



**NOTICE OF MEETING OF THE
BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT
BOARD OF DIRECTORS**

Thursday, September 14, 2023

5:00 PM

IN-PERSON

Notice is given that a **Regular Meeting** of the Board of Directors (Board) of the Barton Springs/Edwards Aquifer Conservation District will be held on **Thursday, September 14, 2023** commencing at **5:00 p.m.** at the **District office, located at 1124 Regal Row, Austin, Texas.**

This meeting will be audio recorded and the recording will be available on the District's website after the meeting.

Public Comments at the Board Meeting – Please complete a comment card prior to the start of the 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.**

AGENDA

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.**
- 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. **Not for public review**
 - b. Approval of minutes of the Board's August 10, 2023, Regular Meeting and Two Public Hearings. **Not for public review at this time**
 - c. Discussion and possible action on amendment #3 to Brian Zavala's contract for website design. **Pg. 16**

- d. Discussion and possible action to approve a memorandum of understanding with the City of Austin detailing the installation of monitor wells. **Pg. 18**

4. General Manager's Report. Discussion and possible action. Topics

- a. Review of key team activities/projects. **Pg. 24**
- b. Aquifer status update.
- c. Upcoming events of possible interest.

5. Discussion and possible action.

- a. Discussion and possible action related to the approval of an amendment to reconcile the FY 2023 Budget. **Pg. 37**
- b. Discussion and possible action related to the performance and compliance of District permittees with their User Drought Contingency Plan curtailments. **NBU**
- c. Discussion and possible action related to a Report of Investigation, Notice of Alleged Violation, and Draft Agreed Order for initiation and resolving enforcement proceedings concerning Aqua Texas, Bear Creek Park. **Pg. 41**
- d. Discussion and possible action on one combination nonexempt well drilling and Historical Trinity Production Permit application for the commercial use of up to 789,000 gallons of water per year filed by Jarica Investments, LLC for one well in the middle Trinity Aquifer to be located at 350 Lonesome Trail in Driftwood, TX 78619 including consideration by the Board of Directors of special conditions or delaying the effective date for an application submitted and/or considered during drought. **Pg. 81**
- e. Discussion and possible action on declaring Stage IV Exceptional Drought. **NBU**
- f. Discussion and possible action on draft preliminary changes to the District's Rules and Bylaws. **Pg. 87**
- g. Discussion and possible action on a moratorium on accepting new permit applications. **NBU**
- h. Discussion and possible action on Petition filed by Hays Commons Land Investment LP at the Texas Commission on Environmental Quality to create the Hays Commons Municipal Utility District. **NBU**

6. Director 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.

7. 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.)

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**Amendment No. 5 to the Agreement for Web Maintenance Services Between
Barton Springs/Edwards Aquifer Conservation District
and
Brian Zavala**

This is Amendment No. 5 to the contract (“Agreement”) between the Barton Springs/Edwards Aquifer Conservation District (hereinafter “District” or “BSEACD”), and Mr. Brian Zavala as contractor (hereinafter “Contractor”) dated March 27, 2014; previously amended August 31, 2016; August 15, 2018; September 1, 2020; and April 23, 2023. This amendment dated _____, 2023, adds a task and increases compensation. All other provisions will remain as is in the existing Agreement, as amended.

Amendment No. 5 is entered into by the District and the Contractor as evidenced by the signatures below with an effective date of _____, 2023. Except as specified in this Amendment, all other provisions of the Contractual Agreement as previously amended continue. Sections II, III and IV of the Agreement are amended as follows:

**Section II
Scope, Compensation and Deliverables**

Section II shall be modified as follows:

Phase IV, Task 2 change the last sentence and add two follow-on sentences to read:

Unless specified otherwise under this Agreement, these task order modules will ordinarily be executed and conducted on a firm fixed-price basis and will not cause the total amount paid per task order to the Contractor to exceed \$5,000 per fiscal year. For fiscal year 2024, a task order is added to significantly revise the District website at a cost not to exceed \$10,000.00. A copy of the task order detailing the work to be performed is attached to this Amendment No. 5 and made a part hereof.

No Other Changes to the Agreement are Hereby Authorized.

The parties have executed this agreement in Austin, Texas, on the dates shown below

**For Barton Springs/Edwards Aquifer
Conservation District,**

For Brian Zavala,

Blayne Stansberry
Board President

Date

Brian Zavala
Principal of Contractor

Date

Attest:

Approved as to Form:

Christy Williams
Board Secretary

Date

William D. Dugat, III
Counsel

Date

**MEMORANDUM OF UNDERSTANDING BETWEEN
THE BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT
AND THE CITY OF AUSTIN**

This Memorandum of Understanding (MOU) is made by and between the Barton Springs Edwards Aquifer Conservation District, a political subdivision of the State of Texas acting by and through its duly elected Board of Directors or designee (“District”) and the City of Austin, Texas, a home-rule municipality and political subdivision of the State of Texas acting by and through its duly authorized City Manager or designee (“City”).

WITNESSETH:

WHEREAS, the City and the District entered into an Interlocal Agreement (“ILA”) dated May 8, 2019 describing the collaboration and coordination on a range of efforts to protect the quality and quantity of the Edwards Aquifer and Barton Springs; and

WHEREAS, on April 15, 2013, the District and Magellan Pipeline Company, L.P. (“Magellan”) entered into an agreement for monitoring groundwater for petroleum hydrocarbons in the Edwards Aquifer. The agreement included a finite funding commitment for annual water sample analysis. Additionally, the agreement provided for the installation of two new monitor wells to augment the current monitor well network; and

WHEREAS, since 2013, the District has annually collected groundwater samples from four monitor wells and from the four spring outlets at Barton Springs; and

WHEREAS, an analysis of groundwater flow downgradient of the Magellan pipeline in south Austin has shown potential pathways for groundwater flow to Barton Springs. The four wells selected for sampling cover some of the area through which any petroleum products released from the pipeline might migrate; and

WHEREAS, an area northeast and downgradient of the pipeline is lacking in monitor wells and there is no adequate monitoring immediately south of Barton Springs where the karst conduits in the aquifer direct flow to the springs; and

WHEREAS, adequate monitoring of this area could be achieved with the installation of one monitor well in Garrison Park—Amur Street and another in Zilker Park. Garrison Park is located about 4 miles south-southeast of Barton Springs and the site for the Zilker Park well is about 800 feet south of Main Barton Springs; and

WHEREAS, these parks are owned by the City, and managed by the City’s Parks and Recreation Department; and

WHEREAS, the ILA addresses collaboration on groundwater monitoring including, among other things, City authorization for the District installation of and access to one or more monitor wells in the Garrison Park-Amur Street (“Garrison well”) area and in Zilker Park near Azie Morton and Barton Hills Drive (“Zilker well”); and

WHEREAS, the Zilker well could be converted into a multiport monitoring system if funding in addition to that provided by Magellan can be secured; and

WHEREAS, conversion of the Zilker well to a multiport system can be achieved by installing special equipment in the well that allows for groundwater sampling, pressure measurements (water levels), and hydraulic conductivity (permeability) testing in discrete hydrologic zones in the aquifer; and

WHEREAS, data from any multiport well will be used to better understand the vertical flow system in the aquifer and if petroleum hydrocarbons or other contaminants are detected in Barton Springs, sampling of this multiport well will help the District and the City determine the pathways for migration of the contaminants; and

WHEREAS, the District intends to apply for a grant of approximately \$84,000 from the City's Barton Springs Salamander Conservation Fund that is part of the City's requirements with U.S. Fish & Wildlife for the City's Habitat Conservation Plan costs for converting the monitor well into a multiport well, described above; and

WHEREAS, the City and District have already been successfully collaborating on a range of efforts to protect the quality and quantity of the Aquifer and the Springs on an *ad-hoc* basis:

NOW, THEREFORE, the District and the City agree that the ILA authorizes the District to install and access the two above-described monitor wells. The District and the City wish to memorialize their agreed understanding of the methodology to accomplish installation and monitoring of the two monitor wells and, if funding is secured, for the conversion of the Zilker well to a multiport well. More specifically, the Parties agree as follows:

I. Interlocal Agreement

This MOU is authorized and entered into under the terms of the Interlocal Agreement between the Barton Springs Edwards Aquifer District and the City of Austin, dated May 8, 2019.

