

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 71-10979
Exam Date: 06/21/2019

1. Current Owner:
PATRICK D FUREY 301 E BROOKHOLLOW DR BOISE ID 83706-6730
2. Accompanied by: Clinton Barnes
Phone No: (208) 736-3033
Address: IDWR Southern Region

3. SOURCE:
GROUND WATER

Method of Determination: On-Site Observation

B. OVERLAP REVIEW

Comments: Surface Water Rights 71-14, 71-15, 71-17, 71-18 are owned by Patrick Furey. Note: these four rights are leased to the Water Supply Bank through 12/31/2038.

1. Other water rights with the same point-of-diversion: **None**

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER SE¼ SW¼, Sec. 17, Twp 10N, Rge 13E, B.M. CUSTER County

Method of Determination: GPS and On-site observation

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	
10N	13E	17											1.9	8.3					10.2

Total Acres: 10.2

PLACE OF USE: STOCKWATER

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10N	13E	17											X	X					

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10N	13E	17											X	X					

Method of Determination: Aerial imagery and on-site observation

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.*
D0075143

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Electronic Flow Meter	Polysonic	GE	PT878	04031		April 2019

2. Measurements: **0.20 cfs** (91.8 gallons per minute)

E. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \mathbf{30.6} \text{ (10.2 acres} \times 3.0 \text{ afa)}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \mathbf{72.9} \text{ (0.2 cfs} \times 184 \text{ days} \times 1.9835)$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{30.6 AF}$$

2. Volume Calculations for Other Uses:

* Domestic: **1.2 AF** (2 homes x 0.6 AF)

* Stock water: **0.14 AF** (20 cattle x 12 gallons/day x 184 days)

F. NARRATIVE/REMARKS/COMMENTS

Permit 71-10979 is for 0.20 cfs from ground water for irrigation, domestic, and stock water uses. On June 21, 2019 Clinton Barnes and I performed a field exam for the permit. We met with Patrick Furey, the permit owner, and he showed us the Point of Diversion (POD), Place of Use (POU), and the developed system.

The POD (tag number D0075143) is located in the SESW Section 17, Twp 10N, Rge 13E. There is an approved flow meter correctly installed near the well head. The well provides domestic water for two homes, stock water for up to 20 range cows, and irrigation for 10.2 acres. Buried lines provide domestic water to the two homes. Buried lines from the well supply irrigation water to 5 risers and three inch diameter above-ground poly pipe with sprinkler pods connect to the risers and deliver irrigation water to 10.2 acres. Several 50 gallon water troughs are used for stock water. There is a locked well house near the well head that contains a pressure tank, valves, and electrical service.

A flow rate measurement taken using a GE Panametrics polysonic flow meter indicates the developed system is capable of the applied-for diversion rate of 0.20 cfs. The permit conditions of lockable works and a measuring device with data logger have been met. I recommend licensing water permit 71-10979 for 0.20 cfs with an annual volume of 31.9 acre-feet.

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

G. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Volume</u>
IRRIGATION	05/01 to 10/31	0.20 CFS	30.6
STOCKWATER	05/01 to 10/31	0.02 CFS	0.1
DOMESTIC	05/01 to 10/31	0.02 CFS	1.2

<u>Totals:</u>	0.20 CFS	31.9
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2. Recommended Amendments

