

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
BENEFICIAL USE FIELD REPORT

**A. GENERAL INFORMATION**

**Permit No:** 96-9901  
**Exam Date:** 07/30/2024

1. Current Owner:  
FRANCIS T JOHNSON JR 651 GOLDEN GATE RD PRIEST RIVER ID 83856-6761
2. Accompanied by: Francis T Johnson JR  
Phone No: 208-661-2102  
Address: Same as above  
Relationship to permit Holder: Permit Holder

3. **SOURCE:**  
UNNAMED STREAM

**Tributary**  
SINKS

**Method of Determination: ArcMap and DRG Layer.**

**B. OVERLAP REVIEW**

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

| Water Right No. | Source         | Purpose of Use                      | Basis                               |
|-----------------|----------------|-------------------------------------|-------------------------------------|
| 96-2033         | UNNAMED STREAM | IRRIGATION                          | LICENSE                             |
| 96-8995         | UNNAMED STREAM | IRRIGATION, IRRIGATION FROM STORAGE | LICENSE W/CLAIM FILED IN THE CFPRBA |

Comments: Licensed Right 96-2033 historically used Unnamed Stream water with a POD located east of the irrigation POU for this Permit in the SE1/4SE1/4; 96-2033's irrigation POU directly overlapped this Permit's irrigation acreage but review of the beneficial use report for Right 96-8995 establishes that 96-2033 had not been in use in the 11 years prior to the filing of application for 96-8995. Currently the Clark Fork Pend Oreille River Basin Adjudication (CFPRBA) is in-process having commenced on 6/15/2021. The applicant has filed for two prior licensed WRs 96-8995 & 96-9320 but did not pursue filing for WR 96-2033. Based on the non-use period of time it's likely 96-2033 would have been disallowed and for that reason Mr. Johnson may have elected not to file a Notice of Claim for that Right.

Concluding the review of overlap between 96-2033, other licensed WRs owned by the applicant, and this Permit I don't recommend use of condition X35 nor 928 toward licensing this Permit between 96-2033 & 96-9901. The applicant doesn't use any part of 96-2033 for current irrigation practices and the WR shall be disallowed once the CFPRBA process is completed.

Licensed Right 96-8995 diverts from a storage pond with inflow of Unnamed Stream source water being diverted throughout the irrigation season depending on water availability. 96-8995 directly overlaps this Permit's 30-acre POU, and 96-9901 was developed using the pond as a 24-HR impoundment vessel & 96-8995's diverting pump serves as a booster pump versus a POD diverting pump as part of this Permit's water conveyance system. For this reason, I don't recommend combined use limits based on diversion rates between the two WRs. Condition X35 was added to the Permit approval but requires revising during licensing review now that the water systems have been fully developed and I understand how the 96-8995 & 96-9901 interact. I've revised existing condition X35 to describe that when 96-8895 and 96-9901 are combined they are limited to a total of 30.0 acres irrigation.

2. Other water rights with the same point-of-diversion: YES Overlap

| Water Right No. | Source         | Purpose of Use | Basis                               |
|-----------------|----------------|----------------|-------------------------------------|
| 96-9320         | UNNAMED STREAM | IRRIGATION     | LICENSE W/CLAIM FILED IN THE CFPRBA |

Comments: Licensed Right 96-9320 uses the same diverting pump and screened intake pipe as this Permit; 96-9901 was developed using overflow discharge water previously returned to the source from the irrigation system developed under 96-9320. Condition F06 was added upon Permit approval, and I recommend carrying the condition forward to licensing 96-9901. The diversion rates associated with each water right are considered additive, and I don't recommend combined use

limits based on diversion rate for licensing purposes. The Right Holder may adjust irrigation under each Right up to the authorized diversion rates simultaneously, individually, or partially between the two throughout the irrigation season of use.

### C. DIVERSION AND DELIVERY SYSTEM

#### 1. LOCATION OF POINT(S) OF DIVERSION:

UNNAMED STREAM SW¼ NE¼, Sec. 36, Twp 55N, Rge 04W, B.M. BONNER County

Method of Determination: GPS; POD is located at -116°46.472, 48°4.130.

#### PLACE OF USE: IRRIGATION

| Twp | Rng | Sec | NE |    |    |    | NW |    |    |    | SW |    |    |    | SE |     |      |    | Totals |
|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|------|----|--------|
|     |     |     | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW  | SW   | SE |        |
| 55N | 04W | 25  |    |    |    |    |    |    |    |    |    |    |    |    |    | 3.0 | 27.0 |    | 30.0   |

Total Acres: 30.0

Method of Determination: Beneficial use field examination and ArcMap aerial imagery.

