

# **Falcon Area Water and Wastewater Authority**

## **WATER RESOURCES REPORT For Homestead North Phase One**

**March 2022**

**Prepared By:**



**CONSULTANTS, INC.**

**Executive Summary:**  
**Water Resources**  
**Homestead North Phase One**

Falcon Area Water and Wastewater Authority originally Sterling Ranch Metropolitan District #1 (SRMD#1) will be the primary water/wastewater provider for not only areas within Sterling Ranch, but The Retreat. As of January 1, 2022 the Falcon Area Water and Wastewater Authority (FAWWA) will become the service provider.

**Water**

This update is for an additional commitment for 147 single family lots being proposed as Homestead North.

The **overall FAWWA available water supply is 697.39** <sup>300 year</sup> based on the discussed herein. It should be noted that the recently completed case 20 CW 3059 adjudicates additional NT and NNT water adjacent to FAWWA which will add to the supply.

The current balance of commitments of water supply for Falcon Area Water and Wastewater Authority are 380.23 AF of water which includes Retreat, Sterling Ranch Phase One (7 plats), Sterling Ranch Phase Two and Homestead North Phase One.

**FAWWA (SRMD#1) has adequate supply on a 300 year basis to meet all current commitments including Homestead North Phase One.**

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## ***SECTION 1 INTRODUCTION***

The purpose of this report is to provide an accounting of current and contingent water rights and supply for FAWWA with emphasis on the current action being Homestead North Phase One.

### *1.1 Development Description:*

Sterling Ranch Development consists of approximately 1,444 acres located east of Vollmer Rd and north of Woodmen Rd, Section 33, Township 12 South, Range 65 West of the 6<sup>th</sup> P.M. Districts 1, 2 and 3 are considered Special Districts and are under the jurisdiction of the Special District Act.

1,119 acres is designated for 5,225 residential units. 56.36 acres is designated for commercial use. 270 acres is designated for open space, greenways, trails, parks, and school sites.

This report is for the Preliminary Plan for Homestead North Phase One which includes 147 single family lots or SFE's.

## ***SECTION 2 PROJECTION OF WATER NEEDS***

### *2.1 Expected Water User Characteristics:*

It is expected that urban style residential lots will be developed with single family housing anticipating turf grass landscaping of less than 2,000 square feet per lot. The total lot area is 23.36 acres of 147 lots which is an average lot size of about 6920 SF/lot. Assuming a typical landscaping coverage of 20% suggests 1384 AF/landscaping per lot. Using the El Paso County criteria in the Land Development Code this would yield a unit user characteristic of 0.338 AF/SFE.

Actual 10-year historical data from the Falcon area suggests that the actual current unit user characteristic is internal use of 0.184 AF/unit and a combined user characteristic of about 0.287 AF/SFE. A value is 0.353 AF per SFE has been adopted by several Falcon entities as a planning factor. The 0.353 exceeds the El Paso County presumptive use factor computed for Homestead North and therefore this report will use the areawide adopted value of 0.353 AF/SFE.

The tracts include some landscaping but note mostly native style grasses. Consequently, most of the irrigation demand is expected to be primarily temporary. Nevertheless, irrigation is included as follows;

**Table 1. Irrigated  
Landscaping  
Homestead North**

<b>Tract</b>	<b>Tract Size (Sq Ft)</b>	<b>Estimated Active Irrigated Landscaping (Sq Ft)</b>	<b>Comments</b>
A	120,226	90170	75% of actual Tract area
B	37,462	18731	Pocket Park- no design. Typically includes non-irrigated play area. Assume 50%
C	2,178	1634	75% of actual Tract area
D	3,049	2287	75% of actual Tract area
E	2,178	1634	75% of actual Tract area
F	54,467	54467	Estimated by NES (Landscape Designer)
G	1,307	980	75% of actual Tract area
H	4,356	3267	75% of actual Tract area
I	871	653	75% of actual Tract area
J	13,068	9801	75% of actual Tract area
K	871	653	75% of actual Tract area
<b>Total Sq Ft</b>		<b>184276</b>	
<b>Total Acres</b>		<b>4.23</b>	<b>10.58 Acre-feet</b>

2.2 *Summary of Current Commitments*

The current level of service commitments is summarized in **Appendix F**. Currently commitments include the Retreat, 6 plats in Sterling Ranch Phase One, Sterling Ranch Phase Two, and Homestead North Phase One.

Homestead North therefore includes 51.89 annual acre-feet of domestic demand and requires an additional 10.58 acre-feet of irrigation demand at least for the grow in years for the native landscaping. This yields a total Homestead Commitment of 62.47 <sup>300 year</sup> of water.

### **SECTION 3 WATER RIGHTS AND SYSTEM FACILITIES**

#### **3.1 Water Rights:**

Water rights adjudications have been decreed by the State of Colorado, Water Division 2 District Court, Water Division 1 District Court, and the Colorado Groundwater Commission. The comprehensive rights for the FAWWA Service area include both decrees, and determinations. Local groundwater rights are associated with the service area components, Sterling, and Retreat. Each of these sites has existing decrees and/or determinations outlining the rights associated with the development lands.

The most recent water rights added to the Sterling Ranch Inventory is case 20 CW 3059 included in the **Appendix C**. This case adjudicates certain groundwater on an adjacent 97 acre parcel known as the Schmidt property and also provides for the augmentation of Denver and Arapahoe Not non-tributary water on the Schmidt and Sterling Ranch proper. This addition will allow for an additional 283.16 acre-feet <sup>300 year</sup> to be made available through Sterling Ranch wells.

In addition to groundwater adjudicated under the various service areas, Sterling has contracted for numerous off-site groundwater acquisitions which include three major sites. These contractual arrangements allow for Sterling Ranch to “take down” or purchase inventories over time to match needs as growth occurs.

Table 2 on the following page, is a table detailing all of the water rights currently available for the FAWWA Service Area.

Update March, 2022

**Table 2**  
**Falcon Area Water and Wastewater Authority**  
**Comprehensive Water Supply Inventory**  
**Current Legal Supply**

Land Formation/Aquifer	Reference Finding/ Determination/ Decree	Tributary Status	Volume	Annual Allocation 100 Year	Annual Allocation 300 Year	Approved Well Locations	Notes	Saturated	
			Acre-Feet	A-F/Year	A-F/Year			Sand Thickness	Specific Yield
<b>Currently Available On-Site Sterling Water Legal Sources</b>									
Laramie Fox Hills	86-CW-19 08CW113	NT	53,900	539.00	179.67	KLF-1 - KLF-4	Under 1410 acres Under 41.44 acres, reduced to 1.44 acres	255	15%
		NT	40	0.40	0.13				
Arapahoe	86-CW-18	NT	57500	575.00	191.67	KA-1 - KA-4	Under 1410 acres	240	17%
					<b>371.47</b>				
<b>Available On-Site Augmented Sterling Water Legal Sources (Note 2)</b>									
Laramie Fox Hills	20CW 3059	NT	2780	27.80	9.27		97.54 acres SR Quarry (Note 5)	190	
Arapahoe	20CW 3059	NNT	4320	43.20	14.40	Augmented via Same Case	97.54 acres SR Quarry (Note 5)	260.5	
Denver	20CW 3059	NNT	4895	48.95	16.32	Augmented via Same Case	97.54 acres SR Quarry (Note 5)	295.2	
Denver	08CW113 Aug 20CW 3059	NNT	72893	728.93	242.98	Augmented via Pending Case	Sterling Ranch 1410 acres		
Arapahoe	08CW113 Aug 20CW 3059	NNT	60	0.60	0.20	Augmented via Pending Case	Sterling Ranch 41.44 reduced to 1.44 acres		
					<b>283.16</b>				
<b>Currently Available On-Site Retreat Water Legal Sources (Note 1)</b>									
Laramie Fox Hills LFH (Retained Water by predecessor in title)	17CW3002	NT	6,440				Under 225.97 acres	190	15%
		NT	-612						
LFH (Relinquishment)	18CW3002	NT	-2,796				PPD Augmenting 29 wells		
			3,032	30.32	10.11				
Arapahoe	17CW3002	NT	9,796	97.96	32.65		Under 225.97 acres	255	17%
Legal Supply: Phase 3, Phase 4 (excluding Lots 39-41) and Phase 6			12,828	128.28	42.76				
<b>Currently Available Off-Site Ground Water Legal Sources</b>									
Augmentation (Dawson NNT)	18CW3002	Aug	2,796	27.96	9.32	29 Single Family Wells Phase 2 (excluding Lots 11-12), Lots 39, 40 & 41 of Phase 4, & 51	Replace a min of 4% of pumping		
Legal Supply: Phase 2 (excluding Lots 11-12), Lots 39-41 of Phase 4, and Phase 5					9.32				
Augmentation (Dawson NNT)	18CW3002	Aug	15,075	15.08	5.23		Replace actual depletions		
Legal Supply Phase 1					5.23	1)			
Augmentation (Dawson NNT)	18CW3002	Aug	240.0	2.40	0.8	Phase 2 - Lots 11 & 12)	pumping		
2)			240.0	2.4	0.8				
<b>Note 1.</b>					The water listed in the shaded area will be used to serve single family wells and is not included in the Total Available for the Central System				
<b>Note 2.</b>					In February, 2022: removed the existing Bar-X holdings from the supply sheet as the LFH water is dedicated to post-pumping depletions for Augmentation Case 20 CW 3059 and added the water yield from Case 20 CW 3059				
<b>Total Current Available 300-Year Water Supply (AF)</b>					<b>697.39</b>	<b>Acre-Feet :Legal Water Supply For Falcon Area Water and Wastewater Authority Central System</b>			

JDS-Hydro a Division of Respec

### 3.2 Adequacy of Water Rights Current Supply

The current water rights inventory by area are as follows;

- Sterling Original On-site NT Water Rights 371.47 AF<sub>300 year</sub>
- 02 CW 3059– 283.16 AF<sub>300 year</sub>
- Retreat at Timber Ridge on site rights are 42.76 AF<sub>300 year</sub>

Sterling owned and currently available on-site NT and adjudicated NNT water totals 697.39 AF<sub>300 year</sub>.

As of March, 2022, the total water commitment within Sterling Ranch Metropolitan District requires 380.23 AF<sub>300 year</sub>. See tabulation of Water Commitments Appendix F

**This leaves a net excess of currently available but uncommitted amount of water for the remainder of Sterling Ranch of 317.16<sub>300 year</sub>.**

### 3.3 Master Planning and Long-Term and Future Sources of Supply:

The FAWWA water system has only three years of operation so little or no usable historic information would be reliable for unique long term planning. However, substantial nearby data from the Falcon area is available for use. As of end of the year the system had only roughly 300 active users. Therefore, initial projections have been based on areawide water user characteristics and a linear buildout rate. This rate is considered to be an average annual rate that might be reasonably maintainable over a 10-year period. The average growth rate is projected as 180 units added per year.

*2040 Scenario:* Based on the above factors, the FAWWA system might conservatively be expected to be serving 3710 single family equivalents in the year 2040. This number is a service area projection and includes the Retreat and The Ranch as well as the main Sterling Ranch. This would require 1310 annual acre-feet of water.

*2060 Scenario;* Based on the same factors, the Sterling system might be expected to be serving 7310 single family equivalents within its expanded service area that includes the Retreat and The Ranch. This would be substantially greater than the actual Sterling Ranch. The annual acre-foot requirement might be 2580 annual acre-feet but supply would include water from The Ranch.

In order to meet future demands, contractual arrangements have been made to obtain additional legal and physical supply to meet growing demands:

- a) The McCune Water SR Water LLC has contracted with the McCune Ranch to purchase non-tributary water rights in El Paso County. These water rights include Laramie Fox Hills, Arapahoe, and Denver formation water totaling 118,900 Acre-feet. Some

additional Not Non-tributary water is included but not included in this calculation at this time.

- b) The Bar-X Water has also been contracted for in a similar manner, some water has already been purchased, but remaining Laramie Fox Hills, Arapahoe, and Denver formation water totaling 204,433 Acre-feet. Some additional Not Non-tributary water is included but not included in this calculation at this time.

In addition to adding off-site sources, is considering additional supplies that would potentially include renewable resources and/or regional projects bringing new water to the area.

**Long Term Planning:** Future water supply has already been contracted for and plans for implementation are under way. The first project recently completed provides augmentation for certain on-site NNT water, so that that water may be used in existing and expanded well fields on-site :

1. ***Bar-X Northern Delivery Project:*** To extend supplies beyond 1802 SFE, the McCune and Bar-X contracts for water acquisition will require a major pipeline to be extended northerly to Hodgkin Road. This pipeline system will make both McCune and Bar-X water being acquired to be physically as well as legally available to Sterling. Preliminary routing, environmental assessments, and 1041 applications are under way for this facility. As discussed above, development beyond 1828 SFE will require this pipeline.
2. ***McCune and Bar-X Acquisitions;*** The off-site acquisitions discussed above will be exercised as needed to continually add to the Sterling supply.

McCune:	Acre-feet NT
1689-BD LFH	26,300
1690-BD Arapahoe	39,800
1691-BD Denver	52,800

There is a 1500 acre-foot set aside reducing the Denver formation portion of the McCune supply, leaving a net total of 117,400 acre-feet of NT water which yields a **391.33 AF<sub>300</sub>** supply adding the capacity for an additional 1109 SFE capacity.

Remaining un-purchased Bar -X Supply:

	Acre-feet NT
93-CW018 Arapahoe	73,800
93-CW018 Denver	130,633
Minus (Set-asides)	-19,098

There is additional Dawson NNT water included in the purchase arrangement, but no current augmentation plan is under

consideration, so it is not counted here. supply, leaving a net total of 204,433 acre-feet of NT water which yields a **617.78 AF<sub>300</sub>** supply adding the capacity for an additional 1750 SFE capacity.

**4. Regionalization opportunities:**

- FAWWA's main supply source is centralized at a point that both Cherokee Metropolitan District and Woodmen Hills Metropolitan District have adjacent major storage and delivery facilities. There are currently no arrangements in place to make connections, but in the future Sterling may seek to have interconnects and possibly share supply
- The second element is a much broader regionalization. Sterling has been open to cooperative actions with Colorado Springs Utilities (CSU). CSU potentially is open to shared physical facility utilization, which would enable Sterling to expand its scope in seeking water rights. While it is not expected that Sterling will provide actual water, the access to facilities opens greater doors for Sterling.

**3. Indirect, Reuse, Lawn Irrigation Return Flows (LIRF) Credits, Aquifer Storage/Recharge; and Direct Reuse:**

- Return Flows; Initial development is being planned around sourcing available physical supplies. These supplies are all fully consumable and ultimately result in potential return flow capabilities. Since Sterling wastewater is discharged to the Meridian system which in turn has the potential to convert some reusable flows to available physical supplies those options will be available and considered by Sterling.
- LIRF Credits, Sterling has already initiated a case that will make augmentation use of its potential LIRF credits.

*3.4 System Interconnects:* FAWWA currently has no system interconnections. However, as discussed above FAWWA's main supply source is centralized at a point that both Cherokee Metropolitan District and Woodmen Hills Metropolitan District have adjacent major storage and delivery facilities. It is possible that future agreements could be worked out.

*3.5 Source of Physical Supply:*

Municipal water demand would be met using primarily Arapahoe and Laramie-Fox Hills formation wells in the Sterling area. The first well site will be drilled with an Arapahoe Well (A-1) and Laramie-Fox Hills Well (LFH-1). Well site #1 includes both an Arapahoe and a Laramie Fox Hills well. Existing Well Permits are included in **Appendix D**. Additional Permits will be obtained as needed to ultimately continue to add to the system as needed.

Off site water to the north of the Sterling Service Area is generally in the Denver and Arapahoe formations.

### 3.6 *Water Quality and Treatment:*

**Appendix E** contains the water quality reports for the initial wells drilled at Sterling Ranch. The quality is generally consistent with Denver Basin water typically encountered in the Falcon area. The water quality in these aquifers in this area has typically been suitable for potable use with the addition of iron and manganese treatment.

### 3.7 *Water Storage, Distribution and Transmission Lines*

An initial 1.0 Million Gallon Tank has already been constructed at the Sterling site.

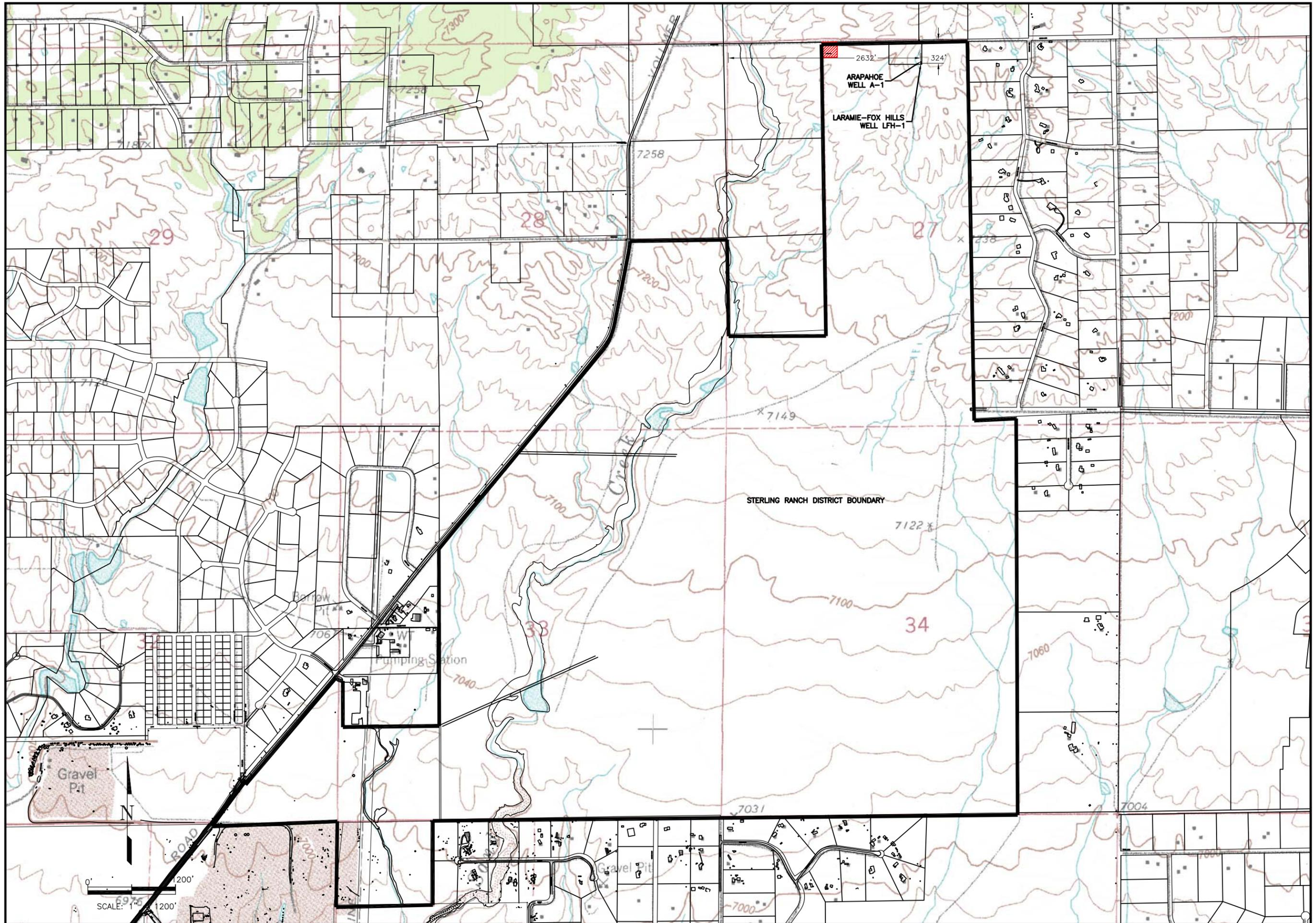
For the purpose of fire protection, we recommend eight inch lines throughout the residential subdivision. The lines should be looped wherever street layout allows. A transmission line of 24 inch diameter has been extended south-southwesterly along one of the major roadways from the storage tank into Phase One of the development.

### 3.8 *Pumping for Service Pressures:*

Ground elevations within the development service area range from approximately 6,970 to 7,320. Adequate service pressures are generally considered 60 psi for residential service. The tank site is on the Sterling property at a base elevation of approximately 7,310 feet which would be capable of supplying acceptable service pressures to ground elevations of approximately 7,190. Initial development is anticipated to be at elevations below 7,190 so the tank site will be able to provide adequate pressure.

As development construction progresses, the FAWWA plans to construct the northern transmission line to bring in the off-site water contracted for. Because the storage tanks are located at a high elevation, there is substantial pressure for residential service and fire flow for initial development of FAWWA and all of The Ranch.

# *Appendix A*



**MORLEY – BENTLEY INVESTMENTS**  
**STERLING RANCH**  
**PROPOSED WELLS LFH-1 AND A-1 LOCATIONS**

Project No.:	161.04
Scale:	11/21/13
Date:	10/05/13
Design:	JPM
Drawn:	TAG
Check:	JPM
Revised:	

# *Appendix B*



# *Appendix C*

# APPENDIX C

08CW113  
86CW18  
86CW19  
17CW3002  
18CW3002  
20CW3059

OFFICE OF THE STATE ENGINEER  
DETERMINATION OF FACTS

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IN THE MATTER OF AN APPLICATION FOR UNDERGROUND WATER RIGHTS IN WATER  
DIVISION NO. 2, EL PASO COUNTY, COLORADO

CASE NO.: 08CW113

APPLICANT: MORLEY-BENTLEY INVESTMENTS, LLC

AQUIFER : DAWSON

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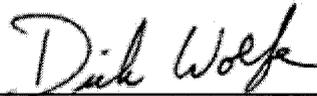
In compliance with C.R.S. 37-92-302(2), Morley-Bentley Investments, LLC, (hereinafter "applicant") submitted an application to the Water Court for a determination of the amount of water available pursuant to C.R.S. 37-90-137(4). Based on information provided to the Court by the applicant and records of the Division of Water Resources, the State Engineer finds as follows:

1. The application was received by the Water Court on December 31, 2008.
2. According to the application, the applicant owns, or has consent to withdraw ground water underlying 1451.44 acres of land as further described in said application.
3. The quantity of water in the Dawson Aquifer (hereinafter "aquifer"), exclusive of artificial recharge, underlying the 1451.44 acres of land claimed in the application is 42,309 acre-feet. This determination was based on the following as specified in the Denver Basin Rules:
  - a. The average specific yield of the saturated aquifer materials underlying the land claimed in the application is 20 percent.
  - b. The average thickness of the saturated aquifer materials underlying the land claimed in the application is 145.8 feet.
4. In determining the amount of ground water available for withdrawal annually from this aquifer, the provisions of C.R.S. 37-90-137(4) must be applied, and pursuant to C.R.S. 37-90-137(4)(b)(I) annual withdrawals shall be allowed on the basis of an aquifer life of 100 years.
5. A review of the records in the State Engineer's Office has disclosed that there are existing wells or other water rights withdrawing ground water from the aquifer underlying the land claimed by the applicant. The well permit numbers, locations, rates of diversion, and other relevant data concerning such rights are set forth in the attached Exhibit A. To prevent material injury to such vested water rights, the quantity of water underlying the land claimed in the application which is considered available for withdrawal has been reduced to 39,247 acre-feet. This reduction was based on a calculation of the area necessary to provide a quantity of water underlying such lands as would be sufficient for the persons entitled to divert water under existing rights to divert the average annual amount of water from the aquifer for the minimum aquifer life of 100 years. The effect of this calculation is

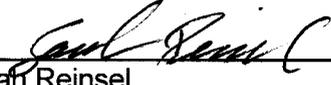
to reduce the land available for calculating the quantity of water underlying the land claimed in the application to 1,345.92 acres.

6. Withdrawal of ground water from the aquifer underlying the land claimed in the application will within one hundred years, deplete the flow of a natural stream at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and therefore the ground water is not nontributary ground water as defined in C.R.S. 37-90-103(10.7). C.R.S. 37-90-137(9)(c) states that judicial approval of a plan for augmentation shall be required prior to use of ground water of the type sought in this application. In the case of the Dawson aquifer such augmentation plans shall provide for the replacement of actual stream depletions to the extent necessary to prevent any injurious effect, based on actual aquifer conditions in existence at the time of the decree.
7. The allowed average annual amount of water available for withdrawal from the aquifer underlying the lands claimed in the application is 392.5 acre-feet (the quantity of water which is considered available divided by the 100 year aquifer life). It is recommended that the water court retain jurisdiction necessary to provide for adjustment (increase or decrease) of this amount.
8. Underlying the land claimed in the application, the aquifer is, as specified in the Denver Basin Rules, located approximately 54 feet to 346 feet below land surface. A site specific evaluation must be conducted with each well permit to identify the interval due to the varied elevation of the aquifer and surface topography.

Dated this 4<sup>th</sup> day of March, 2009.



\_\_\_\_\_  
Dick Wolfe, P.E.  
Director/State Engineer

By:  \_\_\_\_\_  
Sarah Reinsel

Water Resources Engineer

Prepared by: SKR

EXHIBIT A

<u>Well Number</u>	<u>Location</u>					<u>AF</u>	<u>ST</u>	<u>SY</u>	<u>Radius</u>	<u>Area</u>
	<u>Q40</u>	<u>Q160</u>	<u>Sec.</u>	<u>Twp.</u>	<u>Rng.</u>					
8745-R	NE	SW	33	12S	65W	24.2	109	20	1240	87
8746-R	NE	SW	33	12S	65W	16.1	112	20	1001	71
8747-R	NE	SW	33	12S	65W	12.9	114	20	886	57
8748-R	NE	SW	33	12S	65W	16.1	109	20	1011	74

Well Number = Well permit number and/or water court case number

AF = Annual appropriation of the well (acre-feet)

ST = Thickness of the saturated aquifer material at the well location (feet)

SY = Specific Yield of the saturated aquifer material (%)

Radius = Radius of the cylinder of appropriation (feet)

Area = Area of the applicant's land that is overlapped by the cylinder of appropriation (acres)

DISTRICT COURT, WATER DIVISION NO. 2, STATE OF COLORADO OCT 29 1986

Case No. 86-CW-18

*Russell J. Lyons*

FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE Clerk

CONCERNING THE APPLICATION FOR NONTRIBUTARY GROUND WATER RIGHTS OF THE FIRST INTERSTATE BANK OF DENVER N.A., CARLA W. LEWIS, AND SAMUEL S. SHERMAN AS COTRUSTEES UNDER THE LIFE INSURANCE TRUST OF THOMAS M. DINES FROM THE ARAPAHOE FORMATION, EL PASO COUNTY.

THIS MATTER, having come on ~~for hearing before the~~ Court this 29 day of Oct., 1986 upon the application of The First Interstate Bank of Denver N.A., Carla W. Lewis, and Samuel S. Sherman as Cotrustees under the Life Insurance Trust of Thomas M. Dines ("Applicants") and the Court having considered the pleadings filed and the evidence presented, and being fully advised in the premises, hereby enters the following Findings of Fact, Conclusions of Law, and Judgment and Decree: *get*

#### FINDINGS OF FACT

1. The Applicants are The First Interstate Bank of Denver N.A., Carla W. Lewis, and Samuel S. Sherman as Cotrustees under the Life Insurance Trust of Thomas M. Dines whose address is First Interstate Bank of Denver, 633 Seventeenth Street, Denver, Colorado 80202, Attn: Jack Alexander. Applicants filed the application in this case styled Application For Nontributary Ground Water From The Arapahoe Formation (the "Application") on March 28, 1986, seeking an adjudication of nontributary ground water rights from the Arapahoe Formation underlying lands owned by Applicants in El Paso County.

2. Timely and adequate notice of the Application was published as required by statute, and the Court has jurisdiction over the subject matter of this proceeding and over all parties affected hereby, whether they have appeared or not. None of the lands or water rights involved in this case are within the boundaries of a designated groundwater basin.

3. A timely statement of opposition was filed by JVRC, Inc. No other statements of opposition were filed within the time provided by law nor did any other parties enter their appearance or intervene in these proceedings.

4. The Water Referee by Order dated July <sup>9</sup> 19, 1986, under Section 37-92-303(2), C.R.S., rereferred the Application to the Water Judge for all further proceedings. 225

5. The State Engineer issued a Determination of Facts on the Application, dated July 28, 1986, which has been filed with the Court. The Division Engineer adopted the Determination of Facts as his recommendations on August 8, 1986. The Determination of Facts and the findings contained therein have been reviewed and considered by this Court in accordance with Section 37-92-305(6), C.R.S.

6. Applicants seek an adjudication of rights to nontributary ground water from the Arapahoe Formation beneath 1,410 acres of land in El Paso County which are described in Exhibit A and depicted on the map attached as Exhibit B, both of which are incorporated herein by this reference (the "Subject Lands"). Applicants are the owners of the Subject Lands and have the right to withdraw and use the waters from the Arapahoe Formation underlying those lands. The waters claimed herein may be withdrawn through the proposed wells described in Paragraph 7 below and through such additional, replacement and supplemental wells as may be necessary to withdraw all of the water in the Arapahoe Formation underlying the Subject Lands without causing material injury to any vested water right whose source of supply is the Arkansas River and any of its tributaries or any other natural stream, or any ground water tributary thereto, and the Applicants have so proven.

7. Applicants will divert the waters claimed herein from the Arapahoe Formation through Dines Wells KA-1, KA-2, KA-3, and KA-4 more particularly described as follows:

Well Name: Dines Well KA-1

- (a) In the SE 1/4 of the NW 1/4 of Section 27, Township 12 South, Range 65 West of the 6th P.M., 2500 feet from the North Section line and 2200 feet from the West Section line, in El Paso County.
- (b) Depth: 1900 feet.
- (c) Source: Nontributary Arapahoe Formation.
- (d) Pumping rate: 150 gpm.

(e) Annual quantity: 240 acre-feet.\*

Well Name: Dines Well KA-2

(a) Location: In the SW 1/4 of the SW 1/4 of Section 27, Township 12 South, Range 65 West of the 6th P.M., 200 feet from the South Section line and 200 feet from the West Section line, in El Paso County.

(b) Depth: 1800 feet.

(c) Source: Nontributary Arapahoe Formation.

(d) Pumping rate: 150 gpm.

(e) Annual quantity: 240 acre-feet.\*

Well Name: Dines Well KA-3

(a) Location: In the NW 1/4 of the SE 1/4 of Section 33, Township 12 South, Range 65 West of the 6th P.M., 1500 feet from the South Section line and 2100 feet from the East Section line, in El Paso County.

(b) Depth: 1700 feet.

(c) Source: Nontributary Arapahoe Formation.

(d) Pumping rate: 150 gpm.

(e) Annual quantity: 240 acre-feet.\*

Well Name: Dines Well KA-4

(a) Location: In the NE 1/4 of the SW 1/4 of Section 34, Township 12 South, Range 65 West of the 6th P.M., 1400 feet from the South Section line and 2100 feet from the West Section line, in El Paso County.

(b) Depth: 1700 feet.

(c) Source: Nontributary Arapahoe Formation.

(d) Pumping rate: 150 gpm.

(e) Annual quantity: 240 acre-feet.

- \* Not to exceed in total the amount available to Applicants from the Arapahoe Formation pursuant to § 37-90-137(4), C.R.S. and the provisions of this decree.

8. Pursuant to §37-90-137(4), C.R.S., five hundred seventy-five (575) acre-feet of water per year are available to Applicants from the Arapahoe Formation underlying the Subject Lands. The average thickness of saturated sand of the Arapahoe Formation underlying the Subject Lands is 240 feet but the final determination on actual saturated sand thickness will be determined when the wells are drilled, and the amount decreed herein may be subsequently adjusted in accordance with that saturated sand thickness as provided in Paragraph 29 below. The specific yield of the Arapahoe Formation is 17% in and beneath the Subject Lands. This finding is specific to the property involved and does not indicate or in any way reflect upon proper values for the subject aquifer elsewhere. All the water in the Arapahoe Formation underlying the Subject Lands remains available for withdrawal by the wells decreed herein.

9. The State Engineer in his Determination of Facts found that 581 acre-feet per year were available for appropriation through the subject wells. The State Engineer's determination is based on a finding that only 1395 acres of the Subject Lands are available for appropriation, and based on saturated sand thicknesses of 245 feet and 250 feet for different parts of the Subject Lands and a specific yield of 17% for the Arapahoe Formation. The State Engineer also found that of the total 581 acre-feet per year of water available for appropriation, 569 acre-feet was nontributary and 12 acre-feet was not nontributary. The 12 acre-feet per year the State Engineer found as not nontributary underly 37 acres of Section 32 of the Subject Lands. Applicant has shown by a preponderance of the evidence that there are no existing wells with a right to water from the Arapahoe Formation underlying the Subject Lands and that the water underlying 1410 acres is available for appropriation by Applicants. The Court also finds that the withdrawals through Applicants' proposed wells of the water claimed herein including the amount of water underlying the 37 acres in Section 32 is nontributary. The proposed wells will not, at their location and withdrawing the amounts decreed herein, within one hundred years deplete the flow of any natural stream at a rate greater than one-tenth of one percent of the annual rate of withdrawal. Applicants' engineer ~~has testified~~ that 575 acre-feet per year is available for appropriation calculated with a saturated sand thickness of 240 feet for the

Arapahoe Formation. Subject to the final determination of saturated sand thickness based on the information derived from the drilling of the wells, Applicants will use 240 feet for the saturated sand thickness of the Arapahoe Formation beneath the Applicants' property.

10. The source of water for the proposed wells is nontributary as defined in Section 37-90-103 (10.5), C.R.S. The proposed withdrawals through Dines Wells KA-1, KA-2, KA-3, and KA-4 in the amount of 575 acre-feet per year, or in any lesser or greater amount determined under Paragraph 29, will not, within one hundred years, deplete the flow of any natural stream or its alluvium or any ground water tributary thereto at an annual rate greater than one-tenth of 1% of the annual rate of withdrawal.

11. The waters of the Arapahoe Formation that are the subject of the appropriation claimed herein will be, and Applicants intend that they be used, and Applicants shall have the right of succession of uses, for municipal, domestic, commercial, fire protection, industrial, residential, recreation, irrigation, exchange, replacement of depletions, augmentation, livestock and agricultural uses. The water will be produced for immediate application to beneficial use and for storage and subsequent application to beneficial use. Subject only to the provisions of Paragraph 31, Applicants shall have the right to make any reuse, successive use or disposition of the developed water claimed herein until totally consumed free of any limitations, restrictions, or requirements as to the place of use, amount of discharge or location of discharge after such reuse, successive use or disposition in accord with Section 37-82-106, C.R.S.

12. All of the requirements of C.R.S. § 37-90-137(4), in effect on this date have been complied with, and the issuance of permits for the subject wells is justified and those permits will be issued as described in Paragraph 34 below.

13. Applicants will relinquish the right to consume after use, reuse, and successive use 2% of the amount of ground water withdrawn through Dines Wells KA-1, KA-2, KA-3 and KA-4 and any additional, supplemental, or replacement, wells without regard to dominion or control of the ground water so relinquished.

14. Applicants seek a decree designating all of the wells described in Paragraph 7 above as original and alternate points of diversion for each other permitting the withdrawal of up to the full cumulative amount by flow rate and volume of water which may be lawfully withdrawn from any one or more of those wells. The Court finds that no material injury will result to the owners or persons entitled to use water under any vested

water right or decreed conditional water right by the granting of this request, and it is hereby granted.

15. Applicants may withdraw more water than the amounts set forth in Paragraph 8 so long as the sum of the withdrawals from all wells decreed herein (as that sum may subsequently be adjusted pursuant to Paragraph 29 hereof) does not exceed the product of the number of years since the date of this decree, times the annual rate of one percent (1%) of the total amount of unappropriated water recoverable from the Arapahoe Formation.

16. Applicants have requested that the Court determine that Applicants have the right to withdraw all of the unappropriated water from the Arapahoe Formation lying below their land and to increase their annual appropriations based upon the local aquifer characteristics established through information obtained from the drilling of the wells upon notice to all parties and approval by the Court, without amending the Application or republishing. The Court finds that there has been full and adequate notice of these claims and Applicants will be entitled to an adjustment under the provisions of Paragraph 29 below on the amount of water to which the wells are entitled.

17. Applicants may construct any well within 200 feet of the described locations without amending the Application or reopening this decree.

18. With respect to the permits to be issued by the State Engineer's office for construction of the wells described in Paragraph 7 herein, the provisions of Paragraph 34 below are and have been justified and shall apply.

19. As of March 3, 1986, Applicants have intended to claim the waters sought in the Application and have so demonstrated by open and physical acts on the ground and by the completion of an engineering study and hydrogeological investigation on the water available for appropriation in the Arapahoe Formation. Applicants have demonstrated and manifested an intent to appropriate the waters claimed herein by giving sufficient notice thereof, all in accordance with law. The evidence presented shows that the Applicants intend to appropriate the waters claimed herein, that such intent to appropriate has been adequately demonstrated, and that Applicants are entitled to a decree for the water rights herein decreed.

20. There is unappropriated water available for withdrawal by the structures decreed herein and the vested water rights of others will not be materially injured by the appropriations as decreed. Only that quantity of water underlying the Subject Lands has been considered to be

unappropriated; the minimum useful life of the Arapahoe Formation is at least one hundred (100) years, assuming no substantial artificial recharge within one hundred (100) years; and no material injury to vested water rights will result from the issuance of or exercise of the permits for the subject wells.

#### CONCLUSIONS OF LAW

21. The Court has jurisdiction to determine Applicants' rights to nontributary ground water pursuant to Sections 37-90-137(6), 37-92-203(1), and 37-92-302 through 305, C.R.S. (Supp. 1985). The procedures and requirements of these statutes have been complied with, full and adequate notice has been given, and no additional notice is required.

22. The Court concludes as a matter of law that the Application herein is one contemplated by law. The Application for a decree confirming Applicants' right to divert and use ground water from the Arapahoe Formation beneath the Subject Lands, pursuant to C.R.S. § 37-90-137(4), should be granted, subject to the provisions of this decree. The rights confirmed by this decree are vested property rights. The amount of water confirmed in this decree is that quantity of water underlying the Subject Lands and the annual withdrawals are based on an aquifer life of one hundred years.

23. The Court concludes that the rights to ground water determined herein are not conditional water rights and subsequent showings or findings of reasonable diligence under Section 37-92-301(4), C.R.S., are inapplicable and need not be made. Accordingly, each of the water rights adjudicated herein is a final vested property right.

24. Applicants are entitled as a matter of law to use, reuse, and successively use to extinction and dispose of all nontributary ground water decreed herein pursuant to Section 37-82-106, C.R.S. (Supp. 1985) subject only to a 2% relinquishment of Applicants' right to total consumption. Failure to use, reuse or recapture such water, including return flows, shall not be deemed a forfeiture or abandonment of the right to such use, reuse or recapture.

25. The Court shall retain jurisdiction over this matter to make adjustments to the amount of water available for withdrawal annually to conform to the actual aquifer characteristics encountered upon the drilling of the wells. This retained jurisdiction may be invoked only by the parties under Paragraph 36.

## JUDGMENT AND DECREE

26. The Findings of Fact and Conclusions of Law set forth in Paragraphs 1-25, above are incorporated herein by this reference.

27. The Application for determination of water rights for the subject wells is granted subject to the following limitations.

28. A right to five hundred seventy-five (575) acre-feet of nontributary ground water per year is decreed and confirmed in Applicants pursuant to § 37-90-137(4), C.R.S., for Dines Wells KA-1, KA-2, KA-3, and KA-4, from the Arapahoe Formation for municipal, domestic, commercial, fire protection, industrial, residential, recreation, irrigation, exchange, replacement of depletions, augmentation, livestock and agricultural uses. Applicants shall have the right to recapture, reuse, and dispose of the water developed by the subject wells. Applicants shall have the right to withdraw water for immediate application to beneficial use and for storage and subsequent application to beneficial use and shall have the right to make any reuse, successive use or disposition of the developed water claimed herein to extinction free of any limitations, restrictions, or requirements as to the place of use, amount of discharge or location of discharge after such reuse, successive use or disposition in accord with Section 37-82-106, C.R.S. subject only to the provisions of Paragraph 31 below. The water may be withdrawn through the wells described in Paragraph 7 above and through such additional wells as may be required in order to maintain the annual appropriation as determined herein. The proposed withdrawals through Dines Wells KA-1, KA-2, KA-3, and KA-4 and any additional, supplemental, or replacement wells in the amount of 575 acre-feet per year, or in any additional amounts of water from the Arapahoe Formation underlying the Subject Lands, will not, within one hundred years, deplete the flow of any natural stream or its alluvium or any ground water tributary thereto at an annual rate greater than one-tenth of 1% of the annual rate of withdrawal, and those waters are nontributary to any natural surface stream, its alluvium, and any ground water tributary thereto, and the proposed withdrawals will not result in material injury to vested water rights.

29. The total amount of water to which Applicants are entitled and which is available to Applicants from the Arapahoe Formation beneath the Subject Lands shall be 575 acre-feet per year or the lesser or greater amount of water each such well is entitled to as subsequently determined from the saturated sand thickness of the Arapahoe Formation determined from the geophysical data obtained from the construction of the wells. Geophysical logs shall be taken in accordance with the applicable

rules promulgated by the State Engineer. In making the determination of the final amount of water to which the subject wells are entitled, the following criteria shall apply:

(a) Saturated sand thickness shall be defined as the cumulative thickness of saturated materials as shown on the geophysical logs for each well applying standard accepted geophysical log interpretation methodology;

(b) The specific yield for the Arapahoe Formation shall be 17%;

(c) The water in the Arapahoe Formation underlying the 1410 acres of the Subject Lands shall be considered available for appropriation by the wells decreed herein.

After the completion of the wells subject to this decree, Applicants shall submit the geophysical logs and any other geophysical information obtained from the drilling of the wells to the State Engineer and to the other parties in this action together with a statement from Applicants on the final actual saturated sand thickness and final annual appropriation for each well as determined by Applicants. Within 60 days from the date on which Applicants mail copies of the geophysical logs and statement to the parties herein, any party may petition this Court to invoke the Court's retained jurisdiction under Paragraph 36 of this decree to reconsider the saturated sand thickness of the Arapahoe Formation underlying the Subject Lands for the purpose of adjusting the total entitlement of water to the wells decreed herein. Those proceedings shall be limited exclusively to the issue of saturated sand thickness. If the Court's retained jurisdiction is not invoked within the time prescribed in this Paragraph, the respective amounts set forth in Applicants' statement as the final annual entitlement to each well shall be final, which amount shall be confirmed as final by order of the Court upon Applicants' motion to the Court setting forth facts showing compliance with this Paragraph.

30. The issuance by the Colorado Division of Water Resources pursuant to Colorado Revised Statutes, Section 37-90-137(4) of permits to construct the subject wells is justified and the Division of Water Resources is directed to issue the permits in accordance with Paragraph 34 below. Each of the requirements of the statute has been complied with. Unappropriated waters are available for appropriation from the Arapahoe Formation beneath the Subject Lands and the proposed withdrawals will not result in material injury to other vested water rights.

31. Applicants shall relinquish the right to consume, after use, reuse, and successive use 2% of the water withdrawn through Dines Wells KA-1, KA-2, KA-3 and KA-4 and any additional, supplemental, or replacement wells without regard to dominion or control of the ground water so relinquished.

32. All of the wells described in Paragraph 7 may be used as original and alternate points of diversion for each other permitting the withdrawal by flow rate and volume of up to the full cumulative amount of water which may be lawfully withdrawn from all of those wells from any one or more of those wells. The Court finds that no material injury will result to the owners or persons entitled to use water under any vested water right or decreed conditional water right by the granting of this request, and it is hereby granted.

33. Applicants may withdraw more water than the final annual appropriation for each well so long as the sum of the withdrawals from all wells decreed herein (as that sum may subsequently be adjusted pursuant to Paragraph 29 hereof) does not exceed the product of the number of years since the date of issuance of this decree, times the annual rate of one percent (1%) of the total amount of unappropriated water recoverable from the Arapahoe Formation.

34. With respect to the permits to be issued by the State Engineer's office for construction of the wells described in Paragraph 7 herein, the following provisions shall apply.

(a) The State Engineer shall consider the rights granted herein as valid and shall consider the water sought by Applicants as taken and appropriated by Applicants.

(b) When Applicants are prepared to drill a well described in this decree, Applicants shall apply to the State Engineer for a well permit and that permit shall be issued within 60 days under terms and conditions no less stringent than those set forth in this decree with the conditions for equipping and constructing the well as are specified in Paragraph 35 herein. In the event that a well permit expires prior to the construction of the well and the application of water to beneficial use, Applicants may apply for a new well permit and the State Engineer shall within 60 days issue a new well permit with the same terms and conditions as the permit that expired.

(c) Applicants shall submit well permit applications to the State Engineer's office for any replacement, supplemental or additional wells.

(d) Any well permitted pursuant to this decree which is drilled within 200 feet of the decreed location shall be deemed to have been drilled at the decreed well location and shall not require application for a new or amended well permit.

(e) In determining whether good cause exists for granting a request by Applicants to extend well permits for nontributary wells for one or more additional one-year periods pursuant to Section 37-90-137(3)(a)(II), C.R.S. (1985 Supp.), the State Engineer shall recognize that each well decreed herein, and such additional wells as are required from time to time to fully recover the annual appropriation herein, are part of a single integrated water supply system to be constructed over a phased period of time. So long as Applicants still desire to use the groundwater the well permits shall be extended.

(f) Prior to constructing any additional wells, Applicants shall submit well permit applications to the State Engineer. In considering such permit applications, the State Engineer shall be governed by Section 37-90-137(10), C.R.S. (1985 Supp.) and the provisions of this decree. Any such permitting action may be reviewed by this Court pursuant to Section 37-92-305(6), C.R.S. (1985 Supp.).

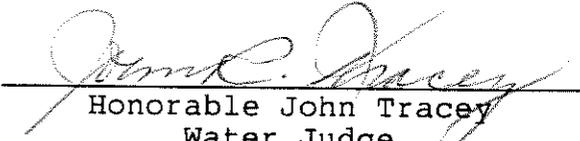
(g) For the purpose of well permit applications, Applicants need not submit separate proof, apart from the terms of this decree, of matters which have been determined herein.

