



**STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/FIELD REPORT**

Permit No: **51-7369**Does this qualify for an in-office field exam (*IDAPA 035.02.r*)? X Y N

Is the permit for:

- Irrigation of 5 acres or less
- Storage of up to 14.6 AF for stockwater purposes only
- Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less

Verify that fees have been paid X Y N W031073

Fee Schedule:

<http://www.idwr.idaho.gov/RulesStatutesForms/WaterRights/PDFs/LicenseExamFees.pdf>

(A license examination fee is not required in connection with permit which use a ground water source and have a total rate of diversion of 0.04 cfs or less OR where the total volume stored is 4.0 AF per year or less)

A. CONTACT INFORMATIONExam/Review Date: 09/26/12 1. Is the Owner of record correct (y/n): Y If **NO**: Owner: _____

Is the Address of record correct (y/n): Y If **NO**: Address: _____

If available:

Phone No: _____

(Primary)

E-mail: _____

Phone No: _____

(Secondary)

E-mail: _____

Open Info Search, enter the permit number, and then use the ArcMap interface to bring up the POU/POD on ArcMap. Check the Taxlot information to see if it matches the permit or proof statement contact information.



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B. POINT OF DIVERSION

__N__ Change in POD (y/n)?

If yes:

*-Compare permit map with taxlot data. If it is domestic use from a well, the POD is generally close to the home.
-For Wells, bring in the "well" layer to see if it is digitized.
-if your overlap analysis found overlapping rights, you can use the data in those right s to verify the POD location.*

Ident No.	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.	County	Method of Determination/Remarks

Method of Determination/Remarks: __Dam visible on GIS Imagery__

__N__ Amendment Required (y/n)?

_____ X59: Point of diversion is located within <Lot 4, Blk. 3, Wilderness Subdivision>.

C. SOURCE:

__N__ Change in Source (y/n)?

If yes:

For springs and streams, we use the name of the source shown on the USGS quad maps.

Source: _____ tributary to _____

Method of Determination/Remarks: _____ Dam & Pond visible on GIS Imagery. _____

_____ B01: Source is also known as _____.

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D. PLACE OF USE:

___N___ Change in POU (y/n)?

If yes:

-Use Taxlot information in ArcMap, permit maps, overlapping rights.
-Check for government lots

Place of Use			NE				NW				SW				SE				Totals
TWP	RGE	SEC	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Or:

___N___ See attached map (goto I.)

Method of Determination/Remarks: ___ Pond visible on GIS Imagery _____

_____ 2004& 2006 photography shows full surface area of pond. _____

___N___ Amendment Required (y/n)?

_____ X60: Place of use is located within <Lots 1-10, Blk. 3; Lot 1-10, Blk. 4; Lots 1-15, Blk. 5; and Lots 1-10, Blk. 6; Mountain Ridge Subdivision>.

E. OVERLAP REVIEW

1. Place of Use (POU):

___N___ (y/n): Other water rights with the same place of use(POU)?

Research Tools:

___ InfoSearch - Query for other WR's with same POU

X POU Comparison Report - Query Tools

X Use ArcMap for overlapping POU

We are checking to see if any other water rights share the same POU or POD. The research tools on the left will help narrow down WR's with POU's and PODs in the same 40 acre tract, but that does not necessarily mean they share the same actual POD (same well, spring etc.) or the same POU (house, 3 acre pasture, etc).

Water Right No.	Source	Purpose of Use	Basis



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For irrigation rights only:

____(y/n)? *E55: Right Nos. ____ and ____ are limited to the irrigation of a combined total of ____ acres in a single irrigation season.*

2. Point of Diversion (POD) Overlap:

__N__ (y/n) Other water rights with the same point of diversion (POD)?

Research tools:

☒ InfoSearch - Query for other water rights with the same POD

☒ Use ArcMap for overlapping POD

Water Right No.	Source	Purpose of Use	Basis

____ *F06: The following rights are diverted through point(s) of diversion described above: .*

F. PURPOSE OF USE:

__N__ Change in purpose of use (y/n):

If yes:

Changes in purpose of use generally consist of things like "Recreation" really being "Recreation Storage", or multi-home domestic uses changing to "Municipal".

