



State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

September 25, 2013

HOWARD HOSKINS
21815 HUMMINGBIRD LN
CULDESAC ID 83524

RE: License Nos. 85-15746 & 85-15747

Issuance of Licenses

Dear Water Right Holder(s):

The Department of Water Resources has issued the enclosed Water Right Licenses confirming that water rights have been established in accordance with your permits. Please be sure to thoroughly review the conditions of approval and remarks listed on your licenses.

The licenses are PRELIMINARY ORDERS issued by the Department pursuant to section 67-5243, Idaho Code. They can and will become final orders without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet.

Both of your licenses are based on the field examinations that were previously conducted. The field examiner found that your irrigation ponds exceed the volume authorized by any of your water rights. You will need to file an application for permit to cover the water that is stored in the ponds. Please note that your application for permit should include enough volume to account for the capacity of the ponds and losses caused by evaporation and seepage.

Please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a \$100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the proper forms and instructions.

If you have any questions, please contact me at 208-287-4916.

Sincerely,

Craig L. Saxton
Water Rights Supervisor

Enclosure(s)

CERTIFICATE OF SERVICE

I hereby certify that on September 26, 2013, I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDERS (Approved Licenses) to the person(s) listed below:

RE: WATER RIGHT NOS.

85-15746 & 85-15747

**HOWARD HOSKINS
21815 HUMMINGBIRD LN
CULDESAC ID 83524**



**Darla Block
Technical Records Specialist**

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

(To be used in connection with actions when a hearing was **not** held)

(Required by Rule of Procedure 730.02)

The accompanying order or approved document is a "Preliminary Order" issued by the department pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department of Water Resources ("department") unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. **Note: the petition must be received by the department within this fourteen (14) day period.** The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after: (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the Department or the Water Resource Board is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the Department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its service date if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) The petition for reconsideration is disposed of; or
- (b) The petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

State of Idaho
Department of Water Resources
Water Right License

WATER RIGHT NO. **85-15746**

Priority: February 15, 2005

Maximum Diversion Rate: 0.15 CFS

It is hereby certified that HOWARD HOSKINS
21815 HUMMINGBIRD LN
CULDESAC ID 83524 has complied with the terms and
conditions of the permit, issued pursuant to Application for Permit dated February 15, 2005; and has
submitted Proof of Beneficial Use on October 27, 2010. An examination confirms water is diverted from:

SOURCE

GROUND WATER

and a water right has been established as follows:

BENEFICIAL USE

IRRIGATION

PERIOD OF USE

02/15 to 11/30

DIVERSION RATE

0.15 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 10, Twp 36N, Rge 03W, B.M. NEZ PERCE County

GROUND WATER SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 11, Twp 36N, Rge 03W, B.M. NEZ PERCE County

PLACE OF USE: IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
36N 03W 10																4.3	4.3
36N 03W 11											17.0						17.0

Total Acres: 21.3

CONDITIONS OF APPROVAL

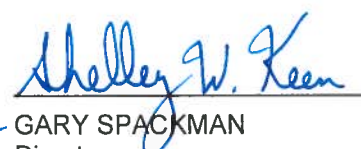
- After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to determine the amount of water diverted from power records and shall annually report the information to the Department.
- Rights 85-7547 and 85-15746 when combined shall not exceed the irrigation of 21.3 acres.
- This right when combined with all other rights shall provide no more than 4.0 afa per acre at the field headgate for irrigation of the lands above.
- This right when combined with all other rights shall provide no more than 0.02 cfs per acre nor exceed a combined annual maximum diversion volume of 85.2 af at the field headgate for the place of use.
- The right holder shall make full beneficial use of right 85-7547 for irrigation of 5 acres of the 21.3 acres authorized to be irrigated under this right. The right holder shall limit the diversion of ground water under this right to irrigate more than 16.3 acres to those times when right 85-7547 is not available or is not reasonably sufficient to irrigate 5 acres of the authorized place of use for this right.
- If water right 85-7547 is abandoned, forfeited, sold, transferred, leased or used on any other place of use, this right to divert ground water shall not be used to irrigate more than 16.3 acres without an approved transfer pursuant to Section 42-222, Idaho Code, or approval of the Department if a transfer is not required.

State of Idaho
Department of Water Resources
Water Right License

WATER RIGHT NO. 85-15746

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. The water right confirmed by this license is subject to all prior water rights and shall be used in accordance with Idaho law and applicable rules of the Department of Water Resources.

Signed this 25th day of September, 2013.



for GARY SPACKMAN
Director

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 85-15746 (split from 85-15543)
Exam Date: June 15, 2012

1. Current Owner: HOWARD HOSKINS
21815 HUMMINGBIRD LN
CULDESAC ID 83524
(208)836-5888

2. Accompanied by: Howard Hoskins

3. **SOURCE**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 85-7547 & 85-15747 (domestic & heating/cooling)
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION (all in NEZ PERCE County):**

GROUND WATER SE1/4SE1/4 Sec. 10, Twp 36N, Rge 03W, B.M. (46.473213, -116.684239)

GROUND WATER SW1/4SW1/4 Sec. 11, Twp 36N, Rge 03W, B.M. (46.473132, -116.68234)

Method of Determination: GPS

2.

