

**FORTY-NINTH ANNUAL REPORT  
OF THE**

**ARKANSAS RIVER  
COMPACT  
ADMINISTRATION**

**1997 COMPACT YEAR**

**November 1, 1996 to October 31, 1997**



\*\*\*\*\*

**PO Box 1106  
Lamar, Colorado 81052**

## **FOREWORD**

Pursuant to Article VIII of the Arkansas River Compact, the Arkansas River Compact Administration (ARCA) is to report annually on its activities. However, for many years the States of Kansas and Colorado have had disputes related to the accountings which have been traditionally reported in its annual reports. With the resolution of certain related disputed issues, the Administration has authorized the publishing of this ARCA Annual Report.

ARCA has established and maintains a website located at:

<https://www.co-ks-arkansasrivercompactadmin.org>

This Annual Report will be posted to this website and this report contains references to other documents that are available.

## Table of Contents

<b>FOREWORD .....</b>	<b>I</b>
<b>LIST OF ABBREVIATIONS AND DEFINITIONS .....</b>	<b>V</b>
<b>1. MEMBERS OF THE ADMINISTRATION.....</b>	<b>1</b>
<b>2. OFFICERS OF THE ADMINISTRATION .....</b>	<b>1</b>
<b>3. STANDING COMMITTEES.....</b>	<b>2</b>
<b>4. MEETINGS .....</b>	<b>2</b>
<b>5. FISCAL .....</b>	<b>4</b>
<b>6. FACTS ABOUT THE JOHN MARTIN RESERVOIR PROJECT .....</b>	<b>4</b>
<b>7. COOPERATIVE STUDIES AND ACTIVITIES .....</b>	<b>7</b>
<b>8. WATER SUPPLY AND RESERVOIR OPERATION .....</b>	<b>8</b>
<b>9. GAGING STATIONS .....</b>	<b>20</b>
<b>10. FINDINGS OF FACT BY THE ADMINISTRATION .....</b>	<b>20</b>
<b>11. INVESTIGATIONS .....</b>	<b>20</b>
<b>12. LITIGATION.....</b>	<b>21</b>
<b>13. RESOLUTIONS.....</b>	<b>22</b>
<b>APPENDIX A – FISCAL MATTERS .....</b>	<b>1</b>
BUDGETS .....	2
ANALYSIS OF SURPLUS ACCOUNT REPORT .....	3
CASH BALANCE STATEMENT .....	4
<b>APPENDIX B – HYDROLOGICAL DATA .....</b>	<b>1</b>
SUMMARY TABULATION .....	2
DISCHARGE: ARKANSAS RIVER AT LAS ANIMAS, COLORADO .....	3
DISCHARGE: PURGATOIRE RIVER NEAR LAS ANIMAS, COLORADO .....	4
RIVER FLOW INTO JOHN MARTIN RESERVOIR .....	5
CONTENTS: JOHN MARTIN RESERVOIR .....	6
OUTFLOW: ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR .....	7
DISCHARGE: ARKANSAS RIVER AT LAMAR, COLORADO .....	8
DISCHARGE: ARKANSAS RIVER NEAR GRANADA, COLORADO .....	9
DISCHARGE: ARKANSAS RIVER NEAR COOLIDGE, KANSAS .....	10
DISCHARGE: FRONTIER DITCH NEAR COOLIDGE, KANSAS .....	11
STATELINE FLOW .....	12
DISCHARGE: ARKANSAS RIVER AT GARDEN CITY, KANSAS .....	13
CONTENTS: JOHN MARTIN RESERVOIR CONSERVATION STORAGE .....	14
TRANSFER OF WATER FROM JMR CONSERVATION STORAGE .....	15
DEMANDS BY COLORADO FOR AGREEMENT ACCOUNT WATER .....	16
DEMANDS BY KANSAS FOR AGREEMENT ACCOUNT WATER .....	17
DIVERSIONS BY DITCHES, COLORADO WATER DISTRICT 14 .....	18
DIVERSIONS BY DITCHES, COLORADO WATER DISTRICT 17 .....	19
DIVERSIONS BY DITCHES, COLORADO WATER DISTRICT 67 .....	20
DIVERSIONS BY DITCHES, KANSAS STATELINE TO GARDEN CITY .....	21
TRANSMOUNTAIN DIVERSIONS INTO THE ARKANSAS BASIN .....	22

<b>APPENDIX C – MEETING INFORMATION .....</b>	<b>1</b>
ARCA NOTICE AND AGENDA .....	2
<b>APPENDIX D – RESOLUTIONS AND OTHER AGREEMENTS.....</b>	<b>1</b>
OFFSET ACCOUNT RESOLUTION .....	2
OFFSET ACCOUNT STIPULATION.....	3
AMENDMENT TO THE OPERATING PRINCIPLES FOR THE TRINIDAD DAM AND RESERVOIR PROJECT AUTHORIZING MUNICIPAL AND INDUSTRIAL USE OF PROJECT WATER.....	4
READOPTED ARCA BY-LAWS.....	5
<b>PLAT 1 – GRAPHICAL REPRESENTATION OF JOHN MARTIN RESERVOIR INFLOWS, OUTFLOWS AND STATELINE FLOW .....</b>	<b>1</b>
<b>PLAT 2 – GRAPHICAL REPRESENTATION OF JOHN MARTIN RESERVOIR ACCOUNTS CONTENT .....</b>	<b>2</b>

## **LIST OF TABLES**

Table 1. John Martin Reservoir project data based on the 1994 resurvey .....	6
Table 2. JMR Annual Operations .....	10
Table 3. JMR Section III Accounts Operation.....	12
Table 4. JMR Conservation Storage Operation .....	14
Table 5. Offset Account Operations .....	15
Table 6. Kansas Section II Account Operation.....	16
Table 7. Transit Loss Account Summary .....	17
Table 8. Colorado Section II Operations .....	18
Table 9. JMR Permanent Pool .....	19

## **LIST OF ABBREVIATIONS AND DEFINITIONS**

**1980 Operating Plan** – Resolution Concerning an Operating Plan for John Martin Reservoir; as amended

**AF** – acre foot; the volume of water required to cover one acre of land to a depth of one foot, which is equal to 325,851 gallons.

**ARCA or Administration** – the Arkansas River Compact Administration

**cfs** – cubic feet per second; volumetric flow measurement of one cubic foot of flow per second

**Compact** – the Arkansas River Compact Entered Into By The States Of Colorado And Kansas, December 14, 1948 (63 Stat. 145 (1949); Kan. Stat. Ann. § 82a-520; Colo. Rev. Stat. § 37-69-101)

**Corps of Engineers** – United States Army Corps of Engineers

**CY** – Compact Year, the water accounting year of the Administration; commences on November 1 of each year and extends to and includes the next succeeding October 31. Source: 1980 Operating Plan.

**DWR** – Division of Water Resources; State agency for either Colorado and/or Kansas

**ft.** – Feet, unit of measure

**FY** – Fiscal Year; ARCA's fiscal year commences July 1 of each year and extends to and includes the next succeeding June 30<sup>th</sup>

**JMAS** – John Martin Accounting System; database used to track inflows, releases, and contents of the various accounts and pools within John Martin Reservoir

**JMR** – John Martin Reservoir

**msl** – Mean sea level

**NGVD** – National Geodetic Vertical Datum of 1929

**Offset Account** – an account in John Martin Reservoir created by ARCA's *Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping* (Offset Account Resolution), as amended.

**OS** – ARCA Operations Secretary

**PWWSP** – Pueblo Winter Water Storage Program

**States** – means the States of Colorado and Kansas.

**Stateline** – means the geographical boundary line between Colorado and Kansas. Source: Compact.

**USBR** – United States Bureau of Reclamation

**USGS** – United States Geological Survey

**Annual Report Of  
Arkansas River Compact  
Administration**

**1997 Compact Year**

November 1, 1996 to October 31, 1997

**TO: THE PRESIDENT OF THE UNITED STATES, AND THE GOVERNORS OF THE STATES OF KANSAS AND COLORADO**

**SIRS:**

Pursuant to Article VIII of the Arkansas River Compact, the Arkansas River Compact Administration submits its Forty-Ninth Annual Report as follows:

**1. MEMBERS of the ADMINISTRATION**

**Representative of the United States:**

Larry Trujillo; Pueblo, Colorado

**Colorado Representatives:**

Daries C. Lile; Denver, Colorado

Carl G. Genova; Pueblo, Colorado

James G. Rogers; Lamar, Colorado

**Kansas Representatives:**

David L. Pope; Topeka, Kansas

Robert Buerkle; Holcomb, Kansas

Eugene Overton; Syracuse, Kansas

**2. OFFICERS of the ADMINISTRATION** (as elected Dec. 10, 1996)

Chairman.....Larry Trujillo

Vice Chairman .....Carl G. Genova

Treasurer .....James G. Rogers

Recording Secretary.....Donald Higbee

Operations Secretary.....Steven J. Witte

Assistant Operations Secretary .....Mark Rude (elected March 11, 1997)

### **3. STANDING COMMITTEES** (as appointed Dec. 10, 1996)

#### **Administrative & Legal Committee:**

Eugene Overton (Chair)

Daries C. Lile

#### **Engineering Committee:**

Carl G. Genova (Chair)

David L. Pope

#### **Operations Committee:**

Robert Buerkle (Chair)

James G. Rogers

The Representative of the United States, Larry Trujillo is an ex-officio member of all standing committees.

### **4. MEETINGS**

#### **Annual Meetings:**

Dec. 10, 1996, Lamar CO

Dec. 9, 1997, Lamar CO

#### **Special Meetings:**

February 5, 1997 (Telephonic)

February 19, 1997 (Telephonic)

March 11, 1997 (Telephonic)

#### **Engineering Committee:**

Dec. 9, 1996, Lamar CO

Dec. 8, 1997, Lamar CO

#### **Operations Committee:**

Dec. 9, 1996, Lamar CO

Dec. 8, 1997, Lamar CO

#### **Administrative & Legal Committee:**

Dec. 9, 1996, Lamar CO

Dec. 8, 1997, Lamar CO

Minutes of the Annual and Special Meetings were kept and have been provided to the Administration and to each State. The minutes of the Annual Meetings also contain summaries of the Administrative & Legal, Engineering and Operations Committee meetings, which were held in association with the respective Annual meetings. The agendas of the committee and Annual meetings are included in Appendix C.



At the beginning of CY 1997 the December 10, 1996 Annual Meeting was held in Lamar, Colorado. Items discussed at the beginning of CY 1997 included:

- Update by Corps of Engineers on channel capacity issues below Pueblo and John Martin Reservoirs;
- Update by USGS on the study of transit losses on the Purgatoire River between Trinidad and Las Animas;
- Initial filling of the enlarged permanent fishery and recreation pool at Trinidad Reservoir by the State of Colorado;
- Status of the USBR's Ten Year Review of Trinidad Reservoir Operations for the period 1985-1994;
- Colorado's request that an additional account be established at JMR to facilitate management and releases of well augmentation water (Offset Account);
- Status of Colorado's Compact compliance efforts; and,
- Requests for changes to Trinidad Project Operating Principles from Purgatoire River Water Conservancy District (PRWCD) and City of Trinidad.

On February 5, February 19, and March 11, 1997 the Administration held Special Telephonic Meetings primarily related to Colorado's request to establish an account in John Martin Reservoir (JMR) to offset depletions to surface water flows by groundwater irrigation pumping. The Administration adopted a *Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping (Offset Account Resolution)* at the March 11<sup>th</sup> special meeting. This resolution authorized an Offset Account in JMR allowing storage up to 20,000 AF with certain terms and conditions. This resolution was subsequently approved on March 17, 1997 by the District Engineer as the duly authorized representative of the Chief of Engineers, U.S. Army Corps of Engineers. Copies of this resolution and a related Stipulation filed in the *Kansas v. Colorado* case are included in Appendix D.

During the March special meeting, the Administration amended and readopted its By-Laws. One change was the creation of an Assistant Operations Secretary as an additional officer of the Administration under the By-Laws Article II. After the By-Laws were readopted, the Administration elected Mark Rude of Garden City, Kansas as the Assistant Operations Secretary. A copy of the readopted By-Laws is included in Appendix D.

The December 9, 1997 Annual Meeting was held in Lamar and the items discussed included:

- The Assistant Operations Secretary presented his first report;
- The Colorado State Engineer presented his first report on Offset Account Operations;
- Colorado reported on its continuing efforts to maintain compliance with the Compact consistent with recent rulings in the *Kansas v. Colorado* litigation;
- The Administration adopted the recompiled By-laws (November 21, 1997);
- Approved an amended Trinidad Operating Principles as one of the five signatories; and
- Adopted financial matters as described in the following section.

## **5. FISCAL**

Article VIII E.(1) of the Compact provides that expenses incident to the Administration of the Compact not paid by the United States shall be borne by the States on the basis of 60% to Colorado and 40% to Kansas. Budgets for such expenses are prepared annually, and the States are assessed their proportionate share of the budgeted expenses at the beginning of each Fiscal Year (FY). The Administration's FY runs from July 1 to June 30.

The fiscal affairs of the Administration for Compact Year 1997 involve portions of the Administration's FY 1996-97 and FY 1997-98. The Treasurer reported on the financial status of the Administration for the relevant periods of those fiscal years at the Annual Meetings held on December 10, 1996 and December 9, 1997.

ARCA budgets for the period November 1, 1996, through October 31, 1997:

- FY 1996-97 budget (2nd revision) adopted Dec. 10, 1996, with anticipated expenditures of \$59,425 and a total assessment to the States of \$62,000 (Kansas = \$24,800, Colorado = \$37,200); and
- FY 1997-98 budget (1st revision) adopted Dec. 10, 1996, had anticipated expenditures of \$59,260 and the total assessment to the States remained at \$62,000 (Kansas = \$24,800, Colorado = \$37,200).

Copies of these budgets are included in this report as Appendix A-1.

At the close of the FY 1996-97 (June 30, 1997) the Administration had a cash balance of \$44,725 as shown in the FY 1996-97 Analysis of Surplus Account Report, which was accepted and approved at the December 9, 1997 Annual Meeting and is included herein as Appendix A-2.

## **6. FACTS ABOUT THE JOHN MARTIN RESERVOIR PROJECT**

The John Martin Reservoir (JMR) Project was built by the United States Army Corps of Engineers (Corps of Engineers). The project was authorized by Congress in the Flood Control Act of June 22, 1936 when the federal responsibility for flood control throughout the country was assigned to the Corps of Engineers. It is located on the Arkansas River, 58 miles upstream from the Colorado-Kansas Stateline and 18 miles upstream from the City of Lamar, Colorado. Construction of the project began in the fall of 1939, but work was suspended due to World War II from the spring of 1943 to the spring of 1946. The project was completed in October 1948, at a cost of about \$15 million. The War Department Civil Appropriation Act of June 24, 1940 changed the name of the project from Caddoa Reservoir Project to John Martin Reservoir Project, in honor of the late Congressman John A. Martin of Colorado. It is operated by the Corps of Engineers, Albuquerque District (New Mexico).

The JMR Project is a part of the comprehensive plan for the control of floods and the development of water resources in the Arkansas River Basin. Based on a 1994 resurvey, JMR contains 259,417 AF of flood control storage between elevations 3851.87 and 3870.00 ft msl. The release of stored flood waters is planned so that when combined with flows originating downstream from the dam, the capacity of the river channel will not be exceeded, providing protection to downstream urban

areas and irrigated farmland. Downstream flood damages prevented by JMR already exceed the cost of the project, and total project benefits to date have surpassed the \$119 million mark.

The reservoir provided for 335,693 AF of storage space for irrigation purposes in the conservation pool below elevation 3851.00 ft msl. Upon request of the Administration, irrigation water for water users as far downstream as Garden City, Kansas is released by the Corps of Engineers through outlet works in the base of the dam.

Recreation and favorable fish and wildlife habitats are also provided by the project. In 1965 Congress authorized a permanent pool with in JMR to improve habitat and recreation values. The Administration subsequently approved the use of up to 15,000 AF (5,000 AF of which is subject to spill) of storage space at JMR for these purposes. The permanent pool can occupy up to 10,000 AF of the flood control space during periods when the conservation pool is full and the reservoir is in flood control operations. This temporary invasion of the flood control space assures a reliable minimum water supply for recreation when water levels later recede. Colorado provides water to the permanent pool pursuant to procedures adopted by the Administration. Reservoir lands are open to public use for outdoor recreation, water sports, fishing, boating, and camping. During construction, some embankment material was obtained from a 75-acre tract of land immediately downstream of the dam. This excavated area, averaging 12 feet deep, filled with water and formed Lake Hasty, now used for year-round recreation. North of the reservoir, a half-mile segment of the historic Santa Fe Trail has been enclosed by a fence and marked with an appropriate sign.

John Martin Dam consists of a concrete gravity structure 1,644 feet long and 118 feet high, and an earth fill structure 2,600 feet long. The concrete gravity structure contains a spillway controlled by sixteen Tainter gates (30 by 64 feet each) and their operating machinery. There are earthen wing dams on either side of the main dam. The north wing dam is 3,700 feet long, connecting to the earth fill structure of the main dam at the north abutment. The south wing dam is 5,800 feet long and connects to the south end of the concrete structure of the main dam. A bituminous-surfaced roadway, 21 feet wide, extends along the crest of the north wing dam, main dam, and south wing dam. The overall length of the structure is approximately 2.6 miles. Detailed project data, based on the 1994 resurvey, is shown on **Table 1**.

**Table 1. John Martin Reservoir project data based on the 1994 resurvey**

<b><u>JOHN MARTIN RESERVOIR DATA</u></b>	
<b>1994 RESURVEY</b>	
<b>DAM</b>	
Total length, feet	13,945
Maximum height above streambed, feet	118
Width of roadway on dam, feet	21
<b>SPILLWAY</b>	
Total length, including piers, feet	1,174
Crest elevation; feet (NGVD)	3,840
Crest gates, 30 feet high x 64 feet wide, each (clear width = 1024 ft)	16
Discharge capacity, cfs (with pool @ reservoir elev. = 3880 ft)	639,200
<b>OUTLET WORKS</b>	
Sluicing conduits, 6 feet x 7.5 feet, each; inlet elev. 3764.25 ft	4
Regulating conduits, 4 feet x 4 feet, each	2
Total outlet capacity, cfs (at elevation 3,851 ft (NGVD))	14,700
<b>RESERVOIR</b>	
Capacity, AF (at top of closed gates elevation. 3870 ft)	605,115
Flood control storage, AF(between elevations 3851 ft and 3870 ft)	259,417
Conservation and recreation storage, AF (elevation 3851.87 ft)	345,698
“Zero” storage elevation, ft	3,779.26
Water surface spillway crest (elevation 3840 ft); acres	8,944
Water surface top of conservation pool, acres (elevation 3851 ft)	11,394
Water surface at top of flood control pool, acres (elev. 3870 ft)	17,151
Drainage area, square miles	18,915

## **7. COOPERATIVE STUDIES and ACTIVITIES**

Article VIII.G.(1) of Arkansas River Compact requires “The Administration to cooperate with the chief official of each of the States of Colorado and Kansas charged with the administration of water rights in their respective states, and with the federal agencies in systematically determining and correlating the facts pertaining to the flow and diversion of the water of the Arkansas River and to the operation and siltation of John Martin Reservoir and other related structures.” Article VIII.G.(2) provides that:

“The director, U. S. Geological Survey, the commissioner of reclamation and the chief of engineers, U. S. Army, are hereby requested to collaborate with the administration and with appropriate state officials in the systematic determination and correlation of data referred to in paragraph G (1) of this article and in the execution of other duties of such officials which may be necessary for the proper administration of this compact.”

Under the Administration By-Laws, these cooperative studies and activities are assigned to the Engineering Committee of the Administration. During the year covered by this report, the Administration has received excellent cooperation from all agencies referred to in the foregoing provisions of the Compact.

The USGS continued the operation of the Compact gaging stations. These gaging stations are described in Section 9 below. The flow from these gaging stations is used in the administration of the Compact and is presented in this report. The USGS briefed the Administration and, where appropriate, sought its input on a variety of water resource studies it was conducting in the Arkansas River basin. During the period covered by this report the USGS continued assessing the data from the four new tributary stream flow gages in Colorado, and reported on hydrograph separation techniques to be used in evaluating that data.

The USGS reported on a study of transit losses on the Purgatoire River between Trinidad Reservoir and its confluence with the Arkansas River near Las Animas, Colorado. The study used existing hydrograph data to determine whether significant losses in fact occurred when delivering water in priority down the Purgatoire. A clearer understanding of such losses will allow the Administration and Colorado officials to better evaluate potential exchanges and other operational issues related to the Trinidad Project. The Purgatoire River Water Conservancy District in cooperation with the Colorado Water Conservation Board paid for approximately half the cost of this \$100,000 project and the Administration contributed \$2,000. The final report entitled: “Evaluation of Streamflow Traveltime and Streamflow Gains and Losses Along the Lower Purgatoire River, Southeastern Colorado, 1984-92” (WRIR 96-4291) was issued by the USGS in May 1997.

The Corps of Engineers continued to operate the conservation pool of John Martin Reservoir in accordance with the terms of the Compact and the resolutions and orders of the Administration. The Corps of Engineers, with funding from the Colorado Water Conservation Board, continued studies of channel capacity issues in two reaches of the Arkansas River: between Pueblo Reservoir and JMR and below JMR to the Stateline. These studies were in response to Administration and local concerns with river stages increasing above historical levels during recent high flow events,

as well as increasing difficulties (higher transit losses) in delivering water to downstream users in Colorado and Kansas during low flow conditions.

In CY 1997, the USBR continued the process to review Trinidad Project operations during the period 1985-1994. A draft report, "Ten Year Review", was issued by USBR in August 1996 and discussion of this draft continued during CY 1997.

## **8. WATER SUPPLY and RESERVOIR OPERATION**

During CY 1997, John Martin Reservoir (JMR) was operated pursuant to *the Resolution Concerning an Operating Plan for John Martin Reservoir* adopted by the Administration on April 24, 1980, and as revised on December 11, 1984 (1980 Operating Plan). Among other things, the 1980 Operating Plan establishes a system of water storage accounts within JMR for both Colorado and Kansas.

Under the 1980 Operating Plan, water is accounted for in JMR as either conservation storage accounts, permanent pool account, other water accounts, or in the flood control storage space. Certain reservoir inflows are distributed into storage accounts for physical release or transfer into other accounts at a later time. These are referred to as "Section II" and "Section III" accounts based on the section of the 1980 Operating Plan under which they were created. These accounts are often referred to as "Article II" and "Article III" accounts.

Accounts established pursuant to Section II:

- Kansas account, and
- Colorado Water District 67 ditch accounts (subsequently divided between the Fort Bent Canal, Keesee Canal, Amity Canal, Lamar Canal, Hyde Canal, Manvel Ditch, X-Y/Graham Ditch, Buffalo Canal, and Sisson-Stubbs Ditch).

Accounts established pursuant to Section III:

- Amity Great Plains Reservoir account,
- Fort Lyon Canal Company account, and
- Las Animas Consolidated Canal Company account.

A Transit Loss Account was also created by the 1980 Operating plan. This account is funded by a 35% storage charge on Section III Account water. The Transit Loss Account water has been released concurrently with Kansas Section II Account to prevent transit losses. Should delivery deficits occur on the Kansas Section II Account releases, such deficits are made up with water destined for the Transit Loss Account. In CY 1997, deliveries of the 35% storage charge above the 1700 AF transit loss account limit, are split 11/35<sup>ths</sup> to Kansas Section II and 24/35<sup>ths</sup> to the Colorado Section II account pursuant to the 1980 Operating Plan.

Beginning in CY 1997, an Offset Account was established separately in JMR by ARCA's *Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping* (Offset Account Resolution). Operations related to the Offset Account are reported on by the Colorado State Engineer at each Annual Meeting.

Data presented in this Annual Report relies on reservoir operations and accounting provided by the Operations Secretary to the Administration each year at the Annual Meeting as required by the 1980 Operating Plan. This *Annual Report of the Operations Secretary Concerning the Operation of John Martin Reservoir* (Operations Secretary Report) includes a daily, monthly and annual accounting of the inflows, releases, and contents of each account using real-time data supplied by the USGS, the Corps of Engineers and the Colorado DWR. More detailed information on reservoir operations are provided in Appendix B.

During this CY, 346,335 AF of water was stored in JMR, 232,156 AF was released to downstream users and 48,626 AF evaporated. These operations resulted in an increase in JMR contents at the end of the CY of 65,553 AF. These reservoir operations are summarized in **Table 2**. Daily hydrologic information including reservoir operations is presented in Appendix B.

**Table 2. JMR Annual Operations**

<b>John Martin Reservoir Annual Operations (AF) Compact Year 1997</b>							
Account	Contents Beg. CY	Inflow to Storage	Transfers In	Evaporation	Transfers Out	Storage Release	Contents End CY
Conservation Storage	0	257,906	11,126	3,404	261,195	0	4,433
Kansas Section II Account	87,775	0	118,721	18,026	0	66,096	122,374
Colorado Section II for Dist. 67 ditches	84,843	0	116,426	16,586	0	100,555	84,843
Section III Accounts (1)	29,581	48,105	40,834	8,582	47,563	856	61,518
Transit Loss Account	19,616	0	3,589	247	19,609	1,705	1,644
Winter Water Holding Account (PWWSP)	0	34,858	0	443	34,415	0	0
Offset Account (2)	0	3,844	4,513	287	0	2,713	5,357
Permanent Pool	8,721	258	0	1,416	0	0	7,562
Flood Control Storage	0	0	0	0	0	0	0
<b>John Martin Reservoir</b>	<b>230,535</b>	<b>346,335</b>	<b>387,055</b>	<b>48,626</b>	<b>387,055</b>	<b>232,156</b>	<b>296,088</b>
<b>Notes</b> 1) Section III Accounts: Amity, Fort Lyon, Las Animas Consolidated 2) Created by the Offset Account Resolution in March 1997							

On November 1, 1996, pursuant to an annual agreement between the Division 2 Engineer (Colorado DWR and ARCA Operations Secretary) and the Garden City Field Office Water Commissioner (Kansas DWR), the 19,609 AF of water in the Transit Loss Account derived from the 35% storage change on Section III deliveries during CY1996 was reallocated between the Kansas and Colorado Section II accounts: Kansas received 6,163 AF (11/35<sup>ths</sup>), and Colorado District 67 ditches 13,446 AF (24/35<sup>ths</sup>). This annual agreement allowed for the total 35% storage



charge to remain undivided in the Transit Loss Account until the end of the CY. Although, annual agreements agreement between the Division 2 and the Garden City Field Office Water Commissioner had been in place for many years, such an annual agreement was not in place for CY 1997.

