RECOMMENDATIONS

Policies

It is recommended that a policy regarding the administration of gravel pits be developed. As a minimum requirement, it is suggested that active gravel pits be fully augmented and that grandfathering of inactive pits not be done until further investigations are made as to the number and impact of inactive gravel pits. Because senior rights, including wells, are potentially injured by gravel pits, it is suggested that grandfathering of gravel pits be done only as a last resort. It is also recommended that rules and regulations for gravel pits be promulgated by the State Engineer rather than passing legislation which may raise equity issues with other water users.

Due to their complexity, new plans for augmentation may require standardized spreadsheet accounting in order to efficiently monitor operation of such a plan. It is recommended that support be given to develop guidelines for this form of reporting.

Personnel Change

It is recommended that a customized orientation outline be developed for new personnel that explains the employee package distributed by the personnel office and provide more information regarding particular aspects of employment such as required paperwork, personnel policies, and other useful information. This could be utilized by each division or in the Denver office for orientation purposes.

A long range work plan for division one has been formulated. It involves restructuring job duties within the division office and in the field in order to better support administration in key areas such as the Denver metropolitan area. Some changes have already begun and additional restructuring is recommended as soon as such possibilities become available.

Budget

The budget allocations are a limiting factor in securing the tools and support needed to allow field and office staff to operate at maximum efficiency. It is recommended that continued support be offered in procuring computers, software, and other items such as vehicles, supplies and technical support for the field and office functions. This is increasingly important as new and more complex decrees continue to expand the duties related to administration.

Administration

As touched on earlier, computerized accounting for plans of augmentation and other diversions is rapidly becoming necessary. Applicants that obtain complex decrees should be required to provide operational spreadsheets that meet standardized requirements upon entry of their decrees.

Legislation

While legislation is being proposed to address gravel pit issues, it may prove more prudent to handle those issues through passage of rules and regulations.

Some legislation may be necessary to establish a data base for water quality. Water quality issues are increasingly conflicting with water rights issues and more data is necessary in the area of water quality. It is recommended that some thought be given regarding legislation that would incorporate the existing network of gaging stations and hydrographic personnel into a data gathering network for water quality, especially along the front range of Colorado.

ROY ROMER
Governor

JERIS A. DANIELSON
State Engineer

DIVISION OF WATER RESOURCES

WATER DIVISION I

Alan D. Berryman
Division Engineer
800 8th Ave.-Room 209- ARIX Bldg.
Greeley, Colorado 80631
(303) 352-8712

January 13, 1989

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 1988 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 1989 year and to the challenges that need to be addressed.

Sincerely,

Alan D. Berryman

Alan D. Berryman
Division 1 Engineer

ADB:ct

ANNUAL REPORT

DIVISION NO. I

1988 IRRIGATION

NOV. 1, 1987 - OCT. 31, 1988

BY

ALAN D. BERRYMAN, DIVISION ENGINEER

INDEX

WATER ADMINISTRATION

CURRENT WATER YEAR

Accomplishments

Again, normal administration of water was the main accomplishment for the year. Each year the addition of new and more complicated decrees makes this task increasingly difficult. During 1988 the court issued 735 decrees and there were 272 new applications for water rights.

Administration of the Cherry Creek basin was initiated on April 1, 1988. Since that date and up until the end of the irrigation year in October, 6,770 acre feet were released from the reservoir and another 720 acre feet has been released to downstream users by exchange. A phase-in period was allowed for ground water rights in the basin. Ground water users formed the Cherry Creek Water Users Association in order to work together toward compliance with the guidelines that come with administration of the basin.

The satellite monitoring system was utilized to a greater extent during the past year as water commissioners were able to gain access through the newly added water-talk software. They were able to get spot readings at critical gaging stations without making a physical inspection of the site.

Large strides were made toward improving administration and accounting in the upper South Platte basin. The coming year should produce some positive changes in administering and monitoring that stretch of the river.

During the past year, commissioners retired from districts 1, 3, 6 and 9, and the water commissioner from water district 7 passed away. Many years of administrative experience is gone; however, these positions have been and will be filled with capable people.

Water User Community Involvement

In 1988, the South Platte River Management Study was commenced to investigate what information, management tools, and other improvements are needed and available to maximize the use of water out of the Platte River. The division one office participated on the operational advisory and the technical advisory committees to add input into the administrative aspect of the study. Additionally, division one personnel worked closely with Colorado State University researchers to become familiar with the SAMPSON computer model that simulates operation of the South Platte River from Denver to the state line. The state currently has a copy of the computer code that has been verified and is capable of being run on the state's VAX computer.

