

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17386

Exam Date: 05/18/2020

1. Current Owner:
BEVERLY EVANS 6776 BENEWAH CREEK RD SAINT MARIES ID 83861 AND/OR
ELMOR EVANS 6776 BENEWAH CREEK RD SAINT MARIES ID 83861
2. Accompanied by: Elmor Evans
Phone No: 208-245-3110
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
UNNAMED STREAM

Tributary
BENEWAH CREEK

Method of Determination: Tax lot verification and GIS

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
95-9510	UNNAMED STREAM	IRRIGATION	LICENSE

Comments: WR 95-9510 has the same permit/license holder, and is for irrigation use on the same parcel. This water right 95-17386 accounts for the pond storage not licensed for on 95-9510.

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 SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

UNNAMED STREAM SW¼ SW¼, Sec. 4, Twp 45N, Rge 03W, B.M. BENEWAH County

Method of Determination: Arcmap; POD (dam) located at -116°43.546, 47°16.868.

PLACE OF USE: FIRE PROTECTION STORAGE, AESTHETIC STORAGE, and IRRIGATION STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
45N	03W	4											X						

PLACE OF USE: IRRIGATION FROM STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
45N	03W	4											3.7						3.7

Total Acres: 3.7

Method of Determination:

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
NONE					

D. FLOW MEASUREMENTS

1.

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

2. Measurements: N/A

E. FLOW CALCULATIONS

Measured Method: NONE

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.7 \text{ ac} \times 3.0 \text{ afa} = 11.1 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \text{N/A} - \text{no diversion rate applied}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 11.1 \text{ af}$$

2. Volume Calculations for Other Uses:

See attached pond analysis sheet

G. NARRATIVE/REMARKS/COMMENTS

Admin note: This water right accounts for storage and irrigation storage from volume associated with water right 95-9510, which was licensed without accounting for the pond in this license. During field exam review it was discovered that the applicant had applied for a cfs diversion rate from an unnamed stream and had not applied for any storage. Below notes are reflected in the field exam narrative for WR 95-9510:

- The 2015 aerial imagery showed a pond located on the property that would not be covered under 24 hour rule for 0.08 cfs for irrigation. It was discussed with regional staff prior to field exam exactly how to approach the exam. It was decided that if applicant had system in place to irrigate, he should be given credit for permit and licensed. It was also decided that there was no way to cover the pond under this permit and a new one would need to be filed by the applicant.
- Field exam with applicant, Elmor Evans, showed Honda pump with suction hose in pond. Mr. Evans had a flexible hose going from pump to a Y connection where 2 hoses went for flood irrigation. The applicant disconnected the Y connection so a 5 gallon bucket test could be performed. The applicant fired on the pump and the flow rate was far greater than a 5 gallon test could measure. Mr. Evans lowered the RPM using the throttle on the pump and a 5 gallon test was performed in 8 seconds which is equal to 37.5gpm or 0.08 cfs. When irrigated area was mapped out it was equal to 3.7 acres.

In house review for licensing for this water right accounts for field exam with applicant, Elmor Evans, on 06/13/2017. There is no diversion rate applied to the storage components associated with the pond in this WR.

Applicant had constructed a pond for fire protection storage, aesthetic storage, and irrigation storage. Applicant used irrigation from storage to irrigate acreage identified and traced out using arcmap equaling 3.7 acres. The Irrigation storage and irrigation from storage component annual volume equals $3.7 \text{ ac} \times 3.0 \text{ afa} = 11.1 \text{ af}$, which will be applied to license. Applicant was permitted for 1.9 af for fire protection storage and aesthetic storage. At time of licensing, a pond analysis sheet was completed identifying the pond capacity equaling 1.2 af. As a result, both fire protection storage and aesthetic storage will be reduced to reflect current pond analysis worksheet derived value of **1.2 af** (annual volume), which will be applied to license. The combined Maximum Diversion Volume applied to this water right equals $11.1 \text{ af (irrigation and irrigation from storage)} + 1.2 \text{ af (fire protection storage and aesthetic storage)} = 12.3 \text{ af}$.

The pond on the applicant's property had a surface area of 0.3 acres with a maximum depth of 10 feet, which equals an average depth of 4.0 feet, and a capacity of 1.2 af. The pond had a seepage factor of 0.3 af, and an evaporation factor of 0.4 af. Multiple fill volume above the initial fill for irrigation from storage equal 11.1 af. The total volume required equals 13.0 af, from which 0.7 af is for seepage and evaporation loss and not accounted for toward beneficial usage of water. A new version of the pond analysis tool was used to issue this water right license (see attached). The applicant used water from pond to flood irrigate 3.7 acres.

