

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-23354
Exam Date: 09/22/2022

1. Current Owner:
SANDS LLC C/O STEVE LOOMIS
7154 W STATE ST #187 BOISE ID 83714
2. Accompanied by: Steve Loomis
Phone No: 208-859-8115
Address: Same
Relationship to permit Holder: Same

3. **SOURCE:**
HOME LAKE

Tributary
ROBBS CREEK

Method of Determination: Site visit, aerial imagery

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
65-11141	Unnamed Stream/Home & Siphon Lakes	Irrigation from Storage	Decreed
65-2035	Unnamed Stream	Irrigation	Decreed
65-23639	Unnamed Stream	Stockwater/Aesthetic Storage	License
65-23640	Spring	Domestic	License
65-23355	Unnamed Stream	Irrigation from Storage/Irrigation Storage	License

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
65-11141	Unnamed Stream/Home & Siphon Lakes	Irrigation from Storage	Decreed

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

HOME LAKE NE¼ SW¼, Sec. 8, Twp 06N, Rge 02E, B.M. BOISE County

Method of Determination: Earthen dam at Home Lake; GPS at 43° 52' 9.72" N, 116° 14' 56.65" W
Siphon Lake #1; GPS at 43° 52' 1.71" N, 116° 15' 7.17" W
Siphon Lake #2; GPS at 43° 52' 2.01" N, 116° 15' 10.35" W

PLACE OF USE: 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	
06N	02E	8									X	X	X	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	
06N	02E	8			3.0					6.0	15.0								24.0

Total Acres: 24.0

Method of Determination: Field photos and aerial photography used to verify irrigation use sites.

3. Delivery System Diagram Attached (required). Indicate all major components and distances between components.
☒ 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.

- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).

- ☒ 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

1.

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

2. Measurements: Flow measurement not required. Permit issued in volume and diversion to storage only.

E. FLOW CALCULATIONS

N/A Additional Computation Sheets Attached

Measured Method: Flow measurement not required. Permit issued in volume and diversion to storage only.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: Irrigation from Storage volume contingent on pond capacity. No refills requested in application.

2. Volume Calculations for Other Uses:

Irrigation Storage: Using the submitted application and ET loss data, GIS tracing and measurement tools, and depth approximations the following theoretical calculations were determined:

Surface area for Home Lake (GIS): **4.0 acres**

Average pond depth: **2 feet** (created by increased dam height)

Reservoir Capacity: 4 acre surface area x 2 feet additional embankment = **8.0 acre feet**

Evaporation Loss: **7.4 AF**

Total Volume: 8.0 AF Pond Capacity + 7.4 AF Losses = **15.4 AF rounded to 15 AF**

Irrigation from storage: Idaho §42-202 provides for a maximum of 5 acre-feet of stored water per acre of land irrigated.

Irrigation from storage: 2 feet x 5 acre feet = **10 AF**

Irrigation Storage 15.0 AF

Irrigation from Storage 8.0 AF

Total License Recommendation 15.0 AF

G. NARRATIVE/REMARKS/COMMENTS

Steve Loomis is the current owner and the original permit applicant. The permit was issued on January 28, 2011, and proof of beneficial use was submitted on February 4, 2021. A beneficial use field exam was conducted on 09/22/22 by Senior Water Right Agent Laura McSherry and was accompanied by Mr. Steve Loomis. The final writeup was completed by Senior Water Right Agent Allen Bradbury.

The primary point of diversion (POD) is located at the 15-foot high earthen dam on Home Lake. This dam increases the capacity of Home Lake and impounds surface runoff and overflow from Siphon Lakes. Both Homes and both Siphon Lakes are located on an unnamed stream tributary to Robbs Creek. The natural flow from Siphon Lakes enters Home Lake through the natural stream channel. A release valve located at the base of Home Lake dam controls flow to a 2-inch pvc pipe mainline which extends north in the center of the POU. System components that enable sprinkler irrigation were noted. A measuring staff gauge in 12-inch units is installed in the north side of Home Lake near the earthen dam.

