

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-9487
Exam Date: 6/2/2020

1. Current Owner:
HENKOSKI FAMILY TRUST PO BOX 750 ATHOL ID 83801-0750
2. Accompanied by: Mike Henkoski
Phone No: 208-683-9139
Address: Same as above
Relationship to permit Holder: Trustee

3. **SOURCE:**
UNNAMED STREAM

Tributary SINKS

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
95-9768	UNNAMED STREAM	IRRIGATION	STATUTORY CLAIM
95-11544	GROUND WATER	IRRIGATION	PERMIT IN LICENSING REVIEW

Comments: WR 95-9768 has a 40 acre POU, but is limited to 1 acre of irrigation on partial decree. This acre is within the same 40 acre tract, but a different acre of irrigation from a different storage pond, and is not a concern for overlap. Water Permit 95-11544 is being licensed congruently with this water right with overlap in irrigated POU, but from a groundwater source; condition X35 is being used to describe overlap and limit irrigated acreage between two water rights to 1.7 acres.

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:

UNNAMED STREAM SE¼ NE¼, Sec. 36, Twp 53N, Rge 03W, B.M. KOOTENAI County

Method of Determination: Arcmap and GPS. Pond earthen dam location -116°38.067, 47°53.895.

PLACE OF USE: IRRIGATION STORAGE, WILDLIFE STORAGE, and AESTHETIC STORAGE

[illegible]

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	
53N	03W	36				0.5													0.5

Total Acres: 0.5

Method of Determination: Arcmap and Field Exam

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
N/A					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A						

2. Measurements: N/A

E. FLOW CALCULATIONS

Measured Method: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

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

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

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 1.5 \text{ af}$$

2. Volume Calculations for Other Uses:

See attached pond analysis sheet.

G. NARRATIVE/REMARKS/COMMENTS

The field exam was performed on 06/02/2020 with the applicant, Michael Henkoski, which showed one pond that was being fed by an unnamed stream. At the POD applicant had an 8 inch pvc storm drain pipe installed vertically into ground approximately 4 feet, from which water was diverted from the unnamed stream. Water was routed downhill to a small pond using approximately 1,200 feet of flexible pvc pipe to applicant's small pond for multiple storage uses and for irrigation from storage purposes.

The pond has a surface area of 0.1 acres. The pond was excavated and lined, has a maximum depth of 4 feet, an average depth of 1.6 feet, and evaporation of 0.1 af. The pond has a multi fill component equaling irrigation from storage volume of 1.5 af annually. The total volume required for pond equals 1.8 af, the sum of afore mentioned pond components. The Maximum diversion volume for this water right will be licensed at **1.8 af**, and the is no diversion rate applied to license.

During field exam, it was identified that applicant was further developing his parcel, with land excavating occurring near area of POU. Applicant pulled water from the small pond to irrigate using above ground tripod sprinklers. The irrigation acreage was traced out equaling 0.5 acres along-side the pond, and using the generic volume of 3.0 afa the annual volume for irrigation from storage component of **1.5 af** will be carried to licensing. Applicant was permitted for 1.8 AF of Irrigation Storage, but due to irrigation from storage value equaling 1.5 af, the annual volume for irrigation storage was reduced to 1.5 af at time of licensing review. At time of licensing review, aerial imagery for applicant's irrigation POU falls within the NENE quarter quarter, but upon investigation it appears there is a shift in aerial imagery observed on the DRG layer. As such, no amendment for POU is recommended for license, as the parcel line is shifted north on current imagery.

Applicant was permitted for 0.3 af of both wildlife and aesthetic storage annual volume. These are not additive, and the volume added to overall maximum diversion volume for license equals **0.3 af**, which is derived by 0.2 af (pond capacity) + 0.1 af (pond evaporation loss) = 0.3 af

Condition 26A was removed from license. Condition 220, 221, and 259 were added to describe the pond components derived from pond analysis sheet and that is lined. Condition R58 was added to describe no more than 3.0 afa per acre for irrigation when combined with all other water rights at POU. Condition X35 was added limiting WRs 95-9487 and 95-11544 irrigation acreage to 1.7 acres when combined to mitigate overlap concerns.

