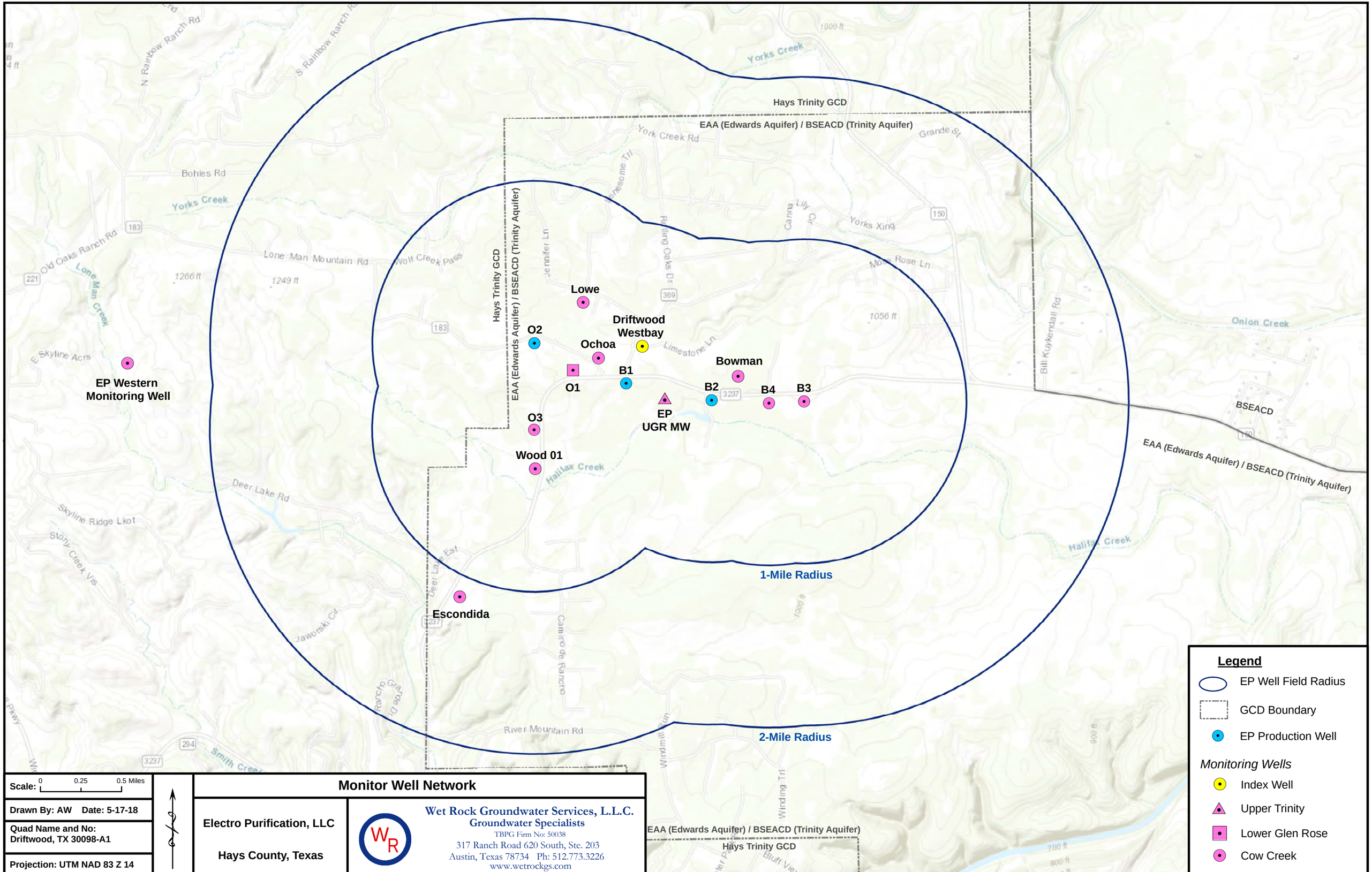
EP Pipeline
0
1.5
3 Miles

**APPENDIX C**


Hays Trinity GCD
EAA (Edwards Aquifer) / BSEACD (Trinity Aquifer)
Hays Trinity GCD
EAA (Edwards Aquifer) / BSEACD (Trinity Aquifer)
O1
O2
O3
B1
B2
B3
B4
Yorks Creek
York Creek Rd
Lonesome Trl
Rolling Oaks Dr
Jenner Ln
Canna Lily Cir
Yorks Xing
Moss Rose Ln
Grandeur
Bill Kuykendall Rd
Onion Creek
Limestone Ln
Bohles Rd
Old Oaks Ranch Rd
Lone Man Creek
Lone Man Mountain Rd
Wolf Creek Pass
N Rainbow Ranch Rd
S Rainbow Ranch Rd
E Skyline Acrs
Halifax Creek
Deer Lake Rd
Skyline Ridge Lkot
Stony Creek Vis
Jaworski Cir
Deer Lake Est
Camino de Rancho
Rancho Grande Dr
River Mountain Rd
Windmill Run
Winding Trl
Smith Creek
Bluff View
1000 ft
1266 ft
1249 ft
1056 ft
900 ft
800 ft
700 ft
183
221
150
369
3237
294
BSEACD
EAA (Edwards Aquifer) / BSEACD (Trinity Aquifer)
Hays Trinity GCD
Legend
GCD Boundary
BSEACD Registered Well
EP Wells
Cow Creek Production
Lower Glen Rose
Cow Creek
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**




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

# Monitor Well Network

**Electro Purification, LLC**

**Hays County, Texas**


Wet Rock Groundwater Services, L.L.C.
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TBPG Firm No: 50038
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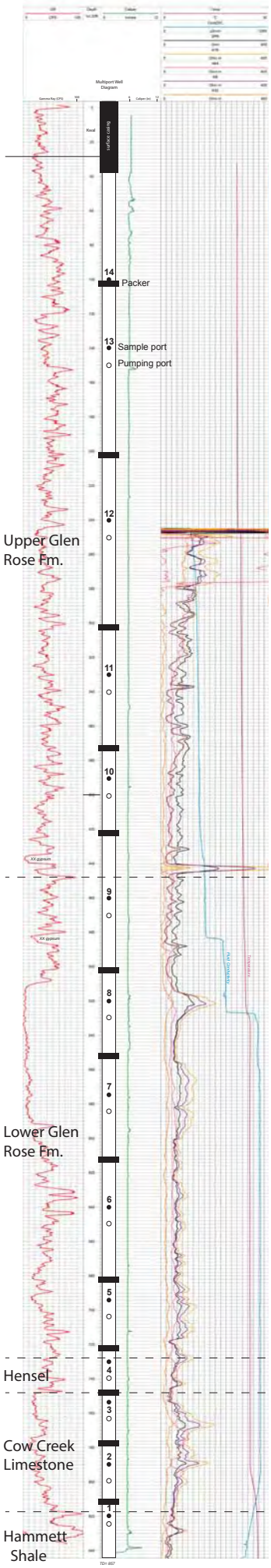
**APPENDIX E**

# Index Well Diagram and Triggers




Upper Glen Rose Fm.

Lower Glen Rose Fm.

Hensel

Cow Creek Limestone

Hammett Shale

| Lower Glen Rose (LGR) Zone 8 | Depth (ft) | Cow Creek (CC) Zone 2 |
|---|---|---|
| | 100 | |
| 202 ft ▼ (3/31/17) | 200 | ▼ 243ft (3/31/17) |
| 275 ft ▼ (4/26/18) | | ▼ 284 ft (4/26/18) |
| | 300 | |
| LGR Trigger 1: 350 ft | | |
| LGR Trigger 2: 400 ft (20%) | 400 | |
| LGR Trigger 3: 450 ft (40%) | 448 | |
| LGR Trigger 4: 500 ft (100%) | 500 | CC Trigger 1: 500 ft |
| | 600 | |
| | | CC Trigger 2: 660 ft (20%) |
| | | CC Trigger 3: 680 ft (40%) |
| | 700 | CC Trigger 4: 700 ft (100%) |
| | 728 | |
| | 748 | |
| | 800 | |
| | 818 | |

*Geologic picks from Alex S. Broun and Brian B. Hunt.*

5.14.18

# PROPOSED SPECIAL PROVISIONS

## SECTION 1. DEFINITION OF TERMS

**"Avoidance" -** any proactive measures taken by a Permittee 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.

**"Impact Avoidance Plan" -** a document that captures the purpose, description, and details of the avoidance measures to which the Permittee has committed. Those avoidance measures may include:

a. reduction of authorized permit volume and/or pumping rate,
b. phased permit volumes with conditional increases,
c. ongoing aquifer monitoring,
d. one or more index wells with defined compliance levels and prescribed responses,
e. temporary pumping curtailments,
f. permanent permit volume reductions,
g. mitigation measures if applicable, and
h. other reasonable measures necessary to avoid the occurrence of unreasonable impacts.

**"Index Well(s)"** - a designated observation or monitoring well that is used to measure the water level and/or quality of water within the aquifer. For the purpose of these provisions, "Rolling Oaks Index Well" is designated as the primary index well for compliance. Details describing the index well are found in Appendix A, Section 1 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.

**"Mitigation Plan" -** a document that captures the purpose, description, and details of the mitigation action and measures to which the Permittee has committed. The measures described in a plan serve as a contingency response to the occurrence of unreasonable impacts that are unanticipated or unavoidable through reasonable avoidance 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 3 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 30-day rolling average of the minimum daily water level (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 Section 4 of these provisions.

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

## SECTION 2. GENERAL

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, the Permittee must submit documentation from the TCEQ authorizing the Permittee to operate the well as a TCEQ-approved Public Water System, if an authorization is required by TCEQ.

