



To: J. Brian Warner and Luraly Warner
17350 W. Goshawk Road
Colorado Springs CO 80908

Re: Water Resources Report for the Warner Subdivision

Date: April 16, 2021

The Water Resources Report was completed by Julia Murphy of Groundwater Investigations LLC, a Professional Geologist on behalf of J. Brian Warner and Luraly Warner (“Applicants”) in accordance with the requirements of the El Paso County Land Development Code described in Section 8.4.7 (B). Ms. Murphy has over 25 years’ experience in hydrogeologic analysis. She has been involved in evaluating water supply for subdivisions in El Paso County for over 15 years. This report presents the data, documentation and analysis in sufficient detail to determine sufficiency of the proposed subdivision’s water supply in terms of dependability, quantity and quality.

1.0 Summary of the Proposed Subdivision

The Warners’ property consists of a 40 Acre parcel zoned RR-5 located in the Northeast ¼ of the Northwest ¼ of Section 23, Township 11 South, Range 65 West, of the 6th P.M. (“Property”). The Property is situated within the Kiowa Bijou Designated Groundwater Basin having the address 17350 W. Goshawk Road, Colorado Springs Colorado, 80908, in El Paso County. (Figure 1).

The 40 acre property will be subdivided to create a four-lot minor subdivision. Lots 1 and 2 are vacant and will be 5-acres each; Lot 3 has an existing home with a well (Permit 95869) completed into the Dawson aquifer and an individual non-evaporative septic system and leach field and will be 19.96 acres; and Lot 4 is vacant and will be 10.0 acres.

2.0 Information Regarding Sufficient Quantity of Water

2.1 Water Quantity

A Determination of Water Rights to the four underlying groundwater aquifers and replacement plan was finalized on October 22, 2020. These include Basin Determinations 4025-BD (Dawson Aquifer), 4024-BD (Denver Aquifer), 4023-BD (Arapahoe Aquifer), 4022-BD, (Laramie Fox Hills Aquifer), and replacement plan 4025-RP (Attachment 1), Table 1 quantifies the groundwater underlying the property in each of the four aquifers.

AQUIFER	NET SAND (feet)	Annual Average Withdrawal 100 Years (Acre Feet)	Total Withdrawal (Acre Feet)
Dawson (NNT)	480	37.77	3840
Denver (NT)	370	25.20	2520
Arapahoe (NT)	260	17.70	1770
Laramie-Fox Hills (NT)	185	11.10	1110

The Water Court awarded the Applicants a vested right to 3,840 acre feet of groundwater from the not-nontributary Dawson aquifer underlying Applicants' Property. Up to 4.0 acre feet annually may be pumped pursuant to the plan for augmentation. As the Dawson aquifer is not-nontributary, the use as a source of water supply for the subdivision is pursuant to the Replacement Plan.

2.2 Water Demand

Pursuant to basin determination 4025-BD, the four residential lots will each use a total of 1.0 acre feet per year of groundwater from the underlying Dawson Aquifer to provide a minimum of 0.25 acre feet of water per year per residence for in-home use. The

remaining 0.75 acre feet per year will be available for irrigation of lawn and garden, domestic animal watering, and commercial use.

3.0 Sufficient Dependability

3.1 Water Supply

The proposed new wells for vacant Lot 1, 2 and 4 and the existing well on Lot 3 will use the not-nontributary Dawson Aquifer groundwater for their water supply. The Dawson aquifer was calculated to have 3,770 acre feet of available groundwater underlying the property. Of this, 1,200 Acre feet (31.8 percent) of the total available amount will be used to provide a 300 year supply.

Numerous nearby Dawson aquifer wells supply water for these rural homes. The existing home on Lot 3 has a well that has been steadily supplying water since 1977. This well is completed in the not non-tributary Dawson Aquifer and is permitted and constructed as an exempt well pursuant to C.R.S. 537-92-602 having permit number 95869 and will be re-permitted according to the approved replacement plan.

2.3. Meeting Replacement Requirements

As the withdrawal of the Dawson groundwater will, within one hundred years, deplete the flow of a natural stream or its alluvial aquifer at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal, the groundwater is considered to be not-nontributary. The Colorado Ground Water Commission has approved replacement plan 4025 RP to secure the replacement of actual depletions of the affected alluvial aquifers of the Kiowa- Bijou Designated Groundwater Basin and the alluvial aquifer of the Upper Black Squirrel Creek Designated Groundwater Basin to prevent any material injury to existing water rights in these alluvial aquifers. At a continuous withdrawal of 4.05 acre-feet annually for 300 years, depletions to the alluvial aquifer systems would steadily increase to 0.128 acre-feet per year in the 300th year, which is equal to 3.16% of pumping.

Under the replacement plan, it is accepted that the septic and leach field return flows from each lot will consist of 90% of the water used for in-house purposes. Assuming each lot uses a total annual amount for in-house use of 0.25 acre-feet, the return flow

per lot would be 0.225 acre-feet annually, and the return flows under the plan will total 0.675 acre- feet per year for all 3 lots at full build out. This exceeds the maximum depletion of 0.128 acre-feet that is projected to occur in the 300th year. The replacement water will replenish the alluvial aquifer system of the Kiowa-Bijou Designated Groundwater Basin where the wells are situated in accordance with Guideline 2007-1.

4.0 Information Regarding Sufficient Quality

Water quality samples were collected by GWI using standard collection and preservation methods. Analytes selected are in compliance with the Amendment to the Land Development Code dated August 27 2019, Section 8.4.7(B)(3)(d)(10)(a). The analysis results are presented in the Water Quality Report and provides evidence that the groundwater in the Dawson aquifer collected on the property meets the Colorado Primary Drinking Water Standards for the required analytes at the sample location.

