

[illegible]

Method of Determination: Arc Map (Aerial Photo)

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.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
N/A					

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
N/A						

2. Measurements: No field measurement. Unable to place 5-gallon bucket beneath discharge pipe for measurement.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method(Theoretical):

$$Q = VA \text{ for partially full pipe}$$

2" dia. PVC (Assumed 1/2 full)

$$A = 0.011 \text{ ft}^2$$

$$V = 2 \text{ ft/sec (assumed velocity)}$$

$$Q = VA = 0.011 \times 2 = 0.02 \text{ cfs}$$

$$Q(\text{theoretical}) = 0.02 \text{ cfs} < Q(\text{permit}) = 0.04 \text{ cfs}$$

Conclusion: The 2" PVC pipe has an estimated full flow capacity, assuming a velocity of 2 ft/sec, of 0.044 cfs. Therefore, system is capable of producing the permitted beneficial use diversion rate of 0.04 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses: (Stock Water Storage Pond)

Surface area of pond is approximately 0.2 ac. as determined from aerial photo. Therefore, use surface area of 8,712 ft². Maximum depth of pond is 12'. Assumed average depth of 10'.

$$V(\text{pond}) = 8,712 \text{ ft}^2 \times 10' / 43,560 \text{ ft}^2 = 2.0 \text{ AF}$$

Conclusion: Stock water storage volume(permit) = 2.0 AF = Stock water storage volume(calculated) = 2.0 AF.

G. NARRATIVE/REMARKS/COMMENTS**COLLECTION AND CONVEYANCE SYSTEM:**

Spring water is collected in a buried barrel/cistern located on the Young's property north of the Fishers. The spring water is discharged through a 2" PVC pipe approximately 400 feet to the south to the Fisher's stock water storage pond. The 2" PVC pipe daylights at the north end of the stock water storage pond. The stock water storage pond has a surface area of approximately 0.20 acres. The applicant indicated that the spring discharges year round to the stock water storage pond. A small spillway located on the south end of the stock water storage pond regulates the pond water surface level. The stock water storage pond provides drinking water for a maximum of 45 head of cattle and 150 sheep.

OVERLAP:

Place of use overlap with Water Right Permit No. 67-14485. The stock water storage place of use for Water Right Permit No. 67-15007 and Water Right Permit No. 67-14485 is the same stock water storage pond. An excavated trench filled with gravel and wrapped in filter fabric discharges spring water from a spring behind the Fisher's barn to the stock water storage pond.

STOCK WATER STORAGE POND VOLUME:

The stock water storage pond is filled by two separate springs on two different water right permits. This spring associated with Water Right Permit 63-15007, and another spring associated with Water Right Permit 63-14885. Each permit has a beneficial use of stock water storage for 2.0 AF. Since the stock water storage ponds maximum volume is 2.0 AF, the combined maximum volume for both permits shall be 2.0 AF.

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.04	&/or	2.0
Beneficial Use Limit	0.04	&/or	N/A
System Measurement	0.02(Theoretical)	&/or	N/A
Proof Fee Amount	0.20	&/or	20.0
Recommended Amount	0.04		2.0

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

Condition No.1 – Source of water is spring water, not waste water. Therefore, reference to waste water as the source in the permit shall be changed to spring.

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER STORAGE	01/01 to 12/31		2.00 AF
DIVERSION TO STORAGE	01/01 to 12/31	0.040 CFS	
<u>Totals:</u>		0.040 CFS	2.00 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