Also on November 1, 1996, 10,036 AF was transferred into conservation storage from water remaining in the Fort Lyon and Las Animas Consolidated ditches Section III subaccounts. This was water remaining in their respective Section III subaccounts at the end of CY 1996 which was stored under the Pueblo Winter Water Storage Program (PWWSP). This transfer to conservation storage was done pursuant to the 1980 Operating Plan.

Pueblo Winter Water Storage Program: In CY1997, pursuant to the PWWSP and Section III of the 1980 Operating Plan, 34,858 AF was stored in JMR during the period November 15, 1996 to March 15, 1997. On March 20, 1997, the 34,415 AF of accumulated PWWSP water was distributed in accordance with PWWSP allocation procedures into the Section III subaccounts for the Amity, Ft Lyon and Las Animas canal companies. Following receipt of this transfer each individual Section III subaccount was assessed the 35% storage charge (total of 12,045 AF): the first 1,700 AF of storage charge water was allocated to the Transit Loss Account and the remainder was transferred to the Colorado District 67 (7,094 AF, 24/35<sup>ths</sup>) and the Kansas (3,251 AF, 11/35<sup>ths</sup>) accounts.

**Table 3. JMR Section III Accounts Operation**

<b>John Martin Reservoir</b> <b>Section III Accounts Operation (AF)</b> <b>Compact Year 1997</b>							
Month	Contents Beg. Month	Inflow to Storage	Transfers In	Evaporation	Transfers Out	Storage Release	Contents End Month
Nov. '96	29,581	0	0	131	10,036	0	19,413
Dec.	19,413	0	0	88	0	0	19,325
Jan. '97	19,325	0	0	39	0	0	19,286
Feb.	19,286	0	0	100	0	0	19,186
Mar.	19,186	0	36,197	420	14,327	0	40,636
Apr.	40,636	1,832	1,832	571	2,473	160	41,096
May	41,096	1,331	910	924	1,376	0	41,037
June	41,037	32,167	0	1,253	11,259	0	60,692
July	60,692	3,264	1,779	1,929	3,544	0	60,263
Aug.	60,263	9,511	116	1,259	3,955	0	64,675
Sept.	64,675	0	0	1,004	593	0	63,079
Oct. '97	63,079	0	0	865	0	696	61,518
<b>Year Total</b>		<b>48,105</b>	<b>40,834</b>	<b>8,582</b>	<b>47,563</b>	<b>856</b>	
<b>Notes</b> 1) Source: JMAS Accounts 32, 33, 34 summed as JMAS Account 31 2) Winter inflow stored at JMR per Pueblo WWSP and transferred into Sec. III Accounts on March 20, 1997. Amity received 25,536.07 AF, Ft. Lyon received 6324.79 AF, and Las Animas Cons. received 4336.31 AF 3) March transfer out was 35% of inflows, the 1st 1700 AF of which was delivered to Transit Loss Account and the balance distributed to Section II Accounts per 1980 Operation Plan. Winter inflow stored at JMR per Pueblo WWSP and transferred into Sec. III Accounts on March 20, 1997 4) Summer inflows stored in Amity Section III Account pursuant to Great Plains Res. Decree 5) Nov. 1st "Transfer Out" of 10,036 AF was from Ft. Lyon and Las Animas Consolidated Sec. III Accounts to conservation storage as redistribution of their respective account contents which cannot be carried over at end of CY							

Conservation Storage: By March 31, 1997, conservation storage account had received 48,194 AF of inflows since November 1, 1996. The transfer of the accrued conservation storage account water to the Section II accounts began at 0000 hours on April 1, 1997 pursuant to the 1980 Operating Plan as both Kansas and some District 67 ditches were releasing water from their respective Section II Accounts on April 1<sup>st</sup>: Kansas (March 21<sup>st</sup>) and a Colorado District 67 ditch, the Lamar Canal (March 10<sup>th</sup>). Transfer of the winter stored portion of conservation storage into the Section II accounts was completed on April 25<sup>th</sup>.

By practice of the Operations Secretary, Compact inflows are stored in a summer compact water conservation storage subaccount starting on April 1<sup>st</sup>. Upon exhaustion of the winter compact water subaccount, the summer compact water subaccount was then transferred to Section II accounts. Conservation storage account was totally exhausted on April 30<sup>th</sup>. Conservation storage

was transferred such that Kansas received 40% and the Colorado Water District 67 ditches received 60% of conservation storage pursuant to the 1980 Operating Plan.

Periods of runoff from June until the end of CY 1997 resulted in an additional 209,711 AF of conservation storage. This conservation storage was transferred to the Section II Accounts pursuant to the 1980 Operating Plan. During the year a total of 261,195 AF was transferred from conservation storage to the Section II Accounts. Kansas received 104,478 AF (40%), and Colorado District 67 ditches 156,717 AF (60%). At the end of CY 1997 conservation storage had 4,433 AF as shown in **Table 4**.

**Table 4. JMR Conservation Storage Operation**

<b>John Martin Reservoir</b> <b>Conservation Storage Operation (AF)</b> <b>Compact Year 1997</b>							
Month	Contents Beg. Month	Inflow to Storage	Transfer In	Evaporation	Transfer Out	Storage Release	Contents End Month
Nov. '96	0	11,321	10,036	99	0	0	21,258
Dec.	21,258	8,265	0	112	0	0	29,410
Jan. '97	29,410	9,098	0	65	0	0	38,443
Feb.	38,443	9,569	0	229	0	0	47,783
Mar.	47,783	9,942	0	791	0	0	56,934
Apr.	56,934	9,153	0	337	65,750	0	0
May	0	0	0	0	0	0	0
June	0	102,337	0	574	53,758	0	48,005
July	48,005	14,568	0	633	59,864	0	2,076
Aug.	2,076	62,089	497	471	41,602	0	22,590
Sept.	22,590	5,014	593	88	28,109	0	0
Oct. '97	0	16,550	0	4	12,113	0	4,433
<b>Year Total</b>		<b>257,906</b>	<b>11,126</b>	<b>3,404</b>	<b>261,195</b>	<b>0</b>	
<b>Notes</b> 1) Source: JMAS Account 46, rounded to nearest AF. See App. B-15 for daily transfer out values. 2) Nov. [11/1/96] Transfer In to conservation storage from Ft. Lyon and Las Animas Cons. Section III Accounts which cannot carryover contents from prior CY. 3) April Transfer out of winter stored water to Sec. II Accounts (40% to Kansas, 60% to Colorado Ditches) began at 0000 hours on 4/1/96 at rate of 1250 cfs. Transfer of winter stored water completed at 2040 hours on 4/16/97. 4) Aug. [8/27-30/97] Transfer In to conservation storage from Fort Lyon Section III account for upstream exchange during a conservation storage event. 5) Sept. [9/8-11/97] Transfer In to conservation storage from Fort Lyon Section III account for upstream exchange during a conservation storage event. 6) Operations Secretary reported inflow to Cons. Storage in CY 1997 was 269,032.24 AF which is equivalent to the sum of the "Inflow to Storage" and "Transfers In" shown here.							

Offset Account: The Administration authorized an “*Offset Account in John Martin Reservoir for Colorado Pumping*” (Offset Account). In accordance with the Offset Account Resolution, the Colorado State Engineer provides monthly reports to the Administration and the Kansas Chief Engineer on deliveries, releases, and balances of the Offset Account and its subaccounts. Complete daily accountings of all aspects of this account are provided in an annual report from the Colorado State Engineer to the Administration.

Monthly Offset Account operations in CY 1997 are summarized in **Table 5**. Additional detail is provided in Appendix C and can be found in the Colorado State Engineer’s annual Offset Account report. Water stored in the Offset Account is provided by Colorado water users to offset depletions caused by groundwater irrigation pumping. Releases from this account are made upon request by Kansas for the benefit of its water users. A stipulation governed the credit

Colorado received from the Offset Account delivered to Kansas to offset depletions to usable Stateline flows during CY1997 and is included in Appendix D. The determination of Offset Account deliveries to the Stateline became a disputed issue between the States and its resolution was subject of an agreement as described below.

**Table 5. Offset Account Operations**

<b>John Martin Reservoir Offset Account Operation (AF) Compact Year 1997</b>							
Month	Contents Beg. Month	Inflow to Storage	Transfers In	Evaporation	Transfers Out	Storage Release	Contents End Month
Nov. '96	0	0	0	0	0	0	0
Dec.	0	0	0	0	0	0	0
Jan. '97	0	0	0	0	0	0	0
Feb.	0	0	0	0	0	0	0
Mar.	0	0	500	0	0	0	500
Apr.	500	0	0	7	0	0	493
May	493	0	0	11	0	0	482
June	482	685	0	20	0	1,147	0
July	0	137	0	1	0	0	136
Aug.	136	2,403	4,013	95	0	1,144	5,313
Sept.	5,313	396	0	80	0	422	5,207
Oct. '97	5,207	224	0	74	0	0	5,357
<b>Year Total</b>		<b>3,844</b>	<b>4,513</b>	<b>287</b>	<b>0</b>	<b>2,713</b>	
<b>Notes</b> 1) Source: JMAS Account # 30, monthly values, rounded to nearest AF. Reported by Operations Secretary as Table XII. 2) Offset Account created by ARCA Resolution dated Mar. 17, 1997. 3) Numerous subaccounts and internal transfers, this table only summarizes gross operations of the Offset Account. Colorado State Engineer provides detailed accounting of Offset Account in separate report submitted to ARCA each December.							

Releases to Kansas: Kansas called for seven releases (runs) of water from JMR beginning at on March 21, 1997. The Kansas releases occurred at varying release rates and durations until September 2, 1997 when the Kansas Section II Account was empty. During this period 66,076 AF was released from the Kansas Section II Account. Separate Transit Loss Account releases totaling 1,705 AF were made as needed to support deliveries of Kansas Section II Account water to the Stateline. Kansas also requested the release of 2,713 AF of water from the Offset Account. Operations of the Kansas, Offset, and Transit Loss Accounts are summarized in Table 5, Table 6, and Table 7. A procedure to determine the amount deliveries of water delivered to Kansas at the Stateline was not agreed to during CY 1997, but was done in subsequent CY as described below.

Determination of Stateline Deliveries to Kansas: The Stateline deliveries of Kansas Section II and Offset Accounts releases were the subject of disputes between the States. These disputes were ultimately resolved by the adoption of two agreements: *Agreement Concerning The Offset Account*

*In John Martin Reservoir For Colorado Pumping, Determination Of Credits For Delivery Of Water Released For Colorado Pumping, And Related Matters (Offset Account Crediting Agreement) and Agreement on Determination of Transit Loss under the provisions of Section II E (4) of the Resolution Concerning an Operating Plan for John Martin Reservoir (Section II Agreement).*

For CY 1997, the States agreed that Kansas Section II releases made were satisfied by an equivalent Stateline flow. Additionally, the States agreed to a quantification of CY 1997 Offset Account delivery by using these agreements.

**Table 6. Kansas Section II Account Operation**

<b>John Martin Reservoir</b> <b>Kansas Section II Account Operation (AF)</b> <b>Compact Year 1997</b>							
Month	Contents Beg. Month	Inflow to Storage	Transfers In	Evaporation	Transfers Out	Storage Release	Contents End Month
Nov. '96	87,775	0	6,163	614	0	0	93,324
Dec.	93,324	0	0	423	0	0	92,901
Jan. '97	92,901	0	0	190	0	0	92,711
Feb.	92,711	0	0	479	0	0	92,232
Mar.	92,232	0	3,251	1,362	0	8,281	85,840
Apr.	85,840	0	26,300	1,305	0	11,227	99,608
May	99,608	0	172	2,213	0	2,473	95,094
June	95,094	0	24,681	2,547	0	2,579	114,650
July	114,650	0	24,306	3,407	0	39,596	95,953
Aug.	95,953	0	17,759	1,997	0	1,940	109,775
Sept.	109,775	0	11,244	1,845	0	0	119,173
Oct. '97	119,173	0	4,845	1,645	0	0	122,374
<b>Year Total</b>		<b>0</b>	<b>118,721</b>	<b>18,026</b>	<b>0</b>	<b>66,096</b>	

Transit Loss Account: The summary for the Transit Loss Account operations is shown in **Table 7.**

**Table 7. Transit Loss Account Summary**

<b>John Martin Reservoir Transit Loss Account Summary (AF) Compact Year 1997</b>							
Month	Contents Beg. Month	Inflow to Storage	Transfers In	Evaporation	Transfers Out	Storage Release	Contents End Month
Nov. '96	19,616	0	0	6	19,609	0	0
Dec.	0	0	0	0	0	0	0
Jan. '97	0	0	0	0	0	0	0
Feb.	0	0	0	0	0	0	0
Mar.	0	0	1,700	7	0	617	1,075
Apr.	1,075	0	641	17	0	0	1,700
May	1,700	0	35	38	0	0	1,697
June	1,697	0	542	42	0	497	1,700
July	1,700	0	617	54	0	590	1,673
Aug.	1,673	0	54	34	0	0	1,693
Sept.	1,693	0	0	26	0	0	1,667
Oct. '97	1,667	0	0	23	0	0	1,644
<b>Year Total</b>		<b>0</b>	<b>3,589</b>	<b>247</b>	<b>19,609</b>	<b>1,705</b>	
<b>Notes</b> 1) Source: JMAS Account 18. 2) Nov. transfer out was distribution of excess contents to Section II Accounts, 24/35 <sup>ths</sup> to Colorado ditches and 11/35 <sup>ths</sup> to Kansas. 3) Transfers in are from Section III Accounts at 35% of inflow to them. 4) No annual agreement between Kansas and Colorado on delay of excess transit loss account distribution in CY 1997. Transit Loss Account contents capped at 1,700 AF. Transfers in that would have exceeded volume of 1,700 AF were instead redistributed to Section II Accounts per 1980 Operating Plan.							

Releases to Colorado: Combined operations of the Section II accounts for the ditches in Colorado Water District 67 are shown in **Table 8**.

**Table 8. Colorado Section II Operations**

<b>John Martin Reservoir Colorado District 67 Ditches Section II Accounts Operation (AF) Compact Year 1997</b>							
Month	Contents Beg. Month	Inflow to Storage	Transfers In	Evaporation	Transfers Out	Storage Release	Contents End Month
Nov. '96	84,843	0	13,446	633	0	1,560	96,097
Dec.	96,097	0	0	436	0	0	95,661
Jan. '97	95,661	0	0	195	0	0	95,466
Feb.	95,466	0	0	494	0	0	94,973
Mar.	94,973	0	7,094	1,420	0	6,105	94,541
Apr.	94,541	0	39,450	1,427	0	29,513	103,050
May	103,050	0	20,531	2,080	20,272	15,444	85,784
June	85,784	0	39,794	2,184	0	31,754	91,640
July	91,640	0	36,706	2,807	0	38,110	87,429
Aug.	87,429	0	27,118	1,804	4,000	11,648	97,094
Sept.	97,094	1,364	16,865	1,512	0	23,177	90,635
Oct. '97	90,635	0	7,268	1,228	0	3,475	93,200
<b>Year Total</b>		<b>1,364</b>	<b>208,271</b>	<b>16,220</b>	<b>24,272</b>	<b>160,787</b>	
<b>Notes</b> 1) Source: JMAS Accounts 7, 19, 20, and 35. 2) Sept. inflow was to City of Lamar temporary account per ARCA approval. Although not authorized as a Section II Account under the 1980 Operating Plan, the City's Fry-Ark Project water, after temporary storage at JMR is diverted at the Ft. Bent Canal, a District 67 structure. In CY 1997, the Lamar temporary account received 1364.45 AF, 24.43 AF was evaporated, 1134.08 AF was released and 205.94 AF remained in the temporary account at the end of CY 1997. This balance was released in November 1997 3) Transfer Explanations: a) November transfer in is Colorado share of excess transit loss account water (24/35). b) March transfer in is redistribution of inflows to transit loss account in excess of 1,700 AF under 1980 Operating Plan c) April - Oct. transfers in are from Conservation Storage d) May transfer out of 20,272 AF was a transfer between Dist. 67 accounts for seasonal adjustment e) On August 4, a transfer out of 4000 AF made from XY's District 67 account to the Offset Account. Operations Secretary treated as a storage release in Table X of his report							

**City of Lamar:** In CY 1997, the City of Lamar again received approval to use a temporary storage account to regulate its Fryingpan-Arkansas Project (transmountain) water under procedures approved by the Administration and described in the Operations Secretary Report. In September, 1,364 AF of Fry-Ark project water was delivered into a temporary account. This City's water is subsequently released from the temporary account and is delivered to the Ft. Bent Canal for use in the City's well field recharge.



Amity Canal's Section III Account: During the summer storage season 48,105 AF of inflow was stored in the Amity Canal's Section III account pursuant to the Great Plains Reservoir decree. The 35% storage charge was transferred into the Transit Loss, the Colorado and Kansas Section II Accounts. Water stored in Amity's Section III subaccount can be carried over from one CY to the next.

JMR Permanent Pool: At the beginning of CY1997, the JMR permanent pool contained 8,721 AF. In August, 258 AF of water was stored in the JMR permanent pool pursuant to the Colorado Division of Wildlife's Muddy Creek Reservoir decree, an Administration approved source. After an evaporation charge of 1,416 AF was assessed, the pool contained 7,562 AF at the close of the CY as shown in **Table 9**.

**Table 9. JMR Permanent Pool**

<b>John Martin Reservoir Permanent Pool Operation (AF) Compact Year 1997</b>							
Month	Contents Beg. Month	Inflow to Storage	Transfers In	Evaporation	Transfers Out	Storage Release	Contents End Month
Nov. '96	8,721	0	0	57	0	0	8,663
Dec.	8,663	0	0	39	0	0	8,624
Jan. '97	8,624	0	0	18	0	0	8,607
Feb.	8,607	0	0	45	0	0	8,562
Mar.	8,562	0	0	127	0	0	8,435
Apr.	8,435	0	0	118	0	0	8,317
May	8,317	0	0	187	0	0	8,131
June	8,131	0	0	197	0	0	7,934
July	7,934	0	0	247	0	0	7,687
Aug.	7,687	258	0	156	0	0	7,789
Sept.	7,789	0	0	122	0	0	7,667
Oct. '97	7,667	0	0	105	0	0	7,562
<b>Year Total</b>		<b>258</b>	<b>0</b>	<b>1,416</b>	<b>0</b>	<b>0</b>	
<b>Notes</b> 1) Source: JMAS Account 5. 2) August inflow pursuant to Colorado DOW Muddy Creek Reservoir decree.							

End of Compact Year: CY 1997 ended at 2400 hours on October 31, 1997 with the JMR content of 296,088 AF. JMR contained 65,553 AF more water than at the beginning of CY 1997. The contents at the end of the CY were allocated as shown in Table 2. Peak content in JMR for CY 1996 was reached on June 29, 1997 with 324,733AF in storage and the minimum content was on November 1, 1996 with 230,991 AF in storage.

## **9. GAGING STATIONS**

The USGS operated eight (8) streamflow gaging stations (Compact stations) under their "Collection of Basic Records" program and through funding agreements with the Corps of Engineers and the Administration during CY 1997. Daily flows for each of these stations are presented in Appendix B. Since 1992 all Compact stations have been linked via satellite for real-time data collection and access. The availability of this real-time data has facilitated improved water management in the basin. For federal fiscal year 1996-1997 (October 1, 1996 to September 30, 1997) the Administration approved cooperative agreements with the Kansas and Colorado Districts of the USGS in the amount of \$60,520. The Administration was assessed one half of this amount (\$30,260).

And for the operation of five (5) tributary stations in Colorado:

1. Apishapa River Near Fowler, Colorado
2. Big Sandy above Amity Canal
3. Big Sandy Creek Near Lamar
4. Wild Horse Creek above Holly
5. Two Buttes at Holly

Emphasis was again placed on obtaining more field data, particularly in the form of discharge measurements at various stages of flow. Additional measurements were also made by personnel of the Colorado State Engineer, which were incorporated into the records as appropriate. The only significant problem at the stations during the year was the continuing unstable channels and controls.

In addition, Colorado operates an extensive network of gages at other locations on the Arkansas River, its tributaries, and at all major diversion points. Real-time data is transmitted by satellite from these stations and made available to all interested parties at a significant cost to the State of Colorado. In CY 1997, the Administration contributed \$8,400 toward the cost of transmitting this real-time data and making it available.

## **10. FINDINGS of FACT by the ADMINISTRATION**

There were no findings of fact made by the Administration during Compact Year 1997.

## **11. INVESTIGATIONS**

There were no investigations undertaken by the Administration during Compact Year 1997.

## **12. LITIGATION**

*Kansas v. Colorado*: In September 1997, Special Master Arthur L. Littleworth issued his Second Report in *Kansas v. Colorado*, No.105 Original, U.S. Supreme Court. His recommendations included the following: that the Court approve the Stipulation of the States quantifying depletions to usable Stateline flow caused by post compact pumping in Colorado for the period 1950-85 in the amount of 328,505 AF; that the depletions to usable Stateline flow for the 1986-94 period be determined to be 91,565 AF; that the Court approve the Stipulation of the States, which together with the Resolution of the Administration, established the Offset Account for the storage and delivery of replacement water to Kansas to offset depletions of usable Stateline flow; and that evidence be received on a suitable remedy for past Compact violations, whether such remedy be in water or money. If the Court accepted his recommendations, the Special Master further recommended that the case be remanded for further evidence and conclusion of the remedy phase of the trial.

As this report was prepared in 2020, the following is a summary of the *Kansas v Colorado*, No. 105, Original, that was filed in 1985 by Kansas to enforce the terms of the Compact. The U.S. Supreme Court appointed a Special Master, who heard this case and made recommendations to the Court. A total of five reports were produced by the Special Master. The first report was issued in July 1994 and consisted of three volumes. The second report was issued in September 1997. The third report was issued in August 2000. The fourth report was issued in November 2003. The fifth and final report was issued in February 2008 and consisted of three volumes; Volumes II and III are the Judgement and Decree and related appendices.

There were four segments to the trial. The first segment of the trial was the liability phase. From Section II, volume I, of the Special Master's fifth and final report, there were three major issues during this phase: (1) whether the increase in groundwater pumping in Colorado since adoption of the Compact had violated Article IV-D; (2) whether Colorado had violated the Compact through implementation of the Winter Water Storage Program in Pueblo Reservoir; and (3) whether operation of Trinidad Reservoir had violated the Compact. The Special Master found in favor of Kansas on the first issue, but dismissed the second and third issues. The second segment of the trial focused on quantification of depletions to usable Stateline flow. Depletions for the period 1950-85 were 328,505 acre-feet; depletions for the period 1986-94 were 91,565 acre-feet; and depletions for the period 1995-96 were 7,935 acre-feet resulting in a total of 428,005 acre-feet of depletions to usable Stateline flows from 1950 through 1996. The third segment of the trial focused on Colorado's repayment for Compact violations which were determined in the amount of \$34,615,146. The fourth and final segment of the trial focused on future determination of Compact compliance.

Between the Special Master's fourth and fifth reports there were approximately 29 issues identified by the States that required resolution prior to a Judgement and Decree. Some issues were withdrawn, the majority settled by agreements between the States or by specific Orders of the Special Master, and one issue was sent to arbitration. The agreements between the States are included in the Judgement and Decree as appendices.

Since the conclusion of the litigation in March 2009 amendments to appendices within the Judgement and Decree have occurred. All reports of the special master and amendments to appendices can be found on the U.S. Supreme Court's website:

<https://www.supremecourt.gov/SpecMastRpt/SpecMastRpt.aspx>.

*Highland and Nine Mile v. ARCA: Highland Irrigation Co., et al. v. Arkansas River Compact Administration, et al.; Case No. 92-C-1151, US District Court, District of Colorado:* At the December 9, 1997, Annual Meeting the Administration received a final status report on this case and a related set of cases in the Colorado Courts. The Colorado cases are described in the 1994, 1995, and 1996 Annual Reports and involved, amongst other issues, a challenge to the validity of the 1980 Operating Plan by several Colorado water users.

In 1996, the Colorado Supreme Court determined that adoption of the 1980 Operating Plan was a valid exercise of ARCA's authority under the Compact. Following that determination the federal case (92-C-1151) involving ARCA was dismissed with prejudice on May 6, 1997, all parties bearing their own costs. As Case 1151 had been stayed for nearly the entire time since it was filed in 1992 those costs were minimal. The Administration thanked its Special Counsel in the federal case, Mr. William Hillhouse, and ended his contract for services in CY 1997. Mr. Hillhouse's case files were subsequently turned over to the Recording Secretary for preservation.

