not complete. Please see Chapter 8, section 8.4.7- ADD all the required information

EXTERNAL MEMORANDUM

COLORADO LICENSED
THOMAS JAMES KENNEDY
39235
PROFESSIONAL ENGINEER
Thomas Kennedy

To: Ed Morgan, PLA, ASLA
William Gunman & Associates, Ltd.

From: Thomas Kennedy, PE
RESPEC
720 South Colorado Blvd., Suite 410 S
Denver, CO 80246

Date: December 13, 2021

Subject: Cornerstone Estates Subdivision - Water Resource Report

This water supply report is for the proposed Cornerstone Estates subdivision located within the Northeast One-Quarter of Section 23, Township 12 South, Range 65 West of the 6th Principal Meridian in El Paso County, Colorado, within the Upper Black Squirrel Creek Designated Ground Water Basin and within the jurisdiction of Upper Black Squirrel Creek Designated Groundwater Management District (see Figure 1). The 58.6707-acre undeveloped land (Property) is proposed to be subdivided into 16 residential lots (see Figure 2), with lot sizes ranging from 2.5007 acres to 3.630 acres.

This water supply report has been prepared in compliance with Section 8.4.7 of the El Paso County Land Development Code.

Water Quantity

The total water demand for the proposed subdivision is calculated to be 5.06 af/yr. (see Table 1). This water demand is based upon the following:

- A total of 5.06 af/yr water demand for in-house uses for the 16 lots (0.316 af/lot/yr).
- A total of 0.91 af/yr water demand for outside uses for the 16 lots (0.056 af/lot/yr), based on a equivalent outside use of 1,000 sq.ft. of outside landscaping (for flowerbeds, tree watering, car washing, etc.) because no general outside landscaping will be covered.

These water uses result in a total water demand per lot of 0.316af/yr.

Wastewater from the domestic uses will be discharged into an evaporative on-site wastewater treatment system (OWTS) which will be designed and constructed in compliance with the requirements of the El Paso County Department of Health and Environment (EPCDHE). We estimate that the return flows from landscape irrigation will be 0.18 af/yr which is 20% of the landscape water requirements.

720 SOUTH COLORADO BLVD.
SUITE 410 S
DENVER, CO 80246
303.757.3655

The water supply for the proposed subdivision will be supplied through individual wells drilled into the non-renewable non-tributary Arapahoe formation aquifer. The amount of water available from the Arapahoe aquifer was determined in the Colorado Ground Water Commission's Findings and Order for Determination of Water Right No. 1302-BD (see attached). 1302-BD concluded that the allowed average annual amount of withdrawal of ground water from the Arapahoe aquifer shall not exceed 23.5 acre-feet based upon a 100-year aquifer life on 58.8 acres of land. Based on the El Paso County 300-year water supply requirement, this amount translates to 7.83 af/yr or 0.489 af/yr per lot. Each of the 16 lots will be allocated 0.489 af/yr of water from Arapahoe aquifer.

Water will be supplied by individual wells placed, drilled, and developed within each individual lot and will be permitted and constructed in accordance with findings and order stated in 1302-BD. The wells shall be designed and constructed in accordance with the Colorado Rules and Regulations for Water Well Construction, Pump Installation, Cistern Installation, and monitoring and Observation Hole/Well (Well Construction Rules, 2 CCR 402-2). Wells drilled into the Arapahoe aquifer typical last 20 to 30 years before well rehabilitation may be required. The timing of well replacement will depend on the individual well owner's well maintenance activities. Each well will be constructed at the time that the construction of the residential unit is constructed on that lot. Well drilling logs, well completion reports, and data and analysis of constant rate and step test pump tests will be provided upon completion of the individual well. Return flow from landscape irrigation of 0.18 af/yr (or 3.58 % of the total water demand of the subdivision) exceed the 2% required return flows from use of the Arapahoe aquifer. Arapahoe aquifer wells typically yield 10 gpm or greater which is adequate for the proposed domestic water uses of the proposed subdivision. An augmentation plan is not required for use of the Arapahoe aquifer at this location.

At this time, we do not have information indicating that there is a well(s) drilled on the property, however if there are they will be plugged and abandoned according to SEO guidelines.

Water Quality

The water quality of the Arapahoe aquifer under the proposed subdivision has not been tested. However, water quality of the Arapahoe aquifer has been reported in the United States Geological Survey "Water Quality in the Denver Basin Aquifer System, Colorado, 2003–05", Circular 1357, to generally be in compliance with the minimum safe drinking water requirements set by the State of Colorado pursuant to the Colorado Water Quality Control Commission's Primary Drinking Water Regulations (Regulation #11) and the requirements of the EPCDHE. Arapahoe aquifer groundwater is used by numerous water suppliers for drinking water in public water supply systems throughout the aerial extent of the Arapahoe aquifer. It is unlikely but possible that Arapahoe aquifer water will contain levels of iron and/or manganese higher than the requirements of Regulation #11 or the requirements of the EPCDHE. Upon drilling of the first Arapahoe aquifer well within the subdivision, the well water will be sampled, tested, and the resultant water quality test results will be provided to the County. If any of the well water constituents exceeds the requirements of Regulation #11 or the requirements of EPCDHE, individual home treatment systems will be required for the portion of the water supply to be used for potable uses. The Arapahoe aquifer is not subject to water quality degradation from on-site and off-site sources as long as the well is constructed in accordance with the Well Construction Rules. Based

upon the available information the Arapahoe aquifer water will be suitable as a safe drinking water source for the subdivision.

