

WATER RESOURCES REPORT

for

***SMH Consultants
Owl Ridge Subdivision***

EPC Parcel #: 5100000447

**February 2022
(revised 08/17/22)
(Second revision 04/13/23)**

Prepared By:



OWL RIDGE SUBDIVISION
EPC Parcel # 5100000447

WATER RESOURCES REPORT

February 2022
(Revised August 2022)
(Second Revision April 2023)

Prepared for:

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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

The purpose of this report is to address the specific water needs of a proposed subdivision of Parcel # 5100000447 in El Paso County, CO.

EXECUTIVE SUMMARY: The water rights and augmentation plan in place for the existing parcel are adequate to meet the needs of two (2) lots proposed for the subdivision on a 300-year basis (the third lot will be served by an exempt well on a 35-acre parcel)

2.0 PROJECTED LAND USES

2.1 *Projected Land Uses*

This report pertains to the existing 26.9-acre parcel that is proposed to be divided into two (2) lots. Two lots (lots #1 and #2) will be served by the proposed augmentation plan. There is a 35-acre lot owned by the same owner but will not be a part of this subdivision and would be served separately by an exempt well. Please refer to the *Land Use Exhibit* in **Appendix A** depicting the proposed subdivision.

3.0 WATER NEEDS AND PROJECTED DEMANDS

3.1 *Water Demand Summary*

Of the two proposed residential lots, one lot is existing over a parcel size of 5 acres (shown as Lot 2 in the Plat provided in **Appendix A**). The other lot will be subdivided as shown in the Plat presented in **Appendix A**, with Lot 1 being 21.9 acres. Lots #1 and existing Lot #2 are to be subdivided and developed immediately, with existing Lot #2 demanding 0.60 AF/year annually to serve one residence and Lot #1 demanding 1.75 AF/year to serve one (1) residence and one (1) guest house. Information on the estimated demands is provided in Case #2021CW3126 contained in **Appendix C**. Water demands and wastewater loads are shown Table 3-1 below:

Table 3-1: Summary of Expected Water Demands & Wastewater Loads

Water (under Case Number 2021CW3126) for 2 lot augmentation plan						Wastewater
# of SFE's	Annual Indoor Use 0.3 (AF/YR/SFE)	Average Daily Indoor Use (GPD)	Irrigation 0.0566 (AF/1,000 SF)	Domestic Watering 0.0125 (AF/Horse/Year)	Total Indoor, Watering, & Irrigation (AF)	ADF (@ 90% Indoor Use (GPD)
3	Note 1 0.900	803	Note 2 1.250	Note 3 0.200	2.35	723

Note 1: **Per Section 8.3.1. and 8.3.2. of Case No. 2021CW3126**

Note 2: **Per 8.4.7(B)(7)(d) of the EPC-LDC, assuming a total of 22,084 ft² irrigatable land for lots #1 and #2**

Note 3: **Assuming 16 horses total for lots #1 and #2 per sections 8.3.1 and 8.3.2. of Case No. 2021CW3126**

3.2 Unit Water User Characteristics

Unit water user characteristics are counted on a *single-family equivalent* (SFE) basis. All single-family homes are counted as one SFE, and user characteristics were based on information provided in the *El Paso County Land Development Code*, Chapter 8 or District Court, Water Division 1 Case Number 2021CW3126 as shown in **Appendix C**.

3.3 Demand versus Supply

An overall demand of 2.35 acre-feet/year for the proposed subdivision is less than the amount of supply listed in the decrees, determinations, and *Findings of Fact* (provided in **Appendix C**) and is further discussed in Section 4.0 of this report. Of note, the water demand for lots #1 and #2 under the augmentation plan described in 2021CW3126 is for a 300-year supply.

4.0 WATER RIGHTS AND SUPPLY

4.1 Water Rights

Water rights, determinations, and replacement plan have been approved as part of Colorado Water Division 1 Court Case No. 2021CW3126 in **Appendix C**. Table 4-1 below summarizes the information from said water rights decreed in Case Nos. 2021CW3126 and 05CW260.

Table 4-1: Water Rights Summary

Land Formation/ Aquifer	Determination	Tributary Status	Area	Decreed Water	Annual Allocation 100-Year	Annual Allocation 300-Year
			(Acres)	(AF)	(AF/Year)	(AF/Year)
Dawson	2021CW3126	NNT	26.9	4,500	45.00	15.00
Denver	2021CW3126	NT	26.9	4,980	49.80	16.50
Arapahoe	2021CW3126	NT	26.9	2,750	27.50	9.17
Laramie-Fox Hills	2021CW3126	NT	26.9	1,870	18.70	6.23
Total Legal Supply					141.00	46.9
					<i>100-Year</i>	<i>300-Year</i>

Beneficial Uses: Domestic Indoor, Industrial, Commercial
Lawn & Garden Irrigation

Water for Domestic Animals, fish, and wildlife, augmentation

Note: The total amount of Dawson Aquifer groundwater conveyed to the property is 49.00 AF annually, or 4,900 AF total. The annual amount available in the NNT Dawson Aquifer is reduced by 4 AF annually, 400 AF total, as a portion of the groundwater reserved for exempt purposes in the 05CW260 decree. This 4 AF/year has been reserved for future exempt uses on the adjacent 35-acre lot.

Note that only the Dawson formation is to be used for the proposed lots in this subdivision. According to the *Findings of Fact* located in **Appendix C**, the following conditions are allowed for the subject property:

- Groundwater from the Dawson Aquifer will be used to serve two individual wells on Lots #1 and #2 through existing Well Permit No. 280006, which will be re-permitted under this augmentation plan. These stipulations are described in Court Case Nos. 2021CW3126 and 05CW260, contained in **Appendix C**.
- There shall be one (1) Dawson aquifer well per lot, totaling two (2) wells in the proposed subdivision.
- Each well must provide water to a house (or houses) on the same lot, ensuring that during pumping, return flows from septic systems alone will always equal or exceed stream depletions in the same year.
- It is not necessary to restrict the type of use to which the Dawson water pumped (pursuant to the augmentation plan) is put.
- The acre-feet of water each Dawson aquifer well is allowed to divert on an annual basis shall be calculated by dividing the number of lots into the

number 2.35, but in no event shall exceed 1.75 acre-foot per well per year under the augmentation plan.

4.2 *Adequacy of Water Rights*

Current water rights are adequate for buildout demands of two (2) lots and meet 2040 and 2060 buildout projections on a 300-year basis.

According to the *Findings of Fact, Groundwater Rights, and Plan for Augmentation*, the following stipulations are found in Colorado District Court, Water Division 1, Colorado Court Case Decree Nos. 2021CW3126 and 05CW260 located in **Appendix C**:

- There are 15 AF/year available on a 300-year supply basis out of the Dawson Formation, which is greater than the estimated annual demand of 2.35 AF-year for lot #1 and #2. The 35-acre lot shown in the final plat is not considered part of the subdivision and will be served through a future exempt domestic and livestock well on a 100-year supply basis per Colorado Division of Water Resources Regulations.
- Assuming a conservative 0.20 AF/yr domestic use per residence, and three households proposed on Lots #1 and #2, with 90% return flows through the septic system per residence, this results in a 0.18 AF/yr replacement flow back through the septic system per household. Subsequently, this results in a 0.540 AF/year replacement volume total from the three (3) residences located on the two (2) lots.
- The estimated maximum depletion to the alluvial aquifer from 300-years of pumping from the Dawson formation at 2.35 AF/year results is 0.52 AF/year by year 300 for the two (2) lots. The estimated annual return flows from each residence are more than the estimated depletions to the alluvium as shown in the Replacement Plan Application included in **Appendix C**.
- Post-pumping depletions: the property will reserve 2.35 AF/year, or 705 AF total over 300-years, from the non-tributary Laramie Fox-Hills (LFH) for use to replace post pumping depletions (assumed to be a maximum of 0.52 AF/year by the year 300 of pumping).
- Exempt well usage: the 4 AF/year of exempt well usage for the 35-acre lot has been set aside out of the Dawson supply and does not require an augmentation plan or replacement water on a 300-year basis and is not considered part of the subdivision.

Conclusion:

The current water rights and augmentation plan in place are adequate to meet the estimated overall demand and resulting alluvial depletions of 2.35 acre-feet/year for two (2) lots.

4.3 *Description of Current Water Rights*

The subject area's current water rights involve non-renewable supplies in the Denver Basin, further discussed below.

Non-Renewable Denver Basin Supply

The Denver Basin is a vast, deep-rock aquifer that stretches from southeast of Colorado Springs to Greeley, and from the base of the front range to the eastern end of Elbert County. Rights granted in the Denver basin are based on the ownership of the surface property – the larger the parcel, the larger the allocation. This water is much deeper than typical residential wells, ranging up to 2,650 feet deep.

Denver Basin water is considered finite and therefore non-renewable. In the subject area, there are four main formations that make up the Denver Basin: Dawson, Denver, Arapahoe, and Laramie-Fox Hills (LFH), described from shallowest to deepest.

Case No. 2021CW3126 contains allocations in all four (4) Denver Basin aquifers, which total 46.90 annual acre-feet on a 300-year basis, and 141 annual acre-feet on a 100-year basis (not counting the 4 AF/year of reserved water for the exempt well on the 35-acre lot in a 100-year basis).

5.0 **WATER SYSTEM FACILITIES AND PHYSICAL SUPPLY**

5.1 *Source of Supply*

Supply for the two (2) lots will be met with one (1) new wells and one (1) existing well (Permit #280006) that is currently drilled into the Dawson formation which will be re-permitted to operate pursuant to the proposed replacement plan. All new wells will be completed in the Dawson aquifer. The existing well currently serves the existing 5-acre residence on Lot #2. The new well will be drilled, screened, test-pumped, and completed in accordance with the Colorado Division of Water Resources rules and regulations.

5.2 *Water Treatment*

Water in the existing well was tested in October of 2020 for constituents required by El Paso County regulations for a confined aquifer. Any desired treatment of existing and future wells will rely on the individual homeowners as this is not considered a *Community System* by the Colorado Department of Public Health and Environment.

5.3 *Water Storage*

Water storage (other than potential individual cisterns) will not be constructed. Therefore, a central water system with treatment and fire-flow capabilities will not be provided. The residents of each subdivided lot will be made aware of this since it will be included on the subdivision plat.

5.4 *Distribution, Pumping, and Transmission Lines*

Since there is no central water system proposed for this subdivision, no distribution, pumping, or transmission lines will be constructed.

5.5 *Water Quality*

The water quality in the Dawson aquifer in this area has typically been suitable for residential potable use. Water samples were obtained from the existing well (well permit #280006 – formerly under permit #108262) serving the existing residence at 18885 Brown Road. Water samples were obtained from this residence on October 1, 2020, with water quality testing performed by Colorado Analytical Laboratories and Hazen Research through Colorado Analytical Laboratories, per the El Paso County Land Development Code section 8.4.7(B). Results for all water quality testing were received on November 17, 2020, and can be found in **Appendix D**. The only results of concern were regarding the Langoliers Index. All other results were found to be below primary and secondary contamination limits established by the Colorado Department of Health and Environment.

The water sampled at this location was tested and found to feature a negative Langoliers Index scale. A negative Langolier Index result tends to indicate an aggressive or corrosive water, which is not out of the ordinary in this area of Black Forest. If the corrosivity of the water becomes an issue at the location, then the provision of a neutralizing bed of calcium carbonate or another alkaline material (i.e., magnesium oxide) in a point-of-entry application may be recommended. In addition, use of PEX plumbing in the household may also mitigate the impacts of potentially corrosive water. Other than the negative Langolier Index there did not appear to be any other constituents of concern, and the confined aquifer should be considered safe for use. Water quality results from the existing on-site well are included in **Appendix D**.

6.0 EL PASO COUNTY MASTER PLANNING ELEMENTS

6.1 *County Water Master Plan 2040 and 2060 Projections*

The subject property lies within the El Paso County Water Master Planning area, Region #2.

6.2 *Buildout (Including 2040 and 2060 Buildout):*

Expected buildout of the subject property are two (2) total lots. Demands for the entire subdivision are listed in Section 3.0 of this report.

6.3 *Description of Long-Term Planning and Future Sources of Supply*

Per El Paso County criteria, the 300-year supply of water for the subject property appears to be more than adequate for full buildout, which would include both the 2040 and 2060 scenarios. However, the proposed supply in the Dawson aquifer is based on non-renewable sources.

If needed beyond the 300-year supply, the subdivision has nontributary water rights in the Denver, Arapahoe, and Laramie Fox-Hills formations. Please refer to Case Number 2021CW3126 in **Appendix C**.

6.4 *Water System Interconnects*

The closest source for a potential interconnect is the Town of Black Forest's Park Forest Water District (for water only) – approximately 5.0 miles to the south. The next closest interconnects for both water and sewer are Colorado Springs Utilities, located 6.2 miles to the southwest.

It is not anticipated (and neither Park Forrest nor Colorado Springs Utilities has been contacted) that an interconnect is needed or warranted.

7.0 CONCLUSION

The subject property has adequate water supply to meet the needs of the proposed subdivision on a 300-year basis.

Appendix A

OWL RIDGE SUBDIVISION

PART OF THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN
COUNTY OF EL PASO, STATE OF COLORADO

NOTES:

1. NO GAPS OR OVERLAPS EXIST.
2. THERE ARE NO LINES OF POSSESSION THAT AFFECT THIS SURVEY.
3. PARENT TRACT IS RECORDED IN BOOK INSTRUMENT #219120728, REGISTER OF DEEDS OFFICE, EL PASO COUNTY, COLORADO.
4. ALL BUILDING SETBACK REQUIREMENTS SHALL BE DETERMINED BY THE ZONING DISTRICT, UNLESS OTHERWISE NOTED.

5. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SMH CONSULTANTS, TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. FOR INFORMATION REGARDING THE SURVEY, THE CLIENT SHOULD CONSULT WITH SMH CONSULTANTS REGARDING THE TITLE POLICY PREPARED BY STEWART TITLE COMPANY 688 LEGACY TITLE, 1841887, DATED APRIL 4, 2022.
6. BASIS OF BEARINGS IS THE WEST PROPERTY LINE, MONUMENTED AS SHOWN AND BEARING NORTH 00 DEGREES 27 MINUTES 45 SECONDS WEST, 1328.92 FEET.
7. SEWAGE TREATMENT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PROPERTY OWNER. THE EL PASO COUNTY PUBLIC HEALTH DEPARTMENT MUST APPROVE EACH SYSTEM AND, IN SOME CASES, THE DEPARTMENT MAY REQUIRE AN ENGINEER-DESIGNED SYSTEM PRIOR TO PERMITTING APPROVAL.

8. INDIVIDUAL WELLS ARE THE RESPONSIBILITY OF EACH PROPERTY OWNER. PERMITS FOR INDIVIDUAL WELLS MUST BE OBTAINED FROM THE STATE ENGINEER WHO BY LAW HAS THE AUTHORITY TO SET CONDITIONS FOR THE ISSUANCE OF THESE PERMITS.

9. WATER IN THE DENVER WATER BASIN AQUIFERS IS ALLOCATED BASED ON A 100-YEAR AQUIFER LIFE; HOWEVER, FOR EL PASO COUNTY PLANNING PURPOSES, WATER IN THE DENVER BASIN AQUIFER IS BASED ON 300-YEAR AQUIFER LIFE. THE PROPERTY OWNERS SHOULD BE AWARE THAT THE ECONOMIC LIFE OF A WELLS IN THE SUBDIVISION SHOULD BE AWARE THAT THE ECONOMIC LIFE OF A WATER SUPPLY BASED ON WELLS IN A GIVEN DENVER BASIN AQUIFER MAY BE LESS THAN EITHER THE 100 YEARS OR 300 YEARS INDICATED DUE TO ANTICIPATED WATER LEVEL DECLINES. FURTHERMORE, THE WATER SUPPLY PLAN SHOULD NOT RELY SOLELY UPON NON-RENEWABLE AQUIFERS. ALTERNATIVE RENEWABLE WATER RESOURCES SHOULD BE ACQUIRED AND INCORPORATED IN A PERMANENT WATER SUPPLY PLAN THAT PROVIDES FUTURE GENERATIONS WITH A WATER SUPPLY.

10. THE PROPERTY OWNER, ITS SUCCESSORS AND ASSIGNS, AND ALL FUTURE LOT OWNERS IN THIS DEVELOPMENT ARE HEREBY ON NOTICE THAT THEY MAY BE REQUIRED TO COMPLY WITH APPLICABLE RULES, IF ANY, OF THE COLORADO GROUND WATER COMMISSION AND/OR THE UPPER BLACK SQUIRREL CREEK GROUND WATER MANAGEMENT DISTRICT, WHICH COMPLIANCE MAY RESULT IN A REDUCTION OF WELL WITHDRAWAL LIMITS, AND THUS A REDUCTION IN WATER AVAILABILITY.

11. ALL PROPERTY OWNERS ARE RESPONSIBLE FOR MAINTAINING PROPER STORM WATER MANAGEMENT AND THE PROPER PROPERTY, PUBLIC DRAINAGE EASEMENTS AS SPECIFICALLY NOTED ON THE PLAT SHALL BE MAINTAINED BY THE INDIVIDUAL LOT OWNERS UNLESS OTHERWISE INDICATED. HOMEBUILDERS ARE RESPONSIBLE TO ENSURE PROPER DRAINAGE AROUND STRUCTURES, INCLUDING ELEVATIONS OF FOUNDATIONS AND WINDOW WELLS IN RELATION TO SIDE-LOT DRAINAGE EASEMENTS AND SWALES. HOMEOWNERS SHALL NOT CHANGE THE GRADE OF THE LOT OR DRAINAGE SWALES WITHIN SAID EASEMENTS, AS CONSTRUCTED BY THE BUILDER, IN A MANNER THAT WOULD CAUSE ADVERSE DRAINAGE IMPACTS TO PROPERTIES. STRUCTURES, FENCES, MATERIALS OR LANDSCAPING THAT COULD IMPEDE THE FLOW OF RUNOFF SHALL NOT BE PLACED IN DRAINAGE EASEMENTS.

12. ACCESS TO LOTS 1&2 SHALL BE THROUGH THE SHOWN ACCESS EASEMENT. THE RESPONSIBILITY AND MAINTENANCE OF SAID ACCESS IS SUBJECT TO THE MAINTENANCE AGREEMENT AND ALL RESTRICTIONS CONTAINED THEREIN, AS RECORDED AT RECEPTION NO. _____ OF THE RECORDS OF EL PASO COUNTY CLERK AND RECORDER.

13. THE SUBDIVIDERS(S) AGREES ON BEHALF OF HIM/HERSELF AND ANY DEVELOPER OR DEVELOPERS TO ASSURE THAT THE SUBDIVISION SHALL BE CONVEYED TO SUCCESSORS AND ASSIGNS SHALL BE REQUIRED TO PAY TRAFFIC IMPACT FEES IN ACCORDANCE WITH EL PASO COUNTY ROAD IMPACT FEE PROGRAM RESOLUTION RESOLUTION NO. 19-471), OR ANY AMENDMENTS THERETO, AT OR PRIOR TO THE TIME OF BUILDING PERMIT SUBMITTALS. THE FEE OBLIGATION, IF NOT PAID AT FINAL PLAT RECORDING, SHALL BE DOCUMENTED ON ALL SALES DOCUMENTS AND PLAT NOTES TO ENSURE THAT A TITLE SEARCH WOULD FIND THE FEE OBLIGATION BEFORE SALE OF THE PROPERTY.

14. DUE TO THEIR LENGTH, SOME OF THE DRIVEWAYS WILL NEED TO BE SPECIFICALLY APPROVED BY THE TRILAKES MONUMENT FIRE PROTECTION DISTRICT.

15. MAILBOXES SHALL BE INSTALLED IN ACCORDANCE WITH ALL EL PASO COUNTY DEPARTMENT OF TRANSPORTATION AND THE UNITED STATES POSTAL SERVICE REGULATIONS.

