LRE Water
909 Colorado Avenue
Glenwood Springs, CO 81601
(970)-945-6777 Voice
(970)-945-1137 Facsimile

Memorandum

To: BWCD BOARD OF DIRECTORS
From: ERIC MANGEOT
CC: CHRIS GEIGER
Date: JUNE 28, 2024
File: APPLICATION

Applicant Name: Crawford Properties, LLC

Type of Use: Domestic __X__ Commercial ____
Industrial _____ Agricultural _____

Amount: __18.1__AF ___---___cfs _____---_____ gpm (Direct Flow Rights Under Contract 6)

Location: Area A _A-4_ Area B ___ Inclusion ____
County: _EAGLE_ Contiguous: ___
BWCD Division: _6_

Mid Valley Metro District Notice Required? Yes____ No__X__

Blue Creek Water Rights Applied? Yes____ No__X__

02CW77 Umbrella Plan Water Rights Applied? Yes__X__ No____ **Cost:** _$3,000__

Crawford Properties, LLC (Applicant) provides water service to the El Jebel development as described in the District's 93CW319 batch plan for augmentation and deletions are augmented by the District under Contract 6. This contract was last amended downward by the Applicant in 2018 to reflect the actual and proposed development. However, based on meter records submitted to the Division of Water Resources for El Jebel Wells Nos. 1 – 3, both the monthly and annual limitations that are currently allowed under Contract 6 have been exceeded by over 160 acre-feet (AF). In addition, meter readings show that over the last three years, overages have increased by approximately 30 AF per year.

In 2023, the Colorado Division of Water Resources (DWR) reached out to the Applicant to formalize a plan for addressing the over-diversions and the Applicant has implemented extensive measures to determine the cause. Evidence suggests that the over-diversions are caused by real system losses (i.e. water line links) and the Applicant has also taken steps to verify that it is also due to unauthorized use, meter errors, software issues, or storage tank overflow. While these losses continued to be addressed, DWR has requested that the Applicant obtain additional contract water from the District to augment any potential additional depletions.

The Applicant is seeking an additional allowable diversion from the wells of 324.29 AF and depletions of 18.1 AF to also have an approximate buffer added in case system losses increase over the next several years while they continue to detect the location of leaks and determine which pipelines need to be repaired or replaced. Please see the additional calculation tables for additional information. Inclusion into the District 02CW77 is necessary because the overages cannot be addressed by any amendment to Contract 6. A large augmenation plan fee was applied by LRE based on the number EQRs in the current development that are being served by the wells.

The locations of the El Jebel Wells Nos. 1 – 3 are as follows:

- El Jebel Well No. 1: Located in the SW1/4 SE1/4 of Section 34, Township 7 South, Range 87 West of the 6th Principal Meridian (P.M.) at a point UTM NAD83 Z13: 4363038m N, 319972m E.

- El Jebel Well No. 2: Located in the SW1/4 SE1/4 of Section 34, Township 7 South, Range 87 West of the 6th P.M. at a point UTM NAD83 Z13: 4362824m N, 319905m E.

- El Jebel Well No. 3: Located in the SW1/4 SE1/4 of Section 34, Township 7 South, Range 87 West of the 6th P.M. at a point UTM NAD83 Z13: 4363062m N, 319698m E.

Water User :	Crawford Properties, LLC	
Analysis Date :	June 28, 2024	
District Area:	A	
Source Series:	4	
Maximum Demand:	---	---
	(GPM)	(CFS)

BASALT WATER CONSERVANCY DISTRICT
WATER REQUIREMENTS
(acre feet)
New Contract for El Jebel Plan Overages
Direct Flow Rights Under Contract 6