Water Supply Dependability

The proposed source of water supply is the non-tributary Arapahoe aquifer. The Arapahoe aquifer water will be used in accordance with 1302-BD. The calculations provided in 1302-BD provide a scientific basis for estimating the life of the Arapahoe aquifer. When combined with the 300-year limitation by El Paso County requirements, the Arapahoe aquifer will be a dependable water supply for the proposed subdivision.

Conclusion

It is my opinion that the water supply available for this subdivision is of the quantity, quality, and dependability required by Section 8.4.7 of the El Paso County Land Development Regulations.

Table 1
Cornerstone Estates Subdivision

Summary of Estimated Demands and Consumptive Use

Water Demand Parameters			
Total Number of EQRs	16		
In-house Demand per EQR (Based on 0.26 af/lot/yr)	232	gal/day	*(Page 37, EP Land Use Code 5/2016)*
Percent of In-house Water Used Consumptively *-(Evaporative OWTS)*	100	%	
Irrigated Outside Use Area	0.37	acres	
Annual Crop Application Rate (Based on 0.0566 af/1000 sq.ft.)	2.47	af/ac	*(Page 37, EP Land Use Code 5/2016)*
Irrigation Efficiency	80%		

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*
	Water Demands			Water Consumption			Return Flows				
Months	In-house	Irrigated Outside Use	Total	In-house	Irrigated Outside	Total	In-house		Irrigated Outside Use		Total
	(acre-ft)	*(acre-ft)*	*(acre-ft)*	*(acre-ft)*	*(acre-ft)*	*(acre-ft)*	*(acre-ft)*	*(gpm)*	*(acre-ft)*	*(gpm)*	*(acre-ft)*
January	0.35	0.00	0.35	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00
February	0.32	0.00	0.32	0.32	0.00	0.32	0.00	0.00	0.00	0.00	0.00
March	0.35	0.00	0.35	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00
April	0.34	0.04	0.38	0.34	0.03	0.37	0.00	0.00	0.01	0.06	0.01
May	0.35	0.13	0.48	0.35	0.10	0.46	0.00	0.00	0.03	0.19	0.03
June	0.34	0.19	0.53	0.34	0.15	0.49	0.00	0.00	0.04	0.29	0.04
July	0.35	0.20	0.55	0.35	0.16	0.51	0.00	0.00	0.04	0.29	0.04
August	0.35	0.15	0.50	0.35	0.12	0.47	0.00	0.00	0.03	0.22	0.03
September	0.34	0.14	0.48	0.34	0.11	0.45	0.00	0.00	0.03	0.21	0.03
October	0.35	0.06	0.42	0.35	0.05	0.40	0.00	0.00	0.01	0.09	0.01
November	0.34	0.00	0.34	0.34	0.00	0.34	0.00	0.00	0.00	0.00	0.00
December	0.35	0.00	0.35	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00
								average		*average*	
Annual	4.16	0.91	5.06	4.16	0.72	4.88	0.00	*0.00*	0.18	*0.11*	0.18

(1) Equals Number of EQRs times In-House Demand per EQR times the Days in the month divided by 325,851.
(2) Equals Equivalent Outside Use Area times Monthly CIR divided by Irrigation Efficiency.
(3) Equals the total of Column (1 thru 2).
(4) Equals Column (1) times the Percent of In-House Water Used Consumptively.
(5) Equals Column (2) times Irrigation Efficiency
(6) Equals the total of Column (4 and 5).
(7) Equals Column (1) minus Column (4).
(8) Equals Coumn (7) divdided by days in the month divided by 1.98 times 449.
(9) Equals Column (2) minus Column (5).
(10) Equals Coumn (9) divdided by days in the month divided by 1.98 times 449.
(11) Equals Column (3) minus Column (6).

	Monthly Parameters	
Months	Days	Application
January	31	0.00
February	28	0.00
March	31	0.00
April	30	0.10
May	31	0.35
June	30	0.51
July	31	0.54
August	31	0.41
September	30	0.38
October	31	0.17
November	30	0.00
December	31	0.00
Annual	365	2.47

*CIR based on an Blaney-Criddle calculations for local weather station and bluegrass.

		EQR per Unit	Total EQR's	Irrigated Area per EQR	Total
Single Family	16 EQR's	1	16	1000 sq.ft.	0.37
Multi-Family					
Commercial					
Total			16		0.37 ac

RESPEC
TJK, 12/13/2021
L:\0008 Colorado Springs Development Clients\Cornerstone Estates\Water Usage.xlsx

RESPEC CONSULTING & SERVICES
720 South Colorado Blvd., Suite 410S
Denver, CO 80246
Phone: 303 757 3655
www.respec.com

Cornerstone Estates

Property Location Map

Scale: 1" = 2000'

Date:12/12/2021

Figure 1

FINAL PLAT
CORNERSTONE ESTATES
A PORTION OF THE NORTHEAST ONE-QUARTER OF SECTION 23, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN COUNTY OF EL PASO, STATE OF COLORADO

ORIGINAL SCALE: 1" = 100'