<u>PLACE OF USE:</u>		<u>IRRIGATION</u>																
Twp	Rge Sec	NE				NW				SW				SE				
		<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>	<u>Totals</u>
36N	03W 10																4.3	4.3
36N	03W 11											17.0						17.0

Total Acres: 21.3

Method of Determination: field visit and aerial imagery

3. ☒ Delivery System Diagram Page 4 & 5 (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>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
D0041295 (primary)		5 hp	Submersible-no information was available		
Not Tagged (back-up)			Submersible-no information was available		

D. FLOW MEASUREMENTS

1.

Measurement

<u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Polysonic	Tyme-Flyte			150232		03-2012

And Calibrated 5 Gallon bucket and watch

2. Measurements:

A). Primary well—D0041295

- 1). A measurement was made at the pipe that discharges into the pond when the restriction valve was at the end of the pipe.
- 2). A measurement was made at the same pipe except this time the valve was removed and the water was open discharging into the pond
- 3). A theoretical measurement based on horsepower

B). Back-up well

- 1). Bucket and stopwatch

E. FLOW CALCULATIONS

___x___ Additional Computation Sheets Attached

Measured Method:

A). Primary well measurements

- 1). 67 gpm or 0.15 cfs was measured over 3 minutes. I didn't feel like I was capturing a good measurement because the signal was going in and out.
- 2). 89 gpm or 0.20 cfs was measured over 10 minutes. Once again I was not capturing a good measurement because the pipe was no longer flowing "pipe-full". The polysonic was showing a problem with the signal during the measurement (see tape).
- 3). $8.8 \times 5 \text{ hp} \times 0.7 / 80 + (2.31 \times \text{estimated pressure } 40) = 30.8 / 172.4 = 0.18 \text{ cfs}$

B). Back up well measurement

- 1). I ran two fills on the 5 gallon bucket, since the time to fill the bucket took about the same time I felt that two fills were sufficient. The first time the well filled the bucket in 17.5 seconds and the second time it took 18 seconds. $5 \times 60 / 18 = 17 \text{ gpm}$ or 0.04 cfs.

I conducted a measurement at the well that is discharging into the pond using the polysonic equipment (D0041295). I began measuring the diversion rate from that well while it was restricted (nozzle affixed to the discharge pipe) and got a measurement of ~67 gpm. We removed the nozzle from the discharge point and let the water open discharge into the pond and got ~89 gpm but, multiple errors occurred during that measurement. I believe that the first measurement of 67 gpm or 0.15 describes the diversion rate from the well the best.

The diversion rate under the back-up well will not count towards the maximum diversion rate as it is not used unless the primary well goes down.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: NA (Supplemental)
2. Volume Calculations for Other Uses: NA

G. NARRATIVE/REMARKS/COMMENTS: When I arrived on site I found 3 wells total. The permit holder told me that the domestic water does not tie into the other two wells that are used for irrigation purposes. I split permit 85-15543 to reflect the two different systems; 85-15746 is for irrigation purposes and 85-15747 is for domestic/heating/cooling purposes...note that the domestic well does provide irrigation of the lawn and garden of ½ acre.

The primary well is discharged into a pond where water is comingled with spring water under 85-7547. Water is then diverted to the fields using a 10 hp Berkley pump (see the diagram for details).
The right holder is raising tritcale, most other crops don't hold up against the deer.

The two ponds on the property are used for the irrigation system. Each pond is ~4.5' deep on average according to the permit holder. The smaller pond is 0.30 acres in surface area and the larger pond is 0.40 acres. The smaller pond flows into the larger pond through a culvert that goes under the field access road. I told the permit holder he may need a permit for the storage but I need to calculate for the 24 hour rule:

$$\begin{aligned} 0.30 \text{ acres} \times 4.5' &= 1.35 \text{ AF} \\ 0.40 \text{ acres} \times 4.5' &= 1.8 \text{ AF} \\ \hline &3.2 \text{ AF} \end{aligned}$$

The spring contributes 0.06 cfs* and the groundwater contributes 0.15 cfs for a total of: $0.21 \text{ cfs} \times 1.9835 = 0.42 \text{ af/day}$. It apparently takes more than one day to fill the pond so a permit may be filed to cover the storage. Please see the pond analysis worksheet that estimate the type of filing if required to cover the storage component.

*The spring may contribute much more but, the contribution of the spring varies. Also, the ponds appear to be within the natural channel of the spring before it reaches Cottonwood Creek 1,000 ft downstream.

Note that this right will be licensed supplemental to the surface water so no volume designation is required for the ground water license.

