**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 UPPER BLACK SQUIRREL CREEK DESIGNATED GROUNDWATER BASIN.

---

REPLACEMENT PLAN NO. 463-RP

FOR DETERMINATION OF WATER RIGHT NO. 463-BD

AQUIFER: DAWSON

APPLICANT: ANDREW AND EMILEE MAKINGS

---

In compliance with section 37-90-107.5, C.R.S. and the Designated Basin Rules, 2 CCR 410-1 (Rules or Rule), Andrew and Emilee Makings (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. 463-BD.

**FINDINGS**

1. Pursuant to section 37-90-107(7), C.R.S., in a Findings and Order dated March 16, 2004, the Ground Water Commission (Commission) approved a Determination of a Right to an Allocation of Groundwater, No. 463-BD, from the Dawson Aquifer (Aquifer), summarized as follows.

    a. The determination quantified an amount of water from beneath 310 acres of overlying land generally described as the SE 1/4 of Section 11 and the NE 1/4 of Section 14, all in Township 12 South, Range 65 West of the 6th P.M., in El Paso County (Overlying Land).

    b. The allowed average annual amount of withdrawal shall not exceed 217 acre-feet, which based on an aquifer life of one hundred years results in an amount of water allocated of 21,700 acre-feet (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: commercial, domestic, irrigation, industrial, fish and wildlife propagation, aesthetic, and for augmentation purposes.

    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 Upper Black Squirrel Creek Designated Groundwater Basin and the Upper Black Squirrel Creek Ground Water Management District. 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 November 15, 2022.

7. The Applicant proposes to divert 6 acre-feet annually from the Dawson Aquifer for a period of 300 years. The Dawson aquifer water will be withdrawn through up to four (4) wells.

    a. One well will withdraw 3.9 acre-feet annually for the following uses: in-house use in up to two (2) single-family residences; in-building commercial sanitary use; up to one (1) acre of irrigation of home lawn, garden, pasture, hay and trees; and watering of up to eighty (80) large domestic animals.

    b. Three (3) wells will each withdraw 0.7 acre-foot annually for in-house use in one (1) single family residence; up to 6,000 square-feet of irrigation of home lawn, garden, pasture, hay and trees; and watering of up to eight (8) large domestic animals; for a total withdrawal from the three (3) wells of 2.1 acre-feet annually.

    The land on which the wells will be located is a 38.83-acre portion of the Overlying Land generally described as a portion of the SE 1/4 of the NE 1/4 of Section 14, Township 12 South, Range 65 West of the 6th P.M., as described in **Exhibit B**.

8. At a continuous withdrawal of 6 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 0.229 acre-feet per year in the 300th year, which is equal to 3.82% of pumping, as shown in **Exhibit A**.

9. The Applicant proposes to provide 0.90 acre-feet per year of replacement water to the alluvial aquifer system of the Upper Black Squirrel Creek 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 residence uses a minimum annual amount for in-house use of 0.20 acre-feet, the return flow per lot would be 0.18 acre-feet annually, and the return flows under the plan will total 0.90 acre-feet per year for all five (5) residences at full build out.

10. The subject property is located within the drainage of Black Squirrel Creek, and the return flows will flow to the alluvial aquifer of the Upper Black Squirrel Creek 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. 463-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. 463-BD, and such water is legally available for use pursuant to this plan.

16. In accordance with Rule 5.6.4 the application was referred to the Upper Black Squirrel Creek Ground Water Management District on January 20, 2023. The District provided written comments on February 9, 2023.

17. 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 February 2, 2023 and February 9, 2023. No objections to the application were received within the time limit set by statute.

18. 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.

19. 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, and 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 310 acres that are the subject of Determination of Water Right no. 463-BD is approved subject to the following conditions:

20. The Dawson Aquifer water will be withdrawn through up to four (4) wells.

    a. One well will withdraw 3.9 acre-feet annually for the following uses: in-house use in up to two (2) single-family residences; in-building commercial sanitary use; up to one (1) acre of irrigation of home lawn, garden, pasture, hay and trees; and watering of up to eighty (80) large domestic animals.

    b. Three (3) wells will each withdraw 0.7 acre-foot annually for in-house use in one (1) single family residence; up to 6,000 square-feet of irrigation of home lawn, garden, pasture, hay and trees; and watering of up to eight (8) large domestic animals; for a total withdrawal from the three (3) wells of 2.1 acre-feet annually.

    The land on which the wells will be located is a 38.83-acre portion of the Overlying Land generally described as a portion of the SE 1/4 of the NE 1/4 of Section 14, Township 12 South, Range 65 West of the 6th P.M., as described in **Exhibit B**.

