

Total Acres: 20

[illegible][illegible]

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
47N 02W 3															X		
															L 7		

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
47N	02W	3																	
																	X		
																	L 7		

Twp Rge Sec	NE				NW				SW				SE				Totals
	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
47N 02W 3												X			X	X	
												L 6			L 7	L 8	

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
47N 02W 3												X			X	X	
												L 6			L 7	L 8	

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.

<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>
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No well information. Measurement was by the bucket method. The well is under artesian pressure as well as being pumped.

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>
Portable Pump		Honda			18 Hp	
Portable Pump		Honda			5 Hp	

2. Measurements:

Pump From Evans Creek was 18 Hp and operated at 110 psi connected to two lines that ran to sprinkler heads.
 $Q = (Hp) (8.8) (Eff) / H$

$$Q = (18 \text{ hp}) (8.8) (80\%) / (110 \text{ psi}) (2.3087 \text{ ft/psi}) = 0.499 \text{ cfs or } 223.9 \text{ gpm}$$

Occasionally a 5 hp pump is also used from Evens Creek

$$Q = (5 \text{ hp}) (8.8) (80\%) / (110 \text{ psi}) (2.3087 \text{ ft/psi}) = 0.14 \text{ cfs}$$

Well Measurement by bucket method

Taylor measured 70 gpm = 0.16 cfs

Total diversion measurements	0.499 cfs
	0.160 cfs
	<u>0.140 cfs</u>
Total	0.799 cfs

E. FLOW CALCULATIONS

Measured Method:

See above calculations

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 20 \text{ ac} \times 3 \text{ af/ac} = 60 \text{ af}$$

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

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 0.4 \text{ cfs} \times 231 \text{ days} \times 1.9835 = 183.3 \text{ af}$$

2. Volume Calculations for Other Uses: *V = 60 af*

Storage calculations:

Pond #3 was not constructed.

Pond #1 0.3 ac x 10 ft ave. depth = 3 af

Pond #2 0.1 ac x 10 ft ave. depth = 1 af

Irrigation storage	Pond size	4 acft
	Evaporation	1.2 af
	Seepage	0.0 af (Instream Pond)
	Irrigation	<u>60 af</u> (20 ac x 3 af/ac)
	Total	65.2 af
Stockwater Storage	Pond size	4 af
	Evaporation	1.2 af
	Seepage	0.0 af
	Stockwater	<u>0.2 af</u> (10 head of mixed stock)
	Total	5.4af (Can only license 5.1 af as per permit)
Wildlife Storage	Pond size	4 af
	Evaporation	1.2 af
	Seepage	<u>0.0 af</u>
	Total	5.2 af

Irrigation From Storage 20 ac x 3 af/ac = 60 af

Stockwater From Storage 0.2 af from chart

G. NARRATIVE/REMARKS/COMMENTS

Greg Taylor on September 15 2014 met with the owner Frank Kelley and performed the field exam. At that time Greg obtained the Statement of Completion and associated fee. The Statement of Completion was lost however the receipt was found in the Departments data base. A replacement Statement of Completion was obtained and signed by the owner on January 12 2015 so the Department could move forward and complete the field exam.

Information for this field exam was obtained from Greg Taylors notes and an interview with Frank Kelley. The owner generally uses one 18 hp pump to divert water from Evans Creek that is positioned along the creek within Lot 7, of the SWSE. Occasionally the owner with also utilize a 5 hp portable pump along Evans Creek at the same time the 18 hp pump is in use, therefore, two points of diversion from Evans Creek are justified. The Evans Creek diversions supply supplemental water to ponds one and two as well as irrigation to the fields as needed. Ponds one and two are also pumped to supply irrigation water to the fields. The well supplies supplemental water when needed to ponds one and two as well as some irrigation to fields near the pond. Neighbors at times run approximately 10 head of mixed stock on the property. Well water can be diverted to a trough for stockwater when needed. Ponds one and two are constructed on two separate unnamed streams and supplemented with water from Evans Creek and a well as needed. The permitted irrigation acreage was 25.9 acres. By current aerial photography it was determined that only 20 acres are actually being irrigated. The landowner was in agreement with the acreage number.

