

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 22-13306

Exam Date: 5/7/2015

1. Current Owner: FOX CREEK COUNTRY CLUB ESTATES POA INC
PO BOX 1088
VICTOR ID 83455

And

FOX CREEK VILLAGE HOA
PO BOX 836
DRIGGS ID 83422

2. Accompanied by: Bob Spoelhof and Allen Wilder

Phone No:

Address:

Relationship to Permit Holder: President of POA/ water system operator

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

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 22-14053
2. Other water rights with the same point of diversion: None

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

GROUND WATER	SE1/4SE1/4	Sec. 23,	Twp 04N,	Rge 45E, B.M.
TETON County				
GROUND WATER	NE1/4SE1/4	Sec. 23,	Twp 04N,	Rge 45E, B.M.
TETON County				

Method of Determination: GPS and aerial photography

2.

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N	45E	23													X	X			X

Method of Determination: Aerial photography

3. _____ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ___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.
- ___X___ Aerial Photo Attached (required for irrigation of 10+ acres).
- ___X___ Photo of Diversion and System Attached

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
New Well		15			
Old Well		7.5			

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Flow Meter	Ultrasonic	Fuji				

2. Measurements:

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

Rate of diversion from the "new well" 15 hp pump was determined by using the Fuji flow meter. Observed rate of diversion was 159.0 gallons per minute.

Rate of diversion from the "old well" 7.5 hp pump was determined by using the installed flowmeter. Observed rate of diversion was 91.0 gallons per minute.

Total rate from both wells is 250.0 gallons per minute or 0.56 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \text{N/A}$$

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

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

2. Volume Calculations for Other Uses:

In-house use for 92 homes = 92 homes X 0.6 acre-feet = 55.2 acre-feet.

Irrigation for 92 lots. Approximately 36.8 acres. Irrigation under each lot is ≤ 0.5 acres. Crop irrigation requirement for turf grass is 1.9 acre-feet/acre (ET Idaho). 36.8 acres X 1.9 acre-feet/acre = 69.9 acre-feet.

Total volume = 125.1 acre-feet.

G. NARRATIVE/REMARKS/COMMENTS

Two pumps divert water to 92 lots for domestic purposes. Water right 22-14053 is an irrigation water right (Fox Creek) that overlaps the majority of lots within the subdivision. Right 22-14053 does not provide irrigation water for the subdivision.

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>
DOMESTIC	01/01 to 12/31	0.560 CFS	125.10 AF
<u>Totals:</u>		0.560 CFS	125.10 AF

2. Recommended Amendments

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

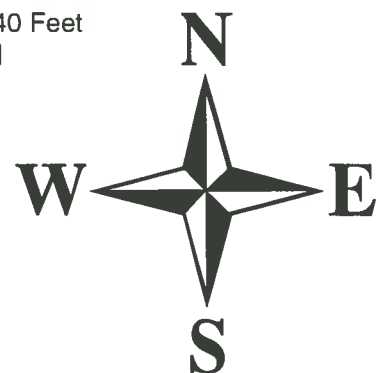
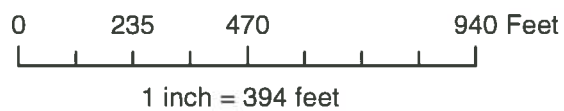
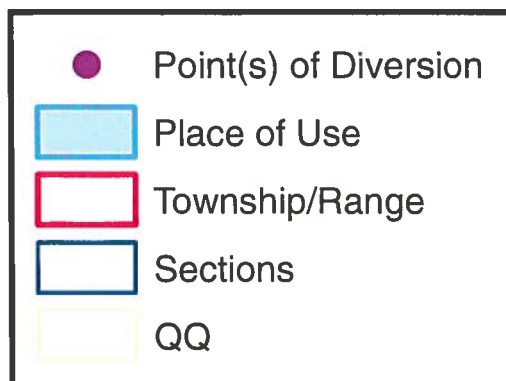
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Blake Jordan Date 5/12/2015

Reviewer _____ Date _____

22-13306



"New well"



Inside "New well" pump house



"New well" pump house

"old well"



Inside "old well" pump house

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.

Driggs (NWS -- 102676)

Statistics based on thirty year normal spans 1969 to 2008 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.

