



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

October 3, 2013

ALBERT STIFANICK
TERRI STIFANICK
PO BOX 2
TENSED ID 83870

RE: License No. 93-7114

Issuance of License

Dear Water Right Holder(s):

The Department of Water Resources has issued the enclosed Water Right License confirming that a water right has been established in accordance with your permit. Please be sure to thoroughly review the conditions of approval and remarks listed on your license.

The license 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 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.

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 October 4, 2013, I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER (Approved License) to the person(s) listed below:

RE: WATER RIGHT NO.

93-7114

**ALBERT STIFANICK
PO BOX 2
TENSED ID 83870**

**TERRI STIFANICK
PO BOX 2
TENSED ID 83870**

A handwritten signature in blue ink, reading "Darla Block", is written over a horizontal line.

**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. 93-07114

Priority: November 29, 2010

Maximum Diversion Volume: 11.0 AF

It is hereby certified that ALBERT STIFANICK
And/Or
TERRI STIFANICK
PO BOX 2
TENSED ID 83870

has complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated November 29, 2010; and has submitted Proof of Beneficial Use on February 17, 2011. An examination confirms water is diverted from:

SOURCE

RUNOFF

Tributary: HANGMAN CREEK

UNNAMED STREAM

HANGMAN CREEK

and a water right has been established as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>ANNUAL DIVERSION VOLUME</u>
STOCKWATER STORAGE	01/01 to 12/31	11.0 AF
STOCKWATER FROM STORAGE	01/01 to 12/31	0.3 AF
RECREATION STORAGE	01/01 to 12/31	10.7 AF

LOCATION OF POINT(S) OF DIVERSION:

UNNAMED STREAM	SE1/4SE1/4	Sec. 17,	Twp 44N,	Rge 04W, B.M.	BENEWAH County
RUNOFF	SE1/4SE1/4	Sec. 17,	Twp 44N,	Rge 04W, B.M.	BENEWAH County

PLACE OF USE: STOCKWATER STORAGE, STOCKWATER FROM STORAGE, AND RECREATON STORAGE

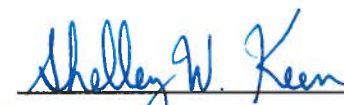
Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
44N	04W	17																	X

CONDITIONS OF APPROVAL

1. This right authorizes the diversion of an annual total of 11 acre-feet to be used for the initial filling of the ponds or reservoirs, for the replacement of losses caused by seepage and evaporation, and for stockwater.
2. The two ponds established by the storage of water under this right shall not exceed a total capacity of 8 acre-feet.
3. Recreation is for swimming and fishing.

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 2nd day of October, 2013.


for GARY SPACKMAN
Director

State of Idaho
Department of Water Resources

Attachment To Water Right License

93-7114

This map depicts the STOCKWATER FROM STORAGE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

02W



● Point of Diversion

Place Of Use Boundary

Townships

PLS Sections

Quarter Quarters

Taxlots

0 0.04 0.08 0.16 Miles



State of Idaho
Department of Water Resources

Attachment To Water Right License

93-7114

This map depicts the STOCKWATER STORAGE AND RECREATION STORAGE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

02W



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

0 0.04 0.08 0.16 Miles



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 93-7114

Exam Date: 5/22/2013

1. Current Owner: ALBERT STIFANICK

And/Or

TERRI STIFANICK
PO BOX 2
TENSED ID 83870
(208) 274-5043

2. Accompanied by:
- Albert Stifanick

Phone No: Same as AboveAddress: Same as AboveRelationship to Permit Holder: Owner3. **SOURCE**

RUNOFF
UNNAMED STREAM

TRIBUTARY

HANGMAN CREEK
HANGMAN CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 93-7103
2. Other water rights with the same point of diversion: None

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

UNNAMED STREAM SE1/4SE1/4 Sec. 17, Twp 44N, Rge 04W, B.M. BENEWAH County
RUNOFF SE1/4SE1/4 Sec. 17, Twp 44N, Rge 04W, B.M. BENEWAH County

Method of Determination: GPS, GIS, and Visual Inspection

2.

PLACE OF USE: STOCKWATER STORAGE, STOCKWATER FROM STORAGE, AND RECREATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
44N	04W	17																	X

Method of Determination: GIS and Visual Inspection

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

YES Aerial Photo Attached (required for irrigation of 10+ acres).

YES 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
Portable Stockwater Pump	Homelite	3.3 Cubic Inch	80190314	Homelite	1.5 inch

*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
NONE						

2. Measurements: The pump wasn't operational at the time of the exam, so I used a pump curve found online for this model pump.

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method:

These are on-stream ponds, so no flow measurement was necessary. The Stockwater pump provided between 36 to 73 gpm per the pump curve, but this amount is not necessary.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

I.R.

$$V = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{2cm}}$$

D.R.

$$V = \text{Smaller of } V_{\text{I.R.}} \text{ and } V_{\text{D.R.}} = \underline{\hspace{2cm}}$$

I.R. D.R.

