

WATER RESOURCES REPORT
FOR
PEERLESS FARMS PRELIMINARY PLAN

PREPARED FOR SAGE CREEK WATER ASSOCIATION
WITH MID COLORADO INVESTMENT COMPANY, INC

PREPARED FOR
ROBERT & WENDY WILLIAMS
16975 FALCON HIGHWAY
PEYTON, CO 80831-7906

DECEMBER 2021

INTRODUCTION

This report and appendices contain information regarding:

- Sufficient water quantity of water including:
 - calculation of water demand
 - calculation of water availability
 - groundwater source information
 - service provider production wells information and mapping
- Sufficient dependability of the proposed water supply including:
 - proof of ownership (see Appendices D & E)
 - description of water supply
 - demonstration of quantity
 - evidence of water system source
- Sufficient water quality
 - (See appendix G)

APPENDICES

APPENDIX A	PRELIMINARY PLAN
APPENDIX B	WATER SUPPLY INFORMATION SUMMARY SHEET
APPENDIX C	VINCINITY MAP OF ARRAPAHOE AND LARAMIE FOX-HILLS WELLS
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MID-COLORADO INVESTMENT COMPANY, INC.

136 Arapahoe Trail, Woodland Park, CO 80863-8254

7 December 2021

To whom it may concern:

Mid-Colorado Investment Co., Inc., or its successors or assigns, commits to provide potable water to Sage Water Users Association (SWUA) for delivery to 7 lots in the "Peerless Farms" subdivision for a 300-year period. The total number of lots shall not exceed 7, there will be reasonable restrictions on irrigated area and number of large animals, and the total annual water demand will not exceed 7.0 acre-feet per year. Mid-Colorado's existing rights are adequate to supply Filing No. 2 for a 300 year period. Some relevant details are laid out below.

Source and quantity of water:

The source of water will be from Mid-Colorado's existing wells in the Laramie-Fox Hills and Arapahoe aquifers. The maximum quantities permitted under Mid-Colorado's various well permits are as follows:

	<i>100-yr Basis</i>
Permit No. 27745-F (Arapahoe)	190 AF/yr
Permit No. 49185-F (Arapahoe)	293 AF/yr
<u>Permit No. 27746-F (Laramie-Fox Hills)</u>	<u>255 AF/yr</u>
TOTAL	738 AF

Converting to a 300-yr basis $\rightarrow 738 \div 3 = \mathbf{246 \text{ AF/yr}}$

Mid-Colorado has very recently applied for additional water in the Laramie-Fox Hills aquifer; we anticipate that an additional 35 AF/yr or so (300 year basis) will be permitted.

Existing and future water supply obligations

Mid-Colorado's current contracted service area includes Sage Creek North (240.26 acres), Sage Creek South (476.74 acres), and portions of Blue Sage Filings 1 and 2, which are included in the Sage Water Users Association (SWUA). The total amount of water set aside for SWUA is 142.535 AF per year. This total comes from the original (1986) contract between Mid-Colorado and the SWUA, 91.5 AF/yr, which was increased in a 1990 Amendment to the contract to 128.5 AF/yr. An additional 14.035 AF/yr was allocated in a 1998 agreement between the SWUA and Mid-Colorado. So,

$$128.5 + 14.035 = 142.535 \text{ AF per year}$$

The amount set aside for SWUA greatly exceeds what is actually needed: the greatest annual quantity ever delivered by this Company to SWUA was about 91 acre-feet in 2000. Only a few new users have been connected to SWUA's system since then. Thus, the roughly 142.5 AF/yr allocation exceeds the actual use by about 50 AF!

Additionally, Mid-Colorado has committed to providing water to 118 lots in the so-called "Sage Filing 2". The total for this subdivision is 47.32 AF/yr. Finally, SWUA has been providing service to a parcel with a trailer park, with typically 14 families, for many years; the water to this trailer park is included in the amount of water now being provided to SWUA, e.g., in the 91 acre-feet delivered in 2000. Mid-Colorado may eventually provide water service to this, and to two additional parcels to the north and south of the trailer park, if they are subdivided. Mid-Colorado has set aside 21.20 acre-feet per year (21.20 AF/yr) for these parcels:

All of the existing and proposed commitments are summarized as follows:

Existing SWUA Commitments:	142.535 AF/yr
"Filing No. 2", 118 lots:	47.32 AF/yr
<u>Other Existing Commitments:</u>	<u>21.12 AF/yr</u>
Total	210.975 AF/yr

As demonstrated above, Mid-Colorado's available water supply at this time, on a 300-yr basis, is **246 AF/yr**, which exceeds the above total by roughly 16.6% (ignoring the large excess "allotment" to SWUA). Therefore the current supply is more than adequate to service the proposed Peerless Farms subdivision with 7.0 AF/yr.

Quantity for Peerless Farms:

The 7.0 AF/yr for the 7 lots is based on 1.0 AF/yr per lot. This figure greatly exceeds the average per-lot use (about 0.25 AF/yr for 2.5 acre lots) from the SWUA's billing records since 1995. The 1.0 AF/yr allowed per lot should be more than adequate. The existing subdivisions have restrictions on the irrigated area (2000 and 1600 square feet per lot in Sage Creek North and South, and in Blue Sage, respectively). Similar restrictions on irrigated area (reflecting the larger lot sizes in Peerless Farms), and number of large animals, will be required for the Peerless Farms lots. SWUA will monitor usage to ensure compliance with these limits and total water deliveries.

Please contact me (office 719-687-5312) if there are any questions.

Sincerely,

Mid-Colorado Investment Co., Inc.



Alfred A. Hagedorn III
President

APPENDIX A
PRELIMINARY PLAN

PEERLESS FARMS

PRELIMINARY PLAN

16975 FALCON HIGHWAY, PEYTON, CO

SITUATED IN THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 13 SOUTH, RANGE 64 WEST OF THE 6TH P.M., CITY OF PEYTON, COUNTY OF EL PASO, STATE OF COLORADO

LEGAL DESCRIPTION:

The Land referred to herein below is situated in the County of El Paso, State of Colorado, and is described as follows:
THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 13 IN TOWNSHIP 13 SOUTH, RANGE 64 WEST OF THE 6TH P.M., MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 13; THENCE SOUTH 00°31'50" WEST ALONG THE WEST SECTION LINE A DISTANCE OF 60.01 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 89°21'32" EAST ON A LINE PARALLEL TO THE NORTH SECTION LINE A DISTANCE OF 779.95 FEET; THENCE SOUTH 00°38'20" EAST, A DISTANCE OF 992.00 FEET; THENCE NORTH 00°01'51" WEST ALONG THE NORTH SECTION LINE A DISTANCE OF 60.01 FEET TO THE TRUE POINT OF BEGINNING. COUNTY OF EL PASO, STATE OF COLORADO.

SITE DATA TABLE:

TAX ID NUMBER:	4313000001
CURRENT ZONING:	RR-5
PROPOSED ZONING:	RR-5
PROPOSED LOTS:	7
TOTAL SITE ACREAGE:	40.07 AC
MINIMUM LOT SIZE:	5.018 AC
SETBACKS OF COVERAGE:	25' FRONT, 25' SIDE/ REAR, 25' SIDE/ REAR SETBACK
MAXIMUM BUILDING HEIGHT:	35' (UNLESS OTHERWISE IMPACTED BY RR-5 RESTRICTIONS)

SOILS & GEOLOGY CONDITIONS, CONSTRAINTS, & HAZARDS NOTE

1. A SOILS AND GEOLOGY STUDY FOR ROBERT WILLIAMS WAS COMPLETED BY RWS ENGINEERS ON APRIL 14, 2021 AND INCLUDED THE AREA OF DEVELOPMENT PROPOSED, KNOWN AS, PEERLESS FARMS. THE PRELIMINARY PLAN SUBMITTED TO THE EL PASO BOARD OF COUNTY COMMISSIONERS, PLANNING AND COMMUNITY DEVELOPMENT FILE NUMBER (TBD). DEVELOPERS AND HOMEOWNERS SHOULD BECOME FAMILIAR WITH THIS REPORT AND ITS CONTENTS. **
2. THE PROPOSED DEVELOPMENT IS FEASIBLE. THE GEOLOGIC CONDITIONS IDENTIFIED POTENTIALLY COULD BE MITIGATED BY THE PROPOSED DEVELOPMENT. THE GEOLOGIC CONDITIONS IDENTIFIED WERE CONSIDERED TYPICAL FOR THE FRONT RANGE REGIONS OF COLORADO. HOWEVER, WHERE AVOIDANCE IS NOT A PRACTICAL NOR ACCEPTABLE ALTERNATIVE, GEOLOGIC CONDITIONS SHOULD BE MITIGATED BY IMPLEMENTING APPROPRIATE PLANNING, ENGINEERING AND SUITABLE CONSTRUCTION PRACTICES. **
3. SITE-SPECIFIC SOILS STUDIES SHALL BE PERFORMED FOR THE LOTS WITHIN THIS SUBDIVISION PRIOR TO CONSTRUCTION OF THE PROPOSED DEVELOPMENT. THE STUDIES SHALL BE CONDUCTED IN ACCORDANCE WITH FOUNDATIONS AND PROVIDE PERTINENT GEOTECHNICAL-RELATED PARAMETERS AND RECOMMENDATIONS FOR FOUNDATION DESIGN AND CONSTRUCTION. **
4. PREVIOUSLY IDENTIFIED MITIGATION ALTERNATIVES, SURFACE AND SUBSURFACE DRAINAGE SYSTEMS SHOULD BE CONSIDERED. EXTERIOR PERIMETER FOUNDATION DRAINS SHOULD BE INSTALLED AROUND THE BUILDING AREA TO PREVENT FLOODING AND INFILTRATION TO THE SUBSURFACE SOIL. **
5. ALL CONSTRUCTION SHOULD REMAIN OUTSIDE THE UNNAMED CREEK DRAINAGEWAY. IT IS RECOMMENDED THE UNNAMED CREEK DRAINAGEWAY BE IDENTIFIED AS A "NO BUILD AREA" UNLESS ADDITIONAL STUDIES ARE PERFORMED IN CONJUNCTION WITH THE DRAINAGE ENGINEER, PRIOR TO ANY NEW CONSTRUCTION. **

** REFER TO THE SOILS REPORT FOR MORE DETAILED INFORMATION.

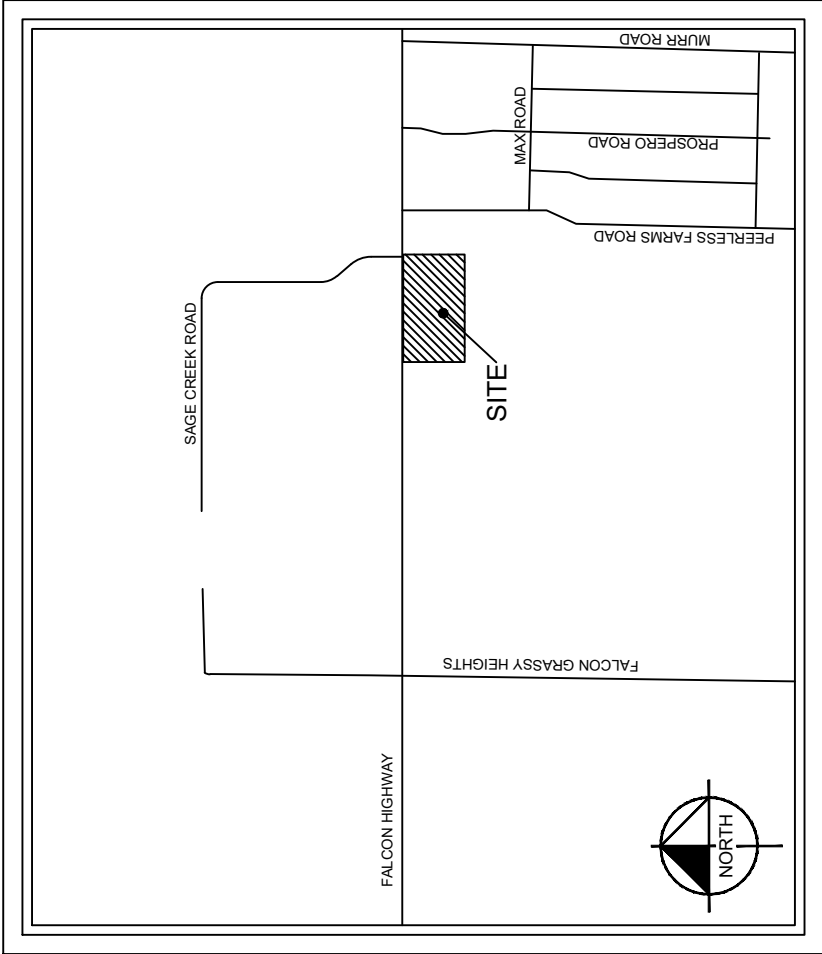
FLOODPLAIN NOTES:

THIS PROPERTY IS NOT LOCATED WITHIN A DESIGNATED FEMA FLOODPLAIN AS DETERMINED BY THE FLOOD INSURANCE RATE MAP. AREAS WITHIN THE FLOODPLAIN ARE ZONE AE, AREAS OUTSIDE THE FLOODPLAIN ARE ZONE X.

