



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

Thursday, October 13, 2022

5:00 PM

IN-PERSON

Notice is given that a **Regular Meeting and Public Hearing** of the Board of Directors (Board) of the Barton Springs/Edwards Aquifer Conservation District will be held on **Thursday, October 13, 2022** 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. **Pg. 4**
 - b. Approval of minutes of the Board's September 15, 2022 Regular Meeting. **Not for public review at this time**
 - c. Approval of two-year contract with SledgeLaw Group PLLC: September 1, 2022 through August 31, 2024 in the amount of \$48,000. **Pg. 27**

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

- a. Review of key team activities/projects. **Pg. 30**
- b. Aquifer status update.
- c. Upcoming events of possible interest.

5. Public Hearing.

The Board will hold a Public Hearing on the proposed District Management Plan that has been updated to incorporate new planning data, address statutory requirements, and include goals and objectives that support the District’s mission and commitment to sound management of all aquifers within the District.

6. Staff Presentation

Aquifer Science Team presentation titled, “In-House Trinity Model Results: Update” to be followed by discussion.

7. Discussion and possible action.

- a. Discussion and possible action related to adoption of the proposed Management Plan by Resolution #101322-01. **Pg. 49**
- b. Discussion and possible action related to the declaration of a change to a more severe drought stage, from Stage II-Alarm drought to Stage III-Critical drought. **NBU**
- c. Discussion and possible action related to the performance and compliance of District permittees with their User Drought Contingency Plan curtailments. **NBU**
- d. Discussion and possible action related to the overpumpage of authorized annual permitted volume by District permittees Aqua Texas Bliss Spillar and Professional Contract Services, Inc. including the assessment of penalties and 30-day notice of payment of penalties. **Pg. 53a.**
- e. Discussion and possible action on acknowledgement of receipt of \$39,875 from INTERA and to confirm that the 2017 Master Technical Services Agreement and related work order to develop a web-based groundwater and water well management system is terminated as provided in the September 22, 2022 letter from Tim Loftus, General Manager, to Eric Markland, Chief Financial and Administrative Officer, INTERA, Inc. **Pg. 55**
- f. Discussion and possible action related to a recommendation by the General Manager to approve a Master Service Agreement with LRE Water and a Statement of Work (i.e., Task Order) to produce a new database for the District at a total first year cost of \$108,000. **Pg. 58**

8. 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.

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 September 15, 2022 Regular Meeting.**
- c. Approval of two-year contract with SledgeLaw Group PLLC: September 1, 2022 through August 31, 2024 in the amount of \$48,000.**

Financial Reports – September 2022

October 13, 2022 Board Meeting

1. Profit and Loss Budget vs Actual

September 1, 2022 through September 30, 2022

2. Profit and Loss Previous Year Comparison

September 1, 2022 through September 30, 2022

3. Balance Sheet Previous Year Comparison

As of September 30, 2022 (compared to September 30, 2021)

4. Check Register – TRUIST Bank Account

September 1, 2022 through September 30, 2022

**These reports are pre-E-O-Y pre-audit adjustments.
(Some adjustments have been made but others will be made after
the final audit report is presented.)**

1. Profit and Loss Budget vs Actual

September 1, 2022 - September 30, 2022

BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT

PROFIT AND LOSS - BUDGET VS ACTUAL

September 1, 2022 - September 30, 2022

	Sept 1, 2022 - Sept 30, 2022	Budget	% of Budget	Notes
INCOME				
4400.0 · Interest Income	0.19	1,600.00	0.01%	Only 1 out of 5 accounts has been posted.
4625.0 · MISCELLANEOUS INCOME	0.00	0.00	0.0%	
4800.0 · USAGE AND PRODUCTION FEES	501,019.47	1,619,554.00	30.94%	
4810.0 · OTHER FEES	2,500.00	12,300.00	20.33%	Well development, applications, pluggings.
TOTAL INCOME	503,519.66	1,633,454.00	30.83%	Highest Billing Cycle due to annual/renewals/transport

EXPENSE				
6000.0 · UTILITIES	2,528.48	22,000.00	11.49%	
6005.0 · Print/Copy/Photo Services	979.90	2,000.00	49.0%	
6007.0 · Postage/Freight/Shipping	0.00	2,000.00	0.0%	
6010.0 · Office Supplies	260.37	6,000.00	4.34%	
6010.2 · Office Furniture	0.00	1,000.00	0.0%	
6011.0 · Comp Hardware-Plotter Supplies	545.00	6,000.00	9.08%	
6014.0 · Software Acquisition & Upgrades	212.50	6,000.00	3.54%	
6015.0 · IT Monthly Maintenance	4,560.40	44,100.00	10.34%	
6016.0 · Meeting Expense	444.59	4,500.00	9.88%	
6017.3 · Sponsorships	0.00	3,750.00	0.0%	
6019.0 · Subscriptions/Publications	0.00	5,000.00	0.0%	
6020.0 · Advertising	0.00	4,000.00	0.0%	
6021.0 · MISCELLANEOUS EXPENSES	4.00	0.00	100.0%	
6022.0 · Accounting System Operation	335.60	6,000.00	5.59%	
6023.0 · MAINTENANCE	792.26	21,500.00	3.69%	Office and Auto
6025.4 · Facilities Repairs	0.00	0.00	0.0%	
6040.0 · LEASES	939.90	9,650.00	9.74%	Copier and Postage Machine
6065.0 · DIRECTOR EXPENSES	0.00	2,500.00	0.0%	
6066.0 · Directors Compensation	800.00	25,000.00	3.2%	
6075.0 · DUES & MEMBERSHIPS	125.00	6,100.00	2.05%	
6080.0 · COMMUNICATIONS AND OUTREACH	0.00	17,050.00	0.0%	

	Sept 1, 2022 - Sept 30, 2022	Budget	% of Budget	Notes
6081.0 · REGULATORY COMPLIANCE	0.00	7,500.00	0.0%	
6084.92 · GENERAL MANAGEMENT	0.00	5,000.00	0.0%	
6089.0 · AQUIFER SCIENCE	374.84	15,000.00	2.5%	
6095.0 · CONTRACTED SUPPORT	0.00	40,750.00	0.0%	New placement (moved out of Team Budgets)
6100.0 · INSURANCE - DISTRICT	545.62	7,047.00	7.74%	Property, Auto, Liability, E&O
6150.0 · INSURANCE - GROUP	9,217.33	150,660.00	6.12%	Health, Dental, Life, Vision
6160.0 · LEGAL SERVICES	5,775.00	121,000.00	4.77%	General Matters
6170.0 · PROFESSIONAL SERVICES	0.00	183,850.00	0.0%	Audit, Elections, Database, Retirement Fees
6179.0 · LEGISLATION	0.00	0.00	0.0%	
6180.0 · PROFESSIONAL DEVELOPMENT	495.00	20,000.00	2.48%	
6199.0 · SALARIES AND WAGES	63,583.16	852,865.00	7.46%	
6203.0 · TAXES & BENEFITS	12,607.56	128,327.00	9.83%	
6800.0 · PROJECTS	0.00	17,500.00	0.0%	
TOTAL EXPENSE	105,126.51	1,743,649.00	6.03%	
NET ORDINARY INCOME	398,393.15	-110,195.00		Negative effect (shortfall) to budget before accounting for the transfers to balance the budget, shown below.
OTHER INCOME				
9000.00 · Transfer from Reserves	0.00	110,200.00	0.0%	\$107,200 FROM General and \$3000 from TexPool Aquifer Reserve (General sub-account)
TOTAL OTHER INCOME	0.00	110,200.00	0.0%	
NET INCOME	398,393.15	5.00		This is the difference between the negative amount in Net Ordinary Income before the transfers in from other accounts, needed to balance the budget.

2. Profit and Loss - Previous Year Comparison

September 1, 2022 – September 30, 2022

**BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT
PROFIT AND LOSS - PREVIOUS YEAR COMPARISON**

September 1 - September 30, 2022

	Sept 1 - Sept 30, 2022	Sept 1 - Sept 30, 2021	\$ Change	% Change
INCOME				
4400.0 · Interest Income (only 1 out of 5 accounts have been posted)	0.19	38.56	-38.37	-99.51%
4625.0 · MISCELLANEOUS INCOME	0.00	456.58	-456.58	-100.0%
4800.0 · USAGE AND PRODUCTION FEES	501,019.47	464,327.87	36,691.60	7.9%
4810.0 · OTHER FEES (well development, applications, pluggings)	2,500.00	5,320.00	-2,820.00	-53.01%
TOTAL INCOME	503,519.66	470,143.01	33,376.65	7.1%
EXPENSE				
6000.0 · UTILITIES	2,528.48	2,774.88	-246.40	-8.88%
6005.0 · Print/Copy/Photo Services	979.90	53.88	926.02	1,718.67%
6010.0 · Office Supplies	260.37	406.46	-146.09	-35.94%
6010.2 · Office Furniture	0.00	57.35	-57.35	-100.0%
6011.0 · Comp Hardware-Plotter Supplies	545.00	738.99	-193.99	-26.25%
6014.0 · Software Acquisition & Upgrades	212.50	0.00	212.50	100.0%
6015.0 · IT Monthly Maintenance (includes two payments)	4,560.40	1,430.00	3,130.40	218.91%
6016.0 · Meeting Expense	444.59	326.79	117.80	36.05%
6021.0 · MISCELLANEOUS EXPENSES	4.00	-166.02	170.02	102.41%
6022.0 · Accounting System Operation	335.60	322.60	13.00	4.03%
6023.0 · MAINTENANCE (Office and Auto)	792.26	1,279.35	-487.09	-38.07%
6040.0 · LEASES	939.90	939.90	0.00	0.0%
6065.0 · DIRECTOR EXPENSES	0.00	0.00	0.00	0.0%
6066.0 · Directors Compensation	800.00	0.00	800.00	100.0%
6075.0 · DUES & MEMBERSHIPS	125.00	125.00	0.00	0.0%
6080.0 · COMMUNICATIONS AND OUTREACH	0.00	1,000.00	-1,000.00	-100.0%
6084.92 · GENERAL MANAGEMENT	0.00	282.36	-282.36	-100.0%
6089.0 · AQUIFER SCIENCE	374.84	-47.07	421.91	896.35%
6100.0 · INSURANCE - DISTRICT (Property, Liability, Auto, E&O)	545.62	451.39	94.23	20.88%
6150.0 · INSURANCE - GROUP (Employee Health/Dental/Life/Vision)	9,217.33	9,516.66	-299.33	-3.15%
6160.0 · LEGAL SERVICES	5,775.00	7,547.50	-1,772.50	-23.49%

	Sept 1 - Sept 30, 2022	Sept 1 - Sept 30, 2021	\$ Change	% Change
6170.0 · PROFESSIONAL SERVICES	0.00	0.00	0.00	0.0%
6180.0 · PROFESSIONAL DEVELOPMENT	495.00	504.00	-9.00	-1.79%
6199.0 · SALARIES AND WAGES	63,583.16	65,173.83	-1,590.67	-2.44%
6203.0 · TAXES & BENEFITS	12,607.56	5,564.21	7,043.35	126.58%
TOTAL EXPENSE	105,126.51	98,282.06	6,844.45	6.96%
NET INCOME	398,393.15	371,860.95	26,532.20	7.14%

3. Balance Sheet - Previous Year Comparison

As of September 30, 2022
(compared to September 30, 2021)

**BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT
BALANCE SHEET - PREVIOUS YEAR COMPARISON**

As of September 30, 2022

	September 30, 2022	September 30, 2021	\$ Change	% Change
ASSETS				
Current Assets				
Checking/Savings				
1000.0 · Cash in Bank-Checking Truist	84,559.20	49,310.05	35,249.15	71.49%
1010.0 · Cash in Bank - Payroll Truist	28,882.65	25,240.35	3,642.30	14.43%
1030.0 · TexPool Funds - General				
1030.1 · Aquifer Protection Reserve	53,750.00	52,050.00	1,700.00	3.27%
1030.21 · Cash Flow Reserve	175,000.00	175,000.00	0.00	0.0%
1030.0 · TexPool Funds - General - Operational	991,726.69	927,835.54	63,891.15	6.89%
Total 1030.0 · TexPool Funds - General	1,220,476.69	1,154,885.54	65,591.15	5.68%
1040.0 · TexPool Funds - Contingency	507,328.26	504,782.09	2,546.17	0.5%
1045.0 · TexPool Funds - Reserve (Vacation and Comp Payable)	64,885.37	61,061.65	3,823.72	6.26%
Total Checking/Savings	1,906,132.17	1,795,279.68	110,852.49	6.18%
Accounts Receivable				
1200.0 · Accounts Receivable				
1200.1 · A/R DMF (Drought Management Fees)	0.00	200.00	-200.00	-100.0%
1200.0 · Accounts Receivable - (billed invoices not yet received)	35,020.41	30,809.42	4,210.99	13.67%
Total 1200.0 · Accounts Receivable	35,020.41	31,009.42	4,010.99	12.94%
Total Accounts Receivable	35,020.41	31,009.42	4,010.99	12.94%
Other Current Assets				
1100.0 · Petty Cash	300.00	300.00	0.00	0.0%
1300.0 · Pre-paid Expenses	1,178.01	252.50	925.51	366.54%
1499.0 · Undeposited Funds-A/R payments (received, posted, not yet deposited)	26,170.95	0.00	26,170.95	100.0%
Total Other Current Assets	27,648.96	552.50	27,096.46	4,904.34%
Total Current Assets	1,968,801.54	1,826,841.60	141,959.94	7.77%

	September 30, 2022	September 30, 2021	\$ Change	% Change
Fixed Assets				
1400.0 · Field Equipment	376,487.89	376,487.89	0.00	0.0%
1410.0 · Office Equipment & Furniture	19,722.90	19,722.90	0.00	0.0%
1410.1 · Computer Hardware & Software	19,329.69	19,329.69	0.00	0.0%
1420.0 · Vehicles	52,363.03	52,363.03	0.00	0.0%
1430.0 · Accumulated Depreciation	-608,852.24	-608,852.24	0.00	0.0%
1440.0 · Land (Antioch Cave)	165,415.00	165,415.00	0.00	0.0%
1445.0 · Office Building	268,588.04	268,588.04	0.00	0.0%
Total Fixed Assets	293,054.31	293,054.31	0.00	0.0%
Other Assets				
1500.0 · Organizational Costs	300,783.26	300,783.26	0.00	0.0%
1510.0 · Accumulated Amortization	-326,324.26	-326,324.26	0.00	0.0%
1600.0 · Deposits Paid (Utilities)	71.00	71.00	0.00	0.0%
Total Other Assets	-25,470.00	-25,470.00	0.00	0.0%
TOTAL ASSETS	2,236,385.85	2,094,425.91	141,959.94	6.78%
LIABILITIES & EQUITY				
Liabilities				
Current Liabilities				
Credit Cards				
2007.0 · Truist VISA	1,919.41	2,205.44	-286.03	-12.97%
Total Credit Cards	1,919.41	2,205.44	-286.03	-12.97%
Other Current Liabilities				
2100.0 · Deferred Revenue	75,741.00	75,741.00	0.00	0.0%
2110.0 · Direct Deposit Liabilities	1,035.01	1,035.00	0.01	0.0%
2200.0 · Fica and Medicare Withheld	-11.31	35.52	-46.83	-131.84%
2220.0 · Federal Income Tax Withheld	-1,065.01	-1,035.01	-30.00	-2.9%
2230.0 · Employer Fica and Med Payable	-150.56	-103.73	-46.83	-45.15%
2250.0 · TWC Unemployment Tax Payable	6.36	12.46	-6.10	-48.96%
2270.0 · Payroll Liabilities	0.09	0.09	0.00	0.0%
2300.0 · Accrued Vacation Payable	54,443.38	53,318.93	1,124.45	2.11%
Total Other Current Liabilities	129,998.96	129,004.26	994.70	0.77%
Total Current Liabilities	131,918.37	131,209.70	708.67	0.54%
Total Liabilities	131,918.37	131,209.70	708.67	0.54%

	September 30, 2022	September 30, 2021	\$ Change	% Change
Equity				
3000.0 - Fund Balance	1,295,905.97	1,181,186.90	114,719.07	9.71%
3000.3 - Invested in Capital Assets	365,127.26	365,127.26	0.00	0.0%
3110.0 - Reserve for Petty Cash	300.00	300.00	0.00	0.0%
Net Income	398,393.15	371,860.95	26,532.20	7.14%
Total Equity	2,059,726.38	1,918,475.11	141,251.27	7.36%
TOTAL LIABILITIES & EQUITY	2,191,644.75	2,049,684.81	141,959.94	6.93%

4. Check Register

TRUIST BANK

September 1 – September 30, 2022

BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT
MONTHLY CHECK REGISTER

September 1, 2022 - September 30, 2022

Type	Date	Num	Name	Memo	Amount	Balance
Deposit	09/02/2022			Deposit (CoA/AWU 1st quarter payment, and City of Kyle Transport	357,781.50	49,108.78
Deposit	09/02/2022			Deposit - permittee production fee payments	6,347.37	406,890.28
Deposit	09/02/2022			Deposit - permittee production fee payments	65,380.71	413,237.65
Transfer	09/05/2022			Funds Transfer - funds too high in Truist Checking	-365,000.00	478,618.36
Check	09/06/2022	26446	Home Depot	Tools (pliers, hacksaw, wire stripper, etc) - AquSci Supplies	-222.10	113,618.36
Check	09/06/2022	26447	Waste Management	Dumpsters - Trash and Recycle 9/1 - 9/30/2022	-522.26	112,874.00
Check	09/06/2022	26448	Capital Area Council of Governments	2023 Annual Membership	-125.00	112,749.00
Check	09/06/2022	26449	Vintage IT Services	New IT Company - first invoice	-1,640.20	111,108.80
Check	09/06/2022	26450	Watson, Jeffery A.	TAGD Conference Hotel and Mileage Reimbursement JW	-465.56	110,643.24
Check	09/06/2022	26451	Jan-Pro of Austin	September Office Cleaning 9/1/2022 - 9/30/2022	-270.00	110,373.24
Check	09/06/2022	26452	Integriek	September Monthly IT Services with MS Office 365 - final invoice	-1,492.50	108,880.74
Check	09/06/2022	26453	Smith, Brian A.	TAGD Conference Mileage 228 miles at \$0.625/mi BS	-142.50	108,738.24
Liability Check	09/08/2022	EFT9082022	Reliance Trust Company	Employee Bi-weekly Retirement	-4,174.56	104,563.68
Check	09/08/2022	26454	Bell-Enders, Kendall	TAGD Conference Mileage Reimbursement 120 mi @ .625/mi	-75.00	104,488.68
Check	09/08/2022	26455	Bickerstaff	Legal General, and Election Matters	-1,981.00	102,507.68
Check	09/08/2022	26456	Charter Communications	September Internet Service 8/30 - 9/29/2022	-231.19	102,276.49
Check	09/08/2022	26457	Loftus, Timothy T.	TAGD Conference Hotel and Mileage TL	-492.40	101,784.09
Liability Check	09/09/2022	EFT9092022	United States Treasury	74-2488641 Employee Bi-weekly Payroll Liabilities	-8,558.97	93,225.12
Check	09/09/2022	26458	Orsak Landscape Services	8/30/2022 Lawn Service	-67.00	93,158.12
Check	09/09/2022	26459	Smith, Brian A.	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	93,008.12
Check	09/09/2022	26460	Wilson, Dana C.	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	92,858.12
Check	09/09/2022	26461	Watson, Jeffery A.	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	92,708.12
Check	09/09/2022	26462	Raymond, Tammy A.	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	92,558.12
Check	09/09/2022	26463	Loftus, Timothy T.	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	92,408.12
Check	09/09/2022	26464	Swanson, Erin Y.	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	92,258.12
Check	09/09/2022	26465	Marino, David S.	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	92,108.12
Check	09/09/2022	26466	Camp, Justin P.	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	91,958.12
Check	09/09/2022	26467	Bell-Enders, Kendall	4th Quarter Smartphone Reimbursement Jun/Jul/Aug	-150.00	91,808.12
Transfer	09/12/2022			Funds Transfer - Payroll	-22,000.00	69,808.12
Check	09/12/2022	26468	CIT Technology Fin Serv, Inc	September Copier Lease	-675.00	69,133.12
Check	09/13/2022	26469	Austin Alliance Group	HR Audit	-1,050.00	68,083.12

Type	Date	Num	Name	Memo	Amount	Balance
Deposit	09/13/2022			Deposit - permittee production fee payments	27,616.31	95,699.43
Check	09/15/2022	26470	Craig Smith	TAGD Conference Hotel Reimbursement	-346.34	95,353.09
Check	09/16/2022	26471	Ready Refresh	Bottled Water Delivery	-1.00	95,352.09
Check	09/16/2022	26472	Sam's Club	Bath Tissue/Paper Towels/Kleenex	-105.74	95,246.35
Check	09/16/2022	26473	Telco Experts	August VOIP Phone Communications	-459.62	94,786.73
Check	09/16/2022	26474	C.C. Lynch And Associates, Inc.	VOID: Aq Sci Troll 200 for FY 2022	0.00	94,786.73
Liability Check	09/20/2022	26475	United Healthcare	October Health Premium	-8,451.52	86,335.21
Liability Check	09/20/2022	26476	AFLAC	September Employee-paid Premium	-107.30	86,227.91
Check	09/20/2022	26477	Fidelity Security Life Insurance Co.	October Gap Insurance	-805.86	85,422.05
Check	09/20/2022	26478	City of Austin	Water Service 8/10/22 - 9/9/22	-20.69	85,401.36
Liability Check	09/20/2022	26479	Sun Life Assurance	October Dental/Life/Disability/Vision	-1,157.35	84,244.01
Check	09/20/2022	26480	Vintage IT Services	October Monthly IT Service (1st Invoice)	-1,640.20	82,603.81
Liability Check	09/22/2022	9222022	Reliance Trust Company	Employee Bi-weekly Retirement	-4,174.56	78,429.25
Liability Check	09/23/2022	9232022	United States Treasury	74-2488641 Employee Bi-weekly Liabilities	-8,559.05	69,870.20
Liability Check	09/23/2022	EFT92322	United States Treasury	74-2488641 Director Liabilities	-122.40	69,747.80
Check	09/23/2022	26481	U.S. Geological Survey	JFA 9/1/2020 - 8/31/2022 remainder of 7600	-850.00	68,897.80
Check	09/23/2022	26482	Texas Water Conservation Association	Conference Registration - TL	-495.00	68,402.80
Check	09/23/2022	26483	Paragon Printing and Mailing	Window #10 Envelopes with Logo	-979.90	67,422.90
Transfer	09/26/2022			Funds Transfer - Payroll	-22,000.00	45,422.90
Check	09/26/2022	26484	In-Situ Inc.	Level Troll 400 for FY 2022	-1,760.50	43,662.40
Check	09/27/2022	26485	CAD Supplies Specialty, Inc.	Annual Plotter Maintenance 10/22/2022 - 10/21/2023	-545.00	43,117.40
Check	09/27/2022	26486	Bickerstaff	General Matters and Elections 8/16/2022 - 9/15/2022	-5,343.00	37,774.40
Transfer	09/27/2022			Funds Transfer (to replenish low checking balance)	50,000.00	87,774.40
Check	09/30/2022	26487	In-Situ Inc.	Aqua Troll 200 for FY 2022	-2,094.75	85,679.65
Check	09/30/2022	26488	Wellintel Inc	Extreme Weather Battery and Sounder Cable	-243.00	85,436.65
Check	09/30/2022	26489	Hays County Clerk	Replenish Escrow Account #191 - to post public meetings	-50.00	85,386.65
Check	09/30/2022	26490	Travis County Clerk's Office	Replenish Escrow Account #98 - to post public meetings	-75.00	85,311.65
Check	09/30/2022	26491	In-Situ Inc.	Enterprise Cellular	-131.84	85,179.81
Check	09/30/2022	26492	Quill Corporation	Envelopes and Toners	-153.63	85,026.18
Check	09/30/2022	26493	Pedermates Electric Cooperative	Electricity 8/22/2022 - 9/21/2022	-466.98	84,559.20
					<u>35,450.42</u>	<u>84,559.20</u>



B. Sledge Direct: 512-579-3601
Fax: 512-579-3611
Email: bsledge@sledgelaw.com

September 13, 2022

Dr. Tim Loftus, PhD
General Manager
Barton Springs Edwards Aquifer Conservation District
1124 Regal Row
Austin, Texas 78748

Re: Amendment to Legislative Consulting Services Agreement (Internal Billing Code 0022-00)

Dear Dr. Loftus:

This purpose of this letter is to amend the contract initially executed on September 18, 2014, as amended by letter agreements dated May 28, 2015, April 5, 2016, June 6, 2016, August 11, 2017, August 9, 2018 and May 8, 2020 (“Engagement Agreement”), for the purpose of extending the term of the agreement. Except as specifically modified by this letter amendment, the terms and conditions of the Engagement Agreement remain the same. The term of the agreement is hereby modified to read as follows:

Term of the Agreement:

The term of the agreement will be for a period beginning September 1, 2022, and ending August 31, 2024, which will include the remainder of the legislative interim period of the 87th Texas Legislature, the Regular Session of the 88th Texas Legislature, the period of time for gubernatorial action on legislative measures passed during the Regular Session of the 88th Texas Legislature, and part of the legislative interim period of the 88th Texas Legislature. The term of the agreement may be extended by mutual agreement of the parties under a separate contract amendment.

Again, all other provisions of the Engagement Agreement, including without limitation the termination provisions, billing structure, and rates, remain the same. Using the extended term set forth in this amendment under the current billing structure, the flat fees during the term would be as follows: September through October, 2022: \$1000 per month; November 2022 through June 2023: \$4000 per month; and July 2023 through August 2024: \$1000 per month.

If this letter correctly reflects your understanding of the terms and conditions of our representation under this amendment to the Engagement Agreement, please execute this amendment in the space provided and return a copy to me.

We look forward to continue working with you and the other good folks at the BSEACD. Please contact me if you have any questions.

Very truly yours,

SLEDGELAW GROUP PLLC



By: _____

Brian L. Sledge

AGREED AND ACCEPTED
BARTON SPRINGS/EDWARDS
AQUIFER CONSERVATION DISTRICT

By: _____
Board President

Attest: _____
Board Secretary

APPROVED AS TO FORM:

William D. Dugat III
Attorney for Barton Springs / Edwards
Aquifer Conservation District

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 October Team Activities and On Deck for November/December

Aquifer Science Team

October Activities:

- Further calibration of the in-house model and consulting with GSI.
- A meeting with the Technical Advisory Committee (TAC) was held on October 5.
- Reviewing rainfall data and assessing potential entry to Stage 3 (Critical) Drought.
- Finalizing memo for Needmore Special Provisions Compliance Level 1.

On Deck:

- Continue running the in-house model with various drought scenarios and pumping scenarios.
- Incorporating comments from the TAC into the in-house model.
- Installing new pressure transducers and telemetry equipment in Trinity monitor wells.

Administration Team

October Activities:

- October monthly billings for the onset of new fiscal year (2nd billing cycle of FY 2023).
- Drought Management Fees to be assessed.
- End-of-year Closing Books, Files, Beginning-of-year Opening Books, etc. * Audit Processes.
- Quarterly Taxes.
- Annual Employee Health Insurance analysis and enrollment for November 1 start date..

On Deck: (November/October)

- Annual Financial Audit/Montemayor *Annual Payroll Audit/Dylong * HR Special Audit/Cooper.
- Retirement Plan – Pension Review Board Annual Reporting (after audit is completed).

