

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. 65-13946

1. Owner Michael Reed Phone No. [208] 250-1888 - cell
 Current address 10883 N Iowa Ave, Payette, ID 83661
2. Examiner's name Vicky Music EXAM DATE 11/1/10
3. Accompanied by Michael Reed Email _____
 Address 10883 N Iowa Ave, Payette, ID 83661
 Relationship to permit holder _____ Phone No. [208] 250-1888
4. Source ground water tributary to Snake River

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

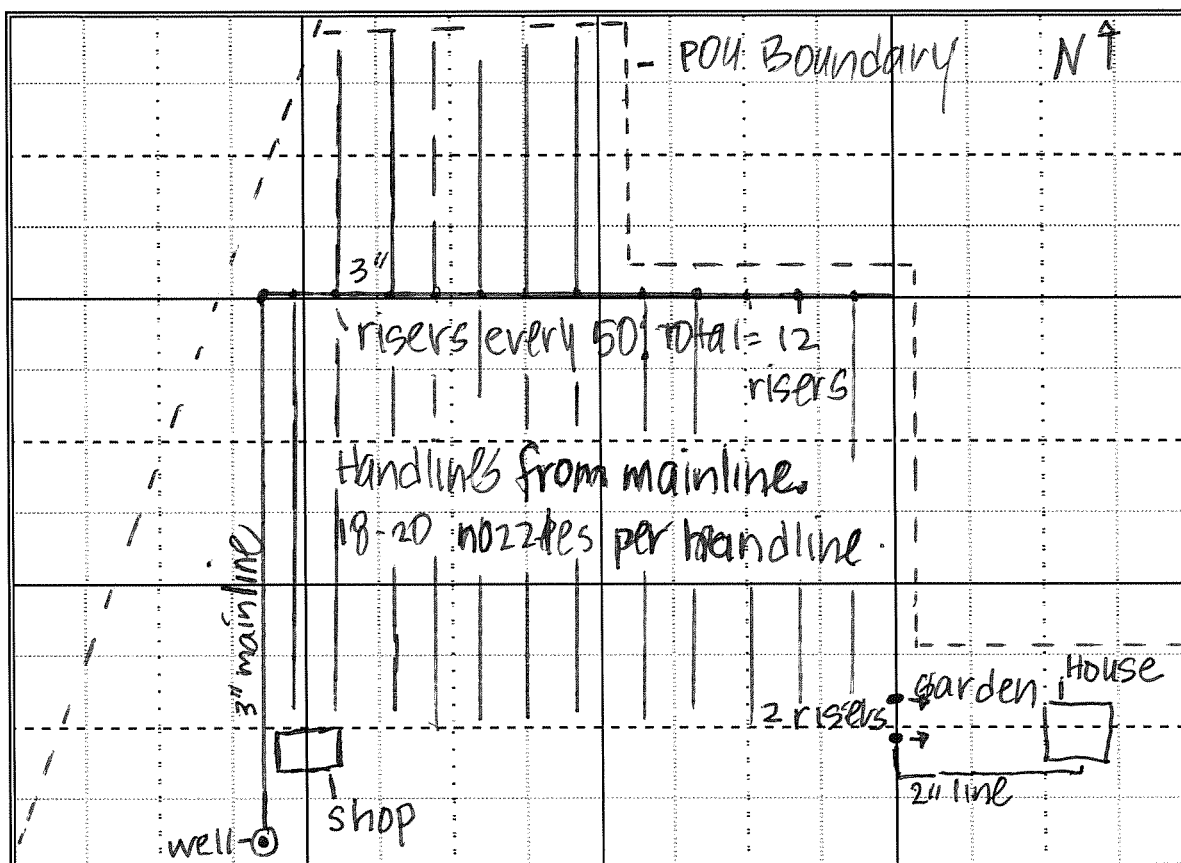
1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
			NE	NE	22	9N	5W	PAYETTE	GPS AND TOPGRAPHIC MAP
									GPSed: 22.66.563, 14.38.135

2. Place(s) of Use: Method of determination topographic 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	
9N	5W	22	5.5																5.5
9N	5W	22	D																
9N	5W	22	S																

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" = n/a

- ☒ 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
well	Hitachi	7.5	mfg # 689470E ?	Flotec 4"	submersible - SN - n/a
well	unknown	1	unknown	Berkely ?	submersible - SN - n/a

*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: _____

no measurements were taken. submersible pump. system was not operating that day.