PRELIMINARY PLAN NOTES

1. THE FOLLOWING REPORTS HAVE BEEN SUBMITTED IN ASSOCIATION WITH THE PRELIMINARY PLAN FOR THIS MINOR SUBDIVISION AND ARE ON FILE AT THE COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT: DRAINAGE REPORT, WATER RESOURCES REPORT, GEOLOGY AND SOILS REPORT, FIRE PROTECTION REPORT, NATURAL FEATURES REPORT.
2. ALL PROPERTY OWNERS ARE RESPONSIBLE FOR MAINTAINING PROPER STORM WATER DRAINAGE IN AND THROUGH THEIR PROPERTY. PUBLIC DRAINAGE EASEMENTS AS SPECIFICALLY NOTED ON THE PLAT SHALL BE MAINTAINED BY THE LOT OWNERS. UNLESS OTHERWISE INDICATED, STRUCTURES, FENCES, MATERIALS OR LANDSCAPING THAT COULD IMPERE THE FLOW OR RUNOFF SHALL NOT BE PLACED IN DRAINAGE EASEMENTS.
3. UNLESS OTHERWISE INDICATED, ALL FRONT, SIDE AND REAR LOT LINES ARE TO BE PLATTED ON EITHER SIDE WITH A 10 FOOT FENCE. UNLESS OTHERWISE INDICATED, THE SILENT RESPONSIBILITY FOR MAINTENANCE OF THESE EASEMENTS IS HEREBY VESTED WITH THE INDIVIDUAL PROPERTY OWNERS.
4. DEVELOPER SHALL COMPLY WITH FEDERAL AND STATE LAWS, REGULATIONS, ORDINANCES, REVIEW AND PERMIT REQUIREMENTS, AND OTHER AGENCY REQUIREMENTS, IF ANY, OF APPLICABLE AGENCIES INCLUDING, BUT NOT LIMITED TO, THE COLORADO DIVISION OF WILDLIFE, COLORADO DEPARTMENT OF TRANSPORTATION, U.S. ARMY CORPS OF ENGINEERS, AND THE U.S. FISH AND WILDLIFE SERVICE REGARDING THE ENDANGERED SPECIES ACT, PARTICULARLY AS RELATED TO THE LISTED SPECIES IDENTIFIED IN THE PROJECT'S ENVIRONMENTAL ASSESSMENT.
5. NO DRIVEWAY SHALL BE ESTABLISHED UNLESS AN ACCESS PERMIT HAS BEEN GRANTED BY EL PASO COUNTY.
6. MAILBOXES SHALL BE INSTALLED IN ACCORDANCE WITH EL PASO COUNTY AND US POSTAL SERVICE REGULATIONS.
7. EXCEPT AS OTHERWISE NOTED ON THE PRELIMINARY PLAN, INDIVIDUAL LOT PURCHASERS ARE RESPONSIBLE FOR MAINTAINING THE DRIVEWAYS AND DRIVEWAYS SHALL BE INSTALLED IN ACCORDANCE WITH EL PASO COUNTY AND US POSTAL SERVICE AND 6.3.3 C.2 AND 6.2.2 C.3. DUE TO THEIR LENGTH, SOME OF THE DRIVEWAYS MAY NEED TO BE APPROVED BY THE FALCON FIRE PROTECTION DISTRICT.
8. AT THE TIME OF APPROVAL OF THIS PROJECT, THIS PROPERTY IS LOCATED WITHIN THE FALCON FIRE PROTECTION DISTRICT, WHICH HAS ADOPTED A FIRE CODE WITH FIRE MITIGATION REQUIREMENTS DEPENDING UPON THE LEVEL OF FIRE RISK ASSOCIATED WITH THE PROPERTY AND STRUCTURES. THE OWNER OF ANY LOT SHOULD CONTACT THE FIRE DISTRICT TO DETERMINE THE FIRE RISK LEVEL FOR THE PROPERTY AND THE REQUIREMENTS FOR THE PROPERTY. IF THE PROPERTY IS LOCATED WITHIN DESIGNATED DRAINAGE EASEMENTS, THE FLOODPLAIN, LANDSCAPE BUFFERS, SETBACKS, SIGHT DISTANCE TRIANGLES, ETC., NO-BUILD AREAS WITHIN INDIVIDUAL LOTS ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.
10. SUBDIVISION SIGNAGE IS NOT APPROVED WITH THIS PLAN. A SEPARATE SIGN PERMIT IS REQUIRED. CONTACT THE EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT AT 2880 INTERNATIONAL CIRCLE FOR A SIGN PLAN APPLICATION.
11. ALL "STOP SIGNS" AND OTHER TRAFFIC CONTROL SIGNAGE SHALL BE INSTALLED BY THE DEVELOPER AT LOCATIONS SHOWN ON THE SITE DEVELOPMENT PLAN TO MEET MUTCD STANDARDS.
12. THE SITE DEVELOPMENT PLAN, SIGNAGE, AND SIGNAGE SCHEDULE SHALL BE SUBMITTED FOR REVIEW BY THE EL PASO COUNTY PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT, AND APPROVAL BY THE BOARD OF COUNTY COMMISSIONERS, AND THE PLAT MUST BE RECORDED OR AUTHORIZED DESIGNEE, AND THE PLAT SHALL BE RECORDED.
13. ALL STREETS SHALL BE NAMED AND CONSTRUCTED TO EL PASO COUNTY STANDARDS AND/OR ANY APPROVED DEVIATIONS. PRIVATE STREETS/DRIVES SHALL BE OWNED AND MAINTAINED BY EACH INDIVIDUAL OWNER.
14. NOTWITHSTANDING ANY AND/OR ASSOCIATED PUBLIC IMPROVEMENTS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL (DCM), AND DCM VOLUME 2. ANY DEVIATIONS FROM THESE STANDARDS MUST BE SPECIFICALLY REQUESTED AND APPROVED IN WRITING TO BE ACCEPTABLE. THE APPROVAL OF THIS PRELIMINARY PLAN DOES NOT IMPLICITLY ALLOW ANY DEVIATIONS OR WAIVERS THAT HAVE NOT BEEN OTHERWISE APPROVED THROUGH THE DEVIATION APPROVAL PROCESS.
15. DEVELOPMENT OF THE PROPERTY WILL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE EL PASO COUNTY LAND DEVELOPMENT CODE AS AMENDED FOR RR-5 ZONES.
16. WASTEWATER SHALL BE TREATED BY THE SAGE WATER USER AUTHORITY (SAGE) SUBJECT TO THE DISTRICTS RULES, REGULATIONS AND SPECIFICATIONS.
17. WASTEWATER WILL BE PROVIDED BY INDIVIDUAL SEPTIC SYSTEMS PER EPC STANDARDS AND REGULATIONS.
18. LOTS HAVE NO DIRECT ACCESS TO FALCON HIGHWAY.
19. ALL PRIVATE, SHARED ACCESS EASEMENTS WILL BE MAINTAINED BY PEERLESS FARMS HOA.
20. ALL FENCING AND GATES WILL BE OUTSIDE OF ALL SHARED PRIVATE ACCESS EASEMENTS.

VICINITY MAP



PROJECT TEAM:

OWNER/ DEVELOPER:
ROBERT S. AND WENDY K. WILLIAMS
16975 FALCON HIGHWAY,
PEYTON, CO 80831-7006
rsall@protonmail.com
(404) 432-1974

CIVIL ENGINEER:
KIMLEY-HORN
2 NORTH NEVADA AVENUE, SUITE 300
COLORADO SPRINGS, CO 80903
rsall@protonmail.com
(719) 284-7281

SHEET INDEX:

01 COVER SHEET
02 PRELIMINARY PLAN
03 GRADING PLAN
04 UTILITY PLAN

Kimley»Horn

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2 NORTH NEVADA AVENUE, SUITE 300

COLORADO SPRINGS, COLORADO 80903 (719) 453-0180

PLANNERS/ LANDSCAPE ARCHT:
KIMLEY-HORN
2 NORTH NEVADA AVENUE, SUITE 300
COLORADO SPRINGS, CO 80903
jim.horn@kimley-horn.com
(719) 284-7280

SURVEYOR:
CENTENNIAL LAND SURVEYING
6445 LEHMAN DRIVE
COLORADO SPRINGS, CO 80918
jls@centenniallandsurveying.com
(719) 282-6540

COVER SHEET

SHEET 1 OF 4

PEERLESS FARMS PRELIMINARY PLAN - COUNTY FILE NO. XXXXXX

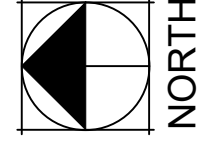
PRELIMINARY PLAN

SITUATED IN THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 13 SOUTH, RANGE 64 WEST OF THE 6TH P.M., CITY OF PEYTON, COUNTY OF EL PASO, STATE OF COLORADO

LEGEND

ASPHALT ROAD

FLOODPLAIN



SCALE: 1" = 100'