Use _____ From _____ To _____ Amount _____ CFS _____ AFA

Use _____ From _____ To _____ Amount _____ CFS _____ AFA

Use _____ From _____ To _____ Amount _____ CFS _____ AFA

Method of Determination/Remarks: Dam & Pond visible on GIS Imagery.

Non-irrigation uses:

Domestic # of homes _____

Stock # 400 range cattle _____

Other: wildlife _____

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G. DIVERSION RATE:

Calculations:

Since we aren't taking a measurement, this is where we explain the recommended diversion rate. Ex. Internal and external domestic use standard is 0.04 cfs.

Notes/Remarks: No diversion rate for all storage use. Instream diversion.

H. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \text{I.R.}$$

$$V = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \text{D.R.}$$

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

For uses that require a volume, this area can be used to show calculations and explain the recommended diversion volume. Ex: 3 acres at field headgate of 4.0 AF per acre = 12 AF.

2. Volume Calculations for Other Uses:

GIS area of pond = 0.8 acre. Per application, ave. pond depth = 2 ft. Volume of pond calculated as follows:
(2 ft deep)(0.8 ac surface area) = 1.6 acre feet.

Evaporative loss calculated using ETIdaho website data. Evaporative loss calculated to be 2.5 acre feet. (See attached Precipitation Loss worksheet.)

Total volume = 1.6 acre feet storage volume + 0.4 af ~~precipitation~~ ^{evaporation} loss = 2.0 acre feet
Recommend license as permitted.

I. NARRATIVE/REMARKS/COMMENTS/CHECKLIST

X Is there enough information to verify the water right in office (IDAPA 035.02.r)?

We need to be able to verify:

- X Beneficial use
- X Place of use
- X Season of use
- X Point of diversion

After reviewing the information available, is there enough information to verify beneficial use and issue a license?

At a minimum, you must be able to verify the 4 items to the left.

Checklist (you do not need all of these items):

- Property tax information
- Well Driller Report
- Receipts
- Photographs

- X Aerial photography (required for irrigation of 10+ acres)
- Other records of the permit holder

- X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use
(REQUIRED). Scale must be 1:24,000 or greater.

This checklist is meant to provide a list of items that can be used to verify beneficial use.

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(Use the WENET Layout application for this)

Map Output

Page Number

Page Orientation

Map Background

Map Output Type

☐ Create Editable Map

☒ Display POU Shape

☒ Display POD Shape

☐ Create Closeup Map of POU

☒ Print Attachment Page

☐ Is Amendment?

☐ Show Taxlots

☐ Show A Current Owner Name

Show Date On Map

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

NARRATIVE/REMARKS/COMMENTS

Locally known as Owen's Field Reservoir Dam. _____

J. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Stockwater Storage	_07/01_ to _09/30_	_____ CFS	_2.0_ AF
Wildlife Storage	_01/01_ to _12/31_	_____ CFS	_2.0_ AF
_____	_____ to _____	_____ CFS	_____ AF
<u>Totals:</u>		_____ CFS	_2.0_ 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 ☒ None

K. AUTHENTICATION

Field Examiner's Name Danielle Favreau Date 10/29/12

Reviewer _____ Date _____

Precipitation Loss Calculation

Date: October 23, 2012

Prepared by: Craig L. Saxton

Water Right No: 51-7369

P = Precipitation

ET= Evapotranspiration

P_d = Precipitation deficit

$P_d = P - ET$

P_d

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

P_d = convert to AFA: (mm/yr) / (convert to feet) x # acres =
950 304.8 0.8
(From ET Idaho)

$P_d = 2.49$ AFA

* Use the Precipitation Deficit for 'P' value

Date: October 23, 2012
 Prepared by: Craig L. Saxton
 Water Right No: 51-7369

P = Precipitation
 ET= Evapotranspiration
 P_d = Precipitation deficit
 P_d = P- ET

P_d Found at: <http://www.kimberly.uidaho.edu/ETIdaho/>
 P_d = convert to AFA: (mm/yr) / (convert to feet) * # acres
 1514.13 304.8 0.8
 P_d = 4.0 AFA