	Demands				Consumptive Use			Augmentation Supply	
Month	(1) Domestic In-house	(2) Lawn Irrigation	(3) TOTAL	(4) Delayed Pumping Diversions	(5) MVMD WWTP Return Flows	(6) Delayed Lawn Irrig. Return Flows	(7) TOTAL	(8) Depletions w/ Transit Loss	(9) Source of Aug/Replace
January	28.73	0.00	28.73	21.78	1.09	0.00	1.09	1.21	GNM
February	26.66	0.00	26.66	21.39	1.07	0.00	1.07	1.19	GNM
March	30.46	0.00	30.46	21.25	1.06	0.00	1.06	1.18	GNM
April	28.56	0.00	28.56	21.77	1.09	0.00	1.09	1.21	GNM
May	23.59	0.00	23.59	25.45	1.27	0.00	1.27	1.41	GNM
June	23.80	0.00	23.80	31.80	1.59	0.00	1.59	1.77	GNM
July	28.70	0.00	28.70	35.44	1.77	0.00	1.77	1.97	GNM
August	29.09	0.00	29.09	34.98	1.75	0.00	1.75	1.94	GNM
September	25.63	0.00	25.63	32.51	1.63	0.00	1.63	1.81	GNM
October	25.17	0.00	25.17	29.60	1.48	0.00	1.48	1.64	GNM
November	26.26	0.00	26.26	25.52	1.28	0.00	1.28	1.42	GNM
December	27.64	0.00	27.64	22.80	1.14	0.00	1.14	1.27	GNM
TOTALS -->	324.29	0.00	**324.29**	324.29	16.21	0.00	16.21	**18.02**	

(1) Planned Overage Diversions - See Column (5) SGM Calculation.
(2) No Lawn Irrigation Under this Contract.
(3) Column (1) + Column (2).
(4) = Total Column (3) x Delayed Pumping Diversion Factors from 5/11/1998 Resource Engineering, Inc. (REI) Memorandum and Glover Analysis.
(5) Mid Valley Metro District (MVMD) WWTP Return Flows. Note: El Jebel area sewer service now supplied by MVMD. Monthly return flows not dela
(6) No Lawn Irrigation Under this Contract.
(7) Net Stream Depletions = Column (5) + Column (6).
(8) = Column (7) / 0.9 for 10% Transit Losses From Green Mountain Reservoir.
(9) = Assumed BWCD Source of Supply.

Table 1. Diversions and Depletions Needing to be Augmented Under New BWCD Contract

All values in acre-feet (AF) unless otherwise stated

Month	Water Year 2021				Water Year 2022				Water Year 2023				Planned Over Diversions (Max + Buffer)	Depletions Under New BWCD Contract	Required Releases Under New BWCD Contract
	Diversions			Depletions	Diversions			Depletions	Diversions			Depletions			
	Total Diversions	Diversion Limitation (Amended Contract 6)	Diversions Above Limit	5%	Total Diversions	Diversion Limitation (Amended Contract 6)	Diversions Above Limit	5%	Total Diversions	Diversion Limitation (Amended Contract 6)	Diversions Above Limit	5%	100% Buffer	5%	10% Transit Loss
(1)	*(2a)*	*(2b)*	*(2c)*	*(2d)*	*(3a)*	*(3b)*	*(3c)*	*(3d)*	*(4a)*	*(4b)*	*(4c)*	*(4d)*	*(5)*	*(6)*	*(7)*
Nov	16.19	10.83	5.36	0.27	21.85	10.83	11.02	0.55	23.96	10.83	13.13	0.66	26.26	1.31	1.46
Dec	17.75	11.19	6.56	0.33	21.78	11.19	10.59	0.53	25.01	11.19	13.82	0.69	27.64	1.38	1.54
Jan	18.56	11.19	7.37	0.37	22.46	11.19	11.27	0.56	25.55	11.19	14.36	0.72	28.73	1.44	1.60
Feb	17.00	10.10	6.90	0.35	20.76	10.10	10.66	0.53	23.43	10.10	13.33	0.67	26.66	1.33	1.48
Mar	19.19	11.19	8.00	0.40	23.83	11.19	12.64	0.63	26.42	11.19	15.23	0.76	30.46	1.52	1.69
Apr	20.09	12.19	7.90	0.40	23.84	12.19	11.65	0.58	26.47	12.19	14.28	0.71	28.56	1.43	1.59
May	24.83	19.49	5.34	0.27	29.65	19.49	10.16	0.51	31.28	19.49	11.79	0.59	23.59	1.18	1.31
Jun	28.42	21.31	7.11	0.36	30.38	21.31	9.07	0.45	33.21	21.31	11.90	0.60	23.80	1.19	1.32
Jul	31.21	21.13	10.08	0.50	30.77	21.13	9.64	0.48	35.48	21.13	14.35	0.72	28.71	1.44	1.59
Aug	32.17	17.63	14.54	0.73	29.82	17.63	12.19	0.61	31.21	17.63	13.58	0.68	29.09	1.45	1.62
Sep	26.86	16.32	10.54	0.53	27.62	16.32	11.30	0.56	29.13	16.32	12.81	0.64	25.63	1.28	1.42
Oct	24.03	12.96	11.07	0.55	24.91	12.96	11.95	0.60	25.55	12.96	12.59	0.63	25.17	1.26	1.40
Total	**276.30**	**175.53**	**100.77**	**5.04**	**307.65**	**175.53**	**132.12**	**6.61**	**336.71**	**175.53**	**161.18**	**8.06**	**324.29**	**16.21**	**18.02**

