

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-12404

Exam Date:

6/30/2014

1. Current Owner: DAVID M CRAWFORD
14377 LEWIS LN
NAMPA ID 83686
(208)463-8352

Or

LESLEY CRAWFORD
14377 LEWIS LN
NAMPA ID 83686
(208)463-8352

2. Accompanied by: David Crawford
Phone No: same as above
Address: same as above
Relationship to Permit Holder: same

3. **SOURCE****TRIBUTARY**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: none
2. Other water rights with the same point of diversion: 63-31188

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW1/4NE1/4 Sec. 15, Twp 02N, Rge 03W, B.M.

CANYON County

GROUND WATER NW1/4NE1/4 Sec. 15, Twp 02N, Rge 03W, B.M.

CANYON County

Method of Determination: Garmin GPS -- irrigation well: N 43.51626, W -116.68069

2. **PLACE OF USE:** IRRIGATION

Twp	Rge	Sec	NE			NW			SW			SE			Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02N	03W	15													19.0

Total Acres: 19

PLACE OF USE: DOMESTIC

TwpRgeSec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02N03W15		X															

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>Pump Serial No. or Discharge</u>	
<u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Size</u>
Irrigation well	Franklin	40		Berkely 40-6T200	
Domestic well		5	unknown		

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u>						<u>Calib. Date</u>
<u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	

2. Measurements: none taken

E. FLOW CALCULATIONS _____ Additional Computation Sheets Attached

[1] Theoretical calculation . pump set at 505 feet, Q vaue uses = 485 feet, 50 psi, 40 hp pump

$$8.8 \times 40 \times 0.7 / 485 + [50] [2.31] = 246.4 / 600.5 = 0.41 \text{ cfs}$$

[2] IDWR standard is 0.02 cfs per acres x 10 acres = 0.38 cfs – recommend for irrigation component.

Measured Method:

Pump curve – capacity is 250 gpm at 500 feet of water = 0.56 cfs = system capacity = combined irrigation limit for 63-12404 and 63-31188.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 19 \text{ acres} \times 4.5 \text{ af per acre} = 85.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.38 \times 1.9835 \times 265 \text{ days} = 199.7 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 85.5 \text{ af}$$

2. Volume Calculations for Other Uses:

Domestic use for internal use in 1 home is 0.6 af per the IDWR standard.

$$\text{TOTAL VOLUME} = 85.5 + 0.6 = 86.1 \text{ af}$$

G. NARRATIVE/REMARKS/COMMENTS

The permit was issued for 0.80 cfs for 40 acres irrigation and 0.02 cfs domestic use for 1 home. There are 2 wells, a domestic well and an irrigation well. The total quantity permitted is 0.82 cfs. David Crawford accompanied me on the exam.

A 6 inch diameter well, tag no D0001418, with a 5 hp pump/motor, was drilled in 1998 for domestic purposes. It is not connected to the irrigation system. The 8 inch diameter irrigation well, tag no. D0025519, is fitted with a 40 hp pump/motor. It is also the point of diversion for overlapping water right 63-31188.

The Crawfords purchased right 63-31188 from the right holder and transferred the right to this property. The right is for 20 acres irrigation and 0.40 cfs and 90 af. When the Crawfords applied for this permit, they included the overlapping acres under 63-31188. The total number of acres the Crawfords irrigate is 39 acres, so 63-12404 will be licensed for 19 acres with combined use limits.

From the irrigation well, water is conveyed through 4 inch PVC pipe to the north 20 acres covered by 63-31188, which includes five acres of table grape vines, and to the south 19 acres covered by this permit.

The water for the 19 acres is south pumped to 13 risers and then to a 27 head wheel line seen on the field the day of the exam. The sprinkler heads are Nelson F33s with nozzles that are 9/16 inch. The 19 acres is planted in oats. Mr. Crawford was having a problem with equipment the day of the exam, so no measurements were taken. There is a pressure gauge on the well and Mr. Crawford stated that the pumping pressure is 50 psi.