Regulatory Compliance Team

October Activities:

- Staff continues to work on new applications and assisting permittees with drought compliance.
- Staff will continue to analyze monthly pumpage to confirm compliance of drought curtailments.
- Staff will finalize annual pumpage volumes, notify all overpumpers, and pursue any related enforcement.
- Ongoing: database/Intera/LRE; EP/landowner wells disposition; sustainable yield

On Deck:

- Staff will begin end of the fiscal year tasks (compilation of annual report sections, etc.).
- Ongoing TWCA and TAGD legislative committees.
- Ongoing sustainable yield data compilation, research, and ongoing internal discussions.
- City of Buda ASR pilot project – reviewing pilot project report.

Communications and Outreach Team

October Activities:

- Put out press release on Stage III Critical Drought/Put Signs Up in District Neighborhoods.
- Put out fall newsletter.
- Send out monthly drought update via icontact.
- Shoot new drought video with Brian Smith/Justin Camp.
- Groundwater to Gulf Prep Meeting with Katie Bedrich – Oct. 24, 2022.

On Deck

- Start thinking of field trip for legislative/political entities to educate folks on the District. Work with Hill Country Alliance
- Meet with Lane Cockrell (Southwestern Travis County GCD) on ways to collaborate.

**STATUS REPORT UPDATE
FOR THE OCTOBER 13, 2022 BOARD MEETING**

Summary of Significant Activities – Prepared by Staff Leads

Upcoming Dates of Interest

- Water, Texas Film Festival – Oct. 25 (Austin)
- Texan by Nature Conservation Summit – Nov. 2 (Dallas)
- Water for Texas – January 23-25 (Austin) – 2023
- Groundwater Management Districts Association Winter Conference – January 23-26 – (Simons Island, GA)
- TWGA Annual Convention – January 25-27 – San Marcos (2023)
- TAGD Winter Business Meeting – January 31-February 1 – Pflugerville (2023)
- The Sinkhole Conference – March 27-31 Tampa (2023)
- Government Social Media Conference – May 2-4 Reno (2023)
- TAGD Spring Business Meeting – June 6-7 Pflugerville (2023)

DROUGHT MANAGEMENT

Drought Status and Water-Level Monitoring (Justin)

We are currently in a status of Stage 2 Alarm Drought since it was officially declared at the June 9, 2022 Board meeting. However, we expect to cross the Stage 3 Critical Drought threshold in mid-October.

Widespread rain moved across Central Texas in late August. The highest totals occurred across the Austin/Travis County area (peak 4-5 inches) while Hays County saw a peak of 2.6 inches (Buda area). Despite the welcomed rain we are still in a status of Stage 2 Alarm Drought since it was officially declared at the June 9 Board meeting. Even with the average 2 inches of rainfall across the District, drought conditions in the Texas Hill Country continue to worsen. We have received an average of 14.8 inches - 7.2 inches behind annual average rainfall from January through August. In September, most of central Texas received less than an inch of rain. Edwards and Trinity aquifer levels began to decline in spring 2022 and continue to do so.

Several factors, including climate patterns in the tropical Pacific Ocean. ENSO (El Nino/Southern Oscillation, the whole La Niña and El Niño system) has the greatest influence on weather and climate during the Northern Hemisphere cold season. Climate scientists forecast that La Niña conditions (declared by NOAA on 10/14/21) are favored to continue through the summer and into the winter 2022. The continuation of La Niña means that we are predicted to receive below average rainfall and above average heat through the summer and into the winter.

May and June, which are historically the wettest months of the year in Central Texas, were both way below their historical monthly average (-2.8 & -2.7 respectively) while July and August have also received below-average rain amounts. In fact, May, June and July 2022 clocked in as the warmest on record for Austin. Because of this, both aquifer levels and spring flows are approaching historic lows.

On October 7, the Lovelady well had a level of 463.2 ft msl, about 15 ft below the trigger level for Stage 2 drought and only about 0.5 ft above Stage 3 Critical drought. Lovelady crossed under the Stage 2 trigger on May 26, 2022.

Also on October 7, Barton Springs was flowing at 24 cfs (10-day average), 14 cfs below the Stage 2 drought trigger point of 38 cfs. The Stage 3 trigger is 20 cfs. Barton Springs crossed under the Stage 2 Drought trigger in late June. The USGS and BSEACD staff continue to make discharge measurements to ensure accurate stage-discharge real-time reporting.

Aquifer science staff continue to closely monitor drought conditions in both the Edwards and Trinity Aquifers. Historic hydrograph data (Figure 1) show that the 2022 drought began with aquifer levels in some portions of the Trinity already approaching historic lows. If drought conditions worsen in coming months, levels could drop well below those historic lows. This has potential for widespread negative impacts to domestic and non-exempt wells, and reduction of Trinity spring flows in the Blanco River Basin. To monitor and study the impact of this ongoing drought on the groundwater system, the aquifer science team is working on the following tasks:

- Maintaining and expanding the District monitoring well network
- Updating our website monitoring well map to allow well owners and other members of the public to view real-time water level data at various locations throughout the District
- Collecting flow measurements at key springs discharging from the Edwards and Trinity
- Analyzing of historic hydrograph and drought data
- Monitoring potentiometric water levels to generate a water level surface of the Trinity during drought conditions

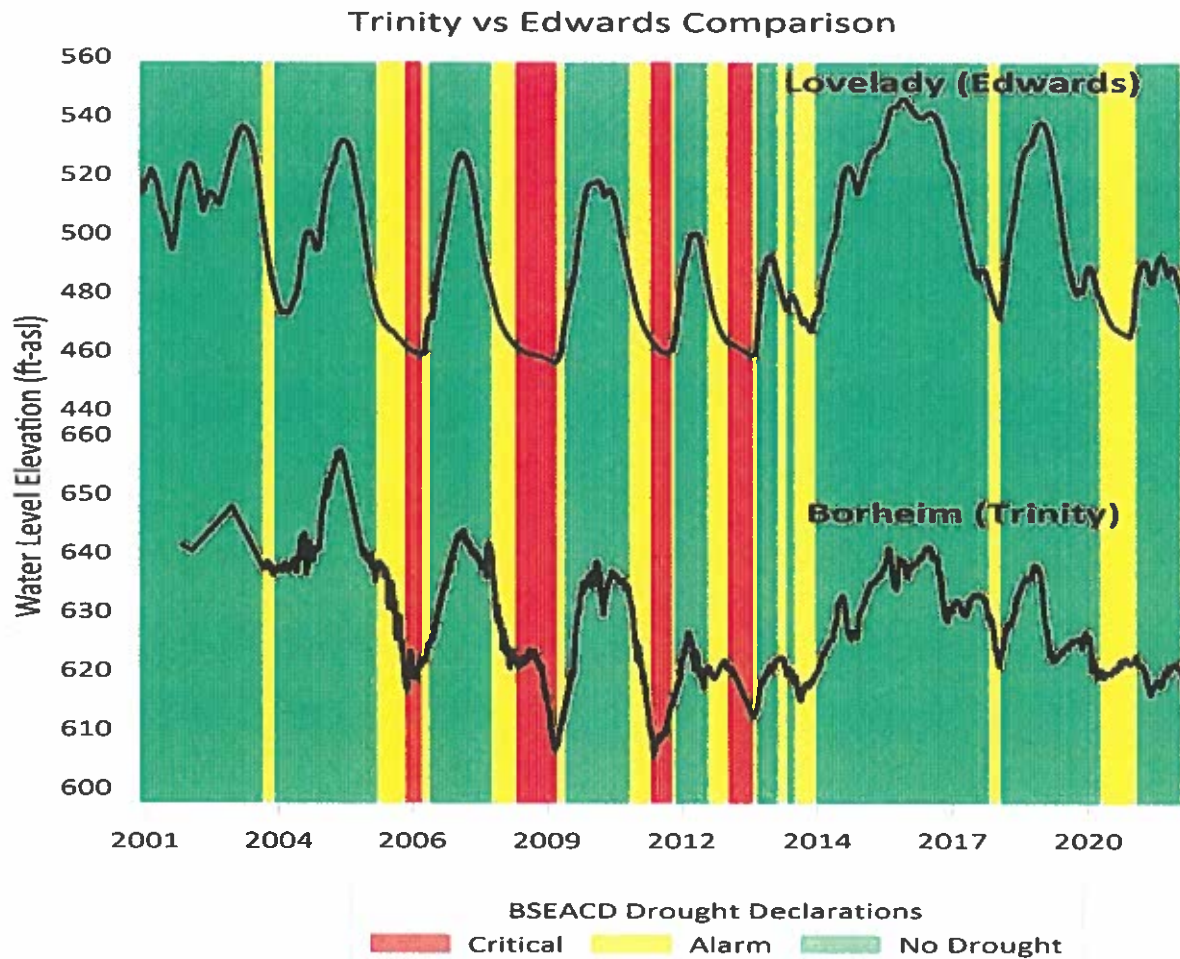


Figure 1. Trinity and Edwards comparison with drought declaration history.

Drought Communication (David, Erin)

Critical Drought (Stage III) Prep: As the District inches closer to Critical Drought, Communications and Outreach is getting Stage III materials ready. Graphics for the website and social media are done. Flyers and mail inserts have been printed. Press release will go out on October 13, 2022 *if* the board declares Critical Drought and yard signs will be put out the week of Oct. 17.

Monthly Drought Update: Communications and Outreach is putting out a monthly drought alert via icontract. It is also shared on the District's social media channels and website.

Drought Update – Sept. 19, 2022

<https://bit.ly/3SFXwWn>

Alarm Drought (Stage II) Signage:

No new signs were put out in September.

The signs below were put out in August.

Wildwood Neighborhood – Austin - 1 Sign

Byron Townsend – 3 Signs

Byron covers Cimarron Park, Slaughter Creek Acres, and Village San Leanna

The signs below were put out in June and July.

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San Marcos

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PGMS – 7 signs

City of Mountain City – 4 signs

Sunfield Neighborhood in Buda – 4 signs

St. Marks Episcopal Church – 3 signs

Buda/Kyle Church of Christ – 3 signs

DISTRICT PROJECTS

GMA Joint Planning

➤ ***GMA 10 Coordination (Tim)***

The GMA 10 meeting tentatively set for Oct. 17 has been postponed until details related to the pending RFQ release are worked out. Staff will work with the Interim GMA 10 Coordinator to complete the RFQ as much as possible and prior to involving the rest of the GMA 10 members. Staff should learn by month's end when the next meeting is set to occur at which point a dates will be set to release the RFQ and for a deadline for responses, and choosing a new GMA 10 Coordinator.

Trinity Aquifer Sustainable Yield Study & Planning

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

The GM and staff are beginning to research and compile policy concepts related to sustainable yield and unreasonable impacts. Staff is planning to bring high level concepts to the Board in November.

Staff has met with a facilitator Kimberley Horndeski with Community Consulting LLC multiple times throughout 2021 to discuss planning aspects of bringing together an Advisory Work Group. The Advisory Work Group would be made up of water professional that would help advise the District on policy aspects of our sustainable yield study. However, we are waiting to meet with the facilitator again until we have a better understanding of how we plan to work through the unreasonable impact factors and what data and information are needed to assess the factors.

Technical Evaluations (Brian, Jeff)

Aquifer Science staff continue to collect data on the geology and hydrogeology related to the Trinity Aquifers. We are evaluating water-level data for a number of Trinity wells to look for long-term trends. We worked with Hays County and Wimberley Valley Watershed Association to install two Trinity monitor wells in the Jacob's Well area. Work on the first two phases of the District's own numerical modeling has been completed. These phases involved the development of a steady-state model that was then converted into a transient model. The transient model will allow for simulation of different pumping and drought scenarios over time. Several different pumping scenarios have been run and a draft report has been completed. Our next step with the model is to run different drought scenarios, including drought of record. We have hired a consulting firm, GSI, to assist us with the model. We are members of a technical committee to guide the development of a numerical groundwater model (BRAAT or BRATWURST) 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. A meeting of the technical committee was held on August 22, 2022. A meeting with the District's Technical Advisory Committee (TAC) for the In-house Model (IHM) was held on October 5. The committee consists of 12 professionals with knowledge of the hydrogeology of central Texas and of numerical groundwater models. A one-hour presentation

was made to the TAC followed by a one-hour discussion. This committee will also provide written comments of model construction and the results of various modeling scenarios.

Habitat Conservation Plan (Brian)

- **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. The Watershed Protection Department has offered to install monitoring equipment in Barton Springs Pool to measure dissolved oxygen as the springs experience wet to drought conditions. Deployment of this equipment will take place after the monitor well is installed. We plan to apply for a grant from the City of Austin this fall to pay for the installation of a monitor well in Zilker Park. 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 - Intera Inc (Tim/Kendall)

With the database project with Intera having reached a resolution and official contract end, staff looks forward to beginning a new project with LRE Water once the Board moves on the GM's recommendation to approve a new contract for a database with LRE Water.

ILA Commitments (Brian)

The District had ILA commitments with Hays County and HTGCD to install two monitor wells in the Jacob's Well Area. Installation of these wells was completed in April 2022. Information from these wells will be used to better understand the flow system that delivers Middle Trinity groundwater to Jacob's Well, and to develop our numerical groundwater models. Both ILAs expired on August 31, 2022 and a preliminary report was delivered to Hays County and HTGCD. Tim Loftus and Brian Smith with Hays County representatives on September 19 to discuss the ILA status and future collaborations.

The ILA with COA is intended 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 BSEACD and COA in December each year to discuss each organization's activities related to their respective HCPs. The COA and BSEACD plan to have additional discussions in the fall of 2022 to coordinate the details of the DO studies and the monitor well installation near Barton Springs.

Region K Planning Activities (Tim)

The next meeting is scheduled for October 26th.

Strategic Planning Implementation (Tim):

This project is currently on hold as other projects are being prioritized.

Training, Presentations, and Conferences (All Teams):

- Aquifer Science: 17th Sinkhole Conference, Tampa, Florida, March 27-31, 2023
- Regulatory Compliance: N/A
- Administration: N/A
- Communications and Outreach: N/A
- General Manager: N/A

New Maps, Publications, or Reports:

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

LITIGATION AND LEGISLATION

Litigation and SOAH Activities (Kendall)

There is no activity to report.

RULEMAKING, PERMITTING, AND ENFORCEMENT

Rulemaking (Erin, Kendall)

Staff has had discussion internally and with legal counsel regarding the Enforcement plan, including drought enforcement. Other areas that are being discussed are notice language and change of ownership timelines. However, the enforcement plan analysis and any rule changes are on a temporary hold so staff can prioritize work on sustainable yield concepts and other preparations that have been suggested by our attorney.

Drought (Erin)

- Preparation for potential upcoming Stage 3 Critical declaration including draft of notification letter.
- 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 II drought curtailments.

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 – Bliss Spillar (Edwards)	Edwards	PWS	Overpumped annual permitted volume; staff to send NOV.
PCSI	Edwards	Irrigation	Overpumped annual permitted volume; staff to send NOV.

Permitting Activity (Erin, Alyssa)

<i>Upcoming</i>				
<i>Application Type</i>	<i>Aquifer</i>	<i>Applicant Name</i>	<i>Use Type</i>	<i>Volume Request</i>
LPP	Middle Trinity	Van Zyl, Jean	Domestic	500,000
Exempt – Domestic	Middle Trinity	Cavanaugh, Mandy	Domestic	7GPM – Exempt
<i>In Review</i>				
<i>Application Type</i>	<i>Aquifer</i>	<i>Applicant Name</i>	<i>Use Type</i>	<i>Volume Request</i>
IPP - >2 MIL	Middle Trinity	DC Southfork/Creedmoor	PWS	195,000,000
IPP	Middle Trinity	Stinson, James	Commercial/PWS	TDB
IPP	Lower Trinity	Stinson, James	Commercial/PWS	TBD
Plugging	Edwards	Whittington, Keith	Plug	0 - Plugging
Exempt – Domestic	Middle Trinity	Tucker, Matthew	Domestic	7GPM – Exempt
Exempt – Domestic	TBD	Zimitz, Diedre	Domestic	7GPM - Exempt
LPP	Edwards/UT	Melchor, Jose Luis	Domestic	500,000
IPP < 2 MIL	Middle Trinity	Collins, Phil	Commercial	1,950,000

Recently Approved

<i>Application Type</i>	<i>Aquifer</i>	<i>Applicant Name</i>	<i>Use Type</i>	<i>Volume Request</i>
LPP	Upper Trinity	Carracedo, Luci	Domestic	500,000
LPP	Upper Trinity	Alexander, Jan Davis	Domestic	500,000

AQUIFER STUDIES

(Brian)

Permitting Hydrogeologic Studies:

- Working with Regulatory Compliance on permitting issues as needed.

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

- Coleman's Canyon- Hydraulic conductivity testing was conducted at the Coleman's Canyon multiport well in July. We are continuing to collect water-level data from the multiport well every month to 6 weeks.
- Remaining TWDB water-quality sampling with isotopes was completed in July.
- There are no dye-trace studies planned at this time because of minimum to no flow in streams and springs.

Field Activities:

- Fence reconnection at Jacobs Well Natural Area monitor well has been completed.
- 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.
- Updating telemetry monitoring equipment at the Needmore index well (Amos). Reviewing pumping and water-level data for the Special Provisions Compliance Level 1 memo.
- Antioch- Continuing to maintain the system and to collect data on flow into the vault (when there is flow).
- Well monitoring- Because of drought, we are increasing the amount of time maintaining equipment in numerous monitor wells and downloading and interpreting data.

Trinity Aquifer Modeling Development:

- BRAAT (BRATWURST) 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.
- In-house model: The model has been calibrated and we have run the model to evaluate different drought and pumping scenarios. A draft report on the model was completed in May 2022 and a presentation was made to the Board. A meeting with the Technical Advisory Committee was held on October 5. Another presentation will be made to the Board on October 13.

COMMUNICATIONS AND OUTREACH
(David Marino)
September 2022

Website: During the month of September, a number of items were added to the spotlights page, including: Next Board Meeting/Public Hearing – October 13, 2022, Drought Update – Sept. 29, 2022, Barton Springs and Lovelady Level Check – Sept. 26, 2022, Next Board Meeting: Oct. 13, 2022, Aquifer District Cancels November General and Special Elections, Barton Springs and Lovelady Level Check – Sept. 13, 2022, Next Board Meeting: Sept. 15, 2022, Barton Springs and Lovelady Level Check – Sept. 8, 2022, All About Drought *BSEACD Newsroom* page was also updated with latest press releases, upcoming meetings, videos, etc. <https://bseacd.org/publications/bseacd-newsroom/>. The two USGS graphics on the drought status page are now larger.

Website Analytics 2022		Top Page Searches			
Month	Total Page Views	Unique Page Views	July	August	September
May	3,920	3,159	Homepage 568 Views	Homepage 752 Views	Homepage 547 Views
June	5,145	4,211	Drought Information 397 Views	Aquifer Science Drought Status 364 Views	Drought Information 216 Views
July	4,327	3,891	Drought Education 279	Publications/Maps 167 Views	Water Conservation 187 Views
August	4,731	4,184	Drought Status 269 Views	Drought Information 143 Views	Drought Status 154 Views
September	3,375	3,039	Newsletters/Sign-up 157 Views	About the Aquifers 128 Views	Newsletters 154 Views

New District Swag (Materials to give away at events): Communications and Outreach ordered rain gauges and drawstring sportspacks with the District’s logo on them to be handed out at future events. We ordered 150 sportspacks and 250 rain gauges. See pictures below.



Barton Springs University Day at Barton Springs Pool: Save Our Springs Alliance held Barton Springs University for the first time since the pandemic started. District staff, including Regulatory Compliance Manager Erin Swanson, Hydrogeology Technician Justin Camp, Regulatory Compliance Specialist Alyssa Gilbert, and Principal Hydrogeologist Brian Smith attended the event. Communications and Outreach set up a table and Aquifer Science did a conductivity exercise with students. Barton Springs University Day is designed primarily for high school students and the general public. See photos below from event.



Critical Drought (Stage III) Prep: As the District inches closer to Critical Drought, Communications and Outreach is getting Stage III materials ready. Graphics for the website and social media are done. Flyers and mail inserts have been printed. Press release will go out on October 13, 2022 *if* the board declares Critical Drought and yard signs will be put out the week of Oct. 17.

October Newsletter: Communications and Outreach is currently putting together the newsletter for October 2022. A draft will be sent to General Manager and staff before the final version goes out to the public. It will contain information about the drought, along with various videos and other updates.

New Handouts/Brochures: The new drought handout “All About Drought” went out to the public earlier in the month. It will be included in the October newsletter. The link to the document is provided below.

All About Drought: <https://bseacd.org/uploads/All-About-Drought.pdf>

Drought Information Website Page: Throughout the month of September the drought information has been updated with the latest graphs and drought information. <https://bseacd.org/regulatory/droughtinformation/>.

Monthly Drought Update: Communications and Outreach is putting out a monthly drought alert via icontract. It is also shared on the District’s social media channels and website.

Drought Update – Sept. 19, 2022

<https://bit.ly/3SFXwWn>

Alarm Drought (Stage II) Signage:

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PGMS – 7 signs

City of Mountain City – 4 signs

Sunfield Neighborhood in Buda – 4 signs

St. Marks Episcopal Church – 3 signs

Buda/Kyle Church of Christ – 3 signs

Ethics Policy Review: Communications and Outreach, General Manager Tim Loftus, and the District’s HR consultant, Austin Alliance Group, have been reviewing ethics policies and evaluating what may need to be updated. Ultimately, any changes would go before the board.

Regional Water Quality Planning Group Meeting: Communications and Outreach is now coordinating and setting up these meetings. The next meeting is scheduled for Friday, October 28. The meeting for this month was held on September 23.

TAGD Media Relations Cheat Sheet: Communications and Outreach Manager is on TAGD’s Information & Education Committee. We are assisting TAGD in creating a communications toolkit for groundwater districts. This document will serve as a guide for employees in Texas groundwater districts and how to oversee communications for a variety of platforms and it also addresses how to communicate during specific situations. Communications and Outreach Manager finished the Media Relations Cheat Sheet as part of the plan. It is now under review.

Media Articles:

Aquifer District Elections Canceled – Austin Monitor

<https://www.austinmonitor.com/stories/whispers/aquifer-district-elections-canceled/>

Videos:

Groundwater Sampling Helps us Better Understand Edwards Trinity Aquifers

<https://www.youtube.com/watch?v=RI7eJP7z0mU>

Drought Update – Sept. 22, 2022

<https://www.youtube.com/watch?v=FfGXv474T-U>

Barton Springs University

<https://www.youtube.com/watch?v=rrSZ3gIcHNc&t=26s>

Social Media (Twitter, Facebook, Instagram, Nextdoor): Drought Update – Sept. 29, 2022, TWDB Water Weekly Report – Sept. 28, 2022, Barton Springs and Lovelady Level Check – Sept. 26, 2022, Regulatory Compliance Specialist Alyssa Gilbert Out in the Field, Drought Video Update – Sept. 22, 2022, First Day of Fall, More Photos from Barton Springs University, Barton Springs University Video, Barton Springs University Live, Barton Springs University photos, Water Weekly Report – Sept. 19, 2022, Pollution Awareness Week, Aquifer District Cancels November General and Special Elections, TWDB Groundwater Sampling Video, Throwback Thursday – Edwards Aquifer Recharge Video, Board Meeting Reminder – Sept. 15, Barton Springs University Preview, Science in 60 Seconds: Streamflow Measurement Video, Barton Springs and Lovelady Level Check – Sept. 13, 2022, Next Board Meeting, Regulatory Compliance Manager Erin Swanson and Hydrogeologist Technician Justin Camp on Well Inspection Visit, Throwback Thursday – Barton Springs Pool Photo, Barton Springs and Lovelady Level Check – September 8, 2022, Rain at District Office Photo, Protect Your Groundwater Day, National Weather Service Forecast, Water Weekly Report – Sept. 5, 2022, All About Drought Handout, TAGD Summit Photo of Board President Blayne Stansberry on Panel

BSEACD Monthly Social Media Roundup/Groundwater News

Social Media Roundup (September 2022):

<https://bseacd.org/uploads/BSEACD-Social-Media-Roundup-September-2022.pdf>

Monthly Groundwater News/Dates of Interest (September 2022):

<https://bseacd.org/uploads/BSEACD-Monthly-Groundwater-News-Dates-of-Interest-September-2022.pdf>

The top performing post on Facebook for the month of September was “Throwback Thursday Picture of Barton Springs” on Sept. 8. It reached 234 people. The top tweet on Twitter for the month of September was “Drought Update – Sept. 29, 2022”. It had 839 impressions and 8 engagements. The top performing video on YouTube for September was “Barton Springs University” with 17 views. The top performing post on Nextdoor for September was “All About Drought?” handout. It had 9,040 Impressions.

GENERAL ADMINISTRATION
(September 9, 2022 – October 6, 2022)

Accounts Receivable/Permittee Cycle Billings

On September 16, October monthly billings went out for a total of \$ 20,360.

On October 16, November monthly billings will go out for a total of \$20,360.

Annual Financial Audit – Began on October 3, 2022

The annual financial audit has begun and will last through the end of the audit process in December when the report is presented to the Board by the auditor.

Drought Management Fees (DMFs)

Tracking monthly DMFs begins in October (for September pumpage), two full months after drought is called, as specified in our Rules.

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 2022 should be posted on the District website.

Tax Reporting

Preparing 3rd quarter payroll taxes (TWC C-3, IRS 940)

Miscellaneous

2023 late payment assessments, TMLIRP (Texas Municipal League Intergovernmental Risk Pool) Payroll Change Adjustment form for Workers’ Comp Insurance renewal, renews with TMLIRP Auto, Property, General Liability, and Errors and Omissions Insurance; bill City of Buda ASR injections (\$1,588); Quickbooks budget entry, Management Plan formatting.

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

Public Hearing

The Board will hold a Public Hearing on the proposed District Management Plan that has been updated to incorporate new planning data, address statutory requirements, and include goals and objectives that support the District's mission and commitment to sound management of all aquifers within the District.

Item 6

Staff Presentation

Aquifer Science Team presentation titled, “In-House Trinity Model Results: Update” to be followed by discussion.

Item 7

Board Discussions and Possible Action

- a. Discussion and possible action related adoption of the proposed Management Plan by Resolution #101322-01.**

STATE OF TEXAS §
COUNTIES OF HAYS, TRAVIS §
AND CALDWELL §

RESOLUTION# 101322-01

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
BARTON SPRINGS/ EDWARDS AQUIFER CONSERVATION
DISTRICT AUTHORIZING ADOPTION OF THE
DISTRICT MANAGEMENT PLAN**

WHEREAS, the proposed Management Plan of the Barton Springs/Edwards Aquifer Conservation District (District), attached hereto as Attachment A, has been developed for the purpose of serving the District's mission, statutory purpose, and commitment to conserving, preserving, protecting, recharging, and prevention of waste of groundwater and of all aquifers within the District.

