

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-22855
Exam Date: 07/16/2019

1. Current Owner:
GEORGE GOLLEHER 50 GREENHORN RD HAILEY ID 83333 AND
RITA GOLLEHER 50 GREENHORN RD HAILEY ID 83333
2. Accompanied by: Rita Golleher

3. **SOURCE:**
GROUND WATER

Method of Determination: On-Site Inspection

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point-of-diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NE¼ NW¼, Sec. 18, Twp 03N, Rge 18E, B.M. BLAINE County

Method of Determination: GPS, On-Site Visit, and Aerial Imagery

PLACE OF USE: HEATING

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	18E	18					X												

PLACE OF USE: COOLING

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	18E	18					X												

2.

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

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

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

X Photo of Diversion and System Attached

3.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0066745 POD					
D0065030 Injection Well					

D. FLOW MEASUREMENTS

1. Measurements: None: No measurement was taken per IDAPA 37.03.02 Beneficial Use Exam Rules because the permitted flow rate of 0.12 cfs is less than 0.24 cfs.

E. FLOW CALCULATIONS

 X Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A
2. Volume Calculations for Other Uses: See attached work sheet.

G. NARRATIVE/REMARKS/COMMENTS

On July 16, 2019 Bill Mills and I met Rita Golleher at the Golleher residence located on Greenhorn Road north of Hailey. Rita and her husband George live part time in the Hailey residence and part time in a residence in California. The heating and cooling system for the Hailey residence is designed for year-round use.

The system is designed to use approximately 50 gpm of ground water and circulate it through 5 heat pumps located in the crawlspace of the home and return the water to the source through a separate injection well. The system is designed to be non-consumptive and only uses the heat potential of the water. The Point of Diversion (POD) is located approximately 100 feet southeast of the residence and the injection well is located approximately 185 feet north of the POD. The Hailey residence is the Place of Use (POU) and is approximately 9900 square feet in size.

Climate data for the Hailey area indicates, annually, an average of 211 days when the temperature gets below 32 degrees Fahrenheit and 154 days when it does not freeze. Corresponding with Mr. Golleher via telephone and email revealed that the system is actively using water for approximately 50% of the time for heating and 25% of the time for cooling. Using these parameters I calculated the volume based on the pump running for 105.5 full days during the heating season and the pump running for 38.5 days during the cooling season.

Conditions of the permit have been met and I recommend licensing 37-22855 for 0.12 cfs and 34.4 Acre Feet.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
HEATING	01/01 to 12/31	0.12 CFS	25.2 AF
COOLING	01/01 to 12/31	0.12 CFS	9.2 AF

Totals: 0.12 CFS 34.4 AF

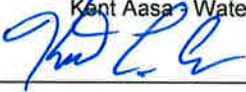
2. Recommended Amendments

☐ 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

Kent Aasa, Water Resource Agent, Senior

Field Examiner's Name  Date 9-26-2019

Reviewer _____ Date _____

37-22855 Heating and Cooling Volume Calculations

George Golleher indicated that the heating system is used 50% of the time in winter and the cooling system is used 25% in the summer.

Climate data for the Hailey area indicates, annually, an average of 211 days when the temperature gets below 32 degrees Fahrenheit and 154 days when it does not freeze.

- Permit 37-22855 proposes a diversion rate of 0.12 cfs.
- A flow rate of 0.12 cfs = 53.85 gallons per minute or 54.0 gallons per minute
- The well driller report for D0066745 confirmed a flow rate of 80 gallons per minute
- A single 24 hour day = 1440 minutes

Heating Season Calculations

Heating = 211 days x .50 = 105.5 days

Heating = 105.5 days x 1440 minutes/day x 54 gallons per minute = 8,203,680 gallons

Heating = 8,203,680 gallons ÷ 325,850 gallons per AF = 25.17 AF or **25.2 AF**

Cooling Season Calculations

Cooling = 154 days 0.25 = 38.5 days

Cooling = 38.5 days x 1440 minutes/day x 54 gallons per minute = 2,993,760 gallons

Cooling = 2,993,760 gallons ÷ 325,850 gallons/AF = 9.18 AF or **9.2 AF**

Total Volume = 25.2 AF + 9.2 AF = **34.4 AF**

Aasa, Kent

From: George Golleher <ggolleher.bigwoodbread@gmail.com>
Sent: Monday, July 22, 2019 5:25 PM
To: Aasa, Kent
Subject: Re: A follow up from last weeks field exam

I would guess that the 50%/25% is pretty close
Sent from my iPhone

On Jul 22, 2019, at 5:11 PM, Aasa, Kent <Kent.Aasa@idwr.idaho.gov> wrote:

George,

Thank you for scheduling the field exam last week on the 16th. Please thank your wife for putting up with us and also for helping out with access door to the crawlspace.