The Crawfords provided a pump curve. The pump is set at 550 feet. The theoretical flow calculation using 50 psi and a Q value of 485 feet, resulted in a diversion rate of 0.41 cfs. The IDWR standard of 0.02 cfs per acres x 19 acres = 0.38 cfs and this is the recommended rate for licensing the irrigation component. The pump curve indicates that the well will produce 250 gpm at 500 feet of water. This is 0.56 cfs, the system capacity, and will be the combined use irrigation limit of 63-12404 and 63-31188.

The domestic well is only used for internal domestic use in the home so the permitted 0.02 cfs and the IDWR volume standard of 0.6 af are recommended for licensing the domestic component.

The two rights combined, 63-31188 and 63-12404, will be limited to 0.56 cfs and 175.5 af for irrigation.

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

Delete conditions WB7 and 8R61 and replaces with X35:

Rights 63-12404 and 63-13118 when combined for irrigation use, shall not exceed a total diversion rate of 0.56 cfs, a total annual maximum diversion volume of 175.5 af, and the irrigation of 39 acres.

Add X36:

Right 63-31188 is also diverted through the irrigation point of diversion described above.

Delete condition X01 and replace with 132:

Domestic use is for 1 home. Irrigation of lawn, garden and landscaping associated with the home is authorized under the irrigation component of this right.

H. RECOMMENDATIONS

- 1) Permit amount 0.82 cfs
- 2) Beneficial use limit 0.40 cfs
- 3) System measurement 0.58 cfs
- 4) Proof fee amount 1 cfs

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/01 to 11/15	0.380 CFS	85.50 AF
DOMESTIC	01/01 to 12/31	0.020 CFS	0.60 AF
<u>Totals:</u>		0.400 CFS	86.10 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 Wicki Lusic Date 7-21-14

Reviewer _____ Date _____



63-12404 -- 2013 NAIP. Both wells, delivery system seen. Irrigation POU is outlined in red. Domestic POU is the house.

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

783813

Office Use Only			
Inspected by			
Twp	Rge	Sec	
1/4	1/4	1/4	
Lat	:	Long	:
	:		:

1. WELL TAG NO. **D 0025519**
 DRILLING PERMIT NO. _____
 Other IDWR No. **63-31188**

2. OWNER:
 Name **David Crawford**
 Address **14377 Lewis Lane**
 City **Nampa** State **ID** Zip **83686**

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N					
S					

Twp. **2** North ☒ or South ☐
 Rge. **3** East ☐ or West ☒
 Sec. **15** 1/4 **N/W** 1/4 **N/E** 1/4
 Gov't Lot _____ County **Canyon**
 Lat: _____ Long: _____
 Address of Well Site **14377 Lewis Lane**
 City **Nampa**

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

Li. _____ Blk. _____ Sub. Name _____

4. USE:

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

5. TYPE OF WORK check all that apply (Replacement etc.)
☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD

☐ Air Rotary ☐ Cable ☒ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK		AMOUNT		METHOD
Material	From To	Sacks or Pounds		
bentonite grout	0 390	28 sk		poured
1/4" gravel	390 520	5 yd		poured

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
12"	0	57	250	steel	☒	☐	☒	☐
8"	+2	455	250	steel	☐	☒	☒	☐
8"	495	561	250	steel	☐	☒	☒	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations _____ Method _____
 Screens _____ Screen Type **304 stnls V wire**

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
455	495	25		8	stnls	☐	☒
561	581	25		8	stnls	☐	☒

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

375 ft. below ground Artesian pressure _____ lb.
 Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

☐ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
NO TEST			

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

Depth first Water Encounter _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
12	0	18	sandy clay		X
	18	57	sand & gravel		X
	57	320	sand & clay streaks		X
	320	360	clay		X
	360	397	sand		X
	397	420	blue clay		X
	420	440	sand	X	
	440	450	blue clay		X
	450	500	black sand	X	
	500	555	blue clay		X
	555	585	black sand	X	
	585	638	sand & clay streaks		X

RECEIVED

SEP 25 2002

WATER RESOURCES
WESTERN REGION

8" 581-586 .250 steel liner welded

Completed Depth **638'** (Measurable)
 Date: Started **8/14/02** Completed **9/11/02**

13. DRILLER'S CERTIFICATION

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

Company Name **Stevens & Sons** Firm No. **153**

Firm Official _____ Date **9/12/02**

and

Driller or Operator _____

(Sign once if Firm Official & Driller)

63-12404 -- Field Exam photographs



POD is well tagged D0025519.