16. THE FOLLOWING REPORTS HAVE BEEN SUBMITTED IN ASSOCIATION WITH THE FINAL PLAT FOR THIS SUBDIVISION AND ARE ON FILE AT THE COUNTY DEVELOPMENT SERVICE DEPARTMENT: DRAINAGE REPORT, WATER RESOURCES REPORT, WETLANDS REPORT, POSTAL SERVICE REPORT, GEOLOGIST AND SOILS REPORT, FIRE PROTECTION REPORT, AND TRAFFIC MEMO.

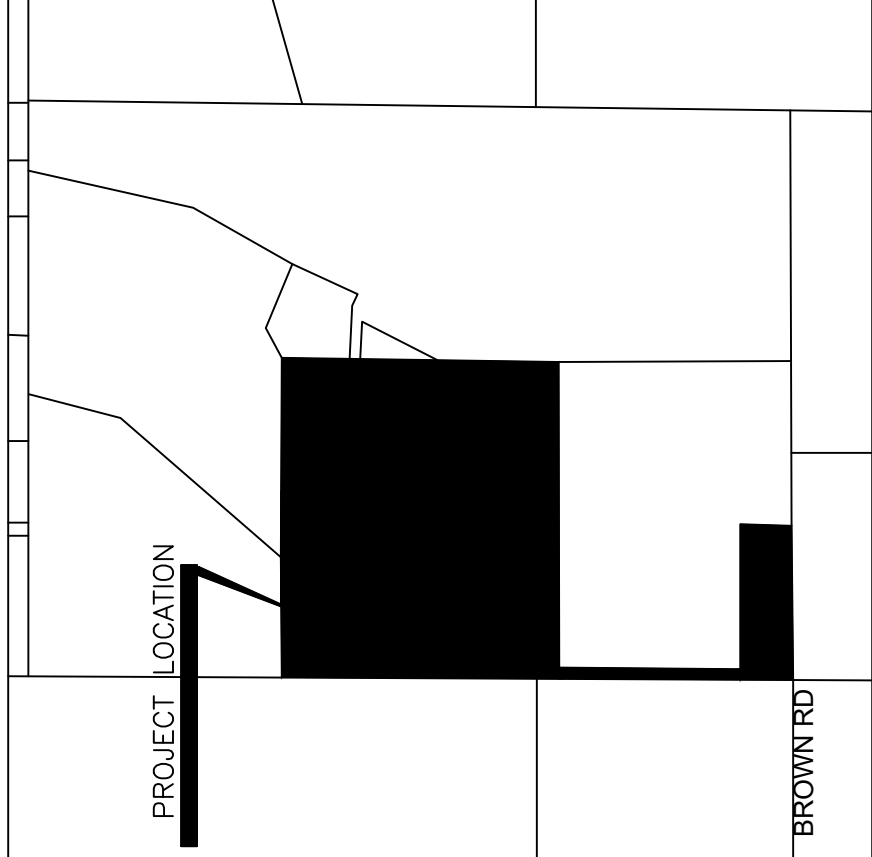
17. THE ADDRESSES EXHIBITED ON THIS PLAT ARE FOR INFORMATIONAL PURPOSES ONLY. THEY ARE NOT THE LEGAL DESCRIPTION AND ARE SUBJECT TO CHANGE.

18. INDIVIDUAL LOTS SHALL CONTRIBUTE TO THE BROWN ROAD IMPROVEMENT ESCROW AGREEMENT. FOR FUTURE IMPROVEMENTS TO BROWN ROAD, AS RECORDED WITH EL PASO COUNTY CLERK AND RECORDER AT RECEPTION NO. _____.

19. WATER RIGHTS MAY NOT BE CONVEYED, SOLD OR TRANSFERRED PER COURT DECREE 2021CW3128 DATED FEBRUARY 8, 2022. USE OF WATER RIGHTS CAN NOT BE CHANGED FROM WHAT IS OUTLINED IN THE PRECEDING COURT DECREE, AS STATED IN COURT DECREE 2021CW3126, WELL NO. 1 IS FOR LOT 2 AND WELL NO. 2 IS FOR LOT 1.

20. THE FOUNDATION SYSTEMS FOR THE PROPOSED SINGLE-FAMILY RESIDENTIAL STRUCTURES AND ANY RETENTION DETENTION FACILITIES SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE FOUNDATION SYSTEMS DEVELOPED IN A SITE-SPECIFIC SUBSURFACE SOIL INVESTIGATION.

21. INDIVIDUAL LOT PURCHASERS ARE RESPONSIBLE FOR CONSTRUCTING DRIVEWAYS INCLUDING NECESSARY DRAINAGE IN ACCORDANCE WITH LAND DEVELOPMENT CODE SECTION 6.3.3.2 AND 6.3.3.C. DUE TO ITS LENGTH, DRIVEWAY FOR LOT 1 WILL NEED TO BE APPROVED BY THE FIRE DISTRICT AUTHORITY.



VICINITY MAP
(NOT TO SCALE)

ENVIRONMENTAL:
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 DEPARTMENT OF WILDLIFE, COLORADO DEPARTMENT OF TRANSPORTATION, U.S. ARMY CORPS OF ENGINEERS, THE U.S. FISH & WILDLIFE SERVICE REGARDING THE ENDANGERED SPECIES ACT, PARTICULARLY AS IT RELATES TO THE PREBLE'S MEADOW JUMPING MOUSE AS A LISTED THREATENED SPECIES.

FLOODPLAIN NOTE:
FLOOD INSURANCE RATE MAP, MAP NUMBER 084041C0305G EFFECTIVE DATE DECEMBER 7, 2018, INDICATES THAT THE AREA WITHIN THE SURVEYED PROPERTY TO BE LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN).

EASEMENTS:
ALL EASEMENTS HEREBY INDICATED, ALL SIDE, FRONT, AND REAR LOT LINES ARE HEREBY PLATTED ON EITHER SIDE WITH A 10-FOOT PUBLIC UTILITY AND DRAINAGE EASEMENT. ALL EXTERIOR SUBDIVISION BOUNDARIES ARE HEREBY PLATTED WITH A 20-FOOT PUBLIC UTILITY AND DRAINAGE EASEMENT. THE SOLE RESPONSIBILITY FOR THE MAINTENANCE OF THESE EASEMENTS IS HEREBY VESTED WITH THE INDIVIDUAL PROPERTY OWNERS.

UTILITY NOTES:
ANY UTILITY COMPANY THAT LOCATES FACILITIES IN ANY EASEMENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF SAID FACILITIES. CLEAR AWAY ANY TREES, LIMBS, VINES, AND BRUSH ON THE UTILITY EASEMENT NOW OR AT ANY FUTURE TIME AND PRUNE AND CLEAR AWAY ANY TREE LIMBS, VINES, AND BRUSH ON LANDS ADJACENT TO THE UTILITY EASEMENT WHENEVER, IN THE UTILITY COMPANIES JUDGMENT, SUCH MAY INTERFERE WITH OR ENDANGER THE CONSTRUCTION, OPERATION, OR MAINTENANCE OF ITS FACILITIES, TOGETHER WITH THE RIGHT OF INGRESS TO AND EGRESS FROM THE UTILITY EASEMENT AND CONTIGUOUS LAND SUBJECT TO THIS EASEMENT. THE PURPOSE OF SURVEYING, ERECTING, MAINTAINING, AND REPLACING, AND WITH OR ENDANGERING THE CONSTRUCTION, OPERATION OR MAINTENANCE OF SAID FACILITIES.

NOTICE:
ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

ACCESS:
NO DRIVEWAY SHALL BE ESTABLISHED UNLESS AN ACCESS PERMIT HAS BEEN GRANTED BY EL PASO COUNTY.

GEOLOGIC HAZARD NOTE:
THE FOLLOWING LOTS HAVE BEEN FOUND TO BE IMPACTED BY GEOLOGIC HAZARDS. MITIGATION MEASURES AND A MAP OF THE GEOLOGIC HAZARDS ARE AVAILABLE AT THE EL PASO COUNTY CLERK AND RECORDER'S OFFICE. THE FOLLOWING LOTS ARE IMPACTED BY RMC ROCKY MOUNTAIN GROUP DATED SEPTEMBER 9, 2022. NO FILE MS-22-005 AVAILABLE AT THE EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT.

- OTHER HAZARD: ARTIFICIAL FILL AREA

ZONING DISTRICT	AREA ACRES (1/2)	WIDTH (AT SETBACK LINE)	FRONT	REAR	SIDE	MAXIMUM LOT COVERAGE	MAXIMUM LOT HEIGHT
RR-5	5	200 Ft	25 Ft	25 Ft	25 Ft	25%	30 Ft

OWNER:
COLT & KATHRYN HAUSEN
LIVING TRUST
10000000448
COLORADO SPRINGS, CO 80908
TOTAL= 27.00 ACRES
NET ACREAGE: 25.33 ACRES

SURVEYOR:
TIM SLOAN, VICE-PRESIDENT
SMH CONSULTANTS P.A.
411 SOUTH TEJON STREET, SUITE 1
COLORADO SPRINGS, CO 80903
719-446-2145

SERVICE PROVIDERS:
TRILAKES MONUMENT FIRE DEPARTMENT
MOUNTAIN VIEW ELECTRIC ASSOC.
CENTURYLINK
MOUNTAIN VIEW WASTE DISPOSAL SYSTEMS
DOMESTIC WELLS
PROPANE SERVICE

DATE SUBMITTED: 01/20/2023
REVISIONS:
1
2
3
4

FEES:
Print Fee: _____
School Fee: _____
Brown Road Cost Share: \$14,866.31

SMH CONSULTANTS

Civil Engineering • Land Surveying • Landscape Architecture
www.smhconsultants.com

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Drawn By: JTH Project: 2010CS4031 DO TDS87 PCD File # MS-22-005

JANUARY 2023

Final Plat

OWL RIDGE SUBDIVISION

PART OF THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN
COUNTY OF EL PASO, STATE OF COLORADO

BOARD OF COUNTY COMMISSIONERS CERTIFICATE:
This Plat OWL RIDGE SUBDIVISION was approved for filing by the El Paso County, Colorado Board of County Commissioners on the _____ day of _____, 2023, subject to any notes specified hereon and any conditions included in the resolution of approval. The dedications of land to the public streets and easements are accepted, but public improvements thereon will not become the maintenance responsibility of El Paso County until preliminary acceptance of the public improvements in accordance with the requirements of the Land Development Code and Engineering Criteria Manual, and the Subdivision Improvements Agreement.

Chair, Board of County Commissioners	_____	Date	_____
Director, Planning and Community Development Department	_____	Date	_____
El Paso County Assessor	_____	Date	_____

RECORDINGS:
STATE OF COLORADO) SS
COUNTY OF EL PASO) SS
I hereby certify that this instrument was filed for record in my office at _____ O'clock _____ M. this _____ day of _____, 2023 A.D., and is duly recorded under Reception Number _____ of the records of El Paso County, State of Colorado.

Chuck Broerman, Recorder

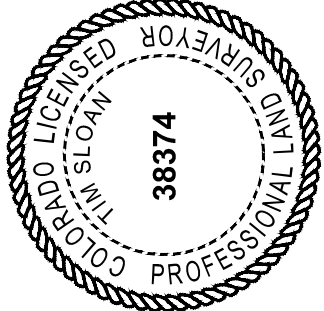
By: _____ Deputy _____ Date _____

SURVEYOR'S CERTIFICATION:

I, Tim Sloan, a duly registered Professional Land Surveyor in the State of Colorado, do hereby certify that this plat truly and correctly represents the results of a survey made on November 19, 2020, by me or under my direct supervision and that all monuments exist as shown hereon; that mathematical closure errors are less than 1:10,000; and that said plat has been prepared in full compliance with all applicable laws of the State of Colorado dealing with monuments, subdivision, surveying of land and all applicable provisions of the El Paso County Land Development Code.

I attest the above on this _____ day of _____, 20_____.

Tim Sloan, Professional Surveyor
Colorado Registered PL S #38374



KNOW ALL MEN BY THESE PRESENTS:
That the undersigned, Colt & Kathryn Haugen Living Trust, being the owners of the following described tract of land:

TO WIT:

PROPERTY DESCRIPTION:

A tract of land in the West Half of Section 7, Township 11 South, Range 65 West of the Sixth Principal Meridian, El Paso County, Colorado described as follows:

Beginning at Southwest Corner of the Northwest Quarter of said Section 7; thence N 00°27'25" W 1327.15 feet along the West Line of the Northwest Quarter of said Section 7; thence S 00°32'12" W 1438.60 feet to the intersection of the Northwest Quarter of said Section 7; thence S 89°17'45" W 555.17 feet; thence S 00°27'45" E 944.10 feet; thence S 89°16'27" W 807.45 feet; thence S 00°27'25" E 270.00 feet; thence S 89°16'28" W 867.42 feet; thence N 00°27'45" W 1326.92 feet to the point of beginning, containing 27.0 acres.

Subject to easements and restrictions of record.

DEDICATION:

The undersigned, being all the Owners, Mortgagees, Beneficiaries of Deeds of Trust and holders of other interests in the land described herein, have laid out, subdivided, and platted said lands into lots and easements as shown hereon under the name and subdivision of "Owl Ridge Subdivision". All public improvements so platted are hereby dedicated to public use and said Owner does hereby covenant and agree that the public improvements will be constructed to El Paso County standards and that proper drainage and erosion control for same will be provided at said Owner's expense, all to the satisfaction of the Board of County Commissioners of El Paso County, Colorado. Upon acceptance by resolution, all public improvements so dedicated will become matters of maintenance by El Paso County, Colorado. The utility easements shown hereon are hereby dedicated for public utilities and communication systems and other purposes as shown hereon. The entities responsible for providing the services for which the easements are established are hereby granted the perpetual right of ingress and egress from and to adjacent properties for installation, maintenance, and replacement of utility lines and related facilities.

IN WITNESS WHEREOF:

The aforementioned Colt & Kathryn Haugen Living Trust, has executed this instrument this _____ day of _____, 2023 A.D.

Colt H. Haugen, Trustee _____ Kathryn E. Haugen, Trustee _____

NOTARIAL:

STATE OF COLORADO) SS
COUNTY OF EL PASO) SS

The foregoing instrument was acknowledged before me this _____ day of _____, 2023 A.D. by Colt H. Haugen and Kathryn E. Haugen

Witness my hand and seal _____

Address _____

My Commission expires _____

DATE SUBMITTED: 01/20/2023
REVISIONS:



Civil Engineering • Land Surveying • Landscape Architecture
www.smhconsultants.com
Manhattan, KS • HQ P: (785) 776-0541 • Dodge City, KS P: (620) 255-1952
Kansas City, KS P: (913) 444-9615 • Colorado Springs, CO P: (719) 465-2145
Drawn By: ATJ Project 2010CS4031 DD TDS87 PCD File #MS-22-005

JANUARY 2023

Appendix B

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>Owl Ridge Subdivision</u>			
2. LAND USE ACTION <u>Minor Subdivision</u>			
3. NAME OF EXISTING PARCEL AS RECORDED <u>18885 Brown Rd</u>			
SUBDIVISION <u>See Above</u>	FILING <u>N/A</u>	BLOCK <u>N/A</u>	Lot <u>N/A</u>
4. TOTAL ACERAGE <u>61.55</u>	5. NUMBER OF LOTS PROPOSED <u>2</u>	PLAT MAPS ENCLOSED <input checked="" type="checkbox"/>	
6. PARCEL HISTORY - Please attach copies of deeds, plats, or other evidence or documentation. (In submittal package)			
A. Was parcel recorded with county prior to June 1, 1972? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO B. Has the parcel ever been part of a division of land action since June 1, 1972? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If yes, describe the previous action <u>Platted but not recorded.</u>			
7. LOCATION OF PARCEL - Include a map delineating the project area and tie to a section corner. (In submittal)			
<u>SW1/4</u> OF <u>NW 1/4</u> SECTION <u>7</u> TOWNSHIP <u>11</u> <input type="checkbox"/> N <input checked="" type="checkbox"/> S RANGE <u>65</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 checked="" type="checkbox"/> YES <input type="checkbox"/> NO If not, scaled hand-drawn sketch Y <input type="checkbox"/> NO			
9. ESTIMATED WATER REQUIREMENTS - Gallons per Day or Acre Foot per Year		10. WATER SUPPLY SOURCE	
HOUSEHOLD USE # ¹ <u>3</u> of units <u>0.300</u> AF/SFE/YR <u>0.900</u> AF COMMERCIAL USE <u>0</u> SF <u>-</u> GPD <u>-</u> AF IRRIGATION ² <u>0.0566</u> AF/1000SF <u>1,116</u> GPD <u>1.250</u> AF ANIMAL WATERING # ³ <u>16</u> Horses <u>0.0125</u> AF/Horse/Year <u>0.2</u> AF TOTAL <u>2,098</u> GPD <u>2.35</u> AF *		<input checked="" type="checkbox"/> EXISTING <input checked="" type="checkbox"/> DEVELOPED <input checked="" type="checkbox"/> NEW WELLS WELLS SPRING WELL PERMIT NUMBERS <u>280006</u> <u>(formerly Permit No. 108262)</u> <input type="checkbox"/> MUNICIPAL <input checked="" type="checkbox"/> ASSOCIATION <input type="checkbox"/> COMPANY <input type="checkbox"/> DISTRICT NAME: <u>N/A</u> LETTER OF COMMITMENT FOR <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO SERVICE	
1) Per Sections 8.3.1. and 8.3.2. of Water Division 1 Court Case 2021CW3126. Note that there will be one proposed residence on Lot #1 and two existing residences on existing Lot #2.. 2) Per 8.4.7.(B)(7)(d) of the EPC LDC, assuming a total of 22,084 ft ² for Lots 1 and 2. 3) For lots #1 and #2 sixteen (16) horses total per Sections 8.3.1. and 8.3.2. of Water Division 1 Court Case 2021CW3126.		Proposed Aquifers - (Check One) <input type="checkbox"/> Alluvial <input type="checkbox"/> Upper Arapahoe <input checked="" 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	
11. ENGINEER'S WATER SUPPLY REPORT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		If yes, please forward with this form. (This may be required before our review is completed)	
12. TYPE OF SEWAGE DISPOSAL SYSTEM			
<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

DISTRICT COURT, WATER DIVISION 1, COLORADO Weld County Courthouse P.O. Box 2038 Greeley, CO 80632	DATE FILED: February 8, 2022 9:31 AM CASE NUMBER: 2021CW3126 ▲ COURT USE ONLY ▲
APPLICATION FOR PLAN FOR AUGMENTATION OF COLT and KATHRYN HAUGEN, Applicants, IN EL PASO COUNTY	Case Number: 2021CW3126
FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF THE REFEREE, AND JUDGMENT AND DECREE	

A claim for a plan for augmentation was filed in this case on July 30, 2021. All matters contained in the application having been reviewed, such testimony having been taken and evidence presented as was necessary, and being otherwise fully advised in the premises, it is hereby the Findings of Fact, Conclusions of Law, Ruling of the Referee, and Judgment and Decree, as follows:

FINDINGS OF FACT

1. Name and address of Applicants:

Colt and Kathryn Haugen
18885 Brown Road
Colorado Springs, CO 80908
2. Statements of Opposition: No statements of opposition were filed and the time for filing of such statements has expired.
3. Subject Matter Jurisdiction: Timely and adequate notice of the application was published as required by statute, and the Court has jurisdiction over the subject matter of this proceeding and over the parties affected hereby, whether they have appeared or not.
4. Consultation: The Water Referee consulted with the Division Engineer, as required by C.R.S. § 37-92-302(4), on the application, on October 11, 2021, and the Division Engineer filed its summary of consultation on October 29, 2021.

GROUNDWATER RIGHTS

5. Subject Property: 61.55 acres generally located in the SW1/4, NW1/4, and the NW/1/4, SW1/4, Section 7, Township 11 South, Range 65 West of the 6th P.M., also known as 18885 Brown Rd, Colorado Springs, CO, El Paso County, State of Colorado, as shown

on **Exhibit A** (“Subject Property”). Applicants are the sole owners of the Subject Property.