5.0 Summary and Conclusions

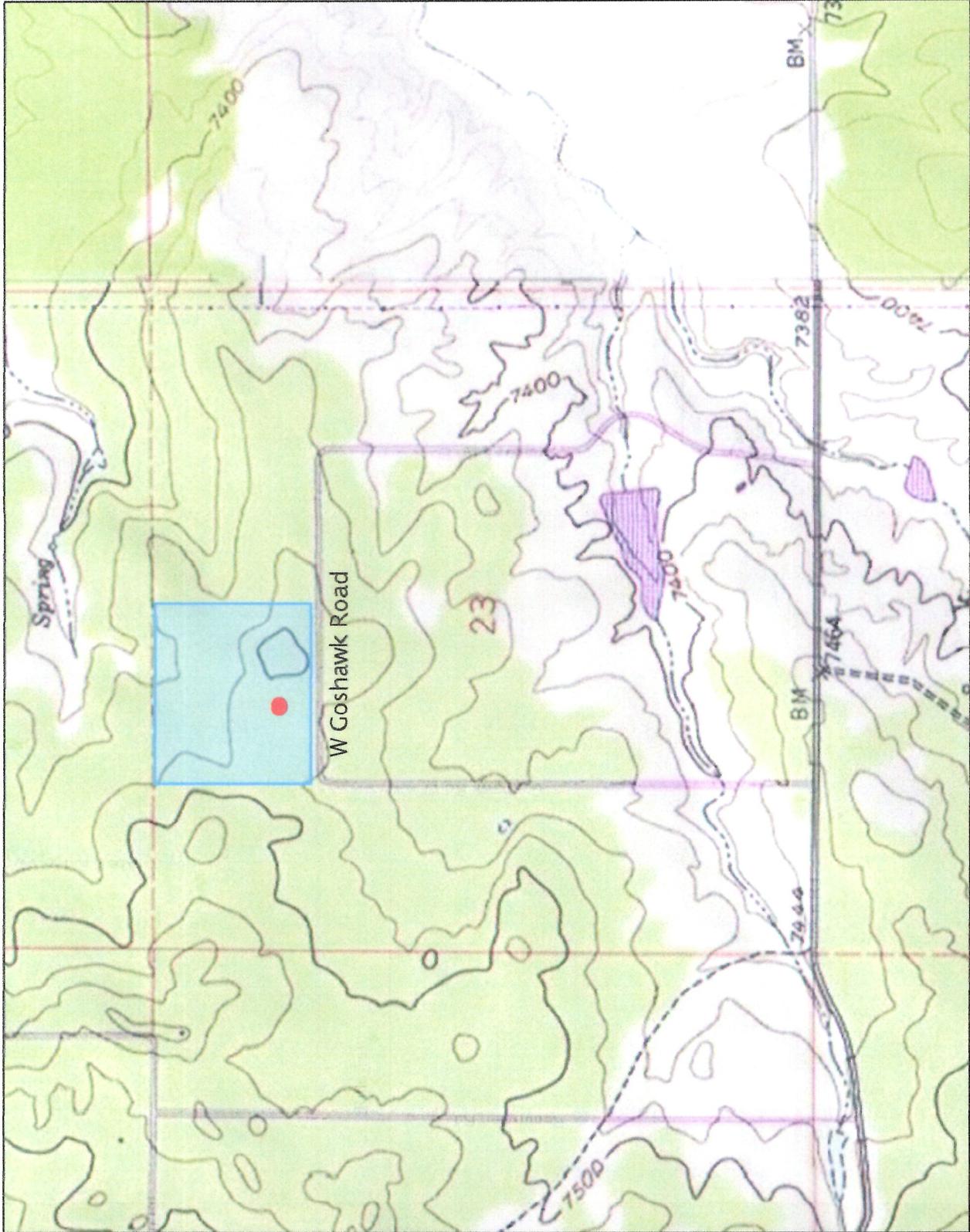
The proposed subdivision of 40 acres will create four new lot. The purpose of the Water Resources Report is to provide the data, documentation and analysis in sufficient detail to determine sufficiency of the proposed subdivision's water supply in terms of dependability, quantity and quality. Water delivered by wells completed in the Dawson aquifer will be used to serve the homes. The amount of groundwater underlying Applicants property has been quantified under the basin determination 4025-BD. Based on the proposed uses and quantification of available groundwater, there is sufficient quantity to meet the County required 300 year water supply criteria. The Dawson aquifer has successfully been a primary source of water supply for similar homes at sufficient rates and duration to meet similar uses; the source is a dependable supply. The quality of the Dawson aquifer groundwater underlying the new proposed lot was evaluated within the parameters specified in the Land Development Code and have been determined to meet Primary Drinking Water Standards for the selected analytes.