APPENDIX B

WATER SUPPLY INFORMATION SUMMARY SHEET

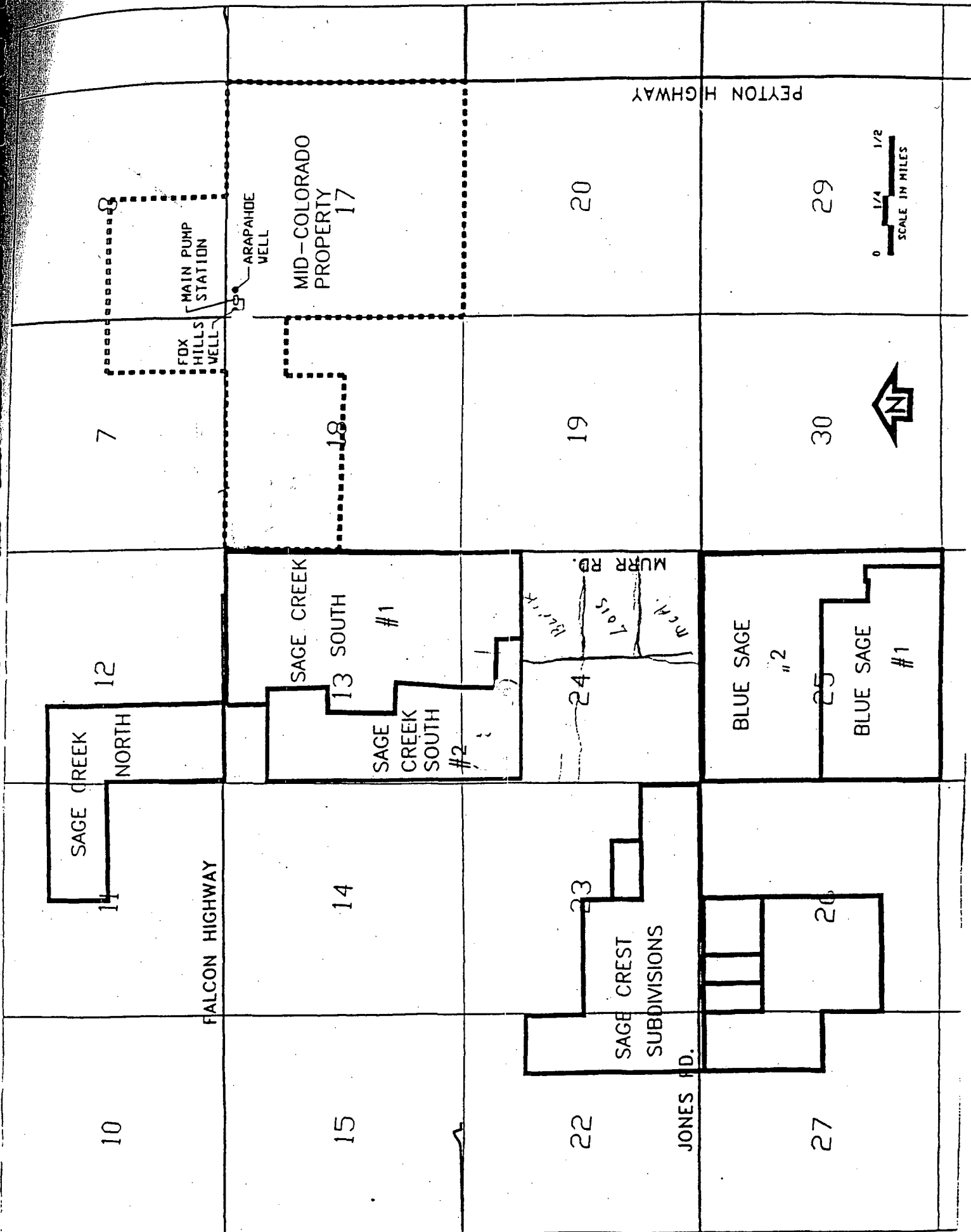
WATER SUPPLY INFORMATION SUMMARY

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

1. NAME OF DEVELOPMENT AS PROPOSED			
<u>PEERLESS FARMS PRELIMINARY PLAN</u>			
2. LAND USE ACTION <u>PRELIMINARY PLAN FOR SEVEN (7) RURAL RESIDENTIAL LOTS</u>			
3. NAME OF EXISTING PARCEL AS RECORDED <u>4313000001</u>			
SUBDIVISION	FILING	BLOCK	LOT
4. TOTAL ACREAGE <u>40.01</u>	5. NUMBER OF LOTS PROPOSED <u>7</u>	PLAT MAP ENCLOSED <input checked="" type="checkbox"/> YES - <u>PRELIMINARY</u>	
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? <input type="checkbox"/> YES <input type="checkbox"/> NO B. Has the parcel ever been part of a division of land action since June 1, 1972? <input type="checkbox"/> YES <input type="checkbox"/> NO If yes, describe the previous action _____			
7. LOCATION OF PARCEL - Include a map delineating the project area and tie to a section corner.			
<u>1/4</u> OF <u>NW</u> <u>1/4</u> SECTION <u>13</u> TOWNSHIP <u>13</u> <input type="checkbox"/> N <input checked="" type="checkbox"/> S RANGE <u>64</u> <input type="checkbox"/> E <input checked="" type="checkbox"/> W			
PRINCIPAL MERIDIAN: <input checked="" type="checkbox"/> 6TH <input type="checkbox"/> N.M. <input type="checkbox"/> UTE <input type="checkbox"/> COSTILLA			
8. PLAT - Location of all wells on property must be plotted and permit numbers provided. Surveyors plat <input type="checkbox"/> Yes <input type="checkbox"/> No If not, scaled hand drawn sketch <input type="checkbox"/> Yes <input type="checkbox"/> No			
9. ESTIMATED WATER REQUIREMENTS - Gallons per Day or Acre Feet per Year		10. WATER SUPPLY SOURCE	
HOUSEHOLD USE # <u>7</u> of units <u>6249.2</u> GPD <u>7</u> AF COMMERCIAL USE # _____ of S.F. _____ GPD _____ AF IRRIGATION # _____ of acres _____ GPD _____ AF STOCK WATERING # _____ of head _____ GPD _____ AF OTHER _____ GPD _____ AF TOTAL _____ GPD _____ AF		<input type="checkbox"/> EXISTING WELLS <input type="checkbox"/> DEVELOPED SPRING WELL PERMIT NUMBERS <u>0</u> _____ _____ <input type="checkbox"/> MUNICIPAL <input type="checkbox"/> ASSOCIATION <input type="checkbox"/> COMPANY <input type="checkbox"/> DISTRICT NAME _____ LETTER OF COMMITMENT FOR SERVICE <input type="checkbox"/> YES <input type="checkbox"/> NO	
		<input type="checkbox"/> NEW WELLS - PROPOSED AQUIFERS - (CHECK ONE) <input type="checkbox"/> ALLUVIAL <input type="checkbox"/> UPPER ARAPAHOE <input type="checkbox"/> UPPER DAWSON <input type="checkbox"/> LOWER ARAPAHOE <input type="checkbox"/> LOWER DAWSON <input type="checkbox"/> LARAMIE FOX HILLS <input type="checkbox"/> DENVER <input type="checkbox"/> DAKOTA <input type="checkbox"/> OTHER _____	
		WATER COURT DECREE CASE NO.'S _____ _____ _____	
11. ENGINEER'S WATER SUPPLY REPORT <input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE FORWARD WITH THIS FORM. (This may be required before our review is completed.)			
12. TYPE OF SEWAGE DISPOSAL SYSTEM			
<input checked="" type="checkbox"/> SEPTIC TANK/LEACH FIELD <input type="checkbox"/> CENTRAL SYSTEM - DISTRICT NAME _____			
<input type="checkbox"/> LAGOON <input type="checkbox"/> VAULT - LOCATION SEWAGE HAULED TO _____			
<input type="checkbox"/> ENGINEERED SYSTEM (Attach a copy of engineering design) <input type="checkbox"/> OTHER _____			

APPENDIX C

VINCINITY MAP OF ARRAPAHOE AND LARAMIE FOX-HILLS WELLS



0 1/4 1/2
SCALE IN MILES



APPENDIX D

ARRAPAHOE WELL PERMITS

SEP. 14 '2004 10:18 719 520 9447

MacDougall Weldridge Worley PC

#5461 P.002

Form No.
GWS-25OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 666-3581

LIC

OWNER'S COPY

APPLICANT

WELL PERMIT NUMBER

049185

F

DIV. 8 CNTY. 21 WD 10 DES. BASIN 4 MD 12

Lot: Block: Filing: Subdiv:

APPROVED WELL LOCATION
EL PASO COUNTYNW 1/4 NW 1/4 Section 17
Twp 13 S RANGE 63 W 6th P.M.MID COLORADO INVESTMENT CO INC
13 LOMA LINDA DR
COLO SPRINGS CO 80906-

(719)634-8750

DISTANCES FROM SECTION LINES

80 Ft. from North Section Line
50 Ft. from West Section Line

ADDITIONAL APPROPRIATION FOR AN EXISTING WELL

CONDITIONS OF APPROVAL

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this existing well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved for additional appropriation for the existing well constructed under Permit No. 27445-F, pursuant to Sections 37-90-107 and 37-90-111(5), C.R.S., and the findings of the Colorado Ground Water Commission dated NOVEMBER 4, 1997.
- 4) The maximum pumping rate shall not exceed 150 GPM.
- 5) The allowed average annual amount of additional ground water to be withdrawn is 293 acre-feet, subject to the conditions in paragraph 18.a. of the above mentioned findings of the Commission.
- 6) The use of ground water from the well shall be limited to the following: watering of livestock on range and pasture and a water supply for a central water supply system for residential and commercial uses, including the irrigation of landscape areas and residential lawns and gardens.
- 7) The well is constructed to withdraw water from only the Arapahoe aquifer.
- 8) This well shall be located within 300 feet of the permit location specified in Permit No. 27445-F, and shall not be located within 600 feet of another large-capacity well completed in the Arapahoe aquifer.
- 9) A totalizing flow meter must be installed on the well and maintained in good working order. Permanent records of all diversions must be maintained by the well owner (collected at least annually) and submitted to the Upper Black Squirrel Creek Ground Water Management District and the Ground Water Commission upon request.
- 10) No more than 98% of the ground water withdrawn annually from this well shall be consumed. The Commission may require the well owner to demonstrate periodically that no more than 98% of the ground water withdrawn by the well is being consumed.
- 11) The owner shall mark this well in a conspicuous place with the permit numbers and the name of the aquifer. He shall take necessary means and precautions to preserve these markings.

NOTE: The ability of this well to withdraw its authorized amount of water from this non-renewable aquifer may be less than the 100 years upon which the amount of water in the aquifer is allocated, due to anticipated water level declines. 8/4/10/20/97

APPROVED
RAC

State Engineer

Receipt No. 0411441

DATE ISSUED NOV 05 1997

By

EXPIRATION DATE NOV 05 1998

FINDINGS OF THE COLORADO GROUND WATER COMMISSION

IN THE MATTER OF AN APPLICATION FOR A PERMIT TO APPROPRIATE GROUND WATER IN
THE UPPER BLACK SQUIRREL CREEK DESIGNATED GROUND WATER BASIN.

APPLICANT: MID-COLORADO INVESTMENT CO.

AQUIFER: ARAPAHOE

PERMIT NO.: 49185-F

In compliance with Sections 37-90-107(1) and 37-90-111(5), C.R.S., and the Designated Basin Rules (2 CCR 410-1), Mid-Colorado Investment Co. (hereinafter "applicant") submitted an application for a permit to appropriate ground water from the Arapahoe Aquifer to allow additional appropriation for an existing well, Permit No. 27745-F. Based on information provided by the applicant and records of the Division of Water Resources, the Ground Water Commission finds as follows:

1. The application was first received by the Ground Water Commission on February 4, 1997, and was received complete on May 20, 1997.
2. The applicant proposes to appropriate ground water from the Arapahoe aquifer (hereinafter "aquifer") underlying 1160 acres of land generally described as the E1/2 of the SE1/4 of Section 7, the SW1/4 of Section 8, all of Section 17 and the N1/2, except the SE1/4 of the NE1/4, of Section 18, all in Township 13 South, Range 63 West of the 6th P.M. According to a signed statement dated February 15, 1997, the applicant owns the 1160 acres of land, as further described in said affidavit which is attached hereto as Exhibit A, and claims the ownership or control of the ground water in the aquifer underlying this property. The proposed additional annual appropriation is 293 acre-feet.
3. On October 3, 1984, the Commission issued Permit No. 27745-F for a well to be located in the NW1/4 of the NW1/4 of Section 17, Township 13 South, Range 63 West of the 6th P.M. at a point 80 feet from the north section line and 50 feet from the west section line of said Section 17. On August 20, 1985, a Well Completion Report was filed showing that the well had been timely completed on April 30, 1985, to withdraw ground water from the aquifer. On August 7, 1997, Mid-Colorado Investment Co. filed a Statement of Beneficial Use stating that water from the well with Permit 27745-F had been put to beneficial use as of June 4, 1986, with a claimed annual diversion of 190 acre-feet.
4. The 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 Ground Water Management District. The Ground Water Commission has jurisdiction.
5. The applicant proposes to apply the appropriated ground water to the following beneficial uses: watering of livestock on range and pasture on the above described 1160 acre property and a water supply for a central water supply system for residential and commercial uses, including the irrigation of landscape areas and residential lawns and gardens, in parts of Sections 11, 12, 13, 24 and 25, Township 13 South, Range 64 West of the 6th P.M., as further described in a map which is attached hereto as Exhibit B.