6. Prior Decree Information: The groundwater underlying the Subject Property was decreed in Case No. 2005CW260, District Court, Water Division 1, on May 16, 2006 (“05CW260 Decree”). Applicants were deeded the following amounts of groundwater for use on the Subject Property in the Water Deed dated April 29, 2013, and recorded in the records of the El Paso County Clerk & Recorder under Reception No. 213056460:

Aquifer	Saturated Thickness	Annual Amount (acre-feet)	Total Amount (acre-Feet)
Dawson (NNT)	460 feet	45.0*	4,500
Denver (NT)	480 feet	49.8	4,980
Arapahoe (NT)	265 feet	27.5	2,750
Laramie-Fox Hills (NT)	205 feet	18.7	1,870

*The total amount of Dawson Aquifer groundwater conveyed to the Applicants is 49.0 acre-feet annually, 4,900 acre-feet total. The annual amount available in the NNT Dawson Aquifer is reduced by 4 acre-feet annually, 400 acre-feet total, as a portion of the groundwater reserved for exempt purposes in the 05CW260 Decree.

7. Decreed Uses in 05CW260: The groundwater will be used, reused, and successively used for domestic, industrial, commercial, irrigation, stock watering, Fish and wildlife, and augmentation purposes, both on and off the Subject Property.

PLAN FOR AUGMENTATION

8. Plan for Augmentation:

- 8.1 Groundwater to be Augmented: 2.35 acre-feet per year of not-nontributary Dawson Aquifer groundwater for 300 years through up to two (2) individual wells on two (2) lots.
- 8.2 Water to be Used for Augmentation: Return flows associated with use of the not-nontributary Dawson Aquifer groundwater and return flows or direct discharge of nontributary groundwater decreed in 05CW260.
- 8.3 The Dawson Aquifer groundwater will be used to serve two (2) individual wells through existing Well Permit No. 280006, which will be re-permitted under this augmentation plan within 60 days of the entry of the final decree, and through a new well, as follows:
- 8.3.1 Proposed Well No. 1: One (1) single-family residence (0.3 acre-feet annually), irrigation, including lawn, garden, and trees of up to 5,000 square-feet (0.25 acre-feet annually), and up to 4 large domestic animals (0.05 acre-feet annually), for a total of 0.6 acre-feet annually.

- 8.3.2 Proposed Well No. 2: Two (2) single-family residences (0.6 acre-feet annually), irrigation, including lawn, garden, and trees of up to 20,000 square-feet (1 acre-foot annually), and up to 12 large animals (0.15 acre-feet annually), for a total of 1.75 acre-feet annually.
- 8.3.3 Conservatively, water use in single-family dwellings will equal at least 0.2 acre-feet of water annually for in-house uses, and that use of non-evaporative septic systems typically results in consumption of approximately 10% of such use, resulting in return flows of at least 0.18 acre-feet annually from in-house use per home, and 0.54 acre-feet total from all three residences. Various components of this plan for augmentation are predicated on these estimations, and Applicants shall be required to use a non-evaporative septic system to treat and dispose of water used for in-house use.
- 8.4 Replacement During Pumping: During pumping of the Dawson Aquifer groundwater, Applicants will replace actual depletions to the affected stream system pursuant to C.R.S. § 37-90-137(9)(c.5). In the 300th year, the total depletion is 22.13% of the amount withdrawn or 0.52 acre-feet total. Return flow from in-house use of the Dawson Aquifer groundwater for a residence is at least 0.18 acre-feet per year as described above and such return flow from use in all three (3) residences, 0.54 acre-feet per year total, is sufficient to replace actual depletions for pumping of the entire 2.35 acre-feet per year for 300 years. Return flows accrue to the South Platte River system via West and East Cherry Creek. Because return flows from all uses are estimated rather than measured, Applicants agree that such return flows shall be used only to replace depletions under this plan for augmentation and will not be sold, leased, traded, or assigned in whole or in part for any other purpose.
- 8.5 Post-pumping Depletion Augmentation: Assuming maximum pumping of 2.35 acre-feet per year for 300 years from the Dawson Aquifer, the maximum total depletion to the affected stream systems is approximately 22.13% of the annual amount withdrawn or 0.52 acre-feet in the 300th year. Applicants will reserve 2.35 acre-feet per year, 705 acre-feet total, of the nontributary Laramie-Fox Hills Aquifer groundwater owned by Applicants for use in this plan, but reserves the right to substitute the use of other nontributary groundwater, including return flows, either underlying the Subject Property, or from another location which is legally available for such purpose, for replacement of post-pumping depletions at such time that post-pumping depletions may begin. The Court retains continuing jurisdiction in this matter to determine if the supply is adequate.
- 8.6 Applicants will begin making post pumping replacements when (1) the absolute total amount of water (705 acre-feet of Upper Dawson aquifer groundwater) allowed to be withdrawn has been withdrawn from the well(s), (2) the Applicants or successors in interest have acknowledged in writing that all withdrawals for

beneficial use of the Dawson Aquifer groundwater has permanently ceased, or (3) for a period of 10 consecutive years that no Dawson Aquifer groundwater has been withdrawn. Until such time as the post pumping depletions begin the Applicants must continue to replace during pumping depletions to the stream using return flows, by pumping water directly to the stream to replace such depletions or using another replacement source approved by the Division Engineer. At the time that post pumping depletions begin as described in this paragraph, Applicants or successors in interest will be required to construct a well and pump groundwater to replace post-pumping depletions, subject to the terms and conditions of Paragraph 8.5. This condition constitutes a covenant running with the land.

- 8.7 Applicants will replace post-pumping depletions for the shortest of the following periods: (1) The period provided by C.R.S. § 37-90-137(9)(c.5), or (2) the expressed period specified by the Colorado Legislature, should it specify one and providing the Applicants obtain Water Court approval for such modification, or (3) the period determined by the State Engineer, should they choose to set such a period and have jurisdiction to do so, or (4) the period established through rulings of the Colorado Supreme Court on relevant cases, or (5) until Applicants petition the Water Court and the State Engineer's Office and prove that they have complied with any statutory requirement.
9. Failure of Applicants and/or successors in interest to comply with the terms of the decree may result in an order of the Division Engineer's office to curtail or eliminate pumping of the well. This decree shall be recorded in the real property records of El Paso County so that a title examination of the property, or any part thereof, shall reveal to all future purchasers the existence of this decree.
10. Administration of Plan for Augmentation:
 - 10.1 Applicants shall report to the Division Engineer for Water Division 1 upon request, a summary of the amount of water pumped by each Denver Basin well, the annual depletion, the amount of replacement water provided by each replacement source, the net impact on the stream and any other information required by the Division Engineer to properly administer the decree on an accounting form acceptable to the Division Engineer.
 - 10.2 All withdrawals which are the subject of this decree will be metered.
 - 10.3 Pursuant to C.R.S. § 37-92-305(8), the State Engineer shall curtail all out-of-priority diversions, the depletions from which are not so replaced as to prevent injury to vested water rights.
 - 10.4 The Applicants and/or successors in interest at the direction of the Division Engineer shall make post-pumping replacements to the South Platte River stream

system via West and East Cherry Creek, or its tributaries, pursuant to the amounts referenced on the depletion curve attached on **Exhibit B**.

11. Retained Jurisdiction for Plan for Augmentation:

- 11.1 Pursuant to C.R.S. § 37-92-304(6), the Court retains continuing jurisdiction over the plan for augmentation decreed herein for reconsideration of the question whether the provisions of this decree are necessary and/or sufficient to prevent injury to vested water rights of others. The Court also has jurisdiction for the purposes of determining compliance with the terms of the augmentation plan.
- 11.2 Any party seeking to invoke the retained jurisdiction of the Court shall file a verified petition with the Court. The petition to invoke retained jurisdiction or to modify this decree shall set forth with particularity the factual basis and the requested decretal language to effect the petition. The party lodging the petition shall have the burden of going forward to establish prima facie facts alleged in the petition. If the Court finds those facts to be established, Applicants shall thereupon have the burden of proof to show: (1) that any modification sought by Applicants will avoid injury to other appropriators, or (2) that any modification sought by Objector is not required to avoid injury to other appropriators, or (3) that any term or condition proposed by Applicants in response to the objector's petition does avoid injury to other appropriators.
- 11.3 The Court retains jurisdiction for the purpose of determining whether the continued reservation of the nontributary water for use on the Subject Property is required. After notice to the State Engineer's Office, if Applicants can demonstrate to the Court that post-pumping depletions need no longer be replaced, the Court may remove the requirement that the nontributary water must be reserved.

CONCLUSIONS OF LAW

- 12. Full and adequate notice of the application was given, and the Court has jurisdiction over the subject matter and over the parties whether they have appeared or not.
- 13. Applicants have complied with all requirements and met all standards and burdens of proof, including but not limited to C.R.S. §§ 37-90-137(9)(c.5), 37-92-103(9), 37-92-302, 37-92-304(6), 37-92-305(3), (4), (6), (8), to adjudicate the plan for augmentation and are entitled to a decree confirming and approving the plan for augmentation as described in the Findings of Fact.
- 14. The Water Court has jurisdiction over this proceeding pursuant to C.R.S. § 37-90-137(6). This Court concludes as a matter of law that the application herein is one contemplated by law pursuant to C.R.S. § 37-90-137(4). The application for a decree confirming Applicants' right to withdraw and use groundwater decreed herein from the Dawson Aquifer should be granted pursuant to C.R.S. §§ 37-90-137(4) and (9)(c.5), subject to the

provisions of this decree. The withdrawal of up to 2.35 acre-feet per year and 705 acre-feet total of the Dawson Aquifer groundwater, and in accordance with the terms of this decree, will not injuriously affect the owner of or persons entitled to use water under a vested water right or a decreed conditional water right. The remaining amount of Dawson Aquifer groundwater decreed in Case No. 05CW260 will not be withdrawn and used until it is included in a separate plan for augmentation.

JUDGMENT AND DECREE

15. The Findings of Fact and Conclusions of Law set forth above are hereby incorporated into the terms of this Ruling and Decree as if the same were fully set forth herein.
16. Applicants and/or successors may withdraw the subject groundwater herein through wells to be permitted by the State Engineer's Office located anywhere on the Subject Property in the average annual amounts and at the estimated average rates of flow specified herein, subject to the limitations herein and the retained jurisdiction by this Court.
17. Applicants may withdraw an average annual amount of 2.35 acre-feet per year and not more than 705 acre-feet total of the Dawson Aquifer groundwater under the plan for augmentation decreed herein pursuant to § 37-90-137(9)(c.5), C.R.S.
18. The groundwater rights described in the Findings of Fact are hereby approved, confirmed and adjudicated, including and subject to the terms and conditions specified herein. No owners of or persons entitled to use water under a vested water right or decreed conditional water right will be injured or injuriously affected by the pumping of Applicants' groundwater resources as decreed herein.
19. Pursuant to C.R.S. § 37-92-305(5), the replacement water herein shall be of a quality so as to meet the requirements for which the water of the senior appropriator has normally used.
20. The plan for augmentation as described in the Findings of Fact is hereby approved, confirmed, and adjudicated, including and subject to the terms and conditions specified herein.
21. No owners of or person entitled to use water under a vested water right or decreed conditional water right will be injured or injuriously affected by the operation of the plan for augmentation as decreed herein.
22. Continuing Jurisdiction: Pursuant to C.R.S. § 37-92-304(6), the Court retains continuing jurisdiction over the plan for augmentation decreed herein for reconsideration by the water judge on the question of injury to the vested rights of others for such period after the entry of such decision as is necessary or desirable to preclude or remedy any such injury.

23. The groundwater rights decreed herein are vested property rights appurtenant to the Subject Property and shall remain appurtenant unless expressly severed by conveyance to someone other than the property owner. If any deed for the Subject Property is silent to the conveyance of the water rights decreed herein, it is assumed that the water rights have been conveyed as an appurtenance to the Subject Property, unless all or part of the water rights have been previously severed.

Date: December 29, 2021



John S. Cowan
Water Referee
Water Division One

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

Date: February 4, 2022



Todd L. Taylor
Water Judge
Water Division One



COLORADO'S
Decision Support Systems
CWCB / DWR

Exhibit A - Haugen - 21CW3126



Colt and Kathryn Haugen
21CW3126

EXHIBIT A-1

PARCEL A:

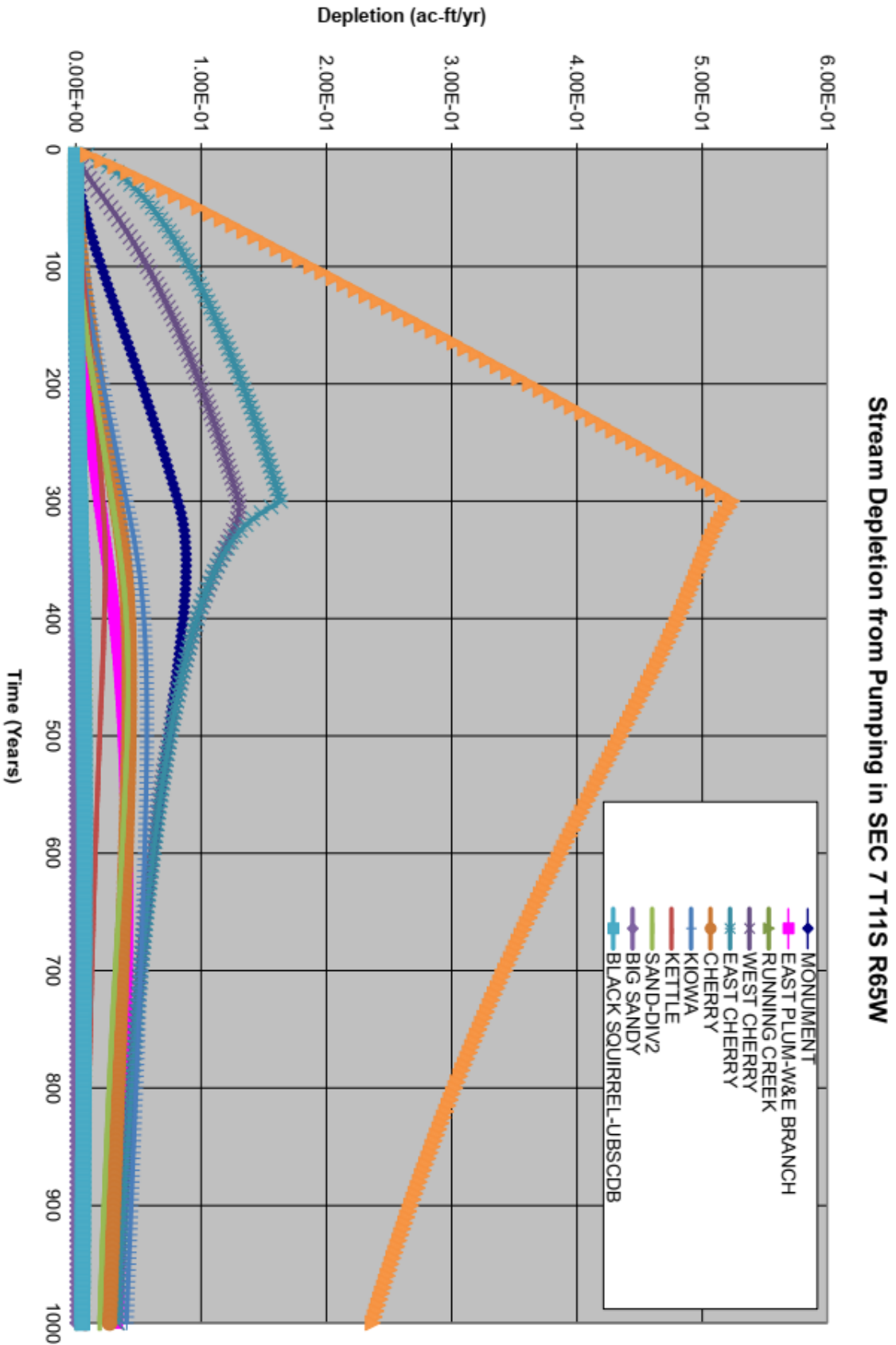
A TRACT OF LAND LOCATED IN THE SOUTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER AND THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER OF SECTION 7, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTH ONE-SIXTEENTH CORNER OF SAID SECTION AND SECTION 12, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH P.M.; THENCE N 00 DEGREES 27 MINUTES 26 SECONDS W ALONG THE COMMON ALIQUOT LINE OF SAID SECTIONS, A DISTANCE OF 270.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING N 00 DEGREES 27 MINUTES 26 SECONDS W ALONG SAID COMMON LINE, A DISTANCE OF 2384.23 FEET TO THE NORTH ONE-SIXTEENTH CORNER OF SAID SECTIONS; THENCE N 89 DEGREES 23 MINUTES 54 SECONDS E ALONG THE NORTH ONE-SIXTEENTH LINE OF SAID SECTION 7, A DISTANCE OF 1681.21 FEET TO THE NORTHWEST ONE-SIXTEENTH CORNER OF SECTION 7; THENCE S 00 DEGREES 02 MINUTES 01 SECONDS W ALONG THE WEST ONE-SIXTEENTH LINE OF SAID SECTION 7, A DISTANCE OF 1325.09 FEET TO THE WEST ONE-SIXTEENTH CORNER OF SAID SECTION 7; THENCE S 00 DEGREES 02 MINUTES 13 SECONDS W ALONG THE WEST ONE-SIXTEENTH LINE OF SAID SECTION 7, A DISTANCE OF 111.51 FEET; THENCE S 89 DEGREES 16 MINUTES 27 SECONDS W ALONG A LINE PARALLEL TO THE SOUTH LINE OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER OF SAID SECTION 7, A DISTANCE OF 1608.91 FEET; THENCE S 00 DEGREES 27 MINUTES 26 SECONDS E ALONG A LINE PARALLEL TO THE WEST LINE OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER OF SAID SECTION 7, A DISTANCE OF 944.10 FEET; THENCE S 89 DEGREES 16 MINUTES 27 SECONDS W ALONG A LINE PARALLEL TO THE SOUTH LINE OF THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER OF SAID SECTION 7, A DISTANCE OF 60.00 FEET TO THE POINT OF BEGINNING.

PARCEL B:

A TRACT OF LAND LOCATED IN THE NORTHWEST ONE-QUARTER OF THE SOUTHWEST ONE-QUARTER OF SECTION 7, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTH ONE-SIXTEENTH CORNER OF SAID SECTION 7 AND SECTION 12, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH P.M.; THENCE N 00 DEGREES 27 MINUTES 26 SECONDS W ALONG THE COMMON ALIQUOT LINE OF SAID SECTIONS, A DISTANCE OF 270.00 FEET; THENCE N 89 DEGREES 16 MINUTES 27 SECONDS E ALONG A LINE PARALLEL TO THE SOUTH ONE-SIXTEENTH LINE OF SECTION 7, A DISTANCE OF 807.42 FEET; THENCE S 00 DEGREES 27 MINUTES 26 SECONDS E ALONG A LINE PARALLEL TO THE WEST LINE OF SECTION 7, A DISTANCE OF 270.00 FEET; THENCE S 89 DEGREES 16 MINUTES 27 SECONDS W ALONG THE SOUTH ONE-SIXTEENTH LINE OF SECTION 7, A DISTANCE OF 807.42 FEET TO THE POINT OF BEGINNING.



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WATER RESOURCES
STATE ENGINEER
COLO

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DISTRICT COURT, WATER DIVISION 1,
COLORADO

Court Address:
Weld County Courthouse
P.O. Box 2038
Greeley, Colorado 80632

SANDRA AND LOWELL HAUGEN, Applicants,
IN EL PASO COUNTY.