LEGEND

○	SET MONUMENT AS NOTED
●	FOUND MONUMENT AS NOTED
⊙	CENTER OF SECTION
✚	SECTION CORNER
⊷	SECTION QUARTER CORNER
U,T&DE	UTILITY, TRAIL AND DRAINAGE EASEMENT
U&DE	UTILITY AND DRAINAGE EASEMENT
SDE	SIGHT DISTANCE EASEMENT

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	CHORD
C1	14°29'26"	854.91'	216.21'	N07°42'31"W 215.64'
C2	28°36'10"	300.00'	149.76'	S75°11'00"W 148.21'
C3	29°03'19"	300.00'	152.13'	N75°24'35"E 150.51'
C4	15°21'38"	300.00'	80.43'	S07°44'35"E 80.19'
C5	35°24'18"	300.00'	185.38'	N02°16'45"E 182.44'
C6	12°43'38"	500.00'	111.07'	S06°18'03"W 110.84'
C7	28°36'10"	330.00'	164.74'	N75°11'00"E 163.03'
C8	29°03'19"	270.00'	136.92'	N75°24'35"E 135.46'
C9	90°00'00"	25.00'	39.27'	S45°03'46"E 35.36'
C10	12°43'38"	470.00'	104.40'	S06°18'03"W 104.19'
C11	9°19'43"	470.00'	76.52'	S04°36'05"W 76.44'
C12	3°23'55"	470.00'	27.88'	S10°57'54"W 27.88'
C13	44°24'55"	45.00'	34.88'	S34°52'19"W 34.02'
C14	268°49'50"	60.00'	281.52'	S77°20'08"E 85.71'
C15	106°02'47"	60.00'	111.05'	S04°03'23"W 95.87'
C16	33°46'26"	60.00'	35.37'	S65°51'14"E 34.86'
C17	67°15'33"	60.00'	70.43'	N63°37'47"E 66.46'
C18	30°00'00"	60.00'	31.42'	N15°00'00"E 31.06'
C19	31°45'03"	60.00'	33.25'	N15°52'32"W 32.83'
C20	44°24'55"	45.00'	34.88'	N09°32'36"W 34.02'

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	CHORD
C21	12°43'38"	530.00'	117.73'	N06°18'03"E 117.49'
C22	90°00'00"	25.00'	39.27'	N44°56'14"E 35.36'
C23	44°24'55"	45.00'	34.88'	S67°51'18"E 34.02'
C24	104°24'55"	60.00'	109.34'	N82°08'42"E 94.83'
C25	104°24'55"	60.00'	109.34'	N82°16'14"W 94.83'
C26	104°24'55"	60.00'	109.34'	N82°16'14"W 94.83'
C27	90°00'00"	25.00'	39.27'	N45°03'46"W 35.36'
C28	15°21'38"	330.00'	88.47'	N07°44'35"W 88.21'
C29	35°24'18"	270.00'	166.84'	N02°16'45"E 164.20'
C30	1°33'43"	270.00'	7.36'	N14°38'32"W 7.36'
C31	33°50'34"	270.00'	159.48'	N03°03'37"E 157.17'
C32	44°24'55"	45.00'	34.88'	N42°11'21"E 34.02'
C33	268°49'50"	60.00'	281.52'	N70°01'06"W 85.71'
C34	69°44'51"	60.00'	73.04'	N29°31'23"E 68.61'
C35	28°38'52"	60.00'	30.00'	N19°40'28"W 29.69'
C36	28°38'52"	60.00'	30.00'	N48°19'21"W 29.69'
C37	117°21'13"	60.00'	122.89'	S58°40'37"W 102.51'
C38	24°26'01"	60.00'	25.59'	S12°13'01"E 25.39'
C39	44°24'55"	45.00'	34.88'	S02°13'34"E 34.02'
C40	35°24'18"	330.00'	203.92'	S02°16'45"W 200.69'

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	CHORD
C41	2°51'06"	330.00'	16.43'	S18°33'20"W 16.42'
C42	29°59'50"	330.00'	172.77'	S02°07'52"W 170.81'
C43	2°33'21"	330.00'	14.72'	S14°08'44"E 14.72'
C44	15°21'38"	270.00'	72.38'	S07°44'35"E 72.17'
C45	90°00'00"	25.00'	39.27'	S44°56'14"W 35.36'
C46	29°03'19"	330.00'	167.35'	S75°24'35"W 165.56'
C47	28°36'10"	270.00'	134.79'	S75°11'00"W 133.39'
C48	10°11'09"	945.06'	168.01'	N05°38'39"W 167.79'

Figure 2

Cornerstone Estates

X:\2520000 all\2522900\Drawings\Sheet Dwgs\Survey\2522900FP01.dwg, PLAT SHEET 3, 9/28/2021 10:35:47 AM, CS

WATER SUPPLY INFORMATION SUMMARY

Section 30-28-133,(d), C.R.S. requires that the applicant submit to the County,"Adequate evidence that a water supply that is sufficient in terms of quantity, quality and dependability will be available to ensure an adequate supply of water.

