

NOTICE OF OPEN MEETING

Notice is given that a **Special Meeting and Public Hearing** of the Board of Directors (Board) of the Barton Springs/Edwards Aquifer Conservation District to be held on **Thursday, September 10, 2020**, commencing at **4:00 p.m. via Telephone and Videoconference** pursuant to Texas Government Code, Sections 551.125, 551.127 and 551.131, as modified by the Governor of Texas (Governor) who ordered suspension of various provisions of the Open Meetings Act, Chapter 551, Government Code, effective March 16, 2020, in accordance with the Texas Disaster Act of 1975. Under his proclamation of March 13, 2020, the Governor certified that the COVID-19 pandemic poses an imminent threat of disaster and declared a state of disaster for all counties in Texas. The COVID-19 pandemic makes it difficult to convene a quorum of the Board at one location with the public. Moreover, the COVID-19 pandemic creates an emergency and unforeseeable situation, a sense of urgency, and immediacy for conducting the meeting via Telephone and Videoconference.

This meeting will be audio/video recorded and the recording will be available on the District's website after the meeting. A copy of the agenda packet for this meeting will be available on the District's website at the time of the meeting.

The method for public participation described below follows the Governor's guidance for conducting a public meeting and ensures public accessibility. Members of the public may participate via videoconference or call in by telephone via the instructions provided below:

INSTRUCTIONS FOR JOINING MEETING

1. You may join the meeting by one of two options:

- a) **Join the Meeting using the Zoom** – use your computer audio/video features
<https://us02web.zoom.us/j/84418276442?pwd=TG0rOEtzdkV0a3pyQ3pvZWVRemUrdz09>

Meeting ID: 844 1827 6442
Passcode: 750928

Helpful Tips – visit the District's [Board Meeting webpage](#) for tips on how to set up Zoom on your device prior to the Board Meeting.

- b) **Join the Meeting by Telephone only**

Meeting Dial In +1-346-248-7799
Meeting ID: 844 1827 6442
Password: 750928

INSTRUCTIONS FOR PUBLIC COMMENTS

1. Register for Public Comment prior to Board Meeting Day - Persons wishing to provide public comment must register by calling (512-282-8441) or emailing tammy@bseacd.org

by 5:00 p.m. on Wednesday, September 9, 2020. Please include the following information in the registration:

- 1) first and last name;
 - 2) email address;
 - 3) phone number;
 - 4) the agenda item on which you wish to comment;
 - 5) indicate whether you would like to comment the day of or have your written comments submitted read into the record; and
 - 6) include written comments, if any.
2. **Public Comments at the Board Meeting** – Each registered person will be recognized and identified by the Presiding Officer or staff moderating the communications when it is their turn to speak. **Public comment is limited to 3 minutes per person.** Only persons who have registered in advance to give public comment during the meeting, will be allowed to provide comment.

Note: The Board of Directors of the Barton Springs/Edwards Aquifer Conservation District reserves the right to meet in Executive Session at any time during the course of this meeting to discuss any of the matters listed on this agenda, as authorized by the Texas Government Code Sections §551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 (Deliberations about Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices), 551.087 (Economic Development), 418.183 (Homeland Security). No final action or decision will be made in Executive Session.

1. **Call to Order 4:00 p.m.**
2. **Citizen Communications (Public Comments of a General Nature).**
3. **Consent Agenda.** *(Note: These items may be considered and approved as one motion. Directors or citizens may request any consent item be removed from the consent agenda, for consideration and possible approval as a separate item of Regular Business on this agenda.)*
 - a. Approval of Financial Reports under the Public Funds Investment Act, Directors' Compensation Claims, and Specified Expenditures greater than \$5,000. NBU
 - b. Approval of minutes of the Board's August 13, 2020 Special Meeting. **Not for public review at this time**
4. **Public Hearing.**

On January 3, 2020, Ruby Ranch Water Supply Corp. (RRWSC), P.O. Box 1585, Buda, TX, 78610, filed an Aquifer Storage and Recovery (ASR) application with the Barton Springs/Edwards Aquifer Conservation District (District). RRWSC is applying for a Storage and Recovery Permit that authorizes the production of Class D Conditional Edwards Aquifer water during times of non-drought periods for the purposes of injection, storage, and recovery from an ASR recovery well. RRWSC is requesting a Class D Conditional Permit to withdraw up to 15,000,000 gallons/year from the Edwards Aquifer; this permit class is reserved for ASR projects

and is 100% curtailed during drought. The RRWSC ASR project involves the production of Edwards Aquifer water for injection into the Middle Trinity Aquifer for subsequent recovery and use as public water supply. The ASR project and associated wells are located at 2053 Ruby Ranch Road, Buda, TX, 78610.

5. Discussion and Possible Action.

- a. Discussion and possible action related to the Ruby Ranch Aquifer Storage and Recovery application as described in the Public Hearing. **Pg. 11**
- b. Discussion and possible action on approval of annual permits for the following permittees: **Pg. 49**
 - Cook Walden/Forest Oaks
 - Onion Creek Country Club
 - Tindol Restaurant Group, LLC
 - Industrial Asphalt
 - Bucks Backyard
 - Roy Seiders
 - Vance Lane
- c. Discussion and possible action on the 2020 Director Election including, but not limited to, cancelling the election for precincts 1 and 3, declaring unopposed candidates elected, approving main early voting polling sites and dates and hours of early voting, and approval of Resolution #09102020-01 regarding Travis County voting machines. **Pg. 51**

6. General Manager's Report. Discussion and possible action.

Topics

- a. Update on Personnel matters.
- b. Update on Aquifer conditions and status of drought indicators.
- c. Update on Election related items.
- d. Review of Status Report and update on team activities/projects. **Pg. 63**
- e. Update on ASR activities in region.
- f. Upcoming public events of possible interest.

7. Directors' Reports.

Directors may report on their involvement in activities and dialogue that are of likely interest to the Board, in one or more of the following topical areas:

- Meetings and conferences attended or that will be attended;
- Board committee updates;
- Conversations with public officials, permittees, stakeholders, and other constituents;

- Commendations; and
- Issues or problems of concern.

8. Adjournment.

Please note: This agenda and available related documentation, if any, have been posted on the District website, www.bseacd.org. If you have a special interest in a particular item on this agenda and would like any additional documentation that may be developed for Board consideration, please let staff know at least 24 hours in advance of the Board Meeting so that we can have those copies made for you.

The Barton Springs/Edwards Aquifer Conservation District is committed to compliance with the Americans with Disabilities Act (ADA). Reasonable accommodations and equal opportunity for effective communications will be provided upon request. Please contact the District office at 512-282-8441 at least 24 hours in advance if accommodation is needed.

Item 1

Call to Order

Item 2

Citizen Communications

Item 3

Consent Agenda

(Note: These items may be considered and approved as one motion. Directors or citizens may request any consent item be removed from the consent agenda, for consideration and possible approval as a separate item of Regular Business on this agenda.)

- a. Approval of Financial Reports under the Public Funds Investment Act, Directors' Compensation Claims, and Specified Expenditures greater than \$5,000.**
- b. Approval of minutes of the Board's August 13, 2020 Special Meeting.**

Item 4

Public Hearing

On January 3, 2020, Ruby Ranch Water Supply Corp. (RRWSC), P.O. Box 1585, Buda, TX, 78610, filed an Aquifer Storage and Recovery (ASR) application with the Barton Springs/Edwards Aquifer Conservation District (District). RRWSC is applying for a Storage and Recovery Permit that authorizes the production of Class D Conditional Edwards Aquifer water during times of non-drought periods for the purposes of injection, storage, and recovery from an ASR recovery well. RRWSC is requesting a Class D Conditional Permit to withdraw up to 15,000,000 gallons/year from the Edwards Aquifer; this permit class is reserved for ASR projects and is 100% curtailed during drought. The RRWSC ASR project involves the production of Edwards Aquifer water for injection into the Middle Trinity Aquifer for subsequent recovery and use as public water supply. The ASR project and associated wells are located at 2053 Ruby Ranch Road, Buda, TX, 78610.

Item 5

Board Discussions and Possible Actions

- a. Discussion and possible action related to the Ruby Ranch Aquifer Storage and Recovery application as described in the Public Hearing.**

Application Summary and Staff Review
(Board Meeting September 10, 2020)

DESCRIPTION OF APPLICATION

Applicant: Ruby Ranch Water Supply Corporation

Type of Application: Storage and Recovery Permit Application

Request: RRWSC is requesting a Class D Conditional Permit to withdraw up to 15,000,000 gallons/year from the Edwards Aquifer for the purposes of injection, storage, and recovery from an ASR recovery well.

Summary

Ruby Ranch Water Supply Corporation (RRWSC) filed an application for an Aquifer Storage and Recovery (ASR) permit on January 3, 2020. This permit would authorize the production of Class D Conditional Edwards Aquifer water during times of non-drought periods for the purposes of injection, storage, and recovery from an ASR recovery well completed in the Middle Trinity Aquifer (Cow Creek limestone). The RRWSC ASR project involves the production of Edwards Aquifer water for injection into the Middle Trinity Aquifer for subsequent recovery and use as public water supply (Figure 1). Technical information and pilot studies have been conducted (Smith et al., 2017; Rauschuber and Vickers, 2019). This is the 4th ASR system approved and permitted by the TCEQ for the state of Texas.

RRWSC has an existing Edwards Aquifer well (#4) and Middle Trinity well (#5) pair that are currently being used for public water supply. Due to higher mineral constituents (e.g. total dissolved solids [TDS], sulfate, etc.) in the Middle Trinity, RRWSC must blend its Edwards and Trinity water to satisfy water-quality standards. By injecting fresh Edwards water that can be permitted by the District when there is not a District-declared drought, RRWSC can have a greater quantity of water available during peak demand (summertime) for their customers and reduce the undesired TDS and sulfate constituents. RRWSC plans to produce, inject, and store Class D Conditional Edwards water during the low domestic water use period between November and April and recover and distribute the stored Edwards water during the usually high domestic water use period between May and October of each calendar year, and to have water available for long periods of drought.

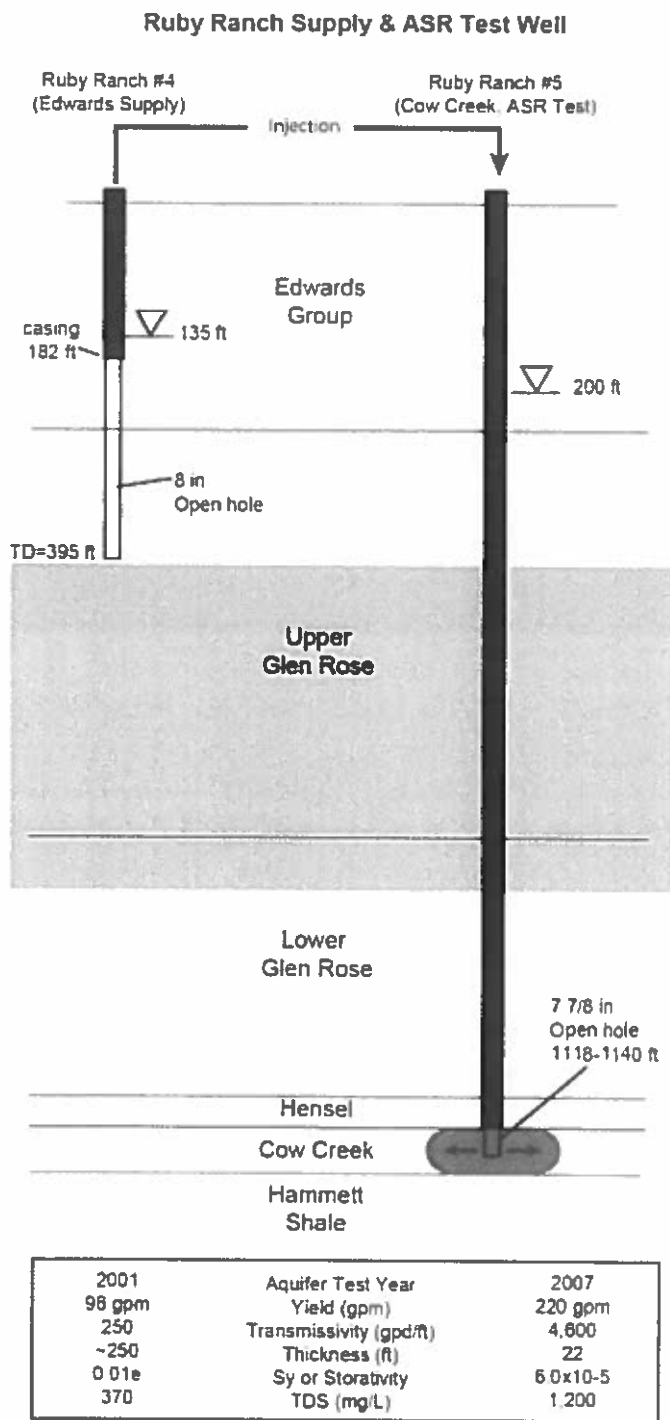


Figure 2. Schematic diagram of the RRWSC ASR system. Figure from Smith et al., 2017.