E. NARRATIVE/REMARKS/COMMENTS

The application was made by Ray Reed. Ray died in 2004 and his wife assigned the permit to their son, Michael, in 2005. Proof of Beneficial use was due October 1, 2002, and was submitted with the fee on that date by Michael Reed. There is no information of the use during the beneficial use period. Mr. Michael Reed [Mr. Reed] is not familiar with the system. Mr. Reed said that his dad had the well drilled, filed the application and developed the sprinkler system and was very knowledgeable about all elements of the system and its use.

The well is fitted with 2 pumps. There is a 3/4 or 1 h.p. submersible for the shop and a 7.5 h.p. Flotec submersible pump for irrigation. Mr. Reed provided a copy of an induction motor label, though he was not entirely sure if it was for the pump motor, and had no additional information about the pump. He said it was set at 60' below ground level [bgl]. While I was on site, he called Ernie's Pump for a pump curve as I requested. Ernie's Pump provided the information regarding the pump manufacturer and h.p. on the Flotec label R. Reed found. Ernie's Pump stated the well pumped 30 gpm, however, Mr. Reed was not certain the Flotec motor label was for the irrigation pump. I include the information here but did not depend on it solely.

The well is 65' deep. I could not see an access port on the well though Mr. Reed thought it had one. He said the pressure was 55 psi. IDWR has a well log that states the static water level is 35' bgl, a bailer test yielded 60 gpm, drawdown was 3' and the pumping level was 38' bgl.

From the well, there is a 3" PVC pipe to the field north of the shop, then east to the property line, then south to the garden and house. There are 12 risers in the main field and 2 risers for the house garden. When irrigating, there are 18 - 20 sprinklers on each line, but Mr. Reed said they run only 1 sprinkler line at a time. There were no sprinklers attached to the risers but there were many sizes of Rainbird nozzles on the property: 11/64, 8/32, 5/32, 7/64, and 9/64. Mr. Reed said they were all used.

[continued on page 3A]

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?

Stockwater is for 10 head mixed stock.

Domestic use is for internal use for a shop.

Delete the surface water condition.

65-13949 Beneficial Use Field Report Narrative [continued from page 3]

None of the property appeared irrigated. Mr. Reed said that his dad planted alfalfa, hay, melons but that it had not been irrigated since his dad died. I could not see evidence of irrigation in any of the aerials I reviewed for 2004, 2006 and 2009. Mr. Reed pointed out areas that were irrigated that are used for storage of storage containers and equipment. I looked at aerials to determine a reasonable number of acres and came up with 5.5. I did not include the area south of the shop that is used for storage. My notes indicate there is not a riser in this area south of the shop

The application was for 20 acres. The Proof of Beneficial Use form states 8 acres were developed and irrigated, the domestic use is for the shop and stockwater is for 10 head of mixed stock – horses, sheep a calf. Mr. Reed said the stock use was to be primarily for the kids, as a hobby. He could not remember when there was stock on the property last.

Because nearly 7 years have passed since the proof of beneficial use was filed and the original permittee is no longer available to provide information, I assume that 5.5 acres was developed and that is what I suggest be licensed at 0.11 cfs. I propose 0.02 for stockwater and 0.04 for domestic, with a total diversion rate of 0.17 cfs. Based on calculations using 4 methods, this is a reasonable diversion rate.

I asked Mr. Reed about overlapping rights and he said they had used Snake River water in the past. He has a pump in the Snake River that has been there since 1955 but he was told by the people in Boise [IDWR] that he had lost the right due to nonuse. He has an easement for his pump, pays no assessments and still occasionally pumps from the Snake R. He says it is difficult to get Snake R water to his property. Highway 95 and another road are between his land and the river. Mr. Reed estimated the last time he pumped from the river was 1990 or 1994.

An IDWR database search indicates an SRBA claim no. 3-4013 in the name of Michael Reed. I could not find the claim file but the Order disallowing the claim was in PCdocs. It looks like evidence of priority was requested but Mr. Reed did not submit it.

The permit was issued for a use supplemental to the surface water [Snake R.] use. The SRBA Court did not issue the partial decree for claim 3-4013 until 2009. Because the claim was disallowed and it was legally determined that there is no primary surface water right appurtenant to the property, this license can be issued as a primary use from ground water. This is not considered an enlargement.

