MEMO

TO: File 98-7771

FROM: CPadilla

DATE: November 1, 2010

RE: Licensing Review Memo

Time Line:
Application for Permit Received: 5/6/1996
Permit Approved: 5/14/1996
Proof of Beneficial Use Received: 5/8/2002--Received late and priority advanced
Field Exam Conducted: 7/23/2002

Conditioning

Comment	Water Permit Condition Report
Doesn't carry to license	1. 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.
Determined to not need dam certification (see 98-7829) Remains on license in case it does in the future.	2. 18B The storage of water under this right is contingent upon the certification of the dam and authorization of storage per the dam safety provisions of the Idaho Code.
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.

POU Overlap Analysis: There are two rights that overlap the POU for this right. Neither right will have an impact on this right since they are from different sources so no POU overlapping conditions will be added.

Right	*Status*	*Uses*	*Rate*	*Source*	*Priority*
98-7006	***Licensed***	***Stockwater, Irrigation, Wildlife***	***10 cfs***	***Myrtle Creek***	***12/4/1967***
98-7837	***Permit***	***Wildlife, Wildlife Storage, Diversion to Storge***	***7.80 cfs***	***Myrtle Creek***	***7/27/2004***

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 (see field exam for 98-7829 attached to this memo).

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 is for wildlife use only

Volume and Diversion Rate: 6.99 cfs is the rate recommended by the field examiner. This is based on a flow meter measurement of 6.99 cfs. Within the field exam for 98-7366, there is further evidence that the pump is capable of producing 6.99 cfs. Later, as shown in a field exam for 98-7829 in 2005, the pump was apparently upgraded and the new capacity is 8.7 cfs.

A volume for wildlife storage of 186 af is based on the capacity of the wetlands by the field examiner. The calculations include an area of 45 surface acres and an average of 10' deep. The field examiner included a slope of 40% in the calculating the total capacity of the wetlands. However, looking at DRG imagery, I see that the area is relatively flat and I think we can give the permit holder the benefit of the doubt and calculate the volume as follows:

45 acres x 10' depth = 450 af (limited to 444 af by permit)

I spoke with Gary Ball of FWS to ascertain the volume used under this right during the development period and has provided pump records. Note that 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	
2000	No Information Available	0	33.0-563.10	530.1	
2001	21724.7-23087.2	1362.5	563.10-1520.02	956.92	
2002	23087.2-23287.6	200.4	1520.02-2672.53	1152.51	
2003[1]	0-1365.07	1365.07	2672.53-4148.69	1476.16	
TOTAL		2927.97 af		4115.69 af	**7043.66 af**

The average volume of water per year is 1,760.9 af. It should be noted that there are different areas within the wetland refuge that this water is delivered. The volume of water moving through the point of diversion does not only get delivered to the POU for this right but also senior right 98-7366 shares the same PD at the time of the development of this right. Right 98-7366 is limited to 1,657.9 afa, which leaves little volume left over for this right's POU. But, it is possible that 98-7366 was not

[1] Although 2003 was not part of the development period, we didn't have pump records during the majority of the development period. In order to get a good sample for the average, especially since information for pump 1 was not available for 2000, I added in 2003.

diverting the full volume available to it under its license during 2000-2003. Again, I think that we can give FWS the benefit of the doubt and allow them the full volume for wildlife use of 444 af.

Note that this right leaves nothing for evaporation or seepage in the refuge.

Amendment Needed? NO

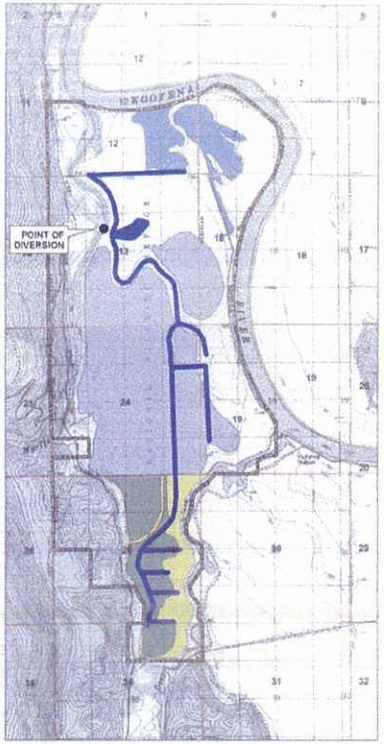
In 2001, Totalizers
1362 AF
956 AF
2318 AF During Developed Period.
2318 AF - 1658 (98-7336)
= 660 Af that is left to allocate to 98-7771
- No need to give benefit of the doubt.

