

COLORADO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RESOURCES

DIVISION ENGINEER'S
ANNUAL REPORT
WATER DIVISION NO. 2

1991

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I. WATER ADMINISTRATION

A. 1991 Water Year

1. Accomplishments

The trial in the case of Kansas vs. Colorado, No. 105 Original before the United States Supreme Court began on September 17, 1990 with the presentation of Kansas' case in chief. During cross examination of Kansas' chief technical expert, Timothy J. Durbin, numerous mistakes were revealed in certain Kansas exhibits resulting in his withdrawal from the stand to make necessary corrections. At the outset of the 56th day of trial on February 19, 1991, the court was advised of Mr. Durbin's unavailability for further trial participation. Subsequently, Kansas filed a motion seeking a continuance of seven months. On March 27, 1991 Special Master Arthur L. Littleworth ordered that the trial resume on April 9, 1991 with the completion of cross examination of Kansas' followup witness, and the presentation of Colorado's case with the provision that Kansas was allowed to reserve cross-examination with respect to Colorado's modelling testimony and to complete its case in chief when appropriate expert assistance becomes available to them. Colorado completed its presentation of evidence on May 30, 1991. On December 16, 1991 an order was entered that the trial be resumed on February 24, 1992 to allow Kansas to complete its case and to allow Colorado to respond to the revised Kansas case and to complete its case.

The delay and rescheduling caused by the need to replace Mr. Durbin protracted the specter of uncertainty affecting nearly all administrative matters throughout the Arkansas river system in Colorado.

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Some significant insights into certain administrative matters was acquired through experience and judicial determinations during the year.

Because of the various factors affecting the amount of water that can be made available to senior priorities near the mouth of the Purgatoire River as a result of curtailing junior upstream diversions, there has existed considerable uncertainty over the appropriateness of such regulatory actions by the Division Engineer for

sometime. This issue was partially addressed through a consent order on cross-claim in Case W-4543 wherein an order of the Division Engineer was approved which specified a "method of operation" prescribing certain criteria to be used when conditions exist similar to those that occurred in June 1975. While this method of operation is presumed to be valid, the experience of June 1991 showed that less drastic regulatory measures may also be valid if taken prior to the occurrence of such diminished conditions. On June 17, 1991 the Highland Canal was diverting 13.0 cfs, Ninemile Canal was not diverting, the flow at the Thatcher gauge was approximately 16.0 cfs, while junior priorities were being satisfied in the Trinidad area. In response to Highland's call for delivery of 16.6 cfs under their 5/31/1866 priority, the water commissioner for former water district 19 was instructed to curtail upstream diversions sufficient to establish a flow of 30.0 cfs at the Thatcher gauge which was accomplished by June 20th and resulted in the full satisfaction of Highland's call on June 26, 1991. This regulatory action was discontinued on July 6, 1991 when Highland's priority could no longer justify a call on upstream appropriators. While this operation was far from precise, it is believed that it proved to be an appropriate action under the circumstances.

Another administrative accomplishment in 1991 was the successful prosecution of an injunctive action to enforce orders of the Division Engineer in the matter of The People vs Grandote Golf and Country Club (91CW26). This case was filed by the State and Division Engineers for a preliminary and permanent injunction to enjoin the defendants from diverting water in violation of the decree issued in Case No. 85CW128, to comply with reporting and recording requirements of said decree, from interfering with an adjusted headgate and to obey all orders of the Water Commissioner and Division Engineer. Judicial clarification was provided in two significant areas by this case:

- 1) The Division Engineer can properly carry out his duties and responsibilities under the statutes by delegating to others, including the Water Commissioners and that orders of the Water Commissioner are, for all intents and purposes, the lawfully issued orders of the Division Engineer; and,

2) The Division Engineer has the authority to withhold recognition of loans under 37-83-105, CRS (1990) where the requirements of such loans as articulated by Fort Lyon Canal Co. v. s. Chew, 33 Colo. 392, 81 P. 37 (1905) have not been met. The legislative intent of the loan statute was not to irrigate golf courses.

