

2006 WATER USE REPORT
BENTON LAKE NATIONAL WILDLIFE REFUGE
GREAT FALLS, MONTANA

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3/15/2007

I. Narrative Discussion - Benton Lake NWR

A. Weather Conditions

January was a very warm month. In Great Falls it was the second warmest on record and saw the highest low temperature of record for the month (18 on the 19th). A daily rainfall record was set at Great Falls on the 15th. High temperatures of 50 or above occurred on eight days during the month with the monthly high temperature of 62 recorded on the 25th. The average monthly temperature was 37 (15.3 degrees above normal) and the monthly precipitation of .71 was .03 inches above normal. February saw a return to near normal temperatures and precipitation. The average monthly temperature at Great Falls was 27 (.6 degrees above normal) and the monthly precipitation total was .44 inches (.07 inches below normal). The high temperature was 63 on the 27th and the low was -25 on the 17th. Below zero temperatures were recorded on five days during the month.

Temperatures for March averaged slightly below normal (1.5 degrees) with the monthly high temperature of 65 degrees recorded on the 25th. High temperatures above 50 degrees were recorded on nine days and highs above 60 were recorded on only two days. Total March precipitation of 1.70 inches was .69 inches above normal. Fourteen inches of snow fell during the month. April was the fifth wettest recorded in Great Falls with 2.88 inches of precipitation (1.48 inches above normal). Temperatures for the month averaged 3.9 degrees above normal. The high temperature of 75 was recorded on the 29th and the 21st. The low temperature of 22 was recorded on the 24th.

May saw very dry conditions for the first three weeks of the month. More than two inches of precipitation was received at Great Falls during the last seven days of the month. The monthly total of 2.64 inches was .11 inches above normal and the average monthly temperature of 54.3 degrees was 2.8 degrees above normal. The high temperature for the month of 90 degrees was recorded on the 18th and the low temperature of 27 degrees occurred on the fifth. June saw variable weather conditions in the Great Falls area. The average monthly temperature of 62.8 degrees was 2.8 degrees above normal and the monthly precipitation total of 4.24 inches was two inches above normal. The high temperature of 92 occurred on the 28th and the low of 43 was recorded on the 21st. Thunderstorms during the first weekend of the month produced winds of 71 mph in the Great Falls area. During this same period heavy precipitation caused flooding in the Highwood Mountains east of Great Falls and in the Cascade area, south of Great Falls.

July saw a return to warm and dry conditions. Great Falls average temp was 73.5 degrees, 7.3 degrees above normal. Precipitation for the month totaled .27 inches, 1.18 inches below normal. There were 20 days with a maximum temperature of 90 degrees or

above which was the most since 1936. It was the third warmest July on record for Great Falls. August was close to average in Great Falls with several periods of very warm temperatures. The average monthly temperature was 67.2 degrees, 1.6 degrees above normal. High temperatures of 90 degrees or above were recorded on ten days. The monthly precipitation total was .32 inches below normal at 1.33 inches. The month was also the second calmest August of record in Great Falls. The first two weeks of September were very warm with highs above 80 degrees on 11 of the first 14 days of the month in Great Falls. The average temperature was 2.8 degrees above normal at 58.2 degrees. Precipitation for the month totaled 1.82 inches, .59 inches above normal. The first frost of the fall in Great Falls was on the 16th as was the first snowfall of 1.3 inches. September was also the sixth calmest on record in Great Falls with an average wind speed of 9 mph.

The average monthly temperature for October in Great Falls was 43.2 degrees, 2.3 degrees below normal. Precipitation totaled 1.48 inches, .55 inches above normal. Snowfall for the month totaled 7.4 inches with almost five inches falling on the 16th. November began and ended with temperatures significantly below normal. The average monthly temperature in Great Falls was 31.9 degrees, .4 degrees below normal and the monthly precipitation of .43 inches was .16 inches below normal. Monthly snowfall totaled 9.8 inches with 6.5 inches falling on the 25th. Five days saw temperature readings below zero with the monthly low of -21 on the 28th. The overnight low of 55F on the 7th was the warmest November minimum of record. Temperatures for December in Great Falls were on the mild side. The average monthly temperature of 32 degrees was 7.7 degrees above normal. The precipitation total of .59 inches was .08 inches below normal. Nine inches of snow fell during the month with 8.6 inches recorded on the 27th and 28th. There were no below zero readings during the month in Great Falls. Very windy conditions occurred mid-month with a gust of 164 mph recorded at Marias pass in Glacier County.

The average temperature in Great Falls for the year was 3.4 degrees above normal and the total precipitation of 18.53 inches was 3.64 inches above normal. The 53.2 inches of snow that fell was 6.4 inches below normal. The highest temperature was 100 on July 28th and the low was -25 on February 17th. The peak wind in Great Falls was 64 mph on June 4th. There were 32 days with high temperatures of 90 or above. The year was the 13th warmest year of record in Great Falls.

B. Lake Creek Gage

The USGS gaging station on Lake Creek provides accurate data on volumes of pumped water and runoff that enters the refuge via Lake Creek. The gage is especially useful in detecting small runoff events that are difficult to measure with staff gage readings and capacity tables. For the purpose of documenting water use the Lake Creek Gage Station data were used to estimate runoff and pumped volumes based on theoretical capacities (Table 1). Runoff in April totaled 121 AF with an additional 20 AF received in May. June runoff in Lake Creek totaled 589 Acre Feet with an additional 81 AF in August.

USGS has indicated that they hope to convert this gage to a real-time site which would make gage readings available on the USGS homepage and make monitoring much easier. Estimates from non Lake Creek sources are based on staff gage/capacity tables.

C. Water Rights and Water Use Discussion

Negotiations between the Service and the Montana Reserved Water Rights Compact Commission were completed and the compact ratified, effective July 17, 1997. A federal Reserved Water Right was established for Benton Lake NWR as follows:

"Reserved Water Right:, priority date 11-21-29, to all natural flow on the Lake Creek drainage including the unnamed tributaries to Benton Lake, after satisfaction of valid existing rights as of the date of ratification of the compact between the Service and the State of Montana, for the purpose of wildlife habitat maintenance and enhancement. The refuge also has a consumptive use right to two acre feet (45 gpm) of groundwater for all uses associated with maintenance of the Headquarters area.