Notes:

(1) Standard irrigation year month, November through October.

(2a) Well diversions for Irrigation Year 2021.

(2b) Total water demand diversion limits listed in Column (3) of Exhibit B of the 2018 Amended Contract 6.

(2c) Exceedances to the diversions covered by the 2018 Amended Contract 6 = (Column 2a) - (Column 2b), or zero, whichever is greater.

(2d) = (Column 2c) * 5%. Total depletions to be augmented with new BWCD contact, equivalent to 5% consumptive use of diversions covered by the 2018 Amended Contract 6. All evidence suggests that diversions in excess of the 2018 Amended Contract 6 are a result of real system loss (leaks from the distribution system)--the meters on the wells are less than 10 years old and in good condition, all customers are metered with T10 Neptune meters and well within the useful life expectancy (installed in 2015 with 20-year life expectancy), the fire department hydrant use is metered, the installed software flags meter issues to help identify bad meters and leaks, analyses show per capita demand is not high (2023 total annual metered usage was 33.75 million gallons for 390.96 EQR [as of February 2023], resulting in an average demand of 236 gallons/day/EQR, which is lower than the planned demand of 280 gallons/day/EQR in Case No. 93CW319), and the distribution system is aging and installed in poor soils which is likely the cause of the system loss. While methods are in place to find and repair any leaks in the distribution system, it is a long and slow process. Therefore, although all evidence suggests the diversions in excess of the 2018 Amended Contract 6 are a result of real system loss, SGM conservatively treated them as indoor usage with a 5% depletive consumptive use consistent with the methodology used in the 93CW319 and 02CW077 decrees.

Notes: *All values in acre-feet (AF) unless otherwise stated*

(3a) Well diversions for Irrigation Year 2022.

(3b) Same as (Column 2b).

(3c) Exceedances to the diversions covered by the the 2018 Amended Contract 6 = (Column 3a) - (Column 3b), or zero, whichever is greater.

(3d) = (Column 3c) * 5%. See note for (Column 2d).

(4a) Well diversions for Irrigation Year 2023.

(4b) Same as (Column 2b).

