

MEMORANDUM

TO: Water Right File 75-14863 & 75-14865
FROM: Brian Normandeau – Associate Engineer
DATE: June 22, 2020
SUBJECT: Licensing Review of Water Rights 75-14863 & 75-14865

The Beneficial Use Field Reports for these rights were prepared by Certified Water Right Examiner Patrick Naylor of Rocky Mountain Environmental Associates. The following is my evaluation and recommendations for licensing based on the provided reports.

Diversion Rate:

The field reports included both an open discharge capacity measurement, and a calculation based on the maximum number of sprinkler heads in operation at one time. Permit 75-14863 has a permitted diversion rate of 0.10 cfs. Based on the information provided in the field report, the recommended rate for licensing remains at 0.10 cfs. Permit 75-14865 has a permitted diversion rate of 0.09 cfs. Based on the information provided in the field report, the recommended rate for licensing is reduced to 0.08 cfs.

Diversion Volume:

Neither permit had an assigned volume restriction. The field reports included calculations for volume based on rate, and the generic irrigation requirement of 3.5 acre-feet/acre. The volumes using the irrigation requirement is recommended for licensing; which corresponds to 17.5 acre-feet for 75-14863, and 9.1 acre-feet for 75-14865.

Point of Diversion and Place of Use:

The point of diversion and place of use had to be amended for both permits due to minor changes that were made during development of the water rights. The permit holder, Ruth Anderson, submitted Applications for Amendment for both permits along with the appropriate fees. The irrigated acreage remained the same for 75-14863, and 75-14865 was reduced from 3.0 acres to 2.6 acres.

Overlap:

The place of use for 75-14863 is overlapped with permits 75-14861 & 75-14862, which have not been developed at this time. There is a combined limit established for the irrigation provided by these three rights. Right 75-10935 is a domestic right that overlaps the place of use for 75-14863. It appears this right is no longer associated with the parcel covered by 75-14863 due to changes in property ownership.

Conditions:

Conditions 26A and 029 are dropped at licensing, as they were adequately satisfied in the development of the irrigation systems. 01H becomes licensing condition R02.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
NOV 25 2019
Department of Water Resources
Eastern Region

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 75-14863

1. Owner Ruth Andersen Phone No. 801-573-4368
Current address 14 Beehaven Ln, Salmon, ID 83467-5029
2. Examiner's name Patrick N Naylor EXAM DATE 9/18/2019
3. Accompanied by Ruth Andersen Email sageranchllc@msn.com
Address same
Relationship to permit holder self Phone No. same
4. Source Salmon River tributary to Snake River

B. OVERLAP REVIEW

1. Other water rights with the same place of use Permit Nos. 75-14861 & 75-14862
2. Other water rights with the same source and point of diversion none

C. DIVERSION AND DELIVERY SYSTEM**1. Point(s) of Diversion:**

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
			SE	SW	34	19N	21E	Lemhi	On-site inspection & aerial

2. Place(s) of Use: Method of determination on-site inspection & aerial

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
19N	21E	34												2.9			2.1		5
													L8			L8			

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.

Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Salmon Rv Pump	Baldor JML1409T	5	36M927W925G1	Berkeley B58083	M24849

*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
Bucket & stopwatch					5 gal	

2. **Measurements:** _____

Measured seven times: 1) 5g/3.85 sec 2) 5g/3.95 sec 3) 5g/3.25 sec 4) 5g/3.44 sec 5) 5 g/3.70 sec 6) 5 g/3.70 sec
 7) 5g/3.13 sec

E. NARRATIVE/REMARKS/COMMENTS

This water right overlaps two other permits, 75-14861 and 75/14862, that pertain to the same 5 acres of irrigation. 75-14861 from ground water and 75-14862 from a spring have not been fully developed yet and therefore were not examined during this visit. The development period on all three permits ends in September 2022. For this examination, it appears that the Salmon River right 75-14863 is the only water right currently being used for irrigation. There are no other rights diverted from the same point of diversion.