CS

11-22-10

Water Rights at Kootenai National Wetland Refuge

T. 18 N., T. 19 N., R. 1 W., R 1 E., W.M.



Application No 98-7613
Owner: U.S. Fish and Wildlife Service
Priority: August 2002
Use: Wildlife
Point of Diversion: SE 1/4 NE 1/4 NE 1/4, Sec 36, T 62 N, R 1 W, B.M.
Diversion Amount: 11.8 cfs
Period of Use: Wildlife 1-1 thru 12-31
Source: Deep Creek
Remarks: To increase diversion rate and use additional water to enhance wetland habitat covered under existing water right for this area

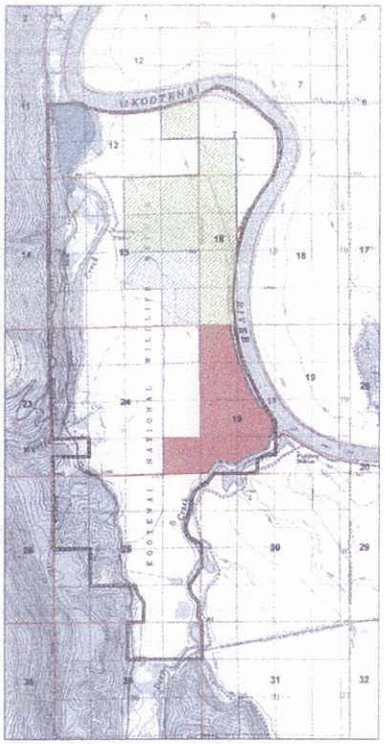
License No. 98-7004
Owner: U.S. Bureau of Sports Fisheries and Wildlife
Priority: December 4, 1967
Use: Irrigation/Stockwater/Wildlife
Point of Diversion: NE 1/4 NE 1/4, Sec 36, T 62 N, R 1 W, B.M.
Diversion Amount: 2.20 cfs, annual volume 628 ac-ft
Period of Use: Irrigation (4-1 thru 11-30) Stock/Wildlife (1-1 thru 12-31)
Source: Deep Creek
Remarks: 3.0 ac-ft/ac for irrigation and 2.0 ac-ft/year for Stockwater and Wildlife

License 98-7006
Owner: U.S. Bureau of Sports Fisheries and Wildlife
Priority: December 4, 1967
Use: Irrigation/Stockwater/Wildlife
Point of Diversion: NW 1/4 SW 1/4, Sec 24, T 62 N, R 1 W, B.M.
Diversion Amount: 10.0 cfs, annual volume 2560 ac-ft
Period of Use: Irrigation (4-1 thru 11-30) Stock/Wildlife (1-1 thru 12-31)
Source: Myrtle Creek

Application No. (to be submitted 9/02)
Owner: U.S. Fish and Wildlife Service
Priority:
Use: Wildlife
Point of Diversion: SE 1/4 NW 1/4, Sec 18, T 62 N, R 1 W, B.M.
Diversion Amount: 3.01 cfs, (New Pump)
Period of Use: Irrigation 1-1 thru 12-31
Source: Kootenai River

Application No. (submitted for West Eagle Nest Pond)
Owner: U.S. Fish and Wildlife Service
Priority:
Use: Wildlife, Wildlife Storage and Diversion to Storage
Point of Diversion: NE 1/4 SE 1/4 NW 1/4, Sec 13, T62N, R1W, B.M.
Diversion Amount: 7.80 cfs
Period of Use: Wildlife 1-1 thru 12-31
Source: Myrtle Creek