Respectfully submitted,



Julia M. Murphy, MS PG
Hydrogeologist/Professional Geologist

Warner Subdivision



Legend

- County
- Well Location

Location

Notes

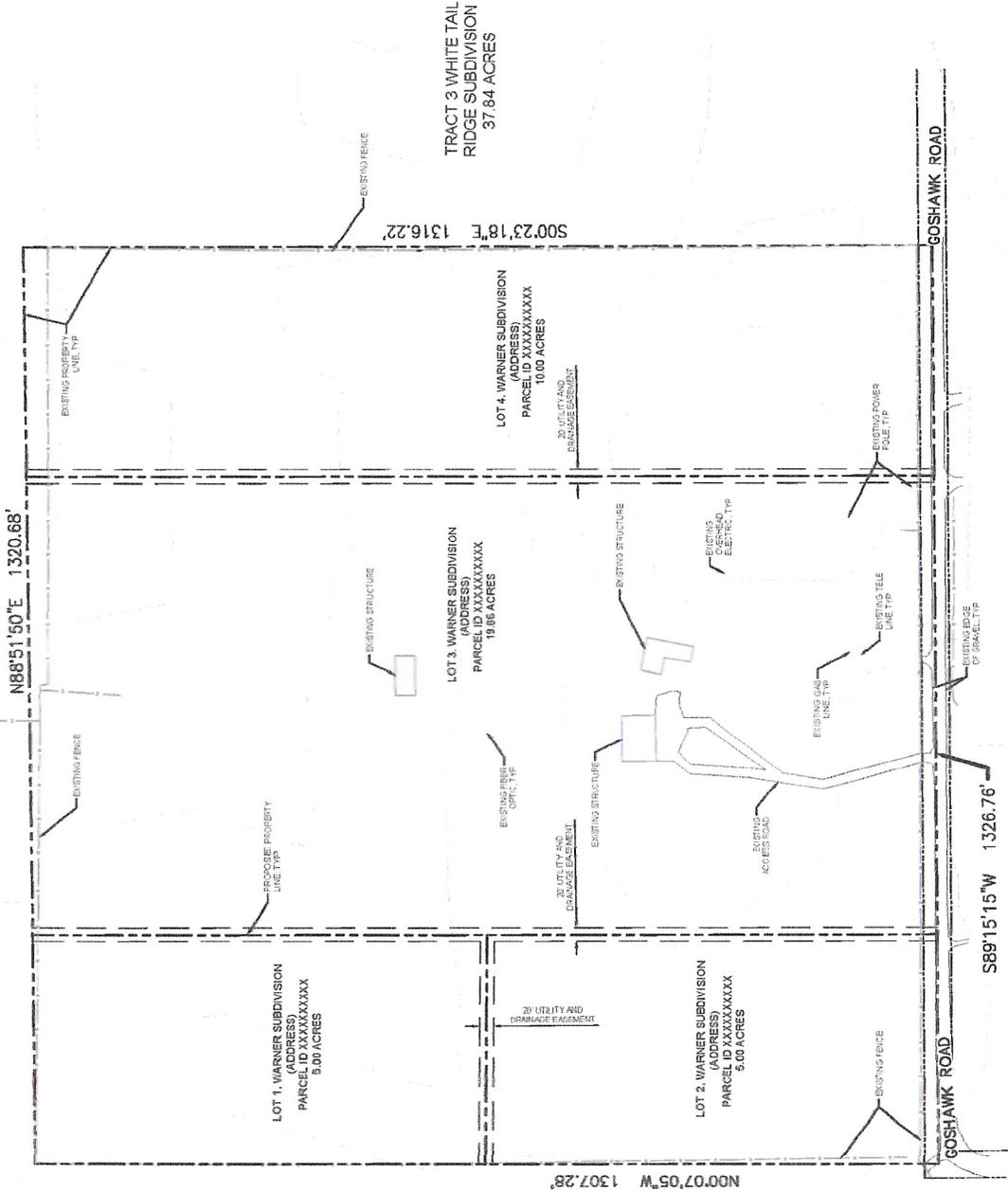
NE4 NW4 S23 T11S R65W

FIGURE 1

FIGURE 2

WARNER 4-LOT SUBDIVISION
 SITE DEVELOPMENT PLANS
 17350 GOSHAWK RD. COLORADO SPRINGS, CO 80908

GENERAL NOTES:



GRAPHIC SCALE
 0' 50' 100' 150' 200'
 Scale: 1"=80'

NO.	REVISIONS	BY	DATE

FORSGREN
Associates, Inc.
 55 Interstate Drive East, Suite 119, Englewood, CO 80112
 TEL: 720.214.0884 FAX: 720.000.0000

PROJECT NO.	DATE

OWNER
 BRIAN WARNER
 COLORADO SPRINGS, CO

DEVELOPMENT PLAN
 4-LOT MINOR SUBDIVISION

SHEET NO. C-01
 DATE: 06/10/2020
 PAGE NO. 1 OF 1

ATTACHMENT 1

COLORADO GROUND WATER COMMISSION FINDINGS AND ORDER

IN THE MATTER OF AN APPLICATION FOR A DETERMINATION OF A RIGHT TO AN ALLOCATION OF
GROUNDWATER IN THE KIOWA-BIJOU DESIGNATED GROUNDWATER BASIN

DETERMINATION NO.: 4025-BD

AQUIFER: Dawson

APPLICANT: J Brian Warner and Luraly Warner

In compliance with section 37-90-107(7), C.R.S., and the Designated Basin Rules, 2 CCR 410-1, J Brian Warner and Luraly Warner (Applicant) submitted an application to the Colorado Ground Water Commission (Commission) for a determination of a right to an allocation of designated groundwater from the Dawson Aquifer.

