

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 72-7577
Exam Date: 08/05/2021

1. Current Owner:

SHILOH WARM SPRINGS RANCH LLC
PO BOX 510
CHALLIS ID 83226-0510

2. Accompanied by: Derrick Bosco

Phone No: 424-214-8743

Address:

Relationship to permit Holder: Facility Aquaculture Manager

3. **SOURCE:**

SPRINGS
WARM SPRING CREEK

Tributary

WARM SPRING CREEK
SALMON RIVER

Method of Determination: Site visit, information from the permit back file, and ArcMap aerial imagery.

B. OVERLAP REVIEW

1. Other water rights with the same place of use:

Water Right No.	Source	Purpose of Use	Basis
72-7209	Springs	Fish Propagation	License
72-7578	Warm Spring Creek	Fish Propagation	Permit

Comments: Permit 72-7578 was filed as a companion to this permit.

2. Other water rights with the same point-of-diversion:

Water Right No.	Source	Purpose of Use	Basis
72-7209	Springs, Warm Spring Creek	Fish Propagation	License
72-7580	Warm Spring Creek	Diversion to Storage, Wildlife Storage	License
72-10142, 72-10143, 72-16597, 72-16598	Warm Spring Creek	Irrigation	Decree
72-10141	Warm Spring Creek	Irrigation, Stockwater	Decree

Comments: It appears that the only right still using the Warm Spring Creek POD is 72-7580

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

SPRINGS SE¼ SE¼ NE¼, Sec. 9, Twp 12N, Rge 20E, B.M. CUSTER County

WARM SPRING CREEK NE¼ NW¼ SW¼, Sec. 10, Twp 12N, Rge 20E, B.M. CUSTER County

Method of Determination: Site visit, permit back file, and ArcMap aerial imagery.

PLACE OF USE: FISH PROPAGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	20E	9	X			X													

Method of Determination: Site visit, permit back file, and ArcMap aerial imagery.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X 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.

X

Aerial Photo Attached (required for irrigation of 10+ acres).

X

Photo of Diversion and System Attached

X

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Source
WRMSC17					Warm Spring Creek

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Swoffer 2100?	Current velocity meter	Swoffer	2100			

2. Measurements: IDWR employee Bob Foster (Salmon Office) made measurements on July 7 and August 5 of 1999, apparently in response to a complaint from a downstream water user.

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: It appears that the 1.10 cfs measurement made on July 7, 1999 was used as the basis for the permit. See Attachment #1, Foster Measurement.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: NA

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

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

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

2. Volume Calculations for Other Uses: $1.10 \text{ cfs} \times 1.9835 \text{ AF/day} \times 365 \text{ days} = \mathbf{796.4 \text{ AF}}$

G. NARRATIVE/REMARKS/COMMENTS

The field exam for permit 72-7577 was conducted on August 5, 2021, with Facility Aquaculture Manager Derrick Bosco in attendance. Originally, the water for the permit was diverted from two sources- a warm spring located about 0.2 mile southeast of the facility, which is the current and only source for the permit, and Warm Spring Creek, at a concrete check structure located about 0.5 mile southeast of the fish propagation facility. It appears that the Warm Spring Creek POD stopped being used about 2014 due to a facility upgrade, and because the change was made after proof of beneficial use was filed, the licensing will be based upon conditions immediately before, and during, the development period. The place of use during the development period was vastly different from what is in place now, also. Therefore, most of the photos and data used in the Beneficial Use Report will reflect the conditions from the more relevant time period, 1999-2000.

The water from Warm Spring Creek was run in an open ditch about 0.25 mile, where it captured the flow of the warm spring; the water from the two sources comingled and flowed in an open ditch to the fish facility and a series of dirt ponds before discharging into a small settling pond, then back into Warm Spring Creek and a much larger settling pond. Most of the water from this permit, permit 72-7578 (fish propagation), and right 72-7209 (fish propagation) was pumped back uphill to a canal where it ran downstream to other uses. Some water spilled back into Warm Spring Creek via a regulated spillway structure.

