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WATER RESOURCES
STATE ENGINEER
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COLORADO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RESOURCES

DIVISION ENGINEER'S
ANNUAL REPORT
WATER DIVISION NO. 2

1989

TABLE OF CONTENTS

The Year in Brief

Accomplishments in Key Areas:

Personnel

'Doing Our Job'

Image

Resource Management

Communications

Operational Concerns

Goals and Objectives

Statistical Summary

A. Winter Water

B. Transmountain Diversions

C. Reservoir Storage Summary

D. Water Diversions

E. Court Activities

F. Office Administration - Activity Summary

G. River Calls

H. Compact Releases Deliveries

1989 - THE WATER YEAR IN BRIEF

1989 will be remembered as a year of drought in the Arkansas River Basin when in fact the total water supply was slightly above average. The perception of drought was due in part to the fact that the water supply was less than that of recent years, the late run-off, and reports of drought in certain localities in Colorado (some of which were in the Arkansas Basin) that appeared in the news media. The perception of drought resulted in very real impacts:

Water that had been stored under the Pueblo Winter Water Program was drawn upon heavily during the early spring for purposes of starting crops and all agricultural storage reserves were substantially diminished in the latter part of the growing season. Water storage programs are generally credited with saving the year.

Interest in 'strict enforcement' of terms and conditions of as yet uncompleted transfer decrees was heightened.

Special administrative provisions were required to address supply shortages experienced by several communities.

Long practiced administrative procedures for assessing transit losses were questioned in hopes of realizing 'just a little more water'.

Although widespread rains which fell during the middle part of the summer benefited much of the prairie pastureland, especially north of the Arkansas, and crop yields within the Arkansas Valley were generally quite good, at the end of the year reservoir supplies were much depleted and the dry fall has raised concerns about the prospects of drought in 1990.

ACCOMPLISHMENTS IN KEY AREAS

PERSONNEL

During 1989 the Division 2 office experienced a turnover of 21%. Among office staff; Secretary, Elinor Meiskey resigned 7/31/89 and was replaced by Celia Solano on 9/1/89. Hydrographer Craig Lis transferred to the Denver office on 10/1/89 and was replaced by the transfer of Ken Knox from the Division 3 office on 11/1/89. Water Resource Engineer, P. O. Abbott, assigned to the Division 2 office for trial preparation in the Kansas v. Colorado litigation was furloughed indefinitely as of 12/29/89. Also, three water commissioner vacancies occurred; Robert Ermel (Water District 10) retired on 7/31/89 and was replaced by Becky Nichols who transferred from Division 4 effective 10/16/89. Gary Wooley (Deputy Water District 12) resigned prior to the irrigation season and was replaced by Lloyd Wadleigh on 6/1/89. Robert Brgoch (Water District 16) died on 12/22/88. Douglas Brgoch was appointed to succeed his father temporarily on 4/10/89 and after an open competitive examination he was appointed on a full-time basis on 6/1/89.

Although it is impossible to immediately replace the experience that has been lost, I have been extremely pleased with the individuals that have been recruited as replacements. These personnel changes have not only afforded an opportunity for reorganization, through training and performance planning we have been able to make progress in building a team in Division 2.

Some of our accomplishments in this area are:

- Reorganization

- . See Division II organizational chart (figure 1)

- Orientation of new personnel and cross training

- . Seminar to introduce draft of Water Commissioner Training Manual to Division 2 and 3 personnel - Alamosa 4/11/89

- . Introduction to Dam Safety Procedures - Alamosa 4/10/89

- . Development and use of 'checklist' for new personnel - 7/12/89

- . Orientation to Colorado Springs water system for B. Nichols - 11/17/89

- . Orientation to State Engineer's Office, Department of Natural Resources - Human Resources personnel and Accounting personnel for secretary, Celia Solano - 12/6/89