3.

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

☒ X Indicate weir size/pipe as applicable.

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be

☒ X 1:24,000 or greater.

☒ X Aerial Photo Attached (required for irrigation of 10+ acres).

☒ X Photo of Diversion and System Attached

4.

| Well or Diversion ID No.* | Motor Make | Hp | Motor Serial No. | Pump Make | Pump Serial No. or Discharge Size |
|---------------------------|------------|----|------------------|-----------|-----------------------------------|
| CENTRIFUGAL PUMP          | UNKOWN     | 30 | UNKOWN           | UNKOWN    | 3 INCH DISCHARGE PIPE             |

### D. FLOW MEASUREMENTS

1.

| Measurement Equipment | Type         | Make          | Model No. | Serial No. | Size     | Calib. Date |
|-----------------------|--------------|---------------|-----------|------------|----------|-------------|
| FLOWMETER             | TRANSIT TIME | GE PANAMETRIC | PT900     | M06210067  | CLAMP-ON | 4/2/2024    |

2. Measurements: I used a PT900 Panametric clamp-on style flowmeter which calculates transit time to obtain a flow rate. The mount fixture was attached to a section of 6-inch Aluminum main irrigation trunk after it split between serving 96-9320 and conveying water by pipeline for 96-9901; the resulting 10-minute flow measurement derived a diversion rate of 318.2 gpm or 0.71 cfs considering Department rounding standards. Irrigation by hand line and wheel line were occurring at both POUs for 96-9320 & 96-9901 during the exam which demonstrates the diverting pump has the capacity to supply source water to both pumps simultaneously.

**E. FLOW CALCULATIONS**  X   Additional Computation Sheets Attached

Measured Method: PT-900 Parametric flowmeter derived the average flow rate of 318.2 gpm or 0.70 cfs considering Department rounding standards.

- Permit authorized diversion rate = 0.60 cfs.
- License recommended diversion rate for 30.0 acres irrigation = 0.02 cfs x 30.0 ac = **0.60 cfs**.

The current diverting system provides irrigation water for a total of 69.0 acres; active irrigation was occurring under both 96-9320 & 96-9901 during the field exam but it's unclear if additional hand lines were not active under 96-9320 that would have displaced a portion of the 0.10 cfs diversion rate observed at time of field exam in the "overflow conveyance pipeline" for 96-9901. I'm only authorized to recommend a maximum diversion rate of 0.60 cfs based on total irrigated acreage toward licensing purposes.

**F. VOLUME CALCULATIONS**

## 1. Volume Calculations for irrigation:

$$V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 30.0 \times 3.0 \text{ afa} = 90.0 \text{ af}$$

$$V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.60 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 255 \text{ af}$$

$$V = \text{Smaller of } V_{I,R} \text{ and } V_{D,R} = 90.0 \text{ af}$$

2. Volume Calculations for Other Uses: The irrigation beneficial use from the Unnamed Stream water source is exempt from the volume reporting requirements in accordance with IDAPA 37.03.02, Section 035.

**G. NARRATIVE/REMARKS/COMMENTS**

I conducted a beneficial use field exam along with Tammy Alleman – Water Resource Agent and the Permit Holder, Mr. Francis T Johnson JR, on 7/30/2024 which showed Unnamed Stream water being diverted for irrigation purposes. At the POD, pre-existing diverting work infrastructure in place under prior Right 96-9320 uses a previous overflow pipe repurposed as a main conveyance pipeline to serve water to this Permit's irrigation POU at separate hay fields than 96-9320's POU. Prior to applying, I performed a site visit with Francis and captured a flow rate off an overflow stub which routed unused water pumped from the source directly back to the source; the applicant proposed capturing this unused overflow from the original overflow set-up and piping it overland to a separate hay field to the north of the POD.

The POD diverting work consists of a screened aluminum intake pipe to 30 HP centrifugal pump with 3-inch aluminum discharge pipeline and flowmeter installed just outside the small pump shed. The 3-inch aluminum couples to a main pipeline run of 6-inch aluminum & PVC piping routing along a dirt single track to the county road. I used a GE brand PT900 ultrasonic flowmeter to take flow measurements in a reach of 6-inch aluminum pipe located after the main pipeline branched (split) serving two different irrigation POU(s). The resulting diversion rate of 0.70 cfs was observed during the field exam, but I'm only authorized to recommend **0.60 cfs** based on Department standard diversion rates considering 0.02 cfs per acre authorization for tracts larger than 5.0 acres.

