

**BEFORE GARY SPACKMAN, INTERIM DIRECTOR
STATE OF IDAHO DEPARTMENT OF WATER RESOURCES**

In the Matter of)
Issuance of Water Right Licenses under)
Water Right Permits 98-7771 and 98-7829)
In the name of U.S. Dept. of the Interior)
Fish & Wildlife Service)

INFORMATION IN SUPPORT OF PETITION FOR RECONSIDERATION

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Background of Kootenai River Water Use and Water Rights on the Kootenai National Wildlife Refuge

The U.S. Fish & Wildlife Service (Service) began acquiring lands for the Kootenai National Wildlife Refuge (NWR) in 1964, and began use of water from the Kootenai River in July of 1968 for marsh development and enhancement of waterfowl habitat. Water was pumped from the river over the dike by means of a trailer mounted 4.7 cubic foot per second (cfs) centrifugal pump. In March of 1981, the Service recorded this use with the Idaho Department of Water Resources (IDWR) by filing a beneficial use "Claim to a Water Right", numbered 98-4113, with a priority date of July 25, 1968. Lands claimed to have been served included Dave's Pond, River

Bend Unit, and other lands north of the section line between Sections 18 and 19, and will be referred to as the North Units.

In 1981, the NWR acquired a pump with a capacity of 6.99 cfs to replace the original pump. This replacement pump is henceforth referred to as the Old Pump. As a result, the Service filed an application for a permit (98-7366) for 2.29 cfs to bring the rate allowed for the Old Pump up to 6.99 cfs ($4.7 + 2.29 = 6.99$). The place of use specified was within the North Units. A license was issued for the rate and place of use requested with an annual volume limit of 1657.9 acre-feet in 1983. (Note: $1657.9 \text{ AF} = 2.29 \text{ cfs}$ pumped continuously for 365 days.)

The Service decided to improve marsh lands south of the North Units in 1996 (South Units), and initially filed a transfer application to add the South Units to the place of use of 98-4113 and 98-7366. The transfer application was returned by IDWR requesting that the Service instead file for a new water right for the additional use. Application 98-7771 for 6.99 cfs was filed shortly thereafter for use in the South Units, and a permit was issued in May of 1996.

In 2000, in cooperation with Ducks Unlimited, an additional pump was installed (DU Pump), and it was used in conjunction with and sometimes simultaneously with the Old Pump for both the North and South Units. The Service does not have the specifications for the DU Pump.

In 2002, a pump with a capacity of 10 cfs (New Pump) was installed to replace the DU Pump. Both the New Pump and the Old Pump continued to be used conjunctively. In preparation for filing an application for a new water right for the New Pump (98-7829), the Kootenai NWR faxed a worksheet to the Service's Region 1 (Portland) office showing how the amount of 3.01 cfs for new application 98-7829 was determined:

$$(6.99 + 10.00) - (4.7 + 2.29 + 6.99) = 3.01 \text{ cfs}$$

$$\text{Total Capacity} - \text{Existing Claims/Licenses/Permits} = \text{Rate requested for 98-7829.}$$

Application 98-7829 was filed in 2002, and a permit was issued in 2004. The place of use for 98-7829 included the development of two new wetland units, some within the existing place of use of 98-4113 (beneficial use claim) and 98-7366 (license).

Water Use Data

The Kootenai NWR has used water from the Kootenai River under its water rights since 1968. Current refuge staff has personal knowledge of continuous use on the refuge since 1992. See, e.g., attached Affidavit of Wayne Wilkerson.

Actual water use data in the files for use from the Kootenai River dates from August of 2000. The DU Pump (then referred to as the Offset Pump in the log book) was used along with the Old Pump until it was replaced in 2002. A water meter was included for the DU Pump when it was

installed, and the same meter was used for the New Pump. A water meter was not installed on the Old Pump until 2003, but electric meter readings were recorded for the Old Pump during 2001 and 2002.

The meter readings were entered into a spreadsheet, and average rates and volume were computed. It should be noted that rate computations were computed based on the meter readings, not on on-site timed observations of the meter which would yield an instantaneous rate.

