

ROY ROMER
Governor



JERIS A. DANIELSON
State Engineer

DIVISION OF WATER RESOURCES
WATER DIVISION I

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January 10, 1991

RECEIVED

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WATER RESOURCES
STATE ENGINEER
COLO.

Dr. Jeris A. Danielson, State Engineer
Division of Water Resources
Room 818 - Centennial Building
1313 Sherman Street
Denver, Colorado 80203

Dear Dr. Danielson:

Attached please find the Annual Report for the 1990 irrigation year.

I do appreciate the support that has been extended to me and our staff by you and all of the Denver people. I look forward to the 1991 year and to the challenges that need to be addressed.

Sincerely,

Alan D. Berryman
Division 1 Engineer

ADB:ct

ANNUAL REPORT
DIVISION NO. I
1990 IRRIGATION
NOV. 1, 1989 - OCT. 31, 1990

BY

ALAN D. BERRYMAN, DIVISION ENGINEER

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WATER ADMINISTRATION

CURRENT WATER YEAR

Accomplishments

There are approximately 8500 direct flow water rights in division one which result in 111,673 cfs of absolute and 31,126 cfs of conditional flow rights. Additionally, there are 3150 storage rights which correspond to 2,644,426 AF of absolute storage and 5,554,021 AF of conditional storage. Finally, division one has about 60,000 exempt type wells and about 13,700 non-exempt type wells. As is usual, the task of administering these rights consumes the majority of time and effort for the staff in division one.

During the past water year a cooperative effort to apply new technology to water administration on the upper South Platte River was initiated. The entities involved include Aurora, Denver, Englewood, Thornton, Centennial Water and Sanitation District, the University of Colorado, the Colorado Water Resources Research Institute at CSU, and the State Engineer's office. The objective of the project is to develop a demonstration/prototype of a computer workstation-based administration system. The initial phase provides for the development of an electronic map to describe the hydrography of the study area, including various data bases that describe the water rights system. Future phases are designed to incorporate real-time data from the satellite monitoring system into the prototype and to add river routing programs to the model. The prototype simulation is intended to assist in real-time operation of the physical and legal components of the stream system in order to enhance planning capabilities and streamline water management.

Two relatively large litigation efforts were essentially completed during the past year. The "Cosmic Cases" involving several municipal entities on Clear Creek were finished up in the past year. Due to the complexity involved in the applications, a large amount of time was spent in negotiation

of the decrees, including the review and design of useful and accurate accounting systems for the decrees. Also, testimony in the case involving reserved right claims of the U.S. Forest Service in division one has ended. This case is a landmark case for Colorado and for other Western states which deals with claims of the federal government that reserved or implied water rights were intended to be set aside by the government for the basic purposes of the National Forests. By law those purposes were to provide a continuous supply of timber and to secure favorable flows within the forests. The main question surrounds the meaning of "secure favorable flows" and whether that can be construed to include minimum flows necessary for channel maintenance. Following over 100 days of testimony, final arguments are to be held prior to next summer and a decision during the same year is hoped for.

Additional progress has been made in the development of an artificial groundwater recharge project near Julesburg in cooperation with the Lower South Platte Conservancy District. It is anticipated that construction of dikes and the turnout structure will be completed in time for water diversion this coming spring. The project is intended to benefit water users on the lower end of the river.

Involvement in the Water User Community

The division one office has worked in several arenas with water users over the past year. As part of the South Platte Basin Water Management Study sponsored by four conservancy districts, we have helped those entities look at ways to manage water resources in order to maximize beneficial use on the river below Denver. Also, being involved with the Upper South Platte Management Group mentioned earlier has encouraged cooperative efforts between water users and the state in applying new technology to provide faster, more accurate, and more detailed information about river conditions and administration to interested water users. The Julesburg recharge project has also created increased interaction between the Division of Water Resources and water users and entities on the lower end of the Platte River. Continual negotiation with water users on new water applications about accounting and administrative concepts has increased communication between this office and water users. Discussion about implementation of Senate Bill 181, which provides for communication and interaction between affected state agencies in applying water quality standards to water projects, was held in the division to get responses from water users about the potential impacts of this issue. Finally, numerous talks, seminars, and presentations were made to various groups about water administration and water use in the South Platte Basin.

Key Issues/Impacts

In 1990 issues of environment, recreation, and public trust continued to enter into the area of water quantity and water development. The final veto of the Two Forks project proclaimed that the damage to environment outweighed the benefits of the project, at least for the present time. This has signaled to some the end of large scale water development projects. More scrutiny has been directed at water rights transfers as to the impacts that such changes create. Experience in the Arkansas basin and concerns raised in the Gunnison basin have brought increased awareness to water users in the South Platte basin as entities endeavor to increase their water supplies from areas outside their local basin. The potential of applying water quality standards to certain water development efforts could increase the number of constraints that must be satisfied in order to perfect water rights. In summary, new issues in addition to water quantity are increasingly entering the area of water rights use and development that require additional information and possibly greater restrictions on water use than has occurred in the past.

If the USFS is successful in obtaining reserved water rights in division one, some of the areas where private water rights have developed upstream of the government's claims will be subject to new water demands that threaten the ability of those rights to utilize their rights. Those threatened areas include developments and small towns along the front range. Some concern also exists that if the reserved rights are allowed in the forests, then the federal government will attempt to expand that concept to federal lands in lower areas such as Bureau of Land Management lands where greater numbers of existing water rights will be impacted.

The combination of increased numbers of complex decrees and a budget that decreases each year makes administration in some areas very difficult. The inability to properly administer decrees may result in lost water to water users and increased conflict in water administration.

Unresolved Issues

Several issues that existed last year remain for the coming year. Administration of wells on Cherry Creek for 1990 allowed for one day of pumping without augmentation. In 1991 all wells will be required to

belong to an approved plan for augmentation in order to pump water and no free pumping days will be allowed.

After July of 1990 all active gravel pits and those constructed after 1980 were subject to augmentation requirements. While some pit owners have submitted the required plans, others have not. Bringing the pits into compliance with the law will require additional time and efforts.

Workload Changes/Effect on Staff

The increasing responsibilities of water administration constitute a continual workload increase on the staff. Researching information about operation of gravel pits requires additional efforts. New and complex decrees create more administrative duties, including observation and paperwork. Working with water users in developing water accounting, operating administrative plans, or developing other projects takes additional allocation of human resources. Addition of gaging stations and satellite monitoring installations necessitates increased hydrographer time. All of the above items tend to stretch the staff's time requirements and decrease their ability to do a complete job in all areas.