1. NAME OF DEVELOPMENT AS PROPOSED
Cornerstone Estates

2. LAND USE ACTION Final Plat

3. NAME OF EXISTING PARCEL AS RECORDED N/A

SUBDIVISION See Above FILING N/A BLOCK N/A LOT N/A

4. TOTAL ACREAGE 58.6 ac

5. NUMBER OF LOTS PROPOSED 16 PLAT MAP ENCLOSED ☐ YES See submittal

6. PARCEL HISTORY - Please attach copies of deeds, plats or other evidence or documentation.

A. Was parcel recorded with county prior to June 1, 1972? ☐ YES ☒ NO
B. Has the parcel ever been part of a division of land action since June 1, 1972? ☐ YES ☒ NO
If yes, describe the previous action _____

7. LOCATION OF PARCEL - Include a map deliniating the project area and tie to a section corner. (in submittal)

NE 1/4 SECTION 23 TOWNSHIP 12 ☐ N ☒ S RANGE 65 ☐ E ☒ W

PRINCIPAL MERIDIAN: X 6TH ☐ N.M. ☐ UTE ☐ COSTILLA

8. PLAT - Location of all wells on property must be plotted and permit numbers provided.
Surveyors plat X Yes No If not, scaled hand drawn sketch ☐ Yes ☒ No

9. ESTIMATED WATER REQUIREMENTS - Gallons per Day or Acre Feet per Year

HOUSEHOLD USE*# 16 of units	3,712 GPD	4.16 AF	
COMMERCIAL USE # 0.0 of S.F.	0 GPD	0.0 AF	
IRRIGATION # 16,000 (of S.F.)	647	0.72 AF	
STOCK WATERING # 0 of head	GPD	0 AF	
OTHER _____	GPD	AF	
TOTAL	4,359 GPD	4.88 AF	

*Based on 0.26 Acre-Feet/Unit/Year

10. WATER SUPPLY SOURCE

[ ] Existing Well [ ] Developed Spring [X] New Wells

Proposed Aquifers (check below)

☐ ALLUVIAL ☒ UPPER ARAPAHOE
☐ UPPER DAWSON ☒ LOWER ARAPAHOE
☐ LOWER DAWSON ☐ LARAMIE FOX HILLS
☐ DENVER ☐ DAKOTA
☐ OTHER _____

WELL PERMIT NUMBERS _____

☐ MUNICIPAL
☐ ASSOCIATION
☐ COMPANY
☐ DISTRICT
NAME _____
LETTER OF COMMITMENT FOR SERVICE ☐ YES ☐ NO

WATER COURT DECREE CASE NO.'S
Determinations
1302-BD (Arapahoe)

11. ENGINEER'S WATER SUPPLY REPORT ☒ YES ☐ NO IF YES, PLEASE FORWARD WITH THIS FORM. (This may be required before our review is completed.)

12. TYPE OF SEWAGE DISPOSAL SYSTEM Individual On-site Wastewater Treatment Systems

☐ SEPTIC TANK/LEACH FIELD ☐ CENTRAL SYSTEM - DISTRICT NAME _____

☐ LAGOON ☐ VAULT - LOCATION SEWAGE HAULED TO _____

☐ ENGINEERED SYSTEM (Attach a copy of engineering design) ☐ OTHER _____

COLORADO GROUND WATER COMMISSION
DIVISION OF WATER RESOURCES
DEPARTMENT OF NATURAL RESOURCES
1313 Sherman St, Room 818, Denver, CO 80203

4x34a6

RECEIVED

AUG 1 4 2006

WATER RESOURCES
STATE ENGINEER
COLO.

APPLICATION FOR DETERMINATION OF WATER RIGHT WITHIN A DESIGNATED GROUND WATER BASIN PURSUANT TO SECTION 37-90-107(7), C.R.S.

Please note: This application may only be used to apply for a determination of rights to ground water from the Dawson, Denver, Arapahoe or Laramie-Fox Hills aquifer underlying land areas located within a Designated Ground Water Basin. Review the instructions on the reverse of this form. This form must be completed, signed, dated and submitted to the Ground Water Commission with a non-refundable $440 filing fee. A separate form must be used for each aquifer determination. Type or print in black ink.

1. APPLICANT INFORMATION

Name of Applicant

Robert Bartlett

Applicant Mailing Address

11340 Goodson Road, Colorado Springs, CO 80908-4408

Applicant Telephone Number (include area code) 719-495-8786

2. AMOUNT OF OVERLYING LAND - the total land area claimed and described by the applicant in Item #8 below, consisting of 58.8 acres.

3. AQUIFER

Arapahoe

4. EXISTING WELLS - Are there any wells located on the claimed and described overlying land? Yes____ No X
If yes, provide a complete list of all wells located on the overlying land area as an attachment to this application. ____

5. ANNUAL AMOUNT OF GROUND WATER - to be withdrawn, for intended beneficial uses, from the aquifer underlying the described land area claimed by the applicant in Item #8 below. Please specify one of the following:

☒ Maximum allowable annual acre-feet ☐ ____ acre-feet annually ☐ Maximum allowable annual acre-feet, excluding ____ acre-feet from that amount

6. USE OF GROUND WATER - description of intended beneficial uses of the ground water to be withdrawn from the aquifer

Domestic, commercial, industrial, irrigation, stock watering and replacement supply

7. PLACE OF USE - of the ground water shall be considered to be that overlying land area claimed and described by the applicant in Item #8 below, unless a legal description or accurate scale map is provided which describes an altenate/additional place of use.

