

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 98-7919

Exam Date: 7/17/2014

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other < >

2. Current Owner: Name: Stephen & DeAnna Galbraith
- Owner of Record Correct? ☒ Yes ☐ No
- Address of Record Correct? ☒ Yes ☐ No
- If No: Address

3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: CO98360

4. **SOURCE****TRIBUTARY**

Kootenai River

Columbia River

Method of Determination: Applicant submitted an aerial photo map that outlined POD & POU.

Change in Source:

☐ Yes ☒ No**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: City of Bonners Ferry municipal water rights are not pertinent to the land.

2. Other water rights with the same point of diversion: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: No POD overlap.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County
Kootenai River			SW	NE	27	62N	01E	Boundary

Method of Determination: Legal Description in permit validated by PLS data and mapping.

Change in POD? ☐ Yes ☒ NoAmendment Required? ☐ Yes ☒ No

2. **PLACE OF USE:** Use: Domestic & 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	
62N	01E	27		0.5															0.5
				L2															

Method of Determination: Map of property submitted by land owner identifies POU clearly. PLSS data through ArcMap match.

Change in POU? ☐ Yes ☒ No Amendment Required? ☐ Yes ☒ No

☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

☒ 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
Unk	Unk	1	Unk	Unk	Unk

*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: In-office field exam so no flow measurements taken.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

$$\text{Theoretical } Q = 8.8 * 0.7[\text{efficiency}] * 1[\text{hp}] / (30[\text{lift}] + 2.31 * 50[\text{psi}]) = 0.04 \text{ cfs}$$

Administrator Memorandum #17 recommends a diversion rate of 0.03 cfs/acre for irrigation of lands less than 5.0 acres.

$$0.5 \text{ acres} * 0.03 \text{ cfs/acre} = 0.02 \text{ cfs}$$

Measurement = 0.04 cfs

Permit allowed = 0.03 cfs

License recommend for 0.02 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.5 \text{ acres} * 3.0 \text{ cfs/acre} = 1.5 \text{ af}$$

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

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 1.5 \text{ af}$$

2. Volume Calculations for Other Uses: None.

G. PURPOSE OF USE

Irrigation ☒ Yes ☐ No # Stock 0 Domestic # of Homes 0

Other: < >

Change in Purpose of Use? ☐ Yes ☒ No

Method of Determination: Information in the water right file is consistent with aerial photography of the property.

If Yes: From Use _____ To Use _____ Amount _____ CFS _____ AFA _____

H. NARRATIVE/REMARKS/COMMENTS

Permit 98-7919 authorized the diversion of 0.03 cfs for irrigation purposes. Based on the information provided in the water right file, this qualifies for an in-office field exam. The exam was completed on July 17, 2014 by WRA Patrick Kelly.

Legal description of POU & POD were used to locate the property in the name of Stephen Galbraith. Initial contact was made with the Galbraith's to identify what was being irrigated and potentially recommending an amendment to identify all QQ's in the POU. The Galbraith property lies at a difficult intersection of many QQ boundaries.

It was found that the parcel of land identified in the application was not the correct property requesting irrigation rights. I went back and forth with DeAnna Galbraith via email and phone calls to sort out what was intended with the permit. The parcel of land highlighted in the application is owned by the Galbraith's, however they do not irrigate this part of their land. What is actually being irrigated is areas around their home. There are several acres of land on the bank of the Kootenai River where the Galbraith home is located. My final recommendation to her was to move forward with the licensing process for half an acre in the POU identified under 98-7919. This will avoid the filing of an amendment and will keep a 2012 priority date for 0.5 acres. I promised that I would send them another application for permit that would cover the remainder of the property and would include all of the correct legal descriptions for POU.

Moving forward with the exam, overlap review showed only Bonners Ferry municipal rights overlap the land. No other uses are associated with the submersible pump.

Theoretical flow rate was determined using information from the application and topographic maps. A 1 hp pump is recorded on the application. Lift was estimated using topo maps of the property. Private irrigation sprinkler systems run at a pressure of 40 – 60 psi. This information was used over a range of 3 scenarios that provide an average diversion rate of 0.04 cfs. This is a sufficient flow rate for the 0.02 cfs that is being recommended for licensing.