Some changes have taken place in the division staffing to address some of the problems over the past year. An assistant division engineer position was moved to a Denver location to deal specifically with the problems in and above the Denver metro area and help water commissioners in that area in water administration. An engineering position in the hydrographic branch has been moved to assist in water administration in the division office while a water commissioner/well inspector position has been changed to a technician position in the hydrographic branch. These changes are meant to better address the administrative workload in the division.

Budget Impact

The operating budget for the division was cut slightly last year. In division one, this meant that travel and phone use had to be reduced and monitored so that available resources would be best utilized. The result was fewer visits to structures, reduced ability to investigate cases in the field, fewer well inspections, less stream measurements, limited upgrades for personnel, and less communication with water users. The above meant reduced services, poorer records, and frustration in not being able to do what was needed.

COMING WATER YEAR

Problems/Concerns

The coming year presents several problems and concerns that will impact operations. A problem that presently exists and must be dealt with is living within a reduced budget. Restrictions on travel and phone use are already in place to preserve funds for summer months when water administration is most important. The freeze on hiring and upgrades will leave some positions open this year and has already put well deserved upgrades in limbo. Every effort will be made to make up for vacant positions and to maximize the use of the available funds in the operating budget.

Administration of wells on Cherry Creek may require extra efforts this year as the administrative phase-in period is over and wells are subject to augmentation requirements. It is expected that legal proceedings will be necessary to bring wells into compliance with rules and regulations regarding groundwater pumping. Additionally, efforts are needed to examine ways to administer or manage water rights (mainly wells) in the Cherry Creek basin that will maximize use in that basin and protect rights within and downstream of the basin. This office may have to take a lead role in a basinwide analysis to come up with acceptable alternatives.

Similar enforcement actions may also be necessary in order to bring gravel pits into compliance with the new statutes requiring augmentation of active and new pits. Field investigations for division staff will consume additional time and expense in support of the enforcement actions.

Ongoing projects will again require extra effort as they progress toward completion. The recharge project at Julesburg will require engineering support in the office as well as in the field. Computer modelling of the project is scheduled to proceed as is construction of diversion and storage facilities. Also, development of the administrative system prototype for the Upper South Platte river will demand time and input from division staff in order to verify data and other inputs to the model.

Lastly, continued efforts are needed to follow up on new decrees as they are placed in operation by the water users. Because of their complexity, including computer applications for accounting, the division office plans

to spend additional efforts in support of the water commissioners who have to assimilate the decrees into their normal administrative operation.

Projected Work Items/Staff

Staff engineers will work toward completing the projects and addressing the problem areas described above. The division office will continue efforts in water court matters, including investigation, negotiation, and litigation. Efforts will be made to examine job duties and descriptions of all employees to fit the current situations.

STATISTICAL INFORMATION

Statistical information for the following categories follows in the order listed:

A. Administration of Plans for Augmentation

Division one has approximately 396 plans for augmentation. In 1990, about 79,378 acre-feet were released for replacement purposes. For a district by district breakdown of the releases made for augmentation, refer to the summary of water diversions for 1989 in section E that follows (2nd page of section E).

