

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-16266
Exam Date: 04/29/2025

1. Current Owner:
TAMARACK VILLAGE FIRST ADDITION INC PO BOX 211 SAGLE ID 83860-0211
2. Accompanied by: James Smith
Phone No: 208-263-6088
Address: Same as above
Relationship to permit Holder: Acting President for Applicant and water system.

3. SOURCE:
GROUND WATER

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
96-7942	GROUND WATER	DOMESTIC	LICENSE
96-8976	GROUND WATER	DOMESTIC, IRRIGATION	LICENSE

Comments:

- Licensed Right 96-7942 was approved with a generic 40-acre tract POU shape that overlaps this Permit's POU(s). Review of backfile information demonstrates the POD/POU for 96-7942 is located south of the subdivision for this Permit, in the SW1/4SW1/4SW1/4 of Section 15, Twp 56N, Rge 02W. There is no concern for overlapping between water rights.
- Licensed Right 96-8976 was approved with a generic 40-acre tract POU shape that overlaps this Permit's POU(s). Review of backfile information demonstrates the POU for domestic and irrigation use is associated with Lots 9, 10, and 14 of Blk 1; Tamarack Village Subdivision. The POD is located in Lot 10, Blk 1; Tamarack Village Subdivision. Right 96-8976's legal descriptions by subdivision are located south of this Permit and there is no concern for overlapping between water rights.

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

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

GROUND WATER NW¼ SW¼, Sec. 15, Twp 56N, Rge 02W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°34.0393, 48°11.9831 well 96-91-N-154.

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	02W	15										X							

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	
56N	02W	15										2.4							2.4

Total Acres: 2.4

Method of Determination: Beneficial use field examination, ArcMap aerial imagery, and Bonner County tax parcel map aerial imagery.

3. Delivery System Diagram Attached (required). Indicate all major components and distances between components.
☒ 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 1:24,000 or greater.

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

- ☒ 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
96-91-N-154	FRANKLIN ELECTRIC	3	MODEL # 2823028310 (RELAY CONTROL PANEL)	UNKNOWN	1 INCH DISCHARGE SIZE

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: Unable to perform flow measurements due to inadequate pipe requirements. Water line from well routes direct to a storage reservoir co-located within 10 feet of well head prior to distribution to frost-free hydrants and water uses.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method: Theoretic pump equation estimates flow as follows:

- 96-91-N-154 well - 3 HP pump hung at 120 ft with 45 PSI operating pressure equals 42.9 gpm or **0.10 cfs** considering Department rounding standards.
- Well Driller report illustrates a 100+ gpm yield rate at time of construction, which supports the ground water source is sufficient to supply water for the developed beneficial uses under this water system.
- Permit authorized diversion rates: 0.11 cfs – Irrigation; 0.14 cfs – Domestic; 0.20 cfs – Maximum Diversion Rate.
- Beneficial use field exam derived diversion rate: 0.10 cfs considering Department rounding standard.
- License recommended diversion rates:
 - Irrigation – 0.03 cfs per ac x 2.4 ac = **0.07 cfs** considering rounding standards
 - Domestic – **0.10 cfs** for 9 homes; rate is limited by pump performance as system developed at time of examination.
 - Maximum Diversion Rate – **0.10 cfs**; rate is limited by pump performance.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.4 \text{ ac} \times 3.0 \text{ afa} = 7.2 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.07 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 29.7 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 7.2 \text{ af}$$

2. Volume Calculations for Other Uses:

- Domestic annual volume = 9 homes (in-home use only) x 0.6 af per home = **5.4 af**.
- Maximum diversion volume = 7.2 af (irrigation) + 5.4 af (domestic) = **12.6 af**.

G. NARRATIVE/REMARKS/COMMENTS

I conducted the beneficial use field exam on 4/29/2025 with the Permit Holder's representative, James Smith – water system acting President, which showed a ground water well serving Tamarack Village First Addition Subdivision water for domestic and irrigation uses. At the POD, well 96-91-N-154 was GPS located in a covered doghouse attached to the water system pump house. I was unable to perform flow measurements as the 1-inch main service pipeline routes direct to ground from the pump house under influence of pressure tank(s). I utilized a theoretical pump equation which derived the maximum diversion rate of **0.10 cfs** which is recommended for licensing purposes. The well has a 3-hp submersible pump paired with 3-hp Franklin Electric pump motor as the diverting works.