8. REQUIRED LANDOWNERSHIP DOCUMENTATION - The Ground Water Commission shall allocate ground water from the Dawson, Denver, Arapahoe or Laramie-Fox Hills aquifer on the basis of ownership of overlying land. For this reason, a Nontributary Ground Water Landownership Statement (form GWS-1) or Nontributary Ground Water Consent Claim (form GWS-48), including a description of the overlying land area subject to this determination, must be submitted as an attachment to the application.

9. SIGNATURE OF APPLICANT - must be original signature - The making of false statements herein constitutes perjury in the second degree, which is punishable as a class 1 misdemeanor pursuant to C.R.S. 24-4-104(13)(a). I have read the statements herein, know the contents thereof, and state that they are true to my knowledge.

Signature Robert Bartlett Date 8/11/06

print name and title Robert Bartlett

Trans Number: 3607681 B
8/14/2006 10:48:48 AM
Jacob Duvall (18)
Total Trans Amt: $240.00
CHECK
Check Number: 6606
Check Amount: $240.00

FOR OFFICE USE ONLY

8 - 10 4 12

DETERMINATION OF WATER RIGHT
SECTION 37-90-107(7)

APPLICANTS: **Robert Bartlett**

BASIN: Upper Black Squirrel Creek GWMD: Upper Black Squirrel Creek

COUNTY: El Paso

AQUIFER: **Arapahoe** RECEIPT NO. 3607681-B

NUMBER OF ACRES IN TRACT: 58.8 acres

GENERAL LOCATION: The SE¼ of the NE¼, and the S½ of the NE¼ of the NE¼ of Section 23, Township 12 South, Range 65 West, 6th P.M.

AQUIFER DATA

AMOUNT AVAILABLE FOR APPROPRIATION: (235 feet SS)(58.8 Acres)(0.17 SY) = 2,349 AF 23.5 AFyr

ADJUSTMENTS: none

ANNUAL AMOUNT: **23.5** **AFyr**

PRE.NOV.19, 1973 WELLS (COMPLETED IN AQUIFER) IN VICINITY: none

OVERLAP AREA: none

AREA CHECKED: Sections 13, 14, 15, 22, 23, 24, 25, 26, and 27 in T12S, R65W

SMALL-CAPACITY WELLS (COMPLETED IN AQUIFER) LOCATED ON CLAIMED TRACT: none

REPLACEMENT WATER STATUS OF CLAIMED LAND AREA: **Nontributary**

REPLACEMENT PLAN REQUIRED: No

AQUIFER INTERVAL (CENTRAL DATA POINT): 1610 feet to 2100 feet bgs

COMMENTS: The SS was considered to be 235 feet based on the sand thickness contour map for the Arapahoe aquifer.

Evaluated by Sarah K. Reinsel, Ground Water Commission Staff
Reviewed by EBT

1:24,000

N

0 1,000 2,000 4,000 6,000 Feet

0 0.25 0.5 0.75 1 Miles

DIVISION OF WATER RESOURCES
STATE OF COLORADO

Receipt Numbers: 3607681 A-D
Applicant: Robert Bartlett
Basin: Upper Black Squirrel
GWMD: Upper Black Squirrel
Aquifers: Klf, Ka, Tkd, Tdw

Section: 23
Township: 12 S
Range: 65 W
Meridian: S

Area claimed: 58.8 acres
58.2 acres measured
p = 1979 m
e = 3.3 acres

Legend
- Parcel
- Basin
- Township
- Section

Office of the State Engineer
Division of Water Resources
Department of Natural Resources

DIVISION OF WATER RESOURCES
STATE OF COLORADO

Arapahoe Aquifer
Tributary Status

Receipt Number: 3607681-B
Applicant: Robert Bartlett
Aquifer: Ka
Location: 23-12S-65W
Area: 58.8 acres

NT

Legend
- Parcel
- Basin
- Township
- Section

N

1:100,000

Office of the State Engineer
Division of Water Resources
Department of Natural Resources

DIVISION OF WATER RESOURCES
STATE OF COLORADO

Arapahoe Aquifer
Saturated Sands

Receipt Number: 3607681-B
Applicant: Robert Bartlett
Aquifer: Ka
Location: 23-12S-65W
Area: 58.8 acres

Legend
- Parcel
- Basin
- Township
- Section

N

1:200,000

Office of the State Engineer
Division of Water Resources
Department of Natural Resources

COLORADO GROUND WATER COMMISSION
FINDINGS AND ORDER

IN THE MATTER OF AN APPLICATION FOR DETERMINATION OF WATER RIGHT TO ALLOW THE WITHDRAWAL OF GROUND WATER IN THE UPPER BLACK SQUIRREL CREEK DESIGNATED GROUND WATER BASIN

APPLICANT: ROBERT BARTLETT

AQUIFER: ARAPAHOE

DETERMINATION NO.: **1032-BD**

In compliance with Section 37-90-107(7), C.R.S., and the Designated Basin Rules, 2 CCR 410-1, Robert Bartlett (hereinafter "applicant") submitted an application for determination of water right to allow the withdrawal of designated ground water from the Arapahoe Aquifer.