WHEREAS, this action to adopt the proposed Management Plan is taken under the District's statutory authority pursuant to Texas Water Code, Chapter 36 and Special District Local Laws, Chapter 8802;

WHEREAS, the proposed Management Plan meets the requirements of Texas Water Code § 36.1071 and § 36.1072 and 31 TAC § 356.52;

WHEREAS, the proposed Management Plan was submitted to the Texas Water Development Board (TWDB) for pre-review and has been revised to comport with the pre-review comments provided by TWDB staff;

WHEREAS, the proposed Management Plan was the subject of a public hearing before the Board of Directors of the District on October 13, 2022; and

WHEREAS, under no circumstances and in no particular case, will the proposed Management Plan, or any part of it, be construed as a limitation or restriction upon the exercise of any discretion where such exists; nor will it in any event be construed to deprive the Board of an exercise of powers, duties and jurisdiction conferred by law, nor to limit or restrict the amount and character of data or information which may be required for the proper administration of the law:

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Barton Springs/Edwards Aquifer Conservation District that:

- 1) The "Management Plan of the Barton Springs/Edward Aquifer Conservation District" attached hereto as Attachment A is hereby adopted;
- 2) This Management Plan will take effect upon approval by the TWDB. It will remain in effect as provided under Texas Water Code § 36.1072(e).

AND IT IS SO ORDERED.

In favor _____ Opposed _____

PASSED AND APPROVED THIS 13TH DAY OF OCTOBER, 2022

Blayne Stansberry, President

ATTEST:

Christy Williams, Secretary

Item 7

Board Discussions and Possible Actions

b. Discussion and possible action related to the declaration of a change to a more severe drought stage, from Stage II-Alarm drought to Stage III-Critical drought.

Item 7

Board Discussions and Possible Actions

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

Item 7

Board Discussions and Possible Actions

d. Discussion and possible action related to the overpumpage of authorized annual permitted volume by District permittees Aqua Texas Bliss Spillar and Professional Contract Services, Inc. including the assessment of penalties and 30-day notice of payment of penalties.

*** MEMORANDUM ***

Date: October 13, 2022
To: District Board of Directors
From: Erin Swanson, Regulatory Compliance Manager
Subject: Staff enforcement recommendations for Aqua Texas Bliss Spillar (Aqua)

Background:

The District's enforcement plan provides for monthly review of permittee production numbers to ensure compliance of the permittee's annual allotment volume at the end of each fiscal year. Aqua Texas' Historic Edwards permit falls under Tier 2 because it is permitted for 12,875,000 gallons per year. Aqua pumped 16,947,999 gallons in FY22, 31.63% over its annual permitted volume.

Under the District's enforcement plan Appendix A, Section 2.5, a permittee will be issued enforcement points and any permittee with an enforcement calculation total over 11 points will be issued a NOV by the General Manager.

In determining an enforcement action, the General Manager will sum the total enforcement points and any permittee with an enforcement calculation total over 11 points will result in the General Manager issuing a NOV and pursuing enforcement. Additionally, the matter will be referred to the Board for action and assessment of penalties. Enforcement Points	
10	Magnitude of violation: Permittee overpumpage greater than 15%
10	Compliance history: permittee had an overpumpage compliance issue or violation in previous 5 years (2 points for each violation in previous 5 years)
5	Good faith effort: Permittee did not correct and overpumped for more than 90 days and/or did not timely respond to District request
1	Permittee Communication: Permittee did not notify the District of an issue
1	Drought: overpumpage occurred during a District declared drought

Pursuant to Appendix A, section 2.5 of the District's Enforcement Plan the staff determined a total of 27 points, due to: magnitude of violation (10 points); compliance history; (2 points) lack of good faith effort; (5 points) permittee communication; (1 point) and, drought (1 point) Aqua was given a Notice of Offense for 100% Permit Usage on 9/15/2022.

After District staff determined that Aqua received a total of 27 enforcement points, a Notice of Violation was sent via e-mail and certified letter on 10/7/2022.

Violations:

District records indicate a minimum of approximately eighty-nine (89) alleged daily violations of **District Rule §3-8.5** for exceeding the annual authorized volume. Daily violations related to rule §3-8.5 were calculated only for the days beginning June 3, 2022, which is the date of the meter reading received by staff providing evidence that the Aqua Texas Bliss Spillar allotted annual volume had been exceeded.

Base Penalties:

Under Section 4.2 of the District’s adopted Enforcement Plan, the level of enforcement and amount of penalties assessed shall be determined considering the following factors:

- (1) The severity or seriousness of the violation;
- (2) Whether the violation was willful, intentional, or could have been reasonably anticipated and avoided;
- (3) Whether the violator acted in good faith to avoid or mitigate the violation, or to correct the violation after it became apparent and compensate those affected;
- (4) Whether similar violations have been committed in the past;
- (5) The amount necessary to deter future violations;
- (6) Any other matter that justice may require;

Penalties were determined from the ranges specified in District Enforcement Plan rules and guidelines for violations and penalty assessments. The penalties range from \$50 - \$1000 daily for violations of Rule §3-8.5 and staff calculated daily penalties from June 3, 2022 (date that District received meter reading the provided evidence of the allotted annual volume had been exceeded) through August 31, 2022. Penalties are based on severity options within the specified ranges. Provided below is the range used to calculate the penalty that the staff will recommend for Board consideration.

Rule Violation	Daily Penalties			TOTAL
	TIER	DAYS OF OVERPUMPAGE	≥25% and <50%	
§3-8.5	2 (≥12 and <25 mg/y)	89	\$150	\$11,550

In accordance with Section 4.3 of the District’s adopted Enforcement Plan, the amount of the penalties assessed may be waived by the Board following assessment of the following factors:

- (7) Compliance History (maximum 30%)
- (8) Culpability (maximum 30%)
- (9) Good Faith Effort to Comply (maximum 40%)
- (10) Voluntary Resolution Conditions or Approved Projects

In consideration of all factors staff did not adjust the penalty amount of \$11,550. The penalty adjustments were not warranted given the duration of the violations and the lack of communication and follow through after the permittee was notified of its overpumpage.

Staff Recommendation:

Section 2.6 of the District’s adopted Enforcement Plan provides that should the GM issue an NOV, the matter will be set on the Board’s regular meeting agenda for possible Board action. Staff shall prepare the appropriate materials to be provided with the backup for the board meeting to include the relevant information and

GM's recommendations on any penalty adjustments and/or conditions. Penalties recommended by the GM shall be determined in accordance with Section 4 Violations and Penalty Assessment Guidelines. The GM could recommend a reduced penalty associated based on penalty adjustments outlined in Section 4.3. The permittee shall then be sent a 30-day notice to pay the penalties. If the permittee is non-responsive or refuses to pay the GM shall exceed with a show cause hearing as outlined in Section 3.5.

Accordingly, Staff recommends assessing the full penalty amount of \$11,550 for the exceeded annual overpumpage of the Aqua Texas Bliss Spillar – Edwards permit and that the permittee be sent a 30-day notice to pay the penalties.

Enforcement Plan Excerpts

Appendix A

Overpumpage of Annual Production Permit Production and Enforcement Process

1.0 Enforcement Strategy

The District's approach to a permittee's annual production permit exceedance is described here and is consistent with District Rule 3-8.5 and 3-8.8. This procedure describes the appropriate implementation mechanisms, permittee notification efforts, and permittee performance monitoring and assessment requirements. The compliance and enforcement efforts specified below, elaborate on District Rule 3-8.5 and 3-8.8 with a focus on assessment of permittee performance on a monthly and annual basis which is used to identify the level of non-compliance.

2.0 Implementation Mechanisms and Enforcement Procedures

The protocols and procedures for notifications relating to permittee overpumpage are depicted in Figure 2. *Enforcement Procedures and Process for Annual Overpumpage Violations.*

2.1 Meter Readings/Unusual High Monthly Production

Meter readings shall be submitted monthly to the District and recorded by the Administration team into the pumpage database for review. Once reviewed, any unusual high monthly usage will prompt a courtesy email and a courtesy phone call from the staff.

2.2 Alert Notice for 80% of Permit Usage

- • Once a permittee's allotted production permit meets or exceeds 80% of the allotted production amount staff shall send the permittee a written notice. This notice will serve as notification to the Permittee that the Permittee has reached 80% of the annual production amount and that the user should be cautious of future pumping that may cause them to exceed their annual authorized production volume.
 - This letter will be the first step of documentation for potential enforcement actions.
- A notice does not have to be sent to a permittee if the permittee does not show a trend of potentially exceeding the total annual authorized production volume by the end of the fiscal year.

2.3 Notice of Offence for 100% of Permit Usage /Notice of Offense

• Notice of Offense letters will only be issued and provided to Permittees if the staff has documented that the permittee has exceeded annual authorized production volume before the end of the fiscal year.

- If the staff determines that a permittee has met or exceeded its total annual production amount prior the end of the fiscal year, the Administration team will notify the Regulatory Compliance team.
- The staff will then send a Notice of Offense letter via certified mail and email to the Permittee.
 - This notice will serve as notification to the permittee that they have met or exceeded their total annual production amount and that the excess production amounts may result in an assessment of overpumpage penalties.
 - This notice will also make it the responsibility of the permittee to correspond with staff to discuss reasons as to why over pumping is occurring and how to monitor the over pumping during remaining fiscal year.

2.4 Determination of Overpumpage Violation by General Manager

- Once the fiscal year has ended, a determination of an occurrence of a violation will be made by the General Manager and will be based on an evaluation of the enforcement assessment criteria in Section 4.2 of this plan. In determining the appropriate level of enforcement and whether or not to issue a NOV, the General Manager will consider the criteria outlined in Section 2.5.

2.5 Criteria for Determining a NOV and Enforcement

In determining an enforcement action, the General Manager will sum the total enforcement points and any permittee with an enforcement calculation total over 11 points will result in the General Manager issuing a NOV and pursuing enforcement. Additionally, the matter will be referred to the Board for action and assessment of penalties. Enforcement Points	
10	Magnitude of violation: Permittee overpumpage greater than 15%
10	Compliance history: permittee had an overpumpage compliance issue or violation in previous 5 years (2 points for each violation in previous 5 years)
5	Good faith effort: Permittee did not correct and overpumped for more than 90 days and/or did not timely respond to District request
1	Permittee Communication: Permittee did not notify the District of an issue
1	Drought: overpumpage occurred during a District declared drought

2.6 Penalty Methodology:

- Permittees that are issued an NOV will be assessed penalties based on permitted volume and percentage over pumped in accordance with Section 4.1.5. and the matter will be sent to the Board for action on the penalty amount. These penalties will be assessed in addition to the excess base fee as described in the fee schedule. Permittees that are not issued an NOV will only be assessed excess base fee in accordance with the fee schedule.
- In determining penalty amounts, the District will review monthly production reports to determine when actual production volume exceeds authorized volume. After the District determines that a permittee's actual production for any month, except August, exceeds annual permitted volumes, each day of additional production after the month that permit volume is

exceeded is considered overpumpage and a separate violation subject to the penalties in the table 1 and enforcement mechanisms available to the District.

For the month of August, if the permittee exceeds the authorized annual permitted amount to be withdrawn under the Production Permit, based on the August meter reading, the permittee's production for the month of August will be divided by the number of days in August to find a daily average equivalent production volume. The daily equivalent production volume will then be added incrementally to each day in August in order to determine which day in August that production exceeded the authorized permitted volume.

- Once a permittee is found to have exceeded the annual production amount, and be in violation, the permittee will issued an NOV and be notified by certified mail and email of the following:
 - The District has documented a permit violation for over pumping;
 - The amount over pumped; and
 - The amount of daily penalties that may be assessed for each day of over pumping as determined using the tables and methodology above.
- Should the GM issue an NOV, the matter will be set on the Board's regular meeting agenda for possible Board action. Staff shall prepare the appropriate materials to be provided with the backup for the board meeting to include the relevant information and GM's recommendations on any penalty adjustments and/or conditions.

Penalties recommended by the GM shall be determined in accordance with Section 4 *Violations and Penalty Assessment Guidelines*. The GM could recommend a reduced penalty associated based on penalty adjustments outlined in Section 4.3.

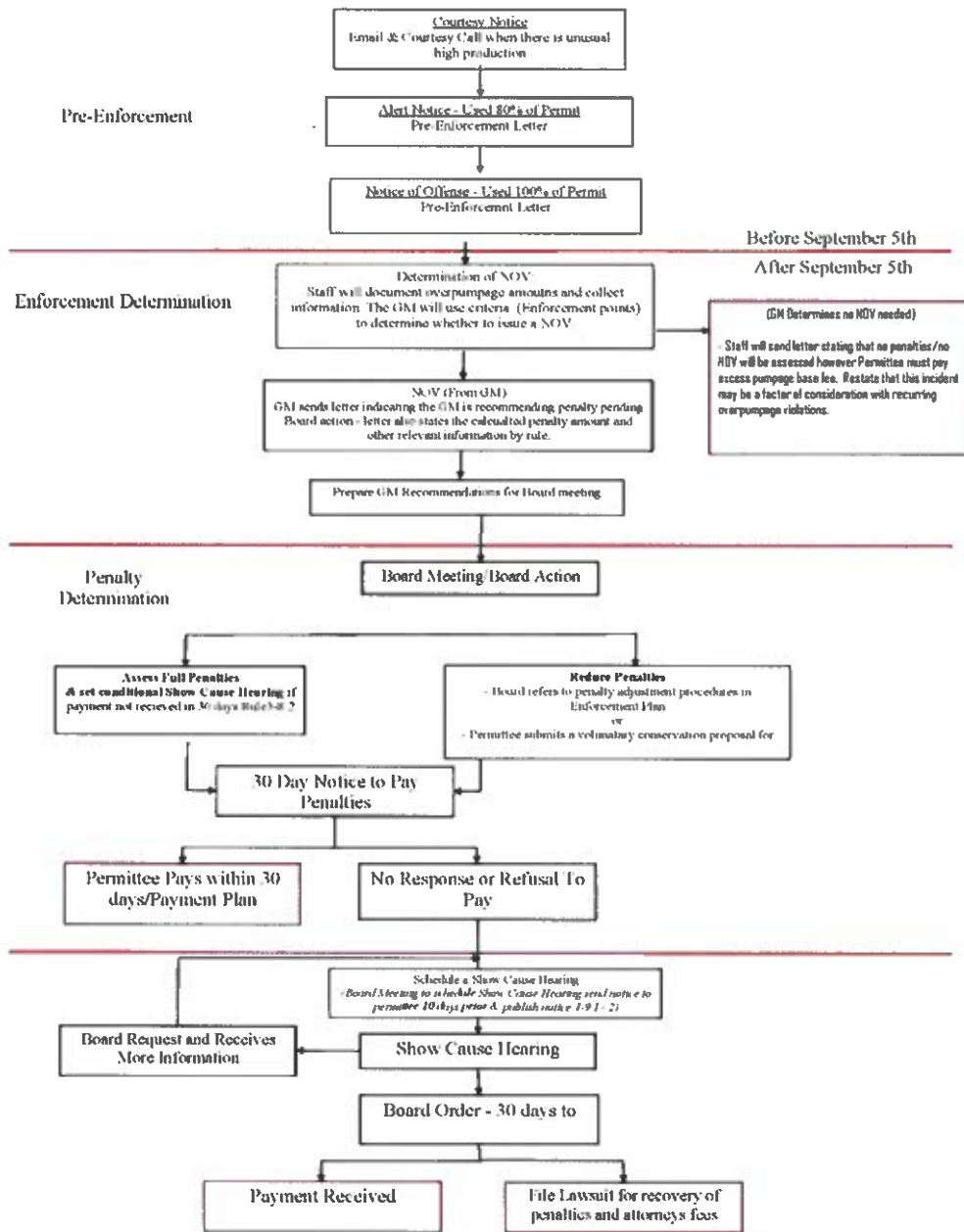
- The permittee shall then be sent a 30-day notice to pay the penalties. If the permittee is non-responsive or refuses to pay the GM shall exceed with a show cause hearing as outlined in Section 3.5.

2.7 Site Inspection

If the permittee does not contact the District within the time specified in the District's written request, a site inspection may be required. A site inspection may be required depending on the amount of over pumpage or if the permittee requests a site inspection. Site Inspections are authorized by District personnel under rule 3-8.3.

Figure 2

Enforcement Procedure & Process for Annual Over Pumpage Violations



*** MEMORANDUM ***

Date: October 13, 2022
To: District Board of Directors
From: Erin Swanson, Regulatory Compliance Manager
Subject: Staff enforcement recommendations for Aqua Texas Bliss Spillar (Aqua)

Background:

The District's enforcement plan provides for monthly review of permittee production numbers to ensure compliance of the permittee's annual allotment volume at the end of each fiscal year. Aqua Texas' Historic Edwards permit falls under Tier 2 because it is permitted for 12,875,000 gallons per year. Aqua pumped 16,947,999 gallons in FY22, 31.63% over its annual permitted volume.

Under the District's enforcement plan Appendix A, Section 2.5, a permittee will be issued enforcement points and any permittee with an enforcement calculation total over 11 points will be issued a NOV by the General Manager.

In determining an enforcement action, the General Manager will sum the total enforcement points and any permittee with an enforcement calculation total over 11 points will result in the General Manager issuing a NOV and pursuing enforcement. Additionally, the matter will be referred to the Board for action and assessment of penalties. Enforcement Points	
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Base Penalties:

Under Section 4.2 of the District's adopted Enforcement Plan, the level of enforcement and amount of penalties assessed shall be determined considering the following factors:

- (1) The severity or seriousness of the violation;
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Penalties recommended by the GM shall be determined in accordance with Section 4 *Violations and Penalty Assessment Guidelines*. The GM could recommend a reduced penalty associated based on penalty adjustments outlined in Section 4.3.

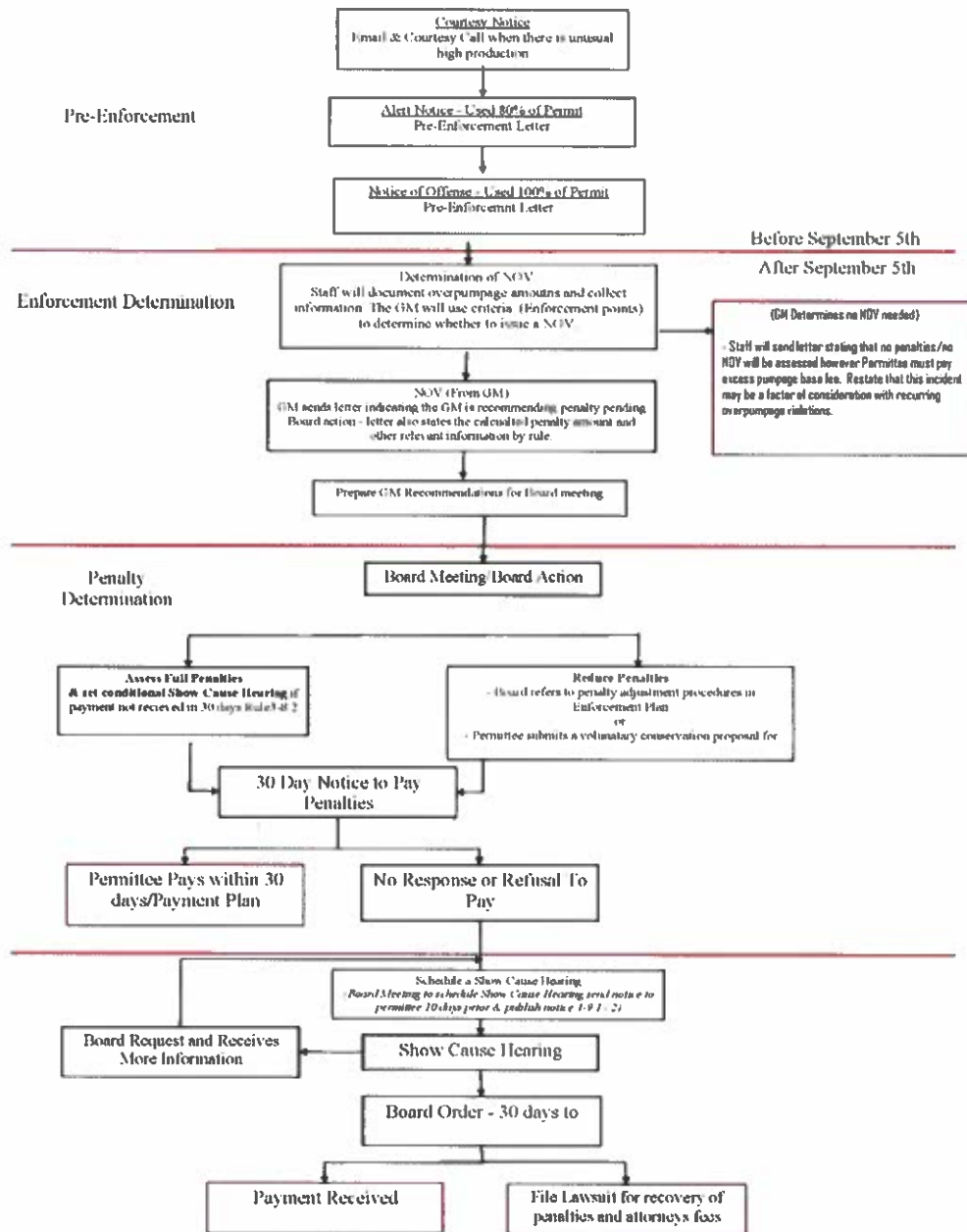
- The permittee shall then be sent a 30-day notice to pay the penalties. If the permittee is non-responsive or refuses to pay the GM shall exceed with a show cause hearing as outlined in Section 3.5.

2.7 Site Inspection

If the permittee does not contact the District within the time specified in the District's written request, a site inspection may be required. A site inspection may be required depending on the amount of over pumpage or if the permittee requests a site inspection. Site Inspections are authorized by District personnel under rule 3-8.3.

Figure 2

Enforcement Procedure & Process for Annual Over Pumpage Violations





**Barton Springs
Edwards Aquifer**
CONSERVATION DISTRICT

NOTICE OF VIOLATION

October 7, 2022

Certified Mail- Return Receipt Requested & Electronic Mail

Aqua Texas – Bliss Spillar
Attn: Brent Reeh or Brian Robinson
2611 FM 2325
Wimberley, TX 78676

RE: Notice of Violation of District Rules & Bylaws.

Dear Permittee:

Regulatory Compliance staff (staff) of the Barton Springs/Edwards Aquifer Conservation District (District) determined that sufficient information exists to warrant this notice, indicating that Aqua Texas – Bliss Spillar (Aqua), the well owner of the well located at Copperleaf Drive, Manchaca, TX (30°8'34.15" N 97°52'48.74" W) has violated the District Rules & Bylaws. District records demonstrably indicate a violation of **District Rules §3-8.5** for exceeding the annual authorized volume. Records show that actual annual pumpage was 16,947,999 gallons while the authorized permitted volume is 12,875,000 gallons.

The District expects complete compliance with all District Rules, and your permit with the District is predicated on that compliance. Pursuant to §36.102 of the Texas Water Code and the penalty schedule contained in §3-8.8 of the District's Rules, the District is authorized to assess civil penalties that range from \$50 to \$1,000 for each day of violation of Rule §3-8.5. The indicated penalties are based on severity options within the specified ranges. Below is the range used in the calculation of Aqua's penalty amount that will be provided to the Board of Directors for its consideration.

Rule Violation	Daily Penalties			TOTAL
	TIER	DAYS OF OVERPUMPAGE	≥25% and <50%	
§3-8.5	2 (≥12 and <25 mgy)	89	\$150	\$11,550

Staff calculated daily penalties beginning June 3, 2022 (the date that District staff received the first required monthly meter reading that provided evidence that the allotted annual volume had been overpumped) through the last day of the District's fiscal year on August 31, 2022.

In accordance with Section 4.3 of the District's adopted Enforcement Plan, the amount of penalties may be waived or reduced considering the following factors:

1. Compliance History (maximum 30%)
2. Culpability (maximum 30%)
3. Good Faith Effort to Comply (maximum 40%)
4. Voluntary Resolution Conditions or Approved Projects

Staff did not waive or reduce the penalty amount of \$11,550. The penalty adjustments were not warranted given the compliance history and lack of communication and follow through after you were notified of your overpumpage.

Accordingly, the District Staff will be recommending to the Board of Directors at the next regular meeting to be held on October 13, 2022 **the assessment of a penalty of \$11,550**. Following the Board's determination, you will be sent a 30-day notice to pay the penalties. If you are non-responsive or refuse to pay the GM shall exceed with a show cause hearing as outlined in Section 3.5. The final penalty amount will be assessed by the Board of Directors in addition to the excess base fee as described in the fee schedule.

If you have any questions regarding this matter, contact Erin Swanson of the Regulatory Compliance Team, by phone at (512) 282-8441.

Sincerely,

A handwritten signature in blue ink that reads "Timothy T. Loftus". The signature is written in a cursive, flowing style.

Timothy T. Loftus, Ph.D.
General Manager

Cc: Mr. Bill Dugat, Esq., District Counsel

the 1990s, the number of people with a mental health problem has increased in the UK (Mental Health Act 1983).

There is a growing awareness of the need to improve the lives of people with mental health problems. The Department of Health (1999) has set out a vision of a new mental health system, which will be based on the following principles:

- People with mental health problems should be treated as individuals, with their own needs and wishes.
- People with mental health problems should be given the opportunity to participate in decisions about their care and treatment.
- People with mental health problems should be given the opportunity to live in their own homes and communities.

The Department of Health (1999) has also set out a number of key objectives for the new mental health system:

- To reduce the number of people with mental health problems who are admitted to hospital.
- To improve the quality of care and treatment for people with mental health problems.
- To improve the support and services available to people with mental health problems.
- To improve the lives of people with mental health problems.

The Department of Health (1999) has also set out a number of key priorities for the new mental health system:

- To improve the quality of care and treatment for people with mental health problems.
- To improve the support and services available to people with mental health problems.
- To improve the lives of people with mental health problems.

The Department of Health (1999) has also set out a number of key challenges for the new mental health system:

- To improve the quality of care and treatment for people with mental health problems.
- To improve the support and services available to people with mental health problems.
- To improve the lives of people with mental health problems.

The Department of Health (1999) has also set out a number of key messages for the new mental health system:

- People with mental health problems should be treated as individuals, with their own needs and wishes.
- People with mental health problems should be given the opportunity to participate in decisions about their care and treatment.
- People with mental health problems should be given the opportunity to live in their own homes and communities.

*** MEMORANDUM ***

Date: October 13, 2022
To: District Board of Directors
From: Erin Swanson, Regulatory Compliance Manager
Subject: Staff enforcement recommendations for Professional Contract Services, Inc. (PCSI)

Background:

The District's enforcement plan provides for monthly review of permittee production numbers to ensure compliance of the permittee' annual allotment volume at the end of each fiscal year. Professional Contract Services, Inc.'s Class A Conditional Edwards permit falls under Tier 1 because it is permitted for 1,331,000 gallons per year. PCSI pumped 1,777,600 gallons in FY22, 133.55% over its annual permitted volume.

Under the District's enforcement plan Appendix, A Section 2.5, a permittee will be issued enforcement points and any permittee with an enforcement calculation total over 11 points will be issued a NOV by the General Manager. (Table 1)

In determining an enforcement action, the General Manager will sum the total enforcement points and any permittee with an enforcement calculation total over 11 points will result in the General Manager issuing a NOV and pursuing enforcement. Additionally, the matter will be referred to the Board for action and assessment of penalties. Enforcement Points	
10	Magnitude of violation: Permittee overpumpage greater than 15%
10	Compliance history: permittee had an overpumpage compliance issue or violation in previous 5 years (2 points for each violation in previous 5 years)
5	Good faith effort: Permittee did not correct and overpumped for more than 90 days and/or did not timely respond to District request
1	Permittee Communication: Permittee did not notify the District of an issue
1	Drought: overpumpage occurred during a District declared drought

Pursuant Appendix A, section 2.5 of the District's Enforcement Plan, PCSI was given a Notice of Offense for 100% Permit Usage on 4/4/2022 and a follow up Notice of Offense e-mail was sent to the permittee on 7/21/2022.