B. Transmountain Diversions

C. Storage Water

D. Water Diversions

E. Court Activities

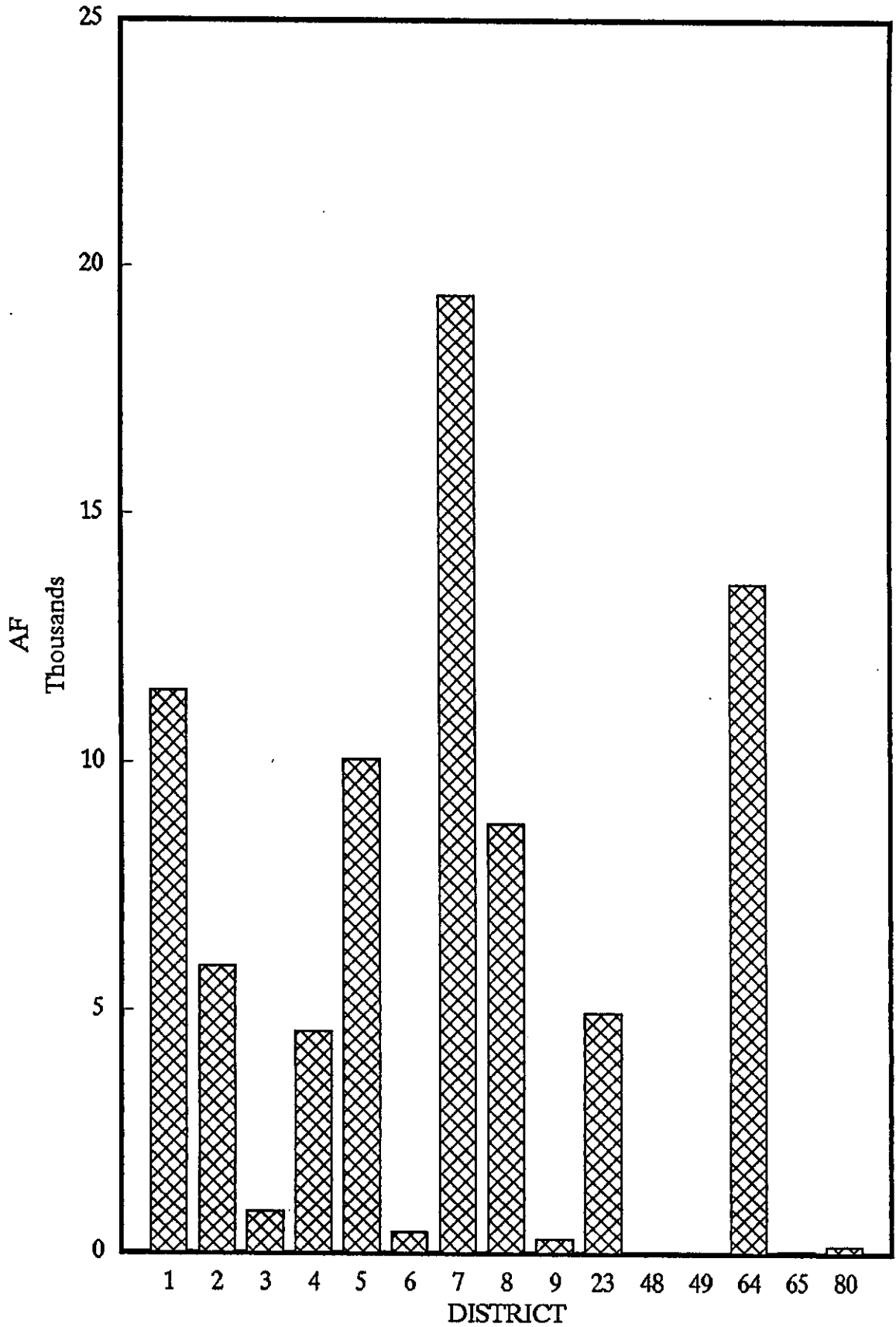
F. Office Administration

G. River Calls

H. Compact Deliveries

DIVISION 1

1990 AUGMENTATION RELEASES



TRANSMOUNTAIN DIVERSIONS SUMMARY - INFLOWS

WD	NAME	RECIPIENT		1989 WATER YEAR		1990 WATER YEAR		SOURCE	
		STREAM	AF	DAYS	AF	DAYS	WD	STREAM	
									WD
03	Wilson Supply Ditch	Cache La Poudre River	930	70	1,640	35	48	Sand & Deadman Cr.	
03	Deadman Ditch	Cache La Poudre River	710	57	656	18	48	Deadman Creek	
03	Bob Creek Ditch	Cache La Poudre River	0	0	0	0	48	Nunn Creek	
03	Columbine Ditch	Cache La Poudre River	0	0	0	0	48	Deadman Creek	
03	Laramie-Poudre Tunnel	Cache La Poudre River	18,880	134	16,760	92	48	Laramie River	
03	Skyline Ditch	Cache La Poudre River	109	3	355	6	48	Laramie River	
03	Cameron Pass Ditch	Cache La Poudre River	116	42	93	23	47	Michigan River	
03	Michigan Ditch	Cache La Poudre River	1,740	166	2,620	290	47	Michigan River	
03	Grand River Ditch	Cache La Poudre River	18,830	145	20,980	128	51	Colorado River	
04	Eureka Ditch	Big Thompson River	0	0	88	66	51	Colorado River	
04	Adams Tunnel	Big Thompson River	273,200	365	213,700	337	51	Colorado River	
06	Moffat Tunnel	South Platte River	66,530	365	67,390	365	51	Fraser River	
07	Berthoud Pass Ditch	Clear Creek	834	107	623	108	51	Fraser River	
07	Vidler Tunnel	Clear Creek	975	135	660	114	51	Montezuma Creek	
23-									
08	Roberts Tunnel	South Platte River	74,380	236	59,420	197	36	Blue River	
23	Boreas Pass Ditch	South Platte River	0	0	0	0	36	Indiana Creek	
23	Hoosier Pass Ditch	Arkansas River	10,870	135	11,200	136	36	Blue River	
23	Aurora Homestake	South Platte River	22,468	226	19,100	170	37	Homestake Creek	

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 1

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1989-1990 IRRIGATION YEAR				End 1990 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Bi.jou #2	South Platte	385	04	955	10	1,130	12	3,580	39	3,700
Empire	South Platte	18,547	49	33,858	90	19,869	53	34,930	93	14,225
Jackson	South Platte	18,051	51	31,586	89	20,565	58	27,149	76	9,064
Riverside	South Platte	20,138	32	60,479	96	8,155	13	63,113	97	35,636
Others		360	17	540	25	395	18	1,114	52	168

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 2

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR			1989-1990 IRRIGATION YEAR			End 1990 Water Yr		
		Beg Irr Yr AF	%	Beg Irr Season AF	Beg Irr Yr AF	%	Beg Irr Season AF			
Barr	South Platte	13,685	43	27,791	86	17,541	55	32,152	100	11,047
Bull Canal #8	Clear Creek	2,349	39	4,058	68	1,692	19	3,526	59	1,013
Coal Ridge	Little Dry Creek	564	86	672	103	561	86	411	63	680
Great Western	Walnut Creek	1,989	61	1,436	44	2,571	79	1,596	49	2,732
Horse Creek	South Platte	8,150	48	14,320	84	5,966	35	15,311	90	8,674
Lord	South Platte	0	0	412	12	41	0	479	13	0
Lower Latham	South Platte	5,646	91	5,693	92	5,929	95	5,976	96	5,551
Milton	South Platte	15,827	75	20,563	97	16,371	78	21,016	100	16,712
Prospect	South Platte	2,238	37	5,020	84	1,332	22	5,022	84	2,118
Quincy	South Platte	2,527	90	2,514	90	2,527	90	2,638	94	2,514
Standley	Woman Creek	32,098	76	31,360	74	35,074	83	35,629	84	34,853
Others		5,460	106	3,250	64	2,767	54	2,906	57	3,478

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 3

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1989-1990 IRRIGATION YEAR				End 1990 Water Yr
		Beg Irr Yr	%	Beg Irr Season	%	Beg Irr Yr	%	Beg Irr Season	%	
		AF		AF		AF		AF		
Fossil Creek	Fossil Creek	5,083	44	8,130	71	5,453	47	10,455	91	5,953
Halligan	N Fk Poudre River	664	10	2,156	34	817	13	6,428	100	976
Indian Creek	Indian Creek	1,460	77	1,339	70	1,673	88	1,572	82	1,155
Mountain Supply										
North Poudre #2	N Fk Poudre River	1,326	34	2,309	59	495	13	2,153	55	0
North Poudre #3	N Fk Poudre River	1,687	43	1,554	45	2,889	84	3,066	89	2,045
North Poudre #4	N Fk Poudre River	466	28	458	27	380	23	410	25	791
North Poudre #5	N Fk Poudre River	3,464	41	3,557	42	4,534	54	4,398	52	2,399
North Poudre #6	N Fk Poudre River	0		0		0	0	0		0
North Poudre #15	N Fk Poudre River	2,771	50	3,239	59	2,060	37	3,064	55	1,115
Park Creek	Park Creek	2,207	30	6,491	88	3,168	43	6,025	82	2,293
Cobb Lake	Cache La Poudre R	11,580	52	11,460	51	7,850	35	13,980	62	13,650
Seaman aka	N Fk Poudre River	1,712	34	2,862	57	49	0	2,485	50	2,568
Milton Seaman										
Claymore	Cache La Poudre R	197	19	613	60	371	01	862	85	454
Panhandle	Panhandle Creek	841	36	841	35	841	36	841	36	841
Seeley	Cache La Poudre R	1,069	69	1,069	69	1,007	65	1,069	69	1,069
Warren	Cache La Poudre R	708	30	577	24	1,920	05	1,667	71	560
Wood	Rollard Draw	1,954	63	2,345	75	1,117	36	2,166	70	2,098
Joe Wright aka	Joe Wright Creek	2,629	37	3,243	45	3,900	54	4,568	64	2,604
Cameron										
Rawhide	Cache La Poudre R	14,824	83	15,111	84	15,801	89	16,000	90	14,212
Horsetooth	Dixon Canyon Cr	67,421	44	131,266	86	65,614	43	115,388	76	86,841