FINDINGS

1. The application was received complete by the Colorado Ground Water Commission on August 14, 2006.

2. The applicant requests a determination of rights to designated ground water in the Arapahoe Aquifer (hereinafter "aquifer") underlying 58.8 acres, generally described as the SE¼ of the NE¼ , and the S½ of the NE¼ of the NE¼ of Section 23, Township 12 South, Range 65 West of the 6th Principal Meridian, in El Paso County. According to a signed statement dated August 11, 2006, the applicant owns the 58.8 acres of land, as further described in said affidavit which is attached hereto as Exhibit A, and claims control of the ground water in the aquifer underlying this land area.

3. The proposed annual amount of ground water to be allocated and withdrawn from the aquifer for intended beneficial uses is the maximum allowable amount.

4. The above described land area overlying the ground water claimed by the applicant is located within the boundaries of the Upper Black Squirrel Creek Designated Ground Water Basin and within the Upper Black Squirrel Creek Ground Water Management District. The Colorado Ground Water Commission (hereinafter "Commission") has jurisdiction.

5. The applicant intends to apply the allocated ground water to the following beneficial uses: domestic, commercial, industrial, irrigation, stock watering, and replacement supply. The applicant's proposed place of use of the allocated ground water is the above described 58.8 acre land area.

6. The quantity of water in the aquifer underlying the 58.8 acres of land claimed by the applicant is 2,349 acre-feet. This determination was based on the following as specified in the Designated Basin Rules:

   a. The average specific yield of the saturated permeable material of the aquifer underlying the land under consideration that could yield a sufficient quantity of water that may be extracted and applied to beneficial use is 17 percent.

b. The average thickness of the saturated permeable material of the aquifer underlying the land under consideration that could yield a sufficient quantity of water that may be extracted and applied to beneficial use is 235 feet.

7. At this time, there is no substantial artificial recharge that would affect the aquifer within a one hundred year period.

8. Pursuant to Section 37-90-107(7), C.R.S., and in accordance with the Designated Basin Rules, the Commission shall allocate ground water in the aquifer based on ownership of the overlying land and an aquifer life of one hundred years. Therefore, the maximum allowed average annual amount of ground water in the aquifer that may be allocated for withdrawal pursuant to the data in the paragraphs above for the 58.8 acres of overlying land claimed by the applicant is 23.5 acre-feet.

9. A review of the records in the Office of the State Engineer has disclosed that none of the water in the aquifer underlying the land claimed by the applicant has been previously allocated or permitted for withdrawal.

10. Pursuant to Section 37-90-107(7)(c)(III), C.R.S., an approved determination of water right shall be considered a final determination of the amount of ground water so determined; except that the Commission shall retain jurisdiction for subsequent adjustment of such amount to conform to the actual local aquifer characteristics from adequate information obtained from well drilling or test holes.

11. The ability of wells permitted to withdraw the authorized amount of water from this non-renewable aquifer may be less than the one hundred years upon which the amount of water in the aquifer is allocated, due to anticipated water level declines.

12. In accordance with Rule 5.3.6 of the Designated Basin Rules, it has been determined that withdrawal of ground water from the aquifer underlying the land claimed by the applicant will not, within one hundred years, deplete the flow of a natural steam or its alluvial aquifer at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and, therefore, the ground water is nontributary ground water as defined in Rule 4.2.19 of the Designated Basin Rules. No more than 98% of the amount of ground water withdrawn annually shall be consumed, as required by the Designated Basin Rules.

13. In accordance with Section 37-90-107(7), C.R.S., upon Commission approval of a determination of water right, well permits for wells to withdraw the authorized amount of water from the aquifer shall be available upon application, subject to the conditions of this determination and the Designated Basin Rules and subject to approval by the Commission.

14. On September 18, 2006, in accordance with Rule 9.1 of the Designated Basin Rules, a letter was sent to the Upper Black Squirrel Creek Ground Water Management District requesting written recommendations concerning this application. No written recommendations from the district were received.

15. The Commission Staff has evaluated the application relying on the claims to control of the ground water in the aquifer made by the applicant.

16. In accordance with Sections 37-90-107(7) and 37-90-112, C.R.S., the application was published in the Ranchland News newspaper on September 21 and 28, 2006.

17. No objections to the determination of water right and proposed allocation of ground water were received within the time limit set by statute.

18. In order to prevent unreasonable impairment to the existing water rights of others within the Upper Black Squirrel Creek Designated Ground Water Basin it is necessary to impose conditions on the determination of water right and proposed allocation of ground water. Under conditions as stated in the following Order, no unreasonable impairment of existing water rights will occur from approval of this determination of water right or from the issuance of well permits for wells to withdraw the authorized amount of allocated ground water from the aquifer.

ORDER

In accordance with Section 37-90-107(7), C.R.S., and the Designated Basin Rules, the Colorado Ground Water Commission orders that the application for determination of rights to designated ground water in the Arapahoe Aquifer underlying 58.8 acres of land, generally described as the SE¼ of the NE¼ , and the S½ of the NE¼ of the NE¼ of Section 23, Township 12 South, Range 65 West of the 6th Principal Meridian, is approved subject to the following conditions:

19. The allowed average annual amount of withdrawal of ground water from the aquifer shall not exceed 23.5 acre-feet. The allowed maximum annual amount of withdrawal may exceed the allowed average annual amount of withdrawal as long as the total volume of water withdrawn does not exceed the product of the number of years since the date of approval of this determination times the allowed average annual amount of withdrawal.

