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Water Division I

District 8

Baggs Ditch, Little Snake River

Diversion Description: Diversion consists of two 36" wide slide gates mounted on a concrete structure. No diversion dam exists.¹

Diversion Location:

Source: Little Snake River, Trib. Yampa River, Trib. Green River

Section, Township, Range: 4, 12, 091

Conveyance Description: Open Channel Canal.

Wyoming Water Rights Summary:

Priority Date (M–D–Y)	Permit Number		Acres	Flow (cfs)	Cumulative Flow (cfs)	Comments
Fall 1877	Terr.	Domestic, Stock, Irrigation	190.00	2.80	2.80	
04-10-1886	Terr.	Irrigation	33.00	0.47		POD/MOC change from a portion of John Irons Ditch
10-00-1887	Terr.	Irrigation	580.00	8.28	11.55	
12-04-1889	Terr.	Domestic, Stock, Irrigation	100.00	1.43	12.98	

Storage Rights: None.

Estimated Canal Losses: Information not available at time of report.

Irrigation Practices: Information not available at time of report.

Crop Types / Consumptive Use: Information not available at time of report.

Return Flows: Return flows are delivered to Little Snake River at Baggs.²

Other Operational Information: Information not available at time of report.

Sources: 1) Western Water Consultants, Inc., <u>Little Snake River Basin Planning Study</u>, <u>Level I Feasibility Study</u>, <u>Draft Phase I Report</u>, <u>Tasks B&C (Diversions and Canals)</u>, August, 1991

2) Stone & Webster Engineering Corporation and Western Water Consultants, Inc., <u>Streamflow Depletion Study – Sandstone Reservoir</u>, February, 1987.

Baggs Ditch, Little Snake River, Diversion Data

	M	ay	Ju	ne	Ju	ly	Aug	gust	Septe	mber
Wateryear	Average (cfs)	Monthly Total (AF)	Average (cfs)	Monthly Total (AF)	Average (cfs)	Monthly Total (AF)	Average (cfs)	Monthly Total (AF)	Average (cfs)	Monthly Total (AF)
1980										
1981										
1982										
1983			8.50	505.79	10.89	669.60	2.22	136.50	2.47	146.98
1984			13.44	799.74	7.51	461.77	0.00	0.00	0.00	0.00
1985										
1986										
1987										
1988										
1989										
1990										
1991										
1992										
1993							0.00	0.00	0.00	0.00
1994							0.00	0.00	0.00	0.00
1995	0.55	33.85	11.96	711.73	6.59	405.15	0.00	0.00		
1996	5.16	317.36	1.80	111.38						
1997	0.69	42.50	13.15	782.48	0.96	59.01				
1998	0.93	57.12	10.14	603.20	4.84	297.70				
Averages:	1.84	112.71	9.83	585.72	6.16	378.65	0.44	27.30	0.62	36.75

Blank cells are due to missing/insufficient data.

Average = Average Flow for ENTIRE month. Monthly Total = Total Volume used during month. See Methodology section for explanations.

Spot data readings used in calculating averages in table on following pages.

Baggs Ditch, Little Snake River, Diversion Data

Data:

1983 (all est.): 5/23, 0 cfs; 6/10, 20 cfs; 6/13, 20 cfs; 6/21, 20 cfs; 6/27, 20 cfs; 7/5, 20 cfs; 7/14, 10 cfs; 7/18, off; 7/22, 10 cfs; 7/25, 10 cfs; 8/1, 5 cfs; 8/8, off; 9/5, 5 cfs; 9/16, 2 cfs; 9/19, 2 cfs; 9/30, off.

1984 (all est.): 6/3, 15 cfs; 6/9, 15 cfs; 6/18, 15 cfs; 7/13, 10 cfs; 7/16, 10 cfs; 7/19, 8 cfs; 7/25, off; 7/28, 5 cfs; 8/1, off for season.

1985: 5/24, 0 cfs.

1993: 4/21, off; 5/13, off; 5/14, off; 5/22, on; 6/3, on; 6/16, on; 7/15, on; 7/23, 7/29, 8/11, 8/26, 8/30, 9/8, off.

1994: 4/21, off; 5/18, 12 cfs; 5/24, 16 cfs; 6/7, 8.0 cfs; 7/8, 7/20, 8/4, 8/10, 8/16, 8/17, 8/23, 9/7, off.

1995: 4/13, 5/11, 5/16, 5/23, 5/24, off; 6/27, 18.13 cfs; 7/27, 8/10, 8/22, off.

1996: 11/7, 11/13, 4/10, 4/18, 4/26, 5/3, off; 5/23, 16 cfs; 7/29, 6.4 cfs; 8/21, 9/4, off.

1997: 4/22, 5/7, 5/20, 5/27, off; 6/3, 12 cfs; 6/10, 14 cfs; 6/27, 14 cfs; 7/1, 8.5 cfs; 7/8, 7/15, 7/22, off.

1998: 5/20, off; 6/24, 14 cfs; 7/28, 9/19, off.

Supply: 1983, above average; 1984, above average (some flooding); 1985, below average; 1986, average; 1989, below average; 1993, slightly above average; 1994, slightly above average; 1995, above average; 1996, above average; 1997, above average; 1998, above average.

Source: State Engineer's Office, Annual Hydrographers' Reports.

First Mesa Canal, Little Snake River

Diversion Description: Diversion consists of four 3' by 3' steel sliding gates mounted on a concrete wall. A sheet-pile and plank diversion dam across the river channel exists.¹

Diversion Location:

Source: Little Snake River, Trib. Yampa River, Trib. Green River

Section, Township, Range: 13, 12, 90

Conveyance Description: Open Channel Canal, approximately 13 miles in length. ¹

wyoming Water Rights Summary:



Priority Date (M-D-Y)	Permit Number	Permitted Use	Acres	Flow (cfs)	Cumulative Flow (cfs)	Comments
06-00-1877		Domestic, Irrigation, Stock	50.00	0.80	1 1 X 1 1	POD/MOC change from Perkins Ditch.
11-12-1882	Terr.	Irrigation	260.00	3.71	431	POD/MOC change from Perkins Ditch.
Early 1886	Terr.	Irrigation	100.00	1.43	3 Y/L	POD/MOC change from Baker Ditch.
Fall 1887	Terr.	Irrigation	31.00	0.44		POD/MOC change from Bennett & Aylesworth Ditch.
06-10-1899	440E	Irrigation, Stock	1463.30	20.86	27.24	
08-01-1902	901E	Irrigation	57.50	0.82	28.06	
12-12-1902	958E	Irrigation	27.00	0.38	/ X 44	POD/MOC change from Perkins Ditch.
11-24-1903	1152E	Irrigation, Stock	70.00	1.00	29.44	
05-28-1904	1209E	Irrigation	7.21	0.10	29.54	POD/MOC change from Enl. Dixon Mercantile & Lumber Co. Ditch.

