

MEMORANDUM

Date: February 14, 2013
To: Water Right File 37-8511
From: cpalmer
Re: Licensing Memo

POU: The place of use is made-up of a network of 17 ponds that are connected by channels. The ponds are within the Camas Prairie Centennial Marsh Wildlife Management Area. The POU is included in the newly formed Upper Wood River Water Measurement District. Pursuant to the order creating the district, the right holder has until 1/1/2013 to install measuring devices.

Overlap: Water right 37-8526 provides 220af total for the initial fill of the ponds (158 af) and also provides some water for evaporative losses (62 af) in 19 ponds. The source for 37-8526 is from ponds which, in this case, is technically water from diffuse surface water and any groundwater that is encountered in the excavated ponds in early spring. Note that 37-8526 provides water to two ponds that are not authorized under this permit. The amount of water that is actually overlapping is 144 af.

Ponds: There are 17 ponds that are covered by 37-8511, 37-8513, and 37-8514 (see attached map). The ponds have a surface area of 67 acres and a capacity of 144 af total. The evaporative losses for 67 acres in this area is 127 af. Therefore, the total amount of water needed for the 17 ponds is 271 af. Rights 37-8511, 37-8513, and 37-8514 are meant to keep the ponds full throughout the season. The full volume of 271 af should be covered by the groundwater rights.

Beneficial Use Discrepancy: The field examiner recommended that the beneficial uses on this right be wildlife and wildlife storage. The permitted beneficial use is ambiguous; the application states wildlife habitat which may mean that this right is meant for flow through only. However, a letter dated 9/21/89 from the Department to the right holder interprets the permit to allow the filling, maintenance, and flow of water in the ponds. In addition, I spoke with Terry Gregory of Fish and Game on the phone and he told me that they use this right to keep the ponds full after the water available under right 37-8526 evaporates. There is no flow through the ponds. The water is diverted from the PD where it enters a network of channels and terminates at the last pond on the network, there is not an outlet on the last pond. The beneficial uses listed on this right will be wildlife storage and diversion to storage.

Diversion Rate: There are no other rights that divert from the PD for 37-8511. The field examiner recommended a diversion rate of 1.0 cfs based on capacity of the well.

According to Terry, the longest that the wells have ever been diverted is May 1-August 1 or 93 days. When the well is pumping, it runs 24 hours a day.

Volume:

Individual Volume of 37-8511/13/14 $1.0 \text{ cfs} \times 1.9835 \times 93 \text{ days} = 184 \text{ af each}$

Combined Limit and Volume Available under 37-8313/14: $1.82 \text{ cfs} \times 1.9835 \times 93 \text{ days} = 336 \text{ af}$

*Total Volume Available for 17 Ponds: $336 + 184 = 520 \text{ AF}$

*Amount of Water Required for Beneficial Use = 144 AF for pond capacity and 127 af for evap = 271 af

*limited to the lesser value

Amendment is required. The place of use was not developed as permitted.

LIMITS: Total ponds in the marsh = 144 AF under 37-8311/13/14 + 14.4 AF under 37-8493 = 158 AF