### **13. RESOLUTIONS**

The Administration passed:

*Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping*

*Stipulation Re Offset Account in John Martin Reservoir*

*Resolution of the Arkansas River Compact Concerning an Amendment to the Operating Principles for the Trinidad Dam and Reservoir Project Authorizing Municipal and Industrial Use of Project Water (adopted December 9, 1997)*

*By-Laws of Arkansas River Compact Administration (As readopted December 9, 1997)*

## **Appendix A – Fiscal Matters**

## Budgets

# STATE OF COLORADO

## Colorado Water Conservation Board Department of Natural Resources

721 Centennial Building  
1313 Sherman Street  
Denver, Colorado 80203  
Phone: (303) 866-3441  
FAX: (303) 866-4474



Ray Romer  
Governor  
James S. Lochhead  
Executive Director, DNR  
Darius C. Uile, P.E.  
Director, CWCB

### MEMORANDUM

TO: Chairman and Members, Arkansas River Compact Administration  
Via FAX

FROM: Steve Miller *SK Miller*

DATE: December 5, 1997

SUBJECT: ARCA Budget Matters, 1997 Annual Meeting

The following materials are submitted for your review regarding budget actions that need to be taken at the December 9, 1997 Annual Meeting:

1. FY 97-98 Budget with proposed second revision. Expenditures to date are generally in line with the budget, but I've suggested changes with regard to the USGS proposal for a transit loss study below JMR and annual report printing.
2. FY 98-99 Budget with proposed first revision, again an attempt to accommodate the USGS proposal for a transit loss study below JMR and a small adjustment for annual report printing.
3. FY 99-2000 Budget, a proposed draft for first adoption.
4. Analysis of ARCA Surplus Account Spreadsheet to show the projected cash balances through the current budget cycle.

Please note that my attempt to fit a portion of the costs of the proposed USGS transit loss study into the budgets is only a preliminary example and an effort to begin discussion of this item. It does not represent Colorado's position on how much of the study ARCA should fund, nor the schedule on which we should proceed. Also I have proposed a 20% increase in assessments for FY99-00 which certainly needs further discussion.

In addition to budget adoption, ARCA also needs to affirm the USGS cooperative agreements for federal FY 98, with the Kansas [\$6,915] and Colorado [\$24,475] Districts. This is the second year that ARCA has been asked to and agreed to enter into the cooperative agreements before the Annual Meeting. These amounts are payable from the Administration's FY 98-99 budget (i.e., USGS bills us in September 1998 and ARCA pays in November 1998), and sufficient funds are already budgeted.

cc: Operations Secretary Witte (w/enc.)  
Recording Secretary Higbee (w/enc.)  
Wendy Weiss

DRAFT FOR REVIEW AT DEC. 9, 1997 ANNUAL MEETING  
**ARKANSAS RIVER COMPACT ADMINISTRATION**  
**FY 1997 - 98 BUDGET, 2nd Revision**  
 (July 1, 1997 - June 30, 1998)

<b>I. EXPENDITURES</b>		CURRENT	PROPOSED	ADOPTED
<b>A. PROFESSIONAL SERVICE CONTRACTS</b>				
1. Treasurer		\$2,000		\$2,000
2. Recording Secretary		\$2,000		\$2,000
3. Operations Secretary		\$6,100		\$6,100
4. Auditor Fee		\$400		\$400
5. Court Reporter Fee		\$1,000		\$1,000
	subtotal services	\$11,500		\$11,500
<b>B. GAGING STATIONS &amp; STUDIES</b>				
1. U.S.G.S. Colorado District Joint Funding fed. FY96-97		\$23,535		\$23,535
2. U.S.G.S. Kansas District Joint Funding fed. FY96-97		\$6,725		\$6,725
3. State of Colorado Satellite System		\$8,400		\$8,400
4. U.S.G.S Cooperative Studies [JMR TL 11/18/97 proposal]		\$0		\$20,000
	subtotal gaging	\$38,660		\$58,660
<b>C. OPERATING EXPENSES</b>				
1. Treasurer Bond		\$100		\$100
2. Annual Report Printing (CY1994, 1995, & 1996)		\$4,000		\$8,000
3. Telephone		\$1,200		\$1,200
4. Miscellaneous Office Expense		\$300		\$300
5. Postage/Copying/Supplies		\$400		\$400
6. Meetings		\$500		\$500
7. Travel		\$0		\$0
8. Rent		\$600		\$600
	subtotal operating	\$7,100		\$9,100
<b>D. OTHER</b>				
1. Equipment		\$0		\$0
2. Contingency		\$2,000		\$2,000
3. Litigation		\$0		\$0
	subtotal other	\$2,000		\$2,000
<b>TOTAL ALL EXPENDITURES</b>		<del>\$59,260</del>		<del>\$81,260</del>
<b>II. INCOME</b>				
<b>A. ASSESSMENTS</b>				
1. Colorado (60%)		\$37,200		\$37,200
2. Kansas (40%)		\$24,800		\$24,800
	subtotal assessments	\$62,000		\$62,000
<b>B. OTHER</b>				
1. Interest Earnings		\$1,000		\$1,000
2. Miscellaneous		\$0		\$0
	subtotal other	\$1,000		\$1,000
<b>TOTAL ALL INCOME</b>		\$63,000		\$63,000
<b>III. CASH SURPLUS ACCOUNT</b>				
<b>A. EXPENDITURES FROM SURPLUS</b>				<del>(\$18,260)</del>
<b>B. ADDITION TO SURPLUS</b>				<del>\$3,740</del>

Adopted by the Arkansas River Compact Administration at its December 12, 1995 Annual Meeting, and revised at its December 10, 1996 Annual Meeting, and revised again at its December 9, 1997 Annual Meeting.

James Rogers, Treasurer

Date



M

	CURRENT	PROPOSED	ADOPTED
1. <u>Section 10.01</u>			
2. <u>Section 10.02</u>			
3. <u>Section 10.03</u>			
4. <u>Section 10.04</u>			
5. <u>Section 10.05</u>			
6. <u>Section 10.06</u>			
7. <u>Section 10.07</u>			
8. <u>Section 10.08</u>			
9. <u>Section 10.09</u>			
10. <u>Section 10.10</u>			
11. <u>Section 10.11</u>			
12. <u>Section 10.12</u>			
13. <u>Section 10.13</u>			
14. <u>Section 10.14</u>			
15. <u>Section 10.15</u>			
16. <u>Section 10.16</u>			
17. <u>Section 10.17</u>			
18. <u>Section 10.18</u>			
19. <u>Section 10.19</u>			
20. <u>Section 10.20</u>			
21. <u>Section 10.21</u>			
22. <u>Section 10.22</u>			
23. <u>Section 10.23</u>			
24. <u>Section 10.24</u>			
25. <u>Section 10.25</u>			
26. <u>Section 10.26</u>			
27. <u>Section 10.27</u>			
28. <u>Section 10.28</u>			
29. <u>Section 10.29</u>			
30. <u>Section 10.30</u>			
31. <u>Section 10.31</u>			
32. <u>Section 10.32</u>			
33. <u>Section 10.33</u>			
34. <u>Section 10.34</u>			
35. <u>Section 10.35</u>			
36. <u>Section 10.36</u>			
37. <u>Section 10.37</u>			
38. <u>Section 10.38</u>			
39. <u>Section 10.39</u>			
40. <u>Section 10.40</u>			
41. <u>Section 10.41</u>			
42. <u>Section 10.42</u>			
43. <u>Section 10.43</u>			
44. <u>Section 10.44</u>			
45. <u>Section 10.45</u>			
46. <u>Section 10.46</u>			
47. <u>Section 10.47</u>			
48. <u>Section 10.48</u>			
49. <u>Section 10.49</u>			
50. <u>Section 10.50</u>			
51. <u>Section 10.51</u>			
52. <u>Section 10.52</u>			
53. <u>Section 10.53</u>			
54. <u>Section 10.54</u>			
55. <u>Section 10.55</u>			
56. <u>Section 10.56</u>			
57. <u>Section 10.57</u>			
58. <u>Section 10.58</u>			
59. <u>Section 10.59</u>			
60. <u>Section 10.60</u>			
61. <u>Section 10.61</u>			
62. <u>Section 10.62</u>			
63. <u>Section 10.63</u>			
64. <u>Section 10.64</u>			
65. <u>Section 10.65</u>			
66. <u>Section 10.66</u>			
67. <u>Section 10.67</u>			
68. <u>Section 10.68</u>			
69. <u>Section 10.69</u>			
70. <u>Section 10.70</u>			
71. <u>Section 10.71</u>			
72. <u>Section 10.72</u>			
73. <u>Section 10.73</u>			
74. <u>Section 10.74</u>			
75. <u>Section 10.75</u>			
76. <u>Section 10.76</u>			
77. <u>Section 10.77</u>			
78. <u>Section 10.78</u>			
79. <u>Section 10.79</u>			
80. <u>Section 10.80</u>			
81. <u>Section 10.81</u>			
82. <u>Section 10.82</u>			
83. <u>Section 10.83</u>			
84. <u>Section 10.84</u>			
85. <u>Section 10.85</u>			
86. <u>Section 10.86</u>			
87. <u>Section 10.87</u>			
88. <u>Section 10.88</u>			
89. <u>Section 10.89</u>			
90. <u>Section 10.90</u>			
91. <u>Section 10.91</u>			
92. <u>Section 10.92</u>			
93. <u>Section 10.93</u>			
94. <u>Section 10.94</u>			
95.			

DRAFT FOR REVIEW AT DEC. 9, 1997 ANNUAL MEETING  
ARKANSAS RIVER COMPACT ADMINISTRATION  
**FY 1999 - 2000 BUDGET**  
(July 1, 1999 - June 30, 2000)

<b><u>I. EXPENDITURES</u></b>		<b>PROPOSED</b>
<b>A. PROFESSIONAL SERVICE CONTRACTS</b>		
1. Treasurer		\$2,000
2. Recording Secretary		\$2,000
3. Operations Secretary		\$6,100
4. Auditor Fee		\$400
5. Court Reporter Fee		\$1,000
	<b>subtotal services</b>	<b>\$11,500</b>
<b>B. GAGING STATIONS &amp; STUDIES</b>		
1. U.S.G.S. Colorado District Joint Funding fed. FY98-99		\$25,700
2. U.S.G.S. Kansas District Joint Funding fed. FY98-99		\$7,200
3. State of Colorado Satellite System		\$10,500
	<b>subtotal gaging</b>	<b>\$43,400</b>
<b>C. OPERATING EXPENSES</b>		
1. Treasurer Bond		\$100
2. Annual Report Printing (CY1998)		\$2,000
3. Telephone		\$1,200
4. Miscellaneous Office Expense		\$300
5. Postage/Copying/Supplies		\$400
6. Meetings		\$500
7. Travel		\$0
8. Rent		\$600
	<b>subtotal operating</b>	<b>\$5,100</b>
<b>D. OTHER</b>		
1. Equipment		\$0
2. Contingency		\$2,000
3. Litigation		\$0
	<b>subtotal other</b>	<b>\$2,000</b>
<b>TOTAL ALL EXPENDITURES</b>		<b>\$62,000</b>
<b><u>II. INCOME</u></b>		
<b>A. ASSESSMENTS</b>		
1. Colorado (60%)		\$40,800
2. Kansas (40%)		\$27,200
	<b>subtotal assessments</b>	<b>\$68,000</b>
<b>B. OTHER</b>		
1. Interest Earnings		\$1,000
2. Miscellaneous		\$0
	<b>subtotal other</b>	<b>\$1,000</b>
<b>TOTAL ALL INCOME</b>		<b>\$69,000</b>
<b><u>III CASH SURPLUS ACCOUNT</u></b>		
<b>A. EXPENDITURES FROM SURPLUS</b>		<b>\$7,000</b>
<b>B. ADDITION TO SURPLUS</b>		

Adopted by the Arkansas River Compact Administration at its December 9, 1997 Annual Meeting.

James Rogers, Treasurer

Date

## **Analysis of Surplus Account Report**

# **ARKANSAS RIVER COMPACT ADMINISTRATION** **ANALYSIS OF ARCA SURPLUS ACCOUNT**

	ACTUAL FY87-88	ACTUAL FY88-89	ACTUAL FY89-90	ACTUAL FY90-91	ACTUAL FY91-92	ACTUAL FY92-93	ACTUAL FY93-94	ACTUAL FY94-95	ACTUAL FY95-96	ACTUAL FY96-97	EST. FY97-98	EST. FY98-99	EST. FY99-00
<b>OPEN CASH BALANCE</b>	\$57,800	\$51,300	\$46,700	\$34,890	\$29,949	\$22,382	\$34,983	\$39,338	\$52,820	\$34,936	\$44,725	\$48,465	\$52,705
<b>INCOME</b>													
REG. ASSESS COLORADO	\$12,000	\$12,000	\$12,000	\$15,000	\$15,750	\$23,400	\$24,000	\$24,000	\$30,000	\$37,200	\$37,200	\$37,200	\$40,800
REG. ASSESS KANSAS	\$8,000	\$8,000	\$8,000	\$10,000	\$10,500	\$15,600	\$16,000	\$16,000	\$20,000	\$24,800	\$24,800	\$24,800	\$27,200
SPEC. ASSESS COLORADO	\$0	\$0	\$0	\$0	\$0	\$0	\$7,800	\$6,000	\$0	\$0	\$0	\$0	\$0
SPEC. ASSESS KANSAS	\$0	\$0	\$0	\$0	\$0	\$5,200	\$0	\$4,000	\$0	\$0	\$0	\$0	\$0
INTEREST	\$3,400	\$4,200	\$3,100	\$2,817	\$1,716	\$1,398	\$1,128	\$1,698	\$977	\$1,094	\$1,000	\$1,000	\$1,000
MISC.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INCOME</b>	<b>\$23,400</b>	<b>\$24,200</b>	<b>\$23,100</b>	<b>\$27,817</b>	<b>\$27,966</b>	<b>\$45,598</b>	<b>\$48,928</b>	<b>\$51,698</b>	<b>\$50,977</b>	<b>\$63,094</b>	<b>\$63,000</b>	<b>\$63,000</b>	<b>\$69,000</b>
<b>EXPENSES</b>	<b>\$29,900</b>	<b>\$28,800</b>	<b>\$34,900</b>	<b>\$32,758</b>	<b>\$35,533</b>	<b>\$32,997</b>	<b>\$44,573</b>	<b>\$38,216</b>	<b>\$68,861</b>	<b>\$53,305</b>	<b>\$59,260</b>	<b>\$58,760</b>	<b>\$62,000</b>
<b>OVER/(UNDER)</b>	<b>(\$6,500)</b>	<b>(\$4,600)</b>	<b>(\$11,800)</b>	<b>(\$4,941)</b>	<b>(\$7,567)</b>	<b>\$12,601</b>	<b>\$4,355</b>	<b>\$13,482</b>	<b>(\$17,884)</b>	<b>\$9,789</b>	<b>\$3,740</b>	<b>\$4,240</b>	<b>\$7,000</b>
<b>CLOSE CASH BALANCE</b>	<b>\$51,300</b>	<b>\$46,700</b>	<b>\$34,900</b>	<b>\$29,949</b>	<b>\$22,382</b>	<b>\$34,983</b>	<b>\$39,338</b>	<b>\$52,820</b>	<b>\$34,936</b>	<b>\$44,725</b>	<b>\$48,465</b>	<b>\$52,705</b>	<b>\$59,705</b>

FY1996-97 Actual figures are based on FY 96-7 Audit and are preliminary as of 12/4/97, pending ARCA approval of audit

Estimated surplus for FY97-98, 98-99, and 99-2000 is based on proposed budgets submitted for ARCA review at 12/9/97 Annual Meeting.

## Cash Balance Statement

## Account Balances Report

As of 12/5/97

Page 1

Acct	12/5/97 Balance
<b>ASSETS</b>	
Cash and Bank Accounts	
Checking-VSB # 11-039863-3	128.76
Money Market-VSB # 11-039862-5	38,480.00
Petty Cash	0.00
<b>TOTAL Cash and Bank Accounts</b>	<b>38,608.76</b>
<b>TOTAL ASSETS</b>	<b>38,608.76</b>
<b>LIABILITIES</b>	<b>0.00</b>
<b>OVERALL TOTAL</b>	<b>38,608.76</b>

## **Appendix B – Hydrological Data**

## Summary Tabulation

Compiled by Colorado Water Conservation Board (AF)  
Compact Year 1997

Station / Data	Source	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Year
Arkansas River above Pueblo		13,450	5,060	9,680	9,300	40,160	58,840	82,790	236,700	88,220	62,190	31,140	26,480	664,010
Arkansas River at Las Animas	App B-2	10,770	10,040	10,190	20,530	14,050	4,390	13,360	159,600	9,430	78,290	6,780	23,360	360,790
Purgatoire River near Las Animas	App B-3	3,270	1,980	1,950	1,740	1,490	1,030	1,120	5,350	1,200	9,030	2,220	4,110	34,490
River Flow into John Martin Res.		14,040	12,020	12,140	22,270	15,540	5,420	14,480	164,950	10,630	87,320	9,000	27,470	395,280
End Month JMR Contents (1)	App B-4	243,000	255,000	268,000	289,000	288,000	254,000	233,000	325,000	255,000	309,000	287,000	296,000	N/A
Net Change in JMR Contents	calculated	12,465	12,000	13,000	21,000	(1,000)	(34,000)	(21,000)	92,000	(70,000)	54,000	(22,000)	9,000	65,465
Evaporation from John Martin Res.	Table 1	1,547	1,128	527	1,453	4,407	3,781	5,453	6,816	9,077	5,816	4,677	3,944	48,626
Outflow from John Martin Res.	App B-5	1,660	235	221	179	15,610	41,610	36,870	42,580	81,190	20,680	29,790	13,930	284,555
Arkansas River at Lamar		3,230	3,490	3,760	2,960	8,750	10,540	4,590	5,860	41,940	23,240	3,860	3,650	115,870
Arkansas River near Granada		7,890	8,140	9,020	8,130	13,960	15,070	7,840	9,650	42,080	39,510	9,880	10,170	181,340
Arkansas River near Coolidge		13,820	13,930	12,970	11,300	17,740	24,280	15,530	17,070	45,800	62,080	20,420	20,430	275,370
Frontier Ditch near Coolidge		0	0	0	0	0	212	1,180	867	1,620	826	1,550	337	6,592
Diversions by ditches in Colorado District 67	App B-12	5,074	169	60	0	6,889	38,484	39,718	41,408	52,638	19,274	37,135	16,894	257,740
Arkansas River at Stateline	App B-6	13,820	13,930	12,970	11,300	17,740	24,492	16,710	17,937	47,420	62,906	21,970	20,767	281,962
Arkansas River at Garden City		12,014	12,425	12,756	9,110	7,712	3,808	7,842	12,278	30	39,173	9,804	14,273	141,225
Diversions by ditches in Kansas (2)	App B-13	268	0	0	2,270	6,208	16,146	7,302	4,475	31,650	8,658	9,300	5,108	91,385

Notes:

- (1) Beginning contents of JMR at 0001 hours, Nov. 1, 1996 was 230,535 AF.
- (2) Diversions by ditches in Kansas include 1,352 AF diverted by Frontier and returned to the River, and an uncalculated amount returned to the River by the South Side Ditch.



## Discharge: Arkansas River at Las Animas, Colorado

USGS Published Records, Gaging Station ([7124000](#))

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	176	196	166	203	588	58	79	165	735	122	104	88	1
2	154	190	159	440	591	57	74	350	351	125	107	86	2
3	120	179	162	510	591	61	86	512	310	97	112	89	3
4	106	168	155	534	563	66	87	1,120	262	99	122	84	4
5	91	174	148	450	519	58	128	996	190	105	120	78	5
6	89	181	149	378	410	59	93	1,040	132	780	112	74	6
7	85	183	145	384	353	58	83	1,620	126	3,720	120	72	7
8	82	175	147	426	353	57	76	2,120	124	2,800	181	74	8
9	82	180	160	406	316	57	71	2,670	328	1,390	181	70	9
10	84	178	150	373	297	58	72	3,360	184	531	185	68	10
11	84	182	140	341	289	59	83	3,350	104	794	125	65	11
12	83	168	130	327	282	59	71	3,940	99	3,540	115	237	12
13	84	162	130	333	288	58	80	3,460	87	4,810	103	221	13
14	103	162	130	297	298	57	69	3,650	83	3,670	101	168	14
15	253	157	140	304	238	57	68	3,320	90	3,340	98	116	15
16	355	158	140	292	119	54	71	3,090	84	2,900	95	103	16
17	282	150	150	288	95	51	70	2,960	77	2,430	93	106	17
18	294	130	160	288	80	51	73	3,450	69	2,000	94	93	18
19	282	130	170	283	74	52	154	4,010	72	1,590	100	89	19
20	274	140	180	266	67	48	242	3,880	77	1,440	103	92	20
21	258	145	182	272	65	49	163	3,810	78	820	104	100	21
22	237	150	186	287	66	50	234	3,540	81	457	106	98	22
23	239	160	195	315	62	52	333	3,720	83	265	108	102	23
24	226	155	198	368	62	69	316	3,780	82	200	109	103	24
25	221	155	204	461	58	243	549	3,850	80	639	110	169	25
26	219	155	196	475	65	141	595	3,770	76	204	116	295	26
27	218	149	186	497	67	190	657	2,990	84	138	111	235	27
28	217	165	186	552	57	112	587	2,630	86	128	98	1,150	28
29	217	165	192	---	53	95	653	1,980	115	122	93	2,890	29
30	214	158	196	---	57	79	534	1,310	268	110	92	2,280	30
31	---	164	207	---	61	---	285	---	138	106	---	2,280	31
Total CFS	5,429	5,064	5,139	10,350	7,084	2,215	6,736	80,443	4,755	39,472	3,418	11,775	Total CFS
Total AF	10,770	10,040	10,190	20,530	14,050	4,390	13,360	159,600	9,430	78,290	6,780	23,360	Total AF

**Total Year      360,790   AF**

## Discharge: Purgatoire River near Las Animas, Colorado

USGS Published Records, Gaging Station ([7128500](#))

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	92	35	37	37	33	42	42	26	10	45	25	53	1
2	95	37	36	32	32	18	54	28	8	76	20	55	2
3	84	35	35	33	32	14	32	26	8	260	13	51	3
4	80	35	35	32	31	9	12	26	6	87	29	45	4
5	79	32	31	34	30	8	11	66	6	78	26	45	5
6	80	34	32	33	30	9	10	247	6	107	22	44	6
7	77	29	26	35	29	9	11	287	8	94	31	49	7
8	72	30	25	33	22	10	14	302	7	132	41	50	8
9	72	32	27	34	21	9	13	134	10	89	31	60	9
10	70	35	24	33	16	43	14	85	8	108	41	53	10
11	71	36	23	32	17	46	24	76	7	325	40	58	11
12	70	37	22	32	15	25	20	143	6	1,940	28	44	12
13	74	37	23	32	16	20	15	180	6	314	22	96	13
14	73	37	24	32	14	13	10	118	6	115	18	206	14
15	41	37	27	31	27	10	10	99	23	85	25	127	15
16	38	32	27	32	59	6	8	81	28	91	29	87	16
17	37	21	27	31	40	8	7	78	13	70	25	67	17
18	36	20	27	29	26	7	12	81	6	64	19	71	18
19	36	20	31	28	25	8	13	84	6	52	13	68	19
20	34	24	38	26	41	8	10	81	6	64	17	60	20
21	33	27	41	27	18	8	7	61	18	53	43	61	21
22	34	26	38	27	16	9	8	49	36	54	50	60	22
23	34	29	38	27	15	10	8	43	25	32	49	56	23
24	34	28	37	28	13	21	9	39	15	26	44	59	24
25	34	32	37	31	13	34	12	72	11	22	97	56	25
26	33	32	35	32	14	13	33	46	11	22	91	24	26
27	32	36	34	31	13	14	31	33	12	27	65	49	27
28	38	39	36	35	39	17	30	44	12	28	61	82	28
29	37	37	37	---	20	17	25	36	51	36	55	84	29
30	31	36	36	---	15	56	29	25	169	30	50	76	30
31	---	41	39	---	17	---	29	---	62	26	---	78	31
Total CFS	1,651	998	985	879	749	520	563	2,696	604	4,552	1,120	2,074	Total CFS
Total AF	3,270	1,980	1,950	1,740	1,490	1,030	1,120	5,350	1,200	9,030	2,220	4,110	Total AF

**Total Year      34,490   AF**

## River Flow Into John Martin Reservoir

Calculated Using USGS Published Records

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	268	231	203	240	621	100	121	191	745	167	129	141	1
2	249	227	195	472	623	75	128	378	359	201	127	141	2
3	204	214	197	543	623	75	118	538	318	357	125	140	3
4	186	203	190	566	594	75	99	1,146	268	186	151	129	4
5	170	206	179	484	549	66	139	1,062	196	183	146	123	5
6	169	215	181	411	440	68	103	1,287	138	887	134	118	6
7	162	212	171	419	382	67	94	1,907	134	3,814	151	121	7
8	154	205	172	459	375	67	90	2,422	131	2,932	222	124	8
9	154	212	187	440	337	66	84	2,804	338	1,479	212	130	9
10	154	213	174	406	313	101	86	3,445	192	639	226	121	10
11	155	218	163	373	306	105	107	3,426	111	1,119	165	123	11
12	153	205	152	359	297	84	91	4,083	105	5,480	143	281	12
13	158	199	153	365	304	78	95	3,640	93	5,124	125	317	13
14	176	199	154	329	312	70	79	3,768	89	3,785	119	374	14
15	294	194	167	335	265	67	78	3,419	113	3,425	123	243	15
16	393	190	167	324	178	60	79	3,171	112	2,991	124	190	16
17	319	171	177	319	135	59	77	3,038	90	2,500	118	173	17
18	330	150	187	317	106	58	85	3,531	75	2,064	113	164	18
19	318	150	201	311	99	60	167	4,094	78	1,642	113	157	19
20	308	164	218	292	108	56	252	3,961	83	1,504	120	152	20
21	291	172	223	299	83	57	170	3,871	96	873	147	161	21
22	271	176	224	314	82	59	242	3,589	117	511	156	158	22
23	273	189	233	342	77	62	341	3,763	108	297	157	158	23
24	260	183	235	396	75	90	325	3,819	97	226	153	162	24
25	255	187	241	492	71	277	561	3,922	91	661	207	225	25
26	252	187	231	507	79	154	628	3,816	87	226	207	319	26
27	250	185	220	528	80	204	688	3,023	96	165	176	284	27
28	255	204	222	587	96	129	617	2,674	98	156	159	1,232	28
29	254	202	229	---	73	112	678	2,016	166	158	148	2,974	29
30	245	194	232	---	72	135	563	1,335	437	140	142	2,356	30
31	---	205	246	---	78	---	314	---	200	132	---	2,358	31
Total CFS	7,080	6,062	6,124	11,229	7,833	2,735	7,299	83,139	5,359	44,024	4,538	13,849	Total CFS
Total AF	14,040	12,020	12,140	22,270	15,540	5,420	14,480	164,950	10,630	87,320	9,000	27,470	Total AF

**Total Year      395,280    AF**

Notes:      (1) Riverflow into John Martin is the combined flow of the [Arkansas River at Las Animas](#) (B-3) and the [Purgatoire near Las Animas](#) (B-4), rounded to the nearest CFS.