Office of the Division II Engineer

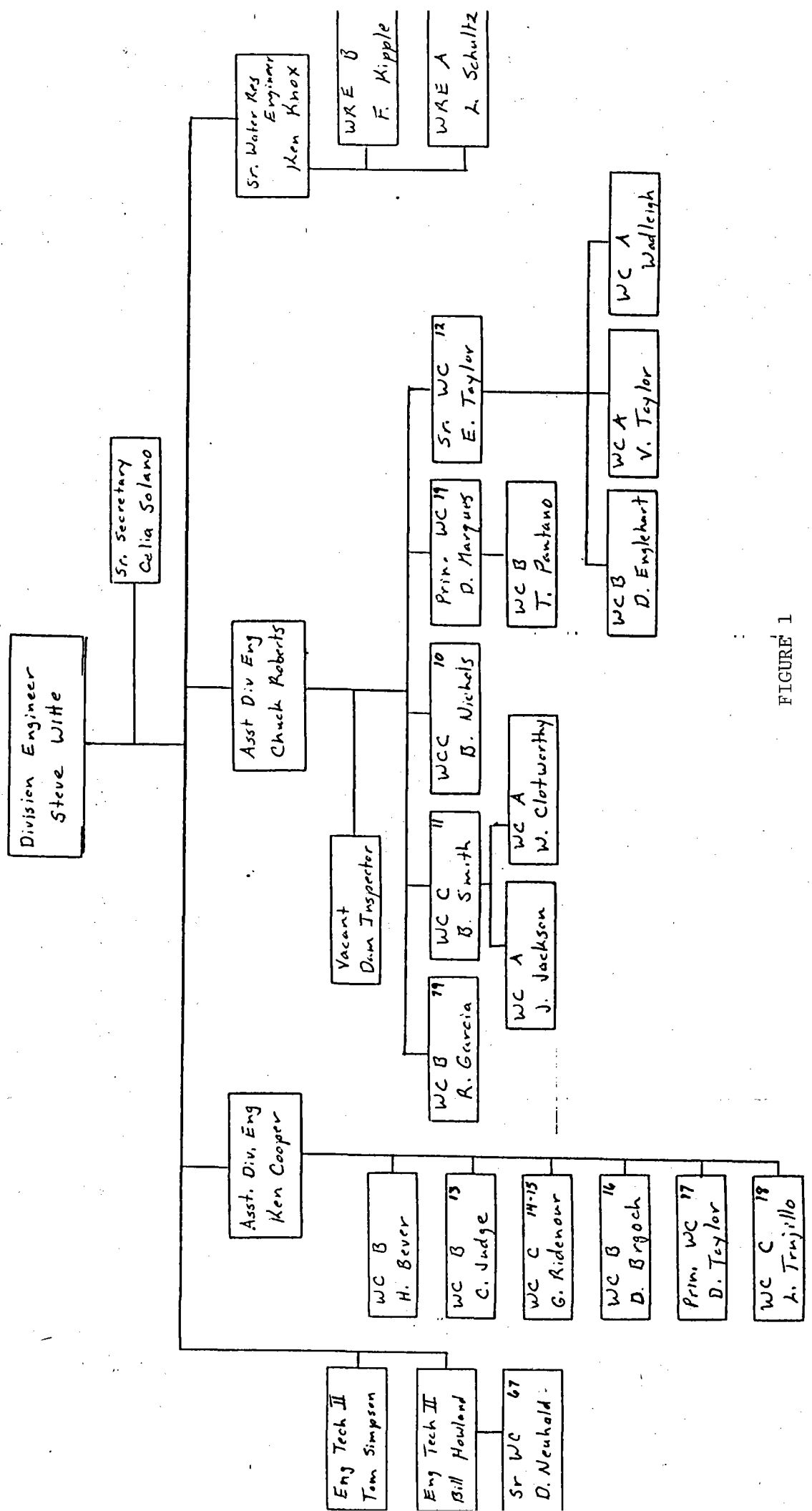


FIGURE 1

- . Arkansas River Compact Administration meeting for Assistant Division Engineer/Hydrographer, Ken Knox - 12/11,12/89
- On-going training
 - . Arranged and hosted clinic presented by Will Burt on Water Rights Data Base organization and procedures for entire staff - 1/25/89
 - . Colorado Water Engineering and Management Conference, CSU, Ft. Collins, Colorado attended by all engineering staff members - 2/27,28/89
 - . Division 2 Spring Water Commissioners meeting used to refresh entire staff on a variety of topics - 4/27/89
 - . 'Management Problems of the Technical Person in a Leadership Role' presented by Fred Pryor Seminars, attended by three senior staff members - 6/8,9/89
 - . Demonstration of various methods of conducting well discharge measurements presented by Bob Longenbaugh and attended by two Division personnel - 7/7/89
 - . 'Executive Performance Management' Seminar presented by Colorado State Department of Personnel, attended by Steve Witte - 9/21/89
 - . Seminar on issues related to telemetry operations for GOES system users attended by entire Division 2 hydrographic staff and supervisor - 9/6/89
 - . 'Understanding the Legislative Process' Seminar presented by the Colorado State Department of Personnel, attended by Steve Witte - 12/6/89
- Performance evaluations
 - . As of 1/1/90, performance plans have been developed for all Division 2 personnel in compliance with HB 1352.

DOING OUR JOB

It is not possible to comprehensively detail all of the successes and failures experiences in our attempts to 'do our job' over the course of 1989; however, the following summarizes some of the more significant activities within this 'Key Area'.