After the conveyance pipeline routes beneath Golden Gate Rd the 6-inch pipeline reduces to 3-inch aluminum open discharging into the storage pond. Co-located with the discharge pipe to pond is the intake and centrifugal pump associated with the irrigation from storage beneficial use of water authorized by 96-8995 for the same 30 acres irrigation as 96-9901. 24-hr impoundment of water diverted under 96-9901 is skimmed from the storage pond and pump to aluminum hand line by the "booster pump" to multiple hand line and wheel lines irrigating 30 acres of hay fields, which are designated as the irrigation POU. I used field maps to sketch the irrigation POU and assigned the same POU shape in ArcMap as the Right Holder's prior Right. There is no annual volume associated with this permit's approval based on Beneficial Use Field

Examination Rules, but condition R62 is being carried forward to licensing which designates that irrigation is limited to 0.02 cfs per acre with no more than 3.0 afa per acre at the field headgate. Although this Permit & prior Licenses held by the Right Holder are in an active adjudication basin, I've elected to use condition X35 vice 928 for overlapping water right concerns as they directly designate combined use versus generically describing any overlap will result in a reduction in this WR to reduce redundancy.

During licensing review, I removed condition 029 from the Permit as Idaho Fish & Game didn't require screening related to this existing diversion system. I revised condition X35 to accurately depict combined use limitations between 96-8995 & 96-9901. All other conditions on the Permit have been carried forward to the license. Aside from the overlapping water right concerns detailed on page(s) 1 & 2 of this report, there are no additional concerns toward licensing 96-9901.

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

#### H. RECOMMENDATIONS

##### 1. Recommended Amounts

| <u>Beneficial Use</u> | <u>Period of Use</u> | <u>Rate of Diversion</u> |
|-----------------------|----------------------|--------------------------|
| IRRIGATION            | 04/01 to 10/31       | 0.60 CFS                 |

Totals: 0.60 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 ☒ None

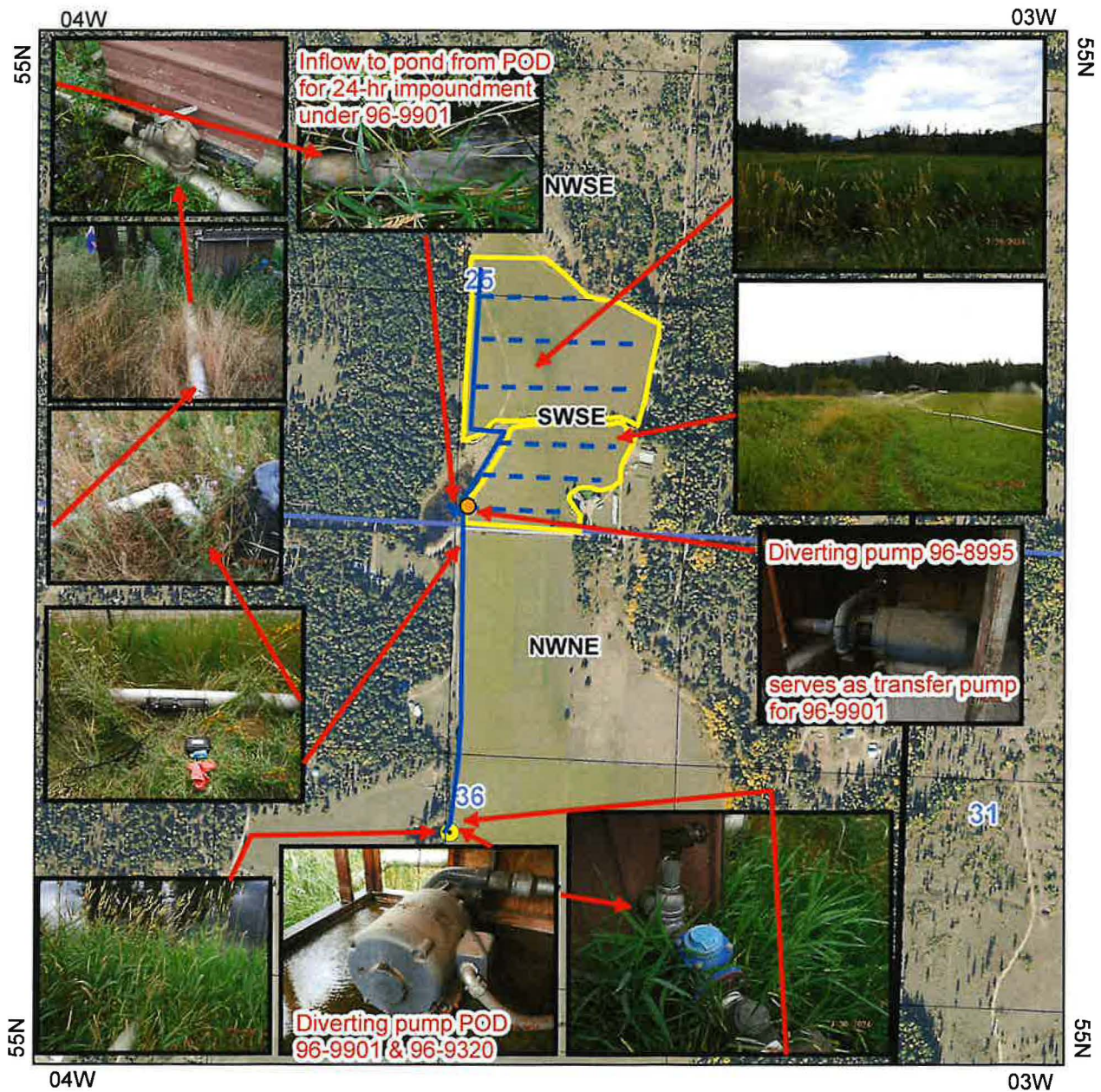
#### I. AUTHENTICATION Luke Bates – Sr Water Resource Agent

