

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-16785

Exam Date: 08/11/2020

1. Current Owner:

BRUCE R WING 8598 W RIVERVIEW DR COEUR D ALENE ID 83814-4906 AND/OR
KRISTEN ANDERSON WING 8598 W RIVERVIEW DR COEUR D ALENE ID 83814

2. Accompanied by: Bruce Wing and Kristen Anderson

Phone No: 208-770-8329

Address: Same as above

Relationship to permit Holder: Permit Holders

3. **SOURCE:**

GROUND WATER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

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

YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-16784	GROUNDWATER	DOMESTIC	BENEFICIAL USE CLAIM, RECOMMENDED ACTIVE STATUS

Comments: Right 95-16784 is a Beneficial Use Claim filed by applicants in the Coeur D'Alene and Spokane River Basin Adjudication, currently an active recommendation status, which uses same well POD as this right and is for domestic use for same home as this right designates in 95-16785' domestic component POU. Condition 928 was added to permit at time of licensing to mitigate overlap concerns from this beneficial use claim.

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

NO Overlap

Water Right No.	Source	Purpose of Use	Basis
95-16784	GROUNDWATER	DOMESTIC	BENEFICIAL USE CLAIM; RECOMMENDED ACTIVE STATUS

Comments: Right 95-16784 and this right, 95-16785, have same POD well D0051678. As right 95-16784 has not been decreed yet, condition F06 was not added to this right at time of licensing.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER L9 (NE¼ SW¼), Sec. 7, Twp 50N, Rge 04W, B.M. KOOTENAI County

Method of Determination: GPS. POD located at -116° 53.179, 47° 41.472.

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	
50N	04W	7									0.2 L9								0.2

Total Acres: 0.2

PLACE OF USE: DOMESTIC and COMMERCIAL

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
50N	04W	7									X L9								

Method of Determination: Field exam and Arcmap.

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 1:24,000 or greater.

XX 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
D0051678	UNKOWN	1.5			

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Unable to perform flow measurement due to piping from well going directly into storage tank.

E. FLOW CALCULATIONSX Additional Computation Sheets AttachedMeasured Method: Theoretical pumping equation estimates flow at **0.02 cfs**, considering Department rounding standards. Pump is estimated to be at depth of 345 feet, with system operating at 60 psi.**F. VOLUME CALCULATIONS**

1. Volume Calculations for irrigation:

$$V_{I.R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.2 \text{ ac} \times 3.0 \text{ afa} = \mathbf{0.6 \text{ af}}$$

$$V_{D.R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 9.8$$

$$V = \text{Smaller of } V_{I.R} \text{ and } V_{D.R} = 0.6 \text{ af}$$

2. Volume Calculations for Other Uses:

Domestic component annual volume = **0.6 af**

Commercial annual volume equals the following:

- **Laundering** of bakery linens broken down by peak and non-peak season
 Peak (June-September) = 50 gpd x 5 day/week x 17 weeks = 4,250 gal
 Non-peak (January – May, October – December) = 50 gpd x 3 day/week x 35 weeks = 5,250 gal
Laundry Total = 4,250 gal (peak) + 5,250 gal (non-peak) = 9,500 gal annually
- **Dish washing** broken down by peak and non-peak season
 Peak (June-September) = 1.3 gpm x 60 min/hr x 2 hr/day x 5 day/week x 17 weeks = 13,260 gal
 Non-peak (January – May, October – December) = 1.3 gpm x 60 min/hr x 2 hr/day x 3 day/week x 35 weeks = 16,380 gal
Dish washing Total = 13,260 gal (peak) + 16,380 gal (non-peak) = 29,640 gal annually
- **Employee water use** by peak and non-peak season
 Peak (June-September) = 2 employees x 15 gpd x 5 day/week x 17 weeks = 2,550 gal
 Non-peak (January – May, October – December) = 2 employees x 15 gpd x 3 day/week x 35 weeks = 3,150 gal
Employee use Total = 2,550 gal (peak) + 3,150 gal (non-peak) = 5,700 gal annually
- **Food prep & Sanitation** of work area broken down by peak and non-peak season
 Peak (June-September) = 40 gpd x 5 day/week x 17 weeks = 3,400 gal
 Non-peak (January – May, October – December) = 40 gpd x 3 day/week x 35 weeks = 4,200 gal
Food prep & Sanitation Total = 4,000 gal (peak) + 4,800 gal (non-peak) = 8,800 gal annually
- **Commercial Total Annual Volume** = 9,500 gal (laundry) + 29,640 gal (Dish washing) + 5,700 gal (Employee use) + 6,600 (food prep & sanitation) = 51,440 gal / 325,850 gal/af = 0.16 af = **0.2 af** considering Department rounding standards.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 8/11/2020 with applicants, Bruce Wing and Kristen Anderson, showed a well being used for domestic, irrigation, and commercial purposes. The well D0051678, had a 1.5 HP pump which diverted water into a 3,000 gal storage tank before routing to pressure tanks for use by applicants. I was unable to perform a flow measurement because water was diverted directly into the storage tank with no proper place to perform measurement. Theoretical pumping equation was used to estimate a flow rate of 0.02 cfs. Well pump was estimated to be 345 feet down and the system running at 60 psi. Applicant's beneficial use components were each permitted for higher diversion rates, but applicants are limited to pumping performance at time of field exam; as such, **0.02 cfs** will be applied to each beneficial use component rate of diversion, and the maximum diversion rate for licensing purposes.

Applicant was permitted for domestic 1 home use, with irrigation associated with the irrigation component of license. During field exam, one home was observed on the applicant's property. The domestic component annual volume equals **0.6 af**, which is carried forward to license.

Applicant permitted for 3 acres of irrigation. During field exam, irrigated acreage was sketched out on a field map. Applicant irrigated using above ground sprinklers from frost free hydrants to irrigation lawn around the home, a fenced in garden, and terraced lawn and trees scattered within the applicants POU. Aerial imagery does not provide adequate visual representation of field exam identified irrigation, and photographs were taken to provide proof of active irrigation. Irrigation area was traced out using field notes and Arcmap equaling 0.2 acres. The annual volume for irrigation equals 0.2 acres x 3.0 afa = **0.6 af**, which will be carried forward to license.

Applicant permitted for commercial use for a bakery. During field exam, a shop designated specifically as a wholesale

bakery was observed. Applicant stated that as a wholesale operation, the two applicants (employees), had peak business in the summer months from June through September where they averaged 5 days a work week. The remaining 8 months of the year were not as busy, and they average 3 days a work week. These averages account for busy holiday seasons, and slower times in transition months throughout the year. The wholesale bakery included industrial sinks and food prep area, ovens, dedicated washer and dryer, a shower point and full service bathroom. Annual volume was broken down to account for 16 weeks of peak operation (Jun-Sept) and 32 weeks of non-peak operation (Jan-May, Oct-Dec). Water use was identified by Laundry, Dish Washing, Employee Use, and Food Prep & Sanitation to more accurately determine water usage. The commercial annual volume equals 9,500 gal (laundry) + 29,640 gal (Dish washing) + 5,700 gal (Employee use) + 6,600 (food prep & sanitation) = 51,440 gal / 325,850 gal/af = 0.16 af = **0.2 af** considering Department rounding standards, which will be carried forward to license.

Conditions 046 and 26A were removed from permit during licensing review. Condition X01 was replaced with 132 to describe domestic for 1 home, with irrigation authorized under the irrigation component of this right. The commercial use condition was adapted to reflect wholesale bakery versus generic bakery annotated on permit. Condition 928 was added to mitigate overlap concerns of water use from Beneficial Use Claim 95-16784, where if decreed as claimed would enlarge this right's maximum diversion volume. All other conditions from permit will remain on license.

Right 95-16784 is a Beneficial Use Claim filed by applicants in the Coeur D'Alene and Spokane River Basin Adjudication, currently an active recommendation status, which uses same well POD as this right and is for domestic use for same home as this right designates in 95-16785' domestic component POU. Condition 928 was added to permit at time of licensing to mitigate overlap concerns from this beneficial use claim. There are no other overlap concerns for this right.