## Contents: John Martin Reservoir

USGS Primary Data, Gaging Station (7130000)

Midnight Contents to Nearest AF (2)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	230,991	243,371	255,408	267,904	289,741	286,507	253,321	232,176	323,054	254,269	307,840	287,339	1
2	231,356	243,652	255,787	268,696	290,790	284,852	252,283	232,087	320,490	254,174	306,534	286,819	2
3	231,721	244,023	256,263	269,689	291,950	283,202	251,150	232,359	318,048	253,040	305,560	286,403	3
4	231,904	244,490	256,644	270,582	293,008	281,870	250,304	232,725	315,285	252,283	304,584	285,988	4
5	232,267	244,865	256,930	271,279	294,066	280,439	249,175	233,275	312,865	252,378	303,934	285,366	5
6	232,359	245,520	257,312	272,377	295,130	279,016	248,331	234,835	310,237	253,700	302,855	284,852	6
7	232,633	245,801	257,695	272,974	295,768	277,698	247,298	236,404	307,622	256,835	301,883	284,438	7
8	232,817	246,173	258,075	273,876	296,622	276,387	246,454	239,366	305,126	262,610	301,344	284,232	8
9	232,908	246,735	258,267	274,679	297,371	274,980	245,239	242,811	302,855	265,245	300,699	283,716	9
10	233,092	247,111	258,843	275,380	297,800	274,076	244,397	247,674	300,268	266,228	300,053	283,099	10
11	233,275	247,580	259,227	276,085	298,229	273,475	243,184	252,378	297,585	268,399	299,408	282,688	11
12	233,734	247,955	259,419	276,589	298,548	272,874	242,438	257,121	295,024	277,597	298,548	283,819	12
13	233,826	248,237	259,708	277,498	298,978	272,277	241,412	261,735	292,055	287,444	297,693	283,819	13
14	234,285	248,705	260,094	278,103	298,870	271,478	240,576	266,524	289,008	295,450	297,050	284,026	14
15	234,559	248,987	260,284	278,712	299,300	270,383	239,552	271,379	286,299	300,484	296,195	284,026	15
16	235,665	249,551	260,670	279,423	299,623	269,391	238,347	276,286	283,613	304,476	294,917	283,922	16
17	236,404	249,739	261,057	279,932	299,623	268,399	236,497	281,256	280,643	307,078	293,854	283,922	17
18	236,957	250,022	261,348	280,541	299,838	266,918	235,020	285,470	277,901	309,582	292,902	283,819	18
19	237,605	250,116	261,929	281,256	299,730	265,147	233,826	289,846	275,279	311,332	291,950	283,613	19
20	237,976	250,116	262,513	281,767	299,838	263,095	233,092	295,130	272,874	312,316	290,790	283,407	20
21	238,625	250,493	262,997	282,382	299,193	261,348	232,542	300,268	270,283	312,975	290,474	283,202	21
22	239,366	250,868	263,583	282,996	297,907	259,323	232,450	304,692	267,706	313,524	289,951	283,305	22
23	239,645	251,245	264,169	283,922	296,836	257,217	232,176	308,493	265,147	313,524	289,322	282,996	23
24	240,017	251,622	264,561	284,748	295,768	257,121	232,087	311,770	262,705	313,304	288,798	284,748	24
25	240,482	252,189	265,147	285,677	294,598	257,026	232,267	314,733	260,767	313,634	288,485	285,366	25
26	240,948	252,378	265,540	286,715	293,641	256,739	232,359	318,935	258,363	313,744	288,485	285,988	26
27	241,412	252,756	265,933	287,548	292,690	256,358	232,542	322,274	255,882	313,195	288,276	286,196	27
28	241,878	253,321	266,327	288,694	291,527	255,977	232,725	324,061	254,648	311,987	287,962	287,235	28
29	242,438	253,984	266,721	---	290,579	255,218	232,908	324,733	254,079	310,784	287,756	289,636	29
30	242,904	254,364	267,116	---	289,427	254,269	233,092	324,621	254,459	310,019	287,444	293,217	30
31	---	254,838	267,511	---	287,962	---	232,908	---	255,218	308,930	---	296,088	31
<b>Average Monthly Contents</b>													
	236,000	249,000	261,000	278,000	296,000	269,000	240,000	275,000	285,000	290,000	296,000	285,000	
<b>USGS Published End of Month Contents</b>													
	243,000	255,000	268,000	289,000	288,000	254,000	233,000	325,000	255,000	309,000	287,000	296,000	

- Notes:
- (1) USGS final published record uses this primary daily data subsequently rounded off per USGS procedures.
  - (2) Determined from elevation-capacity table provided by U.S. Army Corps of Engineers and placed in use Nov. 1, 1994.
  - (3) Peak contents 324,733 AF at elevation 3850.03 on June 29, 1997.

## Outflow: Arkansas River below John Martin Reservoir

USGS Published Records, Gaging Station ([7130500](#))

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	82	4	4	4	3	874	639	545	1,430	655	753	292	1
2	74	3	4	4	3	871	648	514	1,520	1,070	663	323	2
3	74	3	4	4	3	863	658	492	1,580	1,070	576	330	3
4	75	4	4	4	3	783	658	541	1,560	644	598	330	4
5	64	4	3	4	3	720	644	590	1,540	280	580	330	5
6	53	3	3	4	3	717	625	627	1,540	100	564	329	6
7	53	4	4	4	3	730	598	649	1,450	20	564	292	7
8	53	4	4	4	3	745	583	648	1,370	150	541	268	8
9	53	4	4	3	3	753	594	602	1,420	238	529	269	9
10	53	4	4	3	72	620	604	563	1,450	238	533	281	10
11	53	4	4	3	123	442	605	542	1,430	178	533	291	11
12	47	4	4	3	123	405	580	561	1,420	62	540	290	12
13	30	4	4	3	123	406	561	556	1,410	19	544	289	13
14	12	4	4	3	123	479	562	534	1,430	16	544	289	14
15	3	4	4	3	123	602	560	534	1,450	16	570	261	15
16	3	4	4	3	123	607	722	552	1,440	16	591	230	16
17	3	4	4	3	104	618	972	568	1,420	15	587	229	17
18	4	4	4	3	85	777	969	597	1,390	15	575	229	18
19	3	4	4	3	101	1,020	722	619	1,380	83	551	229	19
20	4	4	4	3	135	1,030	552	666	1,370	255	541	229	20
21	4	4	4	3	367	1,040	494	698	1,350	309	539	229	21
22	4	4	3	3	686	1,070	449	700	1,310	276	487	227	22
23	4	4	3	3	689	1,070	451	1,090	1,300	282	410	226	23
24	4	4	3	3	666	736	455	1,470	1,300	281	364	205	24
25	4	4	3	3	611	459	457	1,490	1,300	312	328	192	25
26	4	4	3	3	586	444	462	1,070	1,290	390	308	190	26
27	4	4	3	3	564	445	503	825	1,290	459	296	129	27
28	4	4	3	3	554	458	556	843	1,290	676	296	9	28
29	4	4	3	---	567	562	579	851	1,190	788	260	2	29
30	4	4	4	---	568	633	582	929	295	758	256	2	30
31	---	4	4	---	754	---	543	---	16	756	---	2	31
Total CFS	835	118	112	90	7,872	20,979	18,587	21,466	40,931	10,427	15,021	7,025	Total CFS
Total AF	1,660	235	221	179	15,610	41,610	36,870	42,580	81,190	20,680	29,790	13,930	Total AF

**Total Year    284,555    AF**

## Discharge: Arkansas River at Lamar, Colorado

USGS Published Records, Gaging Station ([7133000](#))

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	41	65	63	60	52	340	21	27	329	222	283	16	1
2	38	67	64	58	48	341	22	54	540	784	235	16	2
3	35	63	66	61	49	332	21	41	680	1,220	110	16	3
4	29	61	61	60	52	310	22	18	739	828	72	15	4
5	23	59	59	57	49	208	26	19	713	305	79	15	5
6	18	59	59	57	49	215	44	25	701	1,730	68	16	6
7	20	58	58	59	46	214	44	61	710	488	69	15	7
8	28	58	67	56	44	240	30	77	582	215	82	15	8
9	42	60	64	59	43	262	27	98	548	106	37	15	9
10	44	62	60	58	43	226	28	60	663	85	28	16	10
11	46	62	62	55	68	50	26	41	657	93	24	15	11
12	63	58	48	52	25	24	30	24	652	1,830	23	85	12
13	58	59	49	49	12	20	40	47	634	1,190	24	88	13
14	55	59	50	47	9	18	33	23	650	505	26	50	14
15	69	58	54	47	11	25	34	18	712	199	23	33	15
16	92	59	56	48	8	28	42	18	718	160	24	28	16
17	86	56	59	52	7	15	379	20	697	125	27	16	17
18	81	52	59	53	6	16	422	16	681	113	37	15	18
19	75	45	63	54	6	293	396	17	697	70	43	15	19
20	72	45	68	49	6	352	86	17	763	44	26	15	20
21	67	46	64	49	10	355	53	17	729	98	142	15	21
22	61	49	67	51	316	370	57	18	640	72	169	15	22
23	59	49	68	50	430	373	69	61	598	113	113	15	23
24	59	50	66	49	464	438	68	603	589	127	54	36	24
25	60	48	65	50	427	87	67	677	602	71	33	66	25
26	61	52	65	50	377	40	59	582	706	42	20	255	26
27	59	54	63	49	365	35	38	92	731	34	19	273	27
28	61	58	63	51	338	29	23	66	731	54	19	195	28
29	64	61	63	---	350	23	31	58	955	241	18	153	29
30	64	63	62	---	352	34	45	57	1,550	205	17	149	30
31	---	63	61	---	348	---	30	---	246	350	---	151	31
Total CFS	1,630	1,758	1,896	1,490	4,410	5,313	2,313	2,952	21,143	11,719	1,944	1,838	Total CFS
Total AF	3,230	3,490	3,760	2,960	8,750	10,540	4,590	5,860	41,940	23,240	3,860	3,650	Total AF

**Total Year 115,870 AF**

## Discharge: Arkansas River Near Granada, Colorado

USGS Published Records, Gaging Station ([7134180](#))

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	132	135	151	155	145	429	112	100	140	450	466	110	1
2	144	135	151	153	138	382	112	94	433	681	357	109	2
3	126	134	154	154	133	374	106	104	585	1,040	316	106	3
4	140	134	153	150	135	367	105	97	702	1,150	222	103	4
5	157	131	145	154	135	305	81	90	722	749	183	110	5
6	140	134	143	152	134	259	72	90	717	1,440	170	111	6
7	129	134	144	155	131	259	89	101	720	2,230	159	110	7
8	123	130	142	147	129	248	96	122	678	894	152	123	8
9	122	131	144	151	125	267	89	140	599	613	142	112	9
10	113	131	149	151	122	286	91	144	645	510	128	106	10
11	102	125	149	151	120	244	90	121	661	498	119	104	11
12	107	123	140	150	144	212	90	116	655	921	109	135	12
13	119	121	135	149	148	170	91	180	633	2,330	100	193	13
14	119	124	140	148	123	144	92	146	646	1,260	96	180	14
15	120	115	142	147	134	127	88	111	664	718	85	163	15
16	160	114	140	140	136	95	87	94	691	509	86	153	16
17	158	111	140	141	132	85	143	89	697	401	85	146	17
18	154	112	143	141	116	81	365	91	669	357	88	140	18
19	150	115	146	142	108	115	454	78	676	325	92	138	19
20	145	130	146	142	101	299	313	80	784	285	97	130	20
21	140	144	153	134	101	370	144	83	750	255	164	124	21
22	141	143	152	136	171	401	116	87	689	281	269	123	22
23	135	143	154	136	472	426	122	94	640	234	227	121	23
24	131	141	153	135	550	500	105	268	618	240	182	125	24
25	129	140	149	141	572	402	112	596	597	226	184	170	25
26	128	138	147	147	479	218	114	690	667	187	208	104	26
27	130	145	144	146	419	162	109	389	701	169	137	259	27
28	129	146	145	150	409	136	96	191	723	148	124	371	28
29	127	147	150	---	437	119	86	149	891	207	119	390	29
30	127	149	151	---	411	115	84	129	1,300	299	114	378	30
31	---	151	153	---	430	---	99	---	921	314	---	380	31
Total CFS	3,977	4,106	4,548	4,098	7,040	7,597	3,953	4,864	21,214	19,921	4,980	5,127	Total CFS
Total AF	7,890	8,140	9,020	8,130	13,960	15,070	7,840	9,650	42,080	39,510	9,880	10,170	Total AF

**Total Year    181,340    AF**

## Discharge: Arkansas River Near Coolidge, Kansas

USGS Published Records, Gaging Station ([7137500](#))

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	266	230	224	212	208	528	225	290	217	720	524	316	1
2	263	234	224	211	203	505	231	295	288	635	501	300	2
3	247	231	225	213	199	592	239	298	458	974	473	299	3
4	246	234	222	210	196	552	228	289	592	1,330	400	299	4
5	236	235	215	205	198	490	209	264	666	1,210	348	331	5
6	224	235	208	205	201	415	205	258	699	1,800	324	370	6
7	211	236	207	207	201	396	216	269	716	2,800	321	351	7
8	204	235	209	203	199	382	214	281	719	1,900	312	365	8
9	205	236	210	202	191	406	220	286	671	1,100	282	361	9
10	215	236	213	206	187	470	206	305	654	944	256	295	10
11	208	230	214	207	185	470	210	286	697	1,150	233	280	11
12	201	224	210	206	190	523	246	285	691	1,290	238	309	12
13	217	223	205	203	209	502	233	317	689	1,970	241	388	13
14	230	226	200	198	211	440	211	320	694	2,620	236	405	14
15	233	228	215	199	218	302	177	274	723	1,410	242	380	15
16	243	230	208	198	219	246	168	257	733	979	234	378	16
17	250	233	204	200	211	223	188	277	735	1,310	230	360	17
18	259	215	206	200	196	202	284	234	734	847	216	318	18
19	257	204	207	199	191	193	410	208	759	707	214	308	19
20	244	223	210	201	182	277	429	172	902	641	241	301	20
21	235	222	214	198	176	382	288	150	879	567	334	280	21
22	234	222	215	193	175	445	347	158	844	596	500	286	22
23	233	223	217	197	313	479	382	155	780	550	508	298	23
24	222	220	215	200	482	537	285	172	746	532	446	300	24
25	224	221	212	199	538	666	267	389	729	448	464	328	25
26	226	223	210	210	558	473	255	612	744	389	433	185	26
27	228	225	203	207	561	371	254	591	786	348	402	223	27
28	235	223	198	209	551	297	238	369	806	321	376	339	28
29	239	222	201	---	531	249	240	297	1,010	351	421	432	29
30	234	222	206	---	534	228	252	247	1,210	418	346	455	30
31	---	222	210	---	529	---	274	---	1,520	439	---	460	31
Total CFS	6,969	7,023	6,537	5,698	8,943	12,241	7,831	8,605	23,091	31,296	10,296	10,300	Total CFS
Total AF	13,820	13,930	12,970	11,300	17,740	24,280	15,530	17,070	45,800	62,080	20,420	20,430	Total AF

**Total Year    275,370    AF**



## Discharge: Frontier Ditch Near Coolidge, Kansas

USGS Published Records, Gaging Station ([7137000](#))

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	0	0	0	0	0	0	35	0	32	35	31	39	1
2	0	0	0	0	0	0	35	0	32	31	31	36	2
3	0	0	0	0	0	0	33	0	33	30	31	35	3
4	0	0	0	0	0	0	34	0	33	23	31	35	4
5	0	0	0	0	0	0	33	0	32	0	31	25	5
6	0	0	0	0	0	0	34	0	32	0	31	0	6
7	0	0	0	0	0	0	33	0	30	0	31	0	7
8	0	0	0	0	0	0	33	12	29	0	31	0	8
9	0	0	0	0	0	0	33	31	29	0	33	0	9
10	0	0	0	0	0	0	34	32	28	0	37	0	10
11	0	0	0	0	0	0	34	31	28	0	38	0	11
12	0	0	0	0	0	0	18	31	28	0	39	0	12
13	0	0	0	0	0	0	23	31	27	0	39	0	13
14	0	0	0	0	0	0	24	32	27	0	39	0	14
15	0	0	0	0	0	0	33	32	27	0	39	0	15
16	0	0	0	0	0	0	32	24	27	0	39	0	16
17	0	0	0	0	0	0	7	0	27	0	39	0	17
18	0	0	0	0	0	0	0	0	27	0	39	0	18
19	0	0	0	0	0	0	0	0	26	0	40	0	19
20	0	0	0	0	0	0	26	9	27	0	39	0	20
21	0	0	0	0	0	15	33	29	23	2	22	0	21
22	0	0	0	0	0	0	29	29	17	16	1	0	22
23	0	0	0	0	0	0	0	28	25	31	1	0	23
24	0	0	0	0	0	0	0	23	22	31	1	0	24
25	0	0	0	0	0	0	0	23	29	31	0	0	25
26	0	0	0	0	0	0	0	2	30	30	0	0	26
27	0	0	0	0	0	0	0	0	30	31	0	0	27
28	0	0	0	0	0	22	0	0	29	31	0	0	28
29	0	0	0	---	0	35	0	7	23	32	8	0	29
30	0	0	0	---	0	35	0	31	0	31	40	0	30
31	---	0	0	---	0	---	0	---	7	31	---	0	31
Total CFS	0	0	0	0	0	107	596	437	816	416	782	170	Total CFS
Total AF	0	0	0	0	0	212	1,180	867	1,620	826	1,550	337	Total AF

**Total Year      6,592   AF**

Notes:      (1) USGS data rounded to nearest CFS.

## Stateline Flow

Calculated using USGS Published Records  
Daily Mean Discharge (CFS)  
Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	266	230	224	212	208	528	260	290	249	755	555	355	1
2	263	234	224	211	203	505	266	295	320	666	532	336	2
3	247	231	225	213	199	592	272	298	491	1,004	504	334	3
4	246	234	222	210	196	552	262	289	625	1,353	431	334	4
5	236	235	215	205	198	490	242	264	698	1,210	379	356	5
6	224	235	208	205	201	415	239	258	731	1,800	355	370	6
7	211	236	207	207	201	396	249	269	746	2,800	352	351	7
8	204	235	209	203	199	382	247	293	748	1,900	343	365	8
9	205	236	210	202	191	406	253	317	700	1,100	315	361	9
10	215	236	213	206	187	470	240	337	682	944	293	295	10
11	208	230	214	207	185	470	244	317	725	1,150	271	280	11
12	201	224	210	206	190	523	264	316	719	1,290	277	309	12
13	217	223	205	203	209	502	256	348	716	1,970	280	388	13
14	230	226	200	198	211	440	235	352	721	2,620	275	405	14
15	233	228	215	199	218	302	210	306	750	1,410	281	380	15
16	243	230	208	198	219	246	200	281	760	979	273	378	16
17	250	233	204	200	211	223	195	277	762	1,310	269	360	17
18	259	215	206	200	196	202	284	234	761	847	255	318	18
19	257	204	207	199	191	193	410	208	785	707	254	308	19
20	244	223	210	201	182	277	455	181	929	641	280	301	20
21	235	222	214	198	176	397	321	179	902	569	356	280	21
22	234	222	215	193	175	445	376	187	861	612	501	286	22
23	233	223	217	197	313	479	382	183	805	581	509	298	23
24	222	220	215	200	482	537	285	195	768	563	447	300	24
25	224	221	212	199	538	666	267	412	758	479	464	328	25
26	226	223	210	210	558	473	255	614	774	419	433	185	26
27	228	225	203	207	561	371	254	591	816	379	402	223	27
28	235	223	198	209	551	319	238	369	835	352	376	339	28
29	239	222	201	---	531	284	240	304	1,033	383	429	432	29
30	234	222	206	---	534	263	252	278	1,210	449	386	455	30
31	---	222	210	---	529	---	274	---	1,527	470	---	460	31
Total CFS	6,969	7,023	6,537	5,698	8,943	12,348	8,427	9,042	23,907	31,712	11,078	10,470	Total CFS
Total AF	13,820	13,930	12,970	11,300	17,740	24,492	16,710	17,937	47,420	62,906	21,970	20,767	Total AF

**Total Year 281,962 AF**

Notes: (1) The daily Stateline flow is the sum of the flow of the [Arkansas River near Coolidge](#) and the [Frontier Ditch near Coolidge](#), rounded to the nearest CFS.

## Discharge: Arkansas River at Garden City, Kansas

USGS Published Records, Gaging Station ([7139000](#))

Daily Mean Discharge (CFS)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	252	213	270	233	108	29	90	207	13	0	139	180	1
2	247	215	270	205	72	4	96	230	2	32	68	179	2
3	230	220	260	199	51	0	112	263	0	63	69	169	3
4	228	212	253	190	52	0	125	271	0	17	85	189	4
5	223	208	225	185	102	1	154	270	0	7	109	200	5
6	212	224	207	198	126	0	154	249	0	247	148	206	6
7	205	219	205	198	138	0	144	238	0	688	138	205	7
8	202	222	191	185	144	0	136	230	0	794	124	222	8
9	200	235	170	193	132	0	138	256	0	946	135	225	9
10	192	236	160	200	135	0	141	260	0	1,360	174	243	10
11	168	244	150	210	142	40	119	252	0	1,370	179	252	11
12	145	241	140	201	154	193	127	282	0	1,070	187	253	12
13	151	238	130	196	155	240	148	307	0	1,050	186	227	13
14	165	233	120	171	152	279	149	278	0	963	178	203	14
15	185	214	120	168	148	298	107	290	0	974	166	225	15
16	220	200	130	164	165	271	57	293	0	1,280	158	229	16
17	214	190	140	172	172	191	33	274	0	1,520	144	234	17
18	206	180	140	180	158	114	13	266	0	1,060	136	246	18
19	205	170	140	193	169	71	4	269	0	937	132	240	19
20	204	160	170	184	180	32	0	261	0	838	137	234	20
21	198	150	200	156	175	12	0	229	0	690	138	231	21
22	188	150	230	101	157	5	0	174	0	595	167	246	22
23	210	150	270	87	158	2	64	132	0	531	228	244	23
24	202	160	300	91	161	1	231	91	0	511	275	231	24
25	201	170	300	74	125	5	285	73	0	537	246	211	25
26	185	160	250	71	82	16	250	107	0	483	233	167	26
27	193	160	220	83	76	35	230	41	0	404	225	238	27
28	204	170	220	105	90	34	222	19	0	291	229	314	28
29	212	200	300	--	87	14	223	26	0	194	220	294	29
30	210	250	300	--	70	34	202	52	0	153	190	317	30
31	--	270	250	--	52	--	200	--	0	145	--	342	31
Total CFS	6,057	6,264	6,431	4,593	3,888	1,920	3,954	6,190	15	19,750	4,943	7,196	Total CFS
Total AF	12,014	12,425	12,756	9,110	7,712	3,808	7,842	12,278	30	39,173	9,804	14,273	Total AF

**Total Year 141,226 AF**

Notes:

- (1) Downloaded from USGS Website
- (2) Some winter values are estimated

## Contents: John Martin Reservoir Conservation Storage

ARCA Operations Secretary (AF)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	10,730	21,549	29,765	38,721	48,117	54,798	0	0	45,968	916	20,751	0	1
2	11,328	21,673	30,119	39,063	48,450	52,397	0	0	43,514	0	18,679	0	2
3	11,926	21,894	30,482	39,411	48,787	49,993	0	0	41,536	0	17,019	0	3
4	12,311	22,225	30,749	39,756	49,120	47,717	0	0	39,516	0	15,426	0	4
5	12,955	22,476	30,929	40,095	49,454	45,459	0	0	37,802	0	14,073	0	5
6	13,178	22,905	31,215	40,447	49,787	43,111	0	0	35,939	851	12,265	0	6
7	13,667	23,138	31,503	40,780	50,111	40,832	0	0	33,968	3,019	10,559	0	7
8	13,982	23,364	31,793	41,122	50,434	38,518	0	611	31,952	7,000	8,984	0	8
9	14,205	23,791	32,083	41,460	50,758	36,161	0	1,569	30,062	7,560	7,203	0	9
10	14,520	24,025	32,371	41,796	51,075	34,012	0	3,975	27,881	6,491	5,625	0	10
11	14,834	24,353	32,648	42,132	51,396	31,826	0	6,251	25,822	6,867	4,214	0	11
12	15,424	24,580	32,787	42,468	51,713	29,564	0	8,697	23,860	15,083	2,611	0	12
13	15,592	24,825	32,993	42,804	52,033	27,307	0	11,270	21,493	24,872	1,038	0	13
14	16,074	25,077	33,266	43,134	52,347	25,028	0	14,540	19,293	32,208	0	379	14
15	16,349	25,329	33,376	43,464	52,661	22,854	0	17,822	17,587	36,364	0	0	15
16	17,209	25,681	33,646	43,795	53,212	21,217	0	21,087	16,078	40,012	0	0	16
17	17,456	25,818	33,918	44,119	53,731	19,588	0	24,161	14,197	42,375	0	0	17
18	17,734	26,005	34,124	44,447	54,010	17,867	0	26,446	12,442	44,556	0	0	18
19	18,098	26,133	34,531	44,778	54,213	16,238	0	29,129	10,793	44,615	0	0	19
20	18,225	26,263	34,940	45,106	54,698	14,519	0	32,408	9,354	43,082	0	0	20
21	18,624	26,391	35,279	45,434	54,909	13,003	0	35,474	7,698	41,563	0	0	21
22	19,145	26,577	35,689	45,764	55,066	11,280	0	37,829	5,952	39,933	0	0	22
23	19,233	26,825	36,098	46,095	55,437	9,453	0	40,356	4,291	37,677	0	0	23
24	19,412	27,057	36,373	46,429	55,749	8,377	0	43,125	2,689	35,305	0	2,472	24
25	19,699	27,304	36,783	46,766	55,837	6,832	0	45,652	1,290	33,404	0	3,125	25
26	19,993	27,561	37,059	47,106	56,089	5,256	0	48,661	0	31,536	0	3,800	26
27	20,284	27,819	37,335	47,443	56,420	3,458	0	50,398	0	29,501	0	2,078	27
28	20,576	28,269	37,612	47,783	56,450	2,038	0	50,549	0	27,567	0	1,200	28
29	20,964	28,802	37,889	---	56,678	573	0	49,505	1,337	25,873	0	1,727	29
30	21,258	29,051	38,166	---	56,707	0	0	48,005	1,103	24,434	0	3,435	30
31	---	29,410	38,443	---	56,934	---	0	---	2,076	22,590	---	4,433	31

Notes:

- (1) Values are from JMAS Accounts #3 and 4 and represent the volume of winter and/or summer compact water remaining in conservation storage prior to transfer to storage accounts, as reported by the Operations Secretary, and round to the nearest AF.

