

MEMO

TO: File 65-13677

FROM: CPadilla

DATE: December 21, 2010

RE: Licensing Review Memo

Time Line:

Application for Permit Received: 7/8/96

Permit Approved: 9/16/96

Proof of Beneficial Use Received: 8/26/98

Field Exam Conducted: 10/19/99

NOTE: An order was issued 7/8/2004 that required the installation of a measuring device and controlling device on the diversion works. This permit was initially approved with a condition that allows for measuring device/lockable device after specific notification. This order will act as the specific notification and the license will be issued with a condition requiring the maintenance of the devices. Inspection of Diversion document dated 8/2004 states that measuring and lockable devices have been stalled.

Conditioning:

Comment	Water Permit Condition Report
Remove from license, no irrigation found.	03A The rate of diversion of water for irrigation under this right and all other water rights on the same land shall not exceed 0.02 cubic feet per second for each acre of land.
Change to R43 per note above.	01M After specific notification by the department, the right holder shall install a suitable measuring device or shall enter into an agreement with the department to determine the amount of water diverted from power records and shall annually report the information to the department.
Doesn't carry to license	Single point of diversion located on or near line between NWNWNW, S26 and NENENE, S27, T10N, R01E.
Carry to license	This right authorizes an annual volume of water to fill the storage facility and the amount required to replace losses through evaporation.
Doesn't carry to license	26A Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.

POU Overlap Analysis: The spring authorized under this right provides water to pond #4 in addition to an unnamed stream that is authorized under 65-13598.

PD Summary: There is one point of diversion from a spring that was developed under this right. In the field exam report, the PD is located in the SESENW of Sec. 22. The field examiner stated that this right shares a PD with 65-13599. In the field exam report for 65-13599, the examiner took a GPS point at the PD and confirmed the location as being SENESW of Sec. 22 and noted the discrepancy but was confident in her recommendation. The PD will be amended to reflect the GPS point for the PD. In addition, the source is tributary to Squaw Creek not Sinks as recommended by the field examiner's recommendation. The field report reflects right 65-13599 trib to Squaw Ck as well as decreed right 65-22373 (same source/different PD). Therefore, I recommend licensing this right w/ a source as springs, trib to Squaw Ck.

Legal Description	System Capacity	Used by Water Rights	Uses
SESENW Sec. 22 10N1E	0.18 cfs	65-13599 and 65-13677	Diversion to Storage and Wildlife Storage & Domestic

Volume and Diversion Rate: The rate from spring no. 1 was measured at 0.18 cfs from the field examiners findings. The permitted rate was limited to 0.20 cfs so this right will be limited to 0.18 cfs. A combined use limit of a maximum diversion of 0.18 cfs with right 65-13599 will apply to this right.

Although the field exam for 65-13598 reflects a total capacity of pond #4 of 2.9 af, the field examiner found a capacity of 1.1 af for this right. The discrepancy most likely is the enlargement of the pond under 65-13598. Proof was submitted after the field exam for right 65-13598 so it very possible that pond #4 was initially developed to hold 1.1 af. A combined limit will be included in the conditions to address the POU overlap.

Since this right is meant to cover evaporation in addition to a one time filling annually, I will adjust the volume recommended by the field examiner.

According to ET Idaho (attached), the expected evaporation from the pond is 2.6 afa/acre or $2.6 \text{ af} \times 0.15 \text{ acre} = 0.4 \text{ afa}$ of ET. Also, seepage is accounted for as follows: $S = Q_{in} + P - ET$

Where S = seepage, $Q_{in} = 0.18 \text{ cfs}$, P = precipitation or 548 mm/year based on ET Idaho, and $ET = 0.4 \text{ afa}$
Solve for $S = 84 \text{ afa}$

Since the storage authorized by the permit is limited to 3 af, I recommend licensing this right with 3 afa. With the volume being; 1.1 afa for the filling, 0.4 afa for ET and 1.5 afa for seepage.

Amendment Needed?: YES. Both the POU and PD are in different locations than permitted. Also the use will be changed from irrigation to diversion to storage. The season will remain the irrigation season as permitted to avoid injury. Note that Basin 65 General Provisions No. 3, the Separate Streams General Provision, does not apply to appropriations of water after October 18, 1977. Therefore, any withdrawal under this permit can be curtailed if injury is occurring in any senior user within the Payette drainage.