I have limited the diversion rate to 0.02 from the authorized 0.03 cfs given the 0.03 cfs/acre recommendation. Because 0.5 acres * 0.03 cfs/acre = 0.02 cfs.

Condition #3 on the permit requires a fish screen in place. A 0.25" screen at point of diversion is recorded on the Proof of Beneficial Use form.

I recommend permit 98-7919 be licensed at a diversion rate of 0.02 cfs. Volume limits will not be included per Beneficial Use Exam Rules.

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

I. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Irrigation	04/010-10/31	0.02 cfs	-
	<u>Totals</u>	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 ☐ Other

Other: < >

J. AUTHENTICATION

Field Examiner's Name Patricia Wiley Date 7-17-2014

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Field Exam Map
98-7919

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



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

0 0.05 0.1 0.2 Miles



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 98-7919
 Reviewer: Patrick Kelly
 Date of Review: 7/17/2014

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	1	1	1
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	30	30	30
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.05	0.04	0.04 0.04

The above calculates the formula =

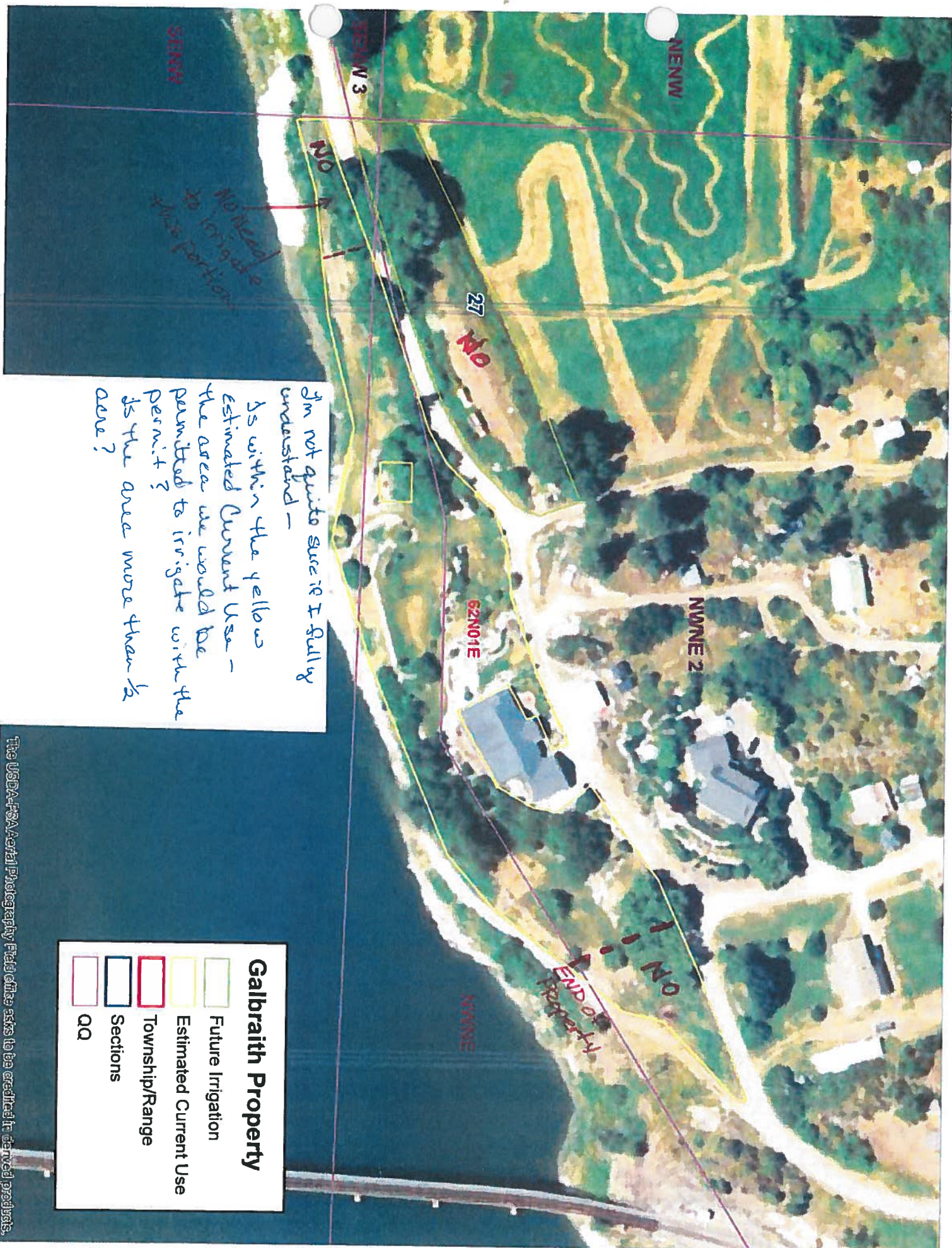
$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