An open meeting with water users in the Cherry Creek basin was held prior to implementation of administration in the basin. Subsequent meetings have been held with the new water user group to discuss options available to come into compliance with the requirements of strict administration.

A meeting and discussions were held with ground water users in the Julesburg area. They were informed that their wells potentially impacted the Interstate Compact with Nebraska concerning division of waters of the South Platte River. Since the wells are junior to the entitlement of Nebraska, the owners were encouraged to investigate the need for a plan for augmentation so that their wells would be protected from the senior demand of Nebraska.

Key Issues/Impacts

Several key issues remain from past years. Progress toward an integrated accounting system to better monitor water use on the upper South Platte River has been accomplished. Additional efforts to meet this goal are scheduled for the upcoming year. Administration of Cherry Creek has begun and will require several more years for completion. The issue of adjudication and use of nontributary ground water has quieted down since much of the available water in growth areas has been quantified and the economy has stymied the rapid growth experienced in earlier years.

In 1988, the Supreme Court ruled that gravel pits are to be considered wells and are subject to augmentation requirements. Proposed legislation for 1989 that would "grandfather in" gravel pits that were constructed up to a certain date has aroused the concern of many water users, especially wells users who have water rights senior to many of the gravel pits. This will be a very important legislative issue if junior water users are exempted from augmentation requirements.

Water quality is rapidly becoming an issue that water rights holders have to address. Effluent from cities potentially affects downstream users who may have to treat such water prior to using it. Downstream users are wary of new water rights that could degrade water quality and require monetary expenditures to enable the downstream user to put such water to beneficial use. Additionally, water users are cautious of upstream exchanges that damage water quality at the expense of the downstream water user. Adequate water treatment may become necessary in metropolitan areas in order to utilize the exchange potential in a given reach of river.

The United States Forest Service's application for reserved rights to maintain and preserve the water carrying capacity of channels within the forest boundary will be heard before the division one water court this year. The trial promises to be lengthy as state water right holders strive to preserve their water rights that were developed subsequent to the claimed reservation by the USA.

Unresolved Problems and Tasks

Accounting for upper South Platte River basin is being reviewed and revised continually. The coming year should result in improved techniques and an updated accounting system. Administration of Cherry Creek water rights has begun and the coming year will be one of several years of phase-in and gradually more stringent requirements that will end with strict administration.

Workload Changes/Effect on Staff

Major changes in workload have occurred in the upper South Platte basin, including the Denver metropolitan area. Changes in job description in the Greeley office staff have already been implemented in order to provide more assistance in the upper basin area. Within the next year, the accounting operation in that area will be handled through the division office in order to allow the water commissioners more time to inspect diversions and do less of the more complex paper work. Within the next two years, it is anticipated that division office staff will provide more assistance and guidance in accounting for plans for augmentation as that accounting is becoming more computer oriented. In order to free up more engineers to do the above tasks, two of the hydrographic positions are to be changed to technician level and the engineers reassigned to areas as described above.

Budget Impact on Division Operations

As always the budget is restrictive on daily operations. Each year hundreds of new, more complicated decrees are being added to the list of water rights that are to be administered by the same personnel. Field personnel are asked to administer the increased work with no increases in travel budgets. Additionally, the budget doesn't allow for the procurement of computers for the commissioners so they can better utilize the satellite monitoring system and can adapt to the computer record keeping system that is used in water right tabulations and diversion records.

COMING WATER YEAR

Problems/Concerns

As indicated by the preceding paragraphs, accounting for the upper South Platte basin and administration of Cherry Creek will remain as a concern in the next year and also years to follow. Three news areas of concern are present for the upcoming year. First, the issue of gravel pits promises to be very controversial for the

upcoming year. Equity issues will surface if legislation allows pits to be grandfathered in without requiring augmentation.

Secondly, the complexity and size of the new plans for augmentation has increased to the point that field personnel are unable to comprehend all of the aspects of such decrees. Many decrees are designed around mathematical programs that require computers in order to operate. Most new decrees over the past 3 to 4 years require or would lend to computerized accounting. Gearing up and reassigning personnel to handle these complexities promises to be a major concern this coming year.

Lastly, the lower end of the Platte river is a concern. There are wells in this stretch that need to be investigated as to their effect on the compact with Nebraska. Several meetings have already been held and a computer model has been constructed in order to investigate the situation.