## Transfer of Water from JMR Conservation Storage

Transferred into John Martin Reservoir into Agreement Accounts

ARCA Operations Secretary (AF)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	0	0	0	0	0	2,479	0	0	2,479	1,240	2,479	0	1
2	0	0	0	0	0	2,479	0	0	2,479	1,260	2,138	0	2
3	0	0	0	0	0	2,479	0	0	2,479	0	1,984	0	3
4	0	0	0	0	0	2,479	0	0	2,479	0	1,984	0	4
5	0	0	0	0	0	2,479	0	0	2,479	0	1,984	0	5
6	0	0	0	0	0	2,479	0	0	2,479	0	1,984	0	6
7	0	0	0	0	0	2,479	0	1,196	2,479	0	1,984	0	7
8	0	0	0	0	0	2,479	0	1,984	2,479	1,198	1,984	0	8
9	0	0	0	0	0	2,479	0	1,984	2,479	1,984	1,984	0	9
10	0	0	0	0	0	2,479	0	1,984	2,479	1,984	1,984	0	10
11	0	0	0	0	0	2,479	0	1,984	2,479	1,984	1,984	0	11
12	0	0	0	0	0	2,479	0	1,984	2,479	702	1,984	0	12
13	0	0	0	0	0	2,479	0	1,984	2,479	0	1,984	0	13
14	0	0	0	0	0	2,479	0	1,984	2,303	0	1,673	1,240	14
15	0	0	0	0	0	2,384	0	1,984	1,984	0	0	956	15
16	0	0	0	0	0	1,984	0	1,984	1,984	0	0	0	16
17	0	0	0	0	0	1,984	0	2,479	1,984	0	0	0	17
18	0	0	0	0	0	1,984	0	2,479	1,984	0	0	0	18
19	0	0	0	0	0	1,984	0	2,479	1,984	1,498	0	0	19
20	0	0	0	0	0	1,984	0	2,479	1,984	2,479	0	0	20
21	0	0	0	0	0	1,984	0	2,479	1,984	2,479	0	0	21
22	0	0	0	0	0	1,984	0	2,479	1,984	2,479	0	0	22
23	0	0	0	0	0	1,984	0	2,479	1,984	2,479	0	0	23
24	0	0	0	0	0	1,984	0	2,479	1,984	2,479	0	0	24
25	0	0	0	0	0	1,984	0	2,479	1,984	2,479	0	0	25
26	0	0	0	0	0	1,984	0	2,479	1,858	2,479	0	0	26
27	0	0	0	0	0	1,984	0	2,479	0	2,479	0	1,984	27
28	0	0	0	0	0	1,984	0	2,479	0	2,479	0	1,984	28
29	0	0	0	--	0	1,984	0	2,479	248	2,479	0	1,984	29
30	0	0	0	--	0	885	0	2,479	1,405	2,479	0	1,984	30
31	--	0	0	--	0	--	0	--	0	2,479	--	1,984	31
Total AF	0	0	0	0	0	65,750	0	53,758	59,864	41,602	28,109	12,113	Total AF

**Total Year 261,195 AF**

Notes:

- (1) Values are from JMAS Accounts #3 and 4, "winter compact water" and "summer compact water", and represent the daily volume of winter and/or summer compact water transferred to storage accounts, as reported by the Operations Secretary, and round to the nearest AF.
- (2) All conservation storage water was apportioned into Colorado and Kansas accounts (40% to Kansas and 60% to Colorado), as described in the Administration's 1980 Operating Plan for John Martin Reservoir Resolution.

## Demands by Colorado for Agreement Account Water

Releases to Colorado Water Users from JMR

ARCA Operations Secretary (AF)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	163	0	0	0	0	878	752	229	1,669	251	1,226	169	1
2	157	0	0	0	0	878	951	68	1,758	0	1,174	215	2
3	157	0	0	0	0	878	842	0	1,793	0	1,154	297	3
4	157	0	0	0	0	765	842	0	1,797	0	1,191	335	4
5	140	0	0	0	0	717	822	0	1,803	0	1,148	335	5
6	111	0	0	0	0	717	698	0	1,803	0	1,122	335	6
7	105	0	0	0	0	730	803	1,180	1,680	0	1,122	277	7
8	101	0	0	0	0	737	810	1,180	1,539	278	1,077	54	8
9	101	0	0	0	0	764	856	1,137	1,456	459	1,060	40	9
10	101	0	0	0	139	899	856	1,079	1,440	459	1,066	32	10
11	101	0	0	0	229	853	856	1,060	1,419	338	1,066	32	11
12	91	0	0	0	224	772	784	1,121	1,398	91	1,074	32	12
13	56	0	0	0	227	772	740	1,102	1,398	0	1,080	32	13
14	18	0	0	0	228	920	740	1,059	1,460	0	1,080	363	14
15	0	0	0	0	228	1,146	740	1,059	1,499	0	703	498	15
16	0	0	0	0	228	1,179	722	1,102	1,484	0	1,063	153	16
17	0	0	0	0	195	1,198	710	1,193	1,422	0	819	34	17
18	0	0	0	0	170	1,295	509	1,224	1,366	0	795	34	18
19	0	0	0	0	203	1,334	405	1,224	1,350	173	759	34	19
20	0	0	0	0	269	1,334	526	1,318	1,342	493	747	34	20
21	0	0	0	0	315	1,343	477	1,380	1,283	584	745	201	21
22	0	0	0	0	344	1,337	0	1,380	1,187	527	445	201	22
23	0	0	0	0	344	1,330	0	1,401	1,161	532	416	201	23
24	0	0	0	0	368	1,097	0	1,489	1,161	532	252	201	24
25	0	0	0	0	336	903	0	1,548	1,044	595	256	35	25
26	0	0	0	0	309	887	0	1,577	945	737	241	0	26
27	0	0	0	0	273	887	0	1,633	343	869	30	0	27
28	0	0	0	0	260	913	0	1,670	0	1,071	30	0	28
29	0	0	0	--	279	1,107	0	1,670	0	1,208	93	0	29
30	0	0	0	--	279	1,107	0	1,670	111	1,226	144	0	30
31	--	0	0	--	659	--	0	--	0	1,226	--	0	31
Total AF	1,560	0	0	0	6,105	29,674	15,444	31,754	38,110	11,648	23,177	4,171	Total AF

**Total Year 161,643 AF**

- Notes:
- (1) Releases from JMAS accounts #7, 20, 35 (Colorado Dist. 67 Sec. II), #31 (Colorado Sec. III), and #19 (City of Lamar in years such as CY 1997 when authorized by ARCA), data rounded to the nearest AF.
  - (2) Includes release of City of Lamar Fry-Ark Project Water = 1498.78 AF

## Demands by Kansas for Agreement Account Water

Released to Kansas Water Users from JMR

ARCA Operations Secretary (AF)

Compact Year 1997

Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Day
1	0	0	0	0	0	793	0	0	992	620	0	0	1
2	0	0	0	0	0	793	0	0	1,095	775	0	0	2
3	0	0	0	0	0	793	0	0	1,190	397	0	0	3
4	0	0	0	0	0	731	0	0	1,190	149	0	0	4
5	0	0	0	0	0	694	0	0	1,190	0	0	0	5
6	0	0	0	0	0	694	0	0	1,190	0	0	0	6
7	0	0	0	0	0	694	0	0	1,190	0	0	0	7
8	0	0	0	0	0	694	0	0	1,190	0	0	0	8
9	0	0	0	0	0	694	0	0	1,302	0	0	0	9
10	0	0	0	0	0	289	0	0	1,388	0	0	0	10
11	0	0	0	0	0	0	0	0	1,388	0	0	0	11
12	0	0	0	0	0	0	0	0	1,388	0	0	0	12
13	0	0	0	0	0	0	0	0	1,388	0	0	0	13
14	0	0	0	0	0	0	0	0	1,388	0	0	0	14
15	0	0	0	0	0	0	0	0	1,388	0	0	0	15
16	0	0	0	0	0	0	335	0	1,388	0	0	0	16
17	0	0	0	0	0	0	893	0	1,388	0	0	0	17
18	0	0	0	0	0	246	893	0	1,388	0	0	0	18
19	0	0	0	0	0	694	353	0	1,388	0	0	0	19
20	0	0	0	0	0	694	0	0	1,388	0	0	0	20
21	0	0	0	0	347	738	0	0	1,388	0	0	0	21
22	0	0	0	0	793	793	0	0	1,388	0	0	0	22
23	0	0	0	0	793	793	0	0	1,388	0	0	0	23
24	0	0	0	0	793	397	0	798	1,388	0	0	0	24
25	0	0	0	0	793	0	0	1,190	1,521	0	0	0	25
26	0	0	0	0	793	0	0	446	1,587	0	0	0	26
27	0	0	0	0	793	0	0	0	1,587	0	0	0	27
28	0	0	0	0	793	0	0	0	1,587	0	0	0	28
29	0	0	0	--	793	0	0	0	1,537	0	0	0	29
30	0	0	0	--	793	0	0	145	421	0	0	0	30
31	--	0	0	--	793	--	0	--	0	0	--	0	31
Total AF	0	0	0	0	8,281	11,227	2,473	2,579	39,596	1,940	0	0	Total AF

**Total Year      66,096      AF**

Notes: (1) Operations Secretary data, from JMAS account # 8, rounded to the nearest AF.  
 (2) Does not include releases made from transit loss account.

## Diversions by Ditches, Colorado Water District 14

Source: Colo. DWR, Water Commissioner Monthly Reports (AF)

Compact Year 1997

Ditch or Canal	Source (2)	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Year
Bessemer	River	0	0	0	0	1,902	5,092	12,098	14,268	12,943	12,510	5,807	5,093	69,712
	Res. / Imp.	0	0	0	0	718	3,497	1,914	0	2,656	551	3,376	1,222	13,934
	Total	0	0	0	0	2,620	8,589	14,012	14,268	15,598	13,062	9,183	6,315	83,646
Minnequa/Union		7,191	6,476	484	5,319	6,903	7,110	7,409	6,938	7,527	7,238	6,600	6,991	76,184
West Pueblo		0	0	0	0	0	0	41	474	0	0	0	0	515
Excelsior		0	0	0	0	0	0	135	323	218	426	127	0	1,229
Collier		0	0	0	0	0	0	0	0	0	0	0	0	0
Colorado	River	7,598	0	0	9,716	2,971	7,071	15,369	24,526	14,687	15,819	8,080	8,691	114,528
	Res. / Imp.	0	0	0	0	126	5,825	3,975	2,414	5,441	3,142	3,603	0	24,526
	Total	7,598	0	0	9,716	3,097	12,896	19,344	26,940	20,128	18,961	11,683	8,691	139,054
Highline	River	3,360	0	0	0	4,080	12,590	19,857	20,412	16,763	10,277	7,624	6,868	101,831
	Res. / Imp.	0	0	0	0	2,553	496	0	0	0	1,665	1,091	0	5,804
	Total	3,360	0	0	0	6,633	13,086	19,857	20,412	16,763	11,942	8,715	6,868	107,635
Oxford-Farmer	River	1,085	0	0	0	1,085	3,965	5,350	4,262	7,181	2,989	3,574	2,076	31,566
	Res. / Imp.	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	1,085	0	0	0	1,085	3,965	5,350	4,262	7,181	2,989	3,574	2,076	31,566
Total District # 14	River	19,235	6,476	484	15,035	16,940	35,827	60,259	71,201	59,318	49,259	31,812	29,719	395,565
	Res. / Imp.	0	0	0	0	3,397	9,818	5,889	2,414	8,097	5,358	8,070	1,222	44,264
	<b>Total</b>	<b>19,235</b>	<b>6,476</b>	<b>484</b>	<b>15,035</b>	<b>20,337</b>	<b>45,645</b>	<b>66,148</b>	<b>73,616</b>	<b>67,415</b>	<b>54,617</b>	<b>39,882</b>	<b>30,940</b>	<b>439,828</b>

Notes:

(1) Colorado DWR data rounded to nearest acre foot

(2) "River" refers to direct flow surface diversions of native Arkansas River flows.

"Res." refers to diversion of stored water released from reservoirs.

"Imp." refers to diversions of imported non-native (trans-mountain) water brought into the Arkansas Basin for use by the canal.



## Diversions by Ditches, Colorado Water District 17

Source: Colo. DWR, Water Commissioner Monthly Reports (AF)

Compact Year 1997

Ditch or Canal	Source (2)	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Year
Otero	River	0	0	0	245	1,065	625	1,647	1,960	1,012	520	6	357	7,437
	Res. / Imp.	0	0	0	0	667	325	0	0	330	177	711	40	2,250
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>245</b>	<b>1,732</b>	<b>950</b>	<b>1,647</b>	<b>1,960</b>	<b>1,342</b>	<b>697</b>	<b>717</b>	<b>397</b>	<b>9,686</b>
Catlin	River	5,175	0	0	0	7,861	13,041	14,755	16,328	18,340	9,103	11,438	7,543	103,584
	Res. / Imp.	549	0	0	0	4,572	3,033	2,657	0	2,627	862	0	37	14,338
	<b>Total</b>	<b>5,724</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,434</b>	<b>16,074</b>	<b>17,412</b>	<b>16,328</b>	<b>20,967</b>	<b>9,964</b>	<b>11,438</b>	<b>7,580</b>	<b>117,921</b>
Holbrook	River	203	0	2,867	0	3,766	2,078	9,334	13,197	9,922	4,222	8,791	551	54,930
	Res. / Imp.	0	0	0	0	4,265	3,900	2,810	0	1,260	0	0	0	12,235
	<b>Total</b>	<b>203</b>	<b>0</b>	<b>2,867</b>	<b>0</b>	<b>8,031</b>	<b>5,978</b>	<b>12,144</b>	<b>13,197</b>	<b>11,182</b>	<b>4,222</b>	<b>8,791</b>	<b>551</b>	<b>67,165</b>
Rocky Ford														
		754	0	0	0	2,428	4,663	4,845	5,480	6,100	3,151	3,492	3,034	33,946
Ft. Lyon Storage	River	13,498	24,025	23,890	2,455	0	2,144	0	34,850	1,830	0	0	0	102,692
	Res. / Imp.	0	0	0	0	0	0	0	0	0	0	0	0	0
	<b>Total</b>	<b>13,498</b>	<b>24,025</b>	<b>23,890</b>	<b>2,455</b>	<b>0</b>	<b>2,144</b>	<b>0</b>	<b>34,850</b>	<b>1,830</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102,692</b>
Ft. Lyon	River	10,817	0	0	0	14,423	21,300	45,647	64,346	47,658	50,843	33,630	21,126	309,789
	Res. / Imp.	0	0	0	0	0	0	0	0	0	0	0	292	292
	<b>Total</b>	<b>10,817</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,423</b>	<b>21,300</b>	<b>45,647</b>	<b>64,346</b>	<b>47,658</b>	<b>50,843</b>	<b>33,630</b>	<b>21,418</b>	<b>310,081</b>
Las Animas Consolidated	River	1,607	0	0	0	2,068	4,340	6,297	5,719	6,646	5,402	5,730	3,182	40,989
	Res. / Imp.	0	0	0	0	0	45	0	0	0	0	0	0	45
	<b>Total</b>	<b>1,607</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,068</b>	<b>4,385</b>	<b>6,297</b>	<b>5,719</b>	<b>6,646</b>	<b>5,402</b>	<b>5,730</b>	<b>3,182</b>	<b>41,034</b>
Subtotal District # 17	River	32,053	24,025	26,757	2,700	31,611	48,191	82,526	141,879	91,507	73,239	63,086	35,793	653,367
	Res. / Imp.	549	0	0	0	9,504	7,303	5,467	0	4,217	1,039	711	368	29,159
	<b>Total</b>	<b>32,602</b>	<b>24,025</b>	<b>26,757</b>	<b>2,700</b>	<b>41,115</b>	<b>55,494</b>	<b>87,993</b>	<b>141,879</b>	<b>95,724</b>	<b>74,278</b>	<b>63,798</b>	<b>36,161</b>	<b>682,526</b>
Total Districts #14 & #17	River	51,287	30,501	27,241	17,735	48,551	84,019	142,785	213,081	150,825	122,498	94,899	65,511	1,048,932
	Res. / Imp.	549	0	0	0	12,901	17,121	11,356	2,414	12,314	6,397	8,781	1,590	73,422
	<b>Total</b>	<b>51,837</b>	<b>30,501</b>	<b>27,241</b>	<b>17,735</b>	<b>61,452</b>	<b>101,139</b>	<b>154,140</b>	<b>215,495</b>	<b>163,139</b>	<b>128,894</b>	<b>103,680</b>	<b>67,101</b>	<b>1,122,354</b>

Notes:

- (1) Colorado DWR data rounded to nearest acre foot
- (2) "River" refers to direct flow surface diversions of native Arkansas River flows.  
"Res." refers to diversion of stored water released from reservoirs.  
"Imp." refers to diversions of imported non-native (trans-mountain) water brought into the Arkansas Basin for use by the canal.

## Diversions by Ditches, Colorado Water District 67

Source: Colorado DWR, Water Commissioner Monthly Reports (AF)

Compact Year 1997

Ditch or Canal	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Year
Fort Bent	653	169	60	0	0	2,892	4,971	4,122	6,365	1,416	3,743	389	24,778
Kessee Ditch	288	0	0	0	730	1,115	1,605	1,502	1,561	803	1,228	912	9,743
Amity	0	0	0	0	0	21,033	21,255	19,337	24,605	9,081	19,724	9,527	124,562
Lamar	2,729	0	0	0	5,945	9,432	8,124	12,478	14,620	5,532	8,362	4,187	71,410
Hyde	0	0	0	0	77	502	522	607	901	611	417	298	3,933
Manvel	(No Headgate diversions, this Section II Account water used for well augmentation in CY 1997)												0
X.Y. & Graham	(No Headgate diversions, this Section II Account water used for well augmentation in CY 1997)												0
Buffalo	1,404	0	0	0	137	3,511	3,241	3,362	4,586	1,831	3,527	621	22,219
Total Native	5,074	169	60	0	6,889	38,484	39,718	41,408	52,638	19,274	37,000	15,934	256,645
Transmountain Del. (2)	0	0	0	0	0	0	0	0	0	0	135	960	1,095
Total District # 67	5,074	169	60	0	6,889	38,484	39,718	41,408	52,638	19,274	37,135	16,894	257,740

Notes:

(1) DWR data rounded to nearest acre foot.

(2) City of Lamar's receipt of Fry-Ark water via Ft. Bent Canal, after temporary storage at JMR.

## Diversions by Ditches, Kansas Stateline to Garden City

Compiled by Kansas DWR (AF)  
Compact Year 1997

Ditch or Canal	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Year
Frontier (2)	0	0	0	0	0	212	1,178	285	1,625	482	1,521	286	5,589
Frontier Term (3) (4)	0	0	0	0	0	0	0	581	0	340	22	50	993
Ft. Aubrey (4)	0	0	0	0	0	0	0	0	0	0	0	0	0
Amazon	0	0	0	0	3,055	5,913	2,001	551	12,165	2,390	1,311	712	28,098
Amazon Term (3)	0	0	0	0	0	44	0	0	0	625	597	554	1,820
Great Eastern	0	0	0	2,270	2,409	2,797	599	2,058	6,612	1,830	755	30	19,360
South Side (5)	0	0	0	0	629	1,801	1,799	0	3,953	1,327	1,779	2,341	13,629
Farmers	115	0	0	0	16	4,540	1,502	877	6,373	1,770	3,088	163	18,444
Farmers Term (3)	121	0	0	0	0	149	0	0	0	95	319	881	1,565
Garden City	0	0	0	0	96	673	197	128	876	172	346	262	2750
<b>Total Diversions Stateline to Garden City</b>	<b>236</b>	<b>0</b>	<b>0</b>	<b>2,270</b>	<b>6,205</b>	<b>16,129</b>	<b>7,276</b>	<b>4,480</b>	<b>31,604</b>	<b>9,031</b>	<b>9,738</b>	<b>5,279</b>	<b>92,248</b>

Notes:

- (1) [Frontier Ditch](#) is USGS record, other ditches are Kansas DWR records.
- (2) Frontier Ditch diversion of 5589 AF includes 1352 AF that was returned to the River.
- (3) Surplus water diverted under a term permit.
- (4) Frontier Term and Ft Aubrey diversions include 610 AF that was returned to the River
- (5) South Side Ditch returned an uncalculated amount of water to the river. Kansas will develop a rating curve to quantify the amount in future reports.

## Transmountain Diversions into the Arkansas Basin (1)

Source: Division Engineer, Colorado Water Division 2 (AF)

Compact Year 1997

Structure/Owner	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Year
Twin Lakes Tunnel / (2)	28	26	10	4	10	152	10,540	13,480	7,320	1,690	908	1,270	35,438
Homestake Tunnel / (3)	0	0	0	0	9,810	14,550	0	4,170	5,970	2,630	0	417	37,547
Wurtz Ditch / Pueblo	0	0	0	0	0	0	1,050	2,350	476	294	12	0	4,182
Larkspur Ditch / Catlin	0	0	0	0	0	0	0	78	62	38	6	0	184
Ewing Ditch / Pueblo	0	0	0	0	0	0	297	701	239	106	6	0	1,349
Columbine Ditch / Pueblo	0	0	0	0	0	0	164	1,130	303	128	5	0	1,730
Bousted Tunnel / SECWCD	133	154	154	146	184	186	12,890	48,150	13,570	3,560	146	184	79,457
Busk-Ivanhoe Tunnel / (4)	82	55	48	39	43	78	453	3,200	324	103	107	6	4,538
Blue River Project	920	1,000	157	780	832	455	601	1,256	927	964	1,378	1,036	10,306
<b>Total</b>	<b>1,163</b>	<b>1,235</b>	<b>369</b>	<b>969</b>	<b>10,879</b>	<b>15,421</b>	<b>25,995</b>	<b>74,515</b>	<b>29,191</b>	<b>9,513</b>	<b>2,569</b>	<b>2,913</b>	<b>174,732</b>

Notes:

- (1) Transmountain water diverted into the Arkansas Basin through a facility is generally delivered to some type of storage prior to use. The values reported reflect water diverted into the basin, generally to storage, and are not necessarily measured as flow below Pueblo.
- (2) Twin Lakes Ownership: Colorado Springs. 54.65%, Pueblo 23.14%, Pueblo West 11.56%, Aurora 4.9%, others 5.75%; (also known as Independence Pass Tunnel).
- (3) Homestake Ownership: Colorado Springs. 50%, Aurora 50%
- (4) Busk-Ivanhoe Ownership: Pueblo 50%, Aurora 49%, others 1%; (also known as Carlton Tunnel).
- (5) Aurora owned transmountain water is generally rediverted into and used in the South Platte River Basin via the Otero Pump Station and Spinney Mountain Reservoir. Total imports for CY 1997 should be reduced by 13,391 AF to reflect water used by Aurora outside the Arkansas Basin.

## **Appendix C – Meeting Information**

## **ARCA Notice and Agenda**

A

# ARKANSAS RIVER COMPACT ADMINISTRATION

307 SOUTH FIFTH STREET, LAMAR, COLORADO 81052  
719-336-9696

FOR COLORADO

DARIES C. LILE, DENVER  
JAMES G. ROGERS, LAMAR  
THOMAS R. POINTON, LAS ANIMAS

CHAIRMAN AND FEDERAL REPRESENTATIVE

LARRY E. TRUJILLO, SR.  
PUEBLO, COLORADO

FOR KANSAS

DAVID L. POPE, TOPEKA  
ROBERT BUEKLE, HOLCOMB  
EUGENE OVERTON, SYRACUSE

## **NOTICE OF ANNUAL MEETING**

### **ARKANSAS RIVER COMPACT ADMINISTRATION**

**Tuesday, December 9, 1997, 8:30 A.M. (MST)**  
**Cow Palace Inn, Lamar, Colorado**

The 1997 Annual Meeting of the Administration will be held at the time and place noted above. The meeting will be recessed for the lunch hour at about noon and reconvened for the completion of business in the afternoon as necessary. Meetings of the Administration are operated in compliance with the federal Americans with Disabilities Act. If you anticipate needing a special accommodation as a result of a disability please contact Steve Miller at 303-866-3441 or Don Higbee at 719-336-9696 at least 3 days before the meeting.

The following Committees of the Administration will meet beginning at 6:30 P.M. and continuing to completion at approximately 9 P.M. on Monday, December 8, 1997 in the Colorado Room at the Cow Palace:

1. Operations & Engineering (combined meeting of both committees)
2. Administrative/Legal

For a description of items to be discussed by the Committees refer to agenda item 7, below. The public is welcome to attend the Committee meetings, but time for comments may be limited.