3. **TCEQ PWS- Testing**. Prior to performing a TCEQ-required pump test on any of the seven proposed production wells, the Permittee will provide a 15-day written notice to the General Manager (GM), and will coordinate any well monitoring during the test. Documented data that is collected during this testing process may be evaluated by the GM and utilized to further refine or adjust the plans enclosed in these special provisions. Permit revisions that are deemed necessary by the GM will be incorporated into the permit 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.

4. **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.

5. **Production Phases.** These provisions mandate the use of a phased permit structure with conditional volume increases. The Permittee is authorized to proceed to the next phase of production only after all conditions have been satisfied for proceeding with the increase. Those conditions are outlined in Section 4 of these permit provisions.

6. Compliance Monitoring Plan (CMP) - Response Actions Required. In response to the staff's review of the submitted Hydrogeological Report and the subsequent GM's preliminary finding identifying a potential for unreasonable impacts resulting from permitted pumping (912,500,000 gallons per year) from the Permittee's well field, the District requires permit-specific Response Actions to be implemented to avoid unreasonable impacts. The Permittee must comply with the Response Actions associated with each Permit Compliance Level. These actions are identified in Appendix A, Section 3 of these provisions.

7. CMP - Contents. These provisions designate the use of a CMP, which describes the protective measures and details relating to index wells, permit compliance triggers, mandatory compliance response actions, and a monitor well network. Appendix A of these provisions further describes the details of the index well(s) to be employed. 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.

8. CMP - Evaluation. As drawdown in the primary index well approaches each Permit Compliance Level, the GM will conduct an evaluation of the data to assess the actual data and effects 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 Compliance Levels are subsequently reached.

9. CMP - Revised Curtailments. When the water level in the primary index well reaches a designated Trigger, the GM will notify the Permittee via certified mail within ten 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.

10. Impact Avoidance Plan. These provisions designate the use of avoidance actions, which are the measures and commitments on the part of the Permittee to avoid anticipated unreasonable impacts. Planning and implementation of all avoidance actions shall be closely coordinated with the GM to ensure that the described measures are implemented properly.

11. Unreasonable Impacts. If the GM determines through its own evaluation and investigation, or through an approved third-party administrator's evaluation and investigation, that permitted production from the Permittee's well field is causing any of the following potential "unreasonable impacts," then the GM may adjust or amend the permit provisions through a GM-initiated amendment after notice and hearing:

    - the degradation of groundwater quality in other wells such that the water is unusable or requires the installation of a treatment system for its intended purpose;

    - depletion of groundwater supply over a long-term basis, including but not limited to chronic reductions in storage or overdraft of an aquifer;

- 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;

- land subsidence; or

- the desired future condition (DFC) to not be achieved.

12. Unreasonable Impacts and Mitigation/Permit Reduction. If the GM determines through its own evaluation and investigation, or through an approved third-party administrator's evaluation and investigation, that production from the permitted wells is causing index wells or any other operational wells (that are adequately equipped, maintained, and completed to withstand natural variability) to experience a potential "unreasonable impact" such as the following:

    - well interference related to one or more water wells ceasing to yield water at the ground surface;

    - well interference related to a significant decrease in well yields that results in one or more water wells being unable to obtain either an authorized, historic, or usable volume or rate from a reasonably efficient water well; or

    - well interference related to the lowering of water levels below an economically feasible pumping lift or reasonable pump intake level;

    then the GM may pursue the following actions:

    - The GM may require the Permittee to immediately implement the mitigation plan and mitigation response actions on file, or

    - Alternatively, if a mitigation plan is no longer in effect by agreement, the GM may require temporary cessation of pumping until the Board, after notice and opportunity for hearing, approves a GM-initiated amendment to partially reduce the full permit volume to a rate that will reasonably avoid recurrence of unreasonable impacts.

13. Mitigation or Permit Reduction. In lieu of permit reductions required by provision No. 12b above, the GM may consider voluntary mitigation measures by the Permittee pursuant to any agreement in effect between the District and the Permittee related to mitigation, to 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.

14. Permit Amendments - 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.

15. Permit Amendments - Effects of Other Pumping. If the GM determines that new pumping centers, new increased pumping centers, or new large-scale groundwater production from nonexempt wells within the area of influence is significantly affecting drawdown relative to the Permit Compliance Levels set on the index well(s), then the GM may consider revision of these permit provisions and Permit Compliance Levels. For drawdown significantly affected by production located outside of the jurisdiction of the District, the GM, with the Permittee's input, will determine the amount of drawdown not related to the Permittee's well(s) and, as appropriate, the GM will recommend to the Board an adjustment to the permit conditions relative to the amount of drawdown. In making these specific determinations, the District will not consider existing or future exempt well pumping effects on the Permit Compliance Levels. Any permit revisions or adjustments to the permit provision must be approved by the Board through a permit amendment.

16. 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.

17. 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.

18. PWS Infrastructure. Within three years of permit issuance, Permittee shall provide documentation satisfactory to the GM that the physical infrastructure is in place necessary to deliver water authorized by this permit to Permittee's wholesale customer. If the Permittee is unable to produce documentation deemed acceptable by the GM by the end of the three-year period, the permit will automatically expire without notice and hearing upon the three-year expiration date unless an extension is requested by the Permittee and granted by the Board. The Permittee may submit to the Board a written request for an extension of time to satisfy this requirement. The request for an extension must be submitted at least ten days before the end of the three-year period. The written request must include a report explaining the status of completion of the physical infrastructure and other relevant information to support an extension. The Permittee's request for an extension may be denied or granted by the Board.

19. Reports. The Permittee will provide a monthly data report on each production well in operation. 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.

20. Permit Compliance. If the Permittee fails to meet 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).

## SECTION 3. RE-EVALUATION OF DESIRED FUTURE CONDITIONS (DFC)

1. The amount of groundwater authorized under this permit for purposes of determining achievement of the applicable DFC is Phase I – (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. 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 and most current tools to perform this evaluation, including but not limited to applicable numerical models, analytical models, water levels, and Texas Water Development Board (TWDB) exempt use estimates.

4. 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, 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 4. PRODUCTION PHASES

Upon the permit issuance date of this permit/special permit provisions, the Permittee is authorized to commence production of groundwater at the Phase I volume. All applicable drought curtailments will apply to the authorized phased volume.

- Phase I (0.5 MGD) = 182,500,000 gallons per year
- Phase II (1.0 MGD) = 365,000,000 gallons per year
- Phase III (1.5 MGD) = 547,500,000 gallons per year
- Phase IV (2.5 MGD) = 912,500,000 gallons per year

The GM may grant authorization and approval without further public notice and hearing for the Permittee to advance to the next phase of production, without public notice and hearing. All future phases of production will be subject to the District Rules in place at the time of the next phase authorization. Before proceeding to the next phase of production from an existing phase, the following conditions must have been satisfied:

1. Water levels in the index well must not have reached a Compliance Level 2 Trigger due to the Permittee's pumping activity.

2. Permittee must have produced an average of 70% of the current phase annual permit volume for the six calendar months prior to the request.

3. Permittee must have contracts in place that will support use of all of the next phase permit volume.

4. Permittee must have water-supply infrastructure in place and in operation for the distribution of groundwater to contracted customers.

5. Permittee must have mitigated any "unanticipated unreasonable impacts" that occurred during the existing phase.

6. Permittee must submit a special fee of $500 for reviewing and evaluating new information related to the request.

7. Permittee must notify the GM in writing of its request to move to the next volume phase.

    a. A 90-day review period starts when the Permittee's request letter and fee is received.

    b. Approval shall be granted if all conditions herein are satisfied; GM will respond with a decision to the Permittee's request within 90 days of receiving the request.

    c. Approval may be delayed if the District is in Stage II Drought or more severe.

8. The GM will respond to the Permittee's request within 30 days. The Permittee may be required to submit updated and revised plans *(Compliance Monitoring Plan, Mitigation Plan, Impact Avoidance Plan)* if the GM determines that 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 and agreed upon by the District.

    b. Updated plans may incorporate additional monitoring wells and/or additional index wells and any extension of the impact areas. If an additional index well is necessary, the Permittee and GM will identify appropriate triggers.

    c. Updated plans must consider the additional areas of impact given the scope of the next production phase.

9. Prior to receiving an authorization for the next production phase volume, and upon receiving a written response and instruction from the GM, the Permittee will implement avoidance actions per its prescribed Impact Avoidance Plan (IAP) schedule.

    a. If Permittee does not complete or follow through with its IAP commitments in full and within the prescribed schedule, then the GM will delay consideration of the request (to move to next phase production) for an additional six months. The six-month delay period will begin upon the Permittee's receipt of a GM notice letter indicating failure to complete IAP commitments.

    b. Avoidance measures must be completed for ALL well owners that are i) known to have an eligible well at risk, or ii) have come forth as a cooperative, willing, and eligible well owner.

    c. The Permittee will identify and list all contacted well owners that are unwilling to receive avoidance actions. Permittee shall provide the GM with copies of documentation evidencing the Permittee's outreach attempts to the well owner(s).

d. The Permittee will identify and list all contacted well owners that did not respond to the Permittee's notifications. Permittee shall provide the GM with copies of documentation evidencing the Permittee's outreach attempts to the well owner(s).

10. In accordance with Section 3 above, prior to advancing to the next phased-production volume, the GM will perform a re-evaluation of the production from the permitted well field at the authorized production in the new phase to assess whether there are current or potential effects to the aquifer that would i) cause a failure to achieve the DFC, or ii) cause an unreasonable impact as defined in District Rules.

## SECTION 5. 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, and upon request to adjacent well owners.

When drawdown in the primary index well reaches a Lower Glen Rose or Cow Creek 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 any deeper drought curtailments are in effect at the time of the production chart revision and will go with whichever curtailment is deeper 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.

