

NORTH FORK POPO AGIE

**Big Cottonwood
Mountain Range
North Fork Ditch
Reynolds
Sioux**

DESCRIPTION AND OPERATION MEMORANDUM

BIG COTTONWOOD DITCH

USGS ID 42108 H7, 42108 G6, 42108 G7 USGS NAME RAY LAKE, LANDER, MOUNTAIN ARTER SE

DIVERSION DESCRIPTION

Two 4' screw type sliding steel gates in concrete headwall.

DIVERSION LOCATION

Source: North Fork Popo Agie River
N 25° 10' W, 3208' from the SE corner of the SE 1/4 SW 1/4 Section 29, Township 34N, Range 100W.

CONVEYANCE DESCRIPTION

Open earthen canal 7 miles long (including Chapman lateral, a.k.a. Harris and Meyers ditch) with two major laterals adding another 3 miles of ditch, serving approximately 2050 acres. Ditch capacity ~ 45 c.f.s.

WYOMING WATER RIGHTS

Priority Date	Permit Number	Permit Use	Acres	Flow(cfs)	(af)	Cumulative Flow(cfs)	Comments
4/15/1885	Terr.	Irr.,Dom.,Stk.	1720.99	27.76		27.76	
12/28/1901	764E	Irr.	75.00	1.07		28.83	
1/30/1958	5950E	Irr.,Dom.,Stk.	163.10	2.33		31.16	
5/09/1960	5991E	Irr.,Stk.	33.90	0.48		31.64	
1/07/1963	6075E	Irr.,Stk.	5.58	0.80		32.44	

STORAGE RIGHTS

Shoshone Lake Reservoir

ESTIMATED CANAL LOSSES

Varies with time of year; estimated 30-35% at peak.

IRRIGATION PRACTICES

Conventional flood irrigation practices, considerable use of pipe for better distribution, some sprinklers.

CROP TYPES / CONSUMPTIVE USE

Alfalfa hay, native hay, pasture, occasional small grains, lawns and gardens.

RETURN FLOWS

Some to North Fork Popo Agie, some to Baldwin Creek, some to Squaw Creek.

OTHER OPERATIONAL INFORMATION

Managed by a formal ditch company; uses Baldwin Creek as a carrier for water to be rediverted to lands south of Baldwin Creek through the Harris and Meyers ditch (a.k.a. Chapman lateral of Big Cottonwood ditch). Numerous small parcels.

CONTACT INFORMATION

Pat White	Don Strube
Lander, WY	Riverton, WY
(307)332-3175	(307)856-6020

PHOTO LOG

Information collected from files available at Division 3 Office of the State Engineer Office in Riverton, WY, and from the ditch contact person when available.

