

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 71-10929

Exam Date: 8/13/2013

1. Current Owner: PATRICK W LEE
C/O JOHN T BROWN
PO BOX 61
SUN VALLEY ID 83353
(208)774-2900
And/Or
JOHN T BROWN

2. Accompanied by: Benny Walker (IDWR Staff) & Patrick Brown via phone

3. SOURCE

LOST CREEK

TRIBUTARY

SINKS

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Licenses 71-7178 & 71-7179 Permits 71-10940 & 71-10941
2. Other water rights with the same point of diversion: 71-7178 and 71-10941

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

LOST CREEK
CUSTER County

SE1/4SE1/4SE1/4

Sec. 34, Twp 08N, Rge 14E, B.M.

Method of Determination: **GPS at time of field exam.**

2.

PLACE OF USE: WILDLIFE STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
08N	14E	34															X		

DIVERSION TO STORAGE same as WILDLIFE STORAGEMethod of Determination: **Field visit and 2011 aerial photography.**

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

D. FLOW MEASUREMENTS

1.

Measurement

<u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
------------------	-------------	-------------	------------------	-------------------	-------------	--------------------

2. Measurements: **A measurement was unattainable at the time of the field exam due to low flows.****E. FLOW CALCULATIONS**

_____Additional Computation Sheets Attached

Measured Method:

Water is diverted from Lost Creek through a slide headgate and measured by a 2 ft. V-notch weir. At the time of the exam it was noted that the high water mark on the v-notch weir was approximately 5 inches. According to the US Dept. of Interior Bureau of Reclamation chart for a 2 ft. V-notch weir with 5 inches of head, the flow is approximately 0.29 cfs. (see attached)

F. VOLUME CALCULATIONS1. Volume Calculations for Irrigation: **N/A**

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses: A wildlife storage volume of 4.2 AF for the two ponds has already been recorded for overlapping water rights 71-7178 and 71-7179. All three licenses will need to be limited to 4.2 AF for wildlife storage.

G. NARRATIVE/REMARKS/COMMENTS

Application for permit 71-10929 was filed on June 30, 2009 for 0.5 cfs of water from Lost Creek for 4.2 acre-feet of wildlife storage associated with two existing ponds.

The system consists of diversion from Lost Creek through a slide head gate and is then measured by a V-notch weir. Once the water flows through the open channel holding the weir it is collected into a 4-inch PVC pipe that carries the water approximately a ¼ mile to the ponds where it is open discharged into the south pond.

At the time of the field exam 1 ½ inches of head was measured going over the weir. After speaking with Mr. Brown via phone on 8/14/2013, he indicated that this is a very low flow even for this time of the year. He indicated normal flows for this time of year are closer to 4 inches over the weir. At the time of the exam it was noted that the high water mark on the v-notch weir was roughly 5 inches. According to the US Dept. of Interior Bureau of Reclamation chart for a 2 ft. V-notch weir with 5 inches of head, flow rate is approximately 0.29 cfs. A flow rate of 0.29 cfs for diversion to storage is recommended for this license.

The volume is limited to 4.2 AF by the wildlife storage volume for overlapping water rights 71-7178 and 71-7179 and needs a condition limiting all three water rights for the ponds to 4.2 AF.

Note, right 71-7178 allows for on-stream storage of water on the old Lost Creek channel and right 71-7149 allows for the diversion of groundwater into the same two ponds described by this license. Permits 71-10940(ground water) and 71-10941 (Lost Creek) for irrigation and stock water use also re-divert water from the same ponds.

Have conditions of permit approval been met? ✓ Yes _____ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DIVERSION TO STORAGE	01/01 to 12/31	0.290 CFS	N/A
WILDLIFE STORAGE	01/01 to 12/31	N/A	4.20 AF
<u>Totals:</u>		0.290 CFS	4.20 AF

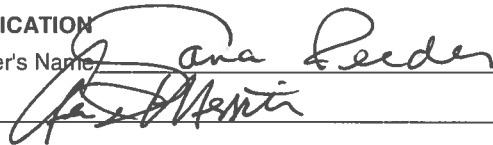
2. Recommended Amendments

___ 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 ___ Other

I. AUTHENTICATION

Field Examiner's Name



Date

10/4/13

Reviewer



Date

10/11/13

pressed rectangular
 $3Lh_1^{1.5}$

Length, L, ft	Head h_1 , ft	L 5.0
19.2	1.55	32.1
19.5	1.56	32.4
19.7	1.57	32.8
20.0	1.58	33.1
20.3	1.59	33.4
20.5	1.60	33.7
20.8	1.61	34.0
21.1	1.62	34.3
21.3	1.63	34.6
21.6	1.64	35.0
21.9	1.65	35.3
22.2	1.66	35.6
22.4	1.67	35.9
22.7		
23.0		
23.3		
23.5		
23.8		
24.1		
24.4		
24.7		
25.0		
25.3		
25.5		
25.8		
26.1		
26.4		
26.7		
27.0		
27.3		
27.6		
27.9		
28.2		
28.5		
28.8		
29.1		
29.4		
29.7		
30.0		
30.3		
30.6		
30.9		
31.2		
31.5		
31.8		

Table A7-4. Discharge of 90° V-notch weirs, in ft³/sec, computed from the formula $Q=2.49h_1^{2.48}$

