

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

94-7701

A. GENERAL INFORMATIONPermit No: ~~91-7701~~

Exam Date: 4/6/2016

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? X Y ___ N
- 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: David and Kathy McDaniel
- Owner of Record Correct? X Y ___ N
- Address of Record Correct? X Y ___ N
- If No: Address

Tax lot data shows the McDaniel's as the owners of the property.

3. Beneficial Use Fees have been paid: X Y ___ N Receipt No: C0

4. **SOURCE** TRIBUTARY
- Rose Creek Coeur D Alene River

Method of Determination: GIS and Taxlot Data

Change in Source: ___ Y ___ X ___ N

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
94-7950	Ground Water	Domestic	Recommendation

Comments: Adjudication claim and recommendation 94-7950 overlaps the place of use. 94-7950 is a domestic use for in-house use and yard irrigation from a well. The yard irrigation covered under 94-7950 is for the same irrigated acres described in this permit.

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

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: Adjudication claim and recommendation 94-7950 describes a well for the in-house use and yard irrigation and some stockwater use in the same 40 acre tract.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Creek Pump			SW	SW	29	49N	1W	B.M.	Kootenai
								B.M.	
								B.M.	

Method of Determination: The Department received a letter from the McDaniel's showing the location of the point of diversion on a map that was sent to them. The letter sent by the McDaniel's has a letter from the owner of the property where the new point of diversion is located giving the McDaniel's permission to have their water pump at this location. The letter also has a yellow sticky note describes the location of the point of the diversion. **Please Note: The permit states the point of diversion is NWNW of Section 32 of Township 49 North, Range West.**

Change in POD? ☒ X ☐ Y ☐ N Amendment Required? ☒ X ☐ Y ☐ 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	
49N	1W	32						0.8											0.8
Total Acres =																			0.8

Method of Determination: GIS and Tax Lot Data

PLACE OF USE: Use: Stockwater

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
49N	1W	32						S											0.8
Total Acres =																			

Method of Determination: GIS and Tax Lot Data

Change in POU? ☒ X ☐ N Amendment Required? ☒ 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
Creek Pump	Unknown	1	Unknown	Unknown	Unknown

*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
NONE						

2. Measurements: No measurement is required for an in-house exam, but a theoretical calculation was used to determine if the diversion rate is reasonable.

E. FLOW CALCULATIONS

 X Additional Computation Sheets Attached

Measured Method:

A theoretical analysis shows that a diversion rate of 0.05 cfs is possible with a 3/4 Hp pump. The owner supplied the horse power of the pump in the application for permit.

Theoretical Calculation = 0.03 to 0.06 cfs

Maximum Allowable Irrigation Use = 0.03 cfs X 0.8 acres = 0.024 cfs

Maximum Allowable Stockwater Use = 0.02 cfs

Permit allowed = 0.06 cfs for irrigation + 0.02 cfs for stockwater = 0.08 cfs

I am recommending that the irrigation component be limited to 0.03 cfs and the stockwater component be limited to 0.02 cfs for a total of 0.05 cfs. I believe the maximum possible pump capacity is approximately 0.05 cfs based on the 40 psi of pressure and the fact that this is a portable pump. I feel the 0.03 cfs per acre is reasonable for a portable type pump system, since they probably can only run 2 to 3 sprinklers, and 0.03 cfs would supply adequate water for 3 sprinklers.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.8 \times 3.0 = 2.4 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \times 231 \times 1.9835 = 13.7$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 2.4$$

2. Volume Calculations for Other Uses:

The permit states that this use is for 5 head of stock, which sound reasonable for this small of property. Application Processing Administrative Memorandum #3 states that 0 -10 head of cattle should be allotted 0.02 cfs and 0.2 af. I recommend that the stockwater portion of this permit be limited to 0.02 cfs and 0.2 af.

G. PURPOSE OF USE

Irrigation X Y N # Stock 5 Domestic # of Homes

Other: < >

Change in Purpose of Use? Y N N

Method of Determination: Taxlot data, Aerial Photos, and conversations with owner.

If Yes: From Use To Use Amount CFS AFA

H. NARRATIVE/REMARKS/COMMENTS

This permit is qualifies for an in-house exam. The application for permit states that a 1 Hp pump is used for this permit. The permit holder provided information that shows the point of diversion is diverted from a wide spot where the creek crosses under the road. This location is in a different 40 acre tract than what was described in the permit, therefore, an amendment will be required to license this permit. The owner has been made aware that an amendment is required. The land being irrigated is only about 0.8 acres instead of the 2 acres described in the permit. I sent a map to the permit holder to confirm the location of the irrigated ground. The place of use for the stockwater is more general to include all of the possible areas where a stockwater tank could be placed for this property.

The permit holder sent confirmation that the pump has a screen with tiny holes. He stated that no fish could get into the pump intake pipe. The small nature of the pump and the large area where the pump is located in the creek suggest that the intake velocity should not be an issue.