DIVERSION RECORD

Year	Measured Data
1983	
1984	6/4, 42.6 cfs
1985	5/24, 42.6 cfs; 6/8, 53.6 cfs; 6/15, 58.8 cfs; 7/3, 49.09 cfs; 9/19, 37.6 cfs
1986	7/19, 50.76 cfs; 8/1, 50.8 cfs; 8/4, 50.8 cfs; 8/6, 50.2 cfs; 8/18, 48 cfs
1995	
1996	7/8, 16.89 cfs; 7/12, 16.33 cfs; 7/16, 46.35 cfs; 7/18, 9.23 cfs; 7/22, 32.62 cfs; 7/26, 34.53 cfs; 8/1, 47.98 cfs; 8/8, 42.09 cfs; 8/14, 43.67 cfs; 8/30, 39.51 cfs; 9/10, 37.49 cfs; 10/3, 36.79 cfs
1997	5/14, 28 cfs; 5/27, 25.79 cfs; 6/11, 36.5 cfs; 6/18, 40.02 cfs; 7/1, 33.1 cfs; 8/7, 30.27 cfs; 8/15, 39.5 cfs; 8/26, 42.62 cfs; 9/12, 40.5 cfs; 9/17, 37.5 cfs; 9/25, 28 cfs
1998	5/12, 21.18 cfs; 5/22, 37.5 cfs; 6/5, 32.62 cfs; 6/10, 28 cfs; 6/15, 16.55 cfs; 6/22, 25.36 cfs; 6/25, 25.79 cfs; 6/29, 24.93 cfs; 7/2, 39 cfs; 7/6, 37.99 cfs; 7/8, 35.51 cfs; 7/13, 33.09 cfs; 7/16, 25.79 cfs; 7/20, 24.5 cfs; 7/23, 37.99 cfs; 7/27, 40.02 cfs; 7/30, 39 cfs; 8/3, 30.27 cfs; 8/6, 29.81 cfs; 8/10, 28 cfs; 8/13, 37.49 cfs; 8/17, 39.51 cfs; 8/20, 42.62 cfs; 8/24, 40.02 cfs; 8/27, 40.02 cfs; 8/31, 37.49 cfs; 9/3, 36.49 cfs; 9/8, 38.5 cfs; 9/10, 37.49 cfs; 9/14, 40.02 cfs; 9/17, 37.49 cfs; 9/21, 30.27 cfs; 9/24, 25.36 cfs; 9/28, 23.65 cfs; 9/30, 23.65 cfs
1999	6/25, 49.09 cfs; 6/28, 36.99 cfs; 7/6, 34.05 cfs; 7/12, 28.45 cfs; 7/19, 32.14 cfs; 7/22, 46.35 cfs; 7/26, 42.09 cfs; 7/29, 47.98 cfs; 8/3, 51.3 cfs; 8/6, 53.02 cfs; 8/10, 50.2 cfs; 8/13, 50.2 cfs; 8/17, 45.81 cfs; 8/20, 43.67 cfs; 8/23, 46.89 cfs; 8/26, 45.81 cfs; 9/3, 46.89 cfs; 9/7, 33.57 cfs; 9/14, 32.62 cfs; 9/27, 12.36 cfs
2000	5/17, 32.62 cfs; 5/22, 39 cfs; 5/25, 53.59 cfs; 5/30, 51.88 cfs; 6/1, 48.53 cfs; 6/5, 57.06 cfs; 6/9, 54.74 cfs; 6/12, 49.64 cfs; 6/14, 49.64 cfs; 6/16, 50.76 cfs; 6/19, 47.44 cfs; 6/21, 50.76 cfs; 6/23, 45.27 cfs; 6/28, 45.27 cfs; 6/30, 44.2 cfs; 7/3, 44.2 cfs; 7/5, 40.2 cfs; 7/7, 37.49 cfs; 7/12, 37.49 cfs; 7/14, 35.51 cfs; 7/17, 35.51 cfs; 7/19, 36 cfs; 7/21, 32.62 cfs; 7/24, 32.14 cfs; 7/26, 29.81 cfs; 7/28, 29.8 cfs; 7/31, 35.02 cfs; 8/2, 35.02 cfs; 8/4, 36 cfs; 8/7, 34.05 cfs; 8/9, 33.09 cfs; 8/11, 32.62 cfs; 8/14, 32.14 cfs; 8/17, 32.6 cfs; 8/22, 32.6 cfs; 8/29, 17.3 cfs; 9/5, 20.4 cfs; 9/19, 17.3 cfs
2001	5/11, Off; 5/15, 48 cfs; 5/23, 39 cfs; 5/25, 44.7 cfs; 6/1, 49.1 cfs; 6/5, 40 cfs; 6/8, 40 cfs; 6/11, 45.8 cfs; 6/15, 37.5 cfs; 6/18, 36 cfs; 6/20, 38 cfs; 6/22, 39 cfs; 6/26, 45.8 cfs; 6/28, 41 cfs; 7/3, 37 cfs; 7/5, 36 cfs; 7/11, 35.5 cfs; 7/13, 33.1 cfs; 7/16, 32.6 cfs; 7/20, 23.6 cfs; 7/24, 19.6 cfs; 7/27, 20 cfs; 7/30, 17.7 cfs; 8/1, 17.7 cfs; 8/3, 29.8 cfs; 8/7, 23.6 cfs; 8/8, 24.5 cfs; 8/9, 24.5 cfs; 8/13, 16.2 cfs; 8/15, 17.3 cfs; 8/17, 16.6 cfs; 8/20, 15.8 cfs; 8/22, 16.2 cfs; 8/24, 15.8 cfs; 8/28, 14.8 cfs; 8/31, 15.1 cfs; 9/4, 13 cfs; 9/6, 15.5 cfs; 9/10, 15.5 cfs; 9/12, 13.4 cfs; 9/19, 7.8 cfs; 9/24, 6.98 cfs; 10/1, 6.98 cfs; 10/16, 7.52 cfs