2. Volume Calculations for Other Uses:

Pond #1 = 0.4 acres surface area, 3.6 af capacity, 0.9 af seepage and evaporation, and 4.5 total storage requirement

Pond #2 = 0.6 acres surface area, 4.8 af capacity, 1.4 af seepage and evaporation and 6.2 af total storage

Total Capacity = 3.6 + 4.8 = 8.4 rounded to 8 acre feet

Total Storage = 4.5 af + 6.2 af = 10.7 af rounded to 11 af.

G. NARRATIVE/REMARKS/COMMENTS

The water for this water right is captured from a natural runoff channels. One of the channels is officially marked on the topographical maps and is described as an unnamed stream. The second channel is not marked on the map and is described as runoff. The northern pond (Pond 2) captures the water from the unnamed stream, and is only used to provide year round water for stock and a private fishing pond. The southern pond (Pond 1) collects water from a natural runoff channel and is used for Stockwater, swimming, and fishing. A portable pump is used to divert water from pond #1 to a water trough in a small corral by the barn. This pump is generally only used during birthing times or times when animals are separated due to sickness or in preparation for shipping or slaughter.

Water right 93-7103 is a ground water right that provides Stockwater for the same animals as this water right when needed. 93-7103 is mainly used during the winter months when the ponds are frozen over.

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>
STOCKWATER STORAGE	01/01 to 12/31		10.70 AF
STOCKWATER FROM STORAGE	01/01 to 12/31		0.30 AF
RECREATION STORAGE	01/01 to 12/31		10.70 AF
<u>Totals:</u>			11.00 AF

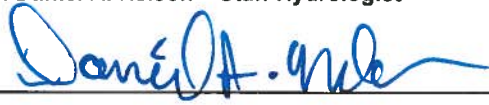
2. Recommended Amendments

☐ 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 Daniel A. Nelson – Staff Hydrologist

Field Examiner's Name



Date

10-1-2017

Reviewer

Date

State of Idaho
Department of Water Resources
Attachment To Field Exam
93-7114

This map depicts the STOCKWATER STORAGE AND RECREATION STORAGE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

02W



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

0 0.04 0.08 0.16 Miles



State of Idaho
Department of Water Resources
Attachment To Field Exam
93-7114

This map depicts the STOCKWATER FROM STORAGE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

02W



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

0 0.04 0.08 0.16 Miles



System Diagram
93-7114
By Dan Nelson

The water for this water right is captured from two natural runoff channels. One of the channels is officially marked on the topographical maps and the other is not. The northern pond (Pond 2) captures the water from the unnamed stream, and is only used to provide year round water for stock. The southern pond (Pond 1) collects water from a natural runoff channel. A portable pump is used to divert water from the pond to a water trough in a small corral by the barn. This pump is generally only used during birthing times or times when animals are separated due to sickness or preparation for shipping or slaughter.