The original permit approval was based on creating additional volume by raising the Home Lake dam and does not reflect any storage in Siphon Lakes since they are natural lakes. Since water flows naturally through Siphon Lakes down into Home Lake, and the diversion withdraws water from Home Lake, Siphon Lakes are not considered actual points of diversion nor sources, therefore the additional POD's and source from Siphon Lakes were removed from the license. Since there is no actual diversion to storage from Siphon Lakes to Home Lake, the diversion to storage use was removed. Water right 63-11141 is also for irrigation from storage and overlaps this POD. This is not an issue since the original intent of the permit was to add additional volume from the same sources and POD. The POD location at Home Lake dam was accurately described on the permit. No amendments are required for the POD.

The permit authorized appropriation of 10.0 AF for irrigation from storage within SENW, SWNE, and NESW Sec 8, T06N, R02E covering 25 acres. The development of the irrigation from storage POU was confirmed using historic satellite imagery and photos from another license field exam on the property during peak irrigation season. ArcMap tools and aerial imagery, supported by photos taken during the field exam, were used to verify the POU area of 24 acres total. Minor adjustments were made accordingly to the PLS description for the POUs. I am recommending the irrigation from storage of 8 AF as calculated in section F2.

The permit authorized appropriation of 20.0 AF for irrigation storage. The surface area for Home Lake was calculated at 4.0 acres. The intent of the permit was to add an additional 2 feet of depth therefore it was estimated that 8.0 acre feet were added to Home Lake evaporation losses of 7.4 AF for a total of 15.4 AF. This differs from the original calculations of a 5 acre surface area and a 9.8 AF of evaporation loss. I am recommending irrigation storage of 15.4 AF, rounded to 15 AF.

Water right overlap analysis revealed water rights 65-11141 and 65-2035 have identical POUs and partially overlap this permit. Combined limits on these two water rights place an acre limit of 21 acres within a total of 30 acres. Also, water right license 65-23355 partially overlaps this permit on 9 acres in the SWNE and SENW of section 8. This license conditions the right with condition X35 stating that Rights 65-23355, 65-11141, 65-2035, and 65-23354 when combined shall not exceed the irrigation of 35 acres. A combined irrigable acre limit is needed on the license to avoid enlargement. No amendment required to correct the legal description of the POUs. I am recommending that Rights 65-23355, 65-11141, 65-2035, and 65-23354 when combined shall not exceed the irrigation of 35 acres.

Condition 121 was updated to 103 as per department standards. Conditions 26A and 01J were deleted. Condition X35, R02, and 18C were added. Conditions R65, R05, 185, and 004 were carried on to the license. Two write-in conditions were carried forward to the license, with one reflecting verified increased storage capacity.

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 STORAGE	01/01 to 12/31		15.0 AF
IRRIGATION FROM STORAGE	03/15 to 10/31		8.0 AF

Totals:

