

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

A. GENERAL INFORMATIONPermit No: 77-14333

Exam Date: 3/15/2017

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: United States Forest Service
- Owner of Record Correct? X Y N
- Address of Record Correct? Y N
- If No: Address

Tax lot data shows the property within the borders of the Bitterroot National Forest.

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

4. **SOURCE** TRIBUTARY
- Smith Gulch Creek Salmon River
- Method of Determination: GPS Coordinates from Permit Holder and Aerial Photography.
- Change in Source: Y X N

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: There are no water rights in the entire section.

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

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: There are no water rights in the entire section.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Smith Gulch Creek Diversion			SE	SW	22	25N	12E	B.M.	IDAHO
								B.M.	
								B.M.	

Method of Determination: GPS Coordinates supplied by Permit Holder and GIS.Change in POD? X N Amendment Required? 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	
25N	12E	22											D						
		Lot #																	
Total Acres =																			

Method of Determination: GIS, GPS coordinates supplied by permit holder and BLM Survey Maps.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.

 X Aerial Photo Attached (required for irrigation of 10+ acres). X Photo of Diversion and System Attached (See proof of Beneficial Use Statement)

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Gravity Fed System					

*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.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

There is no information to calculate the rate of flow for this system. This permit was filed as a domestic use in the Wild and Scenic area, so it must comply with a standard domestic type use. Idaho Code § 42-111 defines an exempt commercial type domestic use as a domestic use for 0.04 cfs and 2,500 gpd. This is a surface water use, but would fit within a similar definition of allowing 0.04 cfs as is the standard for a part B domestic use as described in Idaho Code § 42-111. Since there is no way to measure the water for this property, we should limit the diversion rate for this permit to 0.04 cfs as is standard.

Idaho Code § 42-111 = 0.04 cfs

Permit allowed = 0.04 cfs

I am recommending a diversion rate of 0.04 cfs as recommended in the permit and Idaho Code § 42-111.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{2cm}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$

2. Volume Calculations for Other Uses:

There is no information to show what the actual water volume being used. Licensing Administrative Memorandum No. 4 allows up to 0.6 af for campground use for U.S. Forest Service permits. However, this use is for a lodge and not a campground. The 0.06 af was based on a water use of 10 gallons per day per person for a 180 day season. The application states that this facility has a maximum capacity of 24 occupants. It is safe to assume that they would use the standard of 50 gpd for "Resorts, Day & Night, Limited Plumbing" found in Field Examiner's Handbook. If we used the same standard of 180 days, they would need 0.66 af of water $(\{24 \text{ people} \times 50 \text{ gpd} = 1200 \text{ gpd}\} \times 180 \text{ days}) / 325850 = 0.66 \text{ af})$. The part B designation of Idaho Code § 42-111 allows up to 2,500 gpd, which the in-house use would be within 1/2 of the use. Therefore, we can recommend the full 0.7 af for the in-house use.

In order to determine if this use would remain below the 2500 gpd daily need when the irrigation use is included, I used the maximum Precipitation Deficit for Rain fed Turf Grass at the Elk City station. The maximum daily consumptive use is 2.46 mm/day and annual consumptive use 208 mm per year. I convert the daily value to gallons and found that the maximum consumptive use would be 710 gpd $(\{2.46 \text{ mm} / 304.8\} \times 0.27 \text{ acres} \times 325,850 = 710 \text{ gpd})$. The annual consumptive volume would be 0.18 af per year, which much less than the consumptive volume allotted for this area $(\{208 \text{ mm} / 304.8\} \times 0.27 \text{ acres} = 0.18 \text{ af})$. The standard headgate requirement for this area is 3 af per acre with a standard consumptive volume of 2 af per acre. The standards suggest that approximately 1/3 of the water diverted is not consumed. Taking this into the account the maximum daily headgate diversion use would be approximately 1,065 gpd $(710 \text{ gpd} \times 3/2 = 1065 \text{ gpd headgate requirement})$. I used the same calculations to determine the amount of headgate requirement would be needed for this irrigation use. The headgate requirement or the amount of water that needs to be diverted to cover the total annual consumptive use and water losses is $0.18 \text{ af} \times 3/2 = 0.27 \text{ af}$.