Requested Edwards (Class D) Permit

RRWSC is requesting a Class D Conditional Permit to withdraw up to 15,000,000 gallons/year from the Edwards Aquifer. The Edwards well #4 has a production rate of 95 gpm. At 6 months a year, at an operational 60% runtime, that equates to approximately 15,000,000 gallons/year. Class D requires 100% curtailment upon the declaration of Stage II Alarm Drought, but more importantly, it is only available for groundwater production from wells associated with ASR projects where stored water is recovered and used to supplement or substitute freshwater Edwards Aquifer supplies during District-declared drought (District Rule 3-1.24.F).

The total storage volume (TSV) is the sum of the stored water plus the buffer zone volume (Figure 2). The estimated TSV for the ASR project is approximately 50 to 60 million gallons with an annual recovery volume of 15 million/gallons and a target buffer zone volume of 30 to 45 million/gallons (see Appendix A). The buffer zone will continue to be built up and is estimated to be established within the next 3 to 5 yrs.

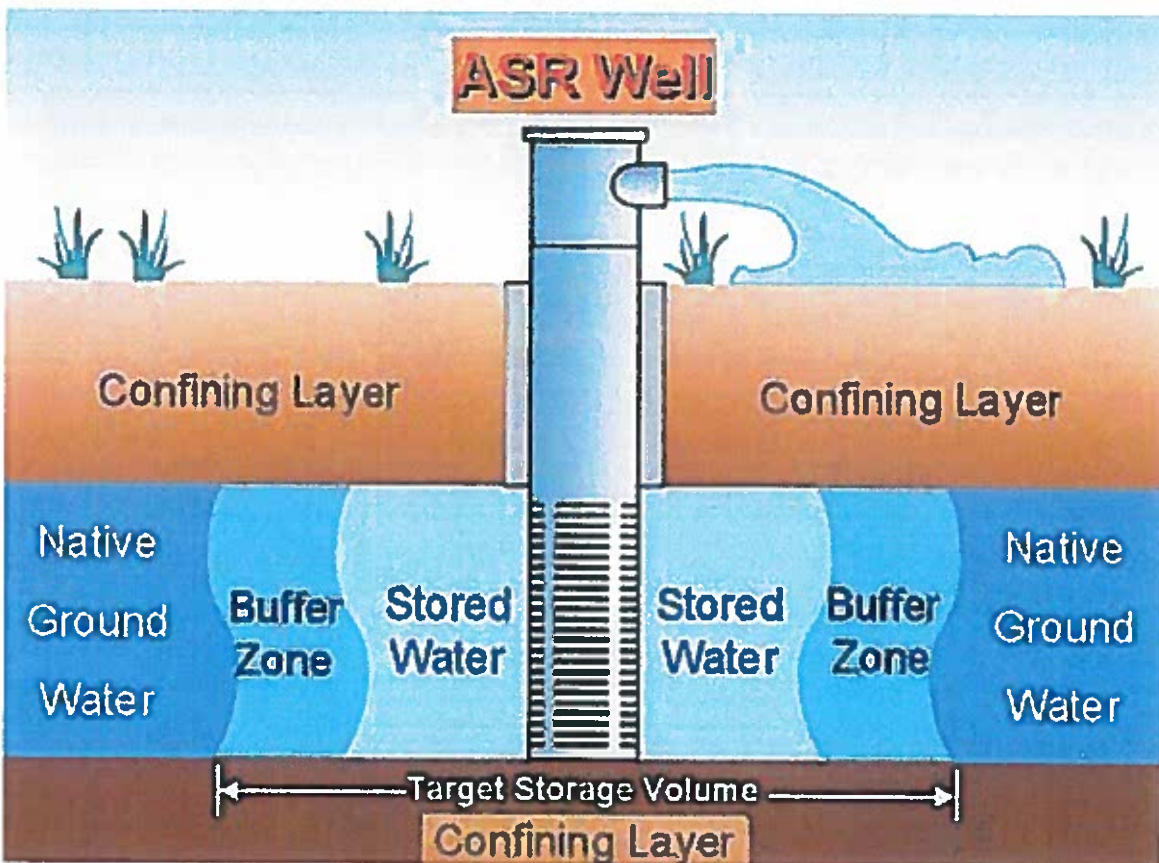


Figure 2. ASR Schematic Diagram

Well Location and Receiving Area

The existing wells and ASR project is located at 2053 Ruby Ranch Road, Buda, TX 78610 on a 0.76-acre lot (water-well easement) within the Ruby Ranch subdivision (Appendix B). The recovered water from well #5 is delivered to the ground storage tank where it is blended with 50% Edwards water from well #4 before it is distributed to the Ruby Ranch service area and subdivision for public-water supply (Appendix C).

The existing Trinity well #5 will be used for injection and recovery and will be considered the ASR well. ASR well #5 is completed in the Cow Creek unit of the Middle Trinity Aquifer at a total depth of 1,140 ft and is about 120 feet from the Edwards source water well (#4). The Edwards well #4 was drilled in 2001 to a depth of 405 feet and is completed within the Edwards Group and Upper Glen Rose.

Hydrogeologic Report and ASR Pilot Test

In accordance with District rules, applicants for permits seeking more than 2 MGY shall conduct an aquifer test and submit a hydrogeologic report addressing the potential impacts associated with the project. The Aquifer Science staff reviewed the hydrogeologic reports and aquifer test for the RRWSC (Geos, 2011; Smith et al., 2017; and Rauschuber and Vickers, 2019). In their professional opinion, these reports satisfy the District's aquifer test and hydrogeologic report requirements for the permit applications. Impacts to water levels in the Edwards and Middle Trinity Aquifers from the permitted pumping will be minor. Water-quality issues (regulated by the TCEQ) will be addressed by the operation of the ASR buffer zone and public water supply (PWS) operational procedures. A summary of these findings includes:

- Middle Trinity Aquifer testing for the original production well (Geos, 2011) provided good aquifer characterization data. A historic permit was granted to the RRWSC for the Middle Trinity production (20.3 MGY) and the well has been in operation for over 8 years.
- Additional pumping from the Edwards well requires a Class D conditional permit, which allows pumping only during non-severe drought conditions. Furthermore, RRWSC already holds an Historic Edwards permit for 24.2 million gallons/year and a Class A Conditional for 7.8 million gallons/year. The operation of the ASR system will result in net zero extraction from the Middle Trinity Aquifer. There are no existing Middle Trinity wells in the vicinity. Therefore, the impact to water levels and springflow will not produce an unreasonable impact.

- Concerns of water quality have been addressed by the aquifer testing and reporting and the TCEQ has approved the ASR system for public water-supply use.

Aquifer Science staff consider that the previous reports satisfy the District’s requirements for hydrogeologic testing prior to issuance of a Class D permit.

ASR Pilot Test Summary

In 2017, RRWSC and the District started cooperating on a project to test the Middle Trinity Aquifer as a reservoir for storage and recovery of fresh Edwards Aquifer groundwater (Smith et al., 2017). The pilot project consisted of multi-step tests with increasing volumes of injected water in each successive step predicated upon successful results at each step. Major objectives of the first two phases of the project were to characterize the suitability of the two aquifers, to determine any impact to water chemistry and to the formation, and to clarifying the physical parameters governing the injected water “bubble”. In the last two phases, an additional objective to assess how much of the water that is injected can be recovered “recoverability” was considered. The pilot testing consisted of four phases or cycles that occurred between April 2017 and August 2019. The District drafted a report for the project at the completion of two phases (Smith et al., 2017; Appendix D) and RRWSC’s consultant, Don Rauschuber, completed a final report at the end of phase 4 (Rauschuber and Vickers, 2019; Appendix E).

Pilot Testing Injection and Recovery Volumes

Phases	Volume Injected (gallons)	Volume Recovered (gallons)	Volume in storage at end of phase (gallons)
Phase 1	50,000	84,000	-34,000
Phase 2	280,000	380,000	-100,000
Phase 3	9,000,000	4,500,000	4,500,000
Phase 4	11,000,000	2,600,000	12,900,000
Total	20,330,000	7,564,000	12,900,000

Injection/Extraction Water Levels, Pressure, and Bubble Radius

During the testing, Edwards Aquifer water was injected into the ASR well #5 a rate of about 40 to 100 gallons per minute (gpm). The water level in the well rose between 6 and 18 ft during the testing. Once injection stopped, the water level in the well quickly returned to pre-injection levels. The injected water was pumped from the ASR well #5 at a rate of approximately 90 to 100 gpm during the extraction period and water levels dropped in the well between 4 and 14 ft

during the testing. At the max injection rate of approximately 100 gpm the water level increased 18 ft. No water-level response could be attributed to the testing project in the nearest Middle Trinity monitor well (5764613). This well is a multiport monitor well located about 1.5 miles to the west of the Ruby Ranch subdivision.

The estimated radial distance of the TSV bubble (45 to 60 million/gallons) is 420 ft and the velocity is 0.3 ft per day with flow to the southeast. The bubble is expected to become elongated to the southeast over time. The ASR project is located on a 0.76-acre triangle shape property owned by the RRWSC and dedicated as a water-well easement. A circle with a 420 ft radius has an area of 12.7 acres, therefore the TSV radius is expected to extend off the property. However, the applicant has initialed a declaration indicating they understand a landowner owning surface property over the TSV radius owns the water unless ownership has been severed.

Water Quality/Geochemical

The pilot test was designed to carefully assess any water-quality changes, geochemical reactions and the mixing characteristics of the native and stored water. Baseline samples were taken prior to testing and water-quality samples and field parameters were taken during extraction for each phase of the testing. Because of concerns about mobilization of arsenic from host rocks, additional analyses for arsenic were made during the extraction phases of the tests.

Water-quality results indicate that:

- The source Edwards water and the native Trinity water are mixing, indicating that a buffer is not fully formed or is currently of insufficient volume;
- The level of iron and manganese is elevated in the recovered water; the source of the iron is likely the well casing and not the aquifer;
- Dissolved oxygen concentrations in the Edwards water are relatively high (as expected) due to the unconfined recharge zone setting, and ranges from approximately 6 to 8 mg/L while dissolved oxygen is relatively low (about 0.2 mg/L) in the Middle Trinity due to its deeply confined setting; and
- A small amount of arsenic was mobilized during each testing phase and concentrations in the recovered water ranged from approximately 2 µg/L during the first phase to 5 µg/L during the fourth phase; all values are below the maximum contaminant level (MCL) of 10.0 µg/L regulated by the EPA and TCEQ; this illustrates that arsenic is available and mobile in the formation.

The sources of arsenic from the Cow Creek are not well understood at this time. Geochemical analysis show that arsenic is present within the predominantly dolomite matrix, but the analyses do not show the specific mineral or minerals with which arsenic occurs. Under conditions observed, the primary factor accounting for the occurrence of arsenic in the recovered water is oxidative dissolution of ferrous iron due to the oxygenated Edwards water injected.

The U.S. Environmental Protection Agency lists the MCL of arsenic as 10.0 µg/L. It is important to note that the arsenic concentrations in the recovered water have not exceeded the MCL and are reduced even further when blended with 50% Edwards water in the storage tank before going to the distribution system. For example, sampling results from phase 4, submitted to TCEQ Drinking Water Section, show arsenic concentrations in the recovery water of 5.15 µg/L and 2.78 µg/L in the blended water. It will be necessary to monitor arsenic concentrations on a regular basis, especially with increasing storage time in the Cow Creek.

Iron and manganese concentrations are elevated and exceed TCEQ's secondary contaminant level (SCL) in the recovered water and iron remains above SCL when blended. RRWSC is working with the TCEQ Drinking Water Division on methods to reduce the iron concentration. Regarding elevated iron concentrations, RRWSC has had issues with elevated iron in well #5 prior to ASR testing and it is anticipated that this related to the well casing. District well construction standards require non-corrosive casing for new wells, but these wells were existing before standards were in place. District consultant and geochemist, Dr. Bruce Darling, ran mixing models during the first two phases which revealed that phase 1 consisted of a mixture of 20% Edwards and 80% Trinity water and phase 2 consist of 35% Edwards and 65% Trinity water. While the mixing model was not run during phase 3 and 4, the recoverability analysis indicates that the native and source waters are still mixing.