Extremely poor snowpack during the winter of 2005/06 in the Lake Creek watershed contributed virtually no runoff to the refuge. Significant rainfall in June provided 2177 AF of runoff to the Refuge. Readings from the Lake Creek gage only indicated 589 acre feet of runoff entered the Refuge through Lake Creek which was well out of its bank for several days. An additional 1588 AF of runoff entered the Refuge, most of it through Lake Creek. There was one significant precipitation event in August which provided 81 AF of runoff to the refuge (Table 1). Total runoff based on the Lake Creek gage was 827 AF. Total runoff for the year based on the Lake Creek gage and Unit staff gages was 2419 AF (Table 2). Average annual runoff in the last 19 years is 3550 AF.

Pumping supplemental water from Muddy Creek began on August 2nd and continued until October 16th. Spring pumping began on June 5th and ended on June 11th with a significant precipitation event that resulted in more than 2000 AF of runoff. Each year a discrepancy exists between water pumped from the pump station based on pump capacity and pumping period and the amount of water that passed the Lake Creek gage. This year the discrepancy was approximately 575 AF. Sediment buildup in the vicinity of the gage in Lake Creek and downstream channel configuration may explain the discrepancy. There was no indication of unauthorized usage anywhere along Lake Creek and no indication of leaks anywhere along the pipeline. Estimates of water pumped based on the USGS Lake Creek Gaging Station totaled 3951 AF. Electricity costs totaled \$69,226 or \$17.52 per AF (Table 3).

The Lake Creek gage is a seasonal site that operated from March 1 through October 31. Runoff received prior to March 1 and after freeze-up (Mid-November) was not measured since staff gages were frozen in.

All three pumps were overhauled and rebuilt. Installation was completed in early spring.

*Unit gages are
incorrect during
high flows*

Table 1. Water Discharge Records - Lake Creek Gage
Water-Data Report 2006

06090650 LAKE CREEK NEAR POWER, MT—Continued

DISCHARGE, CUBIC FEET PER SECOND
CALENDAR YEAR JANUARY TO DECEMBER 2006
DAILY MEAN VALUES

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1				2.3	0.17	0.24	0.79	0.00	38	15		
2				1.9	0.17	0.17	0.79	0.00	27	15		
3				1.8	0.15	0.09	0.75	13	25	15		
4				1.8	0.17	0.02	0.76	29	26	15		
5				1.4	0.17	0.00	0.74	30	24	14		
6				15	0.15	6.6	0.75	31	25	15		
7				26	0.11	21	0.74	31	26	13		
8				3.8	0.05	28	0.63	31	25	15		
9				1.4	0.05	32	0.54	34	24	15		
10				0.68	0.04	97 +65	0.47	34	23	15		
11				0.44	0.00	112 +80	0.40	34	17	15		
12				0.32	0.00	86 +54	0.34	34	10	15		
13				0.30	0.00	29	0.29	36	16	15		
14				0.28	0.00	15	0.17	36	15	15		
15				0.25	0.00	13	0.02	36	15	15		
16				0.27	0.00	9.5	0.00	36	15	15		
17				0.28	0.00	6.5	0.00	37	15	7.5		
18				0.25	0.00	4.3	0.00	37	15	1.6		
19				0.24	0.00	3.5	0.00	37	15	0.97		
20				0.23	0.00	3.2	0.00	37	15	0.67		
21				0.22	0.00	2.6	0.00	37	15	0.53		
22				0.15	0.00	2.1	0.00	37	15	0.47		
23				0.17	0.00	1.8	0.00	38 +1	15	0.39		
24				0.17	0.00	1.5	0.00	39 +2	15	0.29		
25				0.17	0.00	1.1	0.00	40 +3	15	0.29		
26				0.19	0.00	1.0	0.00	41 +4	15	0.29		
27				0.26	0.00	0.90	0.00	41 +4	15	0.26		
28				0.23	3.2	0.91	0.00	42 +5	15	0.23		
29				0.23	3.9	0.86	0.00	43 +6	14	0.19		
30				0.18	1.3	0.81	0.00	44 +7	14	0.31		
31				—	0.48	—	0.00	46 +9	—	0.21		
Total				60.91	10.11	480.70	8.18	1,041.00	559	251.20		
Mean				2.03	0.33	16.0	0.26	33.6	18.6	8.10		
Max				26	3.9	112	0.79	46	38	15		
Min				0.15	0.00	0.00	0.00	0.00	10	0.19		
Ac-ft				121	20	953	16	2,060	1,110	498		

Runoff

Pump

121 20 589 16 81 0 0 827 AF
364 1,979 1,110 498 3951 AF

TABLE 2
WATER RIGHTS AND USE AT BENTON LAKE NWR

FEDERAL RESERVED
REFUGE WATER RIGHTS 2006 WATER USE

<u>Point of Diversion</u>		Means of Diversion	Flow Rate	Claimed Volume	Use	Type	Place	Amount	Period
Source	Map								
Headquarters well	J	Pump	45 gpm	2 AF	Domestic	Fire Protection	Headquarters	0 AF	Annual
Diffuse runoff	A	Dam	Natural	135 AF	F&W	Marsh	Unit III	71 AF	Annual
Lake Creek runoff	B	Dam	500 cfs	14,000 AF	F&W	Marsh	Units I-VI	2177.0 AF	Annual
Diffuse runoff	C	Dam	Natural	392 AF	F&W	Marsh	Unit IV-a	24 AF	Annual
Diffuse runoff	D	Dam	Natural	23 AF	F&W	Marsh	Unit IV-a	0 AF	Annual
Other diffuse runoff	E, F, G	Dam	Natural	176 AF	F&W	Marsh	Unit IV	89 AF	Annual
Other diffuse runoff	H, I	Dam	Natural	303 AF	F&W	Marsh	Unit VI	58 AF	Annual
Muddy Creek (Irrigation flows)	K	Pump-2x16.6 cfs Pump-1x8.3 cfs	50 cfs	14,600 AF	F&W	Marsh	Units 1-VI	4526.10 AF	Annual
Other		Dam			F&W	Marsh	Unit V	0 AF	Annual
TOTALS				<u>29,631 AF</u>				<u>6945.10 AF</u>	

TABLE 3 **ANNUAL WATER PUMPING REPORT 2006**

PUMPING DATA

Hours Operated:

Dates Operated:

Pump No. 1	1939.00	6/15-6/11	8/2-10/16
Pump No. 2	1015.00	6/7-6/11	8/2-9/13
Pump No. 3	839.00	6/6-6/11	8/2-9/1
Total	3793.00		

Acre feet pumped: * 3951 AF

Kilowatt hours: 919,360

Electricity costs: \$ 69,226

* Based on USGS gage: Lake Creek

WATER QUANTITY DATA

Acre feet on hand (beginning)	2,167
Acre feet received	3,951
Acre feet on hand (close)	3,013
Acre feet difference	+846
Cost/acre foot	\$17.52

