

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 57-12013
Exam Date: 08/14/2025

1. Current Owner:
MARK S JENSEN 10015 WILD HORSE RD MELBA ID 83641-4296 AND
ANGELA JENSEN 10015 WILD HORSE RD MELBA ID 83641-4296
2. Accompanied by: Mark Jensen
Phone No: (208) 965-4298
Address: 10015 Wild Horse Rd. Melba, ID 83641
Relationship to permit Holder: Permit Owner

3. **SOURCE:**
WASTE WATER

Tributary
SNAKE RIVER

Method of Determination: in-Person Field Exam, ArcGIS, Proof of Beneficial Use

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
57-7627	Spring	Recreation Storage, Domestic, Diversion to Storage	License
57-7457	Spring	Irrigation	License

Comments: 57-7627 is a direct overlap for the pond developed under 57-12013, though source differs. Right 57-7457 authorizes 0.22cfs irrigation within NESE 01N 03W S17.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: Both rights mentioned in item B1 utilize a spring located in SENESE 01N 03W S17. No other rights share a point of diversion with 57-12013.

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

WASTE WATER NE¼ SE¼, Sec. 17, Twp 01N, Rge 03W, B.M. OWYHEE County

Method of Determination: In-person Field Exam, ArcGIS 2023 Imagery

PLACE OF USE: RECREATION 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	
01N	03W	17													X				

Method of Determination: In-person Field Exam, ArcGIS 2023 Imagery

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.

 N/A 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	N/A	N/A	N/A	N/A	N/A

D. FLOW MEASUREMENTS

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

Measurements: Flow measurements were not collected during this field exam since there are no flows accounted for by right 57-12013.

E. FLOW CALCULATIONS

There are no flows associated with this right.

F. VOLUME CALCULATIONS

Volume Calculations for Recreation Storage:

The pond surface area of 0.2 acres was measured using points recorded in OnX as I walked around the perimeter of the pond, dropping a waypoint every 5-10ft. The owner, Mark, estimates a maximum depth of 8ft. The pond had visible sloped edges. These findings are used to calculate the capacity. Seepage was calculated using CL for the soil classification with a seepage rate of 0.003ft/day, according to the NRCS Web Soil Survey. Evaporative losses were calculated using precipitation deficit data from the Nampa ETIdaho weather station.

Pond Capacity:

$$0.2 \text{ acres} * 0.4 * 8 \text{ ft.} = \mathbf{0.64 \text{ AF}}$$

Seepage:

$$\frac{(0.2 \text{ acres} * 0.003 \text{ ft/day}) * 7.48 * 365 \text{ days}}{325,850 \text{ gal.}} = \mathbf{0.2 \text{ AF}}$$

Evaporation:

$$\frac{747.98 \text{ mm/yr}}{304.8} * 0.2 \text{ acres} = \mathbf{0.5 \text{ AF}}$$

$$0.64 + 0.2 + 0.5 = \mathbf{1.34 \text{ AFA}}$$

G. NARRATIVE/REMARKS/COMMENTS

On June 26, 2020, a permit was issued to Mark and Angela Jensen for 1.9 AFA for Recreation Storage from Wastewater. The permit had a Proof of Beneficial Use due date of July 1, 2025. Proof was submitted to the Department on July 3, 2025, and a field exam conducted on August 14, 2025. The field exam was accompanied by Mark Jensen, the owner of the permit.

Existing and overlapping right 57-7627 authorizes 1.0 AF for Recreation Storage, along with 0.02 cfs for Domestic, and 0.2 cfs Diversion to Storage. The Recreation Storage use on 57-7627 recognizes two ponds limited to a combined capacity of 1.0 acre-feet and surface area of 0.24 acres. At the time of this field exam for 57-12013, only one pond existed. Angela Jensen, an owner of license 57-12013, later confirmed that the second pond was filled in prior to the beginning of the development period in 2020. I walked the perimeter of the pond and marked a waypoint every 5-10ft on OnX GPS, later using these waypoints to draw the place of use outline in ArcMap and calculate the surface area since the pond is not clearly photographed by satellite imagery. The findings of this field exam were that the pond had total capacity of 0.64 acre-feet, maximum depth of 8 feet, and surface area of 0.2 acres. The pond is sourced by both spring and wastewater, with the spring water accounted for by 57- 7627. I recommend right 57-12013 is licensed as recommended below.

Condition 259 was placed, limiting the storage capacity and surface area under 57-12013 and 57-7627 to 0.64 AF capacity and surface area of 0.2 acre for the one pond developed under 57-12013. Condition 121 was replaced with 103 per Department standards. Conditions 219 and 220 were updated to reflect the developed capacity, replacement of losses caused by seepage and evaporation, and total surface area of the one pond developed under 57-12013.

Have conditions of permit approval been met? X Yes No

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Annual Volume</u>
RECREATION STORAGE	01/01 to 12/31	1.3 AF

2. Recommended Amendments

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

Kate England - Water Resource Agent

Reviewer ad/ke Date 10/27/2025



Figure 1 System diagram including recreation storage outline for the one pond, 12' culvert location, and the return to the source.



Figure 2 South facing photo of recreation storage pond.



Figure 3 Outlet of the 12" culvert, returning water to the ditch that then returns irrigation water to the Snake River.