An important part of the water right license is assigning an annual volume amount. We can calculate the volume the system uses in one day from the data available from the heat pump manufacturer. What we don't know is how many days a year the system is used.

You use the heating and cooling system in your home and have an idea of the use of each system. I need some input from you on actual use so I can process your water right permit.

In the Hailey/Ketchum area climate data indicates that there are an average of 211 days when the temperature gets below 32 degrees and 154 days when it does not freeze.

What I need from you is an estimate of the percent of time that you use the heating system and the percent of time that you use the cooling system. Owners of similar systems in the Wood River Valley have indicated using the heating system 50% of the time and using the cooling system 25% of the time.

Do you feel like that may be a reasonable estimate of the use of your system?
Thank you,

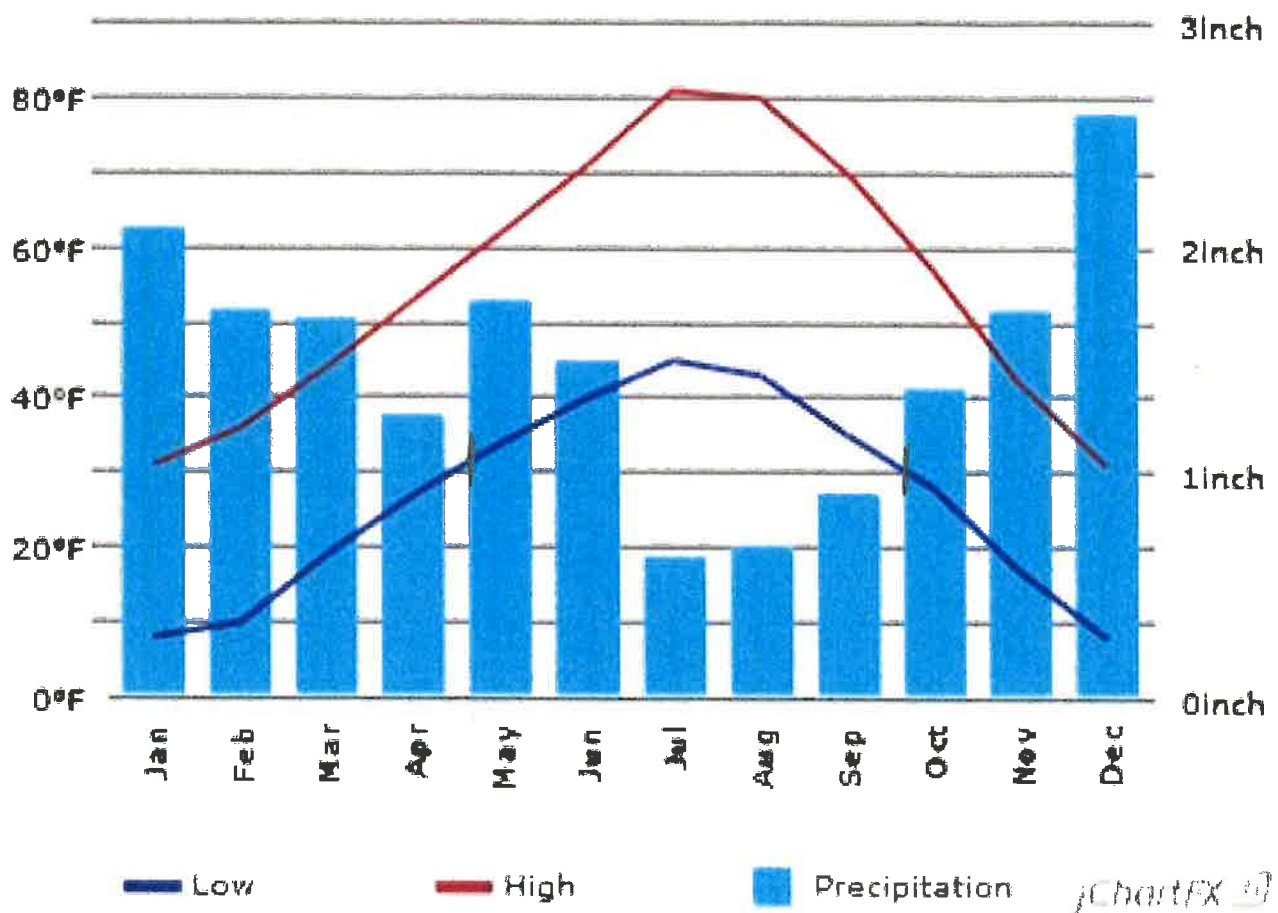
Kent Aasa
Water Resource Agent
Southern Region/Twin Falls
(208) 736-3033