TABLE 4
USGS GAGE, PUMP HOURS, 2006

PUMP	MONTH	HOURS	AF: Pumped	TOTAL Pump	USGS: Total	USGS: Pumped	USGS: Runoff
Total	March	0.00	0.00	0.00	0.00	0.00	0.00
1	April	0.00	0.00				
2	April	0.00	0.00				
3	April	0.00	0.00				
Total	April	0.00	0.00	0.00	121.00	0.00	121.00
1	May	0.00	0.00				
2	May	0.00	0.00				
3	May	0.00	0.00				
Total	May	0.00	0.00	0.00	20.00	0.00	20.00
1	June	142.00	195.80				
2	June	99.00	67.80				
3	June	122.00	168.20				
Total	June	363.00	431.80	431.80	953.00	364.00	589.00
Total	July	0.00	0.00	0.00	16.00	0.00	16.00
1	August	667.00	919.80				
2	August	667.00	456.90				
3	August	717.00	988.70				
Total	August	2051.00	2365.40	2365.40	2060.00	1979.00	81.00
1	September	723.00	997.00				
2	September	249.00	170.60				
3	September	0.00	0.00				
Total	September	972.00	1167.60	1167.60	1110.00	1110.00	0.00
1	October	407.00	561.30				
2	October	0.00	0.00				
3	October	0.00	0.00				
Total	October	407.00	561.30	561.30	498.00	498.00	0.00
1	November	0.00	0.00				
2	November	0.00	0.00				
3	November	0.00	0.00				
Total	November	0.00	0.00	0.00	0.00	0.00	0.00
GRAND TOTAL		<u>3793.00</u>	<u>4526.10</u>	<u>4526.10</u>	<u>4778.00</u>	<u>3951.00</u>	<u>827.00</u>

TABLE 5
WATER BALANCE WORKSHEET - 2006

Unit	Beginning Elevation	Beginning SA	Beginning AF	Ending Elevation	Ending SA	Ending AF
1	3625.06	322	582	3625.80	360	818
2	3619.56	160	141	3619.46	151	128
3	3615.50	692	306	3615.98	916	703
4a	3615.68	39	6	3615.76	51	10
4b	Dry			Dry		
4c	3615.34	1020	533	3615.36	1049	555
5	3615.78	653	296	3615.94	708	405
6	3615.68	553	303	3615.84	585	394
<hr/>						
Totals		<u>3439</u>	<u>2167</u>		<u>3820</u>	<u>3013</u>
Change					<u>+381</u>	<u>+846</u>

D. Marsh Prescribed Burns

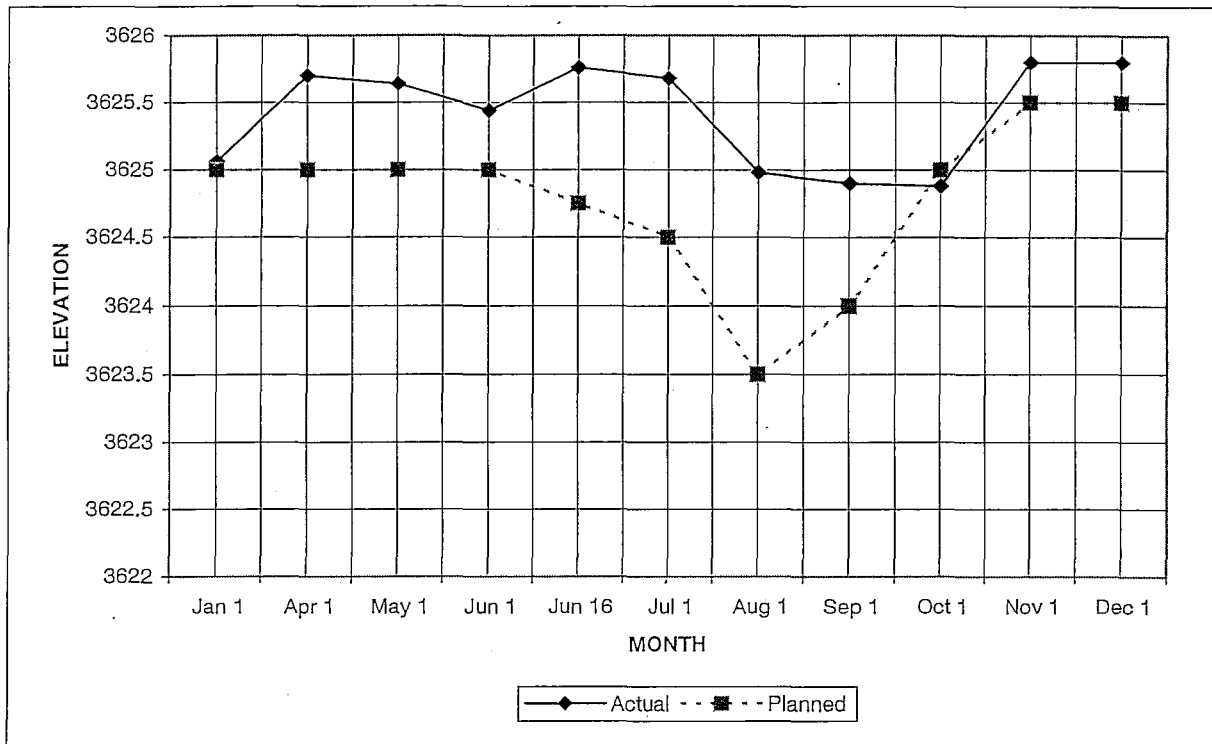
The Unit 2 and Unit 5 marshes as well as the uplands were burned in early March. Fall pumping began some three weeks earlier than usual due to drought conditions that forced the Greenfield Irrigation District to end the irrigation season in mid-August.

E. Water Management Charts and Wildlife Response

Charts for each refuge unit and a brief summary of the wildlife use on these units is found in the following section.