- New statutory duties

- . The provisions of SB120 which relate to the regulation of evaporative losses from gravel pits were not aggressively addressed through any specific program.
- . Attempts were made to develop understanding and expertise in issues related to water quality standards, which is the subject of SB 181. Chuck Roberts made a presentation on the effect of water exchanges on water quality at a conference in Golden, Colorado on 2/13,14/89 and attended hearings held by the Water Quality Control Commission on Lake Cheraw on 7/19/89

- Abandonment lists and revisions to tabulations

- . A strategy for identifying water rights which meet the statutory definition of the presumption of abandonment in Division 2 was developed in October 1989 and water commissioners were instructed to begin its implementation. This included field inspections and data collection for case support.
- . An attempt was made to address all concerns related to the 1988 Tabulation that were brought to the attention of this office through written protest. The revisions that were made were submitted for publication in December, 1989. However, it is recognized that the present condition of the Tabulation of Water Rights for Division 2 does not meet with the standards of consistency, accuracy, or quality that are generally considered to be acceptable throughout the rest of the State and efforts are planned to remedy this situation.

- Drought response

- . As previously stated, the Winter Water Program was instrumental in preventing drought effects during the dry spring of 1989. Tom Simpson of my staff is to be commended for his capable administration of this program which resulted in an ideal distribution among the various accounts.
- . The communities of Karval, Rockvale, Penrose, and Lamar all experienced shortages in their water supplies during the past year. Our efforts to assist them varied from meeting with them and making suggestions to securing approval for extra-ordinary measures from the Arkansas River Compact Administration

. The incidence of localized drought conditions was high enough so that we received numerous requests for substitute supply plans. Our experience with this procedure (contemplated under CRS 37-80-120) proved to be generally unsatisfactory in meeting the needs of those affected in that it is both complicated and time consuming to provide water at the time and place of need.

. Comments were provided to the Army Corps of Engineers in response to their Arkansas Basin Drought Contingency Plan - 7/11/89.

- Day to day functions

. Trial preparation for the case of Kansas vs Colorado, No. 105 Original, which was filed on 12/16/1985 and which is now set for hearing mid-1990, has had the effects of both increasing the Division 2 workload and suspending activities in other areas. From November 1988 through October 1989 over 80 requests for data by Colorado's attorneys and engineers were met and 20 meetings were arranged by the case liason, P. O. Abbott, in this effort.

. A substantial amount of effort has been exerted by Division 2 personnel in 1989 toward implementation of Phase I of a three part plan for administering the water rights within the Horse Creek Basin which was ordered by the Division 2 Water Court in Case 86CW91 captioned as SRJ I Venture vs State of Colorado. Phase I of this plan required identification of all illegal or improper uses of water within the basin.

. In an attempt to gain administrative control over the various types of replacement schemes in effect within Division 2 an inventory was initiated. This included identification of decreed plans for augmentation, administratively approved plans for augmentation, substitute supply plans, loans and exchanges of water, and the like. Although this effort is far from complete, I believe that this was an important first step.

. During 1989 the Division 2 office became more involved in bringing about changes in the operating and accounting procedures used to administer the Trinidad Project.

. The Division 2 Engineer is charged with administering the Pueblo Winter Storage Program. For a summary of this program, please refer to Appendix A of this report

- . In response to numerous complaints that the Division Engineer had been utilizing inconsistent means of determining appropriate transit losses in the reach of the Arkansas below Pueblo Reservoir and after analysis of both the accuracy of the various means and our ability to efficiently use them, I determined that beginning 11/1/89 we would use only the Livingston Transit Loss Method to assess such losses on releases made from Pueblo Reservoir. This decision was announced and widely distributed through a letter dated 10/4/1989.
- . A much publicized controversy developed during the summer of 1989 over Resource Investment Group (RIG) and the City of Aurora's failure to comply with the terms and conditions of the decree entered in Case 83CW18, which awarded a change of water right with respect to the Rocky Ford Ditch. Judge John Tracey found RIG and Aurora to be in Contempt of Court in an order dated 11/1/89.
- . Efforts have been initiated to re-intensify enforcement of the Arkansas Rules and Regulations governing the use of ground water. This has been done through contacts made with the Colorado Water Development and Protective Association and the Lower Arkansas Water Management Association. Additionally, funding has been procured from the State Engineer's SB-200 cash fund that will enable field reconnaissance, data collection, and structure identification.
- . The Division 2 Engineer acts as the Operations Secretary for the Arkansas River Compact Administration. For a complete accounting of this activity the reader is referred to the 1989 Report of the Operations Secretary. A summary of releases from John Martin Reservoir to the State of Kansas is included herein as Appendix H.