## SECTION 6. WELL MODIFICATIONS

The Permittee will complete the following within nine months of the administratively complete date:

1. Modify/complete Bridges Well No. 1 and No. 2, and Odell Well No. 2 to public water supply standards; and

2. Modify/complete Bridges Well No. 3 and No. 4 to domestic well standards.

## SECTION 7. THIRD-PARTY ADMINISTRATORS AND WELL SERVICE CONTRACTORS

1. The GM and the Permittee have previously agreed to utilize one or more mutually agreed third-party administrator(s) to perform certain technical hydrogeological interpretations and/or oversight and coordination of well service contractors related to the commitments in the IAP.

1. The Permittee will be responsible to engage and pay the costs of the third-party administrator for its services.

2. The Permittee will submit a list of proposed third-party administrator to provide hydrogeological interpretations, technical opinions and oversight/coordination of well service contractors that provide well services, well repairs, well construction, and/or well equipment replacement. The Permittee and the District will work cooperatively to select a third-party administrator to coordinate well work with well service contractors and landowners and will verify that all contractors are not subject to any ongoing notice of violation or enforcement action by the GM. At least annually, the Permittee shall update the list, which will be verified by the GM.

3. The Permittee will work with the District to identify a list of licensed well service contractors not subject to any pending violation or enforcement actions by the District, for use in conducting well investigations and/or pull or lower pumps pursuant to the Permittee's IAP.

## SECTION 8. MONETARY COMMITMENTS

1. Water Quality Sampling - Fund Contribution of $1500 Annually
   The Permittee will contribute $1,500 per year to the District for annual water quality sampling and analysis of wells in the immediate area of the Permittee's well field. Water quality sampling results will be used by the District to monitor water chemistry changes, if any, over time with production.

2. Telemetry and Data Hosting - Necessary Costs
   The Permittee shall be responsible for costs associated with purchasing/reimbursement, installing, maintaining, repairing, and replacing all telemetry monitoring equipment such as pressure transducers, related telemetry equipment, and cell/web hosting fees. All materials and equipment shall be new, free from defects, and fit for the intended purpose. These costs are intended for the monitor well network and will be designed in cooperation with the District. Any expenses for the above described work will be incurred by the Permittee at no cost to the District, or will be reimbursed to the District. The data is intended to be made publicly available.

3. Staff Time for Water-Level Measurements/ Data Retrieval - $1000 Annually
   The Permittee will contribute $1,000 per year to the District for offsetting incurred costs of annual manual water-level measurements of the monitor well network, and for data retrieval and processing of transducer data. The data will be used by the District to monitor water level changes and their variability, over time with production.

4. Low Cost Well Monitoring - Fund Contribution of $5,000 One-Time + $500 Annually
   The Permittee will make a one-time initial contribution of $5000 and then contribute $500 per year to the District for the annual purchase of affordable low-cost monitoring equipment (e.g., WellNTell™) to be installed on potential monitor wells in the immediate area of the Permittee's well field. The District will help install and maintain the data, which will be made publicly available. Water-level data will be used by the District to monitor changes, if any, over time with production.

# APPENDIX A: COMPLIANCE MONITORING PLAN



## SECTION 1. MONITORING WELL NETWORK

Within six months of permit issuance, the Permittee will drill/modify and install monitoring equipment for the monitor wells 2-4 below. For the Rolling Oaks Index Well, the District will install, at EP's cost, monitoring equipment within 90 days of permit issuance in accordance with Section 2 of this Compliance Monitoring Plan (CMP), or prior to the TCEQ pump test, whichever comes first. **All monitoring wells and equipment must be installed before production commences.** Monitoring equipment should also be installed in any production wells that are completed. The District is responsible for compiling, collecting, and archiving data from the monitor wells.

1. Rolling Oaks Index Well - Install monitoring equipment within 90 days of permit issuance.
2. EP Western Monitoring Well - Drill well and install monitoring equipment.
3. EP Odell Well No. 1 - Drill well and install monitoring equipment.
4. EP UGR Monitoring Well - Drill well and install monitoring equipment.

The following domestic wells are also included in the monitor well network. The District will oversee and coordinate the installation of monitoring equipment, however, 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.

1. Bowman Well
2. Ochoa Well
3. Lowe Well
4. Wood 01 Well
5. Escondida Well

These wells 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 sites.

### Monitoring Well Access

1. The Permittee agrees to ensure 24-hour access by authorized District personnel to each monitoring well within the Permittee's 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.

2. The District will ask for access agreements with all identified monitoring well owners prior to the production of groundwater (see Figure A-1). If an access agreement cannot be secured cooperatively with a landowner, then the District may find a replacement monitor well location.

3. If there are not an adequate number of existing wells and landowners willing to cooperate and allow wells to serve as monitor wells, then the Permittee shall be responsible for drilling and completing an adequate number of monitoring wells necessary to monitor the effects of pumping on different aquifer formations.

Maintenance and Repair of Monitoring Wells

1. 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.

2. The Permittee shall be responsible for repairing and replacing any part of its own monitor wells. If repairs or replacement of any part of those wells are reasonably necessary or convenient for the continuous and adequate performance of the well, the District shall provide notice and the Permittee shall make repairs and replacements as soon as practicable.

3. The Permittee shall be responsible expenses and/or reimbursement for maintaining, repairing, and replacing all monitoring equipment such as pressure transducers, related telemetry equipment, and cell/web hosting fees. All materials and equipment shall be new, free from defects, and fit for the intended purpose.

## SECTION 2. INDEX WELL

The District has designated a primary index well (Rolling Oaks Index Well) for the purpose of monitoring aquifer conditions in the Middle Trinity Aquifer. These provisions further define the Permit Compliance Levels, Response Actions, and Triggers specific to the primary index well (see Figure A-2). In the event that the primary index well is no longer an adequate or accessible well for compliance purposes, the permit may be amended without notice and hearing, to designate a new primary index well. The Rolling Oaks Index Well is completed as a multiport scientific monitoring well with multiple monitoring zones 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.

Primary Index Well Provisions

1. Within 90 days of permit issuance, the Permittee, in coordination with the GM, 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 and the GM for the purpose of evaluating compliance with Section 3 of this CMP.

2. The District will operate and maintain the index well and equipment. The Permittee shall be responsible for repair and replacement costs for all monitoring equipment such as pressure transducers, related telemetry equipment, and cell/web hosting fees. All materials and equipment shall be new, free from defects, and fit for the intended purpose. Any expenses for the above-described work will be incurred by the Permittee at no cost to the District.

3. The District is solely responsible for normal wear and tear, well maintenance, pump servicing, or other repairs resulting from the District's normal use of the well.

4. The District and Permittee may consider cost sharing or incurring costs associated with repairs or replacement of any part of the index well that is reasonably necessary or convenient for the continuous and adequate performance of the well for monitoring purposes.

## SECTION 3. PERMIT COMPLIANCE ACTIONS

The following Permit Compliance Levels, Response Actions, and Triggers apply to the Rolling Oaks Index Well, the designated primary index well. If data collected from the index wells that have been determined by the GM to be inaccurate, shall not be used to determine compliance with these permit provisions.

### Permit Compliance Level 1 – Evaluation

Trigger 1 - A 30-day rolling average water level equal to or greater than 350 ft below land surface (bls) for the Lower Glen Rose and 500 ft bls for the Cow Creek.

Response Action - When drawdown in the Rolling Oaks Index Well reaches a sustained average water level that is equal to or greater than 350 ft below land surface (bls) for the Lower Glen Rose and 500 ft bls for the Cow Creek, the District will conduct an evaluation of the data to assess the actual impacts of pumping. The evaluation will utilize best available science and methods to consider factors and data including, but not limited to:

a. Manual confirmation of water level data,
b. Calibration and drift of pressure transducer,
c. Actual pumping rate and associated drawdown,
d. Drought conditions,
e. New local interference from pumping both inside and outside of the District,
f. Water-level trends in other monitor wells, and
g. Revised aquifer parameters (e.g. transmissivity, storativity).

### Permit Compliance Level 2

Trigger 2 - A 30-day rolling average water level equal to or greater than 400 ft below land surface (bls) for the Lower Glen Rose and 660 ft bls for the Cow Creek.

Response Action - When drawdown in the Rolling Oaks Index Well reaches a sustained average water level that is equal to or greater than 400 ft below land surface (bls) for the Lower Glen Rose and 660 ft bls for the Cow Creek, the Permittee shall comply with a temporary monthly curtailment of 20% of authorized permit volume. When the drawdown in the Rolling Oaks Index Well recovers to a 30-day rolling average water level that is less than 400 ft below land surface (bls) for the Lower Glen Rose and 660 ft bls for the Cow Creek, the mandatory temporary monthly curtailment of 20% 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 3

**Trigger 3** - A 30-day rolling average water level equal to or greater than 450 ft below land surface (bls) for the Lower Glen Rose and 680 ft bls for the Cow Creek.

