

JENISHAY FARMS

For Shay Miles

WATER RESOURCES And WASTEWATER REPORT

September 2020

Prepared By:



JENISHAY FARMS
WATER RESOURCES and WASTWATER REPORT

SEPTEMBER 2020

Prepared for:

Shay Miles
15630 Fox Creek Lane
Colorado Springs, CO 80908

Prepared by:

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**Executive Summary:
Water Resources and Wastewater Report—JeniShay Farms**

Report must
reference all 9
proposed lots and
corresponding
acreage

Development at Fox Creek Lane consists of 39.77 acres and seven (7) lots and is located in Black Forest, southeast of the intersection of Hodgen Rd and Black Forest Rd. The development is primarily located in the NE1/4 of the SW1/4 of Section 29, Township 11S, Range 65W. Residential properties within the development will be provided water services through individual residential wells and wastewater served through individual on-site wastewater treatment systems (OWTS).

It is expected that each rural residential home in the JeniShay Farms Subdivision will require an average of 0.59 annual acre-feet (which includes annual allocations for domestic use, irrigation, and stock water). This anticipated water demand constant is consistent with historic needs for nearby developments.

All seven (7) lots will be served by individual on-site residential wells and septic. The amount of water available for consumptive use from the Dawson Aquifer to serve the proposed development is estimated at 13.44 AF/year over a 300-year supply. Annual demand estimates using the residential constant described above comes to approximately 4.13 AF annually. Return flows from each individual OWTS will be dedicated to replace post-pumping depletions and are estimated at 1.575 AF annually, which will replace estimated depletions (which are estimated at 0.858 AF/year by the 300th year of use).

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SECTION 1 INTRODUCTION

The purpose of this study is to provide a preliminary outline of the water resources and wastewater needs that would be necessary for the development at JeniShay Farms.

1.1 New Development Description:

Development at JeniShay Farms consists of 39.77 acres and seven (7) lots and is located in Black Forest, southeast of the intersection of Hodgen Rd and Black Forest Rd. The development is primarily located in the NE1/4 of the SW1/4 of Section 29, Township 11S, Range 65W. Residential properties within the development will be provided water services through individual residential wells and wastewater served through individual on-site wastewater treatment systems (OWTS).

Appendix A contains a preliminary plan for the development at Fox Creek Lane.

SECTION 2 PROJECTION OF WATER NEEDS

2.1 Analysis of Water Demands:

Expected water demands are calculated in Appendix B. Table 2-1 below estimates the projected water demands for development at JeniShay Farms. Each Dawson Aquifer well is proposed to divert 0.59 acre-feet of water annually for in house use in one single family residence (0.25 acre-foot per residence for domestic indoor use; irrigation of up to 4,000 square feet of lawn, garden, and trees, which require 0.27 acre-feet; and watering of four large domestic animals, which require 0.07 acre-feet).

Calculation must be based on 0.26 ac-ft/year

Table 2-1 -Projected Water Demands for JeniShay Farms

<i># of Units</i>	<i>Land Use</i>	<i>Water Use Per Unit (AF/Unit)</i>	<i>Annual Demand (AF)</i>	<i>Average Daily Flow (ADF) (GPD)</i>	<i>Maximum Daily Flow (MDF) (@ 2.5 x ADF) (GPD)</i>	<i>Peak Hour Flow (@ 1.5 x MDF) (GPM)</i>
7	Residential (Rural, Well & OWTS)	0.59	4.13	3,687	9,218	9.6

Total Annual Demand for JeniShay Farms is 4.13 acre-feet.

SECTION 3 PROPOSED 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 and described in Court Case No. 18CW3226. The findings and relevant information are displayed in **Appendix C**.

Table 3-1
Summary of Available Legal 300-year Water Supply
for JeniShay Farms

Water	Annual Supply* (Acre-Feet)
Upper Dawson NNT	13.44
Denver NT	10.67
Arapahoe NT	5.52
Laramie-Fox Hills NT	3.79

*300-year annual supply

The replacement plan will utilize return flows from each on-site individual septic system on the order of 0.225 AF/Year-SFE, which is estimated to provide approximately 1.575 AF/year. These return flows are sufficient to augment estimated annual post-pumping depletions within the development. Since the development is not within a designated groundwater basin the depletions are estimated to come out of Division 1 / Division 2. These alluvial depletions are estimated to be at 0.860 AF/year by the 300th year of use, which can be replaced by the estimated return flows from each residential septic system. See **Appendix B** for tabulated results of the Aug 3 model.

The use of ground water from the seven (7) individual residential wells is limited to ordinary household purposes inside one (1) single family dwelling, the watering of not more than four (4) large non-commercial domestic animals, and the irrigation of not more than 13,000 square feet of home gardens and lawns.

3.2 *Source of Supply:*

Domestic and commercial water demand will be met using individual wells drilled into the Upper Dawson formation.

3.3 *Water Quality and Treatment:*

The water quality in the Dawson Aquifer in this area has typically been suitable for residential potable use. Water samples were obtained from an existing Dawson well located at 15630 Fox Creek Ln. Water samples were obtained from the well on March 6th, 2019 with water quality testing performed by Colorado Analytical Laboratories per the El Paso County Land Development Code section 8.4.7(B). Final results from this water quality testing were received on March 20th, 2019 and can be found in **Appendix E**. There were no results of concern.

3.4 *Water Storage:*

Each single-family home and the commercial lot will have its own individual pressure tank. The size and pressure of the tanks are to be determined by the property owner.

SECTION 4 WASTEWATER AND WASTEWATER TREATMENT

4.1 *Wastewater Loads*

Wastewater projections are based on similar District historical use. All 7 of the residential lots at Fox Creek Lane will have on-site septic systems. Average daily wastewater loads are expected to be approximately 241 gallons per day per single family residence, and maximum daily wastewater loads are expected to be approximately 294 gallons per day per single family residence.

Table 4-1 - Projected Wastewater Loads for JeniShay Farms

<i>Wastewater Loads</i>			
<i># of Units</i>	<i>Type</i>	<i>Average Daily Flow (ADF) (GPD)</i>	<i>Maximum Daily Flow (GPD)</i>
7	Residential	1,687	2,058

Total Expected Daily Loads for JeniShay Farms is 1,687 gallons/day.

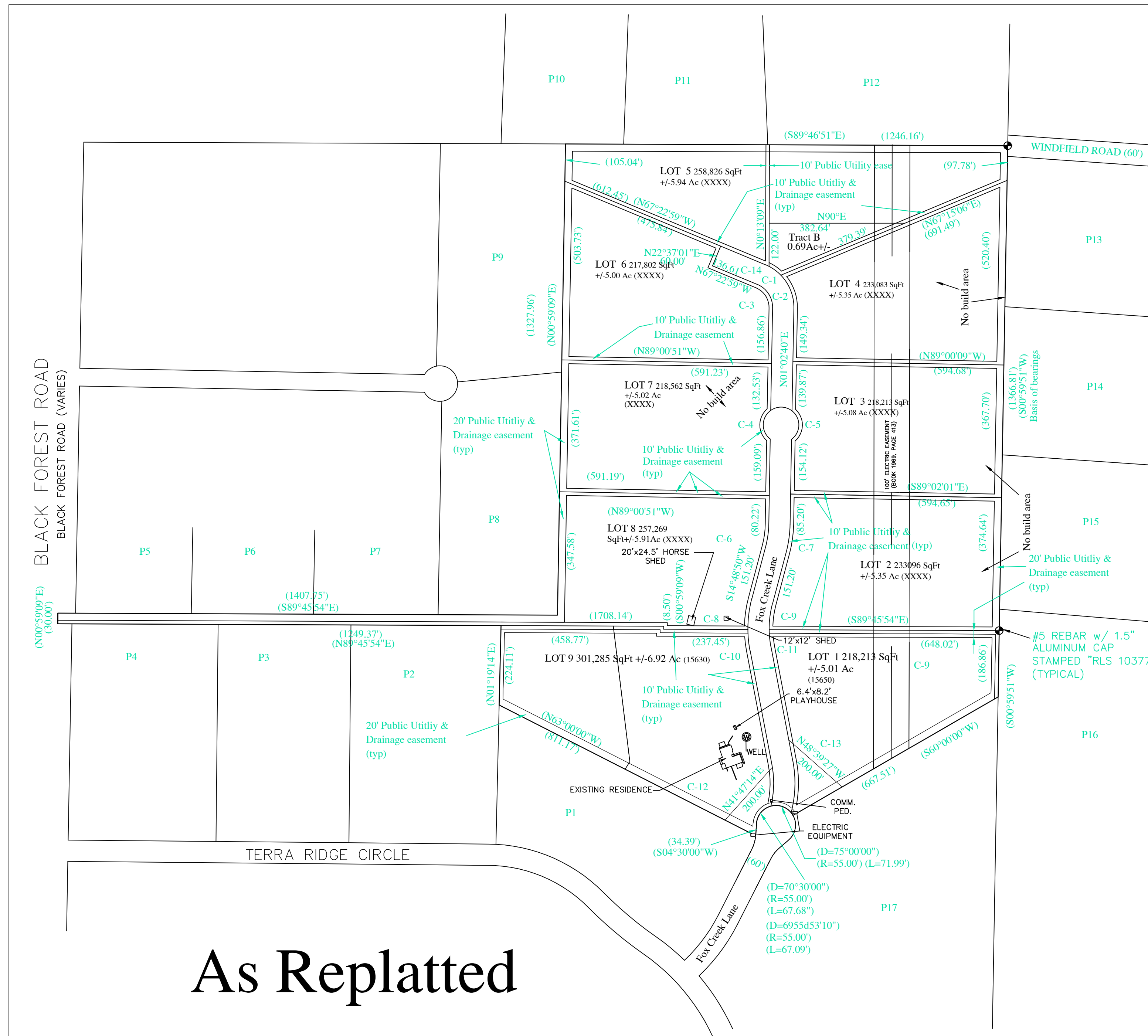
4.2 *On-Site Wastewater Treatment Systems*

Seven (7) single family homes will be served by individual on-site wastewater treatment systems. Soils information relevant to the design of the individual on-site wastewater treatment (septic systems) is included in **Appendix D**. As indicated in the report, each septic system will need to be designed by a Colorado Registered Professional Engineer due to the encountered soil types and encountered groundwater elevation in relation to the surface.