Condition 26A was removed from license. Condition X35 was added to state that WRs 95-17586 and 95-9510 when combined shall not exceed the irrigation of 5.1 acres. All other conditions will remain on license. WR 95-9510 overlaps this water right from the same applicant, for irrigation use, but associated with the diversion of water from the unnamed stream prior to entering applicant's pond. Any overlap concern has been mitigated by adding condition X35, as this water right accounts for the storage component not added to WR 95-9510.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Annual Volume</u>
FIRE PROTECTION STORAGE	01/01 to 12/31	1.2 AF
AESTHETIC STORAGE	01/01 to 12/31	1.2 AF
IRRIGATION STORAGE	01/01 to 12/31	11.1 AF
IRRIGATION FROM STORAGE	04/01 to 10/31	11.1 AF

Totals: 12.3 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 Adrian Franklin Date 5/19/2020
Reviewer [Signature] Date 5/18/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17386

FIRE PROTECTION STORAGE, AESTHETIC STORAGE, and IRRIGATION STORAGE system diagram



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

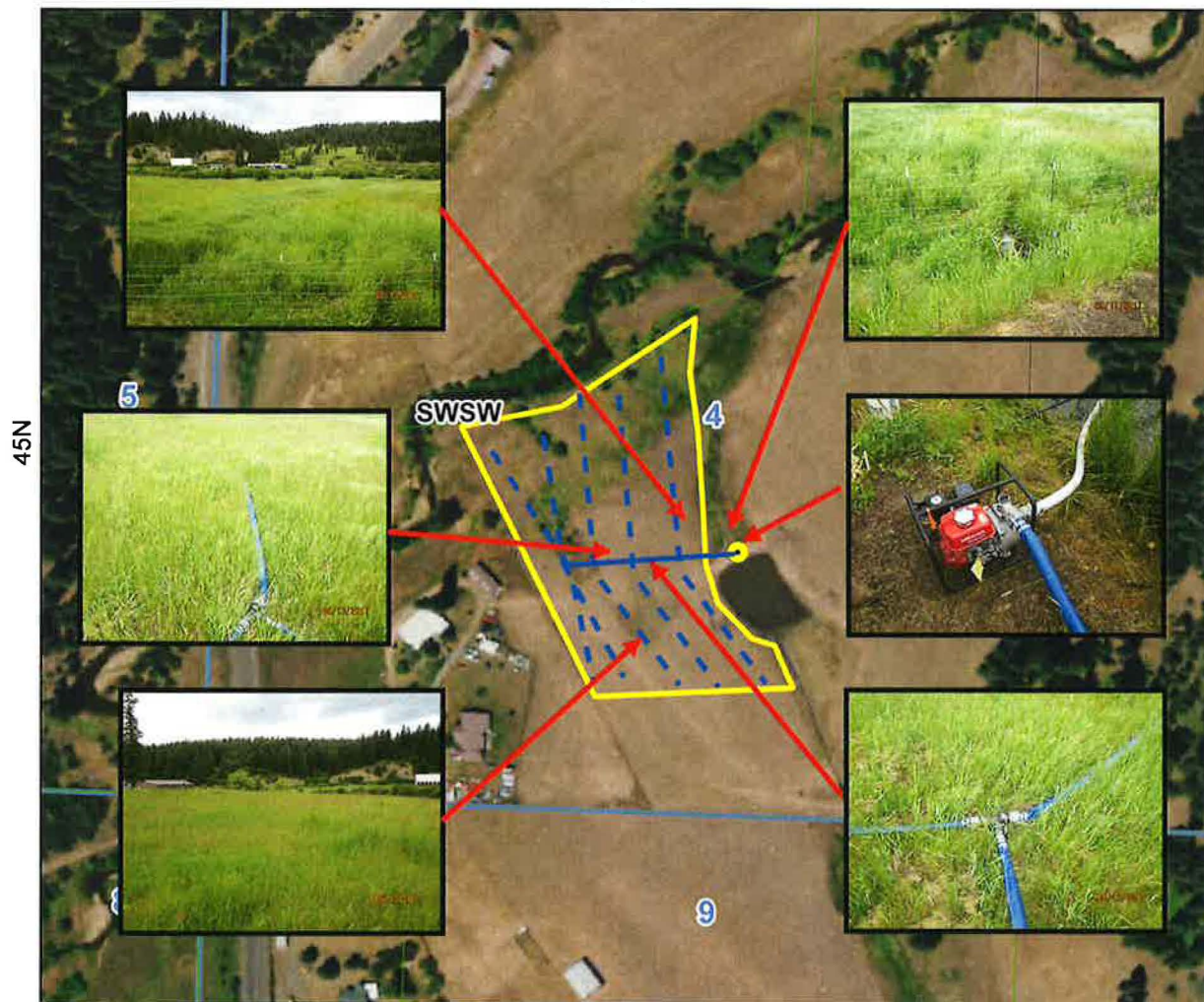
0 0.035 0.07 0.14 Miles



State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17386

IRRIGATION FROM STORAGE system diagram.