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>
IRRIGATION	02/15 to 11/30	0.150 CFS	
<u>Totals:</u>		0.150 CFS	

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

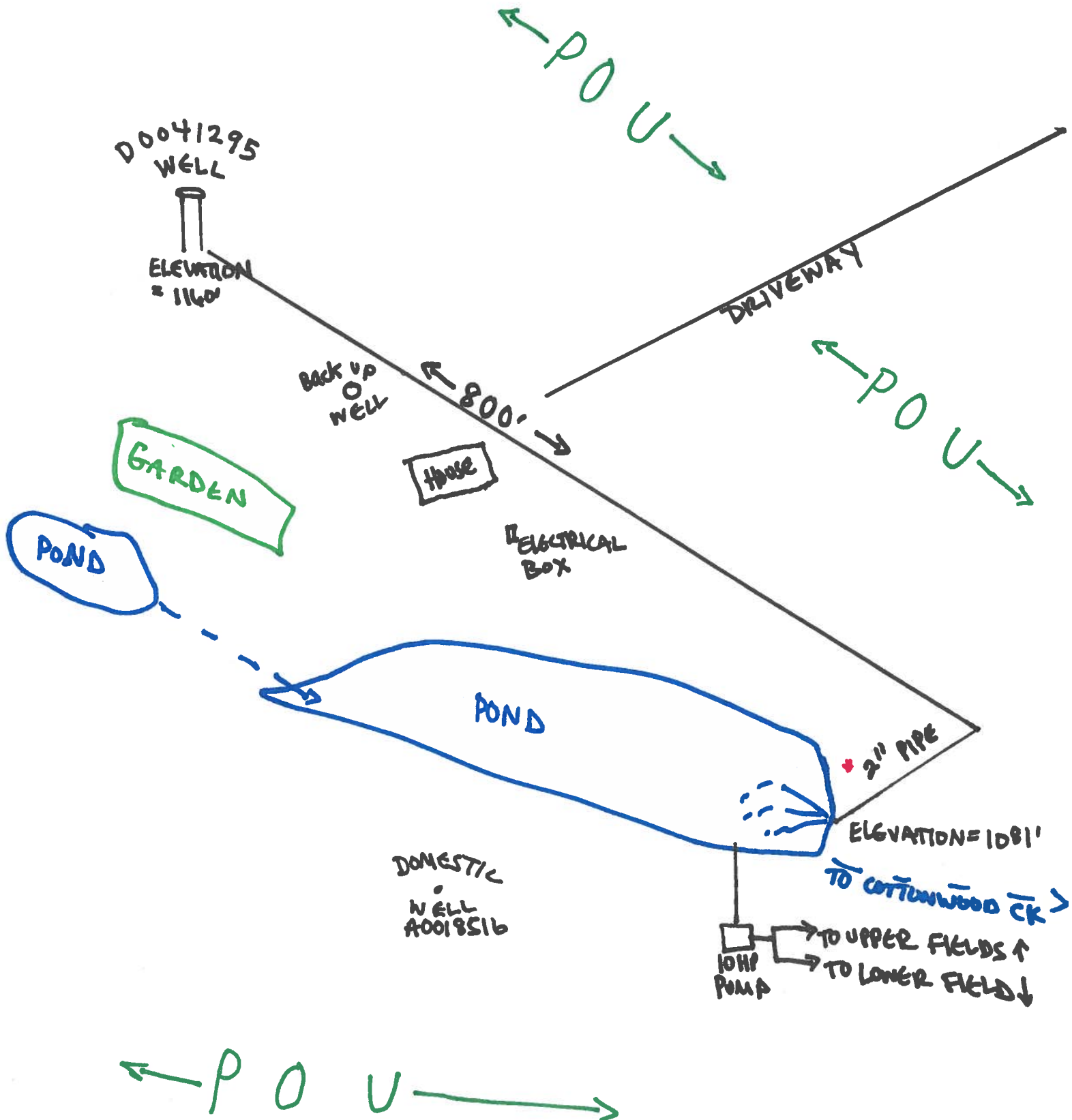
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Cheri Delow Date 9/5/13

Reviewer _____ Date _____

Delivery System (diagram of well to the pond)