The total volume that can be recommended for this domestic use is as follows:

0.7 af for resort use + 0.3 af for yard irrigation = 1.0 af annual Domestic volume

The total domestic use limitation of 2,500 gallons per day for this use is within the total use allowed by part B of Idaho Code § 42-111.

Maximum Daily Resort use = 1,200 gpd + Maximum Daily Headgate Requirement 1,065 = 2,265 gpd for this use.

This permit was advertised as a domestic use. However, the daily volume limiter of 2,500 gpd was not added to the conditions of the permit. This permit should not have a volume, but should have the 2,500 gpd limitation condition. This condition will be added at licensing.

G. PURPOSE OF USEIrrigation ☐ Y ☐ N # Stock _____ Domestic # of Homes 1

Other: < >

Change in Purpose of Use? ☐ Y ☐ NMethod of Determination: Tax data, GIS, and Well Driller's Report.

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

H. NARRATIVE/REMARKS/COMMENTS

This permit is qualified for an in-house exam. This permit is in the wilderness area, so access to the property can only be made by boat or trails. The permit holder has supplied GPS coordinates and photos of the system that provides adequate information to move forward with licensing of this permit. This is a fairly simple system that collects water from a small stream and delivers it to a resort approximately 1,000 feet downhill. There is approximately 160 feet of fall from the point of diversion to the place of use, so that would supply approximately 70 psi at the resort. There are a couple of issues that need to be addressed.

The application for permit included an old topographical map and the place of use was estimated as being in the NWNW of Section 27, and the permit used that legal description in the permit. There is a note in the permit database that the place of use was estimated based on the un-surveyed area in the BLM survey data. However, the GPS reading taken located the place of use in the SWSW of Section 22 per the Department's current mapping technology. A copy of the BLM projected (un-surveyed) survey map agrees with our GIS mapping program. The information in our mapping system matches the point of diversion described in the application for permit and the permit. Typically, we require an amendment to correct the place of use, but this case is slightly different. The place of use was placed on a projected (un-surveyed) topographical map, and they permit holder put the place of use at a location that they felt best described the place of use. The topographical map didn't provide the mapping capabilities that we now have, but even the current mapping information is not based on actual surveys of the sections. After discussing this matter with staff, we agreed that we should correct the place of use based on the most current information available, but we shouldn't require the permit holder to pay for an amendment. The reason for not requiring an amendment is that the place of use and point of diversion haven't changed, and there is no accurate definition of the correct legal description for this area. Therefore, the legal description describing the place of use was not and still is not properly defined. The place of use description we are using to license this permit is based on the most current available data, but it could change in the future if this area is ever properly surveyed. The permit holder should not be required to pay an amendment fee if we do not have conclusive data to ensure that the legal description described in the application for permit was done in error.

The permit holder provided photos showing the fish screen has been installed. They have complied with this portion of the condition. Therefore, Condition 8 029 can be removed.

Conditions 1 (004), 2 (26A), 6 (041), and 8 (029) will be removed at licensing. Conditions 3 (X01) and 4 (X60) will be combined into a single condition. Condition 7 (199) will be changed to condition 01P as is standard on the Salmon River. Condition 9 (121) will be carried forward to licensing. Condition N06 will be added to the license to address the 2,500 gpd limitation.

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>
Domestic	01/01 to 12/31	0.04 CFS	
<u>Totals:</u>		0.04 CFS	

PLEASE NOTE: This permit was advertised as a domestic use in the Wild and Scenic area. Domestic use in this area are supposed to be limited to the 2,500 gpd per the domestic description in part of Idaho Code § 42-111. Unfortunately, this condition was not included on the permit as is required, but we add this condition onto the license. Since the condition will address the volume use for this right, no volume is required on the license.