Hydrogeology

The hydrogeology at the site is described in detail in Smith et al., 2017. The Cow Creek limestone is the target hydrogeologic unit of the ASR testing. The Cow Creek is very porous and permeable and is the primary water-bearing unit within the Middle Trinity Aquifer. The thickness of the Cow Creek in the study area averages about 75 ft. From the results of the pilot testing and four phases of injection and extraction, it was clear that the Middle Trinity Aquifer is capable of receiving the injected Edwards water at the planned flow rates and of storing the injected Edwards water. The Middle Trinity Aquifer within the study area is hydrologically isolated from the overlying Edwards Aquifer due to the presence of aquitard units.

Recoverability

One of the biggest questions regarding ASR projects is “how much of the water that I inject will I get back?” ASR applicants must assess the volume of water (recoverable volume) that can be recovered compared to the volume of water injected. ASR operators must not withdraw a volume of water that exceeds the recoverable volume without a permit for the native water.

Recoverability or recovery efficiency can be assessed based on aquifer and operational parameters and movement, as well as water-quality criteria. TCEQ worked with the University of Texas (UT) to develop a recoverability model (appendix F) based on operational parameters such as injection and pumping rate, and aquifer parameters such as hydraulic conductivity and gradient, porosity, and thickness. However, the District defines recovery efficiency as the percentage of stored water volume that is subsequently recovered based on satisfying, and not exceeding, a set of water-quality criteria for the recovered water.

The estimated recovery efficiency for the Ruby Ranch ASR project is different for the two assessment methods. TCEQ estimated, based on the UT model, a recovery efficiency of 82%. The recovery efficiency based on water-quality criteria (conductivity of 1200 to 1500 uS/cm or TDS of 100 mg/l) is estimated to be between 30 -to 50% for the pilot project. For example, in phase 3, of the 9 million gallons injected, only 4.5 gallons could be recovered before the water quality criteria was exceeded. As mentioned above, this is due to mixing between the source water and native water and indicates the buffer zone is not fully formed or of sufficient size. Mixing of the waters is not a problem as long as the degree of mixing is within the limitations of the water-quality criteria. Recovery efficiency tends to improve with successive cycles when water is stored in each phase or cycle; this is because water not recovered becomes a transition or buffer zone of marginal quality surrounding the stored water (Pyne, 1995). At most ASR sites, up to 100% recovery efficiency is attainable after an adequate buffer has been established. Once the buffer zone has been formed, a common strategy is to avoid recovering the groundwater buffer zone because of water-quality concerns. However, that is not always the case and in fact, Ruby Ranch has a Trinity permit for the native groundwater.

The District expects Ruby Ranch’s recovery efficiency to improve significantly once the buffer zone is established by the end of FY 2022. Therefore, for permitting purposes the District recommends a recovery efficiency goal of 100% until which time there is enough actual data and an operational report to reassess the recoverability efficiency. RRWSC plans to operate the ASR project seasonally and inject 15 million gallons/year and recover between 10 million gallons to 15 million gallons each fiscal year. However, if RRWSC decides to bank water for multiple years and operates the system for drought purposes as opposed to seasonal purposes,

the volume recovered in a fiscal year could be substantially higher and would be based on the cumulative volume injected minus the buffer volume.

ASR Systems LLC – David Pyne

The District consulted with David Pyne of ASR System LLC on the RRWSC ASR project in July 2020. Mr. Pyne has written multiple books on ASR and worked on many ASR projects in Florida, and around the world. Mr. Pyne reviewed the application material and pilot project reports and indicated that the RRWSC ASR project is the smallest seen to date and was impressed with the pilot testing reports and results.

Ultimately, Mr. Pyne recommended the formation of an adequate buffer zone as it is essential to increasing recoverability and reducing the mobilization of arsenic and other constituents. Establishment of a buffer zone, which is achieved by leaving some recharge water in the aquifer, ensures that no reaction products are allowed close to the well during recovery and minimizes the mixing. Based on Florida ASR experience, Mr. Pyne recommended that an adequate buffer zone would be at least the volume associated with recovery at the design capacity of the well for 70 days, ie: 0.32 MGD (220 GPM) x 70 days = 22 million gallons. RRWSC is expected to have 22 million gallons stored by the end of FY 2022.

Mr. Pyne went on to indicate that Florida ASR projects that met at least this minimum buffer zone volume criteria did not have an arsenic problem and high levels of recoverability. Forming and maintaining a buffer zone is a proven and inexpensive “rule of thumb” that works in Florida, avoiding the need for deoxygenation of the recharge water, which is complex, expensive, and impractical for larger ASR operations.

Mr. Pyne also indicated that if the recovery efficiency after buffer zone formation is any less than 100%, it would likely be due to lateral movement of the stored water. He indicated that the estimated lateral velocity of 0.3 ft/day for the Cow Creek limestone is moderately high (110 ft/year).

TCEQ Authorizations

The District and TCEQ (UIC) share authority over ASR projects, with the District having authority over the recovery side of the system. Therefore, RRWSC was required to obtain authorizations from TCEQ UIC Division for pilot testing and the ASR project. In addition, since the recovered water is used for public drinking-water supply, the TCEQ’s Drinking Water Division also

reviewed the project and water-quality data and will be reviewing periodic water quality samples.

- In March 2017, the TCEQ granted permission to conduct an ASR pilot project (Ruby Ranch's Class V UIC authorization no. 5X2500126).
 - o Extension granted in March 2019.
- In December 2019, the TCEQ Water Supply Division granted authorization to use ASR water recovered from Well No. 5 as a public water supply (appendix G)
- In February 2020, the TCEQ granted authorization to RRWSC to own and operate a Class V Aquifer Storage and Recovery Well (appendix H).
 - o Include special provisions for sampling arsenic.

Application Review

- Staff has reviewed the above referenced application and has determined that the application has satisfied all the requirements pursuant to District Rule 3-1.4.A and that the required documentation and payment of fees have been satisfied.
- The permit request does not exceed the Fresh Edwards All-Conditions MAG of 16 cfs (11,600 ac-ft/yr).
- Staff has confirmed that the applicant filed proper notice and the required 20-day public comment period has expired in accordance with District Rule 3-1.4.B. (Attachment). The noticed was published in the Austin American Statesman on July 21st, 2020 and in The Hays Free Press on July 29, 2020. The 20-day comment expired on August 10, 2020 and the District received one question regarding ASR from a Ruby Ranch resident. Staff spoke with the resident on the phone and provided information on ASR.
- The District filed public hearing notice pursuant to District Rule 3-1.4.C.

BASIS FOR APPLICATION REVIEW

The following items were considered in the review of the application:

1. Application submitted on January 3, 2020
2. Supplemental information submitted on July 7, 2020
3. District Rules and ByLaws.
4. District Aquifer Test Guidelines.

Staff Recommendation

The District's staff recommends approval of the ASR Source and Recovery Permit which authorizes 1) the annual production of 15,000,000 gallons per year under an Edwards Class D Conditional Production Permit and 2) the recovery of 100% of total stored volume. District staff recommends approval of the above-referenced ASR Source and Recovery Permit with the following special provisions:

1. Ruby Ranch WSC shall submit a revised recoverability analysis along with the submittal of the required operations report within five years of permit issuance (September 2025). The analysis should be conducted once the target buffer volume is established and should be based on any data collected from the previous five years.
2. Ruby Ranch WSC shall comply with and submit to the District in a timely manner, copies of any and all water-quality sampling requirements or reports as identified in authorization letters from TCEQ's Water Supply Division (dated December 11, 2019) and Underground Injection Control Division (dated February 18, 2020).
3. Additional samples shall be collected from ASR well #5 upon commencement of recovery and at the conclusion of each three-month recovery cycle or any recovery cycle that is less than three months in duration. The samples should be analyzed for water quality parameters that include *arsenic, conductivity, total dissolved solids, dissolved oxygen, iron, and manganese*.
4. Additional samples shall be collected from Edwards well #4 prior to injection at the conclusion of each three-month injection cycle or any injection cycle that is less than three months in duration. The samples should be analyzed for water quality parameter *dissolved oxygen*.
5. All applicable results and reports (identified in provisions 2- 4 above) shall be compiled and submitted to the District within 30 days of collection and no later July 1st of each year. TCEQ sampling parameters or requirements do not need to be duplicated.
6. Ruby Ranch shall take all necessary steps to ensure water quality of the native aquifer (Cow Creek Formation) is protected due to operations of an ASR project. If arsenic concentrations in the recovered water from ASR well #5 exceed 8.0 µg/L for two consecutive sampling periods or exceeds the MCL of 10 µg/L in any single sampling period Ruby Ranch WSC shall:
 - i. Notify District staff in writing within 10 business days of lab results if the arsenic concentrations exceeds the above thresholds;
 - ii. Collect arsenic samples from the ASR well #5 every month during recovery;

- iii. Schedule meeting(s) with TCEQ and the District to discuss and specify what operational controls or treatment would be adequate to reduce the mobilization of arsenic and reduce any risk to the aquifer; and
- 7. Following implementation of operational controls or treatment identified by TCEQ and the District (provision 6 iii & iv above) and in the event that arsenic concentrations exceed 10 µg/L in the recovered water for 3 consecutive sampling months, Ruby Ranch WSC will submit plans to the District for implementing additional controls, treatment, and monitoring to reduce the arsenic concentrations and to assess movement of arsenic within the aquifer.
- 8. Ruby Ranch WSC shall coordinate with the District to obtain groundwater monitoring data for District scientific multiport monitoring well 58-57-513.

References

Geos, 2011, Hydrogeologic Report in Support of an Application for a Pumpage Permit Volume Amendment, Report prepared for the Ruby ranch Water Supply Corporation, Buda, Texas. Submitted to the Barton Springs/Edwards Aquifer Conservation District. Geos Project No. 09-04, February 24, 2011. 44 p.

Rauschuber, D.G. and J. Vickers, 2019, Ruby Ranch Water Supply Corporation Aquifer Storage and Recovery Pilot Project Hays County, Texas. Report for TCEQ UIC Class V Injection Authorization No. 5X2500126. September 2019. 29 p.

Smith, B.A., B.B. Hunt, J. Camp, and B.K. Darling, 2017, Status Report for Aquifer Storage and Recovery Pilot Project: Ruby Ranch Water Supply Corporation, Hays County, Central Texas. BSEACD Technical Note 2017-0930. September 2017. 28 p. https://bseacd.org/uploads/RubyRanchASR_Status-Report_FINAL.pdf

Pyne, R. David G, 1995, Groundwater Recharge and Wells: A Guide to Aquifer Storage and Recovery.

Appendix A
RRWSC TSV Table and 10-yr Plan

PHASE NO./YEAR	YEAR	Volume of Edwards Aquifer Injected into Well No. 5 (Gallons)	Volume of Water Extracted from Well No. 5 (Gallons)	Volume of Water in Storage Inclusive of Recoverable Water and Buffer Zone Water (Gallons)
Pilot Phase 1	17-Apr	50,000	0	50,000
Pilot Phase 1	27-Apr	0	65,000	0
Pilot Phase 2	17-May	280,000	0	280,000
Pilot Phase 2	17-Jun	0	300,000	0
Pilot Phase 3	Oct. 11, 2017 to May 16, 2018	9,000,015	0	9,000,015
Pilot Phase 3	July 27, 2018 to Nov. 8, 2018	0	4,613,100	4,386,915
Pilot Phase 4	Dec. 12, 2018 to May 12, 2019	11,000,000	0	15,386,915
Pilot Phase 4	July 1, 2019 to Nov. 11, 2019	0	5,371,500	10,015,415
ASR Year 2020	Jan. 1 2020 to April 30, 2020	9,000,000	0	19,015,415
ASR Year 2020	July 1, 2020 to Aug. 31, 2020	0	4,700,000	14,315,415
ASR Year 2021	Oct. 1, 2020 to Mar. 31, 2021	15,000,000	0	29,315,415
ASR Year 2021	April 1, 2021 to Sept. 2021	0	10,000,000	19,315,415
ASR Year 2022	Oct. 1, 2022 to Mar. 31, 2022	15,000,000	0	34,315,415
ASR Year 2022	April 1, 2022 to Sept. 30, 2022	0	10,000,000	24,315,415
ASR Year 2023	Oct. 1, 2023 to Mar. 31, 2023	15,000,000	0	39,315,415
ASR Year 2023	April 1, 2023 to Sept. 30, 2023	0	10,000,000	29,315,415
ASR Year 2024	Oct. 1, 2024 to Mar. 31, 2024	15,000,000	0	44,315,415
ASR Year 2024	April 1, 2024 to Sept. 30, 2024	0	10,000,000	34,315,415
ASR Year 2025	Oct. 1, 2025 to Mar. 31, 2025	15,000,000	0	49,315,415
ASR Year 2025	April 1, 2025 to Sept. 30, 2025	0	10,000,000	39,315,415
ASR Year 2026	Oct. 1, 2026 to Mar. 31, 2026	15,000,000	0	54,315,415

