

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17627

Exam Date: 07/16/2020

1. Current Owner:
VISTA BAY WEST INC PO BOX 621 BAYVIEW ID 83803
2. Accompanied by: Dennis Tonhofer
Phone No: 1-509-710-8084
Address: Same as above
Relationship to permit Holder: President, Vista Bay West INC

3. SOURCE:

GROUND WATER

Method of Determination: Arcmap and DRG

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: There are multiple Bayview Water and Sewer District municipal and irrigation water rights that are large tract, that overlap this right's POU, but are not a concern for overlap as the applicant's system is separate.

2. Other water rights with 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:

GROUND WATER L1 (NW¼ NW¼), Sec. 2, Twp 53N, Rge 02W, B.M. KOOTENAI County

Method of Determination: GPS; POD is a well without tag located at -116°32.870, 47°58.510.

PLACE OF USE: IRRIGATION

[illegible]

Total Acres: 0.5

PLACE OF USE: DOMESTIC

[illegible]

Method of Determination: Field Exam and Arcmap.

3.

X 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).

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
96-76-N-109		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 because system pumped directly into pressure tank with inadequate pipe requirements for flow measurement.

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: Theoretical pumping equation estimates flow at **0.05 cfs**, with a pump depth of 83 feet, and a system operating pressure of 50 psi.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.5 \text{ acres} \times 3.0 \text{ afa} = 1.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.05 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 21.22$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \mathbf{1.5 \text{ af}}$$

2. Volume Calculations for Other Uses:

$$\text{Domestic annual volume} = 10 \text{ mobile homes} \times 0.6 \text{ af} = \mathbf{6.0 \text{ af}}$$

$$\text{Maximum Diversion Volume} = 6.0 \text{ af (Domestic component)} + 1.5 \text{ af (Irrigation component)} = \mathbf{7.5 \text{ af}}$$

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 7/16/2020 with applicant's representative, Dennis Tonhofer, showed a well servicing a mobile home park with Domestic and Irrigation uses. The system utilized a 1.5 HP pump that diverted water from the well direct to two pressure tanks, making flow measurements unattainable. Theoretical pumping equation determined the diversion rate of **0.05 cfs**, which will be applied as the maximum diversion rate on license. The pump was estimated to be 83 feet down and the system running at 50 psi. The irrigation component was permitted for 0.02 cfs; the Department standard is 0.03 cfs for small acreage less than 5 acres, but applicant is limited by pump performance at time of field exam. The domestic component was permitted for 0.10 cfs, but again the applicant is limited by the well pump's performance at time of exam.

During field exam, the 10 mobile homes connected to Vista Bay West INC's water system were validated, and photographs were taken illustrating domestic use throughout the mobile home park. Irrigation occurring associated with this water right is authorized under the irrigation component of this right, and not part of the domestic component annual volume. The annual volume for Domestic equals 10 mobile homes x 0.6 af per home = **6.0 af**. Applicant was permitted for 0.5 acres of irrigation within the POU. During field exam, small irrigation usage by hose and sprinkler in between and beside mobile homes, coupled with some small pressurized sprinkler operations along road way were observed. Arcmap aerial imagery was used to trace out irrigation between the mobile homes where irrigation was clearly identified, and the total acreage was approximately 0.5 acres. Due to small area of irrigation, the mapping products for licensing show the same POU as domestic, as tracing individual homes would detract from image clarity. The irrigation components annual volume equals 0.5 acres x 3.0 afa = **1.5 af**. The combined Maximum diversion volume equals 6.0 af (domestic component) + 1.5 af (irrigation component) = **7.5 af**, which will be applied to at time of licensing.

Condition 046 was removed from permit during licensing review. As this right's POU is located within the Rathdrum Prairie Ground Water Management Area (RPGWMA), conditions 174, 175, and 01R were added to describe water use associated with Department limitations for RPGWMA. There are multiple municipal water rights that overlap this right's POU, but are not a concern for overlap; there are no other overlap concerns for this right.