II. Obligations of the District to Drill, Complete and Maintain Monitor Wells

- A. Subject to funding from Magellan and all necessary regulatory approvals by the City, the District will design, drill with air rotary techniques, complete, and maintain two monitor wells. The drilling process for each well will take approximately two weeks.
- B. The location of the drill sites and monitor wells is shown in the attached Exhibit A.
- C. Depths of the two new monitor wells will not exceed 600 feet. The exact depth of each well will be determined once a specific site has been selected.
- D. At a minimum, the diameter of the monitor well boreholes will be 4 inches with a maximum diameter of 8 inches. The specific diameter of each borehole will be determined following discussion with the drilling company selected by the District.
- E. The Zilker well will be cored, which will provide intact rock samples of the entire Edwards section. The core samples will be analyzed for geologic and hydrologic parameters.
- F. The well casing in the Zilker well will be installed to a depth of at least 40 feet. Surface casing in the Garrison well will be installed to the top of the Georgetown Formation (top of Edwards

Aquifer). It is estimated that this will be at a depth of about 200 feet. The well construction will comply with the District's Rule 5 Well Construction Standards.

- G. Cuttings and fluids from the drilling process will be contained on site then disposed in accordance with applicable state regulations.
- H. Geophysical logs will be run in each monitor well. At a minimum, the logs will include gamma, caliper, resistivity, and spontaneous potential.
- I. Well testing will consist of slug tests and water-level measurements.
- J. The wells will be completed with a flush-mount (below ground) well head or with a nominal 2-foot stickup with three or four protective posts. Following completion of the well installation and initial testing, the area around the well will be restored by grading and reseeding or sodding.
- K. If the District is successful in obtaining funding for the conversion of the Zilker well to a multiport well, the District will:
 - i. provide a plan for installation of the multiport equipment;
 - ii. follow the protocol above for access to convert and monitor; and
 - iii. arrange for installation services from a drilling company and for Westbay Instruments.
- L. The City will own the wells.
- M. The District will maintain the wells for the life of the wells. This will include maintenance of the well head and the area close to the well and could involve trimming of vegetation close to the well and painting or repairing metal parts of the well head. The concrete pad will be repaired if settling occurs.
- N. Unless the monitor wells are repurposed for use by the City, the District is responsible for properly plugging the monitor wells whenever the wells cease to be used for monitoring or before the expiration of the term of this MOU, whichever occurs first. If this MOU is terminated before the expiration of its term and the wells are not to be repurposed for the City's use, then the District's obligation to plug the wells shall survive termination.

III. Obligations of the District to Sample and Report

- A. Subject to funding by Magellan for the equipment (hereinafter defined), the District will sample the Garrison well and the Zilker well if it is not converted to a multiport well after completion and development of the wells using a portable pump, generator, and pump-support and power cabling (the equipment) acquired by the District. If the Zilker well is converted to a multiport well, the District will sample it using special Westbay equipment that the District owns. The Zilker well would not be purged for multiport well sampling if it is converted to a multiport well. The sampling and testing will take approximately two weeks per well.
- B. Prior to each round of sampling of the Garrison well and the Zilker well, if it is not converted to a multiport well, the borehole will be purged of at least three well volumes of groundwater or until basic water quality parameters (temperature, conductivity, and turbidity) stabilize during the purging process. Following completion of the multiport well, if

any, only one round of purging is required prior to sampling. The District will use the equipment it owns for sampling any multiport well.

- C. The purged water from the Garrison well and the Zilker well, if it is not converted to a multiport well, will be discharged to the surface.
- D. Within three months of completion of the wells and initial sampling, the District will deliver a report to the City and Magellan documenting the well installation process and initial sampling results.
- E. After the initial sampling, sampling for BTEX and TPH will be conducted on an annual basis with results shared with the City and Magellan on a timely basis. Sampling for other analytes can occur on a quarterly or as-needed basis with results shared with the City. The City shall have the option to be present during quarterly sample collections or to coordinate with the District to collect additional analytes at the City's expense.

IV. Obligations of the City to Provide Well Sites, Access and Identify Necessary Regulatory Approvals

- A. The City will provide well sites for the District to install, operate, monitor and sample the two monitor wells as shown in Exhibit A.
- B. The City will provide access to the well sites for drilling, completion, testing, and initial and routine sampling as shown in Exhibit A and as described as follows:
 - i. Access Route: For Zilker Park, access to the installation site will use a wide gravel path that connects to Barton Hills Dr. For Garrison Park, access will be via the main entrance off of Menchaca Road and to the end of a parking lot near the installation site.
 - ii. Access days and times: Monday through Friday from approximately 8:00 a.m. to 5 p.m. for about two to three weeks at each installation site, depending upon subsurface rock conditions.
 - iii. Notice prior to access: Aaron Levine, Program Manager, PARD Aquatics Division; Nate Thayer, Zilker Park Grounds Supervisor; and Scott E. Hiers, PG, Watershed Program Manager, Watershed Protection Department.
- C. Before the District commences activities under this MOU, the City will identify to the District all City regulatory approvals it requires for the District to conduct the activities described in this MOU.

V. Budget

- A. Funding for the project will be cash and in-kind services. The District will seek funds from Magellan to drill, test, complete, and sample the Zilker and Garrison wells. For the multiport conversion, the District will seek funds from the City's Barton Springs Salamander Conservation Fund (BSSCF) that is part of the City's requirements with U.S. Fish & Wildlife Service for the City's Habitat Conservation Plan costs. The District will also provide in-kind services consisting of technical staff time for oversight during installation of the two new wells and subsequent work to prepare them for use, and administrative staff time for fiscal management throughout project implementation. A description of cash requirements, source of funding and in-kind services is shown in the attached Exhibit B.
- B. Notwithstanding any other provision of this MOU, if the District is unable to secure funding from Magellan for monitor well installation and sampling and funding from the City's BSSCF for

funding the conversion of a monitor well to a multiport well, then the District shall not be obligated to fulfill obligations under this MOU.

WHEREFORE, the parties have executed this MOU to be effective as of the date of the last to sign, as follows:

CITY OF AUSTIN

BY: _____ DATE: _____
Stephanie Hayden-Howard
Assistant City Manager

APPROVED AS TO FORM:

BY: _____ DATE: _____
Chad Shaw
Assistant City Attorney

BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT

BY: _____ DATE: _____
Blayne Stansberry
President

ATTEST: _____ DATE: _____
Christy Williams
Board Secretary

APPROVED AS TO FORM:

BY: _____ DATE: _____
Bill Dugat
District General Counsel

Item 4

General Manager's Report Discussion and possible action topics

Topics

- a. Review of key team activities/projects.**
- b. Aquifer Status Update**
- c. Upcoming events of possible interest.**

Summary of September 2023 Team Activities and On Deck for October/November 2023

Aquifer Science Team

September Activities:

- Data collection for Trinity drought synoptic water level study.
- Field measurements of Barton Springs and Blanco River to verify USGS gauges.
- Planning for second phase of TAS modeling.
- Logistical planning for installation of monitor wells in Zilker and Garrison Parks.
- Evaluation of Buda ASR and Jarica Investments LLC permit applications.
- Lovelady drought trigger well maintenance with USGS.

On Deck:

- Barton Springs discharge measurements with USGS and COA.
- Barton Springs geophysical surveys

Administration Team

September Activities:

- FY 2024 billings went out on August 16, 2023. October monthly to go out on September 16, 2023.
- Drought Management Fees now being assessed for 12th month. Details in Status Report.
- FY 2024 approved Initial Budget and Fee Schedule entered into QB and posted on the website.

On Deck: (October/November)

- Audit is scheduled from October 9–23 (although work continues through December).

Regulatory Compliance Team

September Activities:

- Staff continues to work on new applications and assisting permittees with drought compliance.
- Staff continues analyzing monthly pumpage to confirm compliance/non-compliance of drought curtailments.
- Staff continuing to work through enforcement process with non-compliant permittees.

