

DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES
ROBERT W. JESSE
IRRIGATION DIVISION ENGINEER
1906 W. NORTHERN AVENUE
PUEBLO, COLORADO 81004

OFFICE: 542-3368 HOME: 545-2873

November 14, 1983

Operations Committee Arkansas River Compact Administration

Dear Sirs:

Please find enclosed my report to the Operations Committee. Pages 2-10 are provided in my capacity as Operations Secretary of the Arkansas River Compact Administration. These materials pertain to the expenditures made by my office for FY 82-83 pursuant to the contract between the Colorado Division of Water Resources and the Administration.

The balance of the report, from page 11 to the end, constitutes the accounting of John Martin Reservoir Operations required by VII.A. of the "Resolution Concerning an Operating Plan for John Martin Reservoir", dated April 24, 1980.

Sincerely,

Robert W. Jesse

Operations Secretary

RWJ/eg

Encl.

cc: Members, ARCA

Jeris Danielson, State Engineer

ANNUAL REPORT OF THE OPERATIONS SECRETARY

CONCERNING THE OPERATION OF JOHN MARTIN RESERVOIR

1983

Submitted to The
Operations Committee
ARKANSAS RIVER COMPACT ADMINISTRATION

November 15, 1983

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OPERATIONS SECRETARY'S COMMENTS

1983 was above average in snow pack and we had a very good run-off. Summer precipitation east of Pueblo to Garden City was spotty with a cool, wet Spring and an extremely dry Summer and an record early frost. There will be carry-over water in most accounts.

No significant problems were encountered, in spite of our losing the services of Comsat at the peak of our administrative season.

One event of note was in Pueblo at the peak of the run-off, a sewer trunk buried in the channel of the River below the water level broke and was dumping raw sewage in the River. In a spirit of cooperation, all entities including Kansas were contacted and the River was curtailed long enough to permit the lines being repaired. All temporary storage was restored to the ditches it was taken from, or in the event it was not run was dumpted to the River on Nov. 1.

All deliveries to Kansas were made on schedule and again the Secretary had excellent cooperation from the Garden City office of the State of Kansas.

During the year, State hydrographers made a total of 10 stream flow measurements at Compact stations and a total of 336 observations to verify gage heights or establish flows in the winter months.

FINANCIAL STATUS

OF

OPERATIONS SECRETARY

1983 Contract between Colorado State Engineer Jeris Danielson and Arkansas River Compact Administration

Salary for Secretary:

July. \$ 975.00

Office Equipment and Supplies:

Miscellaneous:

Contract allocated \$5000 to the Operations Secretary. All invoices and a copy of the Contract are hereto attached.

INVOICE

M. Helen Bever 1906 W. Northern Pueblo, Colorado 81004

Services for month of July

\$975.00

M. Helen Bever

Administrative Clerk Typist

Approved by:

: Robert W. Jesse

Operations Secretary

Arkansas River Compact Administration

KINGS KITCHEN CENTER

620 West 7th Street FUERLO, COLORADO 81003 Pinga 543-7102

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ARKANSAS RIVER COMPACT ADMINISTRATION

Principal Office - Court House, Lamar, Colorado

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LAMAR, COLORADO

82-87/1021

June 6/1983 8 Two Thousand Three Hundred and Ninty One Dollars and 95/100

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ARKANSAS RIVER COMPACT ADMINISTRATION

Principal Office - Court House, Lamar, Colorado

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Arkansas River Compact Administration - Lamar, Colorado

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7-10-83		Supplies for Robert Jesse Operations Secretary			\$202.80		

ARKANSAS RIVER COMPACT ADMINISTRATION

Principal Office - Court House, Lamar, Colorado

FIRST NATIONAL BANK IN LAWAR

July 8, 1983

LAMAR, COLORADO

82-87/1021

PAY One Thousand Three Hundredand Nine Dollars and 30/100

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		3 HX 2000 29300347 \$139.90 ea						
		\$1309.30		Total	\$,309.5			
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THIS AGREEMENT is made this 27th day of July, 1982, by and between the State Engineer of the State of Colorado for the use and benefit of the Colorado Division of Water Resources (State Engineer), 1313 Sherman Street, Room 818, Denver, Colorado 80203, and the Arkansas River Compact Administration, 1001 South Main, Lamar, Colorado 81052.

WHEREAS, the Division Engineer, Water Division II in the Colorado Division of Water Resources serves as Operations Secretary for the Arkansas River Compact Administration; and

WHEREAS, the Arkansas River Compact Administration has previously approved of the use of up to \$5,000.00 of its funds for the maintenance of the office of the Operations Secretary for the period beginning July 1, 1982 and ending June 30, 1983.