This permit apparently originated due to a complaint from a downstream water user, which resulted in then-IDWR employee Bob Foster making site visits and flow measurements on July 7 and August 5 of 1999 (see "Foster Measurement", attachment #1). His measurements revealed that more water was being diverted to the facility than was authorized under the existing fish propagation right, 72-7209. That led to the filing of this permit and permit 72-7578. In examining Foster's report, the flow rate for this permit appears to be based on the 'weir measurement' of 1.10 cfs made during the July 7, 1999 visit (see the map and discharge measurement notes in report). Foster made an additional measurement on August 5, 1999 of 1.46 cfs. It would seem that the measurements made in 1999 are an accurate reflection of the permit development period, as they were made about 6 months before the priority date, where we are now 8 years after proof of beneficial use was submitted, so I recommend licensing at 1.10 cfs. The flow is year-round, 24 hours/day so the volume would be figured at $1.1 \text{ cfs} \times 1.9835 \text{ AF/day} \times 365 \text{ days} = 796.4 \text{ AF}$. From Jim Stanton's 11-19-1999 memo, it appears that tilapia were raised during the development period, and they continue to be at the present time.

Conditions of approval appear to have been met. There were numerous straight sections of ditch where measurements could have been made, in addition to the weir where Mr. Foster made his measurements. The diversion on Warm Spring Creek had check boards that could be pulled to control flow, and on my visit this year, I noted that the spring diversion has a pipe to bypass flow from the fish facility to Warm Spring Creek, where it would end up if not diverted to the facility. It was noted that the permit lapsed because proof of beneficial use was not filed; proof was later filed, and the priority date was advanced.

Note: Changed name of source 'Warm Springs Creek' to 'Warm Spring Creek' to match DRG.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
FISH PROPAGATION	1/01 to 12/31	1.10 CFS	796.4 AF

Totals: 1.10 CFS 796.4 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

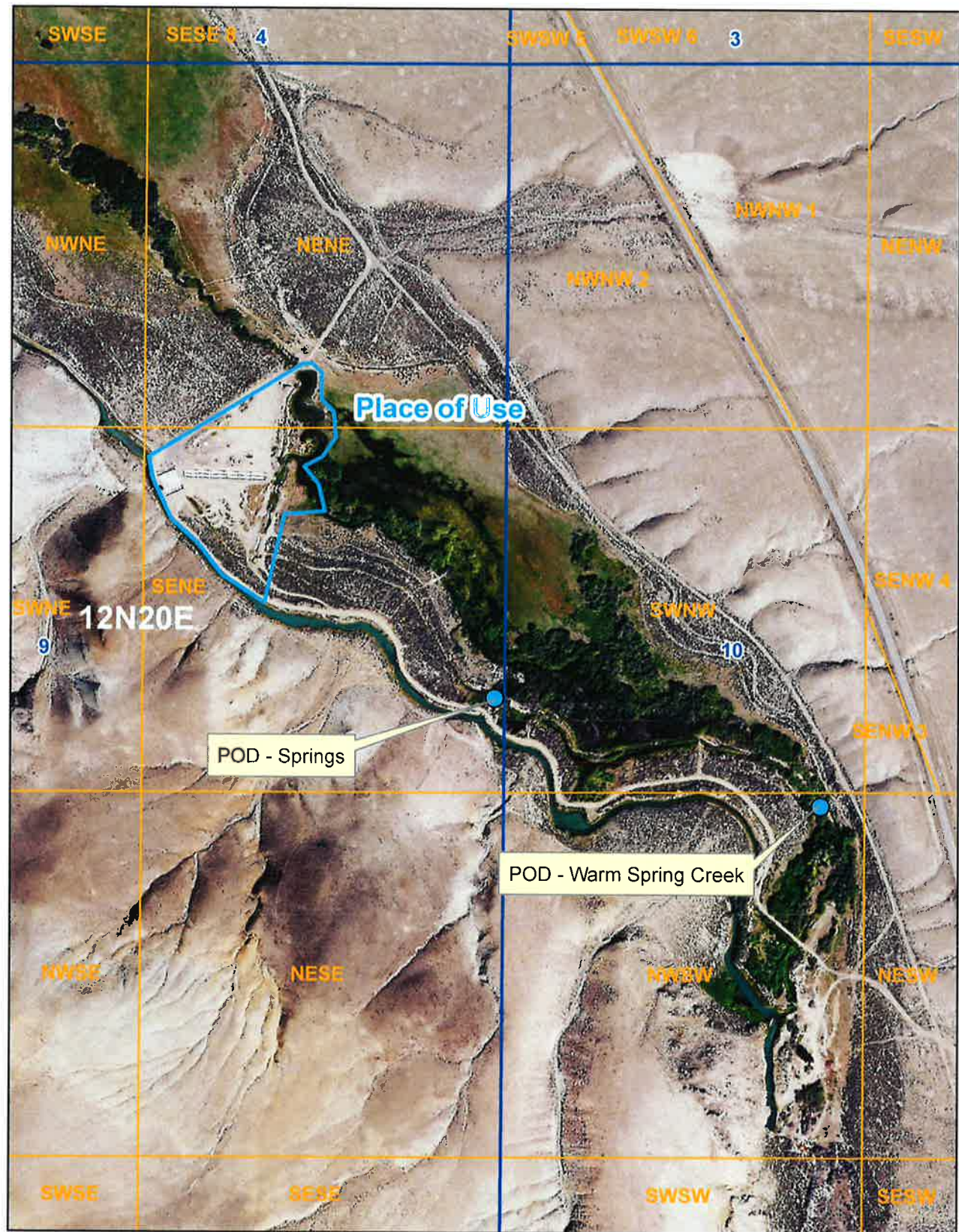
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION

Field Examiner's Name Jim Bitzenburg Date 9-13-2021
Jim Bitzenburg - Senior Water Resource Agent

Reviewer _____ Date _____

72-7577 Place of Use & Point of Diversion Map



Legend

- Township/Range
- Sections
- QQ

0 0.0475 0.095 0.19 Miles





System Diagram 72-7577 Shiloh Warm Springs Ranch, LLC



POD – Springs (Photo from Jim Stanton 11/19/1999 memo)

POD – Warm Spring Creek (Photo from Jim Bitzenburg 12/7/2018 field visit)



72-7577 Shiloh Warm Springs Ranch, LLC



POU – Dirt raceways (Photo from 8/9/1999 Bob Foster memo)

Settling pond (in background) and re-lift pump to canal (Photo from 5/9/2000 Tim Luke memo)





Spillway from settling pond back to Warm Spring Creek (Photo from 5/9/2000 Tim Luke memo)

Discharge flow (at arrow) from re-lift pump to canal (Photo from 5/9/2000 Tim Luke memo)



Memorandum

Date: August 09, 1999

To: Jim Stanton, Southern

From: Bob Foster, Salmon

Re: Measurements of 72-7209 / Morganroth complaint

RECEIVED
AUG 11 1999
Department of Water Resources
Southern Region

I have enclosed two sets of measurements taken approximately one month apart as well as a drawing showing the layout and dimensions of the fish raceways operated by Mark Lupher of Epicenter Aquaculture.

Based on these measurements it would appear Mr. Lupher is exceeding the licensed diversion rate of 72-07209 by a substantial amount. The facility volume of .8 acre feet may be exceeded as well.

Mr. Morganroth maintains that the construction and use of the new concrete raceways has increased the water use by Mr. Lupher and has injured the Morganroth water right(s) for irrigation and power generation.

It would also appear that Mr. Lupher may be in violation of one or more of the conditions of approval of 72-07209 with no measuring device at the point of diversion or at the point of effluent discharge. The only measuring device observed was a four foot rectangular weir at the intake to the lower dirt ponds, no measuring device of any sort was observed at the concrete raceways.

Based on these findings we probably need to inform Mr. Lupher that he is exceeding the licensed diversion rate and needs to file an additional application for excess amount. It may be very difficult to insure that Mr. Lupher complies with any action we may take due to the fact there is no water master control on the source as well as no control or measuring devices at the point of diversion.

Let me know how you want to proceed with this matter and if I can be of further assistance.

Foster Measurement-
Attachment #1

Meas. No.. XXXXXX
Comp. by R. Foster

Date 8-5 1977 Party R. F. Fenn
Width . . . Area . . . Vel. . . G. H. . . Disch. . .
Method . . . No. secs. . . G. H. change . . . in . . . hrs. Susp. . .
Method coef. . . Hor. angle coef. . . Susp. coef. . . Meter No. . .
Type of meter 2127 Date rated . . . Tag checked . . .
Meter . . . ft. above bottom of wt. Spin before meas. 015 after OK
Meas. plots . . % diff. from . . rating . Levels obtained .

GAGE READINGS					WATER QUALITY MEASUREMENTS			
Time		Inside	HM	Chart	Outside	No	Yes	Time
						<u>Samples Collected</u>		
						No	Yes	Time
						<u>Method Used</u>		
						EDI	EWI	Other
						<u>SEDIMENT SAMPLES</u>		
						No	Yes	Time
						<u>Method Used</u>		
						EDI	EWI	Other
Weighted M.G.H.						<u>BIOLOGICAL SAMPLES</u>		
G. H. correction						Yes	Time	
Correct M.G.H.						No	Type	

Check bar, chain found changed to at
Wading, cable, ice, boat, upstr., downstr., side bridge. feet, mile, above, below gage.
 Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%); based on the following cond:

Flow 952D

Cross section A-D-D.....