First Mesa Canal, Little Snake River

Priority Date (M–D–Y)	Permit Number	Permitted Use	Acres	Flow (cfs)	Cumulative Flow (cfs)	Comments
10-23-1905	1450E	Irrigation	10.00	0.14		POD/MOC change from Perkins Irr. Ditch.
02-08-1909	2012E	Irrigation	175.00	2.40	32.08	
05-02-1911	2454E	Irrigation	53.00	0.75	1 4/84	POD/MOC change from portion of Enl. Bennett & Aylesworth Ditch.
12-08-1926	4608E	Irrigation	70.00	1.00	33.83	
12-13-1934	4999E	Irrigation	37.00	0.53	1 3/1 3/2	POD/MOC change from portion of Enl. Bennett & Aylesworth Ditch.
11-17-1948	5475E	Irrigation	138.00	1.97	36.33	
11-09-1955	5855E	Irrigation	76.10	1.09	37.42	Permitted Name: Russell Enl. of First Mesa Canal. 25.40 acres Supplementary Supply.
03-23-1977	6612E	Irrigation	36.00	0.51	37.93	
04-15-1977	6634E	Irrigation	252.60	3.61	41.54	
08-21-1992	7055E	Irrigation	3.00	0.04	41.58	
01-07-1993	7052E	Irrigation, Stock		0.05	41.63	Actual amount of appropriation for stock purposes is 0.056 cfs. 37.00 acres Supplementary Supply.
05-19-1993	7093E	Irrigation, Stock	6.00	0.14		Actual amount of appropriation for irrigation is 0.09 cfs, and for stock purposes is 0.056 cfs.

Storage Rights: None.

Estimated Canal Losses: Typical (10%).¹

Irrigation Practices: Approximately 200 acres are irrigated through 3 sprinkler system lines; remainder of lands are flood irrigated.¹

Crop Types / Consumptive Use: Water is used to irrigate almost entirely native grass hay. Occasionally, some acres are irrigated barley used to regenerate soil.¹

Return Flows: Little Snake River at Muddy Creek.²

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Green River Basin, Wyoming; Key Structures and Diversions Description and Operation Memorandum

First Mesa Canal, Little Snake River

Other Operational Information: The First Mesa Canal is typically utilized for stock and irrigation uses from the first week of May until the first week of October, with stock uses being utilized until mid-November.

Sources: 1) Mary Waldron, First Mesa Canal Company, Interview, May 6, 2000.

2) Stone & Webster Engineering Corporation and Western Water Consultants, Inc.,

Streamflow Depletion Study - Sandstone Reservoir, February, 1987.

First Mesa Canal, Little Snake River, Diversion Data

	M	lay	Ju	ine	Jı	ıly	Au	gust	Septe	ember
Wateryear	Average (cfs)	Monthly Total (AF)								
1980										
1981										
1982										
1983	9.51	584.75	77.63	4,619.31	54.21	3,333.24	34.87	2,144.07	36.17	2,152.26
1984			71.18	4,235.50	63.82	3,924.14	38.89	2,391.25		
1985	58.77	3,613.63	80.64	4,798.41	60.87	3,742.75	24.70	1,518.74	15.33	912.20
1986	62.19	3,823.91	106.00	6,307.44	54.42	3,346.16	9.32	573.06		
1987	83.43	5,129.91	68.89	4,099.24	35.39	2,176.05	15.26	938.30	11.05	657.52
1988	63.14	3,882.33	107.17	6,377.06	48.33	2,971.70	9.62	591.51		
1989	134.49	8,269.47	107.51	6,397.29	29.68	1,824.95	9.63	592.13		
1990	87.15	5,358.64	91.69	5,455.93	69.68	4,284.46	11.94	734.16		
1991	88.28	5,428.13	94.90	5,646.94	48.96	3,010.43	11.85	728.63		
1992	87.52	5,381.40	47.07	2,800.86						
1993	23.75	1,460.33	78.47	4,669.29	58.33	3,586.57	42.46	2,610.76	33.30	1,981.49
1994	72.68	4,468.92	64.48	3,836.83	21.33	1,311.53	12.17	748.30	6.55	389.75
1995	24.00	1,475.70	66.20	3,939.17	71.16	4,375.46	48.29	2,969.24	33.30	1,981.49
1996	66.58	4,093.84	84.87	5,050.12	68.87	4,234.65	36.58	2,249.22	44.10	2,624.13
1997	55.95	3,440.23	81.97	4,877.55	51.42	3,161.69	41.26	2,536.98	25.50	1,517.36
1998	53.19	3,270.53	97.37	5,793.92	61.39	3,774.72	34.46	2,118.86	55.20	3,284.63
Averages:	64.71	3,978.78	82.88	4,931.55	53.19	3,270.57	25.42	1,563.01	28.94	1,722.31

Blank cells are due to missing/insufficient data.

Average = Average Flow for ENTIRE month. Monthly Total = Total Volume used during month. See Methodology section for explanations.

Spot data readings used in calculating averages in table on following pages.

First Mesa Canal, Little Snake River, Diversion Data

Data:

- 1983: 5/16, 0 cfs; 5/23, 4 cfs; 6/1, 58.44 cfs; 6/6, 39.3 cfs; 6/10, 70.56 cfs; 6/13, 69 cfs; 6/17, 76.94 cfs; 6/21, 67.4 cfs; 6/23, 130.6 cfs; 6/27, 108.11 cfs; 7/1, gage=1.7; 7/5, 67.4 cfs; 7/11, 66.70 cfs; 7/14, 59.91 cfs; 7/18, 34.46 cfs; 7/22, 72.14 cfs; 7/25, 44.53 cfs; 7/29, 22.3 cfs; 8/1, 17.4 cfs; 8/5, 22.3 cfs; 8/8, 12.99 cfs; 8/15, 45.86 cfs; 8/19, 45.86 cfs; 8/21, 45.86 cfs; 8/29, 39.37 cfs; 9/5, 52.71 cfs; 9/12, 30.36 cfs; 9/16, 39.37 cfs; 9/19, 30.36 cfs; 9/26, 31.51 cfs; 9/30, 37.5 cfs.
- 1984: 6/3, 83.52 cfs; 6/9, 75.33 cfs; 6/18, 60 cfs; 6/23, 92 cfs; 6/27, 83.52 cfs; 7/13, 52.71 cfs; 7/19, 75.33 cfs; 7/22, 75.33 cfs; 7/25, 59.91 cfs; 7/28, 52.71 cfs; 8/1, 59.91 cfs; 8/5, 52.71 cfs; 8/8, 45.86 cfs; 8/13, 39.37 cfs; 8/20, 45.86 cfs; 8/27, 45.86 cfs.
- 1985: 5/1, 0 cfs; 5/24, 101.54 cfs; 5/27, 76.82 cfs; 7/1, 83.5 cfs; 7/15, 72.9 cfs; 7/20, 62.6 cfs; 7/27, 27.55 cfs; 8/16, 28 cfs; 8/26, 15 cfs; 9/5, 39 cfs; 9/16, 19.76 cfs.
- 1986: 5/13, 59.91 cfs; 5/27, 129 cfs; 6/2, 110 cfs; 6/10, 120 cfs; 6/18, 103 cfs; 6/24, 96 cfs; 6/30, 93 cfs; 7/7, 84 cfs; 7/17, 46 cfs; 8/1, 22 cfs; 8/18, 15 cfs.
- 1987: 5/4, 59.91 cfs; 5/11, 101 cfs; 5/18, 103 cfs; 6/1, 84 cfs; 6/8, 84 cfs; 6/15, 66 cfs; 6/22, 64.40 cfs; 6/29, 49 cfs; 7/9, 31 cfs; 7/13, 58.45 cfs; 7/18, 33.27 cfs; 7/23, 33.27 cfs; 7/27, 29.79 cfs; 7/30, 7.24 cfs; 7/31, 21.24 cfs; 8/3, 20.25 cfs; 8/7, 14.26 cfs; 8/19, 12.99 cfs; 8/28, 18.3 cfs; 9/3, 7.24 cfs; 10/9, 17.39 cfs.
- 1988: 5/16, 60 cfs; 5/23, 72.14 cfs; 5/30, 231 cfs; 6/6, 133 cfs; 6/13, 119 cfs; 6/27, 60 cfs; 7/4, 60 cfs; 7/10, 75 cfs; 7/18, 46 cfs; 7/21, 38.12 cfs; 7/25, 35.66 cfs; 7/31, 12.17 cfs; 8/9, 10.97 cfs; 8/22, 20.75 cfs.
- 1989: 5/1, 171.00 cfs; 5/9, 101.00 cfs; 5/15, 129.00 cfs; 5/23, 124.18 cfs; 5/30, 171.00 cfs; 6/5, 181.00 cfs; 6/12, 101.00 cfs; 6/19, 83.52 cfs; 6/26, 61.39 cfs; 6/29, 83.52 cfs; 7/2, 69.00 cfs; 7/4, 36.80 cfs; 7/6, 33.27 cfs; 7/7, 23.28 cfs; 7/8, 33.27 cfs; 7/12, 34.46 cfs; 7/17, 22.25 cfs; 7/18, 23.28 cfs; 7/24, 22.25 cfs; 8/14, 23.28 cfs.
- 1990: 5/1, 52.71 cfs; 5/7, 59.91 cfs; 5/14, 78.57 cfs; 5/21, 100.84 cfs; 5/29, 125.14 cfs; 6/4, 87.74 cfs; 6/11, 131.00 cfs; 6/18, 72.14 cfs; 6/25, 67.45 cfs; 7/1, 97.28 cfs; 7/9, 139.02 cfs; 7/16, 45.86 cfs; 7/23, 49.93 cfs; 7/30, 27.55 cfs; 8/6, 17.39 cfs; 8/13, 11.37 cfs; 8/19, 9.83 cfs; 8/27, 19.28 cfs.
- 1991: 5/6, 22.25 cfs; 5/13, 54.12 cfs; 5/20, 139 cfs; 5/28, 159.8 cfs; 6/3, 129.09 cfs; 6/10, 119.36 cfs; 6/19, 100.84 cfs; 6/24, 48.56 cfs; 7/1, 49.93 cfs; 7/8, 56.99 cfs; 7/15, 56.99 cfs; 7/24, 43.22 cfs; 7/29, 33.27 cfs; 8/6, 38.12 cfs; 8/12, 23.28 cfs.
- 1992: 5/4, 34 cfs; 5/11, 135 cfs; 5/17, 112 cfs; 5/24, 103 cfs; 6/1, 54 cfs; 6/7, 85 cfs; 6/15, 67 cfs; 6/19, 67 cfs; 6/21, 52 cfs.
- 1993: 4/8, 0 cfs; 4/21, 0 cfs; 5/13, 7.3 cfs; 5/21, 24 cfs; 5/22, 24 cfs; 6/3, 92 cfs; 6/10, 77 cfs; 6/20, 74 cfs; 6/23, 72 cfs; 6/30, 81 cfs; 7/7, 71 cfs; 7/15, 39 cfs; 7/19, 67 cfs; 7/29, 45 cfs; 8/5, 60 cfs; 8/12, 42 cfs; 8/19, 31 cfs; 8/26, 38 cfs; 8/30, 41 cfs; 9/8, 39 cfs.
- 1994: 10/20/93, 11 cfs; 4/21, 12 cfs; 4/28, 3.0 cfs; 5/18, 92 cfs; 5/24, 96 cfs; 6/3, 96 cfs; 6/7, 75 cfs; 6/14, 75 cfs; 6/29, 33 cfs; 7/3, 32 cfs; 7/8, 32 cfs; 7/12, 32 cfs; 7/20, 11 cfs; 8/4, 12 cfs; 8/10, 13 cfs; 8/16, 11 cfs; 8/17, 11 cfs; 8/23, 13 cfs; 9/7, 11 cfs; 9/15, 21 cfs.
- 1995-1998: data logger recorder installed -- see attached tables for data.
- Supply: 1983, above average; 1984, above average (some flooding); 1985, below average; 1986,
- average; 1989, below average; 1993, slightly above average; 1994, slightly above average; 1995, above average; 1996, above average; 1997, above average; 1998, above average.
- Source: State Engineer's Office, Annual Hydrographers' Reports.