UNIT 1

Marsh Unit Elevations 2006

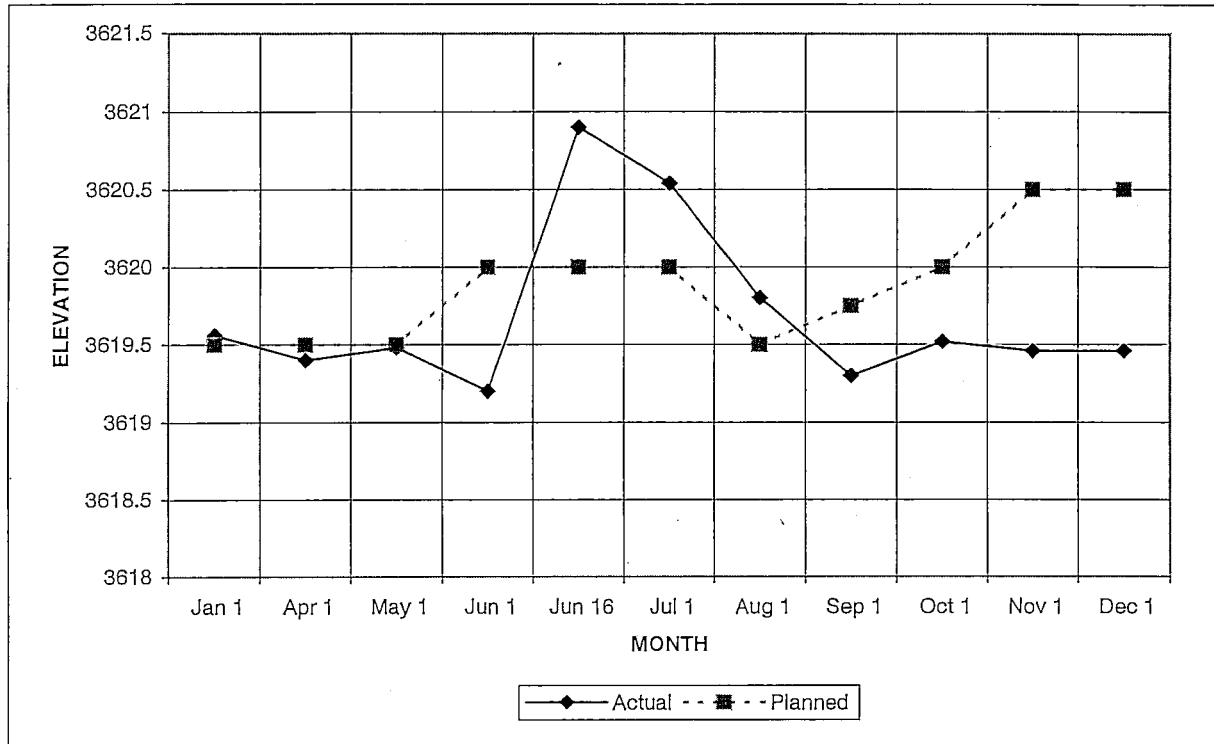


UNIT I -- Spring habitat in March and April provided habitat for 500 American wigeon, 250 Snow geese, 350 Common Goldeneye, 1,300 Pintails, and 2,000 Tundra Swans.

Fall pumping provided 262+ AF of water and provided habitat for 2,000 ducks, 100 Snow geese, and 200 Canada geese. Year-end level was 65+ AF more than planned.

UNIT 2

Marsh Unit Elevations 2006

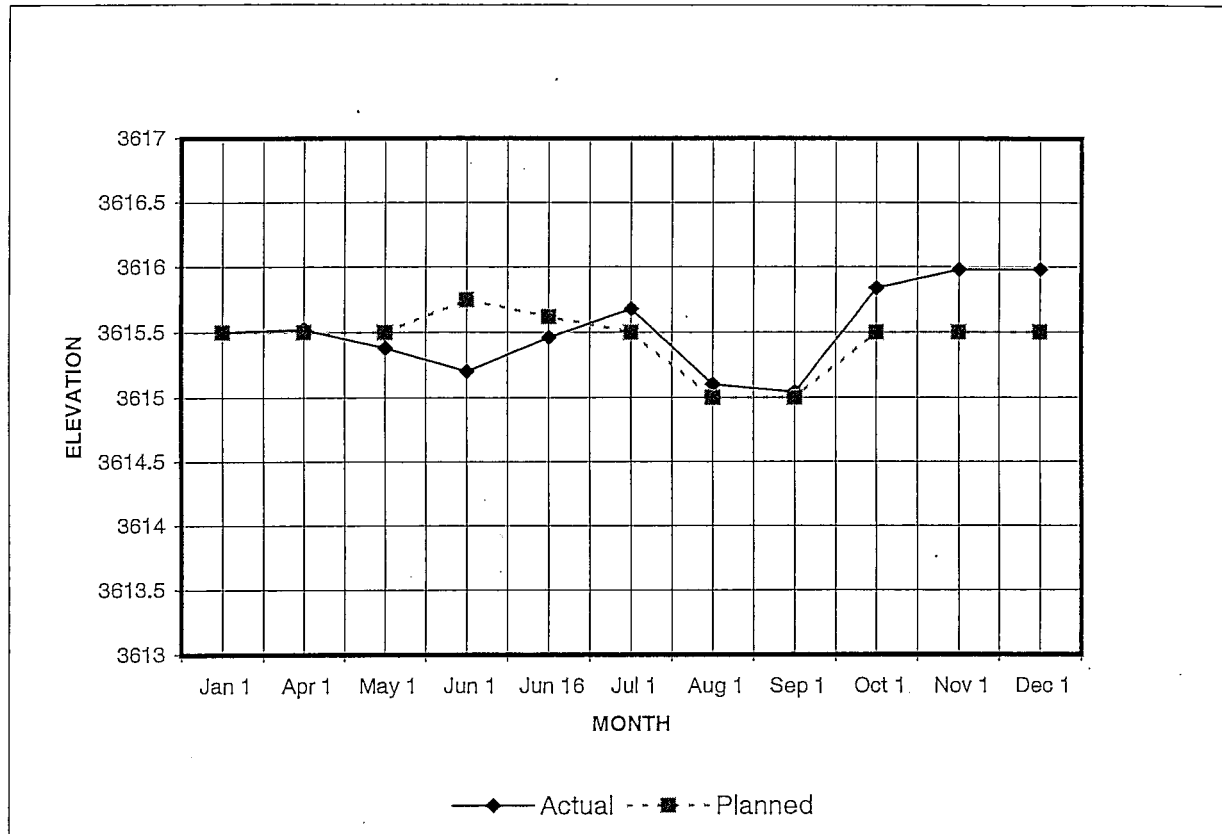


Unit II--Spring habitat for 250 Tundra swans, 200 Gadwalls, 150 Mallards, 1,800 Northern Pintails and 1,200 Canada geese.

No additional water was transferred to this unit during the fall pumping period. Habitat was provided for 10,000 ducks, 500 Canada geese, and 100 Tundra swans. Year-end level was less than planned (192+ AF).