Beneficial Use Period for 98-7771 (permit): (5/14/1996 – 5/1/2002)

The maximum average rate recorded for the DU Pump during the period 9/28/2000 – 10/2/2000 was 8.24 cfs. The DU Pump operated simultaneously with the Old Pump during 2001 according to recorded electric meter readings. While there was no water meter installed on the Old Pump during this period, subsequent data indicate that the Old Pump produced 7.09 cfs (6/10/2003 – 6/19/2003). Since the Old Pump was water righted at 6.99 cfs, it is possible to infer that during the period, water was diverted at least at an average rate of $6.99 + 8.24 = 15.23$ cfs from the Kootenai River.

Beneficial Use Period for 98-7829 (permit): (5/13/2004 – 5/1/2005)

During this period, both the Old Pump and New Pump were used simultaneously. Frequently when the meter was read at the Old Pump, the pump was found to be stopped. The maximum average rate for the New Pump during the period was 9.91 cfs (9/10/2004 – 9/15/2004), but during the period 8/21/2002 – 8/26/2002 the New Pump produced an average rate of 10.49 cfs. The New Pump is capable of producing the full 10.0 cfs the Service requested in Application 98-7829. Thus, it may be inferred that during the beneficial use period, water was diverted at a rate of $10.0 + 6.99 = 16.99$ cfs from the Kootenai River.

Service Recommendations

Recommended language for Licenses 98-7771 and 98-7829:

Claim 98-4113 and rights 98-7366, 98-7771, and 98-7829 when combined shall not exceed a total diversion rate of 16.99 cfs.

Alternate Recommended language for License 98-7771:

Claim 98-4113 and rights 98-7366 and 98-7771 when combined shall not exceed a total diversion rate of 15.23 cfs.

Recommended Language for Wildlife Storage Use

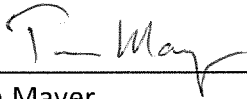
Wildlife storage is for wildlife use and wetland enhancement, including initial filling of wetlands and replacement of losses caused by evapotranspiration, seepage, and evaporation.

Volume Limitations

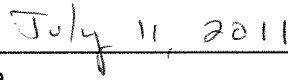
The Service agrees that a maximum diversion volume of 444 acre feet annually be specified in proposed license 98-7771, as this limit was specified in the application for permit.

The Service objects to a maximum diversion volume of 850 acre feet annually being specified in proposed license 98-7829. According to the IDWR License Review Memorandum dated November 1, 2010, the actual total volume required to fill and maintain the wetland area is estimated to be 1271 acre feet annually. There was no specified maximum diversion volume specified in the application. It was the Service's intention to be able to fill and maintain the wetlands at maximum pool for six months (letter to IDWR of October 8, 2002). Initially, the Service estimated the storage to be 340 acre feet covering 170 acres (letter to IDWR of October 8, 2002), but after discussion with IDWR (which apparently recommended an additional three feet of average depth to cover losses), the Service revised its estimate of storage to be 850 acre feet covering 170 acres (letter to IDWR of January 16, 2003). The Service did not agree to or request a maximum diversion volume at that time, nor was it specified in the permit. The Service would agree to a maximum diversion volume of 1271 acre feet annually for license 98-7829, which is the total volume required to fill and maintain the wetland area, as estimated by IDWR.