Looking south at the POU planted in oats.



Looking south west at POU. Riser seen mid-photo, and wheel line with 27 sprinkler heads seen in far background.



One of the 13 risers.

Music, Vicky

From: dlcrawford@speedyquick.net
Sent: Wednesday, July 16, 2014 9:12 AM
To: Music, Vicky
Subject: Dave Crawford Well Information
Attachments: Scan0015.pdf

Hi Vicky this is what we have. Ron Stevens told us that the pump is set at 505 ft. We don't have the information from Bill Dody on our domestic well, and he is no longer around, but the Drilling Permit # is D000 1418 and it's a 5 h.p. pump. You can reach us at 880-4730 - Dave or 880-2497 – Lesley. Thank you Vicky

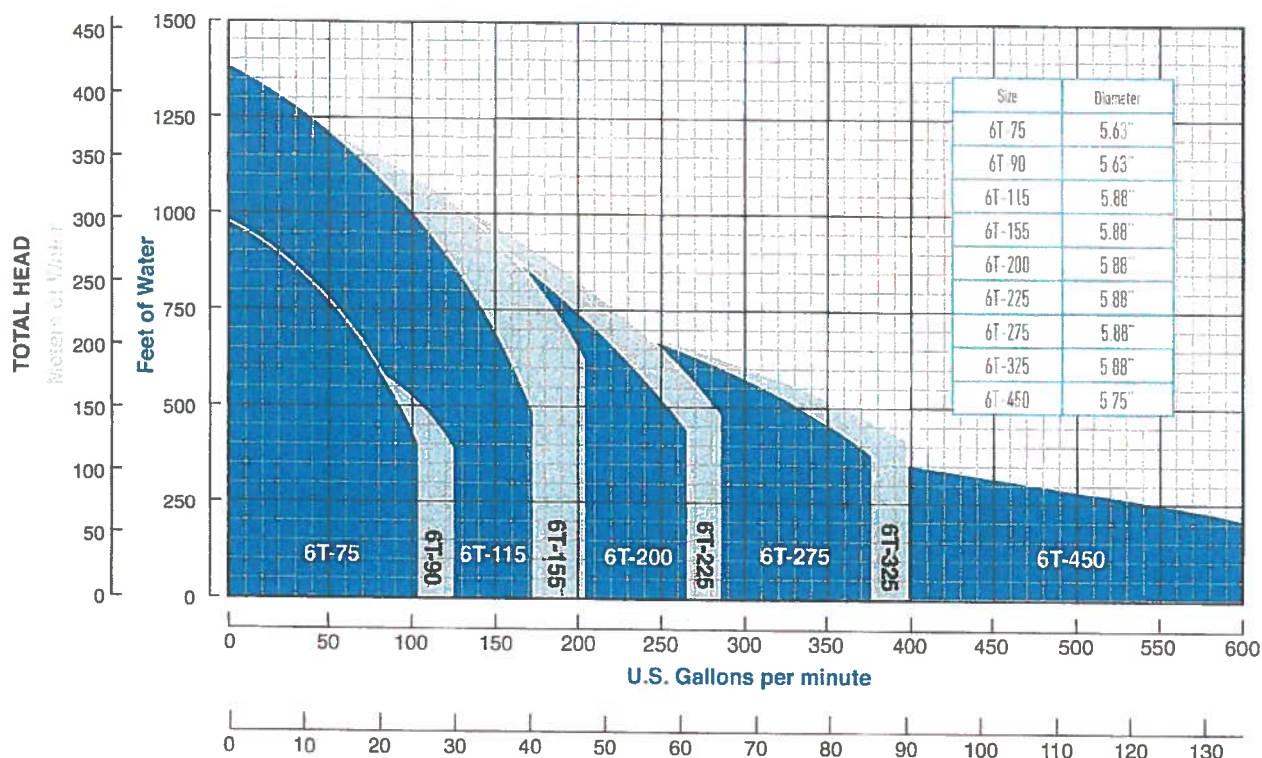
BERKELEY® 6T SERIES SUBMERSIBLE TURBINE PUMPS