211 days below 32

Climate of Ketchum - Idaho on your website

Climate Ketchum

154 above 32



source: U.S. Climate Data - Climate Ketchum

Copy the html-code to your website

```
<iframe frameborder="0" width="470px" height="430px" style="overflow:hidden;" scrolling="no" src="https://www.usclimatedata.com/climate-graph.php?id=usid0131&system=american&title=1"> </iframe>
```

User terms and conditions:

This code may be placed on your website only if the html-code remains unchanged.

Monthly

Daily

History

Geo & Map

Weather Forecast

You are here: United States > Idaho > Ketchum

Climate Ketchum - Idaho

°C | °F

	Jan	Feb	Mar	Apr	May	Jun
Average high in °F:	31	36	44	53	62	71
Average low in °F:	8	10	19	27	34	40
Av. precipitation in inch:	2.09	1.73	1.69	1.26	1.77	1.5
Days with precipitation:	-	-	-	-	-	-
Hours of sunshine:	-	-	-	-	-	-
Average snowfall in inch:	26	20	12	4	0	0

	Jul	Aug	Sep	Oct	Nov	Dec
Average high in °F:	81	80	70	57	42	31
Average low in °F:	45	43	35	28	17	8
Av. precipitation in inch:	0.63	0.67	0.91	1.38	1.73	2.6
Days with precipitation:	-	-	-	-	-	-
Hours of sunshine:	-	-	-	-	-	-
Average snowfall in inch:	0	0	0	2	17	32

Ketchum weather averages

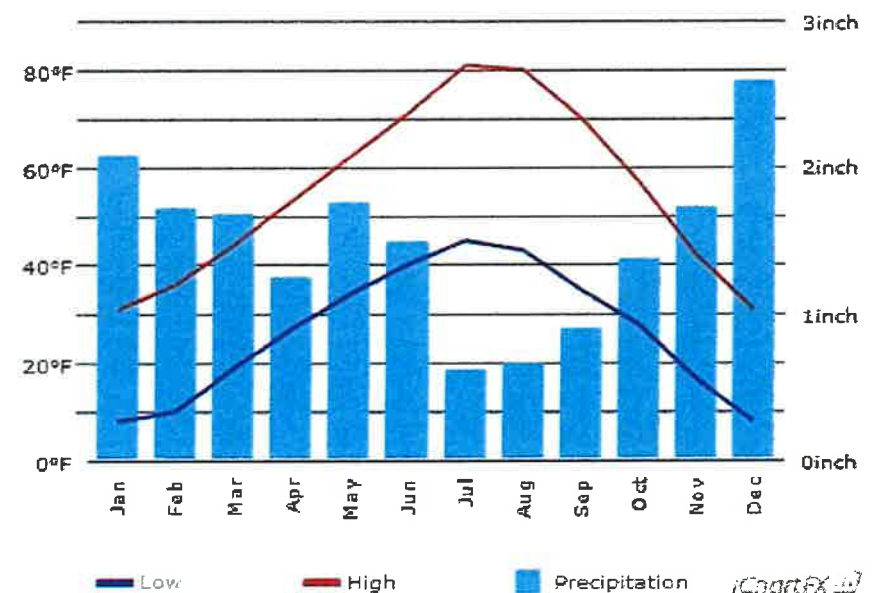
Annual high temperature:	54.8°F
Annual low temperature:	26.2°F
Average temperature:	40.5°F
Average annual precipitation - rainfall:	17.96 inch
Days per year with precipitation - rainfall:	-
Annual hours of sunshine:	-
Av. annual snowfall:	113 inch



Ad closed by Google

[Stop seeing this ad](#)
[Why this ad? ▸](#)