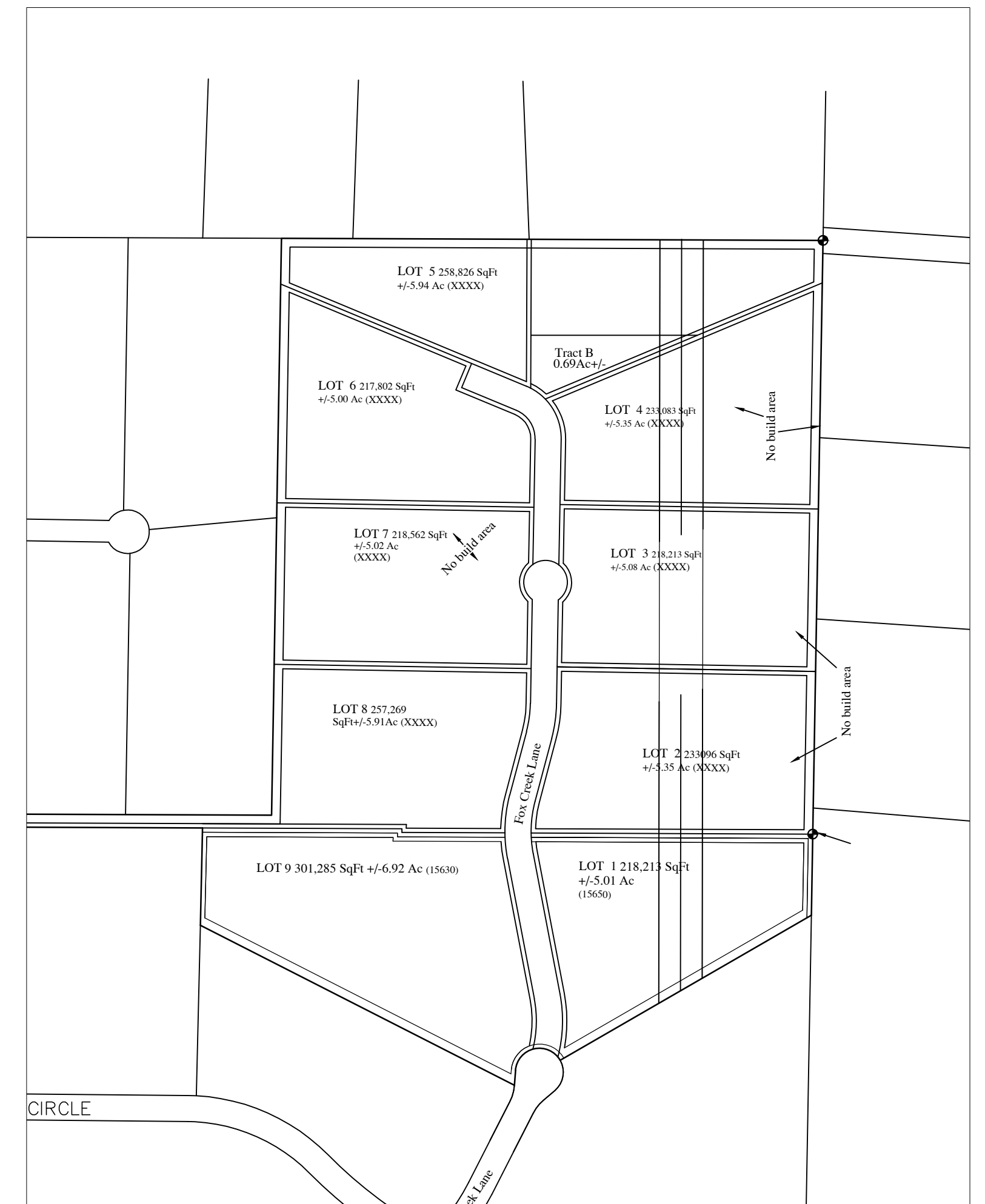
Appendix A

Final Plat FOX CREEK ESTATES

Title Vacation & Replat of Lots 5 and 6, Terra Ridge Filing No. 1, Together with 7 Lots in Fox Creek Estates
A Portion of Section 29, Township 11 South, Range 65 West of the 6th P.M., El Paso County, Colorado



ADJACENT PROPERTY DESCRIPTION	
P1	Not a part of this subdivision Robb Peters 51293-02-004 Lot 4, Terra Ridge Fil. No 1 Zoned RR-5
P2	Not a part of this subdivision Mark Davis 51293-02-003 Lot 3, Terra Ridge Fil. No 1 Zoned RR-5
P3	Not a part of this subdivision Justin Sumpter 51293-02-002 Lot 2, Terra Ridge Fil. No 1 Zoned RR-5
P4	Not a part of this subdivision Eric Mikaska 51293-02-001 Lot 1, Terra Ridge Fil. No 1 Zoned RR-5
P5	Not a part of this subdivision Diana Gard 51293-01-008 Lot 8, Whispering Hills Estates Zoned RR-5
P6	Not a part of this subdivision Rhonda Barr 51293-01-007 Lot 7, Whispering Hills Estates Zoned RR-5
P7	Not a part of this subdivision Christopher Humtcek 51293-01-006 Lot 6, Whispering Hills Estates Zoned RR-5
P8	Not a part of this subdivision David Khalilq 51293-01-005 Lot 5, Whispering Hills Ests Zoned RR-5
P9	Not a part of this subdivision Todd Andrews 51293-01-004 Lot 4, Whispering Hills Ests Zoned RR-5
P10	Not a part of this subdivision Richard Martinez 51290-04-013 Lot 8, Ridgeview Acres Zoned RR-5
P11	Not a part of this subdivision Temmer Family Trust 51290-04-012 Lot 7, Ridgeview Acres Zoned RR-5
P12	Not a part of this subdivision Kimberly Tebrugge 51290-04-011 Lot 6, Ridgeview Acres Zoned RR-5
P13	Not a part of this subdivision Roy & Julie Heare 51290-05-002 Lot 148, Wildwood Village Unit 3 Zoned RR-5
P14	Not a part of this subdivision David Porter 51290-05-001 Lot 149, Wildwood Village Unit 3 Zoned RR-5
P15	Not a part of this subdivision Paul Gavin 51290-05-001 Lot 149, Wildwood Village Unit 3 Zoned RR-5
P16	Not a part of this subdivision Edwin Bedford 51290-05-004 Lot 151, Wildwood Village Unit 4 Zoned RR-5
P17	Not a part of this subdivision Hugo Oregel 51293-02-007 Lot 1, Terra Ridge Fil No. 2 Zoned RR-5



As Replatted

Fox Creek Lane Curve Table:			
Number:	Delta	Radius	Chord
C-1	18°19'30"	130.00'	41.58'
C-2	45°21'29"	130.00'	102.91'
C-3	68°32'26"	70.00'	83.74'
C-4	106°14'26"	50.00'	92.71'
C-5	106°16'47"	50.00'	92.75'
C-6	13°50'51"	330.00'	79.76'
C-7	13°50'51"	270.00'	65.26'
C-8	15°18'30"	330.00'	88.14'
C-9	15°27'55"	270.00'	72.88'
C-10	10°19'05"	330.00'	59.43'
C-11	10°09'22"	270.00'	47.86'
C-12	24°49'13"	270.00'	116.96'
C-13	25°27'17"	330.00'	146.61'
C-14	04°51'27"	130.00'	11.02'

Appendix B

Appendix B, Table 1: Estimated Annual Water Demands and Pumping Rates

Use	Constant	Increment
Domestic Indoor	0.250	AF/year
Irrigation Outdoor	0.270	AF/year
Stock ²	0.070	AF/year
Total Well Demand	0.590	AF/year/lot
Total Lot Demand	4.13	AF/year

Note 2: Stock watering assumes (4) large domestic animals

Current zoning does not restrict total number of animals allowed per parcel. Please clarify in Lol if Covenants will restrict livestock use.

Appendix B, Table 2: Projected Wastewater Loads

Average Daily Wastewater Loads:		241	GPD/SFE
Maximum Daily Wastewater Loads:		294	GPD/SFE
Number of Units	Type	Average Daily Flow (ADF) (GPD)	Max Daily Flow (MDF) (GPD)
7	Residential	1687	2058

Appendix B, Table 3: Estimated Return Flows through Septic

Percent of domestic Indoor	90.00%	
Volume return	0.225	AF/year/lot
Total Volume Return	1.575	AF/year

Appendix B, Table 4: AUG-3 Denver Basin Depletion Model - Maximum Depletions

Pumping Interval	Formation	Total Depl. (AF/yr)	Total Depl. (% of Pumping)	Year of Max. Depletion	Div. 1 Depl. (AF/yr)	Div. 2 Depl. (AF/yr)
100-year pumping period						
Pumping Period	Dawson (NNT)	0.279	6.76%	100	0.190	0.089
Model Period	Dawson (NNT)	0.304	7.36%	210	0.174	0.130
300-year pumping period						
Pumping Period	Dawson (NNT)	0.860	20.83%	300	0.520	0.340
Model Period	Dawson (NNT)	0.860	20.83%	300	0.520	0.340

Appendix C

Appendix C: SB-5 Groundwater Evaluation Model for Aquifer Volume Estimates

Location: NE 1/4 of SW 1/4 of Section 29, Township 11 S, Range 65 W

Surface Area: 39.77 acres

Number of lots / wells: 7

Designated Basin: None

Management District: None

<i>Aquifer</i>	<i>Surface Area (Acres)</i>	<i>Net Sand (ft) ¹</i>	<i>Avg. Specific Yield (%)</i>	<i>Total Approp. Volume (AF)</i>	<i>100-year Ann. Approp. (AF/yr)</i>	<i>300-year Ann. Approp. (AF/yr)</i>
Upper Dawson (NNT)	39.77	506.80	20.00%	4031.09	40.31	13.44
Denver (NT)	39.77	473.40	17.00%	3200.61	32.01	10.67
Upper Arapahoe (NT)	39.77	245.00	17.00%	1656.42	16.56	5.52
Laramie-Fox Hills (NT)	39.77	190.40	15.00%	1135.83	11.36	3.79

Note 1: Estimated saturated thickness taken from SB-5 Bedrock Aquifer Evaluation Determination Tool for the Denver Basin.

DISTRICT COURT, WATER DIVISION 1, CO Court Address: 901 9 th Avenue, Suite 116 Greeley, CO 80631-1113	DATE FILED: July 11, 2019 11:13 AM CASE NUMBER: 2018CW3226
Phone Number: (970) 475-2510	<p style="text-align: center;">▲ COURT USE ONLY ▲</p> <hr/> Case No.: 18CW3226
CONCERNING THE APPLICATION FOR WATER RIGHTS OF: SHAY MILES	
IN EL PASO COUNTY	
FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF REFEREE AND DECREE	

THIS MATTER comes before the Water Referee on the Application filed by Shay Miles on December 28, 2019. 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:

FINDINGS OF FACT

1. The applicant in this case is Shay Miles, whose address is 7330 Matthews Road, Colorado Springs, CO 80908 (“Applicant”). Applicant is the owner of the land totaling approximately 39.72 acres 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 Courts for both Water Divisions 1 and 2 on December 28, 2018. The Application was referred to the Water Referees in both Divisions 1 and 2 on or about January 2, 2019.
3. The time for filing statements of opposition to the Application expired on the last day of February 2019. No Statements of Opposition were timely filed.
4. A Motion for Consolidation of the Division 1 and Division 2 cases into Water Division 1 was filed with the Colorado Supreme Court on March 1, 2019. The Panel on Consolidated Multidistrict Litigation certified the Motion for Consolidation to the Chief Justice on March 6, 2019. Chief Justice, Nathan B. Coats, granted the Motion for Consolidation by Order dated April 2, 2019.
5. On January 2, 2019, the Division 2 Water Court, on Motion from Applicant, ordered that consolidated publication be made by only Division 1. On or near January 2nd, 2019, the Water Court, Division 1 ordered that publication occur in *The Transcript* within El Paso County.

6. 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 January 17, 2019, proof of publication in *The Transcript* was filed with Water Court Division 1. All notices of the Application have been given in the manner required by law.

7. 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 on March 18, 2019.

8. Pursuant to C.R.S. §37-92-302(4), the office of the Division Engineer for Water Division No. 1 filed its Consultation Report dated March 31, 2019, and a Response to the Consultation Report was filed by the Applicant on April 1, 2019. Both the Consultation Report and Response have been considered by the Water Referee in the entry of this Ruling.

9. 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.

Findings must be for all 9 lots and entire **GROUNDWATER RIGHTS**
acreage of subdivision

10. The Applicant requested the adjudication of underground water rights for Miles Wells Nos. 1 through 7, as may be constructed 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 decreed herein. Applicant also requested quantification and adjudication of water uses from the Denver, Arapahoe, and Laramie-Fox Hills aquifers. The following findings are made with respect to such underground water rights:

11. The land overlying the groundwater subject to the adjudication in this case is owned by the Applicant and consists of approximately 39.72 acres located in the SW $\frac{1}{4}$ of Section 29, Township 11 South, Range 65 West of the 6th P.M., El Paso County, Colorado, as more particularly described on the attached **Exhibit A**, and depicted on the attached **Exhibit B** map ("Applicant's Property"). Applicant intends to subdivide the property into up to seven (7) lots. All groundwater adjudicated herein shall be withdrawn from the overlying land.

12. In accordance with the notice requirements of C.R.S. § 37-92-302, lienholders of the Applicant's property were sent a Letter of Notice dated January 25, 2019. A Certificate of Notice was filed with the District Court, Water Divisions 1 and 2, on January 31, 2019.