A 3" flex intake hose receives water from the Salmon River. A 3" x 12" stainless steel screen is fitted to the end of the intake. The flex intake hose connects to the pump and flows into the 6" steel mainline, which is then buried and extends the length of the irrigated field. One riser connects a large sprinkler head to irrigate the western portion of the field adjacent to the river. There are 13 risers connected to laterals of 1.5" polyethylene pipe have 4-6 heads per line. Each head requires 4 gpm.

When irrigating, only 2 laterals are operated simultaneously at 50 psi, meaning that no more than 11 heads are being used.

11 heads x 4 gpm = a total diversion of 44 gpm

Conditions of approval met: 1) a fish screen was installed at the point of intake. 2) the right holder has installed a straight length of conduit or ditch for the purposes of measuring flow 3) A lockable device is installed 4) right holder meets authorized diversion rate and acres.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

F. FLOW CALCULATIONS☐ Additional computation sheets attached**Measured Method:**

Measured seven times using 5 gallon bucket: 1) 5g/3.85 sec 2) 5g/3.95 sec 3) 5g/3.25 sec 4) 5g/3.44 sec 5) 5 g/3.70 sec 6) 5 g/3.70 sec 7) 5g/3.13 sec for an average of 5g/3.57 sec

5g/3.57 sec = 1.4 gps = 84 gpm

Pump capacity was measured to be 84 gpm, or 0.187 cfs.

Operates simultaneously 11 heads at 4 gpm = 44 gpm, or 0.1 cfs

G. VOLUME CALCULATIONS**1. Volume Calculations for Irrigation:**

$$V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5 \text{ ac} \times 3.5 \text{ afa/ac} = 17.5 \text{ afa}$$

$$V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.1 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 42.4 \text{ afa}$$

$$V = \text{Smaller of } V_{I,R} \text{ and } V_{D,R} = 17.5 \text{ afa}$$

2. Volume Calculations for Other Uses:

NA

H. RECOMMENDATIONS**1. Recommended Amounts**

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	4/01	10/31	0.1 cfs	17.5 afa
Totals:			0.1 cfs	17.5 afa

