

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-14887
Exam Date: 5/4/2017

1. Current Owner:
NINA L HAWKINS PO BOX 205 CAMBRIDGE ID 83610 (208)257-3268
2. Accompanied by: Nina Hawkins
Phone No: 208-257-3268
Address: 2812 Salubria Rd Cambridge ID 83610
Relationship to Permit Holder: New land owner.

3. **SOURCE:**
GROUND WATER

TRIBUTARY:

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Lost Valley Reservoir Co. – 67-14566, 67-14567 & 67-14568
2. Other water rights with the same point-of-diversion: Domestic right 67-7057

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW¼SW¼ Sec. 11, Twp 14N, Rge 03W, B.M. WASHINGTON County

Method of Determination: Garmin GPS points collected: 44d 33.662, -116d 40.415

2.

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14N	03W	11										X							

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14N	03W	11							0.4				13.7						14.1

Total Acres: 14.1

Method of Determination: ArcMap tools used to measure aerial imagery. Digital PLSS map confirms legal descriptions.

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
D.P.# 775570		2			

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

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

2. Measurements: System not operating at time of exam. No measurements collected.

E. FLOW**CALCULATIONS**

Additional Computation Sheets Attached

☒ Additional Computation Sheets Attached

Measured Method:

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

Efficiency = 0.70

Depth to water = 32-50 ft.

psi = 40

hp = 2

See attached theoretical sheet.

Theoretical = 0.10 cfs

15 sprinklers @ 2.96 gpm = 44.4 gpm = 0.10 cfs

Permit (irrigation)	0.20 cfs	Permit (Stockwater)	0.03 cfs
B.U. Standard Allowance	0.28 cfs	B.U. Standard Allowance	0.03 cfs
B. U. Proof Fee	\$50 → 0.01 – 0.20 cfs	B. U. Proof Fee	\$50 → 0.01 – 0.20 cfs
Theoretical Rate	0.10 cfs	Theoretical Rate	0.04. cfs
Total License Recommendation		0.13 cfs	

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 14.1 * 4.0 = 56.4 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.10 \text{ cfs} * 231 * 1.9835 = 45.8 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 45.8 \text{ af}$$

2. Volume Calculations for Other Uses: Admin Memo 3 suggests 1.4 af for up to 100 head of range cattle.

G. NARRATIVE/REMARKS/COMMENTS

The field exam was conducted May 4, 2017 by agent Patrick Kelly. I was accompanied by current property owner Nina Hawkins. An ownership change had been submitted prior to the field exam. Information submitted with the form is complete and the license will be drafted in Ms. Hawkins name.

Information that was submitted with the application for permit is useful in understanding the water system. Fields around the home are irrigated using a 3" mainline to 2" handlines. Nina confirmed that the system runs one line at a time with up to 15 sprinklers per line. A theoretical and sprinkler analysis was submitted with the application. A review of this information matches current calculation standards. The applicants' analysis uses 2.09 gallons per minute at 20 psi for a total of 0.07 cfs. Referring to our sprinkler discharge sheet, 1/8" nozzles at 40 psi produce 2.96 gpm. 15 of these nozzles at one time achieves a diversion rate of 0.10 cfs. This matches the theoretical rate calculation. This combined information suggests reducing the recommendation to 0.10 cfs for irrigation use. Since the stockwater use utilizes a second pump, the two pumps could combine for a total of 0.13 cfs from the well.

Overlap review finds Lost Valley Reservoir Co rights on the property. The property does not have access to surface water delivery. Domestic WR 67-7057 comes from the same well and serves Ms. Hawkins home.

Wildlife use is being removed from the recommendation since the water system solely diverts to the irrigation system and a stock trough. Birds and other game may find the small tank useful, but the developed use does not warrant a license.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 10/31	0.10 CFS	45.8 AF
STOCKWATER	01/01 to 12/31	0.03 CFS	1.4 AF
	<u>Totals:</u>	0.13 CFS	47.2 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

Field Examiner's Name Patrick Kelly Date 5-4-2017
 Reviewer _____ Date _____

The following is a narrative to date:

William B Allison originally homesteaded the property now owned by JoAnn Hemenway in 1868. His eldest son, Alexander, inherited the property at his father's death. Alex married Martha Ellen Abernathy and their union produced seven children, Louticia, Betty, Nellie, Margaret, Lois, Willis and Angus. Son Willis died a young man. The balance of the female siblings inherited 20 acres each and son Angus the balance, approximately 35 acres, from their father. The inherited land was kept intact and farmed by Margaret's husband, George Westfall. **The land was irrigated by flood method, miscellaneous ditches as needed**, utilizing the adjudicated water right. In 1970, Louticia (Tish) Buhl sold her 20 acres to Charles C and Gretchen B Clelland, who sold to Bob and JoAnn Hemenway, the first parcel of the original homestead to leave the family. In 1971 Angus sold his 30 acres to the Clelland's, who sold to the Hemenway's. Angus gave them 5 acres of his holding for their work. Those five acres are directly east of the Weiser River Bridge, on Salubria Road after you cross the Salubria Rd. Bridge, currently owned by Angelina Turley. Later, the Hemenway's also acquired Angus' remaining acres. The ground is seeded with permanent dryland pasture. The 20 acres acquired from Tish Buhl is the location of our home, well and farm buildings. **The domestic/irrigation well was drilled and completed on 6/15/1971.** The acres not used as dwelling area are seeded to pasture, irrigated by sprinkler as needed, and seepage/flood irrigation from the slough.

