

MEMO

TO: 96-8685 Taylor

From: S. Hemenway

Date: 5/3/2011

REF: Review for Licensing

A Permit to Appropriate was approved on 6/10/1992, with proof due on 7/2/2002 (this was due to 2 extensions being filed, 5/11/1994, and 5/11/1998). Proof of Beneficial Use was received on 7/1/2002, receipt C063031 for \$50, for Domestic/1, Irrigation of 24-acres, Stockwater for 20 Llamas, and Recreation Storage.

A beneficial use field examination (exam) was conducted on 9/1/2005. The field exam included in the file is a combination of 96-8685 and 96-8686 both on one report, in that it includes both systems and sources (springs and Hellroaring Creek). Upon speaking with management, it was recommended to split the 2 systems off of the field exam, and return them to their original form as approved on the individual permits, and License them as 2-separate water rights. Water right 96-8685 involves 2 springs. One spring is in the recreational pond itself, which maintains the level of the pond, and one 100-gallon stockwater tank. The pond is 0.55 acre, with a maximum depth of 12 ft (created by dredging a swampy area on the property). The other spring maintains another 100-gallon stockwater tank. Stockwater is for 20-Llamas. If there is any overflow from the pond, it goes back to the Pack River. Domestic use is for a camper and a 20 ft X 24 ft shop (no irrigation). Eventually they plan on building a house there. The pond and/or springs have never been utilized for irrigation purposes, so irrigation will not be included on the License. The recreational pond is stocked with fish; no stock drink directly from the pond. In the field exam, it states that there is a point of diversion from Hellroaring Creek with diversion to storage, for maintaining the level of the pond. In a conversation with Tom Taylor on 4/19/2011, he will discontinue diversion to storage from Hellroaring Creek to the pond, since he has no intension of filing another application for permit for this use, and this use is not listed on either permit 96-8685 or 96-8686. **No POD or POU overlaps were found.**

Ownership was confirmed via the Tax Lot Information which was updated on 4/15/2010, showing Thomas P. and Gale E. Taylor 1901 W Bowie Rd., Medical Lake, WA 99022 as the current owners (same information as on water right).

Uses:

Stockwater: 20 Llamas

Domestic (1): camper, and 20 ft X 24 ft shop (no irrigation); plans to build a house later.

Recreation Storage: pond stocked with fish (no stock drink directly from the pond)

Irrigation: NONE from spring source, or pond, therefore not included on the License.

Volume

Recreational Storage(pond):

0.55 acre = 23958

$(23958 \times 12)/43,560 = 6.6$ af

ET Idaho 2009 Evapotranspiration and Consumptive Water Requirement shows (-106), more rainfall per year than evaporation.

Domestic (camper & shop): 0.6 af

Stockwater for 20 Llamas:

$V_{ir} = (20 \text{ head} \times 12 \text{ gallons per day} \times 365 \text{ days})/325,850 = 0.3$ af

$V_{dr} = 0.02 \text{ cfs} \times 365 \times 1.9835 = 14.5$ af (capacity)

$V = 0.3$ af

Recommend: 6.6 af + ~~1.06~~ af + 0.3 af = 7.5 af total annual volume

0.6
af

CFS

Domestic: camper and a shop (no irrigation) 0.02 cfs

Stockwater (20 Llamas), with 2-(100) gallon stocktanks. The spring and precipitation (ET is -106) maintains the level of the pond and stockwater tanks. There is no way to physically measure the spring in the pond that maintains the 100 gallon stock tank there. The other spring maintains the level in the other 100 gallon stock tank. At the time of the field exam, a physical measurement was conducted on the diversion to the pond, which was from Hellroaring Creek, without a permit to divert, and diversion has been ceased (that measurement was 0.05 cfs).

I recommend allowing 0.02 cfs for stockwater, since that would be the minimum allowable if this had been instream stockwater, and in accordance with Idaho Code 42-113(3)(a)(iii), The diversion is from a surface water source to which the livestock would otherwise have access and the watering tank or trough is located on land from which the livestock would have access to the surface water source from which the diversion is made; where water is diverted or retained at 2-different springs, with 2-individual 100-gallon stocktanks. There is no method of measuring the flow.

Recommend total diversion rate:

0.02 cfs domestic + 0.02 cfs stockwater = 0.04cfs

A Flow Measurement Port or Other Device:

Per management approval, Condition #3 was not carried over to the License. There is no means of measuring the flow of the 100-tank developed at the spring.