T. 18 N., T. 19 N., R. 1 W., R 1 E., W.M.

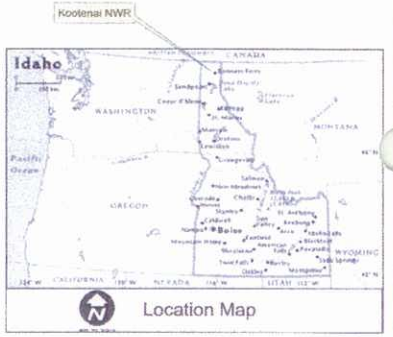


License 98-7003
Owner: U.S. Bureau of Sports Fisheries and Wildlife
Priority: December 4, 1967
Use: Irrigation/Stockwater/Wildlife
Point of Diversion: NW 1/4 NW 1/4, Sec 13, T 62 N, R 1 W, B.M.
Diversion Amount: 1.0 cfs, annual volume 162 ac-ft
Period of Use: Irrigation (4-1 thru 11-30) Stock/Wildlife (1-1 thru 12-31)
Source: Cascade Creek
Remarks: 3.0 ac-ft/ac for irrigation and 2.0 ac-ft/year for Stockwater and Wildlife

License 98-7366
Owner: U.S. Fish and Wildlife Service
Priority: March 9, 1981
Use: Wildlife
Point of Diversion: SE 1/4 NW 1/4, Sec 18, T 62 N, R 1 W, B.M.
Diversion Amount: 2.29 cfs, annual volume 1657.0 ac-ft (Old Pump)
Period of Use: 1-1 thru 12-31
Source: Kootenai River
Remarks: Pump capacity is 6.99 cfs (Old Pump). 4.7 cfs is currently being pump from the Kootenai River (Claim No 98-4113). However, that percentage is required to properly maintain these lands.

Claim 98-4113
Owner: U.S. Fish and Wildlife Service
Priority: July 25, 1958
Use: Wildlife Enhancement
Point of Diversion: SE 1/4 NW 1/4, Sec 18, T 62 N, R 1 W, B.M.
Diversion Amount: 4.70 cfs (Old Pump)
Period of Use: 1-1 thru 12-31
Source: Kootenai River
Remarks: This plus 98-7366 equal 6.99 cfs. This claim includes acreage not include in 98-7366 (New Pump)

Permit 98-07771
Owner: U.S. Fish and Wildlife Service
Priority: March 21, 1996
Use: Wildlife, Wildlife Storage, and Diversion to Storage
Point of Diversion: SE 1/4 NW 1/4, Sec 18, T 62 N, R 1 W, B.M.
Diversion Amount: 6.99 cfs, annual volume 444.0 ac-ft (New Pump)
Period of Use: 1-1 thru 12-31
Source: Kootenai River
Remarks: Proof of beneficial use May 6, 2002



KOOTENAI NWR
Boundary County, Idaho

LEGEND
- Approved Refuge Boundary
- River Pump
- Point of Diversion
- License 98-7003
- License 98-7366
- Permit 98-07771
- Claim 98-4113
- Application (to be submitted 9/02)
- Application No. 98-7613
- License No. 98-7004
- License 98-7006
- Application (submitted for West Eagle Nest Potholes Pond)

Water Resources Branch
911 NE 11th ave
Portland, Oregon 97232
503.231.6145

U.S. Fish and Wildlife Service, Region 1
Kootenai NWR

Water Rights

Updated 8/16/2005 by Dan Craver

Drawn By: Ed M. Zuniga	Checked by: David Langman
Date: August 2002	Sheet No. 1.0	Drawing: R1-WA-Wildlife-##-1.0

From Website www.fws.gov/kootenai

Fo 219-Supp.
12/81

RECEIVED
OCT 21 1982
Department of Water Resources

IDWR SUPPLEMENTAL FIELD REPORT
FOR ANNUBAR MEASUREMENT

Measured by: JK Date 9-8-82

Owner: USDI - Fish & Wildlife Permit No. 98-7366

Description of well &/or measuring site (give distance to restrictions upstream and downstream): Access port approx 50' downstream of 30HP and approx 30' upstream from Headgate Headgate used to regulate flow in pipe - partially closed to fill pipe

