

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 63-33678

1. Owner Rebecca and Warren Eilers Phone No. 208-286-7465
Current address 8800 Hwy 16, Eagle, Idaho 83616
2. Examiner's name Cody Parker EXAM DATE 05/06/2019
3. Accompanied by Warren Eilers Email _____
Address _____
Relationship to permit holder _____ Phone No. _____
4. Source Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use None
2. Other water rights with the same source and point of diversion None

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
			SW	NW	16	05N	01W	Ada	GPS, digital PLS map

2. Place(s) of Use: Method of determination Aerial imagery, site visit, digital PLS map

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	01W	16							2.7	3.7	3.0	0.4							9.8

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" = _____

- ☒ 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

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0064202		20			

*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
Panametric Ultrasonic Flow Meter		GE	PT878	GAA1620004		

2. **Measurements:** _____

Flow meter measurement taken on one wheel line in northernmost field of the place of use. Two such wheel lines were running at the same time in addition to 9 Nelson R33 sprinklers with brown nozzles.

E. NARRATIVE/REMARKS/COMMENTS

Permit 63-33678 authorized the diversion of 0.32 cfs groundwater to irrigate 16 acres. Proof of beneficial use was submitted on October 27, 2017. I completed the field exam for this permit on May 6, 2019.

The point of diversion is an eight-inch well drilled to a depth of approximately 700 ft with a water bearing zone 248 to 294 ft BGS. A 20-hp pump diverts water to a two-inch mainline which forks to the north of the well. The applicant grows a combination of alfalfa and pasture grass which are watered using both wheel lines and K-Line pods with Nelson R33 sprinkler heads with brown nozzles.

The pressure at the well head is 60 psi. Looking at the well drillers report, a reasonable estimate for pumping level is around 270 feet. Total dynamic head is estimated at 409 ft. Using these figures in the water horsepower equation, a theoretical diversion capacity for the well of 0.46 cfs.

At the time of the exam there were two nine-span wheel lines running and nine Nelson Rotator R33 sprinklers. I measured the diversion rate at one wheel line which was 0.063 cfs. Two wheel lines would put out approximately 0.13 cfs. The nine R33s running were uphill from the well. I estimated that the top one was around 80 ft above the well head and on average the sprinklers were around 40 ft above the well head. Factoring in pressure loss due to elevation change, I calculated that the pressure at the sprinklers was, on average, around 45 psi. According to the Nelson R33 brochure, these nozzles at 45 psi put out around 4.7 gpm apiece. That gives a total of 42.3 gpm, or 0.09 cfs, total from the sprinklers. Given the above calculations and measurements, I estimate the diversion rate to be around 0.22 cfs.

Aerial imagery shows that fewer acres irrigation were developed than permitted. This was confirmed by the permit holder during the exam. The total number of acres developed is 9.8 (as measured from aerial imagery). The BU standard for irrigation ($0.02 \text{ cfs/acre} \times 9.8 \text{ acres} = 0.20 \text{ cfs}$) is the limiting factor for the diversion rate and is the rate I have recommended for the license. The recommended annual volume comes from 4.5 afa/acre.

There are no overlapping uses of the well. The permit holder does not have any other water available to irrigate the place of use.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

F. FLOW CALCULATIONS☐ Additional computation sheets attached

Measured Method:

0.063 cfs per wheel line x 2 wheel lines = 0.13 cfs

60 psi at well - (40 ft / 2.31 ft/psi) = 43 psi

Nelson R33's at 45 psi = 4.72 gpm per nozzle x 9 nozzles = 0.09 cfs

TOTAL = 0.22 cfs

BU Standard = 9.8 acres x 0.02 cfs per acre = 0.20 cfs

RECOMMEND: 0.20 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

 $V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 9.8 \text{ acres} \times 4.5 \text{ afa/acre} = 44.1 \text{ afa}$ $V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.20 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 103.1 \text{ afa}$ $V = \text{Smaller of } V_{I,R} \text{ and } V_{D,R} = 44.1 \text{ afa}$