20. To conform to actual aquifer characteristics, the Commission may adjust the allowed average annual amount of ground water to be withdrawn from the aquifer based on analysis of geophysical logs or other site-specific data if such analysis indicates that the initial estimate of the volume of water in the aquifer was incorrect.

21. The applicant may pump the allowed average annual amount of withdrawal and the allowed maximum annual amount of withdrawal from one or more wells of a well field in any combination, so long as the total combined withdrawal of the wells does not exceed the amounts described in this Order.

22. No more than 98% of the ground water withdrawn annually shall be consumed. The Commission may require well owners to demonstrate periodically that no more than 98% of the water withdrawn is being consumed.

23. The use of ground water from this allocation shall be limited to the following beneficial uses: domestic, commercial, industrial, irrigation, stock watering, and replacement supply. The place of use shall be limited to the above described 58.8 acre land area.

24. The applicant, or subsequent persons controlling this water right, shall record in the public records of the county - in which the claimed overlying land is located - notice of transfer of any portion of this water right to another within sixty days after the transfer, so that a title examination of the above described 58.8 acre land area, or any part thereof, shall reveal the changes affecting this water right. Such notice shall consist of a signed and dated deed which indicates the determination number, the aquifer, a description of the above described land area, the annual amount of ground water (acre-feet) transferred, name of the recipient, and the date of transfer.

25. Subject to the above conditions, well permits for wells to withdraw the allocated annual amount of water from the aquifer shall be available upon application subject to approval by the Commission and the following conditions:

    a. The wells shall be located on the above described 58.8 acre overlying land area.

    b. The wells must be constructed to withdraw water from only the Arapahoe Aquifer. Upon application for a well permit to construct such a well, the estimated top and base of the aquifer at the proposed well location will be determined by the Commission and indicated on the approved well permit. Plain non-perforated casing must be installed, grouted and sealed to prevent diversion of ground water from other aquifers and the movement of ground water between aquifers.

    c. The entire depth of each well must be geophysically logged prior to installing the casing as set forth in Rule 9 of the Statewide Nontributary Ground Water Rules, 2 CCR 402-7.

    d. Each well shall be constructed within 200 feet of the location specified on the approved well permit, but must be more than 600 feet from any existing large-capacity well completed in the same aquifer.

    e. A totalizing flow meter or other Commission approved measuring device shall be installed on each well and maintained in good working order by the well owner. Annual diversion records shall be collected and maintained by the well owner and submitted to the Commission or the Upper Black Squirrel Creek Ground Water Management District upon their request.

    f. The well owner shall mark the well in a conspicuous place with the permit number and the name of the aquifer. The well owner shall take necessary means and precautions to preserve these markings.

26. A copy of this Findings and Order shall be recorded by the applicant in the public records of the county in which the claimed overlying land is located so that a title examination of the above described 58.8 acre overlying land area, or any part thereof, shall reveal the existence of this determination.

Dated this 7th day of November, 2006.

Hal D. Simpson
Executive Director
Colorado Ground Water Commission

By: Keith Vander Horst
Keith Vander Horst, P.E.
Supervisor, Designated Basins

Prepared by: SKR

EXHIBIT A

1032-BD

GWS-1 (Rev, Sept 1996)

RECEIVED

AUG 1 4 2006

WATER DIV STATE COLO

STATE OF COLORADO
OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

NONTRIBUTARY GROUND WATER LANDOWNERSHIP STATEMENT

I (we) Robert Bartlett
(Name)
claim and say that I (we) am (are) the owner(s) of the following described property consisting of 58.8 acres in the County of El Paso, State of Colorado:

Tract in NE1/4, Section 23, Township 12 South, Range 65 West: Commencing at the NE corner of said Section; thence southerly on said section line 690 feet to the point of beginning; thence continuing 1950 feet; thence right angle 89<35'30" westerly 1340.31 feet; thence right angle parallel with the east line of said section, 1950 feet; thence right angle 90<24'30" easterly 1340.31 feet to the point of beginning

Except the eastern 30 feet.

and, that the ground water sought to be withdrawn from the Arapahoe aquifer underlying the above-described land has not been conveyed or reserved to another, nor has consent been given to it's withdrawal by another.

Further, I (we) claim and say that I (we) have read the statements made herein; know the contents hereof; and that the same are true to my (our) own knowledge.

Robert Bartlett 8/11/06
Robert Bartlett (Date)

(Date)

INSTRUCTIONS:

Please type or print neatly in black ink. This form may be reproduced by photocopy or word processing means. See additional instructions on back.

1313 SHERMAN ST RM 818 DENVER CO 80203 (303)866-3581

BEFORE THE COLORADO GROUND WATER COMMISSION

UPPER BLACK SQUIRREL CREEK DESIGNATED GROUND WATER BASIN AND UPPER BLACK SQUIRREL CREEK GROUND WATER MANAGEMENT DISTRICT - EL PASO COUNTY

TAKE NOTICE that pursuant to Section 37-90-107(7), C.R.S., Robert Bartlett (hereinafter "applicant") has applied for determinations of water rights to allow the appropriation of designated ground water from the Laramie-Fox Hills, Arapahoe, Denver, and Dawson aquifers underlying 58.8 acres generally described as the SE1/4 of the NE1/4 and the S1/2 of the NE1/4 of the NE1/4 of Section 23, Township 12 South, Range 65 West of the 6th P.M. The applicant claims ownership of this land and control of the ground water in the above-described aquifers under this property. The ground water appropriations from these aquifers will be used on the described property for the following beneficial uses: domestic, commercial, industrial, irrigation, stock watering, and replacement supply. The maximum allowable annual amount of ground water in each aquifer underlying the described property will be appropriated.