RESERVOIR STORAGE SUMMARIES (Continued)

WATER DISTRICT 3

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1989-1990 IRRIGATION YEAR				End 1990 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Douglas	Cache La Poudre R	3,999	43	4,645	49	6,056	65	7,431	79	0
Windsor Res. #8	Cache La Poudre R	4,684	46	6,704	65	7,312	71	9,052	88	4,251
No. 8 Annex	Cache La Poudre R	1,472	40	1,472	40	2,542	70	3,293	90	2,187
Windsor Res.	Cache La Poudre R	5,616	32	11,959	67	7,271	41	16,423	93	8,511
Chambers	Joe Wright Cr	412	05	2,719	30	266	03	2,233	25	1,213
Long Draw aka	Long Draw Cr	3,696	34	4,632	42	1,361	12	2,160	20	1,836
Grand River	Cache La Poudre R	3,517	44	4,089	50	4,050	50	4,376	54	3,589
Black Hollow	Cache La Poudre R	484	38	426	33	494	39	444	35	426
Curtis	Cache La Poudre R	239	21	640	55	785	68	719	63	743
Kluver	Cache La Poudre R	2,044	51	2,776	68	2,521	62	274	07	2,814
Long Pond aka Water Supply #5,6,7	Cache La Poudre R	3,343	75	3,243	73	3,483	79	3,343	75	3,303
Rocky Ridge aka Water Supply #1	Long Pond Res.	2,771	57	4,089	84	1,363	28	3,960	82	250
Water Supply #3	Long Pond Res.	355	24	390	26	805	55	797	54	790
Water Supply #4	Cache La Poudre R	4,763	58	5,545	68	4,976	61	6,326	78	4,272
Terry aka Larimer Weld	Sheep Creek	160	04	978	26	220	06	932	25	392
Worster	Duck Slough	3,725	37	8,756	86	3,651	36	10,070	100	2,095
Tinnath	Cache La Poudre R	528	36	700	47	558	38	1,014	69	969
Windsor Lake	Barnes Meadows Cr	2,010	86	967	41	2,157	92	1,468	62	2,120
Barnes										
Others		4,078	24	6,206	36	8,904	52	6,298	37	8,085

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 4

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR			1989-1990 IRRIGATION YEAR			End 1990 Water Yr		
		Beg Irr Yr AF	%	Beg Irr Season AF	%	Beg Irr Yr AF	%			
Boulder & Larimer aka Ish	Little Thompson	807	11	1,177	16	1,425	19	6,987	95	1,794
Boyd Lake	Big Thompson	11,123	19	26,115	44	21,894	37	35,049	60	30,015
Carter	Big Thompson	89,115	80	106,000	95	32,774	29	96,009	86	62,664
Donath	Big Thompson	637	55	600	52	986	86	933	81	799
Hertha Reservoir	Dry Cr. Hertha	380	22	1,611	94	556	33	1,498	88	572
Horseshoe Reservoir	Big Thompson	2,635	33	2,883	35	2,848	35	3,831	48	4,141
Lake Loveland	Big Thompson	9,767	77	9,767	77	0	0	10,195	80	0
Lon Hagler	Big Thompson	4,550	90	4,874	97	5,088	101	5,030	100	3,220
Lone Tree	Big Thompson	3,002	32	7,436	80	4,695	50	8,623	93	3,738
Loveland Lake	Big Thompson	402	17	629	27	629	27	1,090	47	1,173
Marino	Big Thompson	508	09	1,850	33	1,227	22	5,532	99	2,790
Welch Lake	Big Thompson	3,789	56	4,074	60	5,749	85	5,534	82	2,153
Others		1,714	47	2,035	56	1,712	47	2,200	61	2,109

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 5

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1989-1990 IRRIGATION YEAR				End 1990 Water Yr
		Beg Irr Yr	% AF	Beg Irr Season	%	Beg Irr Yr	% AF	Beg Irr Season	%	
Beaver Pond	Beaver Creek	695	32	1,099	50	0	62	3,466	80	0
Foothills	St. Vrain	780	18	819	18	2,682	85	874	95	1,305
Highland #1	St. Vrain	588	57	1,033	100	3,226	87	3,642	98	588
Highland #2	St. Vrain	3,660	98	3,192	85	1,491	92	1,670	102	2,224
Highland #3	St. Vrain	566	35	1,669	102	2,254	88	2,460	96	566
McIntosh	St. Vrain	1,241	49	1,179	46	2,492	81	3,076	100	1,496
Pleasant Valley	St. Vrain	618	20	2,743	89	1,640	94	1,640	94	2,429
Oligarchy Res. #1	St. Vrain	1,361	78	1,564	90	8,275	65	12,715	100	1,545
Union	St. Vrain	6,132	48	7,246	56	1,328	81	1,549	94	6,544
Left Hand Park	Left Hand Creek	712	43	627	38	2,596	69	3,188	85	1,228
Left Hand Valley	Left Hand Creek	2,432	65	3,149	83	15,223	98	16,153	105	2,253
Button Rock	St. Vrain	12,622	82	8,767	56	1,939	52	2,246	60	15,998
New Thomas	St. Vrain	2,068	55	2,246	60	812	64	867	68	2,020
Lagermann	Left Hand Creek	688	54	758	59					767