IMAGE

Much of what has been done to enhance the image of the Division of Water Resources might well be included as a part of 'Doing Our Job'. However, this is a sampling of our efforts to get out and contact the public.

- Public informational meetings

- . Custer County Rural Revitalization Conference -
1/30,31/89

- . Lower Arkansas Water Management Assn. Annual Meeting - 2/7/89
- . Wet Mountain Valley Water Users Assn. - 2/9/89
- . DeWeese-Dye Reservoir Co. BOD - 2/16/89
- . Colorado Water Protective & Development Assn. - 2/25/89
- . Amity Canal Co. Annual Mtg. - 3/6/89
- . Public hearings - Graneros Cr. Min. Stream Flows - 3/13/89
- . Fort Lyon Canal Co. Mtgs. - 4/12/89, 5/22/89
- . Little Turkey Cr. users group - 4/22/89
- . Agreed to cooperate with Colorado Endowment for the Humanities Seminar - "Colorado Water: The Next 100 Years" - 6/6/89
- . Four States Irrigation Council Annual Mtg. - 8/14,15,16/89
- . Upper Arkansas Water Conservancy District Mtg. - 11/9/89
- . Southeastern Colorado Water Conservancy District - monthly
- Office atmosphere
 - . The appearance of our present workspace and the efficiency with which we are able to retrieve stored information is perceived to be a problem that if corrected could improve our image and our ability to serve the public.
- Press releases
 - . Notices were published in each of the newspapers serving the region which included the Horse Creek Basin, advising the public of the purpose of our presence related to the Horse Creek Administrative plan.
 - . Press coverage was arranged for the presentation of our public recognition awards given at the Division 2 fall Water Commissioners' Meeting.

- . Our office provides information to local papers on river flow conditions daily.
- Public recognition programs
 - . Frank Milenski was the recipient of the first 'Water Manager of the Year' award ever presented by the Division 2 office.
 - . George Ridenour was recognized as 'Water Commissioner of the Year' for his consistent and reliable performance.
 - . Bill Howland was presented an 'Award for Exemplary Service' in recognition for his public service and competence which are an inspiration to co-workers.
 - . National Secretary's Week was observed by escorting Elinor Meiskey to a recognition breakfast hosted by Professional Secretaries International.

RESOURCE MANAGEMENT

The five functions of management: 1) planning; 2) organizing resources; 3) staffing; 4) directing-supervising; 5) controlling. Understanding the principles is easy...applying them is sometimes difficult...

- Expenditure management
 - . In FY 88-89 Division 2 overspent its allocation for Operating and Travel by \$15,986. This represents a 27% over-expenditure of an allocation of \$59,499.
 - . The FY 89-90 allocation for Division 2 Operating and Travel is \$59,388. In order to meet this a budget has been established, our expenditures have been analyzed and redistributed to appropriate cost centers as required, accounting procedures have been improved, and we are conducting ongoing monitoring and have implemented cost controls as necessary. To date, these procedures seem to be working; however, we continue to be plagued by bad data compiled in previous years in our attempts to make cost projections and the basis of our plan, which relies on a 33% mileage reduction, is expected to cause problems in maintaining adequate administrative services in the coming year.

- Statewide vs Division Programs/Denver-Division Support

- . Scrutiny of Division 2 historic expenditures has revealed that we have increasingly been expected to pick up the tab for various programs without receiving either reimbursement or commensurate allocations. Examples of this are activities related to the Kansas vs Colorado litigation, field inspection requests by the Groundwater and Dam Safety Sections, and maintenance of the Satellite Monitoring System. In the future, we will attempt to be more vigilant and diligent in assigning the associated costs of these programs to their rightful cost centers.
- . A lesson was learned as a result of the commitment that was made with respect to the Horse Creek Administration Plan implementation. Such expensive programs cannot be undertaken without significant impacts to other programs or the total budget.
- . The availability of SB-200 funds has been a notable and welcome exception to the trend. This has made it possible for us to undertake an important program that otherwise could not have been effectively attempted. Hopefully, this will continue to be available so that we can become even more aggressive in our enforcement of the Arkansas Rules and Regulations in the future.

- Staff Allocations

- . I believe that a significant blow has been struck against the Division of Water Resources' ability to manage by the Department of Human Resources/Accounting section through their decision to disallow variable work/pay distribution that would more efficiently meet the workload associated with our responsibilities.
- . A review of engrained hydrographic practices has been conducted with the result of the consolidation of several runs and the elimination of duplicative services in the monitoring of trans-mountain diversions. These changes are expected to save significant mileage costs and personnel time.

- Litigation Management

- . We have established a procedure to monitor the status of administrative orders that have been issued, in order to promote more efficient prosecution and enforcement.