A search of the IDWR database revealed a domestic right 65-18506 in Michael's parents' names. Michael said that his parent's home which he now owns has its own well. The application lists domestic use for a home and shop, however, a domestic condition will refer to the shop only.

I sent Michael Reed a letter on 12/7/2011 informing him that I would recommend 5.5 acres irrigation and no domestic use for the house. I asked for additional information or comments by 12/30/11. I received no response. Hence, the license can be issued.

F. FLOW CALCULATIONS☒ Additional computation sheets attached

Measured Method:

used 4 methods to calculate flow [1] theoretical using IDWR standard pressure for irrigation = 60 psi [2] IDWR standard of 0.02 cfs/acre - used in recommendations [3] calculation using various sizes of nozzles found during exam and the gpm at 60 psi. Used the IDWR reference table: SPRINKLER DISCHARGE IN GPM [attached] [4] IDWR standard reference EXPECTED FLOW FOR PIPE DIAMETER.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5.5 \times 4.5 = 24.75 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.11 \text{ cfs} \times 260 \times 1.9835 = 56.7$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 24.75$$

2. Volume Calculations for Other Uses:

DOMESTIC FOR SHOP - VERY SMALL AMOUNT - WILL USE 0.10 afa

STOCKWATER - 10 head mixed at 12 gpd x 365 days. Used conversion factor 0.0134. $[10][.0134] = 0.134 \text{ afa}$ **H. RECOMMENDATIONS**

1. Recommended Amounts

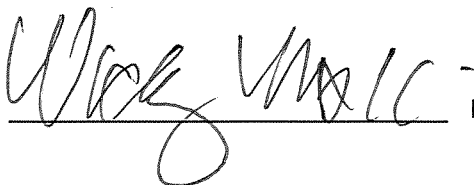
Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
domestic	1/1	12/31	0.04	0.10
irrigation	3/1	11/15	0.11	24.8
stockwater	1/1	1231	0.02	0.10
Totals:			0.17	25

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 1/18/2012

SEAL

Reviewer

Date



Idaho Department of Water Resources

Water Right
65-13946
(IRRIGATION)

