
MEMORANDUM

**Subject: Bear River Basin Plan
Key Structures and Diversions
MYERS No 1 DIVERSION**

Date: August 7, 2000

Diversion Description: The diversion gate structure consists of a deteriorated wooden headwall, a single 30-inch CMP squash pipe, and a 30-inch steel slide gate. The headgate is located approximately 100 yards east of the main river channel. River is dammed during low flows to divert into the ditch.



Myers No. 1 headgate

Diversion Location: Diversion is on the Upper Bear in Wyoming. Irrigated lands are located in Wyoming as shown in the location map hereafter..

Latitude N 41° 07' 47.9"
Longitude W 110° 53' 02.8"

Conveyance Description: Open Channel Ditch. Ditch follows old stream channel.¹

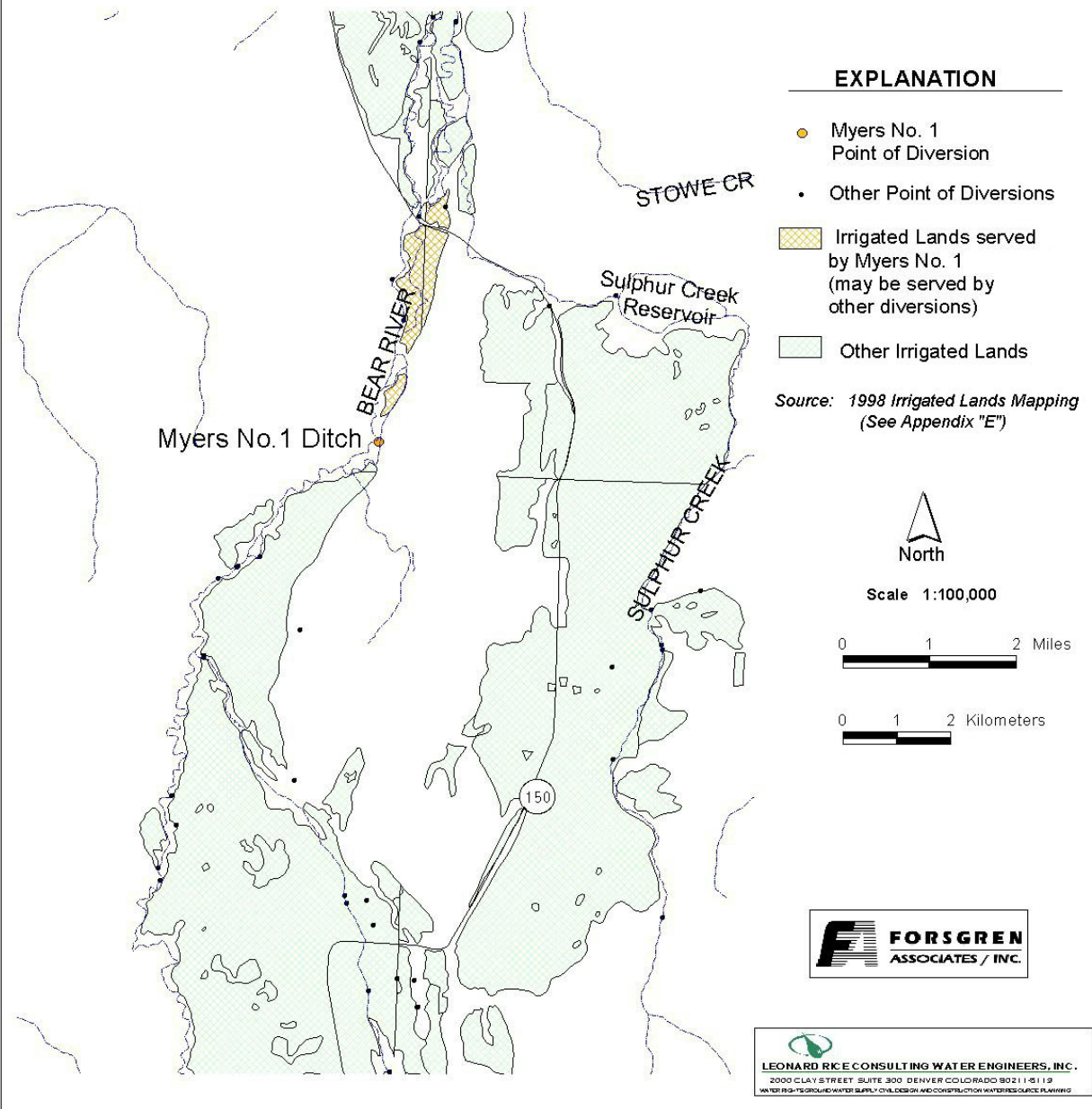
Direct Flow Water Rights:²

Priority Date	Permit Number	Permitted Use	Permitted Acres	Flow (CFS)	Cumulative (CFS)	Comments
08-07-1901	3550	Irrigation	305	4.35	4.35	

Associated Storage Rights:

Reservoir	Shareholder	Volume (Acre-ft)	Est. % of Shares Used this Diversion ³	Comments
Sulphur Creek	Broken Circle Cattle Co.	142	100%	By Exchange

Myers No. 1 Point of Diversion Bear River Basin, Wyoming



Irrigation Practices: Land is all flood irrigated.³

Estimated Diversion Efficiency: Canal losses are relatively high due to porous nature of soils in the higher reaches of the Upper Bear.

Calculated Diversion Efficiency = Conveyance Efficiency X Application Efficiency:

Conveyance Efficiency:	50%