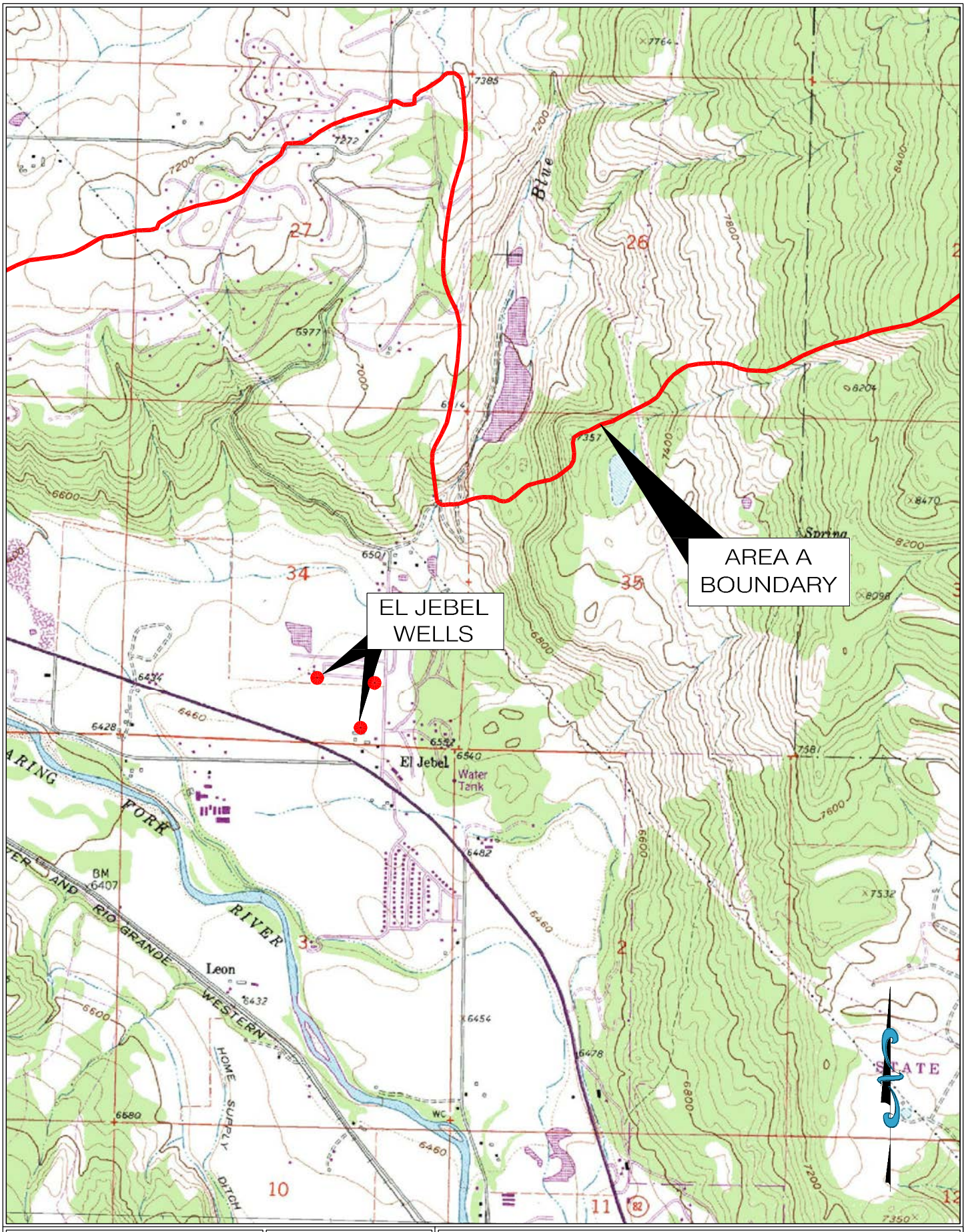
(4c) Exceedances to the diversions covered by the 2018 Amended Contract 6 = (Column 4a) - (Column 4b), or zero, whichever is greater.

(4d) = (Column 4c) * 5%. See note for (Column 2d).

(5) The diversions in excess of the 2018 Amended Contract 6 (Columns 2c, 3c, and 4c) for the last three years were compared to determine planned over diversions in 2024. In addition to choosing the maximum historical values, SGM also incorporated a 100% buffer to ensure there is enough contract water available in the event of unforeseeable circumstances.

(6) = (Column 5) * 5%. See note for (Column 2d).

(7) = [(Column 6) / 0.9], depletions under new BWCD contract, accounting for 10% transit loss.