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Efforts were made in 1991 to further improve enforcement and awareness of the requirements of the Arkansas Rules and Regulations governing the use of groundwater. This was done in cooperation with the Colorado Water Development and Protective Association and the Lower Arkansas Water Management Association. Through an allocation of SB-200 cash funds, we were able to continue a field reconnaissance and monitoring program which was expanded to cover the bench aquifer area of the St. Charles Mesa through the efforts of summer intern, Mr. Sam Rutigliano. Additionally, .5 FTE was allocated to this program with the reassignment of Mr. Lloyd Wadleigh to former Water District 17. This program was extended through FY 91-92.

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Objections to the July 31, 1990 Abandonment List received by the July 1, 1991 deadline were reviewed and a Revised Abandonment List was filed with the Division II Water Clerk as of December 31, 1991.

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Through a transfer to a previously vacant position, Mr. Gary Barta joined the Division 2 staff on September 1, 1991. This move enabled the consolidation of all Division 2 dam safety field operations into the Pueblo Office. Mr. Barta's responsibilities are nearly equally divided between dam safety activities in former Water District 10, oversight of the Rules and Regulations for groundwater program and water rights analysis/administration.

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Due to restrictions on hiring during 1991, it was necessary to resort to some innovative means to accomplish our objectives. In addition to the transfer and the cash funded temporary appointment of a summer intern described above, we were able to arrange for a loan of an employee from the Denver office and participate in a work-study

program through which University of Southern Colorado students received credit toward Engineering Technology degrees for their assistance in development of hydrographic records. We also sponsored two participants in the Youth in Natural Resources program.

Mr. David Jones was appointed as an assistant Water Commissioner in former Water District 12 through conventional means.

Figure 1 depicts the current organizational structure of Division 2.

2. Involvement in the Water User Community

Mr. Raymond D. Nixon was the recipient of the 1991 "Water Manager of the Year Award for Water Division 2" in recognition of his accomplishments and many years of service to the water users of the cities of Trinidad and Colorado Springs as well as to those of the Arkansas River at large through the Southeastern Colorado Water Conservancy District.

Mr. Eddie Taylor was recognized as "Water Commissioner of the Year" for his efforts to effect the proper administration of the waters of former Water District 12 under difficult circumstances, for his efforts to inform, educate and develop good relations with his constituency, and for his accomplishments in training his subordinates.

Division 2 staff members attended numerous meetings, on a regular basis in some instances, with traditional water user entities including, Southeastern Colorado Water Conservancy District, Upper Water District 10 Users Association, Lower Arkansas Water Management Association, Wet Mountain Valley Water Users Association, Colorado Water Protective and Development Association, Huerfano County Water Conservancy District, Arkansas Valley Ditch Association, Purgatoire River Water Conservancy District, Arkansas River Compact Administration, and the Fort Lyon Canal Board of Directors. Additionally, the Division Engineer's office gained broader exposure to a sector of public interest through participation in a Wild and Scenic Task Force organized by the United States Bureau of Land Management and a Department of Natural Resources work group convened to develop recommendations regarding augmentation of flows of recreational rafting on the Arkansas River.

3. Key Issues/Impacts

The potential ramifications of the Kansas vs Colorado lawsuit are enormous. Conceivably they could include renegotiation of the Arkansas River Compact and a mandate for more rigorous administration of groundwater which would require substantial resource commitments.

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Present efforts to monitor and effect compliance with the existing Arkansas Rules and Regulations have raised numerous issues of interpretation and application policy which need to be addressed and resolved in order to develop public confidence and cooperation.

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The quality of the Division 2 Water Rights Data Base is in need of substantial improvement. For example, it is believed that in some instances the order of seniority as reflected in quadrennial tabulations of water rights produced from this data base are inconsistent with long standing administrative practices. The directive received from the State Engineer in this regard is to determine what the administrative rationale has been and to modify the data base accordingly where warranted. Such information which is fundamental to proper water rights administration must be made reliable through principled application of the provisions of law; however, the resources required will be substantial and legal assistance may be necessary.