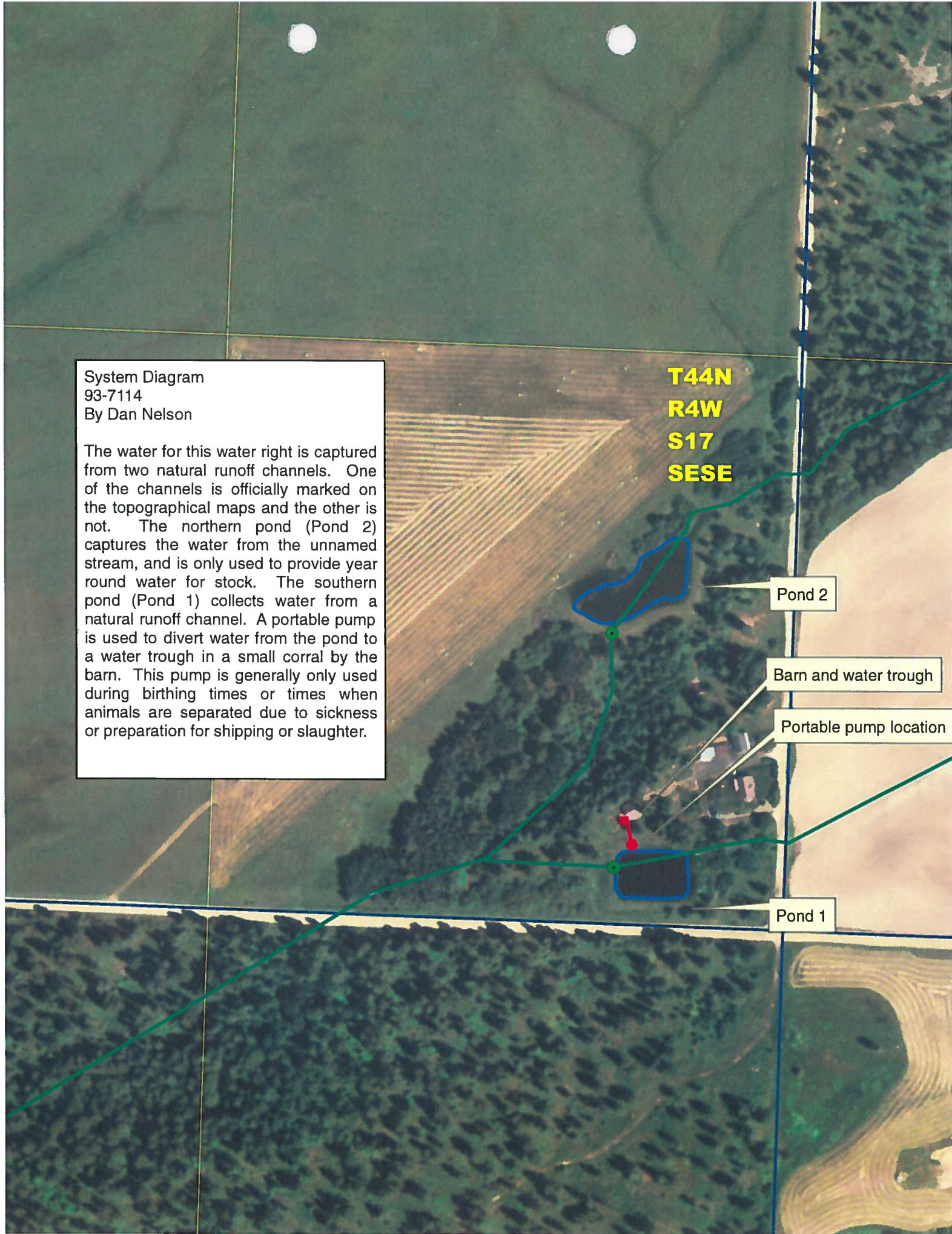
**T44N
R4W
S17
SESE**

Pond 2

Barn and water trough

Portable pump location

Pond 1



TOTAL STORAGE

FILE NUMBER	93-7114 Pond 1
REVIEWER	Dan Nelson
DATE	5/22/2013

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)	0.4	"Surface Area" is automatically carried over from the "Seepage Loss Sheet"
Average Pond Depth (In feet)	9	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: if you know the maximum depth and not the average depth, the field examiner's handbook suggest multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that
Pond Capacity (In acre feet)	3.6	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the

Volume Needed Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (In acre feet)	0	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 "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (In acre feet)	0.4	The "Estimated Seepage Loss" is automatically carried over from the Seepage Loss Sheet
Estimated Evaporation Loss (In acre feet)	0.5	The "Estimated Evaporation Loss" is automatically carried over from the Evaporation Loss Sheet
Total Volume Required (In acre feet)	4.5	"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)	1.00	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)	3.24	This number is automatically selected by picking the highest recorded number in the "Precipitation Deficit Table".
Maximum Required Daily Maintenance Volume (In acre feet per day)	0.01	"Maximum Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year, and is calculated 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 dividing 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)	0.00	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 "Maximum Required Daily 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	2	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. This number should be between 1 and 365 days for a project to be successful.
Days Required to Fill the Pond at 13,000 gallons per day	105	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. This number should be between 1 and 365 if this pond is to described as a domestic use.

User Input
Calculated value
Formula Explanations

Evaporation Loss Calculation

FILE NUMBER	93-7114 Pond 1
REVIEWER	Dan Nelson
DATE	5/22/2013

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 Arc Map. The shape file containing the sites can be found at X:/Spatial/Climate/ETIdahostations.shp .

User Input

Calculated value

Formula Explanations

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

Precipitation Deficit

Station: Twin Falls 2 NNE (NWS -- 109294)

Month	mm/day ¹	Days per month	mm/Month
Jan	0.00	31	0.00
Feb	0.00	28	0.00
March	0.00	31	0.00
April	0.33	30	9.90
May	0.78	31	24.18
June	2.20	30	66.00
July	3.24	31	100.44
August	3.14	31	97.34
September	1.61	30	48.30
October	0.00	31	0.00
November	0.00	30	0.00
December	0.00	31	0.00

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.

Although it has sometimes been useful to consider wintertime evaporation to be zero, Allen and Robison (2007, p. 169) noted, "Evaporation during nongrowing (wintertime) periods varies widely"

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

Total mm/year = **346.16**

[(mm/yr) ÷ (convert to feet)] X (Surface area of pond, in acres) = Evaporation Loss in Acre Feet

(**346.16** ÷ **304.8**) X **0.40** = **0.5 AFA**

Surface Area of Pond is automatically Carried over from the Seepage Loss Sheet.