Projected Work Items/Staff

In order to better address the issues of accounting in the upper South Platte basin and accounting for the complex decrees that exist, the office staff has already begun to reorganize and deal with these items. This coming year the division office staff will assist commissioners in river accounting, river operation and augmentation plan accounting. It is anticipated that a standardized accounting spreadsheet will be developed to handle this need. Also, efforts are under way to complete a customized accounting program for the upper basin area.

Another area that needs to be addressed is that of checking, analyzing and accounting for several of the larger temporary substitute supply plans. It is anticipated that the SAMPSON computer model will be of use in analyzing the impact of wells included in plans that cover a multi county area. Additionally, the initial review of all temporary substitute supply plans will be done in the division office for review by the state engineer.

Finally, the staff will be working toward finalizing accounting on the Tri-Lakes reservoirs located in the Denver metropolitan area. It is anticipated that Chatfield, Cherry Creek, and Bear Creek reservoirs will be monitored from the division office in cooperation with the water commissioners, water users and the Army Corps of Engineers.

STATISTICAL INFORMATION

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

A. Administration of Plans for Augmentation

Division one has approximately 336 plans for augmentation. In 1988, about 58,891 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 1988 in section E that follows (2nd page of section E).

B. Transmountain Diversions

C. Storage Water

D. Water Diversions

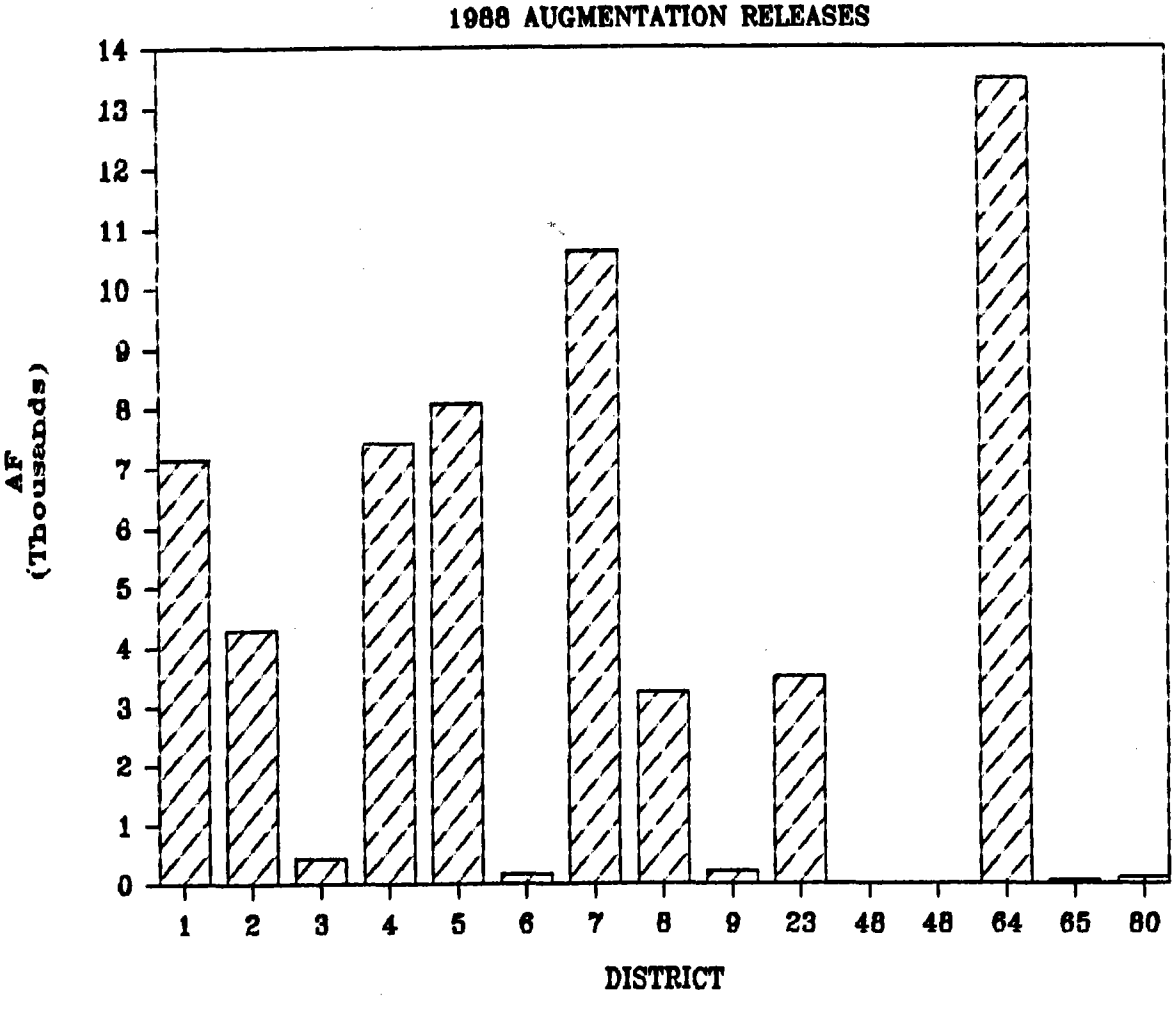
E. Court Activities

F. Office Administration

G. River Calls

H. Compact Deliveries

DIVISION 1


1988 AUGMENTATION RELEASES
AF (Thousands)
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
1
2
3
4
5
6
7
8
9
23
48
48
64
65
80
DISTRICT

TRANSMOUNTAIN DIVERSIONS SUMMARY - INFLOWS

RECIPIENT			1987 WATER YEAR		1988 WATER YEAR		SOURCE	
WD	NAME	STREAM	AF	DAYS	AF	DAYS	WD	STREAM
03	Wilson Supply Ditch	Cache La Poudre River	962	57	2,050	24	48	Sand & Deadman Cr.