District staff determined a total of 16 enforcement points for PCI's violations, due to: (1) magnitude of violation (10 points); (2) lack of good faith effort (5 points); and, (3) drought (1 point). The GM sent a Notice of Violation via e-mail and certified letter on 10/7/2022.

Violations:

District records indicate a minimum of approximately two hundred and five (205) alleged daily violations of **District Rule §3-8.5** for exceeding the annual authorized volume. Daily violations related to rule §3-8.5

were calculated only for the days beginning February 7, 2022 which is the date of the meter reading received by staff providing evidence that the PCSI allotted annual volume had been exceeded.

Base Penalties:

Under Section 4.2 of the District’s adopted Enforcement Plan, the level of enforcement and amount of penalties assessed shall be determined considering the following factors:

- (1) The severity or seriousness of the violation;
- (2) Whether the violation was willful, intentional, or could have been reasonably anticipated and avoided;
- (3) Whether the violator acted in good faith to avoid or mitigate the violation, or to correct the violation after it became apparent and compensate those affected;
- (4) Whether similar violations have been committed in the past;
- (5) The amount necessary to deter future violations;
- (6) Any other matter that justice may require;

Penalties were determined from the ranges specified in District Enforcement Plan rules and guidelines for violations and penalty assessments. The penalties range from \$50 - \$1000 daily for violations of Rule §3-8.5 and staff calculated daily penalties from June 3, 2022 (date that District received meter reading the provided evidence of the allotted annual volume had been exceeded) through August 31, 2022. Penalties are based on severity options within the specified ranges. Provided below is the range used to calculate the penalty that the staff will recommend for Board consideration.

Rule Violation	Daily Penalties			TOTAL
	TIER	DAYS OF OVERPUMPAGE	≥150%	
§3-8.5	1 (<4 mg)	205	\$80	\$14,350

In accordance with section 4.3 of the District’s adopted Enforcement Plan, the amount of the penalties assessed may be waived or reduced by the Board following assessment of following factors

- (7) Compliance History (maximum 30%)
- (8) Culpability (maximum 30%)
- (9) Good Faith Effort to Comply (maximum 40%)
- (10) Voluntary Resolution Conditions or Approved Projects

In consideration of Factor 1, staff reduced the penalty given that no compliance issues (of a similar nature) or violations (NOAV/NOV) have occurred in the last 6-10 years. The penalty adjustment was for 20% or \$2,870 giving a new reduced penalty total of \$10,480.

Staff Recommendation:

Section 2.6 of the District's adopted Enforcement Plan provides that should the GM issue an NOV, the matter will be set on the Board's regular meeting agenda for possible Board action. Staff shall prepare the appropriate materials to be provided with the backup for the board meeting to include the relevant information and GM's recommendations on any penalty adjustments and/or conditions. Penalties recommended by the GM shall be determined in accordance with Section 4 Violations and Penalty Assessment Guidelines. The GM could recommend a reduced penalty associated based on penalty adjustments outlined in Section 4.3. The permittee shall then be sent a 30-day notice to pay the penalties. If the permittee is non-responsive or refuses to pay the GM shall exceed with a show cause hearing as outlined in Section 3.5.

Accordingly, Staff recommends assessing a reduced penalty amount of \$10,480 for the exceeded annual overpumpage of the Professional Contract Services, Inc. permit and that the permittee be sent a 30-day notice to pay the penalties.

Enforcement Plan Excerpts

Appendix A

Overpumpage of Annual Production Permit Production and Enforcement Process

1.0 Enforcement Strategy

The District's approach to a permittee's annual production permit exceedance is described here and is consistent with District Rule 3-8.5 and 3-8.8. This procedure describes the appropriate implementation mechanisms, permittee notification efforts, and permittee performance monitoring and assessment requirements. The compliance and enforcement efforts specified below, elaborate on District Rule 3-8.5 and 3-8.8 with a focus on assessment of permittee performance on a monthly and annual basis which is used to identify the level of non-compliance.

2.0 Implementation Mechanisms and Enforcement Procedures

The protocols and procedures for notifications relating to permittee overpumpage are depicted in Figure 2. *Enforcement Procedures and Process for Annual Overpumpage Violations.*

2.1 Meter Readings/Unusual High Monthly Production

Meter readings shall be submitted monthly to the District and recorded by the Administration team into the pumpage database for review. Once reviewed, any unusual high monthly usage will prompt a courtesy email and a courtesy phone call from the staff.

2.2 Alert Notice for 80% of Permit Usage

- • Once a permittee's allotted production permit meets or exceeds 80% of the allotted production amount staff shall send the permittee a written notice. This notice will serve as notification to the Permittee that the Permittee has reached 80% of the annual production amount and that the user should be cautious of future pumping that may cause them to exceed their annual authorized production volume.
 - This letter will be the first step of documentation for potential enforcement actions.
- A notice does not have to be sent to a permittee if the permittee does not show a trend of potentially exceeding the total annual authorized production volume by the end of the fiscal year.

2.3 Notice of Offence for 100% of Permit Usage /Notice of Offense

- Notice of Offense letters will only be issued and provided to Permittees if the staff has documented that the permittee has exceeded annual authorized production volume before the end of the fiscal year.
- If the staff determines that a permittee has met or exceeded its total annual production amount prior the end of the fiscal year, the Administration team will notify the Regulatory Compliance team.

- The staff will then send a Notice of Offense letter via certified mail and email to the Permittee.
 - This notice will serve as notification to the permittee that they have met or exceeded their total annual production amount and that the excess production amounts may result in an assessment of overpumpage penalties.
 - This notice will also make it the responsibility of the permittee to correspond with staff to discuss reasons as to why over pumping is occurring and how to monitor the over pumping during remaining fiscal year.

2.4 Determination of Overpumpage Violation by General Manager

- Once the fiscal year has ended, a determination of an occurrence of a violation will be made by the General Manager and will be based on an evaluation of the enforcement assessment criteria in Section 4.2 of this plan. In determining the appropriate level of enforcement and whether or not to issue a NOV, the General Manager will consider the criteria outlined in Section 2.5.

2.5 Criteria for Determining a NOV and Enforcement

In determining an enforcement action, the General Manager will sum the total enforcement points and any permittee with an enforcement calculation total over 11 points will result in the General Manager issuing a NOV and pursuing enforcement. Additionally, the matter will be referred to the Board for action and assessment of penalties. Enforcement Points	
10	Magnitude of violation: Permittee overpumpage greater than 15%
10	Compliance history: permittee had an overpumpage compliance issue or violation in previous 5 years (2 points for each violation in previous 5 years)
5	Good faith effort: Permittee did not correct and overpumped for more than 90 days and/or did not timely respond to District request
1	Permittee Communication: Permittee did not notify the District of an issue
1	Drought: overpumpage occurred during a District declared drought

2.6 Penalty Methodology:

- Permittees that are issued an NOV will be assessed penalties based on permitted volume and percentage over pumped in accordance with Section 4.1.5. and the matter will be sent to the Board for action on the penalty amount. These penalties will be assessed in addition to the excess base fee as described in the fee schedule. Permittees that are not issued an NOV will only be assessed excess base fee in accordance with the fee schedule.
- In determining penalty amounts, the District will review monthly production reports to determine when actual production volume exceeds authorized volume. After the District determines that a permittee's actual production for any month, except August, exceeds annual permitted volumes, each day of additional production after the month that permit volume is exceeded is considered overpumpage and a separate violation subject to the penalties in the table 1 and enforcement mechanisms available to the District.

For the month of August, if the permittee exceeds the authorized annual permitted amount to be withdrawn under the Production Permit, based on the August meter reading, the permittee's production for the month of August will be divided by the number of days in August to find a daily average equivalent production volume. The daily equivalent production volume will then be

added incrementally to each day in August in order to determine which day in August that production exceeded the authorized permitted volume.

- Once a permittee is found to have exceeded the annual production amount, and be in violation, the permittee will issued an NOV and be notified by certified mail and email of the following:
 - The District has documented a permit violation for over pumping;
 - The amount over pumped; and
 - The amount of daily penalties that may be assessed for each day of over pumping as determined using the tables and methodology above.
- Should the GM issue an NOV, the matter will be set on the Board's regular meeting agenda for possible Board action. Staff shall prepare the appropriate materials to be provided with the backup for the board meeting to include the relevant information and GM's recommendations on any penalty adjustments and/or conditions.

Penalties recommended by the GM shall be determined in accordance with Section 4 *Violations and Penalty Assessment Guidelines*. The GM could recommend a reduced penalty associated based on penalty adjustments outlined in Section 4.3.

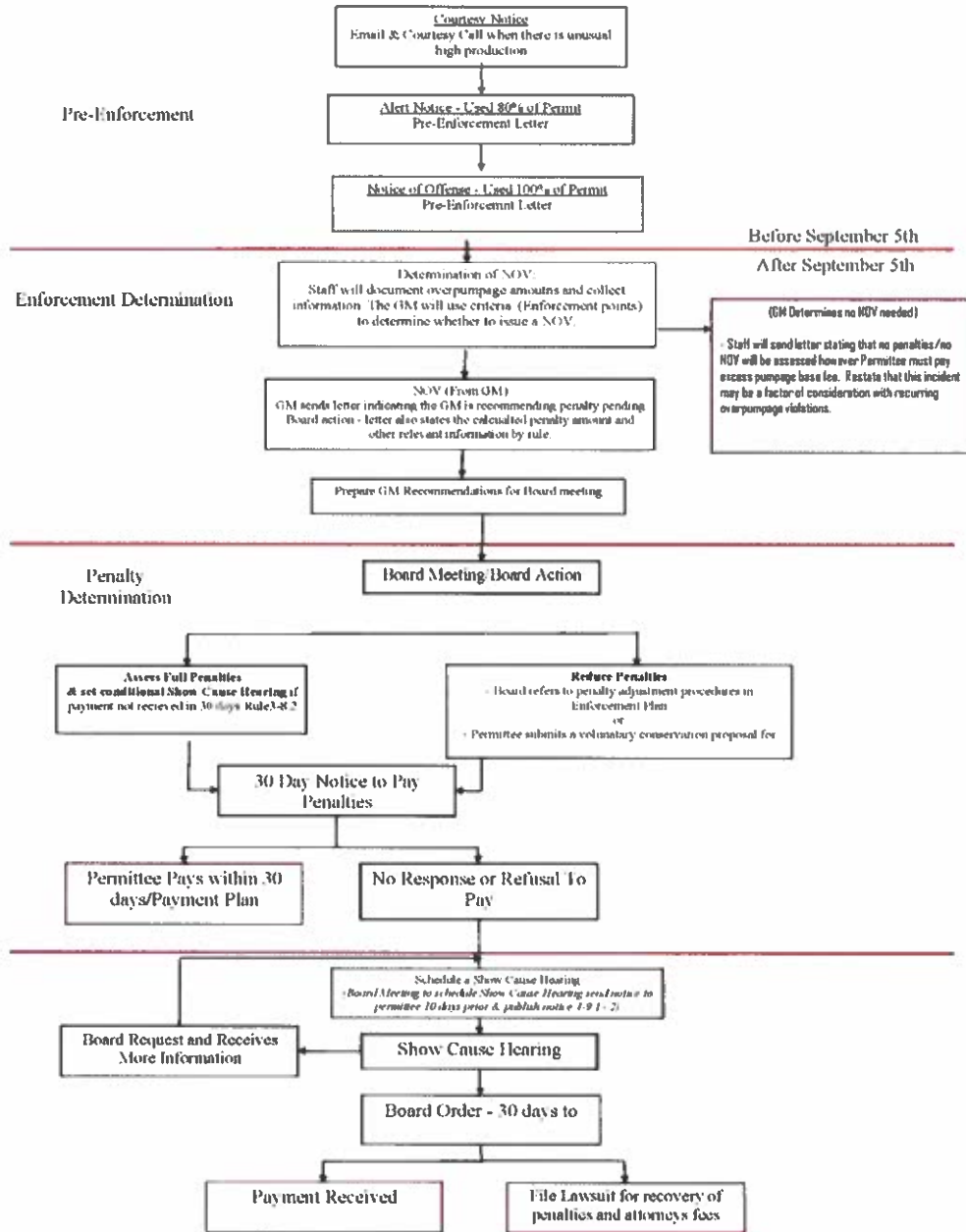
- The permittee shall then be sent a 30-day notice to pay the penalties. If the permittee is non-responsive or refuses to pay the GM shall exceed with a show cause hearing as outlined in Section 3.5.

2.7 Site Inspection

If the permittee does not contact the District within the time specified in the District's written request, a site inspection may be required. A site inspection may be required depending on the amount of over pumpage or if the permittee requests a site inspection. Site Inspections are authorized by District personnel under rule 3-8.3.,

Figure 2

Enforcement Procedure & Process for Annual Over Pumpage Violations





**Barton Springs
Edwards Aquifer**
CONSERVATION DISTRICT

NOTICE OF VIOLATION

October 7, 2022

Certified Mail- Return Receipt Requested & Electronic Mail

Professional Contract Services, Inc.
Attn: Blue Clark or Paul Moyer
718 W FM 1626
Austin, TX 78748

RE: Notice of Violation of District Rules & Bylaws.

Dear Permittee:

Regulatory Compliance staff of the Barton Springs/Edwards Aquifer Conservation District (District) determined that sufficient information exists to warrant this notice, indicating that Professional Contract Services, Inc., the well owner of the well located at 718 W FM 1626, Austin, TX (30°8'35.29" N 97°49'29.00" W) has violated the District Rules & Bylaws. District records demonstrably indicate a violation of **District Rules §3-8.5** for exceeding the annual authorized volume. Records show that actual annual pumpage was 3,108,600 gallons while the authorized permitted volume is 1,331,000 gallons.

The District expects complete compliance with all District Rules, and your permit with the District is predicated on that compliance. Pursuant to §36.102 of the Texas Water Code and the penalty schedule contained in §3-8.8 of the District's Rules, the District is authorized to assess civil penalties range from \$50 to \$1,000 for each day of violation for Rule §3-8.5. The indicated penalties are based on severity options within the specified ranges. Below is the range used in the calculation of Professional Contract Services Inc.'s penalty amount that will be provided to the Board of Directors for its consideration.

Rule Violation	Daily Penalties			TOTAL
	TIER	DAYS OF OVERPUMPAGE	≥150%	
§3-8.5	1 (<4 mgy)	205	\$80	\$14,350

Staff calculated daily penalties beginning February 7, 2022 (the date that District staff received the first required monthly meter reading that provided evidence that the allotted annual volume had been overpumped) through the last day of the District's fiscal year on August 31, 2022.

In accordance with section 4.3 of the District's adopted Enforcement Plan, the amount of the penalties may be waived or reduced considering the following factors:

- (1) Compliance History (maximum 30%)
- (2) Culpability (maximum 30%)
- (3) Good Faith Effort to Comply (maximum 40%)
- (4) Voluntary Resolution Conditions or Approved Projects

In consideration of the above-mentioned Factor 1, staff reduced the penalty given that no compliance issues (of a similar nature) or violations (NOAV/NOV) have occurred in the last 6-10 years. The penalty adjustment was for 20% or \$2,870 giving a new reduced penalty total of **\$10,480**.

Accordingly, the District Staff will be recommending to the Board of Directors at the next regular meeting to be held on October 13, 2022 on the matter **the assessment of a reduced penalty of \$10,480**. The Board of Directors may determine that the reduction is not warranted.

The final penalty amount determined by the Board of Directors will be assessed in addition to the excess base fee as described in the fee schedule. Following the Board's determination, you will be sent a 30-day notice to pay the penalties. If you are non-responsive or refuse to pay the GM shall exceed with a show cause hearing as outlined in Section 3.5.

If you have any questions regarding this matter, contact Erin Swanson of the Regulatory Compliance Team, by phone at (512) 282-8441.

Sincerely,

A handwritten signature in blue ink that reads "Timothy T. Loftus". The signature is cursive and includes a small mark resembling a checkmark or a stylized '7' before the last name.

Timothy T. Loftus, Ph.D.
General Manager

Cc: Mr. Bill Dugat, Esq., District Counsel

Item 7

Board Discussions and Possible Actions

e. Discussion and possible action on acknowledgement of receipt of \$39,875 from INTERA and to confirm that the 2017 Master Technical Services Agreement and related work order to develop a web-based groundwater and water well management system is terminated as provided in the September 22, 2022 letter from Tim Loftus, General Manager, to Eric Markland, Chief Financial and Administrative Officer, INTERA, Inc.



**Barton Springs
Edwards Aquifer**
CONSERVATION DISTRICT

Sent via email and USPS First-Class Mail

September 22, 2022

Mr. Eric Markland, Chief Financial and Administrative Officer
INTERA, Inc.
9600 Great Hills Trail, Suite 300W
Austin, TX 78759

Dear Eric:

The purpose of this letter is to request a resolution with INTERA to end our contractual arrangement over an unfulfilled database project. What follows is some background followed by the Barton Springs Edwards Aquifer Conservation District's (District) specific request.

The INTERA/Epic proposal that you first shared with staff and me on July 1, 2022, featured three options. We agreed to continue discussion of the third option: customizing Epic's core database for our needs at a cost of \$79,750 plus the \$20k per year license. The District Board of Directors (Board) considered the matter at its September 15 Board meeting.

The District is unwilling to support the latest INTERA proposal that includes Epic Engineering and Consulting. The District's position is based on two factors: 1) the considerable annual fee of \$20,000.00 for hosting, maintenance, and general benefit enhancements, and 2) the proprietary nature of Epic's Simplify i3 database that negates the District's ability to own the database.

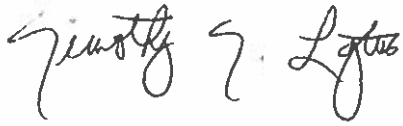
Given that INTERA was prepared, at a minimum, to pay the other half of the project cost – \$39,875.00 – the District respectfully requests that INTERA pay that sum directly to the District instead. Receiving these funds from INTERA will enable the District and INTERA to consider our contract ended with no further action necessary on the part of either party.

The District wishes to maintain full working relations with INTERA and continue to use INTERA's services as we have historically. Settling the database contract expeditiously and as requested will enable the District to renew an expired Master Service Agreement with your firm and continue to work collaboratively on other matters that have always worked well for both parties in the past. It is the District's wish that INTERA will be of the same mind despite the considerable challenge that the database project has posed.

The District requests a response within ten business days of this letter. Should you have any questions or wish to discuss our request, please call me either at my office or on my cell phone at 331.442.9394.

Thank you for your consideration.

Very truly yours,

A handwritten signature in black ink that reads "Timothy T. Loftus". The signature is written in a cursive style with a large initial 'T' and 'L'.

Timothy T. Loftus, Ph.D.
General Manager

Cc: Ms. Blayne Stansberry, President, Board of Directors
Barton Springs/Edwards Aquifer Conservation District
1124 Regal Row
Austin, TX 78748

Mr. Bill Dugat, General Counsel
Bickerstaff Heath Delgado Acosta LLP
3711 S MoPac Expressway
Building 1, Suite 300
Austin, TX 78746

Item 7

Board Discussions and Possible Actions

f. Discussion and possible action on a recommendation by the General Manager to approve Master Service Agreement with LRE Water and a Statement of Work (i.e., Task Order) to produce a new database for the District at a total first year cost of \$108,000.

STATEMENT OF INTEREST AND QUALIFICATIONS

**BARTON SPRINGS /
EDWARDS AQUIFER
CONSERVATION DISTRICT**

**PROFESSIONAL SERVICES RELATED
TO DEVELOPMENT OF A CUSTOMIZED
DATABASE APPLICATION**

August 12, 2022

August 12, 2022

Barton Springs/Edwards Aquifer Conservation District
Attn: SOQ Solicitation
1124 Regal Row, Austin TX 78748
Submitted Via Email: bseacd@bseacd.org

RE: Development of a Customized Database Solution SOQ

Dear Mr. Loftus and Members of the Board,

Since its inception in 1987, the Barton Springs/Edwards Aquifer Conservation District (BSEACD) has made tremendous progress in its mission of conserving, protecting and enhancing the groundwater resources in Hays and Travis Counties. One of the outcomes of BSEACD's progress is a large amount of valuable data that, when organized and used effectively, is available to measure progress and document quantifiable success. We recognize that an effective database application that can accommodate vast and growing amounts of groundwater data, provide technical support for complex permitting schemes, and be accessible through a user-friendly, public-facing dashboard will be a critical tool for long-term effective data management and a key component for stakeholder engagement. **LRE Water** is uniquely suited to work with BSEACD to build a reliable, simple to use, and flexible database application customized to your needs – designed and supported by hydrogeology professionals – and developed exclusively to support you in your mission.

LRE Water brings the following qualifications to meet BSEACD's Customized Database Application request:

- **Database Design Expertise:** LRE Water has a proven track record of successfully developing integrated database and dashboard applications for multiple entities across the country. Our previous work for Clearwater Underground Conservation District (Bell County, TX) provides our team an invaluable understanding of GCD-specific groundwater data management, permitting, reporting, analysis and integrated mapping capabilities, and allows us to focus on new functionalities rather than spending time re-building tools from scratch.
- **Groundwater Backgrounds:** As hydrogeology professionals designing, building, and supporting these systems, we know the importance of data-driven management of groundwater resources and we understand how to organize and communicate information to effectively assist managers and engage stakeholders. We have decades of collective professional experience and we move beyond just storing and visualizing your data, to analysis of that data to help you understand what it means for the BSEACD and management of the groundwater resources.
- **In-Depth Knowledge of Local Aquifers:** We have extensive knowledge of the complex hydrogeology of the Barton Springs Segment of the Edwards, the Brackish Edwards, and the Trinity Aquifers in the BSEACD jurisdiction. We can incorporate our local knowledge when designing BSEACD's dashboard to include logical query functionality as well as important geologic features (such as known faults).

We believe that communication and collaboration with the BSEACD is key to successful project execution, and we will implement a rigorous project management approach that ensures timely communication, and efficient execution to meet project goals on time and within budget. We commit to: providing extraordinary levels of service; responding rapidly to calls/emails; and participating in person at BSEACD meetings as requested. We are also planning an initial project meeting in which we observe BSEACD staff working with the current database, so as to better understand how the existing functionality can efficiently be improved to better meet staff needs.

Please do not hesitate to contact us with any questions about our qualifications and services offered to BSEACD. As our development team lead, you may reach me directly at Kelly.Close@LREWater.com or 720-301-3728.

Sincerely,



Kelly Close, PE
System Design and Development Team Lead



Jordan Furnans, PE, PG
Vice-President Texas Operations & Project Manager



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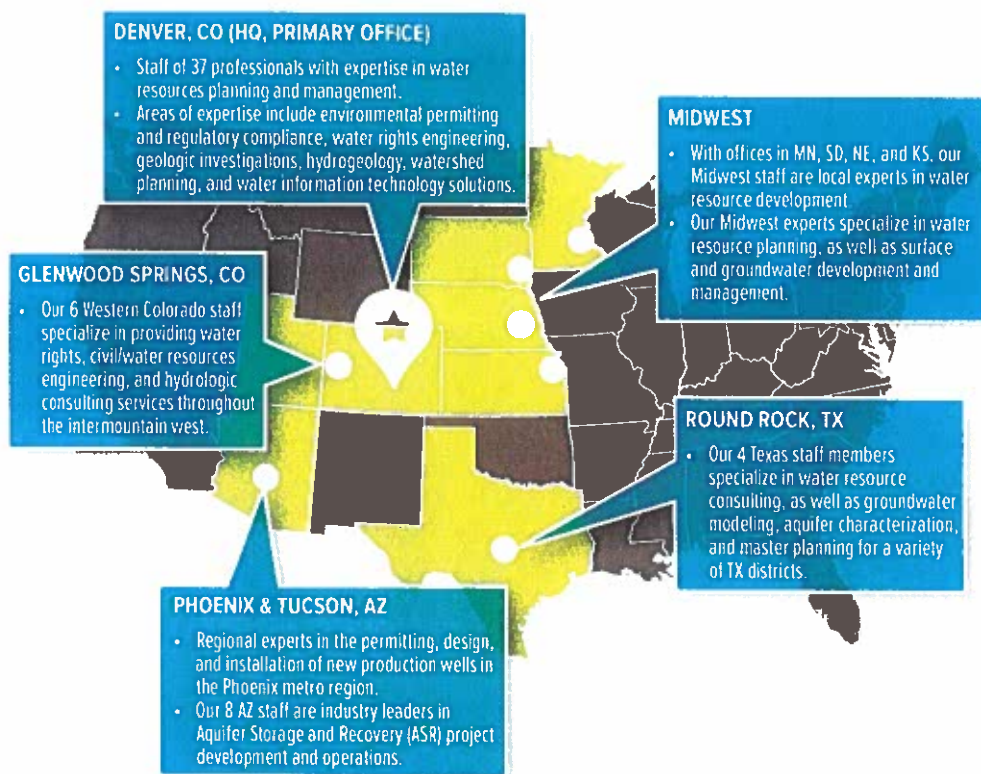
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GENERAL STATEMENT OF QUALIFICATIONS

FIRM INTRODUCTION

For 52 years, LRE Water has provided leadership in engineering and consulting services related to planning, managing, and developing water resources throughout the western United States. It is our unique combination of leadership and technical expertise that our clients rely upon when planning for and managing their most precious resource: *water*.

LRE Water's 60+ person interdisciplinary professional staff is focused on bringing creative solutions to water issues. Our experts provide engineering and consulting services in the areas of water rights and water supply planning, groundwater, environmental permitting, and water innovation & technology. For the purpose of this SOQ response we have focused on our services related to development of data management systems to support management of groundwater resources.



SERVICES SNAPSHOT



Water Quality & Environmental Monitoring



Watershed Planning



Data Visualization & Web-Based Tools



Water Resources Planning



Water Rights Engineering



Data Integration, Modeling & Technology



Groundwater, Geology & Hydrogeology



Regulatory Compliance & Environmental Permitting

Company Profile

Company Name:	LRE Water, LLC (a subsidiary of LRE Water)
No. of Years in Business:	52 years
Company Organization:	LRE Water (parent company) is an S Corporation
Company Ownership:	Employee Owned
Size of Firm:	69 employees across four regions
Authorized Signer:	Cortney Brand, President/CEO
Primary Contact:	Jordan Furnans, Manager of Texas Operations
Address:	1101 Satellite View #301, Round Rock, TX 78665
Office Phone:	512-736-6485
Email Address:	Jordan.Furnans@LREwater.com

Dr. Jordan Furnans opened the Texas office of LRE Water in 2015 and has been building our firm's reputation for excellence since that time. We have performed projects for clients within 57 Texas counties and completed four contract projects for the Texas Water Development Board, including three focused on groundwater topics and one related to precipitation and surface water evaluations. We routinely handle projects ranging in size and scope from \$1,000 "quick" efforts to "\$650,000" multi-year investigations. We are currently engaged in 23 active projects and have four TX staff members.

Even as a relatively new firm working in the Texas groundwater services market, LRE Water is already recognized as a specialized leader in groundwater evaluations and modeling. We are actively engaged with the Clearwater Underground Water Conservation District (CUWCD) working on their data management and integrated mapping system. We also provide Goliad County Groundwater Conservation District (GCGCD) with groundwater availability model (GAM) support and as-needed hydrogeologic expertise. We recently completed a 2-year endeavor with the Texas Water Development Board (TWDB) to better quantify groundwater pumping (prime contractor, \$650K effort) and to assess groundwater recharge (subcontractor to WSP USA, \$195K effort) in five west-Texas aquifers including the Edwards and Trinity Aquifers overlying Travis and Hays Counties. We also were responsible for completing explanatory reports for GMA-13 and GMA-15 during the 3rd round of joint planning.