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	93-7114 Pond 1
REVIEWER	Dan Nelson
DATE	5/22/2013

User Input
Calculated value
Formula Explanations

INPUTS

SQ. FT. Calculator
Pond Surface area in acres
0.4

POND SURFACE AREA (SQ. FT.)	17424
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SUGGESTED SEEPAGE RATE (FT/DAY)	0.0030
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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	391	GPD
----------------	-----	-----

TOTAL SEEPAGE LOSS (AFA)	0.4	AFA
--------------------------	-----	-----

SUGGESTED SEEPAGE RATES FOR DIFFERENT SOIL TYPES:
GW, GP, GM, GC, SW, SP and SM (silty sand, sand silt mixtures and gravel mixtures) = 0.20 ft per day
OL and 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
MH, OH, PT and 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: The initial basis for the Suggested Seepage Rates in the table above is found on 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.

ET_{Idaho} 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison at kimberly dot uidaho dot edu Copyright 2012, University of Idaho.

Potlatch 3 NNE (NWS -- 107301)

Statistics based on thirty year normal spans 1969 to 2001 years

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 ^j	mm/day												mm		
Monthly ^c	-2.20	-1.57	-0.74	0.33	0.78	2.20	3.24	3.14	1.61	0.09	-2.26	-2.17	73	0	73
15-Day Moving Average ^d	-2.31	-1.83	-0.81	0.32	0.86	2.20	3.19	3.05	1.44	0.01	-2.29	-2.07			
7-Day Moving Average ^e	-2.26	-1.64	-0.74	0.29	0.84	2.18	3.22	3.09	1.49	0.06	-2.30	-2.18			
3-Day Moving Average ^f	-2.22	-1.54	-0.74	0.29	0.79	2.17	3.24	3.14	1.57	0.08	-2.27	-2.19			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	1.96	1.16	1.42	1.07	1.92	0.90	1.42	1.62	1.16	1.77	1.31	2.04	136	0	136
15-Day Moving Average ^d	1.98	1.56	1.52	1.45	2.06	1.30	1.45	1.68	1.60	1.62	1.65	1.90			
7-Day Moving Average ^e	2.50	2.24	2.02	2.10	2.77	1.95	1.92	2.29	2.05	2.24	2.35	2.63			
3-Day Moving Average ^f	3.35	3.08	2.75	2.95	3.84	2.81	2.68	3.04	2.69	3.06	3.30	3.48			
20% Exceedance ^l	mm/day												mm		
Monthly ^c	-1.26	-0.51	-0.06	1.39	1.45	2.69	3.97	4.08	2.92	1.05	-1.20	-0.98	158	0	158
15-Day Moving Average ^d	0.05	0.20	1.06	2.37	3.56	4.02	4.94	4.58	3.39	1.99	0.00	0.04			
7-Day Moving Average ^e	0.47	0.99	2.04	3.16	4.28	4.75	5.32	5.04	3.78	2.51	0.72	0.38			
3-Day Moving Average ^f	0.61	1.26	2.60	3.77	4.77	5.18	5.54	5.51	4.03	2.87	1.01	0.61			

TOTAL STORAGE

FILE NUMBER	93-7114 Pond 2
REVIEWER	Dan Nelson
DATE	5/22/2013

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)	0.6	"Surface Area" is automatically carried over from the "Seepage Loss Sheet"
Average Pond Depth (In feet)	8	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: if you know the maximum depth and not the average depth, the field examiner's handbook suggest multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that
Pond Capacity (In acre feet)	4.8	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the

Volume Needed Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (In acre feet)	0	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 "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (In acre feet)	0.7	The "Estimated Seepage Loss" is automatically carried over from the Seepage Loss Sheet
Estimated Evaporation Loss (In acre feet)	0.7	The "Estimated Evaporation Loss" is automatically carried over from the Evaporation Loss Sheet
Total Volume Required (In acre feet)	6.1	"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)	1.00	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)	3.24	This number is automatically selected by picking the highest recorded number in the "Precipitation Deficit Table".
Maximum Required Daily Maintenance Volume (In acre feet per day)	0.01	"Maximum Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year, and is calculated 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 dividing 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)	0.00	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 "Maximum Required Daily 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	2	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. This number should be between 1 and 365 days for a project to be successful.
Days Required to Fill the Pond at 13,000 gallons per day	151	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. This number should be between 1 and 365 if this pond is to described as a domestic use.