UNIT 3

Marsh Unit Elevations 2006

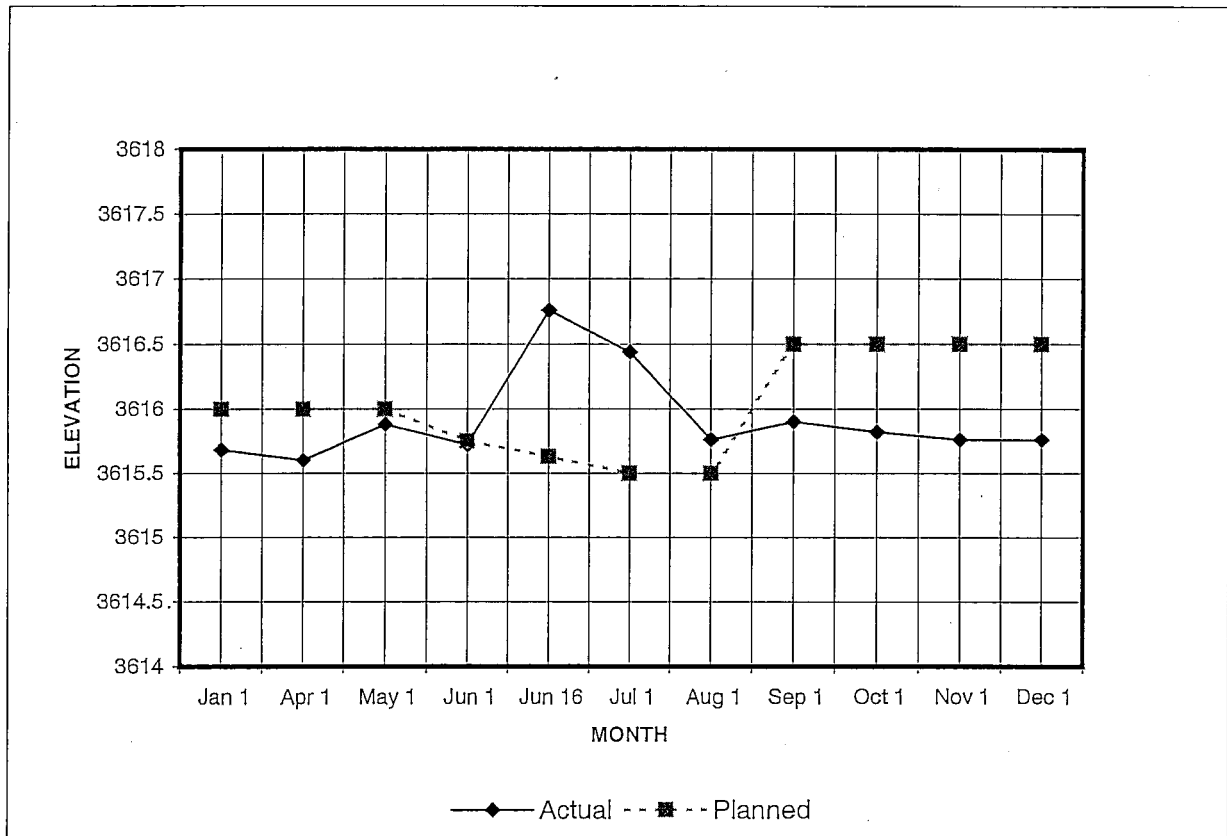


Unit III--This unit provided habitat for numerous ducks, Canada geese and migrating Tundra swans. Dense vegetation makes accurate counts difficult.

Fall pumping transferred 613+ AF and provided habitat for migrating Tundra swans, ducks and Canada geese. Year-end levels were 397+ AF more than planned.

UNIT IV a

Marsh Unit Elevations 2006

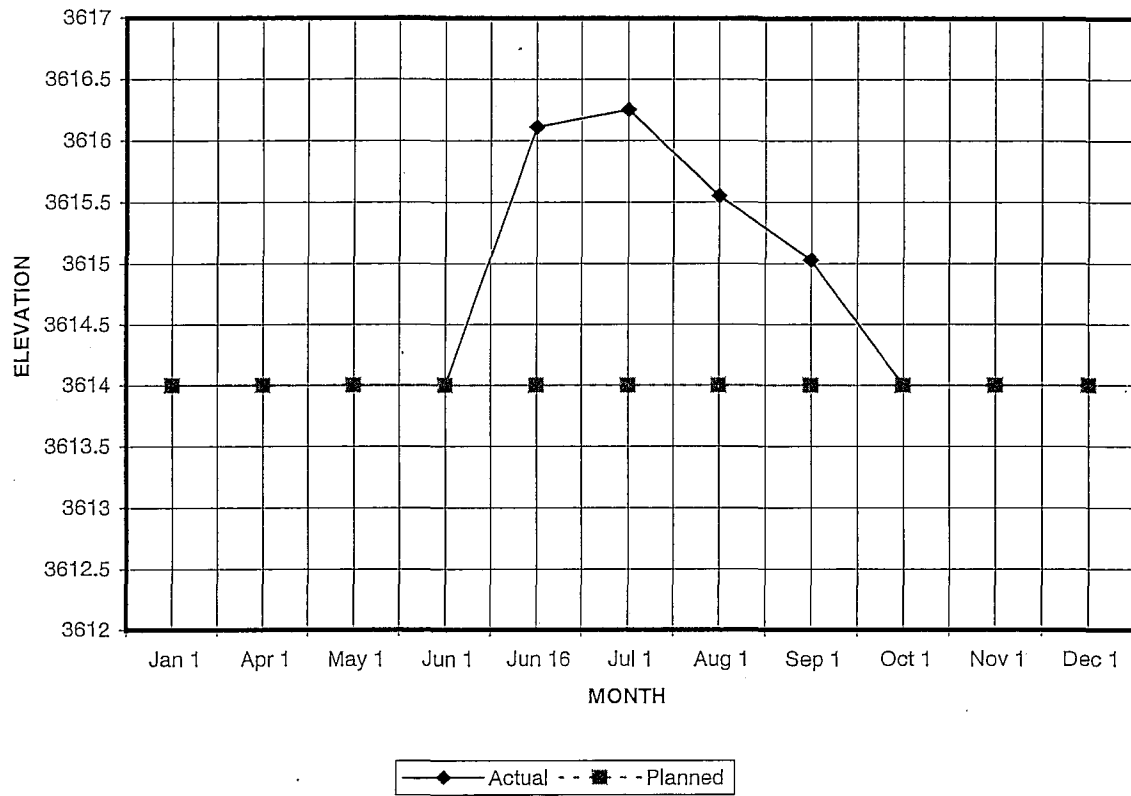


Unit IV a--Spring habitat provided for Northern pintails, Tundra swans, Black-necked Stilts and White-faced Ibis.