Application Efficiency:	<u>55%</u>
Overall Diversion Efficiency:	27%

Conveyance efficiency is estimated based on total length of main canal. Application efficiency for flood irrigation and sprinkler irrigation is estimated at 55% and 85% respectively.

Crop Types / Consumptive Use: Water is used entirely to irrigate mixed meadow grasses.³

Return Flows: Return flow is intercepted by the Booth Canal (approx. 50%) with the remainder entering Sulphur Creek below the reservoir (approx. 50%).

The following return flow pattern was adopted for modeling in this study are as follows:

<u>Month</u> <u>(after initial Diversion)</u>	<u>Percent of Return</u>
0	70%
1	20%
2	<u>10%</u>
	100%

Other Operational Information: The Myers No. 1 ditch gains significant flow from return flows associated with upstream canals, primarily Lewis and Myers No. 2.³

References:

- 1) *USDA -Soil Conservation Service Economic Research Service-Forest Service in Cooperation with the States of Idaho, Utah, Wyoming, Irrigation Conveyance Systems, Working Paper for the Bear River Basin Type IV Study, Idaho-Utah-Wyoming, April 1976*
- 2) *Water rights summary obtained from State Engineer Interstate Reglist – revised April 14, 1999*
- 3) *Irrigation practices based on field investigation and interview with Mr. Don Shoemaker, Water Hydrographer-Commissioner – November 6,1999.*
- 4) *State of Utah Natural Resources, Water Budget Studies – Utah, Bear River Study Area, September 1994*