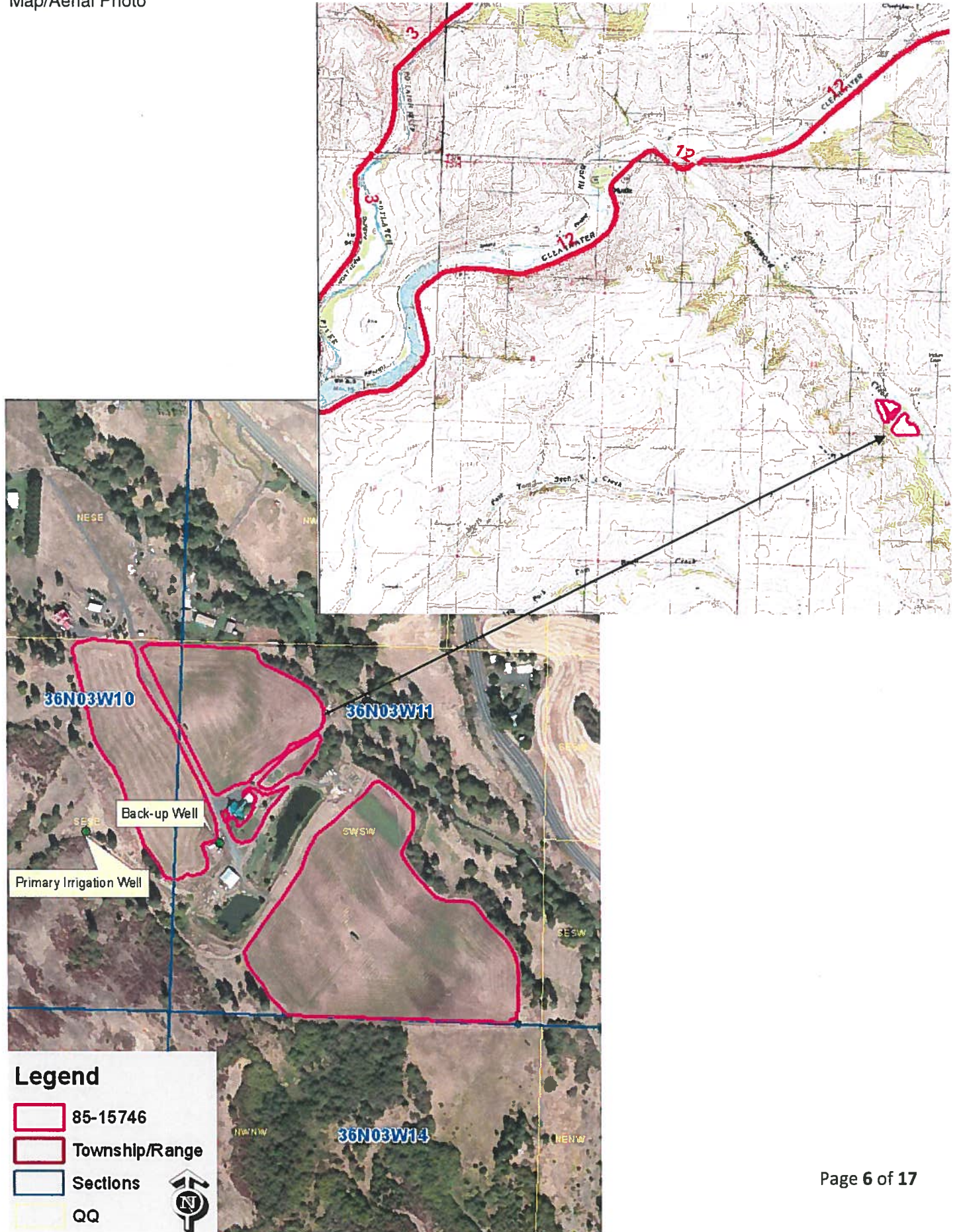


* MEASUREMENT POINT

Delivery System (diagram of pond to the fields)



Map/Aerial Photo



Photos



Looking SW
at POV



Looking NW
at POV



Garden
Looking NE



Looking East



Discharge point
from primary
irrigation well



Distribution System



Line from pond
to 10Hp pump



10 HP Berkeley
pump

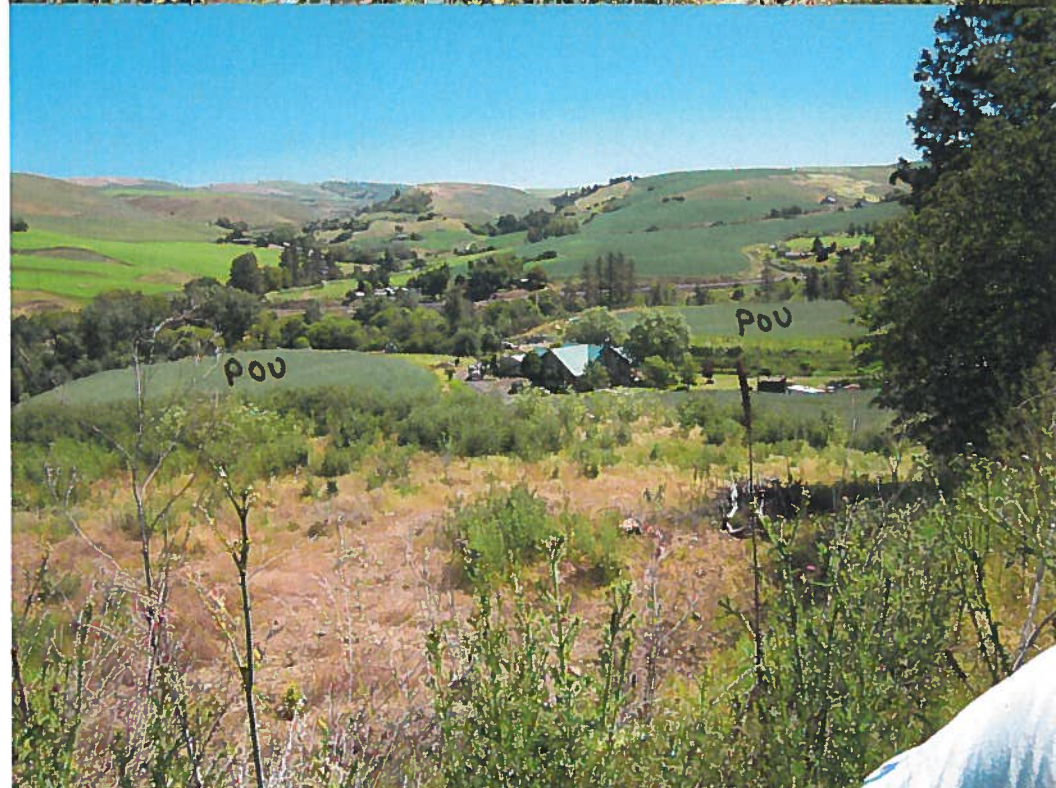


POV
Looking SW



Example of
standpipe in field





Looking East
toward the
house + POV
from the
primary well



Looking NE
at POV



Primary Irrigation well
D0041295



same
Pipe as below but
it was fitted with
a nozzle to create
pressure.

the nozzle was
removed to get
best measurement.