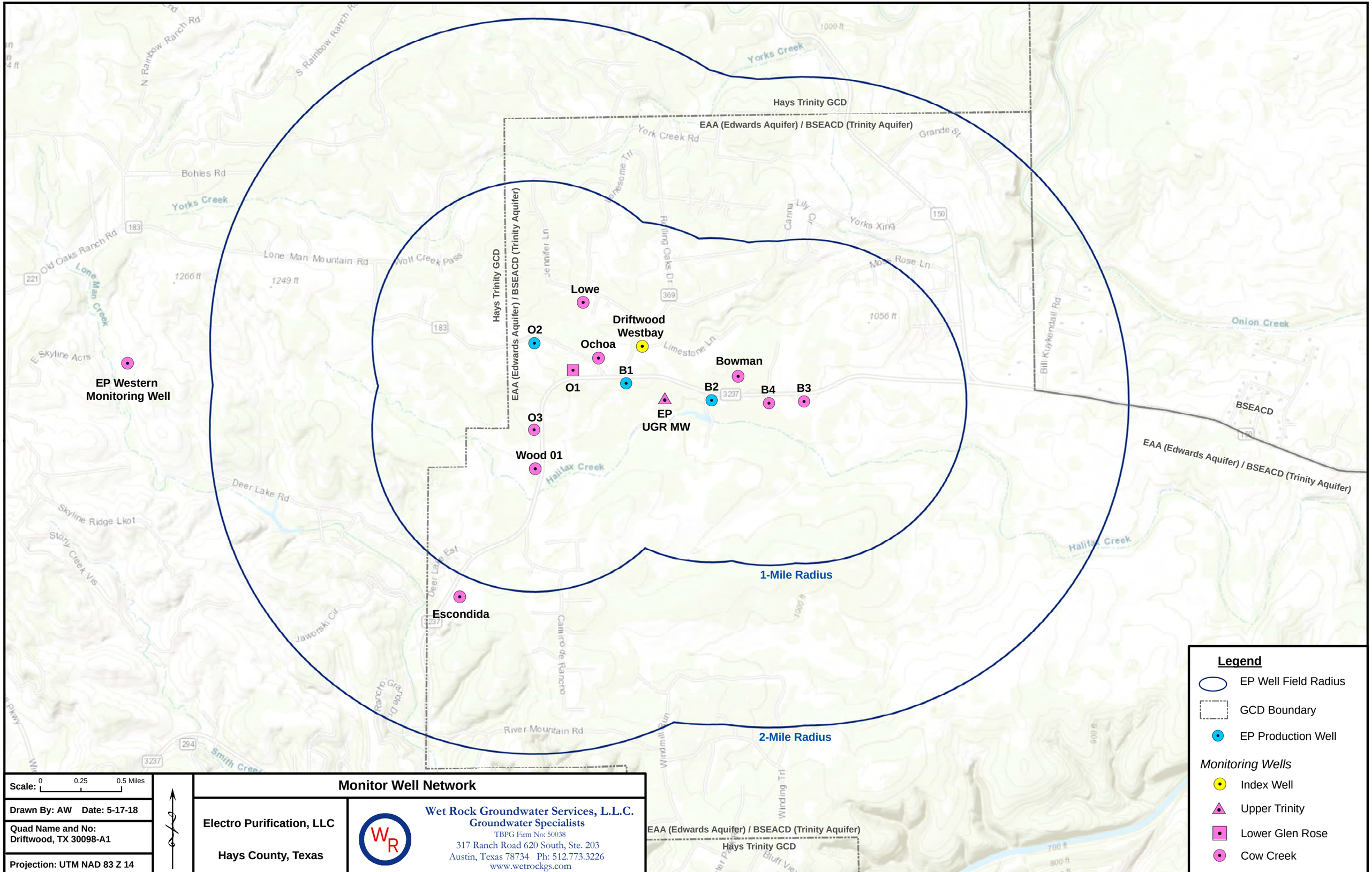
**Response Action** - When drawdown in the Rolling Oaks Index Well reaches a sustained average water level that is equal to or greater than 450 ft below land surface (bls) for the Lower Glen Rose and 680 ft bls for the Cow Creek, the Permittee shall comply with a temporary monthly curtailment of 40% of authorized permit volume. When the drawdown in the Rolling Oaks Index Well recovers to a 30-day rolling average water level that is less than 450 ft below land surface (bls) for the Lower Glen Rose and 680 ft bls for the Cow Creek, the mandatory temporary monthly curtailment of 40% shall be relaxed to 20%. 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 4

**Trigger 4** - A 30-day rolling average water level equal to or greater than 500 ft below land surface (bls) for the Lower Glen Rose and 700 ft bls for the Cow Creek.

**Response Action** - When drawdown in the Rolling Oaks Index Well reaches a sustained average water level that is equal to or greater than 500 ft below land surface (bls) for the Lower Glen Rose and 700 ft bls for the Cow Creek, the Permittee shall comply with a temporary monthly curtailment of 100% of authorized permit volume. When the drawdown in the Rolling Oaks Index Well recovers to a 30-day rolling average water level that is less than 500 ft below land surface (bls) for the Lower Glen Rose and 700 ft bls for the Cow Creek, 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 MONITOR WELL NETWORK




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

# Monitor Well Network

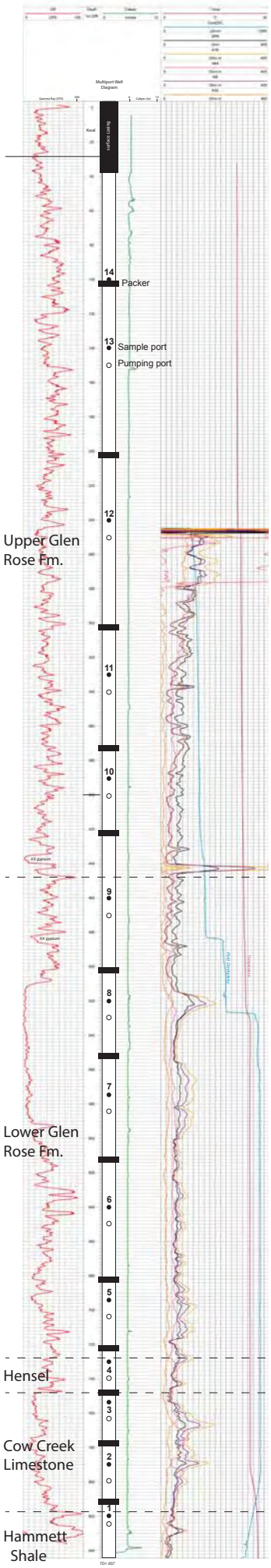
**Electro Purification, LLC**

**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

## FIGURE A-2. WELL DIAGRAM OF INDEX WELL TRIGGERS

# Index Well Diagram and Triggers




Upper Glen Rose Fm.

Lower Glen Rose Fm.

Hensel

Cow Creek Limestone

Hammett Shale

| Lower Glen Rose (LGR) Zone 8 | Depth (ft) | Cow Creek (CC) Zone 2 |
|---|---|---|
| | 100 | |
| 202 ft ▼ (3/31/17) | 200 | ▼ 243ft (3/31/17) |
| 275 ft ▼ (4/26/18) | | ▼ 284 ft (4/26/18) |
| | 300 | |
| LGR Trigger 1: 350 ft | | |
| LGR Trigger 2: 400 ft (20%) | 400 | |
| LGR Trigger 3: 450 ft (40%) | 448 | |
| LGR Trigger 4: 500 ft (100%) | 500 | CC Trigger 1: 500 ft |
| | 600 | |
| | | CC Trigger 2: 660 ft (20%) |
| | | CC Trigger 3: 680 ft (40%) |
| | 700 | CC Trigger 4: 700 ft (100%) |
| | 728 | |
| | 748 | |
| | 800 | |
| | 818 | |

*Geologic picks from Alex S. Broun and Brian B. Hunt.*

5.14.18

# APPENDIX B. IMPACT AVOIDANCE PLAN



## SECTION 1. PUBLIC NOTIFICATION

The following public notification actions are required of the Permittee as a condition to be satisfied prior to advancing to an authorized next phase of production

**Part 1 Timeline: Permittee will implement within 30 days of receiving District Instruction**

1. The Permittee will submit a list of proposed third-party administrators qualified to provide hydrogeological interpretations, technical opinions and oversight/coordination of well service contractors that provide well services, well repairs, well construction, and/or well equipment replacement. The Permittee and GM will work cooperatively to select a third-party administrator to coordinate well work with well service contractors and landowners, and will verify that all contractors are not subject to any ongoing notice of violation or enforcement action by the District. The GM must approve the designated third-party administrator and the Permittee will be the responsible contracting agent with the third-party Administrator. At least annually, the Permittee shall update the list, which will be verified by the GM.

2. The Permittee will work with the District to identify a list of licensed well service contractors not subject to any pending violation or enforcement actions by the District for use to conduct well investigations and/or pull or lower pumps pursuant to the Permittee's IAP.

**Part 2 Timeline: Permittee will implement within 60 days of receiving District Instruction**

1. The Permittee will provide public notices through certified mail to all property owners within the designated avoidance impact area, including well owners known to have wells potentially impacted by the Permittee's groundwater production. The Permittee will coordinate with the GM to develop a list of such landowners from the Hays CAD.

2. The Permittee will publish in a newspaper in general circulation in Hays County, a public notice of Permittee's permit request and avoidance measures, including notice for well owners to register wells.

3. The GM will provide a copy of the Permittee's IAP on the District website and at the District Office.

4. The Permittee will provide signs for the following neighborhoods within a two-mile radius of the Permittee's well field: *Las Lomas, Rolling Oaks, Sierra West, River Mountain,* and *Escondida.*

5. The Permittee will host a public meeting in coordination with the GM. Comments received after the meeting will be considered by the Permittee and the GM, and the GM will post a response on the District website.

## SECTION 2. IMPLEMENTATION OF WELL WORK

**Timeline: Permittee will implement within 90 days of receiving District instruction and prior to ground-water production**

1. The Permittee via the third-party administrator will coordinate well investigation and pump-lowering work efforts. Such efforts will be coordinated between the pre-approved well service contractors and the well owners. The Permittee via the third-party administrator will provide regular status updates to the GM and Permittee related to the avoidance efforts, investigations, and pump-lowering efforts that are taking place.

2. Once the third-party administrator arrives at a decision from its investigative efforts, and if the administrator determines that the well is not eligible for avoidance work, the administrator will notify the GM immediately, and the ultimate and final decision will be made by the GM.

3. All willing well owners with eligible wells will receive the appropriate well work necessary to avoid unreasonable impacts and necessary to satisfy the commitments of this IAP.

4. Well work that may be necessary to avoid unreasonable impacts may involve lowering pumps, replacing pumps, deepening a well, or drilling a new well. Pumps shall be set at an adequate level no less than 20 ft below the top of the water-bearing formation in the aquifer.