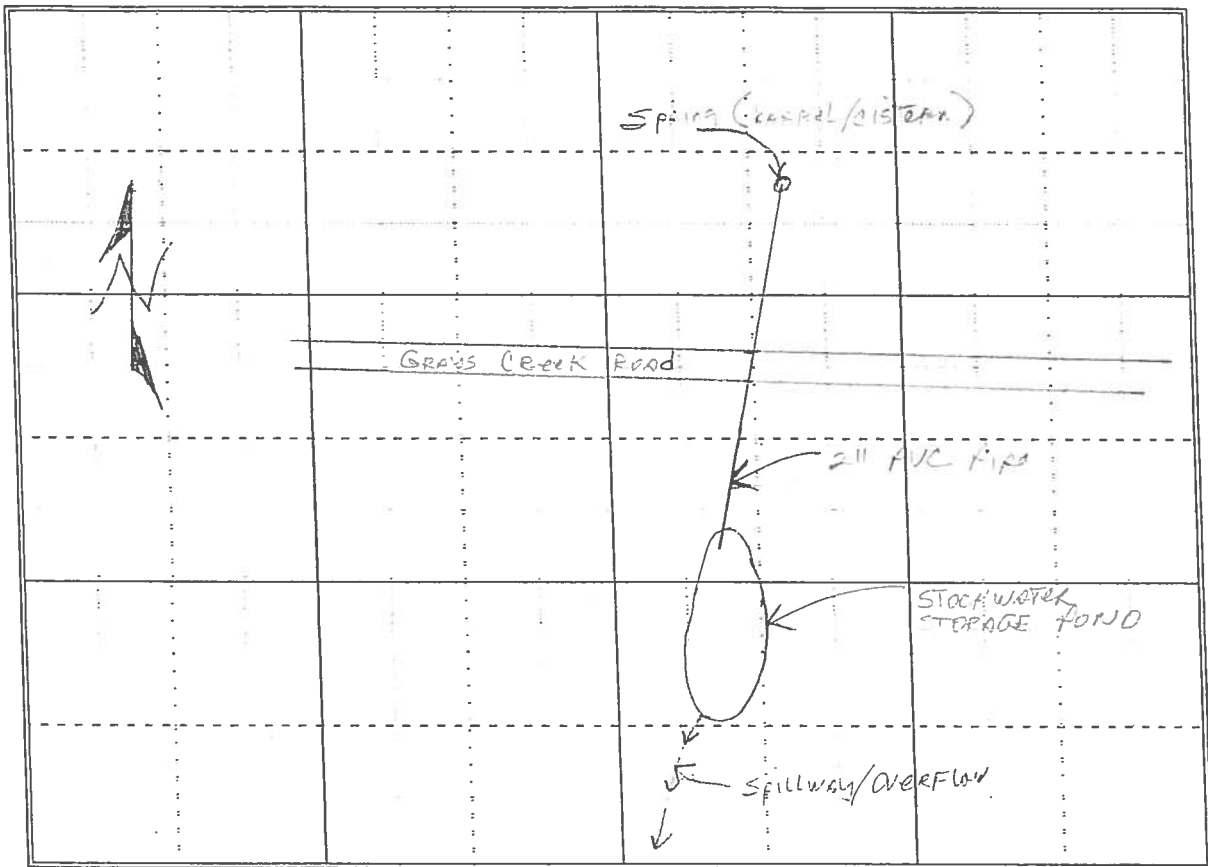
I. AUTHENTICATION

Field Examiner's Name Rick Collingwood Date 8/7/12

Reviewer _____ Date _____

