STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9700
Exam Date: 07/09/2020

1. Current Owner:
JIM SCHAPER PO BOX 216 LACLEDE ID 83841 AND/OR
MARLANE SCHAPER PO BOX 216 LACLEDE ID 83841

2. Accompanied by: Jim Schaper
Phone No:208-263-6800
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:** RILEY CREEK

Tributary PEND OREILLE RIVER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
96-9816	SPRING	STOCKWATER	PERMIT IN PROCESS FOR LICENSING

Comments: right 96-9816 is a permit for same applicant that was split from this right 96-9700, for stockwater use, in the same POU. Rights were split as they had separate water sources.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
RILEY CREEK SE¼ NE¼, Sec. 12, Twp 56N, Rge 04W, B.M. BONNER County

Method of Determination: GPS. POD located at -116°46.147, 48°13.178.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	04W	12	0.1			0.5													0.6

Total Acres: 0.6

PLACE OF USE: STOCKWATER

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	04W	12	X			X													

Method of Determination: Field exam and Arcmap.

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
X 1:24,000 or greater.

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

X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
NONE					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5-GAL BUCKET TEST						

2. Measurements: Three 5 gallon bucket tests were completed from irrigation system at POU, with average of three resulting in diversion flow rate = 20.56 gpm = **0.05 cfs.**

E. FLOW CALCULATIONS

Measured Method: 5 GAL Bucket Test = (5 gal / 14.15 sec) x 60 sec/min = 21.20 gpm
= (5 gal / 15.32 sec) x 60 sec/min = 19.58 gpm
= (5 gal / 14.35 sec) x 60 sec/min = 20.90 gpm
Average of 3ea 5 GAL Bucket Tests = (21.20 gpm + 19.58 gpm + 20.90 gpm) / 3 = 20.22 gpm = 0.05 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{I.R}$ = (Acres Irrigated) x (Irrigation Requirement) = 0.6 acres x 3.0 afa = 1.8 af

$V_{D.R}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.05 cfs x 214 days x 1.9835 = 21.22

V = Smaller of $V_{I.R}$ and $V_{D.R}$ = 1.8 af

2. Volume Calculations for Other Uses:
STOCKWATER annual volume = 50 head cattle x 12 gpd x 365 days = 219,000 gal / 325,850 gal per af = **0.7 af** considering department rounding standards.

As this is a surface water source, no there will be no volume applied to irrigation. There is an annual volume of 0.7 af for stockwater use, but no combined maximum diversion volume for this right.

G. NARRATIVE/REMARKS/COMMENTS

Admin Note: WR 96-9700 has been split, with subsequent WR added: 96-9816. A POD and spring source that was separate and not interconnected to Riley Creek, has been removed from this license, and applied to 96-9816 after field exam annotated how the POD and applicant systems interacted. The applicant had permitted for domestic use, but at time of field exam it was found there was no domestic use that had been applied, and the component was removed at time of licensing.

Field exam conducted on 7/20/2020 with applicant, Jim Schaper, showed diversion from Riley Creek by a 270 cc water transfer pump piped up-grade a ¼ mile for irrigation and stockwater use. Three 5-gallon bucket tests were completed at the POU to determine flow rate, with diversion rate equaling 20.22 gpm = 0.05 cfs as listed below:

5 GAL Bucket Tests = (5 gal / 14.15 sec) x 60 sec/min = 21.20 gpm
= (5 gal / 15.32 sec) x 60 sec/min = 19.58 gpm
= (5 gal / 14.35 sec) x 60 sec/min = 20.90 gpm

Average 5 GAL Bucket Tests = (21.20 gpm + 19.58 gpm + 20.90 gpm) / 3 = 20.22 gpm = 0.05 cfs

The applicant's need for a larger performance transfer pump and diversion rate that exceeds the department standard for the irrigation component is necessitated, as applicant pipes water via pvc pipe up-grade ¼ mile to place of use, and only operates the system 1 hour daily when irrigating. As such, the **0.05 cfs** is recommended as the maximum diversion rate applied to license. The diversion rate for beneficial use of the irrigation component equals **0.03 cfs**, and the diversion rate for beneficial use of the stockwater component equals **0.02 cfs** which is the department standard for 50 head of mixes stock.

During field exam, irrigated acreage was identified within a fenced in area, and applicant had a main trunk line that was necked down from a 3 inch run from POD, to a 2 inch run along the fenced border of the irrigated area. There were sprinkler line connection points along the fenced area that the applicant would hook up hose and sprinklers to irrigate. Due to the abnormally wet spring, applicant had not planted his seasonal crop at time of exam, but the irrigation system was in place and with water diverted, water was shown to be used at the applicants POU. At time of field exam, irrigated acreage was traced out using Arcmap imagery equaling 0.6 acres, which equals an annual volume of 0.6 acres x 3.0 afa = 1.8 af. As this is a surface water source, there is no maximum diversion volume applied to licence.