First Mesa Canal, Little Snake River, Diversion Data

			1995		
	May	June	July	Aug.	Sept.
1		26	92	63	26
2		26	89	58	23
3		25	84	55	22
4		24	73	52	20
5		25	65	50	18
6		25	63	46	17
7		32	63	41	17
8		38	75	51	16
9		38	72	62	33
10		36	82	62	39
11		34	92	62	56
12		43	90	62	55
13		55	90	61	54
14		58	94	60	53
15		61	81	61	53
16		85	75	62	52
17		89	71	62	50
18		86	67	56	35
19		80	66	49	30
20		84	71	41	30
21	0	101	64	40	30
22	22	106	60	39	30
23	22	108	52	38	29
24	22	105	45	36	27
25	33	102	38	35	25
26	33	100	47	35	26
27	33	100	66	34	46
28	33	100	75	33	36
29	22	98	71	32	25
30	22	96	67	31	26
31	22		66	28	
CFS days	264.00	1,986.00	2,206.00	1,497.00	999.00
Average (cfs)	24.00	66.20	71.16	48.29	33.30
•			1996		

First Mesa Canal, Little Snake River, Diversion Data

	May	June	July	Aug.	Sept.
1	13	75	56	60	27
2	13	74	88	58	26
3	13	74	84	58	25
4	14	77	81	59	24
5	13	87	79	60	23
6	14	89	79	58	28
7	43	89	69	56	36
8	71	103	59	53	40
9	72	102	51	51	36
10	70	104	50	46	31
11	67	102	66	43	30
12	66	99	82	41	29
13	58	97	80	38	41
14	70	96	79	34	53
15	81	92	79	33	51
16	85	89	79	32	49
17	89	88	79	29	48
18	89	86	76	27	53
19	85	85	68	25	56
20	80	86	67	24	56
21	78	89	66	22	56
22	79	93	64	18	56
23	95	85	63	14	56
24	95	78	62	12	56
25	94	77	61	16	56
26	94	75	61	20	56
27	89	75	61	24	57
28	86	68	61	27	56
29	85	61	60	34	56
30	84	51	62	32	56
31	79		63	30	
CFS days	2,064.00	2,546.00	2,135.00	1,134.00	1,323.00
Average (cfs)	66.58	84.87	68.87	36.58	44.10
•			1997		
	May	June	July	Aug.	Sept.
			_		

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Description and Operation Memorandum

First Mesa Canal, Little Snake River, Diversion Data

				,	
1	6.1	91	64	55	26
2	5.7	92	56	52	27
3	4.9	89	49	48	25
4	4.6	84	44	44	23
5	11	82	40	51	28
6	56	83	45	64	22
7	20	88	58	58	22
8	18	96	51	50	21
9	17	96	46	45	20
10	15	94	41	46	19
11	27	92	35	54	18
12	38	87	33	55	22
13	35	84	36	53	26
14	39	85	31	49	22
15	47	71	24	47	21
16	52	84	41	41	22
17	67	83	69	38	26
18	65	82	64	37	24
19	69	83	64	37	51
20	84	80	67	36	43
21	97	80	64	33	31
22	102	79	60	32	30
23	100	78	58	29	28
24	100	75	60	25	26
25	102	74	61	25	24
26	97	72	58	27	23
27	90	70	54	29	26
28	88	67	53	32	24
29	90	70	55	33	23
30	96	68	58	28	22
31	91		55	26	
CFS days	1,734.30	2,459.00	1,594.00	1,279.00	765.00
Average (cfs)	55.95	81.97	51.42	41.26	25.50
			1998		
	May	June	July	Aug.	Sept.
1	15	116	96	7.7	56

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First Mesa Canal, Little Snake River, Diversion Data

2	16	115	98	6.4	56
3	17	115	95	6.1	56
4	17	114	90	12	54
5	16	116	86	51	53
6	16	108	79	48	49
7	16	103	72	43	47
8	16	100	64	39	49
9	15	103	58	37	51
10	19	102	51	38	49
11	37	93	56	35	49
12	38	89	48	33	54
13	37	89	39	31	64
14	37	104	32	29	66
15	37	104	33	28	60
16	36	97	67	25	55
17	37	101	63	24	51
18	57	95	60	23	49
19	58	91	59	22	46
20	59	85	54	20	38
21	78	83	50	18	35
22	89	82	47	18	58
23	84	81	46	19	61
24	84	80	60	18	67
25	88	79	64	65	69
26	91	95	76	63	67
27	96	99	78	65	64
28	97	96	61	65	61
29	112	94	62	62	61
30	117	92	50	60	61
31	117		9.1	57	
CFS days	1,649.00	2,921.00	1,903.10	1,068.20	1,656.00
Average (cfs)	53.19	97.37	61.39	34.46	55.20

Gibson and Blair Ditch, Little Snake River

Diversion Description: Diversion consists of three 36"-wide gates mounted on a concrete structure. A boulder diversion dam exists.¹

Diversion Location:

Source: Little Snake River, Trib. Yampa River, Trib. Green River

Section, Township, Range: 7, 12, 091

Conveyance Description: Open Channel Canal.

Wyoming Water Rights Summary:

Priority Date (M–D–Y)	Permit Number	Permitted Use	Acres	Flow (cfs)	Cumulative Flow (cfs)	Comments
03-13-1897	1538	Irrigation	664.00	9.47	9/1/	334.20 Acres (4.77 cfs) of Total in Colorado
09-21-1898	368E	Irrigation, Stock	1,371.30	19.57	1 70 11/1	796.30 Acres (11.37 cfs) of Total in Colorado
01-31-1900	2450	Irrigation	80.00	1.14	1 311 IX	POD/MOC change from a portion of Woodbury Ditch
02-13-1907	1662E	Irrigation	13.00	0.18	30.36	

Storage Rights: None.

Estimated Canal Losses: Information not available at time of report.

Irrigation Practices: Information not available at time of report.

Crop Types / Consumptive Use: Information not available at time of report.

Return Flows: Return flows are delivered to the Little Snake River at Baggs.2

Other Operational Information: Information not available at time of report.

Sources: 1) Western Water Consultants, Inc., <u>Little Snake River Basin Planning Study</u>, <u>Level I</u>

Feasibility Study, Draft Phase I Report, Tasks B&C (Diversions and Canals), August,

1991

2) Stone & Webster Engineering Corporation and Western Water Consultants, Inc.,

<u>Streamflow Depletion Study – Sandstone Reservoir</u>, February, 1987.