15.0 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

Allen Bradbury – Senior Water Right Agent

Field Examiner's Name

Allen Bradbury

Date

11/29/23

Reviewer

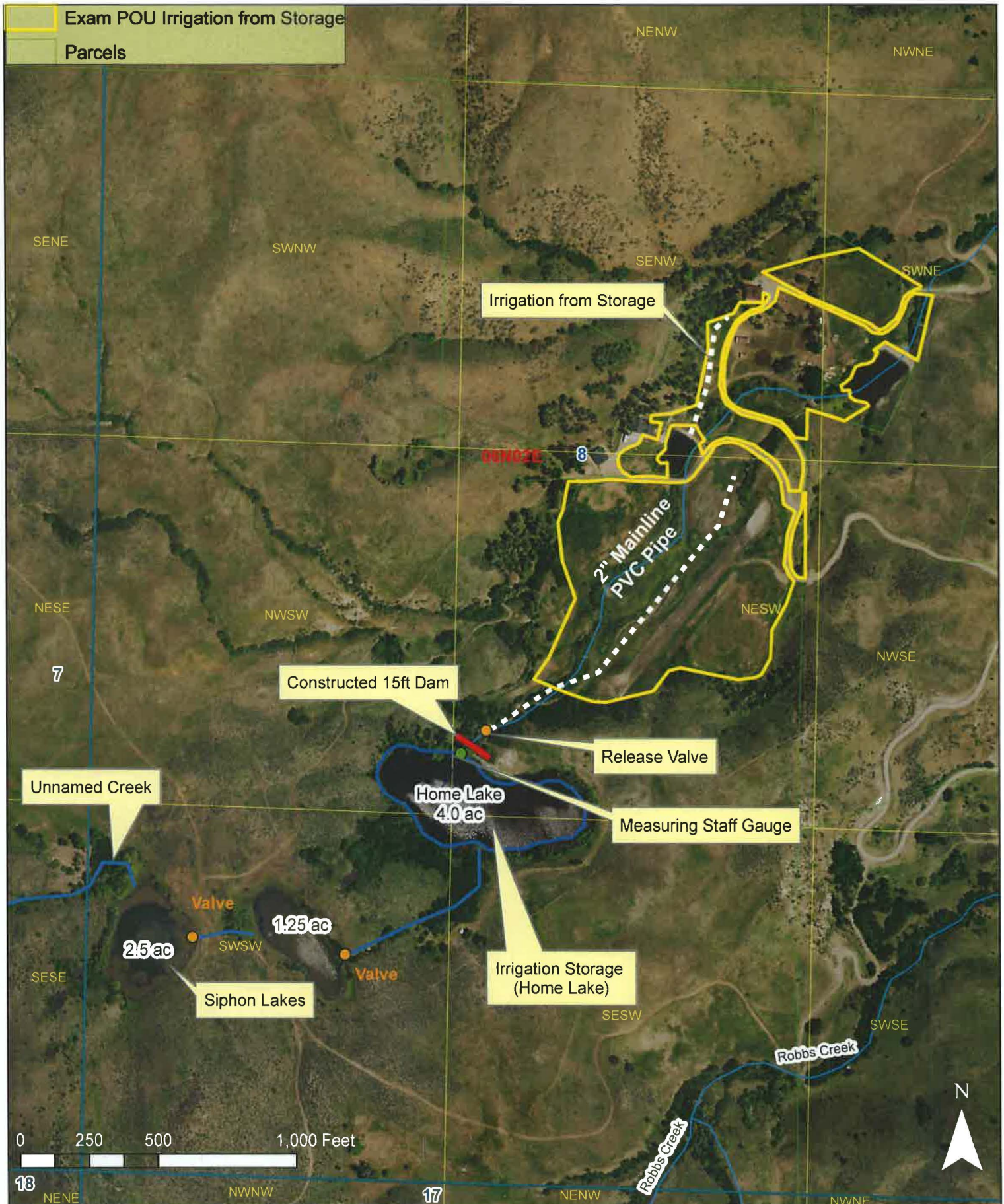
[Signature]

Date

11/29/2023

DELIVERY SYSTEM DIAGRAM

Water Right No. 65-23354



Total Storage Calculations

FILE NUMBER	65-23354
REVIEWER	AB
DATE	8/1/2023

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.)	4	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	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)	8	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)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	7.4	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	15.4	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.

Pond Calculations

WR #: 65-23354
 Max. Depth: 5 feet Avg. Depth: 2 feet
 Soil Type: CL

Volume Calculation

Seepage

Area (acres)	Rate (ft/day)	Start Date	End Date	Days	Volume (AF)
4	0.003	1-Jan	31-Dec	365	4.4
Total Estimated Seepage Losses					4.4 AFA

Evaporation

Station:	Emmett 2E (NWS -- USC00102942)					
Month	mm/day ¹	Start Date	End Date	Days	mm/Month	Volume (AF)
Jan	-0.91	1-Jan	31-Jan	31	0.00	0.00
Feb	-0.44	1-Feb	29-Feb	28	0.00	0.00
Mar	0.48	1-Mar	31-Mar	31	14.88	0.20
Apr	1.81	1-Apr	30-Apr	30	54.30	0.71
May	2.45	1-May	31-May	31	75.95	1.00
Jun	3.31	1-Jun	30-Jun	30	99.30	1.30
Jul	3.96	1-Jul	31-Jul	31	122.76	1.61
Aug	3.44	1-Aug	31-Aug	31	106.64	1.40
Sep	2.12	1-Sep	30-Sep	30	63.60	0.83
Oct	0.94	1-Oct	31-Oct	31	29.14	0.38
Nov	-0.76	1-Nov	30-Nov	30	0.00	0.00
Dec	-1.51	1-Dec	31-Dec	31	0.00	0.00
				365		
Total Estimated Evaporation Losses (mm/year) =					566.57	7.4 AFA

[(mm/yr) ÷ (convert to feet)] X (Surface area of pond, in acres) = Evaporation Loss in Acre Feet

$$\left(\frac{566.57}{304.8} \right) \times 4.00 = 7.4 \text{ AFA}$$

Evaporation loss is calculated by dividing the Evaporation Rate (mm/day) by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet.