- . The policy of attempting to have most of our concerns with court applications addressed through the consultation process, frequently results in a false economy. This is particularly true in those instances when we fail to file protests to referee's rulings within the brief time allotted.
- Telemetry, Telecommunications, Computer Applications
 - . We have had some success using electronic mail capabilities to exchange routine information with water commissioners. Untelemetered flow reports, weather conditions, ditch setting changes, river call changes, and the like can all be effectively and efficiently related in this manner.
 - . Although we have not utilized the FAX machine as frequently as originally anticipated, it has proven to be a life-saver on occasion.

COMMUNICATIONS

"A problem that prevents towers and relationships from being built." (anon.)

- Information sharing within DWR
 - . In my view this problem eclipses all others at the present time. Within Division 2 I have begun and intend to continue holding periodic staff meetings.
 - . I have appreciated receiving minutes from staff meetings conducted by the State Engineer and intend to reciprocate in an effort to enhance vertical communication.
 - . I have found monthly briefings with the State Engineer to be effective but insufficient to adequately keep him apprised of Division activities.
 - . Alternatives need to be tried to increase opportunities for field personnel to have access to verbally communicate with the State Engineer.
 - . The 'speed memos' that have been provided have generally been quite useful.
 - . I have greatly appreciated the initiative of Tom Kelly to schedule meetings in my office to discuss operational problems.

OPERATIONAL CONCERNS

The following is a recapitulation of my operational concerns identified in the foregoing text in approximate order of importance.

- 1) Communication processes simply must be improved to increase information sharing both vertically and laterally within our organization, and other branches and agencies of government.
- 2) Effective team building is absolutely critical to the future operation of the Division 2 office. We must continue to recruit people who are capable of making positive contributions, train them, develop clear understanding of responsibilities and expectations and cultivate esprit de corps in order to deal with the inordinate challenges facing this Division.
- 3) Financial management of our Operating allocation is a special challenge in that it has not been attempted recently. As a result the procedures continue to be developed and refined, spending habits are being challenged, and the necessary controls will undoubtedly result in a reduction of services.
- 4) The quality of the Division 2 Water Rights Data Base is poor and must be improved. Information fundamental to proper water rights administration must be made reliable and accessible; however, the resources required will be substantial.
- 5) Monitoring compliance with the Arkansas Rules and Regulations governing groundwater usage effectively is extremely resource consumptive. Given other demands on resources, this important program cannot be sustained without additional allocations or continued funding from supplemental sources.
- 6) In order to maintain credibility among the water using public improvements are necessary to the manner in which we manage litigation and promptly enforce administrative orders.
- 7) Special attention needs to be given to improving administrative procedures in former water district No. 19, particularly with respect to refinements in accounting, adherence to operating principles, and division of responsibilities associated with the Trinidad Project.
- 8) Improvement is needed in our ability to monitor and enforce compliance with plans for augmentation and other related replacement schemes.

- 9) The decentralization of the Dam Safety Section personnel will present challenges both in terms of integrating a new person into our staff and in coordinating the shared supervision responsibilities associated with this position.
- 10) Elimination of the chronic problem of hydrographic workload backlog remains a concern; however, I am confident that given the credibility, expertise, and energy made available to my staff through Ken Knox, these problems will be resolved in a reasonably prompt manner.
- 11) Revisions are needed to the Division 2 office's filing system to enhance accessibility of documents.

GOALS AND OBJECTIVES

1. Improved Communications

- Continue conducting periodic staff meetings with Division 2 personnel.
- Utilize the PACE performance planning and evaluation system to relate expectations and provide feedback.
- Practice 'Management By Walking Around'.
- Continue to schedule monthly briefings with State Engineer.
- Make more frequent use of electronic mail, speed memos, etc.
- Suggest strategies to increase verbal communications with State Engineer i.e., scheduled weekly reservation of time blocks for telephone contact.
- Strive to develop uncontrived relationships with legislators.

2. Team Building

- Recruit and develop capable, motivated, and supportive personnel.
- See also, first three objectives under Improved Communications.
- Refine and promote use of 'New Employee Checklist' to properly orient employees.
- Continue employee recognition programs.

3. Effectively Manage Allocations

- Refine planning, monitoring, and controlling procedures to more equitably, and appropriately distribute resources within budget.
- Distribute costs between appropriate cost centers.

4. Improve the Quality of the Division 2 Water Rights Data Base

- Develop and implement a detailed and comprehensive work plan to upgrade this information system.

5. Increase Effectiveness of Arkansas Rules and Regulations Enforcement

- Implement work plan, utilizing FY 89-90 SB-200 allocation to reconnoiter affected wells, identifying potential violators and soliciting compliance.

- Analyze field work findings, develop future monitoring/enforcement strategies, and prepare justifications for on-going funding.