R05W

● Point of Diversion

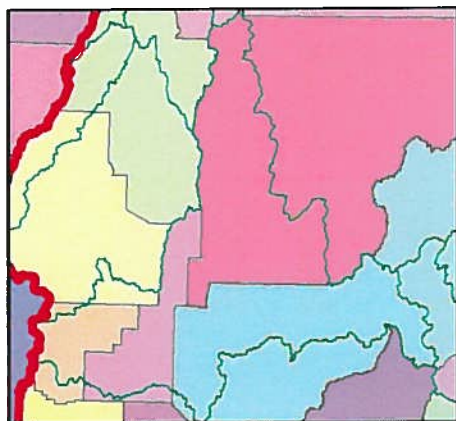
□ Place of Use

□ State Outline

□ Townships

□ PLS Sections

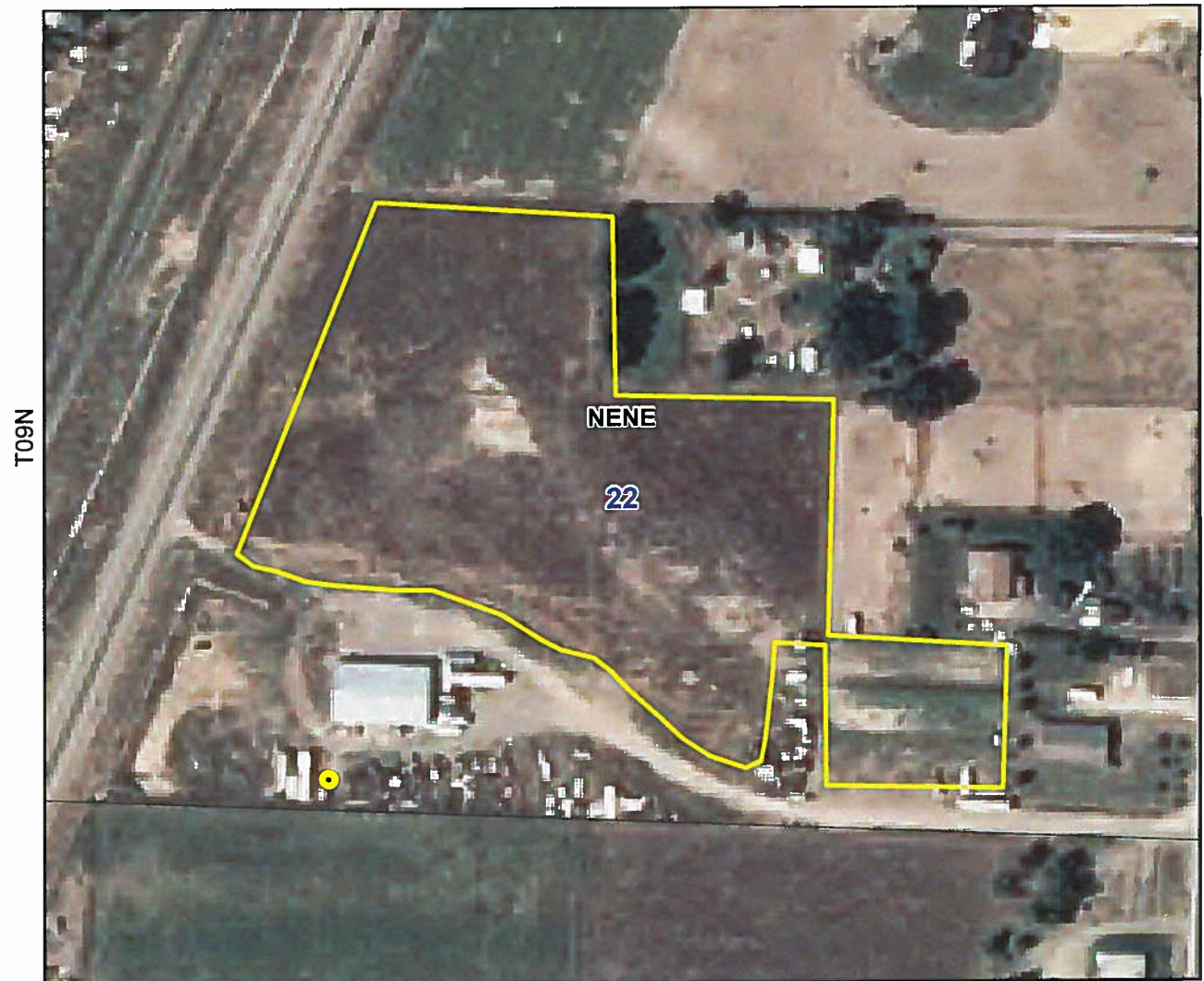
□ Quarter Quarters



Payette County
IDWR Basin 65

Prepared by Music, Vicky

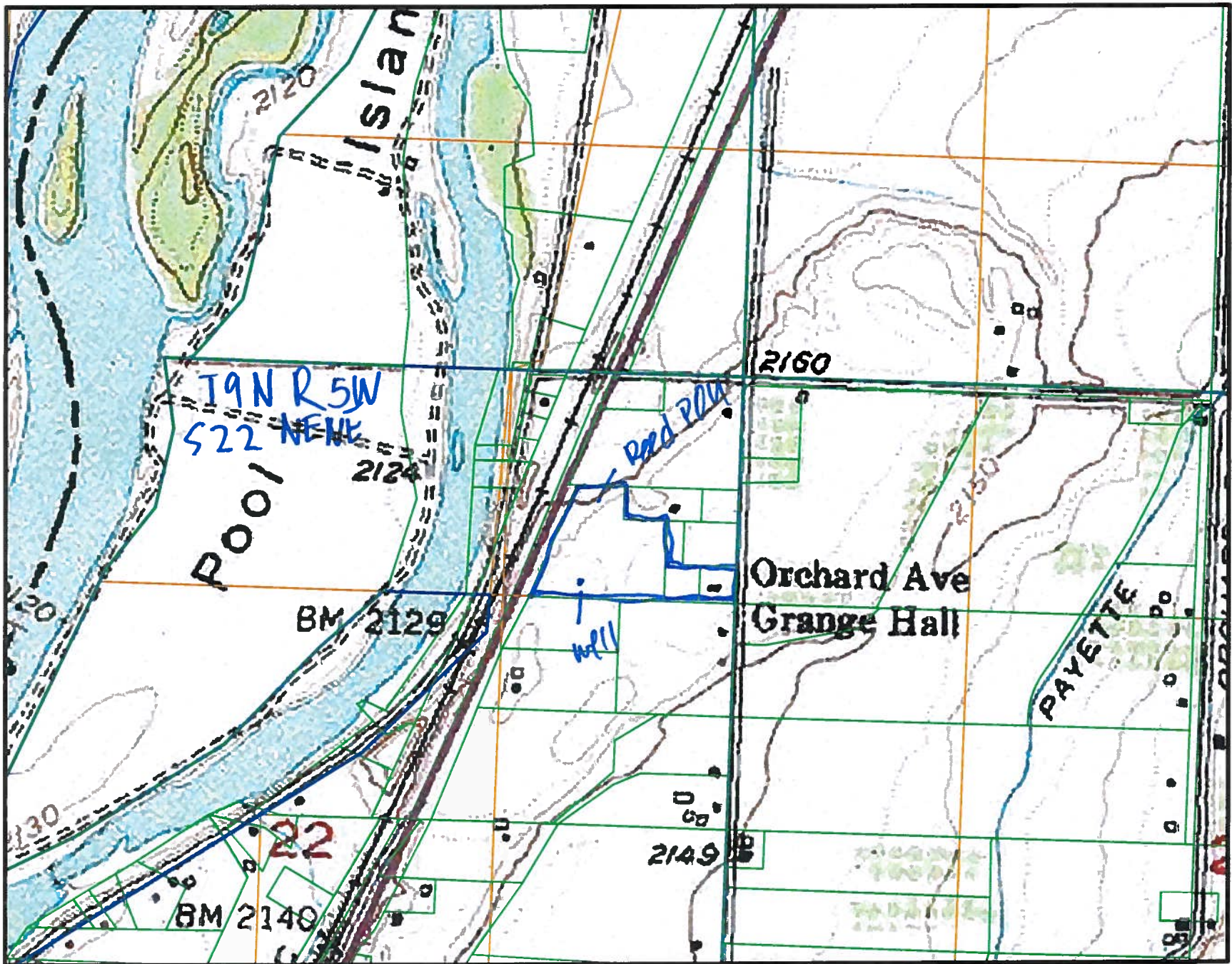
2009 Aerial Photography



0 0.04 0.08 0.16 Miles



65-13946 -- approximately 5.5 acres irrigated. Area south and west of the shop - no risers. Rainbird 30 nozzles. 18 - 20 sprinklers each line. Runs 1 line at a time.



65-13946 -- TOPO MAP

F. - Additional Calculations

Rec'd

65-13946

1) Theoretical Flow Calculation

1.5 hp pump, 60 psi (standard for irrigation),
38' pumping head from well 10', 10% efficiency

$$\frac{(1.5)(8.8)(.10)}{38' + (2.31)(60)} = \frac{46.2}{176.6} = 0.26 \text{ cfs}$$

2) IDWR standard using 0.02 cfs/ac irrigation

$$(1 \text{ acres})(.02 \text{ cfs}) = 0.14 \text{ cfs}$$