Respectfully submitted,



Tim Mayer
Acting Water Resources Branch Chief



Date

KOOTENAI RIVER PUMP DATA

STATION 458002 (DU Pump and New Pump)					STATION 458003 (Old Pump)					COMMENT	SUM OF RATES (CFS)			
DATE	TIME	TIME DIFF (DAYS)	READING (AF)	DIFFERENCE (AF)	RATE (CFS)	COMMENT	DATE	TIME	TIME DIFF (DAYS)			READING (AF)	DIFFERENCE (AF)	RATE (CFS)
DU Pump														
8/1/2000	8:15		33.07			ON TO DAVES POND								
9/5/2000	11:50	35.15	186.47	153.40	2.20									
9/27/2000	14:30	22.11	311.56	125.09	1.10	SWITCHED TO GREENHEAD MARSH								
9/28/2000	13:30	0.96	321.36	9.80	0.21	SWITCHED TO DAVES POND								
10/2/2000	12:00	3.94	401.42	80.06	8.24									
11/6/2000	10:00	34.92	563.10	161.68	2.10	PUMP OFF FOR WINTER								
TOTAL AF FOR 2000			563.10	TOTAL AF FOR 2000 - BOTH PUMPS -			TOTAL AF FOR 2000			UNKNOWN				
1/5/2001	10:30	60.02	563.10	0.00		ON ?OFF								
7/11/2001	15:00	187.19	564.97	1.87		ON TO DAVES POND								
10/5/2001	11:00	85.83	1196.11	631.14	3.71	CONT. . . ON								
11/1/2001	14:00	27.13	1520.02	323.91	6.02	TO REAMER SLOUGH								
TOTAL AF FOR 2001			956.92	TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
New Pump														
2/1/2002	13:00	91.96				NO USE								
3/1/2002		27.46				NO USE								
4/8/2002	13:45	38.57				NO USE								
5/6/2002		27.43				NO USE								
7/15/2002		70.00				2800 GP NO USE								
8/21/2002	10:00	37.42	1706.51	186.49		ON TO GREENHEAD MARSH								
8/26/2002	9:00	4.96	1809.71	103.20	10.49	OFF								
9/6/2002	14:00	11.21	1809.71	0.00		ON TO DAVES POND								
9/23/2002	10:00	16.83				ON TO GREENHEAD MARSH								
9/25/2002	11:00	2.04	2175.45	365.74	9.77	ON								
9/30/2002	7:30	4.85	2253.27	77.82	8.08	ON								
10/3/2002	14:45	3.30	2307.00	53.73	8.20	OFF								
10/7/2002	7:00	3.68	2307.00	0.00		ON								
10/15/2002	8:00	8.04	2416.42	109.42	6.86	TO GREENHEAD MARSH								
10/18/2002	13:00	3.21	2468.57	52.15	8.19	OFF								
10/21/2002	12:00	2.96	2468.57	0.00		ON								
10/25/2002	15:00	4.13	2545.62	77.05	9.42	OFF								
10/28/2002	9:00	2.75	2545.62	0.00		ON TO GREENHEAD MARSH								
10/29/2002	8:00	0.96	2556.55	10.93	5.75	OFF								
11/13/2002	10:00	15.08	2556.55	0.00		ON TO GREENHEAD MARSH								
11/14/2002	10:30	1.02	2565.85	9.30	4.59	ON								
11/15/2002	12:00	1.06	2572.67	6.82	3.24	OFF								
TOTAL AF FOR 2002				TOTAL AF FOR 2002 - BOTH PUMPS -			TOTAL AF FOR 2002			UNKNOWN				
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								
6/14/2001	10:00													
7/11/2001	15:00					ON TO DAVES POND								
10/5/2001						3.71 CONT. . . ON								
11/1/2001	14:00					6.02 TO REAMER SLOUGH								
TOTAL AF FOR 2001				TOTAL AF FOR 2001 - BOTH PUMPS -			TOTAL AF FOR 2001			UNKNOWN				
9/23/2002														
DU Pump														
5/25/2001	13:30					(ELECTRIC METER UNTIL 2003)								