6. Improve Litigation Management

- Develop credibility with referee through more thorough case preparation and consultation presentation.
- Refine and apply status tracking system for administrative orders to expedite enforcement proceedings as necessary.

7. Revise and Redistribute Responsibilities Associated with Trinidad Project

- Present a public information seminar in the Trinidad area to explain concepts of this unique project.
- Refine accounting procedures and promote transfer of operational responsibilities as appropriate.

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 1989 Winter Water Program commenced November 15, 1988 and concluded March 15, 1989. This was the thirteenth 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.

WINTER WATER PROGRAM
STORAGE SUMMARY
1989

Pueblo Reservoir.	40,990.74	A.F.*
Fort Lyon.	55,220.66	
Holbrook	9,555.75	
Colorado	15,723.90	**
Amity John Martin.	22,647.46	
Consolidated John Martin	3,831.97	
Fort Lyon John Martin.	101.59	
Total System.	148,072.07	A.F.
Theoretical 100,000 A.F. System		
28.8% of System	28,800.00	A.F.
71.2% of System	71,200.00	
Amity.	2,750.00	
Holbrook	356.00	
Theoretical 103,106 A.F. System		
25% of System.	11,241.52	
75% of System.	33,724.55	
Total System	148,072.07	A.F.

- * 4061.19 A.F. Holbrook Winter Water Stored in Pueblo Reservoir
- * 720.00 A.F. Colorado Winter Water Stored in Pueblo Reservoir
- ** 1782.14 A.F. Holbrook Winter Water Stored in Colorado Canal System
- ** 171.54 A.F. Fort Lyon Winter Water Stored in Colorado Canal System

TRANSMOUNTAIN DIVERSION SUMMARY

W.D.	RECIPIENT	1YR 1988		1YR 1989		W.D.	SOURCE
		AF	DAYS	AF	DAYS		
14	CITY OF PUEBLO, TENN CRK	786	152	1030	150	11	EWING D
14	CITY OF PUEBLO, TENN CRK	2070	129	881	58	11	WURTZ D
14	CITY OF PUEBLO, TENN CRK	379	74	431	79	11	WURTZ EXT
14	CITY OF PUEBLO, ARK RIVER	1360	121	1050	108	11	COLUMBINE D
17	CATLIN CANAL, ARK RIVER	30	35	119	104	11	LARKSPUR D
11	TURQUOISE RES, LK FK CRK	37240	94	14280	41	11	BOUSTEAD TUN
14	CITY OF PUEBLO, LK FK CRK	3770	162	4270	154	11	BUSK IV TUN
14	CITY OF PUEBLO	N/A					
10	CITY OF CO SPRGS, LK FK CRK	26850	231	28690	125	11	HOMESTK TUN
2	CITY OF AURORA	N/A					
14	CITY OF PUEBLO, LK CRK	37410	365	32420	365	11	TW LAKES TUN
10	CITY OF CO SPRGS, LK CRK	N/A					
16	CUERNO VERDE CATTLE & LAND CO	1696	57	1027	116	16	MEDANO D & HUDSON EXT.

Appendix C

RESERVOIR STORAGE SUMMARY

W.D.	RESERVOIR	SOURCE	CHANGE IN CONTENT %	CONTENT A.F. 11/1/87	CHANGE IN CONTENT %	CONTENT A.F. 4/1/88	CHANGE IN CONTENT %	CONTENT A.F. 11/1/88	CHANGE IN CONTENT %	CONTENT A.F. 4/1/89	CHANGE IN CONTENT %	CONTENT A.F. 11/1/89
11	Turquoise	Lake Fork	-1.10	124385	-4.61	118646	6.04	125818	-28.2	90355	+30.2	117620
11	Twin Lakes	Lake Creek	-3.52	125732	-6.32	117780	13.87	134114	-1.0	132715	-36.2	84660
11	Clear Creek	Clear Creek	-49.84	5174	56.84	8115	-100.00	0	N/A	3298	+170.0	8889
14	Pueblo	Arkansas	-13.95	228850	16.21	265956	-43.86	149318	+36.0	203273	-45.5	110769
14	Trinidad	Purgatoire	80.70	46508	12.82	52472	-62.47	19693	+29.3	25469	-72.2	7093
67	John Martin	Arkansas	-30.18	246367	23.37	303934	-74.01	78984	+56.6	123669	-77.0	28500
	Total Others	Ark. Riv. Basin	-28.55	263000	5.13	276500	-73.92	72100	+111.2	152259	-68.2	48482
	TOTALS	Ark. Riv. Basin	-18.69	1040016	9.94	1143403	-49.27	580027	+26.0	731038	-44.5	406013

