

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. 63-122171. Owner Michael BradyPhone No. 208-890-8400Current address 13660 N McFarland Creek Rd, Boise, ID 837142. Examiner's name Cody ParkerEXAM DATE 9/27/20183. Accompanied by Michael Brady

Email _____

Address _____

Relationship to permit holder same

Phone No. _____

4. Source ground water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use 63-5139B, 63-5139A (SE corner)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
			SE	NE	31	05N	02E	Ada	GPS, digital PLS map
									N 43°43'50.8"
									W 116°15'28.9"

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	02E	31	11			11													22

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
D0053444	VFD	45			

*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:** _____

Theoretical only _____

E. NARRATIVE/REMARKS/COMMENTS

The point of diversion is a ten-inch well with a total depth of 252 ft. Water is diverted from the well using a pump driven by a 45-hp motor, through a ten-inch steel mainline to a gated pipe and a series of risers for hand line. The place of use is 22 acres which completely overlaps the Dry Creek irrigation water right no. 63-5139B. The groundwater use was meant to supplement the existing irrigation from Dry Creek. I have added condition 943 (supplemental use condition) at licensing. The intent of the original application seems to have been to provide water when Dry Creek water is not available so condition 943 seems appropriate.

Approximately 1.7 acres of irrigation in the SE corner of the place of use appear to be on land owned by Patrick Garrow. It seems clear that the irrigation from the same system was developed on this property, though I did not get an explanation of the arrangement in place. The right will be licensed with those acres included. The landowner can submit a change in ownership for the irrigation if they wish.

The eastern section of the place of use was not being irrigated at the time of the exam. However, imagery from 2011 (map included in file with this exam) appears to illustrate that the area was watered during the development period for this permit. Therefore, that acreage has been included in the place of use.

The permit was issued with a condition specifying that the water bearing zone is from 220 to 500 ft. The well was screened from 220-250 ft. There was not condition specifying that the well should be sealed to the first confining layer below 200 ft. It appears from the well log that water may enter from above 200 ft. since there is a 2-inch overbore from 20 ft to 252 ft with no seal. The amount of water from above 200 ft may be minimal. I have recommended that the license be issued with a water bearing zone consistent with the well screen from 220 to 250 ft BGS. I have also recommended a condition that requires the owners to construct replacement or additional wells appropriately to avoid injury to senior Boise River rights.

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:

Theoretical: $8.8 \times 0.7 \times 45 \text{ hp} / (140 \text{ ft} + 2.31 \times 15 \text{ psi}) = 1.59 \text{ cfs}$

BU Standard: 0.44 cfs (recommended)

Permit Rate: 0.70 cfs

Fee Rate: 1.00 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 22 \text{ acres} \times 4.5 \text{ afa/acre} = 99.0 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.44 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 226.9 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 99.0 \text{ afa}$$

2. Volume Calculations for Other Uses:

No other uses

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	03/01	11/15	0.44 cfs	99.0 afa
Totals:			0.44 cfs	99.0 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