* Use the Precipitation Deficit for 'P' value

Month	mm/day	Day's per month	mm/Month
Jan	-0.08	31	-2.48
Feb	0.72	28	20.16
March	1.89	31	58.59
April	3.13	30	93.9
May	4.08	31	126.48
June	4.94	30	148.2
July	5.93	31	183.83
August	4.75	31	147.25
September	3.39	30	101.7
October	20.4	31	632.4
November	0.24	30	7.2
December	-0.1	31	-3.1

Year round	1514.1
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(From ET Idaho)

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

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

Bruneau (NWS -- 101195)

Statistics based on thirty year normal spans 1967 to 2010 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 - small stock ponds															
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	0.08	0.72	1.89	3.16	4.08	4.94	5.93	4.75	3.39	2.04	0.24	0.10	950	0	950
15-Day Moving Average ^d	0.14	0.62	1.93	3.20	4.16	4.99	5.95	4.65	3.31	2.11	0.20	0.08			
7-Day Moving Average ^e	0.10	0.67	1.89	3.16	4.13	4.95	5.96	4.73	3.34	2.06	0.21	0.09			
3-Day Moving Average ^f	0.09	0.70	1.88	3.16	4.09	4.93	5.93	4.76	3.37	2.04	0.24	0.09			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	0.65	0.54	0.82	0.70	1.45	0.76	0.55	1.05	0.72	0.96	0.65	0.94	83	0	83
15-Day Moving Average ^d	0.75	0.70	0.76	0.76	1.28	1.03	0.48	1.21	0.96	0.88	0.84	0.73			
7-Day Moving Average ^e	1.07	0.99	1.07	1.13	1.61	1.61	0.65	1.38	1.24	1.29	1.11	0.97			
3-Day Moving Average ^f	1.49	1.33	1.50	1.60	2.14	2.27	1.02	1.62	1.65	1.67	1.54	1.44			
20% Exceedance ^l	mm/day												mm		
Monthly ^c	0.35	1.19	2.40	3.78	4.72	5.55	6.25	5.11	3.95	2.53	0.87	0.36	1008	0	1008
15-Day Moving Average ^d	0.69	1.55	3.08	4.24	5.82	6.12	6.58	5.58	4.32	3.22	1.38	0.65			
7-Day Moving Average ^e	0.90	2.08	3.59	5.20	6.39	6.80	7.08	6.06	4.75	3.74	1.88	0.82			
3-Day Moving Average ^f	1.10	2.38	4.22	6.13	7.00	7.46	7.57	6.45	5.24	4.08	2.30	1.16			

80 % Exceedance^m	mm/day												mm		
Monthly ^c	0.56	0.34	1.42	2.50	3.63	4.29	5.62	4.60	2.43	1.61	0.39	0.71	882	0	882
15-Day Moving Average ^d	1.30	0.50	0.42	1.88	2.12	3.27	5.00	3.86	2.11	0.44	1.44	1.60			
7-Day Moving Average ^e	2.99	1.32	-0.91	0.81	0.78	1.34	4.39	3.04	0.66	1.35	2.27	2.91			
3-Day Moving Average ^f	4.37	3.12	-3.79	1.31	-3.24	2.14	2.32	0.66	2.32	3.32	4.84	5.06			
Ave Highest P_{def}	mm/day												--		
15-Day Moving Average ^g	0.46	1.08	2.59	3.84	5.01	5.84	6.30	5.20	3.95	2.77	0.90	0.44			
7-Day Moving Average ^h	0.75	1.67	3.10	4.57	5.80	6.50	6.75	5.80	4.48	3.33	1.37	0.64			
3-Day Moving Average ⁱ	0.96	2.05	3.77	5.45	6.46	7.14	7.26	6.23	4.99	3.73	1.84	0.91			
Ave Lowest P_{def}	mm/day												--		
15-Day Moving Average ^g	0.63	0.20	1.23	2.53	3.17	4.11	5.52	4.14	2.71	1.39	0.45	0.53			
7-Day Moving Average ^h	1.50	0.54	0.39	1.58	1.89	2.68	5.02	3.42	1.78	0.33	1.12	1.22			
3-Day Moving Average ⁱ	3.09	1.81	-1.25	0.13	-0.30	0.30	3.84	2.06	0.10	1.38	2.98	2.78			
Special normal distribution parameters for monthly, seasonal, and annual intervals															
Skew ^m	0.08	1.06	-0.35	0.23	-0.63	1.01	0.19	-1.25	1.18	0.28	0.20	0.34	-0.39	0.00	-0.39
Kurtosis ^o	0.58	4.21	1.11	2.80	1.54	3.45	0.81	4.29	4.28	0.96	2.63	0.79	2.82	0.00	2.82