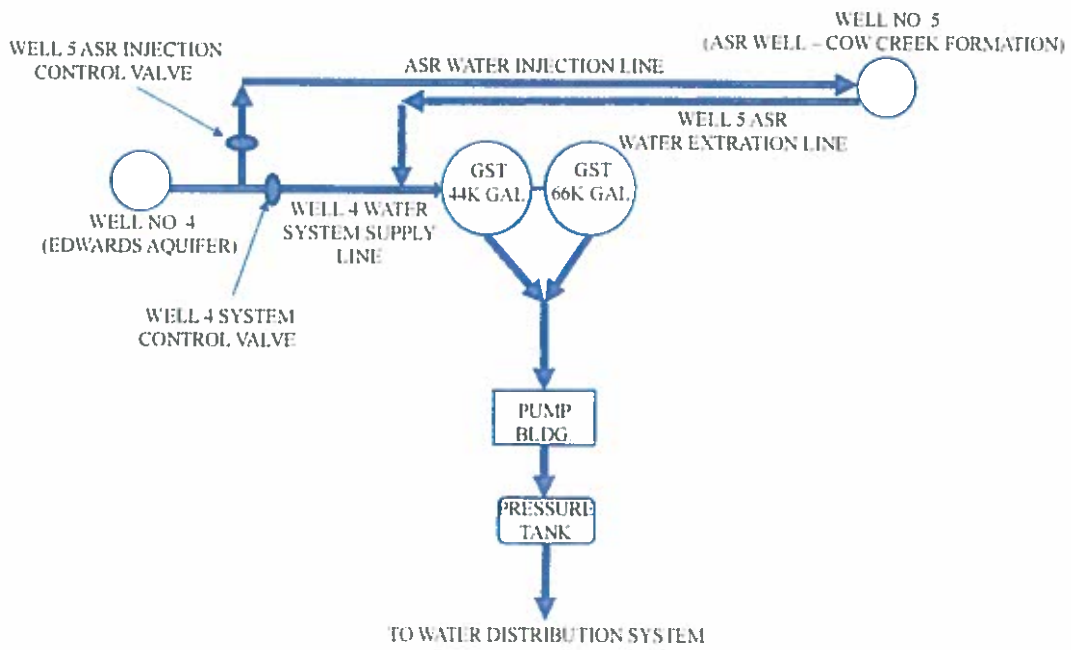
ASR Year 2026	April 1, 2026 to Sept. 30, 2026	0	10,000,000	44,315,415
ASR Year 2027	Oct. 1, 2027 to Mar. 31, 2027	15,000,000	0	59,315,415
ASR Year 2027	April 1, 2027 to Sept. 30, 2027	0	15,000,000	44,315,415
ASR Year 2028	Oct. 1, 2028 to Mar. 31, 2028	15,000,000	0	59,315,415
ASR Year 2028	April 1, 2028 to Sept. 30, 2028	0	15,000,000	44,315,415
ASR Year 2029	Oct. 1, 2029 to Mar. 31, 2029	15,000,000	0	59,315,415
ASR Year 2029	April 1, 2029 to Sept. 30, 2029	0	15,000,000	44,315,415

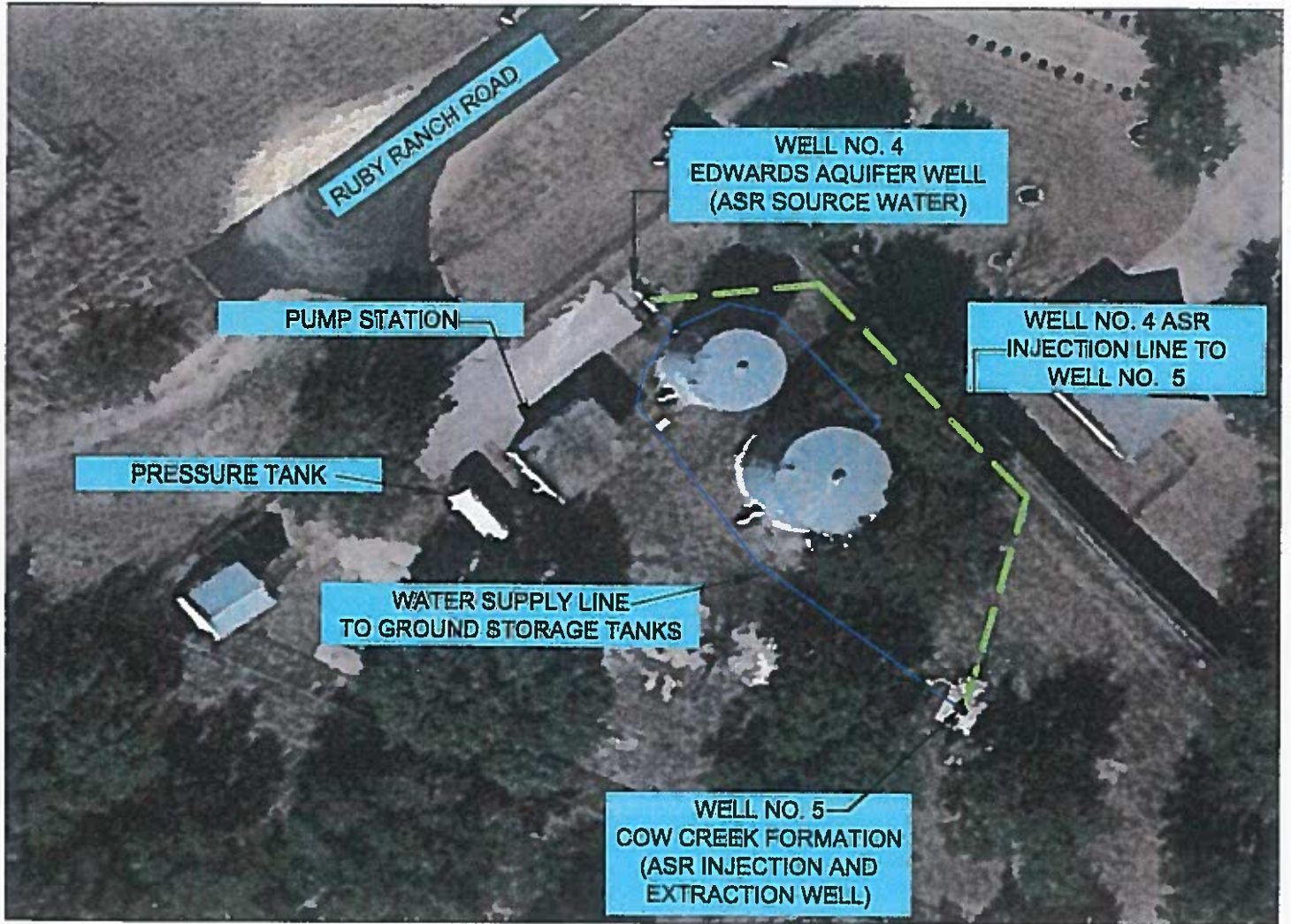
Appendix B
Site Location



Appendix C
Site Plan and Flow Schematic

Site Plan and Flow Schematic





Appendix D
District Pilot Project Report (Phases 1&2)

Appendix E
RRWSC Pilot Project Report (Phases 3&4)

Appendix F
UT Recoverability Analysis

TxASR App

Texas Aquifer Storage & Recovery (ASR) Applet



- Home
- Main
- More info
- How to use

The TxASR app provides a simple way to assess the feasibility of water recharge, storage, and recovery. See the *More info* and *How to use* tabs to get started.

[Download the ASR Application Guide](#)

click and drag slider-handles to select desired parameter values (toggle keyboard arrows for fine adjustment)

Operational Parameters:

- Injection Rate (Q_i), ft³/day**
You have selected an injection rate of 10000 ft³/day
- Pumping Rate (Q_p), ft³/day**
You have selected a pumping rate of 10000 ft³/day
- Injection Time (ti), days**
You have selected an injection time of 133 days
- Delay Time (td), days**
You have selected a delay time of 0 days
- Pumping Time (tp), days**
You have selected a pumping time of 133 days

Physical Parameters:

- Hydraulic Conductivity (K_d), ft/day**
You have selected a hydraulic conductivity of 8.18 ft/day
- Hydraulic Gradient (dh/dx), ft/ft**
You have selected a hydraulic gradient of 0.008 ft/ft
- Porosity (n)**
You have selected a porosity of 0.2
- Aquifer Thickness (B), ft**
You have selected an aquifer thickness of 80 ft

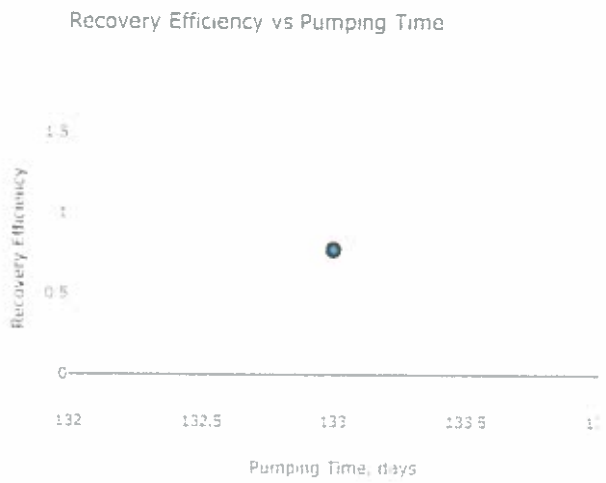
More Options:

- Single time point entries
- Ranged pumping time entry
- Ranged injection & pumping time entries
- Ranged delay & pumping time entries

SUBMIT

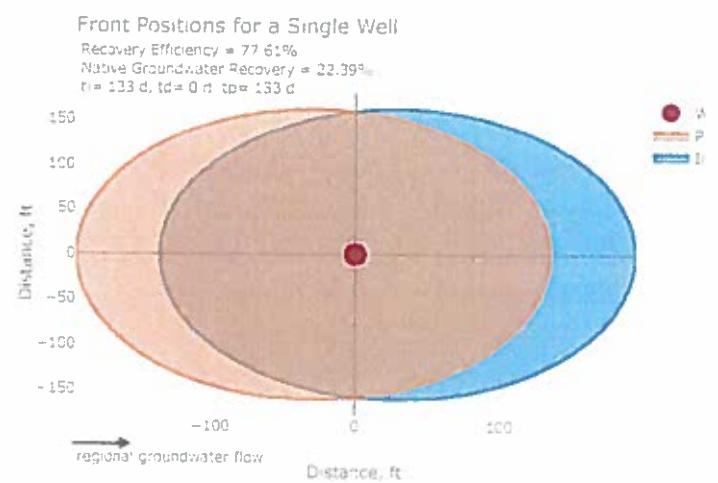
click button to generate graphs below

click data points to generate corresponding "Front Positions for a Single Well" graph



DOWNLOAD CSV

download data for "Recovery Efficiency vs Pumping Time" graph



DOWNLOAD CSV

download data for selected "Front Positions for a Single Well" graph

Appendix G
TCEQ Drinking Water Division Authorization Letter

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janicka, *Commissioner*
Toby Baker, *Executive Director*



PWS_1050122_CO_20191211_Plan Ltr

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 11, 2019

Mr. Donald G. Rauscher, P.E.
Donald G. Rauscher & Associates, Inc.
P.O. Box 342707
Austin, Texas 78734-0046

Re: Ruby Ranch WSC - Public Water System ID No. 1050122
Completion Data for Aquifer Storage and Recovery (ASR) Pilot Test Well at
Water Plant No. 2 (TP19607)
Engineer Contact Telephone: (512) 413-9300
Plan Review Log No. P-10112019-061
Hays County, Texas

CN: 603033564; RN: 102681285

Dear Mr. Rauscher:

On October 11, 2019, the Texas Commission on Environmental Quality (TCEQ) received well completion material with the letter dated October 7, 2019 from Ruby Ranch WSC for the ASR Pilot Test Well. Based on our review of the information submitted, the project generally meets the minimum requirements of Title 30 Texas Administrative Code (TAC) Chapter 290 - Rules and Regulations for Public Water Systems and the constructed well is **approved for use** based on the conditions noted below and may now be **temporarily** placed into service. The well's continued use is contingent upon the following conditions:

1. The chemical analysis report submitted shows that the concentration(s) of several constituents require ongoing monitoring:
 - a. **The level of arsenic in the recovered water was 0.00515 mg/l.** The maximum contaminant level (MCL) for arsenic is 0.01 mg/l. The water when blended with Well #4 was 0.00278 mg/l. The WSC must monitor the level of arsenic in the recovered water and take immediate action (stop usage or install treatment) should water delivered to distribution exceed the MCL.