LRE WATER

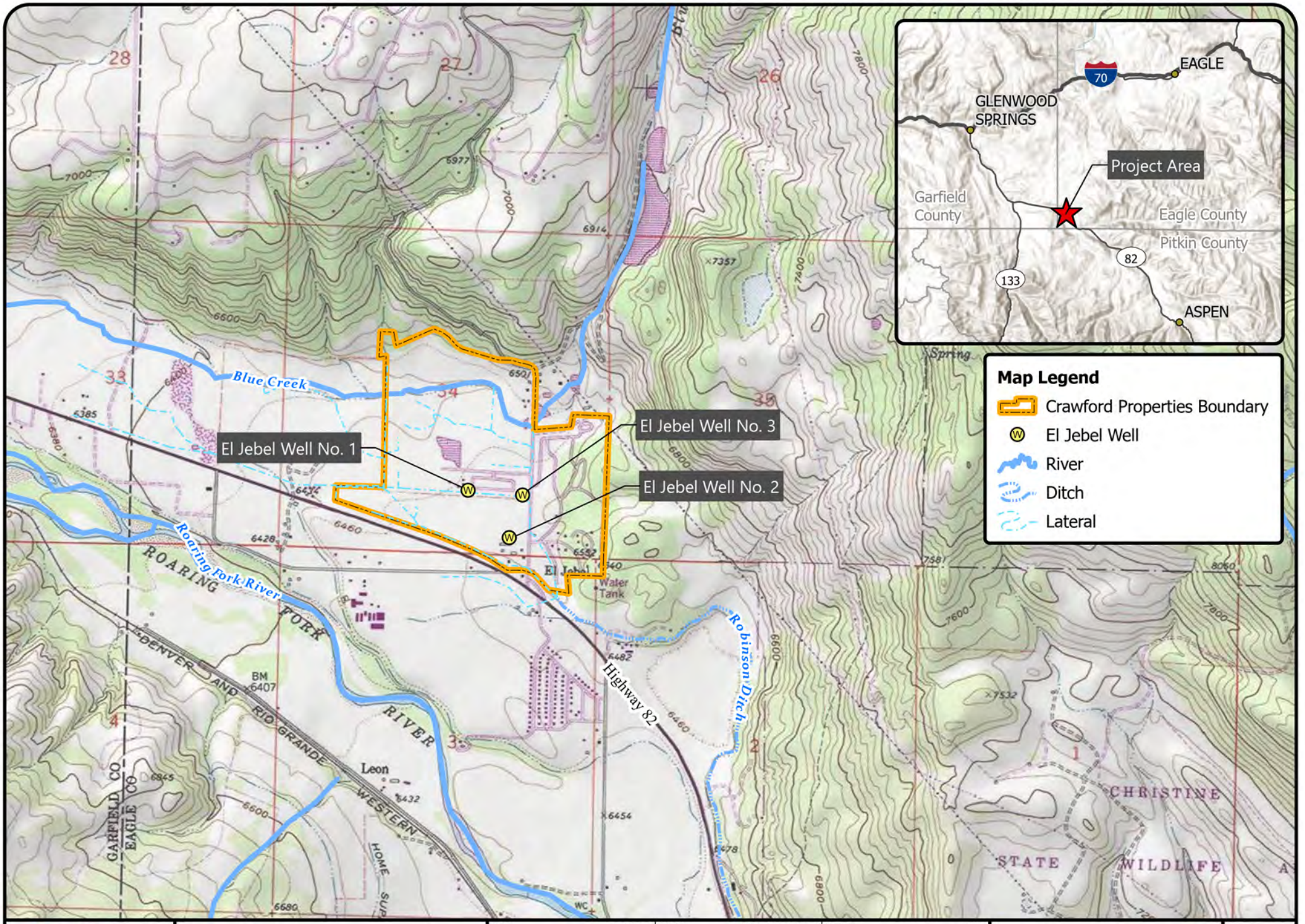
0 1,000 2,000

Scale: 1"=2,000'

Figure 1: Crawford Properties LLC

Water Allotment Contract Application - Overage Contract
Basalt Water Conservancy District