35. Applicants shall geophysically log the entire bore hole of each well prior to the installation of casing. Such logs shall be taken in accordance with the applicable rules promulgated by the State Engineer. In constructing and maintaining any well which will withdraw water from the Arapahoe Formation under this decree, the Applicants shall seal off and encase the well with an impervious lining at all levels, except the level of the Arapahoe Formation, to prevent withdrawal of and mixing of groundwater in other aquifers and a totalizing flow meter shall be installed on each well. After construction the Applicants shall attach an identification tag to the well specifying the name of the well, the permit number and the aquifer from which the water is withdrawn. Applicants shall maintain records of the amounts pumped from each well on a monthly basis and such records shall be provided to the Division Engineer or the State Engineer on request.

36. This Court retains jurisdiction in this case for the reconsideration of the final amounts of water appropriated by the proposed wells in accord with Paragraph 29 above. The Court's retained jurisdiction may be invoked only by the Applicants and JVRC, Inc. The Court's retained jurisdiction may be invoked by written notice to the Court requesting a hearing. Copies of that notice will be served on the parties herein at their latest address of record in this case.

Dated this 29 day of Oct., 1986.

BY THE COURT

  
Honorable John Tracey  
Water Judge  
Water Division No. 2  
State of Colorado

APPROVED AS TO FORM AND SUBSTANCE:

SHERMAN & HOWARD

VRANESH & RAISCH

By:

  
John L. DeWeerd #9390  
Kenneth L. Salazar #11648  
Suite 2900  
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Denver, Colorado 80202

By:

  
Michael D. Shimmin, #9182  
Post Office Box 871  
Boulder, Colorado 80306  
Telephone: (303) 443-6151  
Attorneys for Objector  
JVRC, Inc.

Telephone: (303) 297-2900

Attorneys for Applicants,  
The First Interstate Bank of  
Denver N.A., Carla W. Lewis,  
and Samuel S. Sherman as  
Cotrustees under the Life  
Insurance Trust of Thomas M.  
Dines.

c: Sherman and Howard (Salazar)  
Vranesh & Raisch (Shimmin)  
Division Engineer  
State Engineer

Filed in the office of the  
Clerk, District Court Water  
Division No. 2, State of  
Colorado

OCT 29 1986

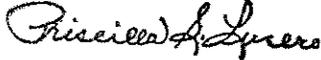
  
Clerk

EXHIBIT A

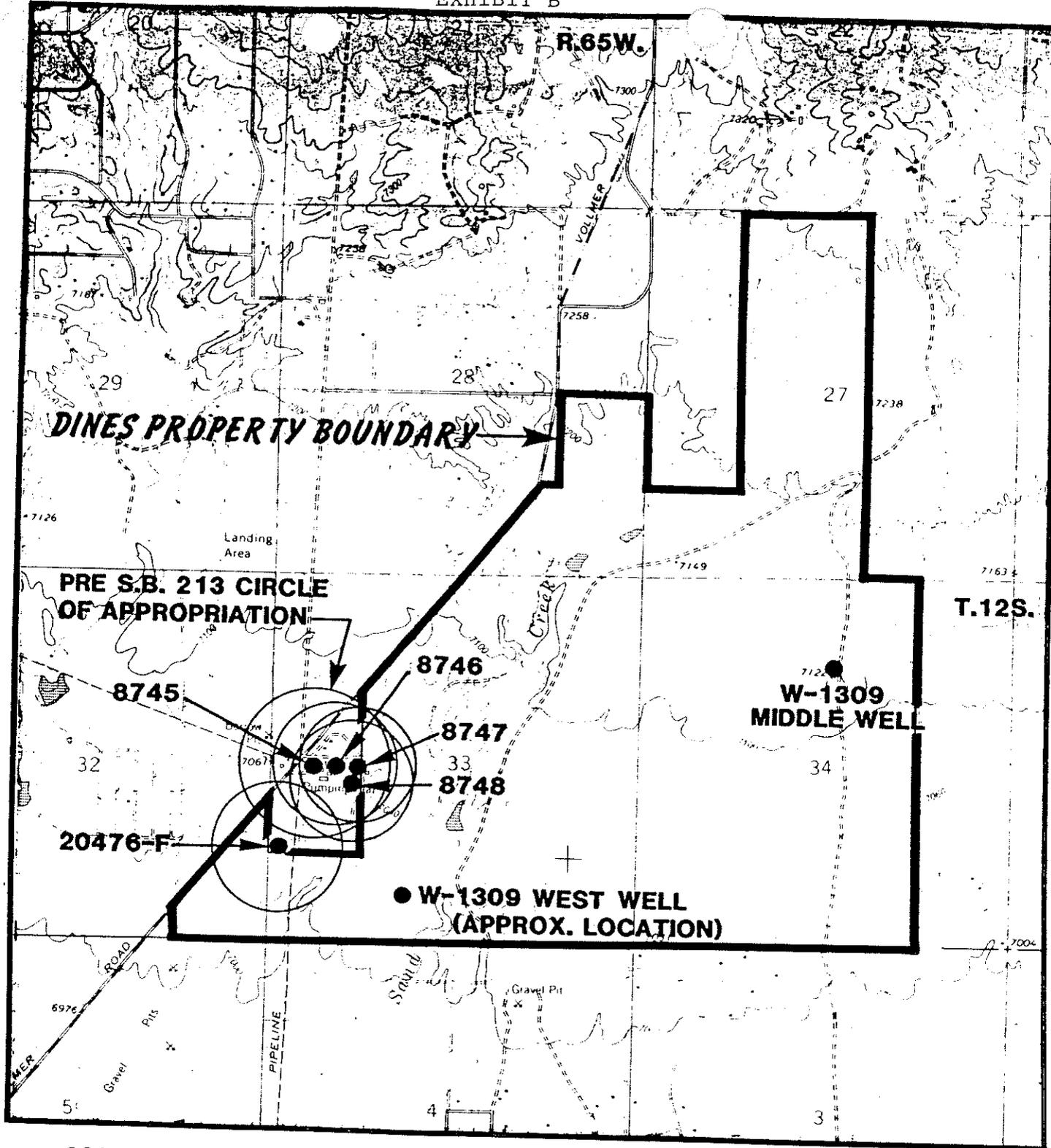
The Subject Lands consist of the following:

The W1/2 W1/2 E1/2 and the E1/2 W1/2 and the SW1/4 SW1/4 of Section 27; the E1/2 SE1/4 and that portion of the SW1/4 SE1/4 lying South and East of the County Road across said premises, both in Section 28; that portion of the SE1/4 SE1/4 of Section 32 lying South and East of said County Road, and that portion of the NE1/4 SE1/4 of said Section 32, lying South and East of said County Road; the E1/2 and the E1/2 SW1/4 and the SW1/4 SW1/4 of Section 33, and all that part of the NW1/4 of said Section 33 lying South and East of the said County Road across said premises, except that portion of the SW1/4 NW1/4 of said Section 33 lying South and East of said County Road containing approximately 10 acres deeded to Colorado Interstate Gas Company by Warranty Deed recorded in Book 1173 at Page 359 of the El Paso County Records; and the W1/2 E1/2 and the W1/2 of Section 34, all in Township 12 South, Range 65 West of the 6th P.M., located in El Paso County, Colorado.

Filed in the office of the  
Clerk, District Court Water  
Division No. 2, State of  
Colorado

OCT 29 1986

*Rosemary A. Lyons*  
Clerk



SCALE 1:24000

# LOCATION MAP

FIGURE 1

Filed in the office of the  
Clerk, District Court Water  
Division No. 2, State of  
Colorado

OCT 29 1986

*Priscilla S. Lyners*  
Clerk

DISTRICT COURT, WATER DIVISION NO. 2, STATE OF COLORADO

OCT 29 1986

Case No. 86-CW-19

*Riseice/Sherman*

FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE

Clerk

CONCERNING THE APPLICATION FOR NONTRIBUTARY GROUND WATER RIGHTS OF THE FIRST INTERSTATE BANK OF DENVER N.A., CARLA W. LEWIS, AND SAMUEL S. SHERMAN AS COTRUSTEES UNDER THE LIFE INSURANCE TRUST OF THOMAS M. DINES FROM THE LARAMIE-FOX HILLS AQUIFER, EL PASO COUNTY.

THIS MATTER, having come on ~~for hearing before the~~ *get* Court this 29 day of Oct., 1986 upon the application of The First Interstate Bank of Denver N.A., Carla W. Lewis, and Samuel S. Sherman as Cotrustees under the Life Insurance Trust of Thomas M. Dines ("Applicants") and the Court having considered the pleadings filed and the evidence presented, and being fully advised in the premises, hereby enters the following Findings of Fact, Conclusions of Law, and Judgment and Decree:

#### FINDINGS OF FACT

1. The Applicants are The First Interstate Bank of Denver N.A., Carla W. Lewis, and Samuel S. Sherman as Cotrustees under the Life Insurance Trust of Thomas M. Dines whose address is First Interstate Bank of Denver, 633 Seventeenth Street, Denver, Colorado 80202, Attn: Jack Alexander. Applicants filed the application in this case styled Application For Nontributary Ground Water From The Laramie-Fox Hills Aquifer (the "Application") on March 28, 1986, seeking an adjudication of nontributary ground water rights from the Laramie-Fox Hills Aquifer underlying lands owned by Applicants in El Paso County.

2. Timely and adequate notice of the Application was published as required by statute, and the Court has jurisdiction over the subject matter of this proceeding and over all parties affected hereby, whether they have appeared or not. None of the lands or water rights involved in this case are within the boundaries of a designated groundwater basin.

3. A timely statement of opposition was filed by JVRC, Inc. No other statements of opposition were filed within the time provided by law nor did any other parties enter their appearance or intervene in these proceedings.

4. The Water Referee by Order dated July 19<sup>9</sup>, 1986, under Section 37-92-303(2), C.R.S., rereferred the Application to the Water Judge for all further proceedings.

5. The State Engineer issued a Determination of Facts on the Application, dated July 28, 1986, which has been filed with the Court. The Division Engineer adopted the Determination of Facts as his recommendations on August 8, 1986. The Determination of Facts and the findings contained therein have been reviewed and considered by this Court in accordance with Section 37-92-305(6), C.R.S.

6. Applicants seek an adjudication of rights to nontributary ground water from the Laramie-Fox Hills Aquifer beneath 1,410 acres of land in El Paso County which are described in Exhibit A and depicted on the map attached as Exhibit B, both of which are incorporated herein by this reference (the "Subject Lands"). Applicants are the owners of the Subject Lands and have the right to withdraw and use the waters from the Laramie-Fox Hills Aquifer underlying those lands. The waters claimed herein may be withdrawn through the proposed wells described in Paragraph 7 below and through such additional, replacement and supplemental wells as may be necessary to withdraw all of the water in the Laramie-Fox Hills Aquifer underlying the Subject Lands without causing material injury to any vested water right whose source of supply is the Arkansas River and any of its tributaries or any other natural stream, or any ground water tributary thereto, and the Applicants have so proven.

7. Applicants will divert the waters claimed herein from the Laramie-Fox Hills Aquifer through Dines Wells KLF-1, KLF-2, KLF-3, and KLF-4 more particularly described as follows:

Well Name: Dines Well KLF-1

- (a) In the SE 1/4 of the NW 1/4 of Section 27, Township 12 South, Range 65 West of the 6th P.M., 2500 feet from the North Section line and 2300 feet from the West Section line, in El Paso County.
- (b) Depth: 2350 feet.
- (c) Source: Nontributary Laramie-Fox Hills Aquifer.
- (d) Pumping rate: 150 gpm.

(e) Annual quantity: 240 acre-feet.\*

Well Name: Dines Well KLF-2

(a) Location: In the SW 1/4 of the SW 1/4 of Section 27, Township 12 South, Range 65 West of the 6th P.M., 100 feet from the South Section line and 100 feet from the West Section line, in El Paso County.

(b) Depth: 2250 feet.

(c) Source: Nontributary Laramie-Fox Hills Aquifer.

(d) Pumping rate: 150 gpm.

(e) Annual quantity: 240 acre-feet.\*

Well Name: Dines Well KLF-3

(a) Location: In the NW 1/4 of the SE 1/4 of Section 33, Township 12 South, Range 65 West of the 6th P.M., 1400 feet from the South Section line and 2200 feet from the East Section line, in El Paso County.

(b) Depth: 2150 feet.

(c) Source: Nontributary Laramie-Fox Hills Aquifer.

(d) Pumping rate: 150 gpm.

(e) Annual quantity: 240 acre-feet.\*

Well Name: Dines Well KLF-4

(a) Location: In the NE 1/4 of the SW 1/4 of Section 34, Township 12 South, Range 65 West of the 6th P.M., 1400 feet from the South Section line and 2200 feet from the West Section line, in El Paso County.

(b) Depth: 2150 feet.

(c) Source: Nontributary Laramie-Fox Hills Aquifer.

(d) Pumping rate: 150 gpm.

(e) Annual quantity: 240 acre-feet.

- \* Not to exceed in total the amount available to Applicants from the Laramie-Fox Aquifer pursuant to § 37-90-137(4), C.R.S. and the provisions of this decree.

8. Pursuant to §37-90-137(4), C.R.S., five hundred thirty-nine (539) acre-feet of water per year are available to Applicants from the Laramie-Fox Hills Aquifer underlying the Subject Lands. The average thickness of saturated sand of the Laramie-Fox Hills Aquifer underlying the Subject Lands is 255 feet but the final determination on actual saturated sand thickness will be determined when the wells are drilled, and the amount decreed herein may be subsequently adjusted in accordance with that saturated sand thickness as provided in Paragraph 29 below. The specific yield of the Laramie-Fox Hills Aquifer is 15% in and beneath the Subject Lands. This finding is specific to the property involved and does not indicate or in any way reflect upon proper values for the subject aquifer elsewhere. All the water in the Laramie-Fox Hills Aquifer underlying the Subject Lands remains available for withdrawal by the wells decreed herein.

9. The State Engineer in his Determination of Facts found that 423 acre-feet per year were available for appropriation through the subject wells based on a specific yield of 15% and a saturated sand thickness of 200 feet for the Laramie-Fox Hill Aquifer beneath the Subject Lands. Applicants' engineers ~~has testified~~ that 539 acre-feet per year is available for appropriation calculated with a saturated sand thickness of 255 feet for the Laramie-Fox Hills Aquifer derived from a review of wells in the vicinity of the Subject Lands. Subject to the final determination of saturated sand thickness based on the information derived from the drilling of the wells, Applicants have shown by a preponderance of the evidence that the saturated sand thickness for the Laramie-Fox Hills Aquifer is 255 feet beneath the Applicants' property.

10. The source of water for the proposed wells is nontributary as defined in Section 37-90-103 (10.5), C.R.S. The proposed withdrawals through Dines Wells KLF-1, KLF-2, KLF-3, and KLF-4 in the amount of 539 acre-feet per year, or in any lesser or greater amount determined under Paragraph 29, will not, within one hundred years, deplete the flow of any natural stream or its alluvium or any ground water tributary thereto at an annual rate greater than one-tenth of 1% of the annual rate of withdrawal.

11. The waters of the Laramie-Fox Hills Aquifer that are the subject of the appropriation claimed herein will be, and Applicants intend that they be used, and Applicants shall have the right of succession of uses, for municipal, domestic, commercial, fire protection, industrial, residential, recreation, irrigation, exchange, replacement of depletions, augmentation, livestock and agricultural uses. The water will be produced for immediate application to beneficial use and for storage and subsequent application to beneficial use. Subject only to the provisions of Paragraph 31, Applicants shall have the right to make any reuse, successive use or disposition of the developed water claimed herein until totally consumed free of any limitations, restrictions, or requirements as to the place of use, amount of discharge or location of discharge after such reuse, successive use or disposition in accord with Section 37-82-106, C.R.S.

12. All of the requirements of C.R.S. § 37-90-137(4), in effect on this date have been complied with, and the issuance of permits for the subject wells is justified and those permits will be issued as described in Paragraph 34 below.

13. Applicants will relinquish the right to consume after use, reuse, and successive use 2% of the amount of ground water withdrawn through Dines Wells KLF-1, KLF-2, KLF-3 and KLF-4 and any additional, supplemental, or replacement, wells without regard to dominion or control of the ground water so relinquished.

14. Applicants seek a decree designating all of the wells described in Paragraph 7 above as original and alternate points of diversion for each other permitting the withdrawal of up to the full cumulative amount by flow rate and volume of water which may be lawfully withdrawn from any one or more of those wells. The Court finds that no material injury will result to the owners or persons entitled to use water under any vested water right or decreed conditional water right by the granting of this request, and it is hereby granted.

15. Applicants may withdraw more water than the amounts set forth in Paragraph 8 so long as the sum of the withdrawals from all wells decreed herein (as that sum may subsequently be adjusted pursuant to Paragraph 29 hereof) does not exceed the product of the number of years since the date of this decree, times the annual rate of one percent (1%) of the total amount of unappropriated water recoverable from the Laramie-Fox Hills Aquifer.

16. Applicants have requested that the Court determine that Applicants have the right to withdraw all of the unappropriated water from the Larimie-Fox Hills Aquifer lying

below their land and to increase their annual appropriations based upon the local aquifer characteristics established through information obtained from the drilling of the wells upon notice to all parties and approval by the Court, without amending the Application or republishing. The Court finds that there has been full and adequate notice of these claims and Applicants will be entitled to an adjustment under the provisions of Paragraph 29 below on the amount of water to which the wells are entitled.

17. Applicants may construct any well within 200 feet of the described locations without amending the Application or reopening this decree.

18. With respect to the permits to be issued by the State Engineer's office for construction of the wells described in Paragraph 7 herein, the provisions of Paragraph 34 below are and have been justified and shall apply.

19. As of March 3, 1986, Applicants have intended to claim the waters sought in the Application and have so demonstrated by open and physical acts on the ground and by the completion of an engineering study and hydrogeological investigation on the water available for appropriation in the Laramie-Fox Hills Aquifer. Applicants have demonstrated and manifested an intent to appropriate the waters claimed herein by giving sufficient notice thereof, all in accordance with law. The evidence presented shows that the Applicants intend to appropriate the waters claimed herein, that such intent to appropriate has been adequately demonstrated, and that Applicants are entitled to a decree for the water rights herein decreed.

20. There is unappropriated water available for withdrawal by the structures decreed herein and the vested water rights of others will not be materially injured by the appropriations as decreed. Only that quantity of water underlying the Subject Lands has been considered to be unappropriated; the minimum useful life of the Laramie-Fox Hills Aquifer is at least one hundred (100) years, assuming no substantial artificial recharge within one hundred (100) years; and no material injury to vested water rights will result from the issuance of or exercise of the permits for the subject wells.

#### CONCLUSIONS OF LAW

21. The Court has jurisdiction to determine Applicants' rights to nontributary ground water pursuant to Sections 37-90-137(6), 37-92-203(1), and 37-92-302 through 305, C.R.S. (Supp. 1985). The procedures and requirements of these statutes have been complied with, full and adequate notice has been given, and no additional notice is required.

22. The Court concludes as a matter of law that the Application herein is one contemplated by law. The Application for a decree confirming Applicants' right to divert and use ground water from the Laramie-Fox Hills Aquifer beneath the Subject Lands, pursuant to C.R.S. § 37-90-137(4), should be granted, subject to the provisions of this decree. The rights confirmed by this decree are vested property rights. The amount of water confirmed in this decree is that quantity of water underlying the Subject Lands and the annual withdrawals are based on an aquifer life of one hundred years.

23. The Court concludes that the rights to ground water determined herein are not conditional water rights and subsequent showings or findings of reasonable diligence under Section 37-92-301(4), C.R.S., are inapplicable and need not be made. Accordingly, each of the water rights adjudicated herein is a final vested property right.

24. Applicants are entitled as a matter of law to use, reuse, and successively use to extinction and dispose of all nontributary ground water decreed herein pursuant to Section 37-82-106, C.R.S. (Supp. 1985) subject only to a 2% relinquishment of Applicants' right to total consumption. Failure to use, reuse or recapture such water, including return flows, shall not be deemed a forfeiture or abandonment of the right to such use, reuse or recapture.

25. The Court shall retain jurisdiction over this matter to make adjustments to the amount of water available for withdrawal annually to conform to the actual aquifer characteristics encountered upon the drilling of the wells. This retained jurisdiction may be invoked only by the parties under Paragraph 36.

#### JUDGMENT AND DECREE

26. The Findings of Fact and Conclusions of Law set forth in Paragraphs 1-25, above are incorporated herein by this reference.

27. The Application for determination of water rights for the subject wells is granted subject to the following limitations.

28. A right to five hundred thirty-nine (539) acre-feet of nontributary ground water per year is decreed and confirmed in Applicants pursuant to § 37-90-137(4), C.R.S., for Dines Wells KLF-1, KLF-2, KLF-3, and KLF-4, from the Laramie-Fox Hills Aquifer for municipal, domestic, commercial, fire protection, industrial, residential, recreation, irrigation,

exchange, replacement of depletions, augmentation, livestock and agricultural uses. Applicants shall have the right to recapture, reuse, and dispose of the water developed by the subject wells. Applicants shall have the right to withdraw water for immediate application to beneficial use and for storage and subsequent application to beneficial use and shall have the right to make any reuse, successive use or disposition of the developed water claimed herein to extinction free of any limitations, restrictions, or requirements as to the place of use, amount of discharge or location of discharge after such reuse, successive use or disposition in accord with Section 37-82-106, C.R.S. subject only to the provisions of Paragraph 31 below. The water may be withdrawn through the wells described in Paragraph 7 above and through such additional wells as may be required in order to maintain the annual appropriation as determined herein. The proposed withdrawals through Dines Wells KLF-1, KLF-2, KLF-3, and KLF-4 and any additional, supplemental, or replacement wells in the amount of 539 acre-feet per year, or in any additional amounts of water from the Laramie-Fox Hills Aquifer underlying the Subject Lands, will not, within one hundred years, deplete the flow of any natural stream or its alluvium or any ground water tributary thereto at an annual rate greater than one-tenth of 1% of the annual rate of withdrawal, and is nontributary to any natural surface stream, its alluvium, and any ground water tributary thereto, and the proposed withdrawals will not result in material injury to vested water rights.

29. The total amount of water to which Applicants are entitled and which is available to Applicants from the Laramie-Fox Hills Aquifer beneath the Subject Lands shall be 539 acre-feet per year or the lesser or greater amount of water each such well is entitled to as subsequently determined from the saturated sand thickness of the Laramie-Fox Hills Aquifer determined from the geophysical data obtained from the construction of the wells. Geophysical logs shall be taken in accordance with the applicable rules promulgated by the State Engineer. In making the determination of the final amount of water to which the subject wells are entitled, the following criteria shall apply:

(a) Saturated sand thickness shall be defined as the cumulative thickness of saturated materials as shown on the geophysical logs for each well applying standard accepted geophysical log interpretation methodology;

(b) The specific yield for the Laramie-Fox Hills Aquifer shall be 15%;

(c) The water in the Laramie-Fox Hills Aquifer underlying the 1410 acres of the Subject Lands shall be considered available for appropriation by the wells decreed herein.

After the completion of the wells subject to this decree, Applicants shall submit the geophysical logs and any other geophysical information obtained from the drilling of the wells to the State Engineer and to the other parties in this action together with a statement from Applicants on the final actual saturated sand thickness and final annual appropriation for each well as determined by Applicants. Within 60 days from the date on which Applicants mail copies of the geophysical logs and statement to the parties herein, any party may petition this Court to invoke the Court's retained jurisdiction under Paragraph 36 of this decree to reconsider the saturated sand thickness of the Laramie-Fox Hills Aquifer underlying the Subject Lands for the purpose of adjusting the total entitlement of water to the wells decreed herein. Those proceedings shall be limited exclusively to the issue of saturated sand thickness. If the Court's retained jurisdiction is not invoked within the time prescribed in this Paragraph, the respective amounts set forth in Applicants' statement as the final annual entitlement to each well shall be final, which amount shall be confirmed as final by order of the Court upon Applicants' motion to the Court setting forth facts showing compliance with this Paragraph.

30. The issuance by the Colorado Division of Water Resources pursuant to Colorado Revised Statutes, Section 37-90-137(4) of permits to construct the subject wells is justified and the Division of Water Resources is directed to issue the permits in accordance with Paragraph 34 below. Each of the requirements of the statute has been complied with. Unappropriated waters are available for appropriation from the Laramie-Fox Hills Aquifer beneath the Subject Lands and the proposed withdrawals will not result in material injury to other vested water rights.

31. Applicants shall relinquish the right to consume, after use, reuse, and successive use 2% of the water withdrawn through Dines Wells KLF-1, KLF-2, KLF-3 and KLF-4 and any additional, supplemental, or replacement wells without regard to dominion or control of the ground water so relinquished.

32. All of the wells described in Paragraph 7 may be used as original and alternate points of diversion for each other permitting the withdrawal by flow rate and volume of up to the full cumulative amount of water which may be lawfully withdrawn from all of those wells from any one or more of those wells. The Court finds that no material injury will result to the owners or persons entitled to use water under any vested water right or

decreed conditional water right by the granting of this request, and it is hereby granted.

33. Applicants may withdraw more water than the final annual appropriation for each well so long as the sum of the withdrawals from all wells decreed herein (as that sum may subsequently be adjusted pursuant to Paragraph 29 hereof) does not exceed the product of the number of years since the date of issuance of this decree, times the annual rate of one percent (1%) of the total amount of unappropriated water recoverable from the Laramie-Fox Hills Aquifer.

34. With respect to the permits to be issued by the State Engineer's office for construction of the wells described in Paragraph 7 herein, the following provisions shall apply.

(a) The State Engineer shall consider the rights granted herein as valid and shall consider the water sought by Applicants as taken and appropriated by Applicants.

(b) When Applicants are prepared to drill a well described in this decree, Applicants shall apply to the State Engineer for a well permit and that permit shall be issued within 60 days under terms and conditions no less stringent than those set forth in this decree with the conditions for equipping and constructing the well as are specified in Paragraph 35 herein. In the event that a well permit expires prior to the construction of the well and the application of water to beneficial use, Applicants may apply for a new well permit and the State Engineer shall within 60 days issue a new well permit with the same terms and conditions as the permit that expired.

(c) Applicants shall submit well permit applications to the State Engineer's office for any replacement, supplemental or additional wells.

(d) Any well permitted pursuant to this decree which is drilled within 200 feet of the decreed location shall be deemed to have been drilled at the decreed well location and shall not require application for a new or amended well permit.

(e) In determining whether good cause exists for granting a request by Applicants to extend well permits for nontributary wells for one or more additional one-year periods pursuant to Section 37-90-137(3)(a)(II), C.R.S. (1985 Supp.), the State Engineer shall recognize that each well decreed herein, and such additional

wells as are required from time to time to fully recover the annual appropriation herein, are part of a single integrated water supply system to be constructed over a phased period of time. So long as Applicants still desire to use the groundwater the well permits shall be extended.

(f) Prior to constructing any additional wells, Applicants shall submit well permit applications to the State Engineer. In considering such permit applications, the State Engineer shall be governed by Section 37-90-137(10), C.R.S. (1985 Supp.) and the provisions of this decree. Any such permitting action may be reviewed by this Court pursuant to Section 37-92-305(6), C.R.S. (1985 Supp.).

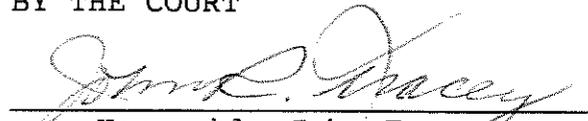
(g) For the purpose of well permit applications, Applicants need not submit separate proof, apart from the terms of this decree, of matters which have been determined herein.

35. Applicants shall geophysically log the entire bore hole of each well prior to the installation of casing. Such logs shall be taken in accordance with the applicable rules promulgated by the State Engineer. In constructing and maintaining any well which will withdraw water from the Laramie-Fox Hills Aquifer under this decree, the Applicants shall seal off and encase the well with an impervious lining at all levels, except the level of the Laramie-Fox Hills Aquifer, to prevent withdrawal of and mixing of groundwater in other aquifers and a totalizing flow meter shall be installed on each well. After construction the Applicants shall attach an identification tag to the well specifying the name of the well, the permit number and the aquifer from which the water is withdrawn. Applicants shall maintain records of the amounts pumped from each well on a monthly basis and such records shall be provided to the Division Engineer or the State Engineer on request.

36. This Court retains jurisdiction in this case for the reconsideration of the final amounts of water appropriated by the proposed wells in accord with Paragraph 29 above. The Court's retained jurisdiction may be invoked only by the Applicants and JVRC, Inc. The Court's retained jurisdiction may be invoked by written notice to the Court requesting a hearing. Copies of that notice will be served on the parties herein at their latest address of record in this case.

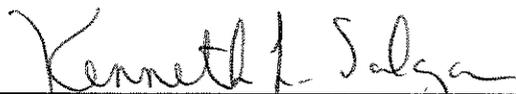
Dated this 29 day of Oct., 1986.

BY THE COURT

  
Honorable John Tracey  
Water Judge  
Water Division No. 2  
State of Colorado

APPROVED AS TO FORM AND SUBSTANCE:

SHERMAN & HOWARD

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Cotrustees under the Life  
Insurance Trust of  
Thomas M. Dines.

c: Sherman and Howard (Salazar)  
Vranesh & Raisch (Shimmin)  
Division Engineer  
State Engineer

VRANESH & RAISCH

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Filed in the office of the  
Clerk, District Court Water  
Division No. 2, State of  
Colorado

OCT 29 1986

  
Clerk

EXHIBIT A

The Subject Lands consist of the following:

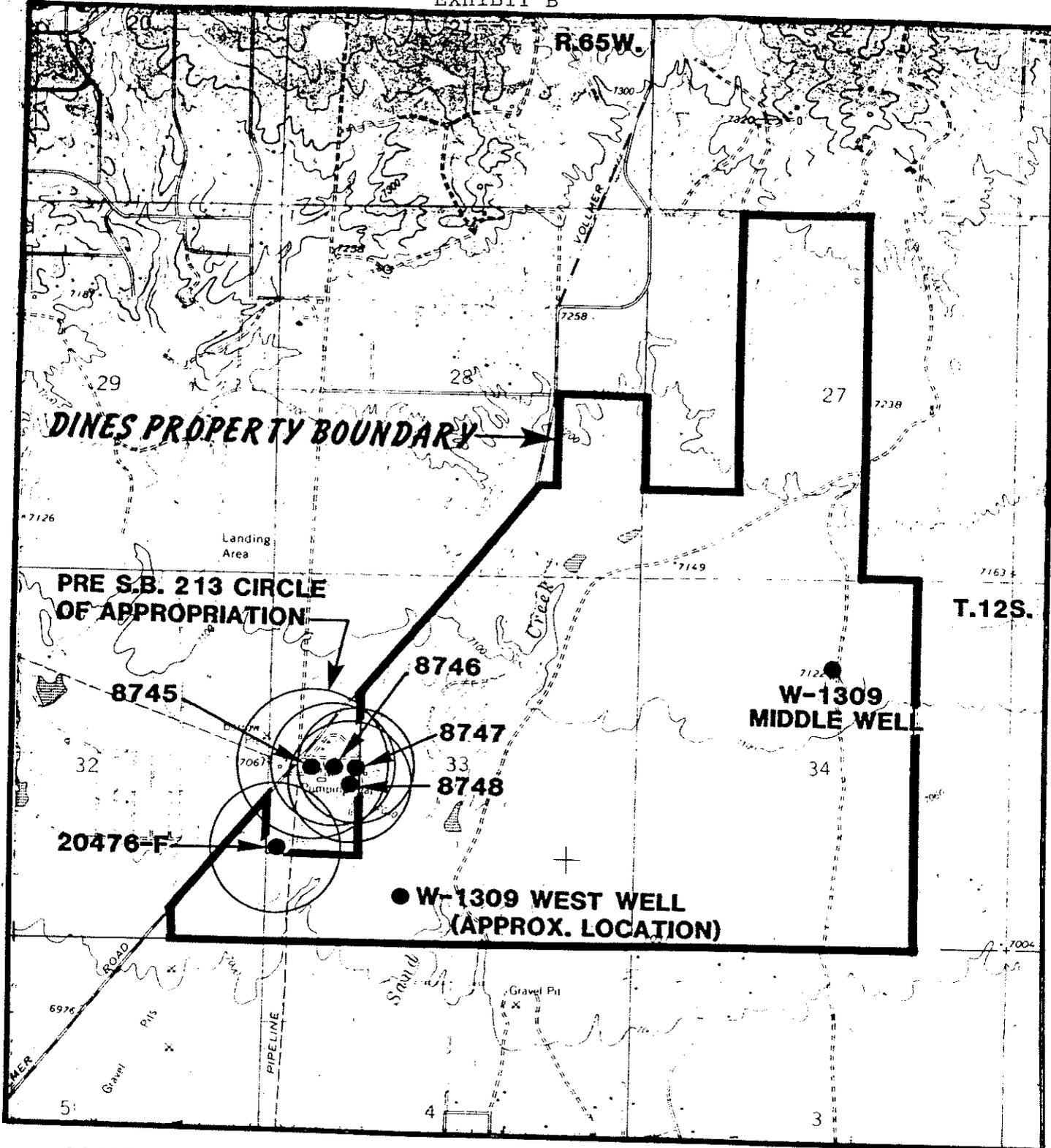
The W1/2 W1/2 E1/2 and the E1/2 W1/2 and the SW1/4 SW1/4 of Section 27; the E1/2 SE1/4 and that portion of the SW1/4 SE1/4 lying South and East of the County Road across said premises, both in Section 28; that portion of the SE1/4 SE1/4 of Section 32 lying South and East of said County Road, and that portion of the NE1/4 SE1/4 of said Section 32, lying South and East of said County Road; the E1/2 and the E1/2 SW1/4 and the SW1/4 SW1/4 of Section 33, and all that part of the NW1/4 of said Section 33 lying South and East of the said County Road across said premises, except that portion of the SW1/4 NW1/4 of said Section 33 lying South and East of said County Road containing approximately 10 acres deeded to Colorado Interstate Gas Company by Warranty Deed recorded in Book 1173 at Page 359 of the El Paso County Records; and the W1/2 E1/2 and the W1/2 of Section 34, all in Township 12 South, Range 65 West of the 6th P.M., located in El Paso County, Colorado.

Filed in the office of the  
Clerk, District Court Water  
Division No. 2, State of  
Colorado

OCT 29 1966

*Priscilla A. Lyons*

Clerk



SCALE 1:24000

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Clerk, District Court Water  
Division No. 2, State of  
Colorado

# LOCATION MAP

OCT 29 1986

FIGURE 1



*Priscilla Lyons*  
Clerk

<b>DISTRICT COURT, WATER DIVISION 2, COLORADO</b>  Court Address: 501 North Elizabeth Street, Suite 116 Pueblo, CO 81003	DATE FILED: May 31, 2017 9:37 AM CASE NUMBER: 2017CW3002
<b>CONCERNING THE APPLICATION FOR WATER RIGHTS OF:</b>  <b>ARROYA INVESTMENTS, LLC, JACOB DECOTO, MARVIN ORNES and TERRI WAHLBERG</b>  <b>IN EL PASO COUNTY</b>	▲ COURT USE ONLY ▲  Case No.: 17CW3002
<b>FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF REFEREE AND DECREE</b>	

THIS MATTER comes before the Water Referee on the Application filed by Arroya Investments, LLC, Jacob Decoto, Marvin Ornes and Terri Wahlberg, and having reviewed said Application and other pleadings on file, and being fully advised on this matter, the Water Referee makes the following findings and orders:

#### **GENERAL FINDINGS OF FACT**

1. The applicants in this case are Arroya Investments, LLC ("Arroya"), Jacob Decoto ("Decoto"), Marvin Ornes ("Ornes") and Terri Wahlberg ("Wahlberg") (collectively, "Applicants"). Applicants are, collectively, the owners of the four separately owned parcels of land totaling approximately 335.59 acres under which the groundwater sought to be adjudicated herein are located, and are likewise the owners of the place of use where the water is anticipated to be put to beneficial use.
2. The Applicants filed this Application with the Water Court for Water Division 2 on January 31, 2017. The Application was referred to the Water Referee by order of the Court dated February 2, 2017.
3. The time for filing statements of opposition to the Application expired on the last day of March, 2017, and a no statements of opposition were timely filed.
4. On February 2, 2017, the Division 2 Water Court ordered that publication occur in the *Daily Transcript* within El Paso County.
5. The Clerk of this Court has caused publication of the Application filed in this matter as provided by statute and the publication costs have been paid. On February 15, 2017, proof of publication in the *Daily Transcript* was filed with the Court. All notices of the Application have been given in the manner required by law.

6. Pursuant to C.R.S. §37-92-302(2), the Office of the State Engineer has filed Determination of Facts for each aquifer with this Court dated March 14, 2017.

7. Pursuant to C.R.S. §37-92-302(4), the office of the Division Engineer for Water Division 2 filed its Consultation Report dated March 29, 2017, with the Court. The Consultation Report has been considered by the Water Referee in the entry of this Ruling.

8. The Water Court has jurisdiction over the subject matter of these proceedings and over all who have standing to appear as parties whether they have appeared or not. The land and water rights involved in this case are not within a designated groundwater basin.

### **GROUNDWATER RIGHTS**

9. The Applicants requested the adjudication and quantification all Denver Basin groundwater in each aquifer underlying the four (4) specifically described parcels of land owned by each of the Applicants, respectively, as described herein. No plan for augmentation for the use of the not-nontributary groundwater was sought or is decreed herein. The Applicants shall construct such wells as necessary for withdrawal of Applicants' full entitlements of water supplies decreed herein. The following findings are made with respect to such underground water rights:

A. Property Description. All wells to all aquifers will be located on the Applicants respective properties. Such Properties are more specifically described as follows:

i. Arroya Parcel. The "Arroya Parcel" is an approximately 226 acre parcel located in the SE1/4 SE1/4 of Section 21, the W1/2 SW1/4 of Section 22, the E1/2 NE1/4 of Section 28, the W1/2 NW1/4 and the NW1/4 SW1/4 of Section 27, all in Township 21 South, Range 65 West of the 6<sup>th</sup> P.M., El Paso County, Colorado, as more particularly described on attached **Exhibit A**, and depicted on attached **Exhibit E**. The Arroya Parcel is owned by Applicant Arroya Investments, LLC.

ii. West Parcel No. 1. The "West Parcel No. 1" is an approximately 36.01 acre parcel located in the SW1/4 SE1/4 and the SE1/4 SE1/4 of Section 21, and the NE1/4 NE1/4 of Section 27, Township 12 South, Range 65 West of the 6<sup>th</sup> P.M., El Paso County, Colorado, as more particularly described on attached **Exhibit B**, and depicted on attached **Exhibit E**. The West Parcel No. 1 is owned by Applicant Jacob Decoto.

iii. West Parcel No. 2. The "West Parcel No. 2" is an approximately 36.03 acre parcel located in the SW1/4 SE1/4 and the SE1/4 SE1/4 of Section 21, Township 12 South, Range 65 West of the 6<sup>th</sup> P.M., El Paso County, Colorado, as more particularly described on attached **Exhibit C**, and depicted on attached **Exhibit E**. The West Parcel No. 2 is owned by Applicant Jacob Decoto.

iv. West Parcel No. 3. The “West Parcel No. 3” is an approximately 37.58 acre parcel located in the NW1/4 SE1/4 and the NE1/4 SE1/4 of Section 21, Township 12 South, Range 65 West of the 6<sup>th</sup> P.M., El Paso County, Colorado, as more particularly described on attached **Exhibit D**, and depicted on attached **Exhibit E**. The West Parcel No. 3 is owned by Applicants Marvin Ornes and Terri Wahlberg.

B. Existing Wells. There is currently one (1) existing well constructed to the Dawson aquifer on West Parcel No. 2 (Decoto): DWR Permit No. 4554, an exempt domestic well. DWR Permit No. 4554 is an exempt structure; water from the Dawson aquifer sufficient to allow for such continued exempt use has been excluded from the quantification herein. Two additional exempt domestic wells have been permitted since the filing of the application in this matter, DWR Permit No. 304551 on West Parcel No. 1 (Decoto), and DWR Permit No. 304498 on West Parcel No. 3 (Ornes/Wahlberg), and are excluded from quantification herein.

C. Additional Wells. Applicants anticipated additional wells will be constructed on each the Applicants’ respective properties. To the extent any additional wells may be constructed to the not-nontributary Dawson and/or Denver aquifer(s), such wells may be constructed only pursuant to a subsequent decree providing an approved plan for augmentation, or as exempt well structures pursuant to C.R.S. §37-92-602.

10. Of the statutorily described Denver Basin aquifers, the Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers all exist beneath the Applicants’ respective properties. The Dawson and Denver aquifers contain not-nontributary water, while the water of the Arapahoe and Laramie-Fox Hills aquifers underlying the Applicants’ respective properties is nontributary. The quantity of water in the Denver Basin aquifers exclusive of artificial recharge underlying each of the Applicants’ respective properties as allocated on a pro-rata per acre basis from the amounts described in the State Engineer’s Determination of Facts, is as follows:

A. Arroya Parcel (225.97 acres):

<b>Aquifer</b>	<b>Sand Thickness (Feet)</b>	<b>Total Ground Water Storage (Acre Feet)</b>	<b>Annual Average Withdrawal – 100 Years (Acre Feet)</b>
Dawson (NNT)	270	12,202	122
Denver (NNT)	310	11,909	119.1
Arapahoe (NT)	255	9,796	98
Laramie-Fox Hills (NT)	190	6,440	64.4

B. West Parcel No. 1 (Decoto – 36.01 acres):

<b>Aquifer</b>	<b>Sand Thickness (Feet)</b>	<b>Total Ground Water Storage (Acre Feet)</b>	<b>Annual Average Withdrawal – 100 Years (Acre Feet)</b>
Dawson (NNT)	270	1,944.4	16.44 <sup>1</sup>
Denver (NNT)	310	1,897.7	18.98
Arapahoe (NT)	255	1,561	15.61
Laramie-Fox Hills (NT)	190	1,026.2	10.26

C. West Parcel No. 2 (Decoto – 36.03 acres):

<b>Aquifer</b>	<b>Sand Thickness (Feet)</b>	<b>Total Ground Water Storage (Acre Feet)</b>	<b>Annual Average Withdrawal – 100 Years (Acre Feet)</b>
Dawson (NNT)	270	1,945.4	16.45 <sup>2</sup>
Denver (NNT)	310	1,898.8	18.99
Arapahoe (NT)	255	1,562	15.62
Laramie-Fox Hills (NT)	190	1,026.8	10.27

D. West Parcel No. 3 (Ornes & Wahlberg – 37.58 acres):

<b>Aquifer</b>	<b>Sand Thickness (Feet)</b>	<b>Total Ground Water Storage (Acre Feet)</b>	<b>Annual Average Withdrawal – 100 Years (Acre Feet)</b>
Dawson (NNT)	270	2,029.2	17.29 <sup>3</sup>
Denver (NNT)	310	1,980.5	19.80
Arapahoe (NT)	255	1,629	16.29
Laramie-Fox Hills (NT)	190	1,071	10.7

<sup>1</sup> Three (3) annual acre feet of Dawson groundwater has been reserved from quantification herein for permitting of an exempt domestic well on this parcel pursuant to C.R.S. §37-92-602, *et seq.*, recently permitted as DWR Permit No. 304551.

<sup>2</sup> Three (3) annual acre feet of Dawson groundwater has been reserved from quantification herein for continued use of DWR Permit No. 4554 as an exempt domestic well on this parcel pursuant to C.R.S. §37-92-602, *et seq.*

<sup>3</sup> Three (3) annual acre feet of Dawson groundwater has been reserved from quantification herein for permitting of an exempt domestic well on this parcel pursuant to C.R.S. §37-92-602, *et seq.*, recently permitted as DWR Permit No. 304498.

11. Pursuant to §37-90-137(9)(c.5)(I), C.R.S., the augmentation requirements for wells in the Dawson aquifer require the replacement to the effected stream systems of actual stream depletions on an annual basis, to the extent necessary to prevent injurious effect, based upon actual aquifer conditions. The augmentation requirements for wells to the Denver aquifer are for 4% of pumping. Applicants shall not be entitled to construct a non-exempt well or use water from the not-nontributary Dawson or Denver aquifers except pursuant to an approved augmentation plan in accordance with C.R.S. §37-90-137(9)(c.5).

12. Applicants shall be entitled to withdraw all legally available groundwater in the Denver Basin aquifers underlying Applicants' respective properties. Said amounts can be withdrawn over the 100-year life for the aquifers as set forth in C.R.S. §37-90-137(4), or withdrawn over a longer period of time based upon local governmental regulations or Applicants' water needs. The average annual amounts of ground water available for withdrawal from the underlying Denver Basin aquifers, based upon the 100-year aquifer life is determined and set forth above, based upon the March 14, 2017 Office of the State Engineer Determination of Facts. Such groundwater may be withdrawn from wells located upon the overlying land or contiguous properties with such contiguity to allow such withdrawal, consistent with the Denver Basin Rules as promulgated by the Office of the State Engineer, as may be amended from time to time.

13. Applicants shall be entitled to withdraw an amount of groundwater in excess of the average annual amount decreed herein from the Denver Basin aquifers underlying Applicants' respective properties, so long as the sum of the total withdrawals from wells in the aquifer does not exceed the product of the number of years since the date of issuance of the original well permit or the date of entry of the decree herein, whichever comes first, and the annual volume of water which Applicants are entitled to withdraw from the aquifer underlying Applicants' respective properties.

14. The Applicants shall have the right to use the ground water for beneficial uses on or off the Applicants' respective properties consisting of domestic, commercial, irrigation, stock water, recreation, wildlife, wetlands, fire protection, piscatorial, and for storage and augmentation associated with such uses. The amount of groundwater decreed for such uses upon the Applicants' respective properties is reasonable as such uses are to be made for the long term use and enjoyment of the Applicants' respective properties and are to establish and provide for adequate water reserves. The nontributary groundwater, may be used, reused, and successively used to extinction, both on and off the Applicants' respective properties subject, however, to the relinquishment of the right to consume two percent of such nontributary water withdrawn. Applicants may use such water by immediate application or by storage and subsequent application to the beneficial uses and purposes stated herein. Provided however, as set forth above, Applicants shall only be entitled to construct a non-exempt well or use water from the not-nontributary Dawson and Denver aquifers pursuant to a decreed augmentation plan entered by the Court. Withdrawals of groundwater available from the nontributary aquifers beneath the Applicants' respective properties in the

amounts determined in accordance with the provisions of this decree will not result in material injury to any other vested water rights or to any other owners or users of water.