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>
IRRIGATION	04/01 to 10/31	0.02 CFS	1.5 AF
DOMESTIC	01/01 to 12/31	0.05 CFS	6.0 AF

Totals: 0.05 CFS 7.5 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 - Water Resource Agent

Field Examiner's Name

Date

8/21/2020

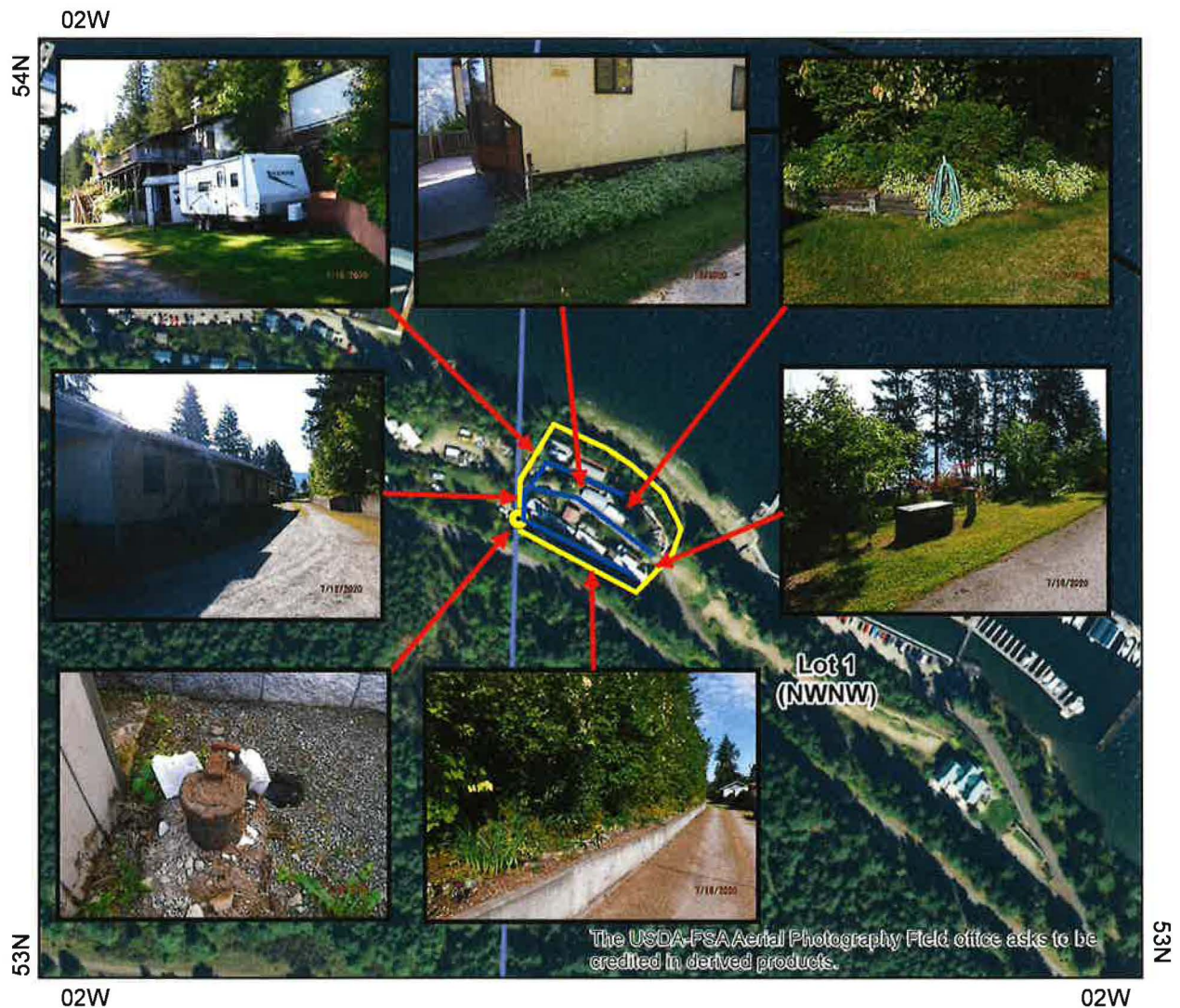
Reviewer

Date

8/21/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17627

DOMESTIC and IRRIGATION system diagram.