The permit stated that pump was on his family's property. The permit holder moved the pump to a better location on property that appears to be owned by Jean Jermane Family Trust. The permit holder has submitted a letter from the Successor Trustee approving the location of the pump.

Conditions 2 (26A) and 4 (X02) will be removed at licensing as is standard. Condition 3 (R66) will be changed to condition X31, since the irrigation place of use is under 1 acre. The remaining conditions will be carried forward to licensing.

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	03/15 to 10/31	0.03 CFS	2.4 AF
Stockwater	01/01 to 12/31	0.02 CFS	0.2 AF
<u>Totals:</u>		0.05 CFS	2.6 AF

2. Recommended Amendments

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

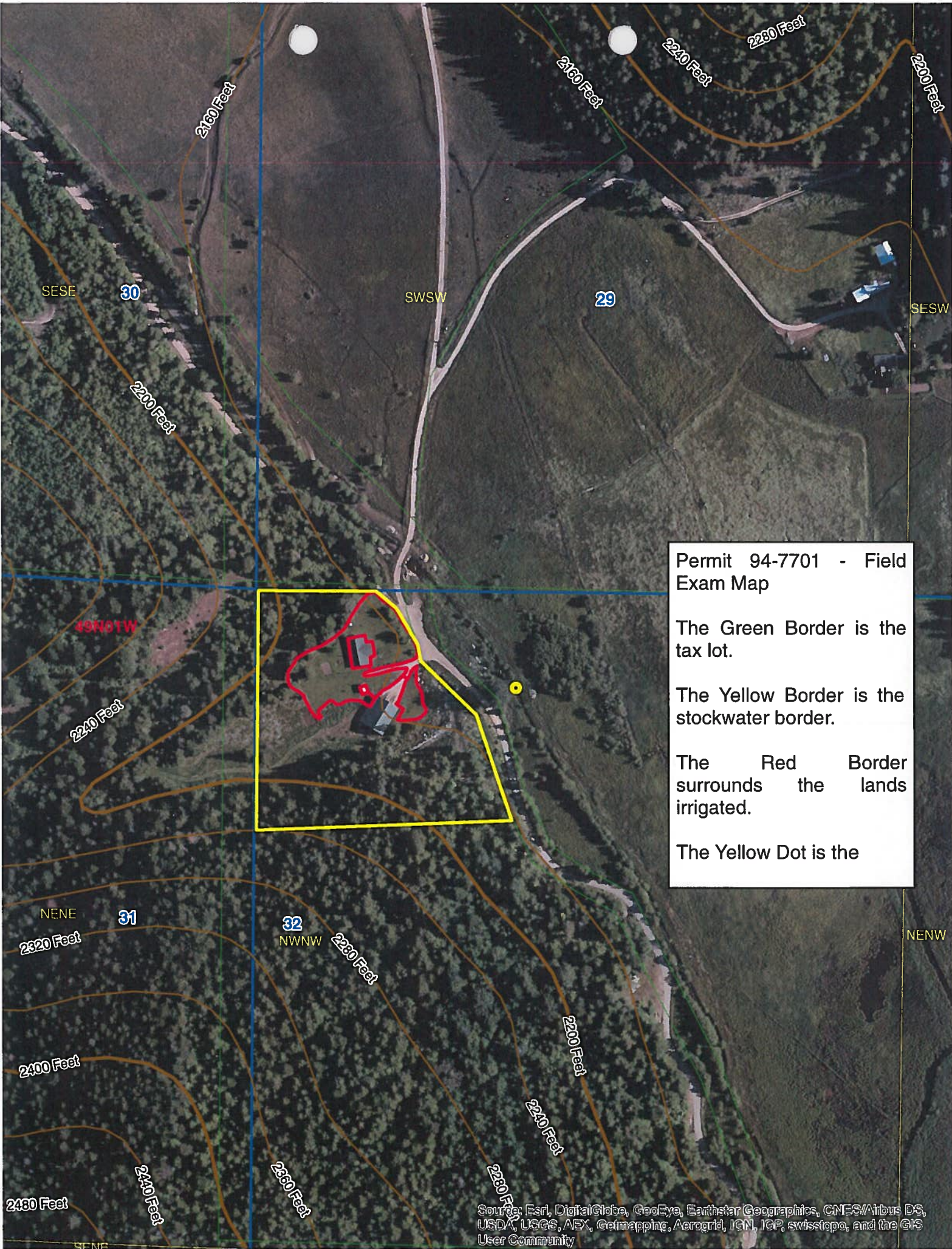
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ None

Other: < >

J. AUTHENTICATION – DANIEL A. NELSON – STAFF HYDROLOGIST

Field Examiner's Name Daniel A. Nelson Date 4-6-16.

Reviewer _____ Date _____



Permit 94-7701 - Field Exam Map

The Green Border is the tax lot.

The Yellow Border is the stockwater border.

The Red Border surrounds the lands irrigated.