03	Deadman Ditch	Cache La Poudre River	626	50	0	0	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	17,469	127	13,900	108	48	Laramie River
03	Skyline Ditch	Cache La Poudre River	0	0	0	0	48	Laramie River
03	Cameron Pass Ditch	Cache La Poudre River	148	35	152	22	47	Michigan River
03	Michigan Ditch	Cache La Poudre River	2,773	284	4,770	175	47	Michigan River
03	Grand River Ditch	Cache La Poudre River	17,246	145	19,920	130	51	Colorado River
04	Eureka Ditch	Big Thompson River	0	0	0	0	51	Colorado River
04	Adams Tunnel	Big Thompson River	246,300	365	258,000	354	51	Colorado River
06	Moffat Tunnel	South Platte River	49,970	365	75,340	366	51	Fraser River
07	Berthoud Pass Ditch	Clear Creek	271	55	710	56	51	Fraser River
07	Vidler Tunnel	Clear Creek	396	101	758	103	51	Montezuma Creek
23-08	Roberts Tunnel	South Platte River	14,640	120	53,060	200	36	Blue River
23	Boreas Pass Ditch	South Platte River	0	0	0	0	36	Indiana Creek
23	Hoosier Pass Ditch	Arkansas River	8,450	162	9,680	155	36	Blue River
23	Aurora Homestake	South Platte River	12,109	121	14,553	177	37	Homestake Creek

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 1

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Bijou #2	South Platte	3,900	42	3,500	38	2,800	31	3820	04	385
Empire	South Platte	17,885	47	35,069	93	17,885	47	33,590	49	18,547
Jackson	South Platte	14,784	41	33,567	94	25,567	71	34,945	98	18,051
Riverside	South Platte	17,410	27	63,113	99	12,692	20	62,734	99	20,138
Others		69	03	370	17	37	02	711	33	360

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 2

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Barr	South Platte	17,326	53	30,889	96	19,831	62	31,409	98	13,685
Bull Canal #8	Clear Creek	2,667	44	3,807	64	1,100	18	2,835	48	2,349
Coal Ridge	Little Dry Creek	547	83	418	64	392	60	291	45	564
Great Western	Walnut Creek	2,721	83	2,992	91	2,271	70	1,736	53	1,989
Horse Creek	South Platte	7,755	45	14,860	87	6,996	41	14,987	88	8,150
Lord	South Platte	0		418	11	120	03	372	10	0
Lower Latham	South Platte	5,457	87	5,740	92	5,458	88	6,023	97	5,646
Milton	South Platte	15,690	74	20,714	98	15,540	74	21,487	102	15,827
Prospect	South Platte	1,893	31	5,412	90	0		4,962	83	2,238
Quincy	South Platte	2,541	90	2,555	91	2,541	91	2,569	92	2,527
Standley	Woman Creek	33,432	78	42,000	99	31,152	74	35,019	83	32,098
Others		3,591	39	6,913	75	6,317	68	6,307	68	5,460