Measured inside diameter of pipe in inches (A) 15.375

Size of Annubar used in test 15.250

State ID# of Annubar ~~Meter~~ used 091444

Size Eagle Eye Meter used 80"

State ID# of Meter used 091479

Date of Last Calibration of Meter 6-1-82

Observed inches of H20 read on Meter 16

Adjusted inches of H20 from Last Calibration (B) 14.416

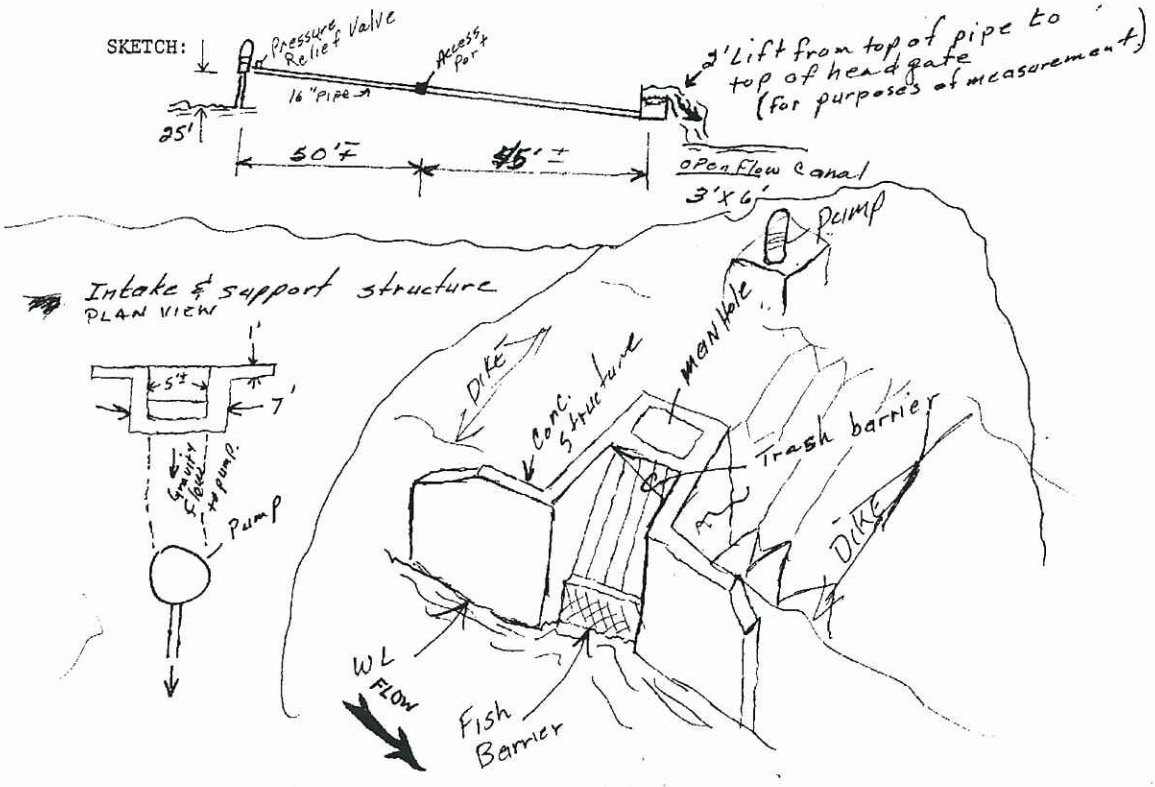
CALCULATION: $\frac{(3.85) \times (A)^2 \times \sqrt{(B)}}{448.8} = \frac{3.85(14.416)^2\sqrt{15.375}}{448.8}$ = ~~3137.31~~

Capacity

cfs measured ~~3137.31~~ 6.99

Where A and B are measured in inches and 3.85 is a constant for the model 75 Annubar.