HYDROGEOLOGICAL SERVICES

The LRE Water Groundwater Team has a long history serving our clients' needs for groundwater resource development and management. Our work focuses primarily on groundwater resources development and evaluation of availability for municipalities, groundwater districts, private industry, and land developments. We specialize in applying the various Texas GAMs to aid in providing both preliminary and detailed water reliability assessments. In addition, our work often includes performing well and well-field design, construction, testing, rehabilitation, and optimization. More recently, our groundwater services have evolved to include innovative groundwater solutions that provide water storage and water quality improvements like aquifer storage and recovery (ASR), soil aquifer treatment, and riverbank filtration. We work in a wide variety of geologic settings including deeper bedrock aquifers and surficial alluvial aquifers where surface water and groundwater interact and benefit from conjunctive management.

At LRE Water, we also understand that determining groundwater availability can be a complex consideration of many factors. An assessment of physical groundwater availability is primarily based on the hydraulic, structural, and lithologic characteristics of the aquifer, while also considering the quality of the groundwater relative to its

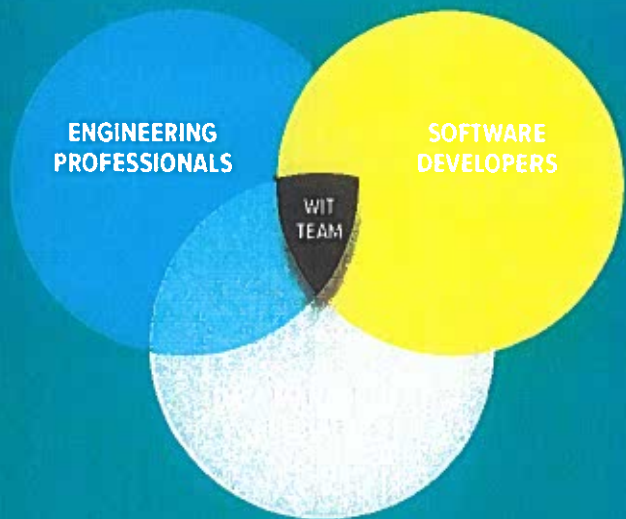
proposed use. By appropriately sizing and spacing wells, we have helped clients optimize groundwater production to meet demands and maximize availability with acceptable water level declines.

WATER INFORMATION TECHNOLOGY TEAM

Our Water Information Technology (WIT) team is based in Denver, CO, and works closely with our TX office on many database projects for clients with similar needs as BSEACD. Led by Kelly Close, PE, the WIT team has been developing customized data management and display tools for clients and collaborators throughout the western United States since 2007. Our WIT team is an interdisciplinary group of surface water and groundwater professionals with additional expertise in database design, data management, modeling, and software development. They have a deep passion for developing functional and aesthetic data management systems and websites that effectively communicate complex water resources data and technical information.

Our WIT team has applied their expertise to develop tools for a diverse set of clients ranging from Federal, State, and local government entities to nonprofits and community organizations. We leverage non-proprietary software to keep maintenance costs low, and we apply Agile project management and open communication to engage clients in the design and development of their systems at every step.

The Water Information Technology (WIT) Team goes beyond traditional software development, synergistically combining engineering, data management expertise and leading-edge software development techniques to create smart solutions for water management that really work.



KEY PERSONNEL

While we will assign LRE Water staff to project tasks based on project requirements and respective staff skills, we expect to manage and complete the project using key personnel from our Round Rock, TX office and our Denver, CO headquarters. Our Round Rock office is located within a 45 minute drive from the District office, and we will not hesitate to be present when needed and requested by District Staff.

EXPERIENCE & QUALIFICATIONS OF KEY PERSONNEL

Key LRE Water Personnel for work on behalf of BSEACD include:



JORDAN FURNANS, PhD, PE, PG | PROJECT MANAGER

Jordan will lead this project for BSEACD and will serve as the administrative point of contact for all aspects of this project, and will provide project oversight. Jordan will coordinate staff efforts on this project to ensure efficient team operation and project completion meeting all established deadlines and task budgets. Jordan will professionally sign and seal any engineering documents needed for completion of this effort. Jordan will attend physical meetings with BSEACD staff whenever requested.



KELLY CLOSE, PE | SYSTEM DESIGN AND DEVELOPMENT TEAM LEAD

Kelly will lead the system design and development team for this project. Kelly has been leveraging databases and programming since the early 1990s to meet water planning and management challenges. Her passion is finding better ways to turn data into useful information, streamline data-driven analysis and reporting, and support efficient and timely water management decisions and operations. Her diverse background includes water rights accounting, modeling, GIS, water quality analysis, field data collection, and permitting. Kelly leads LRE's Water Information Technology (WIT) team, an interdisciplinary group of water experts with a knack for the high tech.



KATY KAPROTH-GERECHT, PE | LEAD DATABASE INTEGRATION SPECIALIST

Katy provides expertise across a diverse range of projects including database design and development, code and tool development, data management, water resources planning, and hydrologic modeling and analyses. She specializes in transforming complex water resources data into succinct and useful information that clients and stakeholders can use to gain actionable insights. She joined LRE Water's WIT team in 2014 and has been instrumental in the team's development of custom, interactive data management systems supporting daily water operations, reporting, stakeholder engagement, historical analysis, and everything in between.



MICAELA PEDRAZAS, EIT, GIT | HYDROGEOLOGIST

Micaela will support development of the data management system. Micaela has been heavily involved with our recent work with CUWCD, including developing improvements of the data analysis tools using R programming language and communicating with the client. She specializes in hydro-geologic data collection, numerical groundwater flow modeling using various MODFLOW codes, analysis and visualization of model results using Python, evaluation of groundwater mounding beneath infiltration basins, and performing geophysical surveys of groundwater systems.



MICHAEL BARRY | FULL STACK WEB DEVELOPER

Michael is a self-taught "full-stack" web developer who builds web tools from the ground up. Many traditionally trained web developers only know their website coding part of the larger project, but Michael understands how the different components of a data management system fit together and is able to work seamlessly with engineers, scientists and database developers to build clean and user friendly tools. Michael leads User Interface development first and foremost but will also assist in database development efforts.

DESCRIPTION OF PREVIOUS WORK AND REFERENCES

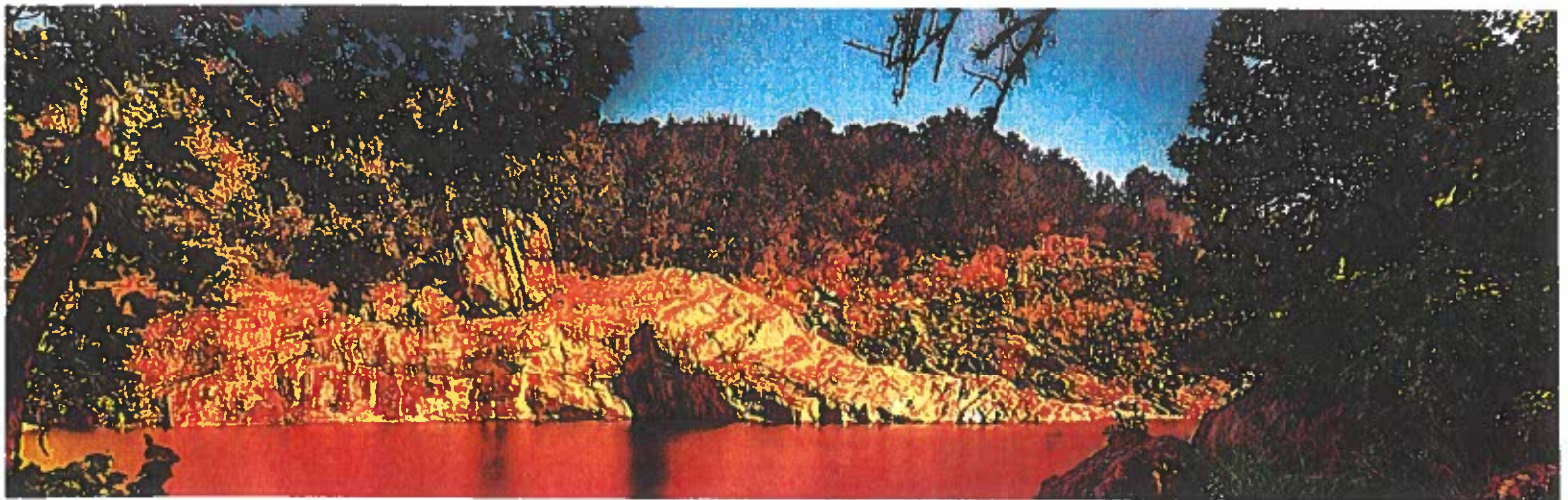
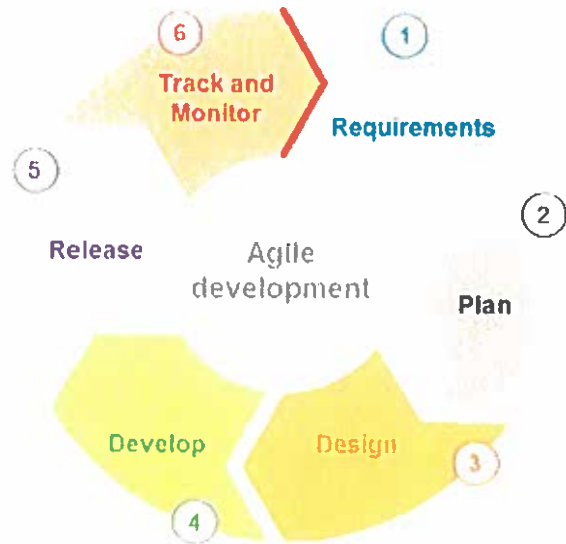
LRE Water has been building database applications for a wide variety of water management entities for over 15 years. These systems run the gamut of functionality, including interactive mapping tools, online data entry, custom querying and reporting, analytical tools and easy to understand data visualizations and analytics. These tools are being used by water managers, water accountants and field staff to monitor and manage data related to well information, meter readings, water levels, water quality, and more. Several of these systems also have public-facing components designed to engage stakeholders, provide management tools for irrigators and district members, and streamline reporting for regulatory compliance.

All of our tools are built on a common foundation of non-proprietary, license free software, keeping ongoing costs manageable. We build on past work and leverage our experience so that new tools do not need to be created from scratch. We can readily adapt the functionality shown in the examples below to meet your needs quickly, allowing BSEACD to focus resources on innovative solutions to challenges unique to your District and ensuring that your budget is spent on customizations important and necessary for you.

The following pages highlight several highly relevant examples of data management, analysis, and mapping systems LRE Water designed, developed, and continues to support. At the beginning of this section a table illustrates a comprehensive list of LRE Water developed tools and the various functions they serve related to BSEACD's needs. Note: hyperlinks will take you to the public-facing portion of each database application.

CLIENT-FOCUSED, AGILE MANAGEMENT

LRE Water is committed to meeting our client's expectations and delivering on time and on budget and we use leading-edge software development management techniques to ensure success. "Agile Management" means that our professionals spend time with Clients during each step of the development process, getting input early and often. It also means that high priority features identified during an in-depth Requirements Discovery Stage are prioritized and finished first so they can be tested and even put to use while there is still plenty of time to make improvements. Agile Management brings together our clients, LRE Water's engineering professionals and software developers in a collaborative process that ensures a high quality final product that meets expectations.



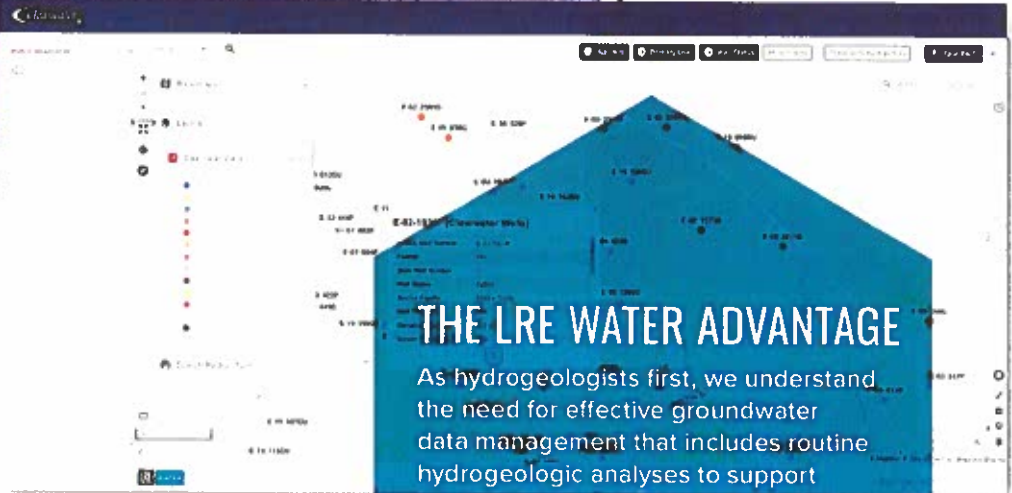
SUMMARY OF DASHBOARD AND DATA VISUALIZATION PROJECTS

Client and Project Name	Project Link	Client Type											Key Function											Client State		
		State Government	Local Government	Special District /Authority	Private Company	Interactive Mapping	Web Services / API for Third Party Connections	Regulatory Workflow	Production Reporting	Multiple User Permissions	Spatial Well Data	Data Management	Custom Queries	Regulatory Reporting	Texas	Colorado	California									
Clearwater Underground Water Conservation District	https://clearwater.lre-up.com/map		◆			●	●	●	●	●	●	●	●	●	●	●	●	●								
Gulf Coast Water Authority Streamflow Predictions Dashboard	www.gcwa-dashboard.com			◆	◆	●												●								
Arkansas Basin Colors of Water Data Viewer	div2waterops.com/ColorsOfWater	◆				●														●						
Arkansas Basin Water Requests System	"http://div2waterops.com (Demo login credentials: USER: CWC Demo PWD: CWC#d3m0!)"	◆				●	●													●						
Central Colorado Water Conservancy District Data Management Dashboard	Not public - contact LRE Water for demo			◆		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
Cherry Creek Basin Water Quality Portal	"https://ccbwwportal.org (Demo login credentials: USER: CWC Demo PWD: CWC#d3m0!)"			◆		●														●						
Firestone Web Based Accounting Portal	Under Development		◆			●	●	●												●						
Siloam Well Users Meter Use Reporting & Accounting Dashboard	Not public - contact LRE Water for demo				◆	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
United and Water Sanitation District Dashboard	data.unitedwaterdistrict.com			◆		●	●		●	●	●	●	●	●	●	●	●	●	●	●						
GSConfluence Data Management and Reporting	https://gsconfluence.com/		◆	◆	◆	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					





Left: Water level measurements are plotted along with top of formations and screen intervals to aid in the analysis



Right: The public-facing dashboard is a map for the public to interact with relevant GIS layers and query by aquifer, well use, well status, etc.

THE LRE WATER ADVANTAGE

As hydrogeologists first, we understand the need for effective groundwater data management that includes routine hydrogeologic analyses to support management of the groundwater resources.

VISIT THE WEBSITE: <https://clearwater.lre-up.com/map>

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

BELL COUNTY, TX

LRE Water refined and updated CUWCD data management, analysis, and integrated mapping system for water well permitting processes and hydrologic data management. The database application has the following capabilities:

Data Management:

- Maintains water level and water quality records and summarizes the data in customized reports.
- Creates a seamless permitting workflow process and generates applicable maps and reports.
- Automates online well registration and permittee reporting of water level and production data.
- Allows multiple user roles with different permissions and levels of system access.

Public-facing Dashboard:

- Displays an interactive map with aquifer and surface geology layers, groundwater wells, land parcels, and GIS layers developed by District staff or consultants.
- Allows for spatial queries, exporting, and printing of maps.

- Extracts and displays stratigraphic columns based on GIS layers developed by District consultants.
- Extracts and displays well completion diagrams (casing, screen, intersected formations, etc.) based on available data for each well.

Data Analysis and Visualization:

- Assessment of the status of each aquifer with respect to adopted desired future conditions (DFC).
- Dynamic visualization of water-level data and trends with user-friendly plot customization options.
- Dynamic visualization of water quality parameters with an option to view various water quality parameters at once.
- Spatial interpolation of water level measurements allowing for dynamic contouring of historic and present water levels.

The data management and integrated mapping system currently aids the District in providing educational materials to the public, in making and assessing groundwater permit applications, in determining compliance with established DFCs, and in managing data provided by District permittees.

Note: Web hosting costs for 2023: \$500 through Amazon Cloud Services





CENTRAL COLORADO WATER CONSERVANCY DISTRICT (CCWCD) DATA MANAGEMENT SYSTEM

Our work for CCWCD is a direct example of our experience, expertise, and qualifications related to data management. CCWCD is a large well owner group including over 600 members that manage over 1,300 wells. CCWCD also manages dozens of reservoirs, recharge facilities, and ditches as part of helping members meet Colorado requirements for groundwater pumping replacements. One of the many functions of CCWCD's system is to capture well meter data from multiple sources, to automate the calculation of water extractions per well, and then to aggregate this data for reporting and analysis.

CCWCD needed a system that made management of their data easier, efficient, and functional. LRE Water efficiently designed, developed, and deployed a data management system that exceeded their expectations for handling their complex requirements. Three key features of the system, described in more detail below, are:

- A Guided Workflow Process with automated data verification to improve data reliability
- User Security that allows as system administrators to define levels of access based on user needs
- Experience, expertise, and qualifications that allows easy access to the data

Guided Workflow Process

CCWCD staff use the system to efficiently perform many of their day to day tasks. We designed the system to walk key staff through complex workflow processes, with tips, reminders, and quality checks along the way. These automated processes for data verification have increased staff efficiency while also improving data reliability.

THE LRE WATER ADVANTAGE

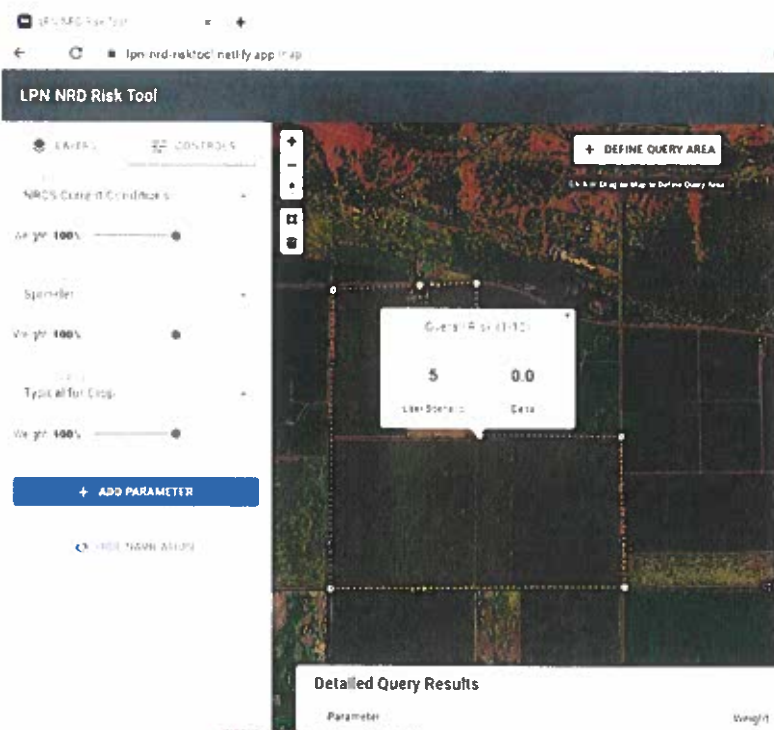
The custom tools we developed for CCWCD are just one example of LRE Water's experience, expertise, and qualifications with public form submissions, mapping, and data requests.

User Security

The data management system includes the ability to assign user permissions based on login role and application. CCWCD Staff, members, and stakeholders may all use the system to query data, but each user's access to data is controlled by the system administrator. For CTGCD, this security creates the opportunity to create user accounts with different permissions and access depending on whether the user is part of the District staff, a permittee, or a stakeholder interested in the hydrogeologic data.

Custom Reporting

The CCWCD data management system includes a sophisticated, but easy to use, query tool that provides access to all data in the system, filtered by user permissions. An open-ended query tool combined with pre-configured reports and saved views ensures that data are easy to obtain and not locked away in a black box. In addition to the query tool, users may take advantage of custom reports, download tools, and print functions to pull data out of the system as needed for their unique purposes. The CCWCD system also includes web services for linking to third party tools and capturing data from outside sources. These types of custom tools we developed for CCWCD are just one example of LRE Water's experience, expertise, and qualifications with public form submissions, mapping, and data requests.



Above: The Lower Platte North Natural Resource District Risk tool summarizes model results on the fly based on user-provided area selection and scenario controls

THE LRE WATER ADVANTAGE

Our team understands the specific needs of the integrated system that the BSEACD requires. LRE Water will build a dashboard that is agile, delivering core functionality sooner rather than later which will allow you to test the dashboard early and prioritize development. Our approach gives you the ability to build out your system in the future as your needs evolve.

LOWER PLATTE NORTH NATURAL RESOURCE DISTRICT, NEBRASKA DATA MANAGEMENT AND RISK ASSESSMENT TOOL

LRE Water's experience, expertise, and qualifications developing integrated mapping systems is well illustrated in our project for the Lower Platte North Natural Resource District. Well management districts (referred to as "Natural Resource Districts" or NRDs) in parts of Nebraska are challenged with mitigating nitrate contamination of groundwater. LRE Water designed a data management system that brings together relevant GIS layers, water quality monitoring information, and model outputs to provide a quick assessment tool for District managers to identify areas at high risk for contamination.

The system we designed is much more than just an integrated mapping system. Along with the usual data display and management functions, the tool also includes a "What-if...?" scenario mode allowing for the evaluation of field-level positive or negative impacts that would result from changing farming practices. By integrating knowledge related to certain Best Management Practices (BMPs), such as cover cropping or no-till practices, the District can use the system to identify members farming in areas with higher risk for nitrate contamination in the groundwater and use the tool to demonstrate how changes in farming practices could mitigate the risk.

CHERRY CREEK BASIN WATER QUALITY AUTHORITY

Since 2010, LRE Water has worked as the Cherry Creek Basin Water Quality Authority's "Watershed Consultant," providing a broad range of planning, reporting, permitting, GIS, and data support roles. As part of this work, LRE Water developed and maintains the Authority's centralized water quality database system. This system includes a robust and interactive water quality data portal which allows them to move their Annual Report from a static PDF document to a highly interactive, data-driven online report. This publicly available resource features rich infographics and interactive graphs that make the data and technical regulatory information highly digestible. Most importantly, the online report is easily maintainable and has significantly reduced the amount of time required to produce the Authority's Annual Report. The data portal is open to read-only use by the public, providing a significant benefit for residents of the area and to those interested in studying and understanding water quality in Cherry Creek basin.

VISIT THE PORTAL: <https://ccbwwqportal.org/>

(no login required)

REFERENCES

DIRK AARON

General Manager
Clearwater Underground Water Conservation District
 daaron@cuwcd.org
 http://www.cuwcd.org
 254-933-0120 office

RUTHANNE SCHAFFER

Water Resources Analyst
City of Thornton
 ruthanne.schaffer@thorntonco.gov
 720-977-6600

DREW DAMIANO

Vice President of Operations
United Water and Sanitation District
 drew@thebromleycompanies.com
 303-659-5000

WALT MARTIN

President
Siloam Well Association
 walt.martin@hmpropertiesllc.com
 719-339-4208

BILL RUZZO & JOHN MCCARTY

Co-Managers
Cherry Creek Basin Water Quality Authority
 bill.ruzzo@comcast.net; 303-598-5358
 johnmccarty1972@gmail.com; 720-884-6310

REGISTRATION, LICENSES, AND CERTIFICATION

Staff Name	Type of Licensure	State of Licensure	License #
Jordan Furnans	Professional Engineer Professional Geoscientist	Texas Texas	97316 11002
Micaela Pedrazas	Engineer-in-Training Geologist-in-Training	Texas Texas	70950 510
Kelly Close	Professional Engineer	Colorado	44870
Katy Kaproth-Gerecht	Professional Engineer	Colorado	51809



APPENDIX A

KEY PERSONNEL RESUMES

JORDAN E. FURNANS, PhD, PE, PG

Water Resources Engineering and Project Management



Jordan leads LRE Water, LLC in Round Rock, Texas. His 22 years of professional experience encompasses both field hydrologic data collection and analysis of data through the development and application of numerical models. He specializes in water availability modeling (groundwater and surface water), groundwater management, well design, water rights analysis & acquisition, hydrology & hydraulics, water supply planning/evaluation, water valuation, water right accounting; optimization, coupled field and model hydrodynamic investigations of estuaries, lakes, and rivers; linking water quality and hydrodynamics in natural systems; watershed hydrology planning and management; flood plain management; hydrographic and sedimentation survey methods; and freshwater inflow and instream flow requirements for ecosystem health.

EDUCATION

PhD, 2005, Civil Engineering
The University of Texas at Austin
MSE, 2001, Environmental & Water Resources Engineering
The University of Texas at Austin
BSE, 1999, Civil/Geological Engineering, Princeton University
US Fulbright Fellowship, 2002-2003, Centre for Water Research
The University of Western Australia

PROFESSIONAL REGISTRATION

Professional Engineer
TX (2006) No. 97316
CO (2010) No. 44217
NM (2010) No. 19880
OK (2012) No. 26095
AZ (2015) No. 61061
KS (2019) No. 26856
Professional Geoscientist
TX (2011) No. 11002
National Society of Professional Surveyors (NSPS) Certified Hydrographer
USA (2011) No. 268

EMPLOYMENT & GENERAL EXPERIENCE

LRE Water, LLC, Round Rock, TX 2015-present
Senior Project Manager, Vice President and Manager of the LRE Water, Inc. Texas office – conducts and supervises water resource investigations, including State of Texas WAM modeling, water availability modeling, water rights permitting & analysis, watershed hydrology, surface water supply/analyses, groundwater availability assessments/modeling, groundwater well design/permitting, reservoir and river operations modeling, and hydrographic surveys of reservoir volumes and sedimentation.

The University of Texas at Austin, Austin TX, 2016-present
Adjunct Faculty – Department of Civil, Architectural, and Environmental Engineering – Teaching CE 356 – Fundamentals of Hydraulic Engineering

INTERA, Inc., Austin, TX 2009-2015
Senior Water Resources Engineer & Surface Water Team Manager

Texas Water Development Board, Austin, TX, 2003-2009
Water Resources Engineer – Served as an engineering specialist assisting in State of Texas programs related to Instream Flow evaluation, Bays & Estuaries modeling, Water Availability Analyses, and Hydrographic Surveying.

FEATURED PROGRAM & PROJECT EXPERIENCE

Project Manager – LRE Water TX Groundwater Projects
Provides oversight and comprehensive project management of all LRE Water Texas groundwater projects, including interactive map development for Clearwater UWGD, well design engineering/field oversight, groundwater availability studies/hydrogeologic report preparation, GMA explanatory report preparation/review, and large-scale TWDB groundwater research projects.