03W



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

0 0.035 0.07 0.14 Miles



Total Storage Calculations

FILE NUMBER	95-17386
REVIEWER	Luke Bates
DATE	5/18/2020

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	1.2	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	11.1	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). Note: You must have a " <u>From Storage</u> " component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.3	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.4	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	13.0	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

TAX LOT VERIFICATION FOR WR# 95-17386



Benewah County, Idaho Parcel Information System

Parcel Details

PIN: RP45N03W045201A

Homeowner Name 1: EVANS, BEVERLY & ELMOR TRUSTEE

Situs Address: not available , Idaho

Total Acres: 89.8400

Display Description: S4 T45N R3W SW S OF CO RD LESS TAX #862

Values

Improvement(s): 14240

Land: 69103

Total: 83343

Taxing Districts

City Bond:

City:

Drainage:

Fire:

Highway: BENEWAH COUNTY ROAD & BRIDGE

Hospital:

Library: BENEWAH COUNTY LIBRARY

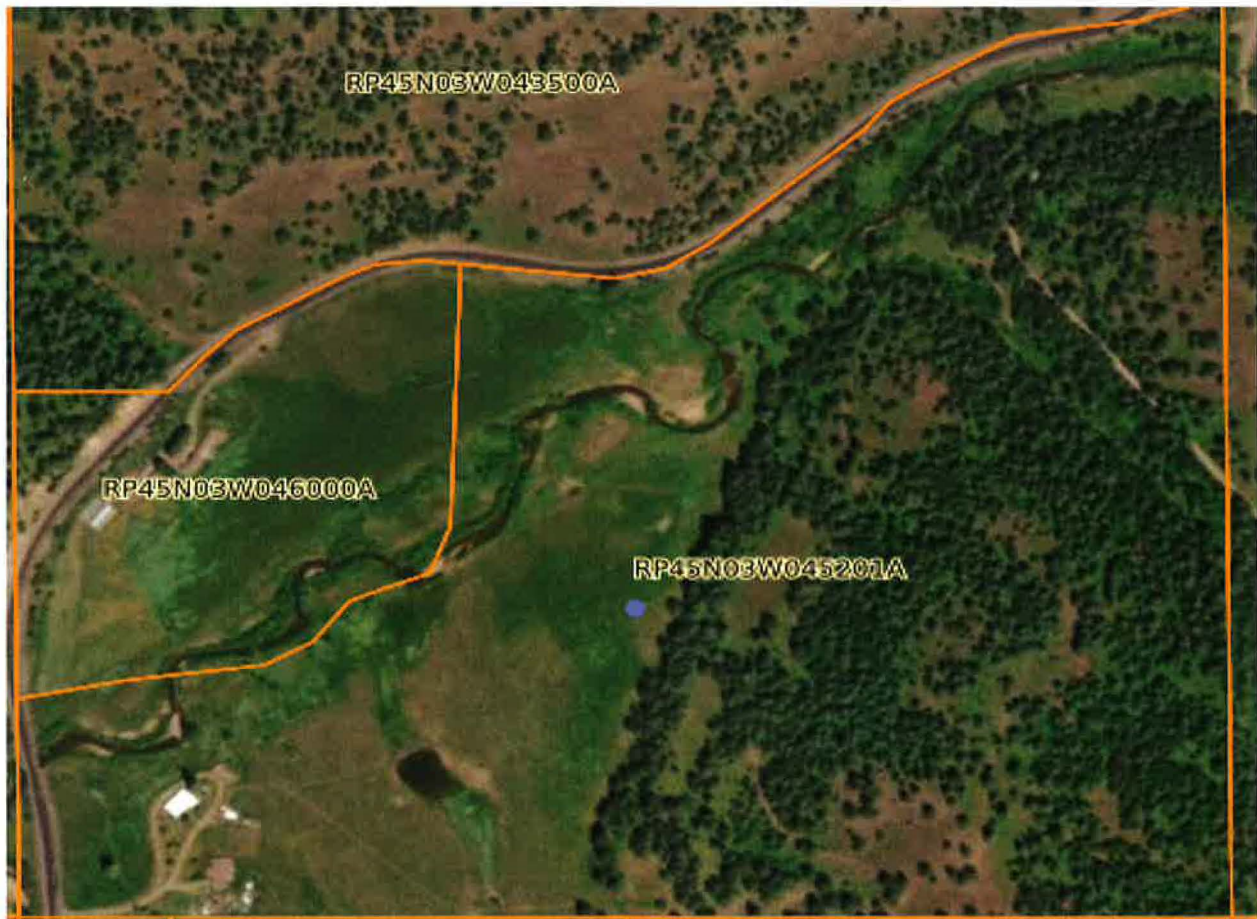
School: ST MARIES SCHOOL #41

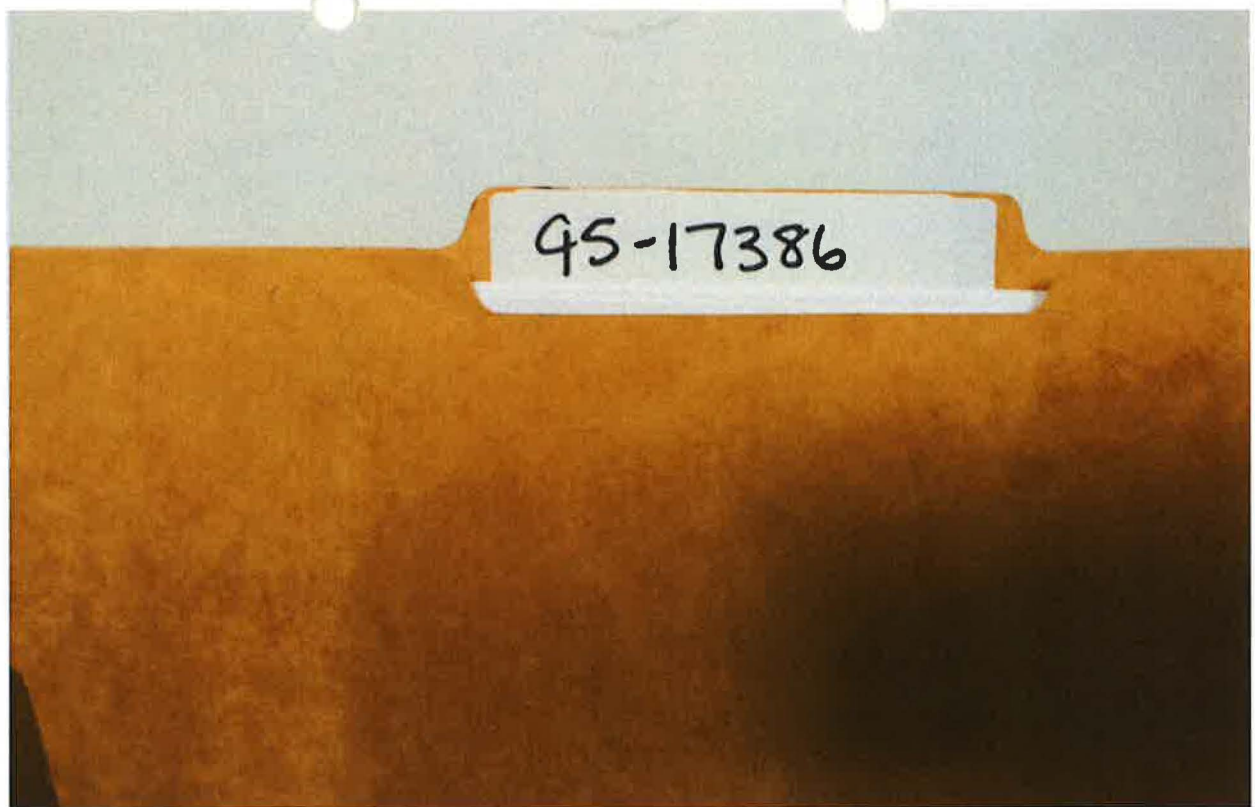
Sewer&Water:

Watershed:

Weed Control:

Google Photos





POD FROM POND & POND HEADGATE



PORTABLE GENERATOR



POD – PORTABLE GENERATOR



PORTABLE GENERATOR AT POD



DISCHARGE PIPE FROM POND



MULTIPLE STORAGE COMPONENT POU – POND





IRRIGATION SYSTEM - POU





IRRIGATION POU





IRRIGATION POU