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The City of Colorado Springs was awarded a decree for a suite of consolidated cases commonly referred to as Colorado Springs "Reuseable Non-sewered Return Flow Cases." The essence of this decree is that it approves programs of re-use, exchange, and a plan for augmentation in reliance upon non-sewered return flows of reuseable water. Some measure of the complexity of this decree may be assessed from the fact that it contains 65 pages, exclusive of appendices and related stipulations. The impact on staff time consumed in meetings, study, and negotiations which culminated in the production of such a document were obviously quite substantial. Furthermore, it is believed that additional manpower may be justified to help administer its provisions.

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Although numerous appropriative rights of exchange have previously been determined within Division 2, particularly with respect to the mainstem of the Arkansas, the full impact of concurrent operations has yet to be experienced. As the realization of the potential effects has become more widespread, a great deal of apprehension and uncertainty has arisen.

The result of this has been attempts to establish limiting conditions, operating rules and the like in an effort to restrict the administrative discretion of the Division Engineer in considering such operations.

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There are a number of emerging interests that are or may seek to assert or acquire some measure of control over the availability of water in the Arkansas river in order to support values that have traditionally been considered as incidental to water right administration practices. The recreational boating industry has been chief among these, followed by fishing groups and such multiple use agencies such as the United States Bureau of Land Management (BLM).

In 1990, at the request of recreational rafting interests, the United States Bureau of Reclamation (USBR) determined that it was appropriate to reschedule releases of Frying Pan-Arkansas Project waters to occur at times and in such amounts that resulted in benefits to the rafting interests. In 1991, the USBR first sought recommendations for this type of operation from the Colorado Department of Natural Resources and the Project's sponsor, the Southern Colorado Water Conservancy District. Conditioned recommendations were provided and the USBR resumed operations accordingly. However, Colorado Trout Unlimited succeeded in suspending these operations through a temporary restraining order issued by the U. S. District Court on August 7, 1991.

This controversy and the BLM's considerations of Wild and Scenic Rivers designations has led to discussions of a multiple agency study to assess the water requirements of a variety of values.

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Restrictions on resource utilization such as the hiring freeze imposed early in FY 91-92 and the directive to cut travel expenditures by 50% during the second half of the fiscal year have presented very difficult management challenges.

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It has been suggested that a statewide evaluation of manpower distribution should be conducted with the objective of distributing manpower in proportion to workload associated with the highest priority functions of the agency within each Division. This would establish a justification of personnel needs and utilization and promote uniformity of service statewide.

4. Workload Changes

Some of the activities which required adjustments of time commitments in 1991 have previously been addressed in the Accomplishments section above.

In response to directives of the State Engineer, the Division Engineers assumed an enlarged role in setting the agenda and in conducting the annual meeting of the State Engineer's staff. Part of this assignment required preparation and presentation of a prioritization of the functional programs with budgeted allocations of manpower and financial resources to each. Although extremely time consuming this proved to be a valuable exercise from a management perspective and it may prove invaluable in the contingency of additional budget cuts.

5. Budget Impact

In FY 90-91 Division 2 underspent its allocation for Operating and Travel by \$2,779. This represents a 4.6% under-expenditure of an allocation of \$60,978.

The initial FY 91-92 allocation for Division 2 Operating and Travel is \$62,186. This \$1208 increase over the FY 90-91 allocation was approved as an increase for additional water commissioner mileage. Based upon previous years experience, this appeared to provide adequate resources. However, as a means to balance the State's budget, the Joint Budget Committee has proposed to reduce FY 91-92 General Fund travel appropriations by 25%

Division 2 to reduce expenditures by approximately \$9700, which will have serious consequences to our administrative efforts.