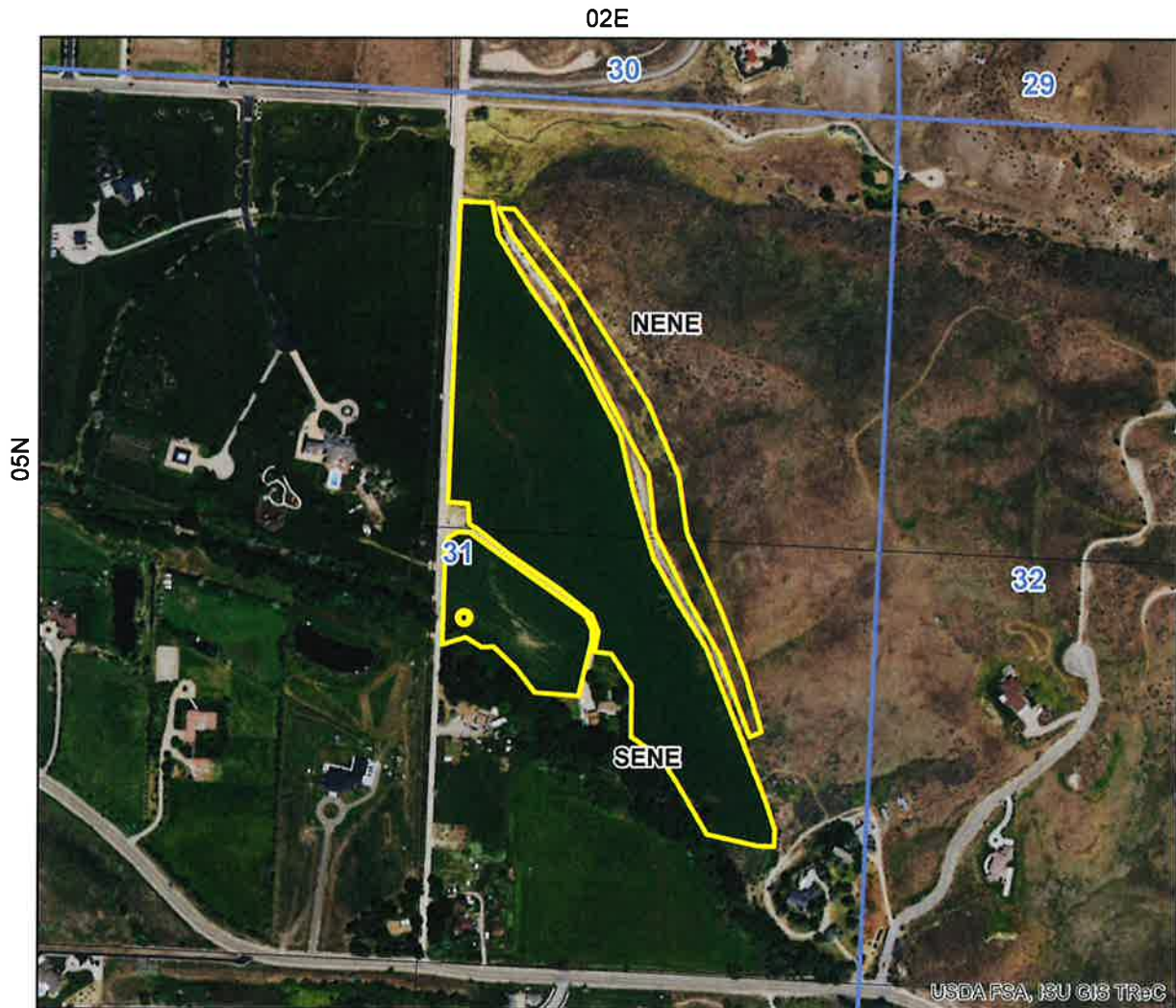
Reviewer

Date 1/3/2019

SEAL

State of Idaho
Department of Water Resources
Beneficial Use Field Report
63-12217

IRRIGATION



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

0 0.05 0.1 0.2 Miles





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**Notes**

- 1- The southwest field is irrigated from hand lines connected to a series of risers from the 10" line which branches south from the first control valve.
- 2- The larger field is irrigated using gated pipe connected to the well. The gated pipe can also be used with a separated Dry Creek system to irrigate the same acres.
- 3- This area was not being irrigated during the time of the exam. However, imagery from 2011 suggests that the area has been irrigated in the past.

$$Q = \frac{8.8 \times 0.7 \times 45 \text{ hp}}{140 \text{ ft} + 2.31 \times 15 \text{ psi}} = 1.59 \text{ cfs}$$

140 ft TDH comes from a SWL of ~60 ft plus ~80 ft drawdown shown on the drillers report.

15 psi was assumed to be the maximum operating pressure at the well head. There is very little relief and gated pipe typically operates at lower pressures.

Imagery from 2011

LEGEND

- Well
 - ▼ Control valve
 - ▶ Open ditch diversion from Dry Creek
 - 10-inch steel mainline
 - - - Gated pipe
 - · - · - Property boundary
- 0 0.05 0.1 Miles



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Figure 1. Metal tag no. D0053444



Figure 2. 10" steel mainline from the well to risers and to the gated pipe.

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Figure 3. Risers from 10" pipe to connect handline for watering the southern field.



Figure 4. The irrigated field in the late season after irrigation was finished for the year.

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Figure 5. The diversion from Dry Creek used to water the same place of use.