Attorneys:
Petrock & Fendel, P.C.
Scott M. Huyler, Atty. Reg. #27342
700 Seventeenth Street, Suite 1800
Denver, Colorado 80202
Telephone: (303) 534-0702

Δ COURT USE ONLY Δ

Case Number: 2005CW 260

**APPLICATION FOR UNDERGROUND WATER RIGHTS FROM NONTRIBUTARY
AND NOT NONTRIBUTARY SOURCES,
IN THE NONTRIBUTARY DENVER, ARAPAHOE AND LARAMIE-FOX HILLS
AND THE NOT NONTRIBUTARY DAWSON AQUIFERS**

1. Name, Address, Telephone Number of Applicants:

Sandra and Lowell Haugen
18885 Brown Road
Colorado Springs, CO 80908-1101
(719) 495-4279

2. Well Permits: Well permits will be applied for prior to construction of the wells.

3. Legal Description of Wells and Subject Property: The property which is the subject of this application is approximately 98 acres of land located in part of the W1/2 of Section 7, T11S, R65W of the 6th P.M., as described and shown on Attachment A hereto. The wells which will withdraw the subject groundwater will be located at any location on the Subject Property subject to Section 37-90-137(4), C.R.S.

4. **Source of Water Rights:** The source of the groundwater to be withdrawn from the Denver, Arapahoe and Laramie-Fox Hills aquifers underlying the Subject Property is nontributary groundwater as described in 37-90-103(10.5), C.R.S. The groundwater to be withdrawn from the Dawson aquifer is not nontributary as described in 37-90-137(9)(c), C.R.S.

5. **Estimated Amounts:** The estimated average annual amounts of withdrawal available from the subject aquifers as indicated below, are based upon the Denver Basin Rules, 2 C.C.R. 402-6. For purposes of this application, Applicants estimate that the following annual amounts are representative of the Dawson, Denver, Arapahoe and Laramie-Fox Hills aquifers underlying the Subject Property:

<u>Aquifer</u>	<u>Saturated Thickness</u>	<u>Estimated Annual Amount</u>
Dawson	463 feet	80 acre-feet(NNT)
Denver	479 feet	80 acre-feet(NT)
Arapahoe	263 feet	44 acre-feet(NT)
Laramie-Fox Hills	201 feet	30 acre-feet(NT)

Applicants will reserve part of the Dawson aquifer water which may be available for use through exempt wells, including an existing well as permitted in Well Permit No. 108262.

6. **Well Fields:** Applicants request that this Court determine that Applicants have the right to withdraw all of the legally available groundwater lying below the Subject Property, through the wells requested herein and any additional wells which may be completed in the future as Applicants' well fields. As additional wells are constructed, applications will be filed in accordance with 37-90-137(10), C.R.S.

7. **Proposed Use:** The water will be used and reused for domestic, industrial, commercial, irrigation, livestock watering, recreational, and fish and wildlife, and augmentation purposes, on or off the Subject Property.

8. **Jurisdiction:** The Water Court has jurisdiction over the subject matter of this application pursuant to 37-92-302(2), and 37-90-137(6), C.R.S.

9. **Remarks:**

A. Applicants claim the right to withdraw more than the average annual amounts estimated in paragraph 5 above pursuant to Rule 8A of the Statewide Rules, 2 C.C.R. 402-7.

B. Although Applicants have estimated the amounts of water available for withdrawal from the subject aquifers, Applicants request the right to revise the estimates upward or downward, based on better or revised data, without the necessity of amending this application or republishing the same.

WHEREFORE, Applicant prays that this Court enter a Decree:

10. Granting the application herein and awarding the water rights claimed herein as final water rights, except as to those issues for which jurisdiction of the Court will be specifically retained;

11. Specifically determining that:

A. Applicants have complied with 37-90-137(4), C.R.S., and water is legally available for withdrawal by the wells proposed herein.

B. The groundwater in the Denver, Arapahoe and Laramie-Fox Hills aquifers is nontributary groundwater. The groundwater in the Dawson aquifer is not nontributary and that water will not be withdrawn until a plan for augmentation is approved by the Court;

C. Vested or conditionally decreed water rights of others will not be materially injured by the withdrawals of groundwater proposed herein and no findings of diligence are required to maintain these water rights.

FURTHER, Applicants pray that this Court grant such other relief as seems proper in the premises.

RESPECTFULLY submitted this 31st day of October, 2005.

Scott M. Huyler

STATE OF COLORADO)
) ss.
COUNTY OF DENVER)

Scott M. Huyler, being first duly sworn upon oath, deposes and says that he has read the foregoing application, knows the contents thereof, and that the same are true to the best of his knowledge.

Scott M. Huyler

Subscribed under oath before me on October 31, 2005.

My commission expires: February 18, 2008.

Notary Public

*ORIGINAL SIGNATURE OF SCOTT M. HUYLER ON FILE AT THE OFFICES OF
PETROCK & FENDEL, P.C.*

ATTACHMENT A
HAUGEN

EFILED Document
CO Weld County District Court 19th JD
Filing Date: Oct 31 2005 1:14PM MST
6th PM 7:00 AM
Review Clerk: Connie S Koppes

A tract located in the W1/2 of Section 7, T11S, R65W of the 6th PM 7:00 AM described as follows:

Beginning at the NW corner of said Section 7; thence S00°07'53"E, 1327 feet to the point of beginning:

Thence N89°43'29"E, 1681 feet;

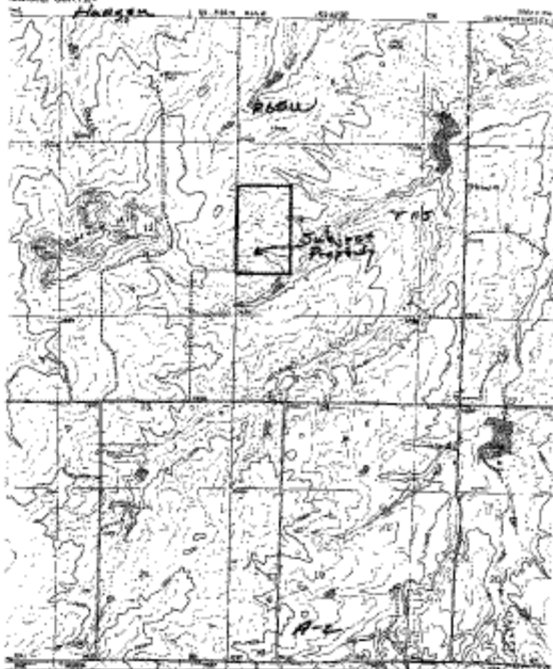
Thence S00°21'35"W, 1325 feet;

Thence S00°21'47"W, 1326 feet;

Thence S89°36'36"W, 1659 feet;

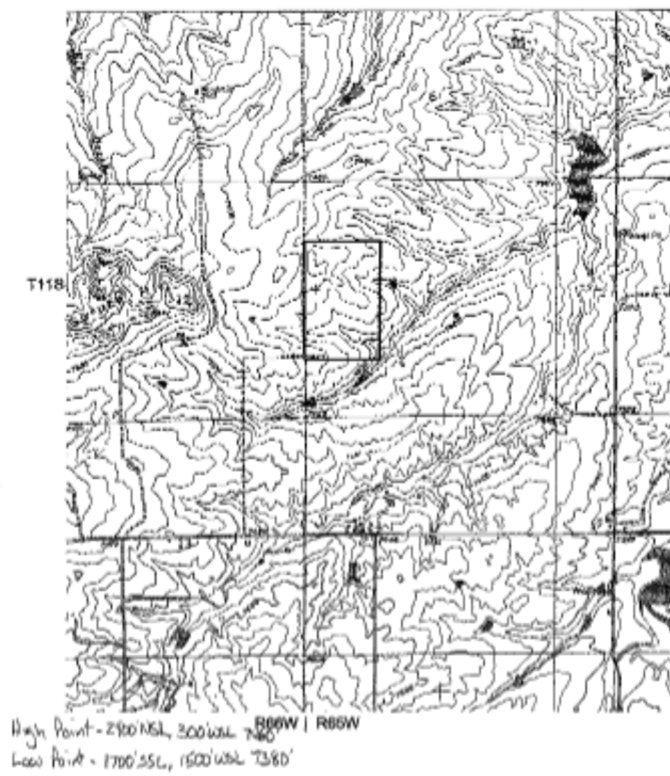
Thence N00°07'53"W, 2654 feet to the point of beginning.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT



Best Copy Available

2005CW260



Best Copy Available

Petrock & Fendel, P.C.

Attorneys

James J. Petrock

Frederick A. Fendel, III

Scott M. Huyler

Matthew S. Doznanovic

EFILED Document

CO Weld County District Court 19th JD

Filing Date: Apr 28 2006 4:31PM MDT

Filing ID: 11163982

Review Clerk: Connie Schoppes

April 28, 2006

700 17th Street, Suite 1800

Denver, Colorado 80202

303-534-0702

303-534-0310 fax

www.petrockfendel.com

Raymond S. Liesman, Water Referee
Water Division 1
P.O. Box 2038
Greeley, CO 80632

Re: Response to Summary of Consultation/Case No. 05CW260/Application of Haugen

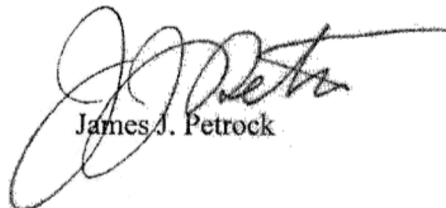
Dear Referee Liesman:

The application requests quantification of the Denver Basin groundwater underlying Applicants' 98 acres in El Paso County.

The State Engineer has issued Determinations of Fact and groundwater is available in the aquifers underlying the land. No objections were filed to the application. A ruling has been entered by the Court which incorporates issues referenced in the Division Engineer's Summary of Consultation dated February 2, 2006.

If you have any questions, please call.

Sincerely,



James J. Petrock

SMH:gjc

cc: Dave Nettles

STATE OF COLORADO

WATER DIVISION ONE
OFFICE OF THE STATE ENGINEER
Division of Water Resources
Department of Natural Resources

810 9th Street, Suite 200
Greeley, Colorado 80631
Phone (970) 352-8712
Fax (970) 392-1816

<http://water.state.co.us/>

RECEIVED

FEB 02 2006

WATER RESOURCES



Bill Owens
Governor

Russell George
Executive Director

Hal D. Simpson, P.E.
State Engineer

James R. Hall, P.E.
Division One Engineer

February 2, 2006

SUMMARY OF CONSULTATION HELD FEBRUARY 1, 2006

OCTOBER 2005 RESUME

CASE NO. 05CW260, Sandra and Lowell Haugen (Applicant), El Paso County

Applicant is seeking underground water rights from the not nontributary Dawson aquifer and the nontributary Denver, Arapahoe and Laramie-Fox Hills aquifers. The subject property consists of approximately 98 acres in Section 7, Township 11 South, Range 65 West, 6th Principal Meridian. The water proposed to be withdrawn will be placed to many beneficial uses.

Please provide a written response to the following concerns to Water Court, P.O. Box 2038, Greeley, Colorado 80632. A RESPONSE TO THIS SUMMARY MUST BE RECEIVED BY THE COURT BY APRIL 30, 2006 OR YOUR APPLICATION MAY BE DISMISSED. If there are questions regarding this letter, contact Lori Coulter at lori.coulter@judicial.state.co.us or telephone number (970) 351-7300, Ext. 5405.

1. Applicant should be limited to that amount of water found to be available for appropriation in the Determination of Facts Report of the State Engineer issued for this case on November 30, 2005.
2. A determination utilizing aquifer parameters different than those of the Denver Basin Rules should be subject to the Court's retained jurisdiction pursuant to C.R.S. 37-92-305 (11) (1985). In addition, any such determination should be governed by the Denver Basin Rules and the Statewide Nontributary Ground Water Rules as provided in C.R.S. 37-90-137(9)(a).
3. Applicant can not use any water from the not-nontributary aquifer until a court approved augmentation plan is in place that will provide for replacement of depletions as required by C.R.S. 37-90-137(9)(c). Replacement of depletions from pumping the aquifer must be made to the affected stream systems to prevent any injurious effect to vested water rights. If not replaced, it appears that the post pumping stream depletions will injure vested water rights in the over appropriated South Platte River drainage. Post pumping depletions should be required for as long as injurious depletions occur. The post pumping augmentation source should be either a renewable surface supply of sufficient amount to cover the maximum anticipated depletions or reservation of a quantity of decreed nontributary water equal to the total amount of water that will be pumped. If previously decreed nontributary water is reserved for augmentation, identification of a specific amount of water from a specific aquifer should be required and the decree should include a provision for a covenant running with the land that would require construction of a well and pumping of the water to replace injurious post-pumping stream depletion.
4. For the nontributary ground water in these aquifers, Applicant must limit the consumption to no more than 98% of the water determined to be available in that aquifer, Denver Basin Rule 8, 2 C.C.R. 402-6.
5. Any decree entered in this case should contain provisions that allow banking and contain a reference that the State Engineer must issue well permits in accordance with C.R.S. 37-90-137(4) and/or (10) as well as any decree entered in this case.

6. Each well should be equipped with a properly installed and maintained totalizing flow meter, and Applicant may be required to submit diversion records to the Division Engineer or his representative on an annual basis or as otherwise requested by the Division Engineer.
7. Provide the Court with proof of sole ownership or notice to every person who has any interest in the overlying land of this application within ten (10) days of filing this application as required by C.R.S. 37-92-302(2) and 37-92-305(6).
8. Provide the Court with a map of the overlying lands addressed in this application.

SECTION 37-92-302(4), C.R.S. (1973), SIGNED INTO LAW MAY 17, 1988, PROVIDES THAT THE APPLICANT OR THE APPLICANT'S ATTORNEY SHALL MAIL OR DELIVER A COPY OF THIS CONSULTATION TO ALL PARTIES OF RECORD WHO FILED A STATEMENT OF OPPOSITION TO THIS APPLICATION, IF ANY. THE STATUTE ALSO REQUIRES THAT THE APPLICANT OR HIS ATTORNEY SHALL FILE A CERTIFICATE OF MAILING WITH THE WATER CLERK OF DIVISION 1 IF THIS SUMMARY OF CONSULTATION IS MAILED TO OPPOSING PARTIES.

James R Hall

James R. Hall, P.E.
Division One Engineer

JRH:SCC/scc

xc: Hal D. Simpson, P.E., State Engineer
Mark Trivisonno, Water Commissioner



Aquifer Divider

OFFICE OF THE STATE ENGINEER
DETERMINATION OF FACTS

IN THE MATTER OF AN APPLICATION FOR UNDERGROUND WATER RIGHTS IN WATER
DIVISION NO. 1, EL PASO COUNTY, COLORADO

APPLICANT: SANDRA AND LOWELL HAUGEN

AQUIFER: DAWSON

CASE NO.: 2005CW260

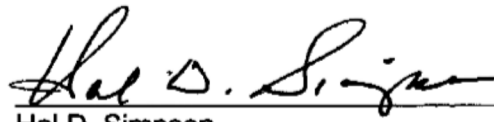
In compliance with C.R.S. 37-92-302(2), Sandra and Lowell Haugen, (hereinafter "applicant") submitted an application to the Water Court for a determination of the amount of water available pursuant to C.R.S. 37-90-137(4). Based on information provided to the Court by the applicant and records of the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

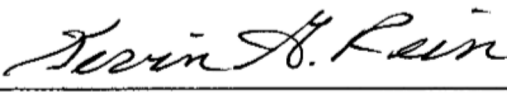
1. The application was received by the Water Court on October 31, 2005.
2. According to the application, the applicant owns, or has consent to withdraw ground water underlying 98 acres of land as further described in said application.
3. The quantity of water in the Dawson aquifer (hereinafter "aquifer"), exclusive of artificial recharge, underlying the 98 acres of land claimed in the application is 9,016 acre-feet. This determination was based on the following as specified in the Denver Basin Rules:
 - a. The average specific yield of the saturated aquifer materials underlying the land claimed in the application is 20 percent.
 - b. The average thickness of the saturated aquifer materials underlying the land claimed in the application is 460 feet.
4. Withdrawal of ground water from the aquifer underlying the land claimed in the application will within one hundred years, deplete the flow of a natural stream at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and therefore the ground water is not nontributary ground water as defined in C.R.S. 37-90-103(10.7). C.R.S. 37-90-137(9)(c) states that judicial approval of a plan for augmentation shall be required prior to use of ground water of the type sought in this application. In the case of the Dawson aquifer such augmentation plans shall provide for the replacement of actual stream depletions to the extent necessary to prevent any injurious effect, based on actual aquifer conditions in existence at the time of the decree.
5. In determining the amount of ground water available for withdrawal annually from this aquifer, the provisions of C.R.S. 37-90-137(4) must be applied, and pursuant to C.R.S. 37-90-137(4)(b)(i) annual withdrawals shall be allowed on the basis of an aquifer life of 100 years.
6. A review of the records in the State Engineer's Office has disclosed that there are existing wells or other water rights withdrawing ground water from the aquifer underlying the land claimed by the applicant. The well permit numbers, locations, rates of diversion, and other relevant data concerning such rights are set forth in the attached Exhibit A. To prevent material injury to such vested water rights, the quantity of water underlying the land claimed

in the application which is considered available for withdrawal has been reduced by 100 acre-feet to a total of 8,916 acre-feet. This reduction was based on an assessment of the amount of water necessary for the persons entitled to divert water under existing rights to divert the average annual amount of water from the aquifer for the minimum aquifer life of 100 years.

7. Underlying the land claimed in the application, the aquifer is, as specified in the Denver Basin Rules, located approximately 70 feet to 1,080 feet below land surface.
8. The allowed average annual amount of water available for withdrawal from the aquifer underlying the lands claimed in the application is 89.2 acre-feet (the quantity of water which is considered available divided by the 100 year aquifer life). It is recommended that the water court retain jurisdiction necessary to provide for adjustment (increase or decrease) of this amount.

Dated this 30th day of November, 2005.


Hal D. Simpson
State Engineer

By: 
Kevin G. Rein, P.E.
Chief of Water Supply

Prepared by: JMW

EXHIBIT A

APPLICANT: SANDRA AND LOWELL HAUGEN

CASE NO.: 2005CW260

AQUIFER: DAWSON

EXEMPT AND/OR NON-EXEMPT WELL

<u>WELL NUMBER</u>	<u>1/4</u>	<u>1/4</u>	<u>SEC</u>	<u>TWP</u>	<u>RNG</u>	<u>AF</u>	<u>USE</u>
108262	NW	SW	7	11 S	65 W	1	Domestic

WELL NUMBER = WELL PERMIT NUMBER OR WATER COURT CASE AND WELL NUMBER

AF = THE ANNUAL APPROPRIATION OF THE WELL IN ACRE-FEET

ST = THICKNESS OF THE SATURATED AQUIFER MATERIAL AT THE WELL LOCATION IN FEET

SY = SPECIFIC YIELD OF THE SATURATED AQUIFER MATERIAL AT THE WELL LOCATION AS
A PERCENT

RADIUS = IS THE RADIUS OF THE CYLINDER OF APPROPRIATION IN FEET

AREA = THE AREA OF THE APPLICANTS' LAND THAT IS OVERLAPPED BY THE CYLINDER OF
APPROPRIATION IN ACRES.

Determination Calculation for Case No. 2005CW260
Sandra and Lowell Haugen
Dawson Aquifer

Total Available Water

Total number of acres = 98 acres

Sand Thickness = 460 feet

Specific Yield = 20%

Total Available Water in the Dawson aquifer underlying the parcel = $98 * 460 * (20/100) = 9016$ acre-feet

Annual Withdrawal = $9016 / 100$ years = 90.16

Vacated Water

Total water claimed by existing exempt and/or non-exempt wells = 100 acre-feet

Total land claimed by pre-213 wells = 0 acres

Total Land not claimed by pre-213 wells = $98 - 0 = 98$ acres

Final Calculations

Total water available = $98 * 460 * (20/100) - 100 = 8916$ acre-feet

Total water available annually = 89.2 acre-feet

LOCATION: SW1/4 OF NW1/4 OF SEC. 7, T.11S., R.65W. (2400 NSL, 300 WSL)

Ground Elevation: 7460

Number of Acres: 1

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TOP		BOT.	TOP		
UPPER DAWSON	6184	7303	460.1	157	0.92	NNT	
LOWER DAWSON							
DENVER	5499	6338	485.0	1961	1122	0.82	NT
UPPER ARAPAHOE	4954	5462	263.2	2506	1598	0.45	NT
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	4302	4571	204.7	3158	2889	0.31	NT

note: E indicates location is at aquifer boundary and values may be more approximate.