B. 1992 Water Year - Goals, Objectives, and Work Items

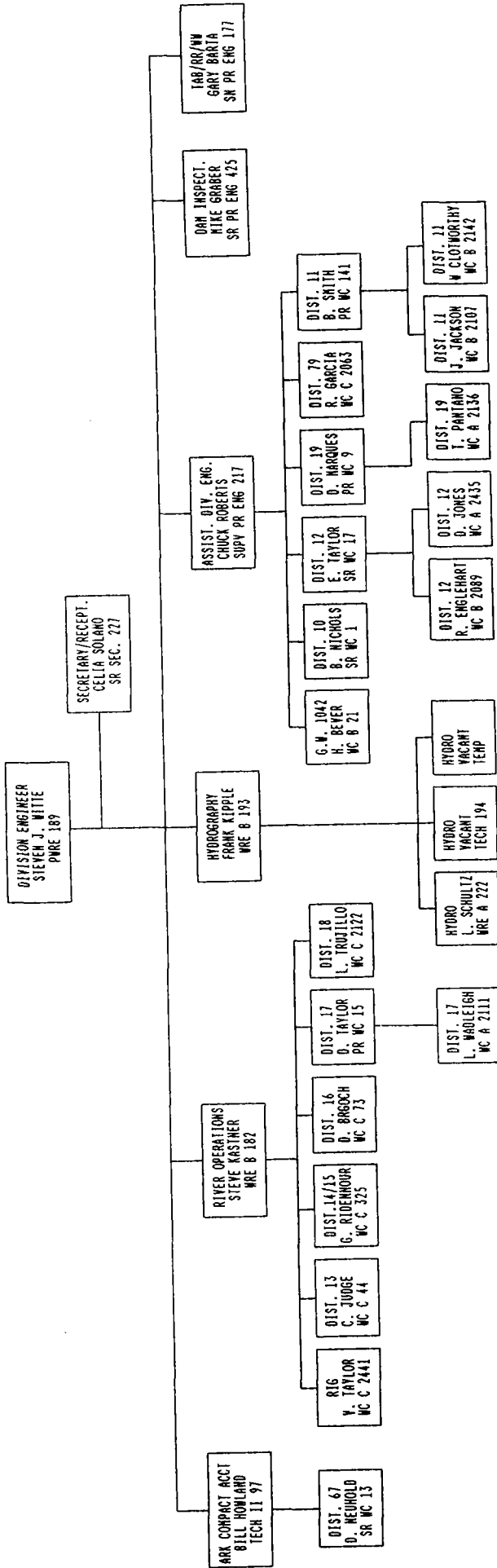
1. Develop an effective communications system with the State Engineer and his staff
 - Continue to schedule monthly briefing meetings with the State Engineer
 - Establish a practice of providing weekly activity report memoranda to the State Engineer for subsequent distribution to his staff
 - Copy minutes of Division 2 staff meetings to State Engineer
2. Plan and begin implementation of program to secure compliance with Rules and Regulations Governing Use of Groundwater in the Arkansas River Basin
 - Continue and extend field reconnaissance efforts of affected wells
 - Develop computer database to compile results of findings and provide for efficient comparison and cross checking with other data files
3. Develop an accurate tabulation of water rights for Division 2 as required by law
 - Develop a work plan to remedy deficiencies within the most recent tabulation and maintain the water rights data base to keep it current as new water rights determinations or changes are decreed. This plan is to be completed and initiated during 1992.
4. Develop and implement a quality control program which produces the best available diversion records that can be obtained.
 - Provide standardized forms to water commissioners to be utilized as primary documentation of diversion records and which will update structure files
 - Continue practice of peer review of preliminary records to detect improper category coding and data entry

5. Administer Horse Creek Basin in full compliance with directives of court.

- Complete efforts to curtail all known illegal and undecreed water useage within the Basin during 1992.