### **TENTATIVE AGENDA**

The tentative agenda for the Annual Meeting, which is subject to change, is as follows:

1. Call to order and introductions
2. Approval of agenda
3. Reports of Officers for Compact Year 1997:
  - a. Chairman - Trujillo
  - b. Recording Secretary - Higbee (defer until agenda item 13)
  - c. Treasurer - Rogers (defer until agenda item 13)
  - d. Operations Secretary - Witte (defer until agenda item 6.c.)

**ARCA Annual Meeting, Tuesday, December 9, 1997**  
**Agenda Page 2**

4. Election of officers for Compact Year 1998:
  - a. Vice-chairman, currently vacant
  - b. Recording Secretary, currently Higbee
  - c. Treasurer, currently Rogers
  - d. Operations Secretary, currently Witte
  - e. Assistant Operations Secretary, currently Rude
5. Approval of transcripts and/or summaries from prior meetings
  - a. Approval of December 1993 Annual Meeting Minutes
  - b. Approval of December 1996 Annual Meeting Minutes
  - c. Approval of February 5, 1997 Special Meeting Minutes (including reconvened sessions on February 19 and March 11, 1997)
6. Committee reports for Compact Year 1997:
  - a. Administrative/Legal, Chair Overton:
    - (1) Financial matters (defer to agenda item 13)
    - (2) By-Law revisions (defer to agenda item 10)
  - b. Engineering, Acting Chair Pope:
    - (1) USGS status report on continued operation of tributary gages, review of data, and hydrograph separation methods.
    - (2) USGS proposal for transit loss/travel time study below JMR.
    - (3) USGS status report on Power Conversion Coefficient (PCC) Study
    - (4) Army Corps status report on channel capacity studies below John Martin and Pueblo Reservoirs.
    - (5) Army Corps informational item on John Martin Reservoir flood control operations and deviation procedures.
    - (6) Colorado State Parks status report on Trinidad Lake Permanent Pool operations and accounting
  - c. Operations, Chair Buerkle:
    - (1) 1997 Operations Secretary Report by Steve Witte and Mark Rude, deferred from agenda item 3.d.
    - (2) Colorado Compact compliance efforts and Offset Account operations, status report by Colorado State Engineer, Hal Simpson.
    - (3) 1997 and 1998 Annual Agreements.
7. Appointment of Committee members and chairs for Compact Year 1998:
  - a. Administrative/Legal (current Lile and Chair Overton)
  - b. Engineering (current Pope and vacant)
  - c. Operations (current Rogers and Chair Buerkle)



**ARCA Annual Meeting, Tuesday, December 9, 1997**  
**Agenda Page 3**

8. Reports of federal agencies:
  - a. Bureau of Reclamation
  - b. Corps of Engineers
    - (1) Channel capacity studies.
    - (2) John Martin Reservoir flood control operations and deviation procedures.
  - c. Geological Survey:
    - (1) Status of gaging efforts and costs.
    - (2) USGS Cooperative Agreements; ratify federal FY 1998 and preauthorize federal FY 1999.
    - (3) Proposal for study of transit loss and travel time on Arkansas River below JMR.
    - (4) USGS status report on Power Conversion Coefficient (PCC) Study.
    - (5) Overview of other studies and activities.
9. Trinidad Project: Review and approval of proposed changes to Operating Principles
10. By-Law Revisions
  - a. Adoption of Recompiled Bylaws
  - b. Proposed changes to recompiled bylaws
    - (1) Alternate locations for Annual and/or Special Meetings.
    - (2) Clarify residence of Operations and Assistant Operations Secretaries.
    - (3) Clarify duties of Operations and Recording Secretaries.
    - (4) Gender neutral pronouns.
    - (5) Require audits every other year.
11. Annual report preparation
  - a. Status of 1994, 1995, and 1996 draft report
  - b. Discussion of 1997 draft report
12. Litigation status report re Highland and Nine Mile Cases
13. Financial matters:
  - a. Recording Secretary's Report - deferred from agenda item 3.b.
  - b. Treasurer's Report - deferred from agenda item 3.c.
  - c. Review and approval of Audit Report for FY 1996-97 (7/1/96-6/30/97)
  - d. Budget review and adoption
    - (1) Review of current fiscal year (1997-98) budget
    - (2) Review of previously adopted FY 1998-99 budget and assessments
    - (3) Adoption of FY 1999-2000 budget and assessments
14. Adjournment

## ARKANSAS RIVER COMPACT ADMINISTRATION

307 SOUTH FIFTH STREET, LAMAR, COLORADO 81052

719-336-9696

### FOR COLORADO

DARIES C. LILE, DENVER  
CARL G. GENOVA, PUEBLO  
JAMES G. ROGERS, LAMAR

### CHAIRMAN AND FEDERAL REPRESENTATIVE

LARRY E. TRUJILLO, SR.  
PUEBLO, COLORADO

### FOR KANSAS

DAVID L. POPE, TOPEKA  
ROBERT BUERKLE, HOLCOMB  
EUGENE OVERTON, SYRACUSE

## NOTICE OF SPECIAL TELEPHONIC MEETING OF THE ARKANSAS RIVER COMPACT ADMINISTRATION

**Wednesday February 5, 1997 at 10:00 A.M. MST (11:00 A.M. CST)**

A Special Meeting of the Arkansas River Compact Administration (ARCA) will be held by telephonic conference call at the time noted above. The meeting will be convened for consideration of the following topics:

1. Establishing a new account in John Martin Reservoir to store water to offset depletions to useable Stateline flows caused by post-compact well pumping in Colorado.
2. Adoption of a change to the By-Laws creating an additional Officer of the Administration, the Assistant Operations Secretary.

Any person wanting to monitor or participate in the telephonic meeting must contact one of the proposed listening sites listed below at least 2 days prior to the meeting. Listening sites with speaker phones have been tentatively established (depending on demand and necessity) at the following locations:

<u>SITE</u>	<u>COORDINATOR</u>	<u>PHONE</u>
1. ARCA Office, 307 S. Main Street, Lamar, CO	Don Higbee	719-336-9696
2. Kansas Div. of Water Resources, Topeka, KS	David Pope	913-296-3717
3. Colorado Water Conservation Board, Denver, CO	Steve Miller	303-866-3441
4. Colorado Div. of Water Res., Div. 2 Engineer, Pueblo, CO	Steve Witte	719-542-3368
5. Kansas Div. of Water Resources, Garden City, KS	Mark Rude	316-276-2901

Notice issued by the Colorado Water Conservation Board pursuant to the authority of the ARCA Recording Secretary, Don Higbee.

Exhibit A  
2-5-97

## **Appendix D – Resolutions and Other Agreements**

# Offset Account Resolution

RESOLUTION CONCERNING  
AN OFFSET ACCOUNT IN  
JOHN MARTIN RESERVOIR FOR  
COLORADO PUMPING

WHEREAS, Article IV-D of the Arkansas River Compact provides as follows:

The Compact is not intended to impede or prevent future beneficial development of the Arkansas River basin in Colorado and Kansas by Federal or State agencies, by private enterprise, or by combinations thereof, which may involve construction of dams, reservoirs and other works for the purposes of water utilization and control, as well as the improved or prolonged functioning of existing works: Provided, that the waters of the Arkansas River, as defined in Article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this Compact by such future development or construction;

and

WHEREAS, the United States Supreme Court has determined that post-Compact well pumping in the State of Colorado has caused material depletions of usable Stateline flows of the Arkansas River in violation of the Arkansas River Compact [hereinafter the "Compact"], *Kansas v. Colorado*, 115 S.Ct. 1733 (1995); and

WHEREAS, the State of Colorado [hereinafter "Colorado"] desires to continue to allow ground water pumping by its water users in excess of the pre-Compact pumping entitlement of 15,000 acre-feet per year determined by the United States Supreme Court as long as any

depletions to usable Stateline flows caused by such pumping are replaced; and

WHEREAS, Section 2 of the Act of Congress approving the Compact provides in relevant part as follows:

[T]he Chief of Engineers is hereby authorized to operate the conservation features of the John Martin Reservoir Project in a manner conforming to such Compact with such exceptions as he and the Administration created pursuant to the Compact may jointly approve[;]

and

WHEREAS, the issue of Compact compliance by Colorado is presently pending before the Special Master appointed by the United States Supreme Court; and

WHEREAS, an account in John Martin Reservoir [hereinafter the "Reservoir"] is not necessary for Colorado's compliance with the Compact, but an account would be of benefit to Colorado by facilitating compliance with the Compact by Colorado and its water users to the extent that Colorado allows post-Compact well pumping by its water users in excess of the pre-Compact entitlement of 15,000 acre-feet per year, and Colorado has requested such an account

WHEREAS, the Offset Account [as hereinafter defined] would create benefits for water users in Kansas but also monitoring and accounting burdens for the State of Kansas [hereinafter "Kansas"]; and

WHEREAS, the existence of an account in the Reservoir does not, in and of itself, assure compliance with the Compact by Colorado and its water users; and

WHEREAS, the Arkansas River Compact Administration [hereinafter the "Administration"] recognizes that it has the authority to create the Offset Account as provided for herein, but that neither the Administration nor either of its member states has any obligation to create the account provided for in this Resolution; and

WHEREAS, concurrently with the adoption of this Resolution, Colorado and Kansas are entering into a Stipulation Re Offset Account in John Martin Reservoir [hereinafter the "Stipulation"];

NOW THEREFORE, BE IT RESOLVED that, pursuant to Section 2 of the Act of Congress approving the Compact, the Administration and the Chief of Engineers of the Corps of Engineers or his duly authorized representative, jointly approve a storage account in the Reservoir to be established and operated as follows:

1. There is hereby established a new storage account in the Reservoir to be known as the "Offset Account in John Martin Reservoir for Colorado Pumping" [hereinafter the "Offset Account"]. The size of the Offset Account shall be 20,000 acre-feet. Deliveries of water to the Offset Account shall be stored in the conservation pool but shall not be inflows into the Reservoir which accrue to conservation storage, and water in the Offset Account shall reside below elevation 3,851 feet above mean sea level (bottom of flood control storage). The establishment of the Offset Account is for the primary purpose of facilitating Compact compliance by Colorado and its water users after the effective date of this Resolution and is not for the purpose of repayment for violations of the Compact by Colorado prior to the effective

date of this Resolution or replacement to Colorado ditches except as authorized herein. The intent of this Resolution is that, to the extent that Colorado allows post-Compact well pumping in Colorado in excess of the pre-Compact entitlement of 15,000 acre-feet per year, any depletions to usable Stateline flows caused by such pumping be contemporaneously offset by delivering replacement water to the Stateline or by making replacement water available in the Offset Account where it can be called for by Kansas in accordance with this Resolution.

2. The Offset Account shall be separate from and in addition to the accounts established by the Administration's Resolution Concerning an Operating Plan for John Martin Reservoir as revised through December 11, 1984 [hereinafter the "1980 Operating Plan"] and the John Martin Reservoir Permanent Pool authorized by the Administration Resolution of August 14, 1976 [hereinafter the "Permanent Pool"].

3. The Colorado State Engineer or his delegate [hereinafter the "Colorado State Engineer"] may deliver or permit the delivery by Colorado water users of water to the Offset Account upon timely notice to the Kansas Chief Engineer or his delegate [hereinafter "Kansas Chief Engineer"]. Such notice shall specify and document the following: the source of the water delivered, the amount of water, the purpose for which the water is delivered, the time of delivery, the rate of delivery, the extent to which the water is fully consumable, and the quantity, timing, and location of any associated return flows.



4. Only water approved for storage in the Offset Account by the Colorado State Engineer may be delivered to the Offset Account, provided that adequate transit losses shall be charged during delivery of water to the Offset Account, which losses shall be determined by the Colorado State Engineer using the method set out in the U.S. Geological Survey Water Resources Investigations 78-75 (Sept. 1978) [hereinafter the "Livingston Formula". At the time of deliver of water to the Offset Account, the Colorado State Engineer shall determine the extent to which water delivered to the Offset Account is fully consumable and shall thereafter demand the release of any water necessary to maintain historical return flows to Colorado ditches and Stateline from deliveries of water historically used for agricultural irrigation; provided, however, that the Kansas Chief Engineer may, at his option, direct that water necessary to maintain historical return flows to the Stateline [hereinafter "Stateline Return Flow"] remain in the Offset Account or be transferred to the Kansas account provided for in Section II of the 1980 Operating Plan [hereinafter "Kansas Section II Account"] for later release, and provided further, that the Colorado State Engineer's determination of the extent to which water delivered to the Offset Account is fully consumable shall not be binding on the Administration or Kansas. Once the Colorado State Engineer has determined the extent to which the water delivered to the Offset Account is fully consumable or is Stateline Return Flow, and has notified the Kansas Chief Engineer in accordance with paragraph 3 above, the Kansas Chief Engineer may demand the release of the water in the Offset Account which is fully consumable at any time and at any rate and

may demand the release or direct the transfer of water in the Offset Account which is Stateline Return Flow at any time and at any rate.

5. Evaporation charges shall be made against water stored in the Offset Account in the manner set forth in Subsection II F of the 1980 Operating Plan. The evaporation charges shall be prorated amongst conservation storage and the accounts, including the offset Account, according to the amounts in them. Evaporation from water in the Offset Account shall be charged against Colorado until:

- A. The water is released or transferred in accordance with this Resolution, or
- B. Thirty days after the Colorado State Engineer has determined and notified the Kansas Chief Engineer of the estimated monthly net depletion to usable Stateline flows caused by post-Compact diversions of tributary ground water from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo Dam and the Stateline ("the estimated monthly net depletion of usable Stateline flows"), to the extent the Kansas Chief Engineer has not previously demanded the release of water available for replacement of the Offset Account in an amount equal to or greater than the estimated monthly net depletion to usable Stateline flows, the evaporation loss on that amount of water or portion thereof shall thereafter be charged to Kansas. In order to determine the estimated monthly net depletion to usable Stateline flows for

purposes of this paragraph only, the Colorado State Engineer shall use the following procedure unless he and the Kansas Chief Engineer agree otherwise: the Colorado State Engineer shall use the presumptive stream depletions established in Rule 4.2 of the Amended Rules and Regulations Governing the Diversion and Use of Tributary Ground Water in the Arkansas River Basin, Colorado, effective June 1, 1996 [hereinafter "Amended Rules"] and unit response functions presently utilized in accordance with the Amended Rules to determine stream depletions at the Stateline caused by post-Compact diversions of tributary ground water from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo Dam and the Stateline. Further, the Colorado State Engineer shall use the same procedures currently used under the Amended Rules to determine the timing and location of return flows from diversions of imported waters and other augmentation water in determining net stream depletions at the Stateline. For the summer storage season in the Reservoir (April 1-October 31), the Colorado State Engineer shall assume that net depletions to usable Stateline flows are 81.9 percent of the net stream depletions at the Stateline, and for the winter storage season (November 1-March 31), the Colorado State Engineer shall assume that net depletions to usable Stateline flows are 34.9 percent of the net stream depletions at the Stateline; provided that if the monthly Stateline flow exceeds 30,000 acre-feet during the summer storage

season or 7,500 acre-feet during the winter storage season, no depletion to usable Stateline flows shall be determined for such months for the purpose of this paragraph.

Notwithstanding paragraph B above, until thirty days after the Colorado State Engineer has determined and notified the Kansas Chief Engineer of the quantity and timing of any estimated Stateline Return Flow in the Offset Account, and the time for release of such water to the Stateline has passed, the evaporation loss on that amount of Stateline Return Flow shall be charged to Colorado, but shall thereafter be charged to Kansas.

6. In accordance with the provisions of paragraphs 3 and 4 above, the Colorado State Engineer may deliver or permit the delivery of water by Colorado water users to the Offset Account, in an amount not to exceed 1,500 acre-feet per Compact year, for the purpose of replacing depletions to the inflows to conservation storage caused by post-Compact well pumping in Colorado and may (1) direct the transfer of such water from the Offset Account to conservation storage to replace depletions to the inflows to conservation storage, or (2) to the extent such water is not needed to replace depletions to the inflows to conservation storage, may change the prior designation of water previously designated for the purpose of transfer to conservation storage. Once the Colorado State Engineer has notified the Kansas Chief Engineer of the change of designation, such water may be released or transferred in accordance with this Resolution.

7. Releases from the Offset Account may be made simultaneously with deliveries into the Offset Account.

However, such simultaneous releases and deliveries cannot create a deficit in the Offset Account.

8. Transit losses for releases from the Offset Account shall not be replenished from the Kansas transit loss account. Transit losses associated with the release of Stateline Return Flow from the Offset Account shall be replaced by the entity which delivered such Stateline Return Flow to the Offset Account, provided that any increase in transit losses which results if the Kansas State Engineer directs that Stateline Return Flow remain in the Offset Account and calls for the release of such Stateline Return Flow at a later time shall be borne by Kansas. Such transit losses on releases of Stateline Return Flow shall be determined using the Livingston Formula for Subreach 6, removing bank and channel storage from the calculation, unless the Colorado State Engineer and the Kansas Chief Engineer agree otherwise. In order to ensure the arrival of releases of Stateline Return Flow at the Stateline if the Kansas Chief Engineer calls for the release of such Stateline Return Flow during the summer storage season in the Reservoir (April 1-October 31), an amount of water equal to the transit losses determined using the Livingston Formula for Subreach 6, including bank and channel storage, shall be released with the Stateline Return Flow and shall be charged to the entity which delivered the Stateline Return Flow, except that Kansas shall bear any increase in evaporation resulting from the summer storage release.

9. Notwithstanding other provisions of this Resolution, 500 acre-feet of fully consumable water shall be delivered by Colorado or Colorado water users to the Offset Account by April 1 of each year or within two

weeks after this Resolution becomes effective, whichever is later, which delivery shall be a prerequisite for Colorado's right to deliver or permit the delivery by Colorado water users of up to 10,000 acre-feet of water (including the said 500 acre-feet) to the Offset Account pursuant to this Resolution during the period until the next succeeding April 1. For delivery of water to the Offset Account in excess of 10,000 acre-feet during each period, five percent of the amount delivered shall be allocated to Kansas. The said 500 acre-feet and five percent of any water delivered in excess of 10,000 acre-feet during each period [hereinafter "Storage Charge Water"] shall be allocated to Kansas, not for offset of depletions of usable flow at the Stateline but as part of Kansas' equitable share of the benefits arising from the creation of the Offset Account in the Reservoir. The Kansas Chief Engineer may direct that Storage Charge Water be transferred to the Kansas Section II Account or may demand the release of Storage Charge Water at any time and at any rate. If Storage Charge Water is retained in the Offset Account, Kansas shall bear the evaporation after April 1. Colorado water users shall bear the evaporation prior to April 1. Any shortfall due to evaporation in the 500 acre-foot April 1 delivery requirement shall be made up out of the next delivery of water after April 1 by Colorado water users. Kansas shall bear the transit losses associated with the release of Storage Charge Water. Such transit losses shall be calculated using the Livingston Formula for Subreach 6, unless the Colorado State Engineer and the Kansas Chief Engineer agree otherwise.

10. No transfers, releases or exchanges shall be made of water in the Offset Account except releases and

transfers authorized by this Resolution or approved by the Administration.

11. Not later than December 1 of each year, the Colorado State Engineer shall make an accounting of the operation under this Resolution for the previous Compact year available to the Operations Committee of the Administration and to interested parties.

12. In recognition of the fact that the operation of the Offset Account is for the primary purpose of facilitating Compact compliance by Colorado in connection with increased post-Compact pumping by Colorado water users, the Colorado State Engineer shall report to the Administration and the Kansas Chief Engineer on a monthly basis the timing and amount of deliveries to the Offset Account, the monthly pumping in location and amount in excess of Colorado's pre-Compact entitlement, and Colorado's monthly accounting of Compact compliance, including documentation not already provided and a report of the status of water delivered to the Offset Account, within two months of the end of the month reported. The Administration recognizes that use of this Offset Account to facilitate Compact compliance by Colorado after the effective date of this Resolution may result in additional monitoring costs to Kansas. The Administration recognizes that Kansas is not waiving its right to claim reasonable compensation from Colorado for such additional monitoring expenses incurred by Kansas after the effective date of this Resolution. The Colorado State Engineer shall timely share relevant information with the Kansas Chief Engineer concerning use of the Offset Account in a manner that will minimize Kansas' monitoring costs. Each year the Colorado State Engineer and the

Kansas Chief Engineer shall discuss further ways to minimize such costs.

13. In the event that runoff conditions occur in the Arkansas River basin upstream from the Reservoir that cause water to spill from the Reservoir, then water stored in the Permanent Pool in excess of 10,000 acre-feet shall spill before water stored in the accounts granted in Subsections III A, B, and C of the 1980 Operating Plan, which shall spill before the water stored in the Offset Account, which shall spill before the accounts granted in Section II of the 1980 Operating Plan, which shall spill before the Kansas Transit Loss Account, all of which shall spill before conservation storage.

14. Water available under priority rights decreed to the ditches of Colorado Water District 67 [hereinafter "District 67"] may be stored in the Offset Account only when no water is accruing to conservation storage, provided that return flows shall be maintained and accounted for in accordance with paragraphs 3 and 4 above; and water may be transferred into the Offset Account from accounts of the ditches of District 67 in the Reservoir provided for in Section II of the 1980 Operating Plan in accordance with this Resolution; provided that such storage or transfers are in accordance with the Amended Rules adopted by the Colorado State Engineer and, with respect to transfers from District 67 accounts, shall include both the consumable and return flow portions of such water.

15. Neither the adoption of this Resolution nor the establishment or operation of the Offset Account shall constitute a waiver of either State's rights under the



Compact (if such a waiver is possible as a matter of law) or prejudice the ability of either State to represent its interests in present or future cases or controversies before the Administration or any court of competent jurisdiction, except as provided in the Stipulation.

16. All terms employed in this Resolution which are defined in the Compact or the 1980 Operating Plan shall have the same meaning as set out in the Compact or the 1980 Operating Plan, as the case may be.

17. The effective date of this Resolution shall be the date on which the Chief of Engineers of the Corps of Engineers, or his duly authorized representative, gives his approval by signing and dating below in the space provided. This Resolution shall not be affected by the termination of the 1980 Operating Plan, except that operations contemplated in this Resolution which rely on the existence of the 1980 Operating Plan shall no longer occur if the 1980 Operating Plan is terminated. This Resolution shall be in full force and effect until March 31, 1998, and year-to-year thereafter subject to the following provisions:

A. Either Colorado or Kansas, through its Compact delegation, may terminate this Resolution effective March 31 by giving written notice to the Administration by February 1 of the same Compact year.

B. In the event that this Resolution is terminated, water in the Offset Account at that time may remain in storage in the Offset Account and be released or transferred as provided above until no water remains in the Offset Account, at which time the Offset Account shall be terminated.

App. 64

18. Colorado may, as it sees fit, fulfill or, as a condition to delivery of water to the Offset Account by Colorado water users, require its water users to fulfill the delivery requirements and be responsible for evaporation and transit loss charges imposed on Colorado by this Resolution, provided that Colorado shall require Colorado water users who wish to deliver water to the Offset Account to comply with this Resolution in all respects and shall require immediate cessation of the use of the Offset Account by any Colorado water user or users in the event of any substantial failure by such Colorado water user or users to comply with this Resolution.

19. Any releases of water from the Offset Account shall not exceed the channel capacity as determined by the Corps of Engineers.

JOINTLY APPROVED:

/s/ <u>Larry E. Trujillo, Sr.</u> Chairman Arkansas River Compact Administration	/s/ <u>Don Higbee</u> Recording Secretary Arkansas River Compact Administration
---	---

/s/ <u>Lloyd S. Wagner</u> District Engineer, Albuquerque District, Duly Authorized Representative of the Chief of Engineers U.S. Army Corps of Engineers	<u>17 March 1997</u> Date
---	------------------------------

---

## **Offset Account Stipulation**

IN THE SUPREME COURT OF THE UNITED STATES

STATE OF KANSAS,

Plaintiff,

v.

STATE OF COLORADO,

Defendant,

and

UNITED STATES OF AMERICA,

Defendant-Intervenor.

No. 105, Original  
October Term 1996

**FILED**

APR 03 1997

SPECIAL MASTER  
U.S. SUPREME COURT

**STIPULATION  
RE OFFSET ACCOUNT IN JOHN MARTIN RESERVOIR**

This Stipulation is entered into this 17 day of March, 1997,  
by the State of Kansas [hereinafter "Kansas"] and the State of Colorado [hereinafter "Colorado"], subject to approval by the Special Master of the United States Supreme Court.