SKETCH:



From field exam 98-7829

F. FLOW CALCULATIONS

Measured Method: ____ Additional Computation Sheets Attached

Flow meter 3,900 gpm

$\frac{3900 \times .133681}{60} = 8.68 \approx 8.7$ cfs *

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = _____

$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation Season) x 1.9835 = _____

V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = _____

2. Volume Calculations for Other Uses: 160 Ac. @ 3 ft Avg. depth

~~56~~ acres avg depth 3 ft

~~56 acres x 3 ft = 168 AF~~

160 x 3 = 480 AF

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use From	Period of Use To	Rate of Diversion Q (cfs)	Annual Volume V (afa)
Wild life	01-01	12-31	3.01	
Wild life Storage	01-01	12-31		~~168~~ 480
Diversion to Storage	01-01	12-31	3.01	
		Totals:	3.01	~~168~~ 480

2. Recommended Amendments Price in Sec 13 not described on Permit

___ Change P.D. as reflected above ___ Add P.D. as reflected above ___ None

✓ Change P.U. as reflected above ✓ Add P.U. as reflected above ___ Other

I. AUTHENTICATION

Field Examiner's Name Wayne Calkins Date 9-19-05

From Reviewer _____ Date 10-5-05 SEAL

Field Exam 98-7829

* Note the latest measurement of pump

SITE NAME: Kootenai River Diversion (offset pump)

SITE NUMBER: 458002

TYPE OF METER: _____

Checked by: _____

DATE (1)	TIME (2)	DIAL VOLUME (ft^3 or gal) (3) AC FT	TIME FOR VOLUME (sec or min) (4)	FLOW RATE (cfs or gpm) (5)	TOTALIZER READING (ft^3, gal, ac-ft) (6)	VOLUME SINCE LAST READING (ft^3, gal, ac-ft) (7)	(8)	REMARKS (9)	OBS INT (10
6/00	NO	USG							
8/1/00	0815	33.074 AC/FT							
9/5/00	11:50	0186.47						Pump ON @ 0815 To Dawes pond	
9/27/00	14:30	311.56						Line switched to Crowshead Marsh/SID ESA	OFF
9/29/00	13:30	321.36						" " " Dawes pond	
10/2/00	—	401.42							
11/6/00	10:00	563.10						pump OFF For Winter SOASAS	

SITE NAME: Kootenai River Pump/Diversion (OFFSET/VERTICAL)

SITE NUMBER: 458002

TYPE OF METER: _____

Checked by: _____

DATE (1)	TIME (2)	DIAL VOLUME (ft³ or gal) (3)	TIME FOR VOLUME (sec or min) (4)	FLOW RATE (cfs or gpm) (5)	TOTALIZER READING (ft³, gal, ac-ft) (6)	VOLUME SINCE LAST READING (ft³, gal, ac-ft) (7)	(8)	REMARKS (9)	OBS. INIT. (10)
1/5/01	10:30.	ON			563.10 AC-FT				WW
12.		OFF							
7/11	3:00pm	ON			564.97 AC-FT				
								TO Dennos (road/Cow River level)	
10/4/01	11:00am	cont... ON			1196.11 ACFT				
11/1/01	14:00	ON	TO Dennos clamp		1520.02 ACFT				

OUT

SITE NAME: _____ TYPE OF METER: _____

SITE NUMBER: _____ Checked by: _____

DATE (1)	TIME (2)	DIAL VOLUME (ft^3 or gal) (3)	TIME FOR VOLUME (sec or min) (4)	FLOW RATE (cfs or gpm) (5)	TOTALIZER READING (ft^3, gal, ac-ft) (6)	VOLUME SINCE LAST READING (ft^3, gal, ac-ft) (7)	(8)	REMARKS (9)	OBS. INIT. (10)
					Meter Reading				
2/1/02	13:00	NO use			AC/FT				
3/02		" "							
4/02	13:45	NO use							
5/02	—	NO use							
7/17/02	—	NO use			Beginning Reading			Full Flow to Greenhead Marsh	
8/21/02	10:00AM	ON		2800GPM	1706.51				
8/26/02	9:00AM	OFF			1709.71				
9/6/02	2:00pm	ON			1809.71				
9/23/02	10:00AM	ON						SO Cars Pond	
9/25/02	11AM	ON			2175.45			To Greenhead Marsh	
9/30	7:33	ON			2253.27				