User Input
Calculated value
Formula Explanations

Evaporation Loss Calculation

FILE NUMBER	93-7114 Pond 2
REVIEWER	Dan Nelson
DATE	5/22/2013

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

User Input
Calculated value
Formula Explanations

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 Arc Map. 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: Twin Falls 2 NNE (NWS -- 109294)

Month	mm/day ¹	Days per month	mm/Month
Jan	0.00	31	0.00
Feb	0.00	28	0.00
March	0.00	31	0.00
April	0.33	30	9.90
May	0.78	31	24.18
June	2.20	30	66.00
July	3.24	31	100.44
August	3.14	31	97.34
September	1.61	30	48.30
October	0.00	31	0.00
November	0.00	30	0.00
December	0.00	31	0.00

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.

Although it has sometimes been useful to consider wintertime evaporation to be zero, Allen and Robison (2007, p. 169) noted, "Evaporation during nongrowing (wintertime) periods varies widely . . ."

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

Total mm/year = 346.16

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

$$(346.16 \div 304.8) \times 0.60 = 0.7 \text{ AFA}$$

Surface Area of Pond is automatically Carried over from the Seepage Loss Sheet.

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	93-7114 Pond 2
REVIEWER	Dan Nelson
DATE	5/22/2013

User Input
Calculated value
Formula Explanations

INPUTS

SQ. FT. Calculator
Pond Surface area in acres
0.6

POND SURFACE AREA (SQ. FT.)	26136
-----------------------------	-------

SUGGESTED SEEPAGE RATE (FT/DAY)	0.0030
---------------------------------	--------

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	586	GPD
----------------	-----	-----

TOTAL SEEPAGE LOSS (AFA)	0.7	AFA
--------------------------	-----	-----

SUGGESTED SEEPAGE RATES FOR DIFFERENT SOIL TYPES:
GW, GP, GM, GC, SW, SP and SM (silty sand, sand silt mixtures and gravel mixtures) = 0.20 ft per day
OL and 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
MH, OH, PT and 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: The initial basis for the Suggested Seepage Rates in the table above is found on 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.

ET_{Idaho} 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison at kimberly dot uidaho dot edu Copyright 2012, University of Idaho.

Potlatch 3 NNE (NWS -- 107301)

Statistics based on thirty year normal spans 1969 to 2001 years

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 ^j	mm/day												mm		
Monthly ^c	-2.20	-1.57	-0.74	0.33	0.78	2.20	3.24	3.14	1.61	0.09	-2.26	-2.17	73	0	73
15-Day Moving Average ^d	-2.31	-1.83	-0.81	0.32	0.86	2.20	3.19	3.05	1.44	0.01	-2.29	-2.07			
7-Day Moving Average ^e	-2.26	-1.64	-0.74	0.29	0.84	2.18	3.22	3.09	1.49	0.06	-2.30	-2.18			
3-Day Moving Average ^f	-2.22	-1.54	-0.74	0.29	0.79	2.17	3.24	3.14	1.57	0.08	-2.27	-2.19			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	1.96	1.16	1.42	1.07	1.92	0.90	1.42	1.62	1.16	1.77	1.31	2.04	136	0	136
15-Day Moving Average ^d	1.98	1.56	1.52	1.45	2.06	1.30	1.45	1.68	1.60	1.62	1.65	1.90			
7-Day Moving Average ^e	2.50	2.24	2.02	2.10	2.77	1.95	1.92	2.29	2.05	2.24	2.35	2.63			
3-Day Moving Average ^f	3.35	3.08	2.75	2.95	3.84	2.81	2.68	3.04	2.69	3.06	3.30	3.48			
20% Exceedance ^l	mm/day												mm		
Monthly ^c	-1.26	-0.51	-0.06	1.39	1.45	2.69	3.97	4.08	2.92	1.05	-1.20	-0.98	158	0	158
15-Day Moving Average ^d	0.05	0.20	1.06	2.37	3.56	4.02	4.94	4.58	3.39	1.99	0.00	0.04			
7-Day Moving Average ^e	0.47	0.99	2.04	3.16	4.28	4.75	5.32	5.04	3.78	2.51	0.72	0.38			
3-Day Moving Average ^f	0.61	1.26	2.60	3.77	4.77	5.18	5.54	5.51	4.03	2.87	1.01	0.61			