WATER DIVERSION SUMMARIES BY DISTRICT IY 1989

W. D.	OBSERVED RECORDINGS	TOTAL DIV. A.F.	TOTAL DIV. TO STORAGE	NO. ACRES IRRIGATED	AVERAGE A.F. ACRE	TOTAL DIV. NON-IRR.	IRRIGATED DISTRICTS				
10	3338	55760*	0	9005	3.05	28260	27500				
11	2179	106040*	80950	15572	6.81	111718	-				
12	2353	141400*	950	12580	11.24	N/A	141400				
13	696	26607	0	18700	1.42	0	26607				
14	2982	254125*	24510	25900	8.22	41135	212990				
15	1231	13900*	1850	4600	3.02	0	13900				
16	1203	7640	0	2064	3.70	0	7640				
17	1841	373400*	161500	92500	4.03	257800	115,600				
18	406	1677	0	3383	.500	0	1677				
19	2935	66500*	44365	25000	2.66	5000	61500				
66 & 67	300	169510	56024	61800	2.74	N/A	169510				
79	955	15060	0	3990	3.77	0	15060				
							<u>20,419</u>	1231,619	370,129	275,094	

793,384

* Estimated actual values will be provided in later reports.

WATER COURT ACTIVITIES

Calendar Year 1989

Applications	84
Consultations with Referee	110
Decrees Awarding Water Rights	88
Dismissals (includes four cancellations of Conditional Rights)	10
Injunctions - 89CW33, 89CW48	2

TYPES OF RULINGS

Findings of Diligence on Conditional Rights	38 cases	452 structures
Cancellations of Conditional Rights	4 "	20 "
Conditional Rights made Absolute	13 "	27 "
New Wells Adjudicated (includes four "Senate Bill 5" wells)	8 "	24 wells
New Springs Adjudicated (includes 187 U.S.A. springs)	13 "	220 springs
New Reservoirs (includes 6 U.S.A. stock ponds)	2 "	6 ponds
Augmentation Plans Approved	5 "	--
Changes of Use	3 "	3 structures
Changes of Location	5 "	5 "

WATER DIVISION NO. 2

Activity Summary, Water Year 1989

<u>ACTIVITY</u>	<u>TOTAL</u>
Number of professional and technical staff	7
Number of clerical staff	1
Number of Water Commissioner FTE assigned (full and part-time)	18
Number of decreed surface rights (including springs)	*8,000
Number of surface rights administered	5,800
Number of wells	**23,170
Number of plans of augmentation	94
Number of consultations with Referee	110
Number of Water Court appearances	73
Number of meetings with water users	18,528
Number of contacts to give public assistance on water matters (including telephone inquiries and an estimated number of contacts made by water commissioners)	20,211

* Estimate from Tabulation.

** Includes Domestic.

RIVER CALL/CHRONOLOGICAL

DATE	PRIORITY DATE	ENTITY	DISTRICTS	DURATION OF CALL/DAYS
** YEAR 1989				
03/15/89	03/01/1887	FORT LYON #2	10-15,17	15
03/30/89	02/26/1887	OXFORD #2	10-15,17	1
03/31/89	12/03/1884	CATLIN #1	10-15,17	1
04/01/89	03/01/1887	FORT LYON #2	10-15,17	4
04/05/89	02/26/1887	OXFORD #2	10-15,17	2
04/07/89	12/03/1884	CATLIN #1	10-15,17	14
04/21/89	02/21/1887	AMITY #1	10-15,17,67	17
05/08/89	12/03/1884	CATLIN #1	10-15,17	1
05/09/89	04/15/1884	FORT LYON #1	10-15,17	1
05/10/89	12/03/1884	CATLIN #1	10-15,17	5
05/15/89	02/21/1887	AMITY #1	10-15,17,67	1
05/15/89	03/01/1887	FORT LYON #2	10-15,17	1
05/16/89	03/03/1890	OTERO	10-15,17	1
05/17/89	01/25/1906	ADOBE RES.	10-15,17	1
05/18/89	03/01/1887	FORT LYON #2	10-15,17	4
05/22/89	02/26/1887	OXFORD #2	10-15,17	1
05/23/89	03/01/1887	FORT LYON #2	10-15,17	3
05/26/89	05/01/1887	BESSEMER (JR.)	10-15,17	1
05/27/89	09/25/1889	HOLBROOK #1	10-15,17	2
05/29/89	05/01/1887	BESSEMER (JR.)	10-15,17	1
05/30/89	03/01/1887	FORT LYON #2	10-15,17	1
06/01/89	05/01/1887	BESSEMER (JR.)	10-15,17	1
06/02/89	01/06/1890	HIGHLINE (JR.)	10-15,17	2
06/04/89	08/30/1893	HOLBROOK #2	10-15,17	1
06/05/89	03/03/1890	OTERO	10-15,17	1
06/06/89	05/01/1887	BESSEMER (JR.)	10-15,17	1
06/07/89	11/14/1887	CATLIN #2	10-15,17	1
06/08/89	09/25/1889	HOLBROOK #1	10-15,17	1
06/09/89	05/01/1887	BESSEMER (JR.)	10-15,17	2
06/11/89	01/06/1890	HIGHLINE (JR.)	10-15,17	3
06/14/89	08/30/1889	HOLBROOK #2	10-15,17	1
06/15/89	09/25/1889	HOLBROOK #1	10-15,17	1
06/16/89	06/06/1890	HIGHLINE (JR.)	10-15,17	5
06/21/89	09/25/1889	HOLBROOK #1	10-15,17	2
06/23/89	03/01/1887	FORT LYON #2	10-15,17	3
06/28/89	02/21/1887	AMITY #1	10-15,17,67	16
07/14/89	06/20/1890	COLORADO	10-15,17	1
07/15/89	08/01/1896	GREAT PLAINS	10-15,17	1
07/16/89	03/01/1887	FORT LYON #2	10-15,17	3
07/19/89	02/21/1887	AMITY #1	10-15,17,67	2
07/21/89	06/30/1885	HIGHLINE	10-15,17	1
07/22/89	12/03/1884	CATLIN #1	10-15,17	4
07/26/89	02/21/1887	AMITY #1	10-15,17,67	5
07/31/89	03/01/1887	FORT LYON #2	10-15,17	11
08/11/89	02/21/1887	AMITY #1	10-15,17,67	2
08/13/89	03/01/1887	FORT LYON #2	10-15,17	1