NOW THEREFORE, it is hereby agreed that:

- The Division Engineer, in his capacity as the Operations Secretary, shall:
 - A. Regulate the gates of John Martin Reservoir in accordance with the Arkansas River Compact and any operating plans or procedures adopted thereunder; and
 - B. Keep accurate daily records on the water stored in John Martin Reservoir, including all matters appurtenant thereto such as the amount of water residing in or being transferred to special reservoir accounts, evaporation of water from the reservoir which is to be prorated among such accounts, and the determination of transit losses and the procedures for computing such in all matters regarding water being transferred to or from said reservoir and accounts therein; and
 - C. Prepare accurate reports of deliveries of water which reports shall be presented to the Administration's operations committee.
- 2. In consideration of the services to be performed by the Division Engineer as Operations Secretary, the Arkansas River Compact Administration shall:
 - A. Pay a secretary for the office of the Operations Secretary at a rate of \$975.00 per month for the months of July, August, September, and October, 1982; and
 - B. Pay, in the amount of \$1,100, telephone charges, computer costs, and incidental office expenses incurred by the Operations Secretary during the period beginning July 1, 1982 and ending June 30, 1983; and
 - C. Make all disbursements only upon receipt of a properly prepared invoice submitted by the Operations Secretary.

Colorado Digision of Water Resources

Jeris A. Danielson,

tate Engineer

Arkansas River Compact Administration

Frank Coorey, Chairman

Delivery of Water to Kansas

Release No. 1 to Kansas began at 1300 Hour, May 6, at a rate of 400.00 cfs. An initial release of 200.00 cfs from the Kansas Transit Loss was begun at the same time. The Transit Loss release was gradually reduced to 0 at 0900 Hr., May 17. The Kansas release continued @ 400.00 cfs until 1300 Hr, May 24.

Release No. 2 to Kansas began at 1500 Hour, July 5 at a rate of 400.00 cfs. This rate was increased on their demand to 600.00 cfs at 1400 Hour, July 11. This rate of release was maintained until 1500 Hour, August 30, when it was cut to 400.00 cfs at Kansas' request. The 400.00 cfs release was continued until 1100 Hour, Sept. 16, when the release was terminated. During this period, releases from the Transit Loss Account were maintained until 0900 Hour, Aug. 1, when all transit loss release was stopped. During the release period transit loss release was regulated 14 separate times in an effort to maintain the Kansas order at the State Line.

Release No. 3 began at 0900 Hour, Oct. 6, at a rate of 500.00 cfs. A release of 100.00 cfs from the Transit Loss Account was begun at the same time. The Transit Loss release was stopped at 0900 Hour, Oct. 10. The 500.00 release continued until 1200 Hour, Oct. 13, when it was stopped.

Releases & Deliveries to Kansas, A. Ft., 1983

MONTH	Kansas Acct. Release	Transit Loss Acct. Release	Frontier Ditch	Arkansas @ Coolidge	Ditch & River Delivery	Delivery Under Call Limitation
April	0	0	. 0	0	0	0
May	14,281.20	2,085.15	1,891.00	15,149.00	17,040.00	15,838.00
June	0	. 0	0	151.00	151.00	151.00
July	29,025.22	2,914.53	1,422.00	25,901.00	27,323.00	25,851.00
Aug.	36,347.64	7.44	2,352.00	37,451.00	39,803.00	36,700.00
Sept.	12,264.64	0	405.00	17,544.00	17,949.00	16,564.00
Oct.	7,066.21	793.40	0	9,251.00	9,251.00	8,694.00
TOTALS	98,984.91	5,800.52	6,070.00	105,447.00	111,517.00	103,798.00

All above figures include credit for a 7 day run-down period on each release.

Total flow passing the Arkansas River gage from April thru October inclusive was 129,160 A.Ft. Total diversion by Frontier Ditch from April thru October inclusive was 8,164 A.Ft. The total combined flow (April - Oct.) was 137,324 A.Ft.

WINTER STORAGE

Reservoir, Nov. 1, 1982 - Oct. 31, 1983

Winter Storage in John Martin Reservoir began at 0001 Hour, November 1, 1982. At that time the Conservation Pool was empty. The Reservoir contained 12,241.00 A.Ft. This water was distributed as follows: 8,866.80 A.Ft. in Agreement Accounts and 3,374.20 A.Ft. in the Recreation Pool. Winter Storage ended at 1636 Hour, May 18, 1983. During this period a total of 114,516.47 A.Ft. was stored. This water was allocated to various accounts as specified in the Operating Plan, adopted by the Arkansas River Compact Administration on April 14, 1980. The following tables reflect the status of the various accounts during Winter Storage.