**RECITALS:**

WHEREAS, Article IV-D of the Arkansas River Compact provides as follows:

This Compact is not intended to impede or prevent future beneficial development of the Arkansas River basin in Colorado and Kansas by Federal or State agencies, by private enterprise, or by combinations thereof, which may involve construction of dams, reservoirs and other works for the purposes of water utilization and control, as well as the

**RECEIVED**

APR 08 1997

HILL & ROBBINS P C

improved or prolonged functioning of existing works: Provided, that the waters of the Arkansas River, as defined in Article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this Compact by such future development or construction;

and

WHEREAS, the United States Supreme Court has determined that post-Compact well pumping in Colorado has caused material depletions of the usable Stateline flows of the Arkansas River in violation of the Arkansas River Compact [hereinafter the "Compact"], Kansas v. Colorado, 115 S.Ct. 1733 (1995); and

WHEREAS, Colorado desires to continue to allow ground water pumping by its water users in excess of the pre-Compact entitlement of 15,000 acre-feet per year determined by the United States Supreme Court as long as any depletions to usable Stateline flows caused by such pumping are replaced; and

WHEREAS, the issue of Compact compliance by Colorado is presently pending before the Special Master appointed by the United States Supreme Court; and

WHEREAS, an account in John Martin Reservoir [hereinafter the "Reservoir"] is not necessary for Colorado's compliance with the Compact, but an account would be of benefit to Colorado by facilitating compliance with the Compact by Colorado and its water users to the extent that Colorado allows post-Compact well pumping by its water users in excess of the pre-Compact pumping

entitlement of 15,000 acre-feet per year, and Colorado has requested such an account; and

WHEREAS, the Arkansas River Compact Administration [hereinafter the "Administration"] has the authority to create the Offset Account as provided for in the Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping [hereinafter the "Resolution"], but neither the Administration nor either of its member states has any obligation to create the Offset Account; and

WHEREAS, the Offset Account will create benefits for water users in Kansas but also monitoring and accounting burdens for Kansas; and

WHEREAS, the existence of an account in the Reservoir does not, in and of itself, assure Colorado's compliance with the Compact; and

WHEREAS, the Administration and the Chief of Engineers of the Army Corps of Engineers are jointly approving concurrently herewith the Resolution establishing a new storage account in the Reservoir known as the "Offset Account in John Martin Reservoir for Colorado Pumping" [hereinafter the "Offset Account"]; and

WHEREAS, Kansas and Colorado desire to reach an agreement on the credit which Colorado shall receive for the delivery of water released from the Offset Account upon demand by Kansas, subject to approval by the Special Master of the United States Supreme Court;

NOW, THEREFORE, Kansas and Colorado stipulate and agree as follows:

1. In accordance with the Resolution, the Colorado State Engineer shall determine the extent to which water delivered to the Offset Account is fully consumable. Colorado understands that Kansas may not agree with the Colorado State Engineer's determination and agrees that the Colorado State Engineer's determination shall not be binding on Kansas in the event of a disagreement. However, both States recognize that it is useful to have the Colorado State Engineer make the determination in the first instance. In the event that Kansas disagrees with the Colorado State Engineer's determination of the extent to which water is fully consumable, Kansas shall notify Colorado within a reasonable period of time and the States shall make a good-faith attempt to resolve the disagreement. In the event the disagreement cannot be resolved by the States, Colorado agrees that it shall have the burden to establish the extent to which water delivered to the Offset Account is fully consumable.

2. With regard to water delivered to the Offset Account for the purpose of offsetting depletions to usable Stateline flows, which is released at the demand of Kansas pursuant to the Resolution, Colorado shall receive credit for the delivery of such water at the Stateline (less transit losses determined in accordance with paragraph 3 below) as a replacement of depletions to usable Stateline flows which occur after the effective date of the Resolution to the extent such water is fully consumable; provided, however, that a demand for a release of water from

the Offset Account by Kansas shall not constitute an admission by Kansas that the water released from the Offset Account and delivered to the Stateline was in fact fully consumable. Antecedent flows at the Stateline shall not be included in the calculated delivery. To the extent the credit for the delivery of water at the Stateline to offset depletions to usable Stateline flows exceeds calculated depletions to usable Stateline flows which occurred after the date of the Resolution, the credit shall be applied to reduce future depletions to usable Stateline flows. Colorado shall receive no credit, however, for spills of water from the Offset Account or for releases of Storage Charge Water (as defined in the Resolution) or Stateline Return Flow (as defined in the Resolution) as a replacement of depletions to usable Stateline flows.

3. Transit losses on releases of water from the Offset Account for delivery to the Stateline for the purpose of offsetting depletions to usable Stateline flows shall be determined using the transit losses for Subreach 6, including bank and channel storage, as set forth in the U.S. Geological Survey Water Resources Investigations 78-75, unless the States agree to use a different method or the United States Supreme Court directs otherwise. The States agree to cooperate with each other, the Administration, and the U.S. Geological Survey to improve the method of determining transit losses between John Martin Dam and the Stateline. Transit losses on releases from the Offset Account for delivery



to the Stateline for the purpose of offsetting depletions to usable Stateline flow shall be borne by such releases.

4. Colorado acknowledges that use of the Offset Account may result in additional monitoring costs to Kansas. Colorado agrees that Kansas is not waiving its right to claim reasonable compensation from Colorado for such additional monitoring expenses incurred by Kansas after the effective date of the Resolution. Colorado shall timely share relevant information with Kansas concerning use of the Offset Account in a manner that will minimize Kansas' monitoring costs. Each year, the States shall discuss further ways to minimize such costs.

5. Neither the adoption of the Resolution nor the establishment or operation of the Offset Account shall constitute a waiver of either State's rights under the Compact (if such a waiver is possible as a matter of law) or prejudice the ability of either State to represent its interests in present or future cases or controversies before the Administration or any court of competent jurisdiction; except that actual storage of water in the Offset Account, transfers authorized by the Resolution, and credits for deliveries of water to the Stateline in accordance with this Stipulation shall be considered in determining Colorado's Compact compliance; and provided further that Colorado shall receive credit for the delivery of water at the Stateline as a replacement of depletions to usable Stateline flows in accordance with this Stipulation.

DATED, this 17 day of March, 1997.

STATE OF KANSAS



JOHN B. DRAPER

Counsel of Record

Special Assistant Attorney General

MONTGOMERY & ANDREWS , P.A.

P.O. Box 2307

Santa Fe, NM 87504-2307

Telephone: 505-986-2525

Attorneys for the State of Kansas

STATE OF COLORADO



DAVID W. ROBBINS

Special Assistant Attorney General

Counsel of Record

DENNIS M. MONTGOMERY

Special Assistant Attorney General

HILL & ROBBINS, P.C.

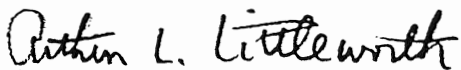
1441 - 18th Street, #100

Denver, Colorado 80202

Telephone: 303-296-8100

Attorneys for the State of Colorado

APPROVED:



ARTHUR L. LITTLEWORTH

Special Master

(6-287p)

[STIP-JMR.RES]

**Amendment to the Operating Principles for the Trinidad Dam and  
Reservoir Project Authorizing Municipal and Industrial Use of Project  
Water**

H

**RESOLUTION  
OF THE  
ARKANSAS RIVER COMPACT ADMINISTRATION  
CONCERNING  
AN AMENDMENT TO THE OPERATING PRINCIPLES  
FOR THE TRINIDAD DAM AND RESERVOIR PROJECT  
AUTHORIZING MUNICIPAL AND INDUSTRIAL USE OF PROJECT WATER**

**WHEREAS**, Article IV-D of the Arkansas River Compact provides: "This Compact is not intended to impede or prevent the future beneficial development of the Arkansas river basin in Colorado and Kansas by federal or state agencies, by private enterprise, or by combinations thereof, which may involve construction of dams, reservoirs and other works for the purposes of water utilization and control, as well as the improved or prolonged functioning of existing works: Provided, that the waters of the Arkansas river, as defined in Article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this compact by such future development or construction;" and

**WHEREAS**, in P.L. 85-500, dated July 3, 1958, Congress authorized the Trinidad Project "substantially in accordance with the recommendations" in a Review Report by the U.S. Corps of Engineers dated June 30, 1953, published as House Document No. 325, 84<sup>th</sup> Congress; and

**WHEREAS**, Kansas by letter from Gov. William H. Avery dated December 30, 1966 approved proposed Operating Principles for the Trinidad Project subject to five additional conditions; and

**WHEREAS**, the Arkansas River Compact Administration reviewed and approved the Trinidad Project Operating Principles, including the Five Kansas Conditions, by resolution dated June 6, 1967; and

**WHEREAS**, the U.S. Bureau of Reclamation ("Reclamation") and the Purgatoire River Conservancy District ("PRWCD") approved the Operating Principles, including the additional five Kansas Conditions; and

**WHEREAS**, the Trinidad Project was constructed by the U.S. Army Corps of Engineers and was substantially completed by January 1, 1977; and

**WHEREAS**, the Operating Principles state that the Trinidad Project will serve the functions of flood control, irrigation, and recreation including a permanent fishery pool. No allowance was made in the Operating Principles for use of Trinidad Project water for municipal and industrial purposes; and

**WHEREAS**, the State of Colorado is vitally interested in the economic development of the Trinidad area, and such interests will

be served by the use of Trinidad Project water for municipal and industrial purposes; and

WHEREAS, Kansas Condition No. 2 of the Operating Principles states: "Any subsequent amendment of the Operating Principles should be subject to the review and approval of the same interests as provided for in the original procedure."

NOW, THEREFORE, BE IT RESOLVED that the Arkansas River Compact Administration hereby approves the proposed amendment to the Operating Principles for the Trinidad Dam and Reservoir Project, as set forth in the attached Exhibit "A", authorizing the use of Trinidad Project water for municipal and industrial purposes.

Entered this 9<sup>th</sup> day of December, 1997, at a meeting of the Arkansas River Compact Administration.



Larry E. Trujillo, Sr.



DATE

*See* Chairman

OPERATING PRINCIPLES  
TRINIDAD DAM AND RESERVOIR PROJECT  
Amended 1997

Preamble

The Trinidad Dam and Reservoir Project as reported in House Document No. 325, 84<sup>th</sup> Congress, 2d Session, and as authorized by the Flood Control Act of 1958, will be operated in such a manner as to secure the greatest practicable benefits from the regulation and use of the flows of the Purgatoire River consistent with the laws and policies of the State of Colorado and of the United States including the Arkansas River Compact. The objectives and principles governing the operation of the Trinidad Dam and Reservoir Project to secure such benefits are contained within the following articles.

Article - OBJECTIVES

I

Article - DEFINITION OF TERMS

II

Article - FLOOD CONTROL

III

Article - IRRIGATION, MUNICIPAL AND INDUSTRIAL

IV

Article - FISHERY AND RECREATION

V

Article - REVIEW AND AMENDMENT

VI

Article I - OBJECTIVES

The operation of the Trinidad Dam and Reservoir involves the regulation of the flows of the Purgatoire River for flood control, irrigation use, municipal and industrial use and recreation, including a permanent fishery pool. The project plan provides for:

1. Control of floods originating above the reservoir for benefit of the City of Trinidad and downstream reaches.

2. Optimum beneficial use of the available water for irrigation and municipal and industrial uses (municipal and industrial hereinafter abbreviated M&I) within the project area consistent with the protection of downstream non-project rights as set forth in House Document No. 325, 84<sup>th</sup> Congress, 2d Session, which provides:

(a) Transfer of the storage decree of the Model Land and Irrigation Company for 20,000 acre-feet annually from the present site to the proposed Trinidad Reservoir.

(b) Storage in the Trinidad Reservoir of flood flows originating on the Purgatoire River above the dam ~~site~~ which would otherwise spill from John Martin Reservoir.

(c) Storage in Trinidad Reservoir of the winter flows of the Purgatoire River historically diverted for winter irrigation of project lands.

3. The maintenance of a minimum pool for enhancement of recreation and fishery values.

4. The construction of the Trinidad Dam and Reservoir with the following allocated capacities:

Flood control . . . . .	51,000 acre-feet
· · · · ·	
Irrigation <u>and M&amp;I</u> . . . .	20,000 acre-feet
· · · · ·	
Permanent fishery pool . .	15,967 acre-feet
· · · · ·	
Joint use* . . . . .	39,000 acre-feet
· · · · ·	
Total Allocated	<u>125,967 acre-feet</u>
Capacity	
*For irrigation, <u>M&amp;I</u> and sediment accumulation	

## Article II - DEFINITION OF TERMS

Definition of terms as used herein:

1. "Reservoir" means the reservoir presently planned and authorized for construction on the Purgatoire River above the City of Trinidad, Colorado.

2. "District" means the Purgatoire River Water Conservancy District, that entity created and existing under laws of the State of Colorado to contract for repayment to the United States of an appropriate share of the project costs allocated to the irrigation and M&I use. The District shall also be the agency responsible for the regulation of irrigation and M&I water supplies within the District boundaries in the manner set forth therein.

3. "Unused Sediment Capacity" means that portion of the 39,000 acre-feet of reservoir capacity allocated to joint use but unoccupied by sediment at any given time.

4. "Irrigation Capacity" means the 20,000 acre-feet of reservoir capacity allocated to irrigation and M&I use plus the unsedimented portion of the joint use capacity.
5. "Permanent Fishery Pool Capacity" means the 15,967 acre-feet of reservoir capacity allocated to fishery and recreation.
6. "Permanent Fishery Pool" means the quantity of water stored in the permanent fishery pool capacity.
7. "Flood Control" means the temporary storage of flood waters at any reservoir pool level as necessary to alleviate flood damages through the City of Trinidad and downstream reaches.
8. "Flood Control Capacity" means the 51,000 acre-feet of capacity exclusively allocated to flood control lying initially above m.s.l. reservoir elevation 6229.6.
9. "Reservoir Inflow" is to be expressed in mean daily cubic feet per second of time and means that total flow of water entering the reservoir, comprising measured flows at the inflow gaging stations and other unmeasured inflows entering the reservoir, less such flow of water as may be acquired by the State of Colorado for filling and maintaining the permanent fishery pool.
10. "District Irrigable Area" means only the 19,717 acres of Class 1, 2 and 3 irrigable lands to be served lying within District boundaries.
11. "Irrigation Season" means that period of the year, as determined annually by the District, during which water may be beneficially applied to the District irrigable area, provided the irrigation season will not begin earlier than April 1 or end later than October 15, except as modified by the District with the consent of the Secretary of Interior.
12. "Nonirrigation Season" means that period of the year other than the irrigation season.
13. "District Storage Right" means those rights under which the District may store water in the irrigation capacity for use on within the District ~~irrigable area~~.
14. "District Water Supply" means that water supply of the Purgatoire River subject to District administration for irrigation and M&I use within the District ~~irrigable area~~.



15. "Colorado State Engineer" means the Colorado State Engineer or such other administrative agency having jurisdiction and control over the distribution of the waters of the State of Colorado.

16. "Operating Agency" means the U.S. Army Engineer District, Albuquerque, New Mexico, Corps of Engineers.

### Article III - FLOOD CONTROL

Trinidad Reservoir shall be operated for flood control benefits in accordance with regulations prescribed by the Secretary of the Army and the following operating principles:

1. All potentially damaging flood inflows shall be temporarily detained as necessary to limit the flow insofar as possible to a non-damaging flow, currently estimated to be 5,000 c.f.s., downstream from the Trinidad Reservoir.

2. All flood waters stored in the flood control capacity shall be released at the maximum non-damaging rate insofar as practicable.

3. Any inflow, other than that stored for irrigation and M&I and Permanent Fishery Pool use, temporarily retained below the bottom of the flood control capacity for flood control purposes, shall be released by the operating agency at such a rate, time, and quantity as may be ordered by the Colorado State Engineer, but within non-damaging flow in the channels below the reservoir.

### Article IV - IRRIGATION, MUNICIPAL AND INDUSTRIAL

Administration of the Irrigation capacity in Trinidad Reservoir and the distribution of water to the District irrigable Area and to M&I uses within the District will be made by the District in accordance with House Document No. 325, 84<sup>th</sup> Congress, 2d Session, and these operating principles. Agreements, satisfactory to the Secretary of the Interior, shall be entered into between the District and the ditch companies and other owners of affected water rights to insure that these principles and the operation described herein shall be adopted.

The principles and provisions under which the District will administer water supplies to the District irrigable area and to M&I uses within the District are contained in the following four parts of this Article: "Water Rights," "Limits of Land and Water Use," "District Water Supply," and "Operation and Exercise of Water Rights."

## A. Water Rights

Accomplishment of the following conditions is necessary under the laws of the State of Colorado to provide the District with the right to regulate the flows of the Purgatoire River in the manner described herein:

1. The water users within the District shall assign the right to the exercise of all the decreed direct flow water rights within the District boundaries to the District for administration by the District at such times and to the degree outlined in these principles. The right to the exercise of the following water rights, all in Water District No. 19, shall be so assigned.

### Direct Flow Rights Water Division No. 2

<u>Number</u>	<u>Priority</u> <u>Date</u>	<u>Amount</u> <u>(cfs)</u>	<u>Name of Ditch</u>
3	11/30/61	6.00	Baca
5	3/20/62	4.00	Johns Flood
7	4/30/62	7.00	Chilili
8	11/15/62	2.82	Baca
8	11/15/62	1.18	El Moro
9	1/1/63	1.28	Johns Flood
9	1/1/63	4.72	Hoehne
12	6/30/63	0.50	South Side
13	1/1/64	1.25	Johns Flood
13	1/1/64	3.75	Lewelling & McCormick
15	4/10/64	5.10	Johns Flood
15	4/10/64	0.80	Hoehne
15	4/10/64	2.54	Salas
19	6/1/65	4.00	Lewelling & McCormick
20	10/7/65	7.35	Johns Flood
20	10/7/65	16.65	Hoehne
21	1/1/66	6.00	Burns & Duncan
22	2/1/66	4.00	Salas
27	5/31/66	2.25	Johns Flood
27	5/31/66	0.75	Salas
40	4/30/68	1.40	South Side
64	4/1/73	2.40	Johns Flood
73	11/1/75	6.00	South Side
74	2/17/76	34.00	South Side
75	12/25/76	4.00	South Side
77	3/11/77	1.30	El Moro
77	3/11/77	2.70	Baca
80	4/7/77	18.60	South Side

<u>Number</u>	<u>Date</u>	<u>(cfs)</u>	<u>Name of Ditch</u>
93	12/15/82	4.00	South Side
95	11/4/83	14.38	Baca
96	11/23/83	16.84	South Side
98	4/30/84	60.00	South Side
103	6/21/86	14.73	Baca
104	10/21/86	10.00	Lewelling & McCormick
106	3/12/87	15.00	Baca
108	2/15/88	9.70	South Side
109	3/1/88	8.00	South Side
137	11/23/97	2.00	V. Florez
145	10/20/02	100.00	Johns Flood
152	12/31/03	2.00	V. Florez
168	1/22/08	200.00	Model
242½	6/12/20	45.56	Baca

2. Waters of the Purgatoire River shall be stored by the District in the irrigation capacity of Trinidad Reservoir under rights created under Colorado law; said rights, defined as the District storage right, include:

(a) The Model storage right, being the right to store 20,000 acre-feet of water from the flows of the Purgatoire River, under reservoir priority No. 10 in Water District No. 19 at a rate of flow not exceeding 700 cubic feet per second of time under date of appropriation of January 22, 1908, as decreed by the District Court of Las Animas County, Colorado, on January 12, 1925, which right shall, by appropriate statutory proceedings be transferred from the place of storage as originally decreed to the site of the reservoir; and

(b) Such other rights to store water in the reservoir as the District may lawfully acquire by appropriation or purchase.

#### B. Limits of Land and Water Use

In order that the Trinidad Dam and Reservoir Project may provide an optimum beneficial use of water for irrigation and M&I use within the District, the following limitations on land and water use shall apply:

1. The acreage irrigated by the District water supply shall be limited to the 19,717 acres classified as 1, 2 and 3 irrigable land lying within the District boundaries. These 19,717 acres of the District irrigable area shall be composed as nearly as practicable of the following acreages under individual ditches:

Baca	2,428 acres
Chilili	114 acres
El Moro	160 acres
Johns Flood	1,854 acres
Model	6,177 acres
South Side	6,359 acres
Victor Florez	22 acres
Hoehne	1,742 acres
Burns & Duncan	322 acres
Lewelling & McCormick	378 acres
Salas	161 acres
Total	19,717 acres

2. All water deliveries to the 19,717 acres of the District irrigable area will be limited during the irrigation season to the irrigation requirements at the farm headgate as determined by the District. Allowance for canal and lateral losses on the individual ditch systems will also be determined by the District.

3. ~~No water deliveries for irrigation of the 19,717 acres of the District irrigable area will be made during the nonirrigation season.~~ Water deliveries may be diverted or stored for M&I or permanent fishery pool purposes with the following limitations:

(a) Only water attributable to the historic consumptive use on acreage removed from irrigation, limited to 948 acres under the Johns Flood Ditch system and 373.7 acres under the Model Land and Irrigation Company system, may be made available for M&I storage or permanent fishery pool storage. Water deliveries shall be limited to the following volumes, which shall not include the volumes retained in storage for later release to maintain historic delayed return flow patterns to the Purgatoire River:

	<u>Maximum Monthly Water Deliveries (acre-feet)</u>
<u>Apr</u>	<u>220</u>
<u>May</u>	<u>345</u>
<u>Jun</u>	<u>565</u>
<u>Jul</u>	<u>685</u>
<u>Aug</u>	<u>620</u>
<u>Sep</u>	<u>345</u>
<u>Oct</u>	<u>160</u>
<u>Nov - Mar</u>	<u>0</u>
<u>Annual Total</u>	<u>2,802</u>

(b) Water attributable to historic return flows associated with the exercise of the water rights used on the acreage removed from irrigation shall be released in such a manner as to maintain the historic return flow patterns to the Purgatoire River. Such return flows, which shall include non-irrigation season return flows, shall be equal to at least 35 percent of the water available to acreage removed from irrigation.

(c) Removal of District irrigable land from irrigation to enable water to be diverted or stored for M&I or Permanent Fishery Pool purposes shall correspondingly reduce the number of acres allowed to be irrigated from the District Water Supply. Prior to April 1 each year, the City of Trinidad shall provide notice to the Arkansas River Compact Administration and the State of Kansas of the acreage to be removed each year corresponding to the amount of water for the Johns Flood Ditch and the Model Ditch to be stored in Trinidad Reservoir for that year. The report shall include a map indicating the specific acreage to be removed from irrigation.

(d) Any Colorado state court or administrative approval of the City of Trinidad's water use covered by these Operating Principles shall require compliance herewith.

4. No water deliveries for irrigation of the 19,717 acres of the District irrigable area will be made during the non-irrigation season. Water may be released during the non-irrigation season for M&I use or to maintain historic return flow patterns for lands removed from irrigation.

#### C. District Water Supply

1. That water supply of the Purgatoire River subject to District administration for irrigation and M&I use within the District irrigable area, defined as the District water supply consists of:

(a) The water stored under the District storage right in the irrigation capacity.

(b) The stream gains to the Purgatoire River below Trinidad Dam that are divertible to the District irrigable area for irrigation use through the District's exercise of the rights listed in IV.A.1.

(c) That portion of the reservoir inflow ~~bypassed to the river below at~~ Trinidad Dam which is available ~~subject to diversion to the~~ District irrigable area through the District's exercise of the water rights listed in IV.A.1.

2. The District water supply will be allocated by the District to the ditches within the District to provide each acre of the District irrigable area an equitable share of the District water supply after allowance has been made for individual ditch transportation losses, provided such allocation will not exceed the irrigation requirements at the farm headgate.

D. Operation and Exercise of Water Rights

The principles governing operation of the irrigation capacity and the District's exercise of the assigned direct flow water rights listed under IV.A.1. and the District storage right are hereinafter set forth as they apply to operations during the entire year as well as to operations during either the non-irrigation season or irrigation season.

1. Non-interference with Downstream Water Rights

(a) Bypasses to the river shall be made at any time during the year to satisfy downstream senior rights as ordered by the Colorado State Engineer to the extent that such demands are not met by stream gains or otherwise satisfied; but are limited to the extent as determined by the Colorado State Engineer to actually benefit such rights without unnecessary waste through channel losses.

(b) Reservoir inflow in excess of the amount stored under the transferred Model right may be detained in the reservoir at such times as John Martin Reservoir is reasonably expected to spill; to the extent that John Martin Reservoir would have spilled, such detained water shall be considered to have been stored under the District storage right and become part of the District water supply. Such detained water which does not become a part of the District water supply shall be released as called for by the Colorado State Engineer in the amounts and at such times as he shall determine that such releases may be required to avoid a material depletion of the water of the Arkansas River as defined in Article 3 of the Arkansas River Compact, C.R.S., 1953, 148-9-1.

(c) Except as provided by paragraph (b) above, any water temporarily detained in the reservoir as a result of the reservoir inflow exceeding the design outlet capacity of the reservoir shall be released as soon as possible.

(d) All releases from the reservoir as set forth in (a), (b) and (c) above, shall be passed down the Purgatoire River without interference by water users in the District irrigable area.

2. District Operation, Non-Irrigation Season

(a) During the non-irrigation season the District will provide an allowance for stock watering purposes of not more than a daily mean flow of five second-feet or its volume equivalent measured at a gage to be located near and above the Baca River headgate. If the stream gains from the Trinidad Dam to said gage are insufficient to fulfill the allowance, an equivalent volume of reservoir inflow will be released to satisfy stock water demands within the allowance.

(b) During the non-irrigation season, the District shall release water stored by the City of Trinidad as designated by the City of Trinidad for:

(1) M&I purposes;

(2) Winter return flows;

(c) During the non-irrigation season, the District will exercise the direct flow water rights and the District storage right only at such times and to the degree as necessary to assure:

(1) That the maximum possible storage of reservoir inflow is accrued.

(2) The stock water allowance is distributed in a manner determined equitable by the District.

3. District Operation - Irrigation Season

(a) During the irrigation season, except at such times as provided for in IV.D.3.(c) below, the District shall exercise the direct flow water rights and the District storage right only at such times and to the degree necessary to assure:

(1) That stream gains to the river below Trinidad Dam which are divertible to the District irrigable area and such reservoir inflow which is available ~~bypassed to the river for District for irrigation and M&I use~~ will be equitably allocated ~~distributed to the District irrigable area~~ as part of the allocated District water supply.

(2) That the District storage right can be fully exercised to store reservoir inflow in excess of that bypass to the river as may be required under D.1.(a) and D.3.(a)(1) above.

(b) During the irrigation season water stored in the irrigation capacity will be released as needed to fulfill or partially fulfill the irrigation requirements of the District irrigable area or, as designated by the City of Trinidad, made available for M&I purposes or the permanent fishery pool as provided in paragraph B.3. above as part of the allocated District water supply.

(c) During the irrigation season, when the irrigation capacity is empty as determined by the District, the District will relinquish its exercise of the direct flow water rights provided that if the reservoir inflow and stream gains below Trinidad Dam which are divertible to the District irrigable area exceed the irrigation requirement and such excess is storable under the District storage right, the District will resume the exercise of the direct flow rights and exercise of the District storage right as in D.3.(a)(2) above.

