

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9620

Exam Date: 07/29/2021

1. Current Owner:

DEANNA BARRETT 611 WATKINS ST BIRMINGHAM MI 48009-1450 AND/OR
KENNETH BARRETT 611 WATKINS ST BIRMINGHAM MI 48009-1450

2. Accompanied by: Deanna Barrett

Phone No: 619-578-3524

Address: Same as above

Relationship to permit Holder: Permit holder.

3. **SOURCE:**

PACK RIVER

Tributary

LAKE PEND OREILLE

Method of Determination: Arcmap and DRG

B. OVERLAP REVIEW

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

YES Overlap

Water Right No.	Source	Purpose of Use	Basis
96-4296	SPRING CREEK	COMMERCIAL	LICENSE
96-7794	PACK RIVER	IRRIGATION	LICENSE
96-9195	PACK RIVER	IRRIGATION	LICENSE

Comments: Right No. 96-4296 uses water from Spring Creek for commercial uses with a POU that overlaps this right, but is not associated with this parcel and no concern for overlap. Right(s) 96-7794 and 96-9195 both use water from the same source as this right for irrigation purposes with overlapping POU(s); neither 96-7794 nor 96-9195 are associated with the applicant's parcel and irrigation uses, and are not a concern for overlap.

2. Other water rights with the same point-of-diversion:

NO Overlap**C. DIVERSION AND DELIVERY SYSTEM**1. **LOCATION OF POINT(S) OF DIVERSION:**

PACK RIVER NW¼ SE¼, Sec. 11, Twp 59N, Rge 02W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°33.4639, 48°28.6992.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
59N	02W	11														0.7			0.7

Total Acres: 0.7

Method of Determination: Field exam and Arcmap aerial imagery.

- 3.
- 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

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
TRANSFER PUMP	HONDA	UNK		WH15X	1.5 INCH DISCHARGE PIPE

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 GAL BUCKET TEST						

2. Measurements: Three 5 gallon bucket tests were completed from garden hose(s), direct from transfer pump, with average of three resulting in a diversion rate of 5 gal / 28.29 sec x 60 sec/min = 10.60 gpm = **0.02 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5 GAL Bucket Test = (5 gal / 28.28 sec) x 60 sec/min = 10.61 gpm
 = (5 gal / 27.53 sec) x 60 sec/min = 10.90 gpm
 = (5 gal / 29.05 sec) x 60 sec/min = 10.33 gpm

Average of 3ea 5 GAL Bucket Tests = (10.61 gpm + 10.90 gpm + 10.33 gpm) / 3 = 10.61 gpm = 0.02 cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.7 \text{ acres} \times 3.0 \text{ afa} = 2.1 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 8.5 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{2.1 \text{ af}}$$

2. Volume Calculations for Other Uses:

This right uses a surface water source, and does not receive an annual volume nor maximum diversion volume.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 7/29/2021 with the applicant, Deanna Barrett, showed water being diverted from the Pack River for irrigation use. At the POD, the applicant uses a small Honda WH15X water transfer pump with 1.5 inch screened intake pipe in the river providing water to 2-4 hoses with tripod sprinklers. Three 5 gallon bucket flow measurements were taken from garden hose(s), direct from transfer pump, with the average of three resulting in a diversion rate of 5 gal / 28.29 sec x 60 sec/min = 10.60 gpm = 0.02 cfs, considering department rounding standards. **0.02 cfs** aligns with the Department's standard diversion rate for 0.7 acres of irrigation as observed during the field exam, and is recommended as the annual and maximum diversion rate for licensing purposes.

During the field exam, photographs of the irrigation system and irrigation POU were taken, and acreage watered was sketched out on field maps. During licensing review, Arcmap aerial imagery was used to accurately define the irrigation POU, which equals 0.7 acres. This value is less than the 2.0 acres the permit was approved for, but is the extent of developed irrigation observed during the field exam. The annual volume associated with the irrigation beneficial use equals 0.7 acres x 3.0 afa = 2.1 af, but as this is a surface source water right no volume metrics are applied to this right for annual or maximum diversion volumes for licensing purposes. 2.1 af is designated using condition X31 to describe the volume limitations for irrigation of 0.7 acres.

The applicant's transfer pump is capable of running up to 4 garden hose-to-tripod sprinklers, but the flow reduces and sprinkler ark is reduced in that configuration. As a result, Mrs. Barrett asserts she typically runs two sprinklers and moves hoses to water green space along a narrow corridor of river frontage to keep the grass green throughout the season. The parcel is currently used for summer time RV camping, but there is no water connected to the trailers, and a contracted porta-john restroom was on-site indicating the camp trailers do not use water from the river for toilets. Mrs. Barrett asserted she has watered less this year, primarily due to the Pack River water level being below the MSF requirements, as defined by WR No. 96-8717. Mrs. Barrett has only watered to keep the grass alive this summer.