Applicant was permitted for stockwater use for 50 head of mixed stock, equaling 50 head cattle x 12 gpd x 365 days = 219,000 gal / 325,850 gal per af = **0.7 af** considering department rounding standards. There is an annual volume of 0.7 af for stockwater use, but no combined maximum diversion volume for this right. The 50 head of stock associated with this right is the same 50 head associated with rights 96-9701 & 96-9816, and thus not additive in annual volume from license to license; condition X35 was applied to rights 96-9700, 96-9701, and 96-9816 to account for the same 50 head of cattle applicant is allocating water for. Applicant used hoses to fill portable stockwater tanks, and rotated stock into this area of his property after the first hay cutting is complete each year. Due to wetness of season, the first cut had not been harvested, and as such no cattle were observed during time of exam. Applicant stated that this source of stockwater use supplemented exempt in-stream stock watering that took place throughout his properties.

Condition 26A, X01, and X02 were removed from permit. Condition X35 was added to describe limitations for combined stockwater annual volume for rights 96-9700, 96-9701, and 96-9816. All other conditions remain on

license. Split right 96-9816 overlaps this rights POU for stockwater use, and condition X35 (listed above) was added to mitigate overlap concerns for right 96-9700. There are no other overlap concerns for this right.

Have conditions of permit approval been met? X Yes ____ No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
IRRIGATION	04/01 to 10/31	0.03 CFS	
STOCKWATER	01/01 to 12/31	0.02 CFS	0.7 AF
	Totals:	0.05 CFS	