KOOTENAI RIVER PUMP DATA

STATION 458002 (DU Pump and New Pump)							STATION 458003 (Old Pump)							
DATE	TIME	TIME DIFF (DAYS)	READING (AF)	DIFFERENCE (AF)	RATE (CFS)	COMMENT	DATE	TIME	TIME DIFF (DAYS)	READING (AF)	DIFFERENCE (AF)	RATE (CFS)	COMMENT	SUM OF RATES (CFS)
11/20/2002	13:00	5.04	2572.67	0.00		ON TO GREENHEAD MARSH								
11/22/2002	16:00	2.13	2595.05	22.38	5.31 OFF									
12/5/2002	10:00	12.75	2595.05	0.00		ON TO GREENHEAD MARSH								
12/6/2002	16:30	1.27	2615.99	20.94	8.31 OFF									
12/9/2002	7:30	2.63	2615.99	0.00		ON TO GREENHEAD MARSH								
12/12/2002	13:00	3.23	2672.53	56.54	8.83 OFF									
TOTAL AF FOR 2002							TOTAL AF FOR 2002							
							UNKNOWN							
TOTAL AF FOR 2002 - BOTH PUMPS -														
4/4/2003	15:00	113.08	2672.53	0.00		SERVICE								
4/22/2003	16:00	18.04	2675.58	3.05										
5/22/2003	16:00	30.00	2675.58	0.00		ON TO RIVER BEND/REAMER SLOUGH								
5/27/2003	10:30	4.77	2734.55	58.97	6.23	ON TO RIVER BEND/REAMER SLOUGH	5/23/2003	12:00	4.00	35.15	35.15	4.43	ON TO RIVER BEND	10.66
6/12/2003	15:20	16.20	2911.26	176.71	5.50	ON TO RIVER BEND/REAMER SLOUGH	5/27/2003	12:00	14.14	205.93	170.78	6.09	ON TO RIVER BEND	11.59
6/19/2003	15:00	6.99	3032.62	121.36	8.76	ON TO DAVES POND	6/10/2003	15:15	8.99	332.30	126.37	7.09	ON TO DAVES POND	15.85
7/1/2003	7:00	11.67	3217.26	184.64	7.98	ON TO RIVER BEND/REAMER SLOUGH	6/19/2003	15:00	11.67	478.99	146.69	6.34	ON TO RIVER BEND	14.32
7/3/2003	16:11	2.38	3262.93	45.67	9.66	ON TO RIVER BEND/REAMER SLOUGH	7/1/2003	7:01	2.38	507.71	28.72	6.08	OFF	15.74
							7/3/2003	16:10	12.66	507.71	0.00	0.00	ON TO DAVES POND	
							7/16/2003	8:00	6.33	530.50	22.79	1.81	OFF	1.81
							7/22/2003	16:00	0.00	530.50	0.00	0.00	ON TO GREENHEAD MARSH	
							7/22/2003	16:01	1.83	546.61	16.11	4.43	ON TO DAVES POND	4.43
							7/24/2003	12:00	8.05	637.81	91.20	5.71	ON TO DAVES POND	5.92
8/1/2003	13:15	28.88	3274.97	12.04	0.21		8/1/2003	13:15	34.05	960.00	322.19	4.77	ON TO RIVER BEND	4.77
							9/4/2003	14:31						
9/27/2003	13:23	57.01	3275.32	0.35	0.00	ON TO GREENHEAD MARSH	9/29/2003	12:00	24.90	1151.44	191.44	3.88	ON TO RIVER BEND	0.00
10/1/2003	15:12	4.08	3304.77	29.45	3.64	TO GREENHEAD MARSH	10/1/2003	15:10	2.13	1168.19	16.75	3.96	TO RIVER BEND	3.88
10/6/2003	15:00	4.99				TO DAVES POND	10/6/2003	15:03	5.00	1168.19	0.00	0.00	TO GREENHEAD MARSH	7.60
10/8/2003	9:50	1.78	3420.47	115.70	8.61	TO DAVES POND								
10/24/2003	14:15	16.18				TO GREENHEAD MARSH								8.61
10/27/2003	9:24	2.80	3695.21	274.74	7.30	TO RIVER BEND AND DAVES POND	11/4/2003	7:32	28.69	1252.77	84.58	1.49	OFF - 3 PHASE INOPERATIVE	7.30
11/4/2003	7:29	7.92	3821.62	126.41	8.05	TO RIVER BEND AND DAVES POND	11/6/2003	12:02	2.19	1252.81	0.04	0.01	ON TO GREENHEAD MARSH	9.53
11/6/2003	12:05	2.19	3863.31	41.69	9.59	TO RIVER BEND	11/13/2003	17:00	7.21	1301.54	48.73	3.41	ON TO GREENHEAD MARSH	9.60
11/13/2003	17:00	7.20	3978.40	115.09	8.05	TO RIVER BEND	11/18/2003	9:00	4.67	1326.17	24.63	2.66	OFF	11.46
							11/19/2003	10:30	1.06	1326.17	0.00	0.00	ON TO RIVER BEND	2.66
12/1/2003	12:57	17.83	4131.13	152.73	4.32	FOUND PUMP OFF - RESTARTED	12/1/2003	13:02	12.11	1358.08	31.91	1.33	FOUND PUMP OFF - RESTARTED	5.65
12/2/2003	11:45	0.95	4148.69	17.56	9.32	OFF	12/2/2003	11:41	0.94	1365.07	6.99	3.73	OFF	13.05
TOTAL AF FOR 2003							TOTAL AF FOR 2003							
							2841.23							
TOTAL AF FOR 2003 - BOTH PUMPS -														
4/12/2004	7:00		4228.40				4/12/2004	7:00		1365.07		0.00	ON TO RIVER BEND	
							4/14/2004	12:00	2.21	1365.07	0.00	0.00	ON TO RIVER BEND	
5/3/2004	9:36	21.11	4474.28	245.88	5.87	ON TO RIVER BEND	5/3/2004	9:37	18.90	1491.99	126.92	3.39	ON TO RIVER BEND	9.26
							5/24/2004	10:31	21.04	1608.31	116.32	2.79	FOUND PUMP OFF - ON TO RIVER BEND	2.79