3) using various nozzle sizes found onsite and 18-20 nozzles per handline per Mr. Rael

(a) 5/32" nozzle @ 60 psi = 5.65 gpm per nozzle

$$\frac{(20 \text{ nozzles})(5.65 \text{ gpm})}{(448.8 \text{ gallon per cfs}) / 448.8 \text{ per minute}} = \frac{113}{448.8} = 0.25 \text{ cfs}$$

(b) 9/64" nozzle @ 60 psi = 4.50 gpm per nozzle

$$\frac{(20)(4.5)}{448.8} = \frac{90}{448.8 \text{ gpm/cfs}} = 0.20 \text{ cfs}$$

(c) 1/64" nozzle @ 60 psi = 6.80 gpm per nozzle

$$\frac{(20)(6.8)}{(448.8 \text{ gpm/cfs}) / 448.8} = \frac{136}{448.8} = 0.30 \text{ cfs}$$

(4) 3" pipe diameter from table = 0.25 cfs

SPRINKLER DISCHARGE IN GPM

Lead
65-13946

NOZZLE SIZE (INCHES) & PRESSURE (PSI)

$$\text{GPM} = 29.82 \times \text{DIAMETER SQUARED} \times \text{SQUARE ROOT OF PRESSURE}$$

Table 1. Sprinkler discharge gpm (gallons per minute) for nozzle size (inches) and pressures (psi) (pounds per square inch).