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>
DIVERSION TO STORAGE	01/01 to 12/31	0.425 CFS	
IRRIGATION	03/15 to 10/31	0.400 CFS	60.00 AF
IRRIGATION STORAGE	01/01 to 12/31		65.20 AF
IRRIGATION FROM STORAGE	03/15 to 10/31		60.00 AF
WILDLIFE STORAGE	01/01 to 12/31		5.20 AF
STOCKWATER STORAGE	01/01 to 12/31		5.10 AF
STOCKWATER FROM STORAGE	01/01 to 12/31		0.20 AF
STOCKWATER	01/01 to 12/3		0.2 AF
<u>Totals:</u>		0.425 CFS	65.40 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

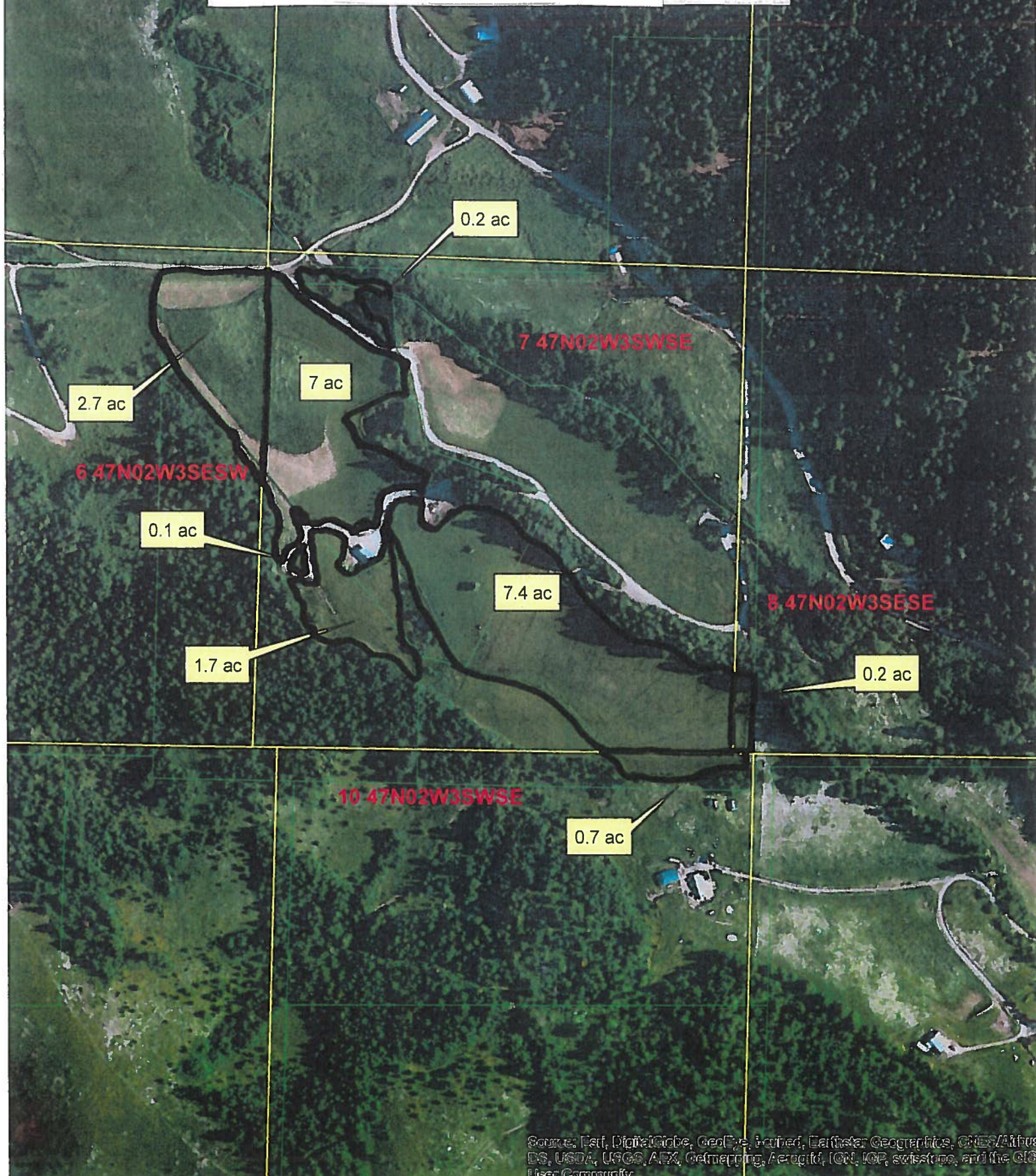
I. AUTHENTICATION

Field Examiner's Name Keith L. Sankhara Date 1/28/2015

Reviewer Eric J. Morris Date 1/29/2015

ACREAGE DETERMINATION

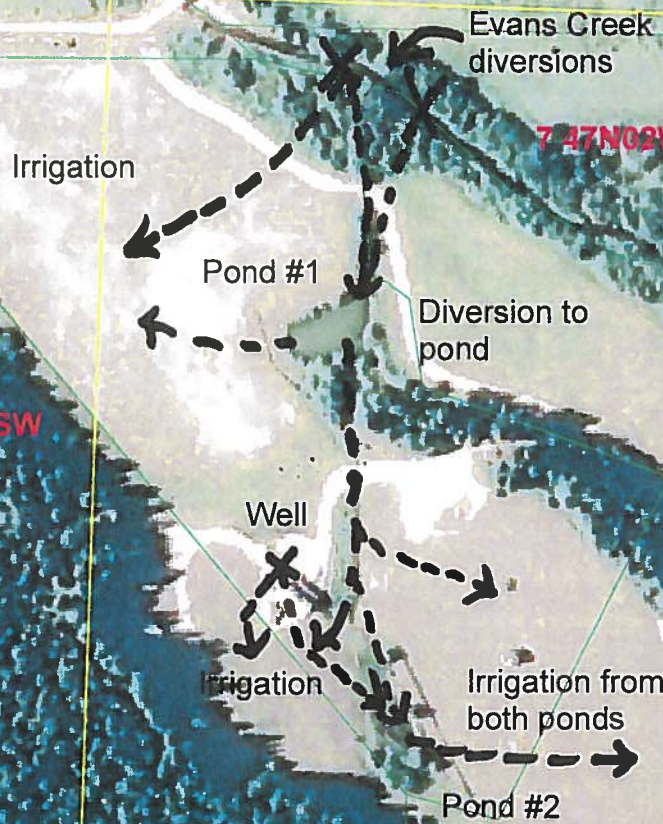
941-7530



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

DELIVERY SYSTEM LAYOUT

94-7530



7 47N02W3SWSE

6 47N02W3SESW

8 47N02W3SESE

10 47N02W3SWSE

9/13/2014
94-7530





9/13/2014

94-15.90 9/13/14



9/13/2014
94-7530





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04-7537 911912014



94-1537 9/12/14



94-7530 91131 2014



18 HP Honda

94-1530



9/13/2014

5 HP Honda 94-7530



9/3/87

5th Honda 94-7597



9/13/2004

Pond #1

94-7530

PUMP EQUATIONS
WATER RIGHT No.

	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q = HP*8.8	18	264.4	0.8	10	110
Q = 0.480 cfs 215.4 gpm					



Compose

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- Spam (30)
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 - Starred
 - People
 - Social
 - Travel
 - Shopping
 - Finance

[No Subject](2) People

me There is no middle pond. So, that volume has to be taken out of sto Today at 12:32 PM

me To me Today at 12:32 PM

There is no middle pond. So, that volume has to be taken out of storage component. The other two ponds volumes are correct on the permit.
The water that was measured by bucket method from well into upper pond was 70 gallons per minute if I remember correctly. Frank held bucket and I ran clock.
The other sprinklers ran about 60 to 80 gpm. I believe there were four running. That was from Evans Creek.
POU is same as permit.

Sent from my iPhone

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