STATION 458002 (DU Pump and New Pump)										STATION 458003 (Old Pump)									
DATE	TIME	TIME DIFF (DAYS)	READING (AF)	DIFFERENCE (AF)	RATE (CFS)	COMMENT	DATE	TIME	TIME DIFF (DAYS)	READING (AF)	DIFFERENCE (AF)	RATE (CFS)	COMMENT	SUM OF RATES (CFS)					
6/1/2004	9:12	28.98	4814.25	339.97	5.91	ON TO RIVER BEND	6/1/2004	9:10	7.94	1664.79	56.48	3.58	ON TO RIVER BEND	9.50					
6/18/2004	17:00	17.33	5139.95	325.70	9.48	ON TO GREENHEAD MARSH								9.48					
7/1/2004	10:22	12.72	5234.55	94.60	3.75	OFF	7/1/2004	10:20	30.05	1849.95	185.16	3.11	OFF	6.86					
8/11/2004	9:25	40.96	5627.83	393.28	4.84	ON TO RIVER BEND	8/11/2004	9:20	40.96	1849.95	0.00	0.00	ON TO GREENHEAD MARSH	4.84					
8/19/2004	11:05	8.07	5760.45	132.62	8.29	OFF/ON POWER BUMP	8/19/2004	10:50	8.06	1896.00	46.05	2.88	OFF/ON POWER BUMP - RESTARTED	11.17					
8/31/2004	9:41	11.94	5972.55	212.10	8.95	ON TO RIVER BEND	8/31/2004	9:43	11.95	1979.15	83.15	3.51	ON	12.46					
9/10/2004	9:05	9.98	5990.56	18.01	0.91	OFF/ON TO GREENHEAD MARSH	9/10/2004	9:05	9.97	1985.07	5.92	0.30	FOUND OFF, RESTARTED TO DAVES POND	1.21					
9/15/2004	12:00	5.12	6091.24	100.68	9.91	ON TO DAVES & RIVER BEND - SPLIT	9/15/2004	12:00	5.12	2023.04	37.97	3.74	ON TO DAVES & RIVER BEND SPLIT	13.65					
							9/30/2004						ON TO GREENHEAD MARSH						
10/4/2004	8:00	18.83	6458.63	367.39	9.83	ON TO DAVES & RIVER BEND - SPLIT	10/4/2004	8:00	18.83	2158.54	135.50	3.63		13.46					
10/7/2004	10:01	3.08	6498.14	39.51	6.46	RIVER BEND & DAVES POND	10/7/2004	10:04	3.09	2180.44	21.90	3.58	TO GREENHEAD MARSH	10.04					
							10/13/2004	8:28	5.93	2222.10	41.66	3.54	ON TO DAVES & RIVER BEND	3.54					
10/15/2004	7:35	7.90	6632.10	133.96	8.55	FOUND PUMP OFF	10/15/2004	7:30	1.96	2229.90	7.80	2.01	FOUND OFF, LEFT OFF	10.56					
10/25/2004	10:07	10.11	6676.28	44.18	2.20	TURNUED OFF								2.20					
11/3/2004	9:34	8.98	6720.83	44.55	2.50	ON TO DAVES & RIVER BEND - SPLIT								2.50					
11/4/2004	13:30	1.16	6740.08	19.25	8.34	ON								8.34					
11/11/2004	14:00					OFF													
11/15/2004	11:57	10.94	6869.00	128.92	5.94	ON TO GREENHEAD MARSH	11/4/2004	13:30	20.25	2229.90	0.00	0.00	OFF, NO USE	5.94					
11/19/2004	16:00	4.17	6940.13	71.13	8.60	OFF													
TOTAL AF FOR 2004			2791.44			TOTAL AF FOR 2004 - BOTH PUMPS -	TOTAL AF FOR 2004			864.83				3656.27					