2. Recommended Amendments

____ Change P.D. as reflected above ____ Add P.D. as reflected above X None

____ Change P.U. as reflected above ____ Add P.U. as reflected above X None

I. AUTHENTICATION

Luke Bates - Water Resource Agent

Field Examiner's Name LBates Date 7/27/2020

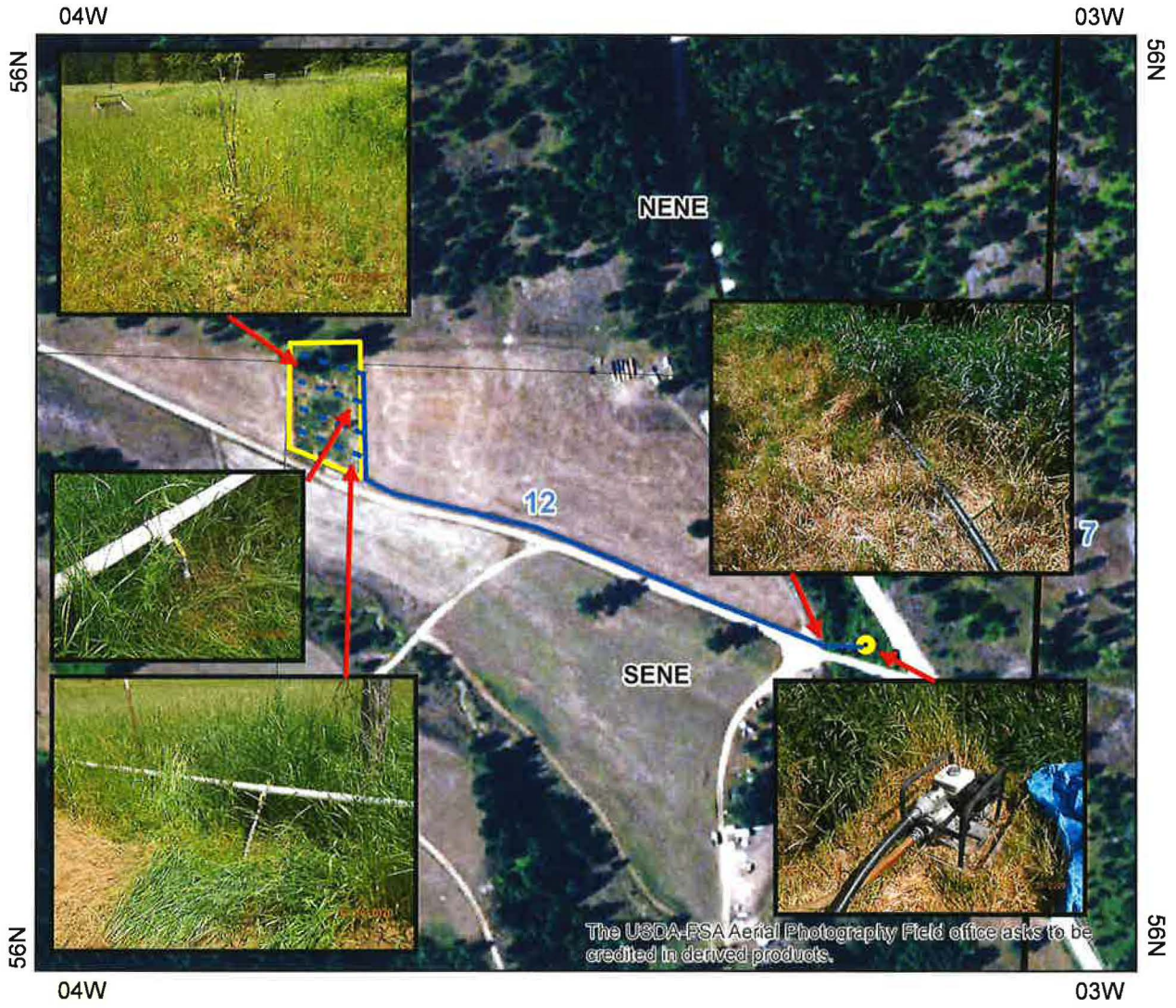
Reviewer Adam Fralick Date 7/30/2020

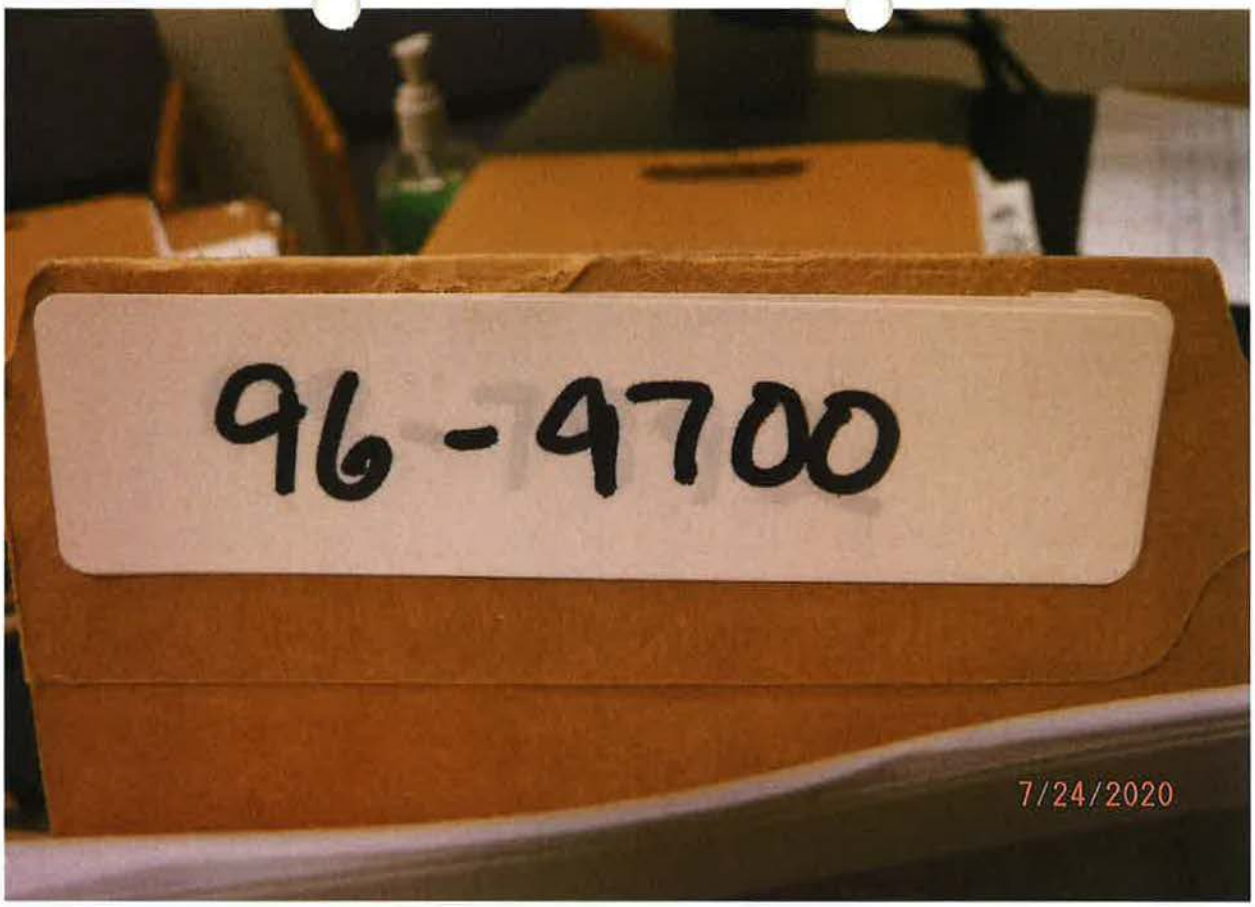
State of Idaho
Department of Water Resources

Attachment to Field Exam

96-9700

IRRIGATION and STOCKWATER system diagram.





POD – WATER TRANSFER PUMP FROM RILEY CREEK

270 CC HONDA GENERATOR ATTACHED TO NORTH STAR WATER TRANSFER PUMP

DIVERSION PIPE FROM CREEK

WATER CONVEYANCE SYSTEM – PVC PIPE WITH ¼ MILE RUN TO POU

IRRIGATION STUBS AT POU

IRRIGATION POU