13. Miles Wells Nos. 1 through 7: Miles Well Nos. 1 through 7 will be located on the Applicant's Property. Applicant is awarded the vested right to use Miles Well Nos. 1 through 7, along with any necessary additional or replacement wells associated with such structures, for the extraction and use of groundwater from the not-nontributary Dawson aquifer pursuant to the Plan for Augmentation decreed herein. 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 well permit for Miles Well Nos. 1 through 7 pursuant to C.R.S. §37-90-137(4), consistent with and references the

Plan for Augmentation decreed herein.

14. Of the statutorily described Denver Basin aquifers, the Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers all exist beneath the Applicant's Property. The Dawson aquifer underlying the Applicant's Property contains not-nontributary water, while the water of the Denver, Arapahoe, and Laramie-Fox Hills aquifers underlying the Applicant's Property are nontributary. The quantity of water in the Denver Basin aquifers exclusive of artificial recharge underlying the Applicant's Property is as follows:

AQUIFER	NET SAND (ft)	DEPTH (ft)		Annual Average Withdrawal 100 Years (Acre Feet)	Total Withdrawal (Acre Feet)
		Bottom	Top		
Dawson (NNT)	510	1010	0	40.5	4,050
Denver (NT)	470	1885	990	31.7	3,170
Arapahoe (NT)	245	2430	1920	16.5	1,650
Laramie-Fox Hills (NT)	190	3030	2725	11.3	1,130

15. Pursuant to C.R.S. §37-90-137(9)(c.5)(I), 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. Applicant shall not be entitled to construct a well or use water from the not-nontributary Dawson aquifer except pursuant to an approved augmentation plan in accordance with C.R.S. §37-90-137(9)(c.5), including as decreed herein as concerns the Dawson aquifer.

16. Applicant shall be entitled to withdraw all legally available groundwater in the Denver Basin aquifers underlying Applicant's Property. Said amounts can be withdrawn over the 300-year life of the aquifers as set forth in El Paso County, Colorado Land Development Code §8.4.7(C)(1) which requirements also satisfy 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 Applicant's water needs. The average annual amounts of ground water available for withdrawal from the underlying Denver Basin aquifers, based upon the 300-year aquifer life is determined and set forth above, based upon the March 18, 2019 Office of the State Engineer Determination of Facts.

17. Applicant shall be entitled to withdraw an amount of groundwater in excess of the average annual amount decreed herein from the Denver Basin aquifers underlying Applicant's Property, 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 Applicant is entitled to withdraw from the aquifer underlying Applicant's Property, subject to the requirement that such banking and excess withdrawals do not violate the terms and conditions of the plan for augmentation decreed herein and any other plan for augmentation decreed by the Court

that authorizes withdrawal of the Denver Basin groundwater decreed herein.

18. Subject to the terms and conditions in the plan for augmentation decreed herein and final approval by the State Engineer's Office pursuant to the issuance of well permits in accordance with C.R.S. §§37-90-137(4) or 37-90-137(10), the Applicant shall have the right to use the ground water for beneficial uses upon the Applicant's Property consisting of domestic, hot tub, commercial, irrigation, stock water, recreation, wildlife, wetlands, fire protection, and for storage and augmentation associated with such uses. The amount of groundwater decreed for such uses upon the Applicant's Property is reasonable as such uses are to be made for the long term use and enjoyment of the Applicant's Property and is to establish and provide for adequate water reserves. The nontributary groundwater, excepting such water reserved for post pumping depletions in the Plan for Augmentation decreed herein, may be used, reused, and successively used to extinction, both on and off the Applicant's Property subject, however, to the relinquishment of the right to consume two percent of such nontributary water withdrawn. Applicant 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, Applicant shall only be entitled to construct a well or use water from the not-nontributary Dawson aquifer pursuant to a decreed augmentation plan entered by the Court, including that plan for augmentation decreed herein.

19. Withdrawals of groundwater available from the nontributary aquifers beneath the Applicant's Property 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.

PLAN FOR AUGMENTATION

20. The structures to be augmented are Miles Well Nos. 1 through 7 to be constructed in the not-nontributary Dawson aquifer underlying the Applicant's Property, along with any additional or replacement wells associated therewith.

21. Pursuant to C.R.S. §37-90-137(9)(c.5), the augmentation obligation for Miles Well Nos. 1 through 7, 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 Miles Well Nos. 1 through 7, 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 Miles Well Nos. 1 through 7 as approved herein. Water use criteria as follows:

A. Use: The Miles Well Nos. 1 through 7 may each pump up to 0.59 acre feet of water per year, for a maximum total of 4.13 acre feet being withdrawn from the Dawson aquifer annually, though should fewer than seven lots be developed on Applicant's Property, each well thereon shall be entitled to withdraw its proportional share of the total 4.13 acre feet available.

Households will utilize an estimated 0.25 acre feet of water per year per residence, with remaining pumping entitlements available for other uses on the property, including, for example, irrigation of approximately 5,920 square feet of lawn and garden and the watering of up to four horses or equivalent livestock, per residence. The foregoing figures assume the use of seven individual septic systems, with resulting return flows from each. Should Applicant subdivide Applicant's property into fewer than seven 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 (20.78%) as described in this Paragraph 21.

B. Depletions: Maximum stream depletions over the 300-year pumping period will amount to approximately twenty point seven eight percent (20.78%) of pumping. Maximum annual depletions for total residential pumping from all wells are therefore 0.858 acre feet in year 300. Should Applicant's pumping be less than the total 0.59 annual acre feet 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: Pursuant to C.R.S. §37-90-137(9)(c.5), Applicant is required to replace actual stream depletions attributable to pumping of the maximum seven residential Dawson aquifer wells. Applicant has determined that 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 the household use rate of 0.25 acre feet per residence per year, total of 1.75 acre feet (assuming seven residences), 1.575 acre feet is replaced to the stream system per year, utilizing non-evaporative septic systems. Thus, during pumping, stream depletions will be more than 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 Miles Well Nos. 1 through 7, Applicant will reserve up to 1,130 acre feet of water from the nontributary Laramie Fox Hills aquifer (subject to the 2% relinquishment requirement), accounting for actual stream depletions replaced during the plan pumping period, calculated at 128.93 acre feet, 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 Miles Well Nos. 1 through 7 for the uses in accordance with this Application and otherwise in compliance with C.R.S. §37-90-137.

22. Because depletions occur to both the South Platte and Arkansas River systems

under the State's groundwater flow model, the Application in this case was filed in both Water Divisions 1 and 2. The return flows set forth above as augmentation will accrue to only the South Platte River system where most of the depletions will occur and where the Applicant's Property is located. Under this augmentation plan, the total amount of depletions will be replaced to the South Platte River system as set forth herein, and the Court finds that those replacements are sufficient under this augmentation plan subject to Paragraphs 42-46 herein.

23. 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.

24. 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 Miles Well Nos. 1 through 7 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.

25. 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.

26. 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 in Paragraph 21 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.

27. 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.

28. 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 Miles Well Nos. 1 through 7. As a result of the operation of this plan for augmentation, the depletions from the Miles Well Nos. 1 through 7 and any additional or replacement wells associated therewith will not result in material injury to the vested water rights of others.

CONCLUSIONS OF LAW

29. The application for adjudication of Denver Basin groundwater and approval of plan for augmentation was filed with the Water Clerks for Water Divisions 1 and 2, pursuant to C.R.S. §§37-92-302(1)(a) and 37-90-137(9)(c). These cases were properly consolidated before Water Division 1.

30. The Applicant's 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 pursuant to C.R.S. §§37-92-302(1)(a), 37-92-203, and 37-92-305.

31. Subject to the terms of this 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 this decree.

32. The Applicant has 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 this decree approving an augmentation plan pursuant to C.R.S. §37-90-137(9)(c.5). Applicant is entitled to a decree from

this Court confirming its rights to withdraw groundwater pursuant to C.R.S. §37-90-137(4).

33. 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.

34. 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 pursuant to C.R.S. §§37-90-137, and 37-92-302 through 37-92-305.

35. 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 Miles Well Nos. 1 through 7 without adversely affecting any other vested water rights in the Arkansas River and South Platte River or their tributaries and when curtailment would otherwise be required to meet a valid senior call for water pursuant to C.R.S. §§37-92-305(3),(5), and (8).

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED AS FOLLOWS:

36. 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.

37. 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.

38. 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.

39. 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.

40. The Applicant recognizes and affirms that The City of Colorado Springs owns senior water rights in the Arkansas River system that may be injured by the operation of this decree wherein depletions to the Arkansas River system will not be made to the Arkansas River system, but rather will be replaced to the South Platte River System. Colorado Springs reserves the right to claim that the cumulative impacts of this and other similar decrees constitute injury to its senior

Arkansas River system water rights. In the interest of settlement only, Colorado Springs consents to the entry of this decree. However, by so doing, Colorado Springs does not waive its right to claim injury and to seek relief in the future pursuant to this paragraph, and Applicant does not waive any rights it has to claim that no injury is occurring, or that any such injury is de minimus.

41. The State Engineer, the Division Engineer, and/or the Water Commissioner shall not curtail the diversion and use of water covered by the Miles Well Nos. 1 through 7 so long as the return flows from the annual diversions associated with the Miles Well Nos. 1 through 7 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 Miles Well Nos. 1 through 7 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 septic systems discussed herein, as appropriate, shall at all times during pumping be in an amount sufficient to replace the amount of stream depletions.

42. 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 Applicant need not refile, republish, or otherwise amend this application to request such adjustments. The Court further retains jurisdiction should the Applicant later seek to amend this decree by seeking to prove that post-pumping depletions are noninjurious, that the extent of replacement for post-pumping depletions is less than the amount of water reserved herein, and other post-pumping matters addressed in Paragraph 21.D.

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 42 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 42 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 42.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.

43. 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 for augmentation purposes. The court also retains continuing jurisdiction for the purpose of determining compliance with the terms of the augmentation plan.

44. As pertains to the Denver Basin groundwater supplies, the court shall retain continuing jurisdiction for so long as Applicant is required to replace depletions to the South Platte stream system, to determine whether the replacement of depletions to the South Platte stream system instead of the Arkansas stream system is causing material injury to water rights tributary to the Arkansas stream system.

45. Any person may invoke the Court's retained jurisdiction at any time that Applicant is causing depletions, including ongoing post-pumping depletions, to the Arkansas River system and is replacing such depletions to only the South Platte River system. 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 the alleged material injury and to request that the Court reconsider material injury to petitioners’ vested water rights associated with the above replacement of depletions under this decree, together with the proposed decretal language to effect the petition. The party filing the petition shall have the burden of proof going forward to establish a prima facie case based on the facts alleged in the petition and that Applicant’s failure to replace depletions to the Arkansas River system is causing material injury to water rights owned by that party invoking the Court's retained jurisdiction, except that the State and Division Engineer may invoke the Court's retained jurisdiction by establishing a prima facie case that material injury is occurring to any vested or conditionally decreed water rights in the Arkansas River system due to the location of Applicant’s replacement water. If the Court finds that those facts are established, the Applicant shall thereupon have the burden of proof to show (i) that 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.

46. Except as otherwise specifically provided in Paragraphs 42-45, 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 three 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.

47. 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 Miles 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.

48. The entire length of the open bore hole shall be geophysically surveyed prior to casing and copies of the geophysical log submitted to the Division of Water Resources. Applicant may provide a geophysical log from an adjacent well or test hole, pursuant to Rule 9A of the Statewide Rules and acceptable to the State Engineer, which fully penetrates the aquifer, in satisfaction of the above requirement.

49. Groundwater production shall be limited to the subject aquifers. Plain, unperforated casing must be installed and properly grouted to prevent withdrawal from or intermingling of water from zones other than those for which the well was designed.

50. Each well shall be permanently identified by its permit number, this Water Court Case Number, and the name of the producing aquifer on the above-ground portion of the well casing or on the pump house.

51. 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. The State Engineer shall identify in any permits issued pursuant to this decree the specific uses which can be made of the groundwater to be withdrawn, and shall not issue a permit for any proposed use, which use the State Engineer determines to be speculative at the time of the well permit application or which would be inconsistent with the requirements of this decree, any separately decreed plan for augmentation, or any modified decree and augmentation plan.