Have conditions of permit approval been met? X 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>
IRRIGATION	03/15 to 11/15	0.02 CFS	0.6 AF
COMMERCIAL	01/01 to 12/31	0.02 CFS	0.2 AF
DOMESTIC	01/01 to 12/31	0.02 CFS	0.6 AF

Totals: 0.02 CFS 1.4 AF

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
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I. AUTHENTICATION

Luke Bates - Water Resource Agent

Field Examiner's Name J. D. B. L. Date 8/26/2024

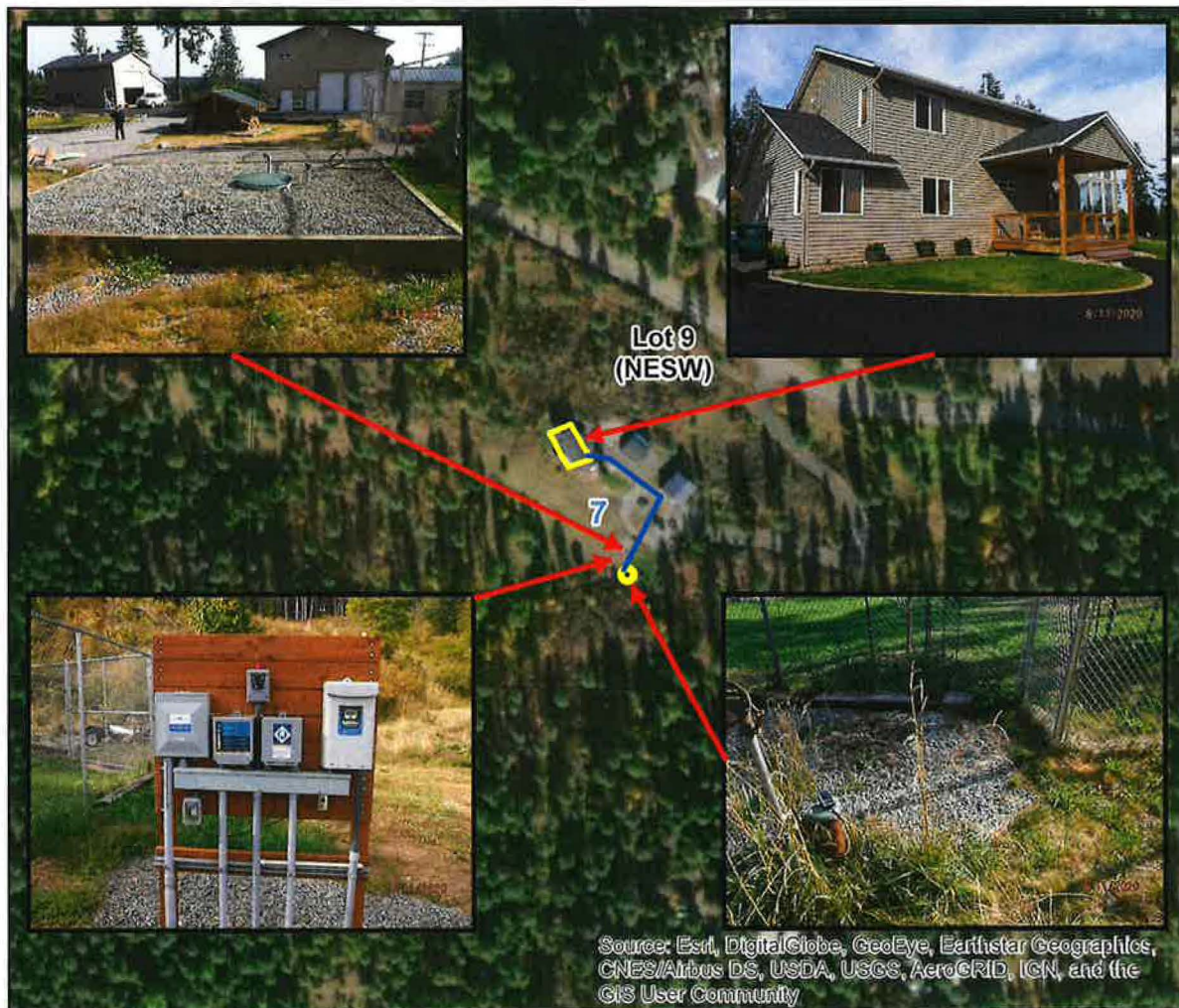
Reviewer Ad F... Date 8/31/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-16785

DOMESTIC system diagram.

