

IN-OFFICE BENEFICIAL USE FIELD REPORT

Permit No: 65-12974C

Examiner: Phill Hummer

Date: 02/21/2019

In-office qualification (IDAPA 035.01.r): ☒ Irrigation ≤ 5 acres
☐ Stockwater storage ≤ 14.6 af
☒ Total diversion rate ≤ 0.24 cfs and not irrigation or storage

Current Owner Name: Sue and Martin Goffin Address: 141 Warm Springs Rd Garden Valley ID 83622

Beneficial Use Fee Paid: \$100.00 Receipt: C025935

Source: Ground Water Source change? ☒ N ☐ Y Change clarifies originally intended source.
 If not – void permit.

Point of Diversion			NE				NW				SW				SE			
Twp	Rge	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE
10N	04E	33										X						

Method of Determination: GPS N44 09.233 W-115 59.633

POD change? ☒ N ☐ Y

Place of Use			NE				NW				SW				SE				Totals
Twp	Rge	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10N	04E	33										D							
10N	04E	33										H							
10N	04E	33										0.1							0.1

Method of Determination: I compared the map submitted by the permit owner to aerial imagery and PLS layer in ArcMap. The house and garage appear to be very close to the boundary but the permit lists the use in the NWSW only.

POU change? ☒ N ☐ Y

Purpose of Use: no change.

Purpose change? ☒ N ☐ Y

Standard Season of Use: Irrigation: 03/15 - 10/31

Update required on license? ☐ N ☒ Y**Overlap Review**POD overlap? ☒ N ☐ Y WR's:

Analysis Attached ☒ Comments: A detailed map of the property boundaries and the water rights that are probably associated with those properties was scanned to file as part of documents supporting the preliminary to void the permit.

POU overlap? ☒ N ☐ Y WR's:

Comments: There are a number of place of use shapes that overlap the Goffin's property but they are all either water rights associated with other properties or water rights associated with Castle Mountain Creek Owners Assn Inc. IDWR parcel date and communication with the permit holder indicates the Goffin's property is not within this subdivision.

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Diversion Rate Calculations

Irrigation

Standard rate based on size of area irrigated:

3600 sq-ft = 0.083, 0.1 acre 0.1 acres * 0.03 cfs/acre = 0.003, 0.01 cfs

Calculated rate based on watering timing and amount:

17 gal/min = 0.038, 0.04 cfs

Domestic

No calculations

Heating

See attached, 0.01 cfs

Total

Calculated from maximum output information from permit owner:

22 gal/min = 0.049, 0.05 cfs

Theoretical system capacity:

See attached, 0.06 cfs

Annual Volume

Irrigation

0.01 cfs * 1.9835 * 180 = 3.57, 3.4 af

0.1 acres * 3.5 af = 0.35, 0.4 af

Domestic

No calculations, the standard volume for 1 home should be used.

Heating

See attached, 2.0 af

Recommended Amounts

Beneficial Use	Season of Use	Diversion Rate (cfs)	Annual Volume (af)
Irrigation	03/15 - 10/31	0.01	0.4
Domestic	01/01 - 12/31	0.01	0.6
Heating	01/01 - 12/31	0.01	5.1
Totals		0.01	5.1

Amendments Required☐ Change P.D.☐ Add P.D☒ None☐ Change P.U.☐ Add P.U.☐ Other:

Conditions: The conditions of the permit are all standard and have been met. The following changes should be made to the conditions for approval on the license. Condition 026 should be removed because it is inactive, condition 09C and 057 should be replaced with R07 and R67, and the text condition should be replaced with WB5. Condition X59 and X60 should be added to specify the lot within the subdivision. Condition X61 should be added to allow irrigation use during the standard irrigation season at the place of use, condition X10 should be added to restrict hot water use. Condition 016 should be removed.

Have conditions of permit been met? ☒ Y ☐ N

Narrative: On June 6, 1998 a field examiner conducted an on-site visit of permits no. 65-12974A, 65-12974B, and 65-12974C. The examiner found that a well and diversion system had been constructed for lots 2 and 3 of the Livingston Estates Subdivision but did not find any evidence that a third lot had been developed. On November 21, 2017 I reviewed the field examiners notes and proceeded to void permit no.

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65-12974C. The Department received a petition for reconsideration and the permit was reinstated on May 2, 2018. Through a series of email with the permit holders I collected the information and documentation necessary to conduct a second examination of the permit in-office.

Martin and Sue Goffin are the owners of lots 12 and 13 within Warm Springs Estates 1 (Amd). The property has a hot water well on it that provides water to the house and garage. The Goffin's also irrigate about 3600 sq ft of lawn and gardens. Using the information about the property and the Department's heating-cooling worksheet I calculated the rate used for heating to be 0.01 cfs. Even though the irrigation rate and the standard rate for domestic use are both greater than this rate, the license should be issued with all three uses decreased to the amount calculated for heating use because Idaho law requires the heat component be used first before the water can be used for other purposes. The calculated volume from the heating-cooling worksheet should be used for the volume for the heating use. The lesser of the two calculated volumes for irrigation should be used per current policy. The volume for domestic use should be 0.6 af because irrigation is on the license in a separate use.