**BEFORE GARY SPACKMAN, INTERIM DIRECTOR
STATE OF IDAHO DEPARTMENT OF WATER RESOURCES**

In the Matter of)
Issuance of Water Right Licenses under)
Water Right Permits 98-7771 and 98-7829)
In the name of U.S. Dept. of Interior)
Fish & Wildlife Service)

AFFIDAVIT OF WAYNE WILKERSON

I, Wayne Wilkerson, do affirm and swear as follows:

1. I, Wayne Wilkerson, am an Engineering Equipment Operator at the Kootenai National Wildlife Refuge (Refuge) and have been working at the Refuge since August 1992.
2. I have been responsible for managing the infrastructure and related water level objectives of the wetlands on the Refuge every year through the use of a water pump on the Kootenai River. In some years since 2000, on occasion two pumps have been used on the Kootenai River; I will refer to the two pumps as the Old Pump and the New Pump. The New Pump has been two different pumps over the years but both new pumps were the same diversion point. The second new pump was an upgrade of the first (sometimes called the DU Pump) which failed to perform as required.
3. Based on my personal knowledge, a Kootenai River water pump has been used every year since 1992 to supply water to the Refuge wetlands that are the place of use for the Refuge's Kootenai River water rights.
4. My operation of the Kootenai River pumps is verified through my work diaries in 1992 and from 1996 to the present.
5. For the years 1996 - 1999, pump use is verified by my diary entries, in the Refuge's Annual Narratives, and by electrical bills (the pump is on its own meter with electrical service provided by the City of Bonners Ferry).

Old = 6.99

New 10.00

128 ac

40 ac

168 ac

16.99 cfs

13.98

2.29

4.70 -

6.99 -

13.98 cfs

3.01 cfs

5.00

1.0

(Fill in Aug) to
2 - 2 1/2 feet depth and held
all year until next June 1st

Then let drawn down naturally until
Aug. (Same as Greenback Marsh)

ABA-EN-WR

January 16, 2003

Mr. Allen Beardslee
Senior Water Resources Agent
Idaho Department of Water Resources
1910 Northwest Boulevard
Coeur d'Alene, Idaho 83814

Dear Mr. Beardslee:

On October 8, 2002 our office submitted an application for a permit to appropriate water from the Kootenai River at the Kootenai National Wildlife Refuge (Refuge). The Refuge is located approximately 5 miles west of the city of Bonners Ferry. The application for a new water right is filed on behalf of the Refuge for use on two new wetland units to support wildlife habitat.

As per our conversation on January 14th, I have calculated the storage volume of these new wetlands units to be 850 acre-feet. The Refuge plans to construct these wetland units, totaling approximately 170 acres, as part of a "*North American Wetland Conservation Act*" grant received last year. These units are located on the north end of the Refuge and will be filled to an average depth of approximately 5.0 feet. Please use the above volume (850 acre-feet) for the wildlife storage component for any subsequent permit.