52. 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.

Date: June 19, 2019



John S. Cowan
Water Referee
Water Division One

The court finds that no protest was filed in this matter. The foregoing ruling is confirmed and approved and is made the judgment and decree of this Court.

Date: July 11, 2019



James F. Hartmann
Water Judge
Water Division One

EXHIBIT A

Property Description. All wells will be located on Applicant's approximately 39.72 acre property ("Applicant's Property") anticipated to be subdivided into seven lots of +/-5 acres each, more particularly described as follows:

A portion of the SW¼ of Section 29, Township 11 South, Range 65 West of the 6th P.M. described as: Beginning at the northwest corner of the SW¼ SW¼, thence S89°46'29"E along the south line of Whispering Hills Estates as recorded in Plat Book Z-2 at Page 2 of said county records, 1,407.75 feet to the southeast corner thereof, thence N00°58'34"E, 1,327.96 feet to the northeast corner thereof; thence S89°47'26"E 1,246.16 feet to the northeast corner of said SW¼, said northeast corner also being on the west line of Wildwood Village Unit 3 as recorded in Plat book H-3 at Page 57 of said county records; thence S00°59'16"W along the east line of said SW¼ and the west line of said Wildwood Village Unit 3 and Wildwood Village Unit 4 as recorded in Plat Book M-3 at Page 46 of said county records, 1,366.81 feet; thence N89°46'29"W, 945.48 feet; thence N00°58'34"E 8.50 feet; thence N89°46'29"W 1,708.14 feet to a point on the west line of said SW¼; thence N00°58'34"E, 30.00 feet to the point of beginning, El Paso County, State of Colorado.

Shay Miles
18CW3226

EXHIBIT B

El Paso County Assessor's Office

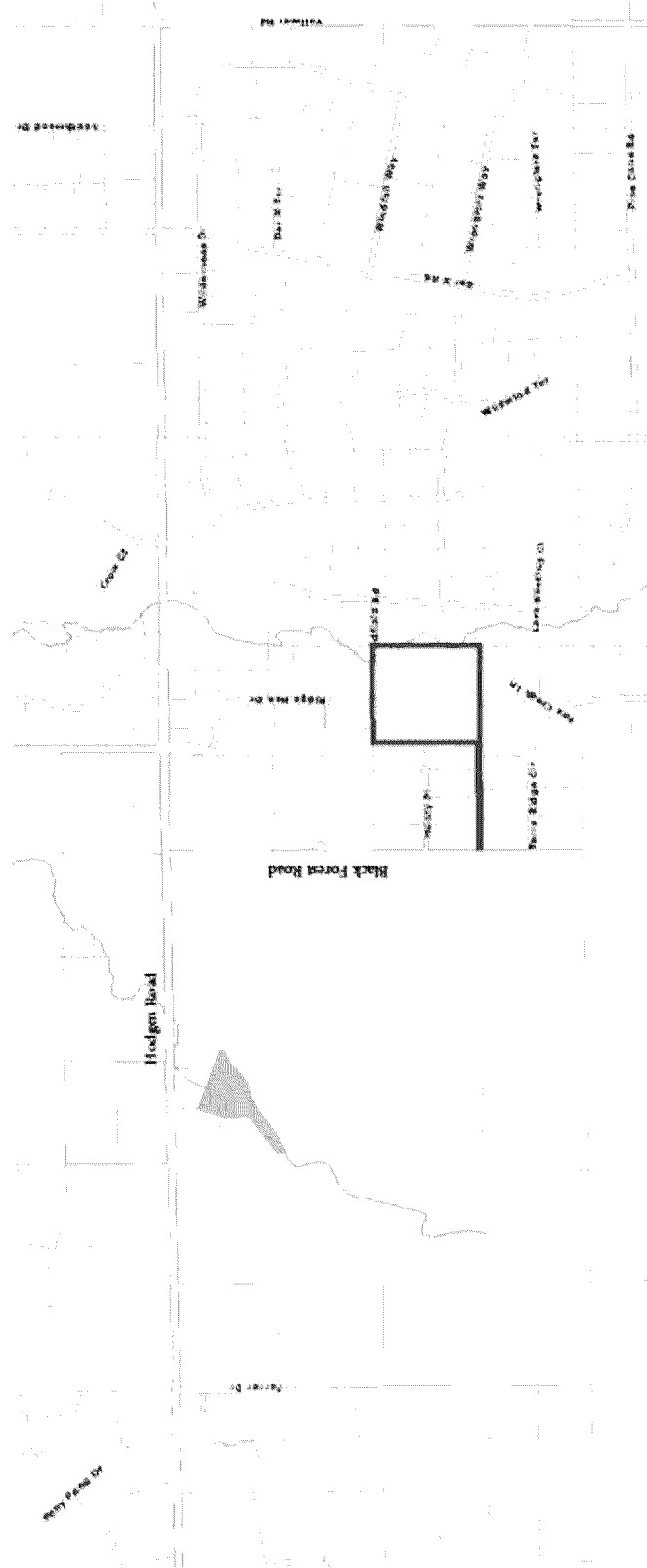
0 29-11-65

SCHEDULE: 5 129 300002

OWNER: MILES PHILLIP SHAY

MILES JENNIFER

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Appendix D



6825 Silver Ponds Heights #101
Colorado Springs, CO 80908
(719) 481-4560

SUBDIVISION PROFILE PIT EVALUATION

FOR

SHAY MILES

JOB #18-0975

15630 Fox Creek Lane,
El Paso County,
Colorado

Sincerely,


Charles E. Milligan, P.E.
Civil Engineer



PROFILE PIT FINDINGS

Enclosed are the results of the subdivision profile pit report for the septic systems to be installed at **15630 Fox Creek Lane, El Paso County, Colorado**. **This report is for planning purposes for the development of the subdivision. Two profile pits will be required on each plotted lot prior to issuance of permits.** The location of the test pits was determined by Shay Miles. The residences will not be on a public water system. The number of bedrooms in the design for the residences is unknown. Due to the natural slope of the property, the system near Profile Pit #1 will feed to the northwest at approximately 8%, the system near Profile Pit #2 will feed to the southwest at approximately 6%, and the system near Profile Pit #3 will feed to the southeast at approximately 11%. All applicable portions of the El Paso County Health Department Onsite Wastewater Treatment System Regulations (OWTS) must be complied with for the installation of the treatment system.

The inspection was performed on May 28, 2019, in accordance with Table 10-1 of the **E.P.C.P.H. OWTS Regulations**.

Soil Profile #1:

- 0 to 6"** - Topsoil - loam, organic composition.
- 6" to 28"** - USDA soil texture sandy clay loam, soil type 3A, structure shape granular, structure grade 1, non-cemented, LTAR 0.30, dark brown in color, 7.5 YR 3/2, organics.
- 28" to 68"** - USDA soil texture sandy loam, soil type 2A, structure shape massive, structure grade 0, non-cemented, LTAR 0.50, light yellowish brown in color, 10 YR 6/4, ~ 15% gravel.
- 68" to 8'** - USDA soil texture sandy clay loam, soil type 3A, structure shape massive, structure grade 0, non-cemented, LTAR 0.30, pale brown in color, 10 YR 6/3, zones of clay, high moisture at 78 inches, groundwater at 86 inches.

Soil Profile #2:

- 0 to 12"** - Topsoil - loam, organic composition.
- 12" to 52"** - USDA soil texture loamy sand, soil type 1, structure shape single grain, structure grade 0, non-cemented, LTAR 0.80, strong brown in color, 7.5 YR 4/6, ~ 20% gravel.
- 52" to 62"** - USDA soil texture sandy loam, soil type 2A, structure shape massive, structure grade 0, non-cemented, LTAR 0.50, brown in color, 7.5 YR 5/3, redoximorphic features at 60 inches.
- 62" to 8'** - USDA soil texture loamy sand, soil type 1, structure shape single grain, structure grade 0, non-cemented, LTAR 0.80, yellowish brown in color, 10 YR 5/4, ~ 30% gravel.

Soil Profile #3:

- 0 to 10"** - Topsoil - loam, organic composition.
- 10" to 40"** - USDA soil texture sandy clay, soil type 4A, structure shape massive, structure grade 0, non-cemented, LTAR 0.15, dark yellowish brown in color, 10 YR 4/4.
- 40" to 84"** - USDA soil texture sandy clay, soil type 4A, structure shape blocky, structure grade 1, non-cemented, LTAR 0.15, yellowish brown in color, 10 YR 5/4, redoximorphic features at 80 inches.
- 84" to 8'** - USDA soil texture sandy clay, soil type 4A, structure shape massive, structure grade 0, non-cemented, LTAR 0.15, yellowish brown in color, 10 YR 5/4.

Groundwater was encountered at the depth of 86 inches in Profile Pit #1 during the inspection. Groundwater evidence was encountered at the depth of 60 inches in Profile Pit #2 and 80 inches in Profile Pit #3 during the inspection. Bedrock was not encountered during the inspection. No known wells were observed within 100 feet of the proposed systems. **All setbacks shall conform to county regulations.**

Designs by Colorado Registered Professional Engineers are likely required due to encountered soil types and groundwater. Maximum depths are expected to range from 12 inches to 36 inches, though anomalies may occur. Long Term Acceptance Rates (LTAR) are expected to range from 0.50 GPD/SF for sandy loam to 0.15 GPD/SF for sandy clay.

~~Weather conditions at the time of the test consisted of clear skies with warm temperatures.~~

A Natural Resources Conservation Service Soil Survey Map is appended to this report.

Address findings from report in Letter of Intent and add a plat note.

PROFILE PIT LOG - Profile Pit #1

JOB#: 18-0975
 DATE EVALUATED: 28 MAY 2019
 EQUIPMENT USED: MINI EXCAVATOR

DEPTH (in ft.)	SYMBOL	SAMPLES	WATER %	SOIL TYPE
0"-6"	TOPSOIL			
	Loam Organic Composition			3A
6"-28"	Clayey Sand			2A
	Fine-very coarse Grained Moderate Density Low-moderate Moisture Content Moderate Clay Content Moderate Cohesion Moderate Plasticity Dark Brown Color 7.5YR 3/2			3A
	USDA Soil Texture: Sandy Clay Loam USDA Soil Type: 3A USDA Structure Shape: Granular USDA Structure Grade: 1 Cementation Class: Non-cemented Long Term Acceptance Rate (LTAR, Treatment Level 1):0.30 Organics			
28"-68"	Sand			
	Fine-very coarse Grained High Density Low Moisture Content Low Clay Content Low Cohesion Low Plasticity Light Yellowish Brown Color 10YR 6/4			
	USDA Soil Texture: Sandy Loam USDA Soil Type: 2A USDA Structure Shape: Massive USDA Structure Grade: 0 Cementation Class: Non-cemented Long Term Acceptance Rate (LTAR, Treatment Level 1):0.50 ~15% gravel			
68"-8'	Clayey Sand			
	Fine-very coarse Grained High Density Moderate-high Moisture Content Low-moderate Clay Content Low-moderate Cohesion Low-moderate Plasticity Pale Brown Color 10YR 6/3			
	USDA Soil Texture: Sandy Clay Loam USDA Soil Type: 3A USDA Structure Shape: Massive USDA Structure Grade: 0 Cementation Class: Non-cemented Long Term Acceptance Rate (LTAR, Treatment Level 1):0.30 Zones of Clay High moisture @ 78" Groundwater @ 86"			

LTAR to be Used for OWTS Sizing: **0.30GPD/SF (USDA Type 3A, Treatment soil, Treatment Level 1)**
Depth to Groundwater (Permanent or Seasonal): Permanent @ 86"
Depth to Bedrock and Type: Not Encountered
Depth to Proposed Infiltrative Surface from Ground Surface: Max. 30" Deep
Soil Treatment Area Slope and Direction: Northwest @ 8%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

Project: 18-0975
 Sheet: 1 of 3
 Date: 3 June 2019
 Scale: 1/4" = 1'
 Drawn by: rah
 Checked by: cem