15. Applicants may construct such wells on their respective properties as necessary for the withdrawal of all entitlements from each aquifer as described above, and such withdrawals may be made through any combination of wells. As to each of Applicants' respective properties, these wells shall be treated as a well field.

### **CONCLUSIONS OF LAW**

16. The application for adjudication of Denver Basin groundwater was filed with the Water Clerk for Water Division 2 pursuant to C.R.S. §§37-92-302(1)(a) and 37-90-137(9)(c).

17. The Applicants' request for adjudication of these water rights is contemplated and authorized by law, and this Court and the Water Referee have exclusive jurisdiction over these proceedings. C.R.S. §§37-92-302(1)(a), 37-92-203, and 37-92-305.

18. Subject to the terms of this decree, the Applicants are entitled to the sole right to withdraw all the legally available water in the Denver Basin aquifers underlying the Applicants' respective properties, and the right to use that water to the exclusion of all others subject to the terms of this decree.

19. The Applicants have complied with C.R.S. §37-90-137(4), and the groundwater is legally available for withdrawal by the requested nontributary well(s), and legally available for withdrawal by the requested not-nontributary well(s) upon the entry of a subsequent decree approving an augmentation plan pursuant to C.R.S. §37-90-137(9)(c.5). Applicants are entitled to a decree from this Court confirming their rights to withdraw groundwater pursuant to C.R.S. §37-90-137(4).

20. The Denver Basin water rights applied for in this case are not conditional water rights, but are vested water rights determined pursuant to C.R.S. §37-90-137(4). No applications for diligence are required. The claims for nontributary and not-nontributary groundwater meet the requirements of Colorado Law.

21. The determination and quantification of the nontributary and not-nontributary groundwater rights in the Denver Basin aquifers as set forth herein is contemplated and authorized by law. C.R.S. §§37-90-137, and 37-92-302 through 37-92-305.

**IT IS THEREFORE ORDERED, ADJUDGED AND DECREED AS FOLLOWS:**

22. All of the foregoing Findings of Fact and Conclusions of Law are incorporated herein by reference, and are considered to be a part of this decretal portion as though set forth in full.

23. The Application for Adjudication of Denver Basin Groundwater proposed by the Applicants is approved, subject to the terms of this decree.

24. The Applicants have furnished acceptable proof as to all claims and, therefore, the Application for Adjudication of Groundwater as requested by the Applicants is granted and approved in accordance with the terms and conditions of this decree. Approval of this Application will not result in any material injury to senior vested water rights.

25. The Applicants shall comply with C.R.S. §37-90-137(9)(b), requiring the relinquishment of the right to consume two percent (2%) of the amount of the nontributary groundwater withdrawn. Ninety-eight percent (98%) of the nontributary groundwater withdrawn may therefore be consumed. No plan for augmentation shall be required to provide for such relinquishment.

26. The Court retains jurisdiction over this matter to make adjustments in the allowed average annual amount of withdrawal from the Denver Basin aquifers, either upwards or downwards, to conform to actual local aquifer characteristic, and that the Applicants need not refile, republish, or otherwise amend this application to request such adjustments.

A. At such time as adequate data may be available, Applicant or the State Engineer may invoke the Court's retained jurisdiction as provided in this Paragraph 26 for purposes of making a final determination of water rights as to the quantities of water available and allowed average annual withdrawals from any of the Denver Basin aquifers quantified and adjudicated herein. Any person seeking to invoke the Court's retained jurisdiction for such purpose shall file a verified petition with the Court setting forth with particularity the factual basis for such final determination of Denver Basin water rights under this decree, together with the proposed decretal language to effect the petition. Within four months of the filing of such verified petition, the State Engineer's Office shall utilize such information as available to make a final determination of water rights finding, and shall provide such information to the Court, Applicant, and the petitioning party.

B. If no protest is filed with the Court to such findings by the State Engineer's Office within sixty (60) days, this Court shall incorporate by entry of an Amended Decree such "final determination of water rights", and the provisions of this Paragraph 26 concerning adjustments to the Denver Basin ground water rights based upon local aquifer conditions shall no longer be applicable. In the event of a protest

being timely filed, or should the State Engineer's Office make no timely determination as provided in Paragraph 26.A., above, the "final determination of water rights" sought in the petition may be made by the Water Court after notice to all parties and following a full and fair hearing, including entry of an Amended Decree, if applicable in the Court's reasonable discretion.

27. Pursuant to C.R.S. §37-92-502(5)(a), the Applicants shall install and maintain such water measurement devices and recording devices as are deemed essential by the State Engineer or Division Engineers, and the same shall be installed and operated in accordance with instructions from said entities. Applicants are to install and maintain a totalizing flow meter on all wells, and any additional or replacement wells. Applicants are also to maintain records and provide reports to the State Engineer or Division Engineers as instructed by said entities, on at least an annual basis.

28. The vested water rights and water right structures decreed herein shall be subject to all applicable administrative rules and regulations, as currently in place or as may in the future be promulgated, of the offices of Colorado State and Division Engineers for administration of such water rights, to the extent such rules and regulations are uniformly applicable to other similarly situated water rights and water users.

29. This Ruling of Referee, when entered as a decree of the Water Court, shall be recorded in the real property records of El Paso County, Colorado. Copies of this ruling shall be mailed as provided by statute.

DATED THIS 5th day of May, 2017.

BY THE REFEREE:



*Mardell R. DiDomenico*

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Mardell R. DiDomenico, Water Referee  
Water Division 2

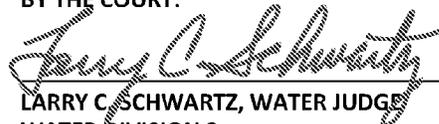
**DECREE**

THE COURT FINDS THAT NO PROTEST WAS MADE IN THIS MATTER, THEREFOR THE FORGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Dated: May 31, 2017.



BY THE COURT:

  
LARRY C. SCHWARTZ, WATER JUDGE  
WATER DIVISION 2

# EXHIBIT A

## LEGAL DESCRIPTION – ARROYA PARCEL

A PARCEL OF LAND LOCATED IN A PORTION OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21 AND A PORTION OF THE SOUTHWEST ONE-QUARTER OF SECTION 22, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: A LINE BETWEEN THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27 AND THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SAID SECTION 27, TOWNSHIP 12 SOUTH, RANGE 65 WEST, MONUMENTED AT THE NORTHERLY END BY A 3-1/4" ALUMINUM CAP STAMPED "2006 ESI PLS 10376" AND MONUMENTED AT THE SOUTHERLY END BY A 3-1/4" ALUMINUM CAP STAMPED "2006 ESI PLS 10376" AND IS ASSUMED TO BEAR  $S00^{\circ}54'30''E$ , A DISTANCE OF 3925.63 FEET;

COMMENCING AT THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27;  
THENCE  $S88^{\circ}38'56''W$  ALONG THE NORTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4), A DISTANCE OF 1047.88 FEET TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED;

THENCE  $S88^{\circ}38'56''W$  CONTINUING ALONG SAID NORTH LINE, A DISTANCE OF 283.03 FEET TO THE NORTHWEST CORNER OF SAID SECTION 27 SAID POINT ALSO BEING A POINT ON THE EASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 431 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER;

THENCE ALONG THE EASTERLY AND NORTHERLY RIGHT-OF-WAY LINES OF SAID DEED THE FOLLOWING TWO (2) COURSES:

1.  $N00^{\circ}37'14''W$  SAID LINE ALSO BEING THE WEST LINE OF THE SOUTHWEST ONE-QUARTER (SW1/4) OF SAID SECTION 22, A DISTANCE OF 30.00 FEET;
2.  $S89^{\circ}40'23''W$ , A DISTANCE OF 736.82 FEET TO THE POINT OF INTERSECTION OF THE EASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 430 OF SAID COUNTY RECORDS;

THENCE  $N21^{\circ}41'10''E$  ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1798.07 FEET;

THENCE  $N59^{\circ}58'50''E$ , A DISTANCE OF 694.83 FEET;

THENCE  $S14^{\circ}30'58''E$ , A DISTANCE OF 567.09 FEET;

THENCE  $N69^{\circ}36'18''E$ , A DISTANCE OF 603.87 FEET;

THENCE  $S30^{\circ}23'46''E$ , A DISTANCE OF 264.58 FEET;

THENCE  $S61^{\circ}52'38''W$ , A DISTANCE OF 227.40 FEET;

THENCE  $S79^{\circ}15'47''W$ , A DISTANCE OF 276.17 FEET;

THENCE  $S89^{\circ}39'18''W$ , A DISTANCE OF 356.07 FEET;

THENCE  $S40^{\circ}09'47''W$ , A DISTANCE OF 310.61 FEET;

THENCE  $S09^{\circ}56'46''W$ , A DISTANCE OF 270.03 FEET;

THENCE  $S35^{\circ}00'25''W$ , A DISTANCE OF 167.38 FEET;

THENCE  $S57^{\circ}24'01''W$ , A DISTANCE OF 235.36 FEET;

THENCE  $S27^{\circ}23'34''E$ , A DISTANCE OF 611.29 FEET TO THE POINT OF BEGINNING;

SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 35.08 ACRES OF LAND, MORE OR LESS.

Along With:

A PARCEL OF LAND BEING THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27, THE SOUTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (SW1/4 NW1/4) OF SECTION 27, THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SECTION 27, A PORTION OF THE SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER OF SECTION 28 AND A PORTION OF THE NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (NE1/4 NE1/4) OF SECTION 28, ALL IN TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: A LINE BETWEEN THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27 AND THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SAID SECTION 27, TOWNSHIP 12 SOUTH, RANGE 65 WEST, MONUMENTED AT THE NORTHERLY END BY A 3-1/4" ALUMINUM CAP STAMPED "2006 ESI PLS 10376" AND MONUMENTED AT THE SOUTHERLY END BY A 3-1/4" ALUMINUM CAP STAMPED "2006 ESI PLS 10376" AND IS ASSUMED TO BEAR S00°54'30"E, A DISTANCE OF 3925.63 FEET;

COMMENCING AT THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27, SAID POINT ALSO BEING THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED;

THENCE S00°54'30"E ALONG THE EAST LINE OF THE WEST ONE-HALF (W1/2) OF SAID SECTION 27, A DISTANCE OF 3925.63 FEET TO THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SAID SECTION 27;

THENCE S87°35'00"W ALONG THE SOUTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4), A DISTANCE OF 1332.78 FEET TO THE SOUTHWEST CORNER OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4);

THENCE N00°53'18"W ALONG THE WEST LINE OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4), A DISTANCE OF 1316.78 FEET TO THE NORTHWEST CORNER OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4);

THENCE S89°08'28"W ALONG THE SOUTH LINE OF THE SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4) OF SECTION 28, A DISTANCE OF 1326.68 FEET TO THE SOUTHWEST CORNER OF SAID SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4);

THENCE N00°30'49"W ALONG THE WEST LINE OF SAID SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4), A DISTANCE OF 1270.77 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN

BOOK 2678 AT PAGE 430 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER;

THENCE N21°41'10"E ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1450.84 FEET TO THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 431 OF SAID COUNTY RECORDS;

THENCE ALONG THE SOUTHERLY AND EASTERLY RIGHT-OF-WAY LINES OF SAID DEED THE FOLLOWING TWO (2) COURSES:

1. N89°40'23"E, A DISTANCE OF 761.52 FEET TO A POINT ON THE EAST LINE OF SAID NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (NE1/4 NE1/4);
2. N00°52'58"W ALONG SAID EAST LINE, A DISTANCE OF 30.00 FEET TO THE NORTHWEST CORNER OF SAID SECTION 27;

THENCE N88°38'56"E ALONG THE NORTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW 1/4 NW1/4), A DISTANCE OF 1330.91 FEET TO THE POINT OF BEGINNING;

SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 190.89 ACRES OF LAND, MORE OR LESS.

Attachment to Order - 2017-0173002

## EXHIBIT B

### LEGAL DESCRIPTION TRAILS AT TIMBERLINE WEST PARCEL 1:

A PARCEL OF LAND LOCATED IN A PORTION OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21 AND A PORTION OF THE NORTHEAST ONE-QUARTER (NE1/4) OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: THE WEST LINE OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 65 WEST IS ASSUMED TO BEAR N00°25'32"W, A DISTANCE OF 2638.53 FEET.

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST ONE-QUARTER (SW1/4), SAID POINT ALSO BEING THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED:

THENCE N00°25'32"W ALONG THE WEST LINE OF SAID SOUTHEAST ONE-QUARTER (SE1/4), A DISTANCE OF 650.11 FEET.

THENCE N89°40'51"E, A DISTANCE OF 2077.12 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF VOLLMER ROAD AS DESCRIBED IN THE DOCUMENT RECORDED IN BOOK 2678 AT PAGE 430 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER.

THENCE S21°41'10"W ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 2013.88 FEET TO A POINT ON THE EAST LINE OF THE NORTHWEST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (NW1/4 NE1/4) OF SAID SECTION 28.

THENCE N00°41'13"W ALONG SAID EAST LINE, A DISTANCE OF 1212.12 FEET TO THE SOUTHWEST CORNER OF THE SOUTHWEST ONE-QUARTER OF THE SOUTHEAST ONE-QUARTER (SW1/4 SE1/4) OF SAID SECTION 21.

THENCE S89°40'14"W ALONG THE SOUTH LINE OF SAID SOUTHWEST ONE-QUARTER OF THE SOUTHEAST ONE-QUARTER (SW1/4 SE1/4), A DISTANCE OF 1343.49 FEET TO THE POINT OF BEGINNING.

SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 38.01 ACRES OF LAND, MORE OR LESS.

## EXHIBIT C

### LEGAL DESCRIPTION TRAILS AT TIMBERLINE WEST PARCEL 2:

A PARCEL OF LAND LOCATED IN A PORTION OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS. THE WEST LINE OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 68 WEST IS ASSUMED TO BEAR N00°25'32"W, A DISTANCE OF 3638.53 FEET;

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHEAST ONE-QUARTER (SE1/4);

THENCE N00°25'32"W ALONG THE WEST LINE OF SAID SOUTHEAST ONE-QUARTER (SE1/4), A DISTANCE OF 650.13 FEET TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED;

THENCE N00°25'32"W CONTINUING ALONG SAID WEST LINE, A DISTANCE OF 706.70 FEET;

THENCE N89°40'31"E, A DISTANCE OF 2364.04 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF VOLLMER ROAD AS DESCRIBED IN THE DOCUMENT RECORDED IN BOOK 2678 AT PAGE 430 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER;

THENCE S21°41'10"W ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 762.36 FEET;

THENCE S89°40'31"W, A DISTANCE OF 2077.32 FEET TO THE POINT OF BEGINNING.

SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 38.03 ACRES OF LAND, MORE OR LESS.

Attachment to Order - 2017CWM-0002

## EXHIBIT D

### LEGAL DESCRIPTION TRAILS AT TIMBERLINE WEST PARCEL 3:

A PARCEL OF LAND LOCATED IN A PORTION OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: THE WEST LINE OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 65 WEST IS ASSUMED TO BEAR N00°25'32"W, A DISTANCE OF 2658.53 FEET.

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHEAST ONE-QUARTER (SE1/4);  
THENCE N00°25'32"W ALONG THE WEST LINE OF SAID SOUTHEAST ONE-QUARTER (SE1/4), A DISTANCE OF 1356.81 FEET TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED;  
THENCE N00°25'32"W CONTINUING ALONG SAID WEST LINE, A DISTANCE OF 656.30 FEET;  
THENCE N88°40'31"E, A DISTANCE OF 2590.16 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF VOLLMER ROAD AS DESCRIBED IN THE DOCUMENT RECORDED IN BOOK 2678 AT PAGE 430 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE THE FOLLOWING TWO (2) COURSES:

1. S00°37'14"E, A DISTANCE OF 95.54 FEET;
2. S21°W10'W, A DISTANCE OF 891.81 FEET;

THENCE S88°40'31"W, A DISTANCE OF 2364.04 FEET TO THE POINT OF BEGINNING.

SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 37.58 ACRES OF LAND, MORE OR LESS.

Attachment to Order - 2017CW3002

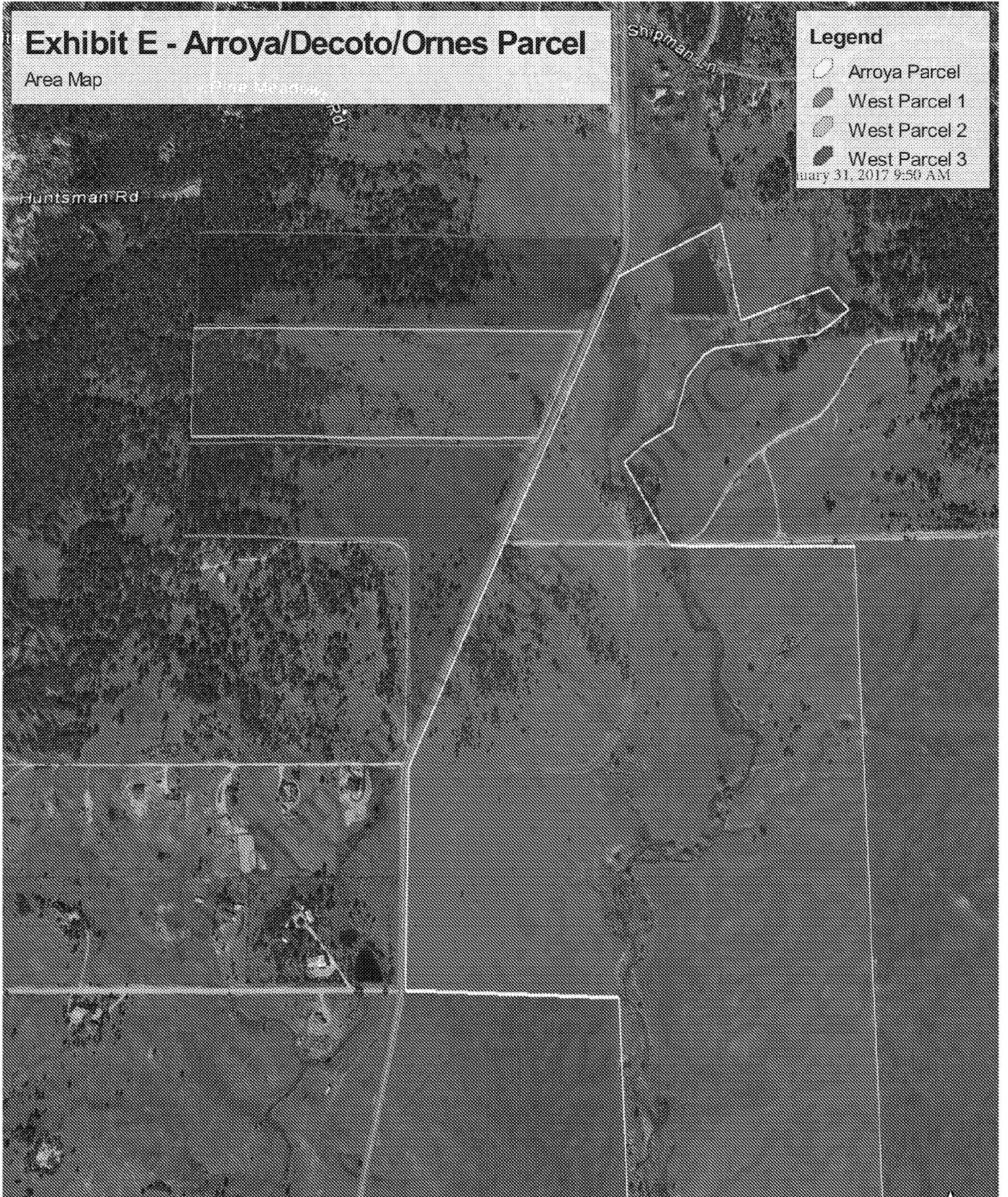
# Exhibit E - Arroya/Decoto/Ornes Parcel

Area Map

## Legend

- Arroya Parcel
- ▨ West Parcel 1
- ▩ West Parcel 2
- ▧ West Parcel 3

January 31, 2017 9:50 AM



<b>DISTRICT COURT, WATER DIVISION 2, CO</b> Court Address: 501 North Elizabeth Street, Suite 116 Pueblo, CO 81003 Phone Number: (719) 404-8832	DATE FILED: August 9, 2018 3:38 PM CASE NUMBER: 2018CW3002
<b>CONCERNING THE APPLICATION FOR WATER RIGHTS OF:</b>  <b>ARROYA INVESTMENTS, LLC</b>  <b>IN EL PASO COUNTY</b>	<b>▲ COURT USE ONLY ▲</b>  <b>Case No.: 18CW3002</b> (17CW3002)
<b>FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF REFEREE AND DECREE</b>	

THIS MATTER comes before the Water Referee on the Application filed by Arroya Investments, LLC, and having reviewed said Application and other pleadings on file, and being fully advised on this matter, the Water Referee makes the following findings and orders:

### GENERAL FINDINGS OF FACT

1. The applicant in this case is Arroya Investments, LLC, whose address is 1283 Kelly Johnson Blvd., Colorado Springs, CO 80920 ("Applicant"). Applicant is the owner of the land totaling approximately 72.5 acres (a portion of the larger 225.97-acre Arroya Parcel previously adjudicated in Case No. 17CW3002), on which the structures sought to be adjudicated herein are located, and are the owners of the place of use where the water will be put to beneficial use.

2. The Applicant filed this Application with the Water Court for Water Division 2 on January 9, 2018. The Application was referred to the Water Referee in Division 2 on or about January 18, 2018.

3. The time for filing statements of opposition to the Application expired on the last day of March 2018. No Statements of Opposition were timely filed.

4. On January 18, 2018, the Water Court, Division 2 ordered that publication occur in the *Daily Transcript* within El Paso County.

5. The Clerk of this Court has caused publication of the Application filed in this matter as provided by statute and the publication costs have been paid. On February 15, 2018, proof of publication in the *Daily Transcript* was filed with Water

Court Division 2. All notices of the Application have been given in the manner required by law.

6. Pursuant to C.R.S. §37-92-302(4), the office of the Division Engineer for Water Division 2 has filed its Consultation Report dated May 2, 2018, with the Court, and a Response to the Consultation Report was filed by the Applicant on June 26, 2018. Both the Consultation Report and Response have been considered by the Water Referee in the entry of this Ruling.

7. The Water Court has jurisdiction over the subject matter of these proceedings and over all who have standing to appear as parties whether they have appeared or not. The land and water rights involved in this case are not within a designated groundwater basin.

8. The Applicant, consistent with the decree entered in Case No. 17CW3002, seeks to utilize ground water rights granted therein for the construction of Timber Ridge Wells Nos. 1 through 29 to the Dawson aquifer, and additional or replacement wells associated therewith, for withdrawal of Applicant's full entitlements of supply under the plan for augmentation sought herein.

9. The land overlying the groundwater subject to the adjudication in this case is owned by the Applicant and was previously quantified in Case No. 17CW3002, which concerned a 225.97 acre parcel of land located in El Paso County, Colorado ("Arroya Parcel"). The land relevant to this decree consists of an approximately 72.5 acre portion of the larger Arroya Parcel as described in Case No. 17CW3002, located in a portion of the SE<sup>1</sup>/<sub>4</sub> of Section 21 and a portion of the SW<sup>1</sup>/<sub>4</sub> of Section 22, Township 12 South, Range 65 West of the 6<sup>th</sup> P.M., El Paso County, Colorado, as more particularly described on the attached **Exhibit A**, and depicted on the attached **Exhibit B** map ("Subject Property"). Applicant intends to subdivide the property into up to twenty-nine (29) lots of approximately 2.5 acres each. All groundwater adjudicated herein shall be withdrawn from the overlying land.

10. Timber Ridge Wells Nos. 1 through 29: Each of the Timber Ridge Wells Nos. 1 through 29 are to be constructed to the not-nontributary Dawson aquifer pursuant to the Plan for Augmentation decreed herein to provide domestic water supplies to a single family residence to be located upon the subdivided Subject Property. Upon entry of this decree and submittal by the Applicant of a complete well permit application and filing fee, the State Engineer shall issue a revised permit for Timber Ridge Wells Nos. 1 through 29 pursuant to C.R.S. §37-90-137(4), consistent with and references the Plan for Augmentation decreed herein.

### **PLAN FOR AUGMENTATION**

11. The structures to be augmented are Timber Ridge Wells Nos. 1 through 29 in the not-nontributary Dawson aquifer underlying the Applicant's Property, along with any additional or replacement wells associated therewith.

12. Pursuant to C.R.S. §37-90-137(9)(c.5), the augmentation obligation for Timber Ridge Wells Nos. 1 through 29, and any additional or replacement wells constructed to the Dawson aquifer requires the replacement of actual stream depletions to the extent necessary to prevent any injurious effect. The water rights to be used for augmentation during pumping are the septic return flows of the not-nontributary Timber Ridge Wells Nos. 1 through 29, to be pumped as set forth in this plan for augmentation. The water rights to be used for augmentation after pumping are a reserved portion of Applicant's nontributary water rights in the Laramie-Fox Hills aquifers. Applicant shall provide for the augmentation of stream depletions caused by pumping the Timber Ridge Wells Nos. 1 through 29 as approved herein. Water use criteria as follows:

A. Use: The Timber Ridge Wells Nos. 1 through 29 may each pump up to 0.32 acre feet of water per year, for a maximum total of 9.32 acre feet being withdrawn from the Dawson aquifer annually. Households will utilize up to 0.26 acre feet of water per year per residence, with the additional pumping available for landscape irrigation, the watering of horses or equivalent livestock, and other beneficial uses decreed in 17CW3002 at each residence. The foregoing figures assume the use of 29 septic systems, with resulting return flows from each. Should Applicant subdivide Applicant's property into fewer than 29 lots, both depletions and return flows for the replacement of the same will be correspondingly reduced, though pumping for uses other than household use may be increased provided at all times septic return flows shall replace the maximum depletions resulting from pumping.

B. Depletions: Applicant has determined that maximum stream depletions over the 300-year pumping period will amount to approximately fifty-six percent (56%) of pumping. Maximum annual depletions for total residential pumping from all wells is therefore 5.22 acre feet in year 300. Should Applicant's pumping be less than the 0.32 acre feet per lot described herein, or should fewer lots be developed, resulting depletions and required replacements will be correspondingly reduced.

C. Augmentation of Depletions During Pumping Life of Wells: Depletions during pumping will be effectively replaced by residential return flows from non-evaporative septic systems. The annual consumptive use for non-evaporative septic systems is 10% per year per residence. At a conservatively estimated household use rate of 0.18 acre feet per residence per year (rather than the full 0.26 acre feet annually), a total of 5.22 acre feet is replaced to the stream system per year, utilizing non-evaporative septic systems, assuming all 29 wells are utilized. With maximum depletions from the pumping of 29 wells at 0.18 acre feet, and anticipated replacement of 5.22 acre feet annually, during pumping, stream depletions will be adequately augmented.

D. Augmentation of Post Pumping Depletions: This plan for augmentation shall have a pumping period of a minimum of 300 years. For the replacement of any injurious post-pumping depletions which may be associated with the use of the Timber Ridge Wells Nos. 1 through 29, Applicant will reserve up to 2,796

acre feet of water from the nontributary Laramie Fox Hills aquifer, less actual stream depletions replaced during the plan pumping period as necessary to replace any injurious post pumping depletions. Applicant also reserves the right to substitute other legally available augmentation sources for such post pumping depletions upon further approval of the Court under its retained jurisdiction. Even though this reservation is made, under the Court's retained jurisdiction, Applicant reserves the right in the future to prove that post pumping depletions will be noninjurious. The reserved nontributary Laramie-Fox Hills groundwater will be used to replace any injurious post-pumping depletions. Upon entry of a decree in this case, the Applicant will be entitled to apply for and receive a new well permit for the Timber Ridge Wells Nos. 1 through 29 for the uses in accordance with this Application and otherwise in compliance with C.R.S. §37-90-137.

13. This decree, upon recording, shall constitute a covenant running with Applicant's Property, benefitting and burdening said land, and requiring construction of well(s) to the nontributary Laramie-Fox Hills aquifer and pumping of water to replace any injurious post-pumping depletions under this decree. Subject to the requirements of this decree, in order to determine the amount and timing of post-pumping replacement obligations, if any, under this augmentation plan, Applicant or its successors shall use information commonly used by the Colorado Division of Water Resources for augmentation plans of this type at the time. Pursuant to this covenant, the water from the nontributary Laramie-Fox Hills aquifer reserved herein may not be severed in ownership from the overlying subject property. This covenant shall be for the benefit of, and enforceable by, third parties owning vested water rights who would be materially injured by the failure to provide for the replacement of post-pumping depletions under the decree, and shall be specifically enforceable by such third parties against the owner of the Applicant's Property.

14. Applicant or its successors shall be required to initiate pumping from the Laramie-Fox Hills aquifer for the replacement of post-pumping depletions when either: (i) the absolute total amount of water available from the Dawson aquifer allowed to be withdrawn under the plan for augmentation decreed herein has been pumped; (ii) the Applicant or its successors in interest have acknowledged in writing that all withdrawals for beneficial use through the Timber Ridge Wells Nos. 1 through 29 have permanently ceased, (iii) a period of 10 consecutive years where either no withdrawals of groundwater has occurred, or (iv) accounting shows that return flows from the use of the water being withdrawn is insufficient to replace depletions caused by the withdrawals that already occurred.

15. Accounting and responsibility for post-pumping depletions in the amount set forth herein shall continue for the shortest of the following periods: (i) the period provided by statute; (ii) the period specified by any subsequent change in statute; (iii) the period required by the Court under its retained jurisdiction; (iv) the period determined by the State Engineer; or (v) the period as established by Colorado Supreme Court final decisions. Should Applicant's obligation hereunder to account for and replace such post-pumping stream depletions be abrogated for any reason, then

the Laramie-Fox Hills aquifer groundwater reserved for such a purpose shall be free from the reservation herein and such groundwater may be used or conveyed by its owner without restriction for any post-pumping depletions.

16. The term of this augmentation plan is for a minimum of 300 years, however, the length of the plan for a particular well or wells may be extended beyond such time provided the total plan pumping allocated to such well or wells is not exceeded. Should the actual operation of this augmentation plan depart from the planned diversions described herein such that annual diversions are increased or the duration of the plan is extended, the Applicant must prepare and submit a revised model of stream depletions caused by the actual pumping schedule. This analysis must utilize depletion modeling acceptable to the State Engineer, and to this Court, and must represent the water use under the plan for the entire term of the plan to date. The analysis must show that return flows have equaled or exceeded actual stream depletions throughout the pumping period and that reserved nontributary water remains sufficient to replace post-pumping depletions.

17. Consideration has been given to the depletions from Applicant's use and proposed uses of water, in quantity, time and location, together with the amount and timing of augmentation water which will be provided by the Applicant, and the existence, if any, injury to any owner of or person entitled to use water under a vested water right.

18. It is determined that the timing, quantity and location of replacement water under the protective terms in this decree are sufficient to protect the vested rights of other water users and eliminate material injury thereto. The replacement water shall be of a quantity and quality so as to meet the requirements for which the water of senior appropriators has normally been used, and provided of such quality, such replacement water shall be accepted by the senior appropriators for substitution for water derived by the exercise of the Timber Ridge Wells Nos. 1 through 29. As a result of the operation of this plan for augmentation, the depletions from the Timber Ridge Wells Nos. 1 through 29 and any additional or replacement wells associated therewith will not result in material injury to the vested water rights of others.

### **CONCLUSIONS OF LAW**

19. The Applicant's request for adjudication of the plan for augmentation decreed herein is contemplated and authorized by law, and this Court and the Water Referee have exclusive jurisdiction over these proceedings. C.R.S. §§37-92-302(1)(a), 37-92-203, and 37-92-305.

20. Subject to the terms of the 17CW3002 decree, the Applicant is entitled to the sole right to withdraw all the legally available water in the Denver Basin aquifers underlying the Applicant's Property, and the right to use that water to the exclusion of all others subject to the terms of said 17CW3002 decree.

21. The Applicant's request for approval of a plan for augmentation is contemplated and authorized by law. If administered in accordance with this decree, this plan for augmentation will permit the uninterrupted diversions from the Timber Ridge Wells Nos. 1 through 29 without adversely affecting any other vested water rights in the Arkansas River or its tributaries and when curtailment would otherwise be required to meet a valid senior call for water. C.R.S. §§37-92-305(3),(5), and (8).

**IT IS THEREFORE ORDERED, ADJUDGED AND DECREED AS FOLLOWS:**

22. All of the foregoing Findings of Fact and Conclusions of Law are incorporated herein by reference, and are considered to be a part of this decretal portion as though set forth in full.

23. The Application for Adjudication of Denver Basin Groundwater and for Approval of Plan for Augmentation proposed by the Applicant is approved, subject to the terms of this decree.

24. The Applicant has furnished acceptable proof as to all claims and, therefore, the Application for Adjudication of Groundwater and Plan for Augmentation, as requested by the Applicant, is granted and approved in accordance with the terms and conditions of this decree. Approval of this Application will not result in any material injury to senior vested water rights.

25. The Applicant shall comply with C.R.S. §37-90-137(9)(b), requiring the relinquishment of the right to consume two percent (2%) of the amount of the nontributary groundwater withdrawn. Ninety-eight percent (98%) of the nontributary groundwater withdrawn may therefore be consumed. No plan for augmentation shall be required to provide for such relinquishment.

26. The State Engineer, the Division Engineer, and/or the Water Commissioner shall not curtail the diversion and use of water covered by the Timber Ridge Wells Nos. 1 through 29 so long as the return flows from the annual diversions associated with the Timber Ridge Wells Nos. 1 through 29 accrue to the stream system pursuant to the conditions contained herein. To the extent that Applicant or one of its successors or assigns is ever unable to provide the replacement water required, then the Timber Ridge Wells Nos. 1 through 29 shall not be entitled to operate under the protection of this plan, and shall be subject to administration and curtailment in accordance with the laws, rules, and regulation of the State of Colorado. Pursuant to C.R.S. §37-92-305(8), the State Engineer shall curtail all out-of-priority diversions which are not so replaced as to prevent injury to vested water rights. In order for this plan for augmentation to operate, return flows from the one or both of the septic systems discussed herein, as appropriate, shall at all times during pumping be in an amount sufficient to replace the amount of stream depletions.

27. Pursuant to C.R.S. §37-92-304(6), the Court shall retain continuing jurisdiction over the plan for augmentation decreed herein for reconsideration of the question of whether the provisions of this decree are necessary and/or sufficient to prevent injury to vested water rights of others, as pertains to the use of Denver Basin groundwater supplies adjudicated herein, including for augmentation purposes.

28. Except as otherwise specifically provided in Paragraph 28, above, pursuant to the provisions of C.R.S. §37-92-304(6), this plan for augmentation decreed herein shall be subject to the reconsideration of this Court on the question of material injury to vested water rights of others, for a period of five (5) years, except as otherwise provided herein. Any person, within such period, may petition the Court to invoke its retained jurisdiction. Any person seeking to invoke the Court's retained jurisdiction shall file a verified petition with the Court setting forth with particularity the factual basis for requesting that the Court reconsider material injury to petitioner's vested water rights associated with the operation of this decree, together with proposed decretal language to effect the petition. The party filing the petition shall have the burden of proof of going forward to establish a prima facie case based on the facts alleged in the petition. If the Court finds those facts are established, Applicant shall thereupon have the burden of proof to show: (i) that the petitioner is not materially injured, or (ii) that any modification sought by the petitioner is not required to avoid material injury to the petitioner, or (iii) that any term or condition proposed by Applicant in response to the petition does avoid material injury to the petitioner. The Division of Water Resources as a petitioner shall be entitled to assert material injury to the vested water rights of others. If no such petition is filed within such period and the retained jurisdiction period is not extended by the Court in accordance with the revisions of the statute, this matter shall become final under its own terms.

29. Pursuant to C.R.S. §37-92-502(5)(a), the Applicant shall install and maintain such water measurement devices and recording devices as are deemed essential by the State Engineer or Division Engineers, and the same shall be installed and operated in accordance with instructions from said entities. Applicant is to install and maintain a totalizing flow meters on all Timber Ridge Wells or any additional or replacement wells associated therewith. Applicant is also to maintain records and provide reports to the State Engineer or Division Engineers as instructed by said entities, on at least an annual basis.

30. The vested water rights, water right structures, and plan for augmentation decreed herein shall be subject to all applicable administrative rules and regulations, as currently in place or as may in the future be promulgated, of the offices of Colorado State and Division Engineers for administration of such water rights, to the extent such rules and regulations are uniformly applicable to other similarly situated water rights and water users.

31. This Ruling of Referee, when entered as a decree of the Water Court, shall be recorded in the real property records of El Paso County, Colorado. Copies of this ruling shall be mailed as provided by statute.

DATED THIS 18th day of July, 2018.

BY THE REFEREE:

*Mardell R. DiDomenico*



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Mardell R. DiDomenico, Water Referee  
Water Division 2

**DECREE**

THE COURT FINDS THAT NO PROTEST WAS MADE IN THIS MATTER, THEREFOR THE FORGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Dated: August 9<sup>th</sup>, 2018.



BY THE COURT:

*Larry C. Schwartz*

LARRY C. SCHWARTZ, WATER JUDGE  
WATER DIVISION 2

# EXHIBIT A

## LEGAL DESCRIPTION – ARROYA PARCEL

A PARCEL OF LAND LOCATED IN A PORTION OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21 AND A PORTION OF THE SOUTHWEST ONE-QUARTER OF SECTION 22, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: A LINE BETWEEN THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27 AND THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SAID SECTION 27, TOWNSHIP 12 SOUTH, RANGE 65 WEST, MONUMENTED AT THE NORTHERLY END BY A 3-1/4" ALUMINUM CAP STAMED "2006 ESI PLS 10376" AND MONUMENTED AT THE SOUTHERLY END BY A 3-1/4" ALUMINUM CAP STAMPED "2006 ESI PLS 10376" AND IS ASSUMED TO BEAR S00°54'30"E, A DISTANCE OF 3925.63 FEET;

COMMENCING AT THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27;  
THENCE S88°38'56"W ALONG THE NORTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4), A DISTANCE OF 1047.88 FEET TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED;

THENCE S88°38'56"W CONTINUING ALONG SAID NORTH LINE, A DISTANCE OF 283.03 FEET TO THE NORTHWEST CORNER OF SAID SECTION 27 SAID POINT ALSO BEING A POINT ON THE EASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 431 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER;

THENCE ALONG THE EASTERLY AND NORTHERLY RIGHT-OF-WAY LINES OF SAID DEED THE FOLLOWING TWO (2) COURSES:

1. N00°37'14"W SAID LINE ALSO BEING THE WEST LINE OF THE SOUTHWEST ONE-QUARTER (SW1/4) OF SAID SECTION 22, A DISTANCE OF 30.00 FEET;
2. S89°40'23"W, A DISTANCE OF 736.82 FEET TO THE POINT OF INTERSECTION OF THE EASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 430 OF SAID COUNTY RECORDS;

THENCE N21°41'10"E ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1798.07 FEET;

THENCE N59°58'50"E, A DISTANCE OF 694.83 FEET;  
THENCE S14°30'58"E, A DISTANCE OF 567.09 FEET;  
THENCE N69°36'18"E, A DISTANCE OF 603.87 FEET;  
THENCE S30°23'46"E, A DISTANCE OF 264.58 FEET;  
THENCE S61°52'38"W, A DISTANCE OF 227.40 FEET;

THENCE S79°15'47"W, A DISTANCE OF 276.17 FEET;  
THENCE S89°39'18"W, A DISTANCE OF 356.07 FEET;  
THENCE S40°09'47"W, A DISTANCE OF 310.61 FEET;  
THENCE S09°56'46"W, A DISTANCE OF 270.03 FEET;  
THENCE S35°00'25"W, A DISTANCE OF 167.38 FEET;  
THENCE S57°24'01"W, A DISTANCE OF 235.36 FEET;  
THENCE S27°23'34"E, A DISTANCE OF 611.29 FEET TO THE POINT OF BEGINNING;

SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 35.08 ACRES OF LAND, MORE OR LESS.

Along With:

A PARCEL OF LAND BEING THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27, THE SOUTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (SW1/4 NW1/4) OF SECTION 27, THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SECTION 27, A PORTION OF THE SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER OF SECTION 28 AND A PORTION OF THE NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (NE1/4 NE1/4) OF SECTION 28, ALL IN TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: A LINE BETWEEN THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27 AND THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SAID SECTION 27, TOWNSHIP 12 SOUTH, RANGE 65 WEST, MONUMENTED AT THE NORTHERLY END BY A 3-1/4" ALUMINUM CAP STAMED "2006 ESI PLS 10376" AND MONUMENTED AT THE SOUTHERLY END BY A 3-1/4" ALUMINUM CAP STAMPED "2006 ESI PLS 10376" AND IS ASSUMED TO BEAR S00°54'30"E, A DISTANCE OF 3925.63 FEET;

COMMENCING AT THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27, SAID POINT ALSO BEING THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED;

THENCE S00°54'30"E ALONG THE EAST LINE OF THE WEST ONE-HALF (W1/2) OF SAID SECTION 27, A DISTANCE OF 3925.63 FEET TO THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SAID SECTION 27;

THENCE S87°35'00"W ALONG THE SOUTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4), A DISTANCE OF 1332.78 FEET TO THE SOUTHWEST CORNER OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4);

THENCE N00°53'18"W ALONG THE WEST LINE OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4), A DISTANCE OF 1316.78 FEET TO THE NORTHWEST CORNER OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4);

THENCE S89°08'28"W ALONG THE SOUTH LINE OF THE SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4) OF SECTION 28, A DISTANCE OF 1326.68 FEET TO THE SOUTHWEST CORNER OF SAID SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4);

THENCE N00°30'49"W ALONG THE WEST LINE OF SAID SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4), A DISTANCE OF 1270.77 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN

BOOK 2678 AT PAGE 430 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER;

THENCE N21°41'10"E ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1450.84 FEET TO THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 431 OF SAID COUNTY RECORDS;

THENCE ALONG THE SOUTHERLY AND EASTERLY RIGHT-OF-WAY LINES OF SAID DEED THE FOLLOWING TWO (2) COURSES:

1. N89°40'23"E, A DISTANCE OF 761.52 FEET TO A POINT ON THE EAST LINE OF SAID NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (NE1/4 NE1/4);
2. N00°52'58"W ALONG SAID EAST LINE, A DISTANCE OF 30.00 FEET TO THE NORTHWEST CORNER OF SAID SECTION 27;

THENCE N88°38'56"E ALONG THE NORTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4), A DISTANCE OF 1330.91 FEET TO THE POINT OF BEGINNING;

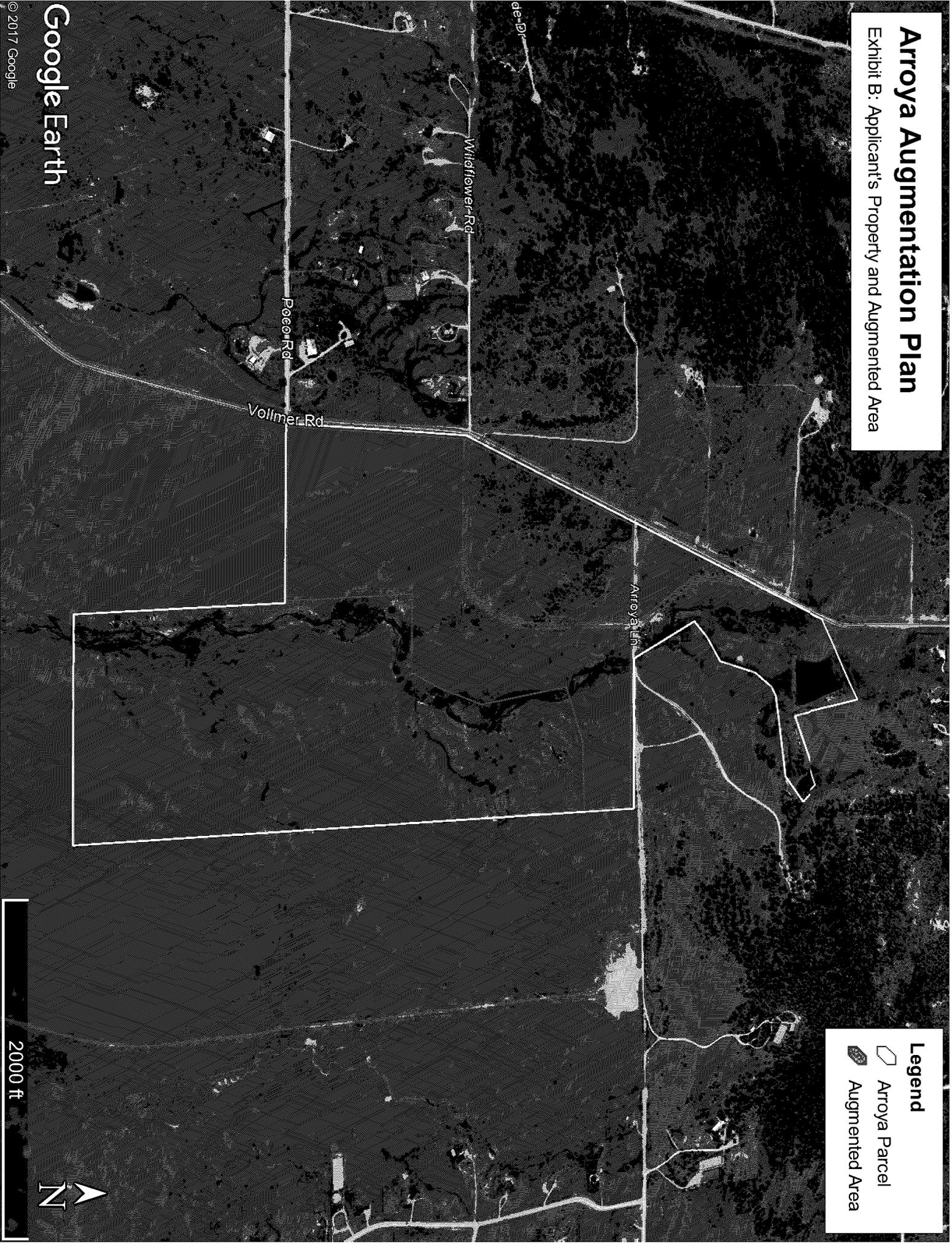
SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 190.89 ACRES OF LAND, MORE OR LESS.

