

[illegible]

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

2. Volume Calculations for Other Uses: See attached Pond data results. The average depth is 7 ft in this pond. Max depth 12 and Min depth 2 ft. $12\text{ft} + 2\text{ft} = 14\text{ft} / 2 =$ the average depth of 7 ft.

G. NARRATIVE/REMARKS/COMMENTS: Dam safety review was compiled on the 06-04-2013. The amendment is to correct the water right place of use.

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	01/01 to 12/31	N/A	10.00 AF
<u>Totals:</u>			10.00 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 *Eric [Signature]* Date 6-11-2013

Reviewer *Keith E. Franklin* Date 7/9/2013

INPUTS

WR 98-7846

NOTES/SUGGESTED VALUES

RESULTS

POND

SURFACE AREA (SQFT) -----

AVERAGE DEPTH (FT) -----

FILL OR REFILL RATE (GFS) -----

USE 0 IF FILLED NATURALLY FROM GW

CONVERT TO GPD -----

0 GPD

TOTAL AF FOR THIS WATER RIGHT		10 AF
IRRIGATION		AF
SEEPAGE AF		2.8 AF
EVAPORATION (GPY per year)		1.6 AFPY
POND SIZE		5.5 AF
CAPACITY		238000 CUFT
		1780240 G

EVAPORATION (IN/DAY) -----

IF UNKNOWN, USE REFERENCE ET_{PM80} FROM ABOVE

CONVERT TO GPD -----

2119 GPD

EVAPORATION (GPY per year) -----

SUGGESTED VALUES FOR DIFFERENT SOIL TYPES:

CONVERT TO GPD -----

2543 GPD

SEEPAGE RATE (FT/DAY) -----

(FT/DAY) 0 = NATURALLY FILLED FROM GW, OR LINED

SEEPAGE RATE (AF PER YEAR) -----

(FT/DAY)

0.001 = CLAY SOILS

(FT/DAY) 0.01 = Ponds with vegetation, aquatic life.

(FT/DAY) 0.1 = SANDS/GRAVELS MIX (APPROX 30% OF VOLUME LOSS IN SEEPAGE)

REFERENCE EXAMPLE:
ESTIMATED NUMBER OF DAYS
TO FILL BASED ON PROVIDED
INPUTS -----

NA DAYS
NA HR



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IMG_1103.JPG



IMG_1104.JPG

98-7846





MEMORANDUM

TO: Keith Franklin

CC: Eric Davis

FROM: Gio Del Papa

SUBJECT: 98-7846 Pond Size – Shem Johnson

DATE: 06/11/2013

On June 4, 2013, I visited the subject pond with Eric Davis of IDWR. The IDWR file indicates the embankment was surveyed by IDWR staff in July 19, 2006. The resulting embankment and hydraulic heights measured during that survey are 16 feet and 12.9 feet, respectively. Based upon the hydraulic height and storage capacity listed on the dam construction application (12 ac-ft), this facility has been regulated by IDWR Dam Safety in the past. During our visit, hand level measurements were performed and resulted in embankment and hydraulic heights of 16.2 feet and 13.3, respectively, confirming the results of the leveling conducted in 2006.

At the time of the visit, the hydraulic barrier consisted of an earthen embankment approximately 37-47 yards in length with a top width of approximately 13 feet. The downstream side slopes were estimated to be around 2H:1 V

The pond had an 8-inch diameter PVC outlet and an 18-inch diameter CHDPE spillway at a relatively steep slope (from the waterline at the dam straight to the toe of the downstream slope). Based upon a rough pond surface area of 0.78 acres from ArcMap (Bing Maps) and an estimated maximum depth of about 12 feet, the resulting storage capacity of the pond is less than 10 ac-ft (see IC 42-1711).

US Highway 95 provides a hydraulic barrier immediately downstream of the pond. Records indicated that a 24-inch diameter CMP culvert crosses under US 95.

The downstream drainage is rural and improvements were not observed immediately downstream of the embankment in the drainage bottom. The current downstream hazard appears low considering the hydrograph attenuation potential of the US 95 barrier.

With the revised storage capacity, hydraulic height, and the low downstream hazard condition, this barrier currently falls under the exceptions of IC 42-1711 (1) and (2) as a non-regulated dam.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Northern Region • 7600 N. Mineral Drive, Suite 100 • Coeur d'Alene, Idaho 83815-7763
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C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

May 30, 2013

Shem Johnson
P.O. Box 1952
Bonners Ferry, Idaho 83805

Subject: Water Right Permit No. 98-7846

Dear Mr. Johnson,

As a condition of approval, the storage of water under this permit is conditioned upon authorization of storage per the dam safety provisions of the Idaho Code. A dam visit must be performed. We have left two voice messages at your phone number on file (208-699-1596); one during the week of May 13, 2013 and one on May 30, 2013. The dam inspection is planned for Tuesday, June 4, 2013. Please contact us at 208-762-2800 if this date is convenient for you to meet with us and to set up a meeting time. Thank you for your cooperation and feel free to call with comments, questions, and/or concerns.

Sincerely,

Giovanni Del Papa, PE
Dam Safety Engineer
Idaho Department of Water Resources
Cell: (208) 819-6713