

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-14780

Exam Date: 9/24/2013

1. Current Owner: COUNCIL SCHOOL DISTRICT #13
PO BOX 468
COUNCIL ID 83612
(208)253-4217
2. Accompanied by: Murray Dalglish & Andy Goold
Phone No: Same
Address: Same
Relationship to Permit Holder: School Superintendent & Irrigation System Operator

3. SOURCE TRIBUTARY
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 67-2288
2. Other water rights with the same point of diversion: 67-2288

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SW1/4NE1/4 Sec. 15, Twp 16N, Rge 01W, B.M.
ADAMS County

Method of Determination: Arc Map (Aerial Photo); GPS – Latitude N.44°43.558', Longitude W.116°26.395'; Datum – NVD83.

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
16N	01W	15	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	6.0

Total Acres: 6

Method of Determination: Arc Map (Aerial Photo); Tax Lots.

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 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 Size</u>
Unknown	_Franklin_	_7.5_	_Unknown_	_Unknown_	3"
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

D. FLOW MEASUREMENTS

1.

<u>Measurement 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. Pitot tube was too small for 5/32" sprinkler nozzles. Based on the operation of 22 sprinklers at a time, assume an operational pressure of 40 psi. Flow for 22 sprinklers @ 40 psi = 4.61 gpm. $Q = 22 \times 4.61 = 101.4 \text{ gpm} \sim 0.23 \text{ cfs}$.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: (Theoretical Horsepower Equation)

$$Q = 8.8 \times 0.7 \times 7.5/150 + (2.31 \times 40) = 46.2/242.4 = 0.19 \text{ cfs}$$

$$Q(\text{sprinklers}) = 22 \text{ sprinklers} \times 4.61 \text{ gpm} = 101.4 \text{ gpm} \sim 0.23 \text{ cfs}$$

$$Q(\text{turf grass}) = 6.0 \text{ ac.} \times 0.02 \text{ cfs} = 0.12 \text{ cfs}$$

$$Q(\text{turf grass}) = 0.12 \text{ cfs} \times (24 \text{ hr}) / 8 \text{ hr} = 0.36 \text{ cfs}$$

$$Q(\text{theoretical}) = 0.19 \text{ cfs} < 0.23 \text{ cfs } Q(\text{sprinklers}) < 0.36 \text{ cfs } Q(\text{turf grass}) > 0.20 \text{ cfs } Q(\text{permit})$$

$$HP = 7.5$$

$$Z = 150' \text{ (Estimate based on City well in area)}$$

$$P = 40 \text{ psi (Assumed)}$$

Appears that the current pumping system can attain the permit diversion rate of 0.20 cfs. Recommend the permit diversion rate of 0.20 cfs.

Note: The turf grass calculation is referenced to Application Processing Memo #60 – Irrigation Diversion Rate for Turf Grass in Public Areas.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 6.0 \times 4.0 = 24.0 \text{ AFA}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.20 \times 246 \times 1.9835 = 97.6 \text{ AFA}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 24.0 \text{ AFA}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS**WATER SUPPLY SYSTEM:**

A 7.5-hp submersible pump diverts ground water for irrigation of 6.0 acres of grass. The irrigable areas include the football and track field, and the elementary school field.

IRRIGATION SYSTEM:

Ground water is discharged through two (2) 2" galvanized steel irrigation main lines. One 2" irrigation main line serves the football and track field areas. The second 2" irrigation main line serves the elementary school field.

The football and track field areas are irrigated with 3" hand lines with twenty-two (22) Nelson high impact sprinklers. The sprinklers are fitted with 5/32" nozzles. The elementary school field is irrigated with 1 1/2" hand lines. Each setting is comprised of 10 – 12 high impact sprinklers. A maximum of 22 sprinklers are in operation at one time. This allows the irrigation system operator the flexibility to irrigate both places of use at the same time.

OVERLAP ANALYSIS:

Point of Diversion: Water Right Permit No. 67-14780 and Water Right 67-2288 have an overlapping point of diversion at the ground water well.

Place of Use: Water Right Permit No. 67-14780 and Water Right 67-2288 have overlapping places of use. Since the place of use for Water Right 67-2288 is only 1-acre, the Council School District #13 needs Water Right Permit No. 67-14780 to irrigate the additional 5-acres of recreational school fields.