#0471 P.008/010
KOOTENAI NWR
11/16/2010 10:43 208 267 5570

Enclive

SITE NAME: New Kootenai River Pump

SITE NUMBER: 458002

TYPE OF METER: _____

Checked by: _____

DATE (D)	TIME (D)	FLAT VOLUME (D or M)	TOTALIZER VOLUME (D)	FLOW RATE (D)	TOTALIZER READING (D)	VOLUME SINCE LAST READING (D)	REMARKS (D)	QUALITY (D)
9/30/02	1:30	ON			2253.27		end of PY 02 Reading	
10/3/02	2:45	OFF						
10/7/02	7:00Am	ON			2307.00			
10/15/02	8:00Am	OFF/ON			2416.42	TO Gland Marsh	TO Greenhead Marsh	
10/18/02	1 pm	OFF			2468.57		Farm pump OFF — Restarted @ 8am (mistake @ 2418.42)	WM
10/[illegible]	[illegible]	ON			2465.51			
10/24/02	3pm	OFF			2545.63			
10/28/02	9am	ON			" "	TO Greenhead		
10/31/02	8:00	OFF			2556.55	966 to		
11/13/02	10Am	ON			2556.55	TO Greenhead	main valve	
11/14/02	10:30Am	ON			2565.85	V Dump	marsh PGG Installed valve & replaced water Gasket	
11/19/02	—?	OFF			2572.67		Irrigate Boat to pump & V River level (minimal)	
11/20/02	8:00Am	ON			" " "	TO Green	Gland Marsh	
11/22/02	4pm	OFF			2595.05	—		
12/5/02	10Am	ON			2595.05	TO Green		
12/6/02	4:30Pm	OFF			2615.79	—	Head	
12/9/02	7:30Am	ON			2615.79	TO Greenhead		
1/14/03	1 pm	OFF			2672.53	—	Marsh	
4/4/03	3pm	OFF		NONE	2672.53			
4/22/03	4pm	OFF			2675.58	Service	Use only Marsh to pipe PGG	
5/22/03	4pm	ON			2675.58	TO River	Need water Release [illegible]	
5/27/03	10:30	ON			2734.53	TO "	" "	
6/[illegible]/03	15:20	ON			2911.26	" "	" "	
6/19/03	15:00	ON			3032.62	TO	Grass Pond	
7/11/03	07:00	ON			3217.26	TO "	River's Bend	
7/[illegible]/03	16:11	OFF			3262.93	" "	" "	
7/[illegible]/03	13:15	OFF			3274.97	" "	" " Pump Past Screen shaved off Housing —	
9/27/03	13:23	ON			3275.32	To Greenhead	Pump temp. Fix.	

SITE NAME: Kootenai River Pump (NEW)

SITE NUMBER: 458002

TYPE OF METER: _____

Checked by: _____

DATE (1)	TIME (2)	DIAL VOLUME (ft³ or gal) (3)	TIME FOR VOLUME (sec or min) (4)	FLOW RATE (cfs or gpm) (5)	TOTALIZER READING (ft³, gal, ac-ft) (6)	VOLUME SINCE LAST READING (ft³, gal, ac-ft) (7)	(8)	REMARKS (9)	OBS. INIT. (10)
10/1/03	15:12	3304.77					To Greenhead Marsh		WW
10/6/03	15:00	—					To Daves Pond		WW
10/8/03	09:50	3420.47					" "		WW
10/24/03	2:15pm	3——					To Greenhead Marsh		
10/27/03	09:24	3695.21					To Rivers Bend unit / Daves Pond		WW
11/4/03	07:29	3821.62					to Daves & Rivers Bend (split flow)		WW
11/6/03	12:65	3863.31					To Rivers Bend (via Palmer Slough)		WW
11/13/03	17:00	3998.40					" "		WW
12/1/03	12:57	4131.13	ON	Found pump off - restarted			" "		WW
12/2/03	11:45	4148.69	OFF						WW
2/13/04	14:37	—						grease motor 2 zirks, Reset screen foot w/ sledge -	WW
4/13/04	07:00	4228.40	ON	TO				To River Bend	
5/3/04	9:36	4494.28	ON	TO				" " "	
6/1/04	09:12	4814.25	ON	TO				To Greenhead Marsh	
6/18/04	17:00	5139.95	ON	TO Greenhead Marsh					
7/1/04	10:22	5234.55	OFF						WW
8/11/04	9:25	5627.83	ON	~~To Greenhead Marsh~~			TO Rivers Bend unit		WW
8/19/04	11:05AM	5760.45	OFF/ON	"Power bump"			Foot Strainer off pump foot, needs repair		WW
8/31/04	09:41	5972.55	ON				To Rivers Bend		WW
9/10/04	9:05	5990.56	OFF/ON	TO Greenhead Marsh			Found pump off/Restarted TO Greenhead		
9/15/04	—	6091.24	ON				To Daves & Riverbend split flow		WW
10/4/04	8:00	6458.63	ON				" " "		WW