04W

50N



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

0 0.035 0.07 0.14 Miles



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IRRIGATION system diagram.

04W



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

0 0.035 0.07 0.14 Miles



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COMMERCIAL system diagram

04W



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

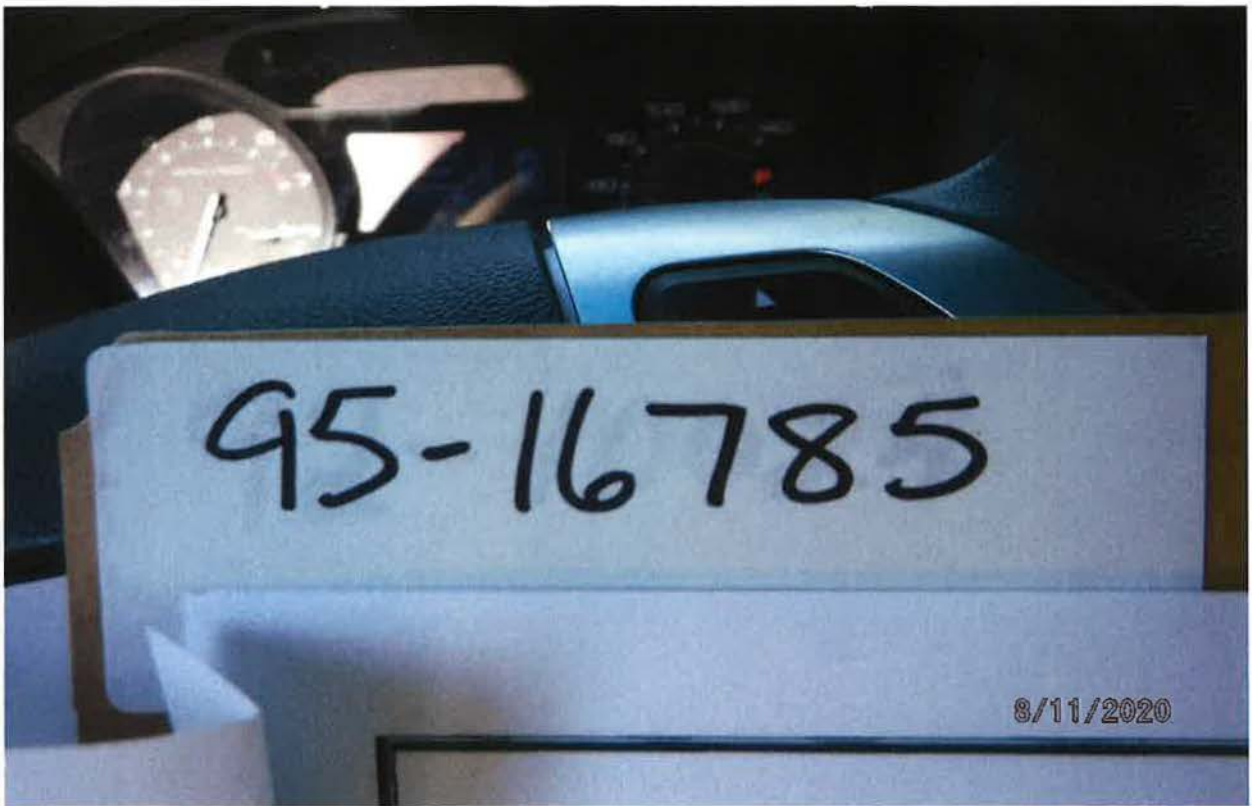
0 0.035 0.07 0.14 Miles



THEORETICAL PUMPING EQUATION FOR WR# 95-16785

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to be at 345 ft, and running at 60 psi.