Applicant: Mid-Colorado Investment Co.
Aquifer: Arapahoe
Permit No.: 49185-F

Page 2

6. The quantity of water in the aquifer underlying the 1160 acres of land claimed by the applicant is 48,314 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 245 feet.
7. At this time, there is no substantial artificial recharge which would affect the aquifer within a 100-year period.
8. Pursuant to Section 37-90-111(5), C.R.S., the Ground Water Commission is required to allocate designated ground water in the aquifer on the basis of landownership and a 100-year aquifer life. Therefore, the maximum annual appropriation which could be allowed pursuant to the data in the paragraphs above for the 1160 acres owned by the applicant is 483 acre-feet.
9. According to the well owners statements, the existing well with Permit No. 27745-F has previously appropriated 190 acre-feet per year of the ground water available for appropriation in the aquifer underlying the above described 1160 acre property. Therefore, the maximum additional annual appropriation which may be allowed for the well with Permit No. 27745-F is 293 acre-feet.
10. The ability of the existing well, with any additional wells, to withdraw the authorized amount of water from this non-renewable aquifer may be less than the 100 years upon which the amount of water in the aquifer is allocated, due to anticipated water level declines.
11. 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 stream 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.
12. A review of the records of the Ground Water Commission has disclosed that none of the water in the aquifer underlying the land claimed by the applicant, other than that claimed for the existing well with Permit No. 27745-F, has been previously appropriated.
13. In accordance with Rules 5.3.8 and 5.3.9 of the Designated Basin Rules, additional wells may be permitted to withdraw the increased amount of appropriation together with the existing well.

Applicant: Mid-Colorado Investment Co.
Aquifer: Arapahoe
Permit No.: 49185-F

Page 3

14. On July 8, 1997, a letter was sent to the Upper Black Squirrel Creek Ground Water Management District requesting recommendations concerning this application. No written recommendations concerning the application were received from the district.
15. The Commission Staff has evaluated the application relying on the claims to control of the water in the aquifer made by the applicant.
16. In accordance with Sections 37-90-107(2) and 37-90-112, C.R.S., the application was published in the Gazette Telegraph newspaper on July 17 and 24, 1997.
17. No objections to the proposed appropriation were received within the time limit set by statute.
18. The Ground Water Commission finds that unreasonable impairment of existing water rights will not occur from approval of the appropriation and issuance of the permit, and issuance of permits for any additional wells approved by the Commission, if the following conditions are complied with:
 - a. The allowed additional average annual amount of water to be withdrawn from the aquifer by the well shall not exceed 293 acre-feet. The allowed maximum annual amount of additional withdrawal for the well may exceed the allowed average annual amount of additional withdrawal as long as the total volume of additional water withdrawn does not exceed the product of the number of years since the date of issuance of the well permit times the allowed average annual amount of additional withdrawal. The Commission may adjust the allowed average annual appropriation based on analysis of the geophysical logs if such analysis indicates that the initial estimate of the volume of water in storage was incorrect.
 - b. The uses of ground water from the appropriation and places of use shall be limited to the following: watering of livestock on range and pasture on the above described 1160 acre property and a water supply for a central water supply system for residential and commercial uses, including the irrigation of landscape areas and residential lawns and gardens, in parts of Sections 11, 12, 13, 24 and 25, Township 13 South, Range 64 West of the 6th P.M., as further described in attached Exhibit B.
 - c. No more than 98% of the ground water withdrawn annually from this well shall be consumed. The Commission may require the well owner to demonstrate periodically that no more than 98% of the water withdrawn from the well is being consumed.
 - d. The maximum pumping rate of the well shall not exceed 150 g.p.m.
 - e. A totalizing flow meter shall be installed on the 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 Upper Black Squirrel Creek Ground Water Management District upon their request.

SEP.14 2004 10:20 719 520 9447

MacDougall Weldridge Worley PC

#5461 2.006

Applicant: Mid-Colorado Investment Co.

Page 4

Aquifer: Arapahoe

Permit No.: 49185-F

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

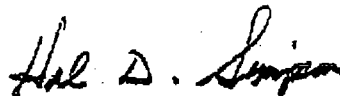
g. Any additional wells must be constructed to withdraw water from only the Arapahoe aquifer. At the existing well location, the top of the aquifer is located approximately 570 feet below ground surface and the bottom of the aquifer is located approximately 1040 feet below ground surface. Plain non-perforated casing must be installed, grouted and sealed to prevent diversion of ground water from other aquifers and the movement of ground water between aquifers.

h. Any replacement well for the existing well shall be located within 200 feet of the original permitted well location and any additional wells shall be constructed within 200 feet of the location specified on the individual permit application, but must be more than 600 feet from any existing large-capacity well completed in the same aquifer.

i. The entire depth of any additional wells 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.

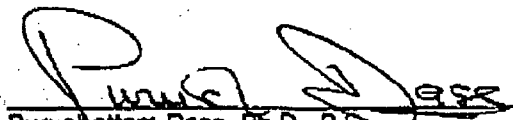
j. Well permits for additional wells to withdraw the additional appropriation shall be available upon application, subject to the above conditions and subject to approval by the Commission. Such wells shall be located on the above described 1160 acre land area on land owned or controlled by the well owner.

Dated this 4th day of November, 1997.



Hal D. Simpson
Executive Director
Colorado Ground Water Commission

By:



Purushottam Dass, Ph.D., P.E.
Supervising Professional Engineer

Prepared by: RAC

PWC-134

SEP.14'2004 10:20 719 520 9447

MacDougall Woldridge Worley PC

#5461 P.007

GWS-1 (Rev. Sept. 1996)

- EXHIBIT A -

RECEIVED

FEB 18 97

WATER RESOURCES
STATE ENGINEER
COLDSTATE OF COLORADO
OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCESNONTRIBUTARY GROUND WATER LANDOWNERSHIP STATEMENTI (We) MID-COLORADO INVESTMENT COMPANY, INC.

(Name)

claim and say that I (we) am (are) the owner(s) of the following described property consisting of 1160 acres in the County of EL PASO, State of Colorado:

(INSERT PROPERTY LEGAL DESCRIPTION)

SEC 17 (ALL)

SEC 18 N $\frac{1}{2}$ LESS SE $\frac{1}{4}$ OF NE $\frac{1}{4}$ SEC 7 E $\frac{1}{2}$ OF SE $\frac{1}{4}$ SEC 8 SW $\frac{1}{4}$ and, that the ground water sought to be withdrawn from the ARAPANCO 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.

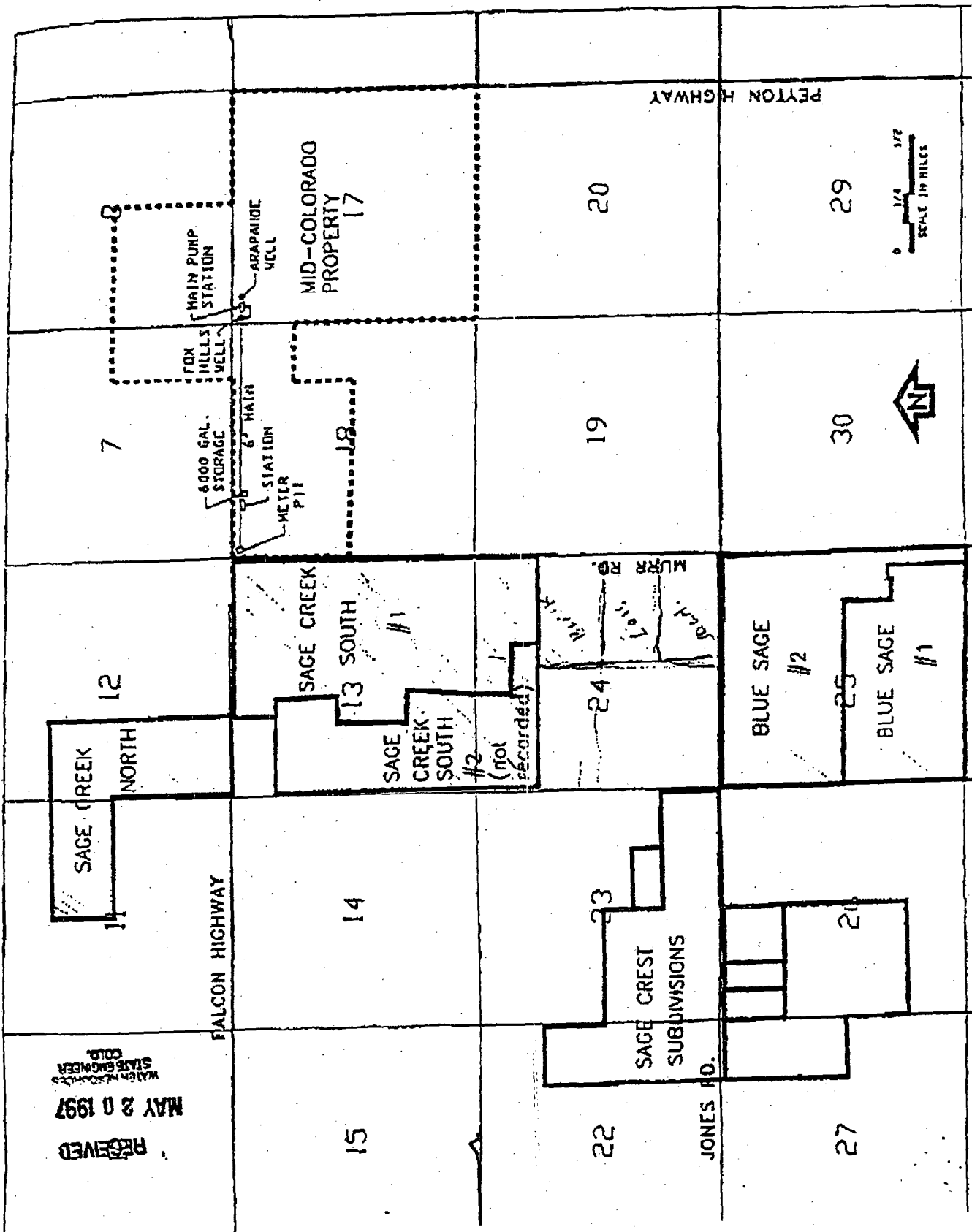
Alfred A. Hagedorn 15 Feb. 1997
(Signature) (Date)
ALFRED A. HAGEDORN III, PRESIDENTAlfred A. Hagedorn 15 Feb '97
(Signature) (Date)
ALFRED A. HAGEDORN, V.P. AND TREASURER

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.

- EXHIBIT B -

Sage Water Users System



FINDINGS OF THE COLORADO GROUND WATER COMMISSION

SUPERCEDED
By 49185

IN THE MATTER OF AN APPLICATION FOR A PERMIT TO CONSTRUCT A WELL AND APPROPRIATE GROUND WATER IN THE UPPER BLACK SQUIRREL CREEK DESIGNATED GROUND WATER BASIN.

APPLICANT : MID-COLORADO INVESTMENTS CO., INC.

AQUIFER : ARAPAHOE ✓

PERMIT NO. : 27745-F

MANAGEMENT DISTRICT: UPPER BLACK SQUIRREL CREEK

In compliance with C.R.S. 37-90-107(1) Mid-Colorado Investments Co., Inc. 13 Loma Linda Dr., Colorado Springs, Colorado 80906, (hereinafter "applicant"), submitted an application for a permit to construct a well and appropriate ground water from the Arapahoe aquifer. Based on information provided by the applicant and records of the Division of Water Resources, the Ground Water Commission finds as follows:

1. The application was received complete by the Ground Water Commission on January 5, 1984.
2. The applicant proposes to construct the well in the NW 1/4 of the NW 1/4 of Section 17, Township 13 South, Range 63 West of the 6th Principal Meridian. The proposed maximum pumping rate is 200 g.p.m. and the proposed annual appropriation is 230 acre-feet. ←
3. The proposed well is located within the boundaries of the Upper Black Squirrel Creek designated ground water basin and the Ground Water Commission has jurisdiction.
4. The applicant proposes to apply the water diverted from the well to the following beneficial uses: Domestic, livestock, commercial, industrial, irrigation and municipal.
5. The location of the proposed well is more than 1/2 mile from any existing well completed in the Arapahoe aquifer.
6. The applicant is the owner of the land on which the well will be constructed
7. According to a sworn affidavit dated December 31, 1983, the applicant owns or has consent of the owner of 1160 acres of land as further described in said affidavit, which is attached hereto as Exhibit A.
8. The proposed well would divert ground water from the Arapahoe aquifer (hereinafter "aquifer").