State of Texas Estimate of Groundwater Pumping Volumes, Locations, and Aquifers for West Texas, TWDB, 2020-2022

Project Manager/Engineer. Served as project manager for effort to revise and improve historical groundwater pumpage datasets for the Pecos Valley, Edwards-Trinity (Plateau), Lipan, Trinity (Hill Country), and Edwards (Balcones Fault Zone) aquifers. Revised datasets were based on the TWDB water use survey datasets, updated through improved and uniformly applied analysis techniques. Pumpage was quantified by year from 1984-2018 for each of 54 counties and 5 aquifers. We also developed an ArcGIS tool that translates the pumpage data into MODFLOW Wel files for use within the TWDB GAM program. TWDB Contract Number 2048302456.

State of Texas Estimate of Groundwater Recharge Volumes and Locations for West Texas, TWDB, 2020-2022

Staff Engineer. As a subconsultant to WSP, Inc, led project efforts to assess historical recharge in west Texas using the Soil Water Balance (SWB) model, the USGS Groundwater Toolbox (RECESS & RORA), and a modified SCS Curve Number method. Developed the modified SCS Curve number method for assessing recharge as a rapid means of assessing recharge ranges using automatable, standard hydrologic analysis techniques without required calibration. Applied all methods to the Pecos Valley, Edwards-Trinity (Plateau), Trinity (Hill Country), and Edwards (Balcones Fault Zone) aquifers .TWDB Contract Number 2048302455.

Groundwater Development – Webb County, TX, Earl & Associates 2021-Present

Project engineer responsible for the design, permitting, and construction oversight of groundwater wells in Webb County to support local residential, commercial/industrial development along I-35 as well as to provide supplemental public water supplies for the City of Laredo.

Camp OTX Groundwater Well Design & Permitting – Bandera, TX, 2021-Present

Project Manager/Engineer. Developed groundwater well permit applications to the Bandera County River Authority and Conservation District, application to TCEQ for a new public supply groundwater well, and well design specifications for groundwater wells to support camp operations. Permits pending approval in January 2022, with drilling/construction to commence shortly thereafter.

Evaluation Rainfall-Runoff Trends in the Upper Colorado River Basin, Phase II, TWDB, 2018-2019

Project Manager/Engineer. Leading the ongoing investigation to determine the cause of diminished rainfall/runoff response in the Upper Colorado River Basin, and to quantify the reduction in streamflow resulting from determined causes. This investigation involves quantifying the impact of small detention structures of runoff-based streamflow, assessing the impact of continued groundwater production on springs and baseflow, correlating trends in precipitation, temperature, and soil moisture to streamflow production, and compiling statistical analyses to suggest streamflow impacts and potential mitigation measures. TWDB Contract Number 1800012283.

State of Texas Subsidence Risk Identification due to Groundwater Pumping, TWDB, 2017-2018

Project Manager/Engineer. Served as project manager for effort to assess subsidence risk in all major and minor aquifers across Texas, quantifying relative risk and developing mathematical tools to incorporate subsidence risk in groundwater permitting decisions. TWDB Contract Number 1648302062.

KELLY CLOSE, PE

Senior Technical Advisor | Water Rights Engineer | Technology Team Lead



Kelly leverages modern technologies to meet water planning and management challenges. Her passion is finding better ways to turn data into information, streamline data-driven reporting and modeling, and support efficient day to day water operations. Her background includes water rights engineering and accounting, surface and ground water modeling, rainfall runoff predictive modeling, water quality analysis, field data collection and environmental permitting. Kelly leads LRE's Water Information Technology (WIT) team, an interdisciplinary group of water experts with a knack for the high tech, collaborating with clients to deliver intelligent and long lasting data management and analytical solutions to water management challenges.

EDUCATION

B.S., Environmental Design,
University of Colorado 1992,
additional Coursework in
mathematics, 2003 - 2007

PROFESSIONAL REGISTRATION

Professional Engineer
CO#44870

PROFESSIONAL ACTIVITIES

American Water Resources
Association (AWRA)

2021

Shannon Estates Water and
Sanitation District (SWSD) –
Current Board Vice President

2017

Colorado Lake and Reservoir
Management Association
(CLRMA) – President

2016 - Present

Crystal Lakes, Colorado Water and
Sewer District Board (CLWSD)
Colorado Foundation for Water
Education 2009 Water Leaders

FEATURED PROGRAM & PROJECT EXPERIENCE

Flying B-Bar "B20" Water Tracking Dashboard: Kelly led the design and deployment of a mobile-friendly tool for managers to track key water delivery system metrics. The tool employs animated graphics and delivers real-time pumping and delivery data to operators, decision makers, and Flying B clients. A sophisticated database supports alerts and individualized content while a hierarchical interface delivers high-level summaries as well as detailed views of the raw telemetry data.

Central Colorado Water Conservancy District (CCWCD), Colorado: Kelly leads development, hosting and support for database and web tools that automate accounting, capture telemetry data and water quality data, and provide visualization, analytics and online reporting, to help CCWCD staff manage over 1300 wells, recharge ponds, irrigation reservoirs, and flow stations. The non-proprietary system is highly customizable and adaptable to CCWCD's ever-changing needs.

United Water and Sanitation District Water Operations Dashboard: Kelly designed and built a cloud based data collection and management system leveraging an open source platform. The system automates data collection for hundreds of private and public telemetered monitoring stations on structures along the Front Range. Data telemetry data are captured and stored in a cloud database which processes the data and serves it up to a series of customized data visualization tools on the web. The Dashboard includes easy to comprehend interactive graphics, conveys real-time and historical data and long-term trends.

Colorado Water Conservation Board, Efficiency Data Portal: In support of House Bill 1051, CWCB contracted with LRE to create a web based data entry and analysis tool for municipal water providers throughout Colorado to meet the HB1051 regulations by submitting data reflecting past, current and planned water conservation efforts. Kelly led the development of a non-proprietary web portal for online data entry into a database hosted and maintained by LRE. cowaterefficiency.com | user: CWC Demo | password: CWC#d3m0!

Central Colorado Water Conservancy District (CCWCD), Colorado: Kelly leads development, hosting and support for database and web tools that automate accounting, capture telemetry data and water quality data, and provide visualization, analytics and online reporting, to help CCWCD staff manage over 1300 wells, recharge ponds, irrigation reservoirs, and flow stations. The non-proprietary system is highly customizable and adaptable to CCWCD's ever-changing needs.

Siloam Well Association Water Accounting Dashboard: To provide an easy meter data entry platform for well owners in the Siloam Well Association, LRE created and supports a mobile-friendly website with a database back end. The system calculates well pumping and models stream depletions each time new meter readings are entered and provides Division 2 staff with always-current accounting for the Association's well augmentation plan.

Town of Firestone Automated Water Accounting, Colorado: Kelly is working with the Town of Firestone to build out their water accounting in a web-based environment. The forms will include automated data imports for streamflow gages and river calls, customized reports for stakeholders, and automatic submittal tools for meeting Division 1 reporting obligations.

City of Greeley Water Demand Study, Colorado: Kelly developed a custom Microsoft Access Pilot-project system to evaluate a tiered billing rates structure for residential, outdoor water use in Greeley. Target water use volumes were calculated from GIS layers intersected with aerial photos and actual use was compared by processing residential meter data, and Northern Colorado Water Conservancy District daily published turf grass requirements.

Cherry Creek Basin Water Quality Authority (CCBWQA), Colorado: Kelly led the development of a comprehensive water quality database and website for CCBWQA that helps them meet regulatory compliance, stakeholder outreach, modeling and reporting needs. For the past 3 years, CCBWQA has used the system to publish an online and interactive Annual report. The system includes secure login roles for data upload, download and editing while allowing all users to access visualizations and analysis tools.

<https://ccbwqportal.org>

Mile High Flood District (MHFD) Alert Maps, Colorado: Kelly manages ongoing work with the MHFD supporting flood managers and public users with online access to flood alerts and climate and hydrology data in the Denver Metro area. Web sites incorporate map based graphical displays and data behind the sites are managed in a cloud-based database. From May – October each year LRE and her team monitor a real-time rainfall runoff modeling system they developed for MHFD in 2010, which runs every 5 minutes and reports data to a web-based model output viewing tool.

KATY KAPROTH-GERECHT, PE

Lead Database Integration Specialist | Senior Project Engineer



Katy Kaproth-Gerecht is a Senior Project Engineer with more than eight years of experience on the Water Innovation and Technology Team. She provides technical expertise on water resources modeling for decision support; custom code, database, and web tool development for data management, visualization, and communication; and supply and demand optimization for long-term planning. She specializes in transforming complex water resources data into succinct and useful information for stakeholders. Katy manages and models all types of water-related information to support water rights, water quality, water use, supply and demand, rainfall-runoff forecasting, watershed systems, and river and reservoir operations projects. Prior to joining LRE Water, Katy worked as a National Science Foundation graduate fellow with research focused on surface water-groundwater interactions in both large regulated rivers and small headwater streams, as well as wildfire impacts on infiltration.

EDUCATION

M.S., Civil Engineering
The Pennsylvania State University 2012
B.S., Engineering Science Smith College 2010

PROFESSIONAL REGISTRATION

Professional Engineer
CO (#0051809)

EXPERIENCE

2014 – Present
LRE Water, Denver

PROFESSIONAL ACTIVITIES

Water Education Colorado
2021 Water Leaders Graduate
CWC EDI Committee
CWC POND Committee Chair
Water Resources Research Scientific Journal – Reviewer

FEATURED PROGRAM & PROJECT EXPERIENCE

Gulf Coast Water Authority, Predictive Streamflow

Dashboard: Katy created a web-based visualization tool for predictive flow model output in the lower Brazos River basin in Texas including interactive mapping capabilities. This tool displays and visualizes flow data from USGS stream and river gages of interest as well as predicted flows at two weeks, one month, three months and six months into the future.

Central Texas Water Coalition Highland Lakes Water Balance

Model Review: Katy provided a detailed review of the Highland Lakes Water Balance Model (developed in MATLAB) functionality and results used by CTWC to simulate water availability under water management policies and historical hydrologic patterns. This review helped determine that a two-year period (that included a severe drought) must be included in the overall water availability modeling effort to accurately quantify the available yields.

Dominion Water & Sanitation District, Supply & Demand

Daily Operations Management: Katy has led the design and development of a database used to manage and visualize water supply, demand, and use data. This database automatically imports data from multiple sources and then provides a user and data visualization interface using Google Data Studio. Data from this effort will be used in support of the development of a new daily operations system model to meet water demands in the most economical way.

City of Greeley Milton Seaman Water Supply Project (MSWSP) Water Quality Model

Development: Katy led the design, development, and application of a water quality model (written in PL/pgSQL) for the Cache La Poudre River to assess project impacts for an Environmental Impact Statement (EIS) in support of a 404 permit with the U.S. Army Corps of Engineers. She developed this mass-based model in a nonproprietary PostgreSQL database environment with a flexible web-based user interface for dynamic model control and output visualization.

Central Colorado Water Conservancy District (CCWCD)

Katy supports the management and development of accounting, web, and database tools that provide CCWCD with real-time data visualization, analysis, reports and aid in monitoring and accounting for district wells, recharge ponds, and flow stations. These tools are highly customizable and have greatly reduced the data management burden on CCWCD staff. [ccwcd2.org/Central]

Water Information Dashboards, Web Tool Development

Katy developed customized web-based water information management and operations tool suite in collaboration with multiple South Platte Basin water users (including Platte Valley Irrigation Company, United Water and Sanitation District, Greeley Irrigation Company, CCWCD, and others) and the CWCB. These dashboards increase operational efficiency by providing quick and easy access to real-time data displays, integration of data from public and independent sources, interactive maps, dynamic alerts, user communication tools for mass messaging, and document management.

Cherry Creek Basin Water Quality Authority (CCBWQA), Water Quality Data Services

Katy supports a comprehensive water quality database and website allowing for data management and visualization that enables the Authority to meet regulatory compliance, stakeholder outreach, and reporting needs. For the past 3 years, CCBWQA has used this system to publish an online and interactive Annual report. The system includes secure login roles for data upload, download and editing while allowing all users to access visualizations and analysis tools. [ccbwwqportal.org]

City of Greeley Terry Ranch Aquifer Storage & Recovery Project, Water Quality Data Management

Katy supported the City of Greeley's data management needs for its due diligence aquifer characterization of the Upper Laramie aquifer beneath the Terry Ranch property for possible aquifer storage and recovery. Katy created a comprehensive water quality database for management of project grab sample data for over 600 unique water quality parameters. The dataset involved significant QAQC as the 9,000 individual analyses were completed by 15 different laboratories. Katy also enabled the client to easily view, filter, and download data in a custom Google Data Studio dashboard and compare data collected against Colorado Regulation 41 groundwater standards. The project was successful with Greeley beginning development of the largest ASR project in Colorado.

Colorado Division of Water Resources (DWR), Arkansas Basin Operational Tools

Katy has worked with Division 2 staff to develop tools for efficient daily management of water, leveraging the Google Stack, a custom online Dashboard (in Drupal) and PostgreSQL database environment to streamline the request process, inform and alert water users of daily river activities, and automate daily reporting to the State's central diversion records database. [div2waterops.com]

MICAELA PEDRAZAS, MSc, EIT, GIT

Hydrogeologist



Micaela Pedrazas has five years of research and professional experience as a hydrogeologist specializing in data analysis and visualization using Python, Shiny App development using R, hydro-geologic data collection, numerical groundwater flow modeling using various MODFLOW codes, evaluation of groundwater mounding beneath infiltration basins, and performing geophysical surveys of groundwater systems, including the interpretation of hydro-geophysical signals from geophysical logs and those obtained from surface electrical, magnetic and gravity prospecting methods. Micaela has been responsible for groundwater field data collection and groundwater modeling activities in diverse environments including Alaska, Arizona, Bangladesh, Bolivia, Colorado, and Texas.

EDUCATION

MSc., 2020, Geological Sciences
The University of Texas at Austin
BSc., 2017, Geophysical Engineering
Minor: Humanitarian Engineering
The Colorado School of Mines

PROFESSIONAL REGISTRATION

Engineer-In-Training (EIT) –
Texas No. 70950
Geologist-In-Training (GIT) –
Texas No. 510

RELEVANT EXPERISE

Data Analysis and Visualization
MODFLOW Groundwater Modeling
Groundwater Mounding Analysis
3D Geologic Model Construction
Site Investigation
Analysis of Down-Hole Geophysics
Aquifer Testing Analysis
Preparation of Technical Reports
Construction and Drilling Oversight
Environmental Soil and Water
Sampling

FEATURED PROGRAM & PROJECT EXPERIENCE

Hydrogeology Assessment, Fairfield, Texas (2022): Micaela assessed the potential impact expected to occur in wells within a 2-mile radius of the proposed well site. She determined aquifer properties from the MODFLOW-USG groundwater flow model and modified the well package to evaluate incremental drawdown in the County.

Groundwater Availability Assessment, Southwest Water Company, Grayson County, Texas (2022): Micaela calculated the projected groundwater supply deficit and identified benefits and challenges associated with various strategies to meet future water demands. She assessed the local hydrogeologic conditions using both field and modeled datasets to identify optimal sites for groundwater development. She prepared a summary report of the quantity and quality of groundwater available with recommendations for a well field and associated costs for well drilling considering the client's existing infrastructure.

Aquifer Protection Permit (APP) Mounding Analysis, EPCOR Water, Copper Basin, Arizona (2022): In support of an APP application, Micaela used MOUNDSOLV to calculate the height of the groundwater mound resulting from recharge beneath infiltration basins. She used both simulated and measured parameters to carry out a simulation to determine the potential areal extent of pollutant migration due to discharge from the facility.

Groundwater Development, Simeon Escondido, LLC , Laredo, Texas (2021-2022): Micaela compiled, reviewed, and identified formations in geophysical logs from various groundwater well databases to develop a 3D conceptual model and recommend an optimal location for a proposed deep test well. She calculated expected total dissolved solids values at the target interval using geophysical logs and nearby field measurements. As the field hydrogeologist, she oversaw drilling and geophysical logging, as well as evaluated lithologic cuttings and analyzed aquifer testing data to determine aquifer hydraulic properties. The aquifer properties were used to provide recommendations for a well field design that maximizes potential yield while minimizing overall aquifer drawdown.

Hydrogeologic Report Preparation, Multiple Groundwater Conservation Districts (GCDs), Texas (2021-2022): Micaela prepared a discussion of the hydrogeologic setting customized to each GCD's Hydrogeological Report requirements. She extracted the aquifer parameters from an approved groundwater availability model and noted any variability in the model parameters from measured data. She simulated the effects of production from the proposed well after 24 hours, 30 days, and 1 year, to assess the projected impact on nearby wells. She prepared a hydrogeologic report summarizing her findings that met the GCD's report requirements.

Estimated Sustainable Groundwater Production, Texas State University, Texas (2021): Micaela performed groundwater flow simulations using nine regional Texas groundwater availability models and modifying the input pumping amounts. She used PEST++ to aid in the calibration of the models resulting in the modeled pumping amount where simulated aquifer conditions met the sustainability target criteria.

Aquifer Status Evaluation Tool, Clearwater Underground Water Conservation District, Bell County, Texas (2020): Micaela developed a user-centered application to assess aquifer conditions based on measured water levels and water quality parameters. She collaborated with the District to ensure that the application's design and functionality met their changing needs. She implemented code enhancements in R language and updated the tool documentation and input datasets.

Groundwater Availability Determination, Confidential Client, Webb, Zapata and LaSalle Counties (2020): Micaela used existing groundwater availability model runs for regional MODFLOW models to estimate permeability values for potential oil and gas wells in the Sparta and Carrizo formations and groundwater availability estimates in the Wilcox, Gulf Coast, Queen City and Yegua-Jackson formations. She succinctly summarized the results in a report with maps to provide insights on each aquifer's structure, hydraulic characteristics, water quality and potential well yield.

Development of Pumping Volumes, Locations, and Aquifers, Texas Water Development Board, Central and West Texas (2020-2022): Micaela carried out a comprehensive literature review of pumping volume estimates in the Edwards, Trinity, Edwards-Trinity (Plateau), Lipan and Pecos Valley aquifers in 57 counties in Texas. She integrated well data from the several databases into one geodatabase. Micaela analyzed and visualized groundwater pumpage using Python by county, aquifer, and water use. She developed an automatic groundwater pumping data anomaly detection method and corrected pumpage based on research.

MICHAEL BARRY

Full Stack Web Developer



Michael Barry is a self-taught full-stack web developer for the Water Information Technology Team with a background of more than ten years of operations management. He creates data-driven graphical user interfaces to empower water resources decision makers. This includes water engineering projects, interactive maps, dynamic graphs & charts, and data management tools. Michael collaborates with several teams to deliver a clean project to the client.

FEATURED PROGRAM & PROJECT EXPERIENCE

EDUCATION

BA, Business, SUNY Oneonta, NY
2009

EXPERIENCE

2021–Present
LRE Water – Denver, CO

TECHNICAL SKILLS

JavaScript, ReactJS, HTML, CSS, PostgreSQL, Mapbox, ChartsJS, Node.js, Material-UI, Auth0, mobile design

VALUE TO PROJECT

- Development of creative and flexible user graphical interfaces
- Data visualization, maps, decision support tools
- Solutions driven problem solver

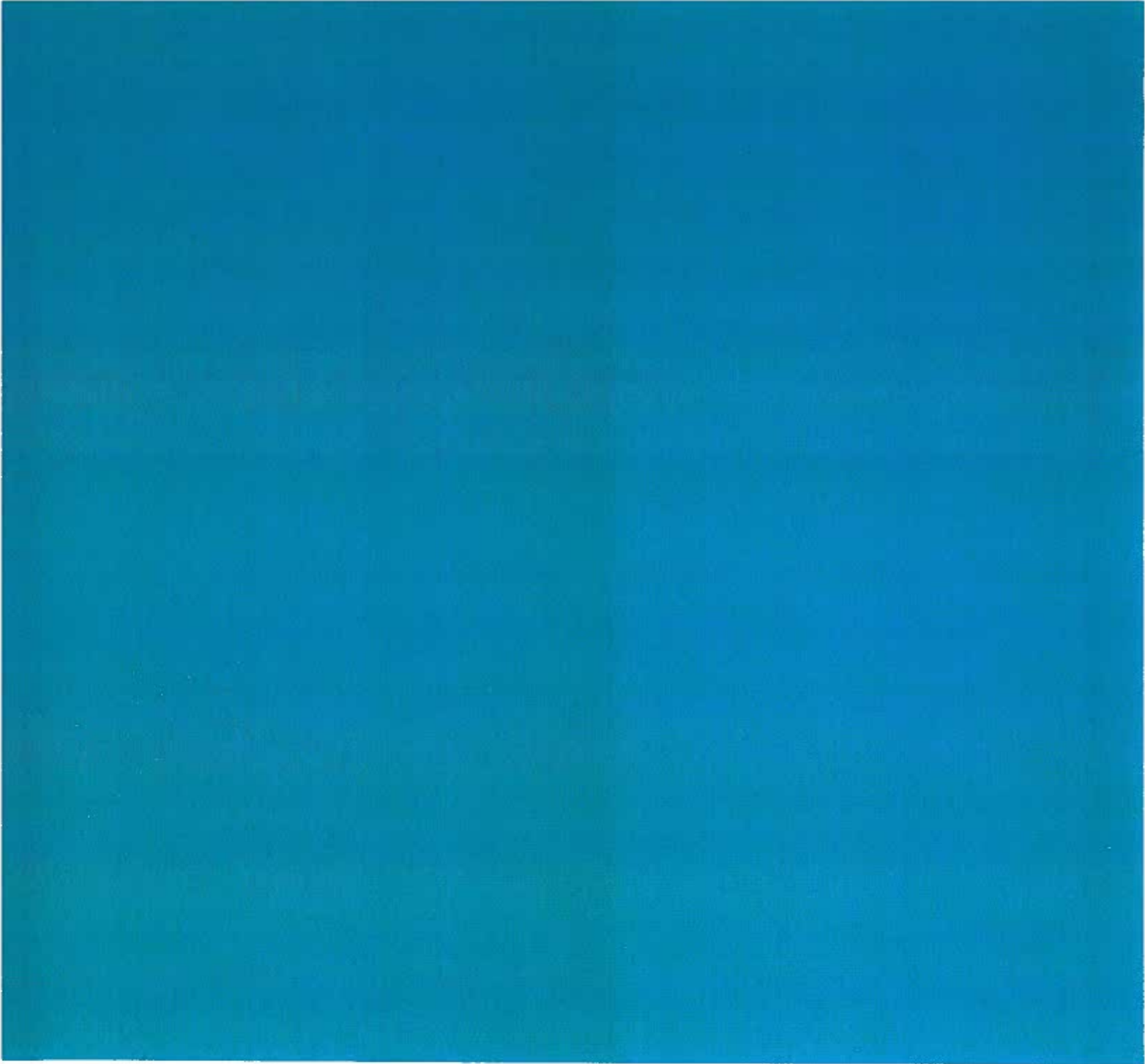
LRE Water Unified Platform, Web Tool Development: Michael co-developed an open-sourced web application that is tailor-made for water engineering projects. It encapsulates a fantastic starting point for entering & analyzing data, accessing & visualizing wells & properties, and viewing reports & analytics. Using this design, he has created projects for Central Colorado Water Conservancy District, Clearwater Underground Water Conversation District, the town of Telluride, the town of Pipestone, Idaho Surface Water Coalition, and Cherry Creek Basin Water Quality Authority.

Cherry Creek Basin Water Quality Authority Watershed Web Development: Michael manages the web development of the CCBWQA Water Quality Data Portal and associated web-based interactive Annual Report of activities for the Colorado Water Quality Control Commission that enable users to access data efficiently, comprehend & integrate information and transform data into actionable insights.

Eagle County Watershed Portal : Michael expanded this platform where staff and stakeholders can access and analyze baseline watershed information via an online interactive portal that calculates statistics, enables targeted evaluations based on flexible queries, and translates results to potential risks. He has created several new data visualizations, mapping interfaces, and other analytics.

Central Colorado Water Conservancy District (CCWCD), Colorado: Michael leads the web development and works closely with a team who help deliver hosting & support for database & web tools that automate accounting, capture telemetry data and water quality data, and provide visualization, analytics, & online reporting, to help CCWCD staff manage over 1300 wells, recharge ponds, irrigation reservoirs, and flow stations. The non-proprietary system is highly customizable and adaptable to CCWCD's ever-changing needs.

United Water and Sanitation District Water Operations Dashboard: Michael maintains web presence which allows the client and LRE project managers to interact with data that is collected for hundreds of private and public telemetered monitoring stations on structures along the Front Range. It also displays customized data visualization charts, graphs, and maps.



COSTS AND TIMELINE ADDENDUM

BARTON SPRINGS / EDWARDS AQUIFER CONSERVATION DISTRICT

**PROFESSIONAL SERVICES RELATED
TO DEVELOPMENT OF A CUSTOMIZED DATABASE
APPLICATION**

September 12, 2022

September 12, 2022

Barton Springs/Edwards Aquifer Conservation District
Attn: Tim Loftus
1124 Regal Row, Austin TX 78748
Submitted Via Email: bseacd@bseacd.org

RE: Cost and Timeline Addendum for Development of a Customized Database Solution

Dear Mr. Loftus and Members of the Board,

Please find included in this document additional information supplementing our recently submitted Statement of Qualifications. The attached tables include a proposed scope of work with costs and an anticipated timeline for completion of your Customized Database Solution.

Table 1 summarizes overall costs for our proposed scope and includes information on long term hosting and support as well. Please note that LRE offers significant flexibility around long term hosting and support options to fit your needs and these example costs are a starting point for discussion.

Table 2 breaks down each phase of the project into tasks that provide more detail on the work we envision being done within each phase. The tasks have also been assigned to a timeline illustrating how we anticipate deliverables will be rolled out over time. Our strategy is to deliver system content early and often, giving you ample opportunity to review and provide feedback while there is still time and budget to make adjustments.

Table 3 provides additional details for each task describing more specifically what will be accomplished and how. This table begins to tie your system requirements with our scope of work, but is still at a high level, to help you fully understand our approach without getting too deep into the weeds.

Should BSEACD choose to engage LRE to build this system for you, one of our first tasks will be for LRE and BSEACD staff to work through your current, comprehensive system requirements list and correlate each item with one of our proposed tasks. This will ensure all of your requirements are being addressed fully in our approach. It is possible that adjustments to our scope would come out of that exercise however we do feel confident that our proposed costs would not change unless there are new requirements not reflected in the mockups and system requirements documents previously provided to us.

Thank you for this opportunity and we look forward to discussing the project with you further. Please do not hesitate to reach out to us with questions. You may reach me directly at kelly.close@lrewater.com or 720-301-3728.

Sincerely,



Kelly Close, PE
System Design and Development Team Lead



Jordan Furnans PhD, PE, PG
Vice-President Texas Operations & Project Manager

Barton Springs Edwards Aquifer Conservation District Data Management Dashboard
 LRE Water Development Scope, Costs and Timeline

TABLE 1. Cost Summary and Long Term Hosting/Support Examples

See Tables 2 and 3 for timeline and scope of work details

Project Phase	Hours	Cost*
Basic Platform Setup	60	\$10,800
Map and Dashboard Initial Customization	80	\$14,400
Data Management Customization	180	\$32,400
Continued Testing and Refinement	120	\$21,600
Reports and Queries	160	\$28,800
Total Year 1 Costs -		\$108,000
Recommended Year 2** Hosting + Support -		\$500 hosting + \$7500 support (can be adjusted to suit)
Typical Long Term Annual Hosting + Support -		\$500/year + \$1500/year support (can be adjusted to suit)
Example 5-Year Costs -		\$124,000
Example 10-year Costs -		\$134,000

* Costs have been calculated based on estimated hours to complete and a blended rate established based on our experience completing similar projects and the level of effort different staff billing at different rates typically contribute.