Additional information and documents can be found in the documents for the preliminary order to void the permit.

Workflow

Exam Date Entered ☒
 POU/POD shapes ☒
 Combined Rights Entry ☐
 Wild & Scenic Entry ☐
 Draft License and Map ☒
 FE Database (N: drive) ☐

Supporting Documents

Aerial Photograph ☒ Well Log ☒
 POU/POD Map ☒ Diagrams ☒
 LandSat ☐ Theoretical ☒
 Photographs ☒ Other:
 Site Visit Date:

Authentication

Field Examiner's Name: Phill Hammer Date: 2-21-2019

Reviewer: Patrick Kelly Date: 4-16-2019

Hummer, Phill

From: Martin Goffin <mrg032@gmail.com>
Sent: Thursday, August 16, 2018 11:52 AM
To: Hummer, Phill
Subject: Goffin water rights

Phill here are the answers to the questions you asked to the best of my knowledge.

Martin and Susan Goffin
141 Warm Springs Rd.
Garden Valley, Idaho 83622

208-861-5712
mrg032@gmail.com

The home was built starting in 1994 and finished in Oct. 1995
it is 977 sq feet on main level and a loft with an additional 500 sq ft.
there is a detached garage that is 360 sq feet and the home and garage are heated with the Geothermal water.
We keep the home at about 70 Degrees and use the hot water system that was initially installed with the original construction. It is tubes set in a concrete floor with tile over that.
When in use about 260 days per year it uses approx 10 gallons per minute 24/7.
The home sits on approx 2 acres and we water about 3600 sq feet of lawn and flowers when we are home. We use the hot water for everyday use ie drinking, washing cloths, showers and normal household uses.
We hope to add a vegetable garden at some time when we are home more.
Lawn watering is about 2 to 3 hours per day and around 17 gallons per minute for approx 180 days per year.

We use a 1.5 HP Grundfos submersible pump with a 2 HP Franklin motor. it has a 22 gal per minute max output
it is set at about 50 feet.

The water is 130 degrees at the output at the well.
The well is located within 20 feet of these GPS co-ordinates
N 44* 09 288'
W 115*59 633'

I will try to get a map of the property and mark dwellings, well and irrigated areas.

I hope this is enough info for you to finalize the water permit.

Martin R Goffin

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-12974C
 Reviewer: Phill Hummer
 Date of Review: 2/22/2019

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	1.5	1.5	1.5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	50	50	50
DISCHARGE PRESSURE	45	50	55
RATE OF FLOW (cfs)	0.06	0.06	0.05
		avg	0.06

The above calculates the formula =
$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes: Diversion system information from the permit holder, email received 08/16/2018
 Assumed discharge pressure scenarios of 45, 50 and 55. Since the above calculation contains several assumptions but the calculation supports the maximum output indicated by the permit owner (22 gal/min or 0.05 cfs).

RESIDENTIAL SPACE HEATING/COOLING REQUIREMENTS FOR COLD OR GEOTHERMAL SOURCES

Worksheet created by Cindy Hodges, 11/93.

Data entered by: Phill Hummer
Exam Date: 02/22/19
File No: 65-12974C
Computations for: Heating of 1 home, 0.1 Irrigation

REQUIRED DATA:

Area of livable floor space, ft2 (A) 1837
2 story? (N=1, Y=2) 2
House efficiency factor (e) * 0.67
Inside design temperature (Ti) 70
Average outside temperature (To) ** 31
Source temperature, degrees F (S) 128
Heating/cooling days per season (D) 260
Hours/day system operates (H) 24

CALCULATED DATA:

DESIGN HEAT LOAD (BTU/hr required)
Formula: $E = [e \times (Ti - To)] \times A$
Applies factor of 0.8 for two-story dwelling

E = 38,401 BTU/hour

TEMPERATURE DROP ACROSS SYSTEM
Formula: $Ts = 0.3 \times [S - Ti]$

Ts = 17.4 degrees F

FLOW RATE REQUIRED (at given source temperature)
Formula: $Q = E / (500 \times Ts) \times 448.8$

Q = 0.01 cfs

DIVERTED VOLUME OVER SEASON
Formula: $Vdiv = Q \times D \times H / 24 \times 1.9835$

Vdiv = 5.1 AFA

AVERAGE TEMPERATURE CALCULATION:

4 DEG MIN + 80 DEG HIGH / 2 =
42 DEG AVERAGE YEAR ROUND TEMP.

* e values are as follows:

- 0.28 Best energy efficiency - extra insulation, caulked and weatherstripped, with storm windows and doors
- 0.44 Better energy efficiency - standard insulation, caulked and weatherstripped, with storm windows and/or doors
- 0.67 Average residence - standard insulation, no weatherproofing but with storm windows or double panes
- 1.11 Poor energy efficiency - minimal insulation, no weatherproofing or storm windows (older homes, shops or greenhouses)

** Suggested average outside temperatures:

WINTER

4 deg F Boise
6 deg F Grand View
-8 deg F Cascade

SUMMER

80 deg F Boise
90 deg F Grand View
70 deg F Cascade