WR 95-9768 has a 40 acre POU, but is limited to 1 acre of irrigation on partial decree. This acre is within the same 40 acre tract, but a different acre of irrigation from a different storage pond, and is not a concern for overlap. Water Permit 95-11544 is being licensed congruently with this water right with overlap in irrigated POU, but from a groundwater source; condition X35 is being used to describe overlap and limit irrigated acreage between two water rights to 1.7 acres.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

Beneficial Use	Period of Use	Annual Volume
IRRIGATION STORAGE	01/01 to 12/31	1.5 AF
IRRIGATION FROM STORAGE	04/01 to 10/31	1.5 AF
WILDLIFE STORAGE	01/01 to 12/31	0.3 AF
AESTHETIC STORAGE	01/01 to 12/31	0.3 AF

Totals: 1.8 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

I. AUTHENTICATION

Luke Bates - Water Resource Agent

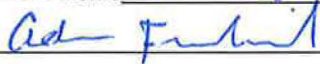
Field Examiner's Name



Date

6/9/2020

Reviewer

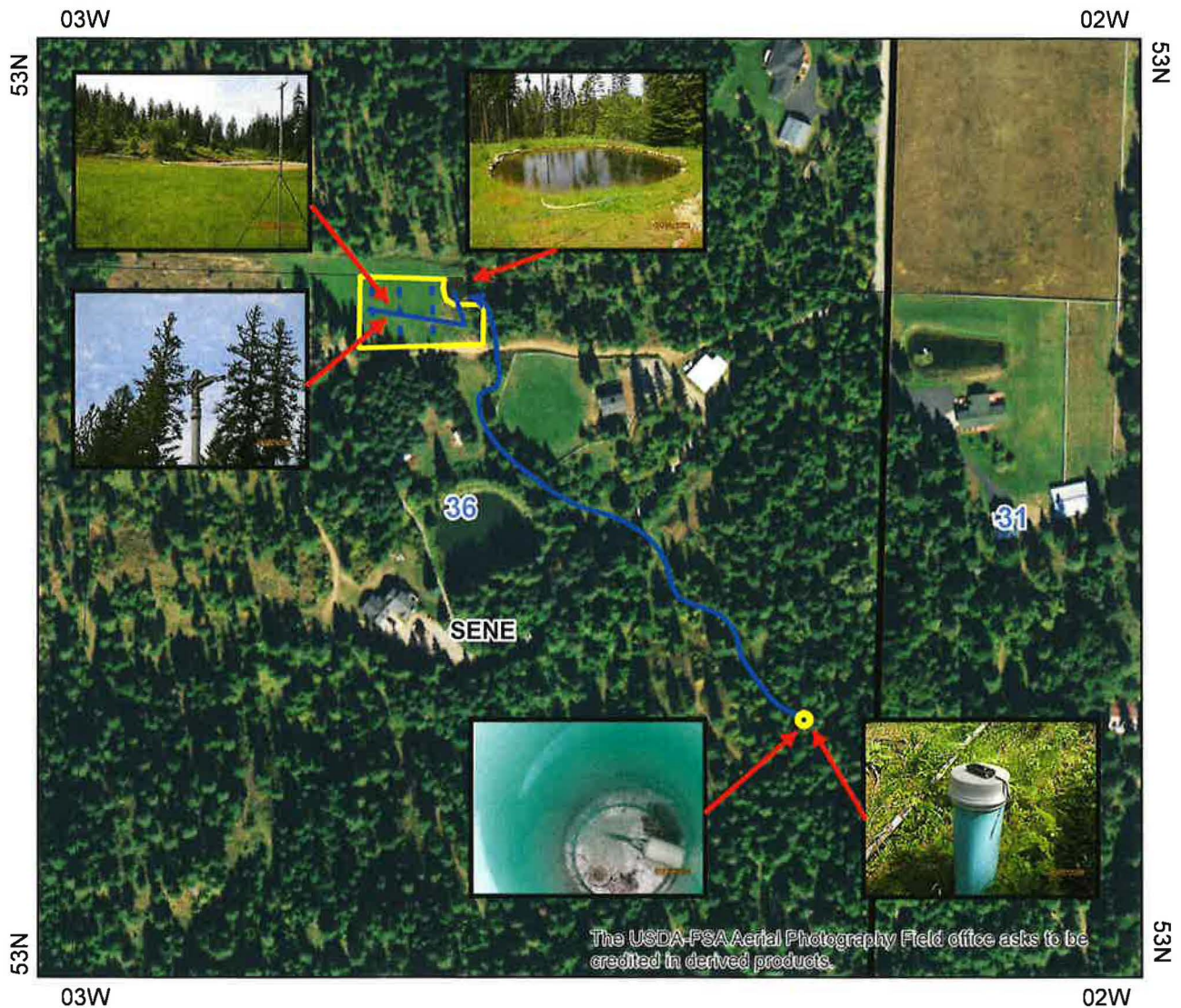


Date

6/11/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-9487

This map depicts the IRRIGATION FROM STORAGE system diagram.



