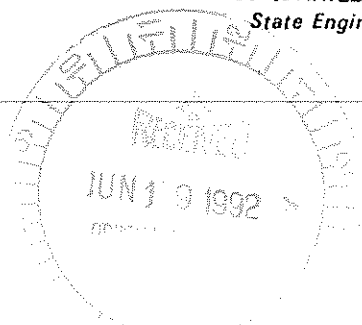


2Y 1981

RICHARD D. LAMM  
Governor



J.A. DANIELSON  
State Engineer



**DIVISION OF WATER RESOURCES**

DEPARTMENT OF NATURAL RESOURCES  
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MEMORANDUM

TO: Operations Committee  
Arkansas River Compact Administration

FROM: Robert W. Jesse *Robert Jesse*  
Division Engineer  
Colorado Division of Water Resources

SUBJECT: Operation of John Martin Reservoir During Compact  
Water Year 1981

DATE: November 12, 1981

Winter Storage in John Martin Reservoir

November 1, 1980 - April 19, 1981

Winter Storage in John Martin Reservoir began at 0001 Hour, November 1, 1980. At that time the Conservation Pool was empty. The Reservoir contained 35,395 A.F. This water was distributed: 27,160.34 A.F. Agreement Accounts; 8,234.66 A.F. in the Permanent Recreation Pool. Winter storage ended at 0036 Hours, April 19, 1981. During this period a total of 46,760.49 A.F. was stored. This water was allocated to various accounts as specified in the Operating Plan, adopted by the Arkansas River Compact Administration on April 24, 1980. Table I thru Table V show amounts stored in, amounts released from, and evaporation losses from, the various accounts. Table VI shows the allocation of the total contents of the Reservoir at 2400 Hours, April 19, 1981.

TABLE I  
COMPACT WATER

	Contents Beginning of Month A.Ft.	Inflow A.Ft.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November	0	5,544.68	31.17	0	5,513.51
December	5,513.51	4,897.00	77.33	0	10,333.18
January	10,333.18	4,423.00	104.21	0	14,651.97
February	14,651.97	3,325.00	221.10	0	17,755.87
March	17,755.87	4,977.00	434.76	0	22,298.11
April 19	22,298.11	1,901.81	252.46	23,947.46	(2400 hrs. 4/19) 0
Totals		25,068.49	1,121.03	23,947.46	

TABLE II  
Amity Canal Winter Water

	Contents Beginning of Month A.Ft.	Inflow A.Ft.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November	0	1,599.00	1.51	0	1,597.49
December	1,597.49	6,924.00	48.77	0	8,472.72
January	8,472.72	6,532.00	96.79	0	14,907.93
February	14,907.93	4,180.00	231.67	0	18,856.26
March	18,856.26	2,457.00	425.85	1,586.13	19,301.28
April 19	19,301.28	0	0	19,301.28	(2400 hrs. 4/19) 0
Totals		21,692.00	804.59	20,887.41	

TABLE III

Ft. Lyon Canal Winter Water

	Contents Beginning of Month A.Ft.	Inflow A.Ft.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November	0	0	0	0	0
December	0	0	0	0	0
January	0	0	0	0	0
February	0	0	0	0	0
March	0	1,586.13	16.33	0	1,569.80
April 19	1,569.80	0	16.90	549.43	(2400 hrs. 4/19) 1,003.47
Totals		1,586.13	33.23	549.43	

TABLE IV

Agreement Water

	Contents Beginning of Month A.Ft.	Inflow A.Ft.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November	27,160.34	0	351.25	550.68	26,258.41
December	26,258.41	0	254.22	0	26,004.19
January	26,004.19	0	214.57	0	25,789.62
February	25,789.62	0	351.46	0	25,438.16
March	25,438.16	0	543.78		24,894.38
April 19	24,894.38	43,798.17	858.95	6,490.81	(2400 hr. 4/19) 61,342.79
Totals		43,798.17	2,574.23	7,041.49	

TABLE V  
Permanent Recreation Pool

	Contents Beginning of Month A.Ft.	Inflow A.Ft.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November	8,234.66	0	108.07	0	8,126.59
December	8,126.59	0	78.68	0	8,047.91
January	8,047.91	0	66.43	0	7,981.48
February	7,981.48	0	108.77	0	7,872.71
March	7,872.71	0	168.28	0	7,704.43
April 19	7,704.43	0	127.69	0	(2400 hrs. 4/19) 7,576.74
Totals		0	657.92	0	

TABLE VI  
Allocation of Reservoir Contents  
In Acre Feet  
@ 2400 Hr. April 19, 1981

Total Contents	Agreement Water	Compact Water	Amity Winter Water	Ft. Lyon Winter Water	Permanent Pool Water
69,923.00	61,342.79	0	0	1,003.47	7,576.74

SUMMER STORAGE IN JOHN MARTIN RESERVOIR

April 19, 1981 - October 31, 1981

Conservation Pool

Summer storage began at 0036 Hour, April 19, 1981. At that time the Conservation Pool was empty. During the Summer season, storage in the Conservation Pool totalled 67,463.33 Acre Feet. This was all released into accounts in accordance with the Operating Plan, adopted April 24, 1980. The Conservation Pool was empty at 2400 Hours, October 31, 1981, the end of the Compact Water Year.

