

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 72-07569

Exam Date: 9/26/2014

1. Current Owner:
JUSTIN And PATRICIA FARR
PO BOX 1255
CHALLIS ID 83226
(208)879-2121

2. Accompanied by: Benny Walker (IDWR) during the 9/26/2014 exam. I met with Justin and Patricia Farr on October 8, 2015 and discussed the development, field findings, and options with regards to other water right filings for the project.

3. SOURCE: UNNAMED STREAM

TRIBUTARY: CHALLIS CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Application for Permit / Draft Permit 72-16909. Note that permit 72-7570 lists fish propagation use in the same tract, but this permit is for a different stream/source and was never actually developed.

2. Other water rights with the same point-of-diversion: Application for Permit / Draft Permit 72-16909. Note that permit 72-7570 lists a point of diversion in the same tract, but this permit is for a different stream/source and was never actually developed.

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

UNNAMED STREAM NE¼NE¼ Sec. 22, Twp 14N, Rge 19E, B.M. CUSTER County

Method of Determination: Field Visit & Aerial Photography

2.

PLACE OF USE: AESTHETIC STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14N	19E	22	X																

PLACE OF USE: RECREATION STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14N	19E	22	X																

PLACE OF USE: WILDLIFE STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14N	19E	22	X																

Method of Determination: Field Visit & Aerial Photography

D. FLOW MEASUREMENTS

Not required for on stream storage

E. FLOW CALCULATIONS

Not required for on stream storage

F. VOLUME CALCULATIONS

The reservoir has a surface area of 3.75 acres (per ARCMap and aerial photography) and an average depth of 3.0 feet for a total capacity of 11.25 acre-feet (11.3 acre-feet rounded). University of Idaho data indicates that approximately 1.87 acre-feet of water per year will evaporate off of an acre of an open water-shallow system in the Challis area after accounting for precipitation (see attached). Using this 1.87 acre-feet per acre times the 3.75 acres of surface area indicates that annual evaporation loss from the reservoir would be about 7.0 acre-feet. Reservoir was constructed in a marshy area and numerous springs actually rise within the reservoir footprint. Therefore, there should be no seepage loss associated with this facility. Total volume of 18.3 acre feet equals storage volume (11.3 acre-feet) plus annual evaporative loss (7.0 acre-feet). Permit 72-7569 allows for 0.5 acre-feet of storage, so recommend 0.5 acre-feet for licensing.

G. NARRATIVE/REMARKS/COMMENTS

Application for Permit 72-7569 was filed on March 10, 1999 for 0.5 acre-feet of on stream wildlife, recreation, and aesthetic storage on an unnamed stream tributary to Challis Creek. The proposed point of diversion and place of use is in a marshy area located approximately 2.0 miles north and 1.35 miles east of the Highway 93 & Main Street/Garden Creek Road intersection in Challis. Permit 72-7569 was issued on June 3, 1999 in the name of Karen Whitworth. In October of 1999, IDWR issued a Moratorium Order (Wilderness Order) requiring permit holders to cease development of their permits tributary to the Frank Church River of No Return Wilderness Area. In November of 2005, IDWR rescinded the moratorium and reestablished a new proof due date for permit 72-7569. Proof of Beneficial Use was filed for permit 72-7569 in June of 2006. On September 26, 2014, while in the area, Benny Walker and I conducted the licensing exam for permit 72-7569. During the exam, it was noted that the reservoir that was constructed was significantly larger than the 0.5 acre-feet allowed by permit 72-7569. Benny and I knocked on the door on the nearby residence, but no one was home. The home and the reservoir are located on property owned by Justin and Patricia Farr. Multiple attempts were made to contact the Farris, and on October 8, 2015, I was able to meet with Justin and Patricia Farr to discuss options relating to water rights and the development of the reservoir. As a result of this meeting, the Farris decided to pursue getting permit 72-7569 assigned to them and pursue the licensing of permit 72-7569. They also decided to make a new water right filing in an attempt to cover the balance of the reservoir not covered by permit 72-7569. On October 19, 2015, IDWR received an assignment of permit from Karen Whitworth to Justin and Patricia Farr. On December 4, 2015, IDWR received Application for Permit 72-16909 for the balance of the storage volume not covered by permit 72-7569. Application for Permit 72-16909 was processed without protest and is currently pending the issuance of the permit.

The reservoir developed under 72-7569, and to be covered by 72-16909, was created by the development of a diversion structure at a culvert under a road along the north boundary line of Section 22. The diversion structure consists of a metal structure at the culvert entrance that allows for the installation of flashboards to back up water upstream of the culvert to form a reservoir. The reservoir has a surface area of 3.75 acres (per ARCMap and aerial photography) and an average depth of 3.0 feet for a total capacity of 11.25 acre-feet (11.3 acre-feet rounded). The reservoir was constructed in a marshy area and numerous springs actually rise within the reservoir footprint. Therefore, there should be no seepage loss associated with this facility. The annual evaporative loss associated with the reservoir was estimated at 7.0 acre-feet bringing the total volume needed to cover the reservoir to 18.3 acre feet (11.3 acre-feet + 7.0 acre-feet). Permit 72-7569 can be licensed for 0.5 acre feet, and permit 72-16909 can be issued for 17.8 acre-feet to cover the facility.