Condition 26A was removed from the permit during licensing review. Condition R66 was replaced with X31, to more accurately designate irrigation diversion rate and diversion volume for acreage less than 1.0 in area. All other conditions on the permit shall be carried forward to licensing. Overlap concerns: right No. 96-4296 uses water from Spring Creek for commercial uses with a POU that overlaps this right, but is not associated with this parcel and no concern for overlap. Right(s) 96-7794 and 96-9195 both use water from the same source as this right for irrigation purposes with overlapping POU(s); neither 96-7794 nor 96-9195 are associated with the applicant's parcel and irrigation uses, and are not a concern for overlap. There are no additional overlap concerns for this water right.

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>
IRRIGATION	04/01 to 10/31	0.02 CFS

Totals: 0.02 CFS

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 Luke Bates - Water Resource Agent

Field Examiner's Name [Signature] Date 8/12/2021

Reviewer [Signature] Date 8/12/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9620

IRRIGATION system diagram.

02W

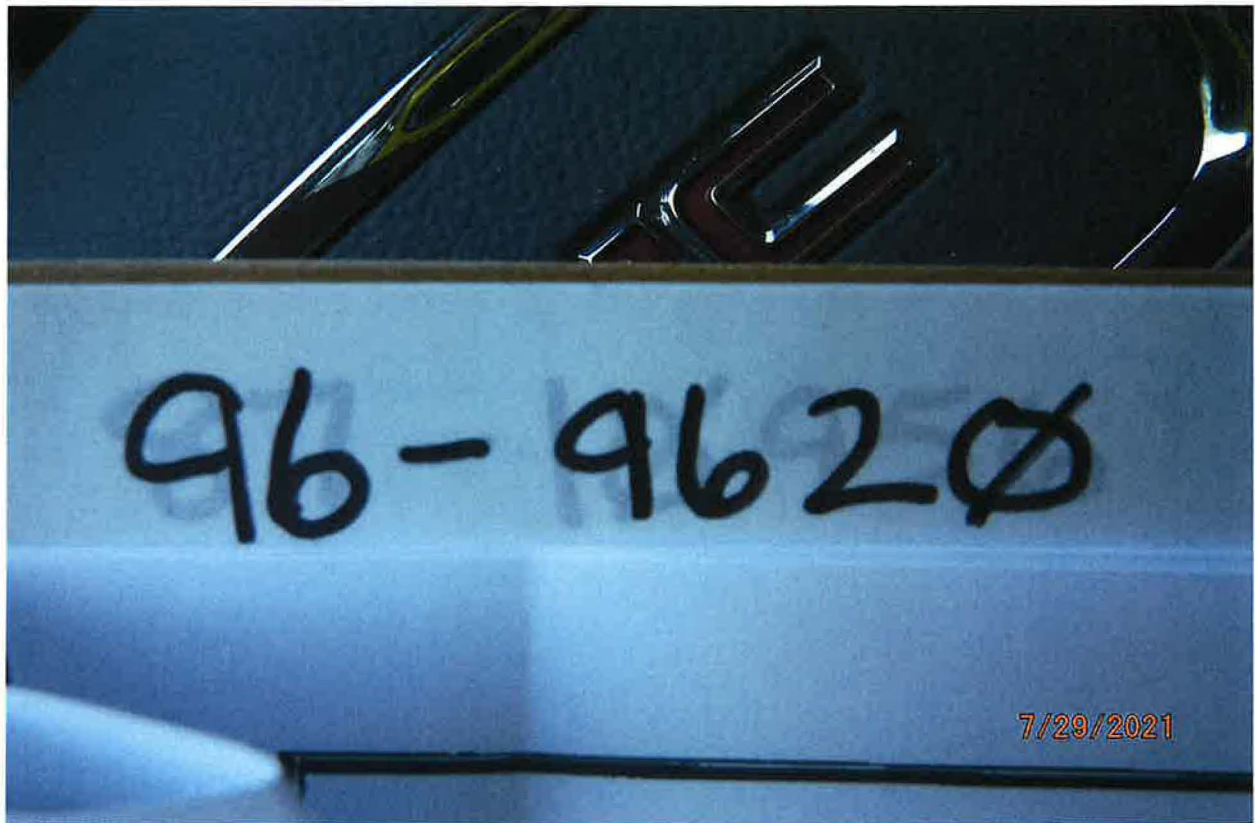
59N



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.035 0.07 0.14 Miles





FIELD EXAM DATE 7/29/2021



POD – SMALL WATER TRANSFER PUMP WITH INTAKE PIPE IN RIVER



SCREENED INTAKE PIPE



1.5 INCH POLY PIPE INTAKE LINE TO PUMP TO HOSE BIB SPLITTER



HONDA WH15X WATER TRANSFER PUMP



RAINBIRD TRIPOD SPRINKLERS WITH 11/64 NOZZLE USED AT IRRIGATION POU



IRRIGATION POU





IRRIGATION POU





IRRIGATION POU