^a Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

^b Nongrowing Season: This is usually the time from a killing frost or harvest in the fall to the of green up in the spring. It is not applicable for entries without a growing season.

^c Mean of the average daily value for month

^d Mean of the fourteen 15-day period averages contained in the month

^e Mean of the twenty three 7-day period averages contained in the month

^f Mean of the twenty seven 3-day period averages contained in the month

^g Mean of the highest/lowest 15-day period average in month

^h Mean of the highest/lowest 7-day period average in month

ⁱ Mean of the highest/lowest 3-day period average in month

^j This value represents the *mean value* for the parameter for the month over the 'normal' period of record. Generally, the 'normal' period is the last thirty years with data.

^k This value represents the *standard deviation* for the parameter for the month over the 'normal' period.

^l This value represents the *value* for the parameter that has a 20% chance of being exceeded that month during any particular year. Conversely, there is an 80% chance that the parameter value will be less than the *value* shown.

^m This value represents the *value* for the parameter that has a 80% chance of being exceeded that month during any particular year. Conversely, there is an 20% chance that the parameter value will be less than the *value* shown.

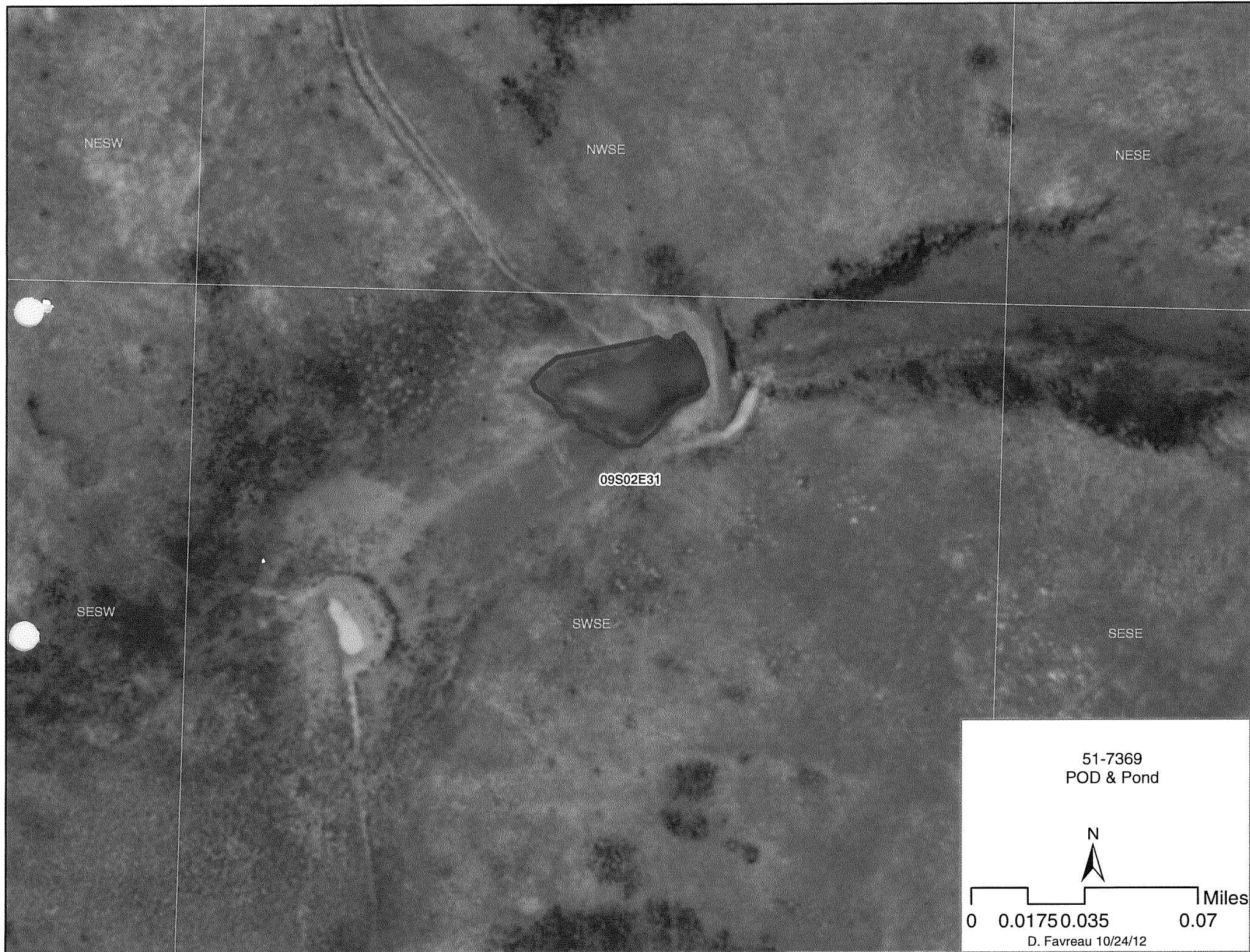
ⁿ This value represents the *skewness (asymmetry) of the distribution of the parameter values* for the month (year) over the 'normal' period. A value near zero indicates that the distribution approximates a normal (Gaussian) and symmetrical distribution. A negative skew indicates that the parameter distribution has relatively few low values compared to high values. A positive skew indicates that the distribution has relatively few high values compared to the number of low values. A skew value near 1 indicates that the underlying distribution approximates a lognormal distribution.