Seepage plus evaporation losses: 11.8 AFA

Storage Volume

Area (Acres)	Average Depth (ft)	Volume (AF)
4	2	8.0
Total Volume		19.8

- 1 Ponds with a contiguous surface area of greater than 5 acres and an average depth greater than 13 feet may use the deep water system evap numbers.
- 2 Ponds with contiguous area less than 5 acres of any depth must utilize the shallow pond system numbers.
- 3 Ponds of any surface area that are less than 13 feet on average must also use the shallow system numbers.

	small stock	shallow system	deep systems	appl 31-Jul-09
Jan	-0.85	-0.91	-0.83	-1
Feb	-0.31	-0.44	-0.62	0.63
Mar	0.78	0.48	-0.32	0.53
Apr	2.29	1.81	0.31	1.73
May	3.04	2.45	0.47	2.53
Jun	3.98	3.31	0.97	3.45
Jul	4.66	3.96	1.53	4.03
Aug	4.06	3.44	1.53	3.41
Sept	2.57	2.12	0.88	2.17
Oct	1.22	0.94	0.54	1.07
Nov	-0.64	-0.76	-0.69	-0.61
Dec	-1.46	-1.51	-1.35	-1.07
afa	9.1	7.4	2.5	7.8

McSherry, Laura

From: McSherry, Laura
Sent: Thursday, April 27, 2023 10:02 AM
To: Rauhut, Manuel
Subject: RE: Dam Inspection Status: Permit 65-23354

Hello,

I hope your week is going well!

I am following up on the dam inspection for water right 65-23354.
Please let me know if there's an appointment scheduled or if I can assist in reaching the applicant.

Thanks,
Laura

From: McSherry, Laura
Sent: Wednesday, March 15, 2023 9:40 AM
To: Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>
Subject: RE: Dam Inspection Status: Permit 65-23354

Hi Manual,

Just following up on the dam inspection for water right 65-23354.
Please let me know if there's an appointment scheduled or if I can assist in reaching the applicant.

Thanks,
Laura

From: McSherry, Laura
Sent: Monday, February 27, 2023 11:23 AM
To: Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>
Subject: Dam Inspection Status: Permit 65-23354

Hello Manuel,

I'm following up to see if you were able to contact Mr. Steve Loomis regarding scheduling a dam inspection for water right 65-23354.
Please let me know if there's an appointment scheduled or if I can assist in reaching the applicant.

Thanks,



Laura McSherry

Water Resource Agent, Sr.

P: (208) 605-4633

Idaho Dept. of Water Resources

McSherry, Laura

From: McSherry, Laura
Sent: Monday, February 27, 2023 11:23 AM
To: Rauhut, Manuel
Subject: Dam Inspection Status: Permit 65-23354

Hello Manuel,

I'm following up to see if you were able to contact Mr. Steve Loomis regarding scheduling a dam inspection for water right 65-23354.

Please let me know if there's an appointment scheduled or if I can assist in reaching the applicant.

Thanks,



Laura McSherry
Water Resource Agent, Sr.
P: (208) 605-4633
Idaho Dept. of Water Resources



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082

Phone: (208) 334-2190 FAX: (208) 334-2348 www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

January 11, 2011

Sands LLC
c/o Lori Graves
SPF Water Engineering, LLC
300 Mallard Dr., Ste. 350
Boise, ID 83706

Re Application for Permit 65-23354

Dear Ms. Graves,

The application referenced above is about ready for final approval. As a courtesy, I wanted to inform you that the approval will not reflect the application. The application is for 0.33 cfs diversion to storage, 87 af irrigation storage and 69 afa irrigation from storage for a total quantity of 0.33 cfs and 87 afa from Home Lake and Siphon Lakes. The application states that the lakes are naturally occurring and together have a natural storage capacity of 59 af. The application proposes to increase the storage capacity of Home Lake by 10 af and proposes 10 af of evaporative loss.