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Place of use comparison

Basin/Seq	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
05N02E31				X			11					X	X	X	X	X		X	X	22
63-12055	UNITED BOISE RI MUNICIPAL																			
63-12217	BRADY, I GROUND IRRIGATION																			
63-16943	MC CON, GROUND DOMESTIC																			
63-22827	CAMPBELL GROUND DOMESTIC																			
63-2618	EAGLESC DRY CRE IRRIGATION																			46
63-3160A	MURPHY GROUND IRRIGATION																			53
63-3160A	MURPHY GROUND STOCKWATER																			
63-31738	BULL DE DRY CRE IRRIGATION					10														10
63-31740	BULL DE GROUND IRRIGATION					10														10
63-3176	BROKEN GROUND IRRIGATION											7								7
63-32270	HARRIS, I GROUND IRRIGATION																			4.5
63-32403	BULL DE DRY CRE IRRIGATION					3.3					2.9									6.2
63-32404	BULL DE DRY CRE IRRIGATION										7.7									9.7
63-32405	BULL DE DRY CRE IRRIGATION					10														26
63-32407	BALL, GA DRY CRE IRRIGATION				24	2														10
63-32408	BULL DE DRY CRE IRRIGATION				10															10
63-32412	BULL DE GROUND IRRIGATION					3.3					2.9									6.2
63-32413	BULL DE GROUND IRRIGATION							2			7.7									9.7
63-32414	BULL DE GROUND IRRIGATION					10														10
63-32416	BALL, GA GROUND IRRIGATION				24	2														26
63-32417	BULL DE GROUND IRRIGATION							10												10
63-32637	BOHME, I DRY CRE IRRIGATION							9												9
63-32638	BOHME, I DRY CRE IRRIGATION				4			5												9
63-32639	BOHME, I GROUND IRRIGATION							9												9
63-32640	BOHME, I GROUND IRRIGATION				4			5												9
63-32707	BULL DE DRY CRE IRRIGATION							10												10
63-32708	BULL DE DRY CRE IRRIGATION							0.9			9.1									10
63-32709	BULL DE DRY CRE IRRIGATION					9.3														9.3
63-32710	BULL DE DRY CRE IRRIGATION							9.3												9.3
63-32712	BULL DE GROUND IRRIGATION							10												10
63-32713	BULL DE GROUND IRRIGATION							0.9			9.1									10
63-32714	BULL DE GROUND IRRIGATION					9.3														9.3
63-32715	BULL DE GROUND IRRIGATION							9.3												9.3
63-33173	HARRIS, I GROUND DOMESTIC																			2.7
63-33173	HARRIS, I GROUND IRRIGATION																			
63-33173	HARRIS, I GROUND STOCKWATER																			
63-33174	HARRIS, I GROUND IRRIGATION																			5.8
63-33244	BULL DE DRY CRE IRRIGATION					3.9					4									7.9
63-33247	BULL DE GROUND IRRIGATION					3.9					4									7.9
63-33255	CREAMEI DRY CRE IRRIGATION																			54.8
63-33255	CREAMEI DRY CRE STOCKWATER																			
63-33256	DEVELOP DRY CRE IRRIGATION																			10.2
63-33256	DEVELOP DRY CRE STOCKWATER																			
63-33723	NONA, LF GROUND IRRIGATION										2.9									2.9
63-3548	BROKEN GROUND IRRIGATION																			87
63-5138	GARROW GROUND IRRIGATION						11													11
63-5139A	GARROW DRY CRE IRRIGATION																			13.5
63-5139B	BRADY, I DRY CRE IRRIGATION						9.5													18.5