In accordance with Section 37-90-107(7), C.R.S., and the Designated Basin Rules, 2 CCR 410-1, the Colorado Ground Water Commission shall allocate ground water from the above-described aquifers based on ownership of the overlying land and an aquifer life of one hundred years. A preliminary evaluation of the applications by the Commission Staff finds the annual amount of water available for appropriation from each of the described aquifers underlying the above-described property to be as follows: 16.8 acre-feet for the Laramie-Fox Hills, 23.5 acre-feet for the Arapahoe, 29.5 acre-feet for the Denver, and 31.7 acre-feet for the Dawson, subject to final staff evaluation. The estimated available annual acre-feet appropriation amount for each aquifer indicated above may be increased or decreased by the Commission to conform to the actual aquifer characteristics, based upon site-specific data.

In accordance with Rule 5.3.6 of the Designated Basin Rules, the Commission Staff's preliminary evaluation of the applications finds the replacement water requirement status for the above aquifers underlying the above-described property to be as follows: nontributary for the Laramie-Fox Hills, nontributary for the Arapahoe, not-nontributary (4% replacement) for the Denver, and not-nontributary (actual impact replacement) for the Dawson.

Upon Commission approval of these determinations of water rights, well permits for wells to withdraw the allowed appropriation from a specific aquifer shall be available upon application, subject to the conditions of the determination and the Designated Basin Rules and subject to approval by the Commission. Such wells must be completed in the specified aquifer and located on the above-described 58.8-acre property. Well permits for wells to withdraw ground water from the Dawson aquifer would also be subject to the conditions of a replacement plan to be approved by the Commission.

Any person wishing to object to the approval of these determinations of water rights must do so in writing, briefly stating the nature of the objection and indicating the above applicant, property description and the specific aquifers that are the subject of the objection. The objection must be accompanied by a $10 fee and must be received by the Commission Staff, Colorado Ground Water Commission, 818 Centennial Building, 1313 Sherman Street, Denver, Colorado 80203, by October 30 , 2006.

PUBLISHER'S AFFIDAVIT

STATE OF COLORADO)
) ss.
COUNTY OF ELBERT)

I, Susan Lister, do solemnly affirm that I am the Publisher of RANCHLAND NEWS; that the same is a weekly newspaper published at Simla, County of Elbert, State of Colorado, and has a general circulation therein; that said newspaper has been continuously and uninterruptedly published in said County of Elbert for a period of at least 52 consecutive weeks next prior to the first publication of the annexed notice, that said newspaper is entered in the post office at Calhan, Colorado as second class mail matter and that said newspaper is a newspaper within the meaning of the Act of the General Assembly of the State of Colorado, approved March 30, 1923, and entitled "Legal Notices and Advertisements," with other Acts relating to the printing and publishing of legal notices and advertisements. That the annexed notice was published in the regular and entire issue of said newspaper, once each week for 2 successive weeks; that the first publication of said notice was in the issue of said newspaper dated:

September 21, 2006

and the last publication of said notice was in the issue of said newspaper dated:

September 28, 2006

and that copies of each number of said paper in which said notice and/or list was published were delivered by carriers or transmitted by mail to each of the subscribers of said newspaper, Ranchland News, according to the accustomed mode of business in this office.

Susan Lister
Publisher

The above certificate of publication was subscribed and affirmed to before me, a Notary Public, to be the identical person described in the above certificate, on the 28 day of September, 20 06

Nikki Lister
Notary Public

1/22/08
(My Notary Public Commission Expiration Date)

Determinations of Water Rights

BEFORE THE COLORADO GROUND WATER COMMISSION

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First Publication September 21, 2006
Final Publication September 28, 2006
In Ranchland News
Legal No. 11,773

STATE OF COLORADO

OFFICE OF THE STATE ENGINEER
Division of Water Resources
Department of Natural Resources

1313 Sherman Street, Room 818
Denver, Colorado 80203
Phone (303) 866-3581
FAX (303) 866-3589

www.water.state.co.us

November 7, 2006

Bill Owens
Governor

Russell George
Executive Director

Hal D. Simpson, P.E.
State Engineer

Robert Bartlett
11340 Goodson Road
Colorado Springs, CO 80908-4408

RE: Determination of Water Right

Dear Mr. Bartlett:

Enclosed is a copy of the Colorado Ground Water Commission's Findings and Order for Determination of Water Right No. 1032-BD, for the allocation of ground water in the Arapahoe aquifer. This Findings and Order is the Commission's approval of your application for determination of rights to ground water in the above-stated aquifer. This document contains important information about your water right and should be reviewed and retained for your records.

As indicated in the Order, a copy of this determination must be recorded by the applicant in the public records of the county – in which the overlying land is located – so that a title examination of the overlying land claimed in the application, or any part thereof, shall reveal this determination. An additional copy of the Findings and Order is enclosed for this purpose.

If you have any questions, please contact this office.

Sincerely,

Sarah K. Reinsel, E.I.T.
Water Resources Engineer
Designated Basins Branch

Enclosures: a/s

Cc: UBSC GWMD

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