FIGURE 1

DIVISION OF WATER RESOURCES
 OFFICE OF THE DIVISION TWO ENGINEER
 January 1, 1992



APPENDIX A

1991 I. Y.

TRANSMOUNTAIN DIVERSION SUMMARY

WD	RECIPIENT	IY 1990 AF DAYS		IY 1991 AF DAYS		WD	SOURCE
14	CITY OF PUEBLO, TENN CRK	785	164	851	133	11	EWING D
14	CITY OF PUEBLO, TENN CRK	1570	89	2207	160	11	WURTZ D
14	CITY OF PUEBLO, TENN CRK	132	60	529	98	11	WURTZ EXT.
14	CITY OF PUEBLO, ARK RIVER	746	78	1595	127	11	COLUMBINE D
17	CATLIN CANAL, ARK RIVER	8	8	95	39	11	LARKSPUR D
11	TURQUOISE RES, LK FK CRK	47270	166	61140	365	11	BOUSTEAD TUN
14	CITY OF PUEBLO, LK FK CRK	5170	143	5656	163	11	BUSK IV TUN
14	CITY OF PUEBLO	N/A		N/A			
10	CITY OF CO SPRGS, LK FK CRK	27480	91	638	61	11	HOMESTK TUN
2	CITY OF AURORA						
14	CITY OF PUEBLO LK CRK	41368	365	42987	365	11	TW LAKES TUN
10	CITY OF CO SPRGS, LK CRK	N/A		N/A			
16	CUERNO VERDE CATTLE 7 LAND CO	1460	64	1081	43.0	79	MEDANO D & HUDSON EXT.

APPENDIX B

RESERVOIR STORAGE SUMMARY

W.D.	RESERVOIR	SOURCE	CHANGE IN CONTENT %	CONTENT A.F. 11/1/89	CHANGE IN CONTENT %	CONTENT A.F. 4/1/90	CHANGE IN CONTENT %	CONTENT A.F. 11/1/90	CHANGE IN CONTENT %	CONTENT A.F. 4/1/91	CHANGE IN CONTENT %	CONTENT A.F. 11/1/91
11	Turquoise	Lake Fork	+30.2	117620	-42.9	67116	+85.2	124314	-30.7	86190	+35.2	116493
11	Twin Lakes	Lake Creek	-36.2	84660	+18.8	100553	+18.9	119581	-6.6	111695	+9.2	122001
11	Clear Creek	Clear Creek	+170.0	8889	+9.1	9695	-12.8	8450	+33.1	11247	-23.5	8607
14	Pueblo	Arkansas	-45.5	110769	+36.9	151643	-43.5	85638	+88.5	161385	-61.7	76381
14	Trinidad	Purgatoire	-72.2	7093	+52.6	10825	-22.4	8404	+66.6	14001	-15.7	11801
67	John Martin	Arkansas	-77.0	28500	+152.9	72067	-74.9	18057	+389.1	70255	-88.1	8387
	Total Others	Ark. Riv. Basin	-68.2	48482	+13.9	55228	-18.1	45234	+30.9	59230	-17.7	48765
TOTALS			-44.5	406013	+49.6	467127	-12.3	409678	+25.5	514003	-47.9	392435

APPENDIX C

WATER DIVERSION SUMMARIES BY DISTRICT IY 1991

W.D.	OBSERVED RECORDINGS	TOTAL DIV. A.F.	TOTAL DIV. TO STORAGE	NO. ACRES IRRIGATED	AVERAGE A.F. ACRE	TOTAL DIV. NON-IRR.
10	1667	131042	364	9475	3.99	92827
11	1641	168711	34515	15172	7.81	15766
12	7797	253435	2758	14860	11.66	38480
13	644	44666	0	18700	2.39	155
14	2154	258477	21673	25222	7.04	59344
15	1260	23022	366	4681	2.52	10869
16	3520	18882	3052	2361	4.73	4657
17	2888	445647	58612	90000	3.64	59265
18	381	7970	0	3383	2.32	123
19	2290	69606	5887	25000	2.38	4323
66 & 67	1718	212399	52198	61800	2.58	787
79	2371	19423	0	6783	2.86	0

APPENDIX D

WATER COURT ACTIVITIES

Calendar Year 1991

Applications	46
Consultations with Referee	47
Decrees Awarding Water Rights	25
Dismissals	11
Complaints	2

TYPES OF RULINGS

Findings of Diligence on Conditional Rights	0 cases	
Cancellations of Conditional Rights	0 cases	
Conditional Rights made Absolute	1 cases	1 structure
New Wells Adjudicated	3 cases	13 structures
New Springs Adjudicated	2 cases	4 structures
New Reservoirs	1 cases	1 structure
Augmentation Plans Approved	4 cases	372 structures
Changes of Location	12 cases	40 structures