Job No. 20033BWCD1-20(4)
Date: 06/28/2024



SGM
118 W. Sixth St., Suite 200
Glenwood Springs, CO 81601
970.945.1004
www.sgm-inc.com

Overview Map

Crawford Properties, LLC

Date:	5/17/2024	Job No.	2015-315.004 Ph. 02
Map by:	KNR		
Coordinate System:	NAD 1983 UTM Zone 13N	Projection:	Transverse Mercator
Data Sources:	CDSS (wells), CDOT (highway/interstate), Eagle County (parcel)		
File:	J:\Projects_Replica\2015\2015-316-CrawfordProp\006-WtrRts\H-Dwgs\GIS\MXDs\WaterRights\WaterRights.aprx		

The information displayed above is intended for general planning purposes. Refer to legal documentation/data sources for descriptions/locations.

0 2,000 4,000 Feet

1 inch = 2,000 feet

Rev. 03/13

APPLICATION FOR WATER ALLOTMENT CONTRACT
BASALT WATER CONSERVANCY DISTRICT

1. Applicant(s) Contact Information

   a. Name: **Crawford Properties, LLC**

   b. Mailing Address: **60 El Jebel Rd. Unit 105**
   El Jebel, CO 81623

   c. Street Address: **60 El Jebel Rd. Unit 105**
   El Jebel, CO 81623

   d. Telephone Numbers: **(970) 963-2684**

   e. Email Address: **info@eljebel.co**

   f. If Applicant is represented by an Attorney, please provide the Attorney's contact information, including name, address, telephone, and email:

   Kevin Patrick, Esq.
   229 Midland Avenue
   Basalt, CO 81621
   patrick@waterlaw.com

   g. Emergency Local Contact Information, including name, address, telephone, and email:

   Crawford Properties, LLC
   60 El Jebel Rd, Unit 105
   El Jebel, CO 81623

   h. Contact Information of property manager, caretaker, irrigator, system operator, or agent who should be provided a copy of this contract, including name, address, telephone, and email:

   Crawford Properties, LLC
   60 El Jebel Rd, Unit 105
   El Jebel, CO 81623

2. Type of land use (development) proposed for water allotment contract (i.e. single family home, subdivision, gravel pit, etc.):
   Municipal/System Loss (see explanation in Question 9)

3. Legal description and address of property on which District's water rights and/or contract water will be used (attach map and vesting deed with proof of ownership)*:
   Please see attached map and Eagle County Property Card

4. Elevation of property: __**X**__ 6–7,000 ft., _____ 7–8,000 ft., _____ 8–9,000 ft.

5. Name and legal description of water supply diversion point(s):

   Name of Diversion____**El Jebel Well No. 1**____.

   Type of Diversion _____**Well**_____ (e.g., a well, spring, ditch, pipeline, etc.)

   Legal Description: __**East**__ Quarter, Section _**34**_, Township _**7**__ S, Range _**87**__ W, of the 6th Principal Meridian, **at a location whence the East Quarter Corner of said Section 34 bears N. 37°54'41" E. 2,200.98 feet**.

   UTM Coordinates (NAD 83):

   Northing: ____**4363038.0**_____.

   Easting: _____**319972.0**_____.

   _____ Zone 12 / _**X**_ Zone 13.

   If diversion point is a well, please provide the Well Permit No. _**43749-F**_____.

   Is the well operational/active? __**X**__ Yes, _____ No

   Is there currently an operating well meter? __**X**__ Yes, _____ No

   Name of Diversion___**El Jebel Well No. 2**_____.

   Type of Diversion ___**Well**_____ (e.g., a well, spring, ditch, pipeline, etc.)

   Legal Description: __**SW**__ Quarter, __**SE**__ Quarter, Section _**34**_, Township _**7**_ S, Range __**87**_ W, of the 6th Principal Meridian, at a location ____**260**____ feet from the __**South**__ Section line and ____**1,510**____ feet from the __**East**__ Section line.