On Deck:

- Upcoming drilling of Creedmoor MT well; looking to begin drilling at the beginning of October 1, 2023.
- Ongoing review of potential updates to current enforcement plan and rules.
- Anticipating 2 new applications for small-scale Trinity production in Driftwood.

Policy and Project Team

September Activities:

- Database project with LRE.
- City of Buda ASR application review
- Begin drafting RFQ for well impact analysis
- Synoptic

On Deck:

- Ongoing sustainable yield data compilation, research, and decision-making framework.
- Helping with regulatory compliance duties when asked.

Communications and Outreach Team

September Activities:

- Participate in Barton Springs University in partnership with Save Our Springs Alliance.
- Promote and participate in City of Buda townhall to communication drought and aquifer conditions.
- Ongoing drought communications and outreach with media contacts and across website/social media.

On Deck:

- Begin backend website rebuild work: replicate existing webpages and also build new pages.
- Continue building comms for Stage IV and working with permittees to educate end-users.
- Build out communications plan for FY 2023-2024.

**STATUS REPORT UPDATE
FOR THE SEPTEMBER 14, 2023 BOARD MEETING**

Summary of Significant Activities – Prepared by Staff Leads

Upcoming Dates of Interest

- Barton Springs University – September 19, 2023 at Barton Springs, Austin TX
- City of Buda Quarterly Townhall Meeting – September 21, City of Buda Government offices
- Hill Country Alliance 2023 Leadership Summit – September 28, The Hall at Jester King Brewery, Austin, TX
- Texas Water Conservation Association (TWCA) fall conference – November 1-3, San Antonio, TX

DROUGHT MANAGEMENT

Drought Status and Water-Level Monitoring (*Justin*)

August has been a continuation of this summer's incredibly hot and dry conditions. According to KXAN, August 17, 2023 reached 110 degrees and tied for the third hottest day recorded in Austin history and the second-hottest day ever observed in the month of August. The area also experienced 45 consecutive 100-degree days, obliterating the previous record of 27 set in 2011. While this streak finally ended with help from Tropical Storm Harold, the Texas Hill Country is still experiencing above average temperatures with minimal chances of rain in the forecast. These conditions continue to deplete groundwater resources and require water conservation efforts by all in the District.

LCRA and the City of Austin declared Stage II Drought in mid-August after the combined contents of lakes Buchanan and Travis fell below 900,000 acre feet. Collectively, these lakes are at 44% capacity, and the last time they were at or above 100% full was in July 2019.

In the month of August, the District received varying amounts of rainfall from Tropical Storm Harold with as little as 0.04 inches in parts of Austin and as much as 0.42 inches in Buda and San Marcos. With no additional rainfall August came up 2.2 inches short of the monthly historical average.

On September 7, 2023, the Lovelady well had a level of 458.0 ft msl, about 1.0 ft above Stage IV Exceptional drought. Back in 2022, Lovelady crossed under the Stage II trigger on May 26 and under Stage III on October 17. Due to this very dry July, water levels in Lovelady and wells throughout the District have been in decline. With no rain, the Lovelady monitor well could cross into Stage IV Exceptional Drought this fall.

While Barton Springs' average discharge since 1978 is 68 cfs, flow has been at or below 20 cfs since October 2022. This means there are few historical data points to effectively calibrate the gage during extremely low flow. This combined with City of Austin staff's recent activities managing the pool to protect the endangered Barton Springs and Austin Blind salamander, specifically over the last 60 days, has resulted in inaccuracies in the gage's data on spring discharge.

In response, the District will take more frequent manual measurements of Barton Springs discharge. On 8/28 flow was measured at 17 cfs. The next measurement will take place on 9/11.

Water levels in Trinity Aquifer monitor wells throughout the District have also continued to fall. In fact, the Borheim Middle Trinity located in Central Hays County, has shown its deepest level (191-ft depth to water) since recording began in 2003. The previous record low was 181-ft in 2011. The flow gauge at Jacob's Well spring has reported zero flow since late June while the Blanco River at Wimberley is reporting record low flows.

DISTRICT PROJECTS

GMA Joint Planning

➤ ***GMA 10 Coordination (Tim)***

The GMA 10 joint-planning group is working with Alyson McDonald of Collier Consulting. The fourth joint-planning process, culminating in February 2027 with the presentation of final explanatory reports, is estimated to cost \$110,081. The estimated cost to the District is \$24,000 over the next three to four fiscal years beginning with FY 24. An ILA between the six GMA 10 planning members is in the process of being finalized for review/approval by each of the groundwater districts. The next planning meeting is scheduled for October 16, 2023.

Trinity Aquifer Sustainable Yield Study & Planning

➤ ***Policy Concepts and Advisory Workgroup Planning (Kendall)***

As a prerequisite to launching a well-impact analysis next fiscal year, staff are working with INTERA to finalize the reconciliation of well data between the District's database and the TWDB's well inventory. That project component is expected to be completed by mid September. Staff met with staff from the Hays Trinity GCD in mid-August regarding the draft data matrix being used to help develop relationships between pumping scenarios and water levels. Staff will also be working with Intera to review our in-house Trinity Aquifer Sustainability Model to make recommendation on any necessary changes that might be needed to complete a sustainability metrics and unreasonable impact analysis.

Technical Evaluations (Jeff)

Aquifer Science staff continue to collect data on the geology and hydrogeology related to the Trinity Aquifers. We are continuing to collect and evaluate water level data from our network of Trinity monitoring wells. In early September staff began data collection for our Trinity Aquifer synoptic drought study which will produce a water level map of the aquifer under the present drought conditions. This study will provide valuable data and insights on how the Trinity responds to severe droughts in different locations, which will be important for informing the Trinity Sustainable process.

The first phase of work on the Trinity Aquifer Sustainability (TAS) model (previously called the "in-house model) has been completed. A comprehensive report with technical details of model construction has been published on the District website. An executive summary was also published summarizing key model findings for non-technical audiences, and is available for download in PDF format on the District website. The next phase of modeling will involve building a series of predictive models from the calibrated TAS model to provide quantitative estimates of impacts of various pumping scenarios on Trinity Aquifer water levels and spring flow. These quantitative model outputs will be critical to informing Trinity sustainable yield stakeholder discussions.

Aquifer science staff are members of a technical committee to guide the development of a numerical groundwater model (BRAAT) of the aquifers influenced by the Blanco River. Southwest Research Institute started work on the BRAAT model in September of 2021 but contracting issues stalled development of the model. Modelling efforts restarted in July 2022 after the contracting issues were resolved. The next meeting of the technical committee will be held October 13 and staff will be in attendance.

Habitat Conservation Plan (Staff)

- **Planning for Technical Tasks:** Aquifer Science staff are coordinating studies at Barton Springs with COA staff. These studies include measurement of dissolved oxygen (DO) in the Barton Springs pool and the installation of a monitor well within Zilker Park and south of the pool. Deployment of this

equipment will take place after the monitor well is installed. Staff submitted an application for a grant from the City of Austin in February which would help pay for the conversion of a standard monitor well to a multiport well. As of May 2023, there is tentative approval of the grant request and AS staff are preparing details of the project with COA staff. The purpose of the monitor well is to understand how groundwater flows from the deeper portions of the Edwards Aquifer to the springs and how DO is distributed vertically in the aquifer. The HCP identified low levels of DO as a threat to the endangered salamanders. A potential remedy for low DO during severe drought is augmentation of DO in the shallow aquifer so that the threat of low DO is reduced.

Database Management System – LRE Water (*Kendall, Tim*)

LRE has completed most of phase 1 (data migration and map) and is obtaining feedback – due to Kendall by August 10 - from staff on the draft interactive-wells map that has been developed. LRE is also working on aspects of project phase 2 (Map and Dashboard Initial Customization) and Phase 3 (Data Management Customization). LRE and staff are working on the permit and production component of the database, which is arguably the most complicated aspect of the project. However, we still working towards a November 1st deadline.