Horsepower is taken from information provided in application. Pumping level was determined from topographic map of the property. A range of discharge pressures was assumed given general irrigation system pressures. The average flow rate of the 3 scenarios is 0.04 cfs.

[illegible]



I'm not quite sure if I fully understand -
 Is within the yellow
 estimated Current Use -
 the area we would be
 permitted to irrigate with the
 permit?
 Is the area more than 1/2
 acre?

Galbraith Property

- Future Irrigation
- Estimated Current Use
- Township/Range
- Sections
- QQ

Kelly, Patrick

From: DeAnna Galbraith [DeAnna.G@BCCH.org]
Sent: Monday, April 21, 2014 9:14 AM
To: Kelly, Patrick
Subject: FW: Attached Image
Attachments: 2907_001.pdf

Good morning Patrick,

Thank you so very much for being so helpful through this process with us!!! It is greatly appreciated!

Here are the documents you requested with the legal description. If they aren't what you're looking for, let me know and I'll try again.

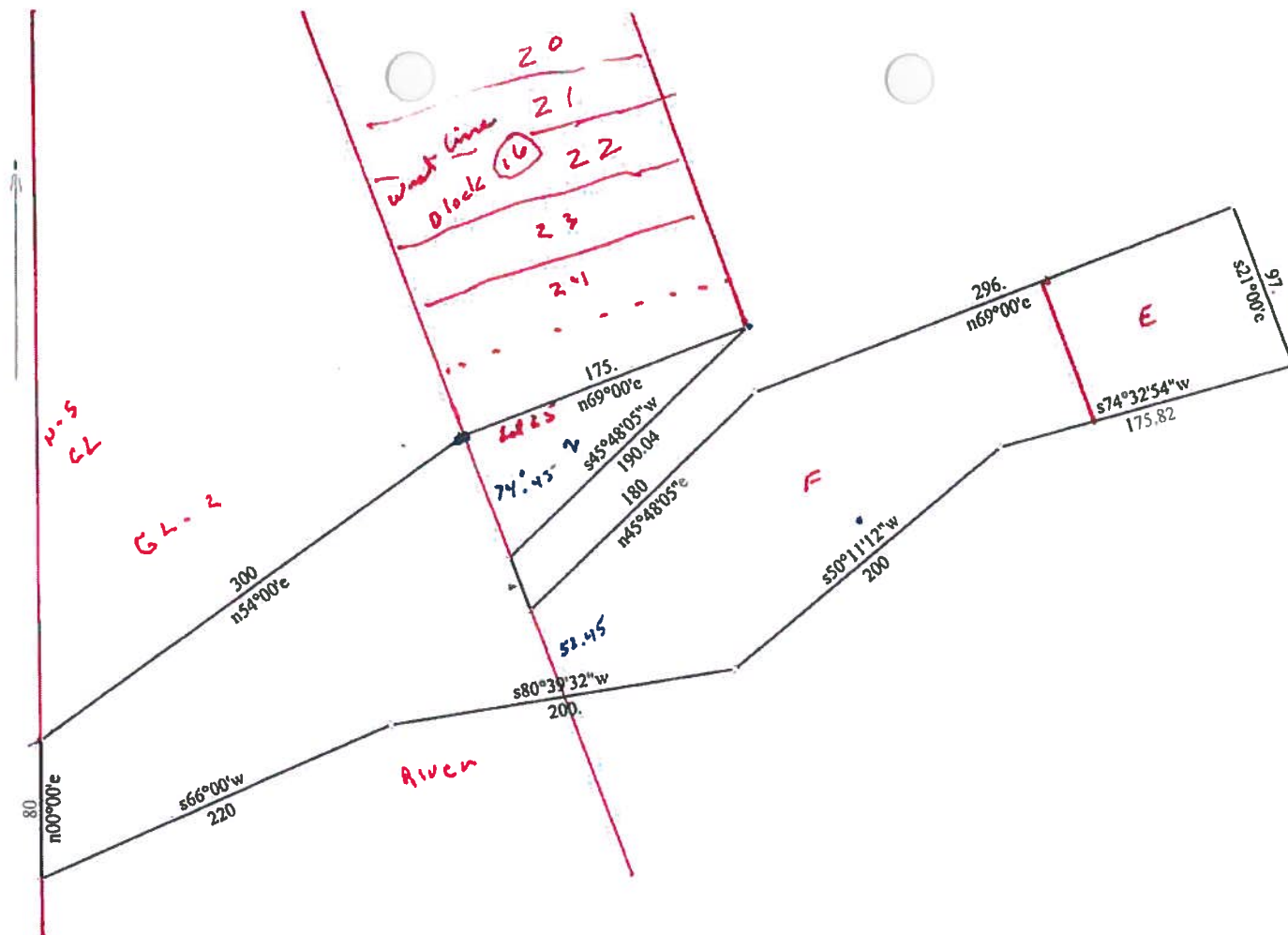
My husband and I talked about the permit and Steve asked me to relay a little more information. We would like to include as much of the property that we can. We realize the ½ acre limitation and would like to provide a little more explanation. Lots E and F both have a prescriptive use city street literally down the center of the property, dividing the lots into northern and southern sections. We