Gibson and Blair Ditch, Little Snake River, Diversion Data

	M	lay	Ju	ne	Jı	ıly	Aug	gust	Septe	
Wateryear	Average (cfs)	Monthly Total (AF)								
1980										
1981										
1982										
1983					44.19	2,717.14	15.05	925.39	6.75	401.65
1984					46.44	2,855.48	15.76	969.04		
1985	0.63	38.74	14.08	837.82	43.12	2,651.35				
1986										
1987	47.02	2,890.99								
1988										
1989	71.78	4,413.76								
1990										
1991										
1992										
1993										
1994										
1995										
1996										
1997										
1998										
		1								
Averages:	39.81	2,447.83	14.08	837.82	44.58	2,741.32	15.41	947.22	6.75	401.65

Blank cells are due to missing/insufficient data.

Average = Average Flow for ENTIRE month. Monthly Total = Total Volume used during month. See Methodology section for explanations.

Spot data readings used in calculating averages in table on following pages.

Gibson and Blair Ditch, Little Snake River, Diversion Data

Data:

1983: 5/16, 0 cfs; 6/6, covered up (full); 6/23, 50.38 cfs; 7/1, 64.42 cfs; 7/11, 61 cfs; 7/14, 50.83 cfs; 7/18, 42.18 cfs; 7/22, 33.34 cfs; 7/25, 28.86 cfs; 7/29, 20 cfs; 8/1, 11.36 cfs; 8/5, 26.71 cfs; 8/8, 20 cfs; 8/15, 14.04 cfs; 8/19, 18.75 cfs; 8/22, 12.67 cfs; 8/29, 6.66 cfs; 9/5, 7.97 cfs; 9/12, 7.97 cfs; 9/16, 7.3 cfs; 9/19, 6.24 cfs; 9/26, 6.24 cfs; 9/30, 4.67 cfs

1984: 6/3, 60.08 cfs; 6/9, 69.92 cfs; 6/18, 6/23, 6/27, 6/30, submerged; 7/13, 55.89 cfs; 7/16, 46.42 cfs; 7/19, 42.17 cfs; 7/22, 42.17 cfs; 7/25, 26.71 cfs; 7/28, 23.27 cfs; 8/1, 23.27 cfs; 8/5, 23.27 cfs; 8/8, 20 cfs; 8/13, 16.92 cfs; 8/13, 14.04 cfs; 8/20, 20 cfs; 8/27, 14.04 cfs.

1985: 5/1, 0 cfs; 5/24, 0 cfs; 7/1, 23.26 cfs; 7/15, 75 cfs; 7/27, 33.14 cfs.

1986: 5/21, 85.61 cfs; 6/9, 85.61 cfs; 6/18, 60.08 cfs.

1987: 5/11, 60.1 cfs; 5/18, 95 cfs; 6/1, 35.67 cfs.

1988: 5/23, 93.1 cfs; 5/30, 114 cfs; 6/6, 117 cfs; 6/13, 108 cfs.

1989: 5/9, 148.38 cfs; 5/15, 110.53 cfs; 5/23, 96.74 cfs; 5/30, 80.25 cfs.

1993: 5/13, 5/22, off; 6/3, 6/10, on; 8/5, 8/12, off; 8/26, 2.8 cfs; 8/30, 2.1 cfs.

1994: 5/24, 6/3, 6/7, on; 7/20, 5-4; 8/4, 8/10, 8/16, 8/17, <0.50 cfs; 8/23, 9/7, <1.0 cfs.

1995: 4/13, off; 6/27, ? (flume completely under water); 7/27, 51 cfs; 8/10, 15 cfs; 9/1, 9.4 cfs; 9/7, 3.6 cfs. Comment: There is a large lateral before the flume.

1996: 4/18, 4/26, off; 5/22, 6/5, 6/17, ? (flume completely underwater); 7/29, 20 cfs (est) (flume 100% submerged); 8/21, 1.3 cfs.

1998: 5/13, on; 6/3, ? (flume completely underwater); 6/24, 7/13, 8/4, 9/9, 9/10, on.

Supply: 1983, above average; 1984, above average (some flooding); 1985, below average; 1986, average; 1989, below average; 1993, slightly above average; 1994, slightly above average; 1995, above average; 1996, above average; 1997, above average; 1998, above average.

Source: State Engineer's Office, Annual Hydrographers' Reports.

Mesa Irrigating Canal, Savery Creek

Diversion Description: Information not available at time of report.

Diversion Location:

Source: Savery Creek, Trib. Little Snake River, Trib. Yampa River, Trib. Green River

Section, Township, Range: 2, 13, 089

Conveyance Description: Open Channel Canal.

Wyoming Water Rights Summary:

Priority Date (M–D–Y)	Number	Use	Acres		Cumulative Flow (cfs)	Comments
Spring 1886	Terr.	Domestic, Irrigation	1,400.00	20.00	20.00	
			280.00	4.00	24.00	

Storage Rights: None.

Estimated Canal Losses: Information not available at time of report.

Irrigation Practices: Information not available at time of report.

Crop Types / Consumptive Use: Information not available at time of report.

Return Flows: Return flows are delivered to Little Snake River above Dutch Joe Creek.

Other Operational Information: Information not available at time of report.

Mesa Irrigating Canal, Savery Creek, Diversion Data No Diversion Data Available.

West Side Canal, Little Snake River

Diversion Description: Diversion consists of two 4' by 5' steel sliding gates mounted on a concrete wall. A sheet-pile and plank diversion dam across the river channel exists.¹

Diversion Location:

Source: Little Snake River, Trib.

Yampa River, Trib. Green River

Section, Township, Range: 9, 12, 90



Conveyance Description: Open Channel Canal, approximately 15 miles in length. Small portions of the canal, totally approximately 1 mile, are concrete lined.