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

0 0.035 0.07 0.14 Miles



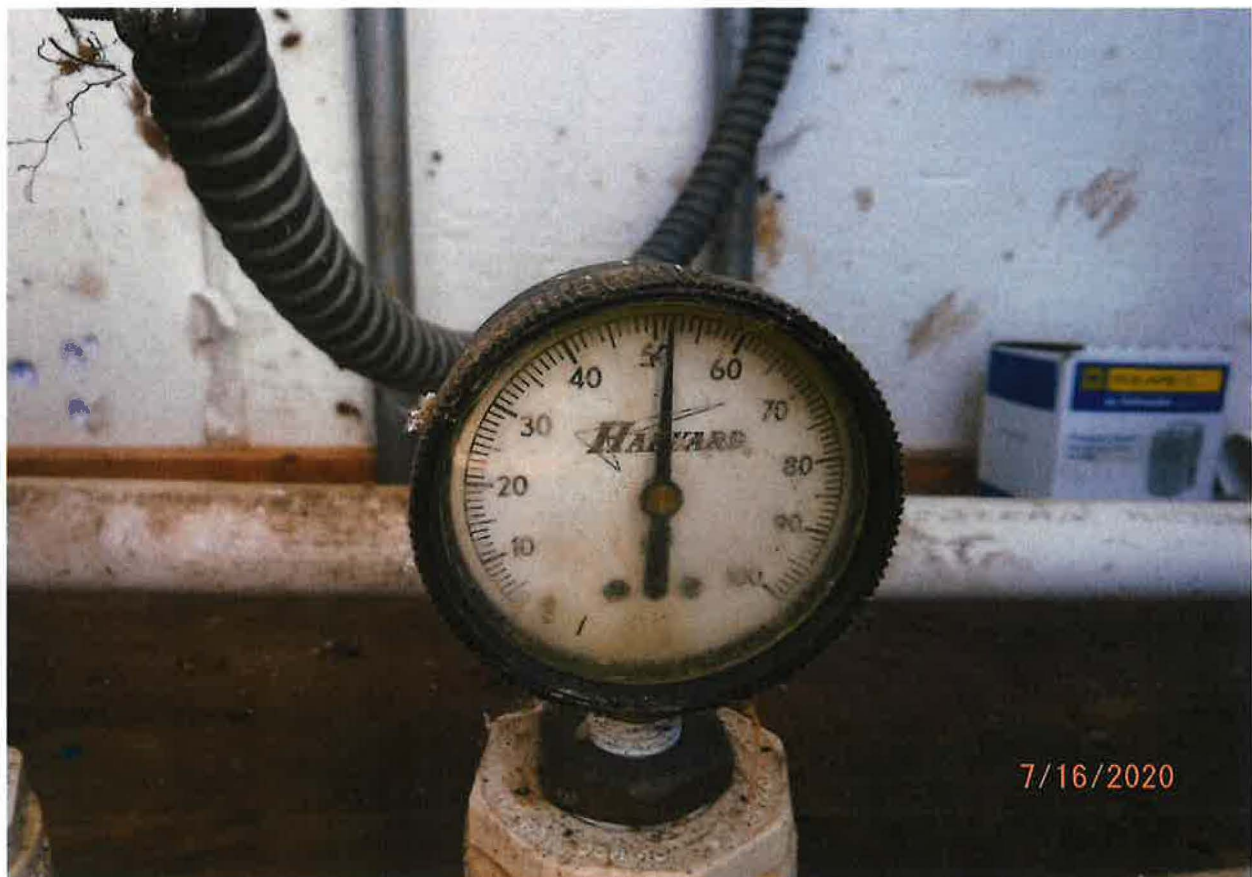


PUMP HOUSE





1.5 HP PUMP



50 PSI OPERATING PRESSURE