The water conveyance system incorporates the 1-inch water main routed off the roadway with service shutoff valves and lateral lines to each residence and a Frost-free hydrant for external water use. Some residences have developed additional hydrant uses, but the development originated with one per lot. I collected photographs of the well's pump house and an example of a shut-off valve from Mr. Smith's residence to demonstrate the valve style per lot. Currently there are no flowmeters installed on the water system, which also doesn't meet the threshold to be regulated by IDEQ.

During the exam Mr. Smith described that each of the nine lots has been using the water historically for decades, but this use was within a subdivision and didn't qualify to file a Notice of Claim on in the ongoing CFPRBA process. During the exam I observed the 10 total lots within the subdivision, with the well lot where the POD is located at being excluded from the development of any beneficial uses.

The domestic POU includes 9 homes, some being manufactured homes and a few custom built small footprint homes. Condition X60 accurately describes the multiple lots including Tamarack Village First Addition Subdivision and Hubbard-Engle Lots Subdivision. I took photographs to illustrate the POU and during licensing review used Arcmap imagery to trace out 9ea homes for licensing purposes. The domestic in-home annual volume equals **5.4 af** as calculated above.

The irrigation POU was sketched out on field maps and during licensing review I used ArcMap aerial imagery to trace out small acreage lawn/landscape watering per parcel equaling a total of 2.4 acres. All irrigation occurs by hoses and sprinklers connected to hydrants and rotated between road frontage and back yard areas. The annual volume assigned for licensing equals 7.2 acres considering 3.0 af per acre by Department standards. The maximum diversion volume recommended for licensing equals **12.6 af**.

I have removed condition 046 and 106 from the Permit during licensing review based on compliance as required from the Permit Holder. All other conditions on the Permit are being carried forward to licensing. I've discussed overlapping water right considerations on PG1 of this report, and there is no overlapping water right concerns toward licensing 96-16266.

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>	<u>Annual Volume</u>
DOMESTIC	01/01 to 12/31	0.10 CFS	5.4 AF
IRRIGATION	04/01 to 10/31	0.07 CFS	7.2 AF

Totals: 0.10 CFS 12.6 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

I. AUTHENTICATION

Luke Bates – Sr Water Resource Agent

Field Examiner's Name LAB Date 5/21/2025

Reviewer Michelle Richner Date 7/22/26

THEORETICAL PUMPING EQUATION(S) FOR WR# 96-16266

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift 120ft, and running at 45 psi.

PUMP EQUATION

WATER RIGHT No. 96-16266

96-91-N-154	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q = $HP \cdot 8.8 \cdot \text{Eff} / H$	3	224.0816	0.81	120	45
Q = 0.096 cfs 42.9 gpm					

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-16266

This map depicts the DOMESTIC system diagram.