Materials of Construction

Part Name	Material	Spec Number
Discharge Adapter	Ductile Iron	ASTM 546
Top Bowl	Cast Iron	ASTM A48 Class 30
Intermediate Bowl	Cast Iron	ASTM A48 Class 30
Bearings, Top and Suction Case	Rubber	Neoprene
Impeller	304 Stainless Steel	ASTM A743 CS 8
Pump Shaft	Stainless Steel	AISI 416 UNS S41600
Impeller Collets	Steel	AISI 1215
Suction Motor Bracket	Cast Iron	ASTM A48 Class 30
Bowl Bearing	Rubber	Neoprene
Strainer	Stainless Steel	AISI 302 UNS S30200
Cable Guard	Stainless Steel	AISI 307 UNS S30700
Shaft Coupling	Stainless Steel	AISI 416 UNS S41600

Pentair Solutions

- ▶ BERKELEY 6" - 10" highly efficient pump designs, to 2200 GPM, to 1400 ft.
- ▶ PENTEK 6" and 8" motors and controls offering leading edge technology.
- ▶ PENTEK pump controllers for maximizing pump functionality.
- ▶ BEC2 powerful application software @ www.bec2.net unparalleled in the industry.
- ▶ Highly-trained customer service staff providing quick solutions at 1-888-BERKELEY.
- ▶ 2-year extended warranty program when BERKELEY pump is installed with a PENTEK motor.



Our Pump - Berkeley 40hp - 6T200
40hp. Franklin motor
Pump is @ 505 feet

293 WRIGHT STREET, DELAVAN, WI 53115 WWW.BERKELEYPUMPS.COM
PH: 888-237-5353 ORDERS FAX: 800-321-8793

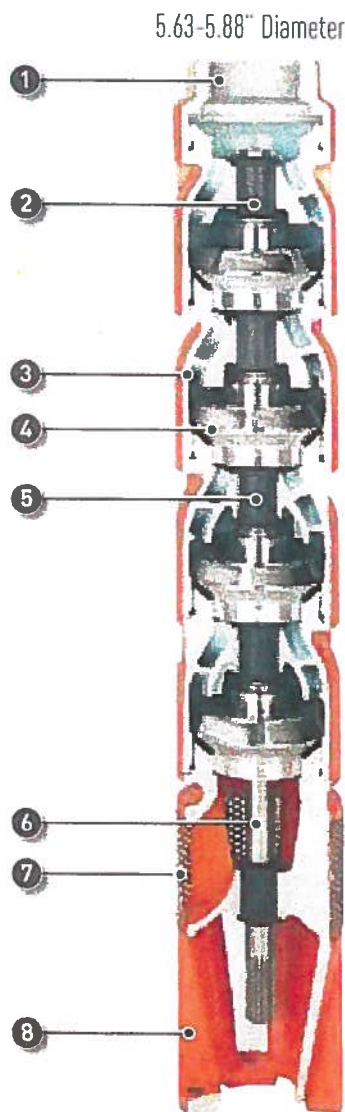
Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice.

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B7173BK (11/21/12)

BERKELEY® 6T SERIES SUBMERSIBLE TURBINE PUMPS

BERKELEY 6T SERIES PUMPS for maximum abrasion resistance are proven performers for a wide range of applications from clean municipal wells to the harshest agricultural wells. Abrasion resistant features include: Investment Cast 304 Stainless Steel Impellers and Neoprene Rubber Bearings for maximum life and performance.



5.63-5.88" Diameter

- ① **Heavy-Duty Discharge Adapter** is ductile iron, threaded with large wrench flats sized for the pump's flow range.
- ② **Factory Pre-set Upthrust Washers** balance rotor loading in all operating conditions.
- ③ **Heavy-Walled Class 30 Cast Iron Bowls** incorporate precise hydraulic design for maximum efficiency and performance.
- ④ **Stainless Steel Impellers** are designed, machined and balanced to optimize efficiency and performance.
- ⑤ **Unique Neoprene Bearing Design** channels abrasives away from stainless steel bearing journal.
- ⑥ **416 Stainless Steel Pump Shaft** is precision ground and polished for reduced running friction and increased service life.
- ⑦ **Heavy-Duty Stainless Steel Suction Strainer** is non-collapsible and corrosion-resistant.
- ⑧ **Heavy-Duty Cast Iron Suction Bracket** assures perfect pump-to-motor alignment with NEMA standard motors.
- ⑨ **Low Profile, Full-Length Stainless Steel Cable Guard (Not Shown)** protects motor leads.