#### 4. Evaporation and Seepage Losses

In the accounting for water in storage, evaporation and seepage losses due to water stored in the irrigation capacity shall be determined using the most recent data available by the Colorado State Engineer and the District with the cooperation of the operating agency.

### Article V - FISHERY AND RECREATION

The permanent fishery pool shall be operated in accordance with the following principles:

1. Water for the initial filling and for replacing evaporation and seepage losses will be acquired by the State of Colorado without interference to the District water supply or without interference to usable Stateline flows, or without additional cost to the District or the United States for the Trinidad Project as envisioned in House Document No. 325. In the specific case of the 11,467 acre-feet allocated to the permanent fishery pool pursuant to the Final Environmental Assessment for Revision of the Water Control Manual to Allocate Excess Storage in Trinidad Lake, Las Animas County, Colorado, U.S. Army Corps of Engineers, dated September 1994, the initial filling shall only be made using waters imported into the Arkansas River basin from other river basins, either by direct importation or by exchange pursuant to the laws of Colorado. The initial filling and the replacement of evaporation and seepage shall be made according to the following procedures:

(a) All water rights on the Purgatoire River downstream of Trinidad Reservoir will be satisfied during the period of any



exchange;

(b) Prior to any exchange, the specific source of imported or native water, as limited by the Operating Principles for Trinidad Dam and Reservoir Project, as amended, will be verified by the Colorado State Engineer;

(c) For each acre-foot of native water stored in Trinidad Reservoir by exchange, the Colorado Division of Parks will deliver an acre-foot of identifiable imported water, or native water whose consumptive use has been determined by final decree of the Colorado Water Court, to the Arkansas River at the Las Animas gaging station;

(d) Transit losses between the source of supply for an exchange and the Las Animas gage will be determined and assessed by the Colorado State Engineer, using the "Livingston Method" or other suitable means, to assure that a "one for one" exchange is accomplished.

The Colorado State Engineer will report and account contemporaneously and annually to the Arkansas River Compact Administration on the initial filling and replacement of evaporation and seepage in the permanent fishery pool.

2. In the accounting for water in storage, evaporation and seepage losses due to the permanent fishery pool shall be determined using the most recent data available by the Colorado State Engineer and the District with the cooperation of the operating agency.

3. There shall never be any release or transfer of water from the permanent fishery pool excepting by necessity of dam safety or flood emergency operations as determined by the Corps of Engineers, District Engineer.

#### Article VI - REVIEW AND AMENDMENT

These Operating Principles may be subject to review and amendment not more than once a year at the request of any of the parties' signatory; provided, that at least one review shall be accomplished within the first 10 years following completion of the Trinidad Dam and at least one review be accomplished every 10 years thereafter. The primary object of such reviews will be obtaining optimum beneficial use of water as conditions change, operating experience is gained, and more technical data become available.

FIVE CONDITIONS  
State of Kansas

1. All inflows over established Colorado water rights (1,156.05 c.f.s.) be designated flood flows and released as promptly as downstream conditions permit. The only time water so designated may be stored in the conservation pool will be when John Martin Reservoir does not have the capacity to store additional water.
2. Any subsequent amendment of the Operating Pprinciples should be subject to review and approval of the same interests as provided for in the original procedure.
3. Assurances that there will be no significant increase in water use which would result in a depletion of water yield to other Colorado and Kansas water users.
4. That 5 years after beginning operation of the Trinidad Reservoir for irrigation purposes, the Operating Pprinciples be reviewed to determine the effect, if any, the operation has had on other Colorado and Kansas water users and the principles amended as necessary. Each 10 years thereafter, reviews should be provided with amendments as needed.
5. All operating records be open for inspection by any qualified representative of the Arkansas River Compact Administration.

The Bureau of Reclamation concurs fully with the "Operating Principles" as set forth above, and further agrees with the five conditions noted and suggested by the State of Kansas, also stated above.

APPROVED:

\_\_\_\_\_  
Larry E. Trujillo, Sr., Chairman      Date  
Arkansas      River      Compact  
Administration

\_\_\_\_\_  
State of Kansas      Date

\_\_\_\_\_  
U.S. Bureau of Reclamation      Date

\_\_\_\_\_  
Purgatoire      River      Water      Date  
Conservancy  
District

\_\_\_\_\_  
U.S. Army Corps of Engineers      Date

## **Readopted ARCA by-laws**

BY-LAWS  
OF  
ARKANSAS RIVER COMPACT ADMINISTRATION

As readopted December 9, 1997

PREAMBLE

Pursuant to Article VIII B(1) of the Arkansas River Compact, these by-laws were readopted by the Arkansas River Compact Administration on the 9th day of December 1997, on the 14th day of November, 1947, namely:

ARTICLE I

THE ADMINISTRATION

1. The Arkansas River Compact Administration is herein referred to as "the Administration."

2. Membership of the Administration shall consist of three representatives from each of the States of Colorado and Kansas, designated or appointed as provided by the Arkansas River Compact and the law of each of such States, and, if designated by the President, one representative of the United States of America.

3. The credentials of each such representative shall be filed with the Secretary of the Administration.

4. Each representative shall advise in writing the Secretary of the Administration as to his address, to which all official notices and other communications of the Administration shall be sent and shall further promptly advise in writing the Secretary as to any change in such address.

## ARTICLE II

### OFFICERS<sup>1/</sup>

1. The officers of the Administration shall be:

Chairman

Vice-Chairman

Recording Secretary

Treasurer

Operations Secretary

Assistant Operations Secretary<sup>2/</sup>

2. The representative of the United States of America shall be the Chairman of the Administration. The Chairman shall preside at meetings of the Administration. His duties shall be such as are usually imposed on such an officer and such as may be assigned to him by these by-laws or by the Administration from time to time.

3. The Vice-Chairman shall be a member of the Administration. He shall be elected at the annual meeting of the Administration, and shall hold office until the next annual meeting of the Administration and until his successor is elected. In the case of a vacancy in the office of Vice-Chairman, the Administration at its next meeting, whether regular or special, shall elect a Vice-Chairman to serve for the unexpired term; and the election of a Vice-Chairman may be made at any meeting of the Administration prior to the holding of its first annual meeting, and in such case he shall hold office until such annual

meeting. The Vice-Chairman shall perform all duties of the Chairman when the latter is unable for any reason to act or when, for any reason, there is a vacancy in the office of the Chairman. In addition, the Vice-Chairman shall perform such other duties as may be assigned to him by these by-laws or by the Administration from time to time.

4.<sup>2/</sup> (a) The Recording Secretary may or may not be a member of the Administration. He shall be elected by the Administration at its annual meeting and shall serve until the next annual meeting or until his successor is elected. In the case of a vacancy in the office of the Recording Secretary, the Administration shall, at its next meeting, whether regular or special, elect a Recording Secretary to serve for the unexpired term. The Recording Secretary shall perform such duties as are imposed on such officer by subparagraph (b) of this paragraph 4, by other provisions of these by-laws, or by the Administration from time to time. He shall furnish a bond for the faithful performance of his duties if the Administration so directs. The cost of such bond shall be paid by the Administration.

(b) The Recording Secretary's duties shall include, but not be limited to:

(i) Preparing, or causing to be prepared, the Administration's annual reports and printing and distributing, or causing to be printed and distributed, the same, the draft of such annual reports to be distributed to the members of the Administration not later than



February 1st following the end of the immediately preceding compact year.

- (ii) Preparing and distributing, or causing to be prepared and distributed, minutes of all meetings, whether special, special telephonic, or regular, of the Administration, drafts of which minutes shall be provided to the members of the Administration within thirty days of the meeting involved.
- (iii) Maintaining the principal office and the records, equipment, and supplies therein, and maintaining the seal of the Administration.
- (iv) Sending notices of annual and special meetings to members of the Administration.
- (v) Publishing the necessary public notices for proposed changes of the Administration's Rules and Regulations as required herein and compiling those Rules and Regulations.

5. The Treasurer may or may not be a member of the Administration; and the office of Secretary and Treasurer may be held by the same person if directed by the Administration. He shall be elected at the annual meeting of the Administration and shall hold office until his successor is elected and shall have qualified, except a treasurer may be

elected prior to the first annual meeting of the Administration and in such case shall hold office until such annual meeting. He shall receive, hold, disburse and keep records of all funds of the Administration; and he shall furnish a bond for the faithful performance of his duties in such amount as the Administration may direct. The cost of such bond shall be paid by the Administration. In the case of a vacancy in the office of Treasurer, the Administration shall, at its next meeting, whether regular or special, appoint a successor to serve for the unexpired term.

6. (a)<sup>3/8/</sup> The Operations Secretary shall not be a member of the Administration, but may be the Division Engineer for Division 2, Colorado Division of Water Resources or the Water Commissioner of the Garden City Field Office, Division of Water Resources, Kansas Department of Agriculture or other qualified individual. He or she shall be elected by the Administration at its annual meeting and shall serve until the next annual meeting or until his successor is elected. In the case of a vacancy in the office of the Operations Secretary, the Administration shall, at its next meeting, whether regular or special, elect an Operations Secretary to serve for the unexpired term. The Operations Secretary shall perform such duties as are imposed on such officer by subparagraph (b) of this paragraph 6, by other provisions of these by-laws, or by the Administration, acting through the Operations Committee, from time to time.

(b) The Operations Secretary's duties shall include, but not be limited to:

- (i) Regulating the gates of John Martin Reservoir in accordance with Compact and any operating plans or procedures adopted thereunder.
- (ii) Keeping 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.
- (iii) Preparing accurate reports of deliveries of water, which reports shall be presented to the Operations Committee.
- (iv) Provide information, maintain open communications and consult with the Assistant Operations Secretary in the performance of the duties set forth above.

7. (a) The Assistant Operations Secretary shall not be a member of the Administration, but may be the Water Commissioner for the Garden City Field Office, Division of Water Resources, Kansas Department of

Agriculture; the Division Engineer for Division 2, Colorado Division of Water Resources; or other qualified individual. He or she shall be elected by the Administration at its annual meeting and shall serve until the next annual meeting or until his or her successor is elected. In the case of vacancy in the office of the Assistant Operations Secretary, the Administration shall, at its next meeting, whether regular or special, elect an Assistant Operations Secretary to serve for the unexpired term. The Assistant Operations Secretary shall perform such duties as are imposed on such officer by subparagraph (b) of this paragraph 7, by other provisions of these by-laws, or by the Administration, acting through the Operations Committee, from time to time.

- (b) The Assistant Operations Secretary's duties shall include, but not be limited to, assisting the Operations Secretary in the performance of his or her duties, as set forth in 6(b) herein, subject to the mutual agreement of the Operations Secretary and the Assistant Operations Secretary.

8. The Administration may employ such engineering, legal, clerical, and other personnel as, in its judgment, may be necessary. They shall receive such compensation and perform such duties as may be fixed by the Administration. Such employees shall not be considered as employees of either Colorado or Kansas.

ARTICLE III  
PRINCIPAL OFFICE

1. The principal office and place of business of the Administration shall be located in the City of Lamar, Colorado.

2. The principal office shall be open for business on such hours and days as the Administration may from time to time direct.

3. All books and records of the Administration shall be kept in the principal office of the Administration.

## ARTICLE IV<sup>4/</sup>

### MEETINGS

1. The annual meeting of the Administration shall be held on the second Tuesday in December of each year.

2. (a) Special meetings of the Administration may be called by the Chairman or, in the case of a vacancy in the office of Chairman or inability of the Chairman to act, by the Vice-Chairman. Upon the written request of two or more representatives, it shall be the duty of the Chairman, or Vice-Chairman, as the case may be, to call such a meeting.

(b) Special telephonic meetings of the Administration may be held by telephonic communications between the several members of the Administration in respect to all matters arising under Article V F of the Compact; Provided that such special telephonic meetings may be called by the Chairman, Vice-Chairman or any member of the Operations Committee, and in any case at least two representatives of each State shall participate personally in such special telephonic meetings and concur in the action taken as a result of any such meeting. And provided further, that the Secretary of the Administration shall prepare minutes of any special telephonic meeting and such minutes shall be acted upon by the Administration at the next Annual meeting or special meeting held under subsection (a) hereof.

3. Notices of all annual meetings of the Administration shall be sent by the Secretary, or in the case of a vacancy in the office of the Secretary, or the inability of the Secretary to act, by the Chairman or Vice-Chairman, as the case may be, to the members of the Administration by ordinary mail at least ten days in advance of such annual meetings. Notice of special meetings shall be given by the Secretary to the members of the Administration by the most expeditious method so as to allow as much time prior to such special meetings as conditions permit.

4. All annual meetings of the Administration shall be held at the principal office of the Administration. Unless otherwise agreed to in advance by all members of the Administration, special meetings shall be held at the office of the Administration.

5.<sup>5/</sup> (a) The Administration shall keep minutes of the proceedings of all of its meetings. Such minutes shall be preserved in a suitable manner as directed by the Administration. Until approved by the Administration, minutes shall not be official and shall be furnished only to the members of the Administration, its employees, and the members of its committees. Distribution of official minutes shall be made by the recording secretary or his designee in accordance with directives of the Administration.

(b) Unless the requirements of this sub-section (b) are waived pursuant to sub-section (c), a verbatim transcript of the proceedings of Administration meetings shall be made by a duly licensed, official court reporter.

The recording secretary or his designee shall be responsible for arranging for the services of such duly licensed, official court reporter to take and transcribe the proceedings of the meeting. Copies of the draft transcript of a meeting shall be provided to one designated representative from each member state within two weeks of a meeting for corrections, but not editing. Corrections agreed upon by these two representatives shall be forwarded to the court reporter and the court reporter instructed to prepare within two weeks a final, corrected transcript. The recording secretary or his designee shall forward a copy of the final, corrected transcript of a meeting to the designated representative from each member state of the Administration within two weeks of his receipt of the transcript from the court reporter. The final, corrected transcript of a meeting shall, upon the approval of the Administration, become the official minutes of that meeting. The official minutes shall be appropriately marked indicating the date of and method of approval and be signed by the chairman.

(c) The requirements of using a duly licensed, official court reporter as set out in sub-section (b) may be waived in advance of a meeting upon the agreement of both states. In this event, the recording secretary or his designee shall be responsible for electronically recording a meeting, and for preparing as directed by both states, either a written summary which accurately reflects the proceedings of a meeting and all actions taken by the Administration at such meeting or a verbatim transcript of the meeting. Procedures for the distribution and approval of final corrected transcripts or summaries and designation as the official minutes of a meeting shall be as specified in subsection (b). Any electronic recording of a meeting shall be preserved by the recording secretary but shall not constitute



the official minutes of a meeting.

6. A quorum for any meeting of the Administration and the casting of votes by representatives of the States on the Administration shall be in accord with Paragraph D of Article VIII of the Arkansas River Compact; and any action by the Administration shall be determined by vote as required by such paragraph D of Article VIII of the Compact. If a quorum is not present at any meeting, the members of the Administration present, one or more, may adjourn from time to time without further notice until a quorum is obtained.

7. At each meeting of the Administration, the order of business, unless otherwise agreed, shall be as follows:

- Call to order;
- Reading of minutes of last meeting;
- Approval of minutes of last meeting;
- Report of Chairman;
- Report of Secretary;
- Report of Treasurer;
- Report of Committees;
- Unfinished business;
- New business;
- Adjournment.

8. All meetings of the Administration, except executive sessions, shall be open to the public.

9. Any meeting of the Administration may be adjourned or continued from time to time and from the place set for the meeting to another place.

10. Public notice of all annual, regular, and special meetings shall be given in an appropriate manner, determined by the Administration, except in cases where the Administration determines to hold an executive session.

## ARTICLE V

### COMMITTEES

1. There shall be the following standing committees:

Administrative and Legal Committee

Engineering Committee

Operations Committee

2. Each of such committees shall be made up of two representatives of the Administration and the Chairman shall be ex-officio member of all committees. In all committee action a vote shall be taken by States with each State having one vote.

3. The standing committees shall have the following duties:

- (a) The Administrative and Legal Committee shall advise the Administration with respect to budgets and accounting, office personnel, equipment, records, and legal matters; and shall prepare the draft of the annual report of the Administration.
- (b) The Engineering Committee shall advise the Administration on all engineering matters; and shall compile all pertinent engineering data and records.
- (c) The Operations Committee shall advise the Administration concerning, and shall have direct supervision over, rules and regulations governing the storage and releases of water from John Martin Reservoir and over such other Arkansas River interstate administration and operation between the States of Colorado and Kansas as come within the purview of the Arkansas River Compact, subject at all times to the provisions of such compact and the directives of the Administration thereunder. This committee shall be responsible for maintaining appropriate relations, under the direction of the Administration, with the chief officials of each of the States of Colorado and Kansas charged with the administration of water rights, and for maintaining appropriate relations with interested Federal agencies. The Operations Committee

shall also be responsible, under directives and orders of the Administration, for supervision over the employees of the Administration engaged in the interstate administration of the waters of the Arkansas River pursuant to the Arkansas River Compact.

4. The Chairman of each Committee shall be designated by the Administration.

5. The Administration may, from time to time, create special committees composed of such members of the Administration and others as it may determine and assign to such committees such tasks as the Administration may designate.

6. Each committee shall make a report to the Administration at each annual and regular meeting and shall make such further reports as may be directed by the Administration. Unless otherwise authorized, all such reports shall be in writing and filed with the Secretary of the Administration.

7.<sup>g</sup> Written notice of the meetings of standing committees and of special committees shall be given to all officers and members of the Administration at least ten days prior to the date for any such committee meetings, said written notice to specify the time, date, location, and agenda for such meetings. A standing committee or special committee may waive such notice requirement if all members of a committee agree that circumstances so warrant. In the event of such a waiver, the chairman of a committee shall make every reasonable effort to inform all officers and members of the Administration of the time, date, location and

agenda for a committee meeting.

## ARTICLE VI

### RULES AND REGULATIONS

1. The Administration shall adopt Rules and Regulations necessary for the administration of the Arkansas River Compact, consistent therewith and with these by-laws.
2. All proposals for Rules and Regulations, or for changes in them, shall be presented to the Administration in writing and shall not be acted on at the meeting when first presented, but shall go over for action at a designated subsequent meeting of the Administration.
3. Following the presentation to the Administration, public notice of all proposed Rules and Regulations and changes in Rules and Regulations shall be given by two publications, at least one week apart, in some newspaper of general circulation in the area of each State affected by the Arkansas River Compact. The representatives of the Administration from each State shall designate the newspaper in their State in which such publication shall be made. No Rule or Regulation and no change in any Rule or Regulation shall be effective until a date specifically stated in the published notice, which date shall be at least ten days after the last publication.

4. The provisions, contained in this Article, for Rules and Regulations and notice thereof shall not be effective in the case of any notice which is otherwise required under the Arkansas River Compact or in any case where, in the judgment of the Administration, effective administration and the public interest under the Arkansas River Compact, require more expeditious action.

5. It shall be the duty of the Secretary to see that the necessary notices are published as herein required.

6. It shall be the duty of the Secretary to compile the Rules and Regulations of the Administration and to prepare copies for distribution to the public under such terms and conditions as the Administration may prescribe.

## ARTICLE VII

### FISCAL

1. All funds of the Administration shall be received by the Treasurer and deposited by him to the credit of the Administration in a depository or depositories designated by the Administration.

2. Disbursement of such Administration funds shall be made by check signed by the Treasurer and countersigned by the Chairman or Vice-Chairman of the Administration.

3. The Administration shall annually adopt and transmit to the Governor of each State, its budget covering anticipated expenses for the ensuing fiscal year, and the amount thereof payable by each State. <sup>17</sup>

4. The fiscal accounts of the Administration and its employees shall not be subject to the auditing and accounting procedures of either the States of Colorado or Kansas; provided, that each State shall have the right to make an examination and audit of the accounts of the Administration at any time.

5. All receipts and disbursements of the Administration shall be audited yearly by a certified public accountant to be selected by the Administration, and the report of audit shall be included in the annual report to the Administration.

6. The Treasurer shall prepare and keep an up-to-date inventory of all the property of the Administration.

7. The fiscal year of the Administration shall begin July 1 of each year and end June 30 of the next succeeding year.

## ARTICLE VIII

### ANNUAL REPORT

1. The report-year referred to in this Article for the making of the annual report shall commence on November 1 and end on the succeeding October 31.

2. The Administration shall make and transmit on or before January first of each year to the Governors of the States of Colorado and Kansas and to the President of the United States a report covering its activities for the preceding report-year. The annual report shall include, among other things, the following:

- (a) The receipts and expenditures of all funds of the Administration and all pertinent financial data.
- (b) All hydrologic data relating to the Arkansas River which the Administration deems pertinent.
- (c) Statements as to cooperative studies of water supplies made during the preceding year, including cooperative studies and activities with any Federal agency.
- (d) All findings of fact made by the Administration during the preceding year.
- (e) Such other pertinent matters as the Administration may deem advisable.



## ARTICLE IX

### SEAL

1. The official seal of the Administration shall be circular in form with the words "Arkansas River Compact Administration" imprinted around the border and the word "Seal" in the center thereof.

2. The Secretary of the Administration shall have custody of the seal of the Administration.

## ARTICLE X

### MISCELLANEOUS

1. The Administration and its Secretary on request shall furnish to the Governor of each of the States of Colorado and Kansas any information within its possession at any time, and shall always provide free access by the public to its records. Except in the case of the Governor of each of the States of Colorado and Kansas, or interested Federal agencies, the cost of furnishing information shall be paid by the person seeking it at such rates as may be fixed by the Administration.

2. All contracts and other instruments in writing required to be signed for and on behalf of the Administration, except matters relating to the receipt and disbursement of funds, shall be signed by the Chairman or Vice-Chairman and Secretary. The seal of the Administration shall be affixed thereto.

## ARTICLE XI

### AMENDMENTS TO BY-LAWS

1. Amendments to the By-Laws may be made at any meeting of the Administration, provided notice of the proposed amendment shall have been given in the notice of the meeting.

<sup>1/</sup> As amended March 21, 1980 and August 6, 1981

<sup>2/</sup> As amended March 21, 1980 and August 6, 1981

<sup>3/</sup> As amended August 6, 1981

<sup>4/</sup> As amended March 17, 1962 and September 21, 1962

<sup>5/</sup> As amended July 12, 1985 and December 8, 1992

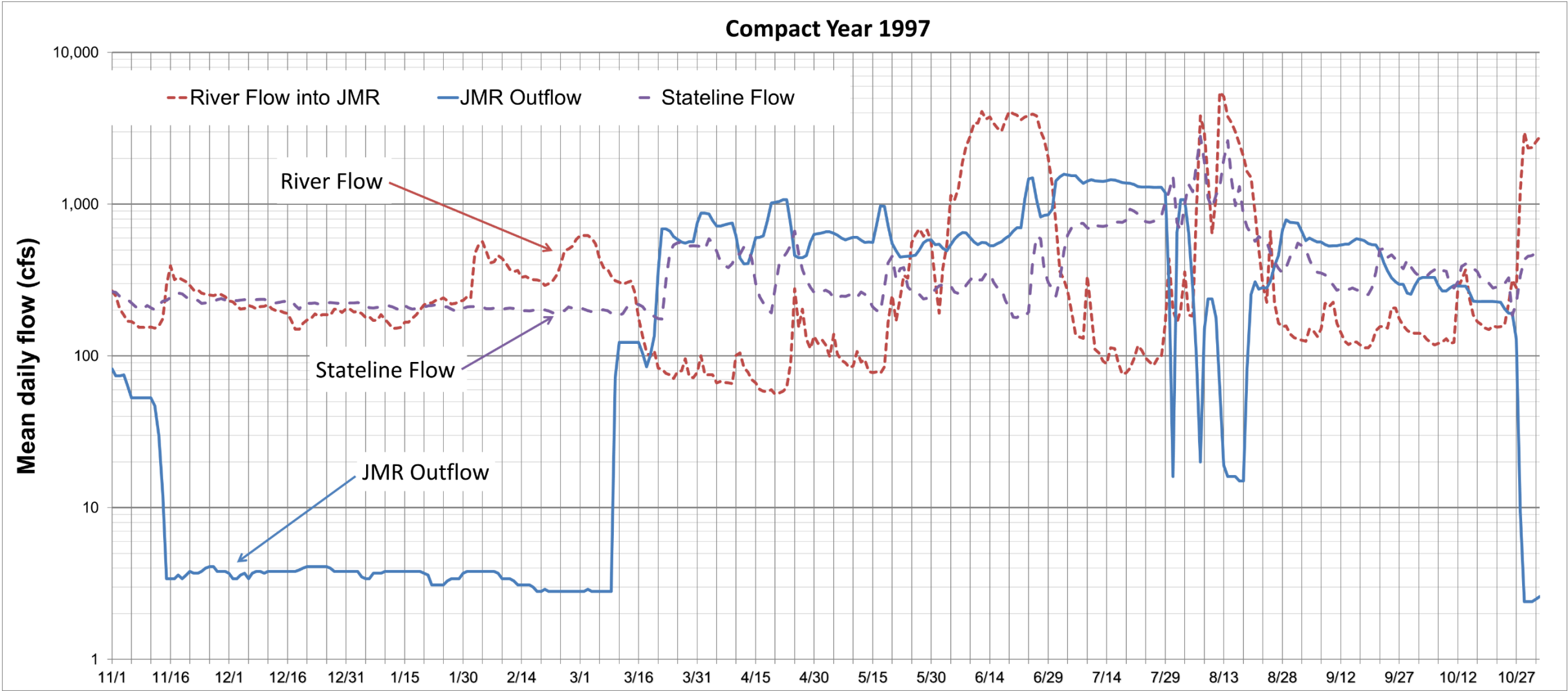
<sup>6/</sup> As amended January 4, 1982

<sup>7/</sup> As amended December 11, 1956

<sup>8/</sup> As amended March 11, 1997

**Plat 1 – Graphical Representation of John Martin Reservoir Inflows, Outflows and Stateline Flow**

**Compact Year 1997**



**Plat 2 – Graphical Representation of John Martin Reservoir Accounts Content**

**Compact Year 1997**