- b. **The level of iron, and manganese was very elevated in the recovered water and iron remained above the Secondary Contaminant Level (SCL) when blended with well #4.** When drinking water that does not meet secondary constituent levels is accepted for temporary use, such acceptance is valid only until such time as water of acceptable chemical quality can be made available at reasonable cost to the area(s) in question (30 TAC Chapter 290.118(a)). Continual efforts to address these issues must be made. TCEQ may revoke this authorization at any time should public health or service come into question.
 - i. **The recovered ASR well #5 water must be blended with Well #4 if iron and manganese levels are above the SCL.**
 - ii. The Corporation has the ability to feed a blended phosphate at Water Plant No. 2 (TP19607). **This chemical injection has not been approved by the TCEQ.** Please provide a submittal describing the size of the equipment and injection point(s). Please provide a chemical suppliers recommendation of use regarding only for Well #5 in recovery or continuous. It was noted that iron levels decrease after continued use of the ASR well. Please provide an analysis of the iron levels from beginning of ASR recovery over a period of time and describe the need for iron sequestration as continuous or just during a start-up period.
2. Ruby Ranch was authorized to do an ASR Pilot Study by TCEQ Underground Injection Control (UIC) on March 16, 2017. That authorization has been terminated (enclosed letter of December 3, 2019). The ASR Pilot Study and request for permanent use is presently under review by UIC staff. The injection of water from Well No. 4 to Well No. 5 can only resume with approval of the UIC staff and must be in conformance with any conditions of the forthcoming TCEQ Class V ASR Authorization.
3. A representative of TCEQ's Drinking Water Quality Team will contact the public water system to arrange for the collection of the official chemical samples. It is the water systems responsibility to contact the **Drinking Water Quality Team at (512) 239-4691** if they have not had the official sample collection within 180 days of the date of this letter. **Please note that this sampling must be done when the ASR Well (#5) is being operated in recovery.**
4. If official chemical analysis testing confirms that a regulated constituent does not meet primary or secondary standards, additional treatment, blending, or public notice may be required. The Drinking Water Quality Team will notify the water system of any additional special requirements for this public water supply source. Plans for any proposed water treatment and blending must be reviewed and approved by the Plan Review Team.

Note: The Comprehensive Compliance Inspection (CCI) at Ruby Ranch conducted on January 4, 2018 noted the ability to draw water from the Ground Storage Tank (GST) at Water Plant #2 for injection into Well #5 (ASR). **This line was not described in the submittal and is not approved for use by the Corporation.**

The submitted materials consisted of the following:

- Existing Well No. 4 (G1050122D),
 - Latitude and Longitude: Lat. 30°03'30.7"N; Long. 97°55'16"
 - 405 feet deep into Edwards Aquifer (bottom 182 feet open hole)
 - Well rated for 90 gallons per minute (gpm)
 - State of Texas Well Report Tracking No. (not available)
 - TCEQ Completion Data approval September 6, 2002 (Plan Review Log No. 207-134)
- Existing Well No. 5 (G1050122E),
 - Latitude and Longitude: Lat. 30°03'30"N; Long. 97°55'15"
 - 1140 feet deep into Middle Trinity Aquifer, Cow Creek Formation (bottom 75 feet open hole)
 - Well rated for 150 gpm
 - State of Texas Well Report Tracking No. 217472
 - TCEQ Completion Data approval February 15, 2011 (Plan Review Log No. P-02092011-026)
- Technical drawings and pictures to describe as-built piping, controls, and valving to deliver up to 100 gpm of water from well #4 to inject into Well #5 (wells are 125 feet apart and located at Water Plant No. 2 (TP19607))
- ASR study including testing data for volume stored and volume pumped for four phase testing;
- Chemical analysis results from LCRA Environmental Laboratory Services dated July 23, 2019 (sample results are enclosed):

Primary Contaminants		Results		
Contaminant	MCL (mg/L)	Well No. 4 (Edwards/injection)	Well No. 5 (ASR Recovery)	Blended (EP 002)
Arsenic	0.01	<0.001	0.00515	0.00278
Fluoride	4.0	0.256	0.684	0.481
Nitrate	10 (as N)	0.518	<0.01	0.253
Nitrite	1 (as N)	<0.01	<0.01	<0.01

Secondary Contaminants		Results		
Contaminant	SCL (mg/L)	Well No. 4 (Edwards/injection)	Well No. 5 (ASR Recovery)	Blended (EP 002)
Aluminum	0.2	<0.005	<0.005	0.00517
Chloride	300	12.8	13.6	15.6
Copper	1.0	0.00387	0.00145	0.00481
Fluoride	2.0	0.256	0.684	0.481
Iron	0.3	<0.05	1.59	0.482
Manganese	0.05	<0.001	0.0578	0.0264
pH	≥7 (Standard Unit)	7.6	7.52	7.56
Sulfate	300	36	206	118
Total Dissolved Solids	1,000	298	557	378
Zinc	5.0	0.00864	0.00823	0.0146

Mr. Donald G. Rauschuber, P.E.
Page 4
December 11, 2019

ASR Recovery Corrosive Water Parameters	
Parameter	Result (mg/L)
Alkalinity as CaCO ₃	285
Calcium as CaCO ₃	267
Sodium	11
Lead	<0.001

This approval is for the above listed items only. Any wastewater components contained in this design were not considered.

The Ruby Ranch WSC public water system provides water treatment.

The project is located at the end of Ruby Ranch Road, 250 feet south of the intersection of Ruby Ranch Road and Bartlett Drive West in Hays County, Texas.

Texas Water Code Section 36.0015 allows for the creation of groundwater conservation districts (GCDs) as the preferred method of groundwater management. GCDs manage groundwater in many counties and are authorized to regulate production and spacing of water wells. **Public water systems drilling wells within an existing GCD are responsible for meeting the GCD's requirements.** The authorization provided in this letter does not affect GCD authority to manage groundwater or issue permits.

Please refer to the Plan Review Team's Log No. P-10112019-061 in all correspondence for this project.

Please complete a copy of the most current Public Water System Plan Review Submittal form for any future submittals to TCEQ. Every blank on the form must be completed to minimize any delays in the review of your project. The document is available on TCEQ's website at the address shown below. You can also download the most current plan submittal checklists and forms from the same address.

<https://www.tceq.texas.gov/drinkingwater/udpubs.html>

For future reference, you can review part of the Plan Review Team's database to see if we have received your project. This is available on TCEQ's website at the following address:

<https://www.tceq.texas.gov/drinkingwater/planrev.html/#status>

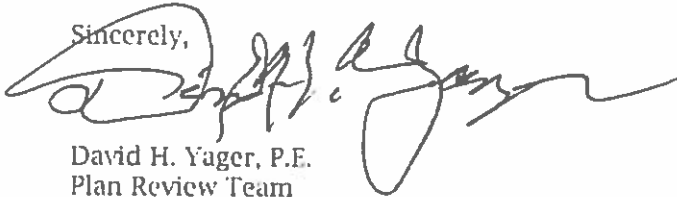
You can download the latest revision of 30 TAC Chapter 290 - [Rules and Regulations for Public Water Systems](#) from this site.

Mr. Donald G. Rauschuber, P.E.
Page 5
December 11, 2019

If you have any questions concerning this letter or need further assistance, please contact David Yager at 512-239-0605 or by email at david.yager@tceq.texas.gov or by correspondence at the following address:

Plan Review Team, MC-159
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Sincerely,



David H. Yager, P.E.
Plan Review Team
Plan and Technical Review Section
Water Supply Division
Texas Commission on Environmental Quality



Vera Poe, P.E., Team Leader
Plan Review Team
Plan and Technical Review Section
Water Supply Division
Texas Commission on Environmental Quality

VP/DY/sg

Enclosure: Sample Results
TCEQ UIC Letter of December 3, 2019

cc: Ruby Ranch WSC, Attn: Steve Selger, PO Box 1585, Buda, Texas 78610-1585

Appendix H
TCEQ Underground Injection Control Authorization Letter

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 18, 2020

Mr. Steve Selger, President
Ruby Ranch Water Supply Corporation
P.O. Box 1585
Buda, Texas 78610

RE: Authorization of a Class V Aquifer Storage and Recovery Injection Well
TCEQ Authorization No. 5R2100053
CN603033564/RN102681285
Ruby Ranch Water Supply Corporation
Plant No. 2
2053 Ruby Ranch Road
Buda, Texas 78610

Dear Mr. Selger:

The Texas Commission on Environmental Quality (TCEQ) Underground Injection Control (UIC) Permits Section staff has completed review of the authorization application dated November 13, 2019, prepared by David Jeffery and Donald Rauschuber for the above referenced Class V Aquifer Storage and Recovery (ASR) authorization.

Approval is hereby given for the operation of existing Water Well No. 5 for the injection of untreated groundwater from the Edwards Aquifer from Water Well No 4 into the Cow Creek Formation. The ASR operator may recover up to 82% of the total volume of water injected into the Cow Creek Formation during the six-month injection cycle. If the total volume of injected water recovered exceeds this quantity, the requirements of Texas Water Code (TWC) Chapter 36, Subchapter N will be applicable. The approved authorization is limited to the plans and specifications for this site as described by the Class V ASR authorization application dated November 13, 2019, as revised on November 22, 2019, December 23, 2019, January 7, 2020, and as revised in response to the February 11, 2020 clarification letter from Donald G. Rauschuber to TCEQ (Provision 6 of this authorization).

In order to maintain authorization by rule, injection operations must meet all requirements of 30 Texas Administrative Code (30 TAC) Chapter 331 (Underground Injection Control) as well as all applicable requirements of TWC, Chapter 27 and 30 TAC Chapters 290, 295, and 297. The express incorporation of the above rules as terms and conditions of this authorization does not relieve the authorization holder of an obligation to comply with all other laws or regulations that are applicable to the activities approved by this authorization. Requirements for the authorization include:

P.O. Box 13087 · Austin, Texas 78711-3087 · 512-239-1000 · tceq.texas.gov

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1. All injection wells are to be constructed to meet the standards provided in 30 TAC §331.132 or as approved otherwise. Mechanical integrity of the well(s) shall be maintained.
2. Ruby Ranch Water Supply Corporation (RRWSC) is authorized to inject up to 15 million gallons of groundwater from the Edwards Aquifer into the Cow Creek Formation and recover up to 12,300,000 gallons of the injected over a one-year period. Any volume of water recovered in excess of 12,300,000 gallons is subject to the requirements of TWC Chapter 36, Subchapter N.
3. Each calendar month, the executive director shall be provided either a written or electronic report containing the following information for the previous month:
 - the volume of water injected for storage;
 - the volume of water recovered for beneficial use; and
 - monthly average injection pressures.

One original and one copy of the report shall be submitted to the UIC Permits Section, Radioactive Materials Division, at mail code MC233.

4. Annual water quality testing shall be performed on water that is to be injected into the ASR system and on water that is recovered from the ASR system. The executive director shall be provided with either a written or electronic report of the results of the testing which shall include all parameters identified in the application. One original and one copy of the report shall be submitted to the UIC Permits Section, Radioactive Materials Division, at mail code MC233.
5. To meet the requirements for groundwater monitoring in 30 TAC §331.19(c)(5)(A)(ii), Ruby Ranch WSC shall coordinate with the Barton Springs Edwards Aquifer Conservation District (BSEACD) to obtain BSEACD's groundwater monitoring data for BSEACD's monitor well number 58-57-513. The groundwater monitoring protocols are detailed in the February 5, 2020 letter from BSEACD to TCEQ (attached). All results from the monitoring of this well shall be reported to the UIC Permits Section, Radioactive Materials Division, at mail code MC233.
6. Water quality testing for arsenic shall be performed on water that is to be injected into the ASR system and on water that is recovered from the ASR system as follows:

Water Supply Well No. 4

At the conclusion of each three-month injection cycle or at the conclusion of any injection cycle that is less than three months in duration, RRWSC shall collect one (1) water sample at the wellhead. This sample shall be tested for arsenic.

ASR Well No. 5

At the conclusion of each three-month recovery cycle or at the conclusion of any recovery cycle that is less than three months in duration, RRWSC shall collect one (1) water sample at the wellhead. This sample shall be tested for arsenic.

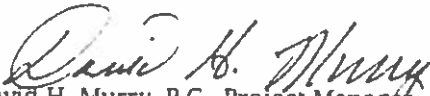
The executive director shall be provided with either a written or electronic report of the results of the testing for arsenic within 30 days of sample collection. The report shall be submitted to the UIC Permits Section, Radioactive Materials Division, at mail code MC233.