UTM Coordinates (NAD 83):

Northing: **4362824.0**.

Easting: **319905.0**.

_____ Zone 12 / **X** Zone 13.

If diversion point is a well, please provide the Well Permit No. **43748-F**.

Is the well operational/active? **X** Yes, _____ No

Is there currently an operating well meter? **X** Yes, _____ No

Name of Diversion **El Jebel Well No. 3**.

Type of Diversion **Well** (e.g., a well, spring, ditch, pipeline, etc.)

Legal Description: **SW** Quarter, **SE** Quarter, Section **34**, Township **7** S, Range 87 W, of the 6th Principal Meridian, at a location **975** feet from the **South** Section line and **1,910** feet from the **East** Section line.

UTM Coordinates (NAD 83):

Northing: **4363062.0**.

Easting: **319698.0**.

_____ Zone 12 / **X** Zone 13.

If diversion point is a well, please provide the Well Permit No. **43750-F**.

Is the well operational/active? **X** Yes, _____ No

Is there currently an operating well meter? **X** Yes, _____ No

Notice: A valid well permit with operating well meter will be required under the contract.

6. Legal Water Supply: (please check one)

   X Applicant requests consideration by the District to be included in the District's Umbrella Plan for Augmentation decreed in Case No. 02CW77.*

   *Note: Certain applicants may qualify to be included in the District's Umbrella Plan at the District's discretion. In order to be included in the District's Umbrella Plan, the Applicant's depletions must occur within the District's defined "Area A" and the Applicant must reimburse the District its *pro rata* share of the District's expenses in obtaining the Umbrella Plan decree. Costs of reimbursement are contingent upon location and intensity of the uses, and range from $1,200 for contractees with less than 2 units (EQRs) in certain areas, to $5,000 for more than 8 EQRs in Area A-3 (generally the Roaring Fork drainage above its confluence with the Fryingpan Rivers).

7. Proposed waste water treatment system: (please check)

   X Tap to central waste water treatment facility
   _____ Septic tank/leachfield system
   _____ Evapotranspiration system
   _____ Other:

8. Proposed use of water (please check)

   X Domestic/Municipal (single family home(s), duplex(s), condominium(s), mobile home(s), apartment). Please complete page four of this application.
   _____ Commercial (hotel, office, warehouse, restaurant, bar, retail). Please complete page five of this application.
   _____ Industrial (gravel pit, manufacturing). Please complete page six of this application.
   _____ Agricultural (crop irrigation, stock watering). Please complete page seven of this application.

Date on which the county or other applicable governmental entities approved the land use for which you seek legal water service: _____. (Note: Copy of the Resolution of other documentation evidencing such approval should be submitted with application.)

The Crawfords have had a potable water system since the mobile home park was first built in 1964. Crawford's first water right decreed for municipal use is the Basalt Conduit with an appropriation date of July 29, 1957.

9. What other water rights are associated with or used on the property?

The 93CW319 decree (attached) changed 242 AF per year of the Basalt Conduit right (450 cfs for generation of electricity, irrigation, domestic, municipal, stockwatering, piscatorial, and industrial uses) for the combined pumping of the El Jebel Wells No. 1-4. El Jebel 1 was decreed for a rate of 0.055 cfs in the 80CW489 decree, while the El Jebel Wells No. 2-4 were decreed at a rate of 0.33 cfs, 0.72 cfs, and 0.72 cfs, respectively, in the 93CW319 decree. The 93CW319 decree augments with BWCD Contract #6 for the use of all four wells to a total annual demand limit of 241.48 AF. The breakdown of the monthly depletion limits can be found in Column 3 of Table 2 page 27 of the 93CW319 decree.