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 – Analyst 3

Field Examiner's Name



Date

3-17-17

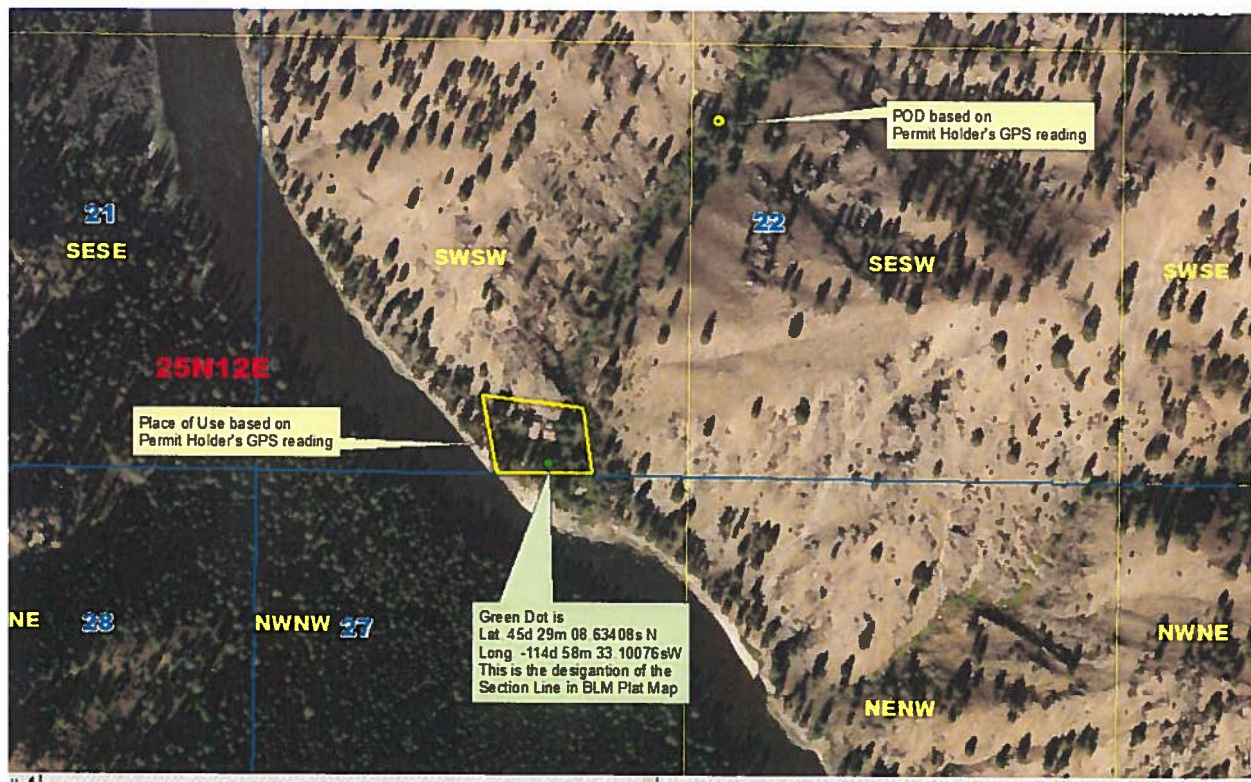
Reviewer

Date

Permit 77—14333 – Field Exam Map -- Dan Nelson

The permit holder supplied GPS coordinates of the point of diversion and place of use. The GPS points show that the point of diversion is clearly in the SESW quarter of Section 22 in Township 25 North, Range 12 East. The place of use was also GPS'ed, and those coordinates clearly show the place of use in the SWSW quarter of Section 22 in Township 25 North, Range 12 East. The permit showed the place of use in Section 27. I reviewed the BLM General Land Office Records, and found that a surveyed point designating the section line between Section 22 and Section 27. I have marked that surveyed point on the map below with a green dot. This survey point suggests that the place of use and point of diversion are both in Section 22.

After discussing this matter with staff, we agreed that we should correct the place of use based on the most current information available, but we shouldn't require the permit holder to pay for an amendment. The reason for not requiring an amendment is that the place of use and point of diversion haven't changed, and there is no accurate definition of the correct legal description for this area. Therefore, the legal description describing the place of use was not and still is not properly defined. The place of use description we are using to license this permit is based on the most current available data, but it could change in the future if this area is ever properly surveyed. The permit holder should not be required to pay an amendment fee if we do not have conclusive data to ensure that the legal description described in the application for permit was done in error.



Permit 77-14333

These plat images are from the BLM General Land Office Records. The Official Plat Map shows the line between Section 22 and 27 has been surveyed as being at Latitude 45 degrees, 29 minutes, 08.63408 seconds North, and Longitude -114 degrees 58 minutes 33.1076 seconds west. This places the permit's place of use in the SWSW quarter of Section 22 and the point of diversion in the SESW quarter of Section 22. The second image is a zoomed in shot of the main map.