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 6

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1989-1990 IRRIGATION YEAR				End 1990 Water Yr
		Beg Irr Yr		% AF		Beg Irr Yr		% AF		
		Beg	%	Beg	%	Beg	%	Beg	%	
Albion	Creek	1,111	100	350	31	1,111	100	813	73	1,000
Barker	Creek	6,814	59	2,592	22	8,057	70	3,848	33	8,187
Baseline	Creek	1,902	36	2,461	46	1,862	35	3,884	73	3,555
Boulder	Creek	11,388	65	11,507	66	7,241	42	10,134	58	6,938
Goose	North Boulder Cr.	900	87	450	43	1,036	100	689	67	1,000
Gross	South Boulder Cr.	26,969	64	15,975	38	25,358	60	14,568	35	26,522
Hillcrest	Creek	1,810	85	1,959	91	1,878	88	2,207	103	1,947
Leggett	Creek	1,304	84	1,416	91	1,355	87	1,601	103	1,406
Marshall	South Boulder Cr.	5,085	49	7,723	73	3,929	38	9,193	88	4,892
McKay	South Boulder Cr.	211	25	211	24	241	28	415	49	515
Panama	Creek	2,968	59	2,864	57	3,585	72	4,008	80	0
Silver	North Boulder Cr.	3,154	79	1,280	32	3,595	90	1,653	41	3,809
Six Mile	Creek	657	46	1,288	90	902	63	1,228	86	804
Valmont	South Boulder Cr.	6,511	88	6,860	92	6,670	90	7,426	100	6,831

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 7

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1989-1990 IRRIGATION YEAR				End 1990 Water Yr
		Beg Irr Yr	%	Beg Irr Season	%	Beg Irr Yr	%	Beg Irr Season	%	
Ralston	Ralston Creek	7,072	55	6,985	54	7,650	60	6,450	51	10,588
Long Lake	Ralston Creek	191	14	396	29	196	15	236	17	354
Tucker	Ralston Creek	181	17	548	50	220	20	376	34	0
Leyden	Clear Creek	594	52	460	39	760	66	381	33	306
Hyatt	Clear Creek	444	41	547	49	502	46	990	90	659
Coors B #3	Clear Creek	2,108	84	500	19	2,514	100	959	38	2,514
Coors B #4	Clear Creek	1,976	52	2,237	59	3,356	84	3,540	95	3,729
Blunn	Clear Creek	4,136	71	4,450	76	4,900	90	3,268	56	3,802
Others		3,430	57	3,600	59	3,616	60	3,153	47	3,232

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 8

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR			1989-1990 IRRIGATION YEAR			End 1990 Water Yr	
		Beg Irr Yr AF	%	Beg Irr Season AF	Beg Irr Yr AF	%	Beg Irr Season AF		
Aurora Rampart	Gulch	1,031	86	955	1,068	89	1,032	86	1,195
Chatfield	South Platte	20,836	29	21,532	19,958	28	27,366	38	20,411
Cherry Creek	Cherry Creek	13,278	05	14,239	12,789	05	14,097	06	13,020
McLellan	Dad Clark Gulch	5,274	88	4,798	4,634	77	5,611	94	5,665
Platte Canon	South Platte	940	98	610	918	95	682	71	842
Quincy	South Platte	2,555	92	2,514	2,527	91	2,665	96	2,679
Strontia Springs	South Platte	7,586	86	7,654	7,359	94	7,049	90	7,349

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 9

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1988-1989 IRRIGATION YEAR				End 1989 Water Yr
		Beg Irr Yr AF	%	Beg Irr Season AF	%	Beg Irr Yr AF	%	Beg Irr Season AF	%	
Soda #1 & #2	Bear Creek	*1,040	46	*1,675	74	*1,054	47	*1,614	72	*1,629
Bowles	Bear Creek	506	20	2,302	93	2,097	85	1,649	67	2,062
Patrick	Bear Creek	1,019	92	1,136	45	1,035	93	1,152	104	1,076
Bear Creek Reservoir	Bear Creek	1,956	02	1,956	02	1,968	03	2,034	03	1,987
Marston	South Platte	6,652	39	10,671	61	10,199	59	12,464	72	9,815
Others		2,571	43	1,648	31	2,232	42	2,812	53	2,184

*Soda Lakes #1 & #2 combined in 1988-89

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 23

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1989-1990 IRRIGATION YEAR				End 1990 Water Yr
		Beg Irr Yr AF	%	Beg Irr Season AF	%	Beg Irr Yr AF	%	Beg Irr Season AF	%	
Antero	S Fk South Platte	20,015	23	19,950	23	20,013	23	20,059	23	20,037
Montgomery	Mid. Fk. S. Platte	4,728	93	517	10	4,802	94	1,347	26	4,354
Eleven Mile	Mid. Fk. S. Platte	99,289	102	99,933	102	99,075	101	99,761	102	98,664
Spirney Mountain	Mid. Fk. S. Platte	37,416	69	29,924	55	44,319	81	30,919	57	32,813

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 64

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR			1989-1990 IRRIGATION YEAR			End 1990 Water Yr	
		Beg Irr Yr	%	Beg Irr Season	Beg Irr Yr	%	Beg Irr Season		
Prewitt	South Platte	22,930	80	23,250	20,570	72	28,130	98	14,600
North Sterling	South Platte	9,290	11	72,300	24,310	30	73,720	90	22,620
Julesburg	South Platte	9,396	33	20,930	8,467	30	21,504	76	14,126

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 80

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1989-1990 IRRIGATION YEAR				End 1990 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Cheesman	S. Fk. S. Platte	61,701	78	66,159	83	63,787	81	78,419	99	60,722
Wellington	N. Fk. S. Platte	3,210	43	3,131	42	2,501	34	3,400	46	3,026
Others		0		17	01	54	04	10	01	10