The Division of Water Resources (DWR) reached out in 2023 to formalize a plan for addressing the over-diversions in recent years of the El Jebel Wells. Extensive active measures have been implemented to determine the identify and address the cause of the over-diversions. All evidence suggest that over-diversions are caused by real system losses (water line leaks). Steps have been taken to ensure that the issue is real losses, and is not due to unauthorized use, meter errors, software issues, tank overflow, or other apparent losses. Further support showcasing that the over-diversions are a result of system loss are:

- The meters on the wells are less than 10 years old (installed 2015-2016) and in good condition.
- All customers are metered with T10 Neptune meters (life expectancy of ~20 years) which were installed around 2015, so they are well within the useful life expectancy. Hydrant use by the fire department is also metered.
- Crawford Properties' software flags meter issues to help identify bad meters or leaks on customer lines.
- Analyses show that system loss volume is relatively consistent throughout the year, with no consistent seasonal patterns which would indicate illegal/unmetered irrigation use.
- The distribution system is aging and installed in poor soils. It is known that best practices for the soil type (proper compaction, etc.) were not always utilized during installation of the distribution system. Soil settling has therefore likely contributed to line breaks throughout the system.

Crawford Properties staff have been working on leak detection, but this has been challenging as the system does not have sufficient isolation valves to conduct this process. Staff are working on installing proper isolation valves so that they can use Mid Valley Metro District's leak detection listening device to find and fix leaks. This is, however, a slow and long-term approach and will likely take many years to reduce the water loss.

The contract being applied for herein will be used to augment the depletions associated with the diversions in excess of the 242 AF limit set in the 93CW319 decree. Table 1 attached

conservatively assumes 5% consumptive use, as though these were delivered to the municipal system.

10. What other uses of water occur on the property?

Most of the non-potable irrigation on the property is supplied by the Robinson Ditch. The El Jebel Wells serve the municipal needs. The contract being applied for herein will be used to augment the depletions associated with the diversions in excess of the 242 AF limit set in the 93CW319 decree. Any depletions associated with diversions at or under the limits set in the 93CW319 decree are already covered under the 93CW319 decree and augmented by BWCD Contract #6.

DOMESTIC/MUNICIPAL WATER USES

In-House

Single family residential home(s) Number of Units: _____

Duplex(s) Number of Units: _____

Condominium(s) Number of Units: _____

Apartment(s) Number of Units/Rooms: _____

Mobile Home(s) Number of Units: _____

Irrigation (lawns, parks, open space)

Total area to be irrigated _____ Sq. Ft. or _____ Acres

Type of irrigation system (please check)

_____ Sprinkler

_____ Flood (irrigation ditch)

Domestic stock watering (cattle, horses)

Number of animals:

Period of use (months):

Other domestic/municipal uses not listed: **System Loss**

Extensive active measures have been implemented to determine the identify and address the cause of the over-diversions. All evidence suggest that over-diversions are caused by real system losses. Steps have been taken to ensure that the issue is real losses, and is not due to unauthorized use, meter errors, software issues, tank overflow, or other apparent losses. The attached Table 1 conservatively calculates depletions as though these were delivered to the municipal system.

VERIFICATION

STATE OF Colorado)
) ss.
COUNTY OF Eagle)

I, Bailey Leppek (name of Applicant or Applicant's duly authorized representative), being first duly sworn, upon oath, depose and state as follows:

1) I am the Applicant or a duly authorized officer, manager, agent or attorney-in-fact for the Applicant for this Application for Water Allotment Contract;
2) I have read and know the contents of this Application;
3) The information contained herein is an accurate and complete description of the Applicant's intended use of the Basalt Water Conservancy District's water rights;
4) The Applicant acknowledges that the accuracy and truth of all statements in this Application are conditions of approval of this Application by the Basalt Water Conservancy District and of the Contract to be made pursuant to such approval; and
5) I acknowledge that this application shall be subject to the District's Water Allotment Contract as approved and issued by the District.

Date: 5/17/24

By: _____

Print Name: Bailey Leppek

Title: Engineer for the Applicant.

Subscribed and sworn before me this 17th day of May, 2024 by Bailey Leppek

Witness my hand and seal.

_____
Notary Public

My commission expires: August 9th, 2025

MICHAEL MCCRARY
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20214031455
MY COMMISSION EXPIRES AUGUST 9, 2025