21. The allowed annual amount of groundwater to be withdrawn from the Aquifer by all wells operating under this plan shall not exceed 6 acre-feet. The allowed annual amount of groundwater to be withdrawn from one of the wells is 3.9 acre-feet and for the remaining wells is 0.7 acre-foot per well for the uses described above (2.1 acre-feet total for the remaining wells).

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 and the Upper Black Squirrel Creek Ground Water Management District upon request on forms acceptable to the Commission, on an annual basis for the previous calendar year, by February 15$^{th}$ of the following year, or more often upon request.

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 310 acres of Overlying Land that are the subject of Determination of Water Right No. 463-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, the number of occupied single-family residences served by the well(s) that are generating return flows via non-evaporative septic systems must be equal to or greater than the number of wells shown in Table 1 below, or 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.

**Table 1**

| Year | Number of Residences | Return Flow (af/yr) |
|---|---|---|
| 0-240 | 1 | 0.18 |
| 241-300 | 2 | 0.36 |

30. 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 and the Upper Black Squirrel Creek Ground Water Management District on forms acceptable to the Commission, on an annual basis for the previous calendar year, by February 15th of the following year, or more often upon request.

    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 residences served by each well.

    d. The number of square feet irrigated by each well.

    e. The number of large domestic animals served by each well.

    f. The return flows occurring from use of all wells operating under the plan, assuming 0.18 acre-feet per year per occupied single-family residence (90% of the water used for in-house purposes) enters the alluvial aquifer as replacement water.

    g. Any other information the Commission deems relevant and necessary to operation, monitoring, accounting, or administration of the plan.

31. 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.

32. 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.

33. 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.

34. All terms and conditions of Determination of Water Right No. 463-BD must be meet.

35. 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 15th of March, 2023.

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

By:_____
Joanna Williams, P.E.
Chief of Water Supply, Designated Basins

F&O463-RP.docx
Prepared by: wad

| Designated Basin Summary Table for Andrew and Emilee Makings<br>Pumping Rate of 6 acre-feet per year for 300 Years from the Dawson aquifer<br>Section(s): Sec. 14, T12S, R65W, 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 | 6.0 | 0.000 | 0.00 | 155 | 6.0 | 0.104 | 1.73 |
| 10 | 6.0 | 0.001 | 0.01 | 160 | 6.0 | 0.109 | 1.81 |
| 15 | 6.0 | 0.001 | 0.02 | 165 | 6.0 | 0.113 | 1.89 |
| 20 | 6.0 | 0.002 | 0.04 | 170 | 6.0 | 0.118 | 1.96 |
| 25 | 6.0 | 0.004 | 0.06 | 175 | 6.0 | 0.122 | 2.04 |
| 30 | 6.0 | 0.006 | 0.09 | 180 | 6.0 | 0.127 | 2.11 |
| 35 | 6.0 | 0.008 | 0.13 | 185 | 6.0 | 0.131 | 2.19 |
| 40 | 6.0 | 0.010 | 0.17 | 190 | 6.0 | 0.136 | 2.26 |
| 45 | 6.0 | 0.013 | 0.21 | 195 | 6.0 | 0.140 | 2.34 |
| 50 | 6.0 | 0.016 | 0.26 | 200 | 6.0 | 0.145 | 2.41 |
| 55 | 6.0 | 0.019 | 0.31 | 205 | 6.0 | 0.149 | 2.49 |
| 60 | 6.0 | 0.022 | 0.37 | 210 | 6.0 | 0.154 | 2.56 |
| 65 | 6.0 | 0.026 | 0.43 | 215 | 6.0 | 0.158 | 2.63 |
| 70 | 6.0 | 0.029 | 0.49 | 220 | 6.0 | 0.162 | 2.71 |
| 75 | 6.0 | 0.033 | 0.55 | 225 | 6.0 | 0.167 | 2.78 |
| 80 | 6.0 | 0.037 | 0.62 | 230 | 6.0 | 0.171 | 2.85 |
| 85 | 6.0 | 0.041 | 0.69 | 235 | 6.0 | 0.175 | 2.92 |
| 90 | 6.0 | 0.045 | 0.76 | 240 | 6.0 | 0.180 | 2.99 |
| 95 | 6.0 | 0.050 | 0.83 | 245 | 6.0 | 0.184 | 3.06 |
| 100 | 6.0 | 0.054 | 0.90 | 250 | 6.0 | 0.188 | 3.14 |
| 105 | 6.0 | 0.058 | 0.97 | 255 | 6.0 | 0.192 | 3.21 |
| 110 | 6.0 | 0.063 | 1.05 | 260 | 6.0 | 0.197 | 3.28 |
| 115 | 6.0 | 0.067 | 1.12 | 265 | 6.0 | 0.201 | 3.34 |
| 120 | 6.0 | 0.072 | 1.20 | 270 | 6.0 | 0.205 | 3.41 |
| 125 | 6.0 | 0.076 | 1.27 | 275 | 6.0 | 0.209 | 3.48 |
| 130 | 6.0 | 0.081 | 1.35 | 280 | 6.0 | 0.213 | 3.55 |
| 135 | 6.0 | 0.086 | 1.43 | 285 | 6.0 | 0.217 | 3.62 |
| 140 | 6.0 | 0.090 | 1.50 | 290 | 6.0 | 0.221 | 3.69 |
| 145 | 6.0 | 0.095 | 1.58 | 295 | 6.0 | 0.225 | 3.75 |
| 150 | 6.0 | 0.099 | 1.66 | 300 | 6.0 | **0.229** | **3.82** |