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 3

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Fossil Creek	Fossil Creek	4,151	36	8,775	76	3,967	34	8,847	77	5,083
Halligan	N Fk Poudre River	0		4,693	73	1,317	20	5,187	81	664
Indian Creek - aka Mountain Supply	Indian Creek	1,815	95	1,414	74	1,051	55	974	51	1,460
North Poudre #2	N Fk Poudre River	2,197	56	2,516	64	1,961	50	2,131	55	1,326
North Poudre #3	N Fk Poudre River	2,955	85	2,760	80	1,892	55	2,206	64	1,687
North Poudre #4	N Fk Poudre River	647	38	622	37	458	27	522	31	466
North Poudre #5	N Fk Poudre River	4,001	47	4,466	53	3,495	42	3,904	46	3,464
North Poudre #6	N Fk Poudre River	0		0		0		0		0
North Poudre #15	N Fk Poudre River	0		4,851	87	885	16	1,929	35	2,771
Park Creek	Park Creek	6,670	90	6,146	83	348	05	6,243	85	2,207
Cobb Lake	Cache La Poudre R	17,660	78	17,450	77	12,660	57	12,660	57	11,580
Seaman aka Milton Seaman	N Fk Poudre River	1,732	34	3,629	72	1,451	29	3,066	61	1,712
Claymore	Cache La Poudre R	177	17	942	92	110	11	946	93	197
Panhandle	Panhandle Creek	841	36	841	36	841	36	841	36	841
Seeley	Cache La Poudre R	1,069	69	1,069	69	1,048	68	1,069	69	1,069
Warren	Cache La Poudre R	1,030	43	951	40	467	20	906	38	708
Wood	Rollard Draw	1,596	51	1,997	64	1,256	40	2,047	66	1,954
Joe Wright aka Cameron	Joe Wright Creek	4,390	61	5,092	71	4,504	63	5,061	71	2,629
Rawhide	Cache La Poudre R	15,751	100	14,728	94	14,729	94	15,209	97	14,824
Horsetooth	Dixon Canyon Cr	89,823	59	141,307	92	92,234	61	137,067	90	67,421

RESERVOIR STORAGE SUMMARIES (Continued)

WATER DISTRICT 3

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Douglass	Cache La Poudre R	5,839	62	6,864	73	4,143	44	5,034	54	3,999
Windsor Res. #8	Cache La Poudre R	4,968	48	7,402	71	2,698	26	7,101	69	4,684
No. 8 Annex	Cache La Poudre R	1,582	43	2,582	70	709	19	2,453	67	1,472
Windsor Res.	Cache La Poudre R	4,098	23	16,514	93	4,139	23	10,364	59	5,616
Chambers	Joe Wright Cr	275	03	4,217	47	591	07	3,000	34	412
Long Draw aka Grand River	Long Draw Cr	6,243	56	7,539	68	3,376	31	3,864	35	3,696
Black Hollow	Cache La Poudre R	4,130	51	4,171	51	4,089	51	4,804	60	3,517
Curtis	Cache La Poudre R	524	41	475	37	444	35	407	32	484
Kluver	Cache La Poudre R	727	63	760	66	663	58	640	56	239
Long Pond aka Water Supply #5,6,7	Cache La Poudre R	2,758	68	2,989	73	2,362	58	2,833	70	2,044
Rocky Ridge aka Water Supply #1	Cache La Poudre R	2,697	60	3,323	75	3,343	75	3,383	76	3,343
Water Supply #3	Long Pond Res.	3,842	79	3,763	77	1,079	22	2,020	42	2,771
Water Supply #4	Long Pond Res.	805	54	851	58	584	40	571	39	355
Terry aka Larimer Weld	Cache La Poudre R	3,884	47	5,726	70	3,129	38	5,908	73	4,763
Worster	Sheep Creek	228	06	1,057	28	124	03	926	25	160
Timnath	Duck Slough	4,250	42	9,887	98	2,875	29	9,765	97	3,725
Windsor Lake	Cache La Poudre R	842	57	900	61	558	38	1,023	70	528
Barnes	Barnes Meadows Cr	0		713	30	1,990	85	1,696	72	2,010
Others		4,285	24	6,636	38	4,324	25	4,556	26	4,078