Form 219 07/11

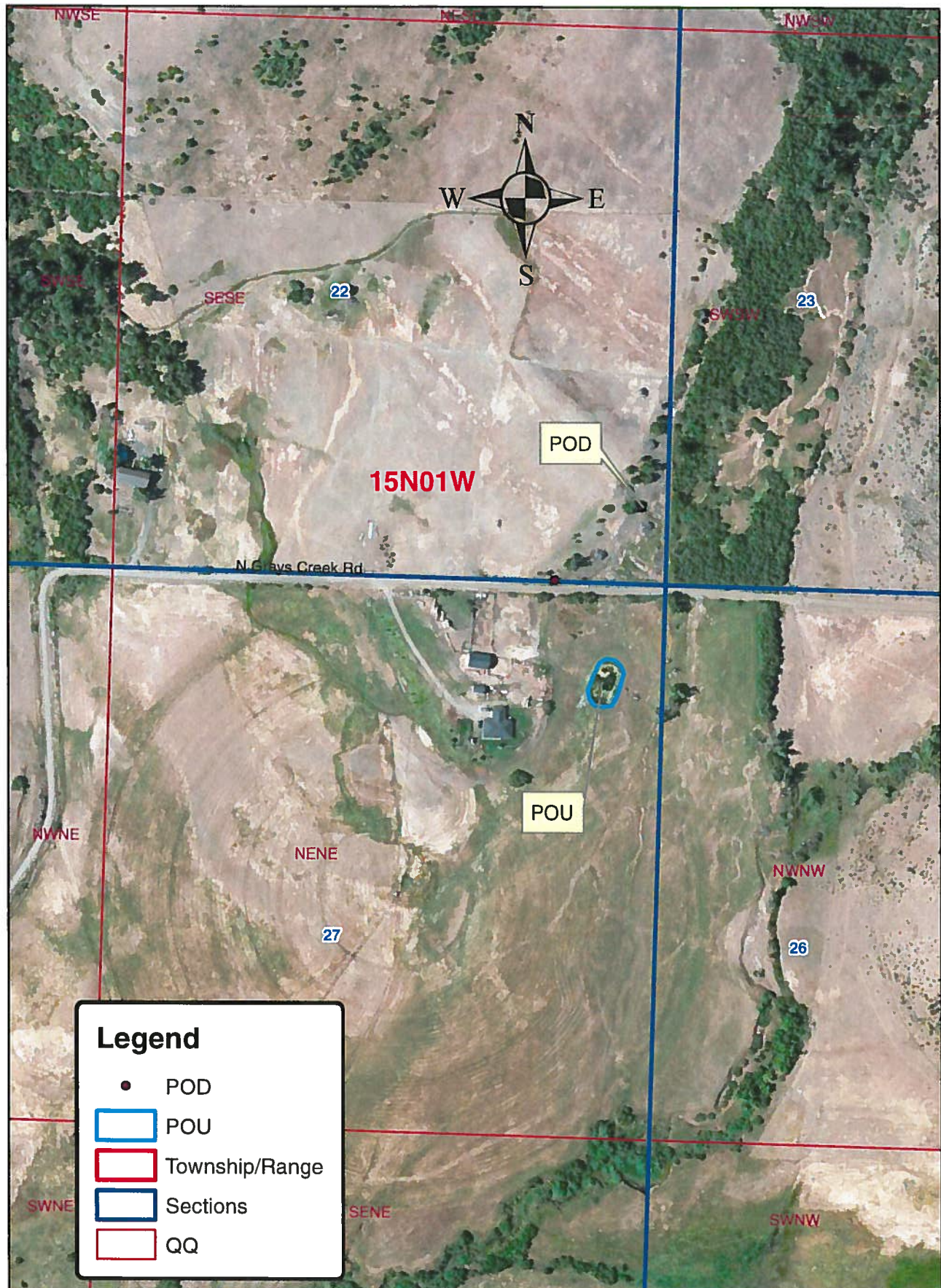
3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.



Scale: 1" = 200'