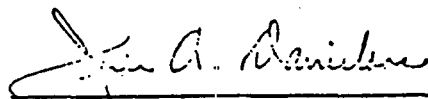
PERMIT NO. 27745-F

9. The quantity of water in the Arapahoe aquifer underlying 1160 acres of land claimed by the applicant is 33,524 acre-feet. This determination was based on the following estimates:
 - a. The average specific yield of the saturated permeable material of the aquifer underlying the land(s) 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(s) under consideration that could yield a sufficient quantity of water that may be extracted and applied to beneficial use is 170 feet. This estimate was based on an analysis of data in the records of the State Engineer's Office.
10. At this time, there is no substantial artificial recharge which would affect the aquifer within a 100 year period.
11. The Policy Guidelines of the Colorado Ground Water Commission (February 8, 1980) provide that applications for wells in the Arapahoe bedrock aquifer at this location will be analyzed in compliance with C.R.S. 37-90-137(4) which provides for a 100 year useful life. Therefore, the maximum annual appropriation which could be allowed pursuant to the data in the paragraphs above for the 1160 acres owned or controlled by the applicant is 335.24 acre-feet per year.
12. A review of the records of the Ground Water Commission has disclosed that none of the water within the Arapahoe aquifer underlying the land claimed by the applicant has been previously appropriated.
13. On March 1, 1984, a letter was sent to the Upper Black Squirrel Creek Ground Water Management District requesting recommendations concerning this application. On March 19, 1984, the Board of Directors of the Upper Black Squirrel Creek Ground Water Management District approved the application to appropriate water from the Arapahoe aquifer.
14. Pursuant to C.R.S. 37-90-107(2) the application was published in the Colorado Springs Gazette-Telegraph on August 2 and August 9, 1984.
15. An objection to the proposed appropriation was received within the 30 day objection period. The objection was withdrawn on September 17, 1984. No other objections were received.
16. The Commission finds that unreasonable impairment of existing water rights will not occur from issuance of this permit if the following conditions are complied with:

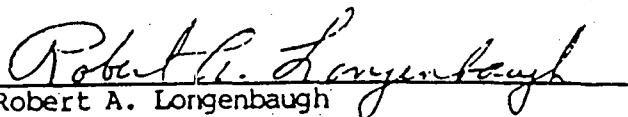
PERMIT NO. 27745-F

- a. The well must be constructed to withdraw water from only the Arapahoe aquifer. The top of the Arapahoe aquifer is located approximately 494 feet below the ground surface. The bottom of the Arapahoe aquifer is located approximately 954 feet below the ground surface. Plain, non-perforated casing must be installed and sealed to prevent diversion of ground water from other aquifers and the movement of ground water between aquifers.
- b. This well shall be constructed within 300 feet of the location specified on the permit application.
- c. The maximum annual amount of water to be diverted from the aquifer by this well shall not exceed 230 acre-feet.
- d. The entire depth of the well must be geophysically logged prior to installing the casing. Copies of the logs must be submitted to the Division of Water Resources.
- e. The maximum pumping rate of the well shall not exceed 200 g.p.m.
- f. A totalizing flow meter shall be installed and maintained by the well owner. Diversion records shall be collected by the well owner and submitted to the Division of Water Resources upon their request.
- g. The owner shall mark this well in a conspicuous place with the permit number and the name of the aquifer. He shall take necessary means and precautions to preserve these markings.

Dated this 3rd day of October, 1984.



Jeris A. Danielson
Executive Director
Colorado Ground Water Commission

By: 
Robert A. Longenbaugh
Assistant State Engineer
Ground Water Section

ARAP

CONDITIONS OF APPROVAL

COLORADO INVESTMENT CO., INC.

PERMIT NO. 27745-F (CONT.)

THE MAXIMUM PUMPING RATE OF THE WELL SHALL NOT EXCEED 200 G.P.M.

A TOTALIZING FLOW METER SHALL BE INSTALLED AND MAINTAINED BY THE WELL OWNER. DIVERSION RECORDS SHALL BE COLLECTED BY THE WELL OWNER AND SUBMITTED TO THE DIVISION OF WATER RESOURCES ON THEIR REQUEST.

THE OWNER SHALL MARK THIS WELL IN A CONSPICUOUS PLACE WITH THE PERMIT NUMBER AND THE NAME OF THE AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS.

mfs 7-24-54

WHERE ARE
PREVIOUS PAGES??

ARAP

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818

Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER 27745-P

MUST BE SUBMITTED
WITHIN 30 DAYS OF COMPLETION
WORK DESCRIBED HERE
IN PRINT IN BLACK

OWNER Mid-Colorado Investment Co., Inc. NW 1/4 of the 4W 1/4 of Sec. 17 T. 13 S. R. 63 W. 6 P.M.

13 Loma Linda Dr.

Colorado Springs, CO 80906

T. 13 S. R. 63 W. 6 P.M.

COMPLETED 4-15, 19 85

HOLE DIAMETER

16 in. from 0 to 45 ft.

12 3/4" in. from 45 to 1510 ft.

8 3/4" in. from 45 to 1754 ft.

DRILLING METHOD rotary

CASING RECORD: Plain Casing see attached

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

Perforated Casing

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

GROUTING RECORD

Material cement

Intervals 0 to 1222'

Placement Method positive displacement

GRAVEL PACK: Size xxxxxxxxxx

Interval _____

TEST DATA

Date Tested April 29 June 12 74, 19 85

Static Water Level Prior to Test 672' ft.

Type of Test Pump Sub.

Length of Test 144h 300. Sp.H. 22.3'
305 Sp.H. 270'
405 Sp.H. 87.3'

Sustained Yield (Metered) _____

Final Pumping Water Level _____

WELL LOG

To	Type and Color of Material	Water Loc.
5	topsoil	
45	gravel	
76	sandstone	
110	shale	
220	sandstone	
290	shale	
420	sand interbedded with shale	
480	shale	
580	shale interbedded with sand	
660	sand	
680	shale	
755	sand	
760	shale	
900	sand	
910	shale	
1050	sand	
1090	shale	
1210	sandy shale	
1220	coal	
1326	sand	
1340	coal	
1490	sand	
1754	shale some coal stringers	
TOTAL DEPTH <u>1754</u>		

Use additional pages necessary to complete log.

CASING RECORD

ARAPAHOE PERMIT# 27745-F

45

PLAIN CASING

0 - 587'

607' - 651'

671' - 709'

714' - 791'

796' - 810'

820' - 886'

896' - 954'

974' - 990'

1010- 1016' T. D.

WELL SCREENS

587' - 607'

651' - 671'

709' - 714'

791' - 796'

810' - 820'

886' - 896'

954' - 974'

990' - 1010'

27745-F

Arapahoe Formation

Interval	Net Feet	Average Porosity	Porosity X Feet
571 - 577	6.0	.342	2.052
582 - 584	2.0	.322	.644
590.5 - 600	9.5	.286	2.717
632 - 662.5	30.5	.329	10.035
676.5 - 678	1.5	.285	.428
703.5 - 714.5	11.0	.308	3.388
780 - 795	15.0	.326	4.890
810 - 813	3.0	.348	1.044
835 - 837.5	2.5	.239	.598
865 - 886	21.0	.299	6.279
907.5 - 916.5	9.0	.317	2.853
942.5 - 962	19.5	.265	5.168
978 - 989	11.0	.290	3.190
991.5 - 997.5	6.0	.279	1.674
999 - 1007	8.0	.260	2.080
1009 - 1026	17.0	.268	4.556
	<u>172.5</u>		<u>51.596</u>

14 November 1986

Division of Water Resources
1313 Sherman Street, Room 818
Denver, Colorado 80203

Attention: Mr Keith Kepler, Chief, Designated Basins Branch

Dear Mr Kepler:

Delivered herewith are the required two copies of each of the Statements of Beneficial Use for the wells constructed under Permits 27745-F and 27746-F. These have been prepared by Mr M E (Sandy) MacDougall from information provided by us. Please note that copies of the Contract between this Company and Sage Water Users Association (a Colorado non-profit corporation) are included with the Statements of Beneficial Use.

We have previously delivered, or caused to be delivered, to you the driller's Well Completion Reports, the Driller's Logs, the geophysical log run on the test bore by Welex, pump test results and the Pump Installation Reports prepared by Amwest, Inc.

We have provided the State Health Department copies of the inorganic chemical analyses on samples from both wells and also copies of the radiological tests done on samples from both wells. Mr MacDougall has advised me that you would be interested in seeing these results so photocopies are provided herewith.

Any further information that may be useful to you will be gladly furnished upon request. I wish to reiterate the invitation to you or any of your associates in the Water Resources Division to make an inspection of the water supply facilities which we have constructed in consequence of the granting of the permits for these two wells.

Very truly yours,

Alfred A Hagedorn

copy: Mr M E MacDougall

ARAP

RECEIVED

NOV 14 1986

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

WATER RESOURCES
STATE ENGINEER
COLO.

STATE OF COLORADO

COUNTY OF El Paso

SS.

AFFIDAVIT

- ☒ STATEMENT OF BENEFICIAL USE OF GROUND WATER
- ☐ AMENDMENT OF EXISTING RECORD
- ☐ LATE REGISTRATION

PERMIT NUMBER 27745-F

LOCATION OF WELL

Mid-Colorado Investment Co., Inc.

AFFIANT(S) by Alfred A. Hagedorn, President

County El Paso

Residing at

13 Loma Linda Drive

NW 1/4 of the NW 1/4, Section 17

Colorado Springs, CO 80906
(STATE) (ZIP)

Twp. 13 S. Rng. 64 W. 6th P.M.
(N OR S) (E OR W)

I, Alfred A. Hagedorn, being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon, the well is located as described above, at distances of 164 feet from the North section line and 325 feet from the

East section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 24th

of September, 19 85; the maximum sustained pumping rate of the well is 150 gallons per minute, the pumping capacity is 1016 feet

claimed hereby is 150 gallons per minute; the total depth of the well is 1050* feet; the average annual amount

of water to be diverted is 190 acre-feet; for which claim is hereby made for Domestic, Livestock, Commercial, Industrial, Irrigation

Municipal purpose(s); the legal description of the land on which the water from this well is used is the Creek North and South Subdivisions (in Sections 11, 12 and 13, T 13 S, 64 W), and Mid-Colorado Investment Co., Inc., land in Sections 17 and 18 of which

T 13 S, R 63 W. 1.0 acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (she) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature of Affiant: Alfred A. Hagedorn
Subscribed and sworn to before me on this 14th day of November, 19 86

Commission expires: January 24, 1987
Shannon G. Johnson
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO
IN ACCORDANCE WITH THE FOLLOWING CONDITIONS:

FOR OFFICE USE ONLY

Court Case No. _____

Prior _____ Mo. _____ Day _____ Yr. _____

Div. _____ Cty. _____

Sec. _____ 1/4. _____ 1/4. _____ 1/4.