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 4

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Boulder & Larimer aka Ish	Little Thompson	1,659	22	4,561	62	1,129	15	2,588	35	807
Boyd Lake	Big Thompson	14,580	24	37,531	64	22,846	39	21,992	38	11,123
Carter	Big Thompson	61,349	54	110,245	98	60,606	54	112,046	100	89,115
Donath	Big Thompson	407	35	379	33	407	35	1,143	100	637
Hertha Reservoir	Dry Cr. Hertha	371	21	1,703	100	556	33	1,498	88	380
Horseshoe Reservoir	Big Thompson	6,392	79	4,964	61	2,883	36	3,144	39	2,635
Lake Loveland	Big Thompson	9,724	76	11,587	90	6,976	55	8,777	69	9,767
Lon Hagler	Big Thompson	1,781	35	3,813	75	4,255	85	4,255	85	4,550
Lone Tree	Big Thompson	2,527	27	8,769	91	2,594	28	8,672	94	3,002
Loveland Lake	Big Thompson	1,336	57	2,049	87	861	37	1,502	64	402
Marino	Big Thompson	3,599	64	5,031	90	2,082	37	4,437	80	508
Welch Lake	Big Thompson	5,199	77	5,491	81	3,686	55	3,449	51	3,789
Others		1,622	36	2,372	53	1,352	30	1,795	40	1,714

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 6

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Albion	Albion Creek	1,111	100	1,111	100	1,111	100	1,111	100	1,111
Barker	Boulder Creek	9,196	79	5,970	51	4,721	41	575	05	6,814
Baseline	Boulder Creek	2,930	55	5,380	101	1,409	27	3,528	67	1,902
Boulder	Boulder Creek	5,381	30	9,266	52	6,225	36	5,405	31	11,388
Goose	North Boulder Cr.	1,036	100	459	44	1,036	100	1,036	100	900
Great Western	Coal Creek	2,584	79	2,982	91	2,271	70	1,736	53	2,308
Gross	South Boulder Cr.	32,960	78	20,584	49	20,912	50	12,771	30	26,969
Hillcrest	Boulder Creek	1,841	85	2,085	97	1,899	89	2,049	96	1,810
Leggett	Boulder Creek	1,327	85	1,509	97	1,371	88	1,483	96	1,304
Marshall	South Boulder Cr.	4,662	44	9,655	92	4,922	47	9,222	88	5,085
McKay	South Boulder Cr.	371	43	531	62	181	21	181	21	211
Panama	Boulder Creek	3,765	75	4,345	87	2,829	57	4,345	87	2,968
Silver	North Boulder Cr.	3,781	94	412	10	3,730	94	2,361	59	3,154
Six Mile	Boulder Creek	715	50	1,248	87	575	40	1,088	76	657
Valmont	South Boulder Cr.	6,583	88	7,147	96	6,712	90	7,067	95	6,511

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 7

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Ralston	Ralston Creek	6,229	48	8,935	70	6,390	50	5,512	43	7,072
Long Lake	Ralston Creek	1,064	78	1,109	82	545	40	391	29	191
Tucker	Ralston Creek	323	29	514	46	311	28	426	39	181
Leyden	Clear Creek	403	34	802	69	433	38	421	37	594
Hyatt	Clear Creek	184	16	652	59	510	47	710	65	444
Standley	Clear Creek	34,197	81	42,200	100	33,117	78	34,306	81	29,452
Coors B #3	Clear Creek	2,464	98	2,514	100	2,445	97	1,649	66	2,108
Coors B #4	Clear Creek	3,551	95	1,274	34	3,500	94	1,001	27	
Blunn	Clear Creek	4,552	78	4,552	78	4,587	79	4,552	78	4,136
Others		9,345	61	4,436	29	4,404	29	3,527	23	3,430

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 8

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Aurora Rampart	Gulch	916	76	938	78	561	47	866	72	1,031
Chatfield	South Platte	19,805	27	27,036	37	17,060	24	27,366	38	20,836
Cherry Creek	Cherry Creek	13,754	05	13,832	05	13,728	06	13,832	06	13,278
Marston	South Platte	7,214	41	13,457	78	5,894	34	7,214	42	6,652
McLellan	Dad Clark Gulch	4,982	83	4,765	79	4,932	82	4,875	81	5,274
Platte Canon	South Platte	883	91	932	96	897	93	842	87	940
Quincy	South Platte	2,458	88	2,527	91	2,298	83	2,569	93	2,555
Strontia Springs	South Platte	6,798	48	7,242	92	6,972	89	6,318	80	7,586