psi	Nozzle Size (in)										
	3/32	7/64	1/8	9/64	5/32	11/64	3/16	13/64	7/32	15/64	1/4
20	1.17	1.60	2.09	2.65	3.26	3.92	4.69	5.51	6.37	7.32	8.34
25	1.31	1.78	2.34	2.96	3.64	4.38	5.25	6.16	7.13	8.19	9.32
30	1.44	1.95	2.56	3.26	4.01	4.83	5.75	6.80	7.86	8.97	10.21
35	1.55	2.11	2.77	3.50	4.31	5.18	6.21	7.30	8.43	9.69	11.03
40	1.66	2.26	2.96	3.74	4.61	5.54	6.64	7.80	9.02	10.35	11.79
45	1.76	2.39	3.13	3.99	4.91	5.91	7.03	8.30	9.60	10.99	12.50
50	1.85	2.52	3.30	4.18	5.15	6.19	7.41	8.71	10.10	11.58	13.18
55	1.94	2.64	3.46	4.37	5.39	6.48	7.77	9.12	10.50	12.15	13.82
60	2.03	2.76	3.62	4.50	5.65	6.80	8.12	9.56	11.05	12.68	14.44
65	2.11	2.88	3.77	4.76	5.87	7.06	8.45	9.92	11.45	13.21	15.03
70	2.19	2.99	3.91	4.96	6.10	7.34	8.78	10.32	11.95	13.70	15.59
75	2.27	3.09	4.05	5.12	6.30	7.58	9.08	10.66	12.32	14.19	16.14
80	2.35	3.19	4.18	5.29	6.52	7.84	9.39	11.02	12.74	14.64	16.67
85	2.42	3.29	4.31	5.45	6.71	8.07	9.67	11.35	13.11	15.10	17.18
90	2.49	3.38	4.43	5.61	6.91	8.31	9.95	11.69	13.51	15.53	17.68
100	2.62	3.57	4.67	5.91	7.29	8.76	10.50	12.32	14.23	16.37	18.64
110	2.75	3.74	4.89	6.19	7.63	9.24	11.00	12.90	14.97	17.17	19.55
120	2.87	3.91	5.10	6.46	7.97	9.65	11.48	13.47	15.63	17.93	20.42
130	2.99	4.07	5.31	6.72	8.30	10.04	11.95	14.02	16.27	18.66	21.25

Note: Figures given are approximate maximum discharge rates for given nozzle size and pressure.

- USE DRILL BITS OR TAPE MEASURE TO CHECK NOZZLE SIZE
- USE SPRINKLER GAGE TO CHECK PSI
- PSI FOR SPRINKLER LINE:
 - CHECK NEAR START, MID & END OF LINE, TAKE AVERAGE
 - OR -- CHECK 1 HEAD ABOUT 1/3 FROM START OF LINE

- R 8/20/07
Cowan "Sprinkler
Q"

EXPECTED FLOWS FOR PIPE DIAMETERS

Reed
65-13946

This is for rough estimate for **pump & closed pipeline** system.

Use to double check other measurements/estimates.

Assumes optimum design.

$$Q = VA \quad \text{where: } V = 5 \text{ ft/sec} \quad A = \pi r^2 \quad (\text{radius in ft.})$$

DIAMETER (INCHES)	RATE (CFS)
01	0.03
02	0.11
03	0.25
04	0.44
06	0.98
08	1.74
10	2.73
12	3.93
14	5.34
16	6.98
18	8.83
20	10.90
22	13.19
24	15.70
36	35.34
48	62.83





INDUCTION MOTOR

TYPE	VCTC	HP	7.5	7.5
FORM	AK	VOLTS	460/230	380
PHASE	3	HERTZ	60	50
POLES	2	R P M	3450	2850
RATING	CONT	AMP'S	11 22	18
TEMP. RISE	75 °C	CODE	1	6
AMB. TEMP.	35 °C	S. F.	1 15	1
DATE	1985	S. F. A.	18 26	
		MFG. No.	689470E	