Created by Wenli Dickinson on January 19, 2023

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

PARCEL 1:

A PORTION OF SPECIAL WARRANTY DEED RECORDED AT RECEPTION NO. 219050325 OF THE EL PASO COUNTY CLERK AND RECORDER OFFICE, BEING SITUATED IN THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARING:

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. BEARINGS ARE BASED ON THE EAST LINE OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, AND ARE ASSUMED TO BEAR S00°28'41"E, MONUMENTED ON THE NORTH END OF THE LINE BY A FOUND 2.5" ALUMINUM CAP STAMPED, "MVE INC, RLS 17665, S11 S12 S14 S13, 1998, T12S R65W" AND ON THE SOUTH END OF THE LINE BY A FOUND 2.5" ALUMINUM CAP STAMPED, "MVE INC, RLS 17665, 1/4, S14, S13, 1998, T12S R65W."

BEGINNING AT THE EAST QUARTER CORNER OF SECTION 14 AND BEING A POINT ON THE WEST RIGHT OF WAY LINE OF GOODSON ROAD;

THENCE WITH THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 14, S89°06'22"W, A DISTANCE OF 409.14 FEET TO THE SOUTHEAST CORNER OF SPECIAL WARRANTY DEED RECORDED AT RECEPTION NO. 207039933 AND BEING A POINT OF NON- TANGENT CURVE TO THE RIGHT;

THENCE DEPARTING SAID SOUTH LINE AND WITH THE NORTH LINE OF SAID SPECIAL WARRANTY DEED AND ALONG SAID NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 435.00 FEET, A CENTRAL ANGLE OF 22°07'49", A DISTANCE OF 168.02 FEET, A CHORD BEARING OF N56°41'15"W WITH A CHORD DISTANCE OF 166.97 FEET;

THENCE CONTINUING WITH SAID NORTH LINE OF SPECIAL WARRANTY DEED, N45°37'21",W, A DISTANCE OF 16.45 FEET;

THENCE S44°22'39"W, A DISTANCE OF 149.99 FEET TO A POINT ON THE SOUTH LINE OF SAID NORTHEAST QUARTER;

THENCE WITH SAID SOUTH LINE, S89°06'22"W, A DISTANCE OF 754.91 FEET;

THENCE DEPARTING SAID SOUTH LINE, N00°28'41"W, A DISTANCE OF 1309.24 FEET;

THENCE N89°31'24"E, A DISTANCE OF 465.80 FEET TO A POINT OF CURVE TO THE RIGHT;

THENCE ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 340.00 FEET, A CENTRAL ANGLE OF 39°42'22", A DISTANCE OF 235.62 FEET, A CHORD BEARING OF S70°37'25"E WITH A CHORD DISTANCE OF 230.93 FEET TO A POINT OF REVERSE CURVE TO THE LEFT;

THENCE ALONG SAID REVERSE CURVE TO THE LEFT, HAVING A RADIUS OF 600.00 FEET, A CENTRAL ANGLE OF 39°42'22", A DISTANCE OF 415.80 FEET, A CHORD BEARING OF S70°37'25"E WITH A CHORD DISTANCE OF 407.53 FEET;

THENCE N89°31'24"E, A DISTANCE OF 353.93 FEET TO THE EAST LINE OF SAID NORTHEAST QUARTER OF SECTION 14 AND BEING A POINT ON THE WEST RIGHT OF WAY LINE OF GOODSON ROAD;

THENCE WITH SAID EAST LINE AND SAID WEST RIGHT OF WAY LINE, S00°28'41"E, A DISTANCE OF 1082.07 FEET TO THE POINT OF BEGINNING

LEGAL DESCRIPTION PREPARED BY BRIAN J. DENNIS WITH GALLOWAY & CO., SURVEY DATED DECEMBER 3, 2021 AND JOB NO. SLV000012.10