## SECTION 3. AVOIDANCE IMPACT AREA

**Avoidance Impact Area**. The Avoidance Impact Area (AIA) associated with the Permittee's well field is generally reflected on the map included as Figure B-1, as the area within a two-mile radius of the Permittee's well field located along FM 3237, approximately six miles northeast of Wimberley, Hays County, Texas. The two-mile radius was determined by an aggregate of the two-mile radii for each of the seven EP test wells. Wells that are considered to be "eligible" are located within the area of potential impact of production from the Permittee's well field (the "AIA") per the following criteria:

- Hybrid completed Lower Glen Rose/Cow Creek wells will be located in the two-mile radius
- Discretely completed Cow Creek well will be located in the two-mile radius
- Discretely completed Lower Glen Rose wells will be located in the one-mile radius

Wells with pump setting to be within one of the following formations:

- Pumps set in the Lower Glen Rose formation above the Level 4 Compliance Trigger (500 ft)
- Pumps set in the Cow Creek formation or hybrid Lower Glen Rose/ Cow Creek formation above the Level 4 Compliance Trigger (700 ft)

## SECTION 4. ELIGIBILITY CRITERIA

As of the permit issuance date, all existing wells that meet the eligibility criteria set forth herein shall be considered to be "Eligible Wells" during the term of the permit.

Factors to be considered in determining eligibility for possible avoidance actions include but are not limited to:

1. Well Registration - A well owner must have previously registered the allegedly impacted well, or must be willing to immediately register their well at the time of submitting the well impact complaint form. Wells located outside of District boundaries are not required to be registered with the District but will be eligible for avoidance if all criteria are met.

2. Avoidance Impact Area - The well must be located within the designated impact area for *the Permittee.* The location of the eligible well should be located within the two-mile radius of the Permittee's well field. The AIA is determined and identified in Section 3 of this impact avoidance plan as depicted in Figure B-1. Certain wells within the AIA that are located outside of the District boundaries, including wells within Hays Trinity Groundwater Conservation District, will be eligible for avoidance.

3. Well Construction and Completion – Receipt of evidence or affidavit from the well owner demonstrating that the well was in operation prior to permit issuance and in a non-deteriorated state downhole. The Permittee will not be responsible for bringing a well into compliance with State or District standards except as necessary when the scope of avoidance work involves lowering a pump or deepening a well.

4. Groundwater Production Zone - The well must be completed in and capable of withdrawing water from the formation or the hydrologically connected formations in which the production wells operating in the Permittee's well field are completed. The well must be completed in and producing water from the Lower Glen Rose or Cow Creek formations of the Trinity Aquifer. The groundwater production zone may be determined through a geophysical log of the well borehole, drillers' reports, or through data collected during the investigation. Wells discretely completed in the Upper Glen Rose section of the Trinity may not be eligible for avoidance unless monitoring well data indicates a connection and impact. Comingling of water from different formations does not make the well ineligible for avoidance.

5. Natural Variability in Water Levels - The well must have been in an operational condition such that it was adequately completed and adequately equipped to account for water-level drawdown attributed to drought conditions, seasonal increases in local pumping, normal pumping usage, and pumping from neighboring wells in the area of influence.

6. Time of Occurrence - The well was functioning as an adequate operational well prior to the Permittee's permit issuance. The well issue occurred after the production at the specified pumping well/well field commenced.

## SECTION 5. AVOIDANCE ACTIONS FOR ELIGIBLE WELLS

Once all of the above "eligibility criteria" have been met, and the well owner has confirmed willingness to cooperate, then one of the following procedures will be carried out. These avoidance actions will be completed prior to the Permittee's groundwater production and within 90 days of receiving District notification as described in Section 1 of this IAP.

Procedure for Wells with Known Completion Information

1. The third-party administrator will review copies of all information and records available on the well, including driller reports and logs.

2. Once the third-party administrator arrives at a decision from its investigative efforts, and if the administrator determines that the well is not eligible for avoidance work, the administrator will notify the GM immediately and the ultimate and final decision will be made by the GM.

3. Wells with documentation showing the pump setting to be within one of the following formations shall be eligible to have their pumps lowered/replaced by a licensed well service contractor at no cost to the well owner. Cost for work will be covered by the Permittee in full.

    - Pumps set in the Lower Glen Rose formation above the Level 4 Compliance Trigger (500 ft).
    - Pumps set in the Cow Creek formation or hybrid Lower Glen Rose/ Cow Creek formation above the Level 4 Compliance Trigger (700 ft).

4. The Permittee via the third-party administrator will coordinate the well investigation and pump-lowering work efforts.

Procedure for Wells with Unknown Completion Information

1. The third-party administrator will review copies of all information and records available on the well, including driller reports and logs. If there is no information or records on the well completion, then the Permittee via the third-party administrator will coordinate an investigation with the GM to verify the completion and pump-setting depth through tools and methods such as geophysical logs, downhole video, or pulling the pump. The Permittee is responsible for all costs associated with a coordinated investigation. If a coordinated investigation is necessary, then the following terms must be agreed upon in writing by the well owner and the Permittee in advance of further investigation:

    (a) If the well is determined to be in the Cow Creek formation or Lower Glen Rose formation, and if the pump depth is confirmed to be above the Level 4 "Trigger," then the Permittee will pay the cost, including the lowering of the pump and/or replacing the pump below the "Trigger" level.

    (b) If the well is determined to *not* be in the Cow Creek formation or Lower Glen Rose formation and/or if the pump depth is confirmed to be below the Level 4 "Trigger," then the well owner (*not* the Permittee) will be responsible for all costs associated with the pulling of the pump and its reinstallation.

2. Once the third-party administrator arrives at a decision from its investigative efforts, and if the administrator determines that the well is not eligible for avoidance work, the administrator will notify the District immediately, and the ultimate and final decision will be made by the GM.

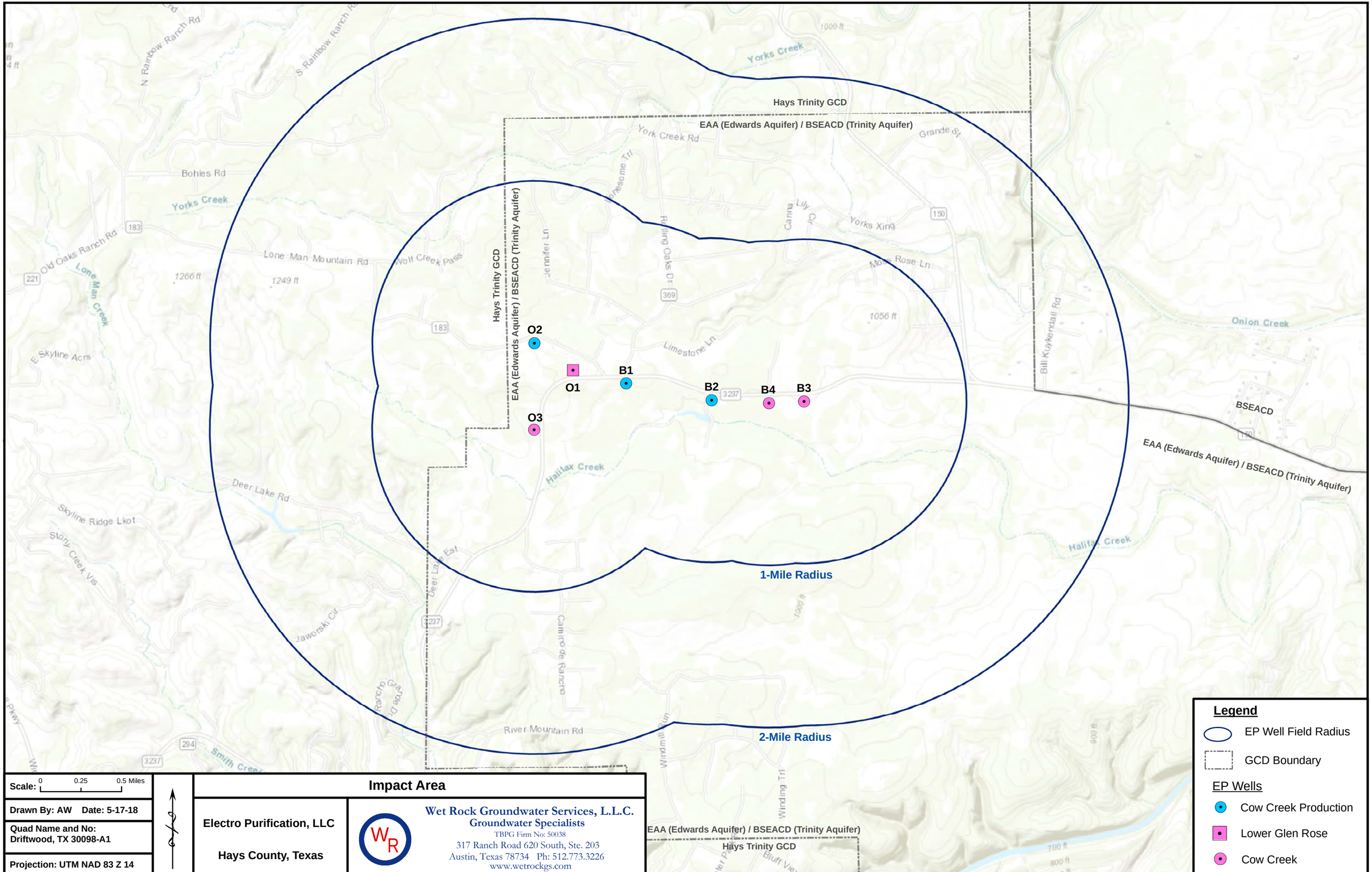
3. The Permittee via the third-party administrator will coordinate the well investigation and pump-lowering work efforts.