Notes:

- 1 For days in which two measurements were taken, one of the measurements was assigned to the day immediately before or after the actual measurement day.
- 2 Data from SEO Hydrographers Reports for years when spot measurements taken.

DESCRIPTION AND OPERATION MEMORANDUM

MOUNTAIN RANGE DITCH

USGS ID 42108 G7, 42108 H7 USGS NAME MOUNTAIN ARTER SE, RAY LAKE

DIVERSION DESCRIPTION

One 4' screwtype sliding steel gate in concrete headwall.

DIVERSION LOCATION

Source: North Fork Popo Agie River

N 78° 00' W, 2065' from the quarter corner common to Sections 30 and 31, Township 34N, Range 100W, and is in Lot 4 of Section 30.

CONVEYANCE DESCRIPTION

Open dirt ditch 3 1/2 miles long delivering water to approximately 450 acres and 15 users. Ditch capacity ~ 15 c.f.s. Includes some water rights originally permitted under Lanigan ditch.

WYOMING WATER RIGHTS

Priority Date	Permit Number	Permit Use	Acres	Flow(cfs)	(af)	Cumulative Flow(cfs)	Comments
3/01/1882	Terr.	Irr.	72.6	1.04		1.04	
3/10/1887	Terr.	Irr.,Dom.,Stk.	325.00	4.78		5.82	
9/16/1908	1940E	Irr.	87.00	1.24		7.06	
11/18/1910	2506E	Irr.	25.00	0.36		7.42	

STORAGE RIGHTS

Shoshone Lake Reservoir

ESTIMATED CANAL LOSSES

Varies with time of year; estimated 20% at peak.

IRRIGATION PRACTICES

Conventional flood irrigation practices. Some sprinkler, some gated pipe.

CROP TYPES / CONSUMPTIVE USE

Native hay and alfalfa hay mix, lawns and gardens.

RETURN FLOWS

Minimal; some to Big Cottonwood ditch, most to North Fork Popo Agie.

OTHER OPERATIONAL INFORMATION

CONTACT INFORMATION

Ted Seely
Lander, WY
(307) 332-0153

PHOTO LOG

Information collected from files available at Division 3 Office of the State Engineer Office in Riverton, WY, and from the ditch contact person when available.