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

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Sandpoint KSPT (NWS --108137)

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	-3.32	-2.24	-0.87	0.56	0.91	1.69	3.34	2.91	1.65	-0.51	-3.98	-3.73	-106	0	-106
15-Day Moving Average ^d	-3.40	-2.54	-0.92	0.53	0.96	1.56	3.28	2.89	1.51	-0.47	-3.99	-3.63	more rainfall per year than evaporation		
7-Day Moving Average ^e	-3.35	-2.35	-0.93	0.51	0.94	1.58	3.32	2.90	1.58	-0.46	-4.07	-3.61			
3-Day Moving Average ^f	-3.31	-2.24	-0.88	0.53	0.92	1.62	3.33	2.91	1.63	-0.49	-4.00	-3.70			
Standard Deviation	mm/day												mm		
Monthly	2.53	1.87	1.59	1.01	1.78	1.23	2.17	2.02	1.19	2.04	1.93	2.28	157	0	157
15-Day Moving Average	2.57	2.51	1.67	1.47	1.97	1.90	2.04	1.90	1.72	1.90	2.52	2.35			
7-Day Moving Average	3.49	3.39	2.26	2.30	2.69	2.71	2.33	2.52	2.24	2.52	3.75	3.40			
3-Day Moving Average	4.68	4.38	3.22	3.16	3.73	3.72	2.91	3.25	2.91	3.34	5.43	4.92			
20% Exceedance	mm/day												mm		
Monthly	-2.25	-0.58	-0.02	1.42	1.87	2.62	4.29	4.15	2.89	0.48	-2.46	-2.40	17	0	17
15-Day Moving Average	0.03	0.08	1.31	2.55	3.62	4.21	5.05	4.72	3.55	1.77	0.00	0.00			
7-Day Moving Average	0.30	0.88	1.98	3.29	4.76	4.94	5.38	5.17	3.94	2.40	0.66	0.16			
3-Day Moving Average	0.46	1.23	2.48	3.85	5.11	5.63	5.70	5.48	4.40	2.64	0.96	0.31			

80 % Exceedance	mm/day												mm		
Monthly	-4.34	-3.68	-1.99	0.48	-0.29	0.89	2.67	1.73	0.63	-2.22	-5.50	-5.12	-248	0	-248
15-Day Moving Average	-6.38	-6.18	-3.73	1.75	-2.10	-1.41	1.30	-0.92	1.66	-3.94	-8.01	-7.81			
7-Day Moving Average	11.30	11.08	-5.93	4.77	-4.77	-5.20	0.92	-4.35	3.30	-7.11	11.03	13.45			
3-Day Moving Average	18.46	19.03	11.66	9.86	-9.34	11.07	5.08	-8.84	8.69	10.81	20.74	18.85			
Ave Highest P_{def}	mm/day												--		
15-Day Moving Average ^g	0.03	0.09	0.65	1.92	2.55	3.08	4.34	4.03	2.73	1.10	0.04	0.01			
7-Day Moving Average ^h	0.14	0.63	1.51	2.88	3.73	4.41	4.93	4.74	3.51	1.91	0.29	0.08			
3-Day Moving Average ⁱ	0.33	0.99	2.11	3.61	4.56	5.17	5.40	5.19	3.97	2.32	0.67	0.23			
Ave Lowest P_{def}	mm/day												--		
15-Day Moving Average ^g	-5.32	-3.69	-2.28	0.77	-0.63	0.05	2.33	1.69	0.37	-2.04	-5.99	-5.72			
7-Day Moving Average ^h	-8.29	-6.49	-4.38	3.05	-2.94	-2.29	0.87	-0.12	1.18	-4.27	-9.43	-9.06			
3-Day Moving Average ⁱ	13.91	10.91	-8.54	6.87	-7.33	-6.61	2.00	-3.57	4.41	-7.57	16.11	15.06			
Special normal distribution parameters for monthly, seasonal, and annual intervals													--		
Skew	-0.29	-1.32	-0.05	0.17	-0.31	-0.85	0.84	-0.37	0.26	-0.07	-0.83	-0.08	-0.59	0.00	-0.59
Kurtosis	1.10	4.44	0.67	3.32	1.00	4.71	2.66	0.79	2.05	0.59	4.04	0.69	3.27	0.00	3.27

^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

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The citation for the evapotranspiration data used from this site should be: *Allen, Richard G. and Clarence W. Robison, 2009. 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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