STEVENS & SONS

WELL DRILLING, INC.

3709 HAWTHORNE DRIVE • BOISE, IDAHO 83703-4529 • PHONE: 208 • 344-0726 • FAX: 208 • 344-0769

STATEMENT

TO: Dave Crawford
14377 Lewis Lane
Nampa, Idaho 83686

DATE: 10/15/02

DESCRIPTION	CHARGE PER UNIT	NO. OF UNITS	AMOUNT
Pump As Bid			
Berkeley 40-6T200 pump			
40 HP Franklin motor			
#4-4 sub wire		500'	
4" check valves		2	
4" X 8" well seal			
4" black pipe		504'	
Installation			\$10,000.00
TOTAL			\$10,000.00



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

*vicky-music
@idwr
- idaho.gov*

June 30, 2014

DAVID CRAWFORD
14377 LEWIS LN
NAMPA, ID 83686

Re Permit To Appropriate Water No. 63-12404

Dear MR CRAWFORD:

Thank you for accompanying me today on the field exam for this permit. As I mentioned, a field exam is required by Idaho law before a license can be issued, at which time it becomes a water right. I need a few more pieces of information before I can complete the exam. Will you please send me the following:

- 1 - pump and motor specs;
- 2 - the depth at which the pump is set; and,
- 3 - a pump curve.

The deadline by which I need the information in writing is **July 18, 2014**. Failure to respond to this letter request by the deadline may result in the permit being voided or a license issued for less than the permitted amount. Thank you and please call me at 208.334.2190 if you have questions.

Sincerely,

Vicky Music

Vicky Music
Sr. Water Resource Agent

334-2190



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Governor

GARY SPACKMAN
Director

June 30, 2014

DAVID CRAWFORD
14377 LEWIS LN
NAMPA, ID 83686

Re Permit To Appropriate Water No. 63-12404

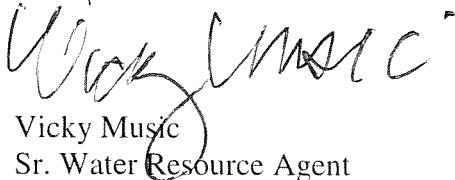
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Sincerely,



Vicky Music
Sr. Water Resource Agent



State of Idaho

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Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

March 20, 2014

DAVID OR LESLEY CRAWFORD
14377 LEWIS LN
NAMPA, ID 83686

Re: Permit to Appropriate Water No. 63-12404

Dear David or Lesley Crawford:

The permit referenced above, issued for irrigation of 20 acres from ground water, has been assigned to me for licensing. A license is required for continued use of the water. The Permit To Appropriate Water was issued on October 27, 2008, and you timely filed the Statement of Completion for Submitting Proof of Beneficial Use on September 6, 2013.

The Proof Statement explains in the introductory paragraph that,

"The Idaho Department of Water Resources considers this form a statement by the permit holder(s) that development of a water right has been completed and that water has been applied to beneficial use to the extent described below."

A review of aerial photographs from the years 2004, 2006, 2009, 2011 and 2013 reveal that this right was not developed and water has not been used to the extent permitted. In fact, no irrigation of the south approximately 20 acres of your 40 acres is evident from these photographs. The permit will be voided and no water right issued unless you can provide proof that you used the water for irrigation of the south 20 acres. A copy of the permit, proof statement and an aerial photo is attached to this letter.

Please submit the requested information so that IDWR can continue the licensing process. The requested information must be received in writing by April 21, 2014. Failure to submit the information will result in the permit being voided. Fees are not refunded for voided permits.

I can be reached by telephone at 208.571.9920 if you would like to discuss this matter further. Thank you.

Sincerely,

Vicky Music
Sr. Water Resource Agent

Enclosures: Permit to Appropriate Water 63-12404, Statement of Completion, 2013 aerial photograph