Project Name and Address
Shay Miles
 15630 Fox Creek Lane
 Sch. No. 51293000002
 El Paso County, Colorado

GEOQUEST, LLC.
 6825 SILVER PONDS HEIGHTS
 SUITE 101
 COLORADO SPRINGS, CO
 80908
 OFFICE: (719) 481-4560
 FAX: (719) 481-9204

PROFILE PIT LOG - Profile Pit #2

JOB#: 18-0975
 DATE EVALUATED: 28 MAY 2019
 EQUIPMENT USED: MINI EXCAVATOR

DEPTH (in ft.)	SYMBOL	SAMPLES	WATER %	SOIL TYPE
0"-12"	TOPSOIL Loam Organic Composition			1
12"- 52"	Sand Fine-very coarse Grained Low Density Moderate-high Moisture Content Low Clay Content Low Cohesion Low Plasticity Strong Brown Color 7.5YR 4/6 USDA Soil Texture: Loamy Sand USDA Soil Type: 1 USDA Structure Shape: Single Grain USDA Structure Grade: 0 Cementation Class: Non-cemented Long Term Acceptance Rate (LTAR, Treatment Level 1):0.80 ~ 20% gravel			2A 1
52"- 62"	Sand Fine-coarse Grained Moderate-high Density Low Moisture Content Low Clay Content Low Cohesion Low Plasticity Brown Color 7.5YR 5/3 USDA Soil Texture: Sandy Loam USDA Soil Type: 2A USDA Structure Shape: Massive USDA Structure Grade: 0 Cementation Class: Non-cemented Long Term Acceptance Rate (LTAR, Treatment Level 1):0.50 Redox @ 60"			
62"- 8'	Sand Fine-very coarse Grained Low Density Low Moisture Content Low Clay Content Low Cohesion Low Plasticity Yellowish Brown Color 10YR 5/4 USDA Soil Texture: Loamy Sand USDA Soil Type: 1 USDA Structure Shape: Single Grain USDA Structure Grade: 0 Cementation Class: Non-cemented Long Term Acceptance Rate (LTAR, Treatment Level 1):0.80 ~ 30% gravel			

LTAR to be Used for OWTS Sizing: 0.50GPD/SF (USDA Type 2A, Treatment soil, Treatment Level 1)
Depth to Groundwater (Permanent or Seasonal): Seasonal @ 60"
Depth to Bedrock and Type: Not Encountered
Depth to Proposed Infiltrative Surface from Ground Surface: Max. 12" Deep
Soil Treatment Area Slope and Direction: Southwest @ 6%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

Project: 18-0975
 Sheet: 2 of 3
 Date: 3 June 2019
 Scale: 1/4" = 1'
 Drawn by: rah
 Checked by: cem

Project Name and Address
Shay Miles
 15630 Fox Creek Lane
 Sch. No. 51293000002
 El Paso County, Colorado

GEOQUEST, LLC.
 6825 SILVER PONDS HEIGHTS
 SUITE 101
 COLORADO SPRINGS, CO
 80908
 OFFICE: (719) 481-4560
 FAX: (719) 481-9204

PROFILE PIT LOG - Profile Pit #3

JOB#: 18-0975
 DATE EVALUATED: 28 MAY 2019
 EQUIPMENT USED: MINI EXCAVATOR

DEPTH (in ft.)	SYMBOL	SAMPLES	WATER %	SOIL TYPE
0"-10"	Loam Organic Composition			4A
10"- 40"	Clay Fine-coarse Grained Moderate Density Low-moderate Moisture Content High Clay Content High Cohesion High Plasticity Dark Yellowish Brown Color 10YR 4/4			4A
40"- 84"	Clay Fine-coarse Grained Very High Density Low Moisture Content High Clay Content High Cohesion High Plasticity Yellowish Brown Color 10YR 5/4			4A
84"- 8'	Clay Fine coarse Grained Moderate-high Density Low-moderate Moisture Content High Clay Content High Cohesion High Plasticity Yellowish Brown Color 10YR 5/4			4A

LTAR to be Used for OWTS Sizing: 0.15GPD/SF (USDA Type 4A, Treatment soil, Treatment Level 1)
Depth to Groundwater (Permanent or Seasonal): Seasonal @ 80"
Depth to Bedrock and Type: Not Encountered
Depth to Proposed Infiltrative Surface from Ground Surface: Max. 32" Deep
Soil Treatment Area Slope and Direction: Southeast @ 11%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

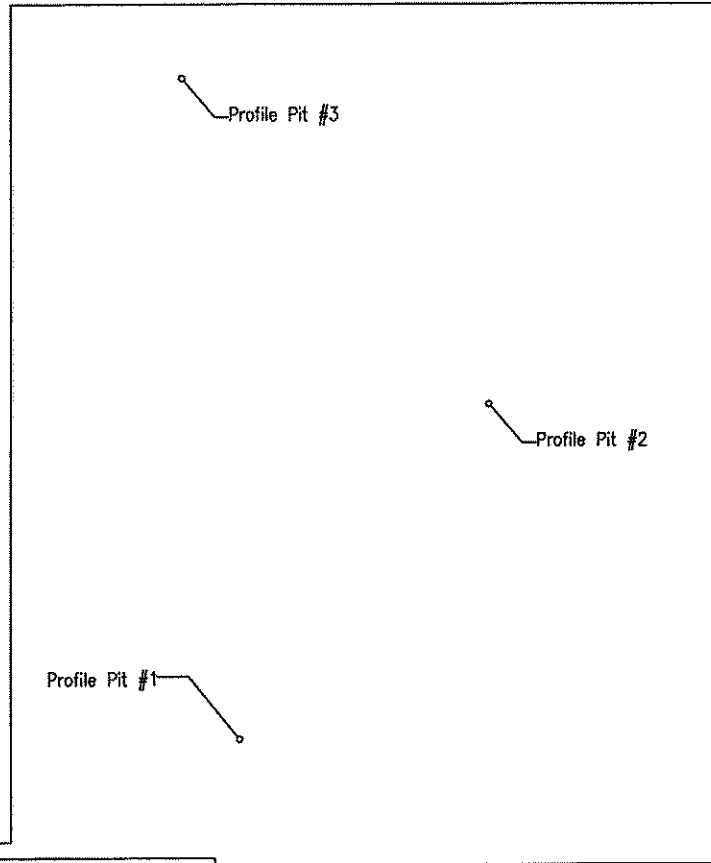
Project: 18-0975	Project Name and Address Shay Miles 15630 Fox Creek Lane Sch. No. 51293000002 El Paso County, Colorado
Sheet: 3 of 3	
Date: 3 June 2019	
Scale: 1/4" = 1'	
Drawn by: rah	
Checked by: cem	

GEOQUEST, LLC. 6825 SILVER PONDS HEIGHTS SUITE 101 COLORADO SPRINGS, CO 80908 OFFICE: (719) 481-4560 FAX: (719) 481-9204	
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GEOQUEST LLC

SITE MAP

15630 Fox Creek Lane
El Paso County,
Colorado
Job #18-0975



Location from Northwest Lot Corner to Profile Pit #1:
S. 73° E. - 1188'

Location from Profile Pit #1 to Profile Pit #2:
N. 54° E. - 645'

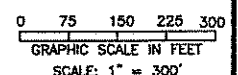
Location from Profile Pit #2 to Profile Pit #3:
N. 47° W. - 690'

GPS Coordinates:

Pit 1; N. 39° 03' 38.47" W. 104° 41' 39.06"

Pit 2; N. 39° 03' 43.84" W. 104° 41' 34.07"

Pit 3; N. 39° 03' 48.88" W. 104° 41' 40.09"





A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for El Paso County Area, Colorado



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

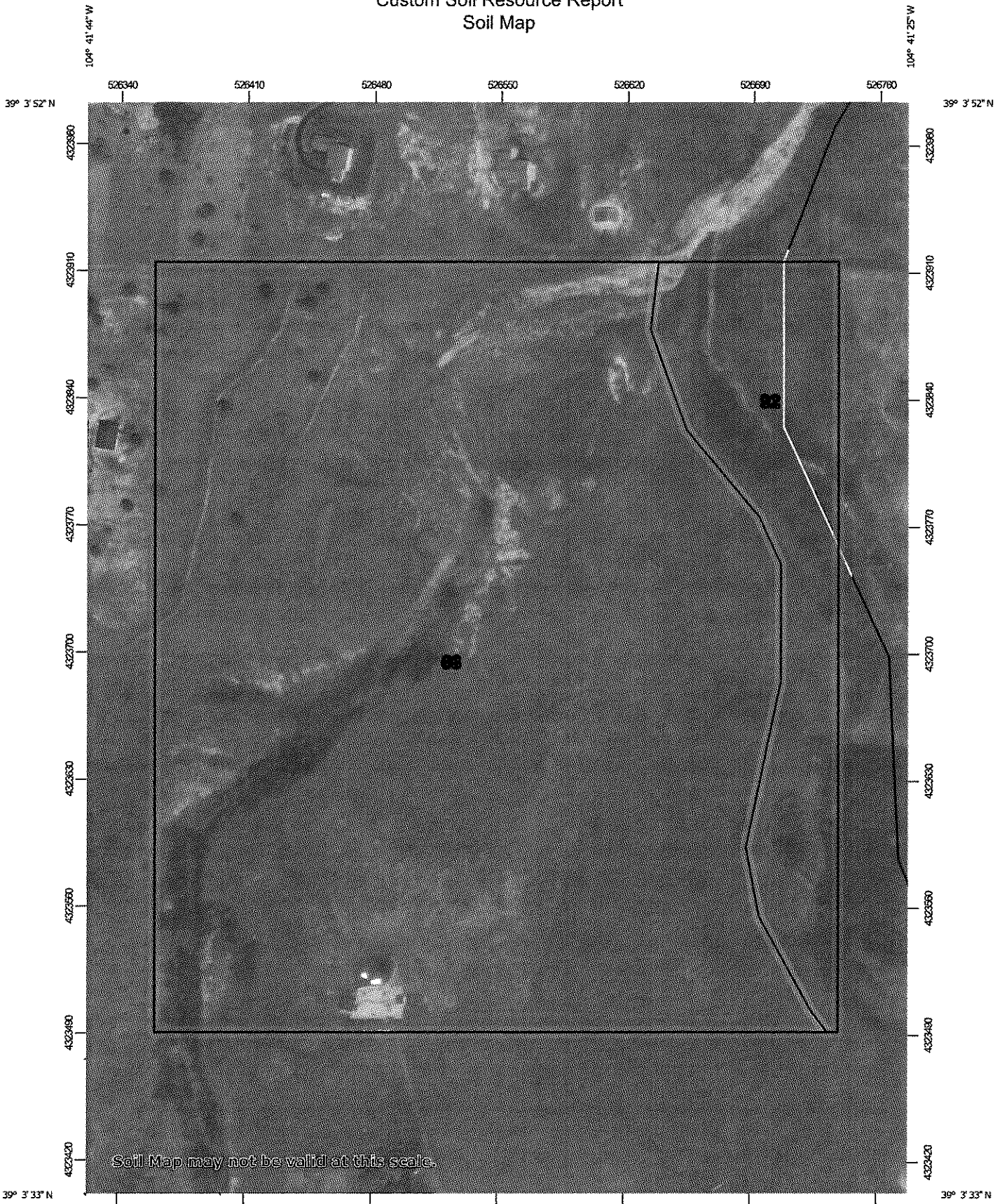
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:2,930 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

- Area of Interest (AOI)
 - Area of Interest (AOI)
- Soils
 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features
 - Streams and Canals
- Transportation
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background
 - Aerial Photography
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Paso County Area, Colorado
 Survey Area Data: Version 16, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 7, 2016—Aug 17, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
68	Peyton-Pring complex, 3 to 8 percent slopes	34.3	86.0%
92	Tomah-Crowfoot loamy sands, 3 to 8 percent slopes	5.6	14.0%
Totals for Area of Interest		39.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

El Paso County Area, Colorado

68—Peyton-Pring complex, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 369f