**BEAR RIVER WYOMING DIVERSIONS
MONTHLY DIVERSION RECORDS**

MEYERS NO. 1

YEAR	MAY			JUNE			JULY			AUGUST			SEPTEMBER		
	Total of Daily Ave for Month	Average CFS	Monthly Total Ac-Ft	Total of Daily Ave for Month	Average CFS	Monthly Total Ac-Ft	Total of Daily Ave for Month	Average CFS	Monthly Total Ac-Ft	Total of Daily Ave for Month	Average CFS	Monthly Total Ac-Ft	Total of Daily Ave for Month	Average CFS	Monthly Total Ac-Ft
*1970															
1971	0	0.0	0.0	192	6.4	380.8	249	8.0	493.9	125	4.0	247.9	47	1.6	93.2
1972	19	0.6	37.7	200	6.7	396.7	164	5.3	325.3	160	5.2	317.4	48	1.6	95.2
1973	0	0.0	0.0	154	5.1	305.5	128	4.1	253.9	25	0.8	49.6	0	0.0	0.0
1974	54	1.7	107.1	140	4.7	277.7	120	3.9	238.0	50	1.6	99.2	0	0.0	0.0
1975	0	0.0	0.0	43	1.4	85.3	209	6.7	414.5	1	0.0	2.0	56	1.9	111.1
1976	1	0.0	2.0	192	6.4	380.8	142	4.6	281.7	123	4.0	244.0	21	0.7	41.7
1977	25	0.8	49.6	64	2.1	126.9	74	2.4	146.8	27	0.9	53.6	0	0.0	0.0
1978	0	0.0	0.0	30	1.0	59.5	170	5.5	337.2	87	2.8	172.6	27	0.9	53.6
1979	26	0.8	51.6	117	3.9	232.1	192	6.2	380.8	122	3.9	242.0	0	0.0	0.0
1980	189	6.1	374.9	141	4.7	279.7	236	7.6	468.1	81	2.6	160.7	0	0.0	0.0
1981	77	2.5	152.7	72	2.4	142.8	183	5.9	363.0	91	2.9	180.5	0	0.0	0.0
1982	28	0.9	55.5	187	6.2	370.9	60	1.9	119.0	149	4.8	295.5	26	0.9	51.6
1983	0	0.0	0.0	15	0.5	29.8	91	2.9	180.5	65	2.1	128.9	0	0.0	0.0
1984	1	0.0	2.0	11	0.4	21.8	212	6.8	420.5	204	6.6	404.6	8	0.3	15.9
1985	0	0.0	0.0	155	5.2	307.4	300	9.7	595.0	236	7.6	468.1	119	4.0	236.0
1986	28	0.9	55.5	19	0.6	37.7	159	5.1	315.4	151	4.9	299.5	103	3.4	204.3
1987	0	0.0	0.0	58	1.9	115.0	122	3.9	242.0	168	5.4	333.2	43	1.4	85.3
1988	4	0.1	7.9	114	3.8	226.1	72	2.3	142.8	67	2.2	132.9	75	2.5	148.8
1989	0	0.0	0.0	6	0.2	11.9	167	5.4	331.2	133	4.3	263.8	31	1.0	61.5
1990	132	4.3	261.8	89	3.0	176.5	67	2.2	132.9	79	2.5	156.7	8	0.3	15.9
1991	0	0.0	0.0	165	5.5	327.3	136	4.4	269.8	62	2.0	123.0	0	0.0	0.0
1992	59	1.9	117.0	146	4.9	289.6	141	4.5	279.7	71	2.3	140.8	24	0.8	47.6
1993	24	0.8	47.6	91	3.0	180.5	129	4.2	255.9	33	1.1	65.5	1	0.0	2.0
1994	269	8.7	533.6	175	5.8	347.1	137	4.4	271.7	143	4.6	283.6	71	2.4	140.8
1995	42	1.4	83.3	63	2.1	125.0	73	2.4	144.8	106	3.4	210.2	161	5.4	319.3
1996	143	4.6	283.6	212	7.1	420.5	88	2.8	174.5	117	3.8	232.1	51	1.7	101.2
1997	66.3	2.1	131.5	99.7	3.3	197.8	147.9	4.8	293.4	68.1	2.2	135.1	43.1	1.4	85.5
1998	44.9	1.4	89.1	56.8	1.9	112.7	149.9	4.8	297.3	304.6	9.8	604.2	32	1.1	63.5
1999	53	1.7	105.1	204	6.8	404.6	31	1.0	61.5	1	0.0	2.0	1	0.0	2.0

AVERAGES

1.4 87.9

3.7 219.7

4.6 283.8

3.4 208.6

1.1 68.1

Notes: *1. No published records are available for this diversion for 1970