Well Use _____

Dist. _____ Basin _____ Man Dis. _____

X: A. Hagedorn

11-11-11

39-10-30

28°-1-10

DESIGNED BY TAW TO HO-BING

Well drilled by: Crandall Drilling & Trenching, Inc. Lic. No. 308

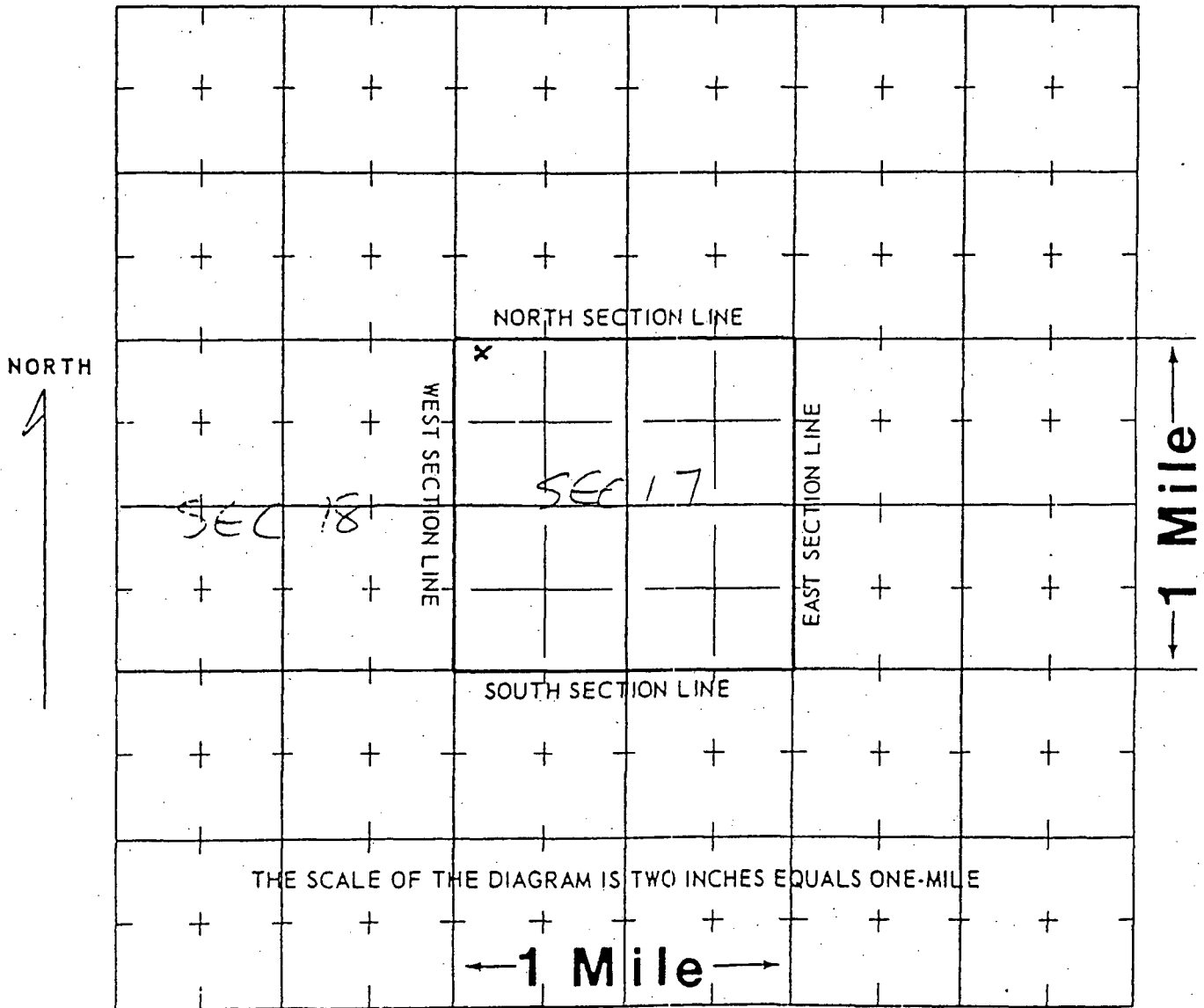
Permanent Pump installed by: Amwest Well & Pump, Inc. Lic. No. 1026

Meter Serial No. 85660335 (Kent) ☐ Flow Meter Date Installed 9/20/85

Owner of land on which water is being used Owners of Lots in Sage Creek North and South Subdivisions (see attached Contract) and Mid-Colorado Investment Co., Inc.

THE LOCATION OF THE WELL MUST BE SHOWN AND FOR LARGE CAPACITY IRRIGATION WELLS THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the CENTER SQUARE (one section) to indicate the location of the well, if possible.



WATER EQUIVALENTS TABLE (Rounded Figures)

- An acre-foot covers 1 acre of land 1 foot deep.
- 1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm).
- 1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
- 1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
- 100 gpm pumped continuously for one year produces 160 acre-feet.

WATER AND PUMP COPY TO BE FILED WITH THE STATE ENGINEER

2890 10 330

APPENDIX E

LARAMIE FOX-HILLS WELL PERMIT

FINDINGS OF THE COLORADO GROUND WATER COMMISSION

IN THE MATTER OF AN APPLICATION FOR A PERMIT TO CONSTRUCT A WELL AND APPROPRIATE GROUND WATER IN THE UPPER BLACK SQUIRREL CREEK DESIGNATED GROUND WATER BASIN.

APPLICANT : MID-COLORADO INVESTMENTS CO., INC.

AQUIFER : LARAMIE-FOX HILLS

PERMIT NO. : 27746-F

MANAGEMENT DISTRICT: UPPER BLACK SQUIRREL CREEK

In compliance with C.R.S. 37-90-107(1) Mid-Colorado Investments Co., Inc., 13 Loma Linda Dr., Colorado Springs, Colorado 80906, (hereinafter "applicant") submitted an application for a permit to construct a well and appropriate ground water from the Laramie-Fox Hills aquifer. Based on information provided by the applicant and records of the Division of Water Resources, the Ground Water Commission finds as follows:

1. The application was received complete by the Ground Water Commission on January 5, 1984.
2. The applicant proposes to construct the well in the NW 1/4 of the NW 1/4 of Section 17, Township 13 South, Range 63 West of the 6th Principal Meridian. The proposed maximum pumping rate is 175 g.p.m. and the proposed annual appropriation is 255 acre-feet.
3. The proposed well is located within the boundaries of the Upper Black Squirrel Creek designated ground water basin and the Ground Water Commission has jurisdiction.
4. The applicant proposes to apply the water diverted from the well to the following beneficial uses: Domestic, livestock, commercial, industrial, irrigation and municipal.
5. The location of the proposed well is more than 1/2 mile from any existing well completed in the Laramie-Fox Hills aquifer.
6. The applicant is the owner of the land on which the well will be constructed
7. According to a sworn affidavit dated December 31, 1983, the applicant owns or has consent of the owner of 1160 acres of land as further described in said affidavit, which is attached hereto as Exhibit A.
8. The proposed well would divert ground water from the Laramie-Fox Hills aquifer (hereinafter "aquifer").

PERMIT NO. 27746-F

9. The quantity of water in the Laramie-Fox Hills aquifer underlying 1160 acres of land claimed by the applicant is 36,888 acre-feet. This determination was based on the following estimates:
 - a. The average specific yield of the saturated permeable material of the aquifer underlying the land(s) under consideration that could yield a sufficient quantity of water that may be extracted and applied to beneficial use is 15 percent.
 - b. The average thickness of the saturated permeable material of the aquifer underlying the land(s) under consideration that could yield a sufficient quantity of water that may be extracted and applied to beneficial use is 212 feet. This estimate was based on an analysis of data in the records of the State Engineer's Office.
10. At this time, there is no substantial artificial recharge which would affect the aquifer within a 100 year period.
11. The Policy Guidelines of the Colorado Ground Water Commission (February 8, 1980) provide that applications for wells in the Laramie-Fox Hills bedrock aquifer at this location will be analyzed in compliance with C.R.S. 37-90-137(4) which provides for a 100 year useful life. Therefore, the maximum annual appropriation which could be allowed pursuant to the data in the paragraphs above for the 1160 acres owned or controlled by the applicant is 368.88 acre-feet per year.
12. A review of the records of the Ground Water Commission has disclosed that none of the water within the Laramie-Fox Hills aquifer underlying the land claimed by the applicant has been previously appropriated.
13. On March 1, 1984, a letter was sent to the Upper Black Squirrel Creek Ground Water Management District requesting recommendations concerning this application. On March 19, 1984, the Board of Directors of the Upper Black Squirrel Creek Ground Water Management District approved the application to appropriate water from the Laramie-Fox Hills aquifer.
14. Pursuant to C.R.S. 37-90-107(2) the application was published in the Colorado Springs Gazette-Telegraph on August 2 and August 9, 1984.
15. An objection to the proposed appropriation was received within the 30 day objection period. The objection was withdrawn on September 17, 1984. No other objections were received.
16. The Commission finds that unreasonable impairment of existing water rights will not occur from issuance of this permit if the following conditions are complied with:

WELL PERMIT NO. 27746-F

a. The well must be constructed to withdraw water from only the Laramie-Fox Hills aquifer. The top of the Laramie-Fox Hills aquifer is located approximately 1339 feet below the ground surface. The bottom of the Laramie-Fox Hills aquifer is located approximately 1658 feet below the ground surface. Plain, non-perforated casing must be installed and sealed to prevent diversion of ground water from other aquifers and the movement of ground water between aquifers.

b. This well shall be constructed within 300 feet of the location specified on the permit application.

c. The maximum annual amount of water to be diverted from the aquifer by this well shall not exceed 255 acre-feet.

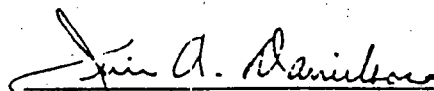
d. The entire depth of the well must be geophysically logged prior to installing the casing. Copies of the logs must be submitted to the Division of Water Resources.

e. The maximum pumping rate of the well shall not exceed 175 g.p.m.

f. A totalizing flow meter shall be installed and maintained by the well owner. Diversion records shall be collected by the well owner and submitted to the Division of Water Resources upon their request.

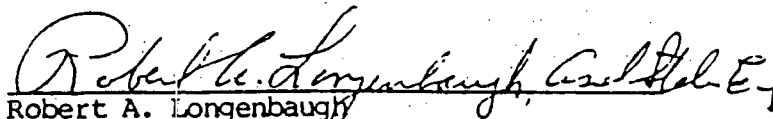
g. The owner shall mark this well in a conspicuous place with the permit number and the name of the aquifer. He shall take necessary means and precautions to preserve these markings.

Dated this 3rd day of October, 1984.



Jeris A. Danielson
Executive Director
Colorado Ground Water Commission

By:



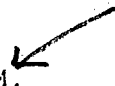
Robert A. Longenbaugh
Assistant State Engineer
Ground Water Section

CONDITIONS OF APPROVAL

LFH

D-COLORADO INVESTMENT CO., INC.

WELL PERMIT NO. 27746-F (CONTINUED)

THE MAXIMUM PUMPING RATE OF THE WELL SHALL NOT EXCEED 175 G.P.M. 

A TOTALIZING FLOW METER SHALL BE INSTALLED AND MAINTAINED BY THE WELL OWNER. DIVERSION RECORDS SHALL BE COLLECTED BY THE WELL OWNER AND SUBMITTED TO THE DIVISION OF WATER RESOURCES ON THEIR REQUEST.

THE OWNER SHALL MARK THIS WELL IN A CONSPICUOUS PLACE WITH THE PERMIT NUMBER AND THE NAME OF THE AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS.

MCS 7-24-54

WHERE ARE
PREVIOUS PAGES?