Elevation: 6,800 to 7,600 feet

Farmland classification: Not prime farmland

Map Unit Composition

Peyton and similar soils: 40 percent

Pring and similar soils: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Peyton

Setting

Landform: Hills

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Arkosic alluvium derived from sedimentary rock and/or arkosic residuum weathered from sedimentary rock

Typical profile

A - 0 to 12 inches: sandy loam

Bt - 12 to 25 inches: sandy clay loam

BC - 25 to 35 inches: sandy loam

C - 35 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 5 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4c

Hydrologic Soil Group: B

Ecological site: Sandy Divide (R049BY216CO)

Hydric soil rating: No

Description of Pring

Setting

Landform: Hills

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Linear

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Parent material: Arkosic alluvium derived from sedimentary rock

Typical profile

A - 0 to 14 inches: coarse sandy loam

C - 14 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: Loamy Park (R048AY222CO)

Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:

Hydric soil rating: No

Pleasant

Percent of map unit:

Landform: Depressions

Hydric soil rating: Yes

92—Tomah-Crowfoot loamy sands, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 36b9

Elevation: 7,300 to 7,600 feet

Farmland classification: Not prime farmland

Map Unit Composition

Tomah and similar soils: 50 percent

Crowfoot and similar soils: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tomah

Setting

Landform: Alluvial fans, hills
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from arkose and/or residuum weathered from arkose

Typical profile

A - 0 to 10 inches: loamy sand
E - 10 to 22 inches: coarse sand
C - 48 to 60 inches: coarse sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: Sandy Divide (R049BY216CO)
Hydric soil rating: No

Description of Crowfoot

Setting

Landform: Alluvial fans, hills
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 12 inches: loamy sand
E - 12 to 23 inches: sand
Bt - 23 to 36 inches: sandy clay loam
C - 36 to 60 inches: coarse sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches

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Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: Sandy Divide (R049BY216CO)

Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:

Hydric soil rating: No

Pleasant

Percent of map unit:

Landform: Depressions

Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix E

Fox Creek Lane - Water Quality Results - Dawson Aquifer

Compound	Result	Detection Limit	MCL
Bicarbonate (mg/L as CaCO3)	37.8	0.1	
Calcium (mg/L as CaCO3)	32.1	0.1	
Carbonate (mg/L as CaCO3)	<0.1	0.1	
Hydroxide (mg/L as CaCO3)	<0.1	0.1	
Langelier Index	-2.44		
pH	6.31	0.1	6.5 - 8.5
Temperature °C	13	0.1	
Total Alkalinity (mg/L as CaCO3)	37.8	0.1	
Total Dissolved Solids (mg/L)	68	5	500
Nitrate as N (mg/L)	1.81	0.05	10
Nitrite as N (mg/L)	<0.03	0.03	1
<i>Total (mg/L)</i>			
Cyanide	<0.005	0.005	0.02
Iron	<0.005	0.005	0.3
Sodium	9.2	0.1	
Antimony	<0.001	0.001	0.006
Arsenic	<0.001	0.001	0.01
Barium	0.41	0.001	2
Beryllium	<0.001	0.001	0.004
Cadmium	<0.001	0.001	0.005
Chromium	<0.001	0.001	0.1
Copper	0.0695	0.0008	1.3
Lead	0.0011	0.0001	0.015
Manganese	<0.0008	0.0008	0.05
Mercury	<0.0001	0.0001	0.002
Nickel	<0.001	0.001	
Selenium	0.002	0.001	0.05
Thallium	<0.001	0.001	0.002
Uranium	<0.0002	0.0002	0.03
EPA/State Required SOCs	all ND		
EPA/State Required VOCs	all ND		
Gross Alpha (pCi/L)	1	0.1	15
Gross Beta (pCi/L)	<3.8	3.8	4 mrem/yr
Radium -226 (pCi/L)	0.8	0.2	
Radium - 228 (pCi/L)	2	0.3	
Combined Radium 226 + 228			5

Analytical Results

TASK NO: 190306009

Report To: Doug Schwenke

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

Bill To: Doug Schwenke

Company: JDS Hydro Consultants
545 E. Pikes Peak Ave
Suite 300

Task No.: 190306009	Date Received: 3/6/19
Client PO:	Date Reported: 3/19/19
Client Project:	Matrix: Water - Drinking

Customer Sample ID Miles Well
Sample Date/Time: 3/4/19 10:20 AM
Lab Number: 190306009-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Bicarbonate	37.8 mg/L as CaCO3	SM 2320-B	0.1	3/7/19	PJL
Calcium as CaCO3	32.1 mg/L	EPA 200.7	0.1	3/11/19	MBN
Carbonate	< 0.1 mg/L as CaCO3	SM 2320-B	0.1	3/7/19	PJL
Hydroxide	< 0.1 mg/L as CaCO3	SM 2320-B	0.1	3/7/19	PJL
Langelier Index	-2.44 units	SM 2330-B		3/14/19	SAN
pH	6.31 units	SM 4500-H-B	0.01	3/6/19	Sampler
Temperature	13 °C	SM 4500-H-B	1	3/6/19	Sampler
Total Alkalinity	37.8 mg/L as CaCO3	SM 2320-B	0.1	3/7/19	PJL
Total Dissolved Solids	68 mg/L	SM 2540-C	5	3/12/19	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

Drinking Water Chain of Custody

1 of 2



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>TDS-Hydro</u>	Company Name: _____	PWSID: _____	Address: <u>15630 Fox Creek Ln</u>	City: <u>AS</u>	State: <u>CO</u>
Contact Name: <u>Doug Schwente</u>	Contact Name: _____	System Name: _____	City: <u>AS</u>	State: <u>CO</u>	Zip: <u>80108</u>
Address: <u>5510 Truck Center Dr.</u>	Address: _____		County: <u>E1</u>	State: <u>CO</u>	Zip: <u>80108</u>
City: <u>Colorado Springs State</u>	City: _____		County: _____	State: _____	Zip: _____
Phone: <u>719-337-0572</u>	Phone: _____		County: _____	State: _____	Zip: _____
Fax: _____	Fax: _____		County: _____	State: _____	Zip: _____
Email: <u>denschwente@tishydro.com</u>	Email: _____	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Sampler Name: <u>Stephanie Schwente</u>	PO No: _____				

Task Number: _____ CAL Task No. 190306009
Miles Well JML

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)	Cyanide	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium
3/4	10:00	#1	2							X								X												
3/4	9:51	#2	1																											
3/4	9:57	#3	1																											
3/4	9:55	#4	1																											
3/4	9:58	#5	1																											
3/4	10:00	#6	1																											
3/4	10:03	#7	1																											
3/4	10:07	#8	1																											
3/4	10:16	#9	3																											
3/4	10:18	#10	3																											

Instructions: Per Stephanie OR to test nitrate Field Temp: 13.2°C
Nitrate out of 47-8
Please analyze lead, copper, iron, manganese

C/S Info: _____
Seals Present Yes No Headspace Yes No

Relinquished By: Stephanie Date/Time: 3/4/19 11:15 Received By: A. Fee Date/Time: 3/6/19 9:00

Delivered Via: Fed Ex C/S Charge Temp: 4 °C/ltr Received By: _____

Date/Time: _____ Sample Pres. Yes No Date/Time: _____

Drinking Water Chain of Custody

2 of 2



LABORATORIES, INC.

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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>	Company Name:	Contact Name: <u>Doug Schwente</u>	Contact Name:	PWSID:	
Address: <u>5540 Tech Center Dr</u>	Address:	City: <u>CS</u>	City:	System Name:	
City: <u>CS</u>	City: <u>CO</u>	State: <u>CO</u>	State: <u>CO</u>	Address: <u>151630 Foxglove Ln</u>	
State: <u>CO</u>	zip: <u>80919</u>	zip:	zip:	City: <u>CS</u>	City: <u>state</u>
Phone: <u>719-327-0017</u>	Phone:	Fax:	Fax:	State: <u>state</u>	zip: <u>state</u>
City: <u>CS</u>	City:	State: <u>CO</u>	State:	County: <u>El Paso</u>	County:
Phone: <u>719-327-0017</u>	Phone:	Fax:	Fax:	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Compliance Samples: Yes <input type="checkbox"/> No <input type="checkbox"/>
Email: <u>dschwente@jshydro.com</u>	Email:	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"/>		
Sampler Name: <u>Stephane Schwente</u>	Sampler Name:				

CAL Task No. 190306009 **F** 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/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)	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium		
3/4	10:20	#11	2										X																		
3/4	10:14	#12	2																												
3/4	10:07	#13	3						X																						
3/4	9:58	#14	3																												
3/4	9:54	#15	1																												
		Trip blank																													
		Field blank																													

Instructions: C/S Info: Delivered Via: FedEx C/S Charge: Temp: 4 °C/liter Received By: Y Sample Pres: Yes No

Relinquished By: <u>[Signature]</u>	Date/Time: <u>3/4/19 11:15am</u>	Received By: <u>[Signature]</u>	Date/Time: <u>3/10/19</u>
Scals Present Yes <input type="checkbox"/> No <input type="checkbox"/>		Headspace Yes <input type="checkbox"/> No <input type="checkbox"/>	

Analytical Results

TASK NO: 190306009

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

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

Task No.: 190306009
Client PO:
Client Project:

Date Received: 3/6/19
Date Reported: 3/19/19
Matrix: Water - Drinking

Customer Sample ID Miles Well
Sample Date/Time: 3/4/19 10:20 AM
Lab Number: 190306009-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
Dibromochloropropane	< 0.02 ug/L	EPA 504.1	0.02 ug/L	3/11/19	SPF	0.2
Ethylene dibromide	< 0.01 ug/L	EPA 504.1	0.01 ug/L	3/11/19	SPF	0.05
Aldrin	< 0.05 ug/L	EPA 505	0.05 ug/L	3/11/19	SPF	
Chlordane	< 0.2 ug/L	EPA 505	0.2 ug/L	3/11/19	SPF	2
Dieldrin	< 0.05 ug/L	EPA 505	0.05 ug/L	3/11/19	SPF	
Endrin	< 0.01 ug/L	EPA 505	0.01 ug/L	3/11/19	SPF	2
Heptachlor epoxide	< 0.02 ug/L	EPA 505	0.02 ug/L	3/11/19	SPF	0.2
Hexachlorobenzene	< 0.1 ug/L	EPA 505	0.1 ug/L	3/11/19	SPF	1
Hexachlorocyclopentadiene	< 0.1 ug/L	EPA 505	0.1 ug/L	3/11/19	SPF	50
Lindane	< 0.02 ug/L	EPA 505	0.02 ug/L	3/11/19	SPF	0.2
Methoxychlor	< 0.1 ug/L	EPA 505	0.1 ug/L	3/11/19	SPF	40
Polychlorinated biphenyl's	< 0.1 ug/L	EPA 505	0.1 ug/L	3/11/19	SPF	0.5
Toxaphene	< 1 ug/L	EPA 505	1 ug/L	3/11/19	SPF	3
2,4,5-TP	< 0.2 ug/L	EPA 515.4	0.2 ug/L	3/13/19	mbs	50
2,4,-D	< 0.1 ug/L	EPA 515.4	0.1 ug/L	3/13/19	mbs	70
Dalapon	< 1.0 ug/L	EPA 515.4	1.0 ug/L	3/13/19	mbs	200
Dicamba	< 0.5 ug/L	EPA 515.4	0.5 ug/L	3/13/19	mbs	
Dinoseb	< 0.2 ug/L	EPA 515.4	0.2 ug/L	3/13/19	mbs	7
Pentachlorophenol	< 0.04 ug/L	EPA 515.4	0.04 ug/L	3/13/19	mbs	1
Picloram	< 0.1 ug/L	EPA 515.4	0.1 ug/L	3/13/19	mbs	500

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Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

Analytical Results

TASK NO: 190306009

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

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

Task No.: 190306009
Client PO:
Client Project:

