

## MEMORANDUM

**Date:** January 04, 2012  
**To:** Water Right File 47-7501  
**From:** cpalmer  
**Re:** Licensing Memo

---

**PD and SOURCE:** The field examiner found two points of diversion during the site visit. The first PD goes into the raceways and goes back into the stream channel and then get diverted again to the ponds where it is then discharged into Mud Creek. The field examiner made the comment that the ponds are primarily fed from Mud Creek water. In the application for permit, the right holder indicated that a pipe would be installed that would feed the unnamed stream into the ponds. However, the field examiner made no such observation that I can tell during the exam. This right will be licensed for one PD from the unnamed stream that feeds the raceways.

The source is recognized as being unnamed stream but I found another right on the unnamed stream, 47-7018, that is for fish propagation that was objected in the SRBA to add the following comment:

The source of this water right includes waste water. This right remains subject to the right of the original appropriator, in good faith and in compliance with state laws governing changes in use and/or expansion of water rights, to cease wasting water, to change the place or manner of wasting it, or to recapture it.

Consequently right 47-7018 was decreed with the above condition in the final decree. Since this water is from the same source as 47-7018, this right will get the condition above as well.

**POU:** The place of use consists of the raceways only. The ponds were authorized under 47-7074. The field examiner estimated the total area of the POU at 3,691 cubic feet.

**OVERLAPS:** The field examiner found that right 47-7074 is appurtenant to the same fish ponds/raceways that this right covers. However, right 47-7074 was disallowed by the courts on 2/18/2010 because the owner of the right said he doesn't use it as a fish propagation pond any more (based on comment made by jstanton 8/22/06). There are no other water rights associated with the POU or PD.

**DIVERSION RATE:** The application for permit was for 3 cfs. The disallowed overlapping right was licensed for 9.01 cfs. However, the field examiner measured a total diversion of 1.38 cfs at the PD located at the unnamed stream and raceways. This right will be limited to the measured amount of 1.38 cfs.

**VOLUME:** The volume that is recommended by the field examiner is based on the diversion rate running 24 hours per day/365 days a year. To ensure that the full volume available under this right is necessary I will do a few checks. First, I tried to estimate how many pounds of fish they were raising. I can then figure out how much space is necessary to accommodate the fish which then leads to how much volume of water is necessary. Note that there is no information from the owner regarding fish type, amount, etc. so I must make many assumptions. I think some safe assumptions are that they raised trout to full adulthood

based on area fisheries. First, I must run the known factors through a density index<sup>1</sup> to see how many lbs. can be raised in their operation:

Density Index ( $W = D \times L \times V$ )

W=weight in lbs

D=range 0.4-1 unitless

V=3,691 cubic ft—size of raceways

L=13.5"—length of fish

Flow Index [ $F=W/(L \times Q)$ ]

F=1.5 unitless

W=weight in lbs

L=13.5"—length of fish

Q=619.3 gpm or 1.38 cfs

W= 19,931- 49,829 lbs of fish

W=12,541 lbs

Can rate accommodate this amount?-----> NO, can only accommodate 12,541lbs

**The limiting factor is the diversion rate**

Since I know how many lbs of fish 1.38 cfs can accommodate, I can back-calculate the density index to figure out how much space (volume) is required to raise 12,541 lbs of fish.

12,541 lbs = 0.4-1 (range) x 13.5 x V

V range = 930 cubic ft to 2,322 cubic ft

Despite the size of the raceways being 3,691 cubic ft, the volume range that is necessary for the amount of fish that they can raise is 930 – 2,322 cubic ft. To further calculate how much water is beneficially used in the fish raceways, I calculated how much water is required to keep up the water quality. A water change of 2.5 times per hour is required to maintain adequate oxygen for trout. Using that rule of thumb, I reach the following conclusion:

2.5 times per hour is 60 changes in a day.

$60 \times 930 = (55,800 \text{ cubic ft/day} \times 365)/43,560 = 468 \text{ afa}$

$60 \times 2,322 = (139,320 \text{ cubic ft/day} \times 365)/43,560 = 1,167 \text{ afa}$

The full volume available for this right of 999.0 afa is within the range that I calculated above. I think that it is within reason to issue this right with a volume of 999.0 afa.

Secondary Check

Annual Volume for Fish Propagation

1. Calculate changes per hour:

Total flow into facility x 3600/facility volume (cf) = changes

2. Calculate annual volume:

Facility volume (AF) x changes x 8760 = AFA

3. Calculate volume given by permitted flow:

Flow rate (cfs) x 1.9835 x 365 days = AFA

1.  $1.38 \text{ cfs} \times 3600/1,167 \text{ cf} = 4.25 \text{ changes}$

2.  $0.03 \text{ AF} \times 4.25 \times 8760 = 997 \text{ AFA}$

3.  $1.38 \text{ cfs} \times 1.9835 \times 365 \text{ days} = 999 \text{ afa}$

4. Choose the lowest figure (in this case they two figures are so close, we can go with the full volume as recommended above)

Recommendation: 999 AFA

<sup>1</sup> See Technical Review Memo from staff engineer Mat Weaver that explains density index, flow index, values, and volume calculation for fish propagation uses that can be found in file 47-7659.