## SECTION 6. IMPLEMENTATION DOCUMENTATION

The Permittee will provide the following types of documents and reports that will be produced to document actions and schedule of implementation tasks.

| Document | Report |
|---|---|
| 1. Notice of the General Manager's Position Statement on the EP Permit. | The Permittee will publish the requisite Notice in a paper of general circulation in Hays County, the selection of which must be approved by the GM, and provide copies of the Publisher's Affidavit to the GM pursuant to its Rules.<br><br>The Permittee will coordinate with the District to post and publish on the District's website the GM's Position Statement including a copy of the following: *Impact Avoidance Plan, Compliance Monitoring Plan, Mitigation Plan*. |
| 2. Mailed Notice Letter of the General Manager's Position Statement of the EP Permit. | The Permittee will provide copies of certified mail return receipts evidencing the mailing of the Notice along with a copy of the mailed Notice to the District in compliance with its Rules. The Permittee will also provide a list of the registered well owners who are to receive Notice. |
| 3. Public Notification Letter for Avoidance Actions. | The Permittee will provide a copy of the notification letter that will be mailed out to property owners in the two-mile "avoidance impact area" with an information letter describing the proposed avoidance measures as well as deadlines and procedures for property owners to follow in order to receive avoidance actions. This letter is to be provided to the District for review prior to mailing. |
| 4. The Permittee will post signs in accordance with the provisions of this Impact Avoidance Plan at locations agreed to and approved by the GM. | The Permittee will document the posting of the Notices by affidavit with pictures of the posted Notices provided to the GM. |
| 5. Contractual Template for Avoidance Well Work. | The Permittee will provide the GM with a copy of the contractual template that will be utilized as the contractual agreement between the well owner and the Permittee for work done on the well. |

## FIGURE B-1. MAP OF THE AVOIDANCE IMPACT AREA




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

# Impact Area

**Electro Purification, LLC**

**Hays County, Texas**


Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
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www.wetrockgs.com

# APPENDIX C. MITIGATION PLAN

** Mitigation Plan Agreement Subject to Board Approval**



## SECTION 1. INTRODUCTION

In response to the GM's preliminary finding, that as applied for, EP's permit when granted could have an unreasonable impact on existing neighboring wells over the long term. Consistent with the Permittee's understanding of the District's desire to manage total groundwater production on a long-term basis in a manner to avoid the occurrence of any such unreasonable impacts, the Permittee has submitted a Compliance Monitoring Plan (CMP) to avoid and/or address the potential for any such unreasonable impacts. The Permittee's CMP was developed in cooperation with the GM and staff to eliminate the potential for unreasonable impacts after considering all of the following:

1. Evaluation of the potential for unreasonable impacts using the best available science to anticipate such impacts,

2. A program of ongoing monitoring and data collection to measure the actual impacts of the pumping project on the aquifer(s) over time once the Permittee commences production under its Permit,

3. Incorporation of specific response measures (temporary adjustments to groundwater production) to be triggered by prescribed aquifer conditions and implemented as a requirement to avoid unreasonable impacts, and

4. Incorporation of specific provisions from the Permittee's proposed Mitigation Plan that serves as a contingency response plan in the event of an occurrence of any unanticipated or unavoidable unreasonable impact through reasonable measures.

The Permittee's proposed Mitigation Plan is intended and designed to complement the District's dedication to preserving and protecting:

1. the long-term sustainability of the aquifer systems for existing and future groundwater users,

2. the integrity of the aquifer systems as a continuing source of water for existing wells and the local community,

3. a property owner's right to access groundwater resources beneath their land, and

4. well owners who may unexpectedly be impacted by production from the Permittee's well field despite the Permittee's proactive avoidance measures to prevent unreasonable impacts pursuant to the Permittee's CMP.

## SECTION 2. OBJECTIVES OF THE PERMITTEE'S MITIGATION PLAN

The Permittee's Mitigation Plan is intended to be an additional tool to address unanticipated unreasonable impacts to existing groundwater users attributable to groundwater production that could not be addressed and avoided through the Permittee's proactive implementation and exhaustion of its CMP because of circumstances either unknown to the Permittee and/or the District at the time of approval of the Permittee's permit, or were unanticipated due to circumstances beyond the Permittee's control. The Permittee will work with the GM and the approved third-party administrator to implement its Mitigation Plan in a timely and consistent manner fair to affected private water-well owners. If the Permittee fails to comply with the provisions of this Mitigation Plan and the commitments described herein in full, then the GM may immediately require temporary cessation of pumping until the Board, after notice and hearing, approves a staff-initiated amendment to partially reduce the full permit volume to a rate that will reasonably avoid recurrence of unreasonable impacts.

## SECTION 3. POTENTIAL IMPACT AREA

Potential Impact Area. The Potential Impact Area (PIA) associated with the Permittee's well field is generally reflected on the maps included as Figure C-1, as the area within a two-mile radius of the Permittee's well field located along FM 3237, approximately six miles northeast of Wimberley, Hays County, Texas. The two-mile radius was determined by an aggregate of the two-mile radii for each of the seven EP test wells. Wells that are considered to be "eligible" are located within the area of potential impact of production from the Permittee's well field (the "Potential Impact Area") per the following criteria:

- Hybrid completed Lower Glen Rose/Cow Creek wells will be located in the two-mile radius
- Discretely completed Cow Creek well will be located in the two-mile radius
- Discretely completed Lower Glen Rose Wells will be located in the one-mile radius

Wells with pump setting to be within one of the following formations:

- Pumps set in the Lower Glen Rose formation above the Level 4 Compliance Trigger (500 ft.)
- Pumps set in the Cow Creek formation or hybrid Lower Glen Rose/ Cow Creek formation above the Level 4 Compliance Trigger (700 ft)

## SECTION 4. ELIGIBILITY

Whether any alleged unreasonable impact to a well is more likely than not attributable to the Permittee's groundwater production, and whether the well owner is entitled to receive mitigation under the

Permittee's Mitigation Plan, will be determined by the third-party administrator's recommendation and GM's final approval, on the basis of actual aquifer conditions, well-data collection, previously documented hydrogeologic modeling tools, the proximity of the allegedly affected well(s) to the Permittee's well field, and other relevant information including data related to other known groundwater-producing wells and projects in the area of the alleged impacted well(s). Factors to be considered in determining eligibility include, but are not limited to, the following:

1. Well Registration - A well owner must have previously registered the allegedly impacted well or must be willing to immediately register their well at the time of submitting the well impact complaint form. In accordance with Section 5, Step 2, #2 of this plan, wells located outside of the District boundaries are not required to be registered with the District but will be eligible for mitigation if all criteria are met.

2. Potential Impact Area - The location of the allegedly impacted well is in the area of influence of the Permittee's well field (the "PIA") identified in Figure C-1 to this Mitigation Plan. Due to the high degree of heterogeneity and anisotropy of the Trinity Aquifer, in accordance with Section 5, Step 2, #2 of this plan, wells located outside of identified PIA may be eligible for mitigation if an investigation determines the unreasonable impact is more likely than not attributable to the Permittee's groundwater production. Certain wells within the PIA that are located outside of the District boundaries, including wells within Hays Trinity Groundwater Conservation District, will be eligible for mitigation.

3. Well Construction and Completion - Evidence or affidavit from the well owner demonstrating that the allegedly impacted well was in operation prior to permit issuance and in a non-deteriorated state downhole. The Permittee will not be responsible for bringing a well into compliance with State or District standards except as necessary when the scope of mitigation work involves lowering a pump or deepening a well.

4. Groundwater Production Zone - The allegedly impacted well must be completed in and withdraw water from the formation or the hydrologically connected formations in which the production wells operating in the Permittee's well field are completed. The well must be completed in and producing water from the Lower Glen Rose or Cow Creek formations of the Trinity Aquifer. The groundwater production zone may be determined using a geophysical log of the well borehole, driller reports, or data collected during the investigation. Wells discretely completed in the Upper Glen Rose section of the Trinity may not be eligible for mitigation unless monitoring-well data indicate a connection and impact. Comingling of water from different formations does not make the well ineligible for mitigation.

5. Natural Variability in Water Levels - The allegedly impacted well must have been in an operational condition such that it was adequately completed, maintained, and equipped to account for water-level drawdown attributed to drought conditions, seasonal increases in local pumping, normal pumping usage, and pumping from neighboring wells in the PIA.

6. Time of Occurrence - The allegedly impacted well was functioning as an operational well that was adequately completed and maintained to withstand natural variability prior to the issuance of the Permittee's permit. The alleged unreasonable impact well issue occurred after the production at the Permittee's well field commenced.

## SECTION 5. PROCESS FOR REVIEW OF WELL IMPACT COMPLAINTS

### STEP 1. WELL OWNER – Contractor Diagnostics and Well Impact Complaint Form

If a well owner experiences well impacts related to any of the following, then the well owner may elect to submit a Well Impact Complaint form (the "Complaint Form") to the GM and the approved third-party administrator:

- a well ceasing to yield water at the ground surface,
- a decrease in well yield that results in the well owner being unable to obtain either an authorized, historic, or usable volume or rate from a reasonably efficient water well,
- the lowering of water levels below a feasible pumping lift or reasonable pump intake level, or
- the degradation of groundwater quality such that the water is unusable for its intended purpose or requires the installation of a treatment system.

A copy of the District approved Complaint Form is appended hereto as Figure C-2.

The Complaint Form, along with a conditionally reimbursable investigation fee in the amount of $50.00 payable to the District, must be submitted within 30 days of experiencing a well issue. To complete a Complaint Form, the well owner will be required to contract a licensed well service contractor or licensed pump installer for the purposes of completing a well diagnostics assessment. The District and the approved third-party administrator expect the well owner to take all reasonable measures to first verify whether the problem may be attributed to the normal maintenance of the well and/or well equipment. The licensed well service contractor will also be required to document their diagnostic findings on the Complaint Form, and verify the following as-built characteristics of the allegedly impacted well:

- total depth of the well,
- the static water level, and
- pump setting.

