

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 27-7582

Exam Date: Summer 2009

1. Current Owner: LOUIS MORALES
1577 E WOLVERINE RD
FIRTH ID 83236
(208)346-6088

2. Accompanied by: Louis Morales

3. SOURCE
SPRING

TRIBUTARY
WOLVERINE CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

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

SPRING SW1/4NW1/4NW1/4 Sec. 11, Twp 02S, Rge 38E, B.M. BINGHAM County

Method of Determination: Aerial photography and site visit

2. PLACE OF USE: RECREATION AND RECREATION STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
02S	38E	10				X													

Method of Determination: Aerial photography and site visit

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).

D. FLOW MEASUREMENTS

Field exam completed in 2009, summary of measurements are attached.

E. VOLUME CALCULATIONS

Pond volume = 8.8 acre-feet

F. NARRATIVE/REMARKS/COMMENTS

Spring flows out of hillside less than 5 feet from Wolverine Creek. Spring is collected, then piped to recreation pond. Outlet from the pond discharges in willows near Wolverine Creek.

Field exam completed during the 2009 irrigation season by WD27 staff. Measurement showed losses associated with the pond were negligible. Pond was constructed in an area with seeps and springs. Permit contemplated a flow-through component, but did not list recreation as a beneficial use. Permit was amended prior to licensing to clarify the flow-through component. 8.8 af off stream storage recreational pond.

One time mitigation was required in the first year after the permit was issued. Mitigation conditions have been satisfied and were not included on the license.

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

G. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
RECREATION	01/01 to 12/31	0.840 CFS	
RECREATION STORAGE	01/01 to 12/31		8.80 AF
DIVERSION TO STORAGE	01/01 to 12/31	0.840 CFS	
<u>Totals:</u>		0.840 CFS	8.80 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

H. AUTHENTICATION

Field Examiner's Name DAVE CARLSON Date 11/2012
Reviewer James Cefalo Date 12/2012

MEMORANDUM

January 29, 2010

To: Application for permit 27-7582

From: Ernie Carlsen, Program Manager

Re: Mitigation for permit 27-7582

The pond covered by this application for permit appears on the 1987 NAPP confirming the previous owner constructed the dam and filled the pond over 22 years ago. According to information obtained from Mr. Stolworth, who constructed the pond, the area where the pond is located was irrigated pasture.

The pond is located at an elevation very close to 5100 ft above mean sea level ("AMSL"). Referring to the ETIdaho website, there are two sites fairly close to the pond location but at different elevations. The Blackfoot site is at an elevation of 4500 feet and the Idaho Falls 16 SE site is at 5700 feet. Since 5100 feet is in the middle of the two elevations, averaging the numbers between the two tables approximates the precipitation deficit at the elevation of the pond. Because of the location of the pond, the calculations below are based on a 200-day irrigation season from April 15 to October 31.

	<i>Blackfoot</i>	<i>Idaho Falls 16 SE</i>	<i>Average</i>
<i>Grass Pasture (low Management)</i>	<i>2.22'</i>	<i>1.48</i>	<i>1.85'</i>
<i>Open Water (shallow system)</i>	<i>1.78'</i>	<i>1.43'</i>	<i>1.60'</i>

During the 2009 irrigation season, flow measurements made by James Cefelo using a AA meter determined inflow to the pond was 0.84 cfs and overflow back to the creek was 0.81 cfs a difference of only 0.03 cfs and less than 4% depletion of the total inflow. James conducted a measurement earlier in the irrigation season with very similar results. Though the percent of depletion is within the standard percent of error for the instrument, any depletion from the pond would consist of evaporative losses and losses due to seepage. In the case of seepage, the dam creating the pond is adjacent to Wolverine Creek at an elevation above the creek, so outflow from the pond goes directly into the creek. With the hydrologic gradient sloping from the dam to the creek, similarly, what seepage may occur considering the pond is at least 22 years old would naturally flow to the creek. With regard to evaporation, comparing the precipitation deficit for grass pasture and open water indicates the evaporative loss is actually less with the pond than historically occurred prior to its construction. Considering the elevation relationship between the pond and Wolverine Creek, the close proximity of the pond to the creek, the historically occurring evaporation and that one-acre was removed from irrigation with construction of the pond, the percentage of depletion is further reduced making it so insignificant that mitigation for evaporation and seepage should be pardoned.

Though the pond is full, mitigation is still required for the one time fill of 8.8 AF, the pond volume. Mitigation is calculated by dividing the pond volume by 1.86 feet, the averaged precipitation deficit for grass pasture. The result reveals 4.8 acres of irrigated land must be idled for one irrigation season to mitigate for the one time fill. The present owner has agreed to use water rights 27-51B and 27-11919 to provide this mitigation. These two rights are included in the large group that was objected to by the BIA and Shoshone Bannock Tribes. The shape files for the two rights must be modified to identify the acres to be set aside and the recommendation modified to reflect the mitigation both in the place of use and in the conditions.



Idaho Department of Water Resources

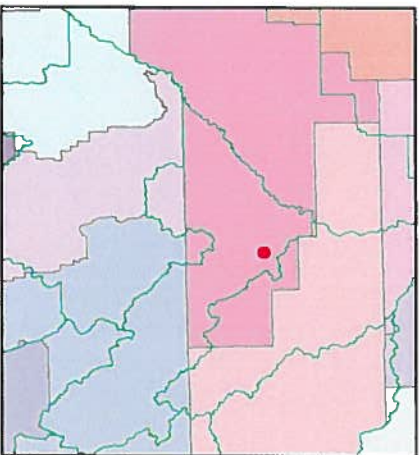
Water Right

27-7582

(RECREATION STORAGE)

R38E

- Point of Diversion
- Place of Use
- State Outline
- Townships
- PLS Sections
- Quarter Quarters



Bingham County
IDWR Basin 27

Prepared by Carlson, Dave

2009 Aerial Photography