Dug out line to
measure the 2" pipe
where the water
is discharged to
pond.



electrical box for the
primary irrigation well.
lists 5 Hp pump



Back-up well
-stand pipe draws
directly from the
well. This is the
measurement point.



Back-up well

06-15 12:3600 *R
+002.90 % AI2

0079.8 NMSEC
102.73 % TO

For Well
restricted

12:48+700.584E-10PM 00H
+ 6.614E 0FPS 00H
+00000 *10 G 00R
-00000 *10 G 00R

12:49+673.110E-10PM 00R
+ 6.354E 0FPS 00R
+00000 *10 G 00R
-00000 *10 G 00R

12:50+673.110E-10PM 00H
+ 6.354E 0FPS 00H
+00013 *10 G 00R
-00000 *10 G 00R

12:51+668.091E-10PM 00R
+ 6.309E 0FPS 00H
+00020 *10 G 00R
-00000 *10 G 00R

87
6PM

unrestricted

12:53+816.291E-10PM 00H
+ 7.706E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

12:56+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

12:57+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00017 *10 G 00H
-00000 *10 G 00H

12:58+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00026 *10 G 00H
-00000 *10 G 00H

12:59+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00035 *10 G 00H
-00000 *10 G 00H

13:00+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00044 *10 G 00H
-00000 *10 G 00H

13:01+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00053 *10 G 00H
-00000 *10 G 00H

13:02+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00062 *10 G 00H
-00000 *10 G 00H

13:03+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00071 *10 G 00H
+00000 *10 G 00H

NOT
GOOD
MEASUREMENT
Air in line

13:04+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

13:05+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

89
6PM

06-15 12:3600 *R
+002.90 % AI2

0079.8 NMSEC
102.73 % TO

For Well
restricted

12:48+700.584E-10PM 00H
+ 6.614E 0FPS 00H
+00000 *10 G 00R
-00000 *10 G 00R

12:49+673.110E-10PM 00R
+ 6.354E 0FPS 00R
+00000 *10 G 00R
-00000 *10 G 00R

12:50+673.110E-10PM 00H
+ 6.354E 0FPS 00H
+00013 *10 G 00R
-00000 *10 G 00R

12:51+668.091E-10PM 00R
+ 6.309E 0FPS 00H
+00020 *10 G 00R
-00000 *10 G 00R

87
6PM

unrestricted

12:53+816.291E-10PM 00H
+ 7.706E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

12:56+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

12:57+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

12:58+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

NOT
GOOD
MEASUREMENT
Air in line

12:59+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

13:00+896.071E-10PM 00H
+ 8.461E 0FPS 00H
+00000 *10 G 00H
-00000 *10 G 00H

89
6PM

OVERLAP ANALYSIS FOR 85-15746

Type	WR #	Owner	Source	TRS	SESE	Total	SIGNIFICANT Y/N?
Right	85 15746	HOWARD HOSKINS,	GROUND WATER	36N03W10	4.3	4.3	
Right	85 15747	HOWARD HOSKINS,	GROUND WATER	36N03W10	3	3	N

Type	WR #	Owner	Source	TRS	SWSW		
Right	85 7547	ANN HOSKINS, HOWARD HOSKINS,	SPRING	36N03W11	5		Y
Right	85 11728	MARLAND P HART,	GROUND WATER	36N03W11	X		N
Right	85 15746	HOWARD HOSKINS,	GROUND WATER	36N03W11	17		
Right	85 15747	HOWARD HOSKINS,	GROUND WATER	36N03W11	24		N

Conclusion: Right 85-7547 is for the spring water that is comingled in the pond with groundwater.
 Right 85-11728 is for a neighboring property and is not overlapping 85-15746.

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

1. WELL TAG NO. D 00 411295 41295

DRILLING PERMIT NO. 838973

Water Right or Injection Well No. _____

2. OWNER:

Name Howard Haskins
Address 21815 Hummingbird Lane
City Caldesac State ID Zip _____

3. LOCATION OF WELL by legal description:

You must provide address or Lot, Blk, Sub. or Directions to well.

Twp. 36 North ☒ or South ☐
Rge. 3 East ☐ or West ☒
Sec. 11 1/4 SW 1/4 SW 1/4
Gov't Lot _____
County Nezperce
Lat: _____ Long: _____

Address of Well Site 3 miles up Cottonwood CK
Road City Caldesac
(Give at least name of road - Distance to Road or Landmark)

Lt. _____ 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 Material	From	To	Weight / Volume	Seal Placement Method
<u>Bentonite</u>	<u>0</u>	<u>25</u>	<u>600*</u>	<u>Top Pour</u>

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 92'

Was drive shoe seal tested? ☒ Y ☐ N How? Air Pressure

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
<u>6"</u>	<u>+2</u>	<u>-92</u>	<u>250</u>	<u>Steel</u>	☒	☐	☒	☐
<u>4.5"</u>	<u>-90</u>	<u>-130</u>	<u>160</u>	<u>PVC</u>	☐	☒	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☒ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method SAW