LOCATION: NE1/4 OF SW1/4 OF SEC. 7, T.11S., R.65W. (1700 SSL, 1500 WSL)

Ground Elevation: 7380

Number of Acres: 1

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TOP		BOT.	TOP		
UPPER DAWSON	6187	7324	463.9	993	0.93	NNT	
LOWER DAWSON							
DENVER	5499	6341	483.3	1881	1039	0.82	NT
UPPER ARAPAHOE	4954	5482	262.3	2426	1918	0.45	NT
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	4308	4578	209.2	3072	2802	0.30	NT

note: E indicates location is at aquifer boundary and values may be more approximate.

ANNUAL APPROPRIATION FOR A 98 ACRE TRACT LOCATED:

SEC.	TWP	RNG	ACRES
7	11S	6S	98

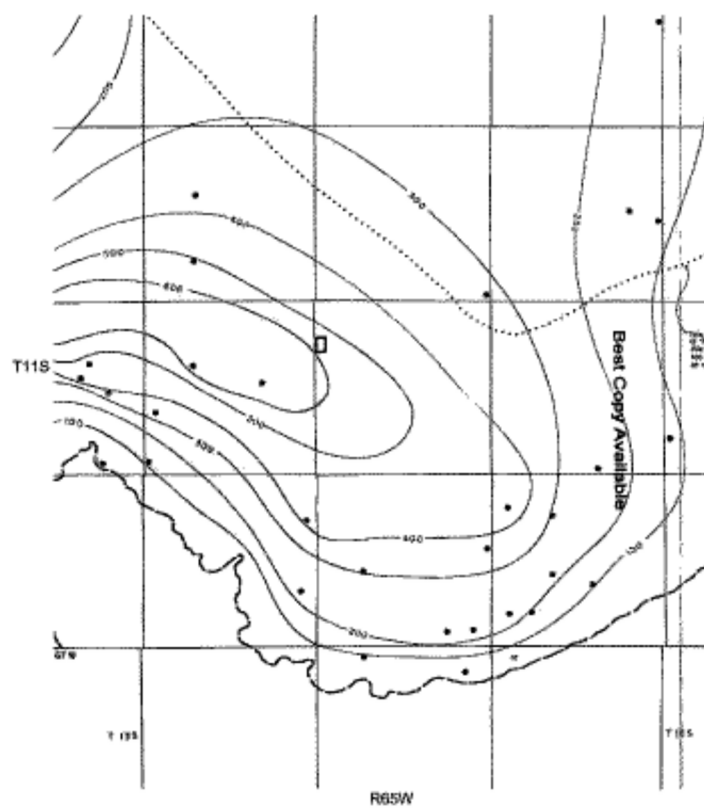
AQUIFER	NON-TRIBUTARY			NOT NON-TRIBUTARY			TOTAL ANNUAL APPROP
	ACRES	AVERAGE ANNUAL SAT.	ANNUAL APPROP	ACRES	AVERAGE ANNUAL SAT.	ANNUAL APPROP	
UPPER DAWSON				98.0		90.4	90.4
LOWER DAWSON							
DENVER	98.0	482.4	80.4				80.4
UPPER ARAPAHOE	98.0	263.5	43.9				43.9
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	98.0	209.8	30.0				30.0

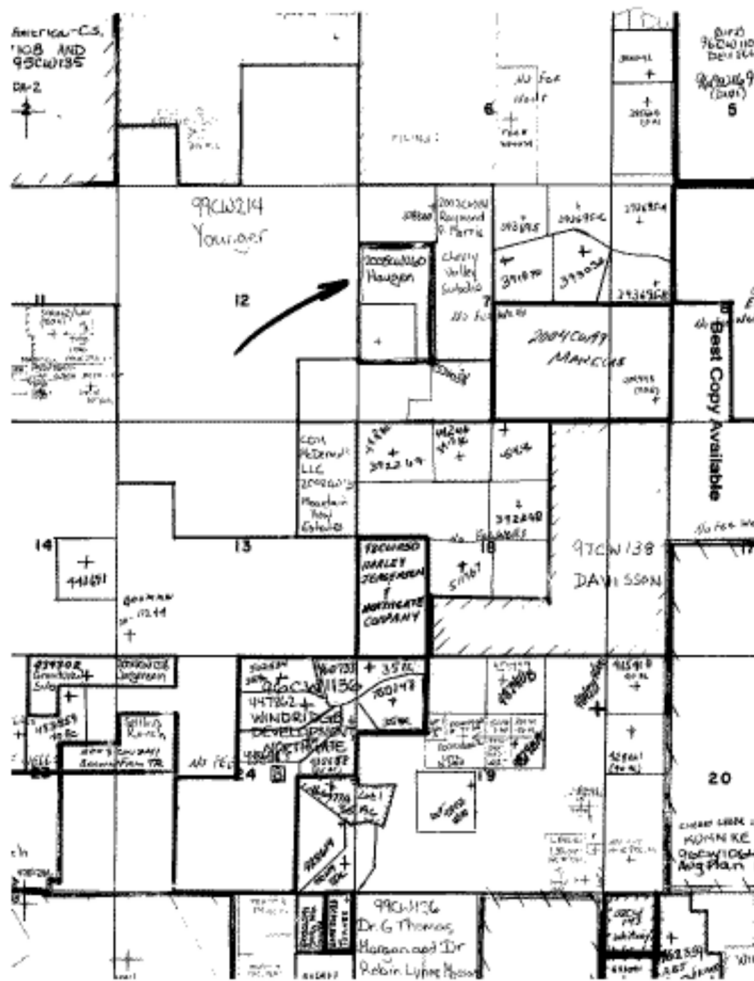
intended - 70' - 1080'
ST - 460'
Permit no. 108262 IAF

[illegible]

NNT Dawson

2005CW260
Dawson





COLORADO DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80202

PERMIT APPLICATION FORM

JUN 26 1979

FOR: ☒ A PERMIT TO USE GROUND WATER
☒ A PERMIT TO CONSTRUCT A WELL
☒ A PERMIT TO INSTALL A PUMP

() REPLACEMENT FOR NO. _____

() OTHER _____

WATER COURT CASE NO. _____

Application must be complete where applicable. Type or print in **BLACK INK**. No overstrikes or erasures unless initialed.

RECEIVED
MAY 17 1979

WATER RESOURCES
STATE ENGINEER

(1) APPLICANT - mailing addressNAME Lowell HauganSTREET 18110 Black Forest Rd.CITY Colorado Springs, Colo. 80908
(State) (Zip)TELEPHONE NO. 495-4279**(2) LOCATION OF PROPOSED WELL**County El PasoNW ¼ of the SW ¼, Section 7Twp. 11 S, Rng. 65 W, 6th P.M.
(N.S) (E.W)**(3) WATER USE AND WELL DATA**Proposed maximum pumping rate (gpm) 15Average annual amount of ground water to be appropriated (acre-feet): 1Number of acres to be irrigated: noneProposed total depth (feet): 250

Aquifer ground water is to be obtained from:

DawsonOwner's well designation only well**GROUND WATER TO BE USED FOR:**

() HOUSEHOLD USE ONLY - no irrigation (0)
☒ DOMESTIC (1) () INDUSTRIAL (5)
() LIVESTOCK (2) () IRRIGATION (6)
() COMMERCIAL (4) () MUNICIPAL (8)

() OTHER (9) _____

DETAIL THE USE ON BACK IN (11)

(4) DRILLERName W.V. Harding & SonsStreet 1409 Bates Dr.City Colorado Springs, Colo. 80909
(State) (Zip)Telephone No. 633-9775 Lic. No. 150

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 106789

Basin _____

Dist. _____

CONDITIONS OF APPROVAL

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.

APPROVED PURSUANT TO CRS 1973, 37-92-602
(3)(b)(II) AS THE ONLY WELL ON A TRACT
OF 35 ACRES OR MORE DESIGNATED AS 40
ACRES IN NW ¼, SW ¼, SEC 7,
T11S, R65W, 6 P.M.

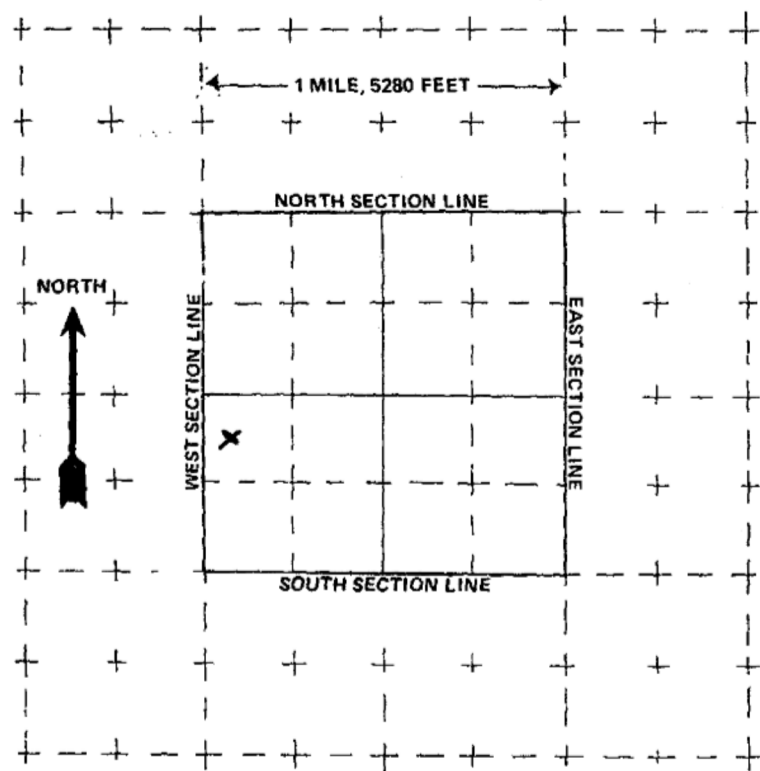
APPLICATION APPROVEDPERMIT NUMBER 108262DATE ISSUED JUL 03 1979EXPIRATION DATE JUL 03 1981

Bruce E. DeBrine
DEPUTY STATE ENGINEER

BY _____

I.D. 1-08COUNTY 21

(5) **THE LOCATION OF THE PROPOSED WELL** and the area on which the water will be used must be indicated on the diagram below. Use the **CENTER SECTION** (1 section, 640 acres) for the well location.



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)
 A family of 5 will require approximately 1 acre-foot of water per year.
 1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
 1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) **THE WELL MUST BE LOCATED BELOW** by distances from section lines.

1800 ft. from south sec. line
 (north or south)
400 ft. from west sec. line
 (east or west)
 LOT _____ BLOCK _____ FILING # _____
 SUBDIVISION _____

(7) **TRACT ON WHICH WELL WILL BE LOCATED** Owner: Lowell Haugan
 No. of acres 40 Will this be the only well on this tract? yes

(8) **PROPOSED CASING PROGRAM**
 Plain Casing
5 in. from 0 ft. to 200 ft.
 _____ in. from _____ ft. to _____ ft.
 Perforated casing
5 in. from 200 ft. to 250 ft.
 _____ in. from _____ ft. to _____ ft.

(9) **FOR REPLACEMENT WELLS** give distance and direction from old well and plans for plugging it:

(10) **LAND ON WHICH GROUND WATER WILL BE USED:**

Owner(s): Lowell Haugan No. of acres: 40
 Legal description: NW 1/4 SW 1/4 Sec 7 T 11 S R 65 W 6th PM

(11) **DETAILED DESCRIPTION** of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.
Water to be used for Domestic purposes
Septic system to be built to County specifications

(12) **OTHER WATER RIGHTS** used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
<u>none</u>		

(13) **THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.**
Lowell O. Haugan
 SIGNATURE OF APPLICANT(S)

THIS FORM MUST BE SUBMITTED
WITHIN 60 DAYS OF COMPLETION
OF THE WORK DESCRIBED HERE-
ON. TYPE OR PRINT IN BLACK
INK.

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818
Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER 108262

RECEIVED

OCT 18 1979

WATER RESOURCES
STATE ENGINEER
CDB

WELL OWNER Lowell Haugen

NW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Sec. 7

18110 Black Forest Rd.

ADDRESS Colorado Springs, Colo. 80908

T. 11 S. R. 65 W. 6th P.M.

DATE COMPLETED August 20, 19 79

HOLE DIAMETER

7 in. from 0 to 205 ft.

_____ in. from _____ to _____ ft.

_____ in. from _____ to _____ ft.

DRILLING METHOD cable tool

CASING RECORD: Plain Casing

Size 5" & kind PVC from 0 to 125 ft.

Size " & kind " from 185 to 205 ft.

Size _____ & kind _____ from _____ to _____ ft.

Perforated Casing

Size 5" & kind PVC from 125 to 185 ft.

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

GROUTING RECORD

Material cement & sand

Intervals 15' to 20'

Placement Method poured from top

GRAVEL PACK: Size 3/8

Interval 20' to 205'

TEST DATA

Date Tested August 20, 19 79

Static Water Level Prior to Test 125 ft.

Type of Test Pump Bailer

Length of Test 1 hr.

Sustained Yield (Metered) 20 gal per min.

Final Pumping Water Level 165 ft.

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	10	clay & fine sand	
10	13	sand	
13	90	sand & clay light brown	
90	135	sand & clay yellow brown	
135	140	sand	X
140	155	sand & clay yellow brown	
155	173	sand & gravel	X
173	205	sand & clay yellow brown	
TOTAL DEPTH <u>205 ft.</u>			

Use additional pages necessary to complete log.



Aquifer Divider

OFFICE OF THE STATE ENGINEER
DETERMINATION OF FACTS

IN THE MATTER OF AN APPLICATION FOR UNDERGROUND WATER RIGHTS IN WATER
DIVISION NO. 1, EL PASO COUNTY, COLORADO

APPLICANT: SANDRA AND LOWELL HAUGEN

AQUIFER: DENVER

CASE NO.: 2005CW260

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

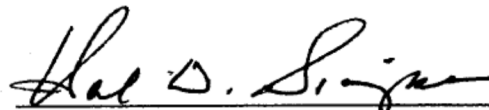
1. The application was received by the Water Court on October 31, 2005.
2. According to the application, the applicant owns, or has consent to withdraw ground water underlying 98 acres of land as further described in said application.
3. The quantity of water in the Denver aquifer (hereinafter "aquifer"), exclusive of artificial recharge, underlying the 98 acres of land claimed in the application is 7,997 acre-feet. This determination was based on the following as specified in the Denver Basin Rules:
 - a. The average specific yield of the saturated aquifer materials underlying the land claimed in the application is 17 percent.
 - b. The average thickness of the saturated aquifer materials underlying the land claimed in the application is 480 feet.
4. Withdrawal of ground water from the aquifer underlying the land claimed in the application will not, within one hundred years, deplete the flow of a natural stream at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and therefore the ground water is nontributary ground water as defined in C.R.S. 37-90-103(10.5). Pursuant to C.R.S. 37-90-137(9)(b) and the Denver Basin Rules, no more than 98% of the nontributary ground water withdrawn annually shall be consumed and the applicant shall demonstrate to the reasonable satisfaction of the State Engineer that no more than 98% of the water withdrawn will be consumed prior to the issuance of a well permit.
5. In determining the amount of ground water available for withdrawal annually from this aquifer, the provisions of C.R.S. 37-90-137(4) must be applied, and pursuant to C.R.S. 37-90-137(4)(b)(i) annual withdrawals shall be allowed on the basis of an aquifer life of 100 years.
6. A review of the records in the State Engineer's Office has not disclosed that there are any existing wells or other water rights claiming or diverting ground water from the aquifer underlying the land claimed by the applicant.
7. Underlying the land claimed in the application, the aquifer is, as specified in the Denver Basin Rules, located approximately 1,040 feet to 1,960 feet below land surface.

Applicant: Sandra and Lowell Haugen
Aquifer: Denver
Case No.: 2005CW260


Page 2

8. The allowed average annual amount of water available for withdrawal from the aquifer underlying the lands claimed in the application is 80 acre-feet (the quantity of water which is considered available divided by the 100 year aquifer life). It is recommended that the water court retain jurisdiction necessary to provide for adjustment (increase or decrease) of this amount.

Dated this 30th day of November, 2005.



Hal D. Simpson
State Engineer

By: 

Kevin G. Rein, P.E.
Chief of Water Supply

Prepared by: JMW

Determination Calculation for Case No. 2005CW260
Sandra and Lowell Haugen
Denver Aquifer

Total Available Water

Total number of acres = 98 acres

Sand Thickness = 480 feet

Specific Yield = 17%

Total Available Water in the Denver aquifer underlying the parcel = $98 * 480 * (17/100) = 7996.8$ acre-feet

Annual Withdrawal = $7996.8 / 100$ years = 79.97

Vacated Water

Total water claimed by existing exempt and/or non-exempt wells = 0 acre-feet

Total land claimed by pre-213 wells = 0 acres

Total Land not claimed by pre-213 wells = $98 - 0 = 98$ acres

Final Calculations

Total water available = $98 * 480 * (17/100) - 0 = 7996.8$ acre-feet

Total water available annually = 80.0 acre-feet

LOCATION: SW1/4 OF NW1/4 OF SEC. 7, T.11S., R.65W. (2400 NSL, 300 WSL)

Ground Elevation: 7460

Number of Acres: 1

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TOP		BOT.	TOP		
UPPER DAWSON	6384	7303	460.1	1076	157	0.92	NMT
LOWER DAWSON							
DENVER	5498	6338	485.0	1122	0.82	NT	
UPPER ARAPAHOE	4934	5462	261.2	1508	0.45	NT	
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	4302	4571	204.7	3158	2889	0.31	NT

note: E indicates location is at aquifer boundary and values may be more approximate.

LOCATION: NE1/4 OF SW1/4 OF SEC. 7, T.11S., R.65W. (1700 NSL, 1500 WSL)

Ground Elevation: 7380

Number of Acres: 1

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TOP		BOT.	TOP		
UPPER DAWSON	6387	7314	463.9	993	66	0.93	NMT
LOWER DAWSON							
DENVER	5499	6341	489.3	1881	0.82	NT	
UPPER ARAPAHOE	4954	5462	262.3	2426	1918	0.45	NT
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	4308	4578	205.2	3072	2802	0.30	NT

note: E indicates location is at aquifer boundary and values may be more approximate.