1990 WATER DIVERSION SUMMARIES BY DISTRICT IN AF

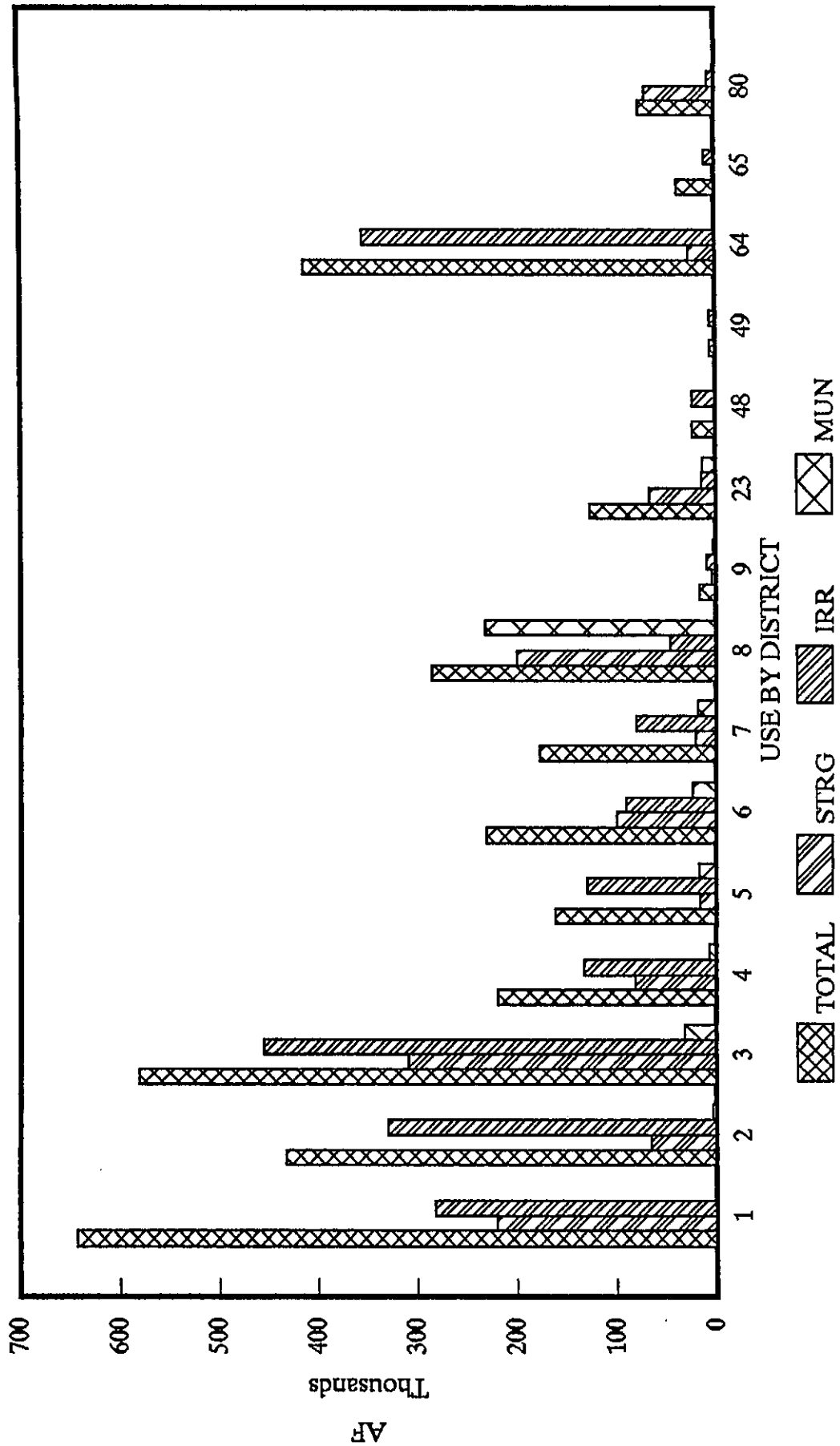
WD	TOTAL DITCHES REPORTING				NU	ESTIMATED NUMBER OF DITCH/WELL VISITATIONS	TOTAL DIVERSIONS -AF-	TOTAL DIVERSIONS TO STORAGE -AF-	TOTAL DIVERSIONS -AF-	IRRIGATION		AVERAGE AF PER ACRE
	WA	NWA	NR							NUMBER OF ACRES IRRIGATED	ACRES	
01	241		4,724		100	642,009	218,992	280,930	189,225		1.49	
02	161		4,087		252	432,015	64,874	528,151	195,243		2.71	
03	198		2,549		123	580,499	308,305	454,797	262,425		1.73	
04	84	2	1,159		57	217,922	80,425	131,560	107,706		1.22	
05	91		1,124		40	160,441	15,148	129,087	111,780		1.15	
06	174		1,646		136	230,042	99,084	89,593	100,331		.89	
07	298		1,402		129	176,145	19,766	78,940	51,250		1.54	
08	358	15	4,314		364	283,839	199,158	45,461	9,648		4.70	
09	57		1,439		53	15,627	3,314	8,318	1,960		4.24	
23	291	39	1,168		330	125,237	65,856	13,093	9,536		1.37	
48	73		51		15	22,480		22,480	4,110		5.47	
49	21		39		17	4,649		4,649	1,555		2.99	
64	123	6	1,726		67	413,480	25,290	352,933	125,479		2.81	
65	22		111		9	36,545	527	8,652	4,720		1.83	
80	154	4	801		86	74,697	68,508	5,929	1,829		3.24	
TOTALS	2,346	66	26,340		1,778	3,415,627	1,169,247	1,954,573	1,176,797		1.66	

1990 (WATER DIVERSION SUMMARIES BY DISTRICT IN AF (CONTINUED))

WD	TRANSMOUNTAIN OUTFLOW	TRANSBASIN OUTFLOW	MUNICIPAL	INDUSTRIAL	RECREATIONAL	FISHERY	COMMERCIAL	RECHARGE	AUG
01				15,376				52,430	11,430
02			2,428				7,277	5,237	5,875
03			30,844	1,364					864
04			5,937						4,547
05			16,134						10,059
06			22,136	1,824					430
07			17,584	49,701					18,397
08			231,091	2,626		4,595	66		8,773
09			1,896				12		286
23			12,572	1,188	3,663	91	425		4,938
48									
49									
64							960	6,395	13,589
65									46
80			233					20	144
TOTALS			340,855	72,079	3,663	4,686	8,740	64,082	79,378

DIVISION 1

1990 DIVERSIONS



WATER COURT ACTIVITIES
(CALENDAR YEAR 1990)

No. Applications for Decrees	235
No. Consultations with Referee	280
No. Decrees Issued by Water Court	510
No. Meetings with Applicant/Denver Office Court Preparation	80
No. Resume Reviews Denver Office	12

TYPES OF DECREES

Findings of Diligence on Conditional Rights	53
Conditional Water Rights Made Absolute	35
Augmentation Plans Approved (Including Exchanges)	41
Cases Involving New Surface Water Diversions	66
Cases Involving Alternate Points of Diversion	125
Cases Involving Transfers	10
Cases Awarding Change of Location	25
Cases Awarding Change of Use	30
Cases Involving Reservoir Storage	48
Cases Involving Groundwater (Nontributary/Tributary)	125
Cases Involving Springs	50
Cases Involving In-Stream Flows	23
Number of Cases Denied	3
Number of Cases Dismissed	128
Conditional Water Rights Abandoned	3
Water Rights Abandoned	5
Requests for Withdrawal Allowed	5

TYPE STRUCTURES IN DECREES

No. Ditches	343
No. Reservoirs	105
No. Wells	625
No. Other	103

ACTIVITY SUMMARY

ACTIVITY	TOTAL CALENDAR YEAR
Number of professional and technical staff	11
Number of clerical staff	2
Number of Water Commissioners	Full Time 16 Part Time 8
Number of decreed surface rights	10,000
Number of surface rights administered	6,394
Number of wells	71,458
Number of plans for augmentation	396
Number of consultations with Referee	246
Number of Water Court appearances	183
Number of meetings with water users	213
Number of contacts to give public assistance on water matters	13,308

RECEIVED

JAN 15 '91

WATER RESOURCES
STATE EXCHANGER
COLO.