FINDINGS

1. The application was received by the Commission on July 7, 2020.
2. The Applicant requests a determination of right to an allocation of designated groundwater (Determination) in the Dawson aquifer (Aquifer) underlying 40 acres, generally described as the NE1/4 of the NW1/4 of Section 23, Township 11 South, Range 65 West, of the 6th P.M., in El Paso County (Overlying Land). According to a Nontributary Groundwater Landownership Statement dated June 8, 2020, attached hereto as Exhibit A, the Applicant owns the 40 acres of land, which are further described in said Ownership Statement, and claims control of the right to the groundwater in the Aquifer underlying the land.
3. The Overlying Land is located within the boundaries of the Kiowa-Bijou Designated Groundwater Basin. The Commission has jurisdiction over the designated groundwater that is the subject of this Determination.
4. The Commission's Staff has evaluated the application relying on the claims to control of the groundwater in the Aquifer underlying the Overlying Land made by the Applicant.
5. The Applicant intends to apply the groundwater in the Aquifer underlying the Overlying Land to the following beneficial uses: in home use, irrigation of lawn and garden, domestic animal watering and commercial. The Applicant's proposed place of use of the groundwater in the Aquifer underlying the Overlying Land is the above described 40 acres of Overlying Land.
6. Pursuant to section 37-90-107(7)(a), and in accordance with the Designated Basin Rules, the Commission shall allocate the groundwater in the Aquifer underlying the Overlying Land on the basis of the ownership of the Overlying Land.
7. The amount of water in storage in the Aquifer underlying the 40 acres of Overlying Land claimed by the Applicant is 3,840 acre-feet. This determination was based on the following as specified in the Designated Basin Rules.
 - a. The average specific yield of those saturated aquifer materials containing sufficient water that can be drained by gravity and placed to beneficial use is 20 percent.
 - b. The average thickness of those saturated aquifer materials containing sufficient water that can be drained by gravity and placed to beneficial use is 480 feet.

8. A review of the records in the Office of the State Engineer has disclosed that a well operating pursuant to section 37-90-105, C.R.S., (i.e. a small-capacity well), permit no. 95869, is located on the Overlying Land and is permitted to withdraw 1.5 acre-feet per year of groundwater from the Aquifer from beneath the Overlying Land. The applicant has indicated that permit no. 95869 will be cancelled and the well re-permitted to operate pursuant to this Determination. The amount of water considered to have been historically withdrawn from the aquifer by this well is 63 acre-feet. In applying Rule 5.3.2.5 of the Designated Basin Rules to computing the amount of water available for allocation in this Determination, the amount of groundwater in the Aquifer underlying the Overlying Land available for allocation in this Determination is reduced by 63 acre-feet to 3,777 acre-feet. Except for that well, review of the records in the Office of the State Engineer finds no other previous allocations or permitted withdrawals from the Aquifer underlying the Overlying Land.
9. Pursuant to section 37-90-107(7)(c)(III), an approved determination of a right to an allocation shall be considered a final determination of the amount of groundwater so determined; except that the Commission shall retain jurisdiction for subsequent adjustment of such amount to conform to the actual local aquifer characteristics from adequate information obtained from well drilling or test holes.
10. Pursuant to section 37-90-107(7)(d), the Commission has authority to issue well permits pursuant to subsection 107(7) (i.e. permits for large capacity wells) for the withdrawal of designated groundwater from the Aquifer. Pursuant to section 37-90-107(7)(a) the Commission shall adopt the necessary rules to carry out the provisions of subsection (7). Pursuant to section 37-90-111(h), C.R.S., the Commission is empowered to adopt rules necessary to carry out the provisions of Article 90 of Title 37. In accordance with that authority, the Commission has adopted the Rules and Regulations for the Management and Control of Designated Ground Water (2 CCR 410-1) (“Designated Basin Rules”, or “Rules”).
11. Large capacity well permits issued pursuant to section 37-90-107(7) are subject to the following provisions of statute and the Designated Basin Rules.
 - a. Pursuant to section 37-90-107(7)(a) well permits issued pursuant to subsection 107(7) shall allow withdrawals on the basis of an aquifer life of one hundred years. The 3,777 acre-feet of water in the Aquifer underlying the Overlying Land available for allocation in this Determination, if permitted for withdrawal by large capacity wells on the basis of an aquifer life of one hundred years, would result in an allowed average annual amount of withdrawal of 37.77 acre-feet per year.
 - b. Any amounts of groundwater in the Aquifer allocated in this Determination that are permitted for withdrawal pursuant to section 37-90-105, by small capacity well permits issued after the issuance of this Determination reduce the amount of water, and the allowed average annual amount of withdrawal, that may be withdrawn by wells permitted pursuant to section 37-90-107(7).
 - c. In accordance with Rule 5.3.6 of the Designated Basin Rules, it has been determined that withdrawal of groundwater from the Aquifer underlying the Overlying Land will, within one hundred years, deplete the flow of a natural stream or an alluvial aquifer at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and, therefore, the groundwater in the Aquifer underlying the Overlying Land is considered to be not-nontributary groundwater as defined in Rule 4.2.23 of the Designated Basin Rules.

Aquifer: Dawson

Applicant: J Brian Warner and Luraly Warner

Withdrawal of water from the Aquifer underlying the Overlying Land would impact the alluvial aquifer of the Kiowa-Bijou Designated Groundwater Basin, which has been determined to be over-appropriated. Commission approval of a replacement plan pursuant to section 37-90-107.5, C.R.S., and Rule 5.6 of the Designated Basin Rules, that provides for the replacement of the actual depletion to the alluvial aquifer and is adequate to prevent any material injury to existing water rights of other appropriators, is required prior to approval of well permits for wells to be located on this land area to withdraw the groundwater in the Aquifer underlying the Overlying Land. Pursuant to the Rules the replacement plan shall provide for the depletion of the alluvial water for the first 100 years due to all previous pumping, and if pumping continues beyond 100 years shall replace actual impact until pumping ceases, assuming water table conditions in the Aquifer.