2. Volume Calculations for Other Uses:

No other uses

H. RECOMMENDATIONS

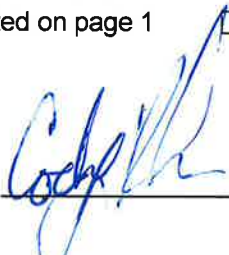
1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Irrigation	03/01	11/15	0.20 cfs	44.1 afa
Totals:			0.20 cfs	44.1 afa

2. Recommended Amendments

☐ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☒ None☐ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**

Field Examiner's Signature



Date

5-7-19

SEAL

Reviewer



Date

5-7-2019

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

Date/Time	Fwd Totalizer ft ³	Error
5/6/2019 15:44	74068.9	0
5/6/2019 15:45	74072.7	0
5/6/2019 15:46	74076.4	0
5/6/2019 15:47	74080.2	0
5/6/2019 15:48	74084.0	0
5/6/2019 15:49	74087.7	0
5/6/2019 15:50	74091.6	0
5/6/2019 15:51	74095.4	0
5/6/2019 15:52	74099.2	0
5/6/2019 15:53	74103.2	0
5/6/2019 15:54	74106.8	0

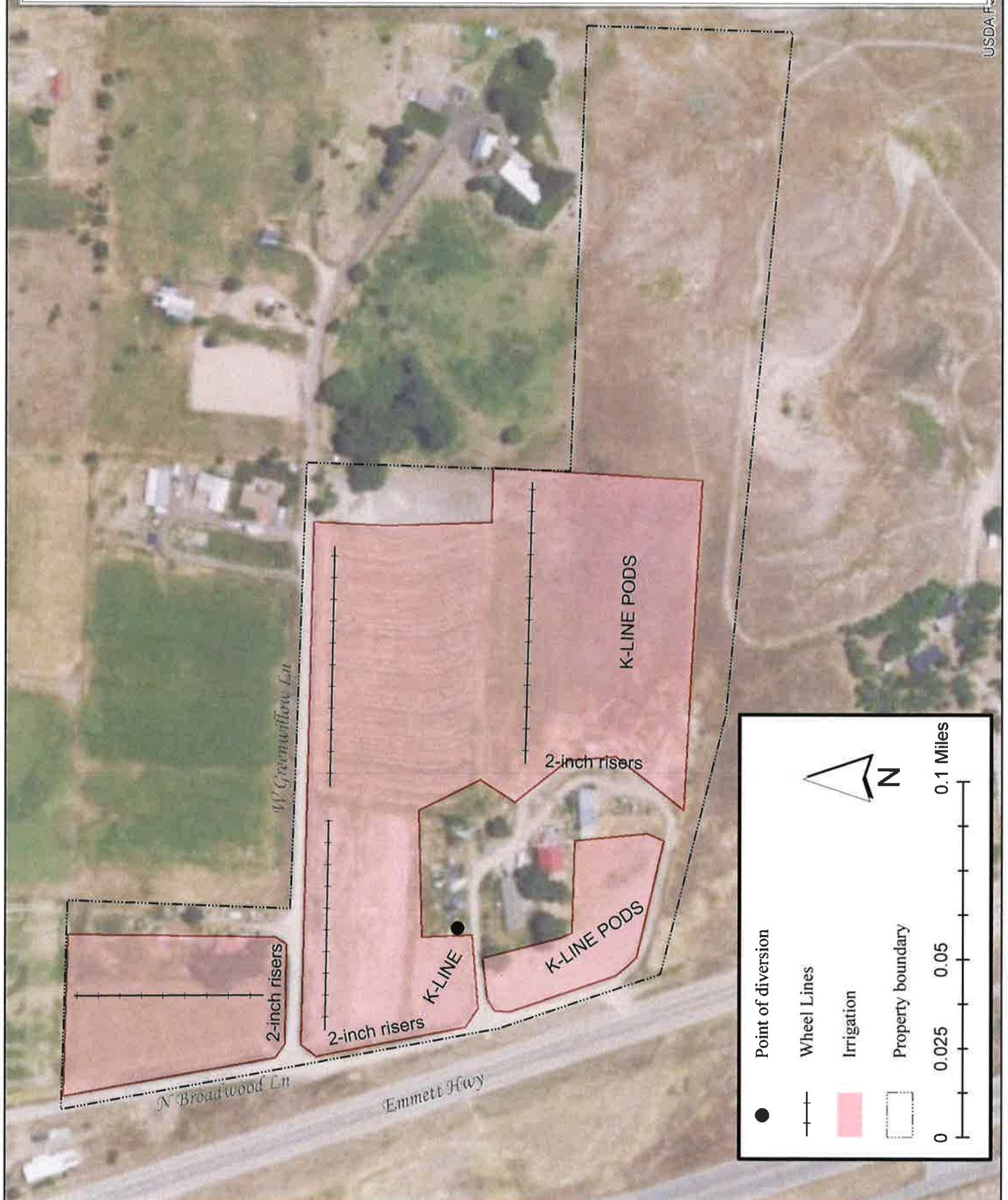
Total 37.9 ft³
Time 10 min
Average Rate 0.063 cfs