Screen Type & Method of Installation _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
<u>-80</u>	<u>-130</u>	<u>1/8"x1"</u>	<u>42</u>	<u>4.5</u>	<u>PVC</u>	☐	☒

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

81 ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft. Describe access port or control devices: _____

36N 3W 11

Office Use Only			
Well ID No. _____			
Inspected by _____			
Twp. _____	Rge. _____	Sec. _____	
_____ 1/4	_____ 1/4	_____ 1/4	
Lat. _____	_____	Long. _____	_____

12. WELL TESTS:

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
<u>35</u>			<u>1.5</u>

Water Temp. 56° Bottom hole temp. _____

Water Quality test or comments: Good

Depth first Water Encounter 105'

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>7</u>	<u>0</u>	<u>25</u>	<u>Whitish BSLT</u>		
<u>6</u>	<u>25</u>	<u>98</u>	<u>Med HJ WITHIN BSLT</u>		
<u>6</u>	<u>98</u>	<u>130</u>	<u>Whitish BSLT & Green Sand</u>	<u>35</u>	

RECEIVED
MAY 15 2006
IDWR/North

RECEIVED
JUL 25 2006
IDWR/North

Completed Depth 130 (Measurable)

Date: Started 3-31-06 Completed 4-4-06

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 Uhlenkott Drilling Firm No. 125

Principal Driller Don Uhlenkott Date 6-9-06

Driller or Operator II _____ Date _____

Operator I _____ Date _____

Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

ET_{Idaho} 2009: Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to [robison at kimberly dot uidaho dot edu](mailto:robison@kimberly.uidaho.edu) Copyright 2010, University of Idaho.

Dworshak Fish Hatchery (NWS --102845)

Statistics based on thirty

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)															
Precipitation Deficit (Click here for a graph)															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual
Mean	mm/day												mm		
Monthly ^c	-1.93	-1.24	-0.32	0.77	1.28	2.51	3.73	3.48	1.73	0.19	-2.01	-2.06	187	0	187
15-Day Moving Average ^d	-1.95	-1.55	-0.33	0.69	1.31	2.40	3.79	3.43	1.70	0.40	-1.98	-1.89			
7-Day Moving Average ^e	-1.95	-1.37	-0.30	0.71	1.31	2.44	3.77	3.44	1.73	0.33	-2.06	-1.94			
3-Day Moving Average ^f	-1.92	-1.27	-0.32	0.75	1.27	2.48	3.76	3.49	1.76	0.24	-2.04	-2.02			
Standard Deviation	mm/day												mm		
Monthly	1.48	1.13	1.35	0.96	1.84	0.88	1.52	1.31	1.20	1.49	1.29	1.58	115	0	115
15-Day Moving Average	1.53	1.58	1.32	1.40	1.96	1.40	1.29	1.34	1.55	1.23	1.47	1.44			
7-Day Moving Average	2.11	2.12	1.74	2.07	2.55	2.11	1.64	1.83	2.05	1.69	2.17	1.97			
3-Day Moving Average	2.96	2.88	2.48	2.77	3.64	2.96	2.31	2.42	2.72	2.48	3.04	2.77			
20% Exceedance	mm/day												mm		
Monthly	-1.01	-0.47	0.38	1.43	2.26	3.10	4.54	4.33	2.90	0.76	-0.95	-1.10	269	0	269
15-Day Moving Average	0.15	0.39	1.52	2.38	3.95	4.42	5.21	4.95	3.48	1.94	0.05	0.00			
7-Day Moving Average	0.45	0.97	2.35	3.58	4.75	5.03	5.68	5.30	3.96	2.30	0.84	0.27			
3-Day Moving Average	0.59	1.46	2.84	4.10	5.21	5.71	5.93	5.60	4.29	2.56	1.05	0.44			

SEEPAGE CALCULATIONS

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total annual seepage losses from a pond.

FILE NUMBER	Pond
REVIEWER	Cpalmer
DATE	9/3/2013

INPUTS

SQ. FT. Calculator
Pond Surface area in acres
0.7

POND SURFACE AREA (SQ. FT.)	30492
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SUGGESTED SEEPAGE RATE (FT/DAY)	0.2000
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Use the table below to find the "SUGGESTED SEEPAGE RATES".

FORMULA:
(Surface Area X Seepage Rate) / 7.48 = Gallons Per Day loss

CONVERT TO GPD	45616	GPD
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TOTAL SEEPAGE LOSS (AFA)	51.1	AFA
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SUGGESTED SEEPAGE RATES FOR DIFFERENT SOIL TYPES:
SM (silty sand, sand silt mixtures) = 0.20 ft per day
ML (inorganic silts - very fine sands, silty, or clayey fine sands) = 0.016 ft per day
SC (clayey sands, sand clay mixtures) = 0.007 ft per day
CL (Low to medium plasticity clays) = 0.003 ft per day
CH (high plasticity clays) = 0.0003 ft per day
LINED PONDS (liners can be chemical, fabric, or bentonite) = 0 ft per day
Ponds Intercepting Groundwater (excavated ponds filled with shallow Ground Water) = 0 ft per day

PLEASE NOTE: Seepage Rates taken from Page 16 of Seepage from Fish Ponds, Bulletin 599, August 1989 Alabama Agricultural experiment Station, Auburn University, Auburn University Alabama. If you don't know the soil type, please refer to the map provided at X:\Spatial\Soils\USCS\PondSoils.lyr. Use "0" if the ponds intersect the water table.