Fall pumping transferred 21+ AF to this unit to provide habitat for migrating ducks, 200 Canada geese, 250 Tundra swans, 500 Long-billed dowitcher, and Black terns. Year-end levels were 105+ AF less than planned.

UNIT IVb

Marsh Unit Elevations 2006

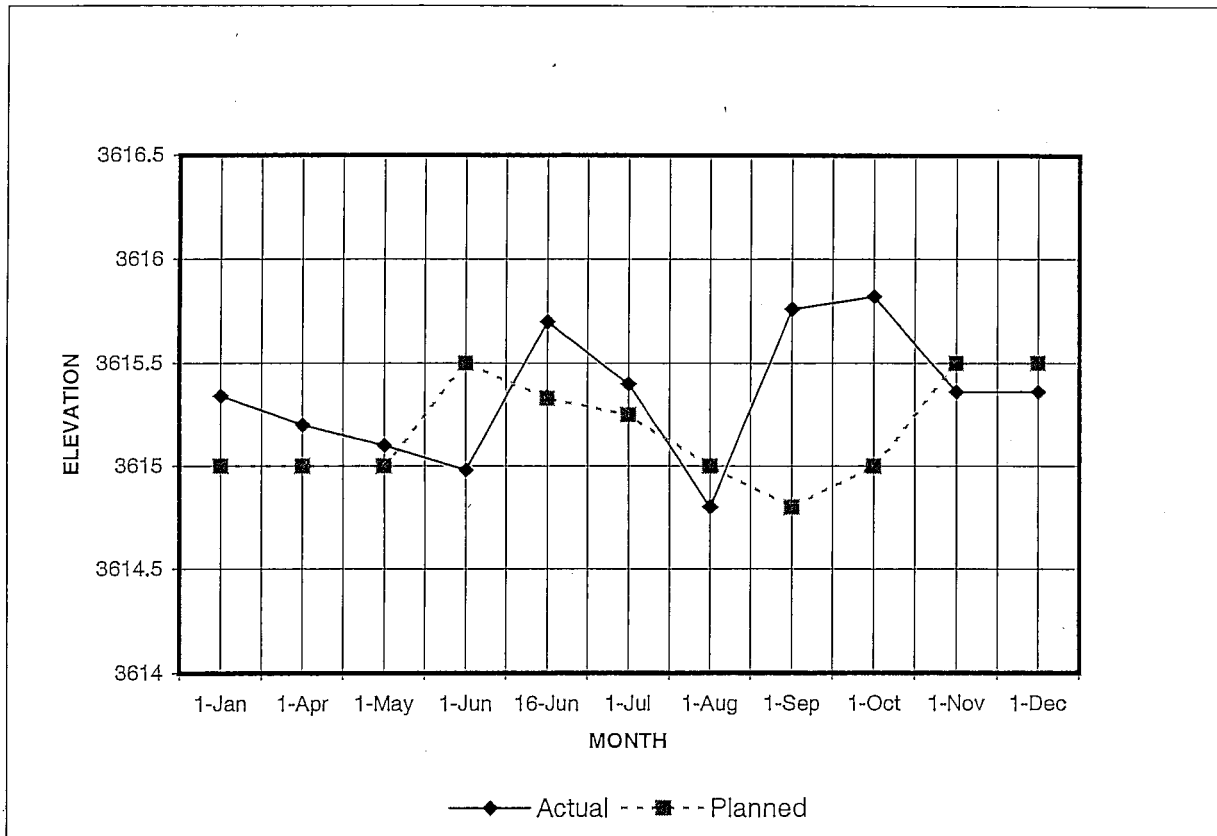


Unit IV b -- Runoff from early June precipitation event provided 200+ AF of water to the unit.

The unit received extensive use by shorebirds and waterfowl broods.

UNIT IV c

Marsh Unit Elevations 2006

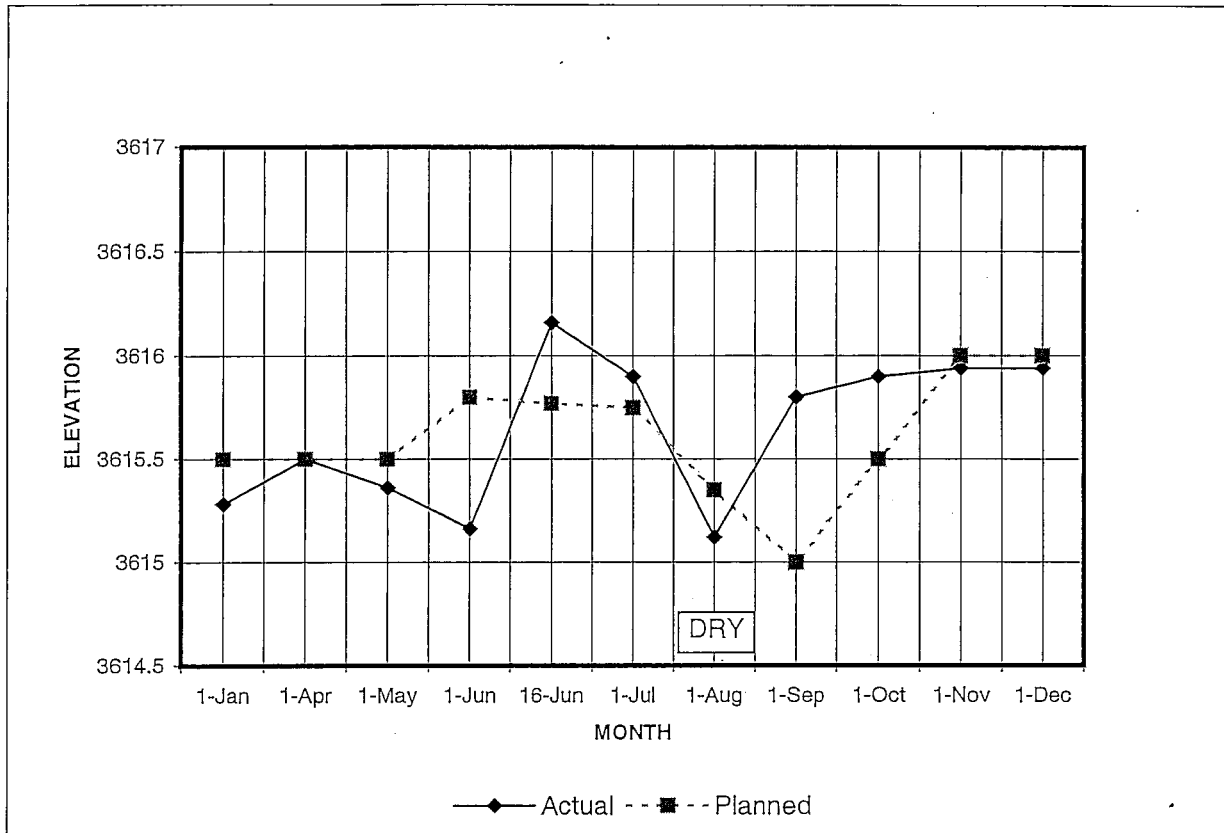


Unit IV c --- Spring nesting habitat provided for White-faced Ibis and Franklin's gulls.