The Yellow Dot is the

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Geomapping, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 94-7701
 Reviewer: Dan Nelson
 Date of Review: 2/25/2016

P/D No.:

	Scenario 1	Scenario 2	Scenario 3	
PUMP HORSEPOWER	1	1	1	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	40	40	40	
DISCHARGE PRESSURE	25	40	60	
RATE OF FLOW (cfs)	0.06	0.05	0.03	Average
	28	21	15	0.05
				21.55

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 topographical lines in ArcMap suggest that water is being pumped up hill approximately 40 feet to the place of use. The permit holder provided the pump horsepower, and I used the standard pressure for a domestic and irrigation type of use of 40 to 60 psi, and I included a minimum pressure of 25 psi. The irrigation place of use is 0.8 acres so that would limit them to a diversion rate of 0.024 cfs (0.03 X 0.8 acres = 0.024 cfs). I think we should round up the irrigation use to 0.03 cfs to ensure they have adequate water to supply their system. The stockwater limitation is also 0.02 cfs. The pump can provide approximately 0.05 cfs at 40 psi, so I am limiting the total diversion rate to 0.05 cfs. This matches up with the intent of the permit at the time it was filed.

April 7, 1975

OPERATIONS DIVISION
ADMINISTRATOR'S MEMORANDUM

TO: District Office
FROM: A. Kenneth Dunn
SUBJECT: Annual Use of Water for Stockwater Purposes

No. of Stock (head)	RANGE CATTLE		DAIRY CATTLE	
	Rate* c.f.s. (1)	Volume AF/yr. (1)	Rate* c.f.s. (2)	Volume AF/yr. (2)
0 - 10	0.02	0.2	0.02	0.4
11 - 25	0.02	0.4	0.02	1.0
26 - 50	0.02	0.7	0.04	2.0
51 - 100	0.03	1.4	0.07	4.0
101 - 200	0.05	2.7	0.13	7.9
201 - 300	0.07	4.1	0.20	12.0
301 - 400	0.09	5.4	0.26	16.0
401 - 500	0.12	6.7	0.33	20.0
501 - 600	0.14	8.1	0.39	24.0
601 - 700	0.16	9.4	0.46	28.0
701 - 800	0.19	11.0	0.52	32.0
801 - 900	0.20	12.0	0.58	36.0
901 - 1000	0.23	14.0	0.65	40.0
1001 - up (3				

(1 The amounts shown are based on 12 gpd/head with a 12 month period of use. (i.e. for range cattle, horses and mules). The amount does not include a loss (i.e. thru conveyance, etc.)

2. The amounts shown are based on 35 gpd/head with a 12 month period of use. (i.e. for dairy cattle). The amount does not include a loss. (i.e. thru conveyance, etc.).

3. For annual use calculations which involve more than 1000 head, round the number of head up to the next even one hundred, and

Volume

- a) for livestock use @ 12 gpd/hd, N (0.0134).
- b) for dairy use @ 35 gpd/hd, N (0.0391).

Rate

- a) for livestock use @ 12 gpd/hd, N (0.00022).
- b) for dairy use @ 35 gpd/hd, N (0.00065).

The answer should be rounded up to the nearest whole acre-foot.

*The rate is based upon approx. 2 hr/day diversion to obtain daily requirement.

A. Kenneth Dunn

RECEIVED

MAR 28 2016

DEPARTMENT OF
WATER RESOURCES

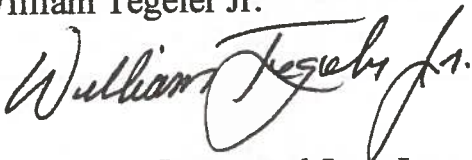
March 15, 2016

To Whom It May Concern;

The property located at 12879 Rose Creek Road, Cataldo, Idaho, 83810, is legally described as, "That portion of the Southeast Quarter of the Southeast Quarter lying South of Rose Creek centerline in Section 30, and that portion of the Southwest Quarter of the Southwest Quarter lying South of Rose Creek centerline in Section 29, all in Township 49 North, Range 1 West, Boise Meridian, Kootenai County, Idaho:" and is included in the James and Jean Jermane Family Trust, 03/16/05. As the appointed successor Trustee of the James and Jean Jermane Family Trust, 03/16/05, I hereby grant Dave McDaniel, Kathy McDaniel and Adam McDaniel the right of entry to the above described property at any time, and for any reason they deem necessary.

I may be contacted at 714 875-1845 should any questions arise regarding the granting of access to the above property.

William Tegeler Jr.



TRUSTEE, James and Jean Jermane Family Trust, 03/16/05

Dan,

Theres an orange spot
on map. Also a pinhole
Through the spot. Also
Orange on back. Right
on the top fold crease.
Call or email for next
step.

Dave
Kathy
McDaniel



Permit 94-7701 - Preliminary Map

The Green Border is the tax lot.

The Yellow Border is the stockwater border.

The Red Border surrounds the lands irrigated.

The Yellow Dot is the point water is diverted from Rose Creek.