RIVER CALL 1989-1990

Calling Priority

Date Call Initiated 1989-1990	Date Call Released 1989-1990	Structure Name	Appropriation District	Person Placing Call	Districts Affected
11/01/89	12/01/89	Nevada Ditch	08	Ken Salser	8
12/01/89	12/19/89	Barr Lake	02	Keith Delventhal	8, 9, 23, 80
12/19/89	01/12/90	Denver Intake	08	Jim McClure	8, 9, 23, 80
12/22/89	03/27/90	Chatfield	08	Jim McClure	8
01/12/90	02/01/90	Marston	08	Jim McClure	8, 23, 80
02/01/90	03/06/90	Intake	08	Jim McClure	8, 23, 80
03/06/90	04/01/90	Cheesman	80	Jim McClure	8, 23, 80
03/20/90	04/22/90	McClellen	80	Ken Salser	8, 23, 80
04/01/90	04/04/90	Cheesman	08	Jim McClure	23, 80
05/04/90	05/09/90	Burlington D.	02	Keith Delventhal	7, 8, 9, 23, 80
05/09/90	05/10/90	O'Brien	02	Keith Delventhal	7, 8, 9, 23, 80
05/10/90	05/17/90	Burlington D.	02	Ken Timmerman	7, 8, 9, 23, 80
05/17/90	05/27/90	Meadow Isl. #2	02	Keith Delventhal	7, 8, 9, 23, 80
05/27/90	05/28/90	Highline	08	Denver	8, 23, 80
05/28/90	05/29/90	Burlington	02	Keith Delventhal	7, 8, 9, 23, 80
05/29/90	06/06/90	Cheesman	80	Jim McClure	23, 80
05/29/90	06/01/90	Chatfield	08	Jim McClure	8, 9, 23, 80
06/01/90	06/06/90	Barr Lake Refill	02	Manuel Montoya	7, 8, 9, 80
06/06/90	06/09/90	Burlington	02	Manuel Montoya	7, 8, 9, 23, 80
06/09/90	06/11/90	Barr Lake Refill	02	Manuel Montoya	8, 9, 80
06/09/90	06/12/90	Cheesman	02	Denver	80, 23
06/11/90	06/12/90	Chatfield	08	Denver	8, 9, 23, 80
06/12/90	06/12/90	Barr Lake Refill	02	Manuel Montoya	8, 9, 80
06/12/90	06/18/90	Cheesman/Burl. By Pass	2, 80	Wagge/Montoya	8, 9, 80
06/18/90	06/23/90	Burlington Direct	02	Keith Delventhal	7, 8, 9, 23, 80
06/23/90	06/24/90	Farmers Ind. D.	02	Keith Delventhal	2, 7, 8, 9, 23, 80
06/24/90	06/28/90	Lupton Bottom	02	Keith Delventhal	2, 7, 8, 9, 23, 80
06/25/90	07/02/90	Ft. Morgan	01	Mabel Cuning	2, 3, 4, 5, 6
06/28/90	06/29/90	Fulton	02	Ken Timmerman	7, 8, 9, 23, 80

RIVER CALL (Continued)

Calling Priority

Date Call Initiated 1989-1990	Date Call Released 1989-1990	Structure Name	Appropriation Date	District	Person Placing Call	Districts Affected
06/29/90	07/02/90	Platteville	10/15/1873	02	Keith Delventhal	7, 8, 9, 23, 80
07/02/90	07/05/90	Upper Platte & Beaver	06/20/1882	01	May Cuning	2, 3, 4, 5, 6
07/02/90	07/05/90	Brighton D.	11/01/1871	02	Keith Delventhal	7, 8, 9, 23, 80
07/05/90	07/06/90	Platteville	10/15/1873	02	Keith Delventhal	7, 8, 9, 23, 80
07/05/90	07/09/90	Pawnee	06/22/1882	64	Elton Watson	1, 2, 3, 4, 5, 6
07/06/90	07/07/90	Meadow Isl. #2	12/19/1877	02	Keith Delventhal	7, 8, 9, 23, 80
07/07/90	07/09/90	Fulton	11/05/1879	02	Keith Delventhal	7, 8, 9
07/07/90	07/09/90	Denver Highline Canal	01/18/1879	08	Dave Dzurrovchin	8, 23, 80
07/09/90	07/10/90	Burlington D.	11/20/1885	02	Manuel Montoya	8, 9, 23, 80
07/09/90	07/10/90	Harmony #1	04/28/1895	64	Elton Watson	1, 2, 3, 4, 5, 6, 7
07/10/90	07/12/90	Dist. 1 Res.	12/31/1929	01	Mae Cuning	2, 3, 4, 5, 6, 7, 8, 9, 80
07/10/90	07/13/90	Cheesman	06/27/1889	08	Jim McClure	23, 80
07/12/90	07/18/90	Harmony #1	04/28/1895	64	Elton Watson	1, 2, 3, 4, 5, 6
07/13/90	07/15/90	Brantner	01/15/1881	02	Keith Delventhal	7, 8, 9, 23, 80
07/15/90	07/16/90	Meadow Isl. #2	12/19/1877	02	Keith Delventhal	7, 8, 9, 23, 80
07/16/90	07/21/90	Platteville	10/15/1873	02	Keith Delventhal	7, 8, 9, 23, 80
07/18/90	07/19/90	Springdale	07/19/1886	64	Elton Watson	1, 2, 3, 4, 5, 6
07/19/90	07/22/90	Lowline	11/14/1882	64	Elton Watson	1, 2, 3, 4, 5, 6, 23
07/22/90	08/03/90	Harmony #1	04/28/1895	64	Elton Watson	1, 2, 3, 4, 5, 6, 7
07/22/90	07/25/90	Burlington Direct	11/20/1885	02	Keith Delventhal	8, 9, 23, 80
07/25/90	07/27/90	Meadow Isl. #2	12/19/1877	02	Keith Delventhal	7, 8, 9, 23, 80
07/27/90	07/28/90	Lupton Bottom	09/15/1873	02	Keith Delventhal	7, 8, 9, 23, 80
07/28/90	08/03/90	Platteville	10/15/1873	02	Keith Delventhal	7, 8, 9, 23, 80
08/03/89	08/03/90	Biyou	10/01/1888	01	Mae Cuning	2, 3, 4, 5, 6,
08/03/90	08/08/90	Meadow Isl. #2	12/19/1877	02	Keith Delventhal	7, 8, 9, 23, 80
08/08/90	08/09/90	Lupton Bottom	09/15/1873	02	Keith Delventhal	7, 8, 9, 23, 80
08/09/90	08/16/90	Evans #2	10/05/1871	02	Keith Delventhal	7, 8, 9, 23, 80
08/16/90	08/20/90	Burlington Direct	11/20/1885	02	Keith Delventhal	8, 9, 23, 80
08/20/90	08/21/90	Riverside	05/31/1907	01	Mae Cuning	1, 2, 3, 4, 5, 6, 7, 8, 9, 23, 80