TABLE I
Compact Water

	Contents Beg. of Month A.Ft.	Inflow A.Ft.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November December January February March April May 1-18	0 8,586.33 14,941.73 22,271.57 28,224.21 42,516.08 17,384.49	8,680.00 6,519.00 7,533.00 6,268.00 15,055.00 28,646.52 17,837.95	93.67 163.60 203.16 315.36 763.13 534.50 150.75	0 0 0 0 0 53,243.61 35,071.69	8,586.33 14,941.73 22,271.57 28,224.21 42,516.08 17,384.49 (2400 hrs. 5-18)
TOTALS		90,539.47	2,224.17	88,315.30	

TABLE II

Amity Canal Winter Water

	Contents Beg. of Month A.Ft.	Inflow A.Ft.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November December January February March April May 1-18	0 2,537.96 8,625.74 15,735.52 20,502.37 23,026.57 0	2,546.00 6,164.00 7,246.00 4,993.00 3,028.00 0	8.04 76.22 136.22 226.15 503.80 9.89 0	0 0 0 0 0 23,016.68	2,537.96 8,625.74 15,735.52 20,502.37 23,026.57 0 (2400 hrs. 5-18)
TOTALS		23,977.00	960.32	23,016.68	

TABLE III

Agreement Water

	Contents Beg. of Month A.Ft.	Inflow A.FT.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November December January February March April May 1-18	8,866.80 8,686.95 8,565.85 8,471.24 8,364.40 8,178.93 82,942.72	0 . 0 0 0 0 0 76,260.29 35,071.69	179.85 121.10 94.61 106.84 185.47 1,136.98 1,342.88	0 0 0 0 0 359.52 25,009.58	8,686.95 8,565.85 8,471.24 8,364.40 8,178.93 82,942.72 (2400 hrs. 5-18) 91,661.95
TOTALS	,	111,331.98	3,167.73	25,369.10	

TABLE IV
Permanent Recreation Pool

	Contents Beg. of Month A.Ft.	Inflow A.Ft.	Evaporation A.Ft.	Releases A.Ft.	Contents End of Month A.Ft.
November December January February March April May 1-18	3,374.20 3,305.76 3,259.68 3,223.67 3,183.02 3,112.42 3,050.79	0 0 0 0 0 0	68.44 46.08 36.01 40.65 70.60 61.63 44.37	0 0 0 0 0	3,305.76 3,259.68 3,223.67 3,183.02 3,112.42 3,050.79 (2400 hrs. 5-18 3,006.42
TOTALS		0	367.78	0	

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TABLE V

Allocation of Reservoir Contents in Acre Feet

@ 2400 Hr. May 18, 1983

Total	Agreement	Compact	Amity	Permanent Pool
Contents	Water	Water	Winter Water	Water
94,668.37	91,661.95	0	0	3,006.42

SUMMER STORAGE

Summer Storage began at 1636 Hr., May 18, 1983. At that time the Conservation Pool was empty. Storage was again commenced at 1200 Hr. on May 30 and continued until 1109 Hr., August 27, when the Conservation Pool again became empty. The Conservation Pool remained empty from that time to the end of the Compact Water Year at 2400 Hr., October 31.

TABLE VI

Conservation Pool

	Contents, A.Ft. Beg. Date Shown		Evaporation A.Ft.	Release A.Ft	Contents, A.Ft. End of Month
May 18 June 1 July 1 Aug. 1 Sept. 1 Oct. 1	0 409.28 43,287.42 41,890.25 0	3,262.20 113,016.59 77,428.18 16,731.75 0	0 574.94 1,964.57 556.43 0	2,852.92 69,563.51 76,860.78 58,065.57 0	409.28 43,287.42 41,890.25 0 0
TOTALS		210,438.72	3,095.94	207,342.78	

TABLE VII

Permanent Recreation Pool

	Contents, A.Ft. Beg. Date Shown	Inflow A.Ft.	Evaporation A.Ft.	Release A.Ft.	Contents, A.Ft. End of Month
May 18 June 1 July 1 Aug. 1 Sept. 1 Oct. 1	3,006.42 2,980.49 2,902.09 9,983.48 9,659.43 9,367.95	0 0 7,311.87 0 0 4,215.15	25.93 78.40 230.48 324.05 291.48 206.13	0 0 0 0 0	2,980.49 2,902.09 9,983.48 9,659.43 9,367.95 13,376.97
TOTALS		11,527.02	2,256.47	0	

TABLE VIII

Releases to State of Kansas, A.Ft.

	Kansas	Kansas Transit	Total Releases
	Agreement Account	Loss Account	to Kansas
May	14,281.20	2,085.15	16,366.35
June	0	0	0
July	29,025.22	2,914.53	31,939.75
August	36,347.64	7.44	36,355.08
September	12,264.64	0	12,264.64
October	7,066.21	793.40	7,859.61
TOTALS	98.984.91	5,800.52	104,785.43

TABLE IX
Releases to State of Colorado, A.Ft.

MONTH	ACRE FEET
April May June July August September October	359.52 16,898.80 23,784.59 40,782.30 40,313.70 19,923.00 9,581.30
TOTAL	151,643.21

A. Ft.

Conservation	Kansas	Kansas *	Colorado	Permanent
Pool	Agree. Acct.	Transit Loss Acct.	Agree. Accts.	Pool
0	15,112.19	1,495.65	37,458.78	12,276.97

Total Contents = 67,443.59 A. Ft.

* NOTE: Contents of Kansas Transit Loss Account were transferred to other Agreement Accounts at 0001 Hr., Nov. 1, 1983.