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 9

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Soda #2 (East)	Bear Creek	1,501	99	1,507	100	813	54	1,470	98	892
Bowles	Bear Creek	1,335	53	1,610	65	1,194	48	855	35	506
Patrick	Bear Creek	694	62	768	69	1,113	100	1,113	100	1,019
Bear Creek Res.	Bear Creek	1,990	02	2,060	02	2,056				
Others		3,340	55	3,390	56	3,343	56	3,950	66	2,571

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 64

RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Prewitt	South Platte	19,200	66	26,310	91	14,680	51	27,670	96	22,930
North Sterling	South Platte	29,430	35	68,360	83	16,770	20	73,720	90	9,290
Julesburg	South Platte	17,190	61	18,273	64	18,408	65	21,214	75	9,396

RESERVOIR STORAGE SUMMARIES

WATER DISTRICT 80

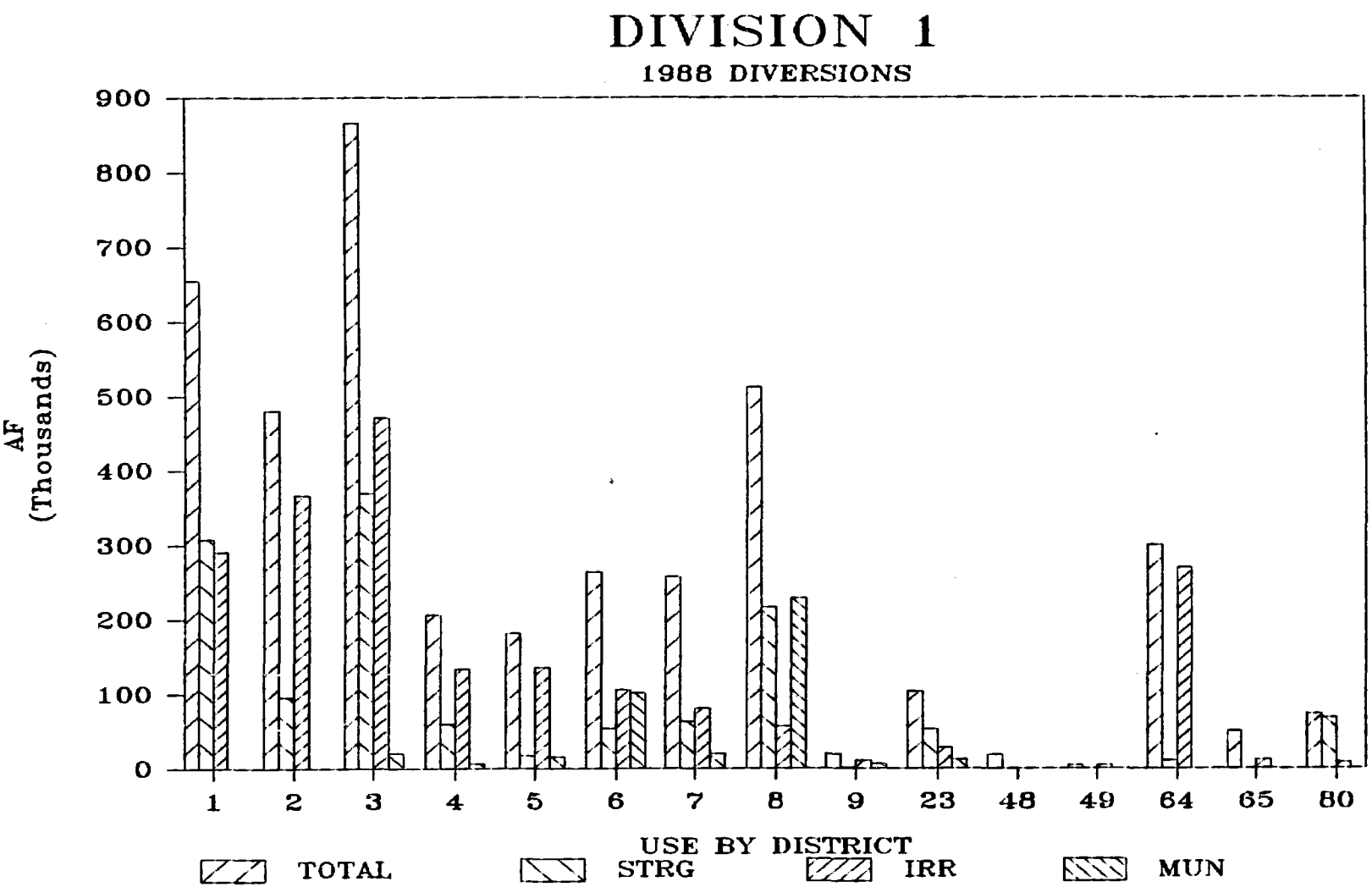
RESERVOIR NAME	STREAM SOURCE	PREVIOUS IRRIGATION YEAR				1987-1988 IRRIGATION YEAR				End 1988 Water Yr
		Beg Irr Yr		Beg Irr Season		Beg Irr Yr		Beg Irr Season		
		AF	%	AF	%	AF	%	AF	%	
Cheesman	S. Fk. S. Platte	46,521	58	76,341	96	47,640	60	66,496	84	61,701
Wellington	N. FK. S. Platte	2,909	66	3,115	70	2,725	37	3,210	43	2,695
Others		673	54	673	54	690	56	17	0	0