This diagnostic assessment shall be signed and notarized by both the well owner and licensed well service contractor. All Complaint Forms will be processed in a timely manner by the District and/or the District-approved third-party administrator.

### STEP 2. DISTRICT AND THIRD-PARTY ADMINISTRATOR REVIEW - Verification of Diagnostics and Inspection

1. Once the District receives a Complaint Form, the GM will provide the Permittee and the third-party administrator with a copy of the Complaint Form and any supporting documentation provided by the complaint. The third-party administrator will verify the documentation included with the completed well diagnostic assessment and the Complaint Form.

2. If the allegedly impacted well(s) is located outside of the "PIA," then the third-party administrator will review existing data and determine if there is a compelling hydrogeological basis and adequate well-diagnostic data to support the complaint before proceeding with an initial inspection.

3. If the allegedly impacted well(s) is verified to be located within the PIA, then within 15 days of receiving a Complaint Form, the third-party administrator will set up a time to meet with the well

owner and perform an initial site inspection of the well. During the initial inspection, the investigating representative will perform the following steps:

- verify the existence, location, and operational status of the allegedly impacted well,
- collect a static water level reading and a pumping level reading,
- take photographs and GPS coordinates of the allegedly impacted well,
- collect copies of any information pertaining to the allegedly impacted well(s), e.g., state well reports, driller invoices, geophysical logs, and registration documentation,
- obtain additional necessary information including but not limited to, a geophysical log or downhole video survey, and
- consider whether installing well monitoring equipment is feasible.

4. Within 15 days of receiving a Complaint Form, the third-party administrator will complete an inspection report.

5. The third-party administrator will provide the Permittee and the GM with a copy of the completed well inspection report.

STEP 3. DISTRICT AND THIRD-PARTY REVIEW - Verification of Eligibility for Mitigation

1. Upon review of the information and data collected in the well inspection report and the verification of well owner diagnostics, the District-approved third-party administrator will also confirm whether the allegedly impacted well meets the eligibility criteria for mitigation.

2. This verification will be completed within 20 days of receiving the initial Complaint Form.

STEP 4. DISTRICT AND THIRD-PARTY REVIEW - Technical Opinion

1. The District-approved third-party administrator will conduct an evaluation of monitor-well data in the vicinity of the allegedly impacted well, and the production data from the production wells in the Permittee's well field.

2. The third-party administrator will provide a technical opinion on whether the allegedly impacted well experienced an unreasonable impact that can be reasonably attributed to groundwater production from the Permittee's well field.

3. This technical opinion will be completed within 30 days of receipt of a Complaint Form.

4. Within ten days of receiving the technical opinion, the GM will respond to the third-party administrator whether to confirm or disagree with the findings of the technical opinion. If there is any dispute between the GM and the third-party administrator regarding the technical opinion determination, the GM will review the facts and make the final determination within 30 days of receiving the technical opinion.

STEP 5. DISTRICT NOTICE - Notification of Unreasonable Well Impact Determination & Mitigation Plan Implementation

1. If the District and/or District-approved third-party administrator finds, through an evaluation of data and through their technical opinion that an unreasonable impact attributable to groundwater

production from the Permittee's well field occurred, then a notification letter will be mailed to the Permittee. The notification letter will include all relevant data and information relating to the complaint, the affected well, staff inspection reports and evaluation data, and the determination. The notification letter will also provide instruction to the Permittee to begin implementation of their Mitigation Plan pursuant to the conditions and requirements of its permit.

2. If an unreasonable impact can be reasonably attributed to the groundwater production from the Permittee's well field, and it is determined that the well owner is eligible for mitigation, then the Permittee is responsible for the cost of any investigative work that was done on the well, and the well owner is eligible for mitigation and reimbursement.

3. If an unreasonable impact cannot be reasonably attributed to the groundwater production from the Permittee's well field, and/or it is determined that the well owner is not eligible for mitigation, then the well owner is responsible for the cost of any investigative work that was done on the well and the well owner will not be eligible for mitigation or reimbursement.

## SECTION 6. WELL OWNER SELF REMEDY AND CONTINGENCY WATER SUPPLY

If a well owner submits a Complaint Form and has elected to immediately self-remedy its well by assuming costs and expenses associated with lowering the pump, arranging for temporary water supplies, or deepening their well, then those measures on the well owner's part should be documented with receipts and invoices in order to receive possible reimbursement. Reimbursement will only be granted and required in situations where an unreasonable impact can be reasonably attributed to groundwater production from the Permittee's well field. The process to receive reimbursement is described in Section 7 of this plan. Self-remedy expenses are eligible for reimbursement and may be limited to the amount reasonably necessary to restore the well owner to the level of water quality and/or quantity prior to the occurrence of the unreasonable impact.

## SECTION 7. MITIGATION ACTIONS

Within 30 days following the GM's determination of the existence of an unreasonable impact, more likely than not attributable to the production of groundwater from the Permittee's well field, the Permittee shall implement the mitigation steps outlined in its plan or negotiate an alternative agreement with the affected well owners. These negotiated agreements, which are a contractual commitment entered into by and between the Permittee and the affected well owners, shall be reduced to writing and signed by both parties. A copy of the agreement, or a memorandum of the agreement if the agreement terms are negotiated to be confidential, shall be filed with the District and included in the Permittee file.

The response measures outlined in a mitigation agreement are solely intended for impacts attributed to the Permittee's pumping only. Acting through the approved third-party administrator, the Permittee shall ensure all mitigation measures shall be diligently pursued to completion. The GM shall be notified upon completion of the mitigation action(s). Among the mitigation actions the Permittee may elect to take to address the impacts are the following:

1. Lowering the Submersible Pump
   If the well is deep enough but the submersible pump is not set deep enough to accommodate projected water level impacts, the Permittee will fund the cost for a licensed wells service contractor

to cause the existing submersible pump to be lowered to an appropriate depth. If lowering the existing pump will cause it to operate outside manufacturer's specifications, the Permittee will provide, at its cost, an appropriately sized submersible pump.

2. Deepening an Existing Well/Drilling a Replacement Well

   If the existing well is not deep enough to lower the submersible pump to accommodate for projected water level impacts, the Permittee, at its cost, will drill a replacement well or extend the existing well deep enough to accommodate water level impacts attributed to the Permittee's production. After the replacement well is completed and operable, the existing well will be plugged in accordance with applicable state and local regulations regarding abandoned wells.

3. Connection to an Existing Water Purveyor

   In an instance where drilling a replacement well is necessary, but not feasible, the Permittee will provide the affected well owner the opportunity to connect to an existing public water supply purveyor. The Permittee will pay for the initial cost of connection to the potable water service. Monthly bills from the water purveyor shall be paid by the affected well owner.

4. Reimbursement

   Affected well owner(s) that have had self-remedy work performed on their wells in order to accommodate unreasonable water level impacts determined to be attributable to the Permittee's pumping, will be eligible for a full reimbursement subject to the conditions in Section 6. The affected well(s) owner must have submitted a Complaint Form and gone through the review process (Steps 1-5) for a reimbursement claim to be considered. Well owners seeking reimbursement should be prepared to provide receipts and invoices that substantiate the work and equipment expenses incurred by the well owner. Reimbursement will only cover expenses necessary to modify the well to accommodate unreasonable impacts attributable to the production of groundwater from the Permittee's well field, and any related diagnostic work that was necessary to review the well impact complaint. Self-remedy efforts completed by the well owner may include costs and expenses associated with lowering the pump, arranging for temporary water supplies, or deepening their well. The well owner will be reimbursed by the Permittee. The Permittee will not reimburse the replacement or upgrading of equipment or level of service that is elective and not necessary to remedy an unreasonable impact.

5. Monetary Settlement

   The Permittee may elect to provide a monetary settlement to an affected well owner unreasonably impacted by groundwater production from the Permittee's well field in lieu of the Permittee hiring a licensed well service contractor to undertake modifications performed on their well to make it capable of accommodating projected water level impacts attributed to the Permittee's pumping. Monetary settlements will be provided only to address issues relating to water level fluctuation or water quality issues. Approved modifications may include deepening the existing well, lowering the pump in the existing well, or a combination of both actions. If the existing well cannot be modified in a manner that will achieve appropriate mitigation measures, the Permittee may elect to provide a monetary settlement for drilling a replacement well to a sufficient depth to account for the water level decline attributable to the Permittee's pumping. Any monetary settlement will be sufficient to cover all costs associated with the necessary mitigation measures. The affected well owner must agree in writing to a monetary settlement in lieu of work being undertaken by a licensed contractor.

## SECTION 8. THIRD-PARTY ADMINISTRATORS AND WELL SERVICE CONTRACTORS

2. The GM and the Permittee agree to utilize one or more mutually-agreed upon third-party administrator(s) to perform technical hydrogeological interpretations and/or oversight and coordination of well-service contractors related to the commitments in the Mitigation Plan.

3. The Permittee will be responsible to engage and pay the costs of the third-party administrator for its services.

4. The Permittee will submit a list of proposed third-party administrators qualified to provide hydrogeological interpretations, technical opinions, and oversight/coordination of well service contractors which provide well services, well repairs, well construction, and/or well equipment replacement. The Permittee and GM will work cooperatively to select a third-party administrator to coordinate well work with well service contractors and landowners and will verify that all contractors are not subject to any ongoing notice of violation or enforcement action by the District. At least annually, the Permittee shall update the contractor list, which will be verified by the GM.

5. The Permittee will work with the GM to identify a list of licensed well service contractors not subject to any pending violation or enforcement actions by the District for use to conduct well investigations and/or pull or lower pumps pursuant to the Mitigation Plan.