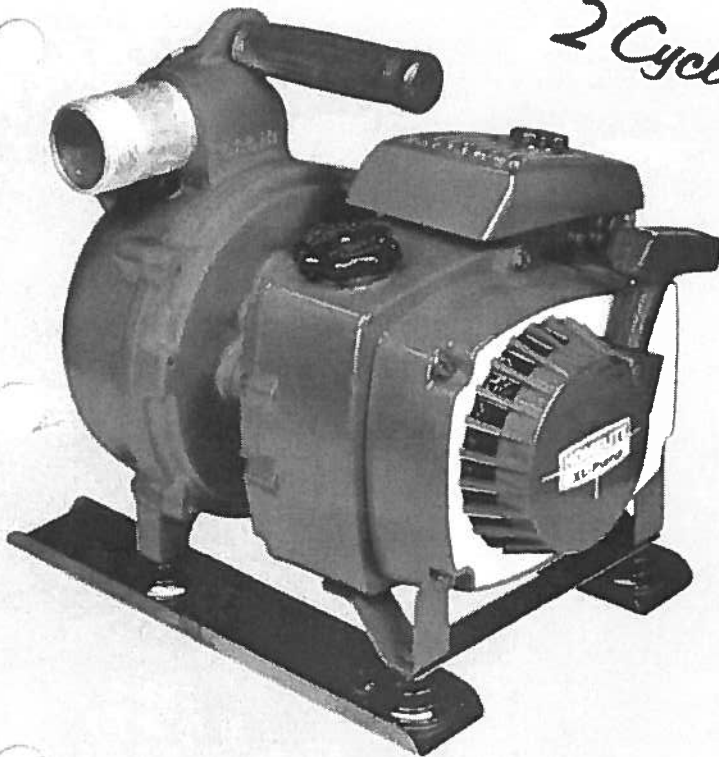
HOMELITE

GASOLINE-ENGINE-DRIVEN SELF-PRIMING CENTRIFUGAL

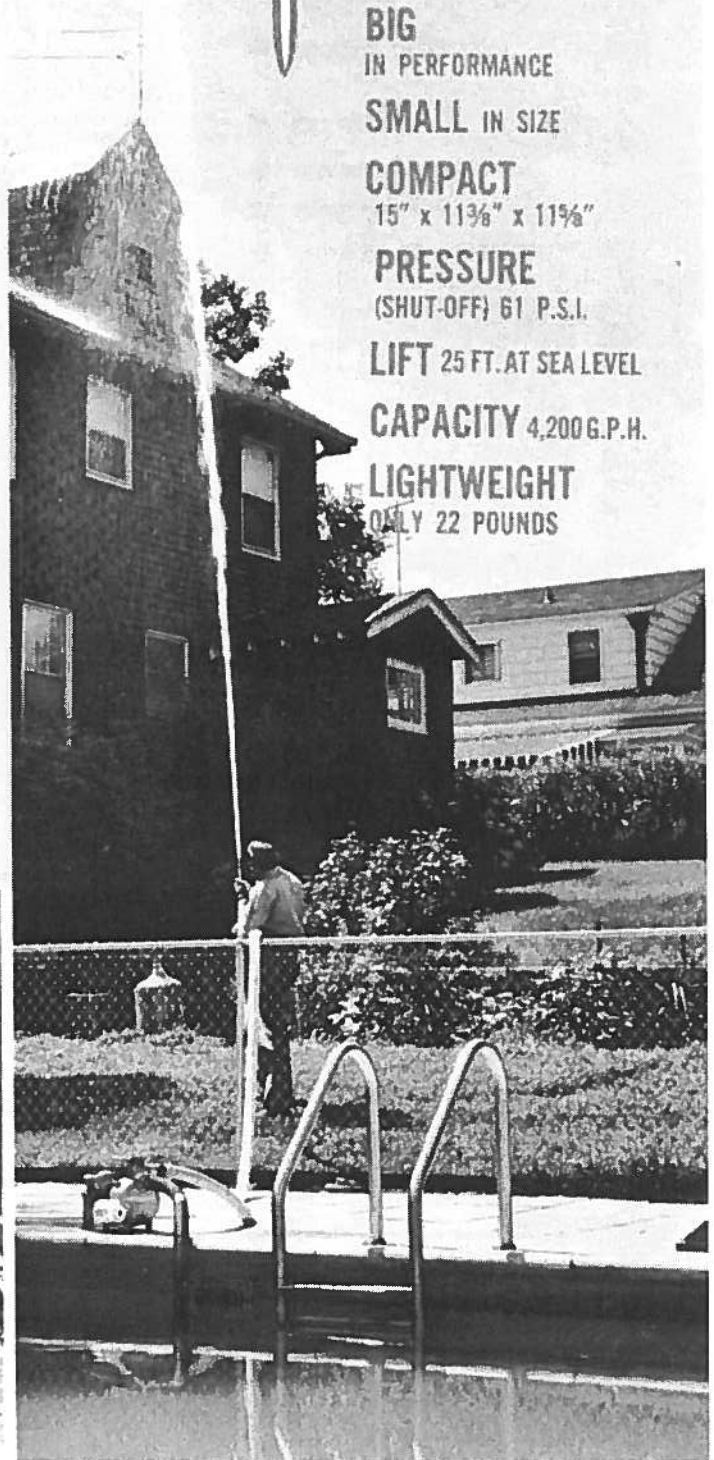
XL-PUMP

MODEL
XLS1½-1A

XLS1½-1A



BIG
IN PERFORMANCE
SMALL IN SIZE
COMPACT
15" x 11¾" x 11¾"
PRESSURE
(SHUT-OFF) 61 P.S.I.
LIFT 25 FT. AT SEA LEVEL
CAPACITY 4,200 G.P.H.
LIGHTWEIGHT
ONLY 22 POUNDS



