

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 25-7512

Exam Date: 7/29/2014

1. Current Owner: ARVIN RHOADES
C/O DOUG RHOADES
1780 BONE ROAD
IONA ID 83427
(208)529-9679
2. Accompanied by: DOUG RHOADES
Phone No: SAME AS ABOVE
Address: SAME AS ABOVE
Relationship to Permit Holder: SON

3. SOURCE

TWIN CREEK

TRIBUTARY

WILLOW CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 25-12373 & 25-7507 (DOMESTIC)
2. Other water rights with the same point of diversion: NONE

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

TWIN CREEK SW1/4SW1/4 Sec. 28, Twp 01S, Rge 40E, B.M.

BONNEVILLE County

TWIN CREEK SW1/4SW1/4 Sec. 28, Twp 01S, Rge 40E, B.M.

BONNEVILLE County

Method of Determination: GPS & SITE VISIT

2.

PLACE OF USE:

IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S	40E	28											20.0						20.0

Total Acres: 20

Method of Determination:

3. _____ Delivery System Diagram Attached (required). Indicate all major components and distances between components. 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.
☒ Aerial Photo Attached (required for irrigation of 10+ acres).
☒ 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**RHOADES POND
RHOADES #2

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement**Equipment****Type****Make****Model No.****Serial No.****Size****Calib. Date**

2. Measurements: NONE – DUE TO DROUGHT CONDITIONS, THIS STREAM HAS NOT HAD FLOW FOR AT LEAST TWO YEARS, IN ORDER TO MOVE FORWARD THEORETICAL CALCULATION WAS USED FOR THE LICENSING.

E. FLOW CALCULATIONS

_____Additional Computation Sheets Attached

Measured Method: A theoretical flow calculation was determined using two methods...

Method #1 = Exhibit #9 of the IDWR Field Exam Handbook "Sprinkler system discharge"

55 psi, and 5/32" sprinkler head = 5.39 gpm x 22 sprinkler heads = 118.58 gpm/448.83 = 0.26 cfs

Method #2 = K Line irrigation technical sheet = 5.11 gpm x 22 sprinkler heads = 112.42 gpm/448.83 = 0.25 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 20 \text{ acres} \times 3.5 = 70 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.26 \text{ cfs} \times 215 \text{ days} \times 1.9835 = 110.88 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 70 \text{ AF}$$

2. Volume Calculations for Other Uses: None

G. NARRATIVE/REMARKS/COMMENTS

Due to drought conditions, the source of water for this permit has not been useable for the last two years. No flow was taken due to lack of water. In an effort to move forward in the process, a theoretical flow calculation was prepared based on a discussion with Doug Rhoades who is purchasing the property. Per Doug Rhoades, when water is available a 15 hp pump attached to a three point PTO is used to pump water through a 1 1/4" pipeline to a series of inline sprinklers, referred to as pods. There is only 1 line used and this line is drug by tractor around the property. There are two points of diversion on the property. The first point of diversion is located at the dam for the pond and has a lockable headgate, the second point of diversion is downstream of the pond and irrigation is facilitated by placing a tarp across the culvert and pumping the water to the sprinklers from this location.

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>
IRRIGATION	4/01 to 11/01	0.260 CFS	70 AF
<u>Totals:</u>		0.260 CFS	70 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

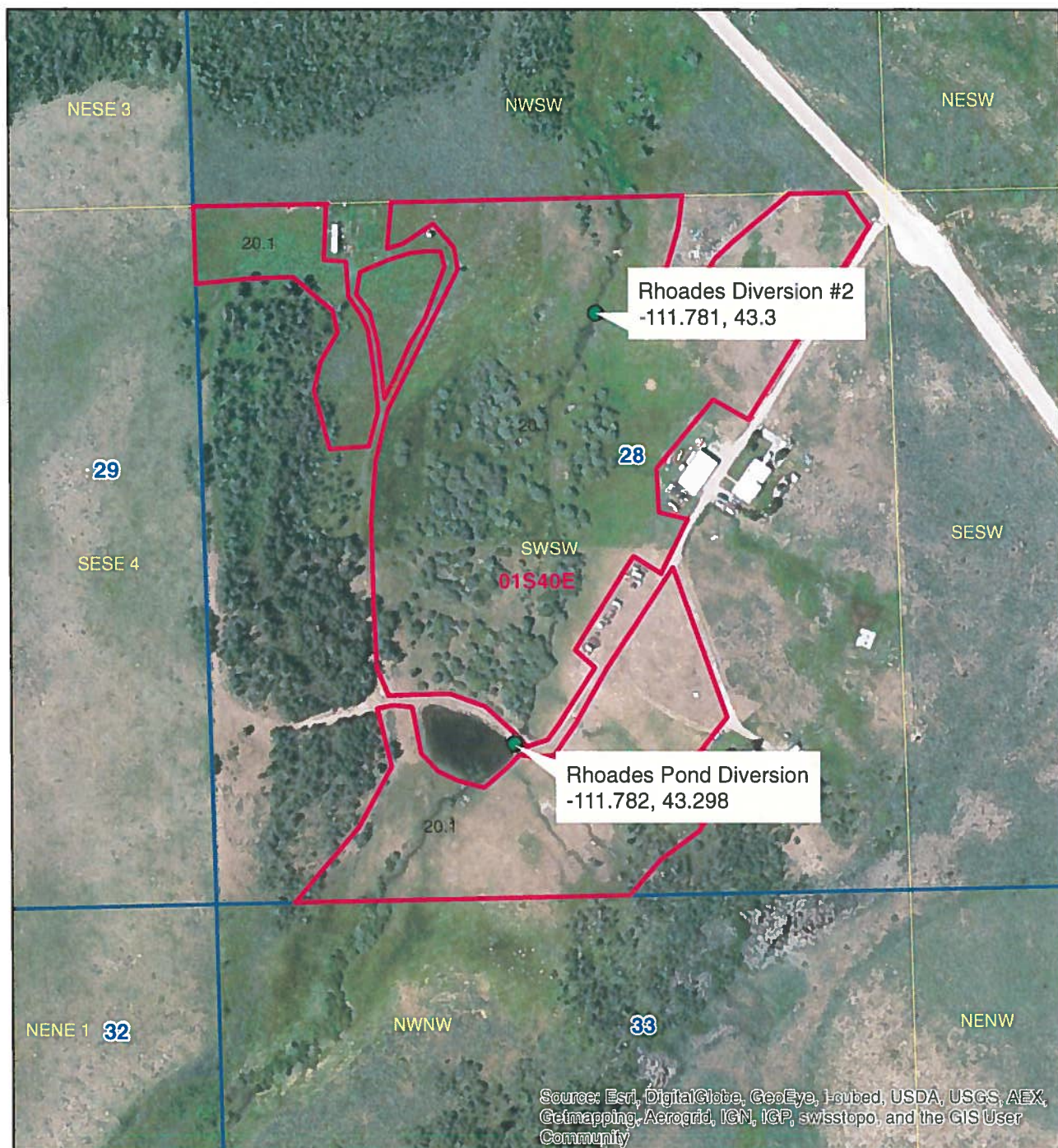
Field Examiner's Name Kevin Mathews Date 7.29.14