Page No. 2
01/08/90

RIVER CALL/CHRONOLOGICAL

DATE	PRIORITY DATE	ENTITY	DISTRICTS	DURATION OF CALL/DAYS
08/14/89	02/26/1887	OXFORD #2	10-15,17	4
08/18/89	02/21/1887	AMITY #1	10-15,17,67	5
08/23/89	12/03/1884	CATLIN #1	10-15,17	14
09/06/89	04/15/1884	FORT LYON #1	10-15,17	5
09/11/89	12/03/1884	CATLIN #1	10-15,17	22
10/03/89	04/15/1889	FORT LYON #1	10-15,17	14
10/17/89	12/03/1884	CATLIN #1	10-15,17	14
10/31/89	03/01/1887	FORT LYON #2	10-15,17	15
11/15/89	03/01/1910	WINTER WATER (84CW179)	ALL	120

Appendix H

JOHN MARTIN RESERVOIR

RELEASES AND DELIVERIES
TO KANSAS

WATER YEAR	DEMAND RELEASE	TRANSIT LOSS	FRONTIER DITCH	ARKANSAS & COOLIDGE, K.S.	DITCH & RIVER DELIVERY	CREDITED DELIVERY
1989 MONTH	A.F.	A.F.	A.F.	A.F.	A.F.	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	5702.57	842.98	0.00	13551.00	13551.00	9981.00
JUNE	0.00	0.00	0.00	0.00	0.00	0.00
JULY	11520.83	1475.24	1641.00	12722.00	14363.00	12905.00
AUGUST	9818.33	0.00	962.00	18107.00	19069.00	15299.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00	0.00
OCTOBER	4958.79	842.99	637.00	5524.00	6161.00	6145.00
TOTALS	32000.52	3161.21	3240.00	49904.00	53144.00	44330.00

NOTE: The May thru August stateline flows are based on provisional USGS data. The October stateline flow is based on Satellite Monitoring System data. The above table reflects only times when actual releases were being made from John Martin Reservoir plus a 7 day rundown period. "Credited delivery" refers to the limitation that credit will not be taken for more than one hundred five percent of Kansas' demand.

COMPACT RELEASES & DELIVERIES
FOR THE STATE OF KANSAS

Release #1 began at 1030 hours May 8, at a rate of 400 c.f.s, and stopped at 1500 hours May 15. This release totalled 5702.57 a.f.

Release #2 began at 1130 hours July 7, at a rate of 400 c.f.s., and stopped at 0930 hours July 15. This release totalled 6264.55 a.f.

Release #3 began at 0900 hours July 25, at a rate of 400 c.f.s and stopped at 0900 hours August 13. This release totalled 15,074.61 a.f.

Release #4 began at 0900 hours October 2 at a rate of 250 c.f.s. and stopped at 0900 hours October 12. This release totalled 4,958.79 a.f.

Releases from the State of Kansas account totalled 32,000.52 a.f. total stateline flow during the period of these releases was 44,330 a.f.