12. Pursuant to section 37-90-105(1), the State Engineer has the authority to approve small capacity well permits. While water withdrawn from the Aquifer from beneath the Overlying Land by small capacity wells may consist of the groundwater allocated herein, the Commission recognizes that in approving small capacity permits the State Engineer is not bound by the terms and conditions of this Determination, and may approve small capacity permits based on standards and with such conditions as the State Engineer considers appropriate.
13. The ability of wells permitted to withdraw the authorized amount of water from this nonrenewable Aquifer may be less than the one hundred years upon which the amount of water in the Aquifer is allocated, due to anticipated water level declines.
14. In accordance with sections 37-90-107(7)(c)(II) and 37-90-112, C.R.S., the application was published in the Ranchland News newspaper on August 27, 2020 and September 3, 2020. No objections to the application were received within the time limit set by statute.

ORDER

In accordance with section 37-90-107(7) and the Designated Basin Rules, the Commission hereby determines a right to an allocation of designated groundwater in the Dawson Aquifer underlying 40 acres of land, generally described as the NE1/4 of the NW1/4 of Section 23, Township 11 South, Range 65 West, of the 6th P.M., further described in Exhibit A, subject to the following conditions.

15. The amount (i.e. volume) of water in the Aquifer underlying the 40 acres of Overlying Land allocated herein is 3,777 acre-feet (Underlying Groundwater).
16. The amount (i.e. volume) of Underlying Groundwater allocated herein shall be considered final, except that the Commission shall retain jurisdiction for subsequent adjustment of such amount to conform to the actual local aquifer characteristics from adequate information obtained from well drilling or test holes, if such information indicates that the initial estimate of the amount of Underlying Groundwater in the Aquifer was incorrect.
17. Approval of this Determination meets the requirements of section 37-90-107(7)(d)(II), that requires a determination of groundwater to be withdrawn by a well be made prior to the granting of a well permit pursuant to section 37-90-107(7).

18. Well permits issued pursuant to section 37-90-107(7), (i.e. large capacity wells) and this Determination are subject to the following conditions.
- a. The total amount of Underlying Groundwater that may be withdrawn from the Aquifer by all large capacity wells permitted pursuant to this Determination may not exceed a volume of 3,777 acre-feet, less any amount of the Underlying Groundwater allocated herein permitted to be withdrawn by small capacity wells issued permits pursuant to section 37-90-105 after the issuance of this Determination. The amounts of water permitted to be withdrawn by such small capacity wells shall be considered to be one-hundred times the annual withdrawals permitted to be withdrawn by those wells.
 - b. The allowed average annual amount of withdrawal by any large capacity well (or well field) permitted to withdraw the allocated water shall be equal to the volume of water permitted to be withdrawn by that well (or well field) divided by one-hundred years.
 - c. The allowed maximum annual amount of withdrawal by any large capacity well (or well field) permitted to withdraw the allocated water may exceed the allowed average annual amount of withdrawal allowed by the well permit(s) as long as the total volume of water withdrawn by such well(s) does not exceed the product of the number of years since the date(s) of issuance of the well permit(s) times the allowed average annual amount of withdrawal allowed by the well permit(s).
 - d. The Applicant may pump the allowed average annual amount of withdrawal and the allowed maximum annual amount of withdrawal from one or more wells of a well field in any combination, so long as the total combined withdrawal of the wells does not exceed the amounts described in this Order.
 - e. Commission approval of a replacement plan, that provides for the replacement of the actual depletion to the alluvial aquifer and is adequate to prevent any material injury to existing water rights of other appropriators in the alluvial aquifer, is required prior to approval of well permits that allow the withdraw of the Underlying Groundwater. The replacement plan shall provide for the depletion of the alluvial water for the first 100 years due to all previous pumping, and if pumping continues beyond 100 years shall replace actual impact until pumping ceases, assuming water table conditions in the Aquifer.
 - f. The use of the Underlying Groundwater shall be limited to the following beneficial uses: in home use, irrigation of lawn and garden, domestic animal watering and commercial. The place of use of the Underlying Groundwater shall be limited to the above described 40 acres of Overlying Land. The Underlying Groundwater that is the subject of this Determination may be reused and successively used to extinction to the extent dominion and control over the water is maintained and its volume can be distinguished from the volume of any stream system into which it is introduced to the satisfaction of the Commission.
 - g. The wells must be located on the above described 40 acres of Overlying Land.
 - h. No well shall be located within 600 feet of any existing large-capacity well in the same Aquifer unless a Waiver of Claim of Injury is obtained from the owner of the existing well or unless the Commission, after a hearing, finds that circumstances in a particular instance warrant that a well may be permitted without regard to this limitation.

- i. The wells must be constructed to withdraw water from only the Dawson Aquifer.
 - j. The entire depth of each well must be geophysically logged prior to installing the casing in the same manner as set forth in Rule 9 of the Statewide Nontributary Ground Water Rules, 2 CCR 402-7.
 - k. A totalizing flow meter or other Commission approved measuring device shall be installed on each well and maintained in good working order by the well owner. Annual diversion records shall be collected and permanently maintained by the well owner and submitted to the Commission.
 - l. The well shall be marked in a conspicuous place with this determination number, the well permit number, and the name of the Aquifer. The well owner shall take necessary means and precautions to preserve these markings.
19. Existing well permit no. 95869 must be canceled and a new permit issued for that well to operate pursuant to this Determination.
20. A copy of this Determination shall be recorded by the Applicant in the public records of the county in which the Overlying Land is located so that a title examination of the above described 40 acres of Overlying Land area, or any part thereof, shall reveal the existence of this Determination.
21. The right to an allocation of designated groundwater determined herein is a vested property right with specific ownership. Some or all of the water right may be transferred independent of the land under which the right originated. Any action taken that is intended to convey, transfer, and/or sell the subject water right shall explicitly identify this Determination number, the specific Aquifer, and the total amount (i.e. volume) of the right that is being conveyed.

Dated this 22nd day of October, 2020.