Reviewer _____ Date _____

Field Exam - July 29, 2014 for 25-7512



Pond point of diversion



Field Exam July 29, 2014



- 25-7512POU
- Township/Range
- Sections
- QQ

0 0.03 0.06 0.12 Miles



A supplier of Grassland and Forage Irrigation Systems throughout the United States and Canada

K-Line Benefits

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System Components

The K-Line system is designed around a set of components chosen for their durability and ease of use under adverse conditions.



K-Line offers a choice of 5 NAAN durable sprinklers with application rates of 2.04 to 5.11 gpm and operating pressures of 35 - 55 psi

pressure.



A choice of 5 Nelson nozzles allows

for varied application rates of 1.64 - 5.47 gpm at 45 - 60 psi. The Nelson sprinkler is available with pressure compensating sprinklers which results in very good uniformity in hilly applications. This is a highly dependable rotary style sprinkler made from heavy

duty plastics. The key fact about the Windfighter is that it can accomplish greater uniformity in systems with wind interference that would affect the uniformity of most impact sprinklers. K-Line also carries the Nelson R33 sprinkler and adapter (not shown), for those that want a 3/4" sprinkler option.



K-Line has added the highly

Rain Bird LF2400 sprinkler to its line of available sprinklers. The Rain Bird LF2400 sprinkler offers a choice of three available nozzles with application rates of 2.35 gpm at 35 psi up to 4.02 gpm at 45 psi. The radius of throw will vary depending on



NAAN 5022 IMPACT SPRINKLER Nozzle Options

O = Orange 7/64"
R = Red .118"
G = Green 1/8"
BU = Blue 9/64"
BK = Black 5/32"

K-LINE NAAN ADAPTOR: Connects NAAN 5022 Sprinkler to the K-Line Saddle.
1/2"mnpt(Bottom) x 1/2"fnpt (Top)

K-LINE TAPPING SADDLE: Saddles available in 32, 40, and 45mm sizes



NELSON R2000WF WINDFIGHTER Nozzle Options

G-G Green Nozzle & Green Plate
T-R Tan Nozzle & Red Plate
R-R Red Nozzle & Red Plate
GO-GO Gold Nozzle & Gold Plate
BN-BN Brown Nozzle & Brown Plate

K-LINE NELSON ADAPTOR: Connects Nelson Windfighter Sprinkler to the K-Line Saddle.
1/2"mnpt(Bottom) x male acme (Top)

K-LINE TAPPING SADDLE: Saddles available in 32, 40, and 45mm sizes



NELSON R2000WF WINDFIGHTER - PRESSURE REGULATED Nozzle Options

G-G Green Nozzle & Green Plate
T-R Tan Nozzle & Red Plate
R-R Red Nozzle & Red Plate
GO-GO Gold Nozzle & Gold Plate
BN-BN Brown Nozzle & Brown Plate

NELSON MINI-REGULATOR: Regulator Options
40psi 45psi 50psi
1/2"fnpt(Bottom) x male acme (Top)

K-LINE NELSON NIPPLE Connects Nelson Mini-Regulator to the K-Line Saddle.
1/2"mnpt(Bottom) x 1/2"mnpt(Top)

K-LINE TAPPING SADDLE: Saddles available in 32, 40, and 45mm sizes



RAIN BIRD LF2400 SPRINKLER Nozzle Options Code

30 = Tan .117" 30 Drill
8 = Red .125" 1/8"
9 = Silver .143" 9/64"

K-LINE RAIN BIRD ADAPTER: Connects Rainbird LF2400 Sprinkler to K-Line Saddle.
RB-ADAPT 1/2" mpt (Bottom) x 1/2" fpt (Top)

K-LINE TAPPING SADDLE: Saddles available in 32, 40, and 45mm sizes

NAAN Sprinkler Rates

Nelson Sprinkler Rates