

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

A. GENERAL INFORMATIONExam Date: 03/13/2024

1. Does this qualify for an in-office field exam (IDAPA 37.03.02.035.01.r)? X Y ___ N
- a. X Irrigation of 5 acres or less
- b. ___ Storage of up to 14.6 AF for stockwater purposes only
- c. X Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
- d. ___ Other
2. Current Owner: **DANIEL & MARLO JENKINS**
- Owner of Record Correct? ___ N
- Address of Record Correct? ___ N
- If No Explain:
3. Beneficial Use Fees have been paid: X Y ___ N Receipt No: C117825
4. Source: **UNNAMED STREAM** Tributary: **LAKE PEND OREILLE**
- Method of Determination: Bonner County Maps, GIS, and Tax Parcel Data
- 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
NONE	NA	NA	NA

Comments: Rights 96-9299 (municipal), 96-8838, 96-8619, 96-8618 (domestic) have GIS have POU areas overlapping the permit POU, but both divert from different sources and are for different beneficial uses than the permit. There are no rights overlapping the permit place of use (POU).

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

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: There are no rights sharing the permit point of diversion (POD).

C. DIVERSION AND DELIVERY SYSTEM

1. Location of Point(s) of Diversion:

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
Screened Intake at the river			SW	SW	29	57N	01W	B.M.	BONNER

Method of Determination: GIS, and Tax Parcel Data

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

2. Place of 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	01W	29											0.3						0.3
		Lot#																	
Total Acres =																			0.3

Method of Determination: Bonner County Maps, GIS, and Tax Parcel Data

2. Place of 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	
57N	01W	29											X						X
		Lot#																	
Total Acres =																			X

Method of Determination: Bonner County Maps, GIS, and Tax Parcel Data

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:

X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.X Aerial Photo Attached (required for irrigation of 10+ acres). Photo of Diversion and System Attached

3. Diversion Id No.*	Motor Make	HP	Pump Model	Pump Make	Pump Serial No. or Discharge Size
Screened creek intake	Unknown	1.5	Unknown	Red Lion	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	NA	NA	NA	NA	NA	NA

2. Measurement Comments: The permit holder stated that the system uses a 1.5 Hp pump to divert water to 1 ½" sprinkler lines. A maximum head of about 20ft was estimated to the POU based on the DRG map.**E. FLOW CALCULATIONS** Additional Computation Sheets Attached

Measured Method:

A theoretical calculation, peer reviewed Department reference materials, and Administrative Memos #17, and 6 were used to determine a reasonable rate of diversion.

$$Q = (1.5 \text{ Hp})(8.8)(0.80 \text{ eff}) / (20 \text{ ft lift}) + (2.31) * (45 \text{ psi}) = 0.09\text{cfs}$$

TABLE 1, RECOMMENDED DIVERSION RATES FOR STOCKWATER

In cubic feet per second (cfs)

<u>No. of head</u>	<u>Dairy cows</u>	<u>Other cattle, horses & mules</u>	<u>Hogs</u>	<u>Sheep & goats</u>
0 - 25	0.02	0.02	0.02	0.02
26 - 50	0.04	0.02	0.02	0.02

Table 1- Field Examiners Handbook-Reference Library-Stockwater-1982 Annual Stockwater Use Table-"Table 1"

Theoretical Calculation= 0.09cfs

Permit allowed = 0.05cfs

Recommendation= 0.03cfs

Comments:

The full permitted rate of 0.05cfs is possible with the 1 ½ Hp pump. However, the total irrigated area identified by the permit holder in the system diagram imagery is 0.3-acre. According to Administrative memo #17 up to 0.03cfs per acre is standard for the irrigation of up to 5 acres. I am recommending a diversion rate of 0.01cfs for irrigation of 0.3-acre on the license. I am recommending the full permitted rate of 0.02cfs for stockwater, as per Department guidance referencing small animals such as goats.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{0.3\text{-acre} \times 3 \text{ AF} = 0.9 \text{ AF}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{0.01\text{cfs} \times 214 \text{ days} \times 1.9835 = 4.3 \text{ AF}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{0.9 \text{ AF}}$$

2. Volume determination for Stockwater:
 40 GPD (stockwater for 20 goats) x365=14,600 gal per yr / 325,850 gal per AF= 0.1 AF annual volume.

VOLUME FACTORS	
STOCK	GPD/HEAD
dairy cattle	35
range cattle	12
horses	12
mules	12
hogs	4
goats & sheep	2

Table 2- Field Examiners Handbook-Reference Library-Stockwater-1982 Annual Stockwater Use Table-"Volume Factors".

Comments:

This permit was issued for irrigation use from a natural steam/river source. According to the IDAPA Beneficial Use Examination Rules 37.03.02.35. 01j.viii a diversion volume is not required for irrigation if water is diverted from a natural flowing stream/river or spring. However, as the POU is less than 1 acre condition X31 will be carried on the license stating the annual volume as 0.9 AF for the irrigation of 0.3-acre. Based on Department guidance material standard stockwater use for 20 head of small animals, such as goats would be approximately 0.1 AF annual volume. I am recommending the license be issued with an annual volume of 0.1 AF for stockwater, as per the Field Examiners Handbook and Administrative Memo 6.