NEED BETTER COPY
LFH

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818
Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER 27746-F

FORM MUST BE SUBMITTED
IN 60 DAYS OF COMPLETION
THE WORK DESCRIBED HERE
TYPE OR PRINT IN BLACK

OWNER Mill - Colorado Investment Co. Inc. % of the 100 % of Sec. 17
ADDRESS 13 Loma Linda Drive T. 13 S. R. 63 E. 6 P.M.
COMPLETED Colorado Springs, Co. 2000, 19 19

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	10	Soil	
10	20	Gravel	
20	30	Sandstone	
30	40	Shale	
40	50	Sandstone	
50	60	Shale	
60	70	Sandstone w/Chile	
70	80	Shale	
80	90	Sandstone w/Sand	
90	100	Sand	
100	110	Shale	
110	120	Sand	
120	130	Shale	
130	140	Sand	
140	150	Shale	
150	160	Sand	
160	170	Shale	
170	180	Sand	
180	190	Shale	
190	200	Sand	
200	210	Shale	
210	220	Sand	
220	230	Shale	
230	240	Sand	
240	250	Shale	
250	260	Sand	
260	270	Shale	
270	280	Sand	
280	290	Shale	
290	300	Sand	
300	310	Shale	
310	320	Sand	
320	330	Shale	
330	340	Sand	
340	350	Shale	
350	360	Sand	
360	370	Shale	
370	380	Sand	
380	390	Shale	
390	400	Sand	
400	410	Shale	
410	420	Sand	
420	430	Shale	
430	440	Sand	
440	450	Shale	
450	460	Sand	
460	470	Shale	
470	480	Sand	
480	490	Shale	
490	500	Sand	
500	510	Shale	
510	520	Sand	
520	530	Shale	
530	540	Sand	
540	550	Shale	
550	560	Sand	
560	570	Shale	
570	580	Sand	
580	590	Shale	
590	600	Sand	
600	610	Shale	
610	620	Sand	
620	630	Shale	
630	640	Sand	
640	650	Shale	
650	660	Sand	
660	670	Shale	
670	680	Sand	
680	690	Shale	
690	700	Sand	
700	710	Shale	
710	720	Sand	
720	730	Shale	
730	740	Sand	
740	750	Shale	
750	760	Sand	
760	770	Shale	
770	780	Sand	
780	790	Shale	
790	800	Sand	
800	810	Shale	
810	820	Sand	
820	830	Shale	
830	840	Sand	
840	850	Shale	
850	860	Sand	
860	870	Shale	
870	880	Sand	
880	890	Shale	
890	900	Sand	
900	910	Shale	
910	920	Sand	
920	930	Shale	
930	940	Sand	
940	950	Shale	
950	960	Sand	
960	970	Shale	
970	980	Sand	
980	990	Shale	
990	1000	Sand	
TOTAL DEPTH		1250	

Use additional pages necessary to complete log.

CASING RECORD
MID-COLORADO INVESTMENT CO. INC.
Foxhills Permit 27745-P

~~A~~
4p

PLAIN CASING

WELL SCREEN

0 - 42' 14"

1222' - 1312' 8"

0 - 1222' 8 5/8"

1339' 1474' 8"

1312' - 1339' 8 5/8"

1474' - 1490' 8 5/8"

277 45 -F

Samie/Fox-Hills Formation:

Interval	Net Feet	Average Porosity	Porosity X Feet
32 - 1141	9.0	.247	2.223
53 - 1157	4.0	.225	.900
65.5 - 1173	7.5	.223	1.673
89 - 1191	2.0	.207	.414
99 - 1200	1.0	.253	.253
10.5 - 1213	2.5	.281	.703
22.5 - 1239	16.5	.312	5.148
41 - 1260.5	19.5	.335	6.533
62 - 1293	31.0	.320	9.920
95 - 1298	3.0	.307	.921
01.5 - 1306	4.5	.305	1.373
07.5 - 1315	7.5	.326	2.445
18 - 1321	3.0	.253	.759
35.5 - 1340	4.5	.353	1.589
41.5 - 1376	34.5	.336	11.592
77.5 - 1380	2.5	.288	.720
81 - 1463	82.0	.342	28.044
54.5 - 1473	8.5	.310	2.635
74.5 - 1478	3.5	.295	1.033
30.5 - 1482	1.5	.295	.443
34.5 - 1486	1.5	.320	.480
10 - 1520.5	10.5	.242	2.541
23 - 1525	2.0	.333	.666
	<u>262'</u>		<u>83.008</u>

14 November 1986

Division of Water Resources
1313 Sherman Street, Room 818
Denver, Colorado 80203

Attention: Mr Keith Kepler, Chief, Designated Basins Branch

Dear Mr Kepler:

Delivered herewith are the required two copies of each of the Statements of Beneficial Use for the wells constructed under Permits 27745-F and 27746-F. These have been prepared by Mr M E (Sandy) MacDougall from information provided by us. Please note that copies of the Contract between this Company and Sage Water Users Association (a Colorado non-profit corporation) are included with the Statements of Beneficial Use.

We have previously delivered, or caused to be delivered, to you the driller's Well Completion Reports, the Driller's Logs, the geophysical log run on the test bore by Welex, pump test results and the Pump Installation Reports prepared by Amwest, Inc.

We have provided the State Health Department copies of the inorganic chemical analyses on samples from both wells and also copies of the radiological tests done on samples from both wells. Mr MacDougall has advised me that you would be interested in seeing these results so photocopies are provided herewith.

Any further information that may be useful to you will be gladly furnished upon request. I wish to reiterate the invitation to you or any of your associates in the Water Resources Division to make an inspection of the water supply facilities which we have constructed in consequence of the granting of the permits for these two wells.

Very truly yours,

Alfred A Hagedorn

copy: Mr M E MacDougall

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

RECEIVED

NOV 14 1986

WATER RESOURCES
STATE ENGINEER
COLORADO

STATE OF COLORADO

COUNTY OF El Paso

SS.

AFFIDAVIT

X STATEMENT OF BENEFICIAL USE OF GROUND WATER

AMENDMENT OF EXISTING RECORD

LATE REGISTRATION

PERMIT NUMBER 27746-F

LOCATION OF WELL

Mid-Colorado Investment Co., Inc.
by Alfred A. Hagedorn, President

County El Paso

AFFIANT(S)
mailing

13 Loma Linda Drive

NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ Section 17

Colorado Springs, CO 80906

Twp. 13 S Rng. 64 W 6th P. 4

I, duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is

located as described above, at distances of 178 feet from the North section line and 270 feet from the

21st section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 21st

September, 19 85; the maximum sustained pumping rate of the well is 200 gallons per minute, the pumping
*cased to 1490 feet

claimed hereby is 200 gallons per minute; the total depth of the well is 1754* feet; the average annual amount

water to be diverted is 255 acre-feet; for which claim is hereby made for Domestic, Livestock, Commercial, Industrial, Irrigation

Municipal purpose(s); the legal description of the land on which the water from this well is used is the Creek North and South Subdivisions (in Sections 11, 12 and 13, T 13 S, R 63 W), and Mid-Colorado Investment Co., Inc., land in Sections 17 and 18 of which

T 13 S, R 63 W.
1 acre are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in
compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he
(I) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) Alfred A. Hagedorn
Subscribed and sworn to before me on this 14th day of November, 19 86

Commission expires: January 24, 1987
Shannon G. Johnson
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO
SUBJECT TO THE FOLLOWING CONDITIONS:

FOR OFFICE USE ONLY

Court Case No. _____

Prior _____ Mo. _____ Day _____ Yr. _____

Div. _____ Cty. _____

Sec. _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____ $\frac{1}{4}$

Well Use _____

Dist. _____ Basin _____ Mon. Dis. _____

NOV 01 1986

Shannon G. Johnson

11/14/86

RECEIVED

385 11/11 23DRU0233 RETAW 30 MOIRVIO 00130 001

Well Drilled by Crandall Drilling & Trenching, Inc. Lic. No. 308

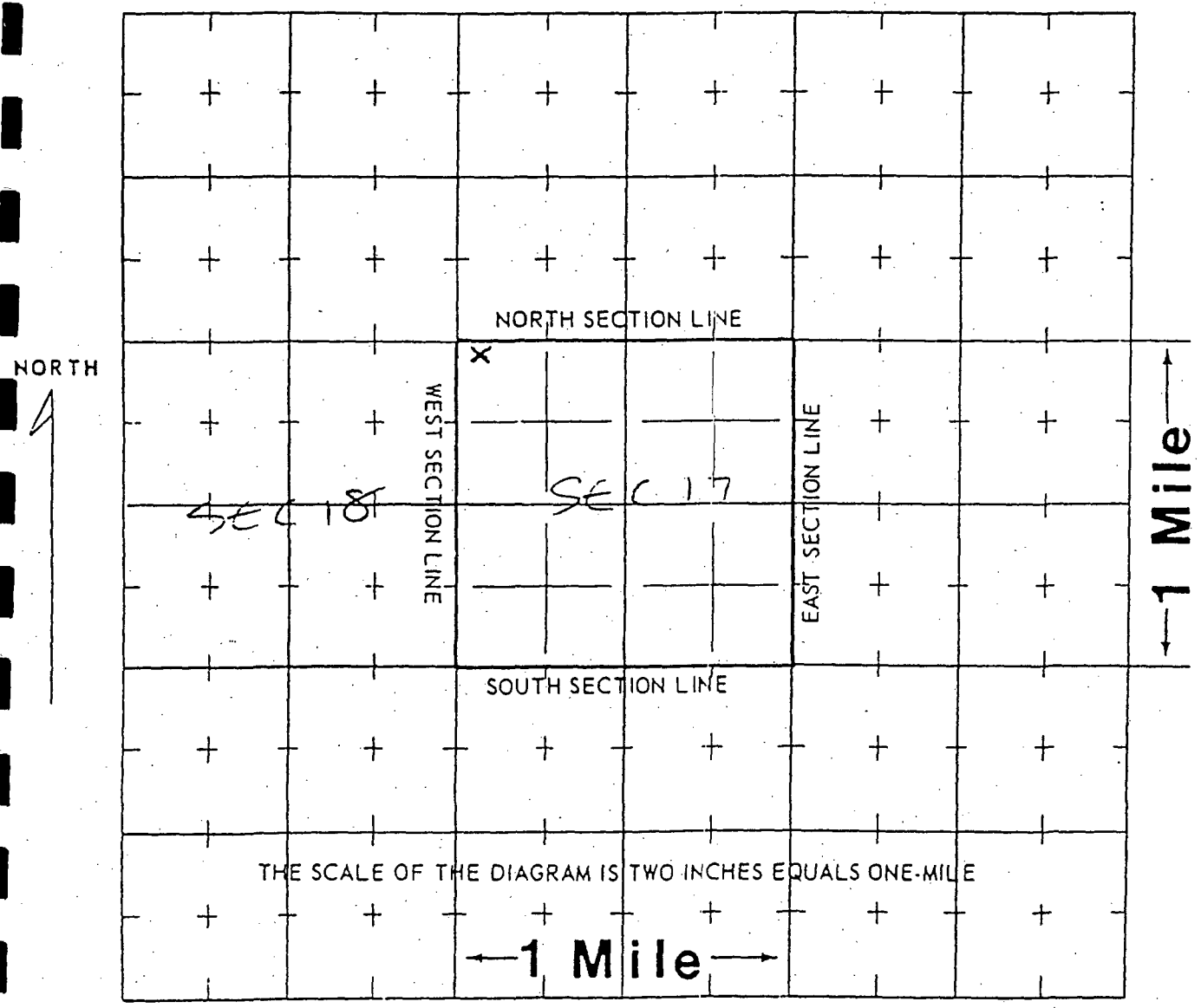
Permanent Pump installed by Amwest Well & Pump, Inc. Lic. No. 1026

Meter Serial No. 85660343 (Kent) ☐ Flow Meter Date Installed 9/20/85

Owner of land on which water is being used Owners of Lots in Sage Creek North and South Subdivisions (see attached Contract) and Mid-Colorado Investment Co., Inc.

THE LOCATION OF THE WELL MUST BE SHOWN AND FOR LARGE CAPACITY IRRIGATION WELLS THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the CENTER SQUARE (one section) to indicate the location of the well, if possible.



WATER EQUIVALENTS TABLE (Rounded Figures)

- An acre-foot covers 1 acre of land 1 foot deep.
- 1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm).
- 1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
- 1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
- 100 gpm pumped continuously for one year produces 160 acre-feet.

APPENDIX F

SUA WATER COMMITMENT

SWUA - PEERLESS FARMS WATER AGREEMENT

27 May 2021

Water Agreement between Robert Williams (owner/developer of Peerless Farms Development located at 16975 Falcon Hwy, Peyton, CO 80831) and Sage Water Users Association, P.O. Box 514, Peyton, 80831-0514.

As requested, this document will serve as a formal Letter of Commitment from the Sage Water Users Association (SWUA) of El Paso County, Colorado to provide municipal water for a total of seven (7) individual lots at the Peerless Farms Development located at 16975 Falcon Highway.

The proposed location for this development is located within SWUA's established boundaries and therefore is eligible for service connections from SWUA. SWUA will utilize the existing water mains at the east end of the property.