ILA Commitments (*Staff*)

The District has an ILA with COA to coordinate studies for the respective HCPs such as scientific feasibility studies and monitoring evaluations; to collaborate on the planning of future Kent Butler Summits; and to exchange technical information regularly on an annual basis. An annual technical meeting is held between the District and COA in December each year to discuss each organization’s activities related to their respective HCPs. The next meeting will be held in December 2023.

Region K Planning Activities (*Tim, Kendall*)

The next meeting is scheduled for October 4, 2023.

New Maps, Publications, or Reports

A list of recent publications can be found at: <https://bseacd.org/scientific-reports/>

LEGISLATION and LITIGATION (SOAH)
(Kendall, Tim)

There is nothing current to report.

RULEMAKING, PERMITTING, AND ENFORCEMENT

Rulemaking *(Tim, Erin, District Counsel, R and E Committee)*

Several recommendations for rules changes, including redlined versions have been discussed with the Rules and Enforcement Committee on July 24. Discussion with the full Board is expected to begin during the August Board meeting and continue during the September meeting where approvals will be sought. It is expected that the Rules and Enforcement Committee will meet again in August to focus on potential changes to the enforcement plan as well as finish any other rules-related discussions that began in July.

Drought *(Erin)*

- Will continue working with Aqua Texas, Creedmoor – Maha, and Monarch Utilities to ensure compliance per their Agreed Orders.
- Will continue enforcement proceedings with Aqua Texas – Bear Creek Park and present penalty recommendation to the Board.
- Will continue monthly pumpage analysis to determine all permittee’s compliance status of drought curtailments.
- Will continue to assist permittees in ensuring they successfully comply with their UDCPs and Stage III drought curtailments for June.

Enforcement and Compliance Matters *(Erin)*

<i>Compliance/Enforcement</i>			
<i>Permittee or Entity Name</i>	<i>Aquifer</i>	<i>Use Type</i>	<i>Notes</i>
Aqua Texas – Bear Creek Park	Edwards	PWS	Enforcement action and recommendation to be discussed at September 14 th meeting.
Aqua Texas – Bliss Spillar (Edwards)	Edwards	PWS	Agreed Order Executed; working with permittee to obtain final item requested.
Creedmoor-MAHA	Edwards	PWS	Agreed Order Executed; all additional requested documents have been received.
Monarch Utilities, Inc.	Edwards	PWS	Agreed Order Executed; all additional requested documents have been received.

Permitting Activity *(Erin, Jacob)*

<i>Upcoming</i>					
<i>Precinct</i>	<i>Application Type</i>	<i>Aquifer</i>	<i>Applicant Name</i>	<i>Use Type</i>	<i>Volume Request (GPY)</i>
1 - Pickens	TBD	Edwards	Haley, Ricky	Domestic/Irrigation?	TBD
1 - Pickens	Volume Increase	Middle Trinity	Tindol Restaurant Group	Commercial	TBD
1 - Pickens	Production	Middle Trinity	Whiskey Ridge	Commercial	9,000,000

1 - Pickens	LPP	Upper Trinity	Pena, Estrella	Domestic	500,000
<i>In Review</i>					
	<i>Application Type</i>	<i>Aquifer</i>	<i>Applicant Name</i>	<i>Use Type</i>	<i>Volume Request (GPY)</i>
4 - Williams	Exempt	Edwards	Kempt, Carlos	Exempt	0 - Geothermal
1 - Pickens	WDA	Edwards	City of Hays	PWS	0 - Replacement
1 - Pickens	LPP	Upper Trinity	Rhodes, Thomas	Domestic	500,000
1 - Pickens	LPP	Middle Trinity	Van Zyl, Jean	Domestic	500,000
<i>Recently Approve and/or Admin Complete</i>					
	<i>Application Type</i>	<i>Aquifer</i>	<i>Applicant Name</i>	<i>Use Type</i>	<i>Volume Request (GPY)</i>
1 - Pickens	IPP <2MIL	Middle Trinity	Jarica Investments	Commercial	788,400

AQUIFER STUDIES

(Jeff, Justin, and Tim)

Permitting Hydrogeologic Studies:

Working with Regulatory Compliance on permitting issues as needed. The Jarica Investments LLC permit application was evaluated at the request of the Board and results of that evaluation will be presented in the September, 2023 board meeting. AS staff continue to review geophysical logs of wells prior to final completion of the wells on an as-needed basis. In April, AS staff reviewed a drilling proposal submitted by Creedmoor-Maha for a Trinity well to be installed in their Edwards well field off of Twin Creeks Road. The Board of Directors approved a well drilling permit in May. A review of the City of Buda ASR permit by AS staff is underway.

Groundwater Studies: *Dye Tracing, Water Quality, Aquifer Characterizations*

- Coleman's Canyon- continuing to collect water-level data from the multiport well every month to 6 weeks. Groundwater sampling of these two wells was performed in May and June as part of the TWDB summer sampling program.
- There are no dye-trace studies planned at this time because of minimum to no flow in streams and springs.
- A synoptic water level study characterizing the Trinity Aquifer during severe drought conditions is underway. Data collection should be finished by the end of September 2023.
- Aquifer science staff are working with the GM and City of Austin staff to drill two new Edwards Aquifer wells in fall 2023: one next to Barton Springs Pool and one at Garrison Park in south Austin.

Field Activities:

- Cooperating with USGS and City of Austin staff to confirm accurate real-time gauge reporting at Barton Springs and Lovelady. Conducting bi-weekly to monthly field measurements. Most recent measurements at Barton Springs: 7/24/23 & 8/7/23.
- Cooperating with USGS staff to confirm accurate real-time gauge reporting at Jacob's Well and the Blanco River at Wimberley.
- Calibrating telemetry monitoring equipment at the Needmore index well (Amos) and reviewing pumping and water-level data as drought worsens.
- Antioch- Continuing to maintain the system and to collect data on flow into the vault (when there is flow). A recent visit to Antioch Cave to assess operating components and electronics indicated the need to recondition most electrical systems.
- Well monitoring- Because of drought, staff are increasing the amount of time maintaining equipment in numerous monitor wells and downloading and interpreting data; and occasionally checking on wells that have been reported as "dry".
- City of Austin monitor wells.
- Texas Water Development Board annual water chemistry sampling (20 wells).
- Magellan Pipeline annual sampling.

Trinity Aquifer Modeling Development:

- Trinity Aquifer Sustainability model (TAS): The first phase of modeling has been completed and a report has been published on the District website detailing specifics of model construction.
- BRAAT modeling: Southwest Research Institute started work on this model in September 2021, but activity was on hold as funding issues were resolved. SWRI restarted the project in late July and are

continuing to make progress. A meeting with the BRAAT review team was held on December 7. It is estimated that the BRAAT model will be completed by late summer or fall of 2023.

- New TWDB Southern Trinity GAM model: In July 2023 staff participated in a kickoff meeting hosted by TWDB modeling staff for the Southern Trinity GAM model. This regional model will cover the BSEACD portion of the Trinity Aquifer. AS will be in regular contact with the TWDB modeling team to provide data and technical input on model construction.

COMMUNICATIONS AND OUTREACH (Shay)

Drought Communications

Press Coverage

Throughout the month of August, staff were contacted by seven reporters and the District was featured and/or mentioned in the six following stories:

- [Before and after photos show dire conditions at popular swimming hole Jacob's Well](#) – KSAT, 8/2/23
- [How much of the Colorado should we leave up to Elon Musk's discretion?](#) - Austin Chronicle, 8/11/23
- Segment over Zoom between Tim and David Yeomans- KXAN, 8/14/23 (link unavailable)
- [Barton Springs, Jacob's Well swimming hole faces danger from Texas drought](#) – Austin-American Statesman, 8/14/23
- [Dry springs in Central Texas warn of water shortage ahead](#) - Inside Climate News and picked up by [Texas Standard](#), [Texas Tribune](#), 8/16/23
- [Interview about drought over Zoom with Tim](#) – Fox 7, 8/24/23
- [Kyle officials request water from San Marcos](#) – KVUE, 8/30/23

Permittee Communications

District staff have actively worked with permittees to inform them about the drought status and help them inform their end-users. Below are specific ways we've contacted and/or worked with permittees over the last month.