 Change P.D. as reflected above Add P.D. as reflected above X None

 Change P.U. as reflected above Add P.U. as reflected above ☒ None

H. AUTHENTICATION Kent Aasa - Water Resource Agent

Field Examiner's Name Paul L. R. Date 07/25/2019

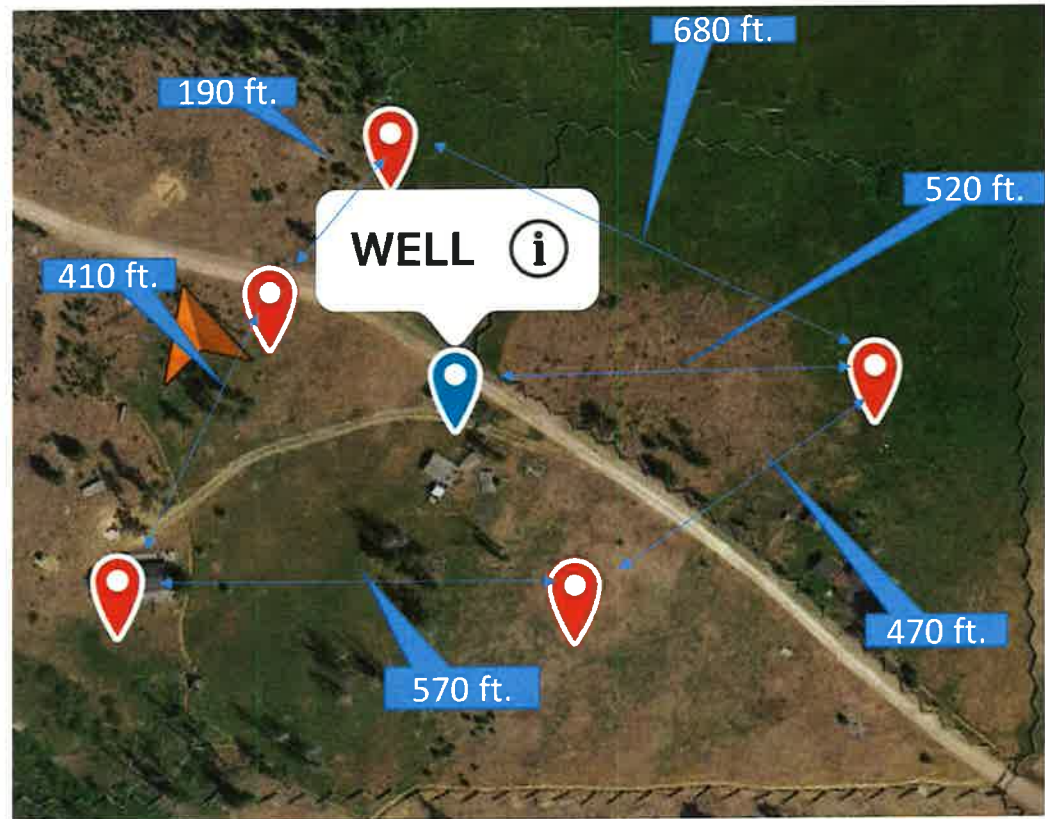
Reviewer _____ Date _____

71-10979

System Diagram

POD and five riser locations

The system uses three inch poly pipe and sprinkler pods



71-10979 POD

Well Head