Mr. Steve Selger
Page 3
February 18, 2020

7. Changes to the authorization, including but not limited to the addition of wells, replacement of wells, different injectate, operational and status changes, require an amendment to the authorization. One original and one copy of an amendment request shall be submitted to the UIC Permits Section, Radioactive Materials Division, at mail code MC233 for approval prior to implementation of the changes.
8. Plugging of injection wells shall comply with standards provided in 30 TAC §331.133, Closure Standards for Injection Wells. One original and one copy of plugging reports shall be submitted to the UIC Permits Section, Radioactive Materials Division, at mail code MC233 upon completion of plugging of the wells or may be submitted with the subsequent status report.
9. When authorized injection activities have ceased, the injection well is either plugged or converted to a water supply well or a monitoring well, and no further injection activities will be conducted at the site, the Class V authorization should be terminated. One original and one copy of a request for termination shall be submitted to the UIC Permits Section, Radioactive Materials Division, at mail code MC233. If plugging reports for the injection well have not been previously submitted to the UIC Permits Section, the termination request must include the plugging information.
10. This Class V ASR authorization does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
11. The issuance of this Class V ASR authorization does not authorize any injury to persons or property or any invasion of other property rights, or any infringement of state or local laws or regulations.

If you have any questions or comments regarding this matter please contact me at david.murry@tceq.texas.gov or (512) 239-6080. If you will be responding by letter, please include mail code MC233 in the mailing address.

Sincerely,


David H. Murry, P.G., Project Manager
Underground Injection Control Permits Section
Radioactive Materials Division
Texas Commission on Environmental Quality

DHM/krh-d

Attachment

cc: David Jeffery
Donald Rauschuber
Joel Klumpp, TCEQ Water Supply Division



**Barton Springs
Edwards Aquifer**
CONSERVATION DISTRICT

Ruby Ranch Water Supply Corporation
Class V Authorization No. 5R2100053
Attachment 1

RECEIVED

FEB 6 2020

WATER QUALITY DIVISION

February 5, 2020

Ms. Lorrie Council
TCEQ
Mail Code 233
PO Box 13087
Austin, Texas 78711-3087

Dear Ms. Council,

The District considers the Ruby Ranch multiport monitor well to be a monitor well for the purposes of monitoring aquifer conditions in the vicinity of the Ruby Ranch ASR system. The District installed this well in 2008 and it consists of 14 zones from which we can measure distinct water levels, water quality, and hydraulic conductivity in each zone (Wong et al., 2014).

Two of those zones are completed in the Cow Creek limestone, which is the injection zone for the Ruby Ranch ASR system. The multiport monitor well (state well number 58-57-513) is about 0.9 miles northwest of the Ruby Ranch ASR well. During testing of the Ruby Ranch Trinity Aquifer well (state well number 58-57-515) in February 2010, the District monitored water levels in the Cow Creek zone of the multiport well. Decreases in water levels of about 3 ft due to pumping of the Ruby Ranch ASR well were recorded at that time, establishing a clear hydrologic connection between the two wells.

Currently, the District monitors water levels in the Cow Creek zone on a continuous basis with a pressure transducer and the data are collected from all zones quarterly from the well. Water-quality samples are collected periodically from the well (see link below). For purposes of monitoring aquifer conditions related to operation of the Ruby Ranch ASR system, the District will continue to collect water-level data and once a year will collect a sample from one of the zones in the Cow Creek limestone which will be analyzed for conductivity and total dissolved solids (TDS). At the time of final permitting of the Ruby Ranch ASR system, a sample will be analyzed for a traditional suite of anions and cations. This analysis will be repeated every five years. Results of the monitoring will be shared with the operators of the Ruby Ranch ASR system annually.

Chemistry data are available at:

<https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=5857513&Type=GWDB>
Wong et al., 2014.

<https://www.researchgate.net/publication/256608062> Investigating Groundwater Flow Between Edwards and Trinity Aquifers in Central Texas

Sincerely,

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

Item 5

Board Discussions and Possible Action

b. Discussion and possible action on approval of annual permits for the following permittees:

- **Cook Walden/Forest Oaks**
- **Onion Creek Country Club**
- **Tindol Restaurant Group, LLC**
- **Industrial Asphalt**
- **Bucks Backyard**
- **Roy Seiders**
- **Vance Lane**

SystemName	FscI Yr	Permit Amt	Total Pumpage (Not including August)	Difference	Discussion
Cook-Walden/Forest Oaks	2020	5,000,000	5,950,000	-950,000	Wants to have meeting with Board to discuss reasons as to why the over pumping occurred.
Onion Creek Country Club	2020	47,583,250	48,154,000	-570,750	Need to follow up to see if Onion Creek wants to meet with Board about over pumping
Tindol Restaurant Group, LLC (Hays City Store)	2020	800,000	1,168,604	-368,604	Filled a permit amendment and has been approved.
Industrial Asphalt, LP (Hays Quarry)	2020	4,000,000	4,349,600	-349,600	Was contacted about over pumping and shut wells off and started hauling water in.
Bucks Backyard (Robert Badger)	2020	1,000,000	1,327,680	-327,680	Had a substainal leak that was not cuaght right away. Once leak was found, it was fixed right away.
Roy Seiders (Irrigation)	2020	436,117	545,387	-109,270	The District would like the permittee to come before the Board due to multiple years of over pumping
Vance Lane	2020	130,000	208,200	-78,200	The permit was prorated out and a total permit for 130,000 gallons for FY 2020 was issued. The District would like the permittee to come before the Board due to the permittee has over pumped so much that, based on pumping data, the permittee will surpass FY 2021 permit amount of 460,000 gallons within 4-5 months.

Item 5

Board Discussions and Possible Actions

c. Discussion and possible action on the 2020 Director Election including, but not limited to, cancelling the election for precincts 1 and 3, declaring unopposed candidates elected, approving main early voting polling sites and dates and hours of early voting, and approval of Resolution #09102020-01 regarding Travis County voting machines.

ORDER CANCELLING GENERAL ELECTION

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT'S ORDER DECLARING UNOPPOSED CANDIDATES FOR DIRECTOR PRECINCTS ONE (1), THREE (3) ELECTED; CANCELLING NOVEMBER 3, 2020 GENERAL ELECTION IN SINGLE MEMBER DISTRICT PRECINCTS ONE (1) AND THREE (3); REPEALING CONFLICTING ORDERS; AND PROVIDING FOR OTHER MATTERS IN CONNECTION WITH THE CANCELLATION

WHEREAS, the Board of Directors ("Board") of the Barton Springs/Edwards Aquifer Conservation District ("District or "BSEACD") on July 9, 2020, adopted an order calling a general election to be held on November 3, 2020 (the "Election"), for the purpose of electing directors from Precinct numbers one (1) and three (3) and,

WHEREAS, Texas Election Code Sections 144.005 and 144.006, establish deadlines for filing applications for a place on the ballot and for receiving declarations of write-in candidacy for the Election which have now expired; and

WHEREAS, Dana Christine Wilson, the District's duly designated Custodian of Records and Agent to the Board Secretary ("Agent"), in the Election has certified in writing to the Board that Dan Pickens is the sole candidate for election to the Director position of Precinct 1 in the General Election and Blake L. Dorsett is the sole candidate for election to the Director position of Precinct 3 in the General Election; and

WHEREAS, the Board hereby finds and determines that the candidates whose names are to appear on the ballot in said election for Director are unopposed, there are no declared write-in candidates, and no propositions are to appear on the ballot for said Election; and

WHEREAS, Texas Election Code, Chapter 2, Subchapter C, authorizes the Board, upon receipt of certification that candidates for an election are unopposed, to declare the unopposed candidates to be elected and further authorizes the Board to cancel that part of the General Election.

NOW, THEREFORE, IT IS ACCORDINGLY FOUND, DECLARED, AND ORDERED BY THE BOARD OF DIRECTORS OF THE BARTON SPRINGS/ EDWARDS AQUIFER CONSERVATION DISTRICT THAT:

SECTION 1. The facts and matters set forth in the preamble of this Order are hereby found to be true and correct.

SECTION 2. In accordance with Texas Election Code Section 2.053(a), the following unopposed candidates in the General Election in Precincts one (1) and three (3) are hereby declared duly elected to the respective office shown and shall be issued a certificate of election following the date on which the Election for Directors was to have been held:

- Director Precinct 1, Dan Pickens
- Director Precinct 3, Blake L. Dorsett

SECTION 3. Pursuant to Texas Election Code Section 2.053(b), the part of the General Election applying to the directors of Precincts one (1) and three (3) ordered by the Board for November 3, 2020, shall not be held and is hereby canceled and the District's Agent is hereby directed to cause a copy of this Order to be posted on Election Day at all polling places that would have been used in such Election. The District's Agent is hereby authorized to take any further actions authorized by or necessary under the Texas Election Code or other law to cancel the November 3, 2020 General Election for the District.

SECTION 4. Should any section, paragraph, sentence, clause, phrase, or word of this Order be declared unconstitutional or invalid for any purpose by a court of competent jurisdiction, the remainder of this Order shall not be affected thereby, and to this end the provisions of this Order are declared to be severable.

SECTION 5. It is hereby found and determined that the meeting at which this Order was passed was open to the public as required by Section 551.001 *et seq.*, Texas Government Code, and that advance public notice of the time, place, and purpose of said meeting was given. The Governor has suspended and modified certain open meeting requirements pursuant to his disaster declaration. These changes include allowing the District to establish procedures for telephonic or video-conferenced meetings that are accessible to the public.

SECTION 6. This Order shall take effect immediately upon its passage.

PASSED AND APPROVED THIS 10th DAY OF SEPTEMBER, 2020.

**BARTON SPRINGS/EDWARDS
AQUIFER CONSERVATION DISTRICT**

Blayne Stansberry
President, Board of Directors

ATTEST:

Blake Dorsett
Secretary, Board of Directors

[SEAL]

ORDEN PARA CANCELAR LA ELECCIÓN GENERAL

ORDEN DEL DISTRITO DE CONSERVACIÓN DEL ACUÍFERO BARTON SPRINGS Y EDWARDS EN LA QUE SE DECLARAN LOS CANDIDATOS ÚNICOS PARA DIRECTORES DE LOS DISTRITOS ELECTORALES UNO (1) Y TRES (3) ELEGIDOS; SE CANCELA LA ELECCIÓN GENERAL DEL 3 DE NOVIEMBRE DE 2020 EN LOS DISTRITOS ELECTORALES UNO (1) Y TRES (3) CON UN SOLO CANDIDATO; SE REVOCAN ÓRDENES CONFLICTIVAS; Y SE DISPONEN OTROS ASUNTOS RELACIONADOS CON LA CANCELACIÓN

CONSIDERANDO QUE, el 9 de julio de 2020 la Junta de Directores ("Junta") del Distrito de Conservación del Acuífero Barton Springs y Edwards (Barton Springs/Edwards Aquifer Conservation District, el "Distrito" o "BSEACD") aprobó una orden en la que se convocaba una elección general a celebrarse el 3 de noviembre de 2020 (la "Elección"), con el propósito de elegir a los directores de distrito de los distritos electorales números (1) y tres (3); y.

CONSIDERANDO QUE, las Secciones 144.005 y 144.006 del Código Electoral de Texas, establecen fechas límite para la presentación de solicitudes de un lugar en la boleta y para recibir las declaraciones de los candidatos agregados por escrito a incluir en la Elección, que ahora han vencido; y

CONSIDERANDO QUE, Dana Christine Wilson, la debidamente nombrada por el Distrito como Encargada de los Registros y Agente ante la Secretaría de la Junta ("Agente") para la Elección, ha certificado por escrito ante la Junta que Dan Pickens es la única candidata para el puesto de Director del Distrito Electoral 1 en la Elección General, que Blake L. Dorsett es el único candidato para el puesto de Director del Distrito Electoral 3 en la Elección General; y

CONSIDERANDO QUE, por medio de la presente la Junta considera y determina que los candidatos cuyos nombres deben aparecer en la boleta de dicha elección para Director son únicos, que no hay candidatos agregados por escrito declarados y que no aparecerán proposiciones en la boleta de dicha Elección; y

CONSIDERANDO QUE, el Subcapítulo C del Capítulo 2 del Código Electoral de Texas autoriza que la Junta, al recibo de la certificación que indica que los candidatos de una elección son únicos, declare que se elijan a los candidatos únicos, y además autoriza a la Junta a cancelar esa porción de la Elección General.

POR LO TANTO, LA JUNTA DE DIRECTORES DEL DISTRITO DE CONSERVACIÓN DEL ACUÍFERO BARTON SPRINGS Y EDWARDS DETERMINA, DECLARA Y ORDENA QUE:

SECCIÓN 1. Por medio de la presente se declara que los hechos y asuntos establecidos en el preámbulo de esta Orden son verídicos y correctos.