DIVERSION RECORD

Year	Measured Data
1983	
1984	
1985	7/10, 5 cfs
1986	8/6, 7.09 cfs
1995	
1996	7/8, 16.879 cfs; 7/12, 16.33 cfs; 7/16, 15.6 cfs; 7/18, 9.23 cfs; 7/22, 10.47 cfs; 7/26, 12.1 cfs; 8/1, 14.87 cfs; 8/8, 12.1 cfs; 8/14, 19.4 cfs; 8/30, 14.34 cfs; 9/10, 12.01 cfs; 10/3, 12.01 cfs
1997	5/14, 5.36 cfs; 5/27, 13.63 cfs; 6/11, 12.6 cfs; 6/18, 16.89 cfs; 7/1, 19.21 cfs; 8/7, 15.23 cfs; 8/15, 13.3 cfs; 8/26, 14.51 cfs; 9/12, 14.5 cfs; 9/17, 13.3 cfs; 9/25, 4.5 cfs
1998	5/12, Off; 5/22, 15.05 cfs; 6/5, 11.93 cfs; 6/10, 15.05 cfs; 6/15, 6.52 cfs; 6/22, 2.88 cfs; 6/25, 2.4 cfs; 6/29, 2.4 cfs; 7/2, 18.23 cfs; 7/6, 17.08 cfs; 7/8, 17.08 cfs; 7/13, 16.89 cfs; 7/16, 10 cfs; 7/20, 11.6 cfs; 7/23, 14.87 cfs; 7/27, 15.41 cfs; 7/30, 13.29 cfs; 8/3, 12.77 cfs; 8/6, 10.79 cfs; 8/10, 10 cfs; 8/13, 12.1 cfs; 8/17, 12.1 cfs; 8/20, 12.6 cfs; 8/24, 16.33 cfs; 8/27, 17.27 cfs; 8/31, 15.96 cfs; 9/3, 15.6 cfs; 9/8, 12.94 cfs; 9/10, 12.6 cfs; 9/14, 7.06 cfs; 9/17, 7.06 cfs; 9/21, 7.06 cfs; 9/24, 6.52 cfs; 9/28, 3.39 cfs; 9/30, 3.39 cfs
1999	6/25, 21.01 cfs; 6/28, 19.21 cfs; 7/6, 15.41 cfs; 7/12, 10.47 cfs; 7/19, 10.63 cfs; 7/22, 11.11 cfs; 7/26, 13.11 cfs; 7/29, 18.23 cfs; 8/3, 19.2 cfs; 8/6, 20.4 cfs; 8/10, 18.81 cfs; 8/13, 18.62 cfs; 8/17, 16.52 cfs; 8/20, 14.16 cfs; 8/23, 12.6 cfs; 8/26, 11.11 cfs; 9/3, 17.27 cfs; 9/7, 16.89 cfs; 9/14, 10 cfs; 9/27, 2.59 cfs
2000	5/17, 16.15 cfs; 5/22, 15.78 cfs; 5/25, 17.65 cfs; 5/30, 17.27 cfs; 6/1, 16.71 cfs; 6/7, 18.23 cfs; 6/9, 19.4 cfs; 6/12, 17.65 cfs; 6/14, 18.23 cfs; 6/16, 18.81 cfs; 6/19, 18.04 cfs; 6/21, 17.65 cfs; 6/23, 18.62 cfs; 6/26, 18.04 cfs; 6/28, 17.46 cfs; 6/30, 16.71 cfs; 7/3, 16.71 cfs; 7/5, 15.41 cfs; 7/7, 19.69 cfs; 7/10, 14.87 cfs; 7/12, 14.51 cfs; 7/14, 13.81 cfs; 7/17, 13.11 cfs; 7/19, 13.29 cfs; 7/21, 12.27 cfs; 7/24, 11.11 cfs; 7/26, 13.11 cfs; 7/28, 13.46 cfs; 7/31, 16.33 cfs; 8/2, 16.33 cfs; 8/4, 16.52 cfs; 8/7, 15.78 cfs; 8/9, 15.6 cfs; 8/11, 15.05 cfs; 8/14, 14.87 cfs; 8/17, 14.7 cfs; 8/22, 14 cfs; 8/29, 8.19 cfs; 9/5, 13.3 cfs; 9/19, 10.07 cfs
2001	5/15, 18.8 cfs; 5/23, 19.2 cfs; 5/25, 21 cfs; 6/1, 20.8 cfs; 6/5, 18.4 cfs; 6/8, 18.2 cfs; 6/11, 20.4 cfs; 6/15, 17.5 cfs; 6/18, 16.9 cfs; 6/20, 16.9 cfs; 6/22, 17.3 cfs; 6/26, 18.4 cfs; 6/28, 16.9 cfs; 7/3, 15.2 cfs; 7/5, 15 cfs; 7/11, 8.05 cfs; 7/13, 7.62 cfs; 7/16, 8.19 cfs; 7/20, 8.78 cfs; 7/24, 10.8 cfs; 7/27, 10.5 cfs; 7/30, 8.78 cfs; 8/1, 9.38 cfs; 8/3, 14.7 cfs; 8/8, 11.2 cfs; 8/9, 11.4 cfs; 8/13, 8.78 cfs; 8/15, 10 cfs; 8/17, 9.69 cfs; 8/20, 8.49 cfs; 8/22, 9.69 cfs; 8/24, 8.78 cfs; 8/28, 7.91 cfs; 8/31, 8.49 cfs; 9/4, 6.79 cfs; 9/6, 8.49 cfs; 9/7, 11.6 cfs; 9/10, 8.78 cfs; 9/12, 7.34 cfs; 9/19, 9.38 cfs; 9/24, 8.34 cfs; 10/1, 7.34 cfs; 10/16, 6.39 cfs

Notes:

- 1 For days in which two measurements were taken, one of the measurements was assigned to the day immediately before or after the actual measurement day.
- 2 Data from SEO Hydrographers Reports for years when spot measurements taken.