G. PURPOSE OF USE

Irrigation X Y N # Stock 20 small stock Domestic # of Homes NA

Change in Purpose of Use? Y X N

Method of Determination: Bonner County Maps, GIS, and Tax lot Data

H. NARRATIVE/REMARKS/COMMENTS

This permit for the irrigation of 1 acre and stockwater for 20 mixed head of livestock qualifies for an in-office examination for license. The permit holder submitted the Proof of Beneficial Use, received by IDWR on February 23, 2024, stating in section #3 that the beneficial use was developed 1 acre of irrigation. The appurtenant parcel is heavily treed and only about 0.3-acre of irrigable land could be identified within the POU in aerial imagery. I called the permit holder requesting additional system information and a map of the irrigation POU and the POD. The permit holder responded March 12, 2024, via email with an attachment outlining the areas irrigated and system used within the parcel. The total irrigation POU area identified by the permit holder was measured using GIS to be approximately 0.3-acre. In 2023 Bonner County imagery stacked logs, slash piles, and trails are visible in many areas within the clearing surrounding the home. The permit holder explained that last year they cleared out many of the trees and underbrush to make improvements to the POU, which tore up a lot of the landscape. Those areas are to be reseeded as soon as the weather allows. The system pump is described as a 1 ½ Hp Red lion pump with a screened foot valve at the intake, delivering water via 1 1/2" discharge hoses with a nozzle on the end of each were used for irrigation throughout the POU.

The livestock is described as 20 mixed small animals such as goats. According to The Field Examiners Handbook reference material for stockwater use (1982 Annual Stockwater Use Table) a rate of 0.02cfs and an annual volume of approximately 0.05AF (40 GPD) is standard for watering 20 head of goats and similar small livestock. Administrative Memo #6 requires that volume is reported to the tenth place on licenses. I am recommending the license be issued with a rate of 0.02cfs and an annual volume of 0.1AF for stockwater.

Administrative memo #17 allows 0.03cfs per acre for the irrigation of up to 5 acres of irrigation, and Administrative Memo #6 states that the rate is to be reported to the hundredth place on licenses. I am recommending a rate of 0.01cfs for irrigation on the license, as per the usage description and current guidance. The license is being recommended for irrigation use from a natural steam/river source. According to the IDAPA Beneficial Use Examination Rules 37.03.02.35. 01j.viii a diversion volume is not required for irrigation if water is diverted from a natural flowing stream/river or spring. However, as the POU is less than 1 acre condition X31 will be carried on the license stating the annual volume as 0.9 AF for the irrigation of 0.3-acre.

I am recommending the license be issued with a combined total rate of 0.03cfs and conditions X60, X59, X31, and 004. Conditions 029 was removed at licensing, as the permit holder confirmed a fish screen (foot valve strainer) is installed at the intake, and no comment was received from Idaho Fish and Game (IDFG) at advertisement. Condition X02 was removed at licensing as per current guidance, and R66 was replaced by X31 at licensing as the irrigated area is less than 1 acre.

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	0.01CFS	0.9 AF (Stated on X31 Only)
STOCKWATER	01/01 TO 12/31	0.02CFS	0.1AF
	<u>Totals:</u>	0.03CFS	

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. AUTHENTICATION- Bob Howe- Water Resource Agent