Creedmoor Maha WSC

- District staff collaborated with Matthew Pickle at CMWSC to coordinate an outreach event to inform customers about the effects of Stage IV. The event was to take place on September 12, 2023.
- The organizations worked together to create informational content, plan the event, and design bill inserts to recruit attendees.
- Since the District did not cross the Stage IV threshold, CMWSC decided to hold off on the event for the time being.

City of Austin/ Austin Water

- District staff reached out to Kevin Kluge, Water Conservation Manager with the City of Austin, on 8/7/23 before the city declared Stage 2 drought.
- Staff offered to host a joint event about water conservation and drought conditions, but no response has been received.

All permittees

- District staff sent [this email](#) to all permittees on 8/10/23 to inform them that if hot, dry conditions continue, the District expects to enter Stage IV in the coming weeks.

City of Buda

- District staff will attend the City of Buda's Quarterly Townhall Meeting on 9/21/23 at 6pm to share the status of the aquifer, drought conditions, and ongoing District aquifer science work with attendees.

SouthWest Water Company (Prev. Monarch Utilities)

- Staff are collaborating with the communications team at SouthWest Water Company to develop content about the District's Stage III status and the possibility of entering Stage IV.

- These are preventative measures to help customers understand the severity of the drought and encourage them to actively conserve resources.

Slaughter Creek Acres WSC

- Mike Dorsey, Board President at SCAWSC, asked District staff for additional information on the reasoning for permit reclassification.
- [This document](#) was sent to him so he could share it at their next board meeting.

Outreach Events

City of Buda Quarterly Townhall Meeting

- Staff are collaborating with the City of Buda to promote and present at their quarterly townhall meeting on September 21 at Buda City Court at 6pm. Jeff Watson will present for about 20 minutes about the state of the aquifer, drought conditions, and ongoing District aquifer science efforts.

Barton Springs University

- District staff are actively preparing for Barton Springs University taking place on September 19. Jeff Watson will do a presentation entitled “Introduction to Hydrogeology and the Edwards Aquifer”. Shay Hlavaty will lead several hands-on activities with students focusing on conductivity in groundwater.

Monthly Email Updates

On August 31, 2023, District subscribers received a [Drought Update email](#). Drought updates are also posted on the [website](#) as a spotlight and across all social media platforms.

Below are the open and click rates the email. For reference, according to MailChimp, the average mass email open rate in the government sector is 29% and click rate is 4%. # of clicks/click rate refers to the number of times links were clicked within the email. This is an effective way to measure engagement with email content.

Email Type	Date Sent	# Sent	# Opened	% Opened	# Clicks	% Clicks
Drought Update	6/29/23	2355	934	40%	54	6%
Newsletter	7/25/23	2334	866	37%	126	15%
Drought Update	8/29/23	2324	898	39%	59	7%

Social Media

As of August 31, Texas State University undergraduate, Becca Cade’s contract ended with the District. District’s social media following and reach continue to grow overall as seen below:

Social Media Outlet	Social Media Performance			
	August Reach	% MOM Growth: August vs. July	August Followers	% MOM Growth: August vs. July
Facebook	4283	258%	1636	3.2%
Instagram	9651	-22%	327	33%
Twitter	3411	96%	786	1.4%
LinkedIn	75	-12.8%	121	14%

Instagram and LinkedIn didn't have as large of reach in August. This was because the District's July Groundwater to the Gulf post was shared by several partners (CRA, LBJWF, Hike Austin) on both outlets, which spiked reach that month. In August all of the District's social media channels increased followers and had good overall engagement.

The District was featured on Hike Austin, an Instagram account with 111,000 followers, on 8/30/23. This post received 2,550+ likes, 380+ shares, and resulted in 45 new followers for the BSEACD Instagram page. (For reference, BSEACD Instagram had 124 followers and an average of 3 likes per post before June 2023.)

Website

A page builder plugin and website theme that meet the organization's online needs have been chosen. District staff and the web contractor continue to plan out site organization and a general project timeline until the Board approves the task order for the project.

ADMINISTRATION

(Dana, Tammy)

(August 4, 2023 – September 8, 2023)

Accounts Receivable / Permittee Cycle Billings

On August 16, invoices for FY 2024 annual, 1st quarter, and September monthly billings went out. This is the largest billing cycle of the year. It also includes transportation fees (\$124,000), and annual permit renewal fees (\$75/each).

On September 16, monthly billings for October will go out.

Annual Financial Audit

The annual financial audit is scheduled for October 9 – October 23, 2023 with Montemayor Britton Bender.

Budget FY 2024

Has been entered into our financial operating system – Quickbooks.

Drought Management Fees (DMFs)

Tracking monthly DMFs began in October 2022 (for September pumpage).

Total DMFs invoiced for FY 2023-to-date (beginning in October) is \$22,460.

End-of-Year Closing 2023 Books and Opening FY 2024 Books

Continuing the process through October.

Financial Reporting – Website Transparency Section (Texas Comptroller’s Office)

Transparency Star-related: Most current, available financial reports are to be posted on our website and accessible within three clicks, as required by the Texas Comptroller of Public Accounts Transparency Star Program. Balance Sheets, Profit and Loss Statements, and Check Registers (Operating and Payroll) through August 2023 should be posted on the District website.

Records Management

Storing annual files in accordance with our Local Government Schedule for retaining and disposing records.

The Administration Team typically has repetitive monthly tasks e.g. monthly bank reconciliations, monthly adjusting journal entries, accounts payable, payroll, contract/grant/project tracking, office maintenance and repairs, budget monitoring, bi-weekly payroll journal updates, directors' compensation, pre-paids, DMFs, posting public meetings, preparing meeting backups, etc. These types of tasks are not listed in this report because they are repetitive. Administration status reports are generally more summarized than the other teams, as we list our extra-ordinary tasks outside of our routine tasks, while supporting all other teams.

Item 5

Board Discussions and Possible Action

- a. Discussion and possible action related to the approval of an amendment to reconcile the FY 2023 Budget.**



MEMORANDUM

Date: July 31, 2023
Updated for September 8, 2023

To: Board of Directors

From: Dana Wilson, Senior Administrative Program Manager

Re: Budget Amendment for FY 2023 – Request for Two Budget Accounts

The Facilities Repairs subaccount of the Maintenance account is budgeted for \$5,000. To date, \$13,344 (267% over budget) has been spent.

The status of this subaccount is due primarily to unexpected expenses for:

- 1) removal of a fallen tree during the last storm and an adjacent tree thought to be compromised (\$3,200),
- 2) repair of 35-year-old A/C ducts that were not blowing air into some offices (\$2,400), and
- 3) replacement of conference room A/C interior unit (\$3,400).

The Database Project is budgeted for \$50,000. To date, \$72,000 (144% over budget) has been spent.

A contract with LRE was entered into in October 2022 which was after the initial budget had been prepared. The \$50,000 budgeted was a supposition. The contract is for \$108,000 of which \$81,000 is to be spent in FY 2023 and the remainder in FY 2024.

Please see the attached details extracted from the current budget report.

There is currently \$74,000 in the Elections subaccount of the Professional Services account that is spent at less than one percent of budget.

This is a request to move \$10,000 from the Elections line item into the Facilities Repairs line item; and \$31,000 from the Elections line item into the Database line item.

Thank you.

Two FY 2023 Budget Accounts Needing Amendments

	Sept 1, 2022 - Aug 31, 2023	Budget	\$ Over Budget	% of Budget
6025.4 - Facilities Repairs	13,343.29	5,000.00	8,343.29	266.87%
6176.1 - District Database Project	72,000.00	50,000.00	22,000.00	144.0%
6178.0 Elections	270.50	75,000.00	-74,729.50	0.36%

(There will be another \$9000 posted to the database for FY 2023 - waiting on invoice).

Item 5

Board Discussions and Possible Actions

b. Discussion and possible action related to the performance and compliance of District permittees with their User Drought Contingency Plan curtailments.