02W



0 0.035 0.07 0.14 Miles

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



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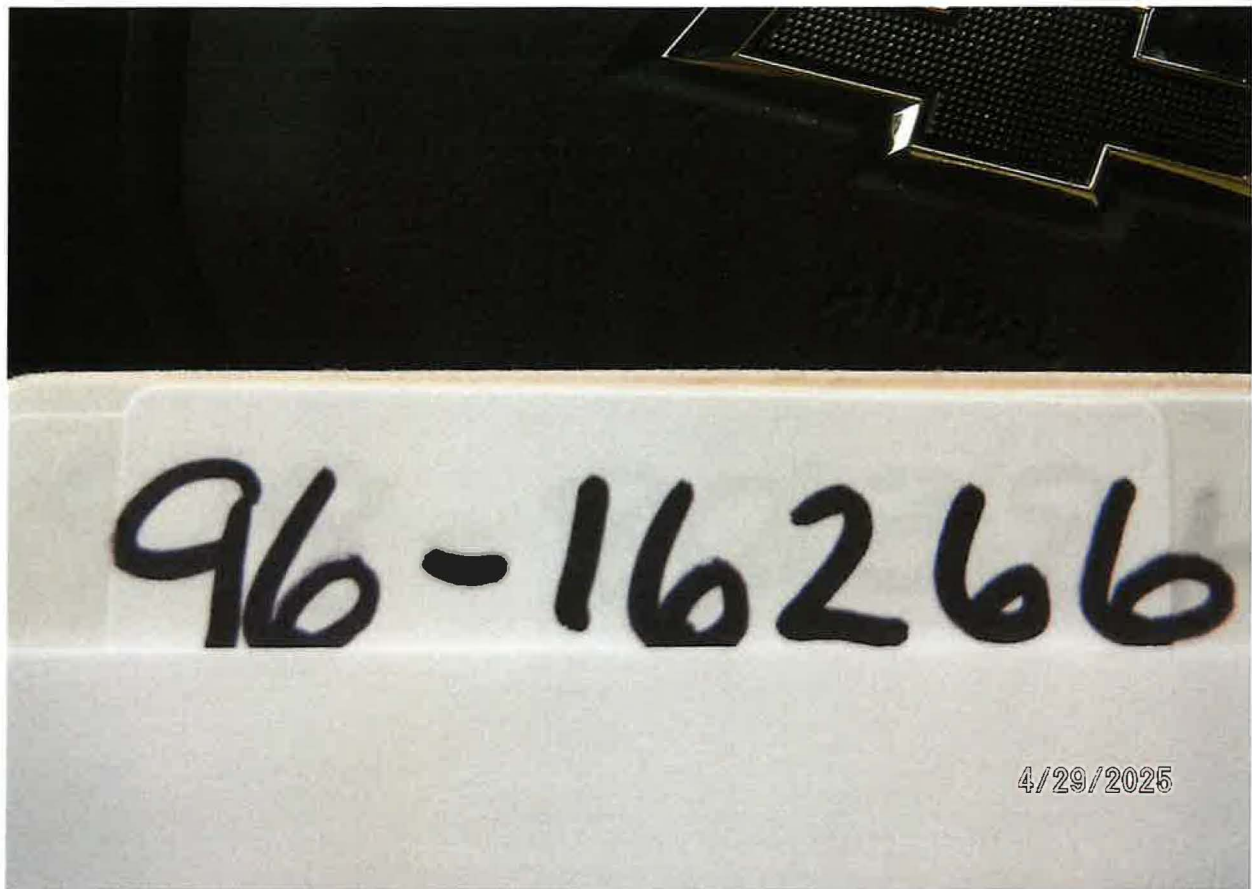
This map depicts the IRRIGATION system diagram.



0 0.035 0.07 0.14 Miles

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





BENEFICIAL USE FIELD EXAM DATE 4/29/2025



POD – GW WELL (SMALL DOG HOUSE TO RIGHT) AND PUMP STATION (LEFT HAND STRUCTURE)



POD – GROUND WATER CASSED WELL 96-91-N-154



CONVEYANCE SYSTEM INCORPORATES 3EA PRESSURE TANKS WITH NO STORAGE COMPONENT TO WATER SYSTEM



POD – 3 HP SUBMERSIBLE PUMP WITH FRANKLIN ELECTRIC 3 HP PUMP MOTOR



PUMP MOTOR MODEL # 2823028310



PUMP MOTOR 3 HP WITH 1 INCH MAIN SERVICE PIPELINE



MAIN SERVICE PIPELINE (VERTICAL OUT OF PUMP STATION) RECEIVING FROM 3EA PRESSURE TANKS (HORIZONTAL PIPING)



WATER SYSTEM PRESSURE MAINTAINS 45 PSI



WATER CONVEYANCE SYSTEM – 9 EA WATER SERVICE LATERAL LINES OFF MAIN SERVICE PIPELINE (WHITE PVC RISER WITH CAP)



4/29/2025

EXAMPLE – INDIVIDUAL LATERAL SERVICE LINE MANUAL SHUTOFF VALVE
(INSIDE WHITE PVC RISER PIPE) 9EA ONE FOR EACH PARCEL



4/29/2025

POU – DOMESTIC AND IRRIGATION – EXAMPLE OF RESIDENCE(S) LOCATED
WITHIN SUBDIVISION WITH FROST FREE HYDRANT IN FRONT YARD FOR SMALL
ACREAGE IRRIGATION



DOMESTIC & IRRIGATION POU – 9EA PARCELS ARE 0.4 ACRES IN SIZE WHICH INCLUDE SMALL RESIDENCE MOBILE HOME OR SMALL CUSTOM BUILT.





IRRIGATION POU – EXAMPLE(S) OF FROST-FREE HYDRANT AND HOSE TO SPRINKLER USED ON EACH PARCEL