Wyoming Water Rights Summary:

Priority Date (M–D–Y)	Permit Number	Permitted Use	Acres	Flow (cfs)	Cumulative Flow (cfs)	Comments
09-15-1880	Lerr	Domestic, Irrigation	425.00	6.07		POD/MOC change from Mathews, Baker, & Easom Ditch (Savery Creek)
Spring 1884	Terr.	Domestic, Irrigation, Stock	55.00	0.85	6.92	POD/MOC change from McCarey, Gooley, & Wilson Ditch (Savery Creek)
Fall 1884	Lerr	Irrigation, Stock	280.00	4.10	1 1 1 1 1 /	POD/MOC change from Carruthers Ditch.
03-18-1885	I err	Irrigation, Stock	140.00	2.10	1 1 1 1 /	POD/MOC change from Highline Ditch.
Season 1886	Terr.	Irrigation	30.00	0.43		POD/MOC change from Mathews, Baker, & Easom Ditch (Savery Creek)
06-01-1888	Terr.	Irrigation	70.00	1.00	14.77	POD/MOC change from Kelley Ditch (Savery Creek)

West Side Canal, Little Snake River

Priority Date (M–D–Y)	Permit Number	Permitted Use	Acres	Flow (cfs)	Cumulative Flow (cfs)	Comments
09-00-1888	Terr.	Domestic, Irrigation, Stock	480.00	6.85	21.40	Permitted Name: Highland Ditch; later re-named.
10-11-1894	90E	Irrigation	144.00	2.06	23.46	POD/MOC change from Carruthers Ditch.
12-09-1895	1111	Domestic, Irrigation	1481.00	21.08	44.54	278 acres actually in Colorado.
02-09-1901	620E	Irrigation	20.00	0.28	44.82	POD/MOC change from Franklin Irrigating Ditch (to Hunt Extension, a lateral of West Side Canal)
10-02-1908	1954E	Irrigation	102.00	1.45	46.27	
11-10-1910		Irrigation	113.00	1.61	47.88	POD/MOC change from Kilgore Ditch (Savery Creek)
06-30-1911	2822E	Irrigation	70.00	1.00	48.88	POD/MOC change from Baker & Easam Ditch (Savery Creek)
07-26-1921	4242E	Irrigation	103.00	1.47	50.35	POD/MOC change from a portion of Matthews & Baker-Easam Ditch (Savery Creek).
09-10-1928	4606E	Domestic, Irrigation, Stock	155.00	2.20	52.55	20 acres Supplementary Supply
11-07-1928		Domestic, Irrigation, Stock	1375.19	19.61	72.16	1345.19 acres actually in Colorado.
03-30-1936	5038E	Irrigation	35.00	0.50		POD/MOC change from McCarey, Gooley, and Wilson Ditch (Savery Creek)

West Side Canal, Little Snake River

Priority Date (M–D–Y)	Permit Number	Permitted Use	Acres	Flow (cfs)	Cumulative Flow (cfs)	Comments
4-20-1954	5723E	Irrigation, Stock	45.00	0.64	73.30	
11-28-1958	5965E	Irrigation	150.11	2.15	75.45	Lands in Colorado
04-24-1962	I DUADE	Irrigation, Stock	16.00	0.23	75.68	
10-23-1966	6331E	Irrigation, Stock	18.10	0.26	75.94	
06-23-1975	6577E	Irrigation	88.03	1.26	77.20	Lands in Colorado.
12-22-1975	6578E	Irrigation	20.00	0.29	77.49	
08-05-1977	6630E	Irrigation	70.00	1.00	78.49	
04-14-1995	7166E	Irrigation, Stock		0.05	78.54	Actual amount of appropriation for stock purposes is 0.056 cfs. 58.20 acres Supplementary Supply.

Storage Rights: None.

Estimated Canal Losses: Significant seepage exists through canal walls. Surface springs that are normally dry flow when canal is flowing.¹

Irrigation Practices: Approximately 100 acres are irrigated through 2 sprinkler system lines; remainder of lands are flood irrigated.¹

Crop Types / Consumptive Use: Water is used to irrigate native grass hay, and approximately 100 acres of alfalfa. Occasionally, some acres are irrigated barley used to regenerate soil.¹

Return Flows: Little Snake River between Willow Creek and Muddy Creek.²

Other Operational Information: The West Side Canal is typically utilized for stock and irrigation uses from the first week of May until mid-October, with stock uses being utilized until the end of November.

Sources: 1) Frank Charles, West Side Canal Company, Interview, May 6, 2000.

2) Stone & Webster Engineering Corporation and Western Water Consultants, Inc., Streamflow Depletion Study – Sandstone Reservoir, February, 1987.

West Side Canal, Little Snake River, Diversion Data

	N	Лау	June		July		August		September	
Wateryear	Average (cfs)	Monthly Total (AF)	Average (cfs)	Monthly Total (AF)	Average (cfs)	Monthly Total (AF)	Average (cfs)	Monthly Total (AF)	Average (cfs)	Monthly Total (AF)
1980										
1981										
1982										
1983*	41.13	2,528.99	134.09	7,978.91	107.86	6,632.05	42.26	2,598.47	28.32	1,685.16
1984			Subm	erged-Unal	ble to Ca	lculate	44.59	2,741.73		
1985	46.53	2,861.02	220.51	13,121.26	132.58	8,152.03	31.29	1,923.95	18.04	1,073.45
1986	72.24	4,441.86	211.17	12,565.49	136.48	8,391.83	23.31	1,433.28		
1987	186.52	11,468.67	158.87	9,453.42	36.82	2,263.97	23.73	1,459.10	24.88	1,480.46
1988	98.01	6,026.40	204.27	12,154.91	51.60	3,172.76	11.90	731.70		
1989	156.39	9,616.05	162.36	9,661.09	47.76	2,936.65	20.30	1,248.20		
1990	169.07	10,395.71	166.36	9,899.11	86.44	3,771.93				
1991	101.27	6,226.85	156.28	9,299.31	67.62	4,157.79				
1992	117.38	7,217.41	81.87	4,871.60						
1993	23.75	1,460.33	78.47	4,669.29	58.33	3,586.57	42.46	2,610.76	9.28	552.20
1994	125.71	7,729.61	123.96	7,376.13	26.87	1,652.17	11.69	718.79	5.33	317.16
1995	19.45	424.46	129.10	7,681.98	120.06	7,382.48	68.58	4,216.86	39.63	2,358.35
1996	83.62	5,141.36	153.97	9,161.65	78.26	4,811.90	31.23	1,920.00	24.10	1,434.05
1997	89.99	4,819.24	137.50	8,181.82	102.84	6,323.31	54.00	3,320.33	38.93	2,316.69
1998	88.83	5,462.02	140.70	8,372.23	100.39	6,172.56	39.00	2,398.02	37.07	2,205.62
Avorages	04.66	5 721 22	150.62	2 062 21	82.42	4 057 71	2/ 19	2 101 62	25.06	1 401 46
Averages:	94.66	5,721.33	150.63	8,963.21	82.42	4,957.71	34.18	2,101.63	25.06	1,491.4

^{*} Kilgore Ditch and Carruthers Ditch included in total

Blank cells are due to missing/insufficient data.