Date Received: 3/6/19
Date Reported: 3/19/19
Matrix: Water - Drinking

Customer Sample ID: Miles Well
Sample Date/Time: 3/4/19 10:20 AM
Lab Number: 190306009-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
Alachlor	< 0.2 ug/L	EPA 525.2	0.2 ug/L	3/14/19	LEH	2
Atrazine	< 0.1 ug/L	EPA 525.2	0.1 ug/L	3/14/19	LEH	3
Benzo(a)pyrene	< 0.02 ug/L	EPA 525.2	0.02 ug/L	3/14/19	LEH	0.2
Butachlor	< 0.25 ug/L	EPA 525.2	0.25 ug/L	3/14/19	LEH	
Di(2-ethylhexyl)adipate	< 0.6 ug/L	EPA 525.2	0.6 ug/L	3/14/19	LEH	400
Di(2-ethylhexyl)phthalate	< 0.6 ug/L	EPA 525.2	0.6 ug/L	3/14/19	LEH	6
Heptachlor	< 0.04 ug/L	EPA 525.2	0.04 ug/L	3/14/19	LEH	0.4
Metolachlor	< 0.25 ug/L	EPA 525.2	0.25 ug/L	3/14/19	LEH	
Metribuzin	< 0.25 ug/L	EPA 525.2	0.25 ug/L	3/14/19	LEH	
Propachlor	< 0.25 ug/L	EPA 525.2	0.25 ug/L	3/14/19	LEH	
Simazine	< 0.07 ug/L	EPA 525.2	0.07 ug/L	3/14/19	LEH	4
3-Hydroxycarbofuran	< 0.5 ug/L	EPA 531.1	0.5 ug/L	3/12/19	MBS	
Aldicarb	< 0.6 ug/L	EPA 531.1	0.6 ug/L	3/12/19	MBS	
Aldicarb sulfone	< 1.0 ug/L	EPA 531.1	1.0 ug/L	3/12/19	MBS	
Aldicarb sulfoxide	< 0.7 ug/L	EPA 531.1	0.7 ug/L	3/12/19	MBS	
Carbaryl	< 0.5 ug/L	EPA 531.1	0.5 ug/L	3/12/19	MBS	
Carbofuran	< 0.9 ug/L	EPA 531.1	0.9 ug/L	3/12/19	MBS	40
Methomyl	< 0.5 ug/L	EPA 531.1	0.5 ug/L	3/12/19	MBS	
Oxamyl	< 1.0 ug/L	EPA 531.1	1.0 ug/L	3/12/19	MBS	200
Glyphosate	< 6.0 ug/L	EPA 547	6.0 ug/L	3/15/19	Outside Lab	700

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Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

Analytical Results

TASK NO: 190306009

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

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

Task No.: 190306009
Client PO:
Client Project:

Date Received: 3/6/19
Date Reported: 3/19/19
Matrix: Water - Drinking

Customer Sample ID: Miles Well
Sample Date/Time: 3/4/19 10:20 AM
Lab Number: 190306009-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
Endothall	< 9 ug/L	EPA 548.1	9 ug/L	3/12/19	SPF	100
Diquat	< 0.4 ug/L	EPA 549.2	0.4 ug/L	3/8/19	Sean	20
1,1,1,2-Tetrachloroethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,1,1-Trichloroethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	200
1,1,2,2-Tetrachloroethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,1,2-Trichloroethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	5
1,1-Dichloroethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,1-Dichloroethylene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	7
1,1-Dichloropropene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,2,3-Trichlorobenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,2,3-Trichloropropane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,2,4-Trichlorobenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	70
1,2,4-Trimethylbenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,2-Dichloroethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	5
1,2-Dichloropropane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	5
1,3,5-Trimethylbenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,3-Dichloropropane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
1,3-Dichloropropene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Benzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	5
Bromobenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Bromochloromethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	

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Analytical Results

TASK NO: 190306009

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

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

Task No.: 190306009
Client PO:
Client Project:

Date Received: 3/6/19
Date Reported: 3/19/19
Matrix: Water - Drinking

Customer Sample ID Miles Well
Sample Date/Time: 3/4/19 10:20 AM
Lab Number: 190306009-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
Bromodichloromethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Bromoform	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Bromomethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Carbon Tetrachloride	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	5
Chlorodibromomethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Chloroethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Chloroform	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Chloromethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
cis-1,2-Dichloroethylene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	70
Dibromomethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Dichlorodifluoromethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Dichloromethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	5
Ethylbenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	700
Fluorotrichloromethane	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Hexachlorobutadiene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Isopropylbenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
m-Dichlorobenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Monochlorobenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	100
Naphthalene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
n-Butylbenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
n-Propylbenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
o-Chlorotoluene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	

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MCL = Maximum Contaminant Level per The EPA
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Analytical Results

TASK NO: 190306009

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

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

Task No.: 190306009
Client PO:
Client Project:

Date Received: 3/6/19
Date Reported: 3/19/19
Matrix: Water - Drinking

Customer Sample ID Miles Well
Sample Date/Time: 3/4/19 10:20 AM
Lab Number: 190306009-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
o-Dichlorobenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	600
Para-Dichlorobenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	75
p-Chlorotoluene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
p-Isopropyltoluene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
sec-Butylbenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Styrene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	100
tert-Butylbenzene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	
Tetrachloroethylene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	5
Toluene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	1000
Total Trihalomethanes	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	80
trans-1,2-Dichloroethylene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	100
Trichloroethylene	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	5
Vinyl chloride	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	2
Xylenes (total)	< 0.5 ug/L	EPA-524.2	0.5 ug/L	3/7/19	LEH	10000

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mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

Drinking Water Chain of Custody

1 of 2



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>TSS-Hydro</u>	Company Name: _____	PWSID: _____	Address: <u>15130 Fox Creek Ln</u>	City: <u>NS</u>	State: <u>SD</u>
Contact Name: <u>Doug Schwertke</u>	Contact Name: _____	System Name: _____	City: <u>NS</u>	State: <u>SD</u>	Zip: <u>57008</u>
Address: <u>5540 TechCenter Dr.</u>	Address: _____		County: <u>El Paso</u>	City: <u>NS</u>	State: <u>SD</u>
City: <u>Colorado State</u>	City: _____		Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	City: <u>NS</u>	State: <u>SD</u>
State: <u>CO</u>	State: _____		Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	City: <u>NS</u>	State: <u>SD</u>
Zip: <u>80919</u>	Zip: _____			City: <u>NS</u>	State: <u>SD</u>
Phone: <u>719-337-0572</u>	Phone: _____			City: <u>NS</u>	State: <u>SD</u>
Fax: _____	Fax: _____			City: <u>NS</u>	State: <u>SD</u>
Email: <u>dschwertke@tsshydro.com</u>	Email: _____			City: <u>NS</u>	State: <u>SD</u>
Sampler Name: <u>Stephanie Schwertke</u>	Sampler Name: _____			City: <u>NS</u>	State: <u>SD</u>
PO No.: _____	PO No.: _____			City: <u>NS</u>	State: <u>SD</u>

Task Number		CAL Task No.		PHASE I, II, V Drinking Water Analyses (check analysis)																Subcontract Analyses											
<u>Miles Well</u>		<u>190306009</u>																		<u>Cyanide</u>											
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)	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium		
3/4	10:56	#1	2							X								X													
3/4	9:51	#2	1																												
3/4	9:57	#3	1																												
3/4	9:55	#4	1																												
3/4	9:58	#5	1																												
3/4	10:00	#6	1																												
3/4	10:03	#7	1																												
3/4	10:03	#8	1																												
3/4	10:16	#9	3																												
3/4	10:18	#10	3																												

Instructions: Field pH: 6.31
 Re: Stephanie
 OK to test nitrate field Temp: 13.2°C
 Nitrate out of 47.8
 Please analyze lead, copper, iron, manganese
 CS Info: _____
 Seals Present Yes No Headspace Yes No

Relinquished By: Stephanie Date/Time: 3/4/19 11:15
 Received By: A. F... Date/Time: 3/6/19 9:00
 Delivered Via: Field Ex CS Charge
 Relinquished Via: _____ Date/Time: _____
 Temp: 4 °C/lit Received By: _____
 Sample Pres. Yes No Date/Time: _____

Drinking Water Chain of Custody

2 of 2



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>	Company Name:	Contact Name: <u>Doug Schwente</u>	Contact Name:	PWSID:	
Address: <u>6540 Tech Center Dr</u>	Address:	City: <u>CS</u>	City:	System Name:	
City: <u>CS</u>	City: <u>CD</u>	State: <u>CO</u>	State:	Address: <u>15150 Foxglove Ln</u>	
Zip: <u>80919</u>	Zip: <u>80919</u>	City: <u>CS</u>	City:	City: <u>CS</u>	
Phone: <u>719-227-0017</u>	Phone:	State: <u>CO</u>	State:	State: <u>CO</u>	
Fax:	Fax:	Zip: <u>80919</u>	Zip:	Zip: <u>80919</u>	
Email: <u>dschwente@jshydro.com</u>	Email:	County: <u>El Paso</u>	County:	County: <u>El Paso</u>	
Sampler Name: <u>Stephane Schwente</u>	Sampler Name:	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

CAL Task No. 190306009 R

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

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)	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium	
3/4	10:20	#11	2										X																	
3/4	10:14	#12	2																											
3/4	10:07	#13	3																											
3/4	9:58	#14	3						X																					
3/4	9:54	#15	1																											
		TriP blank																												
		Field blank																												

Instructions:

Relinquished By: [Signature] Date/Time: 3/4/19 11:15am

Received By: Adama Date/Time: 3/6/19 9:00

Delivered Via: FedEx C/S Charge: No

Relinquished By: [Signature] Date/Time: [Blank]

Temp: 4 °C / Y °F Sample Pres. Yes No

Received By: [Signature] Date/Time: [Blank]

Scals Present Yes No Headspace Yes No

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

Analytical Results

TASK NO: 190306009

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

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

Task No.: 190306009	Date Received: 3/6/19
Client PO:	Date Reported: 3/19/19
Client Project:	Matrix: Water - Drinking

Customer Sample ID Miles Well
Sample Date/Time: 3/4/19 10:20 AM
Lab Number: 190306009-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
Nitrate Nitrogen	1.81 mg/L	EPA 300.0	0.05 mg/L	3/7/19	JTF	10
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	3/7/19	JTF	1
Cyanide-Total	< 0.005 mg/L	EPA 335.4	0.005 mg/L	3/15/19	MAT	0.02
Total						
Iron	< 0.005 mg/L	EPA 200.7	0.005 mg/L	3/11/19	MBN	0.3
Sodium	9.2 mg/L	EPA 200.7	0.1 mg/L	3/11/19	MBN	N/A
Antimony	< 0.001 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	0.006
Arsenic	< 0.001 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	0.01
Barium	0.041 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	2
Beryllium	< 0.001 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	0.004
Cadmium	< 0.001 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	0.005
Chromium	< 0.001 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	0.1
Copper	0.0695 mg/L	EPA 200.8	0.0008 mg/L	3/9/19	DBM	1.3
Lead	0.0011 mg/L	EPA 200.8	0.0001 mg/L	3/9/19	DBM	0.015
Manganese	< 0.0008 mg/L	EPA 200.8	0.0008 mg/L	3/9/19	DBM	0.05
Mercury	< 0.0001 mg/L	EPA 200.8	0.0001 mg/L	3/6/19	DBM	0.002
Nickel	< 0.001 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	N/A
Selenium	0.002 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	0.05
Thallium	< 0.001 mg/L	EPA 200.8	0.001 mg/L	3/6/19	DBM	0.002

Abbreviations/ References:

ML = Minimum Level = LRL = RL
MCL = Maximum Contaminant Level per The EPA
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

Analytical Results

TASK NO: 190306009

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

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

Task No.: 190306009	Date Received: 3/6/19
Client PO:	Date Reported: 3/19/19
Client Project:	Matrix: Water - Drinking

Customer Sample ID Miles Well
Sample Date/Time: 3/4/19 10:20 AM
Lab Number: 190306009-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
<u>Total</u> Uranium	< 0.0002 mg/L	EPA 200.8	0.0002 mg/L	3/9/19	DBM	0.03