HOMELITE

SPECIFICATIONS

HOMELITE
XL S1½-1A

PUMP

- SUCTION** ● 1½"
- DISCHARGE** ● 1½"
- CAPACITY** ● 4200 gallons per hour
- TOTAL LIFT** ● 25 feet at sea level.
- TOTAL HEAD** ● Up to 140 feet, including friction (61 p.s.i.)
 - 5 foot suction lift in 17 seconds.
 - 10 foot suction lift in 23 seconds.
 - 15 foot suction lift in 32 seconds.
 - 20 foot suction lift in 45 seconds.
 - 25 foot suction lift in 66 seconds.
- AUTOMATIC PRIMING** ●
- IMPELLER** ● Open type, abrasive resistant cast iron; large clearances allow passage of mud and solids.
- SEALING DEVICE** ● Extra long-life ceramic-carbon seal — no packing, no grease, no adjustment. (pat. pending)
- PUMP BODY** ● Aluminum alloy.
- NO BEARINGS IN PUMP** ● Impeller mounts directly on the engine crankshaft.

ENGINE

- ENGINE** ● Homelite Single Cylinder, Two Cycle Loop Scavenged
- BORE** ● 1¾"
- STROKE** ● 1¾"
- DISPLACEMENT** ● 3.3 cubic inch
- COMPRESSION RATIO** ● 8 to 1
- FUEL TANK CAPACITY** ● 15 oz. (auxiliary fuel tank kit available).
- FUEL AND MIXTURE** ● Regular gasoline with ½ pint (16 to 1) Homelite or SAE 30 motor oil per gallon.
- MAGNETO** ● High Tension, Water and Dust Proof
- SPARK PLUG TYPE AND GAP** ● Champion TJ-6-J .035 gap.
- BEARINGS** ● Anti-friction, Needle
- GOVERNOR** ● Automatic; air vane type
- SPEED CONTROL** ● Manual throttle control permits the matching of pump speed to job conditions. Speed can be varied from 6500 to 2500 R.P.M.
- CARBURETOR** ● Tillotson All-Position Diaphragm with Integral Fuel Pump and Strainer. External Adjustments.
- AIR FILTER** ● Micro Mesh Fiber
- STARTER** ● Automatic rewind starter

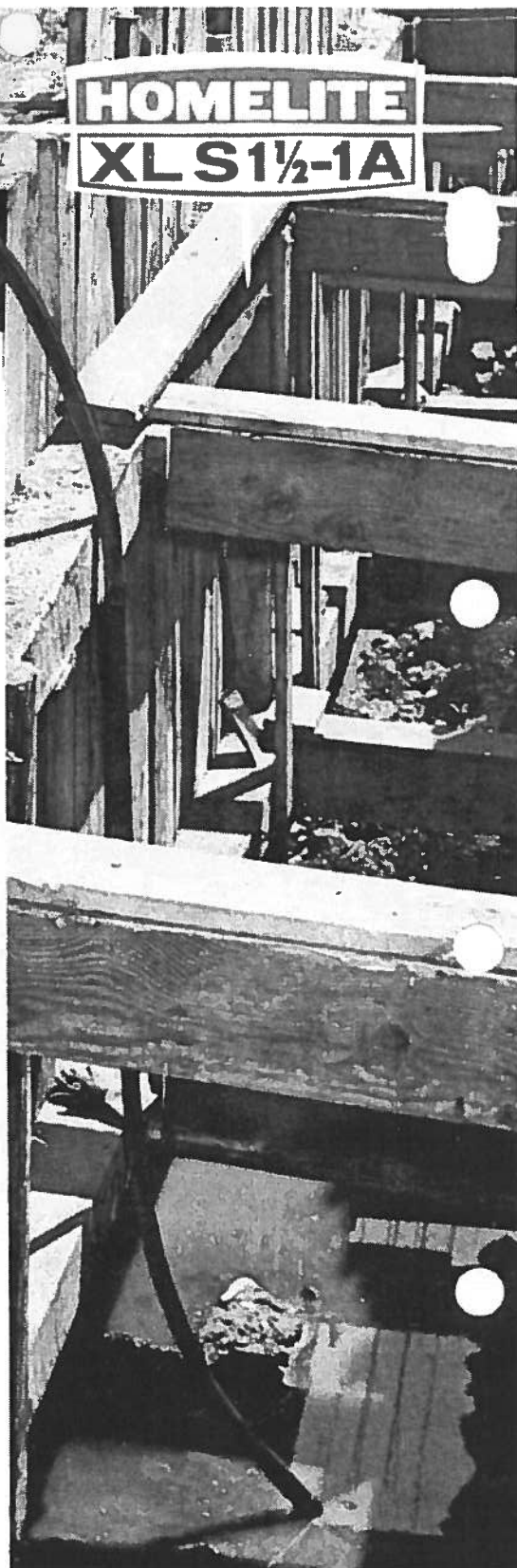
GENERAL

- WEIGHT** ● 22 lbs.
- MOUNTING** ● Entire unit mounted on skids with vibration isolating springs.
- OVER-ALL DIMENSIONS** ●
 - Length 15"
 - Width 11¾"
 - Height 11¾"
- FUEL CONSUMPTION** ● 2½ hours per gallon; (approximately 18½ minutes on built-in tank).