Average = Average Flow for ENTIRE month. Monthly Total = Total Volume used during month.

See Methodology section for explanations.

Spot data readings used in calculating averages in table on following pages.

West Side Canal, Little Snake River, Diversion Data

Data:

- 1983: 5/16, 0 cfs; 6/1, 169.99 cfs; 6/6, 131.6 cfs; 6/10, 108.1 cfs; 6/13, 117.45 cfs; 6/17, 117.45 cfs; 6/21, 139.02 cfs; 6/23, 143.0 cfs; 6/27, 129.05 cfs; 7/1, 134.7 cfs; 7/11, 100.87 cfs; 7/14, 119.3 cfs; 7/18, 139.02 cfs; 7/22, 83.52 cfs; 7/25, 75.33 cfs; 7/29, 41.9 cfs; 8/1, 39.4 cfs; 8/5, 59.91 cfs; 8/8, 59.91 cfs; 8/15, 59.18 cfs; 8/19, 27.55 cfs; 8/22, 22.25 cfs; 9/12, 42.87 cfs; 9/26, 12.99 cfs; 9/30, 12.99 cfs.
- 1984: 6/3, 192.92 cfs; 6/9, 181.61 cfs; 6/18, 160 cfs; 6/23, submerged; 6/27, 228.34 cfs; 6/30, submerged; 7/13, 100.84 cfs; 7/16, 92.03 cfs; 7/19, submerged; 7/22, submerged; 7/25, submerged; 7/28, 92.03 cfs; 8/1, 109.95 cfs; 8/5, 71.35 cfs; 8/8, 56.27 cfs; 8/13, 49.24 cfs; 8/20, 39.37 cfs; 8/21, 33.27 cfs; 8/27, 39.37 cfs.
- 1985: 5/1, 0 cfs; 5/24, 39.37 cfs; 5/30, 170 cfs; 6/11, 300 cfs (est); 6/18, 182 cfs; 7/1, 198 cfs; 7/8, 162 cfs; 7/15, 164 cfs; 7/17, 139 cfs; 7/30, 67 cfs; 8/16, 52 cfs; 8/26, 40 cfs; 9/5, 46 cfs; 9/16, 35.66 cfs.
- 1986: 5/21, 216 cfs; 5/24, 145 cfs; 5/27, 228 cfs; 5/30, 228 cfs; 6/4, 228 cfs; 6/12, 228 cfs; 6/18, 204 cfs; 6/24, 216 cfs; 6/30, 155 cfs; 7/7, 199 cfs; 7/17, 75 cfs; 8/1, 53 cfs; 8/18, 32.
- 1987: 5/4, 45.86 cfs; 5/5, 228 cfs; 5/18, 228 cfs; 6/1, 155 cfs; 6/8, 205 cfs; 6/15, 171 cfs; 6/18, 186 cfs; 6/19, 181.6 cfs; 6/22, 158 cfs; 6/29, 75 cfs; 7/6, 61 cfs; 7/9, 22 cfs; 7/13, 39 cfs; 7/18, 33.27 cfs; 7/23, 22 cfs; 7/27, 13.83 cfs; 7/30, 45.86 cfs; 8/3, 32 cfs; 8/7, 15cfs; 8/12, 11 cfs; 8/19, 17.39 cfs; 8/28, 40.64 cfs; 9/3, 27.55 cfs; 10/9, 19.8 cfs.
- 1988: 5/16, 170 cfs; 5/23, 228 cfs; 5/30, 150 cfs; 6/6, 228 cfs; 6/13, 216 cfs; 6/27, 193 cfs; 7/4, 139 cfs; 7/10, 50 cfs; 7/11, 57 cfs; 7/18, 26 cfs; 7/21, 14.69 cfs; 7/25, 14.69 cfs; 7/31, 18.33 cfs; 8/9, 12.99 cfs; 8/22, 24.85 cfs.
- 1989: 5/9, 216.29 cfs; 5/15, 228 cfs; 5/23, 204 cfs; 5/30, 193 cfs; 6/5, 228 cfs; 6/12, 204 cfs; 6/19, 123 cfs; 6/26, 143 cfs; 6/29, 60 cfs; 7/2, 50.04 cfs; 7/5, 55.20 cfs; 7/6, 48.56 cfs; 7/7, 18.33 cfs; 7/8, 38.12 cfs; 7/12, 39.37 cfs; 7/17, 28.00 cfs; 7/18, 53 cfs; 7/24, 60 cfs; 8/14, 43.22 cfs.
- 1990: 5/1, 92.03 cfs; 5/7, 86.89 cfs; 5/14, 204.38 cfs; 5/21, 192.90 cfs; 5/29, 216.29 cfs; 6/4, 228 cfs; 6/11, 192.9 cfs; 6/18, 170.57 cfs; 6/25, 139.07 cfs; 6/30, 30.95 cfs; 7/1, 92.03 cfs; 7/9, 139.02 cfs; 7/16, 45.86 cfs; 7/23, 48.56 cfs.
- 1991: 5/6, 33.27 cfs; 5/13, 39.27 cfs; 5/28, 159.78 cfs; 6/3, 161.92 cfs; 6/10, 204 cfs; 6/17, 149.26 cfs; 6/24, 106.27 cfs; 7/1, 166.24 cfs; 7/8, 61.39 cfs; 7/15, 75.33 cfs; 7/24, 52.71 cfs; 7/29, 45.3 cfs.
- 1992: 5/4, 60 cfs; 5/11, 123 cfs; 5/17, 160 cfs; 5/24, 149 cfs; 6/1, 97 cfs; 6/7, 125 cfs; 6/15, 121 cfs; 6/19, 145 cfs; 6/21, 129 cfs.
- 1993: 4/8,0 cfs; 4/21, 0 cfs; 5/13, 7.3 cfs; 5/21, 24 cfs; 5/22, 24 cfs; 6/3, 92 cfs; 6/10, 77 cfs; 6/20, 74 cfs; 6/23, 72 cfs; 6/30, 81 cfs; 7/7, 71 cfs; 7/15, 39 cfs; 7/19, 67 cfs; 7/29, 45 cfs; 8/5, 60 cfs; 8/12, 42 cfs; 8/19, 31 cfs; 8/26, 38 cfs; 8/30, 41 cfs; 9/8, 39 cfs.
- 1994: 10/20, 14 cfs; 4/21, off; 4/28, 37 cfs; 5/18, 162 cfs; 5/24, 143 cfs; 6/3, 139 cfs; 6/7, 108 cfs; 6/14, 110 cfs; 6/29, 149 cfs; 7/3, 34 cfs; 7/8, 34 cfs; 7/12, 34 cfs; 7/20, 19 cfs; 8/4, 11 cfs; 8/10, 15 cfs (est); 8/16, 12 cfs (est); 8/17, 12 cfs (est); 8/23, 10 cfs; 9/7, 10 cfs; 9/15, 15 cfs.
- 1995-1998: data logger recorder installed -- see attached tables for data.
- Supply: 1983, above average; 1984, above average (some flooding); 1985, below average; 1986, average; 1989, below average; 1993, slightly above average; 1994, slightly above average; 1995, above average; 1996, above average; 1997, above average; 1998, above average.