DOMESTIC AND IRRIGATION POU





DOMESTIC AND IRRIGATION POU



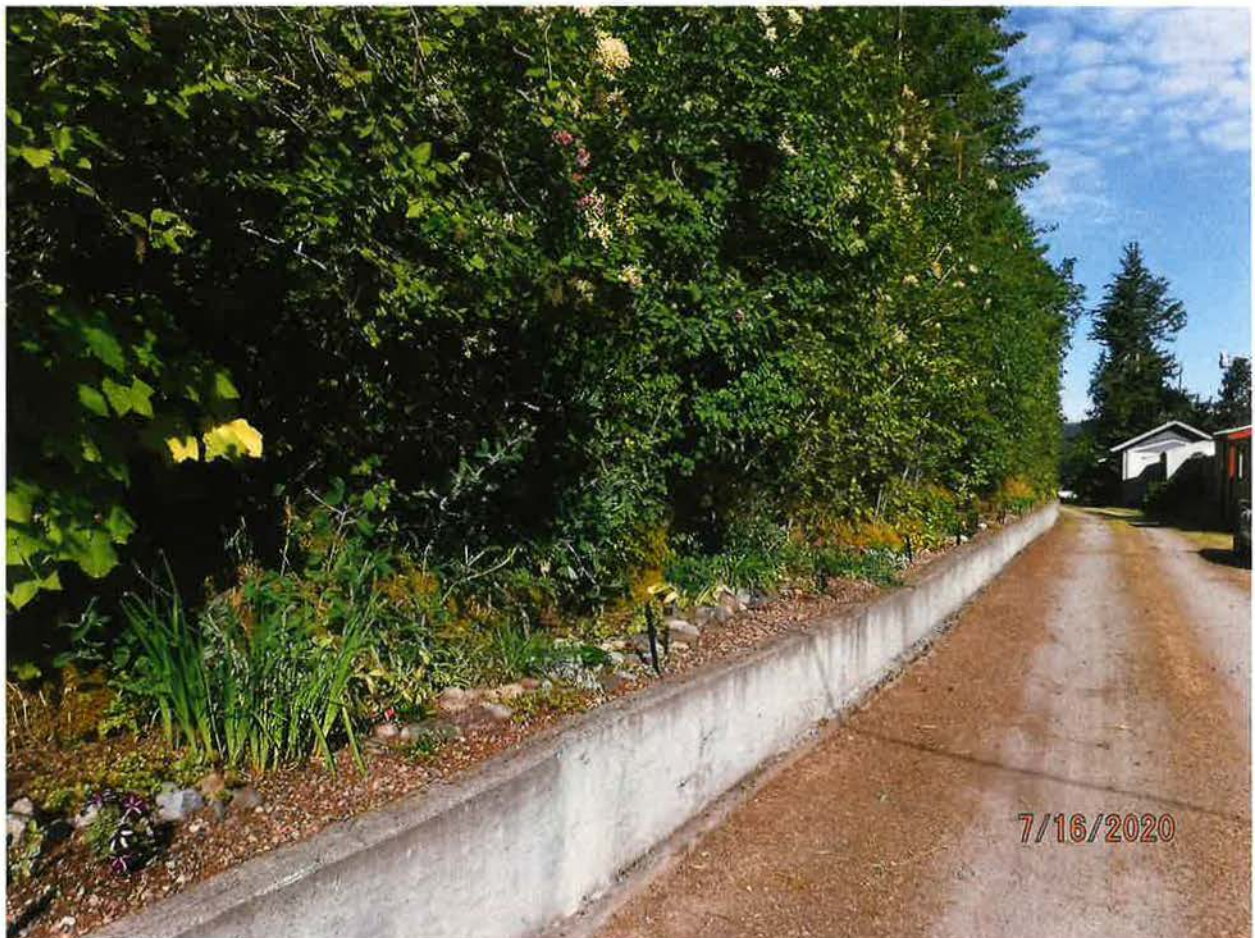


DOMESTIC AND IRRIGATION POU





DOMESTIC AND IRRIGATION POU





DOMESTIC AND IRRIGATION POU