** Year 2 Hosting begins at the end of the 12-month development period (hosting is not charged during development). We recommend budgeting for additional support during the first year after development has completed to allow for extra, unanticipated system tweaks and training



BSEACD CUSTOMIZED DATABASE APPLICATION

Barton Springs Edwards Aquifer Conservation District Data Management Dashboard
LRE Water Development Scope, Costs and Timeline

Milestone Abbreviations:

v0=alpha v1=beta v2=production v3=final

Map = Public Map, Sys = Internal System Components

Ext = External Users Logged In Components

TABLE 2. Costs Breakdown and Proposed Timeline

Meetings and review periods will be ongoing throughout and are included in these costs

Project Phase	Task Description	Hours	Cost	Timeline (Months from Notice to Proceed)														
				1	2	3	4	5	6	7	8	9	10	11	12			
Basic Platform Setup	B01 Cloud Server Setup and Database Installation	60	\$10,800															
	B02 Detailed Requirements Review and Scope Adjustments																	
	B03 First-pass Data Migration																	
	B04 Refine Map-click Info Content and Map Point Filter/View-by Features																	
	B05 Navigation Side Bar Customization 1																	
	B06 Deploy and Test Public Facing Map v0 (alpha)																	
Map and Dashboard Initial Customization	C01 Second-pass Data Migration	80	\$14,400															
	C02 Implement Dashboard Widgets and Explorers																	
	C03 Add WL, WQ and Hydro graphs to Public Map UI																	
	C04 Add Additional and Secured Map Layers																	
	C05 Implement Saved Map Views																	
	C06 Load data for and enable Virtual Bore Tool																	
	C07 Navigation Side Bar Customization 2																	
	C08 Incorporate Feedback and Deploy Public Map v1 (beta)																	
	C09 Deploy and Test Secure Content v0 (alpha)																	
Data Management Customization	D01 Develop Forms and Processes for Creating New and Changing/Editing	180	\$32,400															
	D02 Develop Application Forms and Process (internal versions)																	
	D03 Develop Registration Forms and Process (internal versions)																	
	D04 Develop Well Owner Logged In Content (data entry, edit and review)																	
	D05 Develop External Application and Registration Forms and Process																	
	D06 Deploy v0 (alpha) External Applications and Registrations + Well Owner Logged In Content																	
	D07 Integrate Secure Content Feedback and Deploy New/Improved Internal System Components v1 (beta)																	
Continued Testing and Refinement	T01 Incorporate Public Map Feedback and Redeploy	120	\$21,600															
	T02 Incorporate Feedback and Improvements for Internal Forms and Processes and Redeploy																	
	T03 Incorporate Feedback and Improvements for External Forms and Processes and Redeploy																	
Reports and Queries	R01 Create Custom PDF Reports (i.e. Permit Certificates, etc)	160	\$28,800															
	R02 Build Canned Queries/Reports																	
	R03 Develop Open Ended Query/Download Tool																	
	R04 Develop Bulk Upload Process for Water Level and Water Quality																	

Barton Springs Edwards Aquifer Conservation District Data Management Dashboard
 LRE Water Development Scope, Costs and Timeline

TABLE 3. Detailed Notes

Project Phase	Task	Description	Notes
Basic Platform Setup	B01	Cloud Server Setup and Database Installation	<ul style="list-style-type: none"> Amazon Web Services (aws.amazon.com) w/ GW Management Template in PostgreSQL (postgres.org) Ubuntu 20.04 Linux operating system (ubuntu.com/community/mission) and secure login by Auth0.com
	B02	Detailed Requirements Review and Scope Adjustments	<ul style="list-style-type: none"> LRE will work with BSEACD staff to cross-check system requirements with this scope of work Adjustments may be made to scope to address all requirements
	B03	First-pass Data Migration	<ul style="list-style-type: none"> Migrate data from MS Access system that is directly portable Focus on the data that is needed for the public-facing map
	B04	Refine Map-click Info Content and Map Point Filter/View-by Features	<ul style="list-style-type: none"> For map layers deployed in this phase, specify info to be shown in pop-up when user clicks a map object Includes links to TWDB/USGS sources where appropriate Determine what attributes will be used for Filter buttons and toggles and Color By options
	B05	Navigation Side Bar Customization	<ul style="list-style-type: none"> Adjustment of the Basic Platform template side-bar navigation menu to suit this initial deployment
	B06	Deploy and Test Public Facing Map v0 (alpha)	<ul style="list-style-type: none"> Include BSEACD wells and public facing map layers Connect TWDB wells and USGS data identified by BSEACD and where readily available Solicit and compile feedback from BSEACD staff
Map and Dashboard Initial Customization	C01	Second-pass Data Migration	<ul style="list-style-type: none"> Migrate data from MS Access system that requires customization of the database template
	C02	Implement Dashboard Widgets and Explorers	<ul style="list-style-type: none"> Explorers & widgets rolled out as the database template customization continues and supports them Wells, Production and Monitoring Wells anticipated for this phase
	C03	Add WL, WQ and Hydro graphs to Public Map UI	<ul style="list-style-type: none"> Deploy Basic Platform versions "as-is" in this phase, connected to BSEACD's real data These will be customized in a later phase based on v1 feedback
	C04	Add Additional and Secured Map Layers	<ul style="list-style-type: none"> Some map layers on the public facing map will be hidden until a user logged in Depending on user credentials (aka "Role") secure layers may appear
	C05	Implement Saved Map Views	<ul style="list-style-type: none"> User's selected map layers and zoom/pan settings will be saved for logged in users Users may store an unlimited number of saved views
	C06	Load data for and enable Virtual Bore Tool	<ul style="list-style-type: none"> Basic Platform includes the "Virtual Bore Tool" functionality Raster data set describing geologic formations beneath the study area must be loaded to enable it
	C07	Navigation Side Bar Customization	<ul style="list-style-type: none"> Adjustment of the template side-bar navigation menu to fit all content (deployed and eventual)
	C08	Incorporate Feedback and Deploy Public Map v1 (beta)	<ul style="list-style-type: none"> Continue to test and solicit and compile feedback Potentially open up testing to include people outside of BSEACD and LRE
	C09	Deploy and Test Secure Content v0 (alpha)	<ul style="list-style-type: none"> Auth0 general logins will be created for permission level roles as required Continue to solicit and compile feedback

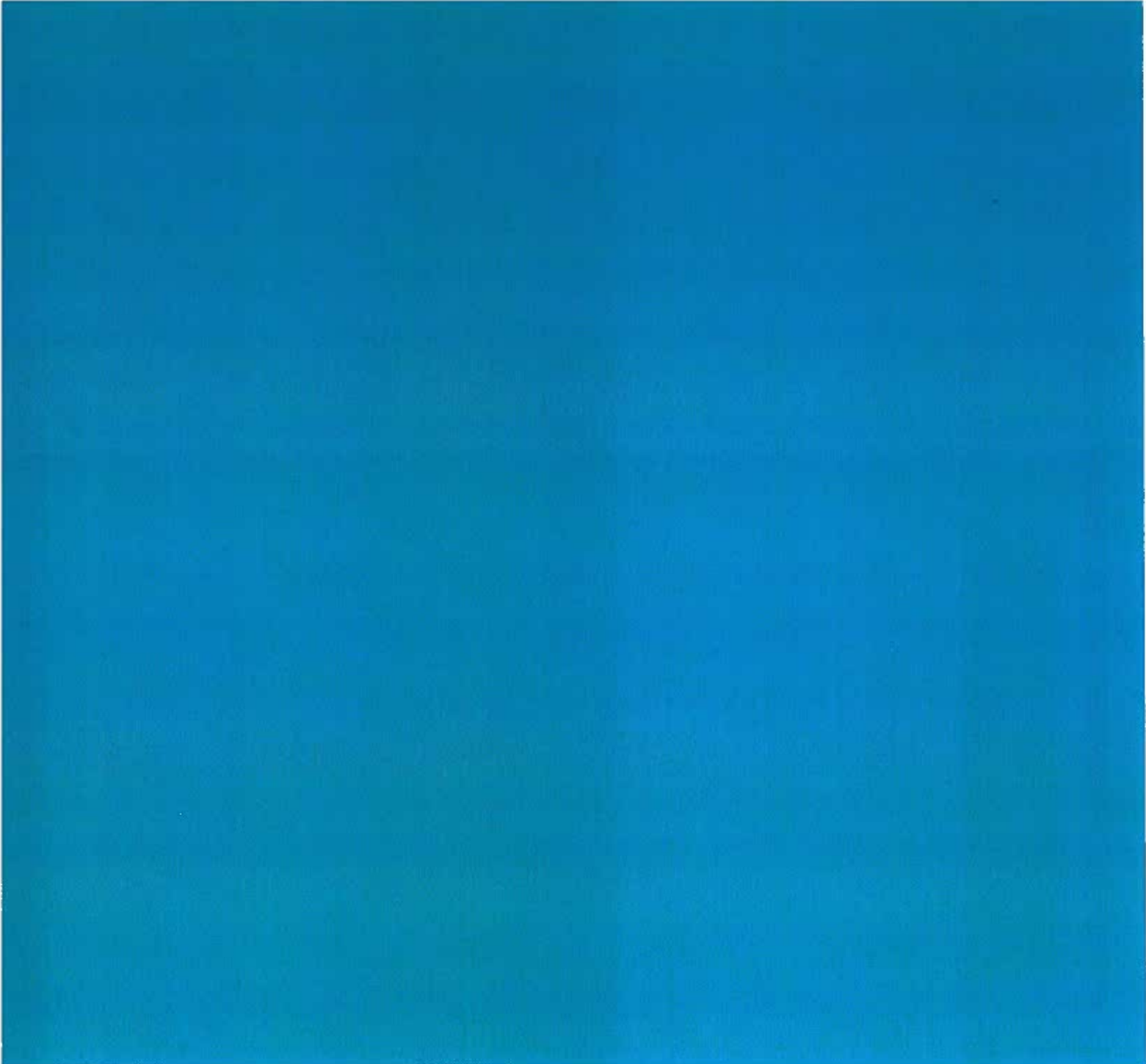


Barton Springs Edwards Aquifer Conservation District Data Management Dashboard
 LRE Water Development Scope, Costs and Timeline

TABLE 3. Detailed Notes

Project Phase	Task	Description	Notes
Data Management Customization	D01	Develop Forms and Processes for Creating New and Changing/Editing	<ul style="list-style-type: none"> - Adapt and extend template for data management - Wells, springs, surface water locations, owners, permits, permittees, meters - Associations between these elements - Meter readings, production, water quality, water levels
	D02	Develop Application Forms and Process (internal versions)	<ul style="list-style-type: none"> - Adapt and extend template to include BSEACD's requirements for these forms and processes
	D03	Develop Registration Forms and Process (internal versions)	<ul style="list-style-type: none"> - Adapt and extend template to include BSEACD's requirements for these forms and processes
	D04	Develop Well Owner Logged In Content (data entry, edit and review)	<ul style="list-style-type: none"> - Public-facing forms will route collected information into a "pending" section in the database to trigger review - Only finalized information will be saved to the main database once approved
	D05	Develop External Application and Registration Forms and Process	<ul style="list-style-type: none"> - Adapt and extend template to include BSEACD's requirements for these forms and processes
	D06	Deploy v0 (alpha) External Applications and Registrations + Well Owner Logged In Content	<ul style="list-style-type: none"> - Test Applications and Registrations forms and processes, address bugs and compile feedback - Create test logins to review owner-specific content
	D07	Integrate Secure Content Alpha Feedback and Deploy New/Improved Internal System Components v1 (beta)	<ul style="list-style-type: none"> - Add additional dashboard Widgets and Explorers per requirements - Continue Testing Internal System Components, addressing bugs and compiling feedback
Continued Testing and Refinement	T01	Incorporate Public Map Feedback and Redeploy	<ul style="list-style-type: none"> - Continue to test, compile feedback and integrate for final deployment
	T02	Incorporate Feedback and Improvements for Internal Forms and Processes and Redeploy	<ul style="list-style-type: none"> - Continue to test, compile feedback and integrate for final deployment
	T03	Incorporate Feedback and Improvements for External Forms and Processes and Redeploy	<ul style="list-style-type: none"> - Continue to test, compile feedback and integrate for final deployment
Reports and Queries	R01	Create Custom PDF Reports (i.e. Permit Certificates, etc)	<ul style="list-style-type: none"> - These reports produce a PDF that the user may save or print - These will be developed alongside the tasks above and deployed as available with each version - Per BSEACD Requirements
	R02	Build Canned Queries/Reports	<ul style="list-style-type: none"> - Output produces interactive on-screen table for review and download option to CSV - These will be developed alongside the tasks above and deployed as available with each version - Per BSEACD Requirements
	R03	Develop Open Ended Query/Download Tool	<ul style="list-style-type: none"> - Query tool provides access to most database fields - Users may query and download data in any combination of these fields
	R04	Develop Bulk Upload Process for Water Levels and Water Quality Data	<ul style="list-style-type: none"> - Use Dropbox or similar service to allow upload of pre-processed data to the system - LRE will provide a template for the data program QA/QC steps in the database to highlight possible errors - A post-upload user interface will enable resolution of issues once imported





COSTS AND TIMELINE ADDENDUM

BARTON SPRINGS / EDWARDS AQUIFER CONSERVATION DISTRICT

**PROFESSIONAL SERVICES RELATED
TO DEVELOPMENT OF A CUSTOMIZED DATABASE
APPLICATION**

September 12, 2022

September 12, 2022



Barton Springs/Edwards Aquifer Conservation District
Attn: Tim Loftus
1124 Regal Row, Austin TX 78748
Submitted Via Email: bseacd@bseacd.org

RE: Cost and Timeline Addendum for Development of a Customized Database Solution

Dear Mr. Loftus and Members of the Board,

Please find included in this document additional information supplementing our recently submitted Statement of Qualifications. The attached tables include a proposed scope of work with costs and an anticipated timeline for completion of your Customized Database Solution.

Table 1 summarizes overall costs for our proposed scope and includes information on long term hosting and support as well. Please note that LRE offers significant flexibility around long term hosting and support options to fit your needs and these example costs are a starting point for discussion.

Table 2 breaks down each phase of the project into tasks that provide more detail on the work we envision being done within each phase. The tasks have also been assigned to a timeline illustrating how we anticipate deliverables will be rolled out over time. Our strategy is to deliver system content early and often, giving you ample opportunity to review and provide feedback while there is still time and budget to make adjustments.

Table 3 provides additional details for each task describing more specifically what will be accomplished and how. This table begins to tie your system requirements with our scope of work, but is still at a high level, to help you fully understand our approach without getting too deep into the weeds.

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Thank you for this opportunity and we look forward to discussing the project with you further. Please do not hesitate to reach out to us with questions. You may reach me directly at kelly.close@lrewater.com or 720-301-3728.

Sincerely,

Kelly Close, PE
System Design and Development Team Lead

Jordan Furnans PhD, PE, PG
Vice-President Texas Operations & Project Manager

Barton Springs Edwards Aquifer Conservation District Data Management Dashboard
LRE Water Development Scope, Costs and Timeline

TABLE 2. Costs Breakdown and Proposed Timeline

Meetings and review-periods will be ongoing throughout and are included in these costs

Milestone Abbreviations:
v0=alpha, v1=beta v2=production v3=final
Map = Public Map, Sys = Internal System Components
Ext = External Users Logged In Components

Project Phase	Task Description	Hours	Cost	Timeline (Months from Notice to Proceed)													
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	R03	Develop Open Ended Query/Download Tool															
	R04	Develop Bulk Upload Process for Water Level and Water Quality	160	\$28,800													

NOTE: The lighter shaded months are feedback periods

BSEACD CUSTOMIZED DATABASE APPLICATION



Barton Springs Edwards Aquifer Conservation District Data Management Dashboard
 LRE Water Development Scope, Costs and Timeline

TABLE 1. Cost Summary and Long Term Hosting/Support Examples

See Tables 2 and 3 for timeline and scope of work details

Project Phase	Hours	Cost*
Basic Platform Setup	60	\$10,800
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Typical Long Term Annual Hosting + Support -		\$500/year + \$1500/year support (can be adjusted to suit)
Example 5-Year Costs -		\$124,000
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* Costs have been calculated based on estimated hours to complete and a blended rate established based on our experience completing similar projects and the level of effort different staff billing at different rates typically contribute.

** Year 2 Hosting begins at the end of the 12-month development period (hosting is not charged during development). We recommend budgeting for additional support during the first year after development has completed to allow for extra, unanticipated system tweaks and training.



BSEACD CUSTOMIZED DATABASE APPLICATION

Barton Springs Edwards Aquifer Conservation District Data Management Dashboard
 LRE Water Development Scope, Costs and Timeline

TABLE 3. Detailed Notes

Project Phase	Task Description	Notes
Basic Platform Setup	B01 Cloud Server Setup and Database Installation	<ul style="list-style-type: none"> - Amazon Web Services (aws.amazon.com) w/ GW Management Template in PostgreSQL (postgresql.org/) - Ubuntu 20.04 Linux operating system (ubuntu.com/community/rmsion) and secure login by Auth0.com
	B02 Detailed Requirements Review and Scope Adjustments	<ul style="list-style-type: none"> - LRE will work with BSEACD staff to cross-check system requirements with this scope of work - Adjustments may be made to scope to address all requirements
	B03 First-pass Data Migration	<ul style="list-style-type: none"> - Migrate data from MS Access system that is directly portable - Focus on the data that is needed for the public-facing map
	B04 Refine Map-click Info Content and Map Point Filter/View-by Features	<ul style="list-style-type: none"> - For map layers deployed in this phase, specify info to be shown in pop-up when user clicks a map object - Includes links to TMDBU/USGS sources where appropriate - Determine what attributes will be used for Filter buttons and toggles and Color By options
	B05 Navigation Side Bar Customization	<ul style="list-style-type: none"> - Adjustment of the Basic Platform template side-bar navigation menu to suit this initial deployment
	B06 Deploy and Test Public Facing Map v0 (alpha)	<ul style="list-style-type: none"> - Include BSEACD wells and public facing map layers - Connect TMDBU wells and USGS data identified by BSEACD and where readily available - Solicit and compile feedback from BSEACD staff
Map and Dashboard Initial Customization	C01 Second-pass Data Migration	<ul style="list-style-type: none"> - Migrate data from MS Access system that requires customization of the database template
	C02 Implement Dashboard Widgets and Explorers	<ul style="list-style-type: none"> - Explorers & widgets rolled out as the database template customization continues and supports them - Wells, Production and Monitoring Wells anticipated for this phase
	C03 Add W/L, WQ and Hydro graphs to Public Map UI	<ul style="list-style-type: none"> - Deploy Basic Platform versions "as-is" in this phase, connected to BSEACD's real data - These will be customized in a later phase based on v1 feedback
	C04 Add Additional and Secured Map Layers	<ul style="list-style-type: none"> - Some map layers on the public facing map will be hidden until a user logged in - Depending on user credentials (aka "Role"), secure layers may appear
	C05 Implement Saved Map Views	<ul style="list-style-type: none"> - User's selected map layers and zoom/pan settings will be saved for logged in users - Users may store an unlimited number of saved views
	C06 Load data for and enable Virtual Bore Tool	<ul style="list-style-type: none"> - Basic Platform includes the "Virtual Bore Tool" functionality - Raster data set describing geologic formations beneath the study area must be loaded to enable it
	C07 Navigation Side Bar Customization	<ul style="list-style-type: none"> - Adjustment of the template side-bar navigation menu to fit all content (deployed and eventual)
	C08 Incorporate Feedback and Deploy Public Map v1 (beta)	<ul style="list-style-type: none"> - Continue to test and solicit and compile feedback - Potentially open up testing to include people outside of BSEACD and LRE
	C09 Deploy and Test Secure Content v0 (alpha)	<ul style="list-style-type: none"> - Auth0 general logins will be created for permission level roles as required - Continue to solicit and compile feedback



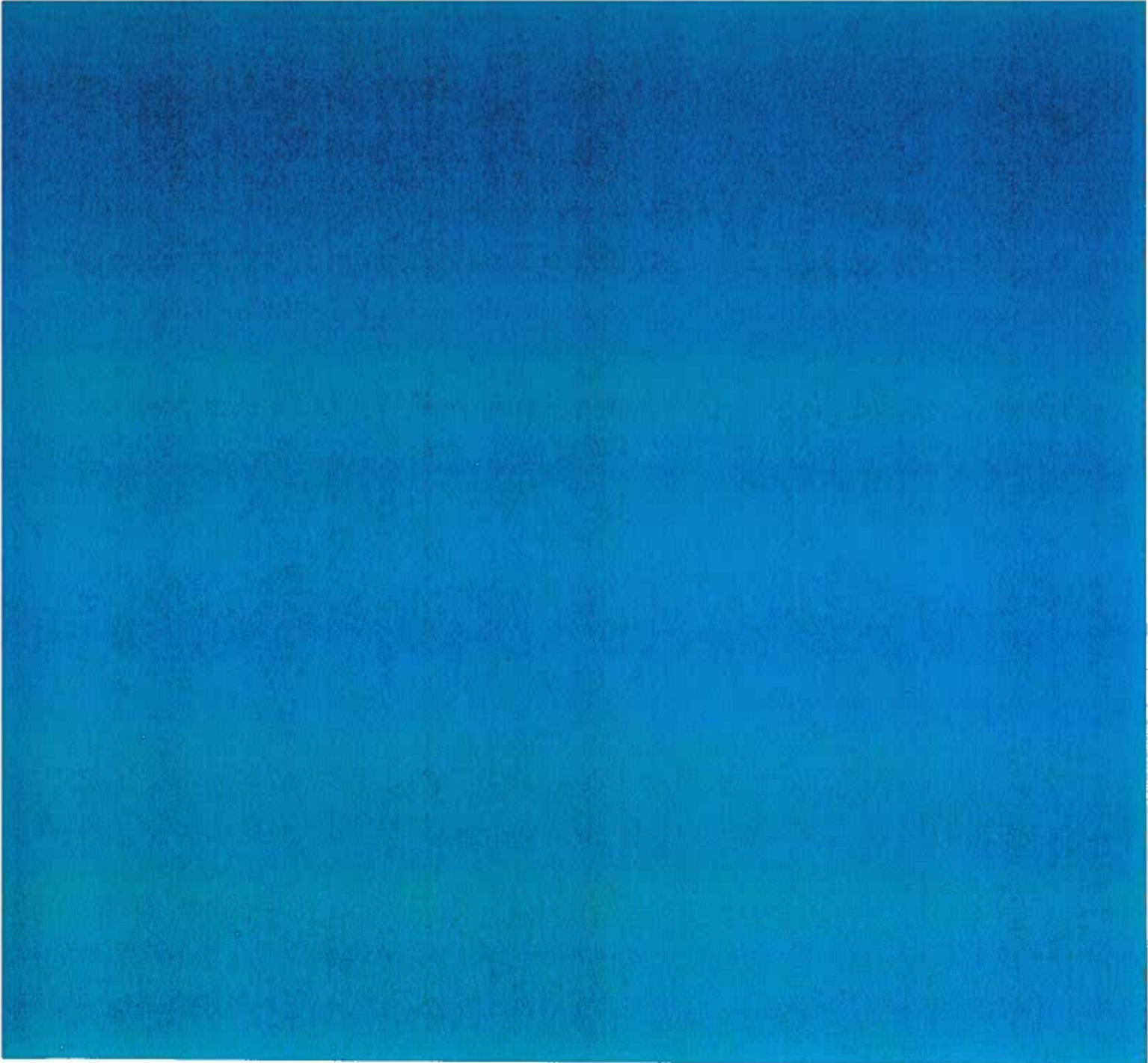
Barton Springs Edwards Aquifer Conservation District Data Management Dashboard
 LRE Water Development Scope, Costs and Timeline

TABLE 3. Detailed Notes

Project Phase	Task Description	Notes
Data Management Customization	D01 Develop Forms and Processes for Creating New and Changing/Editing	<ul style="list-style-type: none"> - Adapt and extend template for data management - Wells, springs, surface water, locations, owners, permits, permittees, meters - Associations between these elements - Meter readings, production, water quality, water levels
	D02 Develop Application Forms and Process (internal versions)	<ul style="list-style-type: none"> - Adapt and extend template to include BSEACD's requirements for these forms and processes
	D03 Develop Registration Forms and Process (internal versions)	<ul style="list-style-type: none"> - Adapt and extend template to include BSEACD's requirements for these forms and processes
	D04 Develop Well Owner Logged In Content (data entry, edit and review)	<ul style="list-style-type: none"> - Public-facing forms will route collected information into a "pending" section in the database to trigger review - Only finalized information will be saved to the main database once approved
	D05 Develop External Application and Registration Forms and Process	<ul style="list-style-type: none"> - Adapt and extend template to include BSEACD's requirements for these forms and processes
	D06 Deploy v0 (alpha) External Applications and Registrations + Well Owner Logged In Content	<ul style="list-style-type: none"> - Test Applications and Registrations forms and processes, address bugs and compile feedback - Create test logins to review owner-specific content
	D07 Integrate Secure Content Alpha Feedback and Deploy New/Improved Internal System Components v1 (beta)	<ul style="list-style-type: none"> - Add additional dashboard Widgets and Explorers per requirements - Continue Testing Internal System Components, addressing bugs and compiling feedback
Continued Testing and Refinement	T01 Incorporate Public Map Feedback and Redeploy	<ul style="list-style-type: none"> - Continue to test, compile feedback and integrate for final deployment
	T02 Incorporate Feedback and Improvements for Internal Forms and Processes and Redeploy	<ul style="list-style-type: none"> - Continue to test, compile feedback and integrate for final deployment
	T03 Incorporate Feedback and Improvements for External Forms and Processes and Redeploy	<ul style="list-style-type: none"> - Continue to test, compile feedback and integrate for final deployment
Reports and Queries	R01 Create Custom PDF Reports (i.e. Permit Certificates, etc)	<ul style="list-style-type: none"> - These reports produce a PDF that the user may save or print - These will be developed alongside the tasks above and deployed as available with each version
	R02 Build Canned Queries/Reports	<ul style="list-style-type: none"> - Per BSEACD Requirements - Output produces interactive on-screen table for review and download option to CSV - These will be developed alongside the tasks above and deployed as available with each version
	R03 Develop Open Ended Query/Download Tool	<ul style="list-style-type: none"> - Per BSEACD Requirements - Query tool provides access to most database fields - Users may query and download data in any combination of these fields
	R04 Develop Bulk Upload Process for Water Levels and Water Quality Data	<ul style="list-style-type: none"> - Use Dropbox or similar service to allow upload of pre-processed data to the system - LRE will provide a template for the data program QA/QC steps in the database to highlight possible errors - A post-upload user interface will enable resolution of issues once imported



BSEACD CUSTOMIZED DATABASE APPLICATION



MASTER SERVICES AGREEMENT

This Master Services Agreement (“Agreement”) is made and entered into as of this 13th day of October 2022 (“Effective Date”) by and between (a) the Barton Springs Edwards Aquifer Conservation District, a political subdivision of the State of Texas, (“District”), on the one hand, and (b) LRE Water, LLC, a Texas limited liability company (“Vendor”), on the other hand, with respect to the following matters. For purposes of this Agreement, Company and Vendor will be collectively referred to as the “Parties” or individually as a “Party.”