Field Examiner's Name *L. Bates* Date *1/16/2025*

Reviewer *Chris Buel* Date *3/20/2025*

State of Idaho  
Department of Water Resources  
**Attachment to Field Exam**  
96-9901

This map depicts the IRRIGATION sytem diagram.



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

0 0.1 0.2 0.4 Miles



### Flow Measurement for permit 96-9901

| Date/Time<br>7/230/2024 | Velocity<br>ft/s | Volume<br>Gallons/min | Fwd Totalizer Fwd<br>Gallons | Error   |
|-------------------------|------------------|-----------------------|------------------------------|---------|
| 15:51:00                | 3.7853           | 318.8562              | 677.1358                     | Error:0 |
| 15:52:00                | 3.7815           | 318.5331              | 995.8563                     | Error:0 |
| 15:53:00                | 3.7876           | 319.0498              | 1314.1992                    | Error:0 |
| 15:54:00                | 3.7933           | 319.5301              | 1633.1677                    | Error:0 |
| 15:55:00                | 3.7689           | 317.4708              | 1951.818                     | Error:0 |
| 15:56:00                | 3.7467           | 315.6068              | 2269.8965                    | Error:0 |
| 15:57:00                | 3.7544           | 316.2528              | 2588.6565                    | Error:0 |
| 15:58:00                | 3.7591           | 316.6504              | 2906.2561                    | Error:0 |
| 15:59:00                | 3.7658           | 317.215               | 3223.2947                    | Error:0 |
| 16:00:00                | 3.7815           | 318.538               | 3540.8262                    | Error:0 |
| 16:01:00                | 3.7571           | 316.4767              | 3859.0769                    | Error:0 |

|                  |        |
|------------------|--------|
| Average Velocity | 3.77   |
| Max Velocity     | 3.7933 |
| Min Velocity     | 3.7467 |