Total evap for ponds under 37-8511/13/14 = 127 AF

Total evap for ponds under 37-8493 = 13.7 AF

299 AF

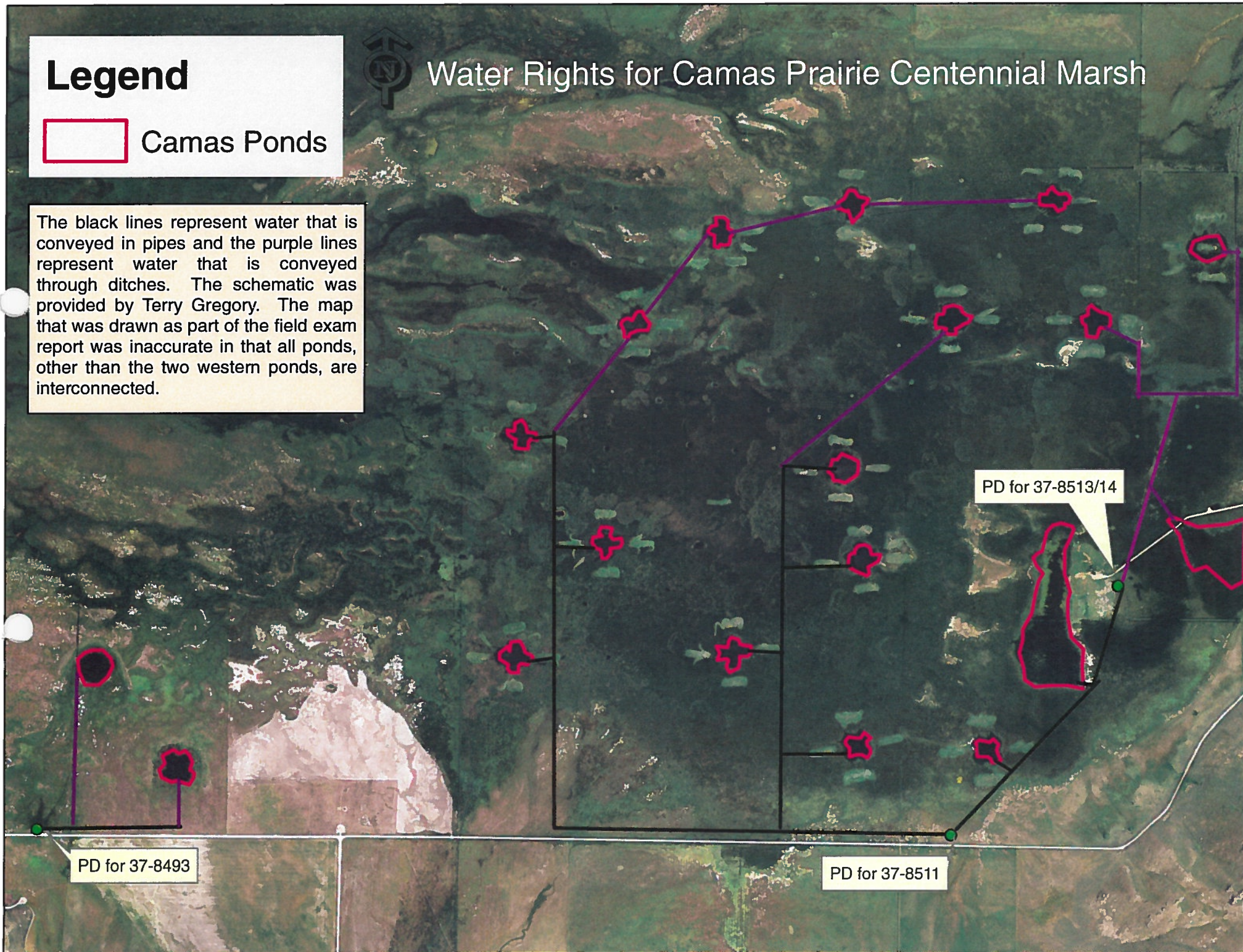
Legend

 Camas Ponds

The black lines represent water that is conveyed in pipes and the purple lines represent water that is conveyed through ditches. The schematic was provided by Terry Gregory. The map that was drawn as part of the field exam report was inaccurate in that all ponds, other than the two western ponds, are interconnected.



Water Rights for Camas Prairie Centennial Marsh



ET Idaho 2009: Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

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Fairfield (NWS --103108)

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
Mean	mm/day												mm	
Monthly ^c	-1.43	-0.78	0.42	1.82	2.92	3.63	4.31	3.73	2.55	1.76	-0.83	-1.35	515	0
15-Day Moving Average ^d	-1.61	-1.10	0.39	1.90	2.85	3.64	4.41	3.64	2.43	1.73	-0.89	-1.39	$= (578.6 \text{ mm} / 25.4) / 12$ $= 1.898 \times 67 \text{ acres}$ $= 127 \text{ af}$	
7-Day Moving Average ^e	-1.54	-0.93	0.41	1.85	2.88	3.61	4.38	3.72	2.47	1.72	-0.90	-1.39		
3-Day Moving Average ^f	-1.46	-0.78	0.42	1.84	2.91	3.63	4.32	3.73	2.52	1.75	-0.86	-1.34		
Standard Deviation	mm/day												mm	
Monthly	1.92	1.19	1.17	0.86	1.50	0.97	0.97	1.42	1.13	1.13	1.37	2.22	127	0
15-Day Moving Average	2.16	1.77	1.16	1.07	1.60	1.32	0.84	1.44	1.49	1.10	1.69	2.22		
7-Day Moving Average	2.80	2.48	1.52	1.60	1.99	1.84	1.24	1.63	1.85	1.62	2.19	2.86		
3-Day Moving Average	3.66	3.05	2.14	2.23	2.51	2.40	1.89	2.04	2.38	2.06	2.97	3.58		
20% Exceedance	mm/day												mm	
Monthly	-0.37	0.22	0.83	2.47	3.55	4.42	4.87	4.43	3.47	2.44	0.08	-0.36	594	0
15-Day Moving Average	0.59	0.93	1.67	3.34	4.65	5.15	5.33	4.77	4.00	2.94	1.06	0.52		
7-Day Moving Average	0.87	1.29	1.97	3.90	5.31	5.61	5.52	5.09	4.43	3.47	1.62	0.78		
3-Day Moving Average	0.97	1.50	2.47	4.77	5.76	6.05	5.82	5.36	4.68	3.94	2.03	1.04		