The water rights, 67-0026/0027 that was a part of the property purchases, were relinquished in 1981 as there was no feasibly economic way to access and utilize it; the water right was traded to Leo J Klinker for a small parcel of land on the east side of Salubria Road that he could not use as it was too small to farm.

Through the property homesteaded by William B Allison was a slough known locally as the Horseshoe Bend slough. Over the years, with the installation of an Army Corp of Engineers dike up-river from Salubria Road and clearing of brush and trees, the slough has decreased in quantity to a **wastewater run off**. At the time Hemenway's purchased the land, there was always water flowing through the slough. Changes in the ditches upstream have interrupted the continuous flow so now it has water in it winter and spring but sometimes dries to a couple of stagnant ponds in summer and early fall. When there is water in the slough, and ponds, they provides good habitat for wildlife, including deer, ducks and geese, foxes, pheasant, and quail. We utilize the 2 ponds and the slough for stock water until the quantity degrades, at which time the livestock can also come to the barn for well water via stock tanks. **The northern pond (Pond #2) was developed in the late 1950's, early 1960's when the Army Corp of Engineers built the dike.**

1/9/2007

Application for Permit for: JoAnn C. Hemenway

Description of Diverting Works and Delivery System:

Groundwater Source:

Total acres owned = 50+ (see attached history on property). Purchased in 1969. Drilled 12' casing well, 100' deep, 2' static, 30' drawdown. Donald Rich/Goodrich Drillers, drilling permit #775570, drilled 6/15/1971. The system runs at 40 psi. GPS Coordinates: 2287674/1487895 (Garmin GPS Map 76S).

There are 2 submersible pumps in the well: Covered under WR# 67-7057 is a ¼-Hp for domestic internal use and Stockwater for the barn (1" discharge). Another pump is also installed in the well: a 2-Hp for irrigation (1 ½" discharge). Both systems have their own separate distribution systems and controls. A Champion 86 gallon pressure tank maintains adequate pressure in the irrigation distribution system to run 1 line with 6 -15 (1/8")-nozzles at one time (depending on the location installed throughout the pasture). There is a 3" above ground aluminum main, with 3 control valves/hook-ups (one south of the house, one west of the house, and one northeast of the barn). The Main runs north to south on the east side of the pasture, with a line running east to west at midpoint of the field. 2" hand-line, 30' sections running east to west in the main pasture, and north to south in the small pasture directly south of the house.

NOTE: Stockwater and Wildlife are the same water as irrigation

Wildlife:

Numerous birds, ducks, geese, deer, fox, quail, pheasant, etc.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 67-14887
 Reviewer: Patrick Kelly
 Date of Review: 5/4/2017

P/D No.:	Scenario 1	Scenario 2	Scenario 3
PUMP HORSEPOWER	2	2	2
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	32	40	50
DISCHARGE PRESSURE	40	40	40
RATE OF FLOW (cfs)	0.10	0.09	0.09 0.093
P/D No.:	Scenario 1	Scenario 2	Scenario 3
PUMP HORSEPOWER	0.75	0.75	0.75
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	32	40	50
DISCHARGE PRESSURE	40	40	40
RATE OF FLOW (cfs)	0.04	0.03	0.03 0.035

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:

Information collected from the applicant suggests there are 2 pumps in the well. A 2 hp pump serves the irrigation system with a 3/4 hp pump delivering water to domestic and stock use. A range of pumping levels were used to estimate lift based on well log data of 2' static and 30' drawdown. The systems operate at 40 psi. Theoretical average flow rate for the irrigation pump is 0.10 cfs and 0.04 cfs for the domestic/stock pump.

WELL DRILLER'S REPORT

State law requires that this report be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

Drilling Permit
775570

WELL OWNER

Name Bob Hemenway

Address Cambridge Idaho

Owner's Permit No. 67-7057

7. WATER LEVEL

Static water level 2 feet below land surface

Flowing? ☐ Yes ☒ No G.P.M. flow

Temperature 64 ° F. Quality Good

Artesian closed-in pressure _____ p.s.i.

Controlled by ☐ Valve ☐ Cap ☐ Plug

NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

PROPOSED USE

☒ Domestic ☒ Irrigation ☐ Test

☐ Municipal ☐ Industrial ☒ Stock

METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

WELL CONSTRUCTION

Diameter of hole 12 inches Total depth 100 feet

Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
<u>.250</u> inches	<u>12</u> inches	<u>+1</u> feet	<u>-73</u> feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

Was a packer or seal used? ☐ Yes ☒ No

Perforated? ☐ Yes ☒ No

How perforated? ☐ Factory ☐ Knife ☐ Torch

Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☒ No

Manufacturer's name _____

Type _____ Model No. _____

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Gravel packed? ☐ Yes ☒ No Size of gravel _____

Placed from _____ feet to _____ feet

Surface seal? ☒ Yes ☐ No To what depth 20 feet

Material used in seal ☐ Cement grout ☒ Puddling clay

8. LOCATION OF WELL

Sketch map location must agree with written location.