**30 HP PUMP (overflow  
from sprinkler system flow  
rate)**

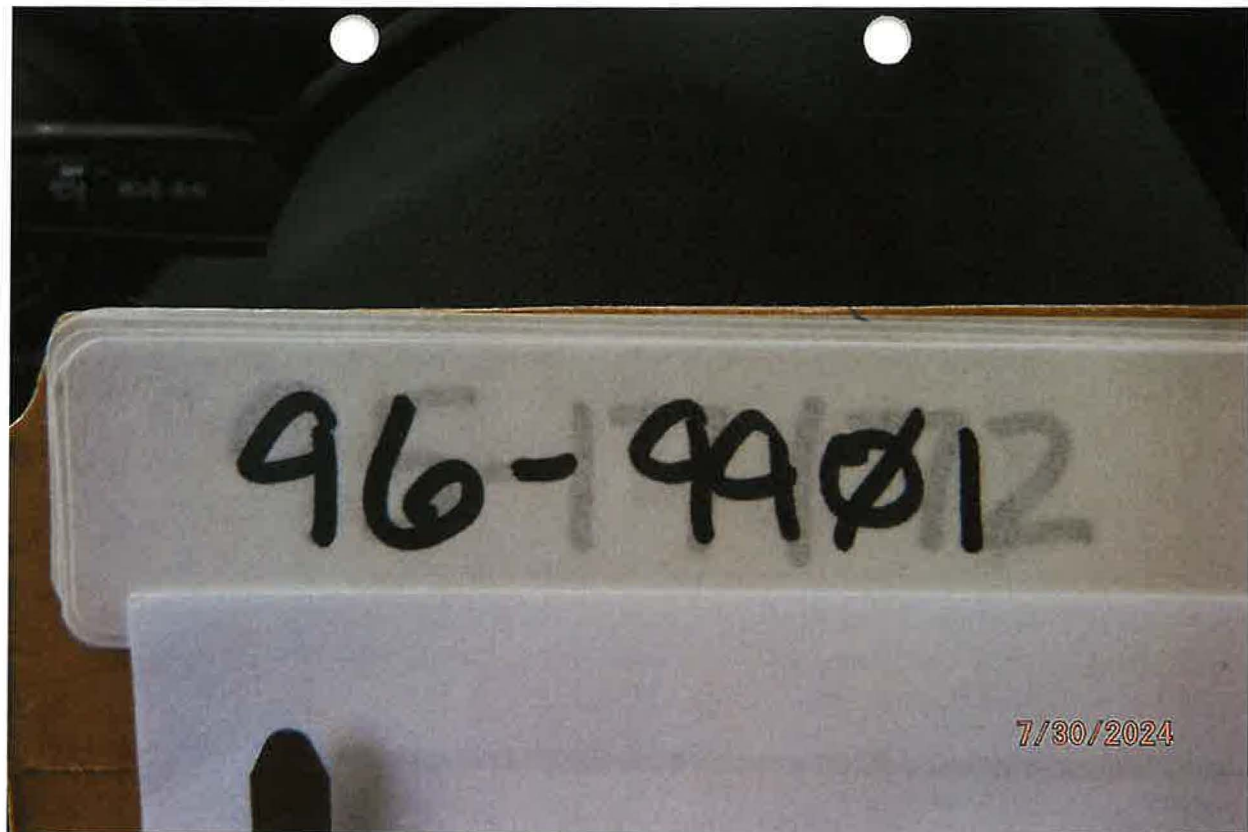
|             |       |
|-------------|-------|
| Average GPM | 317.7 |
| Max GPM     | 319.5 |
| Min GPM     | 315.6 |

|                                      |          |     |
|--------------------------------------|----------|-----|
| Beginning Reading                    | 677.136  |     |
| Ending Reading                       | 3859.077 |     |
| Difference in Readings               | 3181.941 |     |
| Difference / 10 readings             | 318.194  | GPM |
| Conversion from GPM to CFS (/448.83) | 0.709    | CFS |

PT 900 S/N M06210067

Date Calibrated 4/2/2024

yBates 7/31/2024



BENEFICIAL USE FIELD EXAM DATE 7/30/2024



INTAKE PIPE FROM UNNAMED STREAM AT POD



POD – 30 HP CENTRIFUGAL PUMP AND FLOWMETER INSTALLED ON COMMON  
DIVERTING WORKS FOR RIGHTS 96-9320 & 96-9901





6-INCH ALUMINUM MAIN IRRIGATION TRUNK PIPELINE; CONVEYANCE SYSTEM FOR OVERFLOW WATER FROM 96-9320 TO SERVE 96-9901



6-INCH ALUMINUM TRANSITIONS TO PVC PIPE CROSSING ROAD AND ROUTING TO 24-HR IMPOUNDMENT POND



WATER CONVEYANCE PIPE NECKS DOWN TO 4 INCH ALUMINUM WHERE IT DISCHARGES INTO 24-HR IMPOUNDMENT POND





DISCHARGE TO 24-HR IMPOUNDMENT FROM POD & WATER CONVEYANCE SYSTEM



30 HP CENTRIFUGAL PUMP SERVES RIGHT 96-8995 FOR IRRIGATION AND IRRIGATION FROM STORAGE USE; PUMP ALSO SERVES AS A TRANSFER PUMP FOR 96-9901 DRAFTING WATER FROM 24-HR IMPOUNDMENT TO IRRIGATION AT POU.



POU – IRRIGATION BY HAND LINE STUBS OFF IRRIGATION RISERS TO WHEEL  
LINES FOR HAY FIELD WATERING





IRRIGATION POU





IRRIGATION POU