# Arroya Augmentation Plan

Exhibit B: Applicant's Property and Augmented Area

**Legend**

-  Arroya Parcel
-  Augmented Area



2000 ft

DISTRICT COURT, WATER DIVISION 2  
Court Address: 501 N. Elizabeth Street, Suite 116  
Pueblo, CO 81003

**CONCERNING THE APPLICATION FOR WATER RIGHTS OF:**

**STERLING RANCH METROPOLITAN DISTRICT NO. 1**

**IN EL PASO COUNTY**

Attorneys for Applicant:

Chris D. Cummins, #35154  
Emilie B. Polley, #51296  
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▲ COURT USE ONLY ▲

Case No: 20CW \_\_\_\_

**APPLICATION FOR ADJUDICATION OF WATER STORAGE RIGHTS AND APPROVAL OF PLAN FOR AUGMENTATION**

I. NAME, ADDRESS AND TELEPHONE NUMBER OF APPLICANTS

Sterling Ranch Metropolitan District No. 1  
20 Boulder Crescent, # 200  
Colorado Springs, Colorado 80903  
(719) 471-1742

Name, Address and Telephone Number of Applicants' Attorneys:

MONSON, CUMMINS & SHOHEIT, LLC  
Chris D. Cummins, #35154  
Emilie B. Polley, #51296  
13511 Northgate Estates Dr., Ste. 250  
Colorado Springs, CO 80921  
(719) 471-1212

II. APPLICATION FOR SURFACE WATER STORAGE RIGHTS. Applicant (“Applicant”, “SRMD” or “District”) seeks to adjudicate two surface water storage rights in El Paso County, Colorado, for existing on-channel storage structures located within the District, and/or on land located within affiliated Sterling Ranch Metropolitan District Nos. 2 and 3.

A. Name of Structure: SRMD Pond No. 1

1. Legal Description of Structure: SMRD Pond No. 1 is located in the NE $\frac{1}{4}$  SW $\frac{1}{4}$  and the NW $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 33, Township 12 South, Range 65 West of the 6<sup>th</sup> P.M. with the center of the embankment at a point approximately 1,450 feet from the south section line of said Section 33, and approximately 2,590 feet from the east section line of said Section 33, in El Paso County, Colorado.

2. Source: The source for filling and re-filling of this existing on-channel structure is Sand Creek, a tributary of Fountain Creek, tributary to the Arkansas River.

3. Date of Initiation of Appropriation: On or before February 28, 2020, the date of the filing of this Application.

4. Amount Claimed: 12.25 acre feet, absolute, with the right to fill and refill, and freshening flows.

5. Uses: All municipal uses, including but expressly not limited to, domestic, commercial, industrial, recreation, fish propagation, stockwater, wetlands, wildlife habitat, fire protection, and irrigation and for augmentation purposes.

6. Pond Specifications: SRMD Pond No. 1 has a maximum surface area at the high water line of approximately 2.51 acres. The maximum height of the dam is approximately 10 feet and the length of the dam is approximately 510 feet.

7. Total Capacity of Pond: Approximately 12.25 acre feet, all of which is dead storage.

8. Land Ownership: The land upon which all points of diversion and places of use are located are within the boundaries of the District, and within the ownership and control of Applicant, as set forth in Section I of this Application.

B. Name of Structure: SRMD Pond No. 2

1. Legal Description of Structure: SMRD Pond No. 2 is located in the SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 28, Township 12 South, Range 65 West of the 6<sup>th</sup> P.M. at a point approximately 115 feet from the south section line of said Section 28, and approximately 156 feet from the east section line of said Section 28, in El Paso County, Colorado.

2. Source: The source for filling and re-filling of this existing on-channel structure is Sand Creek, a tributary of Fountain Creek, tributary to the Arkansas River.

3. Date of Initiation of Appropriation: On or before February 28, 2020, the date of the filing of this Application.

4. Amount Claimed: 4.29 acre feet, absolute, with the right to fill and refill, and freshening flows.

5. Uses: All municipal uses, including but expressly not limited to, domestic, commercial, industrial, recreation, fish propagation, stockwater, wetlands, wildlife habitat, fire protection, and irrigation and augmentation purposes.

6. Pond Specifications: SRMD Pond No. 2 has a maximum surface area at the high water line of approximately 1.30 acres. The maximum height of the dam is approximately 10 feet and the length of the dam is approximately 155 feet.

7. Total Capacity of Pond: Approximately 4.29 acre feet, all of which is dead storage.

8. Land Ownership: The land upon which all points of diversion and places of use are located are within the boundaries of the District, and within the ownership and control of Applicant, as set forth in Section I of this Application.

### III. APPLICATION FOR ADJUDICATION OF DENVER BASIN GROUND WATER RIGHTS

A. Summary of Application: Applicant seeks adjudication of all Denver Basin groundwater underlying real property referenced herein as the "SR Quarry Parcel") more particularly described in **Exhibit A** and shown on the **Exhibit B** district map, attached hereto. Applicant requests a vested right for the withdrawal of all legally available ground water in the Denver Basin aquifers underlying the SR Quarry Parcel, being approximately 97.54 acres located in the S $\frac{1}{2}$  SW $\frac{1}{4}$  and the SW $\frac{1}{4}$  SE $\frac{1}{4}$  in Township 12 South, Range 65 West of the 6<sup>th</sup> P.M.

#### B. Permitted Wells:

1. There is one permitted well located on the SR Quarry Parcel, DWR Permit No. 26947-F, constructed to the Denver aquifer.

2. Applicant may construct an undetermined quantity of wells to one or more of the Denver Basin aquifers to be quantified herein underlying the SR Quarry Parcel, as necessary to withdraw Applicant's full entitlement from each respective aquifer, subject to the plan for augmentation sought herein. To the extent wells or well

fields constructed on nearby property owned or controlled by Applicant and its affiliates have or are legally interpreted to have contiguity, Applicant seeks the right to withdraw all groundwater entitlements quantified herein from such contiguous wells. Applicant requests that such wells to each respective aquifer be considered a Well Field, and requests waiver of the 600-foot spacing rule with regards to wells properly and solely located within the District and its affiliates, including the SR Quarry Parcel.

C. Water Source:

1. Not-nontributary. The ground water that will be withdrawn from the Dawson aquifer, Denver aquifer, and the Arapahoe aquifer underlying the SR Quarry Parcel is not-nontributary. Pursuant to C.R.S. §37-90-137(9)(c.5), the augmentation requirements for wells in the Dawson, Denver and Arapahoe aquifers adjudicated herein will require the replacement of out-of-priority stream depletions caused by withdrawals. However, only the Denver and Arapahoe aquifers quantified and described herein are subject of the plan for augmentation adjudicated herein. No withdrawals of Dawson water supplies shall be made except pursuant to a subsequently awarded plan for augmentation.

2. Nontributary. The groundwater contained in the Laramie-Fox Hills aquifer of the Denver Basin underlying the SR Quarry Parcel is nontributary.

D. Estimated Rates of Withdrawal and Ground Water Available:

1. Estimated Rates of Withdrawal. The pumping rates for wells to be completed to each aquifer are estimated to be between 15 and 250 gpm. The actual pumping rate for each well will vary according to aquifer conditions and well production capabilities. The Applicant requests the right to withdraw ground water at rates of flow necessary to withdraw the entire decreed amounts, which may be less than or exceed the above estimates. The actual depth of each well to be constructed within the respective aquifers will be determined by actual aquifer conditions.

2. Estimated Average Annual Amounts of Ground Water Available. Applicant requests an absolute water right for the withdrawal of all legally available ground water in the not-nontributary Dawson, Denver, and Arapahoe aquifers, and in the nontributary Laramie-Fox Hills aquifer underlying the SR Quarry Parcel. Said amounts may be withdrawn over the 100-year life of the aquifers as set forth in C.R.S. §37-90-137(4), or may be withdrawn over the 300-year life of the aquifers as required by El Paso County, Colorado Land Development Code §8.4.7(C)(1) which is more stringent than the State of Colorado's 100-year life requirement. The estimated average annual amounts of ground water available for withdrawal from the underlying Denver Basin aquifers will be based upon the Denver Basin Rules. Applicant estimates that the following values and average annual amounts are representative of the Denver Basin aquifers underlying the SR Quarry Parcel:

<b>AQUIFER</b>	<b>NET SAND (Feet)</b>	<b>Total Appropriation (Acre Feet)</b>	<b>Annual Avg. Withdrawal 100 Years (Acre Feet)</b>	<b>Annual Avg. Withdrawal 300 Years (Acre Feet)</b>
Dawson (NNT)	51.3	1,001	10.01	3.34
Denver (NNT)	295.2	4,895	48.95	16.32
Arapahoe (NNT)	260.5	4,320	43.20	14.40
Laramie Fox Hills (NT)	190	2,780	27.80	9.27

Decreed amounts may vary from the above to conform with the State’s Determination of Facts. Pursuant to C.R.S. §37-92-305(11), the Applicant further requests that the Court retain jurisdiction to finally determine the amount of water available for appropriation and withdrawal from each aquifer.

E. Requested Uses: The Applicant requests the right to use the ground water quantified herein for all beneficial municipal uses including, without limitation, domestic, commercial, industrial, irrigation of any irrigable acreage within the District boundaries or District service area, stock water, recreation, fish and wildlife propagation, fire protection, central water supply for such uses and also for exchange, aquifer recharge, replacement, and augmentation purposes. Applicant may use such water by immediate application or by storage and subsequent application to the beneficial uses and purposes stated herein. Provided, however, Applicant shall only be entitled to construct a well or use water from the not-nontributary Dawson, Denver, and Arapahoe aquifers pursuant to a decreed augmentation plan, such as adjudicated herein as to the Denver and Arapahoe aquifers, adequately replacing all injurious stream depletions resulting from the use of such not-nontributary aquifers, in accordance with C.R.S. §37-90-137(9)(c.5).

F. Well Fields: Applicant requests that it be permitted to produce the full legal entitlement from the Denver Basin aquifers underlying the District and its affiliates, including the SR Quarry Parcel, through any combination of wells. Applicant requests that these wells to each respective aquifer be treated as a well field, including wells located on contiguous property within the District and its affiliates, as now comprised, or as may be in the future included.

G. Averaging of Wells. Applicant requests that it be entitled to withdraw an amount of ground water in excess of the average annual amount decreed to the aquifers beneath the SR Quarry Parcel, so long as the sum of the total withdrawals from all the wells in the aquifers does not exceed the product of the number of years since the date of issuance of the original well permit or the date of entry of a decree herein, whichever comes first, multiplied by the average annual volume of water which the Applicant is entitled to withdraw from the aquifers underlying the SR Quarry Parcel.

H. Description of Land Overlying Subject Ground Water: The SR Quarry Parcel overlying the Denver Basin ground water which is the subject of this section of this Application consists of approximately 97.54 acres as described above, as more specifically described in attached **Exhibit A** and depicted on attached **Exhibit B**.

IV. APPLICATION FOR APPROVAL OF PLAN FOR AUGMENTATION

A. Relevant Background/Summary of Augmentation Plan: Applicant seeks approval of a plan for augmentation for depletions associated with municipal use of Denver Basin ground water underlying land included within the District, as well as underlying Sterling Range Metropolitan District Nos. 2 and 3, and underlying the SR Quarry Parcel described above, to support development of land served by the District. Such augmentation will utilize not-nontributary and nontributary water supplies described herein, as well as re-usable and fully consumable augmented lawn irrigation return flows. Augmented structures will include not-nontributary wells and the two existing ponds located within the District, as described in Paragraphs II.A-B, above.

B. Augmentation/Replacement Supplies. The plan for augmentation requested herein will utilize as a source of replacement supplies previously quantified and adjudicated Denver Basin groundwater underlying the real property included within the District and its affiliates, additional previously adjudicated Denver Basin groundwater supplies underlying a property located outside of the District referenced herein as the Bar X Parcel, and underlying the SR Quarry Parcel, as described herein. All such properties are more specifically described in the **Exhibit A** legal descriptions, as attached hereto, and depicted on the attached **Exhibit B** Area Map. The Denver Basin groundwater underlying the Bar X Parcel was previously adjudicated in Case No. 93CW18 by the Division 1 Water Court, which amended prior Case No. 85CW445. The Denver Basin groundwater underlying the District and its affiliates was previously adjudicated by the Division 2 Water Court in Case Nos. 86CW18, 86CW19, and 08CW113, and quantification of the Denver Basin groundwater underlying the SR Quarry Parcel is described above. Applicant owns and controls all Denver Basin supply underlying the District and its affiliates, and underlying the SR Quarry Parcel, and owns, controls, or has options upon the Denver Basin groundwater underlying the Bar X Parcel, as previously adjudicated in Case No. 93CW018, amending Case No. 85CW445, Water Division No. 1.

1. Specifically, the District and/or its affiliates owns or controls the following nontributary Denver Basin groundwater supplies underlying the Bar X Parcel:

<u>Aquifer/Status</u>		<u>Total Allocation (AF)</u>
Denver	NT	136,000 acre feet
Arapahoe	NT	81,300 acre feet
Laramie-Fox Hills	NT	<u>42,700</u> acre feet
<u>BAR X TOTAL:</u>		260,000 acre feet

2. In addition, the following nontributary Denver Basin groundwater supplies were previously adjudicated in Case Nos. 86CW18, 86CW19, and 08CW113 underlying the District and its affiliates, and are available for the District's use:

<u>Aquifer</u>	<u>Status</u>	<u>Total Allocation (AF)</u>
Arapahoe	NT	56,900 acre feet
Laramie-Fox Hills	NT	<u>53,940</u> <sup>1</sup> acre feet
<u>SRMD TOTAL:</u>		110,840 acre feet

3. Further, as described above, the District seeks quantification of all Denver Basin groundwater underlying the SR Quarry Property, including the following quantities of nontributary groundwater estimated to be available for Applicant's use:

<u>Aquifer</u>	<u>Status</u>	<u>Total Allocation (AF)</u>
Laramie-fox Hills	NT	2,780 AF

As such, the District has a total of 373,620 acre-feet of nontributary Denver Basin groundwater available for its use.

C. Statement of Plan for Augmentation: Applicant wishes to provide for the augmentation of injurious out-of-priority stream depletions which may be caused by the pumping of the not-nontributary Denver and Arapahoe aquifer wells underlying the properties owned and controlled by the District, including the SR Quarry Parcel, and within District boundaries as proposed herein, along with evaporative depletions from two (2) pond structures located on-channel on Sand Creek with total surface area of approximately 3.81 acres, as described above. Applicant seeks to utilize such not-nontributary Denver Basin ground in the Denver and Arapahoe aquifers for municipal uses throughout the District's municipal service area, as currently exists or as may exist in the future, or otherwise by agreement. Applicant seeks to utilize portions of the nontributary Denver Basin ground water underlying the Bar X Parcel for augmentation of any injurious post-pumping depletions occurring following the anticipated 300-year pumping life of the augmented structures. The District currently utilizes a wastewater treatment plant which discharges its treated effluent for re-charge of the Upper Black Squirrel Creek alluvial aquifer, rendering any reusable effluent resulting from the use of not-nontributary Denver Basin aquifers unavailable for replacement purposes to Sand Creek, though the potential for on-site wastewater treatment in the future remains, and the District has the option of returning such reusable return flows to the District for re-use by pipeline. For so long as Applicant's otherwise re-usable wastewater return flows are unavailable for re-use or credit in Sand Creek, Applicant proposes to replace any injurious out of priority depletions resulting from Applicant's use of not-nontributary

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<sup>1</sup> Includes 40 acre feet, 0.4 annual acre feet, adjudicated in Case No. 08CW113.

Denver Basin ground water through Lawn Irrigation Return Flows (“LIRFs”), such LIRFs accruing to Sand Creek as a result of irrigation uses throughout the District. Should the District construct in the future such infrastructure as necessary to allow re-usable return flows/effluent to accrue to Sand Creek, or other appropriate tributary to Fountain Creek, Applicant may utilize such effluent in replacement of or in addition to LIRFs for replacement purposes under this plan. As to evaporative depletions, to the extent the LIRFs sought to be quantified herein are insufficient to replace such depletions (or re-usable effluent does not become available to Applicant’s use), Applicant in the alternative will either suffer evaporative loss, or pump its nontributary Laramie-Fox Hills aquifer groundwater underlying the District to replace evaporative depletions in time, place and amount. The total available not-nontributary ground water underlying SRMD, as previously quantified in Division 2 Case No. 08CW113 is as follows:

<u>Aquifer</u>	Annual Average Withdrawal (Acre Feet)
Denver (NNT)	242.97 <sup>1</sup>
Arapahoe (NNT)	0.20 <sup>1</sup>

In addition, and as described above, Applicant has the following additional not-nontributary groundwater available for withdrawal underlying the SR Quarry Parcel:

<u>Aquifer</u>	Annual Average Withdrawal (Acre Feet)
Denver (NNT)	16.32 <sup>1</sup>
Arapahoe (NNT)	14.40 <sup>1</sup>

As such, the total withdrawals from the not-nontributary Denver and Arapahoe aquifers to be augmented by this plan for augmentation is as follows:

<u>Aquifer</u>	Annual Average Withdrawal (Acre Feet)
Denver (NNT)	259.29 <sup>1</sup>
Arapahoe (NNT)	14.60 <sup>1</sup>

C. Augmentation of Not-Nontributary Groundwater.

1. Structures to be Augmented: Applicant seeks approval for a plan

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<sup>1</sup> This represents the annually estimated available quantity of water for a 300-year pumping life, as required by El Paso County Land Development Code.

for augmentation to replace any injurious out-of-priority depletions which may result from Applicant's withdrawal of not-nontributary ground water within the Denver and Arapahoe aquifers available to the District as described above, as well as evaporative depletions associated with SRMD Pond No. 1 and SRMD Pond No. 2, as described above and as depicted on the **Exhibit B** Map.

2. Water Rights to be Used for Augmentation: The water rights to be used for augmentation during pumping are LIRFs as requested to be preliminarily quantified herein, resulting from outside water uses within the District, and which will accrue to Sand Creek for replacement of depletions associated with the Augmented Structures. Initial pumping for the irrigation uses resulting in such LIRFs will be fully augmented by the plan for augmentation adjudicated herein, and therefore such LIRFs will be fully consumable, resulting from augmented withdrawals from the not-nontributary Denver and Arapahoe aquifer wells to be pumped as set forth in this plan of augmentation, or from other water resources utilized by the District, including nontributary supplies. Applicant's request for LIRF quantification is set forth below at Paragraph IV.E, below. The water rights to be used for augmentation of any injurious post-pumping depletions resulting from pumping from the not-nontributary supplies described herein are nontributary groundwater supplies underlying the Bar X Parcel, or in the alternative other nontributary supplies available to the District, including as described herein.

3. Anticipated Uses: Applicant will make all municipal uses of water associated provision of municipal water services to residential, commercial and industrial customers within the District, or by contract, as may develop over time.

4. Augmentation of Depletions During Pumping: Through computer groundwater flow modeling, it has been theoretically demonstrated that pumping the not-nontributary Denver and Arapahoe aquifer wells as proposed in this augmentation plan over one hundred years, will deplete surface water flows at a greater rate than 0.1 percent of the pumping rate, and such aquifers are therefore not-nontributary. As previously decreed, the point of contact between the not-nontributary Denver and Arapahoe aquifers with surface streams, including their alluvium, occurs greater than one mile from the anticipated location of Applicant's wells, and the same is true of the Denver and Arapahoe aquifers underlying the SR Quarry Parcel, as described above. Therefore, pursuant to C.R.S. §37-90-137(9)(c)(I), replacement of 4% of pumping from the not-nontributary Denver and Arapahoe aquifers is adequate to replace injurious depletions during pumping. Applicant asserts that LIRFs resulting from development of irrigated landscaping and lawns within the District represented by public spaces, medians, parks and open space, will adequately replace such 4% of pumping from the not-nontributary Denver and Arapahoe aquifers, with such LIRFs amounting to approximately 15% of the water applied to such uses. In the absence of sufficient LIRFs, Applicant will pump nontributary supplies from the nontributary Arapahoe and/or Laramie-Fox Hills aquifers in amounts sufficient to replace depletions in time, place and amount.

5. Augmentation for Post Pumping Depletions: For the replacement of post-pumping depletions occurring after the anticipated 300-year pumping life of the wells to the not-nontributary aquifers described above, Applicant will dedicate and reserve the 82,167 acre feet of supply from a combination of the nontributary Denver, Arapahoe and Laramie-Fox Hills aquifer underlying the Bar X parcel, owned or controlled by SRMD and its affiliates, less the amount of actual stream depletions replaced during the plan pumping period. Applicant's consultant estimates that a total of 1,978.119 acre-feet of lawn irrigation return flows will replace stream depletions over the 300 year pumping period. The total 81,167 acre feet of reserved post-pumping replacement water, less the amount of actual stream depletions replaced during the plan pumping period, including an estimated 1,978 acre-feet from LIRF's, will be sufficient to replace all calculated injurious post-pumping depletions. Applicant specifically reserves the right to substitute other legally available augmentation sources for replacement of such post pumping depletions upon further approval of the Court under its retained jurisdiction. Even though this reservation is made, Applicant claims that post-pumping depletions will be noninjurious and need not be replaced. Under the Court's retained jurisdiction, Applicant reserves the right in the future to prove that said post-pumping depletions will be noninjurious. Upon entry of a decree in this case, the Applicant will be entitled to file for and receive well permits for the subject not-nontributary Denver and Arapahoe aquifer wells for the uses in accordance with this Application. Applicant acknowledges that the nontributary groundwater underlying the Bar X Parcel hereby reserved originates in Water Division 1, and commits to its transport into Water Division 2 for replacement of any post-pumping depletions under this plan for augmentation in proper location. Applicant intends, consistent with C.R.S. §37-90-137(9)(b), to forego consumption of 2% of the nontributary groundwater withdrawn, and for said 2% to remain in Water Division 1.

D. Augmentation of Evaporative Depletions. Applicant seeks approval of a plan for augmentation for replacement of any out-of-priority evaporative depletions which may result from impoundment of flows from Sand Creek in the SRMD Pond Nos. 1 and 2 water storage rights sought herein, more specifically described in Section II, above.

1. Pond Evaporation: Applicant's consultants have determined the net evaporative depletions based on the application of local climate data to the standards of the State Engineer's Office for the determination of pond evaporation. Based thereon, the net evaporation from the surface area of the combined maximum surface areas of SRMD Pond Nos. 1 and 2, being approximately 3.81 surface acres, is determined to be approximately 46.5 inches. SRMD Pond Nos. 1 and 2 therefore have associated evaporative depletions of approximately 9.90 annual acre feet, in combination.

2. Augmentation Source for Replacement of Evaporative Depletions. Applicant proposes two alternate sources of augmentation supply for replacement of evaporative depletions from SRMD Pond Nos. 1 and 2: (a) excess LIRF credits, as described in Paragraph IV.E., below, when not required for replacement of the 4% pumping depletions associated with the not-nontributary Denver and/or Arapahoe aquifer groundwater withdrawals described in Paragraph IV.C.3., above; or, (b) pumping from the

nontributary Arapahoe and/or Laramie Fox Hills aquifers underlying SRMD, as decreed to Applicant's use in Case Nos. 86CW119 and 08CW113, including from existing SRMD wells described above.

a. Excess LIRF Credits. LIRF credits resulting from irrigation throughout the District, as described and preliminarily quantified in Paragraph IV.E., below, are anticipated to be available in excess of that required for augmentation of the not-nontributary Denver and Arapahoe aquifer wells described herein. Applicant shall utilize such LIRF credits to offset and augment all or part of the estimated 9.90 annual acre feet of evaporative depletions associated with SRMD Pond Nos. 1 and 2.

b. Nontributary Groundwater. In the alternative, Applicant shall pump to the stream such quantities of not-nontributary groundwater as necessary to fully augment evaporative depletions associated with SRMD Pond Nos. 1 and 2, estimated to be a maximum of 9.90 annual acre feet, not otherwise augmented through LIRF credits, as described in Paragraph IV.D.2.a., above. The nontributary Laramie-Fox Hills aquifer underlying approximately 1,410 acres of the District was quantified in Case No. 86CW119 by the Division 2 Water Court, while the nontributary Laramie-Fox Hills aquifer underlying the remaining 41.44 acres of the District was quantified in Case No. 08CW113, Water Division 2. Nontributary groundwater in the Arapahoe aquifer was primarily quantified in Case No. 86CW118, Water Division 1, with a 4 acre foot portion quantified in Case No. 08CW113, Water Division 2. Such adjudications provide for the combined annual withdrawals of nontributary groundwater well in excess of any depletions created through the use and maintenance of SRMD Pond Nos. 1 and 2, and such groundwater was previously adjudicated for all municipal uses, expressly including augmentation. Applicant has existing wells to both the nontributary Arapahoe and Laramie-Fox Hills aquifers underlying the District, Permit Nos. 77785-F and 80132-F, respectively. Such groundwater will be pumped to Sand Creek in times and volumes necessary to prevent injury to other vested water rights users.

E. Quantification of Reusable Outdoor-Use Lawn Irrigation Return Flows ("LIRFs")

Water use within the District's boundaries will include use for outdoor purposes, including irrigation of lawns, landscaping, open space, etc. A portion of the water used for outdoor purposes will return to the Sand Creek/Fountain Creek stream system unconsumed. The District seeks quantification of the amount, timing and location of such LIRFs accruing to the Sand Creek stream system, located in Water Division 2, from use of water from the sources described above in Paragraphs III.B., and D., within the District's current and future boundaries. The District also seeks approval of the right to use such reusable LIRFs for augmentation and replacement in the augmentation plan described above. All such LIRFs will accrue to Sand Creek, tributary of Fountain Creek, tributary to the Arkansas River. The approximate location at or upstream of which all such LIRFs are anticipated to accrue is shown on the attached **Exhibit B** map. The District proposes to calculate the amount of such re-usable LIRFs using a preliminary

fixed return flow percentage of 15% of total outdoor uses. This percentage is based upon a relationship between deep percolation (expressed as a fraction of the amount of water applied) and the amount of water applied (expressed as a fraction of the potential consumptive use of lawn grass), referenced as the "Cottonwood Curve", and the methodology referred to as the "Cottonwood Methodology", first approved in Case No. 81CW142 in Water Division 1, or in the alternative, the "Colorado Springs Methodology". These, or a similar relationship and methodology, have also been approved in various decreed matters in Water Division 2, and therefore will likewise be utilized here. The District proposes to calculate the timing of the deep percolation portion of such reusable LIRFs to the Sand Creek stream system using the Glover bounded alluvial aquifer equation.

Applicant's consultants have estimated, based upon zoning and land use plans approved by El Paso County, that approximately 48 acres of parks and common area will be irrigated throughout the District, resulting in LIRFs calculated at approximately 27.45 acre feet annually. With maximum annual depletions from pumping of not-nontributary aquifers estimated at 10.96 acre feet (4% of 273.89 annual acre feet of pumping), and evaporative depletions estimated at a maximum of 9.90 acre feet, for a total of 20.86 annual acre feet to be augmented, available LIRFs appear well in excess of augmentation demands.

F. Remarks: Additional remarks are as follows:

1. The term of this augmentation plan is for 300 years, however the length of the plan for a particular well or wells may be extended beyond such time provided the total plan pumping allocated thereto is not exceeded. Post-pumping stream depletions accrue to a particular well or wells only to the extent related to that well's actual pumping.

2. Before any wells are constructed, applications for well permits will be filed with the State Engineer's office, and well permits shall be granted in accordance with the decree pursuant to this application.

3. The Applicant requests a finding that vested water rights of others will not be materially injured by the withdrawals of ground water and the proposed plan for augmentation.

4. The wells shall be installed and metered as reasonably required by the State and Division Engineer. Each well must be equipped with a totalizing flow meter and Applicant shall submit diversion records to the Division Engineer on an annual basis or as otherwise requested by the Division Engineer. The Applicant shall also provide accountings to the Division Engineer and Water Commissioner as required by them to demonstrate compliance under the plan of augmentation, and all such accountings shall be integrated into other accountings required from Applicant pursuant to subsequently entered decrees so as to accurately account for all water uses by the District from various

sources, and to ensure that all out-of-priority depletions associated therewith are adequately replaced in time, place and amount.

5. The Applicant intends to waive the 600 feet well spacing requirement for the wells to be located upon the property located within the District as now exists, or as may exist in the future.

RESPECTFULLY SUBMITTED this 9<sup>th</sup> day of October, 2020.

MONSON, CUMMINS & SHOHEE, LLC  
*(Pursuant to C.R.C.P. 121, § 1-26(9),  
the signed original shall be kept on file at the  
offices of Monson, Cummins & Shohee, LLC)*

*/s/ Chris D. Cummins*

Chris D. Cummins, #35154  
Emilie B. Polley, #51296  
13511 Northgate Estates Dr., Ste. 250  
Colorado Springs, CO 80921  
(719) 471-1212

**VERIFICATION**

STATE OF COLORADO    )  
  ) ss.  
COUNTY OF EL PASO    )

I, James Morley, declare under penalty of perjury under the law of Colorado that I am an authorized representative of the Applicant, being the President of the Board of Directors for the Sterling Ranch Metropolitan District No. 1, and that I have read the foregoing and that all of the statements contained therein are true and accurate to the best of my knowledge and information.

Executed on the 9<sup>th</sup> day of October, 2020, in the City of Colorado Springs, Colorado.

  
James Morley  
President  
Sterling Ranch Metropolitan District No. 1

## **EXHIBIT A – Legal Descriptions**

### **Sterling Ranch Metropolitan District Nos. 1, 2 and 3**

The W1/2 W1/2 E1/2 and the E1/2 W1/2 and the SW1/4 SW1/4 of Section 27; the E1/2 SE1/4 and that portion of the SW1/4 SE1/4 lying South and East of the County Road across said premises, both in Section 28; that portion of the SE1/4 SE1/4 of Section 32 lying South and East of said County Road, that portion of the NE1/4 SE1/4 of said Section 32, lying South and East of said County Road, and that portion of the SE1/4 SW1/4 SE1/4 of Section 32 beginning at the SE corner of the SE1/4 SW1/4 SE1/4, then northerly along the east line of the SE1/4 SW1/4 SE1/4 a distance of 495 feet to a point on Vollmer Road, then southwesterly along Vollmer Road 660 feet to a point on the south line, then easterly 495 feet to the point of beginning; the E1/2 and the E1/2 SW1/4 and the SW1/4 SW1/4 of Section 33, and all that part of the NW1/4 of said Section 33 lying South and East of the said County Road across said premises, except that portion of the SW1/4 NW1/4 of said Section 33 lying South and East of said County Road containing approximately 10 acres deeded to Colorado Interstate Gas Company by Warranty Deed recorded in Book 1173 at Page 359 of the El Paso County Records; and the W1/2 E1/2 and the W1/2 of Section 34, all in Township 12 South, Range 65 West of the 6th P.M., located in El Paso County, Colorado. The NW1/4 of the NW1/4 of Section 4, Township 13 South, Range 65 West of the 6th P.M., located in El Paso County, Colorado.

### **Bar X Land**

A parcel of land located in Township 11 South, Range 65 West of the 6th Principal Meridian, El Paso County, Colorado, and more particularly described as follows:

All of Section 16; the E1/2 of the SW1/4 and the SE1/4 of Section 17; the E1/2 of the E1/2 of the W1/2 of Section 20; the NE1/4 and the W1/2, except for the east 30 feet of the SW1/4, of Section 21.

### **SR Quarry Land**

A TRACT OF LAND IN THE SOUTHWEST ONE-QUARTER AND THE SOUTHWEST ONE-QUARTER OF THE SOUTHEAST ONE-QUARTER OF SECTION 32, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, IN EL PASO COUNTY, COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 32; THENCE N89°23'57"E ALONG THE SOUTH LINE OF SECTION 32, 30.00 FEET TO POINT ON THE EASTERLY LINE OF BLACK FOREST ROAD, ACCORDING TO THE RESOLUTION ADOPTED BY THE BOARD OF COMMISSIONERS OF EL PASO COUNTY RECORDED IN ROAD BOOK A AT PAGE 78, WHICH POINT IS THE POINT OF BEGINNING; THENCE N00°02'19"W ALONG SAID EASTERLY LINE, 125.50 FEET TO A POINT ON THE SOUTH LINE OF THAT TRACT OF LAND DESCRIBED IN BOOK 3859 AT PAGE 151; THENCE ALONG THE BOUNDARY OF SAID TRACT FOR THE FOLLOWING FOUR (4) COURSES; (1) THENCE N89°23'57"E, 25.20 FEET; (2) THENCE N42°32'21"E, 664.79 FEET; (3) THENCE N01°44'16"W, 403.43 FEET; (4) THENCE N87°25'38"W, 463.51 FEET TO A POINT ON SAID EASTERLY LINE OF BLACK FOREST ROAD; THENCE N00°02'19"E ALONG SAID EASTERLY LINE, 124.08 FEET; THENCE N89°27'58"E, 2607.50 FEET; THENCE N00°00'40"W ALONG THE NORTH-SOUTH CENTERLINE OF SECTION 32, 152.93 FEET TO THE SOUTHWEST CORNER OF HOLIDAY HILLS NO. 1, ACCORDING TO THE PLAT RECORDED IN PLAT BOOK E2 AT PAGE 12; THENCE N89°31'30"E ALONG THE SOUTH LINE OF SAID HOLIDAY HILLS NO. 1, 1260.38 FEET; THENCE S00°33'58"E ALONG THE WESTERLY LINE OF GLIDER PORT ROAD, AS DEDICATED IN SAID HOLIDAY HILLS NO. 1, 741.29 FEET; THENCE S37°18'25"W ALONG THE NORTHWESTERLY LINE OF VOLLMER ROAD, 721.56 FEET; THENCE S89°23'57"W ALONG THE SOUTH LINE OF SECTION 32, 3437.29 FEET TO THE POINT OF BEGINNING, COUNTY OF EL PASO, STATE OF COLORADO

### Retreat Land

A PARCEL OF LAND LOCATED IN A PORTION OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 21 AND A PORTION OF THE SOUTHWEST ONE-QUARTER OF SECTION 22, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: A LINE BETWEEN THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27 AND THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SAID SECTION 27, TOWNSHIP 12 SOUTH, RANGE 65 WEST, MONUMENTED AT THE NORTHERLY END BY A 3-1/4" ALUMINUM CAP STAMED "2006 ESI PLS 10376" AND MONUMENTED AT THE SOUTHERLY END BY A 3-1/4" ALUMINUM CAP STAMPED "2006 ESI PLS 10376" AND IS ASSUMED TO BEAR S00°54'30"E, A DISTANCE OF 3925.63 FEET;

COMMENCING AT THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27; THENCE S88°38'56"W ALONG THE NORTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4), A DISTANCE OF 1047.88 FEET TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED; THENCE S88°38'56"W CONTINUING ALONG SAID NORTH LINE, A DISTANCE OF 283.03 FEET TO THE NORTHWEST CORNER OF SAID SECTION 27 SAID POINT ALSO BEING A POINT ON THE EASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 431 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER; THENCE ALONG THE EASTERLY AND NORTHERLY RIGHT-OF-WAY LINES OF SAID DEED THE FOLLOWING TWO (2) COURSES:

1.N00°37'14"W SAID LINE ALSO BEING THE WEST LINE OF THE SOUTHWEST ONE-QUARTER (SW1/4) OF SAID SECTION 22, A DISTANCE OF 30.00 FEET; 2.S89°40'23"W, A DISTANCE OF 736.82 FEET TO THE POINT OF INTERSECTION OF THEEASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 430 OF SAID COUNTY RECORDS; THENCE N21°41'10"E ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1798.07 FEET; THENCE N59°58'50"E, A DISTANCE OF 694.83 FEET; THENCE S14°30'58"E, A DISTANCE OF 567.09 FEET; THENCE N69°36'18"E, A DISTANCE OF 603.87 FEET; THENCE S30°23'46"E, A DISTANCE OF 264.58 FEET; THENCE S61°52'38"W, A DISTANCE OF 227.40 FEET; THENCE S79°15'47"W, A DISTANCE OF 276.17 FEET; THENCE S89°39'18"W, A DISTANCE OF 356.07 FEET; THENCE S40°09'47"W, A DISTANCE OF 310.61 FEET; THENCE S09°56'46"W, A DISTANCE OF 270.03 FEET; THENCE S35°00'25"W, A DISTANCE OF 167.38 FEET; THENCE S57°24'01"W, A DISTANCE OF 235.36 FEET; THENCE S27°23'34"E, A DISTANCE OF 611.29 FEET TO THE POINT OF BEGINNING; SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 35.08 ACRES OF LAND, MORE OR LESS.

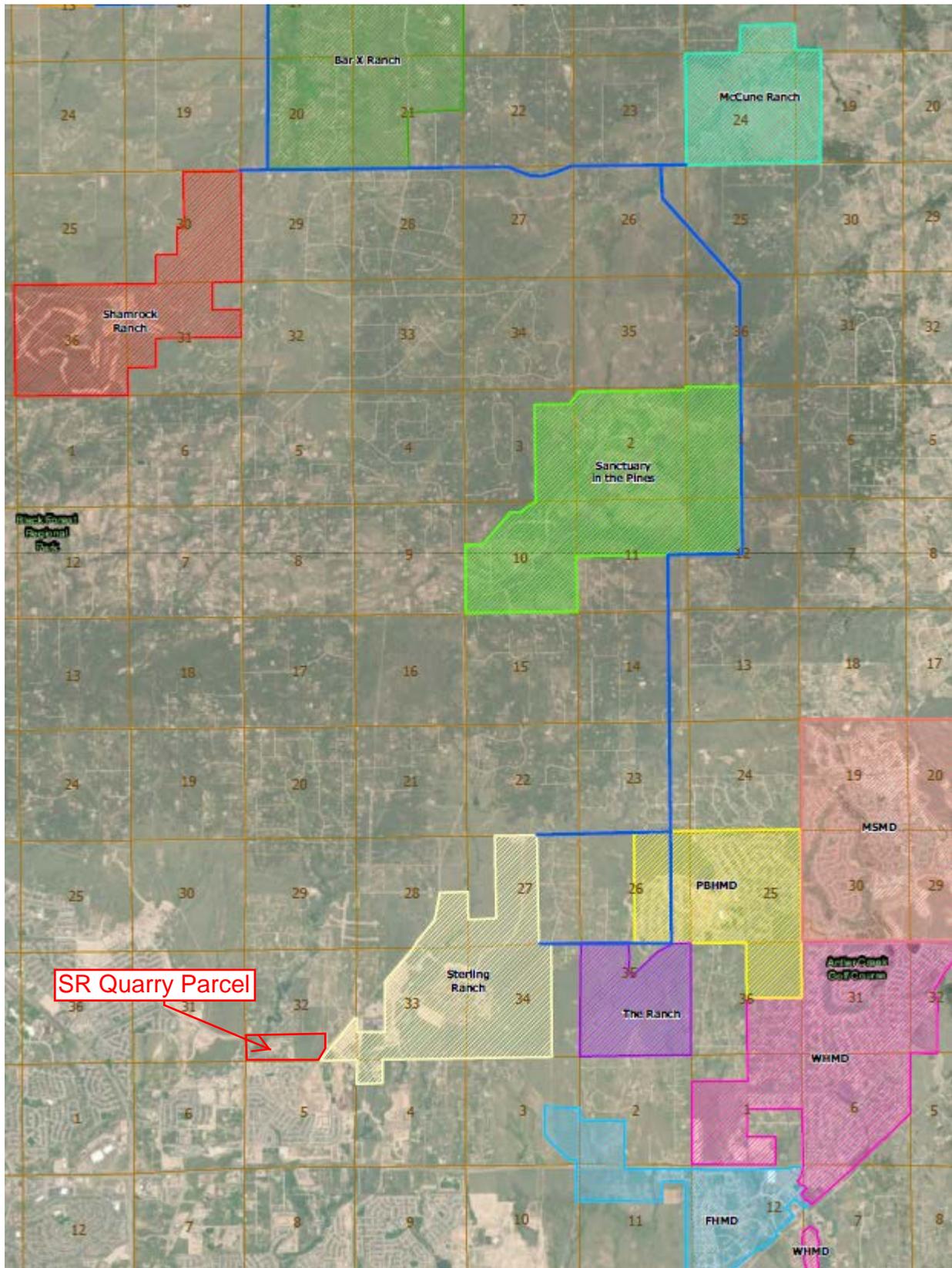
Along With:

A PARCEL OF LAND BEING THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27, THE SOUTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (SW1/4 NW1/4) OF SECTION 27, THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SECTION 27, A PORTION OF THE SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER OF SECTION 28 AND A PORTION OF THE NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (NE1/4 NE1/4) OF SECTION 28, ALL IN TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: A LINE BETWEEN THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27 AND THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4) OF SAID SECTION 27, TOWNSHIP 12 SOUTH, RANGE 65 WEST, MONUMENTED AT THE NORTHERLY END BY A 3-1/4" ALUMINUM CAP STAMED "2006 ESI PLS 10376" AND MONUMENTED AT THE SOUTHERLY END BY A 3-1/4" ALUMINUM CAP STAMPED "2006 ESI PLS 10376" AND IS ASSUMED TO BEAR S00°54'30"E, A DISTANCE OF 3925.63 FEET;

COMMENCING AT THE NORTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4) OF SECTION 27, SAID POINT ALSO BEING THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN DESCRIBED; THENCE S00°54'30"E ALONG THE EAST LINE OF THE WEST ONE-HALF (W1/2) OF SAID SECTION 27, A DISTANCE OF 3925.63 FEET TO THE SOUTHEAST CORNER OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER NW1/4 SW1/4) OF SAID SECTION 27; THENCE S87°35'00"W ALONG THE SOUTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4), A DISTANCE OF 1332.78 FEET TO THE SOUTHWEST CORNER OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4); THENCE N00°53'18"W ALONG THE WEST LINE OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4), A DISTANCE OF 1316.78 FEET TO THE NORTHWEST CORNER OF SAID NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER (NW1/4 SW1/4); THENCE S89°08'28"W ALONG THE SOUTH LINE OF THE SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4) OF SECTION 28, A DISTANCE OF 1326.68 FEET TO THE SOUTHWEST CORNER OF SAID SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4); THENCE N00°30'49"W ALONG THE WEST LINE OF SAID SOUTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (SE1/4 NE1/4), A DISTANCE OF 1270.77 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 430 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER; THENCE N21°41'10"E ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1450.84 FEET TO THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LINE AS DESCRIBED IN THE DEED, AS RECORDED IN BOOK 2678 AT PAGE 431 OF SAID COUNTY RECORDS; THENCE ALONG THE SOUTHERLY AND EASTERLY RIGHT-OF-WAY LINES OF SAID DEED THE FOLLOWING TWO (2) COURSES: 1. N89°40'23"E, A DISTANCE OF 761.52 FEET TO A POINT ON THE EAST LINE OF SAID NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER (NE1/4 NE1/4); 2. N00°52'58"W ALONG SAID EAST LINE, A DISTANCE OF 30.00 FEET TO THE NORTHWEST CORNER OF SAID SECTION 27; THENCE N88°38'56"E ALONG THE NORTH LINE OF SAID NORTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (NW1/4 NW1/4), A DISTANCE OF 1330.91 FEET TO THE POINT OF BEGINNING; SAID PARCEL OF LAND CONTAINS A CALCULATED AREA OF 190.89 ACRES OF LAND, MORE OR LESS.

# EXHIBIT B



# *Appendix D*

**OFFICE OF THE STATE ENGINEER**  
**COLORADO DIVISION OF WATER RESOURCES**  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203  
(303) 866-3581

LIC

**WELL PERMIT NUMBER** 77785 -F -  
DIV. 2      WD 10      DES. BASIN      MD

APPLICANT

MORLEY-BENTLEY INVESTMENTS LLC  
20 BOULDER CRESCENT ST  
COLORADO SPRINGS, CO 80903-

(719) 491-3024

APPROVED WELL LOCATION

EL PASO COUNTY  
NE 1/4 NW 1/4 Section 27  
Township 12 S Range 65 W Sixth P.M.

DISTANCES FROM SECTION LINES

324 Ft. from North      Section Line  
2632 Ft. from West      Section Line

UTM COORDINATES (Meters, Zone:13,NAD83)

Easting:      Northing:

**PERMIT TO CONSTRUCT A WELL**

**ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT**

**CONDITIONS OF APPROVAL**

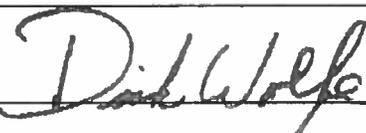
- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-90-137(4) and the decree granted in case no. 86CW19 Division 2 Water Court. The operation of this well is subject to the terms and conditions of said decree.
- 4) The use of ground water from this well is limited to municipal, domestic, commercial, fire protection, industrial, residential, recreation, irrigation, augmentation, livestock watering and agricultural uses.
- 5) The pumping rate of this well shall not exceed 150 GPM.
- 6) The average annual amount of ground water to be appropriated shall not exceed 539 acre-feet.
- 7) Production is limited to the Laramie-Fox Hills aquifer which is located 2,345 feet below land surface and extends to a depth of 2,630 feet. Plain casing must be installed and grouted to prevent the withdrawal of ground water from other aquifers and the movement of ground water between aquifers.
- 8) The entire length of the hole shall be geophysically logged as required by Rule 9 of the Statewide Nontributary Ground Water Rules prior to installing casing.
- 9) The owner shall mark the well in a conspicuous place with well permit number(s), name of the aquifer, and court case number(s) as appropriate. The owner shall take necessary means and precautions to preserve these markings.
- 10) A totalizing flow meter must be installed on this well and maintained in good working order. Permanent records of all diversions must be maintained by the well owner (recorded at least annually) and submitted to the Division Engineer upon request.
- 11) This well shall be constructed at least 600 feet from any existing well, completed in the same aquifer, that is not owned by the applicant.
- 12) This well shall be constructed not more than 200 feet from the location specified on this permit.
- 13) Pursuant to CRS 37-90-137(9)(b) and the Denver Basin Rules, no more than 98% of the nontributary ground water withdrawn annually shall be consumed and the well owner shall demonstrate to the reasonable satisfaction of the State Engineer that no more than 98% of the water withdrawn will be consumed.
- 14) This well is subject to administration by the Division Engineer in accordance with applicable decrees, statutes, rules, and regulations.