Ketchum Climate Graph - Idaho Climate Chart



Ad closed by Google

[Stop seeing this ad](#)
[Why this ad? ▸](#)

Field Exam 37-22855

Field Exam 37-22855



Field Exam 37-22855 POU



Field Exam 37-22855

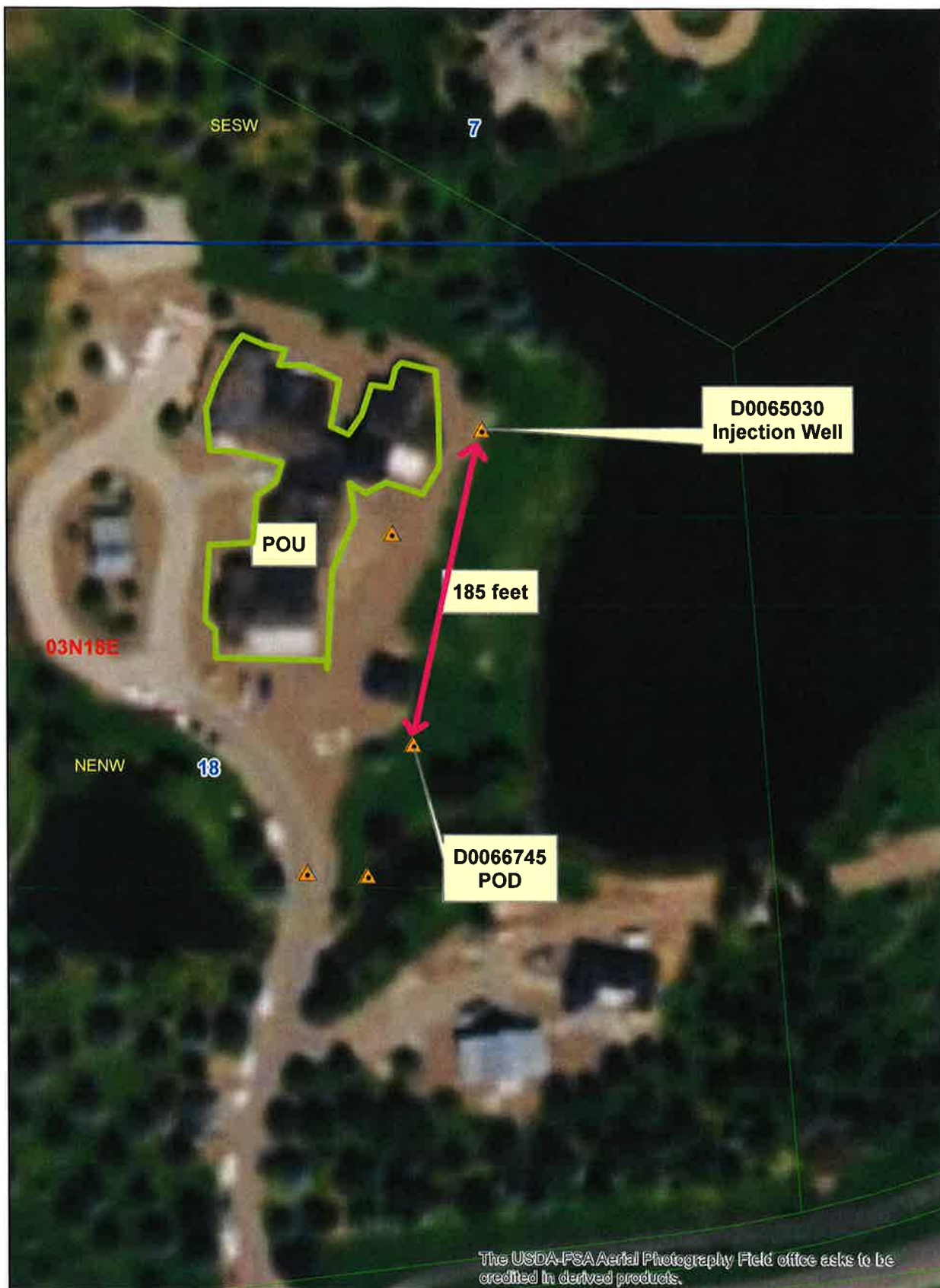
POD



INJECTION WELL



37-22855 System Diagram



Legend

- | | | |
|-----------------|----------------|----|
| Water Right POD | Township/Range | QQ |
| Parcels | Sections | |

Field Exam
37-22855