APPENDIX E

WATER DIVISION NO. 2

Activity Summary, Water Year 1991

<u>ACTIVITY</u>	<u>TOTAL</u>
Number of professional and technical staff	8
Number of clerical staff	1
Number of Water Commissioner FTE assigned (full and part-time)	18
Number of decreed surface rights (including springs)	* 8,439
Number of surface rights administered	6,020
Number of wells	** 25,854
Number of plans for augmentation	102
Number of consultations with Referee	53
Number of Water Court appearances	35
Number of meetings with water users	*3 683
Number of contacts to give public assistance on water matters (including telephone inquiries and an estimated number of contacts made by water commissioners)	2,694

* Estimate from 1992 Tabulation

** Includes Domestic

*3 Office contacts or contacts in the field by office personnel

RIVER CALL/CHRONOLOGICAL

DATE	PRIORITY DATE	ENTITY	DISTRICTS	DURATION OF CALL/DAYS
** YEAR 1991				
03/15/91	04/15/1884	FORT LYON #1	10-15, 17	2
03/17/91	12/03/1884	CATLIN #1	10-15, 17	1
03/18/91	03/01/1887	FORT LYON #2	10-15, 17	8
03/26/91	04/15/1884	FORT LYON #1	10-15, 17	1
03/27/91	12/03/1884	CATLIN/CONSOLIDATED	10-15, 17	3
03/30/91	03/01/1887	FORT LYON #2	10-15, 17	2
04/01/91	12/03/1884	CATLIN/CONSOLIDATED	10-15, 17	2
04/03/91	12/03/1884	CATLIN #1	10-15, 17	14
04/17/91	04/15/1884	FORT LYON #1	10-15, 17	1
04/18/91	12/03/1884	CATLIN	10-15, 17	2
04/20/91	04/15/1884	FORT LYON #1	10-15, 17	2
04/22/91	12/03/1884	CATLIN #1	10-15, 17	1
04/23/91	04/15/1884	FORT LYON #1	10-15, 17	3
04/26/91	12/03/1884	CATLIN #1	10-15, 17	1
04/27/91	04/15/1884	FORT LYON #1	10-15, 17	2
04/29/91	05/15/1874	ROCKY FORD DITCH	10-15, 17	3
05/02/91	04/01/1874	PUEBLO BD/ROCKY FORD	10-15, 17	1
05/03/91	05/15/1874	ROCKY FORD/BESSEMER	10-15, 17	1
05/04/91	03/31/1882	BESSEMER	11-14	1
05/05/91	03/07/1884	HIGHLINE	10-15	1
05/06/91	12/03/1884	CATLIN #1	10-15, 17	1
05/07/91	02/21/1887	AMITY #1	10-15, 17, 67	2
05/09/91	05/04/1881	BESSEMER	11-14	1
05/10/91	12/03/1884	CATLIN #1	10-15, 17	8
05/18/91	11/04/1886	LAMAR CANAL	10-15, 17, 67	6
05/24/91	02/21/1887	AMITY #1	10-15, 17, 67	2
05/26/91	09/25/1889	HOLBROOK CANAL	10-15, 17	1
05/27/91	03/01/1887	FORT LYON #2	10-15, 17	2
05/29/91	02/21/1887	AMITY #1	10-15, 17, 67	1
05/30/91	03/01/1887	FORT LYON #2	10-15, 17	2
06/01/91	05/01/1887	BESSEMER #2	10-14	3
06/04/91	03/01/1887	FORT LYON #2	10-15, 17	7
06/11/91	11/14/1887	CATLIN #2	10-15, 17	1
06/12/91	01/06/1890	HIGHLINE	10-15	1
06/13/91	06/09/1890	COLORADO CANAL	10-15	5
06/18/91	01/06/1890	HIGHLINE	10-15	2
06/20/91	09/25/1889	HOLBROOK CANAL	10-15, 17	1
06/21/91	03/13/1888	CONSOLIDATED	10-15, 17	1
06/22/91	03/01/1887	FORT LYON #2	10-15, 17	8
06/30/91	02/21/1887	AMITY #1	10-15, 17, 67	3
07/03/91	03/13/1888	CONSOLIDATED	10-15, 17	3
07/06/91	02/21/1887	AMITY #1	10-15, 17, 67	9
07/15/91	03/01/1887	FORT LYON #2	10-15, 17	1
07/16/91	02/21/1887	AMITY #1	10-15, 17, 67	2
07/18/91	12/03/1884	CATLIN #1	10-15, 17	5
07/23/91	12/03/1884	CATLIN/AMITY SPLIT	10-15, 17, 67	1
07/24/91	02/26/1887	OXFORD #2	10-15	1
07/25/91	03/01/1887	FT LYON/ 7/16/90 LAMAR	10-15, 17, 67	1