NOTE: The ability of this well to withdraw its authorized amount of water from this non-renewable aquifer may be less than the 100 years upon which the amount of water in the aquifer is allocated, due to anticipated water level declines.

NOTE: To ensure a maximum productive life of this well, perforated casing should be set through the entire producing interval of the approved zone or aquifer indicated above.

NOTE: This permit will expire on the expiration date unless the well is constructed and a pump is installed by that date. A Well Construction and Test Report (GWS-31) and Pump Installation and Test Report (GWS-32) must be submitted to the Division of Water Resources to verify the well has been constructed and the pump has been installed. A one-time extension of the expiration date may be available. Contact the DWR for additional information or refer to the extension request form (GWS-64) available at: <http://www.water.state.co.us>

APPROVED  
IDC

  
State Engineer

  
By  
EXPIRATION DATE      12-19-2014

Receipt No. 3662756

DATE ISSUED      12-19-2013

**OFFICE OF THE STATE ENGINEER**  
**COLORADO DIVISION OF WATER RESOURCES**  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203  
(303) 866-3581

LIC

WELL PERMIT NUMBER 77786 - F -  
DIV. 2      WD 10      DES. BASIN      MD

APPLICANT

MORLEY-BENTLEY INVESTMENTS LLC  
20 BOULDER CRESCENT ST  
COLORADO SPRINGS, CO 80903-

(719) 491-3024

APPROVED WELL LOCATION

EL PASO COUNTY  
NE 1/4 NW 1/4 Section 27  
Township 12 S Range 65 W Sixth P.M.

DISTANCES FROM SECTION LINES

304 Ft. from North Section Line  
2632 Ft. from West Section Line

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting:                      Northing:

**PERMIT TO CONSTRUCT A WELL**

**ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT**

**CONDITIONS OF APPROVAL**

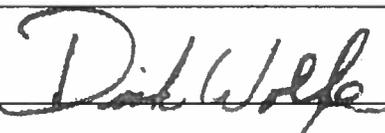
- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-90-137(4) and the decree granted in case no. 86CW18 Division 2 Water Court. The operation of this well is subject to the terms and conditions of said decree.
- 4) The use of ground water from this well is limited to municipal, domestic, commercial, fire protection, industrial, residential, recreation, irrigation, augmentation, livestock watering and agricultural uses.
- 5) The pumping rate of this well shall not exceed 150 GPM.
- 6) The average annual amount of ground water to be appropriated shall not exceed 575 acre-feet.
- 7) Production is limited to the Arapahoe aquifer which is located 1,585 feet below land surface and extends to a depth of 2,070 feet. Plain casing must be installed and grouted to prevent the withdrawal of ground water from other aquifers and the movement of ground water between aquifers.
- 8) The entire length of the hole shall be geophysically logged as required by Rule 9 of the Statewide Nontributary Ground Water Rules prior to installing casing.
- 9) The owner shall mark the well in a conspicuous place with well permit number(s), name of the aquifer, and court case number(s) as appropriate. The owner shall take necessary means and precautions to preserve these markings.
- 10) A totalizing flow meter must be installed on this well and maintained in good working order. Permanent records of all diversions must be maintained by the well owner (recorded at least annually) and submitted to the Division Engineer upon request.
- 11) This well shall be constructed at least 600 feet from any existing well, completed in the same aquifer, that is not owned by the applicant.
- 12) This well shall be constructed not more than 200 feet from the location specified on this permit.
- 13) Pursuant to CRS 37-90-137(9)(b) and the Denver Basin Rules, no more than 98% of the nontributary ground water withdrawn annually shall be consumed and the well owner shall demonstrate to the reasonable satisfaction of the State Engineer that no more than 98% of the water withdrawn will be consumed.
- 14) This well is subject to administration by the Division Engineer in accordance with applicable decrees, statutes, rules, and regulations.

NOTE: The ability of this well to withdraw its authorized amount of water from this non-renewable aquifer may be less than the 100 years upon which the amount of water in the aquifer is allocated, due to anticipated water level declines.

NOTE: To ensure a maximum productive life of this well, perforated casing should be set through the entire producing interval of the approved zone or aquifer indicated above.

NOTE: This permit will expire on the expiration date unless the well is constructed and a pump is installed by that date. A Well Construction and Test Report (GWS-31) and Pump Installation and Test Report (GWS-32) must be submitted to the Division of Water Resources to verify the well has been constructed and the pump has been installed. A one-time extension of the expiration date may be available. Contact the DWR for additional information or refer to the extension request form (GWS-64) available at: <http://www.water.state.co.us>

APPROVED  
IDC

  
State Engineer

  
By

Receipt No. 3662757

DATE ISSUED      12-19-2013

EXPIRATION DATE      12-19-2014

# *Appendix E*



Colorado Department  
of Public Health  
and Environment

**Inorganic Chemicals Certified Laboratory Report Form**  
**WQCD - Drinking Water CAS**  
**4300 Cherry Creek Drive South, Denver, CO 80246-1530**  
**Fax: (303) 758-1398; cdphe.drinkingwater@state.co.us**

Revised 6/13/2014

**IOC**

Section I (Submitted or Completed by Public Water System)		Section II (Submitted or Completed by Certified Laboratory)	
Public Water System Information		Certified Laboratory Information	
PWSID#: CO-0121724		Laboratory ID: CO 0015	
System Name: LFH-1		Laboratory Name: Colorado Analytical Laboratory	
Contact Person: Mark Volle		Contact Person: Customer Service Phone: 303-659-2313	
Comments:		Comments:	
Do Samples Need to be Compositied BY THE LAB? <input type="checkbox"/>			

Section III (Supplied or Completed by Public Water System)			
Sample Date: 2/16/17	Collector: Stephanie Schwe	Facility ID (On Schedule):	Sample Pt ID (On Schedule):

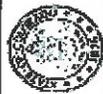
Section IV Inorganic Chemicals (Completed by Certified Laboratory)				
Lab Receipt Date	Lab Analysis Date	Lab Sample ID	Analyte Name	CAS No.
2/17/17	2/17/17	170217005-01	Fluoride	7681-49-4
			Analytical Method	MCL (mg/L)
			EPA 300.0	4
			Lab MRL (mg/L)	0.09
			Result (mg/L)	1.07

NT: Not Tested  
 Lab MRL: Laboratory Minimum Reporting Level  
 BDL: Below Laboratory MRL. A less than (<) may also used.

mg/L: Milligrams per Liter  
 MCL: Maximum Contaminant Level







Colorado Department  
of Public Health  
and Environment

**Inorganic Chemicals Certified Laboratory Report Form**  
**WQCD - Drinking Water CAS**  
Submit Online at <http://www.wqcdcompliance.com/login>

Revised 4/13/2015

**IOC**

Section I (Supplied or Completed by Public Water System)		Section II (Supplied or Completed by Certified Laboratory)	
<b>Public Water System Information</b>		<b>Certified Laboratory Information</b>	
PWSID#: CO-0121724		Laboratory ID: CO 0015	
System Name: LFH-1		Laboratory Name: Colorado Analytical Laboratory	
Contact Person: Mark Volle		Contact Person: Customer Service Phone: 303-659-2313	
Phone #:		Comments:	
Do Samples Need to be Composited BY THE LAB? <input type="checkbox"/>			

Section III (Supplied or Completed by Public Water System)	
Sample Date: 2/16/17	Collector: Stephanie Schw
Section IV Inorganic Chemicals (Completed by Certified Laboratory)	

Lab Receipt Date	Lab Analysis Date	Lab Sample ID	Analyte Name	CAS No	Analytical Method	MCL (mg/L)	Lab MRL (mg/L)	Result (mg/L)
2/17/17	2/22/17	170217005-01A	Antimony	7740-36-0	EPA 200.8	0.006	0.001	BDL
2/17/17	2/22/17	170217005-01A	Arsenic	7440-38-2	EPA 200.8	0.01	0.001	0.002
2/17/17	2/22/17	170217005-01A	Barium	7440-39-3	EPA 200.8	2	0.001	0.015
2/17/17	2/22/17	170217005-01A	Beryllium	7440-41-7	EPA 200.8	0.004	0.001	BDL
2/17/17	2/22/17	170217005-01A	Cadmium	7440-43-9	EPA 200.8	0.005	0.001	BDL
2/17/17	2/22/17	170217005-01A	Chromium	7440-47-3	EPA 200.8	0.1	0.001	0.001
2/17/17	2/22/17	170217005-01A	Mercury	7439-97-6	EPA 200.8	0.002	0.0001	BDL
2/17/17	2/22/17	170217005-01A	Nickel	7440-02-0	EPA 200.8	N/A	0.001	0.001
2/17/17	2/24/17	170217005-01A	Selenium	7782-49-2	EPA 200.8	0.05	0.001	BDL
2/17/17	2/22/17	170217005-01A	Sodium	7440-23-5	EPA 200.7	N/A	0.1	142.7
2/17/17	2/22/17	170217005-01A	Thallium	7440-28-0	EPA 200.8	0.002	0.001	BDL

NT: Not Tested  
Lab MRL: Laboratory Minimum Reporting Level  
BDL: Below Laboratory MRL. A less than (<) may also used.

mg/L: Milligrams per Liter  
MCL: Maximum Contaminant Level







**Hazen Research, Inc.**  
 4601 Indiana Street  
 Golden, CO 80403 USA  
 Tel: (303) 279-4501  
 Fax: (303) 276-1528

Lab Control ID: B16917  
 Received: Feb 17, 2017  
 Reported: Mar 20, 2017  
 Purchase Order No.  
 None Received

Customer ID: 20040H  
 Account ID: Z01034  
 Project #: 009-616  
**ANALYTICAL REPORT**

**Stuart Nielson**  
**Colorado Analytical Laboratories, Inc.**

Lab Sample ID		B16917-001						
Customer Sample ID		170217005-01 - Lfh-1 - PWSID: CO0121724 - LFH-1 sampled on 02/16/17 @ 0906 by Stephanie Schwenke						
Parameter	Units	Code	Precision*		Detection	Method	Analysis Date / Time	Analyst
			Result	+/-	Limit			
Gross Alpha	pCi/L	T	0.0	0.0	1.5	SM 7110 B	3/2/17 @ 0840	LD
Gross Beta	pCi/L	T	0.0	2.1	2.2	SM 7110 B	3/2/17 @ 0840	LD
Radium-226	pCi/L	T	0.0	0.2	0.1	SM 7500-Ra B	3/3/17 @ 0825	LD
Radium-228	pCi/L	T	0.0	0.8	0.8	EPA Ra-05	3/14/17 @ 1257	JR
Radon	pCi/L	T	345	25	13.9	SM 7500-Rn B	2/17/17 @ 1500	AN

Certification ID's: CO/EPA CO00008; CT PH-0152; KS E-10265; NJ CO008; NYSELAP (NELAC Certified) 11417; RI LAO00284; WI 998376610, TX T104704256-15-6

\*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Susspended (R) = Total Residual  
 (PD) = Potentially Dissolved < = Less Than



**RAD**

**Radionuclides Certified Laboratory Report Form**  
 WQCD – Drinking Water CAS  
 4300 Cherry Creek Drive South; Denver, CO 80246-1530  
 Fax: (303) 758-1398; cdphe.drinkingwater@state.co.us

**Section I (Supplied or Completed by Public Water System)**

**Public Water System Information**

PWS ID: CO0121724

System Name: Lfb-1

Collector: Stephanie Schwenke

Facility ID (On Schedule):

Sample Pt ID (On Schedule):

Section II (Supplied or Completed by Certified Laboratory)

**Certified Laboratory Information**

Laboratory ID: CO 00008

Laboratory Name: Hazen Research, Inc.

Contact Person: Jessica Axen

Phone #: 303-279-4501

Phone #:

Do Samples Need to be Composited BY THE LAB?

Comments:

**Section III (Supplied or Completed by Public Water System)**

Sample Date: 02/16/2017

**Section IV Radionuclides (Supplied or Completed by Certified Laboratory)**

Lab Receipt Date	Lab Analysis Date	Lab Sample ID	Analyte Name (Code)	CAS No.	Analytical Method	MCL	Lab MRL	Result
02/17/2017	03/02/2017	B16917-001	Gross Alpha Including Uranium (4002)	12587-46-1	SM 7110 B	N/A	1.5	0.0(±0.0)
			Combined Uranium (4006)	7440-61-1	D2907-97	30 ug/L		
02/17/2017	03/03/2017	B16917-001	Radium -226 (4020)	13982-63-3	SM 7500-Ra B	N/A	0.1	0.0(±0.2)
02/17/2017	03/14/2017	B16917-001	Radium -228 (4030)	15262-20-1	EPA Ra-05	N/A	0.8	0.0(±0.8)
02/17/2017	03/02/2017	B16917-001	Gross Beta (4100)	12587-47-2	SM 7110 B	50 pCi/L*	2.2	0.0(±2.1)
			Total Dissolved Solids (1930)		EPA 160.3	N/A		

\*The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L EPA considers 50 pCi/L to be the level of concern.

**Section V Calculated Values**

Calculated Value	Calculated Value
Gross Alpha Excluding Uranium (4000)	15 pCi/L
Combined Radium {-226 & -228} (4010)	5 pCi/L

NT: Not Tested  
 Lab MRL: Laboratory Minimum Reporting Level  
 BDL: Below Laboratory MRL. A less than sign (<) may also be used  
 ug/L: Micrograms per Liter  
 pCi/L: PicoCuries per Liter  
 MCL: Maximum Contaminant Level



## Analytical Results

TASK NO: 170217005

**Report To:** Mark Volle  
**Company:** JDS Hydro Consultants  
 545 E. Pikes Peak Ave  
 Suite 300  
 Colorado Springs CO 80903

**Bill To:** Jim Morley  
**Company:** SR Water  
 20 Boulder Crescent St.  
 Colorado Springs CO 80903

**Task No.:** 170217005  
**Client PO:**  
**Client Project:** LFH-1 CO-0121724

**Date Received:** 2/17/17  
**Date Reported:** 3/6/17  
**Matrix:** Water - Drinking

**Customer Sample ID:** LFH-1  
**Sample Date/Time:** 2/16/17  
**Lab Number:** 170217005-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Bicarbonate	155.5 mg/L as CaCO <sub>3</sub>	SM 2320-B	0.1	2/20/17	VDB
Calcium as CaCO <sub>3</sub>	6.3 mg/L	SM 3111-B	0.1	2/24/17	MBN
Carbonate	4.0 mg/L as CaCO <sub>3</sub>	SM 2320-B	0.1	2/20/17	VDB
Langelier Index	-0.43 units	SM 2330-B		2/24/17	SAN
pH	8.44 units	SM 4500-H-B	0.01	2/17/17	MBN
Temperature	20 °C	SM 4500-H-B	1	2/17/17	MBN
Total Alkalinity	159.5 mg/L as CaCO <sub>3</sub>	SM 2320-B	0.1	2/20/17	VDB
Total Dissolved Solids	456 mg/L	SM 2540-C	5	2/23/17	ISG

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL  
 mg/L = Milligrams Per Liter or PPM  
 ug/L = Micrograms Per Liter or PPB  
 mpn/100 ml = Most Probable Number Index/ 100 ml  
 Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY







Colorado Department  
of Public Health  
and Environment

**Nitrate and Nitrite as Nitrogen Certified Laboratory Report Form**  
**WQCD - Drinking Water CAS**  
 Submit Online at <http://www.wqcdcompliance.com/login>

Revised 4/13/2015

**NOX**

Section I (Supplied or Completed by Public Water System)		Section II (Supplied or Completed by Certified Laboratory)	
<b>Public Water System Information</b>		<b>Certified Laboratory Information</b>	
PWSID#: CO-0121724		Laboratory ID: CO 0015	
System Name: LFH-1		Laboratory Name: Colorado Analytical Laboratory	
Contact Person: Mark Volle	Phone #: 719-227-0072	Contact Person: Customer Service	Phone: 303-659-2313
Comments:			

Section III (Supplied or Completed by Public Water System)				Section IV (Supplied or Completed by Certified Laboratory)								
Sample Date	Collector	Facility ID On Schedule	Sample Pt. ID On Schedule	Confirmation?	Lab Receipt Date	Lab Analysis Date	1 laboratory Sample ID #	Analyte	Analytical Method	MCL (mg/L)	Lab MRI. (mg/L)	Result (mg/L)
2/16/17	ephanie Schwenk			<input type="checkbox"/>	2/17/17	2/17/17	170217005-01	Nitrate Nitrogen	EPA 300.0	10	0.1	BDL
2/16/17	ephanie Schwenk			<input type="checkbox"/>	2/17/17	2/17/17	170217005-01	Nitrite Nitrogen	EPA 300.0	1	0.1	BDL

NT: Not Tested  
 Lab MRI.: Laboratory Minimum Reporting Level  
 BDL: Below Laboratory MRI. A less than (<) may also used.

mg/L: Milligrams per Liter  
 MCL: Maximum Contaminant Level







Colorado Department  
of Public Health  
and Environment

**Organic Chemicals Certified Laboratory Report Form**  
**WQCD - Drinking Water CAS**  
Submit Online at <http://www.wqcdcompliance.com/login>

Revised 4/13/2015

**VOC/SOC**

Section I (Supplied or Completed by Public Water System)		Section II (Supplied or Completed by Certified Laboratory)	
Public Water System Information		Certified Laboratory Information	
PWSID#: CO-0121724		Laboratory ID: CO 00063	
System Name: LFH-1		Laboratory Name: Colorado Analytical Laboratory	
Contact Person: Mark Voile		Contact Person: Customer Service	Phone: 303-659-2313
Comments:		Comments:	
Do Samples Need to be Composited BY THE LAB? <input type="checkbox"/>			

Section V (Supplied or Completed by Public Water System)		Section VI Synthetic Organic Chemicals (Supplied or Completed by Certified Laboratory)		Section VII (On Schedule)		Section VIII (On Schedule)		
Lab Receipt Date	Lab Analysis Date	Lab Sample ID	Analyte Name	CAS No.	Analytical Method	MCL (ug/L)	Lab MRL (ug/L)	Result (ug/L)
2/17/17	2/24/17	170217005-01E	Dibromochloropropane	96-12-8	EPA 504.1	0.2	0.02	BDL
2/17/17	3/1/17	170217005-01G	2,4-D	94-75-7	EPA 515.4	70	0.1	BDL
2/17/17	3/1/17	170217005-01G	2,4,5-TP	93-72-1	EPA 515.4	50	0.2	BDL
2/17/17	2/23/17	170217005-01H	Atrazine	15972-60-8	EPA 525.2	2	0.2	BDL
2/17/17	3/2/17	170217005-01I	Aldicarb	116-06-3	EPA 531.1	N/A	0.6	BDL
2/17/17	3/2/17	170217005-01I	Aldicarb sulfone	1646-88-4	EPA 531.1	N/A	1	BDL
2/17/17	3/2/17	170217005-01I	Aldicarb sulfoxide	1646-87-3	EPA 531.1	N/A	0.7	BDL
2/17/17	2/23/17	170217005-01III	Atrazine	1912-24-9	EPA 525.2	3	0.1	BDL
2/17/17	2/23/17	170217005-01H	Benzo(a)pyrene	50-32-8	EPA 525.2	0.2	0.02	BDL
2/17/17	3/2/17	170217005-01I	Carbofuran	1563-66-2	EPA 531.1	40	0.9	BDL
2/17/17	2/24/17	170217005-01F	Chlordane	57-74-9	EPA 505	2	0.2	BDL
2/17/17	3/1/17	170217005-01G	Dalapon	75-99-0	EPA 515.4	200	1	BDL
2/17/17	2/23/17	170217005-01III	Di(2-ethylhexyl)adipate	103-23-1	EPA 525.2	400	0.6	BDL
2/17/17	2/23/17	170217005-01H	Di(2-ethylhexyl)phthalate	117-81-7	EPA 525.2	6	0.6	BDL
2/17/17	3/1/17	170217005-01G	Dinosob	85-85-7	EPA 515.4	7	0.2	BDL
2/17/17	2/23/17	170217005-01K	Diquat	85-00-7	EPA 549.2	20	0.4	BDL
2/17/17	2/23/17	170217005-01J	Endothall	145-73-3	EPA 548.1	100	9	BDL
2/17/17	2/24/17	170217005-01F	Endrin	72-20-8	EPA 505	2	0.01	BDL
2/17/17	2/24/17	170217005-01E	Ethylene dibromide	106-93-4	EPA 504.1	0.05	0.01	BDL
2/17/17	2/23/17	170217005-01H	Heptachlor	76-44-8	EPA 525.2	0.4	0.04	BDL
2/17/17	2/24/17	170217005-01F	Heptachlor epoxide	1024-57-3	EPA 505	0.2	0.02	BDL

NT: Not Tested ug/L; Micrograms per Liter MCL: Maximum Contaminant Level BDL Below Laboratory MRL ^ less than sign (<) may also be used.

PWSID#: CO-0121724		Section V (Supplied or Completed by Public Water System)						
Sample Date:	2/16/17	Collector:	Stephanie Schwenk	Facility ID (On Schedule):	Sample Pt ID (On Schedule):			
Section VI Synthetic Organic Chemicals (Supplied or Completed by Certified Laboratory)		Lab Sample ID	Analyte Name	CAS No.	Analytical Method	MCL (ug/L)	Lab MRL (ug/L)	Result (ug/L)
2/17/17	2/24/17	170217005-01F	Hexachlorobenzene	118-74-1	EPA 505	1	0.1	BDL
2/17/17	2/24/17	170217005-01F	Hexachlorocyclopentadiene	77-47-4	EPA 505	50	0.1	BDL
2/17/17	2/24/17	170217005-01F	Lindane	58-89-9	EPA 505	0.2	0.02	BDL
2/17/17	2/24/17	170217005-01F	Methoxychlor	72-43-5	EPA 505	40	0.1	BDL
2/17/17	3/2/17	170217005-01I	Oxamyl	23135-22-0	HPA 531.1	200	1	BDL
2/17/17	3/1/17	170217005-01G	Pentachlorophenol	87-86-5	EPA 515.4	1	0.04	BDL
2/17/17	3/1/17	170217005-01G	Picloram	1918-02-1	EPA 515.4	500	0.1	BDL
2/17/17	2/24/17	170217005-01F	Polychlorinated biphenyl's	1336-36-3	EPA 505	0.5	0.1	BDL
2/17/17	2/23/17	170217005-01H	Simazine	122-34-9	EPA 525.2	4	0.07	BDL
2/17/17	2/24/17	170217005-01F	Toxaphene	8001-35-2	EPA 505	3	1	BDL

NT: Not Tested ug/L; Micrograms per Liter MCL: Maximum Contaminant Level BDL: Below Laboratory MRL  $\Delta$  less than sign (<) may also be used.

170217005-01

2/2  
3/6/17

Drinking Water Chain of Custody



LABORATORIES, INC.

Brighton Lab  
240 South Main Street  
Brighton, CO 80601

Lakewood Lab  
12860 W. Cedar Dr., Suite 100A  
Lakewood CO 80228

Phone: 303-659-2313  
Fax: 303-659-2315

www.coloradolab.com

<b>Report To Information</b>	<b>Company Name:</b> IDS-Hydro <b>Contact Name:</b> Mark Valle	<b>Address:</b> 545 E. Pikes Peak Ave Suite 200 CS State CO Zip 80903 Phone: 719-227-0072 Fax:	<b>State Form / Project Information</b>
<b>Company Name:</b> IDS-Hydro <b>Contact Name:</b> Mark Valle	<b>Company Name:</b> SR Water <b>Contact Name:</b> Jim Morley	<b>Address:</b> 20 Boulder Crescent St City Colorado Zip 80903 Phone: Fax:	<b>System Name:</b> LFA-1
<b>Address:</b> 545 E. Pikes Peak Ave Suite 200 CS State CO Zip 80903 Phone: 719-227-0072 Fax:	<b>Address:</b> 20 Boulder Crescent St City Colorado Zip 80903 Phone: Fax:	<b>Address:</b> NE 1/4 NW 1/4 S27 T12S R6SW 6th PM City Colorado Zip 80908 County: El Paso	<b>PWSID:</b> Co-D121724 <b>System Name:</b> LFA-1
<b>Email:</b> myelle@jshydro.com	<b>Email:</b> jimorley@srwater.com	<b>Compliance Samples:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Send Forms to State:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>Sampler Name:</b> Sephane Schwente	<b>PO No.:</b>	<b>PHASE I, II, V Drinking Water Analyses (check analysis)</b>	<b>Subcontract Analyses</b>

CAL Task No. 170217005

Date	Time	Client Sample ID / EP Code	No. of Containers	Residual Chlorine (mg/L) P/A Samples Only	Total Coliform P/A	504.1 EDB/DBCP	505 Pests/PCBs	515.4 Herbicides	524.2 VOCs	525.2 SOCs-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothall	549.2 Diquat	524.2 TTHMs	552.2 HAA5s	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index	TOC/DOC (Circle)	SUVA, UV 254 (Circle)	metals	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium
9/21	11:31	#1	3			X																								
9/22	9:30	#2	3			X																								
9/24	9:30	#3	3			X																								
9/24	9:30	#4	3								X																			
9/25	9:30	#5	3																											
9/25	9:30	#6	3																											
9/25	9:30	#7	3																											
9/25	9:30	#8	3																											
9/25	9:30	#9	3																											
9/25	9:30	#10	3																											

Instructions:

Relinquished By: [Signature] Date/Time: 10/16/17 Received By: [Signature] Date/Time: 9/17/17 6:00

Delivered Via: Fedex Relinquished By: [Signature] Date/Time: [Signature]

C/S Change: [Signature] Temp: 2 °C/lc [Signature] Sample Pres. Yes  No

Seals Present Yes  No  Headspace Yes  No

PHASE I, II, V Drinking Water Analyses (check analysis)

Subcontract Analyses

Page 3 of 4

Drinking Water Chain of Custody



LABORATORIES, INC.

Brighton Lab  
240 South Main Street  
Brighton, CO 80601

Lakewood Lab  
12860 W. Cedar Dr, Suite 100A  
Lakewood CO 80228

Phone: 303-659-2313  
Fax: 303-659-2315

www.coloradolab.com

Report To Information		Bill To Information (if different from report to)		State Form / Project Information	
Company Name: <u>JDS HYDRO</u>	Contact Name: <u>MARK VOLLE</u>	Company Name: <u>SR WATER</u>	Contact Name: <u>JEFF MOKLEY</u>	PWSID: <u>CO-0121724</u>	System Name: <u>LFH-1</u>
Address: <u>545 E. BAKER PEAK AVE SUITE 300</u>	Address: <u>20 BOULDER CRESSANT ST</u>	Address: <u>NEW NW 1/4 S27 T12S R6SW 6TH PM</u>	City/COLO SP65 State CO ZIP <u>80903</u>	City/COLO SP65 State CO ZIP <u>80903</u>	City/COLO SP65 State CO ZIP <u>80908</u>
Phone: <u>719-227-0072</u> Fax:	Phone:	Fax:	County: <u>EL PASO</u>	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Email: <u>mwalle@jdshydro.com</u>	Email: <u>smorley@coloradolab.com</u>	PHASE I, II, V Drinking Water Analyses (check analysis)			
Sampler Name: <u>STEPA SCHWENKE</u>	PO No.:	Subcontract Analyses			

CAL Task No. 170217005

Date	Time	Client Sample ID / EP Code	No. of Containers	Residual Chlorine (mg/L) P/A Samples Only	Total Coliform P/A	504.1 EDB/DBCP	505 Pests/PCBs	515.4 Herbicides	525.2 SOC's-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothall	549.2 Diquat	524.2 TTHMs	552.2 HAA5s	Lead/Copper	Nitrate	Nitrite	Fluoride <sup>Drinking Water</sup>	Inorganics	Alk./Lang. Index	TOC, DOC (Circle)	SUVA, UV 254 (Circle)	1,4 Dioxane	Gross Alpha/Beta	Radium 226	Radium 228	Radon <sup>Cyanide</sup>	Uranium
9/16	8:37	A11	3																										
9/16	9:50	A12	3																										
9/16	9:51	A13	3																										
9/16	9:43	A14	1																										
9/16	8:40	A15	1																										
9/16	8:44	A16	1																										
9/16	9:02	A17	1																										
9/16	9:42	A18	1																										
9/16	9:29	A19	3																										

34 + 504 Blank

VOA

CS Info: Sedex

Seals Present Yes  No  Headspace Yes  No

Relinquished By: [Signature] Date/Time: 9/16/17 12:15 PM Received By: [Signature] Date/Time: 9/17/17 0800

Relinquished Via: [Signature] Date/Time: 9/17/17 Temp. 2 °C/lit Received By: [Signature] Sample Pres. Yes  No  Date/Time: 9/17/17

## Analytical Results

TASK NO: 170217005

Report To: Mark Voile

Company: JDS Hydro Consultants  
545 E. Pikes Peak Ave  
Suite 300  
Colorado Springs CO 80903

Bill To: Jim Morley

Company: SR Water  
20 Boulder Crescent St.  
Colorado Springs CO 80903

Task No.: 170217005  
Client PO:  
Client Project: LFH-1 CO-0121724

Date Received: 2/17/17  
Date Reported: 3/6/17  
Matrix: Water - Drinking

Customer Sample ID LFH-1  
Sample Date/Time: 2/16/17  
Lab Number: 170217005-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Chloride	5.8 mg/L	EPA 300.0	0.1 mg/L	2/17/17	LJG
Cyanide-Free	< 0.005 mg/L	EPA 335.4	0.005 mg/L	2/24/17	VDB
E-Coli	< 1 mpn/100ml	Colitert	1 mpn/100ml	2/18/17	VDB
Sulfate	142.1 mg/L	EPA 300.0	0.1 mg/L	2/17/17	LJG
Total Coliform	93 mpn/100ml	Colitert	1 mpn/100ml	2/18/17	VDB
Total Organic Carbon	0.8 mg/L	SM 5310-C	0.5 mg/L	2/23/17	ISG
Turbidity	2.49 NTU	SM 2130-B	0.01 NTU	2/17/17	MBN
<b>Total</b>					
Aluminum	0.053 mg/L	EPA 200.8	0.001 mg/L	2/22/17	TCD
Calcium	2.5 mg/L	EPA 200.7	0.1 mg/L	2/22/17	MBN
Copper	0.0026 mg/L	EPA 200.8	0.0008 mg/L	2/22/17	TCD
Iron	0.602 mg/L	EPA 200.7	0.005 mg/L	2/24/17	MBN
Lead	0.0005 mg/L	EPA 200.8	0.0001 mg/L	2/22/17	TCD
Magnesium	0.39 mg/L	EPA 200.7	0.02 mg/L	2/22/17	MBN
Manganese	0.0259 mg/L	EPA 200.8	0.0008 mg/L	2/22/17	TCD
Potassium	1.5 mg/L	EPA 200.7	0.1 mg/L	2/22/17	MBN
Silver	< 0.0001 mg/L	EPA 200.8	0.0001 mg/L	2/22/17	TCD
Strontium	0.037 mg/L	EPA 200.8	0.005 mg/L	2/22/17	TCD
Total Hardness	7.7 mg/L as CaCO3	SM 2340-B	0.1 mg/L as CaCO3	2/24/17	MBN
Uranium	< 0.0002 mg/L	EPA 200.8	0.0002 mg/L	2/22/17	TCD
Zinc	0.004 mg/L	EPA 200.8	0.001 mg/L	2/22/17	TCD

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL  
mg/L = Milligrams Per Liter or PPM  
ug/L = Micrograms Per Liter or PPB  
mpn/100 ml = Most Probable Number Index/ 100 ml  
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

## Analytical Results

**TASK NO: 170217005**

**Report To:** Mark Voile

**Company:** JDS Hydro Consultants  
545 E. Pikes Peak Ave  
Suite 300  
Colorado Springs CO 80903

**Bill To:** Jim Morley

**Company:** SR Water  
20 Boulder Crescent St.  
Colorado Springs CO 80903

**Task No.:** 170217005  
**Client PO:**  
**Client Project:** LFH-1 CO-0121724

**Date Received:** 2/17/17  
**Date Reported:** 3/6/17  
**Matrix:** Water - Drinking

**Customer Sample ID:** LFH-1  
**Sample Date/Time:** 2/16/17  
**Lab Number:** 170217005-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
<u>Total</u> Zinc	0.005 mg/L	EPA 200.8	0.001 mg/L	2/22/17	TCD

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL  
mg/L = Milligrams Per Liter or PPM  
ug/L = Micrograms Per Liter or PPB  
mpn/100 ml = Most Probable Number Index/ 100 ml  
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY







# ANALYTICAL SUMMARY REPORT

March 02, 2017

Colorado Analytical Laboratories Inc  
PO Drawer 507  
Brighton, CO 80601

Work Order: C17020566      Quote ID: C4542 - 624, 625, 1,4-Dioxane  
Project Name: 170217005 LFH-1 CO-0121724

Energy Laboratories, Inc. Casper WY received the following 1 sample for Colorado Analytical Laboratories Inc on 2/21/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C17020566-001	170217005-01 LFH-1	02/16/17 0:00	02/21/17	Drinking Water	Azeotropic Distillation Separatory Funnel Liquid-Liquid Ext. Semi-Volatile Organic Compounds 624-Purgeable Organics Volatile Compounds by Azeotropic Distillation

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

  
Randy Horton, Project Manager

Digitally signed by  
Randy Horton  
Date: 2017.03.02 10:49:28 -07:00



**CLIENT:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724  
**Work Order:** C17020566

**Report Date:** 03/02/17

## CASE NARRATIVE

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Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.



### LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724  
**Lab ID:** C17020566-001  
**Client Sample ID:** 170217005-01 LFH-1

**Report Date:** 03/02/17  
**Collection Date:** 02/16/17  
**Date Received:** 02/21/17  
**Matrix:** Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>VOCS BY AZEOTROPIC DISTILLATION</b>							
1,4-Dioxane	ND	ug/L		1.0		SW8260M	02/27/17 11:16 / eli-b
- Analysis by direct aqueous injection of the sample distillate. A deuterated version of 1,4-Dioxane was added to the sample prior to distillation and used to quantitate the 1,4-Dioxane and account for any variations in the analysis or distillation.							
<b>VOLATILE ORGANIC COMPOUNDS</b>							
Acetone	ND	ug/L		20		E624	02/24/17 19:19 / eli-b
Acetonitrile	ND	ug/L		20		E624	02/24/17 19:19 / eli-b
Acrolein	ND	ug/L		20		E624	02/24/17 19:19 / eli-b
Acrylonitrile	ND	ug/L		20		E624	02/24/17 19:19 / eli-b
Benzene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Bromobenzene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Bromochloromethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Bromodichloromethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Bromoform	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Bromomethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Carbon disulfide	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Carbon tetrachloride	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Chlorobenzene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Chlorodibromomethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Chloroethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
2-Chloroethyl vinyl ether	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Chloroform	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Chloromethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
2-Chlorotoluene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
4-Chlorotoluene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,2-Dibromoethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Dibromomethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,2-Dichlorobenzene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,3-Dichlorobenzene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,4-Dichlorobenzene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Dichlorodifluoromethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,1-Dichloroethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,2-Dichloroethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,1-Dichloroethene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
cis-1,2-Dichloroethene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
trans-1,2-Dichloroethene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,2-Dichloropropane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,3-Dichloropropane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
2,2-Dichloropropane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,1-Dichloropropene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
cis-1,3-Dichloropropene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
trans-1,3-Dichloropropene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Ethylbenzene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



### LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724  
**Lab ID:** C17020566-001  
**Client Sample ID:** 170217005-01 LFH-1

**Report Date:** 03/02/17  
**Collection Date:** 02/16/17  
**Date Received:** 02/21/17  
**Matrix:** Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>VOLATILE ORGANIC COMPOUNDS</b>							
Methyl tert-butyl ether (MTBE)	ND	ug/L		2.0		E624	02/24/17 19:19 / eli-b
Methyl ethyl ketone	ND	ug/L		20		E624	02/24/17 19:19 / eli-b
Methyl isobutyl ketone	ND	ug/L		10		E624	02/24/17 19:19 / eli-b
Methylene chloride	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Naphthalene	ND	ug/L		0.50		E624	02/24/17 19:19 / eli-b
Styrene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Tetrachloroethene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,1,1,2-Tetrachloroethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Toluene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Trichloroethene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,1,1-Trichloroethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,1,2-Trichloroethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Trichlorofluoromethane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
1,2,3-Trichloropropane	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Vinyl Acetate	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Vinyl chloride	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
m+p-Xylenes	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
o-Xylene	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Xylenes, Total	ND	ug/L		1.0		E624	02/24/17 19:19 / eli-b
Surr: 1,2-Dichloroethane-d4	76.0	%REC		71-139		E624	02/24/17 19:19 / eli-b
Surr: p-Bromofluorobenzene	92.0	%REC		80-127		E624	02/24/17 19:19 / eli-b
Surr: Toluene-d8	94.0	%REC		80-123		E624	02/24/17 19:19 / eli-b
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>							
Acenaphthene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Acenaphthylene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Anthracene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Azobenzene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Benzidine	ND	ug/L		10		E625	02/28/17 13:13 / eli-b
Benzo(a)anthracene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Benzo(a)pyrene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Benzo(b)fluoranthene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Benzo(g,h,i)perylene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Benzo(k)fluoranthene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
4-Bromophenyl phenyl ether	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Butylbenzylphthalate	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
4-Chloro-3-methylphenol	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
bis(-2-chloroethoxy)Methane	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
bis(-2-chloroethyl)Ether	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
bis(2-chloroisopropyl)Ether	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
2-Chloronaphthalene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
2-Chlorophenol	ND	ug/L		10		E625	02/27/17 19:27 / eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



**LABORATORY ANALYTICAL REPORT**

Prepared by Casper, WY Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724  
**Lab ID:** C17020566-001  
**Client Sample ID:** 170217005-01 LFH-1

**Report Date:** 03/02/17  
**Collection Date:** 02/16/17  
**Date Received:** 02/21/17  
**Matrix:** Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>							
4-Chlorophenyl phenyl ether	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Chrysene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Diethyl phthalate	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Di-n-butyl phthalate	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
1,2-Dichlorobenzene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
1,3-Dichlorobenzene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
1,4-Dichlorobenzene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
3,3'-Dichlorobenzidine	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
2,4-Dichlorophenol	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Dimethyl phthalate	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Di-n-octyl phthalate	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Dibenzo(a,h)anthracene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
2,4-Dimethylphenol	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
4,6-Dinitro-2-methylphenol	ND	ug/L		50		E625	02/27/17 19:27 / eli-b
2,4-Dinitrophenol	ND	ug/L		50		E625	02/27/17 19:27 / eli-b
2,4-Dinitrotoluene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
2,6-Dinitrotoluene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
bis(2-ethylhexyl)Phthalate	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Fluoranthene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Fluorene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Hexachlorobenzene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Hexachlorobutadiene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Hexachlorocyclopentadiene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Hexachloroethane	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Indeno(1,2,3-cd)pyrene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Isophorone	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
n-Nitrosodimethylamine	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
n-Nitroso-di-n-propylamine	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
n-Nitrosodiphenylamine	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
2-Nitrophenol	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
4-Nitrophenol	ND	ug/L		50		E625	02/27/17 19:27 / eli-b
Naphthalene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Nitrobenzene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Pentachlorophenol	ND	ug/L		50		E625	02/27/17 19:27 / eli-b
Phenanthrene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Phenol	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Pyrene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
1,2,4-Trichlorobenzene	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
2,4,6-Trichlorophenol	ND	ug/L		10		E625	02/27/17 19:27 / eli-b
Surr: 2-Fluorobiphenyl	59.0	%REC		28-107		E625	02/27/17 19:27 / eli-b
Surr: 2-Fluorophenol	34.0	%REC		20-56		E625	02/27/17 19:27 / eli-b
Surr: Nitrobenzene-d5	63.0	%REC		32-94		E625	02/27/17 19:27 / eli-b
Surr: Phenol-d5	33.0	%REC		19-45		E625	02/27/17 19:27 / eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



### LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724  
**Lab ID:** C17020566-001  
**Client Sample ID:** 170217005-01 LFH-1

**Report Date:** 03/02/17  
**Collection Date:** 02/16/17  
**Date Received:** 02/21/17  
**Matrix:** Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
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#### SEMI-VOLATILE ORGANIC COMPOUNDS

Surr: Terphenyl-d14	69.0	%REC		32-122		E625	02/27/17 19:27 / eli-b
Surr: 2,4,6-Tribromophenol	60.0	%REC		21-130		E625	02/27/17 19:27 / eli-b

• The sample was received past the extraction prep hold time. The prep hold time was exceeded by 4.31 days.