Abbreviations/ References:

ML = Minimum Level = LRL = RL
MCL = Maximum Contaminant Level per The EPA
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

Drinking Water Chain of Custody

1 of 2



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>TSS-Hydro</u>	Company Name: _____	PWSID: _____	Address: <u>1512 Fox Creek Ln</u>	City: <u>NS</u>	State: <u>AD</u> Zip: <u>80618</u>
Contact Name: <u>Doug Schwertke</u>	Contact Name: _____	System Name: _____	County: <u>E1 Paso</u>	City: _____	State: _____ Zip: _____
Address: <u>5540 TenCenter Dr.</u>	Address: _____				
City: <u>Colorado Springs State</u>	City: _____				
State: <u>CO</u>	State: _____				
Zip: <u>80919</u>	Zip: _____				
Phone: <u>719-337-0572</u>	Phone: _____				
Fax: _____	Fax: _____				
Email: <u>denschwertke@tsshydro.com</u>	Email: _____				
Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Sampler Name: <u>Stephanie Schwertke</u>	PO No.: _____	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			

Task Number CAL Task No. 190306009
Miles Well JML

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)	Cyanide	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium
3/4	10:00	#1	2							X																				
3/4	9:51	#2	1																											
3/4	9:57	#3	1																											
3/4	9:55	#4	1																											
3/4	9:58	#5	1																											
3/4	10:00	#6	1																											
3/4	10:03	#7	1																											
3/4	10:03	#8	1																											
3/4	10:16	#9	3																											
3/4	10:18	#10	3																											

Instructions: Field pH: 6.31
 Per Stephanie
 We to test nitrate field Temp: 13.2°C
 Nitrate out of kit
 Please analyze lead, copper, iron, manganese

Seals Present Yes No **HeadSpace** Yes No

Relinquished By: <u>Stephanie</u>	Date/Time: <u>3/4/19 11:15</u>	Received By: <u>A. Fine</u>	Date/Time: <u>3/6/19 9:00</u>	Delivered Via: <u>Fed Ex</u>	C/S Charge: <input checked="" type="checkbox"/>	Temp: <u>4</u> °C/lire	Received By: <u>Y</u>	Sample Pres. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Date/Time: _____
-----------------------------------	--------------------------------	-----------------------------	-------------------------------	------------------------------	---	------------------------	-----------------------	--	------------------

Drinking Water Chain of Custody

2 of 2



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>	Company Name:	Contact Name: <u>Doug Schwente</u>	Contact Name:	PWSID:	
Address: <u>5540 TechCenter Dr</u>	Address:	City: <u>CS</u>	City:	System Name:	
City: <u>CS</u>	State: <u>CO</u> zip: <u>80919</u>	State:	State:	Address: <u>151630 Foxglove Ln</u>	
Phone: <u>719-227-0017</u> Fax:	Phone:	City: <u>CS</u>	State: <u>CO</u> zip: <u>80128</u>	City: <u>CS</u>	State: <u>CO</u> zip: <u>80128</u>
Email: <u>dschwente@jshydro.com</u>	Email:	County: <u>El Paso</u>	County:	Compliance Samples: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sampler Name: <u>Stephane Schwente</u>	PO No.:	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			

CAL Task No. 190306009 F

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

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)	Gross Alpha/Beta	Radium 226	Radium 228	Radon	Uranium		
3/4	10:20	#11	2										X																		
3/4	10:14	#12	2																												
3/4	10:07	#13	3						X																						
3/4	9:58	#14	3																												
3/4	9:54	#15	1																												
Instructions:		Trip blank																													
		Field blank																													

Reinquished By: [Signature] Date/Time: 3/4/19 11:15am

Received By: A Adams Date/Time: 3/6/19 9:00

Delivered Via: Fedex C/S Charge:

Reinquished By: [Signature] Date/Time: [Blank]

Temp: 4 °C / Y Sample Pres: Yes No

Received By: [Blank] Date/Time: [Blank]

Seals Present Yes No Headspace Yes No



Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

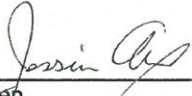
Lab Control ID: 19M01394
Received: Mar 06, 2019
Reported: Apr 01, 2019
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

Stuart Nielson
Colorado Analytical Laboratories, Inc.
PO Box 507
240 South Main Street
Brighton, CO 80601

ANALYTICAL REPORT

*Report may only be copied in its entirety.
Results reported herein relate only to discrete samples
submitted by the client. Hazen Research, Inc. does not warrant
that the results are representative of anything other than the
samples that were received in the laboratory*

By: 

Jessica Axen
Analytical Laboratories Director



Hazen Research, Inc.
 4601 Indiana Street
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Lab Control ID: 19M01394
 Received: Mar 06, 2019
 Reported: Apr 01, 2019
 Purchase Order No.
 None Received

Customer ID: 20040H
 Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
 Colorado Analytical Laboratories, Inc.

Lab Sample ID			19M01394-001					
Customer Sample ID			190306010-01 - Miles Well sampled on 03/04/19 @ 1014 by Stephanie Schwenke					
Parameter	Units	Code	Precision* Detection			Method	Analysis	
			Result	+/-	Limit		Date / Time	Analyst
Gross Alpha	pCi/L	T	1.0	1.0	0.1	SM 7110 B	3/12/19 @ 0754	SS
Gross Beta	pCi/L	T	<3.8	2.2	3.8	SM 7110 B	3/12/19 @ 0754	SS
Radium-226	pCi/L	T	0.8	0.3	0.2	SM 7500-Ra B	3/26/19 @ 0757	SA
Radium-228	pCi/L	T	2.0	0.8	0.3	EPA Ra-05	3/21/19 @ 1450	JR
Radon	pCi/L	T	1010	44	18.5	SM 7500-Rn B	3/6/19 @ 1407	SA

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) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Drinking Water Chain of Custody

19MO1394



**Colorado Analytical
Laboratories, Inc.**
Brighton Lab
240 South Main Street
Brighton, CO 80601

Lakewood Lab
12860 W. Cedar Dr, Suite 101
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)	
Company Name: Colorado Analytical Labs		State Form / Project Information	
Contact Name: Stuart Nielson		PWSID:	
Address: 240 S. Main St		System Name: Miles Well	
City: Brighton	State: CO	Zip: 80601	City: _____
State: CO	Zip: 80601	County: _____	System Address:
Phone: 303-629-2313	Fax: 303-659-2315	Compliance Samples: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Send Forms to State: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Email: stuartnieilson@coloradolab.com	PO No: _____		

Task Number			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)	Total Coliform P/A	504.1 EDR/B/BCP	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 THMs	524.2 HAA5s	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	
03/04/19	1014	190306010-01 Miles Well	6																							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Instructions: Please put on a state form but do not report to the state. Thanks

Delivered Via: C/S Charge Temp. °C / Ice Sample Pres. Yes No

Relinquished By: Adam Date/Time: 3-6-19 Received By: AS Date/Time: 3-6-19

Ship to: Hazen 1030 1300

STANDARD BACTERIOLOGICAL WATER TEST

El Paso County Public Health Laboratory
1675 West Garden of the Gods Road, Suite 2044, Colorado Springs, CO 80907 • (719) 578-3120

METHOD: SM-9223B

EPA ID# CO00025

PWSID #

C	O	O		
---	---	---	--	--

Facility ID _____

Sample Point ID Miles Well

Sample Taken: Date 3/4/19 Time 10:30

Address where sample was taken: _____

Name of Supply groundwater

Sample site location 15630 forresterton Sampler SS Chlorine φ mg/l

- Community Supply Private Well
- Non-Community EHS Surface/Spring Cistern

Results to Dave Schwenke Phone 719-227-0072

Mailing address 5340 Tech Center Drive

City/State/Zip: Colorado Springs, CO

Fax/Email dschwenke@jds-hy

Please provide summary statement regarding overall findings of water quality analysis.

Date 3/4/19 Time 12:21 Rc'd PC

Date 3/4/19 Time 15:40 Tested CPD

Date 3/5/19 Time 10:20 Comp. CP

Lab Sample # 033619

Coliform Results Per 100ml

- Absence: Absence of coliform bacteria
- Presence: Presence of coliform bacteria & non-compliance with drinking water standards. The water supply should be treated & retested

MPN/100 ml _____

- Absence: E. Coli: Escherichia coli bacteria
- Presence: _____

MPN/100 ml _____

Water Resources Report_v1.pdf Markup Summary

Cloud+ (6)



Subject: Cloud+
Page Label: 33
Author: John Green
Date: 12/14/2020 3:25:52 PM
Status:
Color: ■
Layer:
Space:

Address findings from report in Letter of Intent and add a plat note.



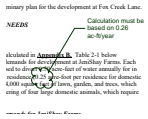
Subject: Cloud+
Page Label: 75
Author: John Green
Date: 12/14/2020 3:29:06 PM
Status:
Color: ■
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Space:

Please provide summary statement regarding overall findings of water quality analysis.



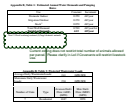
Subject: Cloud+
Page Label: 3
Author: John Green
Date: 12/15/2020 1:36:45 PM
Status:
Color: ■
Layer:
Space:

Report must reference all 9 proposed lots and corresponding acreage



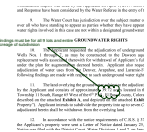
Subject: Cloud+
Page Label: 5
Author: John Green
Date: 12/15/2020 1:37:51 PM
Status:
Color: ■
Layer:
Space:

Calculation must be based on 0.26 ac-ft/year



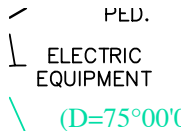
Subject: Cloud+
Page Label: 12
Author: John Green
Date: 12/15/2020 1:41:29 PM
Status:
Color: ■
Layer:
Space:

Current zoning does not restrict total number of animals allowed per parcel. Please clarify in Lol if Covenants will restrict livestock use.



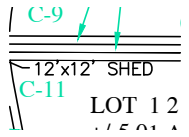
Subject: Cloud+
Page Label: 17
Author: John Green
Date: 12/15/2020 1:43:29 PM
Status:
Color: ■
Layer:
Space:

Findings must be for all 9 lots and entire acreage of subdivision



Subject:
Page Label: 10
Author: AutoCAD SHX Text
Date:
Status:
Color:
Layer:
Space:

ELECTRIC EQUIPMENT



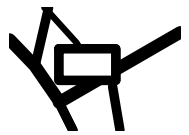
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Page Label: 10
Author: AutoCAD SHX Text
Date:
Status:
Color:
Layer:
Space:

12'x12' SHED



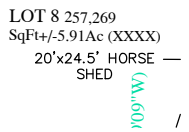
Subject:
Page Label: 10
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Date:
Status:
Color:
Layer:
Space:

COMM. PED.



Subject:
Page Label: 10
Author: AutoCAD SHX Text
Date:
Status:
Color:
Layer:
Space:

EVL



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Author: AutoCAD SHX Text
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20'x24.5' HORSE SHED



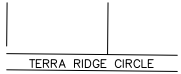
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WELL



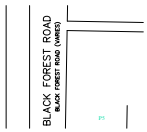
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EXISTING RESIDENCE



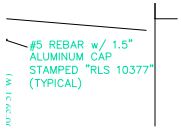
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TERRA RIDGE CIRCLE



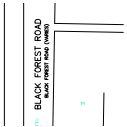
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BLACK FOREST ROAD (VARIES)



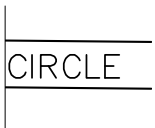
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#5 REBAR w/ 1.5" ALUMINUM CAP STAMPED "RLS 10377" (TYPICAL)



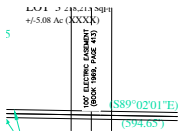
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BLACK FOREST ROAD



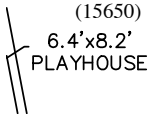
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TERRA RIDGE CIRCLE



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Author: AutoCAD SHX Text
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100' ELECTRIC EASEMENT (BOOK 1969, PAGE 413)



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6.4'x8.2' PLAYHOUSE



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