Your assistance in this matter is greatly appreciated. If you have questions or need additional information, please contact me at 503-231-2057.

Sincerely,

David Langman
Hydrologist

cc:

Refuge Manager, Kootenai NWR
Michael Eberle

Dave-KootenaiLtr-01.16.03-wpd

ABA-EN-WR

October 8, 2002

Mr. Allen Beardslee
Senior Water Resources Agent
Idaho Department of Water Resources
1910 Northwest Blvd.
Coeur d'Alene, Idaho 83814

Dear Mr. Beardslee:

Enclosed please find an Application For Permit to appropriate water from the Kootenai River at the Kootenai National Wildlife Refuge (Refuge). We wish to secure additional water (3.01 cfs) from an existing *Point of Diversion* which currently diverts water under water rights No.(s) 98-7366, 98-4113, and 98-7771. This is an application for a new water right for two new wetland units within the Refuge which will support wildlife habitat. The two pumps located at this existing *Point of Diversion*, have the capacity to serve the existing rights mentioned above, as well as the right we are seeking here.

The Refuge plans to construct these new wetland units totaling approximately 170 acres as part of a "*North American Wetlands Conservation Act*" grant received this year. Construction is scheduled to begin this Fall, 2002. These units will be located on the north end of the Refuge and maintained with water from the Kootenai River Pump (see attached map). Together, they will have a capacity to store approximately 340 acre feet.

The Refuge is planning to maintain these units at maximum level until the seasonal draw down occurs. The need for year-round water is to give the refuge flexibility in its future management of these units. The units will likely be flooded annually to maximum pool for a period of six months, with additional water added only to maintain the wetlands at desired management levels.

Also enclosed is a check in the amount of \$370.00 to cover the minimum statutory filing fee. Please insure that any resulting permit is issued in the name of the U.S. Fish and Wildlife and not the name of the agent signing the application.

CONCURRENCE	
SURNAME	DATE
Scott Brier	10/9/02
Fl. L.	10/8/02

Scott Brier
Fl. L.

Your assistance in this matter is greatly appreciated. If you have questions or need additional information, please feel free to contact me at (503) 231-2057.

Sincerely,

/s/ David Langman

David Langman
Hydrologist

Enclosures

cc:

Refuge Manager, Kootenai NWR
Barbara Scott-Brier, (SOL-PNW)

MEMO

TO: File 98-7829

FROM: CPadilla

DATE: November 1, 2010

RE: Licensing Review Memo

Time Line:

Application for Permit Received: 10/11/2002

Permit Approved: 5/13/2004

Proof of Beneficial Use Received: 3/9/2005

Field Exam Conducted: 7/25/2005

POU Overlap Analysis:

<i>Right</i>	<i>Status</i>	<i>Diversion Rate</i>	<i>Volume</i>	<i>Source</i>	<i>Priority</i>
98-4113	Statutory Claim	4.70	NA	Kootenai River	7/25/1968
98-7366*	License	2.29	1657.90	Kootenai River	3/9/81
98-7829	Permit	3.01	850	Kootenai River	10/11/2002

*Wildlife use only (flow through)—not sure of the validity since the refuge doesn't seem to be designed for flow through

Conditioning

Comment	Water Permit Condition Report 98-7829
Carry to license	1. 004 This right does not grant any right-of-way or easement across the land of another.
Confirmed at field exam-remains on license	2. X36 Rights 98-07829, 98-07366 and 98-07771 are also diverted through the point of diversion described above.
Carry to license	3. 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.
According to a sketch of the system for 98-7366, there is gravity flow to the pump which should satisfy this condition	4. X16 The approach velocity at the point of diversion shall not exceed 0.5 feet per second.
Use confirmed-carry to license	5. Wildlife storage is for wetland habitat enhancement. (NO FLOW THROUGH)
There is a fish screen in place, see attached diagram	6. X15 A fish screen of 1/4 inch or smaller mesh shall be installed and maintained at the point of diversion.