^o This value represents the *kurtosis* of the parameter value distribution for the month (year) over the 'normal' period. Kurtosis is a measurement of the height to width ratio of the probability distribution, or the *peakedness (slenderness)*. A normal (Gaussian) distribution has a kurtosis of 3. A high kurtosis distribution has a sharper peak and longer tails, while a low kurtosis distribution has a more rounded peak and shorter tails.

This work and report were prepared by the University of Idaho Research and Extension Center at Kimberly, Idaho under contract with the Idaho Department of Water Resources. Work was supported by funding from IDWR and the Idaho Agricultural Experiment Station and Idaho Engineering Experiment Station. The authors gratefully acknowledge the long-term evapotranspiration data collection and long-standing advice provided by Dr. James L. Wright, USDA-ARS Kimberly (ret.), the more than two decades of high quality agricultural weather data collection by the U.S. Bureau of Reclamation AgriMet system, and the very long-standing, routine data collection by the hundreds of cooperative weather station volunteers across the state who, for more than one-hundred years, have faithfully observed daily air temperature and precipitation.

The citation for the evapotranspiration data used from this site should be: Allen, Richard G. and Clarence W. Robison, 2012. *Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho: Supplement updating the Time Series through December 2008*, Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.

Questions regarding the data should be addressed to [Clarence W. Robison](#) or [Richard G. Allen](#), University of Idaho, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. Telephone (208)-423-6610



NESW

NWSE

NESE

09S02E31

SESW

SWSE

SESE

51-7369
POD & Pond



0 0.01750.035 0.07 Miles

D. Favreau 10/24/12

Type	WR #	Owner	Source	TRS	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total
Permit	51 7369	UNITED STATES OF AMERICA	UNNAMED STREAM	09S02E31														X			0
Permit	51 7369	UNITED STATES OF AMERICA	UNNAMED STREAM	09S02E31														X			0

Basin Sequence	Suffix	Version Number	Process	Basis	Status	Draft	RightID	Priority Date	Diversion Rate	Source List	Water Use List	Current Owner
51	7369		Water Permit		Active	N	567337	9/9/1999		UNNAMED STREAM	STOCKWATER STORAGE, WILDLIFE STORAGE	UNITED STATES OF AMERICA /
			Other Owner	Leased to Water	Application ID	Approval Date	Total Acres	Acre Limit	Volume	Water District		
			No			3/26/2003			2.0			