SECCIÓN 2. En virtud de la Sección 2.053(a) del Código Electoral de Texas, por medio de la presente se declara que los siguientes candidatos únicos de los Distritos Electorales uno (1) y tres (3) de la Elección General son debidamente elegidos para los puestos respectivos indicados, y se emitirá un certificado de elección después de la fecha en la que se iba a celebrar la elección de directores:

- Directora del Distrito Electoral 1, Dan Pickens
- Director del Distrito Electoral 3, Blake L. Dorsett

SECCIÓN 3. En virtud de la Sección 2.053(b) del Código Electoral de Texas, la porción de la Elección General que se refiere a los directores de los distritos electorales uno (1) y tres que la Junta ordenó celebrarse el 3 de noviembre de 2020, no se celebrará, y por medio de la presente se cancela y se instruye a la Agente del Distrito que el día de la elección publique una copia de esta Orden en todos los lugares de votación que se hubieran usado para tal Elección. Por medio de la presente se autoriza a la Agente del Distrito a emprender cualquier medida adicional autorizada por el Código Electoral de Texas o por otra ley, o requerida en virtud de estos, para cancelar la Elección General del Distrito del 3 de noviembre de 2020.

SECCIÓN 4. Si un tribunal de jurisdicción competente declara inconstitucional o inválido cualquier sección, párrafo, oración, cláusula, frase o palabra de esta Orden, el resto de esta Orden no se verá afectada por esto, y con este propósito se declara que las disposiciones de esta Orden son separables.

SECCIÓN 5. Por medio de la presente se considera y determina que la reunión en la que se aprobó esta Orden estuvo abierta al público, como lo dispone la Sección 551.001 y *siguientes* del Código Gubernamental de Texas, y que se notificó con anticipación al público la hora, el lugar y el propósito de dicha reunión. El gobernador ha suspendido y modificado ciertos requisitos de reuniones abiertas de conformidad con su declaración de desastre. Estos cambios incluyen permitir que el Distrito establezca procedimientos para reuniones telefónicas o por videoconferencia que sean accesibles al público.

SECCIÓN 6. Esta Orden entrará en vigencia inmediatamente después de su aprobación.

APROBADA Y CONFIRMADA ESTE DÍA 10th DE SEPTIEMBRE DE 2020.

**DISTRITO DE CONSERVACIÓN DEL
ACUÍFERO BARTON SPRINGS Y EDWARDS**

Blayne Stansberry
Presidente de la Junta de Directores

DOY FE:

Blake Dorsett
Secretario de la Junta de Directores

[SELLO]

CERTIFICATION OF UNOPPOSED CANDIDATES
CERTIFICACIÓN DE CANDIDATOS ÚNICOS

To: Presiding Officer of Governing Body
Al: Presidente de la entidad gobernante

As the authority responsible for having the official ballot prepared, I hereby certify that the following candidates are unopposed for election to office for the election scheduled to be held on November 3, 2020.

Como autoridad a cargo de la preparación de la boleta de votación oficial, por la presente certifico que los siguientes candidatos son candidatos únicos para elección para un cargo en la elección que se llevará a cabo el 3 de noviembre, del 2020.

List offices and names of candidates:
Lista de cargos y nombres de los candidatos:

Office(s) Cargo(s)	Candidate(s) Candidato(s)
Director <i>Distrito</i>) Precinct (<i>Precinto</i>) 1	Dan Pickens
Director (<i>Distrito</i>) Precinct (<i>Precinto</i>) 3	Blake L. Dorsett

Dana C. Wilson
Signature (*Firma*)

Dana C. Wilson
Printed name (*Nombre en letra de molde*)

Elections Administrator
Title (*Puesto*)

September 3, 2020
Date of signing (*Fecha de firma*)

(Seal) (*sello*)

SUPPLEMENTAL ORDER APPROVING EARLY VOTING LOCATIONS, DATES AND HOURS FOR BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT FOR THE GENERAL ELECTION TO BE HELD ON NOVEMBER 3, 2020

WHEREAS, the Board of Directors (the "Board") of the Barton Springs/Edwards Aquifer Conservation District (the "District" or "BSEACD") on July 9, 2020, adopted an order calling a general election to be held on November 3, 2020 for the purpose of electing directors for the Board (the "Election"); and

WHEREAS, the Board has the authority pursuant to Chapter 85, Texas Election Code to designate early voting locations, dates, and hours for the District; and

WHEREAS, it is now necessary for the Board to supplement the Order Calling the General Election for the District, approved by the Board at a meeting held on July 9, 2020 to approve main early voting polling sites and dates and hours of early voting by personal appearance as the governing body of the entity calling the Election;

WHEREAS, the Board finds that the early voting locations and the dates and hours for early voting are in the public interest.

THEREFORE, BE IT RESOLVED BY THE BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT BOARD OF DIRECTORS:

Section 1. Approval of Main Early Voting Sites, Dates and Times. The Board hereby establishes the main early voting sites, dates and hours for the District's Election as set out in Exhibit "A" to this Order, which is incorporated herein by reference for all purposes.

Section 2. Notice of Meeting. It is hereby found and determined that the meeting at which this Order was passed was open to the public as required by Section 551.001 et seq., Texas Government Code, and that advance public notice of the time, place, and purpose of said meeting was given. The Governor has suspended and modified certain open meeting requirements pursuant to his disaster declaration. These changes include allowing the District to establish procedures for telephonic or video-conferenced meetings that are accessible to the public.

Section 3. Preamble Incorporation. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Order for all purposes and are adopted as part of the judgment and findings of the Board.

Section 4. Inconsistent Provisions. All orders and resolutions, or parts thereof, which are in conflict or inconsistent with any provision of this Order are hereby repealed to the extent of such conflict, and the provisions of this Order shall be and remain controlling as to the matters ordered herein.

Section 5. Severability. If any provision of this Order or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Order and the application

of such provision to other persons and circumstances shall nevertheless be valid, and the Board hereby declares that this Order would have been enacted without such invalid provision.

Section 6. Authorization to Execute. The Board President is authorized to execute, and the Board Secretary is authorized to attest this Order on behalf of the Board; and the Board President is authorized to do all other things legal and necessary in connection with the holding and consummation of the Election.

Section 7. Effective Date. This Order is effective immediately upon its passage and approval.

PASSED AND APPROVED this the 10th day of September 2020.

**BARTON SPRINGS/EDWARDS
AQUIFER CONSERVATION DISTRICT**

Blayne Stansberry
President, Board of Directors

ATTEST:

Blake Dorsett
Secretary, Board of Directors

[SEAL]

EXHIBIT A

Hays County

Main Early Voting Location, Dates and Hours for Early Voting
November 3, 2020 General Election

Early Voting: October 13th, 2020 – October 30th, 2020

Tuesday, October 13 th – Friday, October 16 th	10 AM – 7PM
Saturday, October 17 th	7 AM – 7 PM
Sunday, October 18 th	1 PM – 6 PM
Monday, October 19 th – Friday, October 23 rd	10 AM – 7 PM
Saturday, October 24 th	7 AM – 7 PM
Sunday, October 25 th	1 PM – 6 PM
Monday, October 26 th – Friday, October 30 th	7 AM – 7PM

Main Early Voting Location

Hays County Government Center
712 South Stagecoach Trail
Northwest Conference Rooms

Travis County

**Main Early Voting Location, Dates and Hours for Early Voting
November 3, 2020 General Election**

Main Early Voting Location

Holiday Inn Austin Midtown – Elm Room
6000 Middle Fiskville Rd.
Austin, TX 78752

Dates and Hours for Early Voting by Personal Appearance

Tuesday, October 13 – Friday, October 30
7 am – 7 pm, Monday – Saturday
12 pm – 6pm, Sundays

STATE OF TEXAS

§
§
§

RESOLUTION # 09102020-01

COUNTIES OF HAYS AND TRAVIS

THE BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT FINDS AS FOLLOWS:

Section 61.012 of the Texas Election Code requires that the BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT must provide at least one accessible voting system in each polling place used in a Texas election on or after August 1, 2019. This system must comply with state and federal laws setting the requirements for voting systems that permit voters with physical disabilities to cast a secret ballot.

The Office of the Texas Secretary of State has certified that the ExpressVote® Universal Voting System Version 6020 provided by Election Systems & Software (ES&S) is an accessible voting system that may legally be used in Texas elections. Early voting and election day voting, including provisional ballots will take place on the ExpressVote® Universal Voting System, ballot marking device, in conjunction with the DS200 Digital® Precinct Scanner. The DS450 Digital® Central Count Scanner will be used to process all by mail ballots.

Sections 123.032 and 123.035 of the Texas Election Code authorize the acquisition of voting systems by local political subdivisions and further mandate certain minimum requirements for contracts relating to the acquisition of such voting systems.

THE BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT HEREBY RESOLVES:

As chief elections officer of the BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT, Dana Christine Wilson shall provide at least one ExpressVote® Universal Voting System and DS200 Digital® Precinct Scanner in every early voting and election day polling place used to conduct any and every election ordered on or after August 1, 2019. The ES&S ExpressVote® Universal Voting System and DS200 Digital® Precinct Scanner may be acquired by any legal means available BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT, including but not limited to lease or rental from the County of Travis or from any other legal source, as authorized or required by Sections 123.032 and 123.035, Texas Election Code.

DULY PASSED AND APPROVED BY THE BOARD OF DIRECTORS OF THE BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT BY A VOTE OF ____ TO ____, ON THIS THE _____ DAY OF SEPTEMBER, 2020.

APPROVED:

BARTON SPRINGS/EDWARDS AQUIFER
CONSERVATION DISTRICT

ATTEST:

Blayne Stansberry
President, Board of Directors

Blake Dorsett
Secretary, Board of Directors

ATTEST:

/s/ _____ City Secretary/ Clerk APPROVED AS TO

FORM: /s/ _____

City Attorney

Item 6

General Manager's Report

(Note: Topics discussed in the General Manager's Report are intended for general administrative and operational information-transfer purposes. The Directors will not take any action unless the topic is specifically listed elsewhere in this agenda.)

Topics

- a. Update on Aquifer conditions and status of drought indicators.**
- b. Update on Election related items.**
- c. Review of Status Report and update on team activities/projects.**
- d. Upcoming public events of possible interest.**

STATUS REPORT UPDATE
FOR THE SEPTEMBER 10, 2020 BOARD MEETING

Summary of Significant Activities – Prepared by Team Leaders

UPCOMING DATES OF INTEREST

- District Board Meetings: September 10th, October 8th , November 12th
- GMA 9 Meeting: TBD (Kerrville)
- GMA 10 Meeting: TBD (San Antonio)
- TAGD Texas Groundwater Summit: September 1-3, 2020 (San Antonio)
- TWCA Fall Conference. October 21-23, virtual event.
- Election Day: November 3, 2020
- ASR for Texas: November 19, 2020 (Austin)
- TWRI: The Digital Now for Natural Resource Professionals. December 1-2.

GENERAL MANAGEMENT TEAM

Staff: VE
September 4, 2020

Litigation and SOAH Activities

- **Electro Purification (EP) Production Permit:**

EP and Kinder Morgan have settled, and EP is moving forward with their production permit request from the District. The SOAH schedule has been updated their schedule as follows:

- August 17, 2020 Abatement Ends
 - August 31, 2020 Deadline for Applicant to supplement prefiled testimony
 - November 4, 2020 Deadline for Protestants (except Commissioner Lon Shell) to supplement prefiled testimony
 - November 18, 2020 Deadline for Protestant Hays County to supplement prefiled testimony of Commissioner Lon Shell
 - December 21, 2020 Deadline for BSEACD to supplement prefiled testimony
 - December 28, 2020 Deadline to schedule depositions
 - January 15, 2021 Deadline to file objections to prefiled testimony
 - February 5, 2021 Deadline to respond to objections to prefiled testimony
 - February 8, 2021 Deadline to respond to discovery
 - February 26, 2021 Deadline for motions for summary disposition
 - March 1, 2021 Last day to conduct depositions
 - March 15, 2021 Deadline to request live prehearing conference
 - March 22, 2021 Prehearing conference at 10 am
 - April 12-16 & 19-20, 2021 Hearing on the merits
- **Needmore Water LLC:** Protestants filed an appeal of Needmore Water LLC permit. The District filed a response in March 2020.
 - **Permian Highway Pipeline (PHP):**
The litigation team is currently working on filing a reply in support of their original motion for summary judgement. While they await the Court's decision in mid to late August, there may also be activity in the Sierra Club's suit against the PHP challenging the Corps' NWP 12.

Interim Charges/Legislative Initiatives: GM and staff are tracking the legislative initiatives at TWCA and TAGD committees.