Right No. 63-33678

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

System Diagram

USDA Farm Service Agency



State of Idaho
Department of Water Resources
Beneficial Use Field Report
63-33678

IRRIGATION

01W



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.035 0.07 0.14 Miles



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT



The 8-inch well. A 20-hp pump diverts water to a 4-inch line that necks down to 2-inch mainline.



Metal tag no. D0064202

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT



Nelson R33 Rotators with brown nozzles.



One of the two wheel lines running during the exam. This is the northernmost field of the place of use.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT



The field to the west of the house.
The K-Line pods run up the hill
shown in the background. Wheel
lines to the left.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

Place of Use Comparison

05N01W16

Basin/Sequ	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
63-10860	FIREBIRD	GROUND IRRIGATION										0.5	0.5	0.5	0.5					2
63-12532	NOBLE, K	GROUND IRRIGATION										2								2
63-33678	EILERS, J	GROUND IRRIGATION								2.7	3.7	3	0.4							9.8
63-34520	CHAPARI	GROUND IRRIGATION						5												5
63-34521	CHAPARI	GROUND IRRIGATION						5												5
63-3576	CHAPARI	GROUND IRRIGATION						5	10.5		10									25.5
63-7700	CHAPARI	GROUND IRRIGATION						25	29	10	30									94

Same QQ no overlap

63-10860	FIREBIRT GROUND WATER
63-12532	NOBLE, K GROUND WATER
63-18391	SWAFFO GROUND WATER
63-31044	NOBLE, K GROUND WATER
63-33678	EILERS, J GROUND WATER
63-34520	CHAPARI GROUND WATER
63-34521	CHAPARI GROUND WATER
63-35761	CHAPARI GROUND WATER
63-7396	BOISE VA GROUND WATER
63-7700	CHAPARI GROUND WATER

[illegible]

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

1. WELL TAG NO. D 0064202

Drilling Permit No. 941931 867982
Water right or injection well # 63-33678

2. OWNER:

Name Warren and Rebecca Eilers
Address 8800 Hwy 16
City Eagle State ID Zip 83616

3. WELL LOCATION:

Twp. 5 North ☒ or South ☐ Rge. 1 East ☐ or West ☒
Sec. 16 1/4 SW 1/4 NW 1/4

Gov't Lot _____ County Ada
Lat. 43 46.319 (Deg. and Decimal minutes)
Long 116 28.093 (Deg. and Decimal minutes)
Address of Well Site 8800 Hwy 16

(Give at least name of road + Distance to Road or Landmark)
City Eagle
Lot _____ Blk. _____ Sub. Name _____

4. USE:

☐ Domestic ☐ Municipal ☐ Monitor ☒ Irrigation ☐ Thermal ☐ Injection
☐ Other _____