don't irrigate any of the land north of the city street, nor do we irrigate the space the city street occupies or the house site itself. If at all possible, we would like as much of the triangle shaped lot in addition to E and F to be irrigated with the river water.

Most importantly we don't want to jeopardize the finalization of this permit by making it too complicated either, so do what you think is best and most suitable to finalize the permit. You are the professional and know the boundaries of the permit. Lot F and the triangle piece are the most important to us for irrigation. We already irrigate Lot E with city water and will have new lawn seeded on the triangle piece to irrigate as soon as we return.

We will be out of town for two weeks to start at the end of this week and will be back on May 11th. We don't have our pump in the water for the watering season yet. Due to freezing, we remove it for the winter and will place it back in the water right after we return.

Again, thank you very much for all of your help!

DeAnna Galbraith



Title:		Date: 10-18-2006
Scale: 1 inch = 100 feet	File:	
Tract 1: 1.907 Acres: 83078 Sq Feet: Closure = s46.0219w 0.36 Feet: Precision =1/5887: Perimeter = 2147 Feet		
001=n54.00e 300	006=n69.00e 296.	011=s66.00w 220
002=n69.00e 175.	007=s21.00e 97.	012=n00.00e 80
003=s45.4805w 190.04	008=s74.3254w 175.82	
004=s21.00e 32.64	009=s50.1112w 200	
005=n45.4805e 180	010=s80.3932w 200.	