2. Recommended Amendments

☒ Change P.D. as reflected on page 1

☐ Add P.D. as reflected on page 1

☐ None

☒ Change P.U. as reflected on page 1

☐ Add P.U. as reflected on page 1

☐ Other

I. AUTHENTICATION

Field Examiner's Signature

Patrick N. Naylor

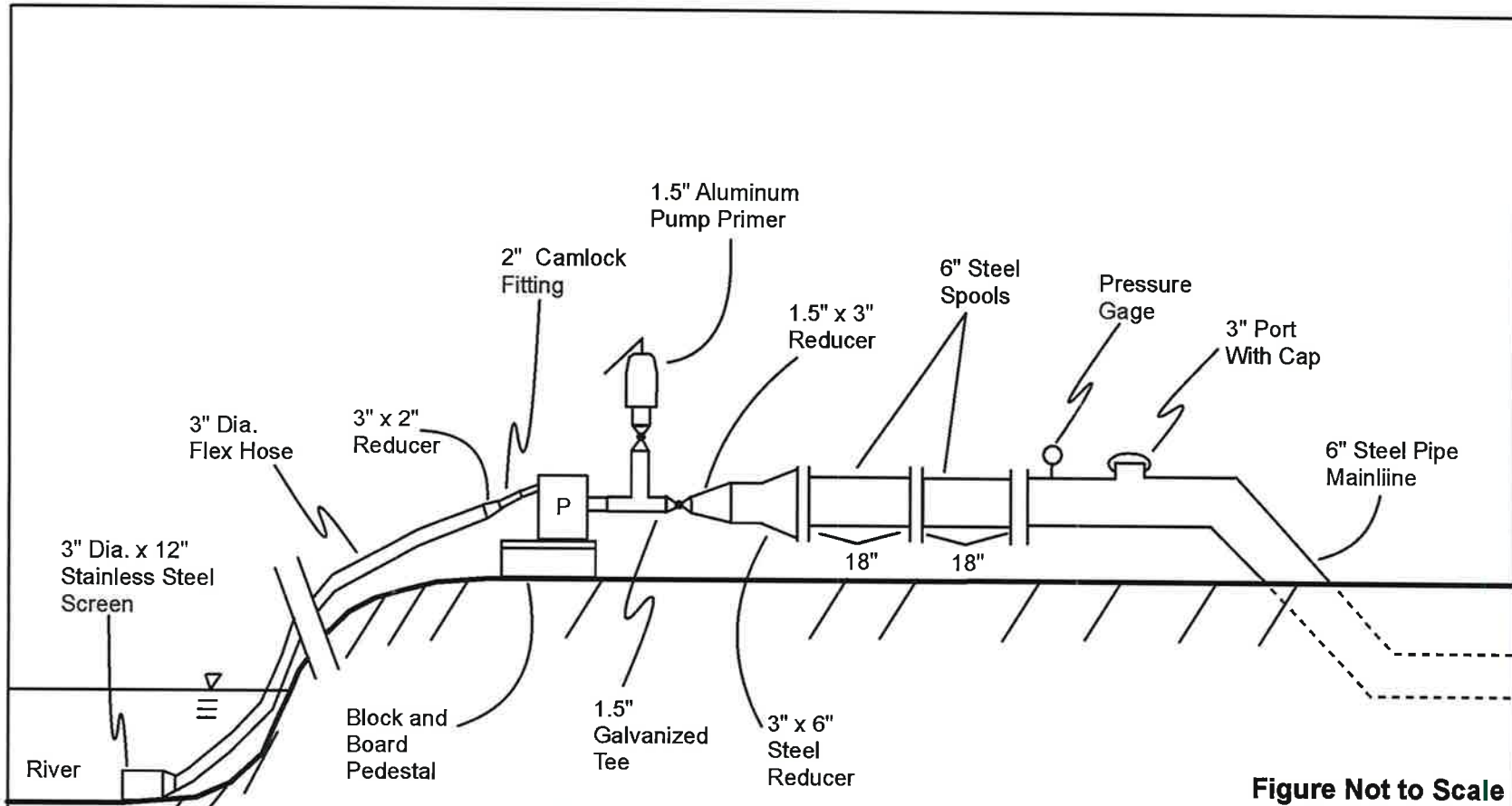
Date

11/18/19

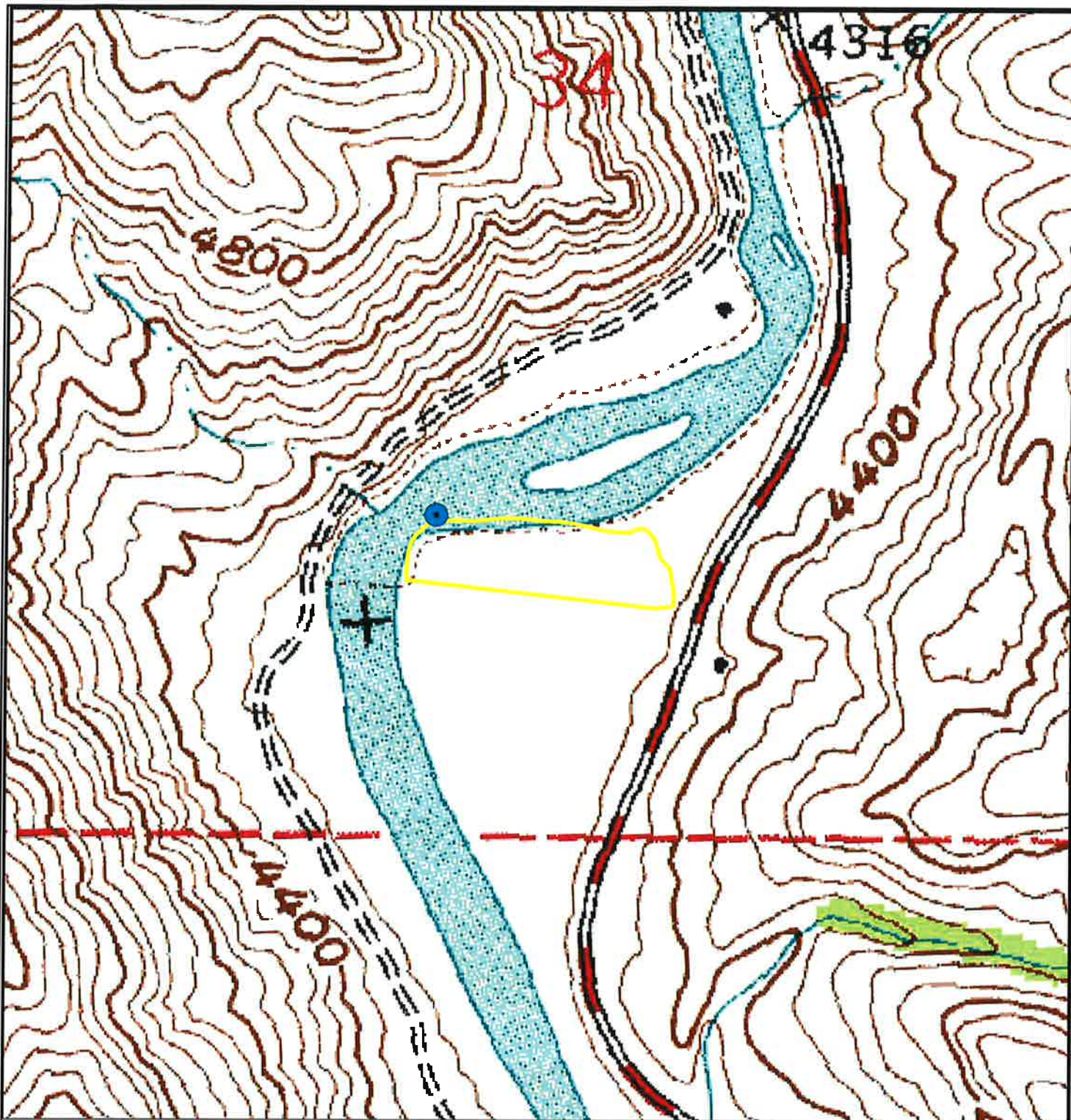
Reviewer

Date





<div data-bbox="262 1128 325 1177" data-label="Image"></div> <div data-bbox="367 1128 567 1161" data-label="Text"><p>Ground Level</p></div> <div data-bbox="262 1185 325 1218" data-label="Image"></div> <div data-bbox="367 1185 630 1218" data-label="Text"><p>Underground Pipe</p></div> <div data-bbox="273 1242 315 1274" data-label="Image"></div> <div data-bbox="367 1242 672 1274" data-label="Text"><p>1.5" Brass Ball Valve</p></div>	<div data-bbox="829 1144 1711 1193" data-label="Section-Header"><h3>Delivery System Diagram for Permit 75-14863</h3></div> <div data-bbox="829 1226 1050 1291" data-label="Text"><p>10 Peacock Ln Salmon, Idaho</p></div> <div data-bbox="829 1307 1302 1412" data-label="Text"><p>Ruth Anderson Water Rights Project Manager: Patrick Naylor</p></div>		
<div data-bbox="262 1307 409 1404" data-label="Image"></div> <div data-bbox="430 1307 745 1404" data-label="Text"><p>Rocky Mountain ENVIRONMENTAL ASSOCIATES, INC.</p></div>		<div data-bbox="1638 1315 1848 1339" data-label="Text"><p>Date: 10/17/2019</p></div> <div data-bbox="1638 1356 1858 1380" data-label="Text"><p>Project #: 19-0151</p></div> <div data-bbox="1638 1388 1806 1412" data-label="Text"><p>Drawn by: JP</p></div>	