ALSO NOTE:

•Soil types GW, GP, GM, GC, SW, and SP are all sandy and gravel soils that most likely will not hold water. Any ponds developed in these soils should probably be lined unless they are part of a recharge water right. The maximum allowable seepage rate is 0.20 ft per day.

•Soil type OL is very similar to ML, so you should use 0.016 ft per day with this soil type.

•Soil types MH, OH, and PT are very similar to CH, so you should use 0.0003 when you encounter these soils.

Evaporation Loss Calculation

FILE NUMBER	Pond 1
REVIEWER	Cpalmer
DATE	9/3/2013

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the annual evaporation losses from a pond.

The acronyms used on the Kimberly Research Center website are defined below:	
P	= Precipitation
ET	= Evapotranspiration
P _d	= Precipitation deficit
P _d	= ET - P

USING THIS SPREADSHEET

To ascertain the evaporation from a pond, you will need to go to the Kimberley Research Center website. The link is found below. This web site provides the Precipitation Deficit for the area where the pond is located. The Precipitation Deficit is the total amount of free pan evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. There are several weather sites that are used, and the entire state is pretty much covered. IDWR staff can find the nearest site using ArcMap. The shape file containing the sites can be found at X:/Spatial/Climate/ETIdahostations.shp.

Found at: <http://www.kimberly.uidaho.edu/ETIdaho/online.php>

Precipitation Deficit

Station: Dworshak Fish Hatchery

Month	mm/day ¹	Days per month	mm/Month
Jan	-1.93	31	-59.83
Feb	-1.24	28	-34.72
March	-0.32	31	-9.92
April	0.77	30	23.10
May	1.28	31	39.68
June	2.51	30	75.30
July	3.73	31	115.63
August	3.48	31	107.88
September	1.73	30	51.90
October	0.19	31	5.89
November	-2.01	30	-60.30
December	-2.06	31	-63.86

PLEASE NOTE: We cannot use the season average, because there are several areas in Northern Idaho with a negative Precipitation Deficit. Therefore, we must enter each monthly deficit, and enter in a zero (0) for each negative month. The reason for this is that precipitation can only offset evaporation to the extent of the evaporation.

Please enter the daily average Precipitation Deficit as shown in the example below.

¹Negative monthly mean values should be entered in the above table as "0".

Total mm/year = 190.75

$[(\text{mm/yr}) \div (\text{convert to feet})] \times (\text{Surface area of pond, in acres}) = \text{Evaporation Loss in Acre Feet}$

(190.75 ÷ 304.8) X 0.70 = 0.4 AFA

TOTAL STORAGE

FILE NUMBER	Pond 1
REVIEWER	Cpalmer
DATE	9/3/2013

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond

Surface Area (in Acres)	0.7	"Surface Area" depicts the actual surface area of the pond measured, determined by ArcMap, or estimated.
Average Pond Depth (in feet)	4.5	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated.
Pond Capacity (in acre feet)	3.15	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth.

Volume Needed Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (in acre feet)	82	The "Volume Needed Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). PLEASE NOTE: You must have a <u>"From Storage"</u> componet exceeding the Intial fill on the permit to include a volume in this space.
Estimated Seepage Loss (in acre feet)	51.1	The "Estimated Seepage Loss" is automatically is automatically carried over from the Seepage Loss Sheet
Estimated Evaporation Loss (in acre feet)	0.4	The "Estimated Evaporation Loss" is automatically is automatically carried over from the Evaporation Loss Sheet
Total Volume Required (in acre feet)	136.7	"The Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

Flow Rate Into Pond (in cfs)	0.21	The "Flow Rate" Into the Pond depicts the actual flow either measured or estimated into the pond.
Highest Daily Evaporation Rate From Evaporation Tab. (in mm/day)	3.73	To determine the "Highest Daily Evaporation Rate" go the the Evaporation Loss Sheet and enter in the highest number recorded in the Precipitation Deficit table.
Maximum Required Daily Maintenance Volume (in acre feet per day)	0.15	"Maximum Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year, and is caluated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by multiplying the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Minimum Maintenance Flow (in cfs)	0.07	The "Minimum Maintenance Flow" is the minimum amount of flow required to maintain the level of the pond. This number is determine by dividing the "Daily Required Maintenance Volume" by 1.9835. This flow can be used to determine if the flow rate into the pond is adequate to maintain the pond level.
Days Required to Fill the Pond	12	The "Days Required to Fill the Pond" is calculated by dividing the "Pond Capacity" by the "Flow Rate" minus "Minimum Maintenance Flow" multiplied by 1.9835. This section will assist you in determining if the flow rate being diverted to the pond is adequate to fill the pond while maintaining the pond level. The length of time to fill the pond will help determine if the flow rate is adequate for the size of pond being proposed.
Days Required to Fill the Pond at 13,000 gallons per day	-29	The "Days Required to Fill the Pond at 13,000 gallons per day" is calculated converting the "Pond Capacity" and the "Maximum Daily Maintenance Volume" to gallons. The "Pond Capacity" is then divided by 13,000 gallons minus the "Maximum Daily Maintenance Volume" in gallons to determine the number of days to fill pond.