J: Title
maps and arbo

missouri 27-62-1 E

J: Title maps and arbo 62 N 1 E 27 / missouri de

EXHIBIT A

Parcel 1

A parcel of land situate in and being all of Lots E and F and part of Lot 25, Block 16 in the Town of Bonners Ferry, and the unplatted portion of Lot 2 of Section 27, in the Northeast Quarter (NE $\frac{1}{4}$) of Section 27, Township 62 North, Range 1 East of the Boise Meridian, in the City of Bonners Ferry, County of Boundary, State of Idaho, more particularly described as follows:

Beginning at the point of intersection of the north line of Willow Street with the north-south center line of said Section 27;

thence North 54 degrees 00 minutes East, a distance of 300.0 feet, more or less, to a point on the west line of said Block 16;

thence North 69 degrees 00 minutes East, a distance of 175.0 feet, more or less, to the east line of said Block 16;

thence along the northwesterly line of Riverside Avenue, South 45 degrees 48 minutes 05 seconds West, a distance of 190.4 feet, more or less;

thence South 21 degrees 00 minutes East, a distance of 32.64 feet, more or less;

X thence along the southeasterly line of said Riverside Avenue, North 45 degrees 48 minutes 05 seconds East, a distance of 180.0 feet, more or less;

X thence continuing along said southeasterly line of Riverside Avenue, North 69 degrees 00 minutes East, a distance of 296.0 feet, more or less, to the southwesterly line of Ferry Street;

X thence along said southwesterly line of Ferry Street, South 21 degrees 00 minutes East, a distance of 97.0 feet, more or less, to the north bank of the Kootenai River;

X thence along the north bank of said River, South 74 degrees 32 minutes 54 seconds West, a distance of 175.82 feet, more or less;

X thence continuing along the north bank of the Kootenai River, South 50 degrees 11 minutes 12 seconds West, a distance of 200.0 feet, more or less;

thence continuing along said north bank, South 80 degrees 39 minutes 32 seconds West, a distance of 200.0 feet, more or less;

thence continuing said north bank, South 66 degrees 00 minutes West, a distance of 220.0 feet, more or less, to a point on the north-south center line of said Section 27;

thence along said north-south center line, North, a distance of 80.0 feet, more or less, to the TRUE POINT OF BEGINNING.

Containing an area of 83,063 square feet, more or less, or 1.91 acres.

Kelly, Patrick

From: Favreau, Danielle
Sent: Tuesday, April 15, 2014 9:12 AM
To: Saxton, Craig
Cc: Kelly, Patrick
Subject: RE: Thoughts on 98-7919

Hi Craig,

It would be a good idea to check with the permit holder to check what her deed says.

Based on the information below, I would interpret it in 2 ways.

- 1) The river meander could be georectified a bit off
- 2) The property is accretion land

The order of priority for land descriptions are government lots, then QQ so describing it as Government Lot 2 would be correct either way.

I leave the conditions up to you.

Danielle

From: Saxton, Craig
Sent: Tuesday, April 15, 2014 8:57 AM
To: Kelly, Patrick; Favreau, Danielle
Subject: Thoughts on 98-7919