RIVER CALL (Continued)

Calling Priority

Date Call Initiated 1989-1990	Date Call Released 1989-1990	Structure Name	Appropriation Date	District	Person Placing Call	Districts Affected
08/21/90	08/28/90	Bi-jou Recharge	05/26/1972	01	Mae Cunning	1, 2, 3, 4, 5, 6
08/21/90	08/22/90	Burlington D.	11/20/1885	02	Manuel Montoya	7, 8, 9, 23, 80
08/22/90	08/24/90	Barr Lake Refill	01/13/1909	02	Keith Delventhal	7, 8, 9, 23, 80
08/24/90	08/28/90	Burlington D.	11/20/1885	02	Keith Delventhal	7, 8, 9, 23, 80
08/28/90	08/30/90	Platteville D.	10/15/1873	02	Keith Delventhal	7, 8, 9, 23, 80
08/28/90	08/30/90	U. Platte & Beaver	04/15/1888	01	May Cunning	2, 3, 4, 5, 6
08/30/90	09/04/90	Evans #2	10/05/1871	02	Keith Delventhal	7, 8, 9, 23, 80
09/04/90	09/06/90	Meadows I. #2	12/19/1877	02	Keith Delventhal	7, 8, 9, 23, 80
09/05/90	09/19/90	Riverside Direct	05/31/1907	01	May Cunning	2, 3, 4, 5, 6
09/06/90	10/01/90	Burlington	11/20/1885	02	Keith Delventhal	7, 8, 9, 23, 80
09/19/90	09/29/90	Dist. 1 Res.	12/31/1929	01	May Cunning	2, 3, 4, 5, 6
10/01/90	11/01/90	Barr Lake Refill	01/13/1909	02	Keith Delventhal	7, 8, 9, 23, 80
10/01/90	10/08/90	Cheesman	06/27/1889	02	Jim McClure Den.	23, 80
10/08/90	10/10/90	Highline	01/18/1879	08	Jim McClure	8, 23, 80
10/10/90	11/01/90	Cheesman	06/27/1889	08	Denver	23, 80

COMPACTS

SOUTH PLATTE RIVER COMPACT

The Colorado-Nebraska Compact on the South Platte provides that Colorado shall have the full use of the river water between the fifteenth of October of any year and the first day of April of the succeeding year but that, between the first day of April and the fifteenth of October of each year, Colorado shall not permit diversion from the river below the Washington-Morgan County line to supply water rights having priority dates junior to June 14, 1897 to the extent that they would diminish the flow of the river at the Julesburg gaging station below a daily mean flow of 120 cfs.

Normally it is not necessary to curtail any surface diversion in Colorado to honor the compact because stream flows are inadequate to satisfy all the water rights senior to the compact date.

Preliminary flow data for the Julesburg station indicates that during the 198 day period from April 1 to October 15, 1990, the mean daily flow dropped below 120 cfs on 113 days.

REPUBLICAN RIVER COMPACT

The Republican River Compact allocates water to the signatory states, Colorado, Kansas and Nebraska on the basis of beneficial consumptive use. Colorado's total allocation of 54,100 acre feet is broken down as follows:

North Fork of the Republican River Drainage Basin	10,000 AF
Arikaree River Drainage Basin	15,400 AF
South Fork of the Republican River Drainage Basin	25,400 AF
Beaver Creek Drainage Basin	3,300 AF

and in addition, for beneficial consumptive use in Colorado annually, the entire water supply of the Frenchman Creek (River) Drainage Basin in Colorado and the Red Willow Creek Drainage Basin in Colorado.

The computed annual consumptive use in Colorado in the Republican River Basin for the 1988 water year, the last year for which official figures are available, was as follows:

<u>STREAM</u>	<u>ADJUSTED ALLOCATIONS</u>	<u>CONSUMPTIVE USE SURFACE & GW</u>	<u>% OF ADJ. ALLOCATION</u>
N. Fk. Republican River	8,180	4,740	57.9
S. Fk. Republican River	12,320	10,470	85.0
Arikaree River	10,300	6,110	59.3
Beaver Creek	3,700	0	0

COMPACTS (continued)

LARAMIE RIVER AGREEMENT

The 1957 decree of the United States Supreme Court limits the diversions from the Laramie River and its tributaries to 49,375 acre feet annually for the State of Colorado. Of that amount, 19,875 acre feet are allocated to transmountain users and the remaining 29,500 acre feet to the meadowland users within the river basin. The meadowland users are further restricted to diversions of not more than 1,800 acre feet after July 31 of each year. In the event that the transmountain users do not divert their full allotment, the meadowland users may divert the difference between the 19,875 acre feet and the actual amount if diverted within the same year.

Sand Creek, which arises in Colorado, later becoming tributary to the Laramie River in Wyoming, is not included within the terms of the compact. Instead, Colorado and Wyoming have a working agreement whereby senior water rights on Sand Creek in Wyoming are recognized before junior diversions are made in Colorado through the Wilson Supply Canal, a transbasin diversion.

In 1990, the transmountain diversions under the Laramie River Compact totaled 19,411 acre feet of the 19,875 acre feet compact allowance. The meadowland diversions totaled 22,480 acre feet or some 76% of the allotment. Total Colorado diversions were 41,891 acre feet or 85% of the total allotment of 49,375 acre feet.