ANNUAL APPROPRIATION FOR A 98 ACRE TRACT LOCATED:

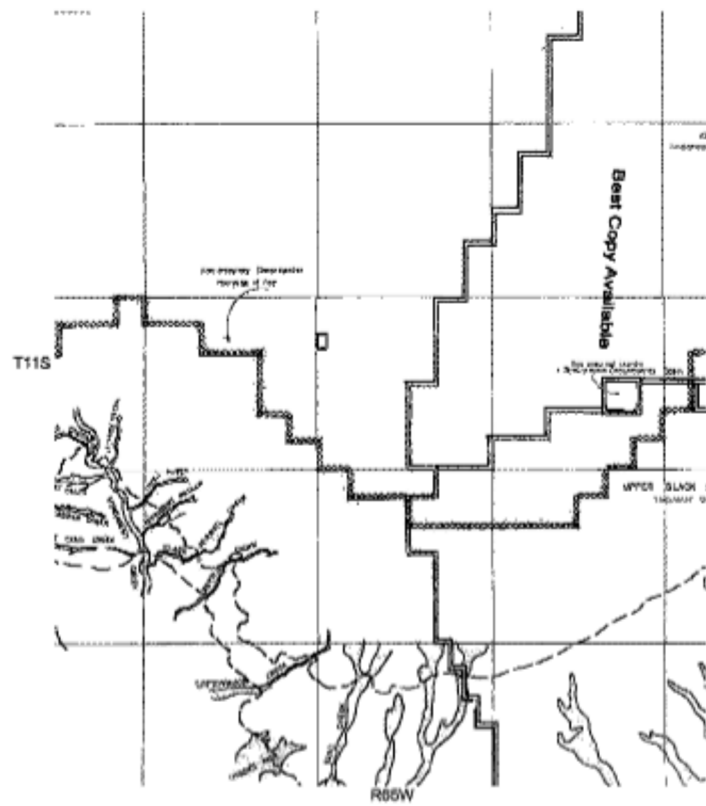
SEC.	TWP	RNG	ACRES
7	11S	6S	98

AQUIFER	NON-TRIBUTARY			TOT NON-TRIBUTARY			TOTAL ANNUAL APPROP
	ACRES	AVERAGE SAT.	ANNUAL APPROP	ACRES	AVERAGE SAT.	ANNUAL APPROP	
UPPER DAWSON	98.0	461.1	90.4	98.0	461.1	90.4	90.4
LOWER DAWSON							
DENVER	98.0	80.4	80.4	98.0	80.4	80.4	80.4
UPPER ARAPAHOE	98.0	261.5	43.9	98.0	261.5	43.9	43.9
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	98.0	203.8	30.0	98.0	203.8	30.0	30.0

1040' - 1900'
ST = 480'

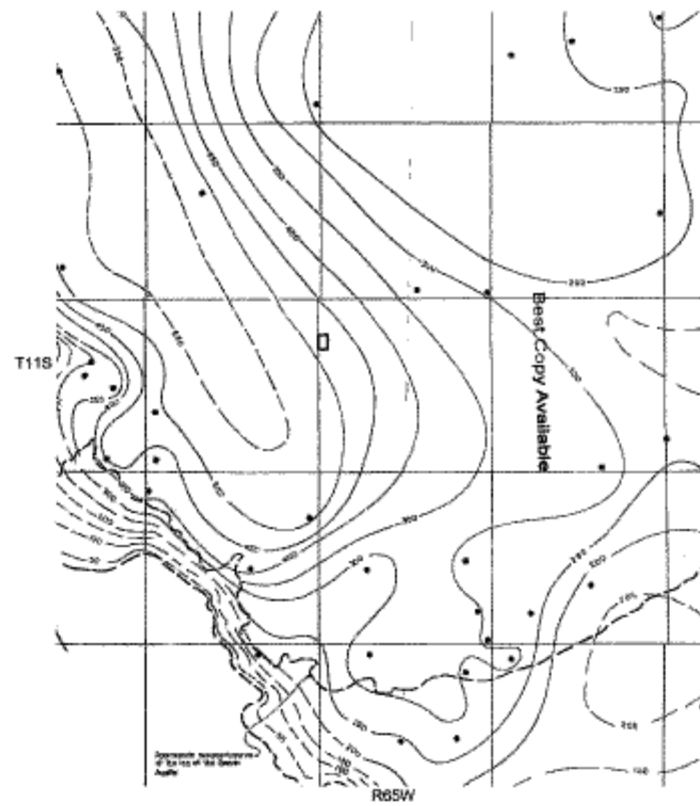
Best Copy Available

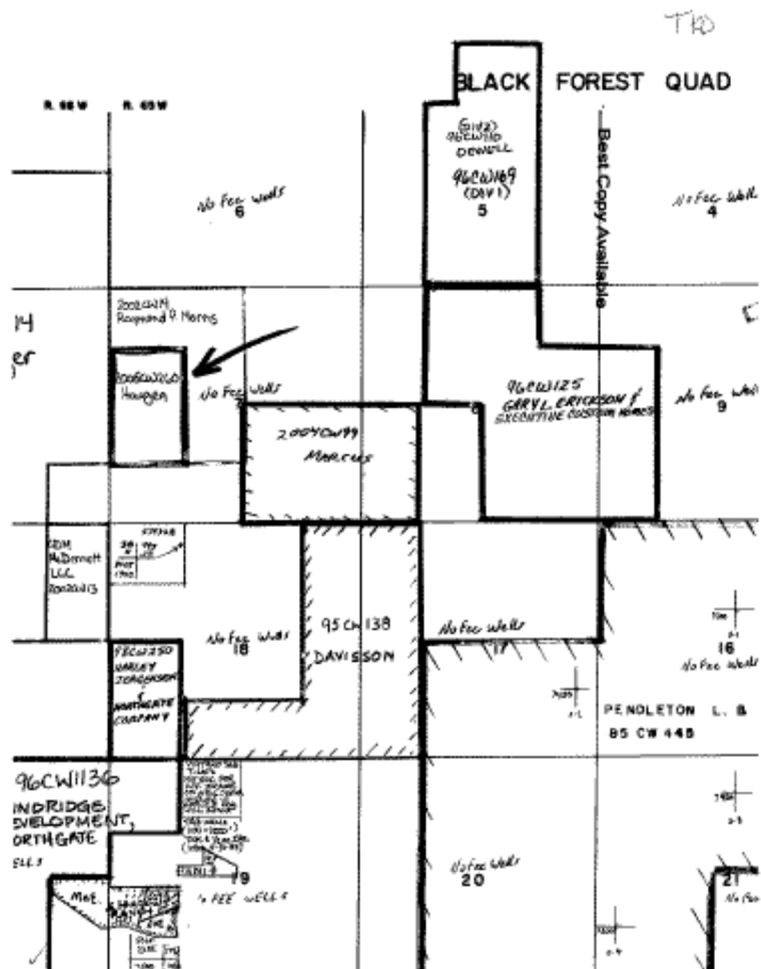
2005CW260
Denver



NT

2005CW260
Denver







Aquifer Divider

OFFICE OF THE STATE ENGINEER
DETERMINATION OF FACTS

IN THE MATTER OF AN APPLICATION FOR UNDERGROUND WATER RIGHTS IN WATER
DIVISION NO. 1, EL PASO COUNTY, COLORADO

APPLICANT: SANDRA AND LOWELL HAUGEN

AQUIFER: ARAPAHOE

CASE NO.: 2005CW260

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

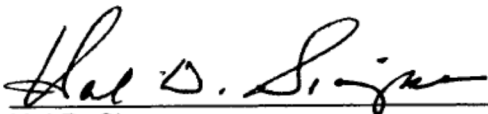
1. The application was received by the Water Court on October 31, 2005.
2. According to the application, the applicant owns, or has consent to withdraw ground water underlying 98 acres of land as further described in said application.
3. The quantity of water in the Arapahoe aquifer (hereinafter "aquifer"), exclusive of artificial recharge, underlying the 98 acres of land claimed in the application is 4,415 acre-feet. This determination was based on the following as specified in the Denver Basin Rules:
 - a. The average specific yield of the saturated aquifer materials underlying the land claimed in the application is 17 percent.
 - b. The average thickness of the saturated aquifer materials underlying the land claimed in the application is 265 feet.
4. Withdrawal of ground water from the aquifer underlying the land claimed in the application will not, within one hundred years, deplete the flow of a natural stream at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and therefore the ground water is nontributary ground water as defined in C.R.S. 37-90-103(10.5). Pursuant to C.R.S. 37-90-137(9)(b) and the Denver Basin Rules, no more than 98% of the nontributary ground water withdrawn annually shall be consumed and the applicant shall demonstrate to the reasonable satisfaction of the State Engineer that no more than 98% of the water withdrawn will be consumed prior to the issuance of a well permit.
5. In determining the amount of ground water available for withdrawal annually from this aquifer, the provisions of C.R.S. 37-90-137(4) must be applied, and pursuant to C.R.S. 37-90-137(4)(b)(I) annual withdrawals shall be allowed on the basis of an aquifer life of 100 years.
6. A review of the records in the State Engineer's Office has not disclosed that there are any existing wells or other water rights claiming or diverting ground water from the aquifer underlying the land claimed by the applicant.
7. Underlying the land claimed in the application, the aquifer is, as specified in the Denver Basin Rules, located approximately 1,920 feet to 2,510 feet below land surface.


Applicant: Sandra and Lowell Haugen
Aquifer: Arapahoe
Case No.: 2005CW260

Page 2

8. The allowed average annual amount of water available for withdrawal from the aquifer underlying the lands claimed in the application is 44.1 acre-feet (the quantity of water which is considered available divided by the 100 year aquifer life). It is recommended that the water court retain jurisdiction necessary to provide for adjustment (increase or decrease) of this amount.

Dated this 30th day of November, 2005.


Hal D. Simpson
State Engineer

By: 
Kevin G. Rein, P.E.
Chief of Water Supply

Prepared by: JMW

Determination Calculation for Case No. 2005CW260
Sandra and Lowell Haugen
Arapahoe Aquifer

Total Available Water

Total number of acres = 98 acres

Sand Thickness = 265 feet

Specific Yield = 17%

Total Available Water in the Arapahoe aquifer underlying the parcel = $98 * 265 * (17/100) = 4414.9$ acre-feet

Annual Withdrawal = $4414.9 / 100$ years = 44.15

Vacated Water

Total water claimed by existing exempt and/or non-exempt wells = 0 acre-feet

Total land claimed by pre-213 wells = 0 acres

Total Land not claimed by pre-213 wells = $98 - 0 = 98$ acres

Final Calculations

Total water available = $98 * 265 * (17/100) - 0 = 4414.9$ acre-feet

Total water available annually = 44.1 acre-feet

LOCATION: SW1/4 OF NW1/4 OF SEC. 7, T.11S., R.65W. (2400 NSL, 300 WSL.)

Ground Elevation: 7460

Number of Acres: 1

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TOP		BOT.	TOP		
UPPER DAWSON	6384	7303	460.1	1076	157	0.92	NNT
LOWER DAWSON							
DENVER	5499	6338	485.0	1961	1122	0.82	NT
UPPER ARAPAHOE	4954	5462	263.2		1998	0.45	NT
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	4302	4571	204.7	3158	2889	0.31	NT

note: E indicates location is at aquifer boundary and values may be more approximate.

LOCATION: NE1/4 OF SW1/4 OF SEC. 7, T.21N., R.65W. (1700 SSL, 1500 WSL)

Ground Elevation: 7380

Number of Acres: 1

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TOP		BOT.	TOP		
UPPER DAWSON	6387	7314	463.5	993	66	0.95	NNT
LOWER DAWSON							
DENVER	5499	6341	433.3	1881	1039	0.82	NT
UPPER ARAPAHOE	4954	5462	262.1	2428		0.45	NT
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	4308	4578	205.2	3072	2802	0.30	NT

note: E indicates location is at aquifer boundary and values may be more approximate.

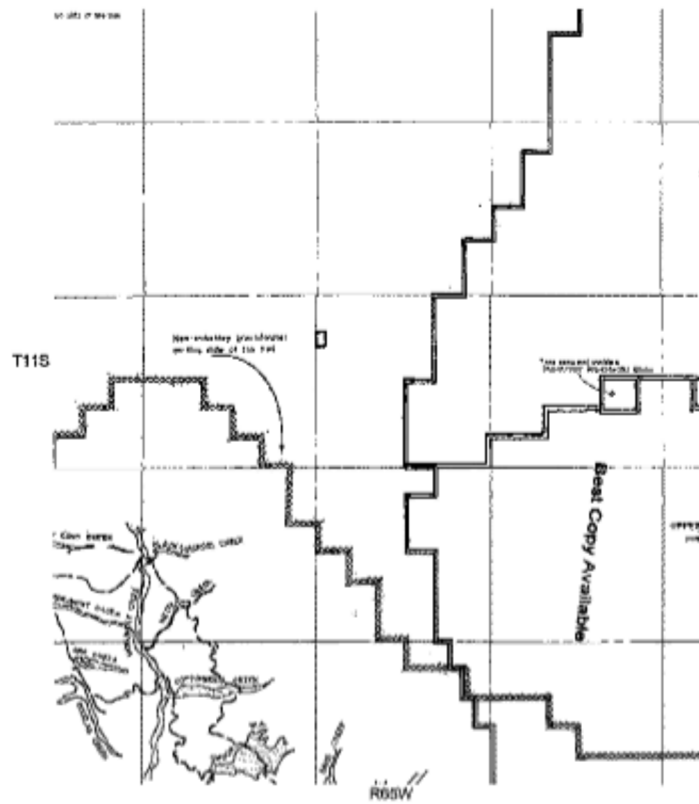
ANNUAL APPROPRIATION FOR A 98 ACRE TRACT LOCATED:

SEC.	TWP	RNG	ACRES
7	11S	65	98

AQUIFER	NON-TRIBUTARY			NOT NON-TRIBUTARY			TOTAL ANNUAL APPROP
	ACRES	AVERAGE SAT.	ANNUAL APPROP	ACRES	AVERAGE SAT.	ANNUAL APPROP	
UPPER DAWSON				98.0	463.1	90.4	90.4
LOWER DAWSON							
DENVER	98.0	485.4	80.4				80.4
UPPER ARAPAHOE	98.0		43.9				43.9
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	98.0	203.8	30.0				30.0

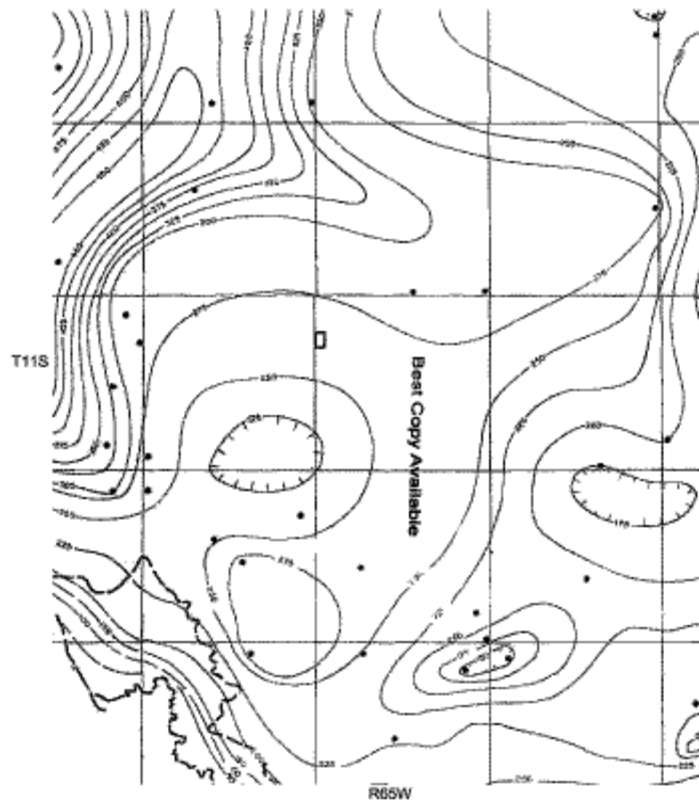
Interval - 1920' - 2510'
ST - 265'

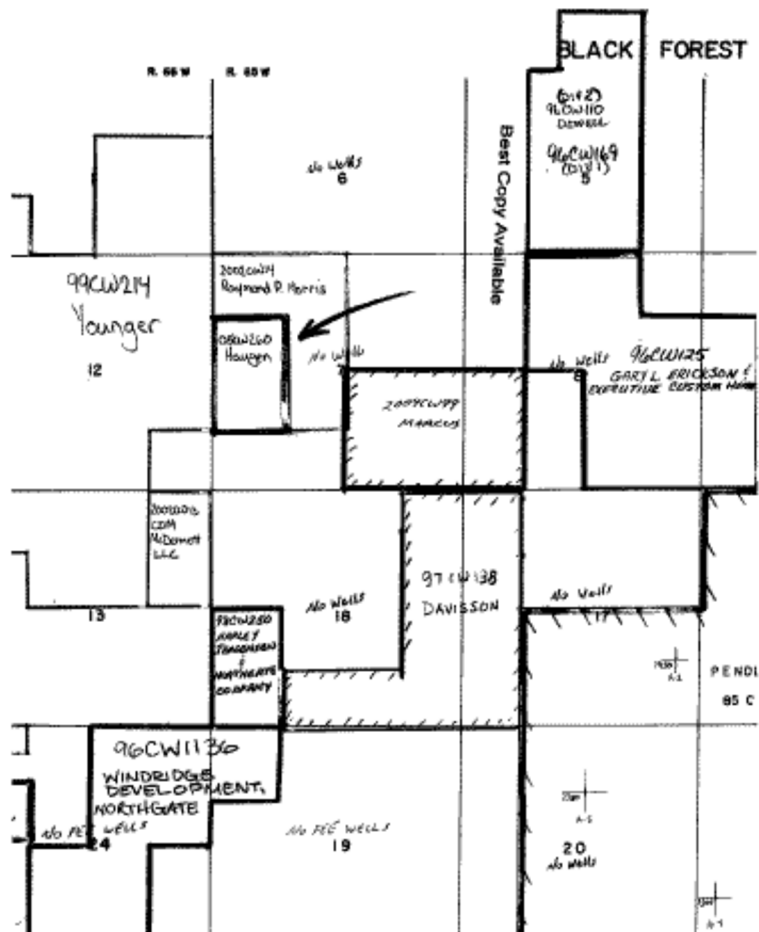
2005CW260
Arapahoe



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2005CW260
Arapahoe



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Aquifer Divider

OFFICE OF THE STATE ENGINEER
DETERMINATION OF FACTS

IN THE MATTER OF AN APPLICATION FOR UNDERGROUND WATER RIGHTS IN WATER
DIVISION NO. 1, EL PASO COUNTY, COLORADO

APPLICANT: SANDRA AND LOWELL HAUGEN

AQUIFER: LARAMIE-FOX HILLS

CASE NO.: 2005CW260

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

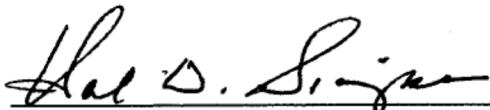
1. The application was received by the Water Court on October 31, 2005.
2. According to the application, the applicant owns, or has consent to withdraw ground water underlying 98 acres of land as further described in said application.
3. The quantity of water in the Laramie-Fox Hills aquifer (hereinafter "aquifer"), exclusive of artificial recharge, underlying the 98 acres of land claimed in the application is 3,014 acre-feet. This determination was based on the following as specified in the Denver Basin Rules:
 - a. The average specific yield of the saturated aquifer materials underlying the land claimed in the application is 15 percent.
 - b. The average thickness of the saturated aquifer materials underlying the land claimed in the application is 205 feet.
4. Withdrawal of ground water from the aquifer underlying the land claimed in the application will not, within one hundred years, deplete the flow of a natural stream at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and therefore the ground water is nontributary ground water as defined in C.R.S. 37-90-103(10.5). Pursuant to C.R.S. 37-90-137(9)(b) and the Denver Basin Rules, no more than 98% of the nontributary ground water withdrawn annually shall be consumed and the applicant shall demonstrate to the reasonable satisfaction of the State Engineer that no more than 98% of the water withdrawn will be consumed prior to the issuance of a well permit.
5. In determining the amount of ground water available for withdrawal annually from this aquifer, the provisions of C.R.S. 37-90-137(4) must be applied, and pursuant to C.R.S. 37-90-137(4)(b)(I) annual withdrawals shall be allowed on the basis of an aquifer life of 100 years.
6. A review of the records in the State Engineer's Office has not disclosed that there are any existing wells or other water rights claiming or diverting ground water from the aquifer underlying the land claimed by the applicant.

Applicant: Sandra and Lowell Haugen
Aquifer: Laramie-Fox Hills
Case No.: 2005CW260


Page 2

7. Underlying the land claimed in the application, the aquifer is, as specified in the Denver Basin Rules, located approximately 2,800 feet to 3,160 feet below land surface.
8. The allowed average annual amount of water available for withdrawal from the aquifer underlying the lands claimed in the application is 30.1 acre-feet (the quantity of water which is considered available divided by the 100 year aquifer life). It is recommended that the water court retain jurisdiction necessary to provide for adjustment (increase or decrease) of this amount.

Dated this 30th day of November, 2005.