Item 5

Board Discussions and Possible Actions

c. Discussion and possible action related to a Report of Investigation, Notice of Alleged Violation, and Draft Agreed Order for initiation and resolving enforcement proceedings concerning Aqua Texas, Bear Creek Park



**Barton Springs
Edwards Aquifer**
CONSERVATION DISTRICT

BSEACD STAFF INVESTIGATION REPORT

I. Basic Information

Report Date: September 14, 2023

Permittee/Respondent: Aqua Texas, Inc. – Bear Creek Park

Permittee Contact 1: Scot Foltz or Lauren Saviour
 Phone: 512-990-4400 x56101
 Mailing Address: 1106 Clayton Lane, Suite 400W
 Austin, TX 78723

Property Address: Black Bear Drive
 Lat: 30°8’25.95” Long: 97°50’43.54”
 Manchaca, TX 78652
 Burson Drive
 Lat: 30°8’12.15” Long: 97°50’41.59”
 Manchaca, TX 78652

BSEACD Staff: Erin Swanson, Regulatory Compliance Manager

II. Investigation Summary

The District declared Alarm Stage Drought at the June 9, 2022 Board meeting. Then on October 20th, the District’s General Manager, Tim Loftus declared Critical Stage Drought. The District’s enforcement plan¹ provides for monthly review of permittee drought target production allocation. The evaluations of Aqua Texas – Bear Creek Park began with the month of July because the month of June was the initial month of a Drought Stage, which is not reviewed under the District’s enforcement plan.

Under section 3.0 of the District’s enforcement plan, permittees are evaluated during drought according to three permitted pumpage tiers (See table 1). Aqua Texas’ Bear Creek Park Historical Edwards permit falls under Tier 2 because it is permitted for 12,098,000 gallons per year.

Permittees are further evaluated based upon three levels (A, B and C). Each level is associated with how much a permittee over pumps its drought target allocation.

Permitted Pumpage (gallons/year)		% Pumpage over Monthly Limits	
Tier 1:	<12,000,000	Level A:	<25%
Tier 2:	≥ 12,000,000 and < 120,000,000	Level B:	≥ 25% and 100%
Tier 3:	≥ 120,000,000	Level C:	≥ 100%

Table 1: Permitted Pumpage and % pumped over drought target volumes

¹ Staff used the Enforcement Plan in effect at the time of violations in its review of Aqua Texas – Bear Creek Park

Under the District’s enforcement plan, only Tier 3 permittees (the largest volume permittees) will be evaluated during the first three months of drought, excluding the initial month. After the 3rd month of drought, evaluation of Tier 2 permittees began during month 4 -6.

Aqua Texas Bear Creek Park’s pumping was assessed during month 13, July of 2023, of District declared drought due to over pumping the drought target allocation since month 4, March of 2023 (See table 2). The evaluation of Aqua Texas – Bear Creek Park under the process described above follows:

Year	Month	Drought Stage	Target	Pumpage	Level	% To Target	Notes
2022	July	Alarm	1,171,086	1,056,000		-10%	Not assessing Tier 2 permittees.
2022	August	Alarm	1,161,408	797,000		-31%	Not assessing Tier 2 permittees.
2022	September	Alarm	967,840	664100038,000		-34%	Not assessing Tier 2 permittees.
2022	October	Alarm	803,307	686,000		-15%	Assessment expansion to Tier 2 permittees begins; in compliance.
2022	November	Critical	592,802	485,000		-18%	In compliance.
2022	December	Critical	533,522	471,000		-12%	In compliance.
2023	January	Critical	533,522	438,000		-18%	In compliance.
2023	February	Critical	550,459	489,000		-11%	In compliance.
2023	March	Critical	558,928	649,000	A	16%	1 st occurrence of non-compliance.
2023	April	Critical	626,676	641,000	A	2%	2 nd occurrence of non-compliance.
2023	May	Critical	677,488	744,000	A	10%	3 rd occurrence of non-compliance.
2023	June	Critical	804,517	906,000	A	13%	4 th occurrence of non-compliance.
2023	July	Critical	1,024,701	1,268,000	A	24%	5 th occurrence of non-compliance.
2023	August	Critical	1,016,232	1,284,000	B	26	6 th occurrence of non-compliance.

Table 2: Aqua Texas Bear Creek Park monthly pumpage during declared Drought Stages.

Under section 4.0 of the District’s enforcement plan, staff reached out to Aqua TX representatives in attempt to coordinate a pre-enforcement meeting to discuss over pumpage of allotment and lack of implementation of its User Drought Contingency Plan. As of the date of this document, a meeting with Aqua Texas for overpumpage of their Bear Creek Park system, was not held as Aqua never responded to staff’s emails. Aqua Texas had multiple occurrences of over pumping the drought target allotment for the months of March – July of 2023.

Below describes the dates and discussions District Staff had with Aqua Texas regarding meeting drought target allocations.

On 06/09/2022, the Board of Directors declared Stage II Alarm drought.

On 08/05/2022, per the District's enforcement plan, section 3.0, staff was to consider the month of July as the initial drought stage month to begin assessing compliance. This allows time for the permittees to start implementing UDCP measures to start reducing its monthly pumpage at/or below the target curtailed drought allotments.

On 04/05/2023, District staff reviewed Aqua Texas Bear Creek Park's pumping for the month of March and observed that the permittee had over pumped the target drought volume by 16% for that month. Per the District's enforcement plan section 3.0, the permittee was eligible to be reviewed for potential enforcement and was issued its first occurrence of non-compliance.

On 04/24/2023, District staff sent an email to Aqua Texas, Inc. to arrange a pre-enforcement meeting to discuss the causes of the non-compliance. The email was sent to Scot Foltz (Mr. Foltz) Environmental Compliance Manager, Brent Reeh (Mr. Reeh) CTX Area Manager, and Environmental Compliance Specialist Lauren Savior (Ms. Savior), via email 04/24/2023 (Attachment A). No response to this email was received.

On 05/05/2023, District staff reviewed Aqua Texas Bear Creek Park's pumping for the month of April and observed that the permittee had over pumped the target drought volume by 2% for that month. Per the District's enforcement plan section 3.0, the permittee was eligible to be reviewed for potential enforcement and was issued its second occurrence of non-compliance.

On 06/05/2023, District staff reviewed Aqua Texas Bear Creek Park's pumping for the month of May and observed that the permittee had over pumped the target drought volume by 10% for that month. Per the District's enforcement plan section 3.0, the permittee was eligible to be reviewed for potential enforcement and was issued its third occurrence of non-compliance.

On 07/05/2023, District staff reviewed Aqua Texas Bear Creek Park's pumping for the month of June and observed that the permittee had over pumped the target drought volume by 24% for that month. Per the District's enforcement plan section 3.0, the permittee was eligible to be reviewed for potential enforcement and was issued its fourth occurrence of non-compliance.

On 07/27/2023, District staff sent a second email to Aqua Texas, Inc. to attempt to arrange a pre-enforcement meeting to discuss the causes of the non-compliance. The email was sent to Scot Foltz (Mr. Foltz) Environmental Compliance Manager, Brent Reeh (Mr. Reeh) CTX Area Manager, and Environmental Compliance Specialist Lauren Savior (Ms. Savior), via email 07/27/2023 (Attachment A). No response to this second email was received.

On 08/05/2023, District staff reviewed Aqua Texas Bear Creek Park's pumping for the month of July and observed that the permittee had over pumped the target drought volume by 13% for that month. Per the District's enforcement plan section 3.0, the permittee was eligible to be reviewed for potential enforcement and was issued its fifth occurrence of non-compliance.

On 08/10/2023, at the monthly Board meeting, District staff District staff notified the Board of a 5th occurrence of non-compliance by Aqua Texas, Inc. and indicated their plans to proceed with

preparations in order to proceed with the first steps of the NOAV process.

On 08/24/2023, Lauren Saviour, Environmental Compliance Specialist for Aqua Texas came into the office and mentioned that they had discovered a leak in the Bear Creek System and that had since been repaired.