Field Examiner's  Date 4/16/24

Reviewer  Date 4/16/24

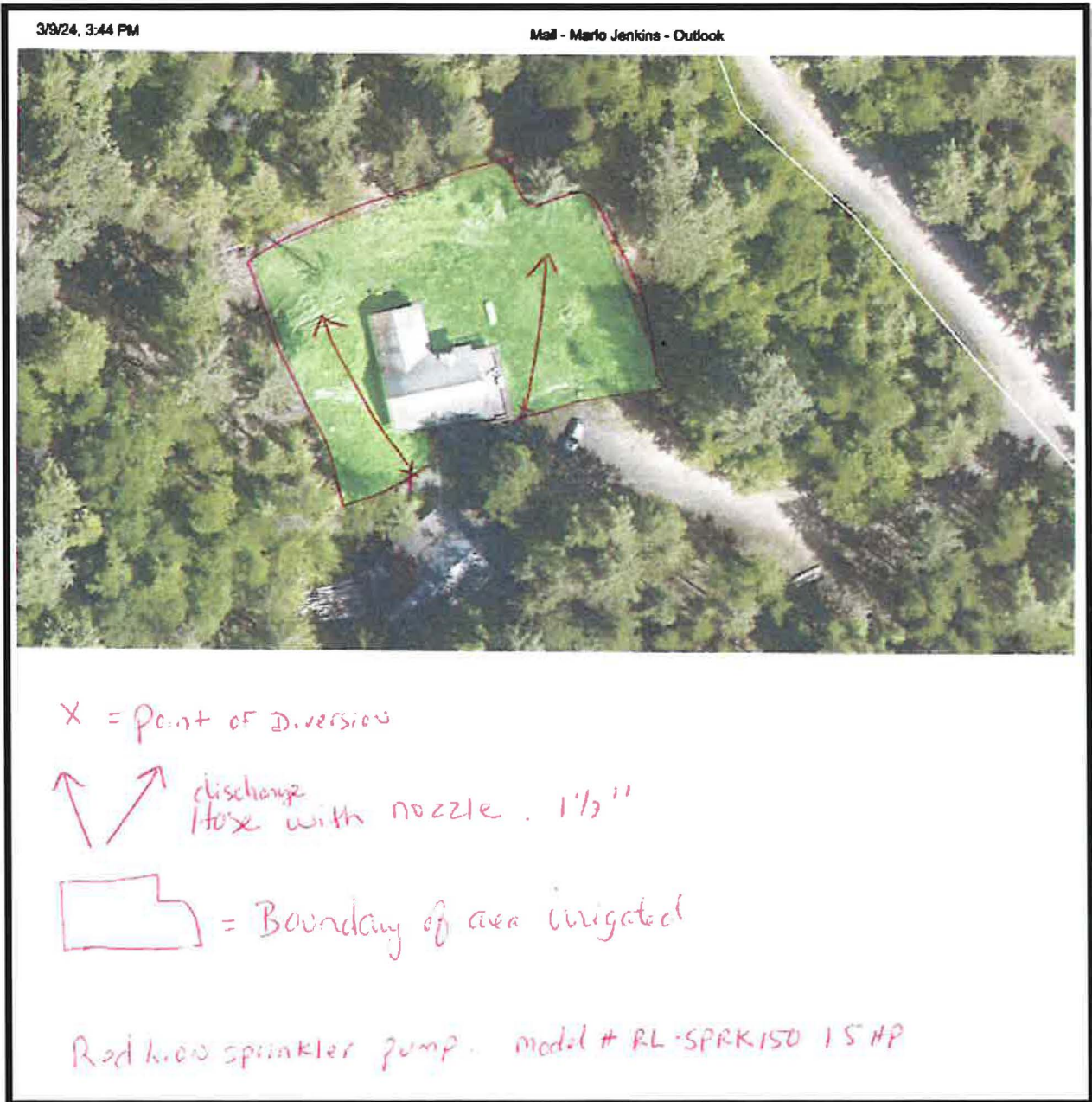


Figure 1-System Diagram submitted by the permit holder.



Figures 2 & 3- Bonner County GIS Imagery of the appurtenant parcel (top image). Measurement of the irrigated POU as indicated by the permit holder's system diagram (bottom image).



Figure 4-Bonner County Imagery- The unnamed stream is visible running on the south side of the house at the southern extent of the irrigation POU.



Figure 5- GIS 2023-NAIP imagery- Irrigated areas are outlined in yellow. Stockwater POU is outlined in blue. POD at the unnamed stream is indicated by the blue point.

Howe, Bob

From: Daniel Jenkins <djenkins102@hotmail.com>
Sent: Tuesday, March 12, 2024 8:59 PM
To: Howe, Bob
Subject: Re: No Documentation Found-RE: Additional Information Requested- Permit 96-12576
Attachments: diagram.pdf

CAUTION: This email originated outside the State of Idaho network. Verify links and attachments BEFORE you click or open, even if you recognize and/or trust the sender. Contact your agency service desk with any concerns.

My apologies Sir,

It's attached to this email.

Thank you,

Daniel Jenkins

From: Howe, Bob <Bob.Howe@idwr.idaho.gov>
Sent: Tuesday, March 12, 2024 10:22 AM
To: Daniel Jenkins <djenkins102@hotmail.com>
Subject: No Documentation Found-RE: Additional Information Requested- Permit 96-12576

Hi Daniel,
There doesn't seem to be any documents attached to this email. Could you please try sending the system diagram and information again. Thank you for your time and attention in this matter.

Best Regards,

Bob Howe

 IDAHO DEPARTMENT OF
WATER RESOURCES
Bob Howe | Water Resource Agent
322 E Front St, PO Box 83720, Boise, ID 83720
(208) 287-4800 | www.idwr.idaho.gov

From: Daniel Jenkins <djenkins102@hotmail.com>
Sent: Saturday, March 9, 2024 9:21 PM
To: Howe, Bob <Bob.Howe@idwr.idaho.gov>
Subject: Additional Information Requested- Permit 96-12576

CAUTION: This email originated outside the State of Idaho network. Verify links and attachments BEFORE you click or open, even if you recognize and/or trust the sender. Contact your agency service desk with any concerns.

Good evening Sir,

I have attached a diagram with the information requested.

Unfortunately, this past year we had our property pretty torn up because we had a lot of equipment on the property to get trees cut down on the majority of the property and cleared out a majority of the ground brush. Then we had some time until we could get all the very large piles moved and burned. Anything nice was destroyed. Unfortunately, I am not at the property at this time. We will be re-seeding when the time is right and hope to things back on track.

Thanks,
Daniel Jenkins