9/4/2013

Water Right 85-7547

Overlapping
water right

Name

ANN HOSKINS

HOWARD HOSKINS

Basis: License

Status: Active

Tributary

COTTONWOOD CREEK

From

To

Diversion Rate

Volume

3/01

11/30

0.060 CFS

20.0 AF

1/01

12/31

0.010 CFS

0.4 AF

1/01

12/31

0.040 CFS

1.2 AF

Total Diversion

0.100 CFS

21.6 AF

Source and Point(s) of Diversion

SWSWSW

Sec. 11, Twp 36N, Rge 03W, NEZ PERCE County

Place Of Use

IRRIGATION within NEZ PERCE County

			NE				NW				SW				SE				
Twp	Rng	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
36N	03W	11											5.0						5.0

PQU Total Acres: 5.0

DOMESTIC Same as IRRIGATION

Conditions of Approval:

1. Domestic use is for 1 home.
2. R51 This right when combined with all other rights shall provide no more than .03 cfs per acre nor more than 4.0 afa per acre for irrigation of the lands above.

Comments:

- | | | | |
|----|--|-----------|------------------------------|
| 1. | VAULT
Proof of Beneficial Use Rcvd | 6/1/1992 | Proof of Beneficial Use Rcvd |
| 2. | mciscell
Bulk Generate Shape From PLS | 6/10/2013 | POD |

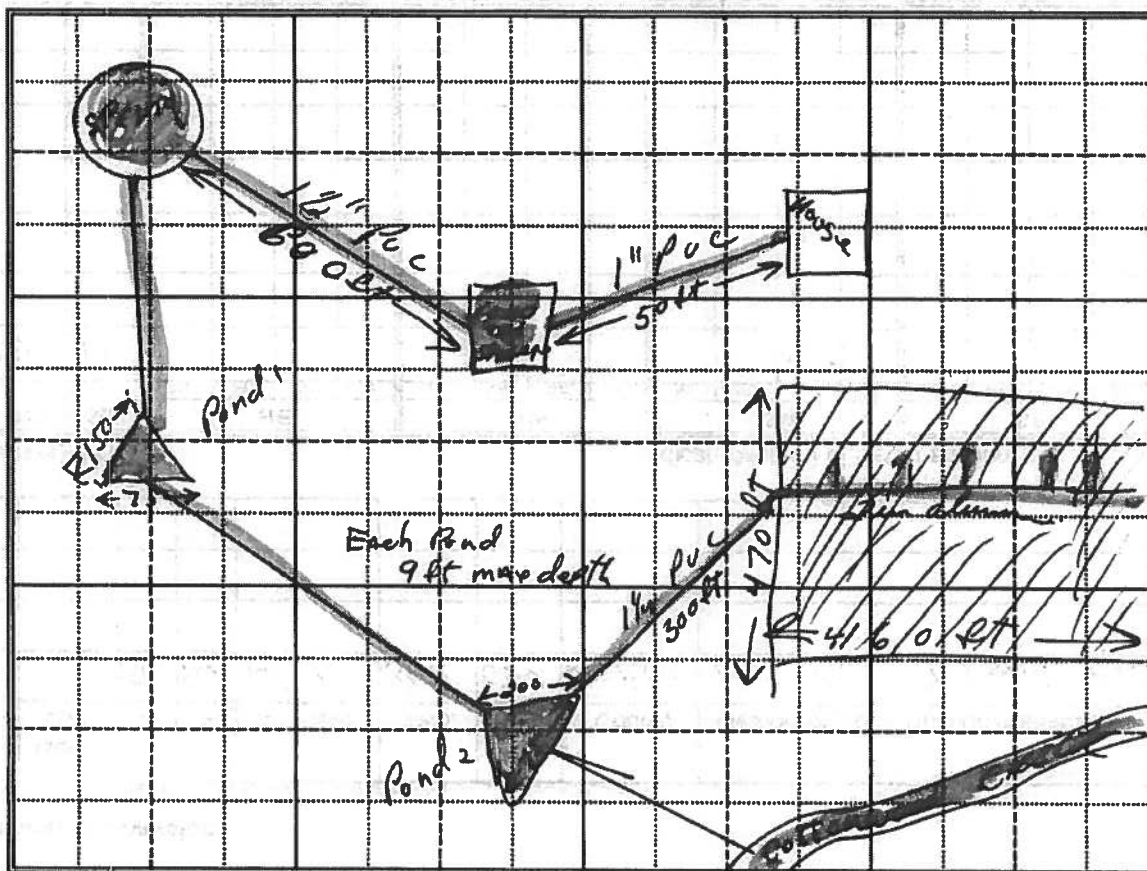
Dates and Other Information

Owner Name Connector: AND

Mitigation Plan: False

Field EXAM MAP for 8507547

3. Delivery System Diagram: Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable.



Scale: 1" = 100'

Copy of USGS Quadrange 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
ERR.	JACU331	2	2dh1	JACU331	1 1/4"

*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:

MICROFILMED

NOV 07 1996