RIVER CALL/CHRONOLOGICAL

DATE	PRIORITY DATE	ENTITY	DISTRICTS	DURATION OF CALL/DAYS
07/26/91	03/01/1887	FORT LYON #2	10-15, 17	5
07/31/91	02/21/1887	AMITY #1	10-15, 17, 67	2
08/03/91	12/03/1884	CATLIN #1	10-15, 17	2
08/05/91	02/21/1887	AMITY #1	10-15, 17, 67	1
08/06/91	03/13/1888	COSOLIDATED #3	10-15, 17	1
08/07/91	03/01/1887	FORT LYON #2	10-15, 17	1
08/08/91	02/21/1887	AMITY #1	10-15, 17, 67	1
08/09/91	03/01/1887	FORT LYON #2	10-15, 17	1
08/10/91	03/03/1890	OTERO CANAL	10-15, 17	1
08/11/91	03/01/1887	FORT LYON #2	10-15, 17	1
08/12/91	02/26/1887	OXFORD	10-15	2
08/14/91	09/25/1889	HOLBROOK CANAL	10-15, 17	2
08/16/91	11/14/1887	CATLIN#2/LAMAR 7-16-90	10-15, 17, 67	1
08/17/91	11/14/1887	CATLIN #2	10-15, 17	1
08/18/91	03/01/1887	FORT LYON #2	10-15, 17	2
08/20/91	04/16/1887	LAMAR #3	10-15, 17, 67	2
08/22/91	03/13/1888	CONSOLIDATED #3	10-15, 17	1
08/23/91	03/01/1887	FORT LYON #2	10-15, 17	2
08/25/91	02/26/1887	OXFORD #2	10-15	1
08/26/91	02/21/1887	AMITY #1	10-15, 17, 67	4
08/30/91	12/03/1884	CATLIN/CONSOLIDATED	10-15, 17	5
09/04/91	09/25/1889	HOLBROOK CANAL	10-15, 17	1
09/05/91	02/21/1887	AMITY #1	10-15, 17, 67	14
09/19/91	11/04/1886	LAMAR #2	10-15, 17, 67	2
09/21/91	12/03/1884	CATLIN #1	10-15, 17	3
09/24/91	04/15/1884	FORT LYON #1	10-15, 17	5
09/29/91	12/03/1884	CATLIN #1	10-15, 17	26
10/26/91	03/11/1886	HIGHLINE	10-15	3
10/29/91	02/21/1887	AMITY #1	10-15, 17, 67	3
11/01/91	03/01/1887	FORT LYON #2	10-15, 17	0
11/03/91	03/02/1892	HOLBROOK RESERVOIR	10-15, 17	1
11/04/91	03/01/1887	FORT LYON #2	10-15, 17	2
11/06/91	03/02/1892	HOLBROOK RESERVOIR	10-15, 17	1
11/07/91	03/09/1898	LAKE MEREDITH	10-15	1
11/08/91	03/02/1892	HOLBROOK RESERVOIR	10-15, 17	1
11/09/91	1891	HENRY RESERVOIR	10-15	6
11/15/91	03/01/1910	WINTER WATER 84CW179	ALL	120

APPENDIX G

WINTER WATER PROGRAM

The Winter Water Program has maximized use of irrigation water normally applied in the winter months by storing the water for summer application. The 1991 Winter Water Program commenced November 15, 1990 and concluded March 15, 1991. This was the fifteenth year of operation of the Winter Water Program since its inception in irrigation year 1976. (The Program was not in operation in irrigation year 1978).