Kevin G. Rein, P.E.
Executive Director
Colorado Ground Water Commission

By: 
Joanna Williams, P.E.
Water Resource Engineer

Prepared by: idc
F&O4025-BD.doc

STATE OF COLORADO
OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES
1313 Sherman St, Room 821, Denver, CO 80203
Phone (303) 866-3581, www.water.state.co.us

NONTRIBUTARY GROUND WATER LANDOWNERSHIP STATEMENT

AQUIFER: DAWSON

I (we) J Brian Warner and Luraly Warner claim and say that I (we) am (are) the owner(s) of the following described property consisting of 40 acres in the County of EL PASO , State of Colorado, as evidenced by the attached copy of a deed, recorded in the county (or counties) in which the land is located. (insert the property's legal description)

NE4NW4 SEC 23-11-65

I (we) further claim and say that the right to withdraw the ground water in the aquifer underlying the above described land has not been reserved by another, nor has consent been given to another for the right to its withdrawal.

NOTE: A completed "Nontributary Landownership or Consent Verification of Notice" form (GWS-43) must also be provided for all applications submitted pursuant to C.R.S. 37-90137(4) outside of a Designated Ground Water Basin.

Further, I (we) claim and say that I (we) have read the statement made herein; know the contents thereof; and that the same are true to my (our) knowledge. Pursuant to Section 24-4104(13)(a), C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a Class 1 misdemeanor.

<u>J Brian Warner</u>	<u>6/8/2020</u>
Signature	Date
<u>Luraly Warner</u>	<u>6/8/2020</u>
Signature	Date

.....

**COLORADO GROUND WATER COMMISSION
FINDINGS AND ORDER**

IN THE MATTER OF AN APPLICATION FOR REPLACEMENT PLAN TO ALLOW THE WITHDRAWAL OF
GROUNDWATER FROM THE DAWSON AQUIFER IN THE KIOWA-BIJOU DESIGNATED GROUNDWATER BASIN.

REPLACEMENT PLAN NO. 4025-RP

FOR DETERMINATION OF WATER RIGHT NO. 4025-BD

AQUIFER: Dawson

APPLICANT: J Brian Warner and Luraly Warner

In compliance with section 37-90-107.5, C.R.S. and the Designated Basin Rules, 2 CCR 410-1 (Rules or Rule), J Brian Warner and Luraly Warner (Applicant) submitted an application for a replacement plan to allow the withdrawal of groundwater from the Dawson Aquifer that has been allocated by Determination of Water Right No. 4025-BD.

FINDINGS

1. Pursuant to section 37-90-107(7), C.R.S., in a Findings and Order dated October 22, 2020, the Ground Water Commission (Commission) approved a Determination of a Right to an Allocation of Groundwater, No. 4025-BD, from the Dawson Aquifer (Aquifer), summarized as follows.
 - a. The determination quantified an amount of water from beneath 40 acres of overlying land generally described as the NE1/4 of the NW1/4 Section 23, Township 11 South, Range 65 West of the 6th P.M., in El Paso County (Overlying Land).
 - b. The amount of water in the aquifer that was allocated was 3,777 acre-feet, and the allowed average annual amount of groundwater to be withdrawn from the aquifer was limited to 37.77 acre-feet per year (subject to adjustment by the Commission to conform to actual local aquifer characteristics).
 - c. The use of groundwater is limited to the following beneficial uses: in home use, irrigation of lawn and garden, domestic animal watering and commercial.
 - d. Withdrawal of the subject groundwater will, within one hundred years, deplete the flow of a natural stream or its alluvial aquifer at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal, the groundwater is considered to be not-nontributary, and Commission approval of a replacement plan providing for actual depletion of affected alluvial aquifers and adequate to prevent any material injury to existing water rights in such alluvial aquifers is required prior to approval of well permits for wells to withdraw the subject groundwater.
2. The subject water is Designated Groundwater located within the boundaries of the Kiowa-Bijou Designated Groundwater Basin. The Commission has jurisdiction over the withdrawal of the water by large capacity wells that are permitted pursuant to section 37-90-107(7).
3. Withdrawal of the subject groundwater would deplete the alluvial aquifer of the Kiowa-Bijou Designated Groundwater Basin and the alluvial aquifer of the Upper Black Squirrel Creek Designated Groundwater Basin, both of which, according to Rules 5.2.4.2 and 5.2.6.2, respectively, have been determined to be over appropriated. Such depletion would unreasonably impair existing large capacity alluvial rights withdrawing water from those alluvial aquifers.