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724

**Report Date:** 03/02/17  
**Work Order:** C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E624</b>							<b>Analytical Run: R275391</b>			
<b>Lab ID: ccv022417</b>	<b>Continuing Calibration Verification Standard</b>							<b>02/24/17 09:51</b>		
Acetone	40.8	ug/L	20	82	70	130				
Acetonitrile	60.0	ug/L	20	120	70	130				
Acrolein	59.2	ug/L	20	118	70	130				
Acrylonitrile	46.4	ug/L	20	93	70	130				
Benzene	4.80	ug/L	0.50	96	70	130				
Bromobenzene	4.56	ug/L	0.50	91	70	130				
Bromochloromethane	4.64	ug/L	0.50	93	70	130				
Bromodichloromethane	4.08	ug/L	0.50	82	70	130				
Bromoform	4.08	ug/L	0.50	82	70	130				
Bromomethane	5.56	ug/L	0.50	111	70	130				
Carbon disulfide	4.80	ug/L	0.50	96	70	130				
Carbon tetrachloride	3.70	ug/L	0.50	74	70	130				
Chlorobenzene	4.80	ug/L	0.50	96	70	130				
Chlorodibromomethane	4.32	ug/L	0.50	86	70	130				
Chloroethane	4.88	ug/L	0.50	98	70	130				
2-Chloroethyl vinyl ether	3.07	ug/L	1.0	61	70	130			S	
Chloroform	4.36	ug/L	0.50	87	70	130				
Chloromethane	4.60	ug/L	0.50	92	70	130				
2-Chlorotoluene	4.84	ug/L	0.50	97	70	130				
4-Chlorotoluene	4.80	ug/L	0.50	96	70	130				
1,2-Dibromoethane	4.40	ug/L	0.50	88	70	130				
Dibromomethane	4.60	ug/L	0.50	92	70	130				
1,2-Dichlorobenzene	4.72	ug/L	0.50	94	70	130				
1,3-Dichlorobenzene	4.84	ug/L	0.50	97	70	130				
1,4-Dichlorobenzene	4.76	ug/L	0.50	95	70	130				
Dichlorodifluoromethane	3.87	ug/L	0.50	77	70	130				
1,1-Dichloroethane	4.40	ug/L	0.50	88	70	130				
1,2-Dichloroethane	3.78	ug/L	0.50	76	70	130				
1,1-Dichloroethene	4.20	ug/L	0.50	84	70	130				
cis-1,2-Dichloroethene	4.72	ug/L	0.50	94	70	130				
trans-1,2-Dichloroethene	4.64	ug/L	0.50	93	70	130				
1,2-Dichloropropane	5.20	ug/L	0.50	104	70	130				
1,3-Dichloropropane	4.64	ug/L	0.50	93	70	130				
2,2-Dichloropropane	3.92	ug/L	0.50	78	70	130				
1,1-Dichloropropene	4.40	ug/L	0.50	88	70	130				
cis-1,3-Dichloropropene	4.56	ug/L	0.50	91	70	130				
trans-1,3-Dichloropropene	4.04	ug/L	0.50	81	70	130				
Ethylbenzene	4.84	ug/L	0.50	97	70	130				
Methyl tert-butyl ether (MTBE)	3.68	ug/L	0.50	74	70	130				
Methyl ethyl ketone	42.8	ug/L	20	86	70	130				
Methyl isobutyl ketone	45.6	ug/L	20	91	70	130				
Methylene chloride	5.44	ug/L	0.50	109	70	130				
Naphthalene	4.88	ug/L	0.50	98	70	130				

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							Analytical Run: R275391		
<b>Lab ID: ccv022417</b>	<b>Continuing Calibration Verification Standard</b>						02/24/17 09:51		
Styrene	4.76	ug/L	0.50	95	70	130			
Tetrachloroethene	4.60	ug/L	0.50	92	70	130			
1,1,1,2-Tetrachloroethane	4.24	ug/L	0.50	85	70	130			
1,1,2,2-Tetrachloroethane	4.96	ug/L	0.50	99	70	130			
Toluene	4.96	ug/L	0.50	99	70	130			
Trichloroethene	4.80	ug/L	0.50	96	70	130			
1,1,1-Trichloroethane	3.75	ug/L	0.50	75	70	130			
1,1,2-Trichloroethane	4.76	ug/L	0.50	95	70	130			
Trichlorofluoromethane	3.34	ug/L	0.50	67	70	130			S
1,2,3-Trichloropropane	4.20	ug/L	0.50	84	70	130			
Vinyl Acetate	4.56	ug/L	1.0	91	70	130			
Vinyl chloride	4.84	ug/L	0.50	97	70	130			
m+p-Xylenes	9.76	ug/L	0.50	98	70	130			
o-Xylene	4.76	ug/L	0.50	95	70	130			
Xylenes, Total	14.5	ug/L	0.50	97	70	130			
Surr: 1,2-Dichloroethane-d4			0.50	74	71	139			
Surr: p-Bromofluorobenzene			0.50	88	80	127			
Surr: Toluene-d8			0.50	92	80	123			

<b>Method: E624</b>							Batch: R275391		
<b>Lab ID: ics022417</b>	<b>Laboratory Control Sample</b>				<b>Run: 5971A.I_170224A</b>		02/24/17 10:31		
Acetone	41.6	ug/L	20	83	55	144			
Acetonitrile	60.4	ug/L	20	121	54	142			
Acrolein	49.6	ug/L	20	99	16	233			
Acrylonitrile	46.0	ug/L	20	92	76	127			
Benzene	4.96	ug/L	0.50	99	73	122			
Bromobenzene	4.76	ug/L	0.50	95	74	129			
Bromochloromethane	4.64	ug/L	0.50	93	66	120			
Bromodichloromethane	4.44	ug/L	0.50	89	74	128			
Bromoform	4.36	ug/L	0.50	87	66	128			
Bromomethane	5.76	ug/L	0.50	115	51	123			
Carbon disulfide	4.92	ug/L	0.50	98	46	145			
Carbon tetrachloride	3.80	ug/L	0.50	76	75	125			
Chlorobenzene	4.92	ug/L	0.50	98	80	123			
Chlorodibromomethane	4.64	ug/L	0.50	93	74	125			
Chloroethane	5.04	ug/L	0.50	101	59	142			
2-Chloroethyl vinyl ether	2.74	ug/L	1.0	55	36	144			
Chloroform	4.40	ug/L	0.50	88	68	124			
Chloromethane	4.64	ug/L	0.50	93	53	146			
2-Chlorotoluene	5.04	ug/L	0.50	101	75	131			
4-Chlorotoluene	4.68	ug/L	0.50	94	74	129			
1,2-Dibromoethane	4.40	ug/L	0.50	88	76	124			
Dibromomethane	4.76	ug/L	0.50	95	77	125			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724

**Report Date:** 03/02/17  
**Work Order:** C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							<b>Batch: R275391</b>		
<b>Lab ID: lcs022417</b>	<b>Laboratory Control Sample</b>				<b>Run: 5971A.L_170224A</b>		<b>02/24/17 10:31</b>		
1,2-Dichlorobenzene	4.80	ug/L	0.50	96	74	124			
1,3-Dichlorobenzene	5.00	ug/L	0.50	100	77	122			
1,4-Dichlorobenzene	4.80	ug/L	0.50	96	76	126			
Dichlorodifluoromethane	4.36	ug/L	0.50	87	56	146			
1,1-Dichloroethane	4.56	ug/L	0.50	81	74	133			
1,2-Dichloroethane	3.76	ug/L	0.50	75	75	129			
1,1-Dichloroethene	4.28	ug/L	0.50	86	74	132			
cis-1,2-Dichloroethene	4.76	ug/L	0.50	95	81	122			
trans-1,2-Dichloroethene	5.08	ug/L	0.50	102	79	143			
1,2-Dichloropropane	5.20	ug/L	0.50	104	75	126			
1,3-Dichloropropane	4.32	ug/L	0.50	86	71	136			
2,2-Dichloropropane	4.00	ug/L	0.50	80	68	142			
1,1-Dichloropropene	4.16	ug/L	0.50	83	70	131			
cis-1,3-Dichloropropene	4.12	ug/L	0.50	82	74	135			
trans-1,3-Dichloropropene	3.96	ug/L	0.50	79	76	149			
Ethylbenzene	4.92	ug/L	0.50	98	72	130			
Methyl tert-butyl ether (MTBE)	3.71	ug/L	0.50	74	72	120			
Methyl ethyl ketone	45.2	ug/L	20	90	45	130			
Methyl isobutyl ketone	49.2	ug/L	20	98	58	135			
Methylene chloride	5.64	ug/L	0.50	113	66	142			
Naphthalene	5.44	ug/L	0.50	109	69	124			
Styrene	4.84	ug/L	0.50	97	80	124			
Tetrachloroethene	4.68	ug/L	0.50	94	72	131			
1,1,1,2-Tetrachloroethane	4.16	ug/L	0.50	83	78	124			
1,1,2,2-Tetrachloroethane	4.72	ug/L	0.50	94	68	137			
Toluene	5.16	ug/L	0.50	103	72	135			
Trichloroethene	4.80	ug/L	0.50	96	85	126			
1,1,1-Trichloroethane	3.73	ug/L	0.50	75	63	120			
1,1,2-Trichloroethane	4.68	ug/L	0.50	94	78	124			
Trichlorofluoromethane	3.30	ug/L	0.50	66	72	120			S
1,2,3-Trichloropropane	4.04	ug/L	0.50	81	64	138			
Vinyl Acetate	4.08	ug/L	1.0	82	31	124			
Vinyl chloride	5.12	ug/L	0.50	102	58	140			
m+p-Xylenes	9.84	ug/L	0.50	98	67	139			
o-Xylene	4.84	ug/L	0.50	97	74	135			
Xylenes, Total	14.7	ug/L	0.50	98	70	137			
Surr: 1,2-Dichloroethane-d4			0.50	72	71	139			
Surr: p-Bromofluorobenzene			0.50	87	80	127			
Surr: Toluene-d8			0.50	92	80	123			
<b>Lab ID: blk022417</b>	<b>Method Blank</b>				<b>Run: 5971A.L_170224A</b>		<b>02/24/17 11:30</b>		
Acetone	ND	ug/L		20					
Acetonitrile	ND	ug/L		20					

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624							Batch: R275391		
Lab ID: blk022417	Method Blank		Run: 5971A.L_170224A				02/24/17 11:30		
Acrolein	ND	ug/L		20					
Acrylonitrile	ND	ug/L		3.0					
Benzene	ND	ug/L		0.50					
Bromobenzene	ND	ug/L		0.50					
Bromochloromethane	ND	ug/L		0.50					
Bromodichloromethane	ND	ug/L		0.50					
Bromoform	ND	ug/L		0.50					
Bromomethane	ND	ug/L		0.50					
Carbon disulfide	ND	ug/L		0.50					
Carbon tetrachloride	ND	ug/L		0.50					
Chlorobenzene	ND	ug/L		0.50					
Chlorodibromomethane	ND	ug/L		0.50					
Chloroethane	ND	ug/L		0.50					
2-Chloroethyl vinyl ether	ND	ug/L		1.0					
Chloroform	ND	ug/L		0.50					
Chloromethane	ND	ug/L		0.50					
2-Chlorotoluene	ND	ug/L		0.50					
4-Chlorotoluene	ND	ug/L		0.50					
1,2-Dibromoethane	ND	ug/L		0.50					
Dibromomethane	ND	ug/L		0.50					
1,2-Dichlorobenzene	ND	ug/L		0.50					
1,3-Dichlorobenzene	ND	ug/L		0.50					
1,4-Dichlorobenzene	ND	ug/L		0.50					
Dichlorodifluoromethane	ND	ug/L		0.50					
1,1-Dichloroethane	ND	ug/L		0.50					
1,2-Dichloroethane	ND	ug/L		0.50					
1,1-Dichloroethene	ND	ug/L		0.50					
cis-1,2-Dichloroethene	ND	ug/L		0.50					
trans-1,2-Dichloroethene	ND	ug/L		0.50					
1,2-Dichloropropane	ND	ug/L		0.50					
1,3-Dichloropropane	ND	ug/L		0.50					
2,2-Dichloropropane	ND	ug/L		0.50					
1,1-Dichloropropene	ND	ug/L		0.50					
cis-1,3-Dichloropropene	ND	ug/L		0.30					
trans-1,3-Dichloropropene	ND	ug/L		0.30					
Ethylbenzene	ND	ug/L		0.50					
Methyl tert-butyl ether (MTBE)	ND	ug/L		0.50					
Methyl ethyl ketone	ND	ug/L		20					
Methyl isobutyl ketone	ND	ug/L		20					
Methylene chloride	ND	ug/L		0.50					
Naphthalene	ND	ug/L		0.50					
Styrene	ND	ug/L		0.50					
Tetrachloroethene	ND	ug/L		0.50					

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc  
Project: 170217005 LFH-1 CO-0121724

Report Date: 03/02/17  
Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E624</b> <span style="float: right;">Batch: R275391</span>										
<b>Lab ID: blk022417</b>	Method Blank		Run: 5971A.I_170224A				02/24/17 11:30			
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50							
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50							
Toluene	ND	ug/L	0.50							
Trichloroethene	ND	ug/L	0.50							
1,1,1-Trichloroethane	ND	ug/L	0.50							
1,1,2-Trichloroethane	ND	ug/L	0.50							
Trichlorofluoromethane	ND	ug/L	0.50							
1,2,3-Trichloropropane	ND	ug/L	0.50							
Vinyl Acetate	ND	ug/L	1.0							
Vinyl chloride	ND	ug/L	0.40							
m+p-Xylenes	ND	ug/L	0.50							
o-Xylene	ND	ug/L	0.50							
Xylenes, Total	ND	ug/L	0.50							
Surr: 1,2-Dichloroethane-d4			0.50	74	71	139				
Surr: p-Bromofluorobenzene			0.50	90	80	127				
Surr: Toluene-d8			0.50	94	80	123				
<b>Lab ID: b17021110-001bms</b> <span style="float: right;">Sample Matrix Spike</span> <span style="float: right;">Run: 5971A.I_170224A</span> <span style="float: right;">02/24/17 20:47</span>										
Acrolein	ND	ug/L	20	0	16	233			S 1	
Acrylonitrile	48.8	ug/L	20	98	76	127				
2-Chloroethyl vinyl ether	3.44	ug/L	1.0	69	36	144				
Surr: 1,2-Dichloroethane-d4			0.50	80	71	139				
Surr: p-Bromofluorobenzene			0.50	95	80	127				
Surr: Toluene-d8			0.50	100	80	123				
- 1 = This is a known very reactive compound. The recovery of this compound was normal in the Laboratory Control Sample (LCS). The compound appears to have reacted with the sample matrix.										
<b>Lab ID: b17021110-001bmsd</b> <span style="float: right;">Sample Matrix Spike Duplicate</span> <span style="float: right;">Run: 5971A.I_170224A</span> <span style="float: right;">02/24/17 21:16</span>										
Acrolein	ND	ug/L	20	0	16	233			20 S 1	
Acrylonitrile	48.8	ug/L	20	98	76	127	0.0	20		
2-Chloroethyl vinyl ether	3.66	ug/L	1.0	73	36	144	6.1	20		
Surr: 1,2-Dichloroethane-d4			0.50	81	71	139				
Surr: p-Bromofluorobenzene			0.50	96	80	127				
Surr: Toluene-d8			0.50	99	80	123				
- 1 = This is a known very reactive compound. The recovery of this compound was normal in the Laboratory Control Sample (LCS). The compound appears to have reacted with the sample matrix.										
<b>Lab ID: b17021110-001bms</b> <span style="float: right;">Sample Matrix Spike</span> <span style="float: right;">Run: 5971A.I_170224A</span> <span style="float: right;">02/24/17 18:21</span>										
Acetone	40.4	ug/L	20	81	55	144				
Acetonitrile	66.0	ug/L	20	132	54	142				
Benzene	4.60	ug/L	0.50	92	73	122				
Bromobenzene	4.60	ug/L	0.50	92	74	129				
Bromochloromethane	4.56	ug/L	0.50	91	66	120				
Bromodichloromethane	4.36	ug/L	0.50	87	74	128				
Bromoform	4.40	ug/L	0.50	88	66	128				
Bromomethane	5.88	ug/L	0.50	118	51	123				

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							Batch: R275391		
<b>Lab ID: b17021110-001bms</b>	<b>Sample Matrix Spike</b>		<b>Run: 5971A.I_170224A</b>				<b>02/24/17 18:21</b>		
Carbon disulfide	5.12	ug/L	0.50	102	46	145			
Carbon tetrachloride	3.59	ug/L	0.50	72	75	125			S
Chlorobenzene	4.52	ug/L	0.50	90	80	123			
Chlorodibromomethane	4.52	ug/L	0.50	90	74	125			
Chloroethane	5.40	ug/L	0.50	108	59	142			
Chloroform	4.68	ug/L	0.50	82	68	124			
Chloromethane	4.64	ug/L	0.50	93	53	146			
2-Chlorotoluene	4.88	ug/L	0.50	98	75	131			
4-Chlorotoluene	4.68	ug/L	0.50	94	74	129			
1,2-Dibromoethane	4.16	ug/L	0.50	83	76	124			
Dibromomethane	4.64	ug/L	0.50	93	77	125			
1,2-Dichlorobenzene	4.64	ug/L	0.50	93	74	124			
1,3-Dichlorobenzene	4.88	ug/L	0.50	98	77	122			
1,4-Dichlorobenzene	4.76	ug/L	0.50	91	76	126			
Dichlorodifluoromethane	4.32	ug/L	0.50	86	56	146			
1,1-Dichloroethane	4.24	ug/L	0.50	85	74	133			
1,2-Dichloroethane	3.48	ug/L	0.50	70	75	129			S
1,1-Dichloroethene	4.12	ug/L	0.50	82	74	132			
cis-1,2-Dichloroethene	4.48	ug/L	0.50	90	81	122			
trans-1,2-Dichloroethene	4.64	ug/L	0.50	93	79	143			
1,2-Dichloropropane	4.92	ug/L	0.50	98	75	126			
1,3-Dichloropropane	4.24	ug/L	0.50	85	71	136			
2,2-Dichloropropane	3.60	ug/L	0.50	72	68	142			
1,1-Dichloropropene	4.04	ug/L	0.50	81	70	131			
cis-1,3-Dichloropropene	4.08	ug/L	0.50	82	74	135			
trans-1,3-Dichloropropene	3.97	ug/L	0.50	79	76	149			
Ethylbenzene	4.64	ug/L	0.50	93	72	130			
Methyl tert-butyl ether (MTBE)	3.63	ug/L	0.50	73	72	120			
Methyl ethyl ketone	44.4	ug/L	20	89	45	130			
Methyl isobutyl ketone	51.2	ug/L	20	102	58	135			
Methylene chloride	5.44	ug/L	0.50	109	66	142			
Naphthalene	4.84	ug/L	0.50	97	69	124			
Styrene	4.56	ug/L	0.50	91	80	124			
Tetrachloroethene	4.44	ug/L	0.50	89	72	131			
1,1,1,2-Tetrachloroethane	3.95	ug/L	0.50	79	78	124			
1,1,2,2-Tetrachloroethane	4.88	ug/L	0.50	98	68	137			
Toluene	4.88	ug/L	0.50	98	72	135			
Trichloroethene	4.56	ug/L	0.50	91	85	126			
1,1,1-Trichloroethane	3.51	ug/L	0.50	70	63	120			
1,1,2-Trichloroethane	4.52	ug/L	0.50	90	78	124			
Trichlorofluoromethane	3.29	ug/L	0.50	66	72	120			S
1,2,3-Trichloropropane	3.90	ug/L	0.50	78	64	138			
Vinyl Acetate	4.00	ug/L	1.0	80	31	124			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							<b>Batch: R275391</b>		
<b>Lab ID: b17021110-001bms</b>	<b>Sample Matrix Spike</b>			<b>Run: 5971A.I_170224A</b>			<b>02/24/17 18:21</b>		
Vinyl chloride	5.12	ug/L	0.50	102	58	140			
m+p-Xylenes	9.32	ug/L	0.50	93	67	139			
o-Xylene	4.44	ug/L	0.50	89	74	135			
Xylenes, Total	13.8	ug/L	0.50	92	70	137			
Surr: 1,2-Dichloroethane-d4			0.50	80	71	139			
Surr: p-Bromofluorobenzene			0.50	94	80	127			
Surr: Toluene-d8			0.50	101	80	123			
<b>Lab ID: b17021110-001bmsd</b>	<b>Sample Matrix Spike Duplicate</b>			<b>Run: 5971A.I_170224A</b>			<b>02/24/17 18:50</b>		
Acetone	44.0	ug/L	20	88	55	144	8.5	20	
Acetonitrile	65.6	ug/L	20	131	54	142	0.6	20	
Benzene	5.04	ug/L	0.50	101	73	122	9.1	20	
Bromobenzene	4.96	ug/L	0.50	99	74	129	7.5	20	
Bromochloromethane	4.80	ug/L	0.50	96	68	120	5.1	20	
Bromodichloromethane	4.60	ug/L	0.50	92	74	128	5.4	20	
Bromoform	4.80	ug/L	0.50	96	66	128	8.7	20	
Bromomethane	6.00	ug/L	0.50	120	51	123	2.0	20	
Carbon disulfide	5.20	ug/L	0.50	104	46	145	1.6	20	
Carbon tetrachloride	3.97	ug/L	0.50	79	75	125	10	20	
Chlorobenzene	4.88	ug/L	0.50	98	80	123	7.7	20	
Chlorodibromomethane	4.76	ug/L	0.50	95	74	125	5.2	20	
Chloroethane	5.32	ug/L	0.50	106	59	142	1.5	20	
Chloroform	4.96	ug/L	0.50	87	68	124	5.8	20	
Chloromethane	4.88	ug/L	0.50	98	53	146	5.0	20	
2-Chlorotoluene	5.20	ug/L	0.50	104	75	131	6.3	20	
4-Chlorotoluene	5.04	ug/L	0.50	101	74	129	7.4	20	
1,2-Dibromoethane	4.52	ug/L	0.50	90	76	124	8.3	20	
Dibromomethane	4.88	ug/L	0.50	98	77	125	5.0	20	
1,2-Dichlorobenzene	5.04	ug/L	0.50	101	74	124	8.3	20	
1,3-Dichlorobenzene	5.20	ug/L	0.50	104	77	122	6.3	20	
1,4-Dichlorobenzene	5.12	ug/L	0.50	98	76	126	7.3	20	
Dichlorodifluoromethane	4.36	ug/L	0.50	87	56	146	0.9	20	
1,1-Dichloroethane	4.68	ug/L	0.50	94	74	133	9.9	20	
1,2-Dichloroethane	3.76	ug/L	0.50	75	75	129	7.8	20	
1,1-Dichloroethene	4.44	ug/L	0.50	89	74	132	7.5	20	
cis-1,2-Dichloroethene	4.88	ug/L	0.50	98	81	122	8.5	20	
trans-1,2-Dichloroethene	5.12	ug/L	0.50	102	79	143	9.8	20	
1,2-Dichloropropane	5.24	ug/L	0.50	105	75	126	6.3	20	
1,3-Dichloropropane	4.64	ug/L	0.50	93	71	136	9.0	20	
2,2-Dichloropropane	3.96	ug/L	0.50	79	68	142	9.6	20	
1,1-Dichloropropene	4.44	ug/L	0.50	89	70	131	9.4	20	
cis-1,3-Dichloropropene	4.40	ug/L	0.50	88	74	135	7.5	20	
trans-1,3-Dichloropropene	4.24	ug/L	0.50	85	76	149	6.6	20	

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724

**Report Date:** 03/02/17  
**Work Order:** C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							Batch: R275391		
<b>Lab ID:</b> b17021110-001bmsd	<b>Sample Matrix Spike Duplicate</b>			<b>Run: 5971A.L_170224A</b>			<b>02/24/17 18:50</b>		
Ethylbenzene	5.00	ug/L	0.50	100	72	130	7.5	20	
Methyl tert-butyl ether (MTBE)	3.83	ug/L	0.50	77	72	120	5.5	20	
Methyl ethyl ketone	46.0	ug/L	20	92	45	130	3.5	20	
Methyl isobutyl ketone	51.2	ug/L	20	102	58	135	0.0	20	
Methylene chloride	5.72	ug/L	0.50	114	66	142	5.0	20	
Naphthalene	5.56	ug/L	0.50	111	69	124	14	20	
Styrene	4.84	ug/L	0.50	97	80	124	6.0	20	
Tetrachloroethene	4.72	ug/L	0.50	94	72	131	6.1	20	
1,1,1,2-Tetrachloroethane	4.20	ug/L	0.50	84	78	124	6.1	20	
1,1,2,2-Tetrachloroethane	5.20	ug/L	0.50	104	68	137	6.3	20	
Toluene	5.12	ug/L	0.50	102	72	135	4.8	20	
Trichloroethene	4.80	ug/L	0.50	96	85	126	5.1	20	
1,1,1-Trichloroethane	3.94	ug/L	0.50	79	63	120	12	20	
1,1,2-Trichloroethane	4.76	ug/L	0.50	95	78	124	5.2	20	
Trichlorofluoromethane	3.36	ug/L	0.50	67	72	120	2.3	20	S
1,2,3-Trichloropropane	4.20	ug/L	0.50	84	64	138	7.4	20	
Vinyl Acetate	4.20	ug/L	1.0	84	31	124	4.9	20	
Vinyl chloride	5.08	ug/L	0.50	102	58	140	0.8	20	
m+p-Xylenes	9.92	ug/L	0.50	99	67	139	6.2	20	
o-Xylene	4.80	ug/L	0.50	96	74	135	7.8	20	
Xylenes, Total	14.7	ug/L	0.50	98	70	137			
Surr: 1,2-Dichloroethane-d4			0.50	81	71	139			
Surr: p-Bromofluorobenzene			0.50	94	80	127			
Surr: Toluene-d8			0.50	100	80	123			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E625									Batch: 107004
Lab ID: MB-107004	Method Blank						Run: SV5973N2.I_170227B		02/27/17 18:24
Acenaphthene	ND	ug/L	10						
Acenaphthylene	ND	ug/L	10						
Anthracene	ND	ug/L	10						
Azobenzene	ND	ug/L	10						
Benzo(a)anthracene	ND	ug/L	10						
Benzo(a)pyrene	ND	ug/L	10						
Benzo(b)fluoranthene	ND	ug/L	10						
Benzo(g,h,i)perylene	ND	ug/L	10						
Benzo(k)fluoranthene	ND	ug/L	10						
4-Bromophenyl phenyl ether	ND	ug/L	10						
Butylbenzylphthalate	ND	ug/L	10						
4-Chloro-3-methylphenol	ND	ug/L	10						
bis(-2-chloroethoxy)Methane	ND	ug/L	10						
bis(-2-chloroethyl)Ether	ND	ug/L	10						
bis(2-chloroisopropyl)Ether	ND	ug/L	10						
2-Chloronaphthalene	ND	ug/L	10						
2-Chlorophenol	ND	ug/L	10						
4-Chlorophenyl phenyl ether	ND	ug/L	10						
Chrysene	ND	ug/L	10						
Diethyl phthalate	ND	ug/L	10						
Di-n-butyl phthalate	ND	ug/L	10						
1,2-Dichlorobenzene	ND	ug/L	10						
1,3-Dichlorobenzene	ND	ug/L	10						
1,4-Dichlorobenzene	ND	ug/L	10						
3,3'-Dichlorobenzidine	ND	ug/L	10						
2,4-Dichlorophenol	ND	ug/L	10						
Dimethyl phthalate	ND	ug/L	10						
Di-n-octyl phthalate	ND	ug/L	10						
Dibenzo(a,h)anthracene	ND	ug/L	10						
2,4-Dimethylphenol	ND	ug/L	10						
4,6-Dinitro-2-methylphenol	ND	ug/L	50						
2,4-Dinitrophenol	ND	ug/L	50						
2,4-Dinitrotoluene	ND	ug/L	10						
2,6-Dinitrotoluene	ND	ug/L	10						
bis(2-ethylhexyl)Phthalate	ND	ug/L	10						
Fluoranthene	ND	ug/L	10						
Fluorene	ND	ug/L	10						
Hexachlorobenzene	ND	ug/L	10						
Hexachlorobutadiene	ND	ug/L	10						
Hexachlorocyclopentadiene	ND	ug/L	10						
Hexachloroethane	ND	ug/L	10						
Indeno(1,2,3-cd)pyrene	ND	ug/L	10						
Isophorone	ND	ug/L	10						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							<b>Batch: 107004</b>		
<b>Lab ID: MB-107004</b>	<b>Method Blank</b>		<b>Run: SV5973N2.I_170227B</b>				<b>02/27/17 18:24</b>		
n-Nitrosodimethylamine	ND	ug/L	10						
n-Nitroso-di-n-propylamine	ND	ug/L	10						
n-Nitrosodiphenylamine	ND	ug/L	10						
2-Nitrophenol	ND	ug/L	10						
4-Nitrophenol	ND	ug/L	50						
Naphthalene	ND	ug/L	10						
Nitrobenzene	ND	ug/L	10						
Pentachlorophenol	ND	ug/L	50						
Phenanthrene	ND	ug/L	10						
Phenol	ND	ug/L	10						
Pyrene	ND	ug/L	10						
1,2,4-Trichlorobenzene	ND	ug/L	10						
2,4,6-Trichlorophenol	ND	ug/L	10						
Surr: 2-Fluorobiphenyl			10	55	28	107			
Surr: 2-Fluorophenol			10	36	20	56			
Surr: Nitrobenzene-d5			10	58	32	94			
Surr: Phenol-d5			10	35	19	45			
Surr: Terphenyl-d14			10	77	32	122			
Surr: 2,4,6-Tribromophenol			10	58	21	130			
<b>Lab ID: LCS-107004</b>	<b>Laboratory Control Sample</b>		<b>Run: SV5973N2.I_170227B</b>				<b>02/27/17 18:55</b>		
Acenaphthene	81.2	ug/L	10	81	58	99			
Acenaphthylene	76.5	ug/L	10	77	57	96			
Anthracene	79.5	ug/L	10	80	60	107			
Azobenzene	79.3	ug/L	10	79	56	100			
Benzo(a)anthracene	84.1	ug/L	10	84	62	114			
Benzo(a)pyrene	80.1	ug/L	10	80	62	108			
Benzo(b)fluoranthene	88.6	ug/L	10	89	48	127			
Benzo(g,h,i)perylene	81.6	ug/L	10	82	82	121			
Benzo(k)fluoranthene	79.2	ug/L	10	79	55	111			
4-Bromophenyl phenyl ether	83.0	ug/L	10	83	58	105			
Butylbenzylphthalate	91.6	ug/L	10	92	60	113			
4-Chloro-3-methylphenol	65.7	ug/L	10	66	53	92			
bis(-2-chloroethoxy)Methane	73.9	ug/L	10	74	50	92			
bis(-2-chloroethyl)Ether	63.4	ug/L	10	63	44	82			
bis(2-chloroisopropyl)Ether	61.2	ug/L	10	61	56	87			
2-Chloronaphthalene	74.9	ug/L	10	75	56	95			
2-Chlorophenol	60.1	ug/L	10	60	47	76			
4-Chlorophenyl phenyl ether	75.8	ug/L	10	76	58	99			
Chrysene	81.9	ug/L	10	82	63	106			
Diethyl phthalate	78.6	ug/L	10	79	58	103			
Di-n-butyl phthalate	87.6	ug/L	10	88	61	110			
1,2-Dichlorobenzene	81.5	ug/L	10	82	43	81			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E625							Batch: 107004		
Lab ID: LCS-107004	Laboratory Control Sample			Run: SV5973N2.I_170227B			02/27/17 18:55		
1,3-Dichlorobenzene	60.2	ug/L	10	60	41	79			
1,4-Dichlorobenzene	61.4	ug/L	10	61	42	79			
3,3'-Dichlorobenzidine	66.6	ug/L	10	69	51	93			
2,4-Dichlorophenol	64.7	ug/L	10	65	49	90			
Dimethyl phthalate	76.4	ug/L	10	76	58	104			
Di-n-octyl phthalate	88.3	ug/L	10	88	56	110			
Dibenzo(a,h)anthracene	80.4	ug/L	10	80	61	111			
2,4-Dimethylphenol	61.8	ug/L	10	62	45	89			
4,6-Dinitro-2-methylphenol	48.2	ug/L	50	48	37	105			
2,4-Dinitrophenol	39.7	ug/L	50	40	27	81			
2,4-Dinitrotoluene	87.7	ug/L	10	88	63	110			
2,6-Dinitrotoluene	75.5	ug/L	10	76	60	107			
bis(2-ethylhexyl)Phthalate	88.6	ug/L	10	89	56	108			
Fluoranthene	63.8	ug/L	10	84	63	110			
Fluorene	77.4	ug/L	10	77	60	99			
Hexachlorobenzene	76.2	ug/L	10	78	57	103			
Hexachlorobutadiene	67.5	ug/L	10	67	39	83			
Hexachlorocyclopentadiene	68.4	ug/L	10	68	39	91			
Hexachloroethane	59.6	ug/L	10	60	37	75			
Indeno(1,2,3-cd)pyrene	82.0	ug/L	10	82	59	109			
Isophorone	67.1	ug/L	10	67	42	102			
n-Nitrosodimethylamine	36.9	ug/L	10	37	20	45			
n-Nitroso-di-n-propylamine	71.5	ug/L	10	71	49	98			
n-Nitrosodiphenylamine	90.0	ug/L	10	90	61	108			
2-Nitrophenol	68.0	ug/L	10	68	51	96			
4-Nitrophenol	16.3	ug/L	50	18	15	36			
Naphthalene	71.6	ug/L	10	72	48	96			
Nitrobenzene	65.0	ug/L	10	65	51	91			
Pentachlorophenol	70.6	ug/L	50	71	53	109			
Phenanthrene	80.5	ug/L	10	81	58	104			
Phenol	35.4	ug/L	10	35	27	45			
Pyrene	89.3	ug/L	10	89	64	108			
1,2,4-Trichlorobenzene	67.3	ug/L	10	67	49	85			
2,4,6-Trichlorophenol	64.9	ug/L	10	65	47	99			
Surr: 2-Fluorobiphenyl			10	63	28	107			
Surr: 2-Fluorophenol			10	35	20	56			
Surr: Nitrobenzene-d5			10	68	32	94			
Surr: Phenol-d5			10	42	19	45			
Surr: Terphenyl-d14			10	87	32	122			
Surr: 2,4,6-Tribromophenol			10	70	21	130			
Lab ID: B17021688-001CMS	Sample Matrix Spike			Run: SV5973N2.I_170227B			02/27/17 20:29		
Acenaphthene	86.4	ug/L	10	86	58	99			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724

**Report Date:** 03/02/17  
**Work Order:** C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							<b>Batch: 107004</b>		
<b>Lab ID: B17021688-001CMS</b>	<b>Sample Matrix Spike</b>			<b>Run: SV5973N2.I_170227B</b>			<b>02/27/17 20:29</b>		
Acenaphthylene	83.0	ug/L	10	83	57	96			
Anthracene	86.4	ug/L	10	86	60	107			
Azobenzene	84.3	ug/L	10	84	56	100			
Benzo(a)anthracene	90.3	ug/L	10	90	62	114			
Benzo(a)pyrene	80.9	ug/L	10	81	62	108			
Benzo(b)fluoranthene	80.4	ug/L	10	80	48	127			
Benzo(g,h,i)perylene	80.5	ug/L	10	81	62	121			
Benzo(k)fluoranthene	83.5	ug/L	10	83	55	111			
4-Bromophenyl phenyl ether	80.4	ug/L	10	80	58	105			
Butylbenzylphthalate	99.7	ug/L	10	100	60	113			
4-Chloro-3-methylphenol	77.0	ug/L	10	77	53	92			
bis(-2-chloroethoxy)Methane	77.3	ug/L	10	77	50	92			
bis(-2-chloroethyl)Ether	66.7	ug/L	10	67	44	82			
bis(2-chloroisopropyl)Ether	66.6	ug/L	10	67	56	87			
2-Chloronaphthalene	79.8	ug/L	10	80	56	95			
2-Chlorophenol	64.1	ug/L	10	64	47	76			
4-Chlorophenyl phenyl ether	84.5	ug/L	10	85	58	99			
Chrysene	85.9	ug/L	10	86	63	106			
Diethyl phthalate	85.4	ug/L	10	85	58	103			
Di-n-butyl phthalate	96.0	ug/L	10	96	61	110			
1,2-Dichlorobenzene	66.1	ug/L	10	66	43	81			
1,3-Dichlorobenzene	61.9	ug/L	10	62	41	79			
1,4-Dichlorobenzene	61.8	ug/L	10	62	42	79			
3,3'-Dichlorobenzidine	69.1	ug/L	10	69	51	93			
2,4-Dichlorophenol	68.4	ug/L	10	68	49	90			
Dimethyl phthalate	81.4	ug/L	10	81	58	104			
Di-n-octyl phthalate	90.6	ug/L	10	91	56	110			
Dibenzo(a,h)anthracene	80.0	ug/L	10	80	61	111			
2,4-Dimethylphenol	69.2	ug/L	10	69	45	87			
4,6-Dinitro-2-methylphenol	58.9	ug/L	50	59	37	105			
2,4-Dinitrophenol	54.8	ug/L	50	55	27	81			
2,4-Dinitrotoluene	82.5	ug/L	10	83	63	110			
2,6-Dinitrotoluene	80.8	ug/L	10	81	60	107			
bis(2-ethylhexyl)Phthalate	92.0	ug/L	10	92	56	108			
Fluoranthene	88.0	ug/L	10	88	63	110			
Fluorene	80.1	ug/L	10	80	60	99			
Hexachlorobenzene	82.5	ug/L	10	83	57	103			
Hexachlorobutadiene	69.0	ug/L	10	69	39	83			
Hexachlorocyclopentadiene	68.1	ug/L	10	68	39	91			
Hexachloroethane	65.6	ug/L	10	66	37	75			
Indeno(1,2,3-cd)pyrene	82.3	ug/L	10	82	59	109			
Isophorone	71.3	ug/L	10	71	42	102			
n-Nitrosodimethylamine	41.5	ug/L	10	41	20	45			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

## QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc

**Report Date:** 03/02/17

**Project:** 170217005 LFH-1 CO-0121724

**Work Order:** C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							Batch: 107004		
<b>Lab ID: B17021688-001CMS</b>	<b>Sample Matrix Spike</b>						<b>Run: SV5973N2.I_170227B</b>	02/27/17 20:29	
n-Nitroso-di-n-propylamine	76.9	ug/L	10	77	49	98			
n-Nitrosodiphenylamine	93.7	ug/L	10	94	61	108			
2-Nitrophenol	69.9	ug/L	10	70	51	96			
4-Nitrophenol	24.6	ug/L	50	25	15	36			
Naphthalene	76.0	ug/L	10	76	48	96			
Nitrobenzene	72.5	ug/L	10	73	51	91			
Pentachlorophenol	89.2	ug/L	50	89	53	109			
Phenanthrene	85.1	ug/L	10	85	58	104			
Phenol	36.7	ug/L	10	37	27	45			
Pyrene	88.8	ug/L	10	90	64	108			
1,2,4-Trichlorobenzene	70.9	ug/L	10	71	49	85			
2,4,6-Trichlorophenol	67.7	ug/L	10	68	47	99			
Surr: 2-Fluorobiphenyl			10	62	28	107			
Surr: 2-Fluorophenol			10	39	20	56			
Surr: Nitrobenzene-d5			10	72	32	94			
Surr: Phenol-d5			10	35	19	45			
Surr: Terphenyl-d14			10	87	32	122			
Surr: 2,4,6-Tribromophenol			10	75	21	130			
<b>Lab ID: B17021688-003CMS</b>							02/27/17 21:31		
<b>Sample Matrix Spike</b>						<b>Run: SV5973N2.I_170227B</b>			
Acenaphthene	89.8	ug/L	10	90	58	99			
Acenaphthylene	82.2	ug/L	10	82	57	96			
Anthracene	73.2	ug/L	10	73	60	107			
Azobenzene	80.2	ug/L	10	80	56	100			
Benzo(a)anthracene	85.1	ug/L	10	85	62	114			
Benzo(a)pyrene	77.0	ug/L	10	77	62	108			
Benzo(b)fluoranthene	73.3	ug/L	10	73	48	127			
Benzo(g,h,i)perylene	78.5	ug/L	10	79	62	121			
Benzo(k)fluoranthene	83.1	ug/L	10	83	55	111			
4-Bromophenyl phenyl ether	78.1	ug/L	10	78	58	105			
Butylbenzylphthalate	92.9	ug/L	10	93	60	113			
4-Chloro-3-methylphenol	69.5	ug/L	10	69	53	92			
bis(-2-chloroethoxy)Methane	69.6	ug/L	10	70	50	92			
bis(-2-chloroethyl)Ether	58.4	ug/L	10	58	44	82			
bis(2-chloroisopropyl)Ether	57.7	ug/L	10	58	56	87			
2-Chloronaphthalene	77.7	ug/L	10	78	56	95			
2-Chlorophenol	56.6	ug/L	10	57	47	76			
4-Chlorophenyl phenyl ether	82.9	ug/L	10	83	58	99			
Chrysene	82.0	ug/L	10	82	63	106			
Diethyl phthalate	80.2	ug/L	10	80	58	103			
Di-n-butyl phthalate	86.9	ug/L	10	87	61	110			
1,2-Dichlorobenzene	61.5	ug/L	10	62	43	81			
1,3-Dichlorobenzene	59.3	ug/L	10	59	41	79			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724

**Report Date:** 03/02/17  
**Work Order:** C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							<b>Batch: 107004</b>		
<b>Lab ID: B17021688-003CMS</b>	<b>Sample Matrix Spike</b>		<b>Run: SV5973N2.I_170227B</b>				<b>02/27/17 21:31</b>		
1,4-Dichlorobenzene	57.9	ug/L	10	58	42	79			
3,3'-Dichlorobenzidine	52.9	ug/L	10	53	51	93			
2,4-Dichlorophenol	61.5	ug/L	10	62	49	90			
Dimethyl phthalate	74.3	ug/L	10	74	58	104			
Di-n-octyl phthalate	82.5	ug/L	10	83	56	110			
Dibenzo(a,h)anthracene	75.9	ug/L	10	76	61	111			
2,4-Dimethylphenol	60.0	ug/L	10	60	45	87			
4,6-Dinitro-2-methylphenol	41.6	ug/L	50	42	37	105			
2,4-Dinitrophenol	30.1	ug/L	50	30	27	81			
2,4-Dinitrotoluene	86.9	ug/L	10	87	63	110			
2,6-Dinitrotoluene	75.9	ug/L	10	76	60	107			
bis(2-ethylhexyl)Phthalate	81.5	ug/L	10	82	56	108			
Fluoranthene	82.0	ug/L	10	82	63	110			
Fluorene	81.9	ug/L	10	82	60	99			
Hexachlorobenzene	75.8	ug/L	10	76	57	103			
Hexachlorobutadiene	69.3	ug/L	10	69	39	83			
Hexachlorocyclopentadiene	69.5	ug/L	10	70	39	91			
Hexachloroethane	57.7	ug/L	10	58	37	75			
Indeno(1,2,3-cd)pyrene	73.4	ug/L	10	73	59	109			
Isophorone	68.4	ug/L	10	68	42	102			
n-Nitrosodimethylamine	27.8	ug/L	10	28	20	45			
n-Nitroso-di-n-propylamine	68.7	ug/L	10	69	49	98			
n-Nitrosodiphenylamine	84.0	ug/L	10	84	61	108			
2-Nitrophenol	61.8	ug/L	10	62	51	96			
4-Nitrophenol	27.7	ug/L	50	28	15	36			
Naphthalene	72.4	ug/L	10	72	48	96			
Nitrobenzene	69.7	ug/L	10	70	51	91			
Pentachlorophenol	66.8	ug/L	50	67	53	109			
Phenanthrene	79.7	ug/L	10	80	58	104			
Phenol	33.9	ug/L	10	34	27	45			
Pyrene	81.2	ug/L	10	81	64	108			
1,2,4-Trichlorobenzene	71.3	ug/L	10	71	49	85			
2,4,6-Trichlorophenol	63.8	ug/L	10	64	47	99			
Surr: 2-Fluorobiphenyl			10	45	28	107			
Surr: 2-Fluorophenol			10	37	20	56			
Surr: Nitrobenzene-d5			10	62	32	94			
Surr: Phenol-d5			10	31	19	45			
Surr: Terphenyl-d14			10	64	32	122			
Surr: 2,4,6-Tribromophenol			10	55	21	130			
<b>Lab ID: MB-107004</b>	<b>Method Blank</b>		<b>Run: SV5973N2.I_170228A</b>				<b>02/28/17 12:11</b>		
Benzidine	ND	ug/L	10						

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



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# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc

**Report Date:** 03/02/17

**Project:** 170217005 LFH-1 CO-0121724

**Work Order:** C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E625									Batch: 107004
<b>Lab ID:</b> LCS-107004	Laboratory Control Sample								Run: SV5973N2.I_170228A 02/28/17 12:42
Benzidine	63.4	ug/L	10	63	10	100			
<b>Lab ID:</b> B17021688-001CMS	Sample Matrix Spike								Run: SV5973N2.I_170228A 02/28/17 14:16
Benzidine	25.8	ug/L	20	26	10	100			
<b>Lab ID:</b> B17021688-003CMS	Sample Matrix Spike								Run: SV5973N2.I_170228A 02/28/17 15:18
Benzidine	28.5	ug/L	20	28	10	100			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E625							Analytical Run: R275528		
Lab ID: 27-Feb-17_CCV_2	Continuing Calibration Verification Standard							02/27/17 15:18	
Acenaphthene	75.7	ug/L	10	101	80	120			
Acenaphthylene	75.2	ug/L	10	100	80	120			
Anthracene	78.7	ug/L	10	105	80	120			
Azobenzene	79.8	ug/L	10	106	80	120			
Benzo(a)anthracene	78.0	ug/L	10	104	80	120			
Benzo(a)pyrene	78.0	ug/L	10	104	80	120			
Benzo(b)fluoranthene	78.6	ug/L	10	105	80	120			
Benzo(g,h,i)perylene	75.3	ug/L	10	100	80	120			
Benzo(k)fluoranthene	73.2	ug/L	10	98	80	120			
4-Bromophenyl phenyl ether	74.4	ug/L	10	99	80	120			
Butylbenzylphthalate	84.4	ug/L	10	113	80	120			
4-Chloro-3-methylphenol	77.2	ug/L	10	103	80	120			
bis(-2-chloroethoxy)Methane	79.4	ug/L	10	106	80	120			
bis(-2-chloroethyl)Ether	80.8	ug/L	10	108	80	120			
bis(2-chloroisopropyl)Ether	77.8	ug/L	10	104	80	120			
2-Chloronaphthalene	70.3	ug/L	10	94	80	120			
2-Chlorophenol	80.3	ug/L	10	107	80	120			
4-Chlorophenyl phenyl ether	72.9	ug/L	10	97	80	120			
Chrysene	75.0	ug/L	10	100	80	120			
Diethyl phthalate	75.7	ug/L	10	101	80	120			
Di-n-butyl phthalate	81.6	ug/L	10	109	80	120			
1,2-Dichlorobenzene	72.7	ug/L	10	97	80	120			
1,3-Dichlorobenzene	77.8	ug/L	10	104	80	120			
1,4-Dichlorobenzene	74.9	ug/L	10	100	80	120			
3,3'-Dichlorobenzidine	75.8	ug/L	10	101	80	120			
2,4-Dichlorophenol	74.8	ug/L	10	100	80	120			
Dimethyl phthalate	75.3	ug/L	10	100	80	120			
Di-n-octyl phthalate	83.5	ug/L	10	111	80	120			
Dibenzo(a,h)anthracene	74.8	ug/L	10	100	80	120			
2,4-Dimethylphenol	73.0	ug/L	10	97	80	120			
4,6-Dinitro-2-methylphenol	71.3	ug/L	50	95	80	120			
2,4-Dinitrophenol	69.4	ug/L	50	93	80	120			
2,4-Dinitrotoluene	79.4	ug/L	10	106	80	120			
2,6-Dinitrotoluene	78.1	ug/L	10	104	80	120			
bis(2-ethylhexyl)Phthalate	84.4	ug/L	10	112	80	120			
Fluoranthene	76.0	ug/L	10	101	80	120			
Fluorene	77.8	ug/L	10	104	80	120			
Hexachlorobenzene	73.8	ug/L	10	98	80	120			
Hexachlorobutadiene	71.9	ug/L	10	96	80	120			
Hexachlorocyclopentadiene	73.1	ug/L	10	97	80	120			
Hexachloroethane	77.6	ug/L	10	103	80	120			
Indeno(1,2,3-cd)pyrene	75.6	ug/L	10	101	80	120			
Isophorone	78.1	ug/L	10	104	80	120			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 03/02/17

Project: 170217005 LFH-1 CO-0121724

Work Order: C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							Analytical Run: R275528		
<b>Lab ID: 27-Feb-17_CCV_2</b>	Continuing Calibration Verification Standard						02/27/17 15:18		
n-Nitrosodimethylamine	75.3	ug/L	10	100	80	120			
n-Nitroso-di-n-propylamine	77.8	ug/L	10	104	80	120			
n-Nitrosodiphenylamine	78.9	ug/L	10	105	80	120			
2-Nitrophenol	75.8	ug/L	10	101	80	120			
4-Nitrophenol	69.6	ug/L	50	93	80	120			
Naphthalene	79.8	ug/L	10	106	80	120			
Nitrobenzene	76.8	ug/L	10	102	80	120			
Pentachlorophenol	73.3	ug/L	50	98	80	120			
Phenanthrene	74.0	ug/L	10	99	80	120			
Phenol	79.2	ug/L	10	106	80	120			
Pyrene	75.2	ug/L	10	100	80	120			
1,2,4-Trichlorobenzene	72.8	ug/L	10	97	80	120			
2,4,6-Trichlorophenol	73.6	ug/L	10	98	80	120			
Surr: 2-Fluorobiphenyl			10	100	80	120			
Surr: 2-Fluorophenol			10	113	80	120			
Surr: Nitrobenzene-d5			10	105	80	120			
Surr: Phenol-d5			10	121	80	120			S
Surr: Terphenyl-d14			10	101	80	120			
Surr: 2,4,6-Tribromophenol			10	102	80	120			

<b>Method: E625</b>							Analytical Run: R275577		
<b>Lab ID: 28-Feb-17_CCV_2</b>	Continuing Calibration Verification Standard						02/28/17 11:39		
Benzidine	89.5	ug/L	10	119	80	120			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170217005 LFH-1 CO-0121724

**Report Date:** 03/02/17  
**Work Order:** C17020566

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> SW8260M									Analytical Run: 107003
<b>Lab ID:</b> CCV-107003	Continuing Calibration Verification Standard								02/27/17 08:30
1,4-Dioxane	105	ug/L	1.0	105	80	120			
<b>Method:</b> SW8260M									Batch: 107003
<b>Lab ID:</b> LCS-107003	Laboratory Control Sample								02/27/17 09:22
1,4-Dioxane	106	ug/L	1.0	106	70	130			Run: VOA5973A.I_170227A
<b>Lab ID:</b> MB-107003	Method Blank								02/27/17 09:44
1,4-Dioxane	ND	ug/L	1.0						Run: VOA5973A.I_170227A
<b>Lab ID:</b> C17020566-001BMS	Sample Matrix Spike								02/27/17 11:37
1,4-Dioxane	200	ug/L	2.0	100	70	130			Run: VOA5973A.I_170227A
<b>Lab ID:</b> C17020566-001BMSD	Sample Matrix Spike Duplicate								02/27/17 11:59
1,4-Dioxane	206	ug/L	2.0	103	70	130	3.0	20	Run: VOA5973A.I_170227A