Same QQ different acres, no overlap
Overlap from different source

Point of diversion comparison

05N02E31

Basin/Seq	Owner	Source	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE
63-12217	BRADY, I	GROUND WATER				X												
63-16943	MC CONN	GROUND WATER							X									X
63-22827	CAMPBELL	GROUND WATER							X									
63-2618	EAGLESC	DRY CREEK																
63-3160A	MURPHY	GROUND WATER						X										
63-31738	BULL DE'	DRY CREEK				X												
63-31740	BULL DE'	GROUND WATER		X														
63-3176	BROKEN	GROUND WATER									X							
63-32270	HARRIS, I	GROUND WATER							X									
63-32403	BULL DE'	DRY CREEK				X												
63-32404	BULL DE'	DRY CREEK				X												
63-32405	BULL DE'	DRY CREEK				X												
63-32407	BALL, GA	DRY CREEK				X												
63-32408	BULL DE'	DRY CREEK				X												
63-32412	BULL DE'	GROUND WATER		X														
63-32413	BULL DE'	GROUND WATER		X														
63-32414	BULL DE'	GROUND WATER		X														
63-32416	BALL, GA	GROUND WATER			X													
63-32417	BULL DE'	GROUND WATER			X													
63-32637	BOHME, I	DRY CREEK				X												
63-32638	BOHME, I	DRY CREEK				X												
63-32639	BOHME, I	GROUND WATER		X														
63-32640	BOHME, I	GROUND WATER		X														
63-32707	BULL DE'	DRY CREEK				X												
63-32708	BULL DE'	DRY CREEK				X												
63-32709	BULL DE'	DRY CREEK				X												
63-32710	BULL DE'	DRY CREEK				X												
63-32712	BULL DE'	GROUND WATER		X														
63-32713	BULL DE'	GROUND WATER								X								
63-32714	BULL DE'	GROUND WATER		X														
63-32715	BULL DE'	GROUND WATER		X														
63-33173	HARRIS, I	GROUND WATER							X									
63-33174	HARRIS, I	GROUND WATER							X									
63-33244	BULL DE'	DRY CREEK				X												
63-33247	BULL DE'	GROUND WATER		X														
63-33723	NONA, LE	GROUND WATER								X								
63-3548	BROKEN	GROUND WATER									X							
63-5138	GARROW	GROUND WATER				X												
63-5139A	GARROW	DRY CREEK				X												
63-5139B	BRADY, I	DRY CREEK				X												

Different source, no overlap

Same source different wells, no overlap

B

Form 238-7
6/07IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

854620

1. WELL TAG NO. D D0053444

Drilling Permit No. 907125-854620

Water right or injection well # 63-12217

2. OWNER

Name Micheal or Kathlene Brady

Address 13660 N. McFarland Creek Rd.

City Boise State Id Zip 83714

3. WELL LOCATION:

Twp. 5 North ☒ or South ☐ Rge. 2 East ☒ or West ☐Sec. 31 NW 1/4 SE 1/4 NE 1/4
10 acres 40 acres 160 acres

Gov't Lot County Ada

Lat. 43° 43.845'N (Deg. and Decimal minutes)

Long. 116° 15.483'W (Deg. and Decimal minutes)

Address of Well Site Same

City Boise

(Give at least name of road + Distance to Road or Landmark)

Lot. Blk. Sub. Name

4. USE:

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

5. TYPE OF WORK check all that apply (Replacement etc.)

☒ 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 ft³)	Placement method/procedure
5/8 Bentonite	0	20	800 lbs.	16" Overbore

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
10"	1.5	216	.307	Steel	☒	☐	☐	☒
8"	214	221	.250	Steel	☐	☒	☐	☒
8"	250	252	.250	Steel	☐	☒	☐	☒

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 216'

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N MethodManufactured screen ☒ Y ☐ N Type Johnson

Method of installation Washdown

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
220	250	.035	30'	8"	Stainless	304

Length of Headpipe 7.10 Length of Tailpipe 1.8

Packer ☒ Y ☐ N Type Rubber K-Packer

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft³)	Placement method
N/A				

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) Static water level (ft) 57'

Water temp. (°F) Bottom hole temp. (°F)

Describe access port

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
77'	600 GPM	4 HRS.

Test method:

Pump	Ballot	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
16"	0	2	Top Soil		X
	2	20	Sandy Brown Clay		X
10"	20	35	Sandy Brown Clay		X
	35	36	Brown Clay		X
	36	45	Sandy Brown Clay		X
	45	61	Blue Clay		X
	61	196	Blue Clay w/ Sand Streaks	X	
	196	212	Coarse Sand	X	
	212	218	Brown Clay		X
	218	252	Coarse Sand	X	

RECEIVED

MAR 06 2009

WATER RESOURCES
WESTERN

Completed Depth (Measurable)

252'

Date: Started 1/21/09

Completed 1/30/09

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 Dennis Phipps Well Drilling Inc. Co. No. 332

*Principal Driller Date 1/30/09

*Driller Date 1/30/09

*Operator II Date 1/30/09

Operator I Date

* Signature of Principal Driller and rig operator are required.