4. Pursuant to Rule 5.6.1.A this plan must be adequate to prevent any material injury to water rights of other appropriators, which for purposes of this plan means large capacity wells withdrawing water from the alluvial aquifer of the Kiowa-Bijou Designated Groundwater Basin and the alluvial aquifer of the Upper Black Squirrel Creek Designated Groundwater Basin.
5. Pursuant to Rule 5.3.6.2(C) the amount of replacement water shall provide for the depletion of alluvial water for the first 100 years due to all previous pumping and if pumping continues beyond 100 years, shall replace actual impact until pumping ceases.
6. The application for the replacement plan was received by the Commission on August 6, 2020.
7. The Applicant proposes to divert 4.0 acre-feet annually from the Dawson Aquifer for a period of 300 years. The Dawson aquifer water will be withdrawn through four wells to be located on four residential lots. Each Dawson Aquifer well is proposed to divert 1 acre-foot of water annually for use in 1 single family residence (0.25 acre-feet in-door use), and irrigation of lawn and garden and domestic animal watering and commercial (0.75 acre-feet). The land on which the wells will be located is the 40 acres of Overlying Land of Determination of Water Right no. 4025-BD described above.
8. At a continuous withdrawal of 4.0 acre-feet annually for 300 years, depletions to the alluvial aquifer systems of the Kiowa-Bijou Designated Groundwater Basin and Upper Black Squirrel Creek Designated Groundwater Basin would steadily increase to 0.126 acre-feet per year in the 300th year, which is equal to 3.15% of pumping, as shown in Exhibit A.
9. The Applicant proposes to provide 0.225 acre-feet per year of replacement water to the alluvial aquifer system of the Kiowa-Bijou Designated Groundwater Basin. The proposed source of replacement water is septic and leaching field return flows from the in-house use of the groundwater to be pumped under the plan. The Applicant estimates that return flows from each lot will consist of 90% of the water used for in-house purposes. Assuming each lot uses a total annual amount for in-house use of 0.25 acre-feet the return flow per lot would be 0.225 acre-feet annually, and the return flows under the plan will total 0.9 acre-feet per year for all four lots at full build out.
10. The subject property is located within the drainage of Kiowa Creek, and the return flows will flow to the alluvial aquifer of the Kiowa-Bijou Designated Groundwater Basin. The Applicant proposes to aggregate all replacements to the drainage in which the well or wells will operate, in accordance with Guideline 2007-1.
11. Pursuant to Rule 5.6.1.B this plan must be adequate to prevent unreasonable impairment of water quality. Pursuant to Rule 5.6.1.B.1.b, if the replacement source water is from an onsite wastewater treatment system permitted by a local health agency and the applicant demonstrates the source is in compliance with that permit there shall be a rebuttable presumption of no unreasonable impairment of water quality.
12. Pursuant to Rule 5.6.1.C this plan, including the proposed uses of the water withdrawn pursuant to the plan, must not be speculative, and must be technically and financially feasible and within the Applicant's ability to complete. The plan, including the proposed uses of the water withdrawn pursuant to the plan, is not speculative. The plan appears technically and financially feasible and within the Applicant's ability to complete.

13. Pursuant to Rule 5.6.1.D this plan must be able to be operated and administered on an ongoing and reliable basis. The plan appears to be able to be operated and administered on an ongoing and reliable basis.
14. Pursuant to Rule 5.6.1.F replacement source water must be physically and legally available in time, place and amount to prevent material injury. As determined in Determination of Water Right No. 4025-BD water is currently available in the amounts and for the number of years proposed to be diverted.
15. Pursuant to Rule 5.6.1.G the replacement source water must be legally available for use. Records in this office indicate that the Applicant controls the water right to be used as the source of replacement water, consisting of Determination of Water Right No. 4025-BD, and such water is legally available for use pursuant to this plan.
16. In accordance with sections 37-90-107.5 and 37-90-112, C.R.S., the application was published in the Ranchland News newspaper on August 27, 2020 and September 3, 2020. No objections to the application were received within the time limit set by statute.
17. According to Rule 5.6.1:
 - a. The Applicant has the burden of proving the adequacy of the plan in all respects.
 - b. If the applicant meets its burden of proof, the Commission shall grant approval of the plan which shall include any terms and conditions established the Commission.
18. The Commission Staff has evaluated the application pursuant to section 37-90-107.5, and the requirements of Rule 5.3.6.2(C) and Rule 5.6, finds that the requirements have been meet, and the plan may be approved to allow diversions from the Dawson Aquifer if operated subject to the conditions given below.

ORDER

In accordance with section 37-90-107.5, and the Designated Basin Rules, the Colorado Ground Water Commission orders that the application for a replacement plan to allow the withdrawal of groundwater from the Dawson Aquifer underlying 40 acres that are the subject of Determination of Water Right no. 4025-BD is approved subject to the following conditions:

19. The Dawson Aquifer water will be withdrawn through four wells to be located on four residential lots. The allowed use of groundwater for each well under this plan is use in one single family residence, irrigation of lawn and garden, domestic animal watering and commercial. The land on which the wells will be located is the 40 acres of Overlying Land of Determination of Water Right no. 4025-BD described above.
20. The allowed annual amount of groundwater to be withdrawn from the Aquifer by all wells operating under this plan shall not exceed 4.0 acre-feet. The allowed annual amount of water to be withdrawn from each on-lot well shall not exceed 1 acre-foot.
21. Existing well permit no. 95869 must be canceled and a new permit issued for that well to operate pursuant to this Replacement Plan.

22. A totalizing flow meter shall be installed on each well. The well owner shall maintain the meter in good working order.
23. Permanent records of all withdrawals of groundwater from each well shall be recorded at least annually by the well owners, permanently maintained, and provided to the Commission.
24. Pumping under this plan is limited to a period of 300 years. The year of first use of this replacement plan shall be the calendar year of construction of a well permitted pursuant to this plan or permitting of an existing well pursuant to the plan.
25. Return flows from in-house use of groundwater shall occur through individual on-lot non-evaporative septic systems located within the 40 acres of Overlying Land that are the subject of Determination of Water Right No. 4025-BD. The septic systems must be constructed and operated in compliance with a permit issued by a local health agency.
26. Replacement of depletions must be provided annually in the acre-feet amounts shown in Exhibit A. Annual replacement requirements may be computed by pro-rating between the values given on Exhibit A, or for simplicity may be taken as the amount shown in the next succeeding 5 year increment.
27. The Applicant or their successor(s) are responsible for ensuring that replacement water is provided to the alluvial aquifer as required by this plan. The annual replacement requirement and the annual amount of replacement water provided shall be calculated and reported on a form acceptable to the Commission. The annual amount of replacement water provided must be no less than the annual replacement requirement on a yearly basis. No credit shall be claimed by the Applicant for an oversupply of replacement water provided to the alluvium during previous years.
28. The Applicant must provide the required annual amount of replacement water for the first 100 years, or for as long as a well is operated pursuant to this plan, whichever is longer.
29. To assure adequate return flows, at least one well must be serving an occupied single-family dwelling that is generating return flows via a non-evaporative septic system before any irrigation or animal watering is allowed to be served by any of the wells.
30. So long as at least one well continues to pump and supply an occupied dwelling, the plan's required replacement obligations, shown in Exhibit A, will be met. Should all wells cease pumping for in-house use within the first 100 years an amended or alternate replacement plan must be obtained that will replace actual depletions to the alluvial aquifer so as to prevent any material injury to water rights of other appropriators.
31. The Applicant (and their successors) must gather and maintain permanent records of all information pertaining to operation of this plan, which shall include, but is not be limited to, those items identified below. The Applicant must submit records to the Commission on forms acceptable to the Commission, on an annual basis for the previous calendar year, by February 15th of the following year.
 - a. Identification of all well permits issued and wells constructed under this plan.