SITE NAME: Kootenai River pump

SITE NUMBER: (01D)

TYPE OF METER: _____

Checked by: _____

DATE (1)	TIME (2)	DIAL VOLUME (ft^3 or gal) (3)	TIME FOR VOLUME (sec or min) (4)	FLOW RATE (cfs or gpm) (5)	TOTALIZER READING (ft^3, gal, ac-ft) (6)	VOLUME SINCE LAST READING (ft^3, gal, ac-ft) (7)	(8)	REMARKS (9)	OBS. INIT. (10)
5/25/01	13:30 pm	ON						Elec. meter reading 21724.7	
6/14/01	10 am	OFF						H_2O To Greenhead Marsh	
7/11/01	3:00pm	ON	To Dave's pond					Elec. meter 22096.9	
7/18/01?	?	ON	Switched To Greenhead marsh - when?					Elec. meter 22096.9	
10/3/01		cont. ON	To Dave's pond						
11/1/01	14:00	OFF						Elec. motor 23887.2	
12/07		no use							

SITE NAME: Kootenai River Pump (old)

SITE NUMBER: —

TYPE OF METER: _____

Checked by: _____

DATE (1)	TIME (2)	DIAL VOLUME (ft³ or gal) (3)	TIME FOR VOLUME (sec or min) (4)	FLOW RATE (cfs or gpm) (5)	TOTALIZER READING (ft³, gal, ac-ft) (6)	VOLUME SINCE LAST READING (ft³, gal, ac-ft) (7)	(8)	REMARKS (9)	OBS. INIT (10)
		meter reading							
9/23/2002		23289.6	OH	to: Dave Ronald					

11/16/2010 10:44 208 267 5570 KOOTENAI NWR #0471 P.010/010

SITE NAME: OID Kootenai River Pump

SITE NUMBER:

TYPE OF METER:

Checked by:

DATE (I)	TIME (J)	DIAL VOLUME (in cubic feet) (K)	TOTAL FOR VOLUME (cubic feet) (L)	AVG. RATE (cubic feet per second) (M)	TOTALIZER READING (in cubic feet) (N)	VOLUME SINCE LAST READING (in cubic feet) (O)	REMARKS (P)	DAYS BETWEEN READINGS (Q)
2/1/02			Hour meter					
6/3/02		OFF	23287					
6/7/02		ON	23287					
6/13/02		OFF						
6/15/02		ON					Bam to Dr	
6/18/02		OFF	23357(?)					
			Not running well.					
4/1/02		Pump initial volumeter in line						
		Reading 0000.00						
11/4/03	4pm	NO use						
5/23/03	10am	ON	[illegible]					
6/2/03	10:30	ON	35.15				TO Dawes Pond	
6/10/03	15:15	ON	205.93				FROM Dawes Pond	
6/17/03	15:00	ON	332.30					
7/1/03	07:01	ON	478.99				TO River Bend wetland	
7/2/03	16:10	OFF	507.71				" "	
7/11/03	08:00	ON	507.71					
7/12/03	18:00	OFF	530.50				TO Dawes Pond	
7/22/03	16:01	ON	530.50				TO Greenhead mash	
7/28/03	12:00	ON	546.61				" "	
8/1/03	13:15		637.81				TO Dawes Pond	
9/4/03	14:31	ON	960.00				" " "	
9/29/03	"	"	1151.44				TO River Bend unit	
							TO " " "	