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

67-15007



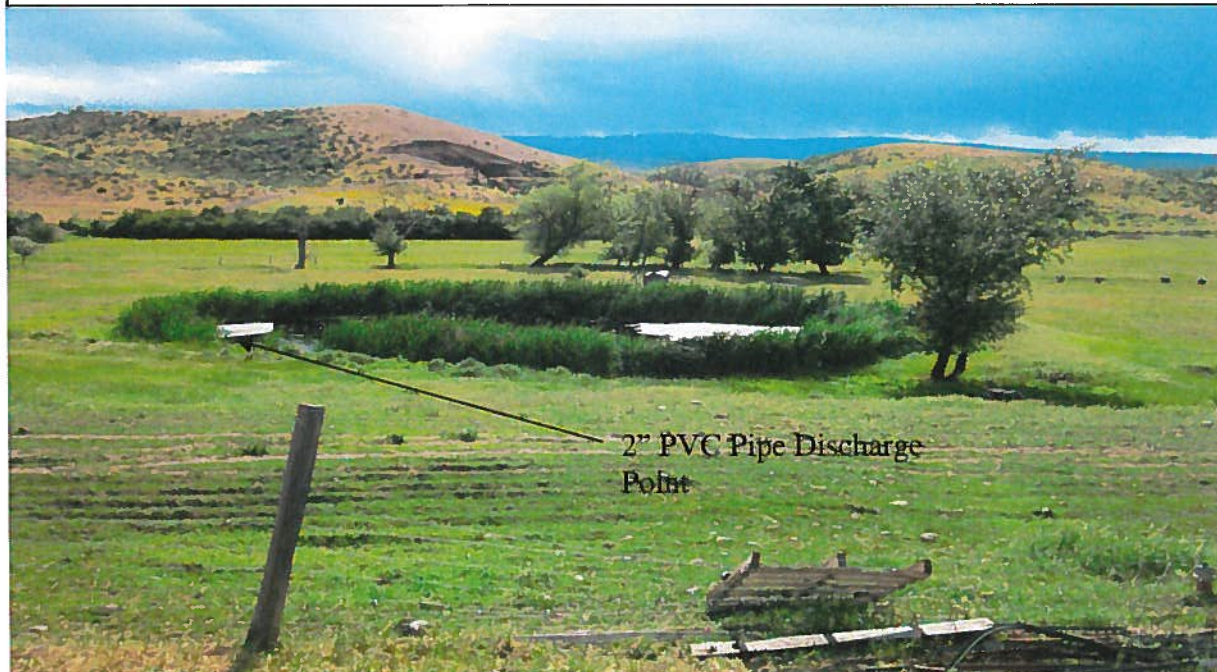
FIELD EXAM PHOTOS

Water Right Permit: 67-15007

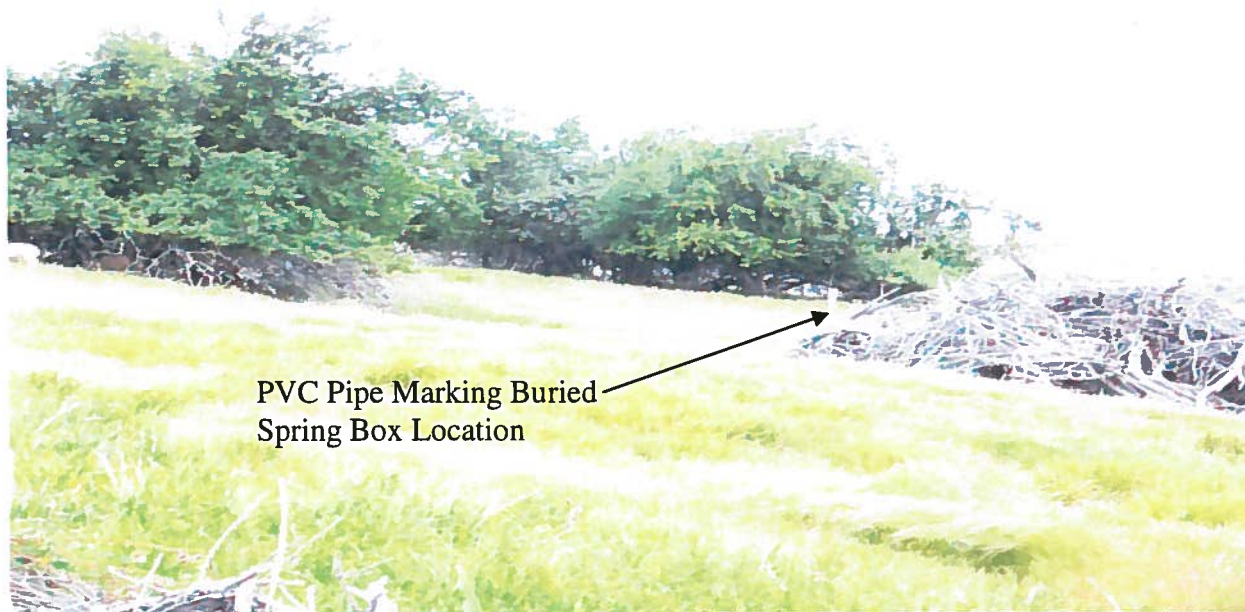
Field Exam Date: 6-4-12

PLS: NE1/4, NE1/4 Section 27, T.15N, R.01W.

Field Examiner: RC



Place of Use: View easterly of stock water storage pond. A 2" PVC pipe from spring box located on neighbors property to the north, discharges to north end of stock water storage pond. A small spillway on south end of pond regulates pond water surface levels. The stock water storage pond provides water for a maximum of 45 head of cattle and 150 sheep.



Point of Diversion: View northerly of approximate location of buried spring box. Two PVC pipes mark the location of the spring box.



Place of Use: Stock water storage pond 2" PVC pipe supply line from spring box on neighbors property.