- b. The amount of water diverted by each well and all wells in total, both annually and cumulatively since operation of the plan began.
 - c. The number of occupied dwellings served by each well.
 - d. The return flows occurring from use of all wells operating under the plan, assuming 0.225 acre-feet per year per occupied single family dwelling (90% of the water used for in-house purposes) enters the alluvial aquifer as replacement water.
 - e. Any other information the Commission deems relevant and necessary to operation, monitoring, accounting, or administration of the plan.
32. The Applicant (and their successors) are fully responsible for the operation, monitoring, and accounting of the replacement plan. In the event a lot with a well permitted or operating pursuant to this plan is sold, identification of the well that was sold and evidence that the new owner has been notified of their responsibilities under the replacement plan shall accompany that year's accounting.
33. Any covenants adopted for this subdivision should contain a description of the replacement plan, including the limitations on diversions and use of water for each well and lot, the requirement to meter and record all well pumping, and information on how records are to be reported and the plan is to be administered.
34. In the event the permitted well or wells are not operated in accordance with the conditions of this replacement plan, they shall be subject to administration, including orders to cease diverting groundwater.
35. All terms and conditions of Determination of Water Right No. 4025-BD must be met.
36. Pursuant to Rule 5.6.1.E, a copy of this Findings and Order shall be recorded by the Applicant in the clerk and recorder's records of El Paso County, so that a title examination of the land on which the structures involved in this plan are located reveals the existence of this plan.

Dated this 22nd day of October, 2020.



Kevin G. Rein, P.E.
Executive Director
Colorado Ground Water Commission

By: 
Keith Vander Horst, P.E.
Chief of Water Supply, Designated Basins

Exhibit A
4025-RP
Page 1 of 1

Exhibit A
Replacement Plan - Determination No.: 10004494-BD
Page 1 of 1

Designated Basin Summary Table for J Brian Warner and Luraly Warner Pumping Rate of 4 acre-feet per year for 300 Years from the Dawson aquifer Section(s): Section 23, T11S, R66W, 6th P.M.							
Year	Pumping (Q) (AF/YR)	Annual Depletion (q) (AF/YR)	Depletion as a % of Pumping (q/Q)	Year	Pumping (Q) (AF/YR)	Annual Depletion (q) (AF/YR)	Depletion as a % of Pumping (q/Q)
5	4.0	0.000	0.00	155	4.0	0.053	1.31
10	4.0	0.000	0.00	160	4.0	0.055	1.38
15	4.0	0.000	0.01	165	4.0	0.058	1.44
20	4.0	0.001	0.02	170	4.0	0.060	1.50
25	4.0	0.001	0.03	175	4.0	0.063	1.57
30	4.0	0.002	0.05	180	4.0	0.065	1.63
35	4.0	0.003	0.07	185	4.0	0.068	1.70
40	4.0	0.004	0.10	190	4.0	0.070	1.76
45	4.0	0.005	0.13	195	4.0	0.073	1.82
50	4.0	0.007	0.17	200	4.0	0.076	1.89
55	4.0	0.008	0.20	205	4.0	0.078	1.95
60	4.0	0.010	0.24	210	4.0	0.081	2.02
65	4.0	0.011	0.29	215	4.0	0.083	2.08
70	4.0	0.013	0.33	220	4.0	0.086	2.14
75	4.0	0.015	0.38	225	4.0	0.088	2.21
80	4.0	0.017	0.43	230	4.0	0.091	2.27
85	4.0	0.019	0.48	235	4.0	0.093	2.33
90	4.0	0.021	0.54	240	4.0	0.096	2.40
95	4.0	0.024	0.59	245	4.0	0.099	2.46
100	4.0	0.026	0.65	250	4.0	0.101	2.53
105	4.0	0.028	0.70	255	4.0	0.104	2.59
110	4.0	0.030	0.76	260	4.0	0.106	2.65
115	4.0	0.033	0.82	265	4.0	0.109	2.72
120	4.0	0.035	0.88	270	4.0	0.111	2.78
125	4.0	0.038	0.94	275	4.0	0.114	2.84
130	4.0	0.040	1.00	280	4.0	0.116	2.90
135	4.0	0.043	1.06	285	4.0	0.119	2.97
140	4.0	0.045	1.13	290	4.0	0.121	3.03
145	4.0	0.048	1.19	295	4.0	0.124	3.09
150	4.0	0.050	1.25	300	4.0	0.126	3.15

Created by idc on August 14, 2020

Values for 'Depletion as a % of Pumping' (q/Q) are not calculated when the pumping rate (Q) is changed to anything but zero