WINTER WATER PROGRAM OPERATIONS

- A. By foregoing winter diversions, the water will be accounted for by storage in Pueblo Reservoir or headgate diversions on a percentage basis of total river production.
- B. A division of total river production below 100,000 A. F. entitles the off channel storage participants to 71.2 percent of the river flow and the direct flow participants 28.8 percent of the river flow.
- C. The Amity Canal receives the next 2,750 A. F. over 100,000 A. F.
- D. When the system reaches 102,750 A. F., 2,250 A. F. of water is released to the Colorado Canal, pro-rata from winter water stored in reservoirs upstream from Pueblo.
- E. The Holbrook Canal receives the next 356 A. F. over 102,750 A. F.
- F. A division of total river production above 103,106 A. F. entitles the off channel storage participants to 75 percent of the river flow and the direct flow participants, 25 percent of the river flow.
- G. Winter water that is delivered to the Amity Canal account in John Martin Reservoir will not be depleted by transit loss occurring from the Arkansas at Las Animas Gauge to John Martin Reservoir. All participating entities except Fort Lyon will stand that loss, based on the Livingston Formula, on a pro-rata basis. Any winter water delivered to the Fort Lyon or Consolidated accounts in John Martin will be charged a transit loss based on the Livingston Formula.

After eleven years of a successful voluntary Winter Water Program, the Division 2 Water Court awarded the applicants a interlocutory decree for the Winter Water Program on November 10, 1987. A final decree was entered in Case 84CW179 on November 10, 1990.

WINTER WATER STORAGE PROGRAM

FINAL SUMMARY REPORT

1990-1991

Direct Flow Entities

Bessemer Ditch	8,347.97
Catlin Canal	12,316.16
Consolidated Canal	3,725.19
Highline Canal	11,209.57
Oxford Ditch	2,702.41
Riverside Ditch	178.61
West Pueblo Ditch	<u>357.22</u>
Total (A.F.)	38,837.13

Storage Entities

Amity Canal	22,729.69
Colorado Canal	15,852.64
Fort Lyon Canal	54,076.12
Holbrook Canal	<u>13,129.69</u>
Total (A.F.)	105,788.14

System Total (A.F.)	144,625.27
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JOHN MARTIN RESERVOIR
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 APPENDIX H
 RELEASES AND DELIVERIES
 TO KANSAS

WATER YEAR 1991 MONTH	DEMAND RELEASE A.F.	TRANSIT LOSS ACCT.RELEASE A.F.	FRONTIER DITCH A.F.	ARKANSAS COOLIDGE,KS. A.F.	DITCH & RIVER DELIVERY A.F.	CREDITED FLOW A.F.
NOVEMBER	0.00	0.00	0.00	0.00	0.00	0.00
DECEMBER	0.00	0.00	0.00	0.00	0.00	0.00
JANUARY	0.00	0.00	0.00	0.00	0.00	0.00
FEBRUARY	0.00	0.00	0.00	0.00	0.00	0.00
MARCH	0.00	0.00	0.00	0.00	0.00	0.00
APRIL	0.00	0.00	0.00	0.00	0.00	0.00
MAY	0.00	0.00	0.00	0.00	0.00	0.00
JUNE	7636.48	2293.44	455.00	5260.00	5715.00	5595.00
JULY	9751.42	371.91	1557.00	13464.00	15021.00	13712.00
AUGUST	0.00	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	17387.90	2665.35	2012.00	18724.00	20736.00	19307.00

NOTE: The June and July stateline flows are based on provisional USGS data. Only one release lasting 23 days was made on Kansas' demand during the year. The above table reflects only times when actual releases were being made from John Martin Reservoir plus a 7 day rundown period. "Credited flow" refers to the limitation that credit will not be taken for more than one hundred five percent of Kansas' demand.

RELEASES AND DELIVERIES
 TO KANSAS
 BY RUNS

RUN #	RELEASE PERIOD	RELEASED FROM KANSAS ACCOUNT ACRE FEET	A.F. CREDITED DELIVERY AT STATELINE
ONE	JUN.21-JUL.13	17387.90	19307.00
TWO		0.00	0.00
THREE		0.00	0.00
FOUR		0.00	0.00
TOTALS		17387.90	19307.00