● Point of Diversion

□ Place of Use

0 70 140 280 420 560 Feet

USGS Goldbug Ridge Quadrangle 1:24,000 **Permit 75-14863**

10 Peacock Ln
 Salmon, Idaho

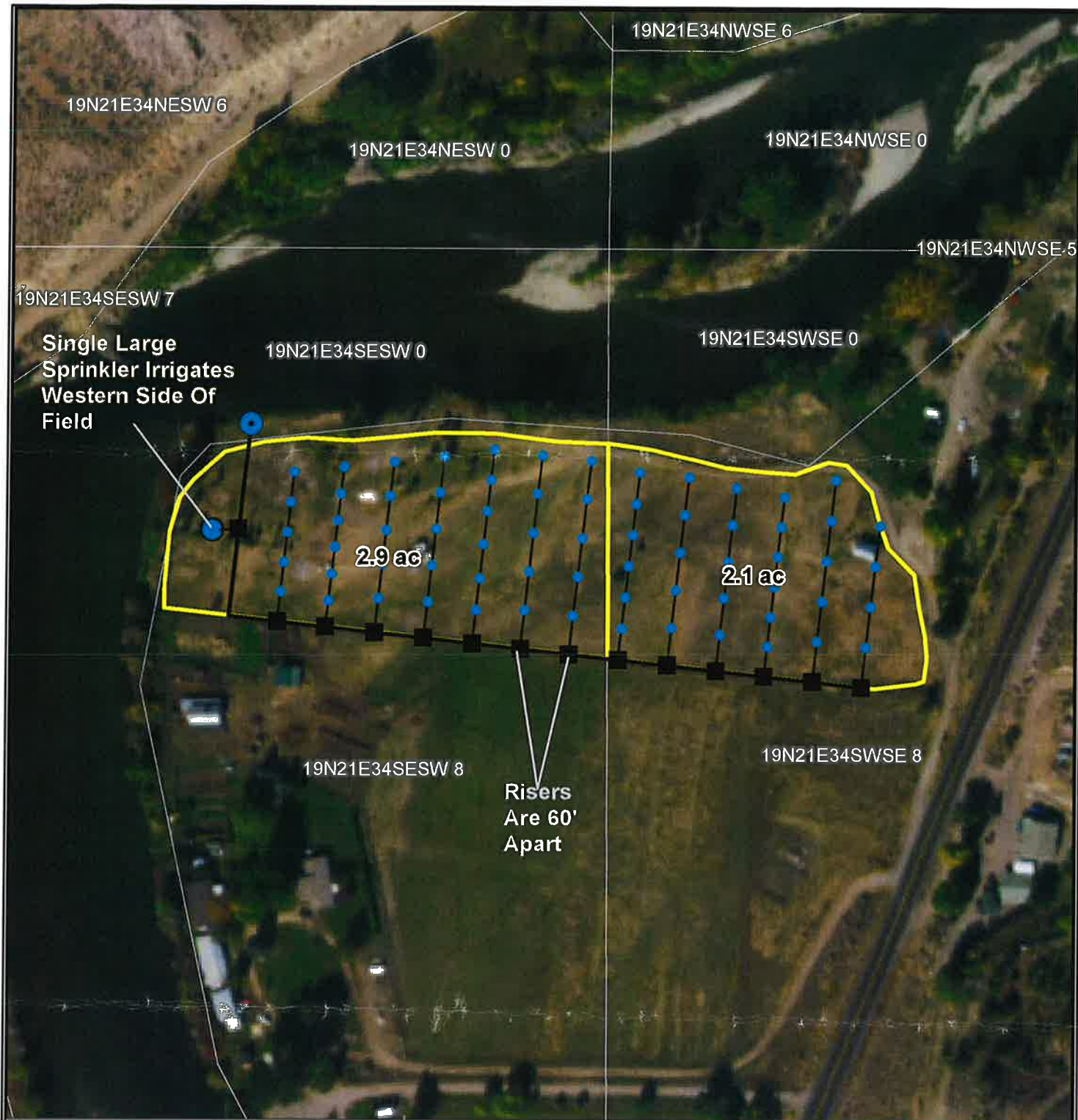


Ruth Anderson
 Water Rights
 Project Manager: Patrick Naylor

Date: 10/24/2019

Project #: 19-0151

Drawn by: JP



- Sprinkler Head
- Large sprinkler head
- Riser
- Point of Diversion
- 1.5" Polyethylene Pipe
- 6" Steel Pipe
- Place of Use
- Twp & Rng
- Section
- QQ

0 70 140 280 420 560 Feet

Field Examination Map -- Permit 75-14863

10 Peacock Ln
Salmon, Idaho



Ruth Anderson
Water Rights
Project Manager: Patrick Naylor

Date: 10/24/2019

Project #: 19-0151

Drawn by: JP

Photos of Diversion and System

Full Pump Assembly



Pump Plate



Motor Plate



Intake in River



Sprinklers in Use



Sprinklers for West End



Central Laterals