Hitachi, Ltd. Tokyo Japan

ND23419

IDAHO DEPARTMENT OF WATER RESOURCES

WELL INSPECTION FORM

1. DRILLING PERMIT NO: 164950 OTHER APPLICABLE NO: 65-13946
2. OWNER: Michael Reed * Phone: (208) 250-1888
Address: P.O. Box 811, Payette, ID 83661
3. WELL LOCATION: Twp 9N, Rge. 5W, Sec. 22, NE 1/4 NE 1/4
County Payette CO. (Provide sketch map and photo on reverse.)
10883 N Iowa Ave, Payette
4. DRILLER: Willow Creek Irr. Lic. No. 573
When Drilled? 102-2000
5. WELL CONSTRUCTION:
Casing Diameter 12 inches Water tight cap? ☒ Yes ☐ No Access Port: ☒ Yes ☐ No
Casing $\geq$ 12 inches above ground? ☒ Yes ☐ No - Describe _____
Depth of Casing 66 ft. Method Drilled cable
Condition of Well Casing: ☒ Good ☐ Fair ☐ Poor Describe _____
Control Valve? ☒ Yes ☐ No Pressure Gauge: ☐ Yes ☒ No
Condition of Piping and Valving Good
Auger to a depth of n/a ft. Evidence of Annular Seal ☐ Yes ☒ No
Are there obvious constuction problems that may be a source for contamination or waste of water?
☐ Yes ☒ No (Describe in Remarks and Attach Photo - On Reverse)
6. HYDROLOGIC INFORMATION:
Depth to Static Water 35 ft. Water Temperature 58 °F
Flowing Artesian ☐ Yes ☒ No Pressure: _____ (psi)
Water Sample Taken? ☐ Yes ☒ No If yes, describe purpose _____
Water Quality Measurements/Observations (Describe) none
7. WELL USE:
☒ Domestic ☒ Irrigation ☒ Stock
☐ Test ☐ Municipal ☐ Industrial
☐ Abandoned ☐ Waste Disposal/Injection ☐ Not Used
☐ Other: _____

8. POSSIBLE CONTAMINATION SOURCES:

Is there evidence of Chemigation? [] Yes [X] No

If yes, is there a check-valve present? [] Yes [X] No

Is there a possible source of contamination nearby? [X] Yes [] No

If yes, what Type? there is a truck repair shop on site

How far away from the well is this source? 30 yards

9. REMARKS:

W. J. White

Signature of Dept. Representative & Title

11-1-10

Inspection Date

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

SCANNED
11-1-10

Reed Field Exam Photographs



Well



From west end of shop, looking north



Domestic use – truck maintenance shop



Riser



Irrigated garden behind house.



Lots of pipe and sprinkler heads



Large field north of shop



Large field north of shop



South of shop looking east



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

Phone: (208) 334-2190 FAX: (208) 334-2348 www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

December 7, 2011

Michael Reed
10883 N. Iowa Ave.
Payette, ID 83661

Re Licensing of Permit 65-13946

Dear Mr. Reed:

IDWR is about to finalize licensing of this permit, however, I wanted to inform you about the place of use likely to be licensed. The original application was for 20 acres. When the beneficial use was filed, it stated that 8 acres had been developed. Based on my field exam last autumn and aerial photographs that I reviewed, I cannot find that more than 5.5 acres can be irrigated.

Attached is a 2011 aerial with the 5.5 acres that I believe is reasonably irrigable. The area around the house is covered under water right no. 65-18506 for domestic use. It is still in your parents' names. It does not seem reasonable to allow irrigation south of the shop that has been used for storage for years, nor west of the shop.

If you disagree with the 5.5 acre place of use, please call me at 208.334.2190. If I do not hear from you by December 30, 2011, the license will be issued for 5.5 acres. Thank you for your attention to this matter.

Sincerely,

Vicky Music
Sr. Water Resource Agent

Enclosure: Aerial photograph



65-13946 -- Michael Reed. 2011 aerial. Area outlined in purple is the POU for total of approx. 5.5 acres. House already has water rt # 65-18506 for internal use and irrigation of up to 1/2 acre. not feasible to irrigate south of the shop - used for storage. West of shop ?.

Michael Reed
PO Box 811
Payette, ID 83661

February 9, 2010

Steve Lester
IDWR – Western Region
2735 Airport Way
Boise, Id 83705

RECEIVED

FEB 09 2010

WATER RESOURCES
WESTERN REGION

Re Water Right Permit # 65-13946

Dear Mr. Lester,

Our proof of beneficial use was submitted 9/30/2002 and our field exam fee was paid. The field exam has not been done. Will you please schedule the exam for our permit during the upcoming season?

Also, the phone number on record for us is incorrect. Will you please correct the number to [208] 250-1888? Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Michael Reed". The signature is written in dark ink and is positioned below the word "Sincerely,".

Michael Reed