County Washington

NW 14 SW 11 Sec. 11 T. 14 N. R. 3 E. W

10.

Work started June 1 finished June 15/71

11. DRILLER'S CERTIFICATION

This well was drilled under my supervision and this report is true to the best of my knowledge.

Donald E. Rich

Driller's or Firm's Name

56

Number

Goodrich Drillers Central

Address

Don Rich

Signed By

June 14, 1971

Date

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT



Well (POD)

Drilling Permit: 775570

44d 33.662
-116d 40.415



Stockwater trough



Sprinkler using 1/8" nozzle.

MEMORANDUM

Date: January 18, 2008
To: Water Right File 67-14887
From: agrimm
Re: Comment/Analysis

This is an existing well system that needs a water right. When well drilled in 1971, applicant had water right permit 67-7057 for irrigation and domestic use, license granted only for domestic use based on proof of beneficial use documentation. Applicant might upgrade system from current 0.11 cfs estimated capacity per extensive IDWR notes (SRBA work). Applicant does not have any interests/shares in a delivery organization for surface water per phone conversation with applicant 11/14/07. Primary irrigation is proposed. Assuming no protests, application is approvable, because the proposed use is within an area open to new rights.

SC 4-11-07



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

April 19, 2017

ETHEL PEARSON AND ROBIN THORSEN
2982 CUTLER RD
CAMBRIDGE ID 83610

COPY

RE: Scheduling Field Exam for Water Right Permit No. 67-14887

Dear Permit Holder:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit **this season**. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes **0.20 cfs of GROUND WATER for IRRIGATION, WILDLIFE and STOCKWATER use**. If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.

If you did not develop a beneficial use of water under the permit during the beneficial use period, a license cannot be issued and the permit should be relinquished. If that use was developed, but have ceased using the water and you currently carry no interest in it, please relinquish the permit by submitting the enclosed Relinquishment of Permit form (no fee required).

If you did develop a beneficial use of water under the permit, but you no longer own the place of use property identified in the permit, please submit the enclosed Assignment of Permit form with the applicable \$25 processing fee.

Please contact me within the next thirty (30) days at (208) 334-2190 to either schedule an examination or submit a relinquishment or assignment form. If you no longer own the place of use property and/or do not respond to this letter, the department will work with the current property owner to issue a license or void the permit.

Sincerely,

Patrick Kelly
Water Resource Agent, Sr.

Enclosures: Relinquishment of Permit form
Assignment of Permit form
Water Permit Report and Map



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

September 15, 2014

ETHEL J PEARSON AND
ROBIN L THORSEN
2982 CUTLER RD
CAMBRIDGE ID 83610

RE: Scheduling Field Exam for Water Right Permit No. 67-14887

Dear Permit Holder:

We are planning to **conduct water right examinations** in the vicinity of the above-referenced permit **during the weeks of September 22 and September 29, 2014**. An examination is needed to verify your water use in order to issue a water right license.

Please be advised that you will need to operate your system under normal conditions during the examination. The permit authorizes diversion of ground water for stockwater (up to 100 range cattle), wildlife (ducks, geese, quail, etc.), and irrigation of up to 14.1 acres.

In order to conduct your exam as efficiently as possible, we ask that you call this office to schedule a day and time convenient for you. **Please call me at 208-334-2190 by September 26, 2014**. If there is a problem with scheduling or conducting the examination at this time, please call and other arrangements can be made. I appreciate your attention in this matter and I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Angela M. Grimm', is written over a horizontal line.

Angela M. Grimm, P.G.
Water Resource Agent, Sr.



State of Idaho

DEPARTMENT OF WATER RESOURCES

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Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

September 13, 2013

Ethel J. Pearson
2982 Cutler Road
Cambridge, ID 83610

RE: Scheduling Field Exam for Water Right Permit No. 67-14887

We are planning to **conduct water right field examinations** in the vicinity of the above-referenced permit **on September 27, 2013**. An examination is needed to verify your water use in order to issue a water right license.

Please be advised that you will need to operate your system under normal operating conditions during the examination. The permit authorizes the diversion of 0.20 cfs of ground water for irrigation of 14.1 acres, stock water for 100 range cattle, and for wildlife.

In order to conduct your exam as efficiently as possible, we ask that you call this office to schedule a time which is convenient for you. **Please call me at 208-334-2190 by September 18, 2013, to conduct the exam on September 27, 2013.** If there is a problem with scheduling or conducting the examination at this time, please let me know so we can reschedule or make other arrangements.

I appreciate your attention to this matter and I look forward to hearing from you.

Sincerely,

Rick Collingwood, P.E.
Water Resource Agent, Sr.