PERFORMANCE TABLE

Total Head (Including Friction) Feet	Capacity — G.P.M.				
	Suction Lift — Feet Above Water (At Sea Level)				
	5	10	15	20	25
25	72				
30	69	60	55	40	29
40	63	59	54	40	29
50	57	57	53	40	29
60	52	52	52	39	29
70	45	45	45	37	29
80	43	43	43	36	28
90	38	38	38	34	27
100	30	30	30	30	26
110	22	22	22	22	22
120	15	15	15	15	15
130	8	8	8	8	8

Total Head (Including Friction) P.S.I.	Capacity G.P.M.
	Pump 5 Feet Above Water
10	73
20	59
30	47
40	36
50	18
60	2



HOMELITE
a **Textron** Division PORT CHESTER, N.Y. U.S.A.

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 5/22/2013

FILE NUMBER 93-7114



The photo above shows Pond #1. This is the pond by closest to the house and the street corner. The photo below shows the outflow structure. The water is piped to the creek shown in the trees.



The two photos below show the water trough and the gas powered trash pump that is used to divert the water from the pond to the 50 gallon water trough in the small corral. This is only used when livestock are separated out and kept in the small corral.



PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 5/22/2013

FILE NUMBER 93-7114



The photo above shows Pond #2. The photo below left shows the culvert coming under the road and the photo below right shows the channel entering the pond.



The photos below show the outlet of Pond #2. There is a pipe that is used much like a drain that allows water to flow into creek channel below the dam.



Nelson, Dan

From: Al and Terri [benttree@cpcinternet.com]
Sent: Wednesday, May 01, 2013 7:38 PM
To: Nelson, Dan
Subject: Re: Licensing Inspection for water right 93-7114

Dan

8am will be ok. See you 5/22/13.

Al

From: Nelson, Dan
Sent: Wednesday, May 01, 2013 5:53 AM
To: Al and Terri
Subject: RE: Licensing Inspection for water right 93-7114

Al and Terri,

Thank you so much for helping us get this license issued. I will plan to be at your property at 8:00 am on Wednesday May 22, 2013. If something else comes up, please let me know and we will try to schedule another time. If this is too early, please let me know. Currently, I have times available later on in the day if that will work better for you. I will be happy to work with you as much as I can.

Thank you for getting back with me.

Daniel A. Nelson
Staff Hydrologist
Idaho Department of Water Resources
Telephone # (208) 287-4856
Fax (208) 287-6700 (C/O Dan Nelson)

From: Al and Terri [mailto:benttree@cpcinternet.com]
Sent: Tuesday, April 30, 2013 7:54 PM
To: Nelson, Dan
Subject: Re: Licensing Inspection for water right 93-7114

Dan

We look forward to meeting with you, and will set that day aside to review the ponds with you. If possible please send another notice and call as the date approaches.

Thank you.

Al and Terri Stifanick

From: Nelson, Dan
Sent: Tuesday, April 30, 2013 12:42 PM
To: benttree@cpcinternet.com
Subject: Licensing Inspection for water right 93-7114

Nelson, Dan

To: Al and Terri
Subject: RE: Licensing Inspection for water right 93-7114

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Sent: Tuesday, April 30, 2013 12:42 PM
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Subject: Licensing Inspection for water right 93-7114

Dear Mr. Stifanick;

I have been asked to assist our Northern Region staff in catching up on some of their water right licensing field exams. I will be in your area with Chad Goodwin of our Northern Region to do several licensing exams on Wednesday May 22nd.

If you cannot be in the area at that time and want us to visit the site, you can send a response granting us permission to visit the site without your presence. We will not visit the site if you do not give us permission to be there, but I wanted to give you an alternative to accompanying us on the field exam. We would prefer that you accompany us, because you have valuable insight concerning your system.

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In order to license your water right permit, we need to conduct a field examination to verify that you have completed work you requested in your water right permit. If you could contact me as soon as possible to make plans, I would appreciate your assistance.

Daniel A. Nelson
Staff Hydrologist
Idaho Department of Water Resources
Telephone # (208) 287-4856
Fax (208) 287-6700 (C/O Dan Nelson)

Nelson, Dan

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