

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-34581

Exam Date: 10/16/2023

1. Does this qualify for an in-office field exam (IDAPA 37.03.02.035.01.r)? x Y N
- a. x Irrigation of 5 acres or less
- b. Storage of up to 14.6 AF for stockwater purposes only
- c. x Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
- d. Other < >
2. Current Owner:
- CAROL MCDONALD 28803 FARMWAY RD CALDWELL ID 83607-8635 OR
- JOSEPH MCDONALD 28803 FARMWAY RD CALDWELL ID 83607-8635

3. SOURCE: GROUND WATER

Method of Determination: GIS ArcMap Tools, Aerial Imagery, and Taxlot Data

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
65-2900	Tunnel No 2 Drain	Irrigation	Decreed
63-2878	Elijah Drain	Irrigation	Decreed

Comments: Black Canyon Irrigation District rights. Original applicants indicated that property is not eligible to receive water from irrigation district.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: None.

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER NE¼ NE¼, Sec. 8, Twp 05N, Rge 03W, B.M. CANYON County

Method of Determination: GIS ArcMap Tools, and Taxlot Data

PLACE OF USE: IRRIGATION

[illegible]

Total Acres: 0.3

PLACE OF USE: STOCKWATER

[illegible]

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	03W	8	X																

Method of Determination: GIS ArcMap Tools, Google Earth Imagery, and Taxlot Data

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

Aerial Photo Attached (required for irrigation of 10+ acres).

Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
N/A	N/A	N/A	N/A	N/A	N/A

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: No measurement is required for an in-office examination, but a theoretical calculation was used to determine if the diversion rate is reasonable.

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method:

A theoretical analysis shows that a diversion rate of 0.03 cfs is possible with a 1.5 hp pump and 165' of lift.

$$Q = (1.5 \text{ hp})(8.8)(0.7 \text{ efficiency}) / (165 \text{ lift in ft}) + (2.31)(50 \text{ pressure psi}) + (\text{friction}) = 0.03 \text{ cfs}$$

$$\text{Measurement} = 0.03 \text{ cfs}$$

$$\text{Permit Allowed} = 0.20 \text{ cfs}$$

$$\text{Irrigated acres} \times \text{acre limit} = (0.3 \text{ ac}) \times (0.03 \text{ cfs/ac}) = 0.01 \text{ cfs}$$

F. VOLUME CALCULATIONS**1. Volume Calculations for irrigation:**

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = (0.3 \text{ ac}) \times (4.5 \text{ af}) = 1.4 \text{ afa}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 4.5 \text{ afa}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 1.4 \text{ afa}$$

2. Volume Calculations for Other Uses:

Domestic: 0.6 af per domestic household when irrigation is separated as per Application Processing Memo No. 22.

Stockwater: 0.2 af for 0-10 head of stock as per Application Processing Memo No. 3.

G. NARRATIVE/REMARKS/COMMENTS

This permit qualifies for an in-office exam because it is for irrigation of less than 5 acres and all other uses combined have a diversion rate less than 0.24 cfs. The exam was conducted on October 16, 2023 by Justin Shearer. At the time of exam, ownership of the permit is in the name of Joseph McDonald, or Carol McDonald. Current Canyon County taxlot data represents the McDonald's own the land pertinent to the place of use (POU) and point of diversion (POD). Proof of Beneficial Use was submitted on August 30, 2023.

Statement of Completion for Submitting Proof of Beneficial Use indicated that the extent of uses completed as authorized by the permit were domestic for 1 household, irrigation of 4 acres, and stockwater for 8 goats. The original application from 2018 indicated that the well's diversion works were upgraded in 2017 to a new 1.5 hp pump set at 165' below ground. A quick theoretical analysis shows that a diversion rate of 0.03 cfs is possible with 1.5 hp pump and 165' of lift. The permit authorized 0.14 cfs for 4.5 acres of irrigation, 0.04 cfs for domestic, and 0.02 cfs for stockwater. However, ArcMap tools and aerial imagery including Google Earth imagery were only able to confirm 0.3 acres of irrigation as having been developed. Because no on-site examination was conducted to determine current system capacity I am not going to restrict my recommendation by the theoretical diversion rate of 0.03 cfs. As a result, I am recommending 0.01 cfs and 1.4 af for 0.3 acres of irrigation. Additionally, I am recommending 0.04 cfs and 0.6 af for domestic purposes, and 0.02 cfs and 0.2 af for stockwater purposes.

All conditions for the permit have been met. Conditions X02 26A, 046, and 004 are being removed at licensing as per department standard. Condition 121 is updated to 103 as per department standard. Condition R69 will and WB5 will carry over to the license.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

Beneficial Use	Period of Use	Rate of Diversion	Volume
IRRIGATION	03/01 to 11/15	0.01 CFS	1.4 AF
STOCKWATER	01/01 to 12/31	0.02 CFS	0.2 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	0.6 AF

Totals:

0.07 CFS

2.2 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION

Justin Shearer -

Field Examiner's Name



Date

10/16/2023

Reviewer

Date



Google Earth Imagery 6/29/2022