Fall pumping transferred 866+ AF to this unit to provide waterfowl hunting opportunities and migration habitat. Year-end levels less than planned (155+ AF).

UNIT V

Marsh Unit Elevations 2006

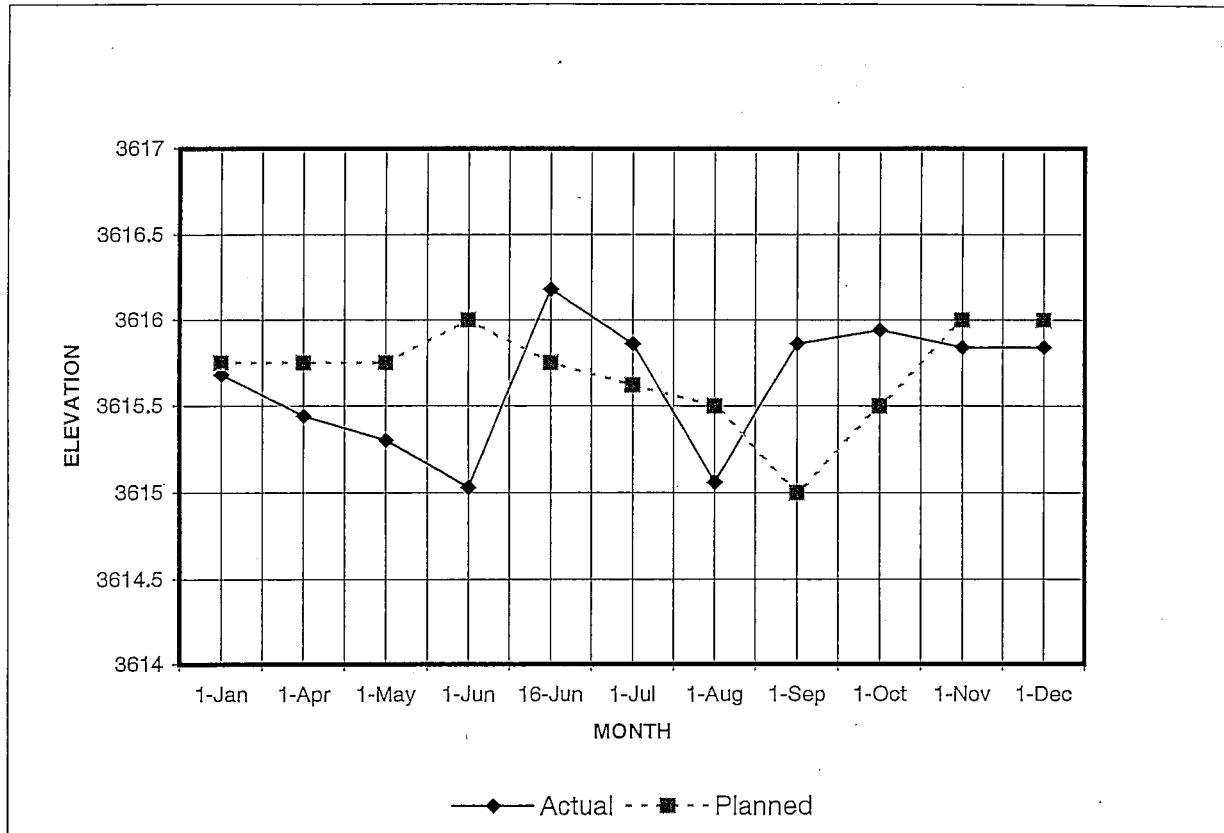


Unit V -- Spring habitat provided for waterfowl and shorebirds.

Fall pumping transferred 388+ AF to this unit to provide waterfowl hunting opportunities and migration habitat. Year-end levels were 43+ AF less than planned.

UNIT VI

Marsh Unit Elevations 2006



Unit VI -- Spring habitat for 150 Mallards, 1,200 Pintails, 300 shovelers, Forster's terns and White-faced Ibis as well as waterfowl brood habitat.

Fall pumping transferred 464+ AF of water for 1,000 Long-billed dowitcher and to provide waterfowl hunting opportunities and migration habitat for Snow geese, Tundra swans and ducks. Year-end levels were 96+ AF less than planned.

II. Narrative Discussion - Benton Lake Wetland Management District

A. Weather Conditions

Snowfall throughout the district during the winter of 2005/2006 was below normal. Snowfall through early January looked promising, but temperatures well above normal during the second half of January and first half of February resulted in significant loss to mountain snow packs that never recovered. June rainfall improved wetland conditions in the WMD, but most wetlands were dry by freeze-up.

Wetlands along the Rocky Mountain Front began the year in poor condition. Most wetlands were dry by early summer.

The main marsh on the Schrammeck Lake WPA was 25% of full in May and dry by mid-summer.

The seasonal wetlands on the Arod Lakes WPA held some water throughout the year. The main storage reservoir was drawn down by the irrigation company in summer and early fall, and was very low at freeze-up.

The main marsh on the Ehli WPA in Toole County was dry all year and wetlands in the Sweetgrass Hills were in poor condition in early spring. June rains created fair wetland conditions, but most wetlands were dry again by late summer.

The Sands WPA in Hill County had limited water throughout the year. Fifty acre feet of Beaver Creek Irrigation District water was delivered to the WPA in May.

Wetlands on the Blackfoot WPA held good pair and brood water. Basins 1-4 held water at freeze-up. Migratory bird use was high on the unit with many duck and goose broods as well as eared and red-throated grebes, black terns, and sandhill cranes nesting on the area. Canvasback use was also high. All seasonal wetlands on the unit were dry by late summer. Kleinschmidt Lake WPA wetlands had adequate pair and brood water, but all wetlands on the unit were dry by freeze-up.