Head H , ft	Discharge Q , ft ³ /sec	Head H , ft	Discharge Q , ft ³ /sec	Head H , ft	Discharge Q , ft ³ /sec	Head H , ft	Discharge Q , ft ³ /sec
0.20	0.046	0.65	0.856	1.10	3.15	1.55	7.38
.21	.052	.66	.889	1.11	3.23	1.56	7.50
.22	.058	.67	.922	1.12	3.30	1.57	7.62
.23	.065	.68	.957	1.13	3.37	1.58	7.74
.24	.072	.69	.992	1.14	3.45	1.59	7.86
.25	.080	.70	1.03	1.15	3.52	1.60	7.99
.26	.088	.71	1.06	1.16	3.60	1.61	8.11
.27	.097	.72	1.10	1.17	3.68	1.62	8.24
.28	.106	.73	1.14	1.18	3.75	1.63	8.36
.29	.116	.74	1.18	1.19	3.83	1.64	8.49
.30	.126	.75	1.22	1.20	3.91	1.65	8.62
.31	.136	.76	1.26	1.21	3.99	1.66	8.75
.32	.148	.77	1.30	1.22	4.08	1.67	8.88
.33	.159	.78	1.34	1.23	4.16	1.68	9.02
.34	.172	.79	1.39	1.24	4.25	1.69	9.15
.35	.184	.80	1.43	1.25	4.33	1.70	9.28
.36	.198	.81	1.48	1.26	4.42	1.71	9.42
.37	.212	.82	1.52	1.27	4.50	1.72	9.56
.38	.226	.83	1.57	1.28	4.59	1.73	9.70
.39	.241	.84	1.62	1.29	4.68	1.74	9.83
.40	.257	.85	1.66	1.30	4.77	1.75	9.98
.41	.273	.86	1.71	1.31	4.86	1.76	10.1
.42	.290	.87	1.76	1.32	4.96	1.77	10.3
.43	.307	.88	1.81	1.33	5.05	1.78	10.4
.44	.325	.89	1.87	1.34	5.15	1.79	10.6
.45	.344	.90	1.92	1.35	5.24	1.80	10.7
.46	.363	.91	1.97	1.36	5.34	1.81	10.8
.47	.383	.92	2.02	1.37	5.44	1.82	11.0
.48	.403	.93	2.08	1.38	5.53	1.83	11.1
.49	.425	.94	2.14	1.39	5.63	1.84	11.3
.50	.446	.95	2.19	1.40	5.74	1.85	11.4
.51	.469	.96	2.25	1.41	5.84	1.86	11.6
.52	.492	.97	2.31	1.42	5.94	1.87	11.8
.53	.516	.98	2.37	1.43	6.05	1.88	11.9
.54	.540	.99	2.43	1.44	6.15	1.89	12.1
.55	.565	1.00	2.49	1.45	6.26	1.90	12.2
.56	.591	1.01	2.55	1.46	6.36	1.91	12.4
.57	.618	1.02	2.62	1.47	6.47	1.92	12.6
.58	.645	1.03	2.68	1.48	6.58	1.93	12.7
.59	.673	1.04	2.74	1.49	6.69	1.94	12.9
.60	.701	1.05	2.81	1.50	6.81	1.95	13.0
.61	.731	1.06	2.88	1.51	6.92	1.96	13.2
.62	.761	1.07	2.94	1.52	7.03	1.97	13.4
.63	.792	1.08	3.01	1.53	7.15	1.98	13.5
.64	.823	1.09	3.08	1.54	7.27	1.99	13.7

Lost
Creek



4" PVC
underground



4" line to South
Pond



Channel to North Pond



Inlet South Pond

The water for these two ponds are diverted from three sources, Lost Creek, the Old Lost Creek Channel, and ground water. The water for the two ponds diverted from Lost Creek in the SESE of S34 and delivered through a buried PVC pipeline to the pond. The water for the two ponds diverted from the Old Lost Creek Channel is diverted at the ponds. The ponds are on this stream, which account for the onstream storage. The Old Lost Creek Channel and the Lost Creek channel were connected at one time. There also may be times during high runoff that they still share water, but basically, they are separate at this time. The ground water is diverted from a well in the SESE into a PVC pipeline that

T8N R14E S34

Ponds

North Pond = 0.3 acres surface area
South Pond = 0.1 acres surface area
Both Ponds 8 Ft. Deep
(0.1 + 0.3) X 8 = 3.2 acre feet

SWSE

Current Lost Creek Channel

SESE

Point of Diversion Lost Creek Channel (Diversion to Storage)

Well is in SESE

On Stream Storage on Old Channel of Lost Creek Channel. Some runoff and waste water still flows in the old channel.

Point of Injection for water from well into the old Lost Creek Channel.

Old Lost Creek Channel, Now it is a wash or dried streambed carrying only runoff and wastewater.

T8N R14E S34

Salmon

Ponds

Current Lost Creek Channel

Point of Diversion Lost Creek Channel (Diversion to Storage)

SESE

SWSE

Well is in SESE

On Stream Storage on Old Channel of Lost Creek Channel. Some runoff and waste water still flows in the old channel.

Point of Injection for water from well into the old Lost Creek Channel.

Old Lost Creek Channel, Now it is a wash or dried streambed carrying only runoff and wastewater.

