

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-23032
Exam Date: 6/5/2013

1. Current Owner:
ROBERT M FLATEN PO BOX 556 CASCADE ID 83611 (208) 880-2999
2. Accompanied by: Current Owner.
Phone No:
Address:
Relationship to Permit Holder:

3. SOURCE:
UNNAMED STREAM

TRIBUTARY:
ROUND VALLEY CREEK

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:**

UNNAMED STREAM SE¼SW¼ Sec. 20, Twp 12N, Rge 04E, B.M. VALLEY County

Method of Determination: Aerial photo and field examination.

2.

PLACE OF USE: STOCKWATER STORAGE, STOCKWATER, IRRIGATION, & IRRIGATION STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	04E	20												X					

PLACE OF USE: IRRIGATION FROM STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	04E	20												1.0					1.0

Total Acres: 1

Method of Determination: Aerial photo and ArcMap measuring tools.

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.

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

X 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
NA	SEARS	1	Model: 390 260/5	Centrifugal	1.5" discharge
NA	SEARS	0.5	Unknown	Unknown	1.5" discharge

*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: None taken.

E. FLOW CALCULATIONS

Measured Method:

_____ Additional Computation Sheets Attached

Irrigation use from storage via garden hoses:

~ 15 ft elevation head from pond to irrigation POU.

5/8" garden hose @ 40 psi: 100 ft hose = 11 gpm = 0.02 cfs

5/8" garden hose @ 60 psi: 100 ft hose = 14 gpm = 0.03 cfs

Flow through 2 5/8" garden hoses ~ 100' long at ~40 psi = $2 * 0.02 \text{ cfs} = 0.04 \text{ cfs}$ (U of I website)

Theoretical:

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

Efficiency = 0.70

Depth to water = 15 ft.

psi = 40-60

hp = 1.5

See attached theoretical sheet.

Theoretical = 0.09 cfs

Pipe diameter discharge estimate:

$$D = 1.5 \text{ in} = 0.125 \text{ ft} \quad A = \pi * r^2 = \pi * 0.0625^2 = 0.0123 \text{ ft}^2 \quad Q = A * V = 0.0123 \text{ ft}^2 * 5 \text{ ft/sec} = 0.06 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) * (\text{Irrigation Requirement}) = 1.0 * 3.0 = 3.0 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] * (\text{Days in Irrigation season}) * 1.9835 = 0.03 * 200 * 1.9835 = 11.9 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 3.0 \text{ af}$$

2. Volume Calculations for Other Uses:

Storage:

General shape = Flat bottom

Surface area = WL = 2.0 ac

Max depth = 5 ft

$$\text{Stockwater Storage \& Irrigation Storage} = \text{Avg depth} * \text{Surface area} = 10.0 \text{ af}$$

Stockwater:

Max range cattle = 40 head

0.5 af per admin memo #3

G. NARRATIVE/REMARKS/COMMENTS

Water diverted from pond used to irrigate native vegetation/grasses to facilitate growth for feed stock in pasture and grazing area.

No water pumped from on-stream pond to troughs etc. for stockwater. Only water pumped via max 2 pumps totaling 1.5 hp to irrigate pasture grass on bank of pond.

Pond capacity is ~10 af. Evaporation losses would be surface area times the standard consumptive loss volume (2 ac * 2 af/ac = 4af). Evaporation losses not included in storage volume permitted because natural flow components/uses from pond supposed to account for refill. Therefore, recommend "irrigation" component limited to total limited to 1 acre with irrigation from storage uses with maximum not to exceed total irrigation of 1 acre. Also recommend "stockwater" component despite no diversion to troughs etc. Cattle drink from natural channel/pond. Pond refills and account for evaporation losses.

Stockwater:

Permit	0.03 cfs
B.U. Standard Allowance	0.02 cfs
B. U. Proof Fee	\$100 → 0.20 cfs to 1.00 cfs
Measurement or Theoretical Rate	0.02 cfs

License Recommendation **0.02 cfs**

Irrigation:

Permit	0.24 cfs
B.U. Standard Allowance	0.03 cfs
B. U. Proof Fee	\$100 → 0.20 cfs to 1.00 cfs
Measurement or Theoretical Rate	0.06 cfs

License Recommendation **0.03 cfs**

Storage:

Permit	12.0 af
B.U. Standard Allowance	5.0 af for irrigation storage use, none for other uses
B. U. Proof Fee	\$100 → 21 af to 100 af
Measurement or Theoretical Rate	10.0 af

License Recommendation **10.0 af**

No measuring devices into or out of the reservoir installed. Lockable control works are in place.

Permit owner must install measuring devices or seek a waiver from the watermaster to complete licensing. Permit owner was made aware of situation during visit. All other conditions compliant.

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	04/15 to 10/31	0.03 CFS	3.0 AF
IRRIGATION STORAGE	01/01 to 12/31		5.0 AF
STOCKWATER	01/01 to 12/31	0.02 CFS	0.5 AF
STOCKWATER STORAGE	01/01 to 12/31		10.0 AF
IRRIGATION FROM STORAGE	04/15 to 10/31		5.0 AF
<u>Totals:</u>		0.05 CFS	13.5 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

1. AUTHENTICATION

Field Examiner's Name Patricia Kelly Date 11-30-2016
Reviewer _____ Date _____

NWSW

NESW

65-23082 SYSTEM DIAGRAM

STORAGE
POU

1.0 Acre
IRRIGATION
POU*

20

12N04E

SESW

*2 Pumps totalling 1.5 hp
sprinkler irrigate for
pasture grazing. 40 head
of range cattle

SWSW

OUTLET
CULVERT
↓

NWNW

NENW

25

The USDA-FSA Aerial Photography Field Office asks to be credited in derived products.















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
Interim Director

September 25, 2012

Robert M. Flaten
1111 N. Adkins Ave.
Meridian, ID 83642

RE: Scheduling Field Exam for Water Right Permit No. 65-23032

Dear Mr. Flaten:

We are planning to **conduct water right examinations** in the vicinity of the above-referenced permit **during the weeks of October 1 and October 9, 2012**. 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 unnamed stream water for irrigation storage, stockwater storage, stockwater from storage, irrigation from storage, stockwater, and irrigation of up to 12 acres. The property associated with this permit is located off of Herrick Ln. in Round Valley.

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 October 5, 2012**. 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'. The signature is fluid and cursive, with a large, sweeping flourish at the end.

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