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☐ Other _____

6. DRILL METHOD:

☐ Air Rotary ☒ Mud Rotary ☐ Cable ☐ Other _____

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
bentonite	0	248	4500lbs	dry pour

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
8"	+2	270	.250	steel	☒	☐	☐	☒

Was drive shoe used? ☐ Y ☒ N Shoe Depth(s) _____

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____
Manufactured screen ☒ Y ☐ N Type johnson
Method of installation placed

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
272	292	.025	---	6"	stainless	

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☐ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
8-12silica	294	248	2200lbs	dry pour

11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____

Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 226 Static water level (ft) 204
Water temp. (°F) 62degF Bottom hole temp. (°F) _____
Describe access port well cap

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
90ft	30gpm	180minutes
235 ft	100 gpm	2 hrs

Test method:

Pump	Bailer	Air	Flowing artesian
☐	☐	☒	☐
☒	☐	☐	☐

Water quality test or comments:

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
12"	0	2	top soil		X
	2	10	brown sandy clay		X
	10	31	coarse sand		X
	31	50	tan clay		X
	50	70	coarse sand		X
	70	84	tan clay		X
	84	95	coarse sand		X
	95	103	tan clay		X
	103	109	sand		X
	109	121	gray clay		X
	121	125	sand		X
	125	145	gray clay		X
	145	149	sand		X
	149	165	gray clay		X
	165	170	sand		X
	170	197	tan sandy clay		X
	197	218	sand	X	
	218	226	blue clay		X
	226	233	sand	X	
	233	234	blue clay		X
	234	245	gray sand	X	
	245	261	blue clay		X
	261	290	coarse gray sand	X	
	290	309	blue clay		X
	309	335	sandstone		X
	335	421	blue clay w/ fine sand strips	X	
	421	700	blue clay		X
			finished well at 294		
			no appreciable water bearing formations found after 290		

Completed Depth (Measurable): 294ft

Date Started: Mar 18, 2013 Date Completed: Apr 8, 2013

14. DRILLER'S CERTIFICATION:

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Coonse Well Drilling Co. No. 409

*Principal Driller [Signature] Date Apr 12, 2013

*Driller [Signature] Date Apr 12, 2013

*Operator II _____ Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

RECEIVED

JUN 20 2013



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 W Airport Way • Boise ID 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348

Website: idwr.idaho.gov • Email: westerninfo@idwr.idaho.gov

BRAD LITTLE
Governor

GARY SPACKMAN
Director

April 29, 2019

REBECCA AND WARREN EILERS
8800 HWY 16
EAGLE ID 83616

RE: Scheduling Field Exam for Water Permit No. 63-33678

Dear Permit Holder:

The Idaho Department of Water Resources (IDWR) is planning to conduct water right examinations in the vicinity of the above-referenced permit. An examination is needed to verify water use(s) developed under the permit in order to issue a water right license.

Your permit authorizes the diversion of 0.32 cfs groundwater for irrigation. If you developed a beneficial use of water and still own the place of use property identified in the permit, please contact me at your earliest convenience to schedule an examination.

If you developed a beneficial use of water under the permit but no longer own the place of use property, please use the enclosed Assignment of Permit form (\$25 fee). This will allow IDWR to work with the new permit owner for the license process.

A license cannot be issued if beneficial use of water was not developed or if use was developed but abandoned.

In either of those cases, please relinquish the permit by using the enclosed Relinquishment of Permit form (no fee required). The permit will be voided if a relinquishment form is not submitted for either of those cases.

Please contact me within the next thirty (30) days to schedule an examination or submit a relinquishment or complete an assignment form. If you still own the property in question but do not make a timely response in this regard, the permit will be voided. If you no longer own that property and do not assign or relinquish the permit, IDWR will work with the current property owner to issue a license or void the permit.

Please call me at 208-334-2190 if you have any questions. I appreciate your attention to this matter and look forward to hearing from you.

Sincerely,



Cody Parker

Water Resource Agent, Sr.

Enclosure: Relinquishment of Permit Form
Assignment of Permit Form
Proof Report and Map