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# Work Order Receipt Checklist

Colorado Analytical Laboratories Inc

C17020566

Login completed by: Dorian Quis

Date Received: 2/21/2017

Reviewed by: Kasey Vidick

Received by: dcq

Reviewed Date: 2/21/2017

Carrier name: Ground

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	6.8°C Blue Ice		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

## Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

## Contact and Corrective Action Comments:

None





Colorado Department  
of Public Health  
and Environment

**Inorganic Chemicals Certified Laboratory Report Form**  
**WQCD - Drinking Water CAS**  
**4300 Cherry Creek Drive South, Denver, CO 80246-1530**  
**Fax: (303) 758-1398; cdphe.drinkingwater@state.co.us**

Revised 6/13/2014

**IOC**

<b>Section I (Supplied or Completed by Public Water System)</b>		<b>Section II (Supplied or Completed by Certified Laboratory)</b>	
<b>Public Water System Information</b>		<b>Certified Laboratory Information</b>	
PWSID#: CO0121724		Laboratory ID: CO 0015	
System Name: Sterling Ranch MD		Laboratory Name: Colorado Analytical Laboratory	
Contact Person: Mark Volle		Contact Person: Customer Service Phone: 303-659-2313	
Comments:		Comments:	
Do Samples Need to be Compositied BY THE LAB? <input type="checkbox"/>			

<b>Section III (Supplied or Completed by Public Water System)</b>			
Sample Date: 3/23/17	Collector: Stephanie Schw	Facility ID (On Schedule): New Well	Sample Pt ID (On Schedule): New Well
<b>Section IV Inorganic Chemicals (Completed by Certified Laboratory)</b>			
Lab Receipt Date: 3/24/17	Lab Analysis Date: 3/24/17	Lab Sample ID: 170324007-01	Analyte Name: Fluoride
		CAS No: 7681-49-4	Analytical Method: EPA 300.0
		MCL (mg/L): 4	Lab MRL (mg/L): 0.09
			Result (mg/L): 1.22

NT: Not Tested  
Lab MRL: Laboratory Minimum Reporting Level  
BDL: Below Laboratory MRL. A less than (<) may also used.

mg/L: Milligrams per Liter  
MCL: Maximum Contaminant Level

4/21/17  
170324007-01  
1/1  
N





**Brighton Lab**  
 240 South Main Street  
 Brighton, CO 80601

**Lakewood Lab**  
 12860 W. Cedar Dr, Suite 100A  
 Lakewood CO 80228

Phone: 303-659-2313  
 Fax: 303-659-2315

[www.coloradolab.com](http://www.coloradolab.com)

Drinking Water Chain of Custody

page 2 of 2

<b>Report To Information</b> Company Name: <u>JDS-Hydrate Consultants</u> Contact Name: <u>Mark Volle</u> Address: <u>546 E. Pikes Peak Ave</u> <u>Suite 300</u> City: <u>CS</u> State: <u>CO</u> Zip: <u>80903</u> Phone: <u>719-227-0073</u> Fax: Email: <u>Mvolle@jds-hydro.com</u> Sampler Name: <u>Soprano Schuster</u> PO No.:		<b>Bill To Information (if different from report to)</b> Company Name: <u>SR Water</u> Contact Name: <u>Jim Morley</u> Address: <u>20 Boulder Crest</u> <u>Colorado</u> State: <u>CO</u> Zip: <u>80903</u> Phone: Fax: Email: <u>jmorley3870@aol.com</u>		<b>State Form / Project Information</b> PWSID: <u>CO 0121724</u> System Name: <u>Serling Ranch MD</u> Address: <u>20 Boulder Crest</u> City: <u>CS</u> State: <u>CO</u> Zip: <u>80903</u> County: <u>El Paso</u> Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
--	--	--	--	--	--

GAL Task No. 170324007		PHASE I, II, V Drinking Water Analyses (check analysis)														Subcontract Analyses																	
ARF		No. of Containers	Residual Chlorine (mg/L)	Total Coliform P/A	504.1 EDB/D/CP	505 Pests/P/CBS	515.4 Herbicides	525.2 SOC's-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothal	549.2 Diquat	524.2 TTHMs	552.2 HAAs	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index	(TOD, DOC) (Circle)	SUVA, UV 254 (Circle)	Cyanide	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium					
3-23	8:07	#11																															
	8:00 am	#12																															
	8:26	#14																															
	8:18	#15																															
	8:12	#16 (1.4 Dicane)																															
	8:20	#17																															
	8:21	#18																															
	8:15	#19																															
	8:29	#20																															

Instructions:  
 Relinquished By: [Signature] Date/Time: 3-23 11:30am  
 Received By: [Signature] Date/Time: 3-23 11:30am



Colorado Department  
of Public Health  
and Environment

**Inorganic Chemicals Certified Laboratory Report Form**  
**WQCD - Drinking Water CAS**  
Submit Online at <http://www.wqcdcompliance.com/login>

Revised 4/13/2015

**IOC**

Section I (Supplied or Completed by Public Water System)		Section II (Supplied or Completed by Certified Laboratory)	
Public Water System Information		Certified Laboratory Information	
PWSID#: CO0121724		Laboratory ID: CO 0015	
System Name: Sterling Ranch MD		Laboratory Name: Colorado Analytical Laboratory	
Contact Person: Mark Volle		Contact Person: Customer Service Phone: 303-659-2313	
Comments:		Comments:	
Do Samples Need to be Composited BY THE LAB? <input type="checkbox"/>			

Section III (Supplied or Completed by Public Water System)			
Sample Date: 3/23/17	Collector: Stephanie Schwe	Facility ID (On Schedule): New Well	Sample Pt ID (On Schedule): New Well
Section IV Inorganic Chemicals (Completed by Certified Laboratory)			

Lab Receipt Date	Lab Analysis Date	Lab Sample ID	Analyte Name	CAS No.	Analytical Method	MCL (mg/L)	Lab MRL (mg/L)	Result (mg/L)
3/24/17	3/29/17	170324007-01A	Antimony	7740-36-0	EPA 200.8	0.006	0.001	BDL
3/24/17	3/29/17	170324007-01A	Arsenic	7440-38-2	EPA 200.8	0.01	0.001	0.002
3/24/17	3/29/17	170324007-01A	Barium	7440-39-3	EPA 200.8	2	0.001	0.003
3/24/17	3/29/17	170324007-01A	Beryllium	7440-41-7	EPA 200.8	0.004	0.001	BDL
3/24/17	3/29/17	170324007-01A	Cadmium	7440-43-9	EPA 200.8	0.005	0.001	BDL
3/24/17	3/29/17	170324007-01A	Chromium	7440-47-3	EPA 200.8	0.1	0.001	BDL
3/24/17	3/29/17	170324007-01A	Mercury	7439-97-6	EPA 200.8	0.002	0.0001	BDL
3/24/17	3/29/17	170324007-01A	Nickel	7440-02-0	EPA 200.8	N/A	0.001	0.001
3/24/17	3/29/17	170324007-01A	Selenium	7782-49-2	EPA 200.8	0.05	0.001	BDL
3/24/17	3/30/17	170324007-01A	Sodium	7440-23-5	EPA 200.7	N/A	0.1	52.8
3/24/17	3/29/17	170324007-01A	Thallium	7440-28-0	EPA 200.8	0.002	0.001	BDL

NT: Not Tested  
Lab MRL: Laboratory Minimum Reporting Level  
BDL: Below Laboratory MRL. A less than (<) may also used.

mg/L: Milligrams per Liter  
MCL: Maximum Contaminant Level





Drinking Water Chain of Custody

page 2 of 2

<b>Report To Information</b> Company Name: <u>JDS-Hydro Consultants</u> Contact Name: <u>Mark Volle</u> Address: <u>545 E. Pikes Peak Ave</u> <u>Suite 300</u> City: <u>CS</u> State: <u>CO</u> Zip: <u>80903</u> Phone: <u>719-227-0073</u> Fax: Email: <u>mvolle@jds-hydro.com</u> Sampler Name: <u>Stephanie Schuster</u> PO No.:		<b>Bill To Information (if different from report to)</b> Company Name: <u>SR Water</u> Contact Name: <u>Jim Morley</u> Address: <u>20 Boulder Crescent</u> <u>City</u> State: <u>CO</u> Zip: <u>80903</u> Phone: Fax: Email: <u>jmorley3870@aol.com</u> Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>State Form / Project Information</b> PWSID: <u>CO 0121724</u> System Name: <u>Serling Ranch MD</u> Address: <u>20 Boulder Crescent</u> City: <u>CS</u> State: <u>CO</u> Zip: <u>80903</u> County: <u>El Paso</u> Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		<b>LABORATORIES, INC.</b> <b>Brighton Lab</b> 240 South Main Street Brighton, CO 80601 <b>Lakewood Lab</b> 12860 W. Cedar Dr, Suite 100A Lakewood CO 80228 Phone: 303-659-2313 Fax: 303-659-2315 www.coloradolab.com	

CAL Task No. 170324007		PHASE I, II, V Drinking Water Analyses (check analysis)														Subcontract Analyses																	
ARF		No. of Containers	Residual Chlorine (mg/L)	Total Coliform P/A	504.1 EDB/D/BCP	505 Pests/PCBs	515.4 Herbicides	525.2 SOCs-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothal	549.2 Diquat	524.2 THMs	522.2 HAAs	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index	(TOC, DOC (Circle)	SUVA, UV 254 (Circle)	X Cyanide	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium					
3-23	8:07	#11																															
	8:00 am	#12																															
	8:26	#14																															
	8:12	#15																															
	8:23	#16 (1,4 Dioxane)																															
	8:24	#18																															
	8:15	#19																															
	8:29	#20																															

Instructions:  
 Relinquished By: [Signature] Date/Time: 3-23 11:30am  
 Received By: [Signature] Date/Time: 3-23 11:30am

## Analytical Results

TASK NO: 170324007

**Report To:** Mark Volle

**Company:** JDS Hydro Consultants  
545 E. Pikes Peak Ave  
Suite 300  
Colorado Springs CO 80903

**Bill To:** Jim Morley

**Company:** SR Water  
20 Boulder Crescent St.  
Colorado Springs CO 80903

**Task No.:** 170324007  
**Client PO:**  
**Client Project:** Sterling Ranch MD CO0121724

**Date Received:** 3/24/17  
**Date Reported:** 4/21/17  
**Matrix:** Water - Drinking

**Customer Sample ID:** Sterling Ranch MD  
**Sample Date/Time:** 3/23/17 8:03 AM  
**Lab Number:** 170324007-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Bicarbonate	99.7 mg/L as CaCO <sub>3</sub>	SM 2320-B	0.1	3/28/17	VDB
Calcium as CaCO <sub>3</sub>	2.6 mg/L	SM 3111-B	0.1	3/30/17	MBN
Carbonate	< 0.1 mg/L as CaCO <sub>3</sub>	SM 2320-B	0.1	3/28/17	VDB
Langelier Index	-1.23 units	SM 2330-B		3/31/17	LJG
pH	8.16 units	SM 4500-H-B	0.01	3/24/17	MBN
Temperature	20 °C	SM 4500-H-B	1	3/24/17	MBN
Total Alkalinity	99.7 mg/L as CaCO <sub>3</sub>	SM 2320-B	0.1	3/28/17	VDB
Total Dissolved Solids	143 mg/L	SM 2540-C	5	3/29/17	ISG

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL  
mg/L = Milligrams Per Liter or PPM  
ug/L = Micrograms Per Liter or PPB  
mpn/100 ml = Most Probable Number Index/ 100 ml  
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY





**Brighton Lab**  
 240 South Main Street  
 Brighton, CO 80601

**Lakewood Lab**  
 12860 W. Cedar Dr, Suite 100A  
 Lakewood CO 80228

Phone: 303-659-2313  
 Fax: 303-659-2315

www.coloradolab.com

**Drinking Water Chain of Custody**

page 2 of 2

<b>Report To Information</b>		<b>State Form / Project Information</b>	
Company Name: <u>JDS-Hydro Consultants</u>	Company Name: <u>SR Water</u>	PWSID: <u>CO 0121724</u>	
Contact Name: <u>Mark Volle</u>	Contact Name: <u>Jim Morley</u>	System Name: <u>Serling Ranch MD</u>	
Address: <u>546 E. Pikes Peak Ave</u>	Address: <u>20 Boulder Crest</u>	Address: <u>20 Boulder Crest</u>	
Suite: <u>300</u>			
City: <u>CS</u>	State: <u>CO</u>	City: <u>CS</u>	State: <u>CO</u>
Zip: <u>80903</u>	Zip: <u>80903</u>	County: <u>El Paso</u>	
Phone: <u>719-227-0072</u>	Phone: <u>3870@cs.com</u>	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Fax: <u></u>	Email: <u>jmorley@srwater.com</u>	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Sampler Name: <u>Soprano Schuster</u>	Sampler No.:		

CAL Task No. 170324007		PHASE I, II, V Drinking Water Analyses (check analysis)															Subcontract Analyses																				
Date	Time	Client Sample ID / EP Code	No. of Containers	Residual Chlorine (mg/L)	P/A Samples Only	Total Coliform P/A	504.1 EDB/D/BCP	505 Pests/PCBs	515.4 Herbicides	525.2 SOCs-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothal	549.2 Diquat	524.2 TTHMs	552.2 HAAs	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index	(TOC, DOC) (Circle)	SUVA, UV 254 (Circle)	X Cyanide	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium							
3-23	8:01	#11	1																																		
	8:00 am	#12	1																																		
	8:26	#14	3																																		
	8:12	#15	2																																		
	8:20	#16 (1,4 Dioxane)	3																																		
	8:28	#17	2																																		
	8:15	#18	3																																		
	8:19	#19	3																																		
	8:29	#20	3																																		

Instructions:

Relinquished By: [Signature] Date/Time: 3-23 11:30am

Received By: [Signature] Date/Time: 3-23 11:30am



**Nitrate and Nitrite as Nitrogen Certified Laboratory Report Form**  
**WQCD - Drinking Water CAS**  
**Submit Online at <http://www.wqcdcompliance.com/login>**

Revised 4/13/2015

**NOX**

Section I (Supplied or Completed by Public Water System)		Section II (Supplied or Completed by Certified Laboratory)	
Public Water System Information		Certified Laboratory Information	
PWSID#: CO0121724	Laboratory ID: CO 0015		
System Name: Sterling Ranch MD		Laboratory Name: Colorado Analytical Laboratory	
Contact Person: Mark Volle	Phone #: 719-227-0072	Contact Person: Customer Service	Phone: 303-659-2313
Comments:		Comments:	

Section III (Supplied or Completed by Public Water System)				Section IV (Supplied or Completed by Certified Laboratory)								
Sample Date	Collector	Facility ID On Schedule	Sample Pt ID On Schedule	Confirmation?	Lab Receipt Date	Lab Analysis Date	Laboratory Sample ID #	Analyte	Analytical Method	MCL (mg/L)	Lab MRI (mg/L)	Result (mg/L)
3/23/17	ephanie Schwenk	New Well	New Well	<input type="checkbox"/>	3/24/17	3/24/17	170324007-01	Nitrate Nitrogen	EPA 300.0	10	0.1	BDL
3/23/17	ephanie Schwenk	New Well	New Well	<input type="checkbox"/>	3/24/17	3/24/17	170324007-01	Nitrite Nitrogen	EPA 300.0	1	0.1	BDL

NT: Not Tested  
 Lab MRL: Laboratory Minimum Reporting Level  
 BDL: Below Laboratory MRL. A less than (<) may also used.

mg/L: Milligrams per Liter  
 MCL: Maximum Contaminant Level

4/21/17  
 170324007-01  
 1/1  
 N





**Colorado Analytical**  
LABORATORIES, INC.

**Brighton Lab**  
240 South Main Street  
Brighton, CO 80601

**Lakewood Lab**  
12860 W. Cedar Dr, Suite 100A  
Lakewood CO 80228

Phone: 303-659-2313  
Fax: 303-659-2315

[www.coloradolab.com](http://www.coloradolab.com)

**Drinking Water Chain of Custody**

page 2 of 2

<b>Report To Information</b>		<b>Bill To Information (if different from report to)</b>	
Company Name: <u>JDS-Hydro Consultants</u>	Company Name: <u>SR Water</u>	PWSID: <u>CO 0121724</u>	System Name: <u>Serling Ranch MD</u>
Contact Name: <u>Mark Volle</u>	Contact Name: <u>Jim Morley</u>	Address: <u>20 Boulder Crest</u>	Address: <u>20 Boulder Crest</u>
Address: <u>545 E. Pikes Peak Ave</u>	Address: <u>20 Boulder Crest</u>	City: <u>CS</u>	City: <u>CS</u>
State: <u>CO</u>	State: <u>CO</u>	State: <u>CO</u>	State: <u>CO</u>
Zip: <u>80903</u>	Zip: <u>80903</u>	Zip: <u>80903</u>	Zip: <u>80903</u>
Phone: <u>719-227-0072</u>	Phone: <u>3870@caal.com</u>	County: <u>El Paso</u>	County: <u>El Paso</u>
Fax: <u></u>	Email: <u>jmorley@caal.com</u>	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Sampler Name: <u>Stephan Schuster</u>	PO No.: <u></u>	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

C/L Task No.		PHASE I, II, V Drinking Water Analyses (check analysis)														Subcontract Analyses																	
170324007																																	
ARF																																	
Date	Time	Client Sample ID / EP Code	No. of Containers	Residual Chlorine (mg/L)	P/A Samples Only	Total Coliform P/A	504.1 EDB/BCP	505 Pests/PCBs	515.4 Herbicides	525.2 SOCs-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothal	549.2 Diquat	524.2 THMs	552.2 HAAs	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index	(TOC, DOC) (Circle)	SUVA, UV 254 (Circle)	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium				
3-23	8:01	#11	1																														
	8:00	#12	X																														
	8:26	#14	3				X																										
	8:18	#15	2																														
	8:12	#16 (1,4 Dioxane)	3																														
	8:23	#17	2																														
	8:24	#18	2																														
	8:15	#19	3																														
	8:29	#20	3																														
Instructions:																																	
		C/S Info:														Seals Present Yes <input type="checkbox"/> No <input type="checkbox"/> Headspace Yes <input type="checkbox"/> No <input type="checkbox"/>																	
		Delivered Via: <input type="checkbox"/> C/S Charge <input type="checkbox"/> Temp. °C/Ice														Sample Pres. Yes <input type="checkbox"/> No <input type="checkbox"/>																	
		Retinquired By: <u>[Signature]</u> Date/Time: <u>3-23 11:30am</u>														Received By: <u>[Signature]</u> Date/Time: <u></u>																	



**Organic Chemicals Certified Laboratory Report Form**  
**WQCD - Drinking Water CAS**  
**Submit Online at <http://www.wqedcompliance.com/login>**

Revised 4/13/2015

**VOC/SOC**

Section I (Supplied or Completed by Public Water System)		Section JI (Supplied or Completed by Certified Laboratory)	
Public Water System Information		Certified Laboratory Information	
PWSID#: CO0121724		Laboratory ID: CO 00063	
System Name: Sterling Ranch MD		Laboratory Name: Colorado Analytical Laboratory	
Contact Person: Mark Volle		Contact Person: Customer Service Phone: 303-659-2313	
Comments:		Comments:	
Do Samples Need to be Compositied BY THE LAB? <input type="checkbox"/>			

Section V (Supplied or Completed by Public Water System)		Section VI Synthetic Organic Chemicals (Supplied or Completed by Certified Laboratory)		Section VII (Supplied or Completed by Public Water System)				
Lab Receipt Date	Lab Analysis Date	Lab Sample ID	Analyte Name	CAS No	Analytical Method	MCL (ug/L)	Lab MRL (ug/L)	Result (ug/L)
3/24/17	4/3/17	170324007-01E	Dibromochloropropane	96-12-8	EPA 504.1	0.2	0.02	BDL
3/24/17	3/29/17	170324007-01G	2,4-D	94-75-7	EPA 515.4	70	0.1	BDL
3/24/17	3/29/17	170324007-01G	2,4,5-TP	93-72-1	EPA 515.4	50	0.2	BDL
3/24/17	3/31/17	170324007-01I	Alachlor	15972-60-8	EPA 525.2	2	0.2	BDL
3/24/17	3/31/17	170324007-01J	Aldicarb	116-06-3	EPA 531.1	N/A	0.6	BDL
3/24/17	3/31/17	170324007-01J	Aldicarb sulfone	1646-88-4	EPA 531.1	N/A	1	BDL
3/24/17	3/31/17	170324007-01J	Aldicarb sulfoxide	1646-87-3	EPA 531.1	N/A	0.7	BDL
3/24/17	3/31/17	170324007-01I	Atrazine	1912-24-9	EPA 525.2	3	0.1	BDL
3/24/17	3/31/17	170324007-01I	Benzo(a)pyrene	50-32-8	EPA 525.2	0.2	0.02	BDL
3/24/17	3/31/17	170324007-01J	Carbofuran	1563-66-2	EPA 531.1	40	0.9	BDL
3/24/17	3/30/17	170324007-01F	Chlordane	57-74-9	EPA 505	2	0.2	BDL
3/24/17	3/29/17	170324007-01G	Delapon	75-99-0	EPA 515.4	200	1	BDL
3/24/17	3/31/17	170324007-01I	Di(2-ethylhexyl)adipate	103-23-1	EPA 525.2	400	0.6	BDL
3/24/17	3/31/17	170324007-01I	Di(2-ethylhexyl)phthalate	117-81-7	EPA 525.2	6	0.6	BDL
3/24/17	3/29/17	170324007-01G	Dinoseb	85-85-7	EPA 515.4	7	0.2	BDL
3/24/17	3/24/17	170324007-01L	Diquat	85-00-7	EPA 549.2	20	0.4	BDL
3/24/17	3/29/17	170324007-01K	Endothall	145-73-3	EPA 548.1	100	9	BDL
3/24/17	3/30/17	170324007-01F	Endrin	72-20-8	EPA 505	2	0.01	BDL
3/24/17	4/3/17	170324007-01E	Ethylene dibromide	106-93-4	EPA 504.1	0.05	0.01	BDL
3/24/17	3/31/17	170324007-01I	Heptachlor	76-44-8	EPA 525.2	0.4	0.04	BDL
3/24/17	3/30/17	170324007-01F	Heptachlor epoxide	1024-57-3	EPA 505	0.2	0.02	BDL

NT: Not Tested ug/L; Micrograms per Liter MCL: Maximum Contaminant Level BDL: Below Laboratory MRL A less than sign (<) may also be used.

PWSID#: CO0121724		Section V (Supplied or Completed by Public Water System)						
Sample Date:	3/23/17	Collector:	Stephanie Schwenk	Facility ID (On Schedule):	New Well	Sample Pt ID (On Schedule):	New Well	
Section VI Synthetic Organic Chemicals (Supplied or Completed by Certified Laboratory)		Lab Sample ID	Analyte Name	CAS No.	Analytical Method	MCL (ug/L)	Lab MRL (ug/L)	Result (ug/L)
3/24/17	3/30/17	170324007-01F	Hexachlorobenzene	118-74-1	EPA 505	1	0.1	BDL
3/24/17	3/30/17	170324007-01F	Hexachlorocyclopentadiene	77-47-4	EPA 505	50	0.1	BDL
3/24/17	3/30/17	170324007-01F	Lindane	58-89-9	EPA 505	0.2	0.02	BDL
3/24/17	3/30/17	170324007-01F	Methoxychlor	72-43-5	EPA 505	40	0.1	BDL
3/24/17	3/31/17	170324007-01J	Oxamyl	23135-22-0	EPA 531.1	200	1	BDL
3/24/17	3/29/17	170324007-01G	Pentachlorophenol	87-86-5	EPA 515.4	1	0.04	BDL
3/24/17	3/29/17	170324007-01G	Picloram	1918-02-1	EPA 515.4	500	0.1	BDL
3/24/17	3/30/17	170324007-01F	Polychlorinated biphenyl's	1336-36-3	EPA 505	0.5	0.1	BDL
3/24/17	3/31/17	170324007-01I	Simazine	122-34-9	EPA 525.2	4	0.07	BDL
3/24/17	3/30/17	170324007-01F	Toxaphene	8001-35-2	EPA 505	3	1	BDL

NT: Not Tested ug/L; Micrograms per Liter MCL: Maximum Contaminant Level BDL Below Laboratory MRL. A less than sign (<) may also be used.

170324007-01 N

2/2  
4/21/17







# Radionuclides Certified Laboratory Report Form

Revision 6/13/2014

WQCD - Drinking Water CAS  
4300 Cherry Creek Drive South; Denver, CO 80246-1530  
Fax: (303) 758-1398; [cdphe.drinkingwater@state.co.us](mailto:cdphe.drinkingwater@state.co.us)

# RAD

Colorado Department  
of Public Health  
and Environment

## Section I (Supplied or Completed by Public Water System)

## Section II (Supplied or Completed by Certified Laboratory)

### Public Water System Information

### Certified Laboratory Information

PWS ID: CO0121724

Laboratory ID: CO 00008

System Name: Sterling Ranch MD

Laboratory Name: Hazen Research, Inc.

Contact Person:

Contact Person: Jessica Axen

Phone #:

Phone #: 303-279-4501

Comments:

Comments:

Do Samples Need to be Compositd BY THE LAB?

## Section III (Supplied or Completed by Public Water System)

Sample Date: 03/23/2017 Collector: Facility ID (On Schedule): Sample Pt ID (On Schedule):

## Section IV Radionuclides (Supplied or Completed by Certified Laboratory)

Lab Receipt Date	Lab Analysis Date	Lab Sample ID	Analyte Name (Code)	CAS No.	Analytical Method	MCL	Lab MRL	Result
03/24/2017	04/18/2017	C27017-001	Gross Alpha Including Uranium (4002)	12587-46-1	SM 7110 B	N/A	1.5	0.0(±1.5)
			Combined Uranium (4006)	7440-61-1	D2907-97	30 ug/L		
03/24/2017	04/07/2017	C27017-001	Radium -226 (4020)	13982-63-3	SM 7500-Ra B	N/A	0.1	0.4(±0.3)
03/24/2017	03/30/2017	C27017-001	Radium -228 (4030)	15262-20-1	EPA Ra-05	N/A	0.6	0.2(±0.6)
03/24/2017	04/18/2017	C27017-001	Gross Beta (4100)	12587-47-2	SM 7110 B	50 pCi/L.*	2.1	0.0(±2.0)
			Total Dissolved Solids (1930)		EPA 160.3	N/A		

\*The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L EPA considers 50 pCi/L to be the level of concern.

## Section V Calculated Values

Calculated Value	Calculated Value
Gross Alpha Excluding Uranium (4000)	15 pCi/L
Combined Radium {-226 & -228} (4010)	5 pCi/L

NT: Not Tested

ug/L: Micrograms per Liter

Lab MRL: Laboratory Minimum Reporting Level

pCi/L: Picoocuries per Liter

BDL: Below Laboratory MRL. A less than sign (<) may also be used

MCL: Maximum Contaminant Level



## Analytical Results

TASK NO: 170324007

Report To: Mark Volle

Company: JDS Hydro Consultants  
545 E. Pikes Peak Ave  
Suite 300  
Colorado Springs CO 80903

Bill To: Jim Morley

Company: SR Water  
20 Boulder Crescent St.  
Colorado Springs CO 80903

Task No.: 170324007  
Client PO:  
Client Project: Sterling Ranch MD CO0121724

Date Received: 3/24/17  
Date Reported: 4/21/17  
Matrix: Water - Drinking

Customer Sample ID: Sterling Ranch MD  
Sample Date/Time: 3/23/17 8:03 AM  
Lab Number: 170324007-01

Facility ID: New Well  
Sample Point ID: New Well

Test	Result	Method	ML	Date Analyzed	Analyzed By
Chloride	1.3 mg/L	EPA 300.0	0.1 mg/L	3/24/17	LJG
Cyanide-Free	< 0.005 mg/L	EPA 335.4	0.005 mg/L	3/28/17	VDB
E-Coli	< 1 mpn/100ml	Coli fert	1 mpn/100ml	3/25/17	VDB
Sulfate	10.7 mg/L	EPA 300.0	0.1 mg/L	3/24/17	LJG
Total Coliform	68 mpn/100ml	Coli fert	1 mpn/100ml	3/25/17	VDB
Total Organic Carbon	< 0.5 mg/L	SM 5310-C	0.5 mg/L	3/28/17	ISG
Turbidity	1.08 NTU	SM 2130-B	0.01 NTU	3/24/17	MBN
<b>Total</b>					
Aluminum	0.032 mg/L	EPA 200.8	0.001 mg/L	3/29/17	TCD
Calcium	1.0 mg/L	EPA 200.7	0.1 mg/L	3/29/17	MBN
Copper	< 0.0008 mg/L	EPA 200.8	0.0008 mg/L	3/29/17	TCD
Iron	0.180 mg/L	EPA 200.7	0.005 mg/L	3/30/17	MBN
Lead	0.0002 mg/L	EPA 200.8	0.0001 mg/L	3/29/17	TCD
Magnesium	0.06 mg/L	EPA 200.7	0.02 mg/L	3/29/17	MBN
Manganese	0.0071 mg/L	EPA 200.8	0.0008 mg/L	3/29/17	TCD
Potassium	1.0 mg/L	EPA 200.7	0.1 mg/L	3/29/17	MBN
Silver	< 0.0001 mg/L	EPA 200.8	0.0001 mg/L	3/29/17	TCD
Strontium	0.009 mg/L	EPA 200.8	0.005 mg/L	3/29/17	TCD
Total Hardness	2.7 mg/L as CaCO <sub>3</sub>	SM 2340-B	0.1 mg/L as CaCO <sub>3</sub>	3/30/17	MBN
Uranium	< 0.0002 mg/L	EPA 200.8	0.0002 mg/L	3/29/17	TCD
Zinc	0.002 mg/L	EPA 200.8	0.001 mg/L	3/29/17	TCD

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL  
mg/L = Milligrams Per Liter or PPM  
ug/L = Micrograms Per Liter or PPB  
mpn/100 ml = Most Probable Number Index/ 100 ml  
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

**Analytical Results**

**TASK NO: 170324007**

**Report To:** Mark Volle  
**Company:** JDS Hydro Consultants  
545 E. Pikes Peak Ave  
Suite 300  
Colorado Springs CO 80903

**Bill To:** Jim Morley  
**Company:** SR Water  
20 Boulder Crescent St.  
Colorado Springs CO 80903

**Task No.:** 170324007  
**Client PO:**  
**Client Project:** Sterling Ranch MD CO0121724

**Date Received:** 3/24/17  
**Date Reported:** 4/21/17  
**Matrix:** Water - Drinking

**Customer Sample ID:** Sterling Ranch MD  
**Sample Date/Time:** 3/23/17 8:03 AM  
**Lab Number:** 170324007-01

**Facility ID:** New Well  
**Sample Point ID:** New Well

Test	Result	Method	ML	Date Analyzed	Analyzed By
<u>Total</u> Zinc	0.002 mg/L	EPA 200.8	0.001 mg/L	3/29/17	TCD

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL  
mg/L = Milligrams Per Liter or PPM  
ug/L = Micrograms Per Liter or PPB  
mpr/100 mls = Most Probable Number Index/ 100 mls  
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY







# ANALYTICAL SUMMARY REPORT

April 06, 2017

Colorado Analytical Laboratories Inc  
PO Drawer 507  
Brighton, CO 80601

Work Order: C17030850      Quote ID: C4542 - 624, 625, 1,4-Dioxane  
Project Name: 170324007 Sterling Ranch MD

Energy Laboratories, Inc. Casper WY received the following 1 sample for Colorado Analytical Laboratories Inc on 3/28/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C17030850-001	170324007 Sterling Ranch MD	03/23/17 8:03	03/28/17	Groundwater	Azeotropic Distillation Separatory Funnel Liquid-Liquid Ext. Semi-Volatile Organic Compounds 624-Purgeable Organics Volatile Compounds by Azeotropic Distillation

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

  
Randy Horton, Project Manager

Digitally signed by  
Randy Horton  
Date: 2017.04.06 16:31:29 -06:00



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Billings, MT 800.735.4489 • Casper, WY 888.235.0515  
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

**CLIENT:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD  
**Work Order:** C17030850

**Report Date:** 04/06/17

## CASE NARRATIVE

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Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.



### LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD  
**Lab ID:** C17030850-001  
**Client Sample ID:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Collection Date:** 03/23/17 08:03  
**Date Received:** 03/28/17  
**Matrix:** Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
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#### VOCS BY AZEOTROPIC DISTILLATION

1,4-Dioxane	ND	ug/L		1.0		SW8260M	04/06/17 09:34 / eli-b
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- Analysis by direct aqueous injection of the sample distillate. A deuterated version of 1,4-Dioxane was added to the sample prior to distillation and used to quantitate the 1,4-Dioxane and account for any variations in the analysis or distillation.

#### VOLATILE ORGANIC COMPOUNDS

Acetone	ND	ug/L		20		E624	03/31/17 16:09 / eli-b
Acetonitrile	ND	ug/L		20		E624	03/31/17 16:09 / eli-b
Acrolein	ND	ug/L		20		E624	03/31/17 16:09 / eli-b
Acrylonitrile	ND	ug/L		20		E624	03/31/17 16:09 / eli-b
Benzene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Bromobenzene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Bromochloromethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Bromodichloromethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Bromoform	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Bromomethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Carbon disulfide	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Carbon tetrachloride	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Chlorobenzene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Chlorodibromomethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Chloroethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
2-Chloroethyl vinyl ether	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Chloroform	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Chloromethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
2-Chlorotoluene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
4-Chlorotoluene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,2-Dibromoethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Dibromomethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,2-Dichlorobenzene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,3-Dichlorobenzene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,4-Dichlorobenzene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Dichlorodifluoromethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,1-Dichloroethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,2-Dichloroethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,1-Dichloroethene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
cis-1,2-Dichloroethene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
trans-1,2-Dichloroethene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,2-Dichloropropane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,3-Dichloropropane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
2,2-Dichloropropane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,1-Dichloropropene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
cis-1,3-Dichloropropene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
trans-1,3-Dichloropropene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Ethylbenzene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



### LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD  
**Lab ID:** C17030850-001  
**Client Sample ID:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Collection Date:** 03/23/17 08:03  
**Date Received:** 03/28/17  
**Matrix:** Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>VOLATILE ORGANIC COMPOUNDS</b>							
Methyl tert-butyl ether (MTBE)	ND	ug/L		2.0		E624	03/31/17 16:09 / eli-b
Methyl ethyl ketone	ND	ug/L		20		E624	03/31/17 16:09 / eli-b
Methyl isobutyl ketone	ND	ug/L		10		E624	03/31/17 16:09 / eli-b
Methylene chloride	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Naphthalene	ND	ug/L		0.50		E624	03/31/17 16:09 / eli-b
Styrene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Tetrachloroethene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,1,1,2-Tetrachloroethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Toluene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Trichloroethene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,1,1-Trichloroethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,1,2-Trichloroethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Trichlorofluoromethane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
1,2,3-Trichloropropane	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Vinyl Acetate	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Vinyl chloride	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
m+p-Xylenes	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
o-Xylene	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Xylenes, Total	ND	ug/L		1.0		E624	03/31/17 16:09 / eli-b
Surr: 1,2-Dichloroethane-d4	105	%REC		71-139		E624	03/31/17 16:09 / eli-b
Surr: p-Bromofluorobenzene	102	%REC		80-127		E624	03/31/17 16:09 / eli-b
Surr: Toluene-d8	92.0	%REC		80-123		E624	03/31/17 16:09 / eli-b

### SEMI-VOLATILE ORGANIC COMPOUNDS

Acenaphthene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Acenaphthylene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Anthracene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Azobenzene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Benzidine	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Benzo(a)anthracene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Benzo(a)pyrene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Benzo(b)fluoranthene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Benzo(g,h,i)perylene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Benzo(k)fluoranthene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
4-Bromophenyl phenyl ether	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Butylbenzylphthalate	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
4-Chloro-3-methylphenol	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
bis(-2-chloroethoxy)Methane	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
bis(-2-chloroethyl)Ether	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
bis(2-chloroisopropyl)Ether	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
2-Chloronaphthalene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
2-Chlorophenol	ND	ug/L		10		E625	03/30/17 17:14 / eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



### LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD  
**Lab ID:** C17030850-001  
**Client Sample ID:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Collection Date:** 03/23/17 08:03  
**Date Received:** 03/28/17  
**Matrix:** Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>							
4-Chlorophenyl phenyl ether	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Chrysene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Diethyl phthalate	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Di-n-butyl phthalate	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
1,2-Dichlorobenzene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
1,3-Dichlorobenzene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
1,4-Dichlorobenzene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
3,3'-Dichlorobenzidine	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
2,4-Dichlorophenol	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Dimethyl phthalate	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Di-n-octyl phthalate	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Dibenzo(a,h)anthracene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
2,4-Dimethylphenol	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
4,6-Dinitro-2-methylphenol	ND	ug/L		50		E625	03/30/17 17:14 / eli-b
2,4-Dinitrophenol	ND	ug/L		50		E625	03/30/17 17:14 / eli-b
2,4-Dinitrotoluene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
2,6-Dinitrotoluene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
bis(2-ethylhexyl)Phthalate	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Fluoranthene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Fluorene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Hexachlorobenzene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Hexachlorobutadiene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Hexachlorocyclopentadiene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Hexachloroethane	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Indeno(1,2,3-cd)pyrene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Isophorone	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
n-Nitrosodimethylamine	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
n-Nitroso-di-n-propylamine	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
n-Nitrosodiphenylamine	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
2-Nitrophenol	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
4-Nitrophenol	ND	ug/L		50		E625	03/30/17 17:14 / eli-b
Naphthalene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Nitrobenzene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Pentachlorophenol	ND	ug/L		50		E625	03/30/17 17:14 / eli-b
Phenanthrene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Phenol	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Pyrene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
1,2,4-Trichlorobenzene	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
2,4,6-Trichlorophenol	ND	ug/L		10		E625	03/30/17 17:14 / eli-b
Surr: 2-Fluorobiphenyl	61.0	%REC		28-107		E625	03/30/17 17:14 / eli-b
Surr: 2-Fluorophenol	39.0	%REC		20-56		E625	03/30/17 17:14 / eli-b
Surr: Nitrobenzene-d5	63.0	%REC		32-94		E625	03/30/17 17:14 / eli-b
Surr: Phenol-d5	27.0	%REC		19-45		E625	03/30/17 17:14 / eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



### LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD  
**Lab ID:** C17030850-001  
**Client Sample ID:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Collection Date:** 03/23/17 08:03  
**Date Received:** 03/28/17  
**Matrix:** Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>							
Surr: Terphenyl-d14	70.0	%REC		32-122		E625	03/30/17 17:14 / eli-b
Surr: 2,4,6-Tribromophenol	68.0	%REC		21-130		E625	03/30/17 17:14 / eli-b

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 04/06/17

Project: 170324007 Sterling Ranch MD

Work Order: C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624							Analytical Run: R277281		
Lab ID: ccv033117	Continuing Calibration Verification Standard							03/31/17 08:45	
Acetone	58.0	ug/L	20	116	70	130			
Acetonitrile	56.4	ug/L	20	113	70	130			
Acrolein	56.4	ug/L	20	113	70	130			
Acrylonitrile	49.6	ug/L	20	99	70	130			
Benzene	5.08	ug/L	0.50	102	70	130			
Bromobenzene	5.04	ug/L	0.50	101	70	130			
Bromochloromethane	5.36	ug/L	0.50	107	70	130			
Bromodichloromethane	4.92	ug/L	0.50	98	70	130			
Bromoform	5.04	ug/L	0.50	101	70	130			
Bromomethane	4.28	ug/L	0.50	86	70	130			
Carbon disulfide	5.32	ug/L	0.50	106	70	130			
Carbon tetrachloride	5.80	ug/L	0.50	116	70	130			
Chlorobenzene	4.56	ug/L	0.50	91	70	130			
Chlorodibromomethane	5.04	ug/L	0.50	101	70	130			
Chloroethane	4.80	ug/L	0.50	96	70	130			
2-Chloroethyl vinyl ether	2.90	ug/L	1.0	58	70	130			S
Chloroform	5.60	ug/L	0.50	112	70	130			
Chloromethane	3.82	ug/L	0.50	76	70	130			
2-Chlorotoluene	5.00	ug/L	0.50	100	70	130			
4-Chlorotoluene	5.44	ug/L	0.50	109	70	130			
1,2-Dibromoethane	4.68	ug/L	0.50	94	70	130			
Dibromomethane	4.96	ug/L	0.50	99	70	130			
1,2-Dichlorobenzene	5.04	ug/L	0.50	101	70	130			
1,3-Dichlorobenzene	5.16	ug/L	0.50	103	70	130			
1,4-Dichlorobenzene	5.00	ug/L	0.50	100	70	130			
Dichlorodifluoromethane	5.20	ug/L	0.50	104	70	130			
1,1-Dichloroethane	4.96	ug/L	0.50	99	70	130			
1,2-Dichloroethane	6.24	ug/L	0.50	125	70	130			
1,1-Dichloroethene	5.12	ug/L	0.50	102	70	130			
cis-1,2-Dichloroethene	4.76	ug/L	0.50	95	70	130			
trans-1,2-Dichloroethene	5.00	ug/L	0.50	100	70	130			
1,2-Dichloropropane	4.88	ug/L	0.50	98	70	130			
1,3-Dichloropropane	4.88	ug/L	0.50	98	70	130			
2,2-Dichloropropane	5.72	ug/L	0.50	114	70	130			
1,1-Dichloropropene	5.44	ug/L	0.50	109	70	130			
cis-1,3-Dichloropropene	4.80	ug/L	0.50	96	70	130			
trans-1,3-Dichloropropene	4.84	ug/L	0.50	97	70	130			
Ethylbenzene	4.88	ug/L	0.50	98	70	130			
Methyl tert-butyl ether (MTBE)	5.20	ug/L	0.50	104	70	130			
Methyl ethyl ketone	54.0	ug/L	20	108	70	130			
Methyl isobutyl ketone	50.4	ug/L	20	101	70	130			
Methylene chloride	5.88	ug/L	0.50	118	70	130			
Naphthalene	5.08	ug/L	0.50	102	70	130			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							Analytical Run: R277281		
<b>Lab ID:</b> ccv033117	Continuing Calibration Verification Standard							03/31/17 08:45	
Styrene	4.52	ug/L	0.50	90	70	130			
Tetrachloroethene	4.68	ug/L	0.50	94	70	130			
1,1,1,2-Tetrachloroethane	4.72	ug/L	0.50	94	70	130			
1,1,2,2-Tetrachloroethane	4.96	ug/L	0.50	99	70	130			
Toluene	4.76	ug/L	0.50	95	70	130			
Trichloroethene	4.92	ug/L	0.50	98	70	130			
1,1,1-Trichloroethane	5.72	ug/L	0.50	114	70	130			
1,1,2-Trichloroethane	4.72	ug/L	0.50	94	70	130			
Trichlorofluoromethane	4.88	ug/L	0.50	98	70	130			
1,2,3-Trichloropropane	5.24	ug/L	0.50	105	70	130			
Vinyl Acetate	5.32	ug/L	1.0	106	70	130			
Vinyl chloride	4.60	ug/L	0.50	92	70	130			
m+p-Xylenes	9.32	ug/L	0.50	93	70	130			
o-Xylene	4.52	ug/L	0.50	90	70	130			
Xylenes, Total	13.8	ug/L	0.50	92	70	130			
Surr: 1,2-Dichloroethane-d4			0.50	107	71	139			
Surr: p-Bromofluorobenzene			0.50	102	80	127			
Surr: Toluene-d8			0.50	91	80	123			

<b>Method: E624</b>							Batch: R277281		
<b>Lab ID:</b> lcs033117	Laboratory Control Sample					Run: 5971A.l_170331A	03/31/17 09:19		
Acetone	56.0	ug/L	20	112	55	144			
Acetonitrile	56.8	ug/L	20	114	54	142			
Acrolein	42.4	ug/L	20	85	16	233			
Acrylonitrile	48.4	ug/L	20	97	76	127			
Benzene	4.92	ug/L	0.50	98	73	122			
Bromobenzene	4.96	ug/L	0.50	99	74	129			
Bromochloromethane	5.16	ug/L	0.50	103	66	120			
Bromodichloromethane	5.16	ug/L	0.50	103	74	128			
Bromoform	5.12	ug/L	0.50	102	66	128			
Bromomethane	4.76	ug/L	0.50	95	51	123			
Carbon disulfide	5.36	ug/L	0.50	107	46	145			
Carbon tetrachloride	5.72	ug/L	0.50	114	75	125			
Chlorobenzene	4.64	ug/L	0.50	93	80	123			
Chlorodibromomethane	5.32	ug/L	0.50	106	74	125			
Chloroethane	4.48	ug/L	0.50	90	59	142			
2-Chloroethyl vinyl ether	2.62	ug/L	1.0	52	36	144			
Chloroform	5.52	ug/L	0.50	110	68	124			
Chloromethane	3.77	ug/L	0.50	75	53	146			
2-Chlorotoluene	5.08	ug/L	0.50	102	75	131			
4-Chlorotoluene	5.36	ug/L	0.50	107	74	129			
1,2-Dibromoethane	4.64	ug/L	0.50	93	76	124			
Dibromomethane	5.16	ug/L	0.50	103	77	125			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc  
Project: 170324007 Sterling Ranch MD