Source: State Engineer's Office, Annual Hydrographers' Reports.

West Side Canal, Little Snake River, Diversion Data

	1995					
	May	June	July	Aug.	Sept.	Oct.
1		17	182	92	39	33
2		17	171	92	33	26
3		46	171	84	39	13
4		46	149	75	39	8
5		46	119	75	53	7.7
6		64	119	75	53	0
7		67	119	75	53	
8		67	110	75	60	
9		67	110	75	60	
10		67	110	84	53	
11		67	110	84	46	
12		110	119	84	46	
13		139	119	84	33	
14		139	139	84	33	
15		171	139	67	28	
16		101	139	67	28	
17		149	119	46	28	
18		182	119	46	22	
19		193	119	46	53	
20		193	129	46	60	
21	0	193	119	53	33	
22	39	199	110	53	33	
23	39	193	92	53	33	
24	17	182	92	64	33	
25	17	193	92	92	33	
26	17	193	101	84	33	
27	17	193	101	56	33	
28	17	193	101	56	33	
29	17	193	101	53	33	
30	17	193	101	53	33	
31	17		101	53		
CFS days	214.00	3,873.00	3,722.00	2,126.00	1,189.00	87.70
Average (cfs)	19.45	129.10	120.06	68.58	39.63	14.62
			199	6		

West Side Canal, Little Snake River, Diversion Data

	May	June	July	Aug.	Sept.	Oct.
1	4.9	157	105	61	17	32
2	9.1	154	102	45	17	32
3	2.1	156	101	42	16	33
4	0	134	101	66	16	34
5	0	143	101	86	16	35
6	4	157	99	62	17	32
7	5.1	160	95	44	16	33
8	3.2	165	93	38	15	32
9	8.7	175	90	32	16	31
10	15	174	89	28	19	33
11	21	174	89	26	17	32
12	24	166	87	26	17	32
13	39	157	83	27	18	32
14	69	156	79	25	23	32
15	96	150	77	25	21	32
16	108	149	73	25	19	33
17	113	148	80	25	18	34
18	115	146	96	25	21	34
19	120	149	90	27	31	32
20	119	158	80	28	35	36
21	117	166	68	30	37	28
22	130	175	58	23	39	15
23	172	167	46	19	38	0
24	172	162	45	18	33	
25	163	158	44	18	30	
26	172	156	48	12	32	
27	166	152	52	16	33	
28	156	141	42	17	32	
29	154	107	47	18	32	
30	157	107	79	17	32	
31	157		87	17		
CFS days	2,592.10	4,619.00	2,426.00	968.00	723.00	699.00
Average (cfs)	83.62	153.97	78.26	31.23	24.10	30.39
			199	7		
	May	June	July	Aug.	Sept.	Oct.

West Side Canal, Little Snake River, Diversion Data

		Cot Diac	Carrar, 1		unc iti i	1, 11, 0
1		132	135	66	43	27
2		137	143	67	42	9.1
3		120	154	67	45	9.1
4		119	152	60	45	9.1
5	0	121	139	53	45	9.1
6	9.5	133	131	53	45	9.1
7	5.4	145	130	53	45	9.1
8	20	164	124	53	45	17
9	6.1	163	121	53	45	17
10	5.7	159	116	53	43	16
11	17	147	112	59	43	16
12	49	145	112	61	44	17
13	53	145	112	61	45	16
14	53	142	111	61	43	14
15	56	142	96	60	41	13
16	75	140	84	58	40	13
17	84	138	84	58	40	12
18	101	140	83	58	41	12
19	119	146	83	51	47	12
20	139	140	83	55	43	12
21	139	137	82	49	32	11
22	160	136	81	49	32	11
23	171	130	81	49	31	11
24	177	126	82	47	30	12
25	173	120	82	45	29	8
26	154	119	80	45	29	0
27	148	122	79	48	30	
28	141	135	78	47	29	
29	141	144	79	46	28	
30	127	138	80	45	28	
31	106		79	44		
CFS days	2,429.70	4,125.00	3,188.00	1,674.00	1,168.00	321.60
Average (cfs)	89.99	137.50	102.84	54.00	38.93	12.37
			199	8		
	May	June	July	Aug.	Sept.	Oct.
1	0.77	182	150	37	28	38

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Green River Basin, Wyoming; Key Structures and Diversions Description and Operation Memorandum

West Side Canal, Little Snake River, Diversion Data

		CBL DIGC	Cullul, 1	Dittie Dir	unc itive	1, Dive
2	28	182	169	37	28	46
3	28	193	165	37	28	46
4	28	182	160	36	28	43
5	28	182	145	36	22	41
6	33	182	106	30	22	39
7	33	145	104	29	22	38
8	33	145	107	29	33	37
9	33	145	105	29	33	36
10	33	149	104	30	33	36
11	33	139	105	30	30	35
12	33	149	104	30	33	26
13	46	149	101	29	46	25
14	46	139	90	30	49	23
15	46	139	89	67	49	22
16	46	139	88	55	49	21
17	46	119	87	55	49	20
18	60	101	86	54	48	19
19	84	101	87	33	47	18
20	101	92	86	28	41	16
21	149	92	85	40	42	13
22	160	92	84	47	40	11
23	171	101	86	71	39	9.5
24	171	110	87	67	39	8.4
25	171	118	88	39	39	7.3
26	182	137	96	39	39	0
27	187	133	81	33	39	
28	187	150	80	33	39	
29	193	166	82	33	39	
30	182	168	67	33	39	
31	182		38	33		
CFS days	2,753.77	4,221.00	3,112.00	1,209.00	1,112.00	674.20
Average (cfs)	88.83	140.70	100.39	39.00	37.07	25.93
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