## SECTION 9. FINANCIAL COMMITMENT FOR MITIGATION ACTIONS

Separate from any costs associated with the Permittee's contractual agreements with the third-party administrators, the Permittee will make timely payments for all invoices presented for mitigation efforts authorized by this Mitigation Plan. The Permittee will make payments within 20 days of receipt of written receipts and invoices documenting the mitigation effort. To guarantee full and timely payment of any such mitigation effort-related expense, in the unanticipated failure of Permittee to make full and timely payments, the Permittee shall establish and maintain a Mitigation Fund that will be available for use to fund the payment of Permittee's implementation of its Mitigation Plan. Specifically, the Permittee will either (i) fund a trust identifying the District as the beneficiary, or (ii) secure a bond payable to the District in the amount of not less than $50,000 to support its financial commitment to implement its Mitigation Plan. If necessary, the funding of the trust or bond will be replenished as needed when the account reaches a threshold of $10,000, as a condition to the renewal of its Permit. This trust fund will be established and maintained to cover the costs associated with the implementation of the Mitigation Plan actions during the life of the permit. These funds may be administered solely by the District's GM to reimburse mitigation efforts performed on a well that was found to have an unreasonable impact that was more likely than not attributed to the groundwater production from the Permittee's well(s).

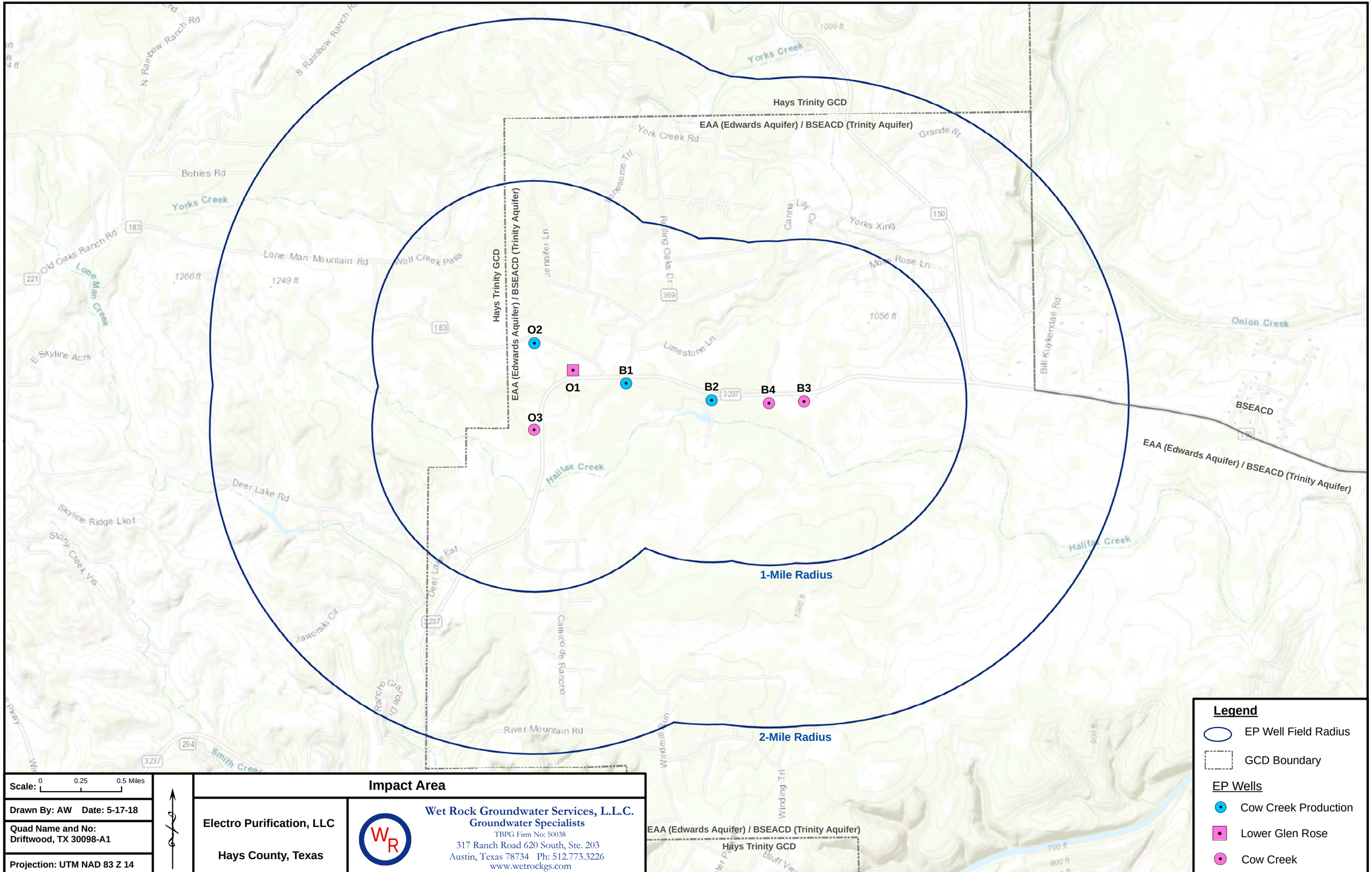
## SECTION 10. STIPULATIONS RELATED TO MITIGATION ACTIONS

1. The mitigation activities administered as part of the response efforts are considered "one time only" actions that are designed to address unreasonable water level impacts attributed to the production of groundwater from the Permittee's well field.

2. The Permittee's mitigation activities shall not be deemed an admission of cause and effect, and the well owner(s) receiving mitigation shall not hold the expectation that all well/pump maintenance and operational problems that arise in the future (post-mitigation) are either due to, or to be remedied in perpetuity by the Permittee.

3. If the Permittee fails to comply with the provisions of this Mitigation Plan and the commitments described herein in full, then the GM may immediately require temporary cessation of pumping until the Board, after notice and hearing, approves a staff-initiated amendment to partially reduce the full permit volume to a rate that will reasonably avoid recurrence of unreasonable impacts.

## FIGURE C-1. MAP OF THE POTENTIAL IMPACT AREA




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

# Impact Area

**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

## FIGURE C-2. MITIGATION WELL COMPLAINT FORM

# Well Impact Complaint Form

1124 Regal Row ~ Austin, TX 78748 ~ 512-282-8441 ~ www.bseacd.org

If you have experienced a well impact that you allege is unreasonable and is caused by a nearby pumping well then complete this form and submit all required documentation, along with an Investigation Fee of $$. This form may be transmitted to the Permittee's General Manager approved Third Party Administrator (xxx) for review, processing and investigation.

## Section I. Owner Contact Information

Property/Well Owner: _____Email:
Mailing Address:_____City:_____ Zip:_____County: _____
Primary Phone:_____Secondary Phone: _____
Property lot size: _____acres
How many active wells_____and inactive wells_____

□ Check this box if physical address is the same as mailing address
Physical Address for affected well:_____City:_____Zip:_____County: _____
Well Coordinates (http://www.whatsmygps.com/ ) Latitude: _____Longitude:_____

## Section II. Well Information (Complete one form for each well affected)

1. Select ALL the use types that are currently supplied by the affected primary well.
   ☐ Livestock – Qty/Type_____
   ☐ Domestic (Residential Indoor & Outdoor use) - Number of homes served: ____
   ☐ Landscape Irrigation Only
   ☐ Unused - Capped, Plugged, Open

2. If known, please provide the following information about the affected primary well:
   □ Trinity Well □ Edwards □ Other_____Well Depth_____Pump Size (horsepower):_____Well Capacity (GPM):_____Water Level:_____Date well was drilled:_____Well Driller:_____
3. Do you have a State Well Report or other records for this well that you can email or mail in? □ No □ Yes

## Section III. Description of Issue Occurring at the Affected Well

- How long you have owned the property?
- When did the issue first arise? Describe the issue.
- List all known problems to have occurred in the well since its completion or since your ownership.
- Have you experienced issues with your well in quantity or quality during the Drought Periods of 2009-2012?
- What is the duration of the issue occurrence?
- When was the well last serviced? What company? Please provide records if available.
- How close is the nearest neighboring well?

## Section IV. Water Well Contractor's Diagnostics Statement

You are required to select a local water well service contractor to complete this section of the form and to perform a basic
water well diagnostics assessment. The diagnostics should assess the condition of the well including but not limited to the following:

- Well pump check (gpm)
- Power source electrical check
- Water quality samples (TDS, Sulfates)
- Leak Check
- Storage Tank assessment
- Pressure tank assessment
- Water Level
- Total Depth
- Current Pump Setting

A copy of the sworn written diagnostic assessment shall be appended hereto as Exhibit No.1

## Section V. Materials to Submit

1. Submit a copy of the service receipt or invoice for performing the well diagnostics
2. Submit a copy of the well contractor's written diagnostics
3. Submit a copy of the well contractor's written estimate or completed charges for work performed.
4. Submit company info, name of licenses well driller or licensed pump installer, license number, contact info.

## Section VI. Applicant or Authorized Agent Sworn Statement

I hereby notify the Barton Springs/Edwards Aquifer Conservation District and Third- Party Administrator for the purpose indicated
above for the water well described herein, and I certify that I am the property owner/grantor or lessee/grantee or an Authorized Agent, and that each and all the statements herein are true and correct. I hereby authorize the District or its representative access to this property following reasonable advance notice or, in an emergency, immediately, with such emergency access reported to the owner if advance notice was not possible. The District or its authorized representative may access the well for the purposes of inspecting, collecting water quality samples, and investigating conditions relating to the withdrawal, waste, water quality, pollution or contamination of groundwater.

| Signature of Applicant or Authorized Agent* | Print Name | Date |
|---|---|---|

*(*Notarized Agent Authorization Form Required)*

State of Texas, County of _____. SWORN TO AND SUBSCRIBED before me by the said owner or agent on this the _____day of _____20__.

| Notary Public, State of Texas | My commission expires |
|---|---|