On 09/05/2023, District staff reviewed Aqua Texas Bear Creek Park's pumping for the month of August and observed that the permittee had over pumped the target drought volume by 26% for that month. Per the District's enforcement plan section 3.0, the permittee was eligible to be reviewed for potential enforcement and was issued its sixth occurrence of non-compliance.

III. Alleged Violations:

The District has recorded violations of the following District rules:

§3-1.11 (A)(11) Violation of the permit's terms, conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal or transporting amounts outside of the District in excess of the amount authorized for transport, shall be punishable by civil penalties as provided by the Act and these Rules.

§3-7.6 (A)(1) All permittees not granted a variance from the Drought Rules shall achieve individual monthly (prorated for partial months) target pumpage volumes for each drought stage by reducing established monthly baseline pumpage by the respective percentage reductions associated with each drought stage.

IV. Chronology of Events:

06/09/22: The Board of Directors declared Stage II Alarm drought
07/05/22: Meter Readings were considered initial month.
10/20/22: General Manager, Dr. Tim Loftus, declares Stage III Critical drought.
04/05/23: Aqua Texas Bear Creek Park over pumped the drought target amount by 16% for the month of March.
05/05/22: Aqua Texas Bliss Spillar over pumped the drought target amount by 2% for the month of April.
06/05/22: Aqua Texas Bliss Spillar over pumped the drought target amount by 10% for the month of May.
07/05/22: Aqua Texas Bliss Spillar over pumped the drought target amount by 13% for the month of June.
08/05/22: Aqua Texas Bliss Spillar over pumped the drought target amount by 24% for the month of July.
09/05/22: Aqua Texas Bliss Spillar over pumped the drought target amount by 26% for the month of August.

V. Documentation

- Attachment A – 04/24/2023 & 07/27/2023 1st and 2nd notification emails
- Attachment B – 08/10/2023 Board Meeting minutes

Item 5

Board Discussions and Possible Actions

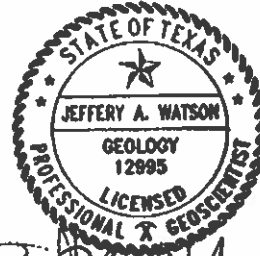
d. Discussion and possible action on one combination nonexempt well drilling and Historical Trinity Production Permit application for the commercial use of up to 789,000 gallons of water per year filed by Jarica Investments, LLC for one well in the middle Trinity Aquifer to be located at 350 Lonesome Trail in Driftwood, TX 78619 including consideration by the Board of Directors of special conditions or delaying the effective date for an application submitted and/or considered during drought.



**Barton Springs
Edwards Aquifer**
CONSERVATION DISTRICT

TECHNICAL MEMORANDUM: Evaluation of Potential for Unreasonable Impacts From Jarica Investments, LLC Application for Individual Production Permit.

Date: August 23, 2023



Jeff Watson, P.G., Staff Hydrogeologist, BSEACD

Jarica Investments, LLC has applied for a non-exempt production permit of 789,000 gallons-per-year to be produced out of the Middle Trinity Aquifer. This category of permit is classified as an individual production permit (IPP). IPP applications requesting less than 2,000,000 gallons-per-year do not require an aquifer test and hydrogeologic report under District rules because it is assumed from experience with previous pumping tests that the impact from such a small pumping volume will be relatively small. Additionally, these small permits typically do not require review and approval by the BSEACD Board of Directors and can be approved directly by the general manager. However, during times of declared drought, IPP applications for less than 2,000,000 gallons-per-year do require board approval. Given the ongoing severe drought, and reports of dry wells by well owners in the vicinity of the proposed Jarica Investments, LLC well site, the BSEACD Board of Directors has requested a technical review of the permit application by aquifer science staff to evaluate potential impacts due to the proposed production.

The permit application proposes a production well completed in the Lower Glen Rose, a sub-unit of the Middle Trinity Aquifer, to supply 12 tiny house rental units. The proposed annual pumping volume is approximately equivalent to the average annual production of seven of the District's Limited Production Permit (LPP; average BSEACD reported LPP production from 2017-2019 = 112,766 gallons/year).

Impacts for the proposed permit were evaluated by creating a predictive model using the Theis confined aquifer analytical model (Theis 1935). This and similar analytical models are commonly used for predicting localized water level drawdowns due to pumping. Geologic formation picks and aquifer unit thicknesses were inferred for the proposed well site using geologic data from nearby wells in the District's geologic database and a published geologic map by Collins (2017). Aquifer parameters Transmissivity (T) and Storativity (S) were taken from Oliver and Pinkard (2018), who estimated these parameters using aquifer testing data from a nearby aquifer test. A constant pumping rate of 1.5 gallons-per-minute, which is equivalent to the annual production volume requested in the permit application, was assumed for the

model. A schematic diagram of the proposed well completion with estimated geologic formation depths and inferred water levels is provided in Figure 1. A summary of model parameters is provided in Table 1.

An excel spreadsheet produced by the USGS (2002) was used to calculate modeled drawdown for two different hypothetical Jarica production well completions in the Middle Trinity Aquifer:

- 1) Well producing from the Lower Glen Rose hydrostratigraphic unit of the Middle Trinity Aquifer.
- 2) Well producing from the Cow Creek hydrostratigraphic unit of the Middle Trinity Aquifer.

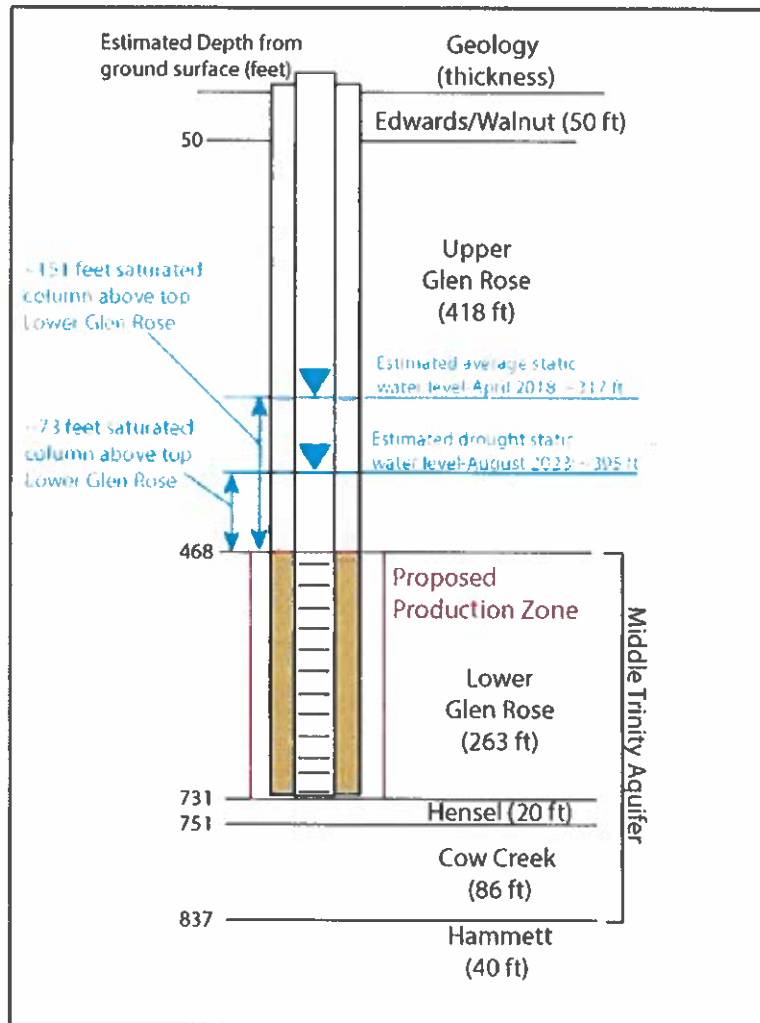


Figure 1. Well schematic for proposed Jarica Investments LLC well. Water level inferred from District Rolling Oaks Multiport Monitoring well measurement (April 2018 and June 2023). Formation thicknesses inferred from Lowe well geophysical log.