Total Storage Calculations

FILE NUMBER	57-12013
REVIEWER	KE
DATE	10/3/2025

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.)	0.2	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	3.2	"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)	0.64	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)	0	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)	0.2	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.3	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.

Evaporation Loss Calculations

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the annual evaporation losses from a pond.

FILE NUMBER	57-12013
REVIEWER	KE
DATE	10/3/2025

User Input
Calculated value
Formula Explanations

The acronyms used on the Kimberly Research Center website are defined below:

P = Precipitation
ET= Evapotranspiration
P _d = Precipitation deficit
P _d =ET-P

USING THIS SPREADSHEET

Use the link below to access the Kimberly Research Center website. This website provides the Precipitation Deficit for a station most representative of the pond under examination. The Precipitation Deficit is the total amount of free water surface evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. There are several weather sites that are used throughout the state. IDWR staff can find the nearest site using Arc Map. The shape file containing the sites can be found at <X:/Spatial/Climate/ETIdahostations.shp>.

Instructions:

1. Use the link below to navigate to ET Idaho 2012.
2. Select the station which is most representative to your pond location.
3. Click Submit Query.
4. Under "Land Covers with Evapotranspiration Estimates," select "Open Water - Shallow Systems (ponds, streams)" or "Open Water - small stock ponds" depending on the pond size.
5. Click the link to "Precipitation Deficit."
6. Reference and copy (ctrl + C) the first subheading "Mean" values.
7. Click the "Paste Values from ET Idaho" button. The table will automatically enter a zero (0) for any negative precipitation deficit values.

Found at: <http://data.kimberly.uidaho.edu/ETIdaho/>

Precipitation Deficit

Station: Twin Falls 2 NNE (NWS -- 109294)

Month	mm/day ¹	Days per month	mm/Month
Jan	0.00	31	0.00
Feb	0.47	28	13.16
March	1.57	31	48.67
April	2.27	30	68.10
May	2.89	31	89.59
June	3.89	30	116.70
July	4.83	31	149.73
August	4.11	31	127.41
September	2.65	30	79.50
October	1.42	31	44.02
November	0.37	30	11.10
December	0.00	31	0.00

PLEASE NOTE: The seasonal average for precipitation deficit should not be used for calculations because precipitation often exceeds evaporation during wetter months of the year. If the pond is kept full, excess precipitation during wetter months does not serve to refill the pond during drier months.

For example, see Sandpoint KSPT (NWS -- 108137), the annual precipitation deficit is -106 mm. However, April through September have positive precipitation deficit values. To properly estimate the annual volume of water necessary to refill a pond due to evaporation losses, the table will automatically enter a zero (0) for each month that the precipitation value is reported as a negative value.

As described above, precipitation offsets evaporation in winter months, so the net effect is that wintertime precipitation deficit is usually zero.

Total mm/year = 747.98

$$[(747.98 \text{ mm/yr}) \div (\text{convert to feet})] \times (\text{Surface area of pond, in acres}) = \text{Evaporation Loss in Acre Feet}$$

$$(747.98 \div 304.8) \times 0.20 = 0.5 \text{ AFA}$$

Seepage Loss Calculations

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total annual seepage losses from a pond.

FILE NUMBER	57-12013
REVIEWER	KE
DATE	10/3/2025

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	0.2	AC.
-------------------------	-----	-----

Pond Surface Area (SQ. FT.)	8712	SQ. FT.
-----------------------------	------	---------

I used the following method to obtain my Soil Classification information:	NRCS Web Soil Survey	
My Soil Classification is	CL	
Suggested Seepage Rate (FT./DAY)	0.0030	FT./DAY

Formula: (Surface Area X Seepage Rate) X 7.48 = Gallons Per Day Loss
--

Convert to GPD	195	GPD
----------------	-----	-----

Total Seepage Loss (AFA)	0.2	AFA
--------------------------	-----	-----

Though sand and gravel seepage rates may actually be higher, the maximum allowable rate is 0.2 ft/day, pursuant to Administrative Memo "Seepage Loss Standards for Ponds and Reservoirs."

Suggested Seepage Rates for Different Soil Types:
GW, GP, GM, GC, SW, SP and SM (silty sand, sand silt mixtures and gravel mixtures) = 0.2 ft per day
OL and ML (inorganic silts - very fine sands, silty, or clayey fine sands) = 0.02 ft per day
SC (clayey sands, sand clay mixtures) = 0.007 ft per day
CL (Low to medium plasticity clays) = 0.003 ft per day
MH, OH, PT and CH (high plasticity clays) = 0.0003 ft per day
LINED PONDS (liners can be chemical, fabric, or bentonite) = 0 ft per day
Ponds Intercepting Groundwater (excavated ponds filled by ground water) = 0 ft per day

PLEASE NOTE: The initial basis for the Suggested Seepage Rates in the table above is found on Page 16 of Seepage from Fish Ponds, Bulletin 599, August 1989 Alabama Agricultural experiment Station, Auburn University, Auburn University Alabama. If you don't know the soil type, please refer to the map provided at the NRCS Web Soil Survey (Tab #1), an ArcMap Soil Classification Map (Tab #1.1), or published NRCS Soil Survey (Tab #1.2). Use "0" if the pond fill relies on the water table.