Grass - Turf (lawns) - Irrigated 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	0.01	0.01	0.06	0.19	1.74	4.78	5.16	4.78	2.43	-0.10	-0.39	-0.12	582	-14	568
15-Day Moving Average ^d	0.00	-0.03	0.06	0.16	1.69	4.79	5.13	4.70	2.22	-0.07	-0.35	-0.11	1.9 Af		
7-Day Moving Average ^e	0.01	-0.01	0.05	0.16	1.71	4.74	5.12	4.76	2.31	-0.08	-0.39	-0.11			
3-Day Moving Average ^f	0.01	0.01	0.05	0.18	1.72	4.76	5.15	4.79	2.39	-0.10	-0.39	-0.12			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	0.07	0.08	0.16	0.43	1.83	1.18	1.24	0.96	1.07	0.84	0.38	0.33	103	16	106
15-Day Moving Average ^d	0.08	0.21	0.19	0.51	1.63	1.68	1.11	1.05	1.54	0.67	0.54	0.27			
7-Day Moving Average ^e	0.13	0.37	0.34	0.69	2.02	2.23	1.60	1.42	2.05	1.18	0.81	0.41			
3-Day Moving Average ^f	0.22	0.53	0.57	1.02	2.74	2.88	2.41	1.98	2.74	1.97	1.16	0.62			
20% Exceedance ^l	mm/day												mm		
Monthly ^c	0.04	0.05	0.18	0.31	2.78	5.65	5.86	5.46	3.21	0.09	-0.08	0.00	664	-3	650
15-Day Moving Average ^d	0.12	0.20	0.40	0.58	4.45	6.65	6.61	5.97	4.52	0.67	0.15	0.11			
7-Day Moving Average ^e	0.25	0.42	0.66	0.94	5.36	7.35	7.05	6.58	5.78	1.45	0.45	0.29			

3-Day Moving Average ^f	0.35	0.55	0.90	1.82	6.94	8.86	8.24	7.81	6.87	3.65	0.72	0.42			
80% Exceedance^m	mm/day												mm		
Monthly ^c	-0.02	-0.03	-0.02	-0.06	0.66	3.88	4.51	3.90	1.35	-0.57	-0.77	-0.29	486	-33	466
15-Day Moving Average ^d	-0.15	-0.25	-0.29	-0.49	-0.58	2.20	3.19	2.89	-0.17	-1.16	-1.37	-0.60			
7-Day Moving Average ^e	-0.35	-0.57	-0.70	-1.19	-2.10	-0.92	1.27	1.58	-1.44	-2.77	-2.84	-1.07			
3-Day Moving Average ^f	-0.74	-1.29	-1.66	-2.72	-6.22	-4.56	-3.52	-1.27	-5.18	-7.11	-5.18	-2.35			
Ave Highest P_{def}	mm/day												--		
15-Day Moving Average ^g	0.09	0.16	0.28	0.55	2.83	6.03	6.11	5.49	3.65	0.60	0.10	0.07			
7-Day Moving Average ^h	0.20	0.36	0.50	0.91	4.08	6.88	6.70	6.26	5.06	1.30	0.32	0.20			
3-Day Moving Average ⁱ	0.30	0.53	0.75	1.58	5.69	8.11	7.83	7.33	6.23	2.15	0.55	0.32			
Ave Lowest P_{def}	mm/day												--		
15-Day Moving Average ^g	-0.08	-0.16	-0.15	-0.18	0.52	3.50	4.29	3.90	1.11	-0.75	-0.80	-0.29			
7-Day Moving Average ^h	-0.20	-0.44	-0.48	-0.72	-0.89	1.42	2.91	2.67	-0.07	-1.60	-1.52	-0.63			
3-Day Moving Average ⁱ	-0.46	-0.97	-1.21	-1.81	-3.73	-1.09	-0.27	0.56	-2.74	-4.13	-3.10	-1.29			
Special normal distribution parameters for monthly, seasonal, and annual intervals															
Skew ^m	0.17	-1.43	0.36	3.16	0.19	-0.36	-0.09	0.00	0.10	0.62	-0.97	-0.78	0.29	-0.03	0.33
Kurtosis ^o	0.91	7.22	0.75	14.25	0.63	3.30	0.71	0.53	2.74	2.15	3.10	1.76	2.40	2.53	2.27

^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

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