IDWR does not issue water rights for storage in naturally occurring lakes, only for the volume developed by a water user beyond what transpired from natural processes. Therefore, the permit will be issued for 0.33 cfs for diversion to storage, 20 afa irrigation storage (which includes the 10 af of new storage to be developed in Home Lake and 10 afa for evaporative losses) and 10 afa for irrigation from storage which reflects the proposed new Home Lake



Fig. 1 – View looking SE at the
~15' earthen dam. Point of
Diversion (POD)

GPS'd at:

43° 52' 9.72" N

116° 14' 56.65" W



Fig. 2 – View looking south at
the ~15' earthen dam. Release
valve seen in center of photo.



Fig. 3 – Condition required measuring device (staff gauge) in units of feet. View looking east.



Fig. 4 – Irrigation storage locally known as Home Lake. View looking SE.



Fig. 5 – Irrigation storage locally known as Home Lake. View looking S and SW.





Fig. 6 – Irrigation storage
locally known as Home Lake.
View looking SE.



Fig. 7 – Irrigation storage
locally known as Home Lake.
View looking NE.



Fig. 8 – Location of Siphon Lakes, just uphill from Home Lake. View looking NE.



Fig. 9 – View looking NE at Siphon Lake #1 (lower in elevation). Point of Diversion (POD) GPS'd at:

43° 52' 1.71" N

116° 15' 7.17" W



Fig. 10 – View looking SW at Siphon Lake #2 (higher in elevation). Point of Diversion (POD) GPS'd at:

43° 52' 2.01" N
116° 15' 10.35" W



Fig. 11 – Irrigation from storage POU. View looking north.



Fig. 12 – Irrigation conveyance components within the POU.





Fig. 13 – POU during late spring.
View looking SW.

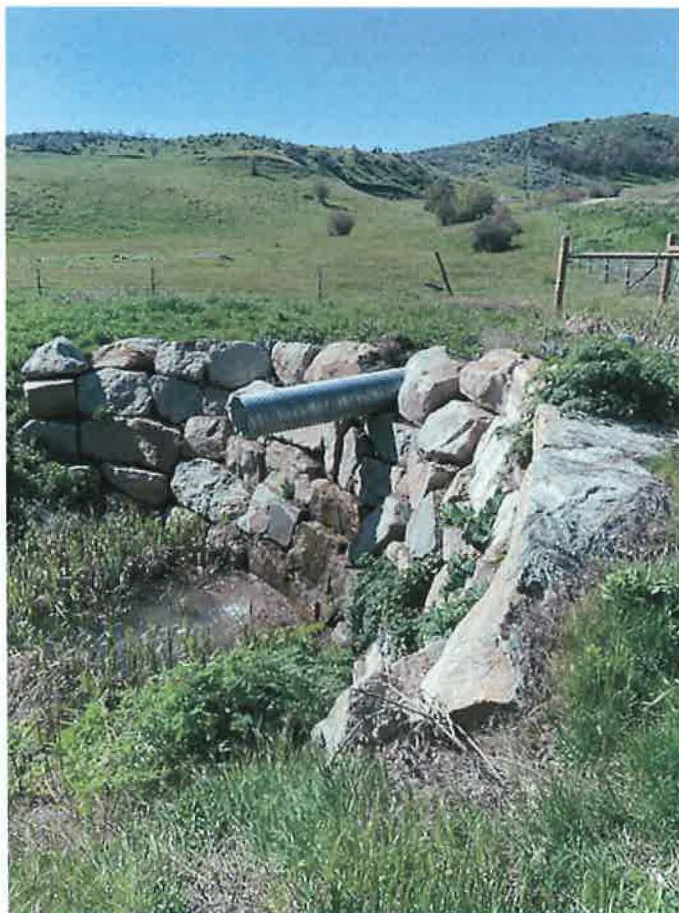


Fig. 14 – POU during late spring.
View looking SE.