Hal D. Simpson
State Engineer

By: 

Kevin G. Rein, P.E.
Chief of Water Supply

Prepared by: JMW

Determination Calculation for Case No. 2005CW260
Sandra and Lowell Haugen
Laramie-Fox Hills Aquifer

Total Available Water

Total number of acres = 98 acres

Sand Thickness = 205 feet

Specific Yield = 15%

Total Available Water in the Laramie-Fox Hills aquifer underlying the parcel = $98 * 205 * (15/100) = 3013.5$ acre-feet

Annual Withdrawal = $3013.5 / 100$ years = 30.14

Vacated Water

Total water claimed by existing exempt and/or non-exempt wells = 0 acre-feet

Total land claimed by pre-213 wells = 0 acres

Total Land not claimed by pre-213 wells = $98 - 0 = 98$ acres

Final Calculations

Total water available = $98 * 205 * (15/100) - 0 = 3013.5$ acre-feet

Total water available annually = 30.1 acre-feet

LOCATION: SW1/4 OF NW1/4 OF SEC. 7, T.11S., R.65W. (2400 NSL, 300 WSL)

Ground Elevation: 7460

Number of Acres: 1

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TDP		BOT.	TDP		
UPPER DANSON	6384	7303	460.1	1076	157	0.92	NNT
LOWER DANSON	---	---	---	---	---	---	---
DENVER	5499	6338	485.0	1961	1122	0.82	NT
UPPER ARAPAHOE	4954	5462	263.2	2506	1998	0.43	NT
LOWER ARAPAHOE	---	---	---	---	---	---	---
LARAMIE-FOX HILLS	4302	4571	204.7	2889	---	0.31	NT

note: e indicates location is at aquifer boundary and values may be more approximate.

LOCATION: NE1/4 OF SW1/4 OF SEC. 7, T.11S., R.65W. (1700 NSL, 1500 WSL)

Ground Elevation: 7380

Number of Acres: 1

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TDP		BOT.	TDP		
UPPER DANSON	6387	7314	463.9	993	66	0.93	NNT
LOWER DANSON	---	---	---	---	---	---	---
DENVER	5499	6341	483.3	1881	1039	0.82	NT
UPPER ARAPAHOE	4954	5462	262.3	2426	1918	0.43	NT
LOWER ARAPAHOE	---	---	---	---	---	---	---
LARAMIE-FOX HILLS	4308	4578	203.2	3072	---	0.30	NT

note: e indicates location is at aquifer boundary and values may be more approximate.

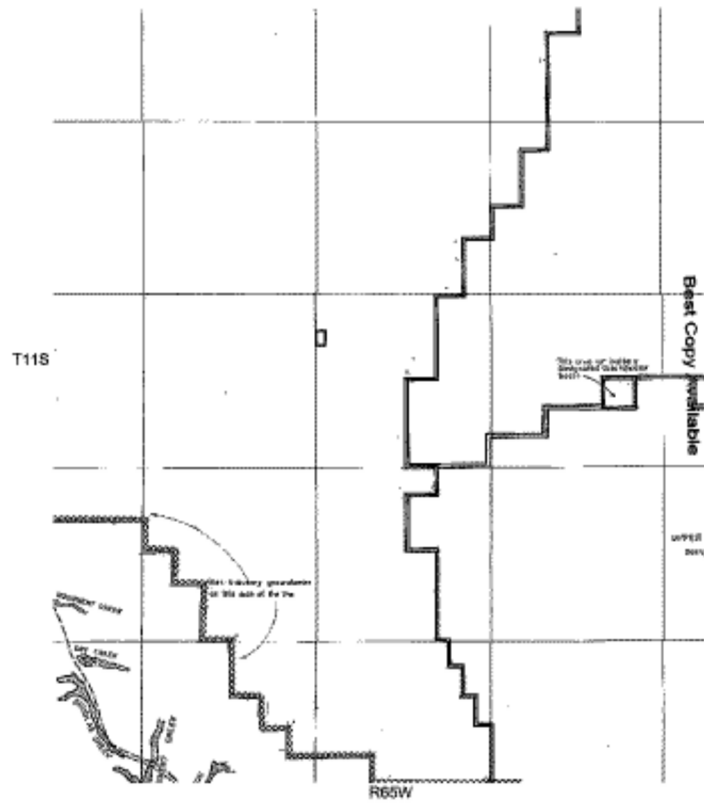
ANNUAL APPROPRIATION FOR A 98 ACRE TRACT LOCATED:

SEC.	TWP	RNG	ACRES
7	11S	65	98

AQUIFER	NON-TRIBUTARY			NOT NON-TRIBUTARY			TOTAL
	ACRES	AVERAGE SAT.	ANNUAL APPROP	ACRES	AVERAGE SAT.	ANNUAL APPROP	
UPPER DANSON	---	---	---	98.0	461.1	90.4	90.4
LOWER DANSON	---	---	---	---	---	---	---
DENVER	98.0	482.4	80.4	---	---	---	80.4
UPPER ARAPAHOE	98.0	263.5	43.9	---	---	---	43.9
LOWER ARAPAHOE	---	---	---	---	---	---	---
LARAMIE-FOX HILLS	98.0	---	30.0	---	---	---	30.0

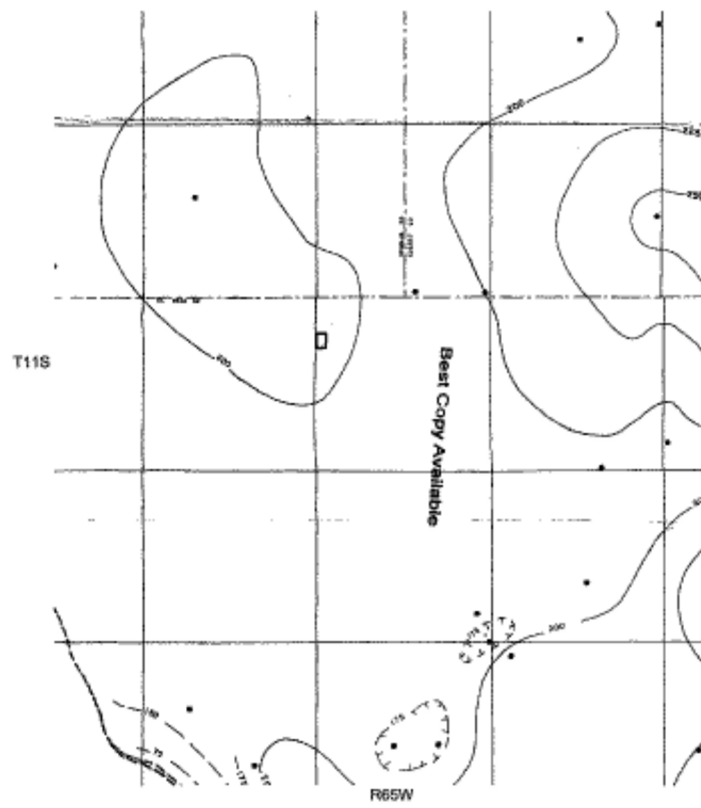
Interval - 2800' - 3140'
ST - 200'

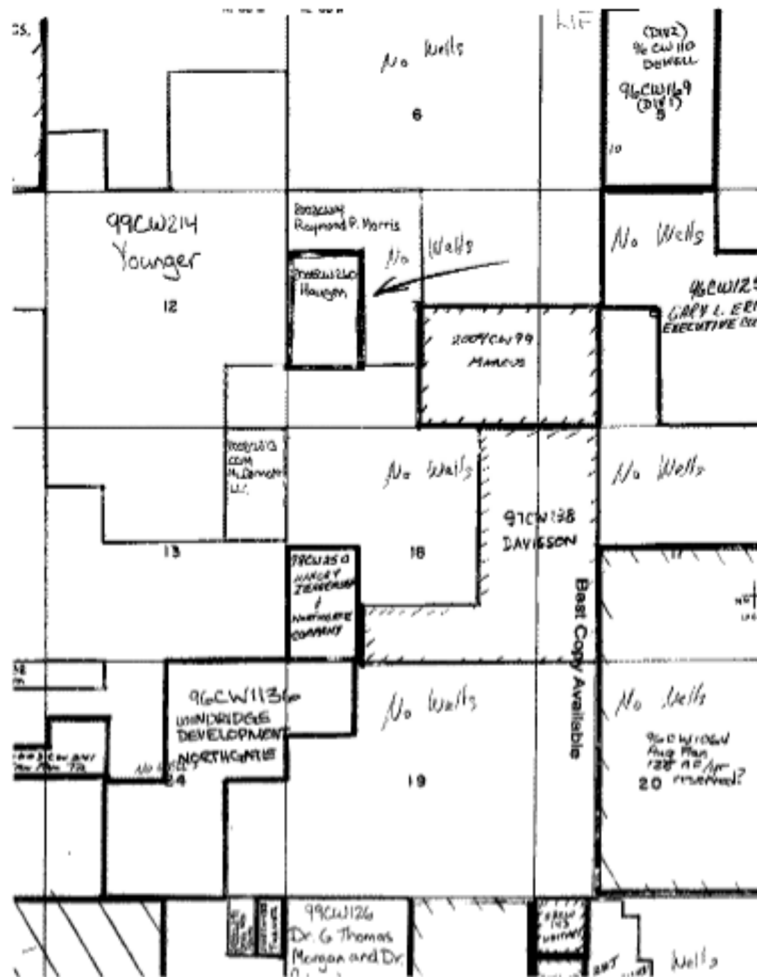
2005CW260
Laramie-Fox Hills



NTL

2005CW260
Laramie-Fox Hills





COLORADO WELLS, APPLICATIONS, AND PERMITS
COLORADO DIVISION OF WATER RESOURCES

PERMIT D CTY OWNER INFORMATION

ACTIVITY	STATUS	1ST USED	ANN	AREA	GEOL	WELL	WELL WTR	SEC LOC	TWN	P			
CD DATE	CD DATE	WD MD DB USE DATE	APR	IRR	AQFR	YIELD	DEPTH LEV	COORD	QTRS	SEC	SHP	RNG	M
194827	1 ELP	AMANDA PINES LLC	19201 E MAIN ST STE 200 PARKER, CO 80134	LOT	5 ECHO RANCHES WEST								
EP	11-30-1995	EP 01-18-2000	8		8 L	0	0	TDW	0	0	0	500N.700E	NENE 7 11S 65W S
222866	1 ELP	FENIMORE DAVID	2170 WICKERS RD COLORADO SPRINGS, CO 80919-	LOT	5 ECHO RANCHES WEST								
NP	12-06-1999		8		8 L	0	1.00	TDW	0	0	0	500N.700E	NENE 7 11S 65W S
194524	1 ELP	AMANDA PINES LLC	19201 E MAIN ST STE 200 PARKER, CO 80134	LOT	4 ECHO RANCH WEST								
NP	11-30-1995	AR 04-23-1996	8		8 L	0	0	TDW	10.00	240	85	700N.2040E	NWNE 7 11S 65W S
192122	1 ELP	AMANDA PINES LLC	19201 E MAINSTREET #200 PARKER, CO 80134	LOT	2 ECHO RANCH WEST								
NP	11-13-1995	AR 12-21-1995	8		8 L	0	0	TDW	9.00	240	65	1400N.650E	SENE 7 11S 65W S
191807	1 ELP	PITTS RUSSEL & CAROL	12695 HOLMES RD COLO SPGS, CO 80908-	LOT	3 ECHO RANCH WEST								
NP	10-06-1995	OC 03-26-2003	8		8 L	0	0	GW	9.00	300	65	3600S.3200W	SWNE 7 11S 65W S
184802	1 ELP	BENSON ROBERT T	19275 MARIAH TR CO SPGS, CO 80908										
NP	12-09-1994	AR 01-26-1995	8		8 L	0	0	TDW	12.00	300	161	495N.1650W	NWNW 7 11S 65W S
184230	1 ELP	MARCUS ANDY & LINDA	572 WHEATFIELD DR LITITZ, PA 17543										
NP	11-01-1994		1		9	0	0	GW	0	0	0	175S.400E	SESE 7 11S 65W S
	1 ELP	HAUGAN LOWELL	18110 BLACK FOREST RD COLO SPRINGS, CO 80908										
NP	05-17-1979		8		8	1.00	0		0	0	0	1800S.400W	NWSW 7 11S 65W S
259868	1 ELP	THOMPSON NORM	4455 WALKER RD COLORADO SPRINGS, CO 80908-										
NP	09-22-2004		8		8 9	0	1.00	TDW	11.00	280	120	1290S.1513W	SESW 7 11S 65W S

No Water Rights or CWCBS

Form No. 4
GWS-25

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

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

EXST

WELL PERMIT NUMBER 280006
DIV. 1 WD 8 DES. BASIN MD

APPLICANT

MARIAH MEADOWS LLLP
C/O PETROCK & FENDEL PC
700 17TH STREET #1800
DENVER, CO 80202-

(303) 534-0702

APPROVED WELL LOCATION

EL PASO COUNTY
NW 1/4 SW 1/4 Section 7
Township 11 S Range 65 W Sixth P.M.

DISTANCES FROM SECTION LINES

1400 Ft. from South Section Line
400 Ft. from West Section Line

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: Northing:

PERMIT TO USE AN EXISTING WELL (AMENDED)

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT

CONDITIONS OF APPROVAL

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(II)(A) as the only well on a tract of land of 40 acres described as that portion of the W 1/2 of the W 1/2, Sec. 7, Twp. 11 South, Rng. 65 West, 6th P.M., El Paso County, more particularly described on the attached Exhibit A.
- 4) Approved for the use of an existing well constructed under permit no. 108262. The issuance of this permit hereby cancels permit no. 108262.
- 5) The use of ground water from this well is limited to fire protection, ordinary household purposes inside not more than three (3) single family dwellings, the watering of poultry, domestic animals and livestock on a farm or ranch and the irrigation of not more than one (1) acre of home gardens and lawns.
- 6) Production from this well is restricted to the Dawson aquifer.
- 7) The pumping rate of this well shall not exceed 15 GPM.
- 8) The annual withdrawal of ground water from this well shall not exceed 3.2 acre-feet (8.16 acre-feet per surface acre), which is a portion of the 8 acre-feet total excluded from Div. 1 Water Court case no. 05CW260.
- 9) The return flow from the use of this well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located.
- 10) This well shall be constructed not more than 200 feet from the location specified on this permit.

NOTE: To ensure a maximum productive life of this well, perforated casing should be set through the entire producing interval of the approved zone or aquifer indicated above. B.D.H. 03/11/09

APPROVED
BDH

State Engineer

DATE ISSUED 03-03-2009

By

EXPIRATION DATE

Receipt No. 3637293

Form No.
GWS-25

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

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

EXST

WELL PERMIT NUMBER 280006 - -
DIV. 1 WD 8 DES. BASIN MD

APPLICANT

MARIAH MEADOWS LLLP
C/O PETROCK & FENDEL PC
700 17TH STREET #1800
DENVER, CO 80202-

(303) 534-0702

APPROVED WELL LOCATION

EL PASO COUNTY
NW 1/4 SW 1/4 Section 7
Township 11 S Range 65 W Sixth P.M.

DISTANCES FROM SECTION LINES

1400 Ft. from South Section Line
400 Ft. from West Section Line

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: Northing:

PERMIT TO USE AN EXISTING WELL

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT

CONDITIONS OF APPROVAL

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(II)(A) as the only well on a tract of land of 40 acres described as that portion of the NW 1/4 of the SW 1/4, Sec. 7, Twp. 11 South, Rng. 65 West, 6th P.M., El Paso County, more particularly described on the attached Exhibit A.
- 4) Approved for the use of an existing well constructed under permit no. 108262. The issuance of this permit hereby cancels permit no. 108262.
- 5) The use of ground water from this well is limited to fire protection, ordinary household purposes inside not more than three (3) single family dwellings, the watering of poultry, domestic animals and livestock on a farm or ranch and the irrigation of not more than one (1) acre of home gardens and lawns.
- 6) Production from this well is restricted to the Dawson aquifer.
- 7) The pumping rate of this well shall not exceed 15 GPM.
- 8) The annual withdrawal of ground water from this well shall not exceed 3.2 acre-feet (8.16 acre-feet per surface acre), which is a portion of the 8 acre-feet total excluded from Div. 1 Water Court case no. 05CW260.
- 9) The return flow from the use of this well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located.
- 10) This well shall be constructed not more than 200 feet from the location specified on this permit.

NOTE: To ensure a maximum productive life of this well, perforated casing should be set through the entire producing interval of the approved zone or aquifer indicated above. B.D.H. 03/03/09

APPROVED
BDH

State Engineer

DATE ISSUED 03-03-2009

EXPIRATION DATE

Receipt No. 3637293

COLORADO DIVISION OF WATER RESOURCES DEPARTMENT OF NATURAL RESOURCES 1313 SHERMAN ST., RM 818, DENVER, CO 80203 phone - info: (303) 866-3587 main: (303) 866-3581 fax: (303) 866-3589 http://www.water.state.co.us		Office Use Only Form GWS-44 (06/2006) <div style="text-align: center; border: 1px solid black; padding: 5px; margin: 10px 0;"> RECEIVED FEB 17 2009 <small>WATER RESOURCES STATE ENGINEER COLO</small> </div>	
RESIDENTIAL Note: Also use this form to apply for livestock watering Water Well Permit Application Review instructions on reverse side prior to completing form. The form must be completed in black or blue ink or typed.		6. Use Of Well (check applicable boxes) See instructions to determine use(s) for which you may qualify <input type="checkbox"/> A. Ordinary household use in one single-family dwelling (no outside use) <input checked="" type="checkbox"/> B. Ordinary household use in 1 to 3 single-family dwellings: Number of dwellings: <u>3</u> <input checked="" type="checkbox"/> Home garden/lawn irrigation, not to exceed one acre: area irrigated <u>1</u> <input type="checkbox"/> sq. ft. <input checked="" type="checkbox"/> acre <input checked="" type="checkbox"/> Domestic animal watering - (non-commercial) <input type="checkbox"/> C. Livestock watering (on farm/ranch/range/pasture)	
1. Applicant Information Name of applicant <u>Mariah Meadows, LLC</u> <u>c/o Petrock & Fendel, P.C.</u> Mailing address <u>700 17th St. #1800</u> City <u>Denver</u> State <u>CO</u> Zip code <u>80202</u> Telephone # <u>303 534-0702</u> E-mail (optional)		7. Well Data (proposed) Maximum pumping rate <u>15</u> gpm Annual amount to be withdrawn <u>3.2</u> acre-feet Total depth <u>205</u> feet Aquifer <u>Dawson</u>	
2. Type Of Application (check applicable boxes) <input type="checkbox"/> Construct new well <input type="checkbox"/> Use existing well <input type="checkbox"/> Replace existing well <input type="checkbox"/> Change or increase use <input type="checkbox"/> Change source (aquifer) <input type="checkbox"/> Reapplication (expired permit) <input checked="" type="checkbox"/> Other: <u>Designation of new acreage</u>		8. Water Supplier Is this parcel within boundaries of a water service area? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If yes, provide name of supplier:	
3. Refer To (if applicable) Well permit # <u>108262</u> Water Court case # <u>Ant. reserved in 05CW260</u> Designated Basin Determination # Well name or # <u>Well #1</u>		9. Type Of Sewage System <input checked="" type="checkbox"/> Septic tank / absorption leach field <input type="checkbox"/> Central system: District name: <input type="checkbox"/> Vault: Location sewage to be hauled to: <input type="checkbox"/> Other (attach copy of engineering design and report)	
4. Location Of Proposed Well County <u>El Paso</u> <u>NW</u> 1/4 of the <u>SW</u> 1/4 Section <u>7</u> Township <u>11</u> N or S <input checked="" type="checkbox"/> Range <u>65</u> E or W <input checked="" type="checkbox"/> Principal Meridian <u>6th</u> Distance of well from section lines (section lines are typically not property lines) <u>* 1400</u> Ft. from <input type="checkbox"/> N <input checked="" type="checkbox"/> S <u>400</u> Ft. from <input type="checkbox"/> E <input checked="" type="checkbox"/> W For replacement wells only - distance and direction from old well to new well feet direction Well location address (Include City, State, Zip) <input type="checkbox"/> Check if well address is same as in Item 1.		10. Proposed Well Driller License #(optional): 11. Signature Of Applicant(s) Or Authorized Agent 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. Sign here (Must be original signature) Date <u>2/16/09</u> <u>Gary Crosby</u> Print name & title <u>Gary Crosby, Paralegal, Petrock & Fendel, P.C.</u>	
Optional: GPS well location information in UTM format. GPS unit settings are as follows: Format must be UTM <input type="checkbox"/> Zone 12 or <input type="checkbox"/> Zone 13 Units must be Meters Datum must be NAD83 Unit must be set to true north Was GPS unit checked for above? <input type="checkbox"/> YES Remember to set Datum to NAD83		Office Use Only USGS map name <u>Black Forest</u> DWR map no. <u>51-0</u> Surface elev. <u>7161'</u> Change of location & use & desc. of acres. <u>Parcel A & C</u> Trans Number: 3637293 2/17/2009 1:11:07 PM Debbie Gonzales (20) Total Trans Amt: \$100.00 CHECK WE <u>108262</u> Check Number: 9462 WR <u>05CW260</u> Check Amount: \$100.00 CWCB TOPO MYLAR SB	
5. Parcel On Which Well Will Be Located (PLEASE ATTACH A CURRENT DEED FOR THE SUBJECT PARCEL) A. You must check and complete one of the following: <input type="checkbox"/> Subdivision: Name Lot _____ Block _____ Filing/Unit _____ <input type="checkbox"/> County exemption (attach copy of county approval & survey): Name/# _____ Lot # _____ <input type="checkbox"/> Parcel less than 35 acres, not in a subdivision, attach a deed with metes and bounds description recorded prior to June 1, 1972, and a current deed <input type="checkbox"/> Mining claim (attach a copy of the deed or survey): Name/# <input type="checkbox"/> Square 40 acre parcel as described in Item 4 <input type="checkbox"/> Parcel of 35 or more acres (attach a metes and bounds description or survey) <input checked="" type="checkbox"/> Other (attach metes & bounds description or survey and supporting documents) B. # of acres in parcel <u>Approx. 40</u> C. Are you the owner of this parcel? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (if no - see instructions) D. Will this be the only well on this parcel? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (if no - list other wells) E. State Parcel ID# (optional):		DIV <u>1</u> WD <u>8</u> BA _____ MD _____	