DESCRIPTION AND OPERATION MEMORANDUM

NORTH FORK DITCH

USGS ID 42108 H6, 42108 G7, 44 109 B1, 42108 G6, 42108 H7 USGS NAME LANDER NW, MOUNT ARTER SE, TONOPAHA RIDGE, LANDER, RAY LAKE

DIVERSION DESCRIPTION

One 4' screwtype sliding steel gate in concrete headwall.

DIVERSION LOCATION

Source: North Fork Popo Agie River
N 3° 10' W, 3003' from the SW corner of Section 28, Township 34N, Range 100W, and is in Lot 1 of Section 29.

CONVEYANCE DESCRIPTION

Open dirt ditch 7 miles long delivering to approximately 660 acres and 12 users. Ditch capacity is approximately 18 c.f.s.

WYOMING WATER RIGHTS

Priority Date	Permit Number	Permit Use	Acres	Flow(cfs)	(a.f.)	Cumulative Flow(cfs)	Comments
7/03/1868	Wind River Tribe	Irr.	88.00		416.00		
7/03/1868	Walton	Irr.	90.90		436.32		
4/29/1884	Terr.	Irr.,Dom.,Stk.	563.00	9.57		9.57	
4/04/1908	1860E	Irr.	204.00	2.91		12.48	
4/04/1947	5446E	Irr.,Stk.	14.00	0.20		12.68	

STORAGE RIGHTS

Shoshone Lake Reservoir

ESTIMATED CANAL LOSSES

Varies with time of year.

IRRIGATION PRACTICES

Conventional flood irrigation practices, some use of pipe.

CROP TYPES / CONSUMPTIVE USE

Alfalfa hay, native hay, pasture, lawns and gardens.

RETURN FLOWS

Minimal; some to Coon Creek, most to North Fork Popo Agie

OTHER OPERATIONAL INFORMATION

CONTACT INFORMATION

Rollie Cox
Lander, WY
(307) 332-2541

PHOTO LOG

Information collected from files available at Division 3 Office of the State Engineer Office in Riverton, WY, and from the ditch contact person when available.

DIVERSION RECORD

Monthly Summary (ac-ft)

Year	Discharge (ac-ft)												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1973													
1974													
1975													
1976													
1977													
1978													
1979													
1980													
1981													
1982													
1983													
1984													
1985													
1986													
1987													
1988													
1989													
1990													
1991													
1992													
1993													
1994				0	1,140	1,630	1,790	1,760	1,980				8,300
1995				80	880	2,010	1,790	2,230	1,740				8,730
1996				0	1,080	2,360	2,270	1,540	1,250				8,500
1997				0	1,670	1,880	1,930	1,750	1,960				9,190
1998				64	2,093	2,146	2,125	1,833	1,718				9,979
1999				94	1,641	2,058	2,223	1,808	1,911				9,733
2000				160	1,843	2,182	2,302	2,247	1,905				10,638
2001					2,077	2,277	2,251	1,885	1,675				10,164
Total				57	1,553	2,068	2,085	1,882	1,767				9,411

Monthly Summary (cfs)

Year	Discharge (cfs)												Average
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1973													
1974													
1975													
1976													
1977													
1978													
1979													
1980													
1981													
1982													
1983													
1984													
1985													
1986													
1987													
1988													
1989													
1990													
1991													
1992													
1993													
1994				0	19	27	29	29	33				23
1995				1	14	34	29	36	29				24
1996				0	18	40	37	25	21				23
1997				0	27	32	31	28	33				25
1998				1	34	36	35	30	29				27
1999				2	27	35	36	29	32				27
2000				3	30	37	37	37	32				29
2001					34	38	37	31	28				33
Average				1	25	35	34	31	30				26

Notes:

- 1 Data from SEO Hydrographers Reports, USGS Gage Data and WRDS electronic data.
- 2 Monthly summaries are summarized from daily data. Missing readings interpolated from readings immediately before and after missing data.