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

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.20	&/or	N/A
Beneficial Use Limit	0.20	&/or	N/A
System Measurement	0.19 (theoretical)	&/or	N/A
Proof Fee Amount	0.20	&/or	N/A
Recommended Amount	0.20	&/or	N/A

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 11/15	0.200 CFS	24.0 AFA
<u>Totals:</u>		0.200 CFS	24.0 AFA

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 ___ Other

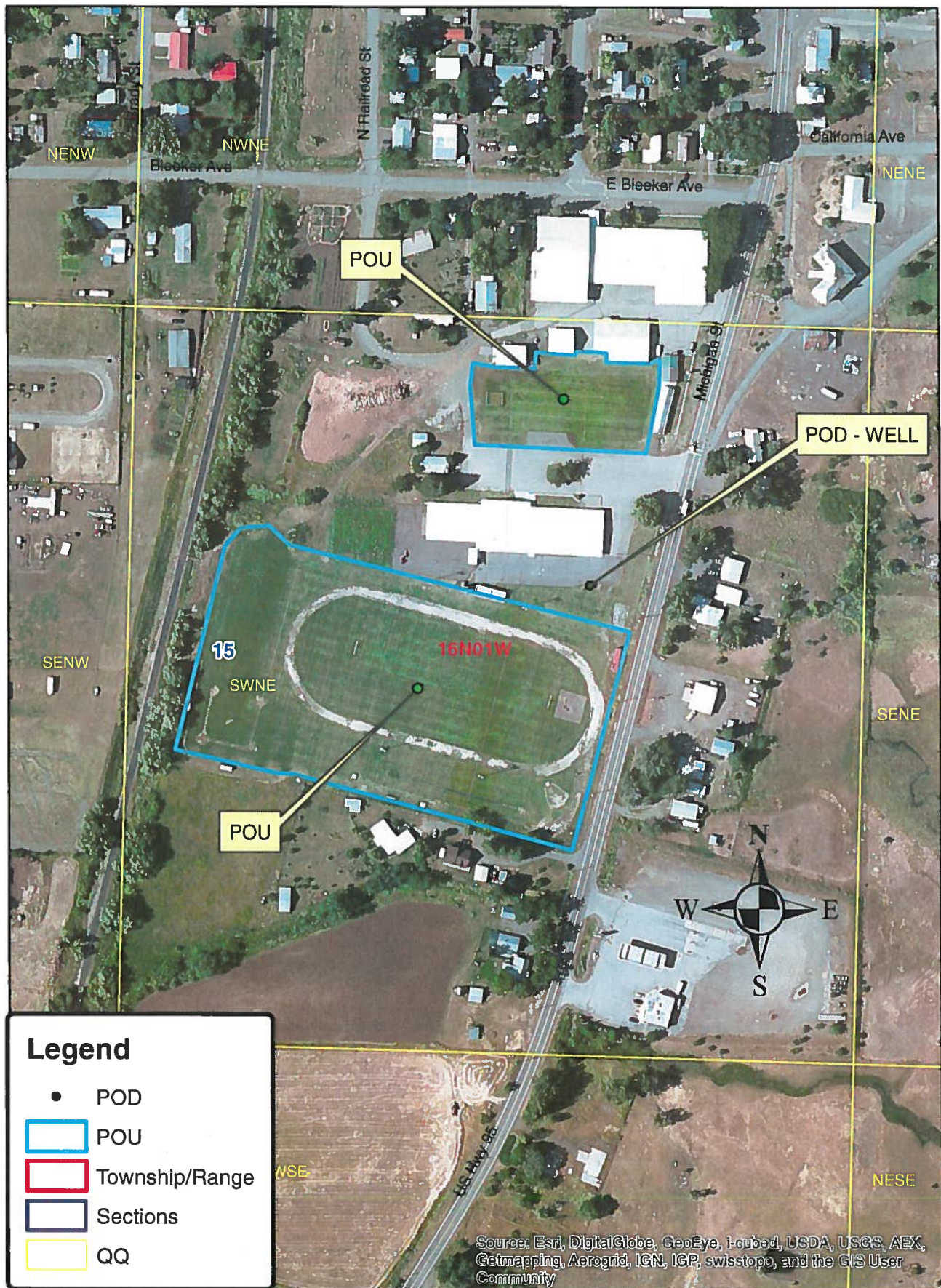
I. AUTHENTICATION

Field Examiner's Name Rick Collingwood Date 2/24/14

Reviewer _____ Date _____

67-14780

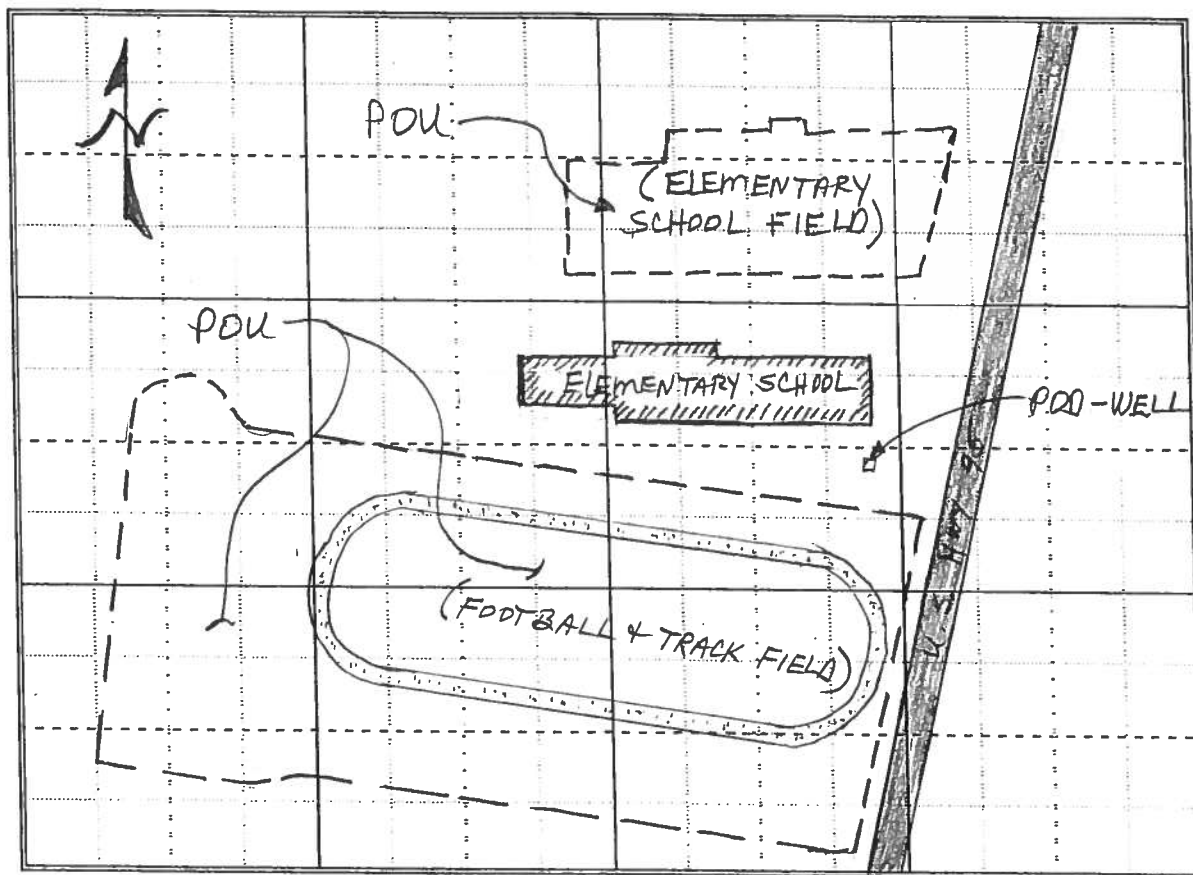
ESRI AERIAL PHOTO - 2012



0 80 160 320 480 640 Feet

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" = NTS

- ☐ 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

FIELD EXAM PHOTOS

Water Right Permit: 67-14780

Field Exam Date: 9-24-13

PLS: SW1/4, NE1/4 Section 15, T.16N, R.01W

Field Examiner: RC



Point of Diversion: View northeasterly of the well and pump house located near the northeast corner of the football and track field.



Point of Diversion: View inside the well and pump house of the ground water well and 3" and 2" galvanized steel discharge piping.



Place of Use: View southwesterly of the 3" hand line irrigation system irrigating the football and track field. The irrigation system operates with 22 Nelson sprinklers per setting.



Place of Use: View westerly of the elementary school field. The elementary school field is irrigated with 1 1/2" hand lines with 10 – 12 sprinklers per setting.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

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C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

September 13, 2013

Council School District No.13
P.O. Box 468
Council, ID 83612

RE: Scheduling Field Exam for Water Right Permit No. 67-14780

We are planning to **conduct water right field examinations** in the vicinity of the above-referenced permit **on September 27, 2013**. An examination is needed to verify your water use in order to issue a water right license.

Please be advised that you will need to operate your system under normal operating conditions during the examination. The permit authorizes the diversion of 0.20 cfs of ground water for irrigation of 6.0 acres.

In order to conduct your exam as efficiently as possible, we ask that you call this office to schedule a time which is convenient for you. **Please call me at 208-334-2190 by September 18, 2013, to conduct the exam on September 27, 2013.** If there is a problem with scheduling or conducting the examination at this time, please let me know so we can reschedule or make other arrangements.

I appreciate your attention to this matter and I look forward to hearing from you.

Sincerely,

Rick Collingwood, P.E.
Water Resource Agent, Sr.