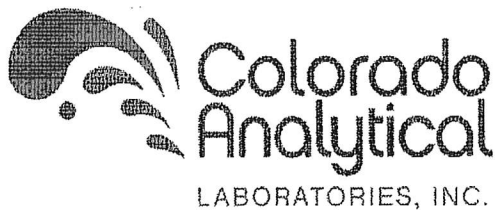
* Actual location

Appendix D

***El Paso County Land Development Code
Water Quality Requirements and Results
Dawson Confined Aquifer
For Owl Ridge Subdivision
Sampled October 1, 2020***

Compound	Units	MCL/SMCL	Result
Antimony	mg/l	0.006	0.0012
Arsenic	mg/l	0.01	0.0006
Barium	mg/l	2	0.0655
Beryllium	mg/l	0.004	0.0001
Cadmium	mg/l	0.005	0.0001
Chromium	mg/l	0.1	0.0015
Cyanide (Total)	mg/l	0	0
Fluoride	mg/l	4	0.18
Mercury	mg/l	0.002	0
Nitrate as N	mg/l	10	1.67
Nitrite as N	mg/l	1	0.03
Selenium	mg/l	0.05	0.0012
Thallium	mg/l	0.002	0.0002
Aluminum	mg/l	0.05	0.003
Chloride	mg/l	250	2
Langelier Index			-1.72
Iron	mg/l	0.3	0.005
Manganese	mg/l	0.05	0.0008
pH		6.5 - 8.5	6.86
Silver	mg/l	0.1	0.0005
Sulfate	mg/l	250	4.5
TDS	mg/l	500	120
Zinc	mg/l	5	0.006
Gross Alpha/Beta	pCi/l	15	8.2
Combined Radium 226+228	pCi/l	5	0
Total Coliform	#/100 ml	Absent	Absent

Green = Result below MCL - Acceptable Water Quality



Quotation for Analytical Services

Quote ID: QBO20090077

Prepared For: Monument Valley Engineers - MVE Ci
1903 Lelaray St

Quote Date: Thursday, September 24, 2020
Turn Around Time: 10 Working Days

Colorado Springs, CO 80909

Attn: David R Gorman, P.E.

CAL Task
201001048

Project:

DEW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Drinking	Langelier Index	N/A	1	\$57.00	\$57.00
Water - Drinking	Alkalinity	SM 2320-B	1	Incl.	Incl.
Water - Drinking	Ca as CaCO3	EPA 200.7	1	Incl.	Incl.
Water - Drinking	Carb/ Bicarb	SM 2320-B	1	Incl.	Incl.
Water - Drinking	Lang Index	SM 2330-B	1	Incl.	Incl.
Water - Drinking	pH/ Temp	SM 4500-H-B	1	Incl.	Incl.
Water - Drinking	TDS	SM 2540-C	1	Incl.	Incl.
Water - Drinking	Nitrate/ Nitrite Nitrogen	Calculation	1	\$0.00	\$0.00
Water - Drinking	Fe - Total	EPA 200.7	1	\$12.00	\$12.00
Water - Drinking	Ag - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Al - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	As - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Ba - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Be - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Cd - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Cr - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Hg	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Mn - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Sb - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Se - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Tl - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Zn - Total	EPA 200.8	1	\$15.00	\$15.00
Water - Drinking	Chloride	EPA 300.0	1	\$17.00	\$17.00
Water - Drinking	Nitrate Nitrogen	EPA 300.0	1	\$17.00	\$17.00
Water - Drinking	Nitrite Nitrogen	EPA 300.0	1	\$17.00	\$17.00
Water - Drinking	Sulfate	EPA 300.0	1	\$17.00	\$17.00
Water - Drinking	Fluoride	EPA 300.0	1	\$18.00	\$18.00
Water - Drinking	Total Coliform P/A	SM 9223	1	\$23.00	\$23.00
Water - Drinking	Cyanide-Total	EPA 335.4	1	\$38.00	\$38.00
Water - Drinking	Gross Alpha/Beta (Sub)	SM 7110-B	1	\$56.16	\$56.16
Water - Drinking	Radium 226 (Sub)	SM 7500-Ra B	1	\$75.60	\$75.60



Quotation for Analytical Services

Quote ID: QBO20090077

LABORATORIES, INC.

Water - Drinking	Radium 228 (Sub)	EPA Ra-05	1	\$118.80	\$118.80
Shipping	Cooler Shipment - UPS	UPS	1	\$10.00	\$10.00
Shipping	Sample Shipment to Outside Lab UPS		1	\$30.00	\$30.00

CAL Task

201001048

\$701.56

DEW

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Contract analysis pricing subject to change. Sub-Contract radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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WW

Analytical Results

TASK NO: 201001048

Report To: David R Gorman, P.E.

Company: Monument Valley Engineers - MVE Civil
1903 Lelaray St
Colorado Springs CO 80909

Bill To: David R Gorman, P.E.

Company: Monument Valley Engineers - MVE Ci
1903 Lelaray St
Colorado Springs CO 80909

Task No.: 201001048
Client PO:
Client Project:

Date Received: 10/1/20
Date Reported: 10/9/20
Matrix: Water - Drinking

Lab Number	Customer Sample ID	Sample Date/Time	Test	Result	Method	Date Analyzed
201001048-01C	Prarie Ridge	10/1/20 10:15 AM	Total Coliform	Absent	SM 9223	10/2/20
			E-Coli	Absent	SM 9223	10/2/20

Abbreviations/ References:

Absent = Coliform Not Detected

Present = Coliform Detected - Chlorination Recommended

Date Analyzed = Date Test Completed

SM = "Standard Methods for the Examination of Water and Wastewater"; APHA; 19th Edition; 1995



DATA APPROVED FOR RELEASE BY

Analytical Results

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Report To: David R Gorman, P.E.

Company: Monument Valley Engineers - MVE Civil
1903 Lelaray St
Colorado Springs CO 80909

Bill To: David R Gorman, P.E.

Company: Monument Valley Engineers - MVE Ci
1903 Lelaray St
Colorado Springs CO 80909

Task No.: 201001048
Client PO:
Client Project:

Date Received: 10/1/20
Date Reported: 10/9/20
Matrix: Water - Drinking

Customer Sample ID Prarie Ridge
Sample Date/Time: 10/1/20 10:15 AM
Lab Number: 201001048-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Bicarbonate	48.9 mg/L as CaCO ₃	SM 2320-B	4	10/2/20	ECM
Calcium as CaCO ₃	32.3 mg/L	EPA 200.7	0.1	10/6/20	MBN
Carbonate	< 4 mg/L as CaCO ₃	SM 2320-B	4	10/2/20	ECM
Hydroxide	< 4 mg/L as CaCO ₃	SM 2320-B	4	10/2/20	ECM
Langelier Index	-1.72 units	SM 2330-B		10/7/20	SAN
pH	6.86 units	SM 4500-H-B	0.01	10/1/20	MBN
Temperature	20 °C	SM 4500-H-B	1	10/1/20	MBN
Total Alkalinity	48.9 mg/L as CaCO ₃	SM 2320-B	4	10/2/20	ECM
Total Dissolved Solids	120 mg/L	SM 2540-C	5	10/6/20	ISG

Abbreviations/ References:

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



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Analytical Results

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1903 Lelaray St
Colorado Springs CO 80909

Bill To: David R Gorman, P.E.

Company: Monument Valley Engineers - MVE Civil
1903 Lelaray St
Colorado Springs CO 80909

Task No.: 201001048
Client PO:
Client Project:

Date Received: 10/1/20
Date Reported: 10/9/20
Matrix: Water - Drinking

Customer Sample ID Prarie Ridge
Sample Date/Time: 10/1/20 10:15 AM
Lab Number: 201001048-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
Nitrate/ Nitrite Nitrogen	1.67 mg/L	Calculation	0.05 mg/L	10/6/20	MAT	
Chloride	2.0 mg/L	EPA 300.0	0.1 mg/L	10/2/20	MAT	
Fluoride	0.18 mg/L	EPA 300.0	0.09 mg/L	10/2/20	MAT	4
Nitrate Nitrogen	1.67 mg/L	EPA 300.0	0.05 mg/L	10/2/20	MAT	10
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	10/2/20	MAT	1
Sulfate	4.5 mg/L	EPA 300.0	0.1 mg/L	10/2/20	MAT	
Cyanide-Total	< 0.005 mg/L	EPA 335.4	0.005 mg/L	10/5/20	CES	0.02
Total						
Iron	< 0.005 mg/L	EPA 200.7	0.005 mg/L	10/6/20	MBN	0.3
Aluminum	0.003 mg/L	EPA 200.8	0.001 mg/L	10/2/20	IPC	0.05
Antimony	< 0.0012 mg/L	EPA 200.8	0.0012 mg/L	10/2/20	IPC	0.006
Arsenic	< 0.0006 mg/L	EPA 200.8	0.0006 mg/L	10/2/20	IPC	0.01
Barium	0.0655 mg/L	EPA 200.8	0.0007 mg/L	10/2/20	IPC	2
Beryllium	0.0001 mg/L	EPA 200.8	0.0001 mg/L	10/2/20	IPC	0.004
Cadmium	< 0.0001 mg/L	EPA 200.8	0.0001 mg/L	10/2/20	IPC	0.005
Chromium	< 0.0015 mg/L	EPA 200.8	0.0015 mg/L	10/2/20	IPC	0.1
Manganese	< 0.0008 mg/L	EPA 200.8	0.0008 mg/L	10/2/20	IPC	0.05
Mercury	< 0.0000 mg/L	EPA 200.8	0.0000 mg/L	10/6/20	MLT	0.002
Selenium	0.0012 mg/L	EPA 200.8	0.0008 mg/L	10/2/20	IPC	0.05

Abbreviations/ References:

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



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Analytical Results

TASK NO: 201001048

Report To: David R Gorman, P.E.

Company: Monument Valley Engineers - MVE Civil
1903 Lelaray St
Colorado Springs CO 80909

Bill To: David R Gorman, P.E.

Company: Monument Valley Engineers - MVE Ci
1903 Lelaray St
Colorado Springs CO 80909

Task No.: 201001048
Client PO:
Client Project:

Date Received: 10/1/20
Date Reported: 10/9/20
Matrix: Water - Drinking

Customer Sample ID Prarie Ridge
Sample Date/Time: 10/1/20 10:15 AM
Lab Number: 201001048-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
<u>Total</u>						
Silver	< 0.0005 mg/L	EPA 200.8	0.0005 mg/L	10/2/20	IPC	
Thallium	< 0.0002 mg/L	EPA 200.8	0.0002 mg/L	10/2/20	IPC	0.002
Zinc	0.006 mg/L	EPA 200.8	0.001 mg/L	10/2/20	IPC	5

Abbreviations/ References:

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



DATA APPROVED FOR RELEASE BY



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

Customer ID: 20040H
Account ID: Z01034

Lab Control ID: 20M02854
Received: Oct 05, 2020
Reported: Nov 17, 2020
Purchase Order No.
None Received

Stuart Nielson
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City, CO 80640

ANALYTICAL REPORT

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

By: _____


Jessica Axen
Analytical Laboratories Director



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

Lab Control ID: 20M02854

Received: Oct 05, 2020

Reported: Nov 17, 2020

Purchase Order No.

None Received

Customer ID: 20040H

Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson

Colorado Analytical Laboratories, Inc.

Lab Sample ID			20M02854-001					
Customer Sample ID			201001059-01 - Prarie Ridge sampled on 10/01/20 @ 1015					
Parameter	Units	Code	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	pCi/L	T	2.1	1.9	0.1	SM 7110 B	10/7/20 @ 0852	KT
Gross Beta	pCi/L	T	6.1	2.4	3.8	SM 7110 B	10/7/20 @ 0852	KT
Radium-226	pCi/L	T	NR	-	-	SM 7500-Ra B	-	-
Radium-228	pCi/L	T	NR	-	-	EPA Ra-05	-	-

NR - Not Requested - Analysis not requested on this sample.

Certification ID's: CO/EPA CO00008; CT PH-0152; KS E-10265; MI 9070; NJ CO008;
NYSELAP (NELAC Certified) 11417; RI LAO00284; WI 998376610, TX T104704256-15-6

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

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than



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

Lab Control ID: 20M02854

Received: Oct 05, 2020

Reported: Nov 17, 2020

Purchase Order No.

None Received

Customer ID: 20040H

Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson

Colorado Analytical Laboratories, Inc.

Lab Sample ID			20M02854-002					
Customer Sample ID			201001059-01A - Prarie Ridge sampled on 10/01/20 @ 1015					
Parameter	Units	Code	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	pCi/L	T	NR	-	-	SM 7110 B	-	-
Gross Beta	pCi/L	T	NR	-	-	SM 7110 B	-	-
Radium-226	pCi/L	T	0.9	0.3	0.1	SM 7500-Ra B	11/6/20 @ 0938	AS
Radium-228	pCi/L	T	3.5	1.0	0.3	EPA Ra-05	10/19/20 @ 1158	JR

NR - Not Requested - Analysis not requested on this sample.

Certification ID's: CO/EPA CO00008; CT PH-0152; KS E-10265; MI 9070; NJ CO008;
NYSELAP (NELAC Certified) 11417; RI LA000284; WI 998376610, TX T104704256-15-6

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

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY

Date: 10/07/2020

Batch QC Summary Form

Analyte: Gross Alpha

Control Standard/LFB: ID: C-11 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C-11 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

Calculation:
$$\frac{(59.2) - (1.000) - (0.4) - (0.200)}{57.4} \times 100 = 103\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

 x Batch QC Passes**
 Batch QC Fails
 Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluated in this report.

Batch Listing by Lab Control Number:

<u>20M02829</u>	<u>20M02865</u>
<u>20M02835</u>	<u>20M02867</u>
<u>20M02854</u>	<u>20M02742</u>
<u>20M02855</u>	<u>20M02743</u>
<u>20M02859</u>	<u>20M02772</u>
<u>20M02860</u>	<u>20M02825</u>
<u>20M02861</u>	_____
<u>20M02862</u>	_____
<u>20M02863</u>	_____
<u>20M02864</u>	_____

Evaluator:

Gynnea Rockwell _____

10/12/2020

Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY

Date: 10/07/2020

Batch QC Summary Form

Analyte: Gross Beta

Control Standard/LFB: ID: C-11 pCi/mL: 44 (use 1 diluted)

Spike Solution: ID: C-11 pCi/mL: 44 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(38.3) - (1.000) - (0.0)}{44} \times 100 = 87\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

 x Batch QC Passes**
 Batch QC Fails
 Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluated in this report.

Batch Listing by Lab Control Number:

<u>20M02829</u>	<u>20M02865</u>
<u>20M02835</u>	<u>20M02867</u>
<u>20M02854</u>	<u>20M02742</u>
<u>20M02855</u>	<u>20M02743</u>
<u>20M02859</u>	<u>20M02772</u>
<u>20M02860</u>	<u>20M02825</u>
<u>20M02861</u>	_____
<u>20M02862</u>	_____
<u>20M02863</u>	_____
<u>20M02864</u>	_____

Evaluator:

Gynnes Rockwell _____

10/12/2020

Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY

Date: 11/06/2020

Batch QC Summary Form

Analyte: Radium-226

Control Standard/LFB: ID: NBL-6A pCi/mL: 23 (use 2 diluted)

Spike Solution: ID: NBL-6A pCi/mL: 23 (use 2 mL)

Spike Recovery Calculation: Sample: 20M02807-002c

$$\text{Calculation: } \frac{(46.9) - (0.970)}{46} - \frac{(0.1) - (0.950)}{46} \times 100 = 99\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap			x

* Required for batch size greater than 10 samples.

Conclusions:

 x Batch QC Passes**
 Batch QC Fails
 Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluated in this report.

Batch Listing by Lab Control Number:

20M02807	_____
20M02829	_____
20M02835	_____
20M02841	_____
20M02842	_____
20M02854	_____
20M02855	_____
20M02856	_____
_____	_____
_____	_____

Evaluator:

Glynned Rockwell _____

11/16/2020

Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY

Date: 10/19/2020

Batch QC Summary Form

Analyte: Radium-228

Control Standard/LFB: ID: NBL-7A pCi/mL: 13.2 (use 10 diluted)

Spike Solution: ID: NBL-7A pCi/mL: 13.2 (use 10 mL)

Spike Recovery Calculation: Sample: 20M02871-001e

$$\text{Calculation: } \frac{(140.5) - (1.7)}{132} \times 100 = 105\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap			x

* Required for batch size greater than 10 samples.

Conclusions:

 x Batch QC Passes**
 Batch QC Fails
 Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluated in this report.

Batch Listing by Lab Control Number:

20M02783	_____
20M02784	_____
20M02807	_____
20M02829	_____
20M02835	_____
20M02854	_____
20M02855	_____
20M02871	_____
_____	_____
_____	_____
_____	_____

Evaluator:

Glynn Rockwell _____

10/22/2020

Date

Sub-Lab Chain of Custody Form

20 mo?

Report To Information Company Name: <u>Colorado Analytical Laboratory</u> Report To: <u>Stuart Nielson</u> E-Mail: <u>stuartnielson@coloradolab.com</u>	Bill To Information (If different from report to)	Project Name -
Address: <u>10411 Heinz Way</u> <u>Commerce City, CO 80640</u> Phone: <u>303-659-2313</u>	Address:	CAL TASK 201001059 DEW Compliance Samples: Submit Data to CDPHE:

Tests Requested

Sample Date/Time		Sample ID	Matrix																
10/1/20	10:15 AM	201001059-01 - Prairie Ridge	Water - Drinking																
10/1/20	10:15 AM	201001059-01A - Prairie Ridge	Water - Drinking																

Comment:

Relinquished by: (Signature)	Date: Time: 10/2/20 1000	Received by: (Signature)	Date: Time: 10/2/20 1442	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)
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Rec'd presd
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10/2/20