Recitals

- A. District is a groundwater conservation district created by the Texas Legislature in 1987. The District’s mandate is to conserve, preserve, protect, recharge, and prevent the waste of groundwater resources within its jurisdictional boundaries, pursuant to Chapter 36 of the Texas Water Code, the District’s enabling act, and other applicable laws of the State of Texas. The District may collect and manage information and data to support its mandate.
- B. Vendor is a licensed architect, landscape architect, professional engineer, or professional land surveyor.
- C. Vendor is a business that provides hydrogeological studies, engineering design, construction inspection, development of customized database and related engineering work (the “Services”) in the State of Texas.
- D. District seeks to retain Vendor to provide Services for District on an as-needed basis, and upon the terms and conditions set forth herein. Vendor seeks to provide the Services for District for and upon such projects as District may, from time to time, designate and for which Vendor agrees to provide such Services.
- E. The Parties desire to enter into an agreement pursuant to which District may issue, and Vendor may accept, one or more SOWs, hereinafter defined, to perform the Services specified in the SOW pursuant to the terms and conditions set forth in such SOW and this Agreement.

Agreement

The Parties therefore agree as follows:

- 1. **Statement of Work (SOW).** From time to time, District may issue to Vendor a Statement of Work or Task Order or Purchase Order (each, an “SOW”) with respect to specified Services on a particular project (each, a “Project”). The SOW may be in any form, and may include all or part of Vendor’s proposal for a Project, provided the SOW is in writing and sets forth the scope of the Services to be performed and such other terms as District and Vendor may agree upon in writing for the Project, which terms shall not be contrary to the terms of this Agreement. If Vendor is in agreement with the terms and conditions set forth in the SOW, Vendor shall promptly sign and deliver the SOW to District. Upon the Parties’ execution of the SOW, such SOW shall constitute a contract for the performance of the specified Services called for therein, subject to all of the terms, conditions and provisions of this Agreement.

2. **[Reserved.]**
3. **Term.** This Agreement shall commence on the Effective Date and will remain in full force and effect for one (1) calendar year and shall automatically be renewed for consecutive one (1) calendar year terms unless terminated by either Party in accordance with Section 5. Termination shall not affect the rights, obligations, and remedies of the Parties.
4. **Compensation.** Compensation will be as set forth in the SOW as mutually agreed upon by Vendor and District. No subsequent change in the compensation will be effective unless approved in writing by District. Vendor shall promptly issue its invoices to District either as directed by the SOW or upon its completion of each quantifiable task. Invoices shall be paid by District forty-five (45) days after the receipt of correct and complete invoices from Vendor. Invoices shall be mailed addressed to the Company entity that issued the SOW at the following address:

Barton Springs Edwards Aquifer Conservation District
Attn: Ms. Dana C. Wilson
1124 Regal Row
Austin, TX 78748
SOW 067PRO2022-115: Professional Services Related to Development of
a Customized Database Application – August 12,2022, Addendum Sept.
12, 2022

District may withhold all or part of any payment claimed by Vendor on account of subsequently discovered evidence, and may nullify all or part of any amounts previously paid, for any of the following reasons:

- (i) Defective services provided by Vendor not remedied;
- (ii) Reasonable evidence that the work cannot be completed by Vendor within the time required by Vendor in this Agreement, and not otherwise excused;
- (iii) Failure of Vendor to make payments properly for labor, materials or equipment to its subcontractor and/or Vendors performing work or furnishing materials under this Agreement;
- (iv) If there is a defect, as a result of Vendor's actions, in the efficiency, sufficiency, quality and/or performance of the material or equipment or substitute material or equipment;
- (v) Damage caused by Vendor or its subcontractor(s);
- (vi) Failure by Vendor to submit insurance certificates and endorsements required by Section 7;
- (vii) Failure by Vendor to maintain all required insurance; or
- (viii) Failure by Vendor to submit required warranties, guaranties, permits, licenses, as-built drawings or other documents required by this Agreement.

As to any provision of this Section 4 inconsistent with Texas Government Code Chapter 2251 (Prompt Payment Act), the provisions of the Prompt Payment Act will apply.

5. **Termination.** District shall have the right to terminate this Agreement with or without cause by providing fifteen (15) calendar days' written notice to Vendor. As long as the Services under an agreed upon SOW are not deficient, according to industry standards, District shall pay Vendor for any and all Services under such SOW up until the termination of this Agreement. In addition, in the event Vendor retains a subcontractor and such subcontractor is, among other things, performing defective services not in accordance with industry standards or the standard of care, is consistently missing deadlines, or is in violation of federal, state and/or local safety violations, laws, regulations and/or ordinances, then District shall, at its sole discretion, have the right to direct the Vendor to terminate the subcontractor and engage the services of a new subcontractor with District's prior approval.
6. **Schedule and Delays.** Time is of the essence in this Agreement. Vendor shall advise District in writing of the time and sequence in which the various portions of the Services shall be performed under each agreed upon SOW. Vendor represents that it believes the schedule within each SOW to be reasonable. In addition to the provisions in Section 17 of this Agreement, Vendor shall not be in default in performance of its obligations for any delay caused by third parties outside of Vendor's control, or caused by the District or by the District's employees, representatives, independent contractors, or other persons or entities subject to District's control or supervision who are not employees of Vendor or employees of Vendor's subcontractors engaged for a Project. After the commencement of the Services under a SOW, Vendor shall notify District's designated Project Manager immediately by verbal communication, and confirm via electronic communications no later than 24 hours thereafter, regarding any event or condition impairing Vendor's ability to meet the schedule, together with proposed revisions to the schedule. If necessary, the price and the time for Vendor's performance shall be adjusted by appropriate additions or deductions mutually agreed upon by the Parties before Vendor performs the changed Services under the SOW. If District and Vendor cannot agree on the amount of the addition or deletion, Vendor shall nonetheless perform the Services as changed by District's written direction. Such performance shall be done in a timely manner in accordance with industry standards. In such circumstance, if the District's written direction requires Vendor to perform work for which Vendor and District have not already agreed upon terms of compensation—whether in a SOW or otherwise—then Vendor shall be entitled to compensation for such work billed at the hourly rates specified in the SOW. If Vendor should default in performance of the Services or should otherwise commit any act which causes delay, Vendor shall be liable for all losses, costs, expenses, liabilities and damages sustained by District or for which Vendor may be liable to District because of Vendor's default.
7. **Insurance.** Vendor agrees to provide and to maintain in effect at all times during the Term of this Agreement, at its sole expense, the minimum insurance coverage for each SOW set forth in **Exhibit A** attached hereto and incorporated herein by reference.

8. **Health and Safety.** Vendor shall place the highest priority on health and safety and maintain a safe working environment during performance of the Services. Vendor shall comply, and shall secure compliance by its employees, agents, and subcontractors with all applicable health, safety, security, federal, state and local laws and regulations, and Vendor's rules and regulations. District reserves the right to request, at any given time, Vendor's subcontractors' insurance, and health, and safety documentation. Compliance with such requirement shall represent Vendor's minimum standard. Vendor shall submit copies of its safety programs to District before work may commence. Vendor shall ensure that the provisions of this Section are made binding on all subcontractors. A violation of this Section shall be considered to be a material and a substantial breach of this Agreement.
9. **[Reserved.]**
10. **Performance and Warranty.** Vendor represents that it is qualified to perform the Services, and that the Services shall be performed in a professional manner in accordance with accepted industry standards and practices applicable to engineering firms operating in the State of Texas. Vendor warrants that all Services under this Agreement shall be of good quality, free from faults and defects caused by Vendor or Vendor's agents or subcontractors, and in conformance with this Agreement. If, during the one (1) year period following completion or termination of Services, whichever is earlier, under the applicable SOW, it is shown that there is an error in the Services as a result of Vendor's failure to perform the Services in accordance with the above standard, and District has notified Vendor in writing of the error within such one year period, Vendor shall re-perform, at no cost to District, such corrective Services within the original SOW, as may be necessary to remedy such error and to conform the Services to the above stated standard. District shall reserve its rights to exercise its termination rights under Section 5 at any time. In addition to the above, Vendor shall pay any and all costs incurred by District arising from any noncompliance with this warranty.
11. **[Reserved.]**
12. **Permits, Licenses.** Vendor certifies that it is properly licensed in the jurisdiction where the Services are being performed and that it has obtained permits, business licenses and such other documents that may be required by the appropriate governmental or other authority having jurisdiction over the Services. Vendor shall provide before any work is performed, copies of all such permits and licenses to District. Vendor shall indemnify and hold harmless District from any penalties, fees and other charges levied because of the failure of Vendor to conform to the provisions in this Section 12.
13. **Inspection.** District reserves the right to inspect and observe, the work of Vendor. Vendor shall furnish to District as often as required by District, full reports of the progress of its work. Such reports shall show the progress of such preparation and manufacture in such detail as may be required by District, including but not limited to, any plans, drawings, or diagrams in the course of preparation.
14. **Indemnification.** As part of the consideration for this Agreement Vendor, for itself and its successors and assigns, agrees to indemnify, release, waive hold harmless,

discharge and covenant not to sue District, its parent and affiliates, and their respective officers, directors, employees, representatives and agents, from every actual loss, damage, injury, cost, expense, claim, judgment or liability of every kind or character, whether in contract, tort or otherwise, for claims or litigation, including, but not limited to, asbestos-related claims or litigation, which arises directly or indirectly from Vendor's willful, intentional, reckless, or negligent (whether active, passive or gross) acts or omissions related to or arising from this Agreement. This indemnity and hold harmless agreement will apply whether such acts or omissions are conducted by Vendor, or any subcontractor or agent of Vendor. The Vendor's indemnification obligations under this paragraph shall not apply to losses, damages, injury, costs, expenses, claims, judgments or liability of every kind or character, whether in contract, tort or otherwise, for claims or litigation, including, but not limited to, asbestos-related claims or litigation, which arises directly or indirectly from District's willful, intentional, reckless, or negligent (whether active, passive or gross) acts or omissions.

15. **Relationship of Parties.**

15.1. **Independent Contractors.** Vendor will act solely as an independent contractor. Nothing contained herein will be construed to create the relationship of principal and agent, employer and employee, partner or joint venturer. District assumes no liability for personal injury or property damage arising out of Vendor's performance of this Agreement.

15.2. **Personnel.** Vendor shall enforce strict discipline and good order among its employees, temporary personnel, flex force and others employed or contracted by Vendor (collectively, "Personnel"), and shall ensure that all Personnel comply with all applicable provisions of this Agreement. Vendor shall not assign to District Personnel who are unskilled in the work assigned to them. District may at any time request the removal of Personnel from performing Services under this Agreement, with cause, and Vendor will immediately comply with such requests. Vendor shall be solely responsible for:

- a. Payment of all Personnel compensation, all taxes, workers' compensation, and contributions which employer is required to pay in relation to the employment of such Personnel;
- b. Payment of Personnel legal and contractual benefits, including but not limited to social security, health insurance coverage and occupational benefits; and
- c. Compliance with all other employer duties and obligations in respect to Personnel, including payment of withholding taxes, as applicable locally; and Vendor shall also provide back-up Personnel for each of its Personnel assigned to District's account in the event of their illness, disability, vacation, leave, or absence for any reason. Said back-up Personnel are expected to cover all duties and responsibilities of Vendor's regular Personnel with no disruption in service.

- 15.3 **Subcontractors.** Vendor will not subcontract any of the Services to other persons or entities without the prior written approval of District. Vendor agrees to impose on its subcontractors the same obligations imposed upon Vendor under this Agreement with respect to safety, security, confidentiality, personal data, and insurance. Vendor's execution of any subcontracts, including subcontracts approved by District, will not relieve, waive or diminish any obligation Vendor may have to District under this Agreement. Compensation for subcontracted Services will be included in the fees and costs billed by Vendor according to Section 4 of this Agreement. Subcontractors shall be liable for any loss or damage to any work in place or to any equipment and materials on the job site caused by it or its agents, employees or guests.
16. **Vendor Certification.** Vendor certifications required under the Texas Government Code are set forth as a contract addendum in Exhibit B attached hereto and incorporated herein by reference.
17. **Force Majeure.** Vendor will not be in default in performance of its obligations under this Agreement if Vendor's performance is delayed, disrupted or becomes impossible because of any act of God, war, flood, earthquake, fire, strike, accident, civil commotion, epidemic, pandemic, act of government, or any other cause beyond the control of the Parties (collectively, "Force Majeure"). Upon occurrence of any such event, Vendor will maintain the integrity of District's project location, service area, and surrounding property to the best of its ability under the circumstances, and Vendor will not be responsible for any damages, fines, penalties or claims resulting therefrom.
18. **Notice.** Any notice required or permitted by this Agreement shall be in writing and shall be delivered by email and, except for the electronic notice detailed in Section 6, one of the following, with notice deemed given as indicated: (i) by personal delivery; (ii) by overnight courier upon written verification of receipt; or (iii) by certified or registered mail, return receipt requested, upon verification of receipt to the following:

If to Vendor:

LRE Water, LLC
 1221 Auraria Parkway
 Denver, CO 80204
 Tel: (303) 867-7692
 Email: Bill.Fronczak@LREwater.com
 Attn: William H Fronczak, P.E., Esq., VP
 – Risk Management

If to District:

Barton Springs Edwards Aquifer
 Conservation District
 1124 Regal Row
 Austin, TX 78748
 Tel: (512) 282-8441
 Email: tloftus@bseacd.org
 Attn: Timothy T. Loftus, Ph.D.
 General Manager

With a copy to:

LRE Water, LLC
 1101 Satellite View #301
 Round Rock, TX 78665
 Tel: (512) 736-6485
 Email: jordan.furnans@lrewater.com

Attn: Jordan Furnans – VP Texas Ops

19. **Attorneys' Fees.** In the event of any dispute and/or legal action arising from an interpretation and/or performance of any of the provisions of this Agreement, the Parties hereby agree that the prevailing Party shall be awarded reasonable attorneys' fees and costs.
20. **Assignment.** Vendor may not, directly or indirectly, in whole or in part, neither by operation of law nor otherwise, assign or transfer this Agreement or delegate any of its obligations under this Agreement without District's prior written consent. Any attempted assignment, transfer or delegation without such prior written consent will be void and unenforceable. This Agreement shall be freely assignable by District.
21. **Confidentiality.** Vendor agrees to hold in confidence and not to use, disclose or divulge to any third-party without the written consent of District any and all confidential and proprietary information relating directly to the Services provided, except as required by law or regulation, or as needed to carry out work under this Agreement. Such confidential and proprietary information may include, but is not limited to, customer accounts, customer lists, business forecasts, sales and merchandising and marketing plans and strategies, financial information in any form whatsoever to include audited and non-audited financial statements, any scientific or technical information, patent, copyright, trade secret and proprietary information, techniques, sketches, drawings, models, inventions, designs, know-how, works-in-process, processes, procedures, formulae, improvements, any concepts, reports, data, specifications, apparatus, equipment, algorithms, software programs, software source documents and formulae related to the current, future and proposed products and services of District, Vendor lists, development tools, computer software, source code, object code, flow charts, databases, inventions and information, and any other information that should reasonably be recognized as confidential information by Vendor. This obligation of confidentiality shall expire three (3) years after the completion or termination of the Services under the applicable SOW, and shall not apply to: (a) information in Vendor's possession or known to Vendor prior to its receipt in connection with this Agreement or the SOW; (b) information independently developed by Vendor at no cost to District without the use of District's confidential information; (c) information which is or becomes public knowledge through no fault of Vendor; (d) information which is or becomes available on an unrestricted basis from a third party which Vendor has no reason to believe has an obligation of confidentiality.
22. **Ownership of Records.** Subject to Section 21 above, all reports, logs, field data, filed notes, laboratory test data, calculations, estimates and other documents prepared by Vendor under this Agreement shall remain the property of District. Vendor shall be entitled to maintain file copies, subject to Vendor's confidentiality agreement set forth in Section 21 above. District recognizes that Vendor's reports and opinions will be prepared significantly for and in connection with the Services performed for the particular location and SOW. Any such reuse or modification of Vendor's reports and opinions without written verification or adaptation by Vendor, as appropriate for the specific purpose intended, will be at District's sole

risk and without liability or legal exposure to Vendor, its officers, directors, employees, agents, or consultants.

23. **Compliance with Applicable Laws.** In providing the Services, Vendor will abide by and comply with all applicable federal, state, and local laws, rules and regulations, including, without limitation, those related to bribery and corruption and employment and labor matters, including those specifically related to wage and hour issues (“Applicable Laws”). Vendor agrees to indemnify and hold harmless District, its officers, directors, employees, agents and assigns from all claims, fines, damages, suits, penalties, judgments and related losses associated with Vendor’s failure to comply with all Applicable Laws.
24. **Conflicts of Interest.** Vendor understands that District maintains comprehensive policies and procedures for its employees, including policies prohibiting employees from engaging in activities that could create even the appearance of a conflict of interest. Vendor acknowledges the existence of such policies and procedures and affirmatively represents that Vendor will take no actions to induce employees to violate such policies.
25. **Miscellaneous.**
 - a. This Agreement shall be binding upon, and inure to the benefit of, the executors, administrators, heirs, assigns and successors of each party hereto.
 - b. In no event shall either party be liable to the other for any incidental, special, indirect, consequential, exemplary or punitive damages, regardless of whether such damages are based in tort, warranty, contract or any other legal theory, even if advised of the possibility of such damages.
 - c. Each party to this Agreement warrants and represents that it is fully and properly authorized to enter into this Agreement and that all necessary corporate, administrative, or governmental approvals have been obtained prior to execution of this Agreement.
 - d. The Parties shall promptly execute any and all further or additional instruments and will perform any acts which may become necessary in order to effectuate and carry out the purposes of this Agreement.
 - e. Neither any failure nor any delay on the part of any Party in exercising any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any right.
 - f. If the amount of Vendor’s invoices for any calendar year under this Agreement exceeds \$100,000, Vendor agrees to permit District or its representatives, upon reasonable notice and during normal business hours at District’s cost and expense, to examine, make copies of and audit records and all items related to amounts invoiced to District pursuant to this Agreement for a period of 24 months following the date of the corresponding invoice. Any audit under this section will be limited to books

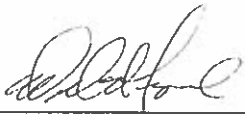
and records of Vendor which relate to the amounts invoiced by Vendor to District and will be limited to a period of 24 months.

- g. This Agreement shall be construed and enforced in accordance with the laws of the State of Texas, without reference to conflicts of law principles.
- h. If there are any discrepancies between the terms and conditions of the Agreement and those of the SOW, the terms and conditions of the Agreement shall prevail.
- i. This Agreement contains the entire understanding and agreement of the Parties with respect to its subject matter, and supersedes all previous agreements concerning the subject matter. No Party is relying on any oral or written representation that is not contained in this Agreement. This Agreement can be amended only by mutual consent and in writing and signed by both Parties.

*****Signatures to follow*****

IN WITNESS WHEREOF, Vendor and District have executed this Agreement as of the Effective Date.

LRE Water, LLC

By: 
Name: William H. Fronczak, PE. Esq.
Title: Vice President – Risk Management
Date: 10/4/2022

BARTON SPRINGS EDWARDS AQUIFER
CONSERVATION DISTRICT

By: _____
Name: Blayne Stansberry
Title: President
Date: _____

ATTEST

By: _____
Name: Christy Williams
Title: Secretary
Date: _____

APPROVED AS TO FORM

By: _____
Name: William D. Dugat III
Title: General Counsel
Date: _____

EXHIBIT A – INSURANCE

Insurance. Vendor agrees to provide and to maintain in effect at all times during the Term of this Agreement, at its sole expense, the following minimum insurance coverage:

- A. **Minimum required insurance coverages and limits--**
- 1) **Workers' compensation and employer's liability ("WC/EL"):** insurance as required by the state where the work is performed with statutory WC limits and Employer's Liability limits in an amount not less than \$1,000,000 per accident for bodily injury by accident, \$1,000,000 policy limit by disease and \$1,000,000 per employee for bodily injury by disease.
 - 2) **Business automobile liability:** insurance covering claims for injuries to members of the public and/or damages to property of others arising from use of motor vehicles, including onsite and offsite operations, and owned, non-owned, or hired vehicles, with \$1,000,000 limits for bodily injury and property damage, combined.
 - 3) **Commercial general liability ("CGL"):** insurance covering claims for injuries to members of the public or damage to property of others arising out of any covered negligent act or omission of Vendor or of any of its employees, agents, or Subcontractors, with \$1,000,000 per occurrence and \$2,000,000 in the aggregate, per project. In addition, coverages to include minimum limits of \$1,000,000 aggregate, covering Products and Completed Operations, \$1,000,000 for each occurrence of Personal and Advertising Injury, and Contractual Liability coverage in an amount sufficient to cover Vendor's indemnity obligations but not less than \$1,000,000 for each occurrence and in the aggregate.
 - 4) **Professional Liability/Errors and Omissions:** if stamped drawings are provided by Vendor (or any of its Subcontractors, employees, or agents) including stamped drawings for traffic control, shoring, or concrete mix design, or if construction management services are provided -- coverage of not less than \$2,000,000 for each claim and annual aggregate.
 - 5) **Completed operations:** Coverages for Products and Completed Operations and Professional Liability/Errors and Omissions shall be maintained for a period of at least three (3) years after acceptance of completed work. Coverage must include all operations involved in the project/scope of work in this contract.
 - 6) **[Reserved.]**
 - 7) **Umbrella/Excess Liability:** with policy limits of not less than \$1,000,000 per occurrence and annual aggregate, as excess over CGL, automobile liability and employer's liability policies.
- B. **Other insurance requirements--**
- 1) District to be named as Certificate Holder on Certificate(s) of Insurance.
 - 2) Vendor policies shall be endorsed to name District as an ADDITIONAL INSURED on all policies (except Workers' Compensation/EL and

Professional Liability) on ISO forms CG 20 10 or CG 20 38 (during performance of work) and CG 20 37 (completed operations), or equivalent forms of such endorsement forms that specify "blanket where required by written contract". ISO form 20 33 is not equivalent and is not acceptable whenever Vendor uses a Subcontractor to perform some of the work under this contract.

- 3) CGL, Auto and Umbrella policies shall contain a SEPARATION OF INSUREDS provision.
- 4) All policies shall be endorsed with WAIVER OF SUBROGATION in favor of District.
- 5) Notwithstanding any other provision in these requirements, in the event of the occurrence of a casualty or other loss, and insurance maintained by District and Vendor are both applicable to such casualty or loss, then the insurance maintained by Vendor will be PRIMARY and NON-CONTRIBUTORY with respect to any insurance maintained by District. All insurance policies shall include coverage for defense costs and related expenses.
- 6) District to be provided with thirty (30) days' advance written notice of any cancellation to the required insurance policies.
- 7) All insurance policies shall be issued by companies licensed to do business in the states where the Services are delivered and will be rated "A-" or better by A.M. Best (or as otherwise acceptable to District).
- 8) Any Subcontractors used by Vendor for any part of the work provided to District under this contract shall be required to meet these same insurance requirements as set forth herein, including endorsement of their policies in favor of District. Vendor shall be responsible for verifying and maintaining the certificates of insurance provided by each subcontractor. In the event that any Subcontractor engaged by Vendor fails to meet any of these insurance requirements, Vendor shall be required to include such Subcontractor as an additional insured under Vendor's insurance policies.
- 9) Prior to commencing work, Vendor shall provide District with certificates of insurance evidencing that each required insurance policy is in force. Vendor shall provide District with certificates of insurance promptly upon any modification or renewal of such required insurance policies.
- 10) Vendor shall provide District copies of any insurance policies, amendments and endorsements required hereunder upon request.
- 11) The insurance policies and other requirements stipulated herein are mandatory and shall not be cancelled, reduced in coverage or in limits.

EXHIBIT B – TEXAS GOVERNMENT CODE CERTIFICATIONS

This Addendum is made between the BARTON SPRINGS EDWARDS AQUIFER CONSERVATION DISTRICT ("DISTRICT") and LRE WATER, LLC, A TEXAS LIMITED LIABILITY COMPANY ("VENDOR"), (collectively the "Parties") and is hereby incorporated into the *Master Services Agreement* effective October 13, 2022 (the "Agreement"), and any addendums and amendments thereto, in order to verify Vendor's compliance with certain applicable Texas statutes and as further consideration of the Client's execution of the Agreement.

1. **PROHIBITION ON BOYCOTTING ISRAEL.** As required by Section 2271.002, Texas Government Code, Vendor hereby verifies that Vendor does not boycott Israel and will not boycott Israel during the term of the Agreement. For purposes of this verification, "boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.
2. **TERRORISM VERIFICATION.** Pursuant to Chapter 2252, Texas Government Code, Vendor hereby represents and warrants that at the time of entering into the Agreement and during the term of the Agreement, neither Vendor, nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of Vendor: (i) is a company listed by the Texas Comptroller under Section 2252.153, Texas Government Code, or (ii) engages in business with Iran, Sudan or any foreign terrorist organization as described in Chapters 806 or 807, Texas Government Code, or Subchapter F of Chapter 2252, Texas Government Code. The term "foreign terrorist organization" has the meaning assigned to such term in Section 2252.151, Texas Government Code.
3. **PROHIBITION ON BOYCOTTING ENERGY COMPANIES.** As required by Section 2274.002, Texas Government Code, Vendor hereby verifies that Vendor does not boycott any energy companies and will not boycott energy companies during the term of the Agreement. For purposes of this verification, "boycott energy company" is defined in Section 809.001, Texas Government Code, as an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company: engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or does business with a company described above.
4. **PROHIBITION ON DISCRIMINATION OF FIREARM ENTITY OR FIREARM TRADE ASSOCIATION.** As required by Section 2274.002, Texas Government Code, Vendor hereby verifies that Vendor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of the Agreement against a firearm entity or firearm trade association. For purposes of this verification, "discriminate against a firearm or firearm trade association" is defined in Section 2274.001, Texas Government Code, as refusing to engage in trade of any goods or services with an entity or association based solely on its status as a firearm entity or firearm trade association, refraining from continuing existing

business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association, or terminating an existing business relationship with an entity or association based solely on its status as a firearm entity or firearm trade association.

5. **PROHIBITION ON AGREEMENTS WITH CERTAIN FOREIGN-OWNED COMPANIES IN CONNECTION WITH CRITICAL INFRASTRUCTURE.** As required by Section 2274.0102, Texas Government Code, Vendor hereby represents and warrants that at the time of entering into the Agreement and during the term of the Agreement, neither Vendor, nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of Vendor: (i) is owned by or the majority of stock or other ownership interest of the company (a) who are citizens of China, Iran, North Korea, Russia, or a designated country; or (b) a company or other entity, including a governmental entity, that is owned or controlled by citizens of or is directly controlled by the government of China, Iran, North Korea, Russia, or a designated country; or (ii) is headquartered in China, Iran, North Korea, Russia, or a designated country. For purposes of this verification, "designated country" is defined as a country designated by the Texas governor as a threat to critical infrastructure as defined under Section 2274.0103, Texas Government Code.

Vendor acknowledges and agrees that the verifications stated above are material terms of, and material consideration for, the Agreement and that Client is expressly relying on this verification in agreeing to enter the Agreement with Vendor.

6. **FORM 1295** As required by Section 2252.908, Texas Government Code, Vendor is required to complete online and submit to Client a completed Texas Ethics Commission Form 1295 upon execution of this Agreement.

Item 8

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 9

Adjournment