TABLE VII

Summer Operations of Conservation Pool

	Contents, A.Ft. Beginning Date Shown	Inflow, A.Ft.	Evaporation, A.Ft.	Release, A.Ft.	Contents, A.Ft. End of Month
April 19	0	0	0	0	0
May 1	0	3707.73	0	1750.00	1957.73
June 1	1957.73	1780.76	4.27	3734.22	0
July 1	0	10954.14	29.53	10924.61	0
August 1	0	48811.81	287.32	47500.00	1024.49
Sept. 1	1024.49	2208.89	2.55	3230.83	0
October 1	0	0	0	0	0
Totals		67463.33	323.67	67139.66	

TABLE VIII

Storage In and Releases From Conservation Pool

Beginning of Storage		Ending of Storage		Beginning of Release		Ending of Release	
Hour	Day	Hour	Day	Hour	Day	Hour	Day
0300	May 31	2050	June 1	0300	May 31	2050	June 1
0800	July 4	1906	July 9	0800	July 4	1906	July 9
0600	Aug. 8	1410	Sept. 1	0600	Aug. 8	1410	Sept. 1
1100	Sept. 8	1737	Sept. 9	1700	Sept. 8	1737	Sept. 9

TABLE IX

Summer Operation of Permanent Recreation Pool

	Contents, A.Ft. Beginning Date Shown	Inflow A.Ft.	Evaporation, A.Ft.	Release, A.Ft.	Contents, A.Ft End of Month
April 20	7576.74	0	85.18	0	7491.56
May 1	7491.56	0	285.71	0	7205.85
June 1	7205.85	0	437.83	0	6768.02
July 1	6768.02	0	409.35	0	6358.67
Aug. 1	6358.67	31.35	323.30	0	6066.72
Sept. 1	6066.72	0	304.04	0	5762.68
Oct. 1	5762.68	0	202.04	0	5560.64
Totals		31.35	2047.45	0	

Releases for Irrigation

All waters stored in the Conservation Pool were first transferred to Agreement Accounts in accordance with the Operating Plan, dated April 24, 1980. Water was then released upon order by the Water Commissioner or the Division Engineer.

State of Kansas

Releases to the State of Kansas were made upon request from their Account. In addition, releases were made from both the Transit Loss Account and the Sisson Ditch Account to assist delivery of the Kansas demand to Coolidge, Kansas.

TABLE X

Releases to State of Kansas, A.Ft.

	Kansas Agreement Account	Kansas Transit Loss Account	Sisson Ditch Account	Total Release to Kansas
April	0	0	0	0
May	0	0	0	0
June	0	0	0	0
July	17125.80	1437.60	360.18	18923.58
August	16050.00	0	341.00	16391.00
Sept.	3259.22	0	8.50	3267.72
Oct.	0	0	0	0
Totals	36435.02	1437.60	709.68	38582.30

State of Colorado

Releases to the State of Colorado were made upon individual request of the various ditches in Colorado. Orders were placed with Water Commissioners who then transmitted them to the Operations Secretary of the Compact Administration. Appropriate transit losses using U.S.G.S. Transit Loss Study Reach 6 were deducted to calculate headgate diversions.

TABLE XI

Releases to State of Colorado

MONTH	ACRE-FEET
April	16662.00
May	17853.18
June	5807.21
July	10327.71
August	15025.56
September	11762.44
October	3037.84
Total	80475.94

Contents of the Reservoir at 2400 Hours, October 31, 1981 was 13712.89 A.Ft.

TABLE XII

Allocation of Contents @ 2400 Hours, Oct. 31, 1981

Conservation Pool	Agreements Accounts	Permanent Pool	Total
0	8152.25 A.Ft.	5560.64 A.Ft.	13712.89 A.Ft.

CONCLUSIONS

Attached are copies of the monthly sheets, which were sent out weekly. All weekly sheets should be discarded and replaced with the monthly summation sheets.

A new Area Capacity Table was received and implemented on August 12, 1981.

In August 1981, 31.35 A.F. was stored in the Permanent Pool from the Muddy Creek decrees.

Attached is the report of the ad hoc Committee to report on gauge stations.

All letter orders for releases, changes and stops are on file in the Division Engineer's office and the Army Corps of Engineers' office.