

Review Memo

Date: May 9, 2012

To: File 98-7701

From: Craig L. Saxton

Re: Review of Permit 98-7701

Volume:

Permit 98-7701 was filed for the storage developed under 98-7598 but was not authorized by permit. When the field examination was conducted for 98-7598, the field examiner reported that the pond created under permit 98-7598 actually stored up to 20.7 AF with a surface area of 5.2 acres and average depth of 4 feet (max depth reported as 7 feet).

Right 98-7598 was licensed for 3 AF of storage as permitted and therefore permit 98-7701 was filed for the remaining 17.7 acre feet.

The field examiner for 98-7701 reported that the pond had a 4 foot max depth (in contrast to the previous report of a 4 foot average depth) and a surface area of 4.6 acres recommending a storage volume of 7.5 af.

Current GIS mapping capabilities show that the pond surface area is 7 acres. I averaged the 7 foot max depth reported in the 98-7585 field exam with the 4 foot max depth reported in the 98-7701 and will base the volume calculations on a max depth of 5.5 feet $(4' + 7') / 2 = 5.5'$:

$$(5.5 \text{ feet})(7 \text{ acres})(0.4) = 15.4 \text{ AF}$$

Evaporation losses were calculated to be 6 AF using ETIdaho data.

The total calculated volume requirements for the pond is 21.4 AF. By subtracting 3 AF already authorized under 98-7598, the remaining volume requirement is 18.4 AF. Issue license 98-7701 for 17.7 AF as permitted. This is 0.7 AF less than calculated, but is a 3% difference. The water stored in this pond is fully authorized under rights 98-7598 and 98-7701.

Source:

Source permitted as Dunning Creek but is actually Unnamed Stream per USGS quad map. In addition, source listed for overlapping right 98-7598 is Unnamed Stream.

Add B01: Source is also known as Dunning Creek.

Conditions:

Condition 4:

Recreation storage is for non-commercial, recreational fish propagation.

The field examiner recommends recreation storage as a valid use but an affidavit from the permit holder signed May 18, 1995, states:

There is not now nor has there ever been any fish in this creek. Dunning Creek is intermittent and has been this way for as long as I have owned this property (17 years). There can be no recreational fish propagation if there is no fish.

The statement that Denning Creek (unnamed stream) is intermittent is consistent with the USGS quad designation. And the proof statement doesn't include recreation storage as a purpose of use.

I would guess that since this permit was filed to cover the additional storage volume that was found during the field exam for 98-7598, permit 98-7701 was issued with the same purposes of use as 98-7598. License 98-7598 does include Recreation Storage as an authorized purpose of use.

I recommend dropping Recreation Storage as a purpose of use for 98-7701 at licensing.

Condition 5:

An intake screen of 1/4 inch or smaller mesh shall be installed at the point of diversion to prevent any negative impact on juvenile fish.

Condition 5 was added due to a request from IDFG on October 8, 1992. The request states (emphasis added):

*We have reviewed these proposed water right diversions (98-7701 & 97-8329). The applicant **should be required to screen their diversions** to prevent fish losses and provide for fish passage around any diversion structure, unless they can demonstrate no fishery resource will be affected.*

Condition 5 shouldn't have been added as it is not applicable to on-stream storage rights. There is no intake line that a fish screen could be installed on.

I recommend dropping condition 5 at licensing as there is no way this condition could be met.

Condition 6:

Prior to diversion under this right, the permit holder shall provide for fish passage around the diversion structure.

Condition 6 was added due to a request from IDFG on October 8, 1992. The request states (emphasis added):

*We have reviewed these proposed water right diversions (98-7701 & 97-8329). The applicant **should be required to screen their diversions to prevent fish losses and provide for fish passage around any diversion structure, unless they can demonstrate no fishery resource will be affected.***

The permit holders May 18, 1995, affidavit stating that has never been any fish in the creek and that the unnamed stream also known as Dunning Creek is intermittent was provide to addresses IDFG's caveat to their October 8, 1992 letter, "...*unless they can demonstrate no fishery resource will be affected.*" The statement is consistent with the USGS quad designation that shows the source as an intermittent stream.

The POD is not in a water district and the diversion dam has been in place since at least June 19, 1990, when the field exam for 98-7598 was conducted. There does not appear to have been any complaints from IDFG in the last 22 years.

I recommend that Condition #6 is dropped at licensing because it is not appropriate for this right.

LICENSE REVIEW CHECKLIST

Permit No. 98-7701 Date: 5/9/2012 Reviewer: Craig L. Saxton

Name/Address: No Name is now Ohnstad Revocable Trust, but address is the same.
Add B01

Source: Yes Change? Source permitted as Dunning Creek but is actually unnamed stream

Point of Diversion: no Change?
no Add?
Yes F06 (overlap POD) 98-7598
n/a X59 (subdivision description)

Place of Use: no Change
n/a X60? (subdivision description)
n/a E55? (PPU acre Limit)

Yes Overlaps: Right(s): 98-7598

Diversion Rate: Permitted Rate: n/a cfs Diversion rate from rights with same POD: n/a
Fee Limit: \$50 20 AF

Water Uses: No Change? Same use as 98-7598

Irrigation	<u>n/a</u> cfs	<u> </u> af
Recreation Storage	<u>n/a</u> cfs	<u>17.7</u> af
Recreation Storage	<u>n/a</u> cfs	<u>17.7</u> af
Total =	<u> </u> cfs	<u>17.7</u> af