GMA DFC Planning: GM and staff have developed a memorandum that describes the GMA 10 DFC expression revision. Staff has also developed a memorandum which was shared with TWDB that describes improved approaches for calculating the MAG in GMA 10. The TWDB is amenable to utilizing revised methods for this workflow. There is ongoing coordination with SWTGCD, HTGCD, TWDB & GMA 9 as boundary adjustments continue. GM and staff are planning for Explanatory Report development to be completed in Fall 2020. There will be future internal discussions to identify objectives and goals of DFC monitoring methodologies. Staff received an update from TWDB on their GAM modeling efforts and learned that the timeline for the Hill Country Trinity model update completion is 2023.

Sustainable Yield Planning: GM and staff are planning to start work with a facilitator on our strategic workplan for policy workgroup discussions. Staff continues internal discussions related to modeling, future stakeholder meetings, potential rule-making objectives and timelines, Board Presentations.

Database Management System: Intera and District staff are working on mockups and revisions for the final phase of the project. Status updates, meeting reports, design work, and developer work is ongoing.

Kent Butler Summit Planning: GM and staff are participating in the planning and coordination of the 2020 Kent Butler Summit. Event is targeted toward local officials, key decision makers, and staff at municipalities, counties, WSCs and GCDs. The focus will be on land and water resource management and how partnerships with counties, municipalities, GCDs and NGOs can be leveraged.

Meetings with Officials: NA

GM Meetings with Permittees:
Ruby Ranch ASR Project

Drought Planning: All teams are making preparations for permittee notifications as water levels get closer to drought trigger thresholds.

Training, Presentations, and Conferences:

- Texas Water Foundation Leadership Institute Training – Vanessa Escobar, Michael Redman.
- American Groundwater Trust
- Texas Alliance of Groundwater Districts

REGULATORY COMPLIANCE TEAM

Staff: KBE, ES, MR
September 4, 2020

Sustainable Yield

The RC team and Aquifer Science Team developed a process overview that outlines the timeline, milestones, and steps involved with completing the policy discussions, stakeholder aspects, and technical aspects of the sustainable yield effort. Staff is discussing modeling and policy internally. Staff is working on a schedule for a series on planning meetings with Kimberly Horndeski, Community Consulting LLC) to discuss stakeholder meeting.

DFC Planning

The RC team is actively collaborating in planning discussions with the Aquifer Science Team, neighboring GCDs, GMA 10 representatives, and TWDB staff. We are working on preparing a timeline and planning strategy for our immediate and long-term goals related to DFC revisions and DFC monitoring compliance. Discussions will continue as we continue to attend GMA meetings and prepare to develop presentations, bring information to the Board and engage additional stakeholders. On January 16th, staff made a presentation to the Board on DFC process and proposed revisions. Staff has drafted a DFC memo and will begin revision process with GMA 10 and TWDB. Next GMA 9 & 10 meeting times and dates are still to be determined.

Database Development Intera Contract

Intera continues to work on modules for completion and deployment. Staff had internal meetings and with Intera on August 18, 19, 21 & 31, 2020 to discuss the progress of the project which included review and mockup of well registration, field app and well details. Meetings with Intera are scheduled throughout September to review mockups and to review other sections of the database. Staff will likely need to spend more time on this project to get it finalized.

Permitting: In Review Applications:

- City of Hays Well Rehab/ Well Plugging
- Exempt Domestic Wells (Cowell & Lyman)
- Jackson LPP
- Virden LPP
- IPP Amendment Tindol Restaurant Group

Permitting: Pre Application Meetings (Soon to be Filed):

Application Type	Entity
Exempt/LPP	Mathew and Lisa Wells
IPP	Active Deployment Systems (Elliot Simon)
Change of Ownership	Home Tech

Other Project Efforts/ Planning Discussions

- TAGD legislative subcommittees
- Buda ASR well drilling

- Region K
- Permittee Workplan
- TWCA Groundwater subcommittee

Drought Compliance – No Drought

AQUIFER SCIENCE TEAM

Staff: BAS, BH, and JC (LC for ILA)
September 3, 2020

Sustainable Yield Evaluation of the Trinity Aquifers

Aquifer Science staff continue to collect data on the geology and hydrogeology related to the Trinity Aquifers. We are working with Hays County to install Trinity monitor wells in the Jacob's Well area. Work on the District's own numerical modeling is ongoing. We are members of a technical committee to guide the development of a numerical groundwater model of the aquifers influenced by the Blanco River. Planning and funding of the Blanco River/Trinity model (BRATWURST) are close to being finalized with ongoing discussions between Hays County, Meadows Center, and Southwest Research Institute. In August, the Hays County Commissioners Court approved about \$200,000 to help fund the modeling effort. Aquifer Science staff worked with the General Manager and the Regulatory Compliance team and other partners to submit an application for a Bureau of Reclamation drought resiliency grant. The application was submitted on August 5.

Alternative Water Supplies (ASR and Desalination)

Ruby Ranch has completed testing of injection of Edwards water into their Trinity well. Ruby Ranch submitted a final report on the ASR pilot testing to the TCEQ and the District on October 9, 2019. The District has received a permit application from Ruby Ranch for operation of their ASR system. The Ruby Ranch ASR system is now permitted for operation by TCEQ. The City of Buda recently completed the drilling of a Middle Trinity well for their ASR project and a pump test was conducted in July. The well is capable of pumping about 400 gpm, so it is expected that the same amount of water can be injected. Aquifer Science staff monitored the Antioch multiport well (about one mile away) during the pump test and were able to measure about 4 ft of drawdown as a result of pumping of the Buda ASR well.

Drought and Water-Level Monitoring

The District drought indicators are likely to enter drought conditions possibly as early as the September 10 Board meeting. On September 3, the Lovelady well had a level of 480.0 ft msl, about 9 ft below the peak water level that was reached on July 7. On September 3, Barton Springs was flowing at 38.4 and has been decreasing since April.

Presentations, Conferences, Reports, and Publications

The 16th Sinkhole Conference that was to be held in San Juan, PR in April 2020 was postponed until April 2021. A list of recent publications can be found at: <https://bseacd.org/scientific-reports/> Any conferences that District staff may be considering attending are being held virtually.

Travis County ILA - Hydrogeologic Atlas of Western Travis County

The 80-page Hydrogeologic Atlas of Southwest Travis County was published by BSEACD on April 29. This atlas covers the hydrogeology, structure, water quality, and water use of southwest Travis County and a portion of northern Hays County. The key result of this study is that some portions of these aquifers are undergoing significant lowering of water levels, and some portions are depleted with no groundwater available for water supply to wells. A second phase of work complimenting Phase 1 was completed on August 31. This phase involved a final report plus a database of data collected during both phases of the project.

EDUCATION TEAM

Staff: JV
September 3, 2020

District Operation Updates

Education staff has continued working with all teams to keep the public up-to-date with changed office operations, staff contact information, and other useful resources for the public during remote work operations. Updates are made to the website, front door signage, social media, and shared with eNews and press contacts as operations shift.

District Newsletter

Education staff has been working with all teams to redevelop the format and frequency of the District newsletter with decreased team staff. The latest eNews was delivered to the District contact lists on July 31st. The summer release received a 20% open rate which is consistent with most email marketing campaigns. The Summer eNews release included topics on Monitoring Tools, Staff Updates, DFC Process and more.

Drought Planning

Staff are busy with drought preparation and procedures. Updating the various digital documents, creating a drought media toolkit, and gathering all required materials. Educational resources will be available upon request upon declaration, as well as highlighted on the website in order to help educate water users about drought restrictions.

Website & Public Information

Staff has been working to improve basic readability and functionality of key web pages, in addition to updating spotlights, banners, and project pages for public information purposes. New updates have been made to web icons, as well as social media profiles and banners.

Kent Butler Summit

Regular meetings continue with the Kent Butler Summit planning committee which includes District staff, Austin Water, Austin Watershed, Hill Country Alliance, and an outside facilitator. Format this year will be an invitation-only workshop focused on need/strategies/successes for 'Investing in the Natural Infrastructure of the Hill Country.' This strategic planning process also aims to improve the planning process for future summits. The format and date of this year's summit is subject to change as discussions continue.

Strategic Planning + Communications

Strategic planning is underway and notes from the Board presentations have been used to inform the budget draft and outreach team planning process. Research on an informal communications plan is underway and is being guided with help from other GCDs, agencies, and non-profit education/outreach staff.

Scholarship Programs

Scholarship funds have been disbursed to this year's three highest-scoring Kent Butler Scholarship winners. The District scholarship deadline was March 25th and winners were officially selected

during the May board meeting. The District awarded the top 3 college applicants \$2,500 scholarships, and the 7 summer camp scholarship applicants with an alternative prize--passes to the Meadows Center in San Marcos. This year's scholarship programs were funded by the District and through conservation credit donations from City of Austin, Creedmoor Maha, Goforth, and Cook-Walden- Forest Oaks. All winners have been contacted, and alternative prize packages have been delivered. Thank you letters to our judging panel have been sent out. View winners and essays at www.bseacd.org/scholarships.

District Well Water Checkup Postponed

The annual well water checkup program, originally set for April 22nd is postponed until further notice. The Well Water Checkup normally hosts the first 50 District well owners to bring in their water samples to test for common drinking water contaminants, at no cost to the well owner.

Other meetings and activities:

- **National Protect Your Groundwater Day:** Online digital campaigns have included the National Protect Your Groundwater Day (PYGWD) which occurred on September 1st this year. The PYGWD campaign was created by the National Groundwater Association with the goal of informing groundwater users of new tools and resources to conserve and protect drinking water resources.
- **Hill Country Living + Rainwater Revival Festival:** The annual event hosted by Hill Country Alliance has been rescheduled and will occur virtually on October 24th, 2020. The District is a regular sponsor and participant of this educational event.
- **Central Texas Water Efficiency Network (CTWEN):** The District continues to participate in the regular gathering of water professionals involved with the CTWEN group meetings, now held virtually.
- **Hydrogeologic Atlas of Southwest Travis County:** Working with members of the project team, staff are coordinating outreach to stakeholders, partners, peer-reviewers and participants to share the recently completed scientific report. Working with partners, an educational Well Owner Guide was approved for well owner education in Travis County which includes the main findings and information in the Atlas report.
- **2021 Austin Cave Festival:** Collaborators have opted to cancel the festival for 2021 in light of the COVID pandemic and in the interest of public safety. The District collaborates with the Lady Bird Johnson Wildflower Center and various collaborating organizations to sponsor and plan this event on an annual basis.

Internet Traffic Report - Page views and visits to the District Website

From Aug-Sep, the District website had 1,563 total page views by 1,272 unique sessions. Top sites in order of number of views were Home Page (351), Drought Status (80), Maps (73). *The most popular FB posts included National Protect Your Groundwater Day posts, Studying Endangered Salamander Species DNA, and Water Conservation Tips.*

ADMINISTRATION TEAM

Staff: SD, TR, and DW
August 8, 2020 – September 4, 2020

Accounts Receivable/Permittee Cycle Billings

Invoiced annual, 1st quarter, and September monthly permittee initial cycle billings for FY 2021 (this is the largest billing cycle of the year that also includes transport fees.). Total invoiced \$481,071 (Transport fees: 124,000. Annual permit fees: 5700. Annual permit/1st Quarter and September monthly: 103,117. CoA/AWU: 248,254).

Audit FY 2020

To commence on September 29, 2020.

Election – November 3, 2020

There are three director precincts that are involved this year:

Precinct 1 - Mary Stone (not running). Dan Pickens will be our new director for Precinct 1.
Precinct 3 - Blake Dorsett, (unopposed). Blake Dorsett remains our director for Precinct 3.
Precinct 4 - Robert D Larsen, Ph.D. with opposition from Christy Williams.

UPDATES: We will be holding an election in Hays and Travis counties since Precinct 4 is in both counties.

Ballot proofing was held at Travis County on August 31, 2020.

End-of-Year Processes

Closing books for FY 2020 and opening FY 2021 books, creating all new files and storing the old; adjusting the books through end of September (crossing over both fiscal years; this is a much larger process than it sounds).

Financial Reporting – Website Transparency Section

Transparency Star-related. Most current, available financial reports are to be posted. Balance Sheets, Profit and Loss Statements, and Check Registers (Operating and Payroll) through July 2020 have been posted on the District website.

Grants

SAM Registration, Bureau of Reclamation grant. (Quite an intensive process.)

The Administration Team typically has repetitive monthly tasks e.g. monthly bank reconciliations, daily phone answering, monthly adjusting journal entries, accounts payable, contract/grant/project tracking, monthly meter reading reporting, office maintenance and repairs, etc. These types of tasks are not listed here because they are repetitive. Administration status reports are generally more summarized than the other teams, as we list our extraordinary tasks.

Item 7

Adjournment