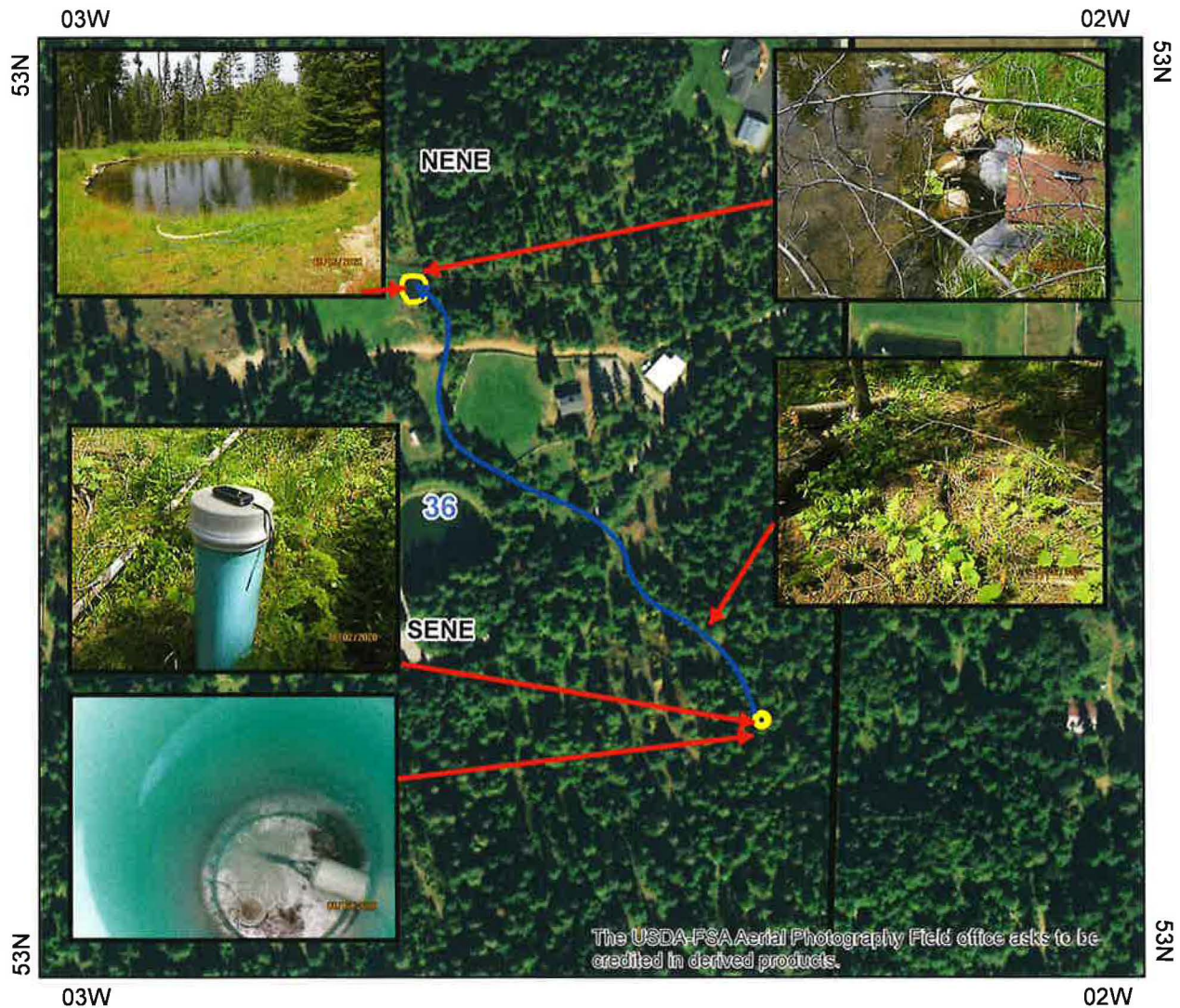
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.035 0.07 0.14 Miles



State of Idaho
Department of Water Resources
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This map depicts the IRRIGATION STORAGE, WILDLIFE STORAGE,
and AESTHETIC STORAGE system diagram.



03W

02W

53N

53N

- 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	95-9487
REVIEWER	Luke Bates
DATE	6/3/2020

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.)	0.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	1.6	"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)	0.2	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)	1.5	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 "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.1	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.8	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.

POD - UNNAMED STREAM



It prepared by a certified
permit has changed, contact
rm. If you wish to relinquish
extension, please notify the

RECEIVED

APR 05 2018

DEPARTMENT OF
WATER RESOURCES

o. _____ / yr. _____

_____ acre-feet.

er conditions of permit:

s ☐	No ☒
s ☐	No ☒
☐	No ☒
☐	No ☒
☐	No ☒
☐	No ☒

with your proof of

No ☒

06/02/2020

9.5-9487



POD – UNNAMED STREAM



PVC PIPE WATER CONVEYANCE DOWN HILL TO POND



MULTIPLE STORAGE POU – LINED POND



OUTFLOW FROM POND



INFLOW TO POND – BLACK PVC PIPE



IRRIGATION FROM STORAGE POU



IRRIGATION FROM STORAGE POU – SPRINKLER HEAD