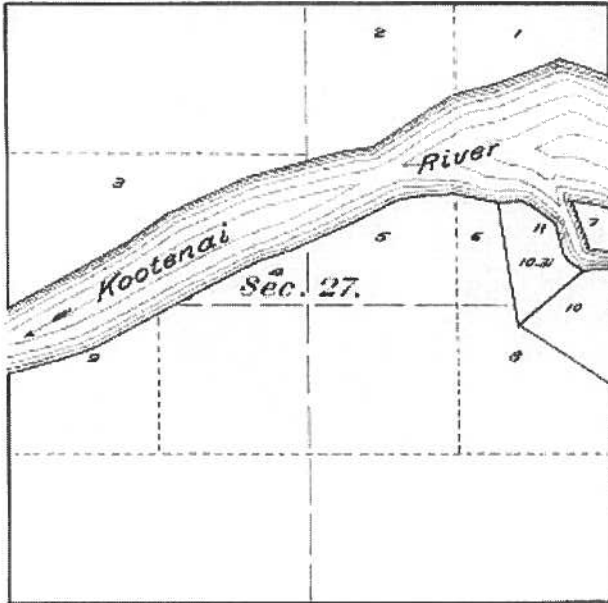
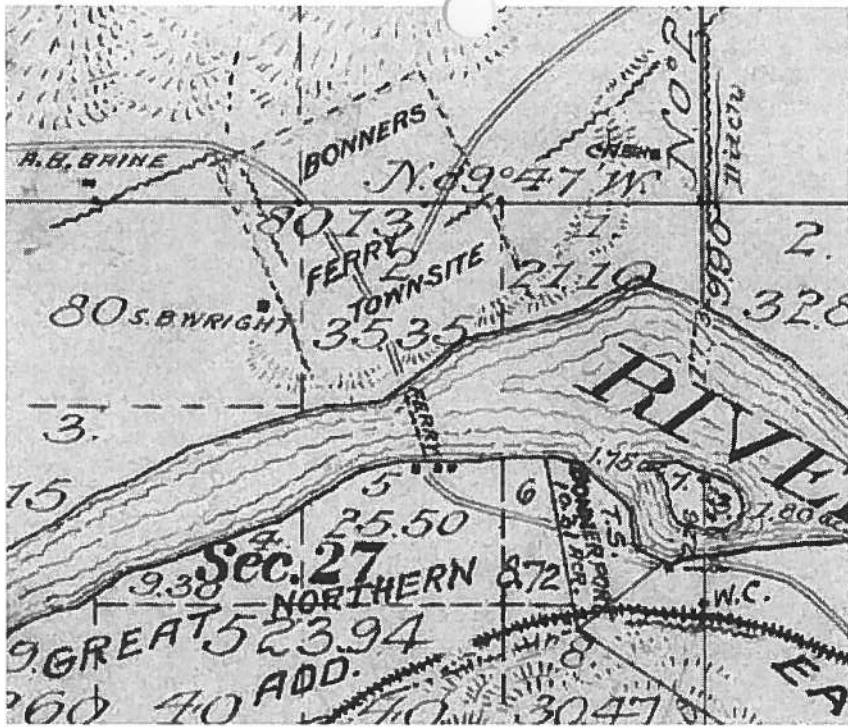
Hey Pat (and Danielle),

This might be a Danielle Question. Is it more appropriate to call that area with the black hatch marks part of Govt lot 2, or is it more appropriate to call it NWNE of 27 and refer to it as un-surveyed accretion land (*using condition F18 or F19 below*)?

Since you are in e-mail contact with the permit holder, you might ask her what her deed calls this property. Does it start out as saying it is in Government lot 2, or does it call out property within the NWNE of?

Because it is so close to the boundary, I think I would call it part of government lot 2. No amendment needed.

c





Condition F18:

"The place of use for this water right is un-surveyed accretion land. The quarter-quarter description has been protracted from the adjacent public land survey."

Change "Category" to **Explanatory**

Or

Condition F19:

"The place of use for a portion of this water right is un-surveyed accretion land. The quarter-quarter description for the accretion land has been protracted from the adjacent public land survey. "

Change "Category" to **Explanatory**

Kelly, Patrick

From: Kelly, Patrick
Sent: Thursday, March 27, 2014 4:03 PM
To: 'deanna.g@bcch.org'
Subject: Water Right 98-7919
Attachments: 98-7919.pdf

Dear permit owner,

I have been appointed to conduct the field exam for your license. In review of your file, I have come across an issue that needs clarification. In your application for permit, you included a map of the property that outlined the entire property as the place of use. This legal description (T63N, R01E, Sec27 L2,NW,NE was placed on the application and was permitted as your place of use. However, as you can see from the attached map, I have outlined your property and the SW corner of the property lies in the SW,NE Quarter Quarter. For licensing this is fine if you wish to not irrigate this area of the property. If you are irrigating this portion of the property, an amendment will have to be filed to include this legal description and authorize irrigation on the license. I can send you the forms and help you submit this amendment. To complete the amendment, a fee of \$100 will be charged. Again, if you are not irrigating this portion and have no plans to, we can move forward and exclude this from your place of use with no amendment or fee.

Regards,

Patrick Kelly

Water Resource Agent
Idaho Department of Water Resources
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Boise, Idaho 83702
d: 208.287.4933
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