Volume Determination

Depth = <u>5.5</u> Ft	Evaporation Losses = <u>6.0</u> af
Slope = <u>0.4</u>	Calculated Pond Vol = <u>15.4</u> AF
Surface Area = <u>7</u> AC	Total = <u>21.4</u>
Calculated Pond Vol = <u>15.4</u> AF	Licensed under 98-7598: <u>3</u> AF
	Remaining Vol Requirements = <u>18.4</u>
	Permitted Rate: <u>17.7</u> AF
	Difference b/w vol requirements and permit = <u>0.7</u> AF (see Remarks)
	Total Authorized Max Div Vol = <u>17.7</u>

Remarks: Difference b/w vol requirements and permit is 3%. Consider volume requirements covered fully under rights 98-7598 and 98-7701

Additional Conditions

<u> </u> Watermaster Control	GW Dist? <u> </u>
<u> </u> GW Measurement/Measuring devices	Water Msmt. Dist? <u> </u>
<u> </u> Other	Crit. GWMA? <u> </u>

Advance Priority? yes/no
Adjust Memo yes/no If yes, explain why below: Reinstated permit

Precipitation Loss Calculation

Date: April 7, 2012
Prepared by: Craig L. Saxton
Water Right No: 98-7701

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 =

259	/	304.8	x	7	=
(From ET Idaho)					

P_d = 5.95 AFA

* Use the Precipitation Deficit for 'P' value

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

Please send suggestions for improving this site to robison@kimberly.uidaho.edu Copyright 2010, University of Idaho.

Bonnors Ferry (NWS --101079)

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	-1.90	0.94	0.29	1.36	2.20	2.54	3.80	3.55	1.85	0.07	-1.96	-2.44	259	0	259
15-Day Moving Average ^d	-2.05	1.15	0.35	1.32	2.15	2.49	3.85	3.62	1.78	0.17	-1.93	-2.37			
7-Day Moving Average ^e	-1.99	1.04	0.32	1.32	2.19	2.49	3.83	3.59	1.81	0.10	-1.90	-2.40			
3-Day Moving Average ^f	-1.91	0.97	0.30	1.36	2.18	2.52	3.80	3.57	1.84	0.08	-1.90	-2.44			
Standard Deviation	mm/day												mm		
Monthly	1.52	1.04	1.11	0.82	1.53	0.86	1.15	1.26	0.87	1.33	1.57	1.81	134	0	134
15-Day Moving Average	1.62	1.47	1.11	1.17	1.67	1.31	1.03	1.22	1.31	1.22	2.02	1.76			
7-Day Moving Average	2.26	1.98	1.55	1.82	2.23	1.92	1.42	1.60	1.75	1.83	2.47	2.53			
3-Day Moving Average	3.18	2.59	2.18	2.53	2.96	2.75	1.96	2.23	2.29	2.43	3.25	3.50			
20% Exceedance	mm/day												mm		
Monthly	-1.01	0.14	0.97	2.19	2.96	3.31	4.30	4.26	2.62	0.87	-0.78	-1.42	376	0	376
15-Day Moving Average	0.05	0.31	1.70	3.03	4.29	4.59	5.19	4.86	3.70	1.91	0.02	0.00			
7-Day Moving Average	0.30	0.87	2.25	3.79	5.18	5.15	5.57	5.42	4.25	2.38	0.55	0.14			
3-Day Moving															

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Average	0.49	1.20	2.78	4.54	5.75	5.89	5.92	5.79	4.55	2.78	0.81	0.32			
80 % Exceedance	mm/day												mm		
Monthly	-2.98	2.03	-0.52	0.55	1.21	1.82	3.00	3.01	1.16	0.64	-3.57	-3.57	147	0	147
15-Day Moving Average	-4.78	3.12	-1.55	0.83	0.06	0.59	2.08	1.82	0.50	2.19	-4.73	-5.94			
7-Day Moving Average	-8.09	5.37	-2.97	3.09	-3.00	1.66	0.40	-0.06	3.08	4.59	-8.12	-8.88			
3-Day Moving Average	13.56	9.83	-5.75	6.93	-5.99	6.30	2.28	-4.63	5.83	6.97	14.22	13.55			
Ave Highest P_{def}	mm/day												--		
15-Day Moving Average ^g	0.05	0.20	1.26	2.46	3.43	3.59	4.59	4.39	2.77	1.31	0.04	0.02			
7-Day Moving Average ^h	0.17	0.59	1.96	3.40	4.50	4.63	5.20	5.07	3.65	2.00	0.33	0.07			
3-Day Moving Average ⁱ	0.34	0.97	2.42	4.05	5.13	5.44	5.74	5.49	4.08	2.33	0.63	0.21			
Ave Lowest P_{def}	mm/day												--		
15-Day Moving Average ^g	-3.23	1.78	-0.62	0.24	0.96	1.42	3.06	2.54	0.87	1.14	-3.03	-3.92			
7-Day Moving Average ^h	-5.32	3.36	-1.96	1.43	-0.89	0.30	1.87	1.22	0.55	2.84	-4.84	-6.49			
3-Day Moving Average ⁱ	-9.32	6.27	-4.53	4.21	-4.27	3.50	0.14	-1.47	2.96	5.29	-8.76	10.57			
Special normal distribution parameters for monthly, seasonal, and annual intervals													--		
Skew	0.00	1.04	-0.12	0.23	-0.37	0.77	0.09	-0.57	0.10	0.06	-1.53	-0.23	-0.72	0.00	-0.72
Kurtosis	0.57	4.39	0.65	2.31	0.95	3.96	0.64	1.43	2.47	0.72	5.82	0.75	3.35	0.00	3.35

^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

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

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

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, 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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