<u>PUMP EQUATIONS</u>						
WATER RIGHT No. 95-16785						
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	1.5	483.7755	0.8	345	60
Q =		0.022 cfs	9.8 gpm			



POD - WELL D0051678



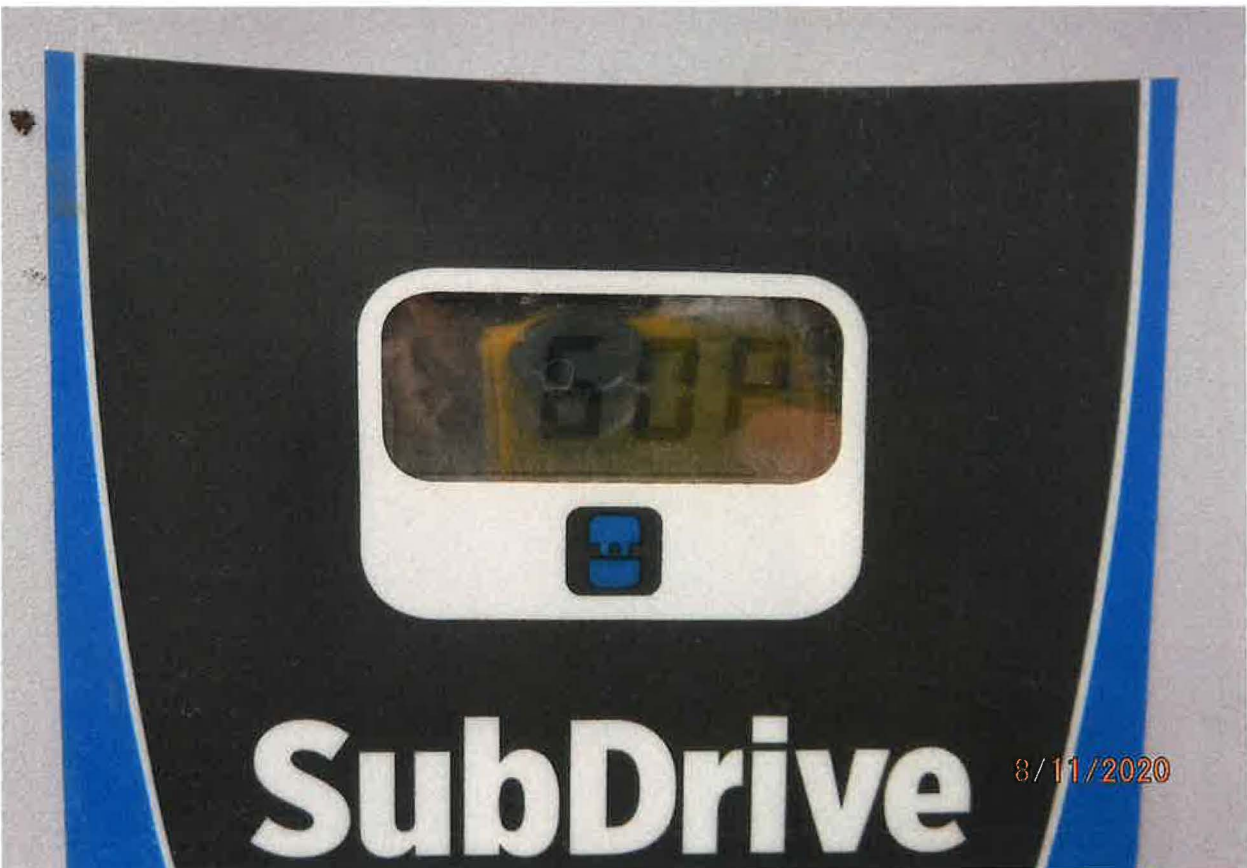
WELL D TAG D0051678



1.5 HP



WATER SYSTEM CONTROL PANEL



60 PSI OPERATING PRESSURE



3,000 GALLON VAULTED STORAGE TANK



DOMESTIC POU



IRRIGATION POU



IRRIGATION POU – TREES



IRRIGATION POU





IRRIGATION POU





COMMERCIAL POU – WHOLESALE BAKERY





FULL BATHROOM / LAUNDRY / SHOWER AT COMMERCIAL POU



COMMERCIAL POU – WHOLESALE BAKERY