

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

A. GENERAL INFORMATIONPermit No: 96-9461

Exam Date: 07/16/15

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)?
- X
- Y
-
- N

- a. **Irrigation of 5 acres or less**
 b. Storage of up to 14.6 AF for stockwater purposes only
 c. Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 d. Other < >

2. Current Owner: Name: Castles

Owner of Record Correct? X Y NAddress of Record Correct? X Y N

If No: Address

3. Beneficial Use Fees have been paid:
- X
- Y
-
- N Receipt No: C100655

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

Pend Oreille River

Columbia River

Method of Determination: Taxlot location

Change in Source: Y X N**B. OVERLAP REVIEW**

1. Other water rights with the same place of use:
- X
- NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments:, 96-9336 & 96-9543:City of Dover, lots to east PIN: RPD009400219T0A 96-9374:taxlot to west, PIN RPD37980000020A. 96-4447, 96-4460, 96-4465, 96-4471, & 96-4489 are irrigation rights for 15 acres in 57N02W29SESE. Because the majority of the acres decreed in 96-4447 are in QQ to the east of the SESE and 96-4460 is owned by Tiftt who also owns taxlot PIN: RPD07060000020A which is in the East ½ of the SESE, I believe that 96-4447, 96-4460, 96-4465, 96-4471, & 96-4489 are for properties in the East ½ of the SESE and do not overlap with the POU of 96-9461 although specific POU for these rights could not be determined.

2. Other water rights with the same point of diversion:
- X
- NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: POD for 96-9461 is a dock diversion for use by property owner. No overlap indicated.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Pend Oreille River	1		SE	SE	29	57N	02W	B.M.	Bonner
								B.M.	

Method of Determination: GIS Imagery and application information

Change in POD? Y X N Amendment Required? Y X N

2. **PLACE OF USE:** Use: 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	
57N	02W	29																1.0	
		Lot #																1	
Total Acres =																		1.0	

Method of Determination: GIS Imagery, Taxlot Information, and Application Information. POU for 2 adjacent taxlots.(PINs RPD0094002004EA & RPD37980000030A) Combined taxlot acres = 2.6 acres. Lots with extensive hardscape – houses, outbuildings and extensive pavement.

Change in POU? ____ Y ____ X ____ N Amendment Required? ____ Y ____ X ____ N

__ 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

*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: < _____ >

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

Per App. Processing Memo #17, up to 0.03 cfs/acre for irrigation up to 5 acres acceptable. 1.0 acres(0.03 cfs) = 0.03 cfs

Pump info. in file not in HP. Standard pump size of 2 - 3 HP sufficient for permitted cfs. See Theoretical Sheet

Measurement = 0.03 cfs

Permit allowed = 0.09 cfs

License recommend for 0.03 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.0 \times 3.0 = 3.0$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \times 214 \times 1.9835 = 12.7$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.0$$

2. Volume Calculations for Other Uses:

License recommend: Exempt: IDAPA 37.03.02(j) (viii)

G. PURPOSE OF USEIrrigation ☒ Y ☐ N # Stock _____ Domestic # of Homes _____

Other: < >

Change in Purpose of Use? ☐ Y ☐ N

Method of Determination: Information provided by permit holder.

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

H. NARRATIVE/REMARKS/COMMENTS

- Season of Use: 04/01-10/31 (214 days)

Headgate: 3.0

Cons. Use: 2.0

Water District None

Groundwater District None

Conditions

1.	004	This right does not grant any right-of-way or easement across the land of another.
2.	R66	This right when combined with all other rights shall provide no more than 0.03 cfs per acre nor more than 3.0 afa per acre at the field headgate for irrigation of the lands above.
3.	X15	A fish screen of 0.25 inch or smaller mesh shall be installed and maintained at the point of diversion.

Per email from D. Nelson dated 12/10/2014 – Not contacting owner regarding fish screen. Will carry conditions onto license.

Have conditions of permit approval been met? ☒ X 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	04/01 to 10/31	0.03 CFS	N/A AF
<u>Totals:</u>		0.03 CFS	N/A AF
Exempt: IDAPA 37.03.02(j) (viii)			

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 ☒ X None

Other: < >

J. AUTHENTICATIONField Examiner's Name Danelli Turner Date 07/16/15Reviewer Daniel A. Nelson Date 7-16-15

NWSE

NESE

96-9461



0 37.5 75 150 225 300 Feet

D. Favreau 07/15/15

~~2013 NAD~~ ESR 1

29

SWSE 2

SESE 1

57N02W

28

NWSW 4

33

Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, ICP, swisstopo, and the GIS User Community



96-9461



0 37.5 75 150 225 300 Feet

D. Favreau 07/15/15

2013 NAIP

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 96-9461
 Reviewer: D. Favreau
 Date of Review: 7/16/2015

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	2.5	2.5	2.5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	50	50	50
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.11 49	0.09 42	0.08 37
			0.09 42.31

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:

The horsepower as indicated on appliation. The pressure was estimated by using the standard for pressure tank turn on and shut off of 40 to 60 psi. The lift was estimated using the maximum deliniation between the topo map's elevation lines along the property.