Report Date: 04/06/17  
Work Order: C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							<b>Batch: R277281</b>		
<b>Lab ID: Ics033117</b>	<b>Laboratory Control Sample</b>				<b>Run: 5971A.I_170331A</b>		<b>03/31/17 09:19</b>		
1,2-Dichlorobenzene	4.96	ug/L	0.50	99	74	124			
1,3-Dichlorobenzene	5.12	ug/L	0.50	102	77	122			
1,4-Dichlorobenzene	4.96	ug/L	0.50	99	76	126			
Dichlorodifluoromethane	5.60	ug/L	0.50	112	56	146			
1,1-Dichloroethane	4.72	ug/L	0.50	94	74	133			
1,2-Dichloroethane	5.76	ug/L	0.50	115	75	129			
1,1-Dichloroethene	5.16	ug/L	0.50	103	74	132			
cis-1,2-Dichloroethene	4.88	ug/L	0.50	98	81	122			
trans-1,2-Dichloroethene	5.12	ug/L	0.50	102	79	143			
1,2-Dichloropropane	4.60	ug/L	0.50	92	75	126			
1,3-Dichloropropane	4.68	ug/L	0.50	94	71	136			
2,2-Dichloropropane	5.68	ug/L	0.50	114	68	142			
1,1-Dichloropropene	5.00	ug/L	0.50	100	70	131			
cis-1,3-Dichloropropene	4.40	ug/L	0.50	88	74	135			
trans-1,3-Dichloropropene	4.84	ug/L	0.50	97	76	149			
Ethylbenzene	4.96	ug/L	0.50	99	72	130			
Methyl tert-butyl ether (MTBE)	5.12	ug/L	0.50	102	72	120			
Methyl ethyl ketone	52.0	ug/L	20	104	45	130			
Methyl isobutyl ketone	50.8	ug/L	20	102	58	135			
Methylene chloride	6.08	ug/L	0.50	122	66	142			
Naphthalene	5.60	ug/L	0.50	112	69	124			
Styrene	4.56	ug/L	0.50	91	80	124			
Tetrachloroethene	4.72	ug/L	0.50	94	72	131			
1,1,1,2-Tetrachloroethane	4.64	ug/L	0.50	93	78	124			
1,1,2,2-Tetrachloroethane	4.76	ug/L	0.50	95	68	137			
Toluene	4.76	ug/L	0.50	95	72	135			
Trichloroethene	4.80	ug/L	0.50	96	85	126			
1,1,1-Trichloroethane	5.40	ug/L	0.50	108	63	120			
1,1,2-Trichloroethane	4.48	ug/L	0.50	90	78	124			
Trichlorofluoromethane	4.52	ug/L	0.50	90	72	120			
1,2,3-Trichloropropane	4.68	ug/L	0.50	94	64	138			
Vinyl Acetate	4.76	ug/L	1.0	95	31	124			
Vinyl chloride	4.76	ug/L	0.50	95	58	140			
m+p-Xylenes	9.06	ug/L	0.50	91	67	139			
o-Xylene	4.48	ug/L	0.50	90	74	135			
Xylenes, Total	13.6	ug/L	0.50	90	70	137			
Surr: 1,2-Dichloroethane-d4			0.50	109	71	139			
Surr: p-Bromofluorobenzene			0.50	102	80	127			
Surr: Toluene-d8			0.50	92	80	123			
<b>Lab ID: blk033117</b>	<b>Method Blank</b>				<b>Run: 5971A.I_170331A</b>		<b>03/31/17 10:18</b>		
Acetone	ND	ug/L	20						
Acetonitrile	ND	ug/L	20						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 04/06/17

Project: 170324007 Sterling Ranch MD

Work Order: C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							Batch: R277281		
<b>Lab ID: blk033117</b>	Method Blank		Run: 5971A.I_170331A				03/31/17 10:18		
Acrolein	ND	ug/L				20			
Acrylonitrile	ND	ug/L				20			
Benzene	ND	ug/L			0.50				
Bromobenzene	ND	ug/L			0.50				
Bromochloromethane	ND	ug/L			0.50				
Bromodichloromethane	ND	ug/L			0.50				
Bromoform	ND	ug/L			0.50				
Bromomethane	ND	ug/L			0.50				
Carbon disulfide	ND	ug/L			0.50				
Carbon tetrachloride	ND	ug/L			0.50				
Chlorobenzene	ND	ug/L			0.50				
Chlorodibromomethane	ND	ug/L			0.50				
Chloroethane	ND	ug/L			0.50				
2-Chloroethyl vinyl ether	ND	ug/L			1.0				
Chloroform	ND	ug/L			0.50				
Chloromethane	ND	ug/L			0.50				
2-Chlorotoluene	ND	ug/L			0.50				
4-Chlorotoluene	ND	ug/L			0.50				
1,2-Dibromoethane	ND	ug/L			0.50				
Dibromomethane	ND	ug/L			0.50				
1,2-Dichlorobenzene	ND	ug/L			0.50				
1,3-Dichlorobenzene	ND	ug/L			0.50				
1,4-Dichlorobenzene	ND	ug/L			0.50				
Dichlorodifluoromethane	ND	ug/L			0.50				
1,1-Dichloroethane	ND	ug/L			0.50				
1,2-Dichloroethane	ND	ug/L			0.50				
1,1-Dichloroethene	ND	ug/L			0.50				
cis-1,2-Dichloroethene	ND	ug/L			0.50				
trans-1,2-Dichloroethene	ND	ug/L			0.50				
1,2-Dichloropropane	ND	ug/L			0.50				
1,3-Dichloropropane	ND	ug/L			0.50				
2,2-Dichloropropane	ND	ug/L			0.50				
1,1-Dichloropropene	ND	ug/L			0.50				
cis-1,3-Dichloropropene	ND	ug/L			0.50				
trans-1,3-Dichloropropene	ND	ug/L			0.50				
Ethylbenzene	ND	ug/L			0.50				
Methyl tert-butyl ether (MTBE)	ND	ug/L			0.50				
Methyl ethyl ketone	ND	ug/L			20				
Methyl isobutyl ketone	ND	ug/L			20				
Methylene chloride	ND	ug/L			0.50				
Naphthalene	ND	ug/L			0.50				
Styrene	ND	ug/L			0.50				
Tetrachloroethene	ND	ug/L			0.50				

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							Batch: R277281		
<b>Lab ID: blk033117</b>	Method Blank		Run: 5971A.I_170331A				03/31/17 10:18		
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50						
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50						
Toluene	ND	ug/L	0.50						
Trichloroethene	ND	ug/L	0.50						
1,1,1-Trichloroethane	ND	ug/L	0.50						
1,1,2-Trichloroethane	ND	ug/L	0.50						
Trichlorofluoromethane	ND	ug/L	0.50						
1,2,3-Trichloropropane	ND	ug/L	0.50						
Vinyl Acetate	ND	ug/L	1.0						
Vinyl chloride	ND	ug/L	0.50						
m+p-Xylenes	ND	ug/L	0.50						
o-Xylene	ND	ug/L	0.50						
Xylenes, Total	ND	ug/L	0.50						
Surr: 1,2-Dichloroethane-d4			0.50	105	71	139			
Surr: p-Bromofluorobenzene			0.50	104	80	127			
Surr: Toluene-d8			0.50	92	80	123			
<b>Lab ID: b17031875-001dms</b>							Run: 5971A.I_170331A		
Sample Matrix Spike						03/31/17 14:12			
Acetone	378	ug/L	100	109	55	144			
Acetonitrile	274	ug/L	100	110	54	142			
Benzene	24.6	ug/L	2.5	98	73	122			
Bromobenzene	24.8	ug/L	2.5	99	74	129			
Bromochloromethane	25.2	ug/L	2.5	101	66	120			
Bromodichloromethane	26.2	ug/L	2.5	105	74	128			
Bromoform	27.0	ug/L	2.5	108	66	128			
Bromomethane	18.8	ug/L	2.5	75	51	123			
Carbon disulfide	26.4	ug/L	2.5	106	46	145			
Carbon tetrachloride	28.2	ug/L	2.5	113	75	125			
Chlorobenzene	22.8	ug/L	2.5	91	80	123			
Chlorodibromomethane	26.8	ug/L	2.5	107	74	125			
Chloroethane	20.2	ug/L	2.5	81	59	142			
Chloroform	33.2	ug/L	2.5	110	68	124			
Chloromethane	18.6	ug/L	2.5	74	53	146			
2-Chlorotoluene	24.8	ug/L	2.5	99	75	131			
4-Chlorotoluene	25.8	ug/L	2.5	103	74	129			
1,2-Dibromoethane	24.0	ug/L	2.5	96	76	124			
Dibromomethane	26.2	ug/L	2.5	105	77	125			
1,2-Dichlorobenzene	24.6	ug/L	2.5	98	74	124			
1,3-Dichlorobenzene	24.6	ug/L	2.5	98	77	122			
1,4-Dichlorobenzene	24.6	ug/L	2.5	98	76	126			
Dichlorodifluoromethane	27.0	ug/L	2.5	108	56	146			
1,1-Dichloroethane	24.2	ug/L	2.5	97	74	133			
1,2-Dichloroethane	29.2	ug/L	2.5	117	75	129			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							Batch: R277281		
<b>Lab ID:</b> b17031875-001dms	<b>Sample Matrix Spike</b>		<b>Run: 5971A.I_170331A</b>				03/31/17 14:12		
1,1-Dichloroethene	26.6	ug/L	2.5	106	74	132			
cis-1,2-Dichloroethene	24.4	ug/L	2.5	98	81	122			
trans-1,2-Dichloroethene	25.8	ug/L	2.5	103	79	143			
1,2-Dichloropropane	23.0	ug/L	2.5	92	75	126			
1,3-Dichloropropane	22.4	ug/L	2.5	90	71	136			
2,2-Dichloropropane	28.0	ug/L	2.5	112	68	142			
1,1-Dichloropropene	25.2	ug/L	2.5	101	70	131			
cis-1,3-Dichloropropene	22.2	ug/L	2.5	89	74	135			
trans-1,3-Dichloropropene	24.6	ug/L	2.5	98	76	149			
Ethylbenzene	23.6	ug/L	2.5	94	72	130			
Methyl tert-butyl ether (MTBE)	25.6	ug/L	2.5	102	72	120			
Methyl ethyl ketone	268	ug/L	100	107	45	130			
Methyl isobutyl ketone	258	ug/L	100	103	58	135			
Methylene chloride	32.2	ug/L	2.5	129	66	142			
Naphthalene	27.6	ug/L	2.5	110	69	124			
Styrene	22.4	ug/L	2.5	90	80	124			
Tetrachloroethene	22.8	ug/L	2.5	91	72	131			
1,1,1,2-Tetrachloroethane	23.0	ug/L	2.5	92	78	124			
1,1,2,2-Tetrachloroethane	26.0	ug/L	2.5	104	68	137			
Toluene	24.4	ug/L	2.5	95	72	135			
Trichloroethene	23.8	ug/L	2.5	95	85	126			
1,1,1-Trichloroethane	26.8	ug/L	2.5	107	63	120			
1,1,2-Trichloroethane	23.4	ug/L	2.5	94	78	124			
Trichlorofluoromethane	21.2	ug/L	2.5	85	72	120			
1,2,3-Trichloropropane	26.2	ug/L	2.5	105	64	138			
Vinyl Acetate	24.4	ug/L	5.0	98	31	124			
Vinyl chloride	22.6	ug/L	2.5	90	58	140			
m+p-Xylenes	44.8	ug/L	2.5	90	67	139			
o-Xylene	22.6	ug/L	2.5	90	74	135			
Xylenes, Total	67.4	ug/L	2.5	90	70	137			
Surr: 1,2-Dichloroethane-d4			2.5	110	71	139			
Surr: p-Bromofluorobenzene			2.5	102	80	127			
Surr: Toluene-d8			2.5	93	80	123			
<b>Lab ID:</b> b17031875-001dmsd	<b>Sample Matrix Spike Duplicate</b>		<b>Run: 5971A.I_170331A</b>				03/31/17 15:11		
Acetone	410	ug/L	100	122	55	144	8.1	20	
Acetonitrile	262	ug/L	100	105	54	142	4.5	20	
Benzene	25.0	ug/L	2.5	100	73	122	1.6	20	
Bromobenzene	25.6	ug/L	2.5	102	74	129	3.2	20	
Bromochloromethane	25.2	ug/L	2.5	101	66	120	0.0	20	
Bromodichloromethane	27.2	ug/L	2.5	109	74	128	3.7	20	
Bromoform	28.4	ug/L	2.5	114	66	128	5.1	20	
Bromomethane	20.8	ug/L	2.5	83	51	123	10	20	

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 04/06/17

Project: 170324007 Sterling Ranch MD

Work Order: C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624							Batch: R277281		
Lab ID: b17031875-001dmsd	Sample Matrix Spike Duplicate		Run: 5971A.I_170331A				03/31/17 15:11		
Carbon disulfide	25.6	ug/L	2.5	102	46	145	3.1	20	
Carbon tetrachloride	28.6	ug/L	2.5	114	75	125	1.4	20	
Chlorobenzene	23.6	ug/L	2.5	94	80	123	3.4	20	
Chlorodibromomethane	28.0	ug/L	2.5	112	74	125	4.4	20	
Chloroethane	20.6	ug/L	2.5	82	59	142	2.0	20	
Chloroform	33.6	ug/L	2.5	111	68	124	1.2	20	
Chloromethane	19.3	ug/L	2.5	77	53	146	3.8	20	
2-Chlorotoluene	26.4	ug/L	2.5	106	75	131	6.2	20	
4-Chlorotoluene	27.2	ug/L	2.5	109	74	129	5.3	20	
1,2-Dibromoethane	24.0	ug/L	2.5	96	76	124	0.0	20	
Dibromomethane	26.8	ug/L	2.5	107	77	125	2.3	20	
1,2-Dichlorobenzene	25.8	ug/L	2.5	103	74	124	4.8	20	
1,3-Dichlorobenzene	26.0	ug/L	2.5	104	77	122	5.5	20	
1,4-Dichlorobenzene	25.4	ug/L	2.5	102	76	126	3.2	20	
Dichlorodifluoromethane	25.8	ug/L	2.5	103	56	146	4.5	20	
1,1-Dichloroethane	24.8	ug/L	2.5	99	74	133	2.4	20	
1,2-Dichloroethane	29.2	ug/L	2.5	117	75	129	0.0	20	
1,1-Dichloroethene	26.8	ug/L	2.5	107	74	132	0.7	20	
cis-1,2-Dichloroethene	25.2	ug/L	2.5	101	81	122	3.2	20	
trans-1,2-Dichloroethene	26.4	ug/L	2.5	106	79	143	2.3	20	
1,2-Dichloropropane	23.6	ug/L	2.5	94	75	126	2.6	20	
1,3-Dichloropropane	23.8	ug/L	2.5	95	71	136	6.1	20	
2,2-Dichloropropane	28.6	ug/L	2.5	114	68	142	2.1	20	
1,1-Dichloropropene	25.8	ug/L	2.5	103	70	131	2.4	20	
cis-1,3-Dichloropropene	23.2	ug/L	2.5	93	74	135	4.4	20	
trans-1,3-Dichloropropene	25.4	ug/L	2.5	102	76	149	3.2	20	
Ethylbenzene	25.0	ug/L	2.5	100	72	130	5.8	20	
Methyl tert-butyl ether (MTBE)	26.6	ug/L	2.5	106	72	120	3.8	20	
Methyl ethyl ketone	292	ug/L	100	117	45	130	8.6	20	
Methyl isobutyl ketone	286	ug/L	100	114	58	135	10	20	
Methylene chloride	31.4	ug/L	2.5	126	66	142	2.5	20	
Naphthalene	27.8	ug/L	2.5	111	69	124	0.7	20	
Styrene	22.8	ug/L	2.5	91	80	124	1.8	20	
Tetrachloroethene	23.8	ug/L	2.5	95	72	131	4.3	20	
1,1,1,2-Tetrachloroethane	23.2	ug/L	2.5	93	78	124	0.9	20	
1,1,2,2-Tetrachloroethane	27.4	ug/L	2.5	110	68	137	5.2	20	
Toluene	24.4	ug/L	2.5	95	72	135	0.0	20	
Trichloroethene	25.0	ug/L	2.5	100	85	126	4.9	20	
1,1,1-Trichloroethane	27.4	ug/L	2.5	110	63	120	2.2	20	
1,1,2-Trichloroethane	24.8	ug/L	2.5	99	78	124	5.8	20	
Trichlorofluoromethane	22.4	ug/L	2.5	90	72	120	5.5	20	
1,2,3-Trichloropropane	26.8	ug/L	2.5	107	64	138	2.3	20	
Vinyl Acetate	24.4	ug/L	5.0	98	31	124	0.0	20	

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E624</b>							<b>Batch: R277281</b>		
<b>Lab ID:</b> b17031875-001dmsd	<b>Sample Matrix Spike Duplicate</b>			<b>Run: 5971A.I_170331A</b>			<b>03/31/17 15:11</b>		
Vinyl chloride	22.8	ug/L	2.5	91	58	140	0.9	20	
m+p-Xylenes	46.0	ug/L	2.5	92	67	139	2.6	20	
o-Xylene	23.4	ug/L	2.5	94	74	135	3.5	20	
Xylenes, Total	69.4	ug/L	2.5	93	70	137			
Surr: 1,2-Dichloroethane-d4			2.5	112	71	139			
Surr: p-Bromofluorobenzene			2.5	105	80	127			
Surr: Toluene-d8			2.5	93	80	123			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 04/06/17

Project: 170324007 Sterling Ranch MD

Work Order: C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							Batch: 107942		
<b>Lab ID: MB-107942</b>	Method Blank		Run: SV5973N2.I_170330B				03/30/17 16:12		
Acenaphthene	ND	ug/L							
Acenaphthylene	ND	ug/L							
Anthracene	ND	ug/L							
Azobenzene	ND	ug/L							
Benzidine	ND	ug/L							
Benzo(a)anthracene	ND	ug/L							
Benzo(a)pyrene	ND	ug/L							
Benzo(b)fluoranthene	ND	ug/L							
Benzo(g,h,i)perylene	ND	ug/L							
Benzo(k)fluoranthene	ND	ug/L							
4-Bromophenyl phenyl ether	ND	ug/L							
Butylbenzylphthalate	ND	ug/L							
4-Chloro-3-methylphenol	ND	ug/L							
bis(-2-chloroethoxy)Methane	ND	ug/L							
bis(-2-chloroethyl)Ether	ND	ug/L							
bis(2-chloroisopropyl)Ether	ND	ug/L							
2-Chloronaphthalene	ND	ug/L							
2-Chlorophenol	ND	ug/L							
4-Chlorophenyl phenyl ether	ND	ug/L							
Chrysene	ND	ug/L							
Diethyl phthalate	ND	ug/L							
Di-n-butyl phthalate	ND	ug/L							
1,2-Dichlorobenzene	ND	ug/L							
1,3-Dichlorobenzene	ND	ug/L							
1,4-Dichlorobenzene	ND	ug/L							
3,3'-Dichlorobenzidine	ND	ug/L							
2,4-Dichlorophenol	ND	ug/L							
Dimethyl phthalate	ND	ug/L							
Di-n-octyl phthalate	ND	ug/L							
Dibenzo(a,h)anthracene	ND	ug/L							
2,4-Dimethylphenol	ND	ug/L							
4,6-Dinitro-2-methylphenol	ND	ug/L							50
2,4-Dinitrophenol	ND	ug/L							50
2,4-Dinitrotoluene	ND	ug/L							10
2,6-Dinitrotoluene	ND	ug/L							10
bis(2-ethylhexyl)Phthalate	ND	ug/L							10
Fluoranthene	ND	ug/L							10
Fluorene	ND	ug/L							10
Hexachlorobenzene	ND	ug/L							10
Hexachlorobutadiene	ND	ug/L							10
Hexachlorocyclopentadiene	ND	ug/L							10
Hexachloroethane	ND	ug/L							10
Indeno(1,2,3-cd)pyrene	ND	ug/L							10

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							<b>Batch: 107942</b>		
<b>Lab ID: MB-107942</b>	<b>Method Blank</b>		<b>Run: SV5973N2.I_170330B</b>				<b>03/30/17 16:12</b>		
Isophorone	ND	ug/L	10						
n-Nitrosodimethylamine	ND	ug/L	10						
n-Nitroso-di-n-propylamine	ND	ug/L	10						
n-Nitrosodiphenylamine	ND	ug/L	10						
2-Nitrophenol	ND	ug/L	10						
4-Nitrophenol	ND	ug/L	50						
Naphthalene	ND	ug/L	10						
Nitrobenzene	ND	ug/L	10						
Pentachlorophenol	ND	ug/L	50						
Phenanthrene	ND	ug/L	10						
Phenol	ND	ug/L	10						
Pyrene	ND	ug/L	10						
1,2,4-Trichlorobenzene	ND	ug/L	10						
2,4,6-Trichlorophenol	ND	ug/L	10						
Surr: 2-Fluorobiphenyl			10	57	28	107			
Surr: 2-Fluorophenol			10	42	20	56			
Surr: Nitrobenzene-d5			10	62	32	94			
Surr: Phenol-d5			10	30	19	45			
Surr: Terphenyl-d14			10	80	32	122			
Surr: 2,4,6-Tribromophenol			10	68	21	130			
<b>Lab ID: LCS-107942</b>	<b>Laboratory Control Sample</b>		<b>Run: SV5973N2.I_170330B</b>				<b>03/30/17 16:43</b>		
Acenaphthene	89.1	ug/L	10	89	58	99			
Acenaphthylene	84.2	ug/L	10	84	57	96			
Anthracene	75.6	ug/L	10	76	60	107			
Azobenzene	78.0	ug/L	10	78	56	100			
Benzidine	53.1	ug/L	10	53	10	100			
Benzo(a)anthracene	86.4	ug/L	10	86	62	114			
Benzo(a)pyrene	84.7	ug/L	10	85	62	108			
Benzo(b)fluoranthene	89.8	ug/L	10	90	48	127			
Benzo(g,h,i)perylene	87.2	ug/L	10	87	62	121			
Benzo(k)fluoranthene	84.0	ug/L	10	84	55	111			
4-Bromophenyl phenyl ether	87.1	ug/L	10	87	58	105			
Butylbenzylphthalate	90.8	ug/L	10	91	60	113			
4-Chloro-3-methylphenol	74.6	ug/L	10	75	53	92			
bis(2-chloroethoxy)Methane	69.9	ug/L	10	70	50	92			
bis(2-chloroethyl)Ether	72.1	ug/L	10	72	44	82			
bis(2-chloroisopropyl)Ether	63.2	ug/L	10	63	56	87			
2-Chloronaphthalene	84.9	ug/L	10	85	56	95			
2-Chlorophenol	67.2	ug/L	10	67	47	76			
4-Chlorophenyl phenyl ether	83.0	ug/L	10	83	58	99			
Chrysene	87.0	ug/L	10	87	63	106			
Diethyl phthalate	84.6	ug/L	10	85	58	103			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							<b>Batch: 107942</b>		
<b>Lab ID: LCS-107942</b>	<b>Laboratory Control Sample</b>			<b>Run: SV5973N2.I_170330B</b>			<b>03/30/17 16:43</b>		
Di-n-butyl phthalate	87.1	ug/L	10	87	61	110			
1,2-Dichlorobenzene	69.3	ug/L	10	69	43	81			
1,3-Dichlorobenzene	64.0	ug/L	10	64	41	79			
1,4-Dichlorobenzene	64.5	ug/L	10	64	42	79			
3,3'-Dichlorobenzidine	64.8	ug/L	10	65	51	93			
2,4-Dichlorophenol	70.6	ug/L	10	71	49	90			
Dimethyl phthalate	82.5	ug/L	10	82	58	104			
Di-n-octyl phthalate	93.4	ug/L	10	93	56	110			
Dibenzo(a,h)anthracene	87.8	ug/L	10	88	61	111			
2,4-Dimethylphenol	66.2	ug/L	10	66	45	89			
4,6-Dinitro-2-methylphenol	66.1	ug/L	50	66	37	105			
2,4-Dinitrophenol	54.1	ug/L	50	54	27	81			
2,4-Dinitrotoluene	86.2	ug/L	10	86	63	110			
2,6-Dinitrotoluene	77.2	ug/L	10	77	60	107			
bis(2-ethylhexyl)Phthalate	86.0	ug/L	10	86	56	108			
Fluoranthene	84.2	ug/L	10	84	63	110			
Fluorene	89.3	ug/L	10	89	60	99			
Hexachlorobenzene	82.7	ug/L	10	83	57	103			
Hexachlorobutadiene	71.7	ug/L	10	72	39	83			
Hexachlorocyclopentadiene	81.0	ug/L	10	81	39	91			
Hexachloroethane	65.0	ug/L	10	65	37	75			
Indeno(1,2,3-cd)pyrene	83.2	ug/L	10	83	59	109			
Isophorone	69.8	ug/L	10	70	42	102			
n-Nitrosodimethylamine	36.8	ug/L	10	37	20	45			
n-Nitroso-di-n-propylamine	76.6	ug/L	10	77	49	98			
n-Nitrosodiphenylamine	91.5	ug/L	10	92	61	108			
2-Nitrophenol	72.3	ug/L	10	72	51	96			
4-Nitrophenol	27.4	ug/L	50	27	15	36			
Naphthalene	68.1	ug/L	10	68	48	96			
Nitrobenzene	77.9	ug/L	10	78	51	91			
Pentachlorophenol	72.4	ug/L	50	72	53	109			
Phenanthrene	82.0	ug/L	10	82	58	104			
Phenol	40.6	ug/L	10	41	27	45			
Pyrene	85.0	ug/L	10	85	64	108			
1,2,4-Trichlorobenzene	71.2	ug/L	10	71	49	85			
2,4,6-Trichlorophenol	73.9	ug/L	10	74	47	99			
Surr: 2-Fluorobiphenyl			10	69	28	107			
Surr: 2-Fluorophenol			10	42	20	56			
Surr: Nitrobenzene-d5			10	72	32	94			
Surr: Phenol-d5			10	36	19	45			
Surr: Terphenyl-d14			10	80	32	122			
Surr: 2,4,6-Tribromophenol			10	70	21	130			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							<b>Batch: 107942</b>		
<b>Lab ID: C17030850-001CMS</b>	<b>Sample Matrix Spike</b>		<b>Run: SV5973N2.I_170330B</b>				<b>03/30/17 17:45</b>		
Acenaphthene	86.7	ug/L	10	87	58	99			
Acenaphthylene	75.5	ug/L	10	76	57	96			
Anthracene	81.6	ug/L	10	82	60	107			
Azobenzene	84.6	ug/L	10	85	56	100			
Benzidine	122	ug/L	20	122	10	100			S
Benzo(a)anthracene	83.4	ug/L	10	83	62	114			
Benzo(a)pyrene	78.4	ug/L	10	78	62	108			
Benzo(b)fluoranthene	79.9	ug/L	10	80	48	127			
Benzo(g,h,i)perylene	83.2	ug/L	10	83	62	121			
Benzo(k)fluoranthene	84.5	ug/L	10	84	55	111			
4-Bromophenyl phenyl ether	79.5	ug/L	10	79	58	105			
Butylbenzylphthalate	89.2	ug/L	10	89	60	113			
4-Chloro-3-methylphenol	78.3	ug/L	10	78	53	92			
bis(-2-chloroethoxy)Methane	77.9	ug/L	10	78	50	92			
bis(-2-chloroethyl)Ether	71.5	ug/L	10	71	44	82			
bis(2-chloroisopropyl)Ether	58.4	ug/L	10	58	56	87			
2-Chloronaphthalene	77.6	ug/L	10	78	56	95			
2-Chlorophenol	63.7	ug/L	10	64	47	76			
4-Chlorophenyl phenyl ether	81.0	ug/L	10	81	58	99			
Chrysene	85.9	ug/L	10	86	63	106			
Diethyl phthalate	84.0	ug/L	10	84	58	103			
Di-n-butyl phthalate	87.0	ug/L	10	87	61	110			
1,2-Dichlorobenzene	67.3	ug/L	10	67	43	81			
1,3-Dichlorobenzene	66.0	ug/L	10	66	41	79			
1,4-Dichlorobenzene	66.7	ug/L	10	67	42	79			
3,3'-Dichlorobenzidine	131	ug/L	10	131	51	93			S
2,4-Dichlorophenol	70.0	ug/L	10	70	49	90			
Dimethyl phthalate	79.3	ug/L	10	79	58	104			
Di-n-octyl phthalate	81.8	ug/L	10	82	56	110			
Dibenzo(a,h)anthracene	80.1	ug/L	10	80	61	111			
2,4-Dimethylphenol	70.7	ug/L	10	71	45	87			
4,6-Dinitro-2-methylphenol	53.1	ug/L	50	53	37	105			
2,4-Dinitrophenol	43.0	ug/L	50	43	27	81			
2,4-Dinitrotoluene	85.6	ug/L	10	86	63	110			
2,6-Dinitrotoluene	81.5	ug/L	10	81	60	107			
bis(2-ethylhexyl)Phthalate	77.5	ug/L	10	77	56	108			
Fluoranthene	84.0	ug/L	10	84	63	110			
Fluorene	80.0	ug/L	10	80	60	99			
Hexachlorobenzene	78.2	ug/L	10	78	57	103			
Hexachlorobutadiene	69.1	ug/L	10	69	39	83			
Hexachlorocyclopentadiene	69.0	ug/L	10	69	39	91			
Hexachloroethane	62.6	ug/L	10	63	37	75			
Indeno(1,2,3-cd)pyrene	76.3	ug/L	10	76	59	109			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 04/06/17

Project: 170324007 Sterling Ranch MD

Work Order: C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							<b>Batch: 107942</b>		
<b>Lab ID: C17030850-001CMS</b>	<b>Sample Matrix Spike</b>		<b>Run: SV5973N2.I_170330B</b>				<b>03/30/17 17:45</b>		
Isophorone	71.4	ug/L	10	71	42	102			
n-Nitrosodimethylamine	26.1	ug/L	10	26	20	45			
n-Nitroso-di-n-propylamine	76.1	ug/L	10	76	49	98			
n-Nitrosodiphenylamine	105	ug/L	10	105	61	108			
2-Nitrophenol	73.5	ug/L	10	74	51	96			
4-Nitrophenol	25.8	ug/L	50	26	15	36			
Naphthalene	75.6	ug/L	10	76	48	96			
Nitrobenzene	75.6	ug/L	10	76	51	91			
Pentachlorophenol	60.3	ug/L	50	60	53	109			
Phenanthrene	83.8	ug/L	10	84	58	104			
Phenol	38.7	ug/L	10	39	27	45			
Pyrene	87.0	ug/L	10	87	64	108			
1,2,4-Trichlorobenzene	74.7	ug/L	10	75	49	85			
2,4,6-Trichlorophenol	68.8	ug/L	10	69	47	99			
Surr: 2-Fluorobiphenyl			10	51	28	107			
Surr: 2-Fluorophenol			10	41	20	56			
Surr: Nitrobenzene-d5			10	64	32	94			
Surr: Phenol-d5			10	33	19	45			
Surr: Terphenyl-d14			10	73	32	122			
Surr: 2,4,6-Tribromophenol			10	67	21	130			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc

Report Date: 04/06/17

Project: 170324007 Sterling Ranch MD

Work Order: C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							<b>Analytical Run: R277253</b>		
<b>Lab ID: 30-Mar-17_CCV_11</b>	<b>Continuing Calibration Verification Standard</b>						<b>03/30/17 15:40</b>		
Acenaphthene	75.3	ug/L	10	100	80	120			
Acenaphthylene	79.7	ug/L	10	106	80	120			
Anthracene	75.2	ug/L	10	100	80	120			
Azobenzene	75.1	ug/L	10	100	80	120			
Benzidine	70.6	ug/L	10	94	80	120			
Benzo(a)anthracene	76.3	ug/L	10	102	80	120			
Benzo(a)pyrene	81.9	ug/L	10	109	80	120			
Benzo(b)fluoranthene	78.3	ug/L	10	104	80	120			
Benzo(g,h,i)perylene	78.0	ug/L	10	104	80	120			
Benzo(k)fluoranthene	81.6	ug/L	10	109	80	120			
4-Bromophenyl phenyl ether	81.6	ug/L	10	109	80	120			
Butylbenzylphthalate	78.0	ug/L	10	104	80	120			
4-Chloro-3-methylphenol	76.0	ug/L	10	101	80	120			
bis(2-chloroethoxy)Methane	70.4	ug/L	10	94	80	120			
bis(2-chloroethyl)Ether	77.2	ug/L	10	103	80	120			
bis(2-chloroisopropyl)Ether	76.7	ug/L	10	102	80	120			
2-Chloronaphthalene	79.8	ug/L	10	106	80	120			
2-Chlorophenol	72.7	ug/L	10	97	80	120			
4-Chlorophenyl phenyl ether	72.7	ug/L	10	97	80	120			
Chrysene	74.9	ug/L	10	100	80	120			
Diethyl phthalate	76.8	ug/L	10	102	80	120			
Di-n-butyl phthalate	76.9	ug/L	10	102	80	120			
1,2-Dichlorobenzene	76.8	ug/L	10	102	80	120			
1,3-Dichlorobenzene	72.1	ug/L	10	96	80	120			
1,4-Dichlorobenzene	74.8	ug/L	10	100	80	120			
3,3'-Dichlorobenzidine	76.2	ug/L	10	102	80	120			
2,4-Dichlorophenol	73.5	ug/L	10	98	80	120			
Dimethyl phthalate	77.0	ug/L	10	103	80	120			
Di-n-octyl phthalate	81.2	ug/L	10	108	80	120			
Dibenzo(a,h)anthracene	76.2	ug/L	10	102	80	120			
2,4-Dimethylphenol	70.3	ug/L	10	94	80	120			
4,6-Dinitro-2-methylphenol	77.4	ug/L	50	103	80	120			
2,4-Dinitrophenol	80.2	ug/L	50	107	80	120			
2,4-Dinitrotoluene	79.8	ug/L	10	106	80	120			
2,6-Dinitrotoluene	80.8	ug/L	10	108	80	120			
bis(2-ethylhexyl)Phthalate	77.3	ug/L	10	103	80	120			
Fluoranthene	76.8	ug/L	10	102	80	120			
Fluorene	82.8	ug/L	10	110	80	120			
Hexachlorobenzene	74.2	ug/L	10	99	80	120			
Hexachlorobutadiene	73.0	ug/L	10	97	80	120			
Hexachlorocyclopentadiene	79.2	ug/L	10	106	80	120			
Hexachloroethane	74.4	ug/L	10	99	80	120			
Indeno(1,2,3-cd)pyrene	73.3	ug/L	10	98	80	120			

**Qualifiers:**

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ND - Not detected at the reporting limit.



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# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E625</b>							Analytical Run: R277253		
<b>Lab ID: 30-Mar-17_CCV_11</b>	<b>Continuing Calibration Verification Standard</b>						03/30/17 15:40		
Isophorone	71.5	ug/L	10	95	80	120			
n-Nitrosodimethylamine	79.5	ug/L	10	106	80	120			
n-Nitroso-di-n-propylamine	76.0	ug/L	10	101	80	120			
n-Nitrosodiphenylamine	77.5	ug/L	10	103	80	120			
2-Nitrophenol	74.6	ug/L	10	99	80	120			
4-Nitrophenol	72.4	ug/L	50	97	80	120			
Naphthalene	68.4	ug/L	10	91	80	120			
Nitrobenzene	77.1	ug/L	10	103	80	120			
Pentachlorophenol	71.7	ug/L	50	96	80	120			
Phenanthrene	70.9	ug/L	10	95	80	120			
Phenol	79.0	ug/L	10	105	80	120			
Pyrene	79.0	ug/L	10	105	80	120			
1,2,4-Trichlorobenzene	73.1	ug/L	10	98	80	120			
2,4,6-Trichlorophenol	71.0	ug/L	10	95	80	120			
Surr: 2-Fluorobiphenyl			10	108	80	120			
Surr: 2-Fluorophenol			10	105	80	120			
Surr: Nitrobenzene-d5			10	101	80	120			
Surr: Phenol-d5			10	102	80	120			
Surr: Terphenyl-d14			10	104	80	120			
Surr: 2,4,6-Tribromophenol			10	105	80	120			

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Colorado Analytical Laboratories Inc  
**Project:** 170324007 Sterling Ranch MD

**Report Date:** 04/06/17  
**Work Order:** C17030850

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> SW8260M									Analytical Run: 108173
<b>Lab ID:</b> CCV-108173	Continuing Calibration Verification Standard								04/06/17 08:29
1,4-Dioxane	95.7	ug/L	1.0	96	80	120			
<b>Method:</b> SW8260M									Batch: 108173
<b>Lab ID:</b> LCS-108173	Laboratory Control Sample								04/06/17 08:51
1,4-Dioxane	87.5	ug/L	1.0	88	70	130			Run: VOA5973A.I_170406A
<b>Lab ID:</b> MB-108173	Method Blank								04/06/17 09:12
1,4-Dioxane	ND	ug/L	1.0						Run: VOA5973A.I_170406A
<b>Lab ID:</b> C17030850-001AMS	Sample Matrix Spike								04/06/17 09:55
1,4-Dioxane	194	ug/L	2.0	97	70	130			Run: VOA5973A.I_170406A
<b>Lab ID:</b> C17030850-001AMSD	Sample Matrix Spike Duplicate								04/06/17 10:17
1,4-Dioxane	206	ug/L	2.0	103	70	130	6.0	20	

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



# Work Order Receipt Checklist

Colorado Analytical Laboratories Inc

C17030850

Login completed by: Corinne Wagner

Date Received: 3/28/2017

Reviewed by: Kasey Vidick

Received by: ckw

Reviewed Date: 3/29/2017

Carrier name: Ground

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	6.6°C On Ice - From Field		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

## Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

## Contact and Corrective Action Comments:

None



# *Appendix F*

**Appendix F**  
**Falcon Area Water and Wastewater Authority**  
**Current Water Supply within FAWWA Service Area (Sterling Ranch)**  
**Update February, 2022**

		<u>Summary of Existing Available Supplies</u>		
Water Supply Summary	Existing Available Supplies summarized from From Table 2		Non -UBS	
	The Ranch Onsite (UBS)		Onsite-must remain in UBS 245 AF	
	Sterling Ranch Onsite Sterling Ranch On-Site Aug Case 20 CW 3059		371.47 283.16	Onsite--Original report Additional Onsite NT and NNT Augmented 20 CW 3059
	Sterling Ranch Available Supply (300 year)		654.63	
	Retreat Onsite (Central System Only)		42.76	Retreat Onsite
	<b>Total Currently Available FAWWA Supply</b>		<b>697.39</b>	
		<b>Total AF</b>		

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**Falcon Area Water and Wastewater Authority**  
**Commitments within FAWWA Service Area (Sterling Ranch)**  
**Update March, 2022**

<b>Analysis of Water Commitments</b>								Volumetric Commitment (300 year--Acre-feet)
Development	Preliminary Commitments			Final Commitments				
	Commitment SFE	Supply / Commitment Acre-Feet	Letter or Summary Date/Notes	Commitment SFE	Commitment Acre-Feet	Letter or Summary Date/Notes		
Commitments	The Retreat at TimberRidge Preliminary Plan (Central System Only) Final #1 Final #2	167	58.951	April 2018 Report Supplement Nov 2020	59 SFE 78 SFE	20.827 27.53	23-Aug-20 April 30,2021	17685.3
		Sterling Ranch Preliminary Plan Phase One						
Commitments	Sterling Ranch Filing #1	726	255.96	June 2015 Report/Summary Update February 2019	0	0	Tracts Only	
	Tract BB (10.545) Branding Iron at Sterling Ranch Filing No. 1 Branding Iron Filing No. 2				51 88	17.85 31.07	Summary and Letter Revised Feb 20, 2020 (includes School--13 SFE/75 Residential)	5355 9321
	Sterling Ranch Filing #2 (49 SF lots with 4.29 AF landscaping)				61 (61 SFE w irrigation)	21.59	Includes 4.29 AF Irrigation Revised Jan 21, 2021	6477
	Tract G (19.574) Homestead at Sterling Ranch Filing No. 1 Tract E (29.658) Homestead at Sterling Ranch Filing No. 2				72 104	25.42 36.71	20-Feb-19	7624.8 11013.6
	Copper Chase at Sterling Ranch resubmittal				145	50.45	21-Feb-19 138 single family lots 12/21/2021 includes 1.39 Ac Park	15135
Sterling Ranch Preliminary Plan Phase Two		214.5	75.719	July, 2020 Re-issue Feb 26, 2021			School commitment (13 SFE) contained in Branding Iron Filing #2 above	22715.55
Homestead North at Sterling Ranch Preliminary Plan		147	62.47				Letter November 4, 2020 includes 10.58 AFs irrigation Update Letter Jan 21, 2021	18741
Totals	Total Active Commitments Either actual Finding of Sufficiency or anticipated Finding	Total Findings at Preliminary			Total Findings at Final			114068.3
		SFE	AF		SFE	AF		
		528.5	197.14		521.0	183.088		
<b>Total Active Commitments (AF)</b>						<b>380.23</b>		

General Note 1. As of January 1, 2022 the Falcon Area Water and Wastewater Authority is managing all water among various Districts, who are participating agencies. Therefore, water accounting changes were adopted on January 1, that do not separately balance or account for separate water accounting within the respective area. Going forward, the commitment sheet will be streamlined by simply adding the total commitments across the FAWWA participating entities.

General Note 2: Sketch Plans do not have hard commitments and are not shown here. Subdivisions can either have a finding of sufficiency at preliminary or final plat stage. Water reports/commitments are sometimes submitted at both stages, even though sufficiency might be achieved at different stages. In order to attempt to track this possible discrepancy we will show the active water commitment in yellow highlight as best as possible. Summation of active water commitments will only track the totals highlighted in yellow. If when a submitted preliminary plan commitment does not result in a finding of sufficiency and an ensuing finding occurs at final plat, only the final commitment will be tallied.

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# *Appendix G*

# WATER SUPPLY INFORMATION SUMMARY

Section 30-28-133(d), C.R.S. requires that the applicant submit to the County, "Adequate evidence that a Water supply that is sufficient in terms of quantity, quality, and dependability will be available to ensure an adequate supply of water"

1. NAME OF DEVELOPMENT AS PROPOSED		<u>Homestead North Phase One</u>	
2. LAND USE ACTION		<u>Preliminary Plan</u>	
3. NAME OF EXISTING PARCEL AS RECORDED			
<u>N/A</u>			
SUBDIVISION <u>See Above</u>		FILING	BLOCK <u>All</u> Lot <u>All</u>
4. TOTAL ACERAGE <u>60.623</u>	5. NUMBER OF LOTS PROPOSED <u>147</u>	PLAT MAPS ENCLOSED <input type="checkbox"/> YES	
6. PARCEL HISTORY - Please attach copies of deeds, plats, or other evidence or documentation. (In submittal package)			
A. Was parcel recorded with county prior to June 1, 1972?		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
B. Has the parcel ever been part of a division of land action since June 1, 1972?		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If yes, describe the previous action			
7. LOCATION OF PARCEL - Include a map delineating the project area and tie to a section corner. (In submittal)			
OF SECTION <u>27, 28 and 33</u> TOWNSHIP <u>12</u>		<input type="checkbox"/> N <input checked="" type="checkbox"/> S RANGE <u>65</u> <input type="checkbox"/> E <input checked="" type="checkbox"/> W	
OF SECTION _____ TOWNSHIP _____			
OF 1SECTION _____ TOWNSHIP _____			
PRINCIPAL MERIDIAN: <input checked="" type="checkbox"/> 6TH <input type="checkbox"/> N.M. <input type="checkbox"/> UTE <input type="checkbox"/> COSTILLA			
8. PLAT - Location of all wells on property must be plotted and permit numbers provided.			
Surveyors plat <input type="checkbox"/> YES <input type="checkbox"/> NO		If not, scaled hand-drawn sketch <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <u>N/A</u>	
9. ESTIMATED WATER REQUIREMENTS - Gallons per Day or Acre Foot per Year		10. WATER SUPPLY SOURCE <u>DENVER BASIN</u>	
HOUSEHOLD USE # 1 * <u>147</u> of units <u>46,324</u> GPD <u>51.89</u> AF	HOUSEHOLD USE #2 _____ of units _____ GPD _____ AF	<input checked="" type="checkbox"/> EXISTING <input type="checkbox"/> DEVELOPED	<input type="checkbox"/> NEW WELLS
COMMERCIAL USE # _____ Acres _____ GPD _____ AF	IRRIGATION # <u>4.23</u> acres <u>9,440</u> GPD <u>10.58</u> AF	WELLS SPRING WELL PERMIT NUMBERS	Proposed Aquifers - (Check One)
<i>Temporary Irrigation to start Native Grasses in Tracts (See Report) **</i>	STOCK WATERING # _____ of head _____ GPD _____ AF	<u>LFH 80131-F</u>	<input type="checkbox"/> Alluvial <input checked="" type="checkbox"/> Upper Arapahoe
OTHER _____ GPD _____ AF	TOTAL <u>55,764</u> GPD <u>62.47</u> AF	<u>Arapahoe 80132-F</u>	<input type="checkbox"/> Upper Dawson <input checked="" type="checkbox"/> Lower Arapahoe
* This overall unit user characteristic <u>exceeds</u> the use characteristics required by <u>El Paso County Presumptive use factors</u>		<u>20 CW 3059</u>	<input type="checkbox"/> Lower Dawson <input checked="" type="checkbox"/> Laramie Fox Hills
** Based on landscaping plan and tract sizes, the estimated landscaping is 4.23 acres included in SFE		<u>08 CW-113; 08 CW -018</u>	<input type="checkbox"/> Denver <input type="checkbox"/> Dakota
		<input type="checkbox"/> MUNICIPAL	<input type="checkbox"/> Other
		<input type="checkbox"/> ASSOCIATION	WATER COURT DECREE CASE NUMBERS
		<input checked="" type="checkbox"/> COMPANY	<u>08 CW-113, 08 CW -018, 08 CW-019</u>
		<input checked="" type="checkbox"/> DISTRICT	<u>17 CW-3002; 18 CW-3002, 20 CW-3059</u>
		NAME <u>Falcon Area Water and Wastewater Authority</u>	
		LETTER OF COMMITMENT FOR SERVICE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
11. ENGINEER'S WATER SUPPLY REPORT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If yes, please forward with this form. (This may be required before our review is completed)			
12. TYPE OF SEWAGE DISPOSAL SYSTEM <u>Central Sewer</u>			
<input type="checkbox"/> SEPTIC TANK/LEACH FIELD		<input checked="" type="checkbox"/> CENTRAL SYSTEM - DISTRICT NAME: <u>Falcon Area Water and Wastewater Authority</u>	
<input type="checkbox"/> LAGOON		<input type="checkbox"/> VAULT - LOCATION SEWAGE HAULED TO: _____	
<input type="checkbox"/> ENGINEERED SYSTEM (Attach a copy of engineering design)		<input type="checkbox"/> OTHER: _____	