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE  
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA ) A. Subcase 47-7018  
(Insert water right number)  
Case No. 39576 )  
STANDARD FORM 1  
OBJECTION

Please fill in the following information:

B. NAME AND ADDRESS OF PERSON OBJECTING

Name: Twin Falls Canal Company  
Address: P.O. Box 326  
Twin Falls, Idaho 83303-0326  
Daytime Phone: 208-733-6731

Name & Address of Attorney, if any:  
John K. Simpson / Travis L. Thompson / Paul L. Arrington  
Barker Rosholt & Simpson LLP  
P.O. Box 485  
Twin Falls, Idaho 83303-0485

FILED  
2007 SEP 14 PM 4 34  
DISTRICT COURT - 5TH JUD  
TWIN FALLS CO., IDAHO

C. CLAIMANT OF WATER RIGHT AS LISTED IN DIRECTOR'S REPORT

Name: Claudia J. Snyder  
Address: 4060 N 1200 E  
Buhl, Idaho 83316

Name: Charles Russell Snyder  
Address: 4060 N 1200 E  
Buhl, Idaho 83316

Attachment to Licensing Memo  
Explanation of wastewater condition  
on right 47-7501

D. I object to the following elements as recommended in the Director's Report. (Please check the appropriate box(es)).

1. ☐ **Name and Address**

Should be: \_\_\_\_\_

2. ☒ **Source**

Should be: The following remark should be added to clarify the source and explain that it is waste water originating from the diversion and use of water by Twin Falls Canal Company shareholders: "The source of this right is waste water originally diverted by Twin Falls Canal Company. The wasting of water may be discontinued at any time."

3. ☐ **Quantity**

Should be: \_\_\_\_\_

4. ☐ **Priority Date**

Should be: \_\_\_\_\_

5. ☐ **Point of Diversion**

Should be: \_\_\_\_\_

6. ☐ **Instream Flow Beginning and Ending Point**

Should be: \_\_\_\_\_

7. ☐ **Purpose(s) of Use**

Should be: \_\_\_\_\_

8. ☐ **Period of Year**

Should be: \_\_\_\_\_

9. ☐ **Place of Use**

Should be: \_\_\_\_\_

10 ☐ **I object because:**

☐ This water right should not exist.

☐ This water right was not recommended, but Should be recommended with the elements described above.

**E. REASONS SUPPORTING OBJECTIONS(S):** The remark should be included to clarify the source of the water being appropriated under this right. Water resulting from irrigation of Twin Falls Canal Company project lands may be discontinued due to changes in irrigation practices, delivery methods, and/or other actions beyond the control of the Company. The above remark is necessary to notify the claimant and the watermaster that water may not always be available to satisfy the right due to subsequent changes in the Company's delivery of water to its shareholders and/or changes in other operations. Additionally, this remark is necessary due to IDWR's failure to recognize TFCC's water right claim 47-4376.

## Trout Hatchery Water Requirements

Idaho Fish and Game Department

### Trout Rearing Raceways

Maximum annual production of trout in raceways in southern Idaho is 1 1/2 to 2 pounds of trout per cubic foot of water.

A water change of 2 1/2 times per hour is required to maintain adequate oxygen for trout. A raceway 6 feet wide, 2 1/2 feet deep, and 100 feet in length requires 1 1/4 c.f.s. flow. Water can be reused up to a maximum of 500 feet if it is aerated by dropping it 6 to 12 inches each 100 feet.

A rule of thumb for a profitable trout hatchery is not less than 5 c.f.s. of 50 to 60 degree Fahrenheit water. A good trout hatchery will produce about 8,000 pounds of trout annually for each c.f.s. of water flow if water is reused. This should be considered as maximum production.

### Earthen Rearing Ponds or Small Lakes

Commercial producers often use earthen ponds or small lakes to rear trout. In this case trout density should not exceed 1/2 pound per cubic foot of water. Greater densities will lead to diseases that are difficult to handle in earthen ponds.

*Small fish feed in upper 1/2 of water column, 2 1/2 feet in depth*

From Admin. Memo  
Application Processing #55

## IDAHO DEPARTMENT OF WATER RESOURCES

Adjudication Recommendation Report 47-7074 V1

WATER RIGHT NUMBER: 47-7074 V1

|                   |                         |
|-------------------|-------------------------|
| <u>Owner Type</u> | <u>Name and Address</u> |
| Previous Owner    | MICHAEL J LEEDS         |
| Original Owner    | RUTH A JAMES            |
| Current Owner     | OWEN SHRIVER            |
| Current Owner     | CLAUDETTE SHRIVER       |

overlapped 47-791

Priority Date: 07/15/1969

Basis: License

Status: Disallowed

Source

MUD CREEK

Tributary

SNAKE RIVER

Beneficial Use

FISH PROPAGATION

From To

1/01 to 12/31

Diversion Rate

9.010 CFS

Annual VolumeTotal Diversion: 9.010 CFSLocation of Point(s) of Diversion

MUD CREEK

NE1/4SW1/4SW1/4

Sec. 34, Twp 09S, Rge 14E, B.M.

TWIN FALLS County

Place of Use

FISH PROPAGATION

| Twp | Rge | Sec | NE |    |    |    | NW |    |    |    | SW |    |    |    | SE |    |    |    | Totals |
|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|
|     |     |     | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |        |
| 09S | 14E | 34  |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |        |

Conditions of Approval:

1. P09 License relinquished.

Comments:

1. jstanton 8/22/2006 New Owner

Comment: Today I received a call from Mr. Leeds. He said that he had sold the fish ponds to Owen Schriber in February. I called Mr. Schriber, who told me that the water quality of these ponds was always poor and that he was not interested in raising fish there. He is using the ponds to improve water quality in Mud Creek. He said he would be willing to do an ownership change and withdraw the claim. Doug said to just get the COO and then recommend disallowal.

2/18/2010