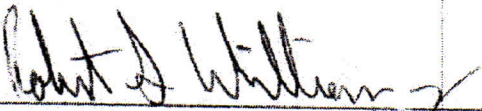
The SWUA board, along with the developer have agreed to providing domestic water for 7 (5 AC +/-) residential lots (homes and guest quarters) and for the watering of limited livestock. SWUA will be paid \$7,500 tap fee for each of the six additional lots (one tap already existing), which will cover the cost of the tap and meter installation. This tap fee will be due for each lot when sold or a new residential structure is built. The existing tap/meter is in the proposed road and will be relocated at owner expense. Also, the main will have to be connected to the SWUA system at owner expense.

In addition, the owner agrees to reimburse SWUA for legal fees up to \$2,500 to cover amendment of corporation filing and review of contract modification with Mid-Colorado Investment Co., Inc.

This water commitment is hereby made exclusively for this specific development project at this site within SWUA boundaries. To confirm this commitment the developer will provide SWUA with a copy of the final plat approval from El Paso County Development Services within 18 months of the date of this letter. Otherwise, SWUA may use this allocation for other developments requesting a water commitment. If the subject project is re-platted, the Developer must submit a new commitment request prior to submitting the re-plat to El Paso County, which may result in a recalculation of the water demand for the project.

Agreed terms and conditions are recognized by:

Developer:

X 

Sage Water Users Association:

X 

SWUA – PEERLESS FARMS WATER AGREEMENT

Incorporated herein: Mid-Colorado Investment Co., Inc (and/or their successors) agrees to supply water to the additional six lots and to modify the SWUA contract to incorporate these changes.

Mid Colorado Investment Co., Inc:

X Alfred C. Hagedorn
President

APPENDIX G
WATER QUALITY REPORT

Esta es informacion importante. Si no la pueden leer, necesitan que alguien se la traduzca.

The Sage Water Users Association and Mid-Colorado Investment Co., Inc. are pleased to present this year’s annual Water Quality Report. This report is designed to inform you about the quality of the water you consume every day. We are committed to providing you, our customers, with water that meets or exceeds all federal and state requirements. If you have any questions, please contact any member of the Sage Board of Directors (call 719-660-3076, or email contact@sagewater.org), Philip Cromwell, operator of the Sage system (719-499-8408), or Al Hagedorn of Mid-Colorado (719-687-5312), or attend the meetings of the Sage Board. The Board meets at 7:00 PM on the third Tuesday of “odd-numbered” months (Jan., Mar., etc.) at the Sage Creek Community Church, 6160 Murr Rd. For updated locations, dates and times, check www.sagewater.org ,or call 719-222-2955.

Vulnerable Populations Warning

Some people may be more vulnerable to contaminants in drinking water than the public in general. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV-AIDS or other immune system disorders, some elderly, and infants can be particularly at risk of infections. These people should seek advice from their health care providers about drinking water. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and microbiological contaminants, call the EPA Safe Drinking Water Hotline at 1-800-426-4791.

Where Does Our Water Come From?

Our water comes from deep (over 1000 feet) wells drilled into the Laramie-Fox Hills and Arapahoe aquifers (groundwater); the amounts drawn from the two aquifers vary, but we usually deliver a blend of about 67% Laramie-Fox Hills, and 33% Arapahoe. The wells, pumps and treatment facilities are owned and maintained by Mid-Colorado. The water is chlorinated at the wells, then pumped to an underground reservoir. From there, the pressure is raised with booster pumps and the water is delivered into the distribution system, owned and maintained by the Sage Association. In 2020, the amount used by the entire Sage service area was 24,743,396 gallons, about 67,605 gallons per day average over the year.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- * Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- * Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides that may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, septic systems, and as byproducts of water disinfection.
- *Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The Source Water Assessment Report

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. You may obtain a copy of the report by visiting www.cdphs.state.co.us/wq/sw/swaphom.html or by contacting Al Hagedorn at 719-687-5312.

Potential sources of contamination in our source water area come from: “Road Miles.”

The Source Water Assessment Report provides a screening-level evaluation of potential contamination that **could** occur. **It does not mean that contamination has occurred or will occur.** We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan; this plan has been developed and implementation is beginning.

Please contact Al Hagedorn,(719-687-5312), to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Consumer Confidence Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Understanding the Table of Contaminants

In the table on the other side of this sheet, you will find some terms and abbreviations that might not be familiar to you. To help you better understand these terms, we’ve provided some definitions:

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow.

Waiver - State permission not to test for a specific contaminant. **During 2020, we had waivers of monitoring requirements for dioxin, glyphosate, cyanide, and asbestos.** These contaminants are not expected to occur in our water.

Milligram - a unit of weight in the metric system, abbreviated “mg.” There are about 454,000 milligrams in a pound. Approximately six grains of table salt weigh one milligram.

Liter - a unit of volume in the metric system, abbreviated “L.” A liter is slightly more than one quart.

Milligrams per liter (mg/L) - 1 mg/L corresponds to about 4 drops of water in a full bathtub, or 10 tablespoons of salt in one day’s average water use throughout the Sage subdivisions; same as “parts per million (ppm).”

Micrograms per liter (µg/L) - 1 µg/L corresponds to one or two grains of salt in a full bathtub, or about half a teaspoon of water in an average week’s water use by all of Sage; same as “parts per billion (ppb).”

Picocuries per liter (pCi/L) - a measure of the radioactivity in water.

N/A - Not Applicable. This test was not required, or the requirement is not applicable to our system.

N/T - No Test. This test was not required for our system.

What’s In Our Water?

The State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some of our data, though representative, may be more than one year old. The table below lists the regulated and unregulated contaminants that were found, as well as a few that were NOT detected. For a complete list of the **very** large number of contaminants tested for but not detected, their MCLs, sampling dates, etc., please contact Al Hagedorn at (719)-687-5312. He can also supply results for earlier years, possible health effects from contaminants, and other information about the water.

Contaminant	Sample Date	Violation (Yes/No)	Level Detected	Unit	MCL	MCLG	Likely source of contaminant
Microbiological Contaminants (samples taken at booster pump station and at various locations throughout the distribution system)							
Total Coliform Bacteria	monthly	No	Absence	Presence/ Absence	Presence	0	Naturally present in the environment
<i>E. coli</i> Bacteria	monthly	No	Absence	Presence/ Absence	Presence	0	Human and animal fecal waste
Inorganic Contaminants							
Arsenic	4/26/21	No	0.001	mg/L	0.01	0	Erosion of natural deposits; orchard runoff
Barium	4/26/21	No	0.006	mg/L	2.0	0.1	Erosion of natural deposits
Copper (see Note below)	9/23/20- 9/24/20	No	0.01 (90th %ile)	mg/L	AL = 1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride (see Note below)	4/26/21	No	1.01	mg/L	4	4 (AL = 2)	Erosion of natural deposits
Lead (see Note below)	9/23/20- 9/24/20	No	<0.50 (90th %ile)	µg/L	AL = 15	0	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate (as Nitrogen)	4/26/21	No	<0.1	mg/L	10	10	Runoff from fertilizer use; sewage, leaching from septic tanks; erosion of natural deposits
Nitrite (as Nitrogen)	12/04/12 4/26/21	No No	<0.004 <0.1	mg/L	1.0	1	erosion of natural deposits
Sodium (unregulated)	4/26/21	N/A	124.5	mg/L	N/A	N/A	Naturally present in the environment
Total Dissolved Solids (see Note below)	12/03/12	N/A	424	mg/L	N/A	N/A	Erosion of natural deposits. This measures the residue left when the water evaporates.
Radionuclides (see Note below)							
Radium-226	12/03/15	No	0.2	pCi/L	5 (for combined Ra-226 + Ra-228)	0	Erosion of natural deposits
Radium-228	12/03/15	No	0.0	pCi/L			Erosion of natural deposits
Gross Alpha	12/04/12	No	0.0	pCi/L	15	0	Erosion of natural deposits
Uranium	12/04/12	No	<0.7	pCi/L	30	0	Erosion of natural deposits
Disinfection Byproducts (See Note below.)							
Bromodichloromethane	4/26/21	N/A	0.7	µg/L	N/A	0	Disinfection byproduct
Bromoform	4/26/21	N/A	1.1	µg/L	N/A	0	Disinfection byproduct
Dibromochloromethane	4/26/21	N/A	1.4	µg/L	N/A	60	Disinfection byproduct
Chloroform	4/26/21	N/A	<0.5	µg/L	N/A	N/A	Disinfection byproduct
TTHM in Sage distrib system (see Note below)	various 2020	No	8.7 avg	µg/L	80 µg/L	N/A	Disinfection byproducts
HAA5 in Sage distrib system (see Note below)	various 2019	No	1.25 avg (range 1.1-1.4)		60 µg/L	N/A	Disinfection byproducts
Disinfectant Residual							
Total Chlorine Residual (see Note below)	1/01/20- 12/31/20	N/A	0.82 avg (0.69-1.10)	mg/L	N/A	N/A	Water additive added to control microbes; MRDL and MRDLG both 4.0 mg/L

Notes to Table of Values

VIOLATIONS: SEE SEPARATE SHEET

Fluoride: If children under 7 years of age regularly consume water with fluoride levels near 1 mg/L, their permanent teeth tend to become decay-resistant. However, with *prolonged* consumption of water with fluoride levels over 2 mg/L, the children begin to be at risk of developing dental fluorosis, a mottling of the enamel of the permanent teeth. The blend of Laramie-Fox Hills and Arapahoe water sampled on 4/26/21 showed a fluoride content of 1.01 mg/L, in line with historic results. Arapahoe well water by itself slightly exceeds the action level of 2 mg/L, but it is rarely the sole source of water; only when the Laramie-Fox Hills well is out of service (e.g., when the pump needs replacing) is unblended Arapahoe water delivered. Exposure to the higher fluoride level then would be for only a few days, and should not pose a risk of dental fluorosis.

Copper and Lead: There is very little copper or lead in the water that is delivered to the Sage distribution system; for example, a sample of the usual blend of Laramie-Fox Hills and Arapahoe water taken 10/13/02 showed these contaminants to be present, if at all, at levels below the State Health Department lab’s limits of detection. However, these contaminants might leach into the water from piping or plumbing fixtures in the homes. Accordingly, analyses were conducted on “first draw” samples (the first water taken from a tap after standing overnight) from ten homes. None of these samples showed lead or copper at or above the Action Levels; lead, in fact, was below the detection limit in all samples! Values in the Table are 90th percentile figures, and are far below the action levels.

Lead in drinking water: If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home’s plumbing. If you are concerned about lead in your water, you may wish to have your water tested. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Total Dissolved Solids: This is considered a “secondary contaminant”, that may cause cosmetic effects (such as skin, tooth or clothing discoloration) or aesthetic effects (taste [good or bad], odor, or color) in drinking water. The non-enforceable secondary standard is 500 mg/L.

Disinfection Byproducts: The first four compounds listed make up the “Total Trihalomethanes” (“TTHM”), by-products of the chlorination process used to disinfect the water. The values shown are from Mid-Colorado’s sampling at the booster station on 4/26/21. Sage Water Users Association took samples in 2020 for TTHM and in 2019 for HAA5 (5 haloacetic acids) at several points in the distribution system. The results for these samples, shown in the Table, are far below the MCLs of 80 and 60 µg/L for TTHM and HAA5, respectively.

Disinfectant Residual (Total Chlorine Residual): . The table shows results from testing the water entering the Sage distribution system (average 0.82 mg/L, range 0.69-1.10 mg/L),. These reflect measurements taken when monthly samples were taken in 2020 for bacterial analysis at the booster station. Also, 2020 distribution system samples were all within allowed limits. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose; some people who drink water that contains chlorine well in excess of the MRDL could experience stomach discomfort.

Radionuclides: Radioactive decay of these radium isotopes is the primary source of radon, another radioactive contaminant in water and in air. Radium itself arises from naturally occurring uranium in the rocks and soil.

Comments on this report and other aspects of water quality are very welcome! Please contact any member of the Sage Association Board of Directors. Attending the Board meetings is a great way to keep up to date about **your** water system.