1/31/11 : I spoke w/ Gary Ball to confirm that there is no flow thru the refuge. He said anything that is lost is due to seepage. There is no discharge into the river

PD Summary and Overlap Analysis of the PD: An overlap condition will be added to this right to limit the diversion rate to the total capacity of 8.7 cfs. I spoke with Gary Ball of FWS to ascertain the volume used under this right during the development period. Even though the development period was less than 1 year, I believe that collecting a couple years of volume data for comparison purposes.

Tag #	Location	Rights that Use PD	Uses
NONE	SENW Sec 18 62N 1E	98-7366*, 98-7829, 98-7771	Wildlife storage, diversion to storage

*This right covers Wildlife uses only

Right	Priority	Development Period	Rate	Volume
98-7366	1981	April 23, 1981-July 8, 1982	2.29	1,657.9
98-7771	1996	May 6, 1996-May 8, 2002	6.69	444.0
98-7829	2002	October 11, 2002-March 9, 2005	3.01	850.0
Total			8.70 cfs	NA

There are two pumps on this system. The pumps operate independently of one another so the volume measured for each pump will be additive. Here are the totals:

TIME	PUMP 1 (Old) TOTALIZER	TOTAL	PUMP 2 (New) TOTALIZER	TOTAL	
5/2004- 5/2005	1491.99-2229.91	737.92 af	4474.28-6940.13	2465.85 af	
5/2005- 5/2006	2229.91-3378.44	1,148.53 af	6940.13-9326.22	2,386.09 af	
TOTAL		1,886.45 af		4851.94 af	6738.39 af

The average per year is 3,370.2 af. It should be noted that there are different areas within the wetland refuge that this water is delivered. The volume moving through the point of diversion obviously does not get delivered to the POU for this right only. However, right 98-7366 is limited to 1,657.9 af and 98-7771 is limited to a volume of 444 af or a total of 2,101.9 af. This leaves plenty of room for the volume limited by this right, 850 af.

Volume and Diversion Rate: The field examiner recommended the full permitted rate of 3.01 cfs and I agree with his findings, see below. The field examiner recommended a volume of 480 af. This was simply based on the area of the wetland. I recommend that we license this right for the full permitted amount of 850 af. The justification is as follows:

480 afa for the filling of the wetland area
 287 afa for evaporation (see below and attachments)
504 afa for seepage (see below)
 1271 afa total volume required

$3.01 \text{ cfs} \times 1.9835 \times 150 \text{ days}^1 = 895.6 \text{ afa}$ (volume historically delivered under this right)

¹ The attached pump records show that the pumps are on for ~150 days a year.

Evaporation Transpiration

Query from <http://www.kimberly.uidaho.edu/ETIdaho/> for Bonners Ferry station (attached). The mean annual evaporation for small stand wetlands is 546 mm.

$$(546\text{mm}/25.4)/12 = 1.79 \text{ af/acre} \times 160 = 286.6 \text{ afa}$$

Seepage

There is a water balance that can be expressed as:

$$\Delta s = Q_{in} + P - ET - S$$

Where

Δs = Change in storage

Q_{in} = Flow going into the pond

P = precipitation

ET = find what best characterizes the area you are working with from ET Idaho

S = seepage (this can be solved for since seepage is unknown)

$$S = Q_{in} + P - ET - \Delta s$$

$S = Q_{in} + P - ET$ (there is no change in storage—no outflow)

$$= (3.01 \text{ cfs})(1.296^* \times E^7/\text{year})(1/43560) + (546 \text{ mm/year})(1\text{ft}/304.8\text{mm})(160 \text{ acres}) - (1292 \text{ mm/year})(1\text{ft}/304.8 \text{ mm})(160 \text{ acres})$$

$$= (895.5 \text{ afa}) + (286.6 \text{ afa}) - (678.2 \text{ afa})$$

$$S = 503.9 \text{ afa}$$

***This number comes from the number of days in the season and converted to seconds in a season: (150 days x 86400) = 12,960,000**

To convert mm to feet divide mm by 304.8

Amendment Needed?: Yes. The place of use has been modified as permitted.