DESCRIPTION AND OPERATION MEMORANDUM

REYNOLDS DITCH

DIVERSION DESCRIPTION

One 36" screwtype headgate in concrete headwall.

DIVERSION LOCATION

Source: North Popo Agie River
S 7° 32' E, 1876' from the NW corner Section 18, Township 2S, Range 1E, WRM.

CONVEYANCE DESCRIPTION

Open dirt ditch 2 1/2 miles long serving approximately 490 acres. Ditch capacity ~ 14 c.f.s.

WYOMING WATER RIGHTS

Priority Date	Permit Number	Permit Use	Acres	Flow(cfs)	(af)	Cumulative Flow(cfs)	Comments
7/03/1868	Wind River Tribes	Irr.	24.50		116.38		
7/03/1868	Walton	Irr.	128.30		609.07		
5/05/1905	6596	Irr.	111.00	1.65		1.65	
7/12/1919	4087E	Irr.,Dom.	252.80	s.s.			
5/20/1921	4208E	Irr.,Dom.	77.00	s.s.			
2/04/1925	4429E	Irr.	12.00	0.17		1.82	

STORAGE RIGHTS

Shoshone Lake Reservoir

ESTIMATED CANAL LOSSES

Varies with the time of year; estimated 35-40% at peak.

IRRIGATION PRACTICES

Conventional flood irrigation methods, some pipe.

CROP TYPES / CONSUMPTIVE USE

Pasture, yards, hay.

RETURN FLOWS

Minimal; all to North Fork Popo Agie.

OTHER OPERATIONAL INFORMATION

Several small subdivision parcels.

CONTACT INFORMATION

James Allen	Ellis Land and Livestock
Lander, WY	Lander, WY
(307)332-2995	(307) 332-4249

PHOTO LOG

Information collected from files available at Division 3 Office of the State Engineer Office in Riverton, WY, and from the ditch contact person when available.

DIVERSION RECORD

DESCRIPTION AND OPERATION MEMORANDUM

SIoux DITCH

DIVERSION DESCRIPTION

One 3' screwtype sliding steel gate in concrete headwall.

DIVERSION LOCATION

Source: North Fork Popo Agie River
S 8° 04' W, 1688.3' from the North 1/4 corner of Section 16, Township 2S, Range 1E, WRM, and is in Lot 4 Section 16.

CONVEYANCE DESCRIPTION

Open dirt ditch 4 1/2 miles long serving approximately 720 acres. Ditch capacity ~ 18 c.f.s.

WYOMING WATER RIGHTS

Priority Date	Permit Number	Permit Use	Acres	Flow(cfs)	(af)	Cumulative Flow(cfs)	Comments
7/03/1868	Wind River Tribes	Irr.	347.40		1642.52		
7/03/1868	Walton	Irr.	218.40				
7/26/1906	7432	Irr.	253.00	3.61		3.61	
11/22/1927	4506E	Dom.,Irr.,Stk.	13.00	0.19		3.8	

STORAGE RIGHTS

Shoshone Lake Reservoir

ESTIMATED CANAL LOSSES

Varies with the time of year; estimated 35% at peak.

IRRIGATION PRACTICES

Conventional flood irrigation methods, some use of sprinklers.

CROP TYPES / CONSUMPTIVE USE

Hay, pasture, lawn and garden, occasional small grains.

RETURN FLOWS

Minimal; to North Fork Popo Agie.

OTHER OPERATIONAL INFORMATION

CONTACT INFORMATION

David Cox	Shoshone and Arapahoe Tribes
Lander, WY	Ft. Washakie, WY
(307) 332-9356	(307) 332-3164

PHOTO LOG

Information collected from files available at Division 3 Office of the State Engineer Office in Riverton, WY, and from the ditch contact person when available.

DIVERSION RECORD