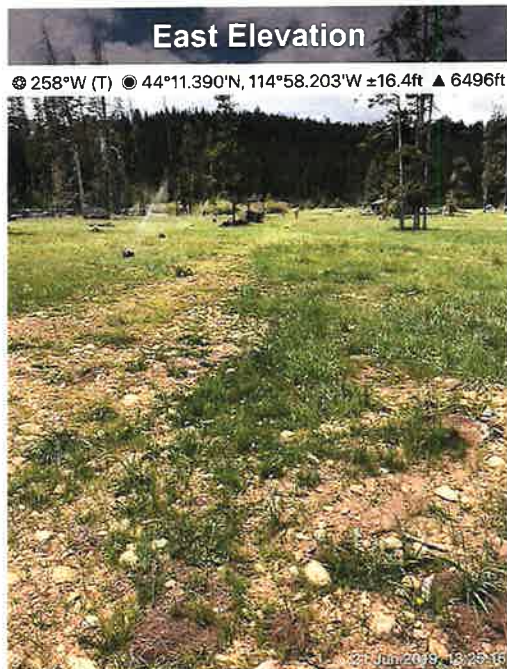


Installed flow meter



71-10979 IRRIGATION POU

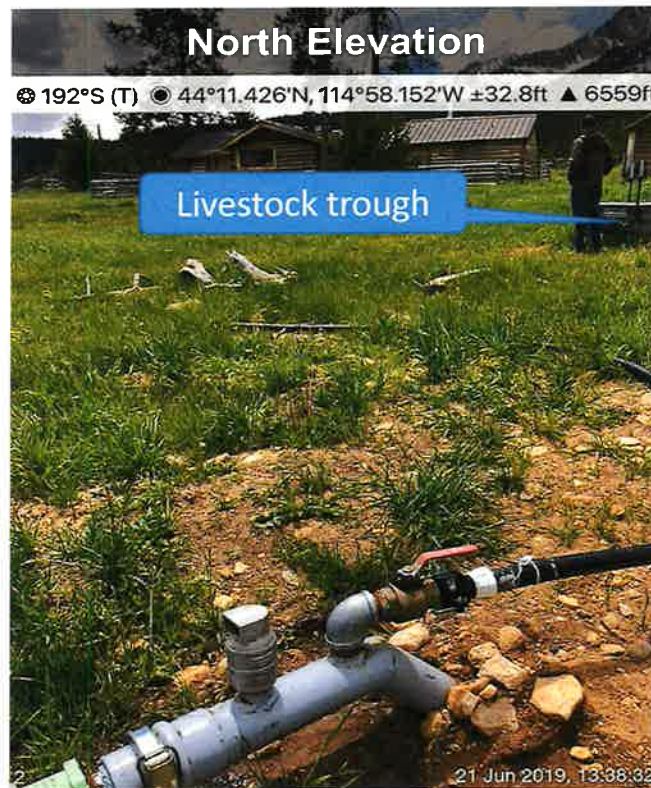
Sprinkler pods



Three inch sprinkler line



71-10979 LIVESTOCK TROUGH

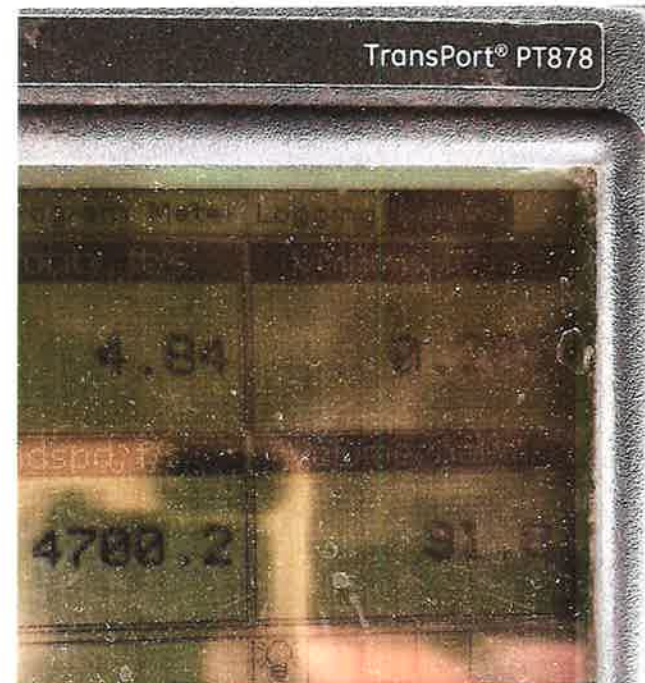


71-10979 Field Exam Meter Readings

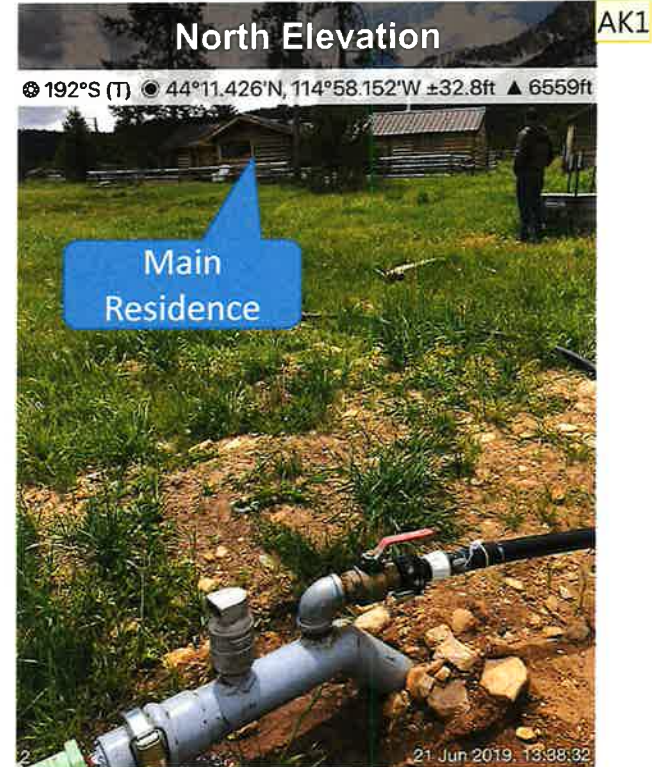
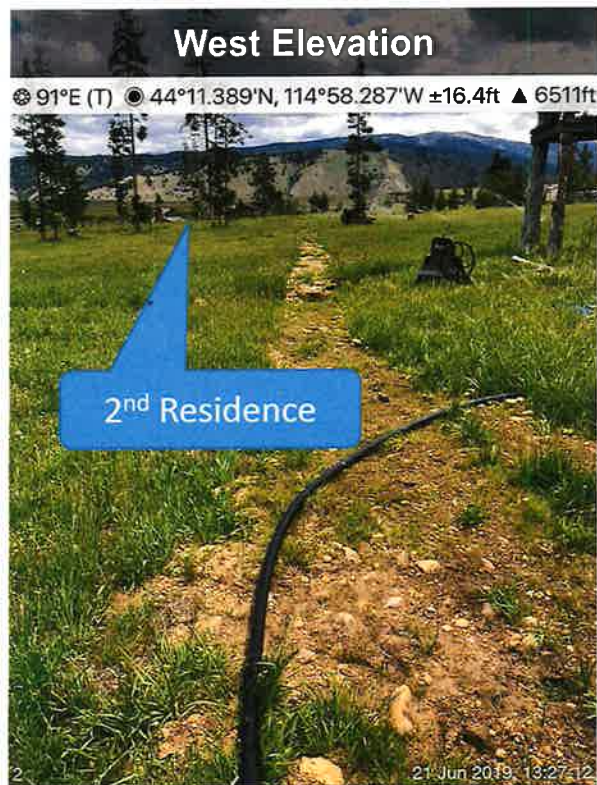
Installed System Meter



Portable Polysonic Meter



71-10979 Domestic Places of Use



71-10979 Lockable Works