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

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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.

Gross Precipitation															
	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	2.38	2.23	2.05	1.44	1.53	0.84	0.36	0.29	0.59	1.31	2.26	2.72	0	548	548
15-Day Moving Average ^d	2.44	2.32	2.10	1.37	1.63	0.74	0.27	0.33	0.63	1.27	2.20	2.57			
7-Day Moving Average ^e	2.40	2.35	2.11	1.39	1.58	0.77	0.30	0.31	0.61	1.31	2.25	2.66			
3-Day Moving Average ^f	2.88	2.29	2.04	1.38	1.54	0.81	0.35	0.41	0.59	1.31	2.25	2.73			
Standard Deviation	mm/day												mm		
Monthly	1.72	1.42	1.87	0.79	1.64	0.71	0.56	0.53	0.41	1.17	0.87	1.88	0	123	123
15-Day Moving Average	1.68	1.73	1.62	1.05	1.62	0.86	0.42	0.52	0.63	1.25	1.43	1.61			
7-Day Moving Average	2.26	2.32	2.09	1.47	2.05	1.30	0.70	0.67	0.99	1.85	1.98	2.67			
3-Day Moving Average	2.75	3.10	2.78	2.10	2.64	1.89	1.20	0.90	1.49	2.64	2.96	3.66			
20% Exceedance	mm/day												mm		
Monthly	3.26	3.08	2.47	2.19	2.20	1.51	0.59	0.40	0.91	1.73	3.18	3.34	0	655	655
15-Day Moving Average	4.81	5.35	3.83	3.17	3.85	2.50	1.13	0.71	1.79	3.45	4.53	4.95			
7-Day Moving Average	6.99	7.50	6.60	4.94	6.26	3.73	2.09	1.51	3.31	5.84	6.41	7.91			
3-Day Moving Average	11.10	12.33	9.73	9.07	9.83	8.03	4.17	3.30	6.60	10.87	11.43	14.80			
80% Exceedance	mm/day												mm		

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

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Open water - shallow systems (ponds, streams)															
Actual Evapotranspiration (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	0.34	0.79	1.36	2.33	3.28	3.93	4.62	4.05	2.66	1.46	0.62	0.24	784	0	784
15-Day Moving Average ^d	0.33	0.78	1.36	2.34	3.31	3.95	4.65	4.06	2.63	1.46	0.62	0.24			
7-Day Moving Average ^e	0.34	0.79	1.35	2.34	3.29	3.94	4.64	4.05	2.64	1.46	0.61	0.24			
3-Day Moving Average ^f	0.34	0.79	1.35	2.33	3.28	3.93	4.63	4.05	2.65	1.46	0.62	0.24			
Standard Deviation	mm/day												mm		
Monthly	0.05	0.09	0.29	0.27	0.46	0.29	0.53	0.32	0.20	0.20	0.10	0.04	35	0	35
15-Day Moving Average	0.05	0.13	0.26	0.34	0.45	0.39	0.40	0.31	0.29	0.25	0.14	0.03			
7-Day Moving Average	0.06	0.19	0.31	0.43	0.59	0.55	0.44	0.41	0.39	0.34	0.18	0.04			
3-Day Moving Average	0.09	0.24	0.38	0.55	0.71	0.71	0.55	0.53	0.51	0.40	0.21	0.06			
20% Exceedance	mm/day												mm		
Monthly	0.36	0.82	1.43	2.48	3.56	4.25	4.90	4.23	2.80	1.55	0.69	0.25	812	0	812
15-Day Moving Average	0.42	1.02	1.74	2.79	3.95	4.58	5.12	4.51	3.17	1.87	0.90	0.28			
7-Day Moving Average	0.51	1.12	1.99	3.16	4.43	4.81	5.33	4.76	3.42	2.16	1.00	0.33			
3-Day Moving Average	0.57	1.28	2.32	3.54	4.66	5.22	5.56	5.00	3.69	2.33	1.10	0.38			