Table 1. Summary of parameters used for forward modeling exercise. Aquifer parameters were taken from Oliver and Pinkard (2018).

Model	Transmissivity (ft ² /d)	Storativity	Anisotropy (Kh/Kv)	Aquifer Thickness (ft)	Pumping Rate (gallons-per-minute)
Lower Glen Rose	48.75	0.0002	0.4	195	1.5
Cow Creek	300	0.00006	0.1	75	1.5

Modeled drawdown from the proposed pumping well after 30 years is <4 feet for the Lower Glen Rose, and <1 foot for the Cow Creek at a distance of ¼ mile from the pumping well (Figure 2). These modeled drawdowns decrease with distance from the pumping well. The difference in modeled drawdown is the result of the Cow Creek having higher transmissivity relative to the Lower Glen Rose, which results in smaller predicted drawdowns in response to pumping. Compared to the amount of saturated water column available above the top of the Middle Trinity Aquifer (73 and 151 feet estimated for 2023 drought and 2018 average conditions respectively), these modeled drawdowns are unlikely to result in dewatering of Middle Trinity Aquifer units (lowering of water levels below the top of the aquifer). These modeled drawdowns are also unlikely to cause significant impacts to neighboring Trinity wells.

In the vicinity of the proposed well site, exempt wells are present in both the Upper and Middle Trinity Aquifers. The Middle Trinity Aquifer is generally considered to be hydraulically separated from the Upper Trinity Aquifer. However, there is some potential for vertical connectivity in the vicinity of faults, where solutionally enlarged fractures and karst features provide possible pathways for groundwater flow. The proposed Jarica Investments, LLC well does fall within the vicinity of mapped faults. Thus, the potential for pumping in the Middle Trinity to influence water levels in the Upper Trinity Aquifer cannot be definitively ruled out. If such a vertical influence were present, any drawdown to the Upper Trinity Aquifer would be expected to be smaller than drawdowns in the Middle Trinity Aquifer. Given the relatively small modeled drawdowns in the Middle Trinity Aquifer, results from the above predictive model suggest that any impact to the Upper Trinity would be negligible due to the proposed pumping. Based on this technical evaluation, the proposed pumping by Jarica Investments, LLC is unlikely to cause unreasonable impacts to nearby wells completed in the Middle or Upper Trinity Aquifers. This finding supports the staff recommendation made earlier to approve the Jarica Investments, LLC drilling and production permits.

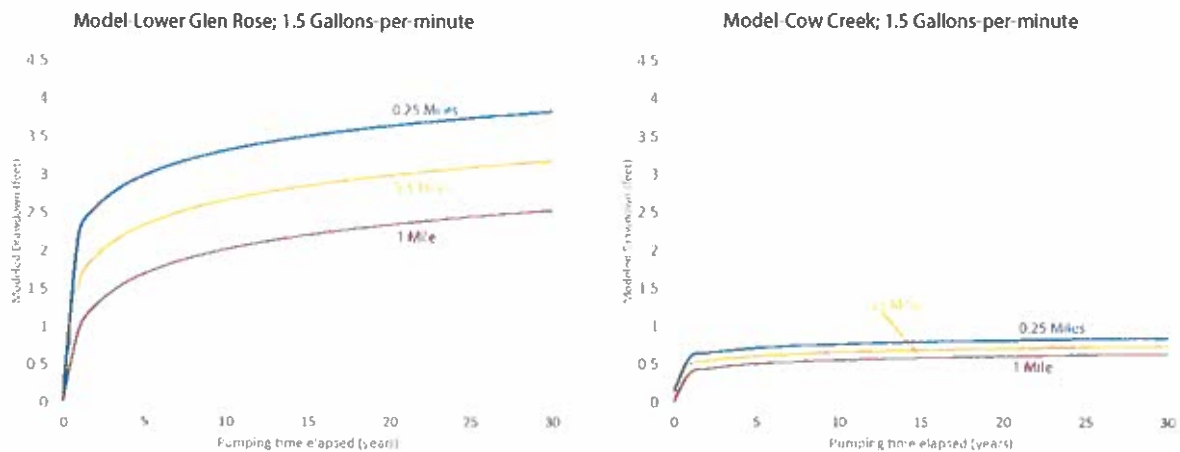


Figure 2. Modeled drawdown over time from Jarica Investments, LLC proposed production well.

References:

Collins, E. W., 2017, Geologic Map of the Shingle Hills-Dripping Springs-Driftwood-Rough Hollow-Henly-Hammetts Crossing Area, Central Texas: The University of Texas at Austin, Bureau of Economic Geology Open-File Map No. 231, map scale 1:50,000.

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Item 5

Board Discussions and Possible Actions

e. Discussion and possible action on declaring Stage IV Exceptional Drought.

Item 5

Board Discussions and Possible Actions

- f. Discussion and possible action on draft preliminary changes to the District's Rules and Bylaws.**

4-1.4. CONFLICT OF INTEREST.

- A. Directors: In accordance with Chapter 171 of the Local Government Code, before any vote or decision on a business entity or real property in which a Director has a “substantial interest,” a Director will publicly disclose the interest during a meeting of the Board, file a completed affidavit with the Secretary of the Board, and abstain from further participation in the matter including voting and attending a closed meeting related to the matter for which the director is required to file the affidavit if:
1. The action on the matter will have a special economic effect on the business entity that is distinguishable from the effect on the public; or
 2. It is reasonably foreseeable that an action on the matter will have a special economic effect on the value of the property that is distinguishable from its effect on the public.

3-7-10. Enforcement/Penalties During Drought.

A. Maximum Penalty (no changes)

B. Determination of daily penalties for failure to reduce pumpage during District declared drought

1. When a permittee's reported monthly pumpage exceeds the Permittee's target (i.e., drought curtailed) pumpage for the month under its User Drought Contingency Plan (UDCP), the District will use the methodology that follows to determine daily penalties.
2. The District will calculate an average daily usage by dividing the monthly total pumpage by the number of days in the month.
3. The average daily usage will be summed until the total equals permittee monthly target (i.e., drought curtailed) pumpage for that month under the Permittee's UDCP (referred to as "First Day of Exceedance").
4. Each day that the average daily usage exceeds the target monthly pumpage beginning with the First Day of Exceedance constitutes a separate daily violation.
5. Daily penalties will be assessed in accordance with subsection 3-7.10.A. above.
6. The product of the number of days of overpumpage multiplied by the appropriate daily penalty amount constitutes the total monthly penalty.

3-7-10. Enforcement/Penalties During Drought.

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4. Each day that the average daily usage exceeds the target monthly pumpage beginning with the First Day of Exceedance constitutes a separate daily violation.
5. Daily penalties will be assessed in accordance with subsection 3-7.10.A, above.
6. The product of the number of days of overpumpage multiplied by the appropriate daily penalty amount constitutes the total monthly penalty.

7. The District will provide notice of the total monthly penalty, if any, for every partial or full month of overpumpage within 30 days of the receipt of permittee's monthly pumpage.

8. Payment must be made by permittee within 30 days of notification of the total monthly penalty amount by the General Manager.

C. At its sole discretion, the District may use the above-described process to calculate and notify permittee of continuing monthly violations of Rule 3-7.6 in lieu of District preparing a report of findings and Notice of Alleged Violation as described under Rule 3-8.4.

D. If in its sole discretion the District uses the above-described process to calculate and notify permittee of continuing violations of Rule 3-7.6, the process will end the first full month that the District is in Stage 1, No Drought.

Item 5

Board Discussions and Possible Actions

- g. Discussion and possible action on a moratorium on accepting new permit applications.**

Item 5

Board Discussions and Possible Actions

h. Discussion and possible action on Petition filed by Hays Commons Land Investment LP at the Texas Commission on Environmental Quality to create the Hays Commons Municipal Utility District.

Item 6

Director's Reports

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;**
- **Committee formation and updates;**
- **Conversations with public officials, permittees, stakeholders, and other constituents;**
- **Commendations; and**
- **Issues or problems of concern.**

Item 7
Adjournment