STATE OF IDAHO DEPARTMENT OF WATER RESOURCES **BENEFICIAL USE FIELD REPORT**

Α. **GENERAL INFORMATION**

- 1. Current Owner: JOAN YAKE 1815 E 35TH AVE SPOKANE WA 99203-4025 AND/OR THOMAS E YAKE 1815 E 35TH AVE SPOKANE WA 99203-4025
- 2. Accompanied by: Thomas Yake Phone No: 509-535-3934 Address: Same as above Relationship to permit Holder: Permit holder

3. SOURCE: SPRING

Tributary SINKS

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

 Other water rights w 	vith the same place of use:	NO Overlap	
Water Right No.	Source	Purpose of Use	Basis

Comments:

2. Other water rights v	vith the same point-of-diversion:	NO Overlap		
Water Right No.	Source	Purpose of Use	Basis	

Comments: ____

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

SPRING SW1/4 NW1/4 NE1/4, Sec. 5, Twp 55N, Rge 01W, B.M. BONNER County

Method of Determination: GPS. POD is a concrete spring box located at -116º28.098, 48º08.869.

PLACE OF USE: DOMESTIC and FIRE PROTECTION

Two Png	Sec	NE			NW		SW			SE			Totals						
iwp	Ring	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
55N	01W	5			X L2														

Method of Determination: Field exam and Arcmap aerial imagery.

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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.
- 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	Нр	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
NONE					

D. FLOW MEASUREMENTS

Measurement Equipment	Туре	Make	Model No.	Serial No.	Size	Calib. Date
4 CUP MEASUREMENT						

2. Measurements: A 4 CUP flow measurement was completed from a PVC pipe entering the spring box concrete cistern, with the resulting flow rate of 4 cups in 30.44 seconds.

E. FLOW CALCULATIONS

Measured Method: 4 CUP measurement = 4 cups per 30.44 seconds = 16 cups per 121.78 seconds = 1 gal per 2.178 minutes = less than 0.5 gal per minute which is less than the minimum value for 0.01 cfs. The resulting **0.01 cfs** defaults to the diversion rate for licensing purposes.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

- V_{LR} = (Acres Irrigated) x (Irrigation Requirement) =
- V_{D,R} = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 =
- $V = Smaller of V_{LR}$ and $V_{D.R} =$
- 2. Volume Calculations for Other Uses:

Domestic annual volume = 1.2 af

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G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 9/30/2020 with the applicant, Thomas Yake, showed spring water being diverted for domestic and fire protection purposes. At the POD, the applicant had a concrete spring box that diverted water using a PVC pipe in side of a hill and spring. Water gravity flowed downhill to the applicant's POU, using a 1" black poly pipe, to a 1400 gallon concrete storage reservoir co-located with the applicant's home. A 4 cup measuring test was completed to determine a flow rate equal to 4 cups per 30.44 seconds = 16 cups per 138.04 seconds = 1 gal per 2.18 minutes = less than 0.5 gal per minute, which is less than the minimum value for 0.01 cfs. The resulting **0.01 cfs** flow rate is the default diversion rate that will be carried to licensing as the domestic and fire protection diversion rates, and subsequent maximum flow rate for licensing purposes.

The applicant had permit approved to develop irrigation for 10 acres and two homes for domestic use purposes. During the field exam, applicant stated he had only developed 1 home, and minimal irrigation. The irrigated area identified during the field exam consisted of small fruit trees located near the home, as well as a few small areas less than ½ acre of small conifer trees the applicant irrigated using hose and buckets throughout the irrigation season. Based on finding at time of field exam, the domestic beneficial use was changed to 1 home with up to ½ acre of irrigation. The irrigation beneficial use was removed from the permit at time of licensing, as it had not been developed in the permit development period. The 1 home and small watering of trees was traced out during field exam, and during licensing review Arcmap aerial imagery was used to trace out ½ acre consisting of a small home and minor irrigation of trees near the home. The annual volume for domestic use equals **1.2 af**, which will be carried forward to licensing.

The applicant used a 1400 gallon storage cistern, and gravity flow for his small off-grid home, and all uses were from gravity flow. The applicant used hoses to connect to the storage reservoir when not service connected to the home, and used water for the trees and to keep the ground wet during dry periods for fire protection purposes. Due to the hose bib and hoses present, fire protection is recommended for credit, with the understanding that the applicant is restricted by the total volume of storage in the event of an active fire. Arcmap aerial imagery was used to trace out the applicant's parcels, which is recommended for the fire protection POU for licensing purposes. The applicant had tee-fittings inline as the 1" poly pipe ran from the POD to POU, and was able to connect to them with hoses in the event fire suppression. Due to the fire protection beneficial use as a direct flow component, there is no maximum diversion volume applied to this water right license.

Conditions 26A, 132, and R62 were removed from the permit during licensing review. Condition X01 was added to describe 1 home found at time of field exam. Condition 187 was added to describe the irrigation occurring under the domestic use shall not exceed ½ acre. All other conditions on the permit will remain on the license. There are no overlap concerns for this water right.

Have conditions of permit approval been met? A res	No	Yes	х	been met?	permit approval	ofp	conditions	Have
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H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
DOMESTIC	01/01 to 12/31	0.01 CFS	1.2 AF
FIRE PROTECTION	01/01 to 12/31	0.01 CFS	
	Totals:	0.01 CFS	
2. Recommended Amendments			
Change P.D. as reflected above	ve Add P.D.	as reflected above	None

Change P.U. as reflected above _____ Add P.U. as reflected above _____ None

I.	AUTHENTICATION	Luke Bates - Water Resource Agent				
	Field Examiner's Name	(Fall	Date	10/2	/zøzø	
	Reviewer ad Fr	Lif	Date	1/27/	2020	







POD – SPRING BOX CISTERN

POD – DIVERSION FLOW MEASUREMENT USING 4-CUP CONTAINER

POLY PIPE ROUTED DOWN HILL FROM POD-TO-POU

1400 GALLON CONCRETE RESERVOIR RECIEVES SPRING WATER FROM POD

HOSE BIB FOR WATER USE OUT OF STORAGE RESERVOIR

DOMESTIC, FIRE PROTECTION, IRRIGATION POU

FIRE PROTECTION AND IRRIGATION POU

FIRE PROTECTION AND IRRIGATION POU