Most basins on the H2-0 WPA were held at optimal levels in the spring and early summer and allowed to dry naturally into the fall. Spring rains in early April delayed diversion from the Blackfoot River until April 24th. Diversion of water was terminated on July 21st when emergency drought response measures were again initiated on the Blackfoot River. Alkali Lake levels were held 18 inches higher than last year in order to obtain an elevation to move water to basin's to the southeast. Approximately 5 miles of the delivery ditch was cleaned out to allow for more efficient use of water. Removal of the old diversion structure and the construction of a new one were completed in the end of October and the beginning of November. This project will allow for much more precise diversion of river water. The installation of a fish screen will prevent fish entrainment in

the delivery ditch. Basins on the east side of the property held water into late July and then were allowed to dry up. Basins on the west side of the property and on the Aunt Molly WMA held water until early July and were dry by July 18th.

B. Water Rights and Use in the Wetland Management District. See Table on the following page.

WATER RIGHTS AND USE ON BENTON LAKE WMD
2006 WATER YEAR
WMD - WATER REPORT 2006

WPA	SOURCE	CLAIM NO.	COMMENTS	MEANS OF DIVERSION	FLOW RATE	CLAIMED VOLUME ACRE FT	ACRE FT 2006	PERIOD
Kingsbury Lake	Stock Dam #1	41R-W-188250		Dam	Natural Flow	1.00	1.00	Annual
Kingsbury Lake	Stock Dam #2	41R-W-188251		Dam	Natural Flow	2.50	2.50	Annual
Kingsbury Lake	Stock Dam #3	41R-W-188252		Dam	Natural Flow	2.50	2.50	Annual
Kingsbury Lake	Stock Dam #4	41R-P-098649		Dam	Natural Flow	0.40	6.00	Annual
Kingsbury Lake	Stock Dam #5	41R-W-211490		Dam	Natural Flow	6.00	6.00	Annual
Kingsbury Lake	Alder Creek	11810	41R-W-011810	Direct Use	Natural Flow	3.25	3.25	Annual
Kingsbury Lake	Well 5" Casing	11812	41R-W-011812	Windmill & Tank	.5gpm	3.50	0.00	Annual
Kingsbury Lake	Unnamed Coulee or Dry Runs	11806	41R-W-011806	Dam	Natural Flow	6.40	6.40	Annual
Kingsbury Lake	Unnamed Coulee or Dry Runs	11807	41R-W-011807	Dam	Natural Flow	6.40	6.40	Annual
Kingsbury Lake	Unnamed Coulee or Dry Runs	11808	41R-W-011808	Dam	Natural Flow	6.40	6.40	Annual
Kingsbury Lake	Unnamed Coulee or Dry Runs	11809	41R-W-011809	Dam	Natural Flow	6.40	6.40	Annual
Kingsbury Lake	Unnamed Coulee or Dry Runs	11811	41R-W-011811	Dam	Natural Flow	6.40	6.40	Annual
Blackfoot	Unnamed Springs	76F-W-033714	Supplies H2O to 4 ponds	Direct Use	Natural Flow	160.00	160.00	Annual
Blackfoot	Unnamed tributary of the Big Blackfoot River	76F-P-78265	Permit is associated with water right No. 76F-W-033714 & supplies H2O to 4 ponds. Total appropriation is 479AF	Dam	N/A	319.00	319.00	Annual
Blackfoot	Big Blackfoot River	76F-P-003472	Permit No. 76F-P-003472 Irrigate 123 acres	Pump	700 gpm	370.00	0.00	Annual
Kleinschmidt	Kleinschmidt Lake	76F-W-097791				3.70	3.70	Annual
Sands	Beaver Creek Water Contract			Headgate	Unknown	50.00	0.00	Annual
Sands	Squaw Coulee	40J-W-118716		Dam	.66cfs	0.66	0.00	Annual
Sands	Squaw Coulee	40J-W-118717		Headgate	15 cfs	154.00	154.00	Annual
Sands	Unnamed trib. Of Halfway Lake	40J-P-011694		Pit??		2.00	0.00	Annual
Furnell	Trail Creek		No Runoff 2006	Headgate	2 cfs	480.00	0.00	Annual
Ehli	Willshaw	40F-W-159045		Direct Use	Runoff	28.00	28.00	Annual

WPA	SOURCE	CLAIM NO.	COMMENTS	MEANS OF DIVERSION	FLOW RATE	CLAIMED VOLUME ACRE FT	ACRE FT 2006	PERIOD
Ehli	O'Neal Coulee	40F-B-214983		Dam	Natural Flow up to 25cfs	770.60	0.00	Annual
H2-0	Blackfoot River	76F-G-117710-00	Authorization applies to 76F-W-117710 76F-W-11711 76F-B-214348	Twin headgates	32.5 cfs	1115.00	750.00	4/20 - 8/1
H2-0	Ground water	76F-W-117702-00	Artesian well, residence use (domestic)	Well	35 gpm	4.00	4.00	Annual
H2-0	Ground water	76F-W-117703-00	Artesian well (same as above) for stock water	Well	35 gpm	6.72	0.00	Annual
H2-0	Ground water	76F-W-117704-00	Old wind mill no longer in use	Well	20 gpm	6.72	0.00	5/1-12/4
H2-0	Ground water	76F-W-117705-00	Artesian well by Alkali Lake stock water	Well	35 gpm	6.72	6.72	Annual
H2-0	Blackfoot River	76F-P-017006-00		Pump	1500 gpm	375.00	0.00	4/15-10/19
H2-0	Blackfoot River	76F-G-017006-00	Stock water (same as above)	Pump	1500 gpm	375.00	0.00	Annual
H2-0	Ground water	76F-W-117707-00	Stock water on Aunt Molly	Well	35 gpm	6.72	6.72	Annual
H2-0	Ground water	76F-C-069182-00	Stock water section 29	Well	25 gpm	5.95	0.00	Annual
H2-0	Ground water	76F-B-214346-00	Artesian well by house for Fish & Wildlife (overflow)	Well	66 gpm	106.00	106.00	Annual
H2-0	Blackfoot River	76F-B-214347-00	For Fish & Wildlife	Diversion	25 cfs	88.00	88.00	4/1-11/4
H2-0	Ground water	76F-B-214349-00	For Fish & Wildlife, Alkali Lake well overflow	Well	75 gpm	120.00	120.00	Annual
H2-0	Waste & seepage	76F-B-214350-00	For Fish & Wildlife, waste & seepage along ditch	Irrigation overflow collects in McCormick ditch	12.5 cfs	88.00	88.00	Annual
TOTAL						<u>4692.94</u>	<u>1887.39</u>	