Control. NONE.

Gage operating	Weather
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Intake/Drift cleaned Air °C@ Water °C@

Record removed Extreme Indicator: Max Min

Manometer N- Pressure Tank	Feed	Bbl rate	per min
----------------------------	------	----------	---------

Manometer N₂ Pressure Tank Feed Bol rate per min.

Observer: 228

Observer
HUM

Remarks: first exposure at 21st morning at 1st

Remarks: Ties...
... ..

1. 1.46 c.f.s.

GPS LAT\LONG

G.H. of zero flow ft. Sheet No. of sheets

River at--											
Angle of sight	Dist. from initial point	Width	Depth	Obstruc- tion depth	Revo- lutions	Time in sec- onds	VELOCITY		Adjusted for hor. angle or	Area	Discharge
							At point	Mean in ver- tical			
LEW	1.0	—		1/8							
	1.5	.50	3.80				69 1.02	.635		1.900	1.20
	2.0	.50	3.80				72 1.04	.710		1.900	1.34
	2.5	.50	3.70				67 1.05	.660		1.850	1.22
	3.0	.50	3.60				82 1.11	.765		1.800	1.37
	3.5	.50	3.50				70 1.10	.730		1.750	1.27
	4.0	.50	3.50				69 1.08	.730		1.750	1.27
	4.5	.50	3.30				83 1.13	.845		1.650	1.39
INLET	5.0	.50	3.30				89 1.16	.800		1.650	1.32
	5.5	.50	3.20				83 1.15	.790		1.600	1.26
	REW	6.0	—								
							WATER MEASUREMENT			11.64 cfs 1.46 cfs	
LEW	.80	—		3/8			At Point	Avg. Vel.			13.10 cfs
	1.30	.50	2.90				1.40 1.45	1.425		1.450	2.06
	1.80	.50	2.90				98 1.51	.895		1.450	1.29
	2.30	.50	2.90				1.04 1.07	.980		1.450	1.42
	2.80	.50	2.90				1.14 1.12	.980		1.450	1.42
	3.30	.50	2.90				1.09 1.11	.900		1.450	1.30
	3.80	.50	2.90				1.15 1.18	.955		1.450	1.35
	4.30	.50	2.90				1.10 1.15	.825		1.450	1.19
OUTLET	4.80	.50	2.90				1.20 1.20	.950		1.450	1.37
	5.30	.50	2.90				1.25 1.27	1.110		1.450	1.60
	REW	5.80	—								
										13.03 cfs	



State of Idaho

DEPARTMENT OF WATER RESOURCES

206 Van Drell, Suite B, Salmon, Idaho 83467-4117

Phone: (208) 756-6644 FAX: (208) 756-6644

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

July 07, 1999

Mark Lupher
HC-61 Box 3016
Challis, Idaho 83226

Mr. Lupher:

Please find enclosed copies of the calculated flow measurements I completed this morning.

It would appear the total flow of the inlet from the canal (11.14 cfs) along with the measurement obtained at the four foot weir (1.10 cfs) at the lower spring, there is a combined total of 12.24 cfs. The measured flow at the outlet from the raceways totaled 12.26 cfs.

Based on these measurements I would conclude there is no appreciable evaporation loss and there may be a slight gain. Please keep in mind these measurements have an accuracy factor of plus or minus five percent.

If I can be of further assistance or if you have any questions regarding these measurements feel free to call me at the above number.

Sincerely,

A handwritten signature in cursive script, reading "Robert E. Foster".

Robert E. Foster
Sr. Water Rights Agent



Project Inspection Photographs



File Number: 72-07209

Taken By: Bob Foster

Notes

UPPER
RACEWAYS

inlet in
lower left
corner

photo taken
looking
NNE

①



Notes

lower
raceways

photo taken
looking
west.

②





Project Inspection Photographs



File Number: 72-07209

Taken By: Bob Foster

Notes

largest
Pond east
of concrete
Raceways

③



Notes

Series of
Dirt ponds
south of
concrete
raceways.

Four foot
rectangular
wider at
arrow in
upper right

④





Project Inspection Photographs



File Number: 72-07209

Taken By: Bob Foster

Notes

Series of 6
dirt ponds
south of
concrete
raceways

(5)



Notes

Series of
3 dirt ponds
south of
concrete
raceways

(6)



72-57209



Not to scale