The Farris indicated that they have obtained permits from Fish & Game for the facility. The culvert under the roadway and the diversion structure forming the reservoir would constitute a fish barrier for any fish migrating upstream towards the reservoir. In addition, the reservoir is located at the head of a stream in a big marshy area which would not be considered typical anadromous fish habitat. For these reasons, condition 029 (IDFG fish screen requirement) can be dropped at licensing. The reservoir is constructed on a stream that is located within Water District 72A. However, it is in a portion of Water District 72A that is not currently administered by the district and may not be for some time (see 1/22/2016 Tim Luke e-mail). As indicated previously, water rises up in the reservoir. Therefore it does not seem appropriate to require an upstream measuring device. Because this portion of the district is inactive, it seems appropriate to require 'upon specific notification' type of conditions with regards to any measuring device and lockable works conditions.

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

H. RECOMMENDATIONS

1. Recommended Amounts

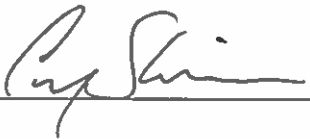
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
RECREATION STORAGE	1/01 to 12/31		0.5 AF
WILDLIFE STORAGE	1/01 to 12/31		0.5 AF
AESTHETIC STORAGE	1/01 to 12/31		0.5 AF
<u>Totals:</u>			0.50 AF

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

Field Examiner's Name  Date 3/30/16

Reviewer _____ Date _____

72-7569
Point of Diversion & Place of Use Map
2015 imagery



72-7569
Licensing Exam Photos
9/26/2014



ABOVE: Panoramic view of the reservoir (place of use) from the south end of the reservoir. The point of diversion is located at the far (north) end of the reservoir.

BELOW: View of water bubbling up (areas indicated by arrows) along the edge of the reservoir. Justin Farr (permit holder) indicated that water springs up all over in the reservoir with the larger springs being located near the center of the reservoir. Since water rises up in the reservoir it does not seem appropriate to require upstream and downstream measuring devices.



72-7569
Licensing Exam Photos
9/26/2014

Permit Holder's
Residence



Point of
Diversion
Structure

ABOVE: View looking along the north edge of the reservoir showing the point of diversion location. The point of diversion is a metal structure on the upstream end of a culvert under a roadway. Flashboards can be installed/removed in the structure to regulate water level in the reservoir.

BELOW: Close up view of point of diversion structure.



Flashboards

ETIdaho 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison@kimberly.uidaho.edu Copyright 2012, University of Idaho.

Challis (NWS -- 101663)

Statistics based on thirty year normal spans 1959 to 1996 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)															
Precipitation Deficit (Click here for a graph)															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual
Mean ^j	mm/day												mm		
Monthly ^c	-0.11	0.34	0.97	1.92	2.29	3.05	3.88	3.41	2.03	1.21	0.01	-0.17	570	0	570
15-Day Moving Average ^d	-0.15	0.31	1.00	1.93	2.22	3.11	3.99	3.33	1.92	1.25	0.01	-0.16			
7-Day Moving Average ^e	-0.14	0.32	0.99	1.89	2.27	3.07	3.92	3.36	1.97	1.23	-0.02	-0.16			
3-Day Moving Average ^f	-0.12	0.34	0.97	1.91	2.27	3.04	3.89	3.40	2.01	1.21	0.00	-0.17			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	0.51	0.23	0.58	0.59	1.20	0.87	1.23	1.09	0.87	0.53	0.47	0.48	82	0	82
15-Day Moving Average ^d	0.52	0.33	0.49	0.76	1.09	1.12	1.08	0.99	1.22	0.45	0.55	0.42			
7-Day Moving Average ^e	0.69	0.48	0.65	1.05	1.47	1.74	1.49	1.30	1.57	0.72	0.74	0.60			
3-Day Moving Average ^f	0.92	0.66	1.00	1.43	2.08	2.37	1.98	1.64	2.07	1.05	0.98	0.87			
20% Exceedance ^l	mm/day												mm		
Monthly ^c	0.18	0.53	1.37	2.49	2.86	3.79	4.42	3.88	2.63	1.47	0.33	0.08	649	0	649
15-Day Moving Average ^d	0.32	0.77	1.69	2.80	3.56	4.63	4.85	4.37	2.97	1.88	0.68	0.27			
7-Day Moving Average ^e	0.47	1.04	2.02	3.26	4.36	5.03	5.15	4.58	3.48	2.36	0.83	0.41			

= 1.87 AFA