1988 WATER DIVERSION SUMMARIES BY DISTRICT IN AF

TOTAL DITCHES REPORTING					ESTIMATED NUMBER OF DITCH/WELL VISITATIONS	TOTAL DIVERSIONS -AF-	TOTAL DIVERSIONS TO STORAGE -AF-	IRRIGATION		
WD	WA	NWA	NR	NU				TOTAL DIVERSIONS -AF-	NUMBER OF ACRES IRRIGATED	AVERAGE AF PER ACRE
01	231		4,269	73	1,658	654,951	308,119	291,202	189,225	1.53
02	149	3	3,743	118	2,779	480,628	95,718	366,601	244,326	1.50
03	348	1	2,380	53	1,374	865,559	369,601	471,015	262,425	1.79
04	98	1	1,133	35	3,396	206,639	59,145	133,297	107,706	1.23
05	199		938	33	3,965	181,469	17,347	136,186	111,780	1.21
06	169		1,588	115	1,799	263,759	53,562	105,660	100,331	1.05
07	317		1,215	93	2,726	257,183	62,787	80,399	51,250	1.56
08	336	4	3,678	287	919	511,942	216,953	56,518	12,414	4.55
09	71		1,410	38	3,806	19,278	1,481	10,849	5,845	1.85
23	291	16	1,100	298	1,697	103,903	53,207	27,582	15,298	1.80
48	75		35	11	1,850	17,981		17,981	4,615	3.89
49	21		39	17		4,391		4,391	1,555	2.82
64	132	7	1,723	62	1,495	300,548	10,750	270,115	151,642	1.78
65	12		112	7	3,040	49,927		11,453	4,720	2.42
80	142	3	741	73	655	72,857	64,949	7,609	1,545	4.92
TOTALS										
	2,591	**35**	**24,104**	**1,3131**	**31,159**	**3,991,015**	**1,313,619**	**1,990,858**	**1,264,677**	**1.57**

1988 WATER DIVERSION SUMMARIES BY DISTRICT IN AF (CONTINUED)

WD	TRANSMOUNTAIN OUTFLOW	TRANSBASIN OUTFLOW	MUNICIPAL	INDUSTRIAL	RECREATIONAL	FISHERY	COMMERCIAL	RECHARGE	AUG
01				13,888				41,742	7,140
02						363	7,771	5,610	4,298
03			20,822	3,194				496	424
04			5,917	863					7,417
05			15,708						8,087
06			101,637	742	155				169
07			20,336	50,941					10,617
08			228,987	1,634		4,478	112		3,260
09			6,745						203
23			12,126	3,139	3,748	295			3,490
48									
49									
64				34				5,023	13,454
65						2,347			45
80			189				3		107
TOTALS			**412,467**	**74,435**	**3,903**	**7,483**	**7,886**	**52,871**	**58,891**


DIVISION 1
1988 DIVERSIONS
AF
(Thousands)
900
800
700
600
500
400
300
200
100
0
1
2
3
4
5
6
7
8
9
23
48
49
64
65
80
USE BY DISTRICT
TOTAL
STRG
IRR
MUN

WATER COURT ACTIVITIES

No. of Applications for Decree	305
No. of Consultation with Referee	332
No. of Decrees Issued by Water Court	272

Type of Decrees		Type of Structures					
		Ditch	Res.	Sprg.	Well	Other	Total
New Appropriation	178	15	38	13	301	48	593
Change	179	315	169	3	121	20	807
			TFR			3	
			Alt Point			9	
			Change Use			11	
			Diligence			85	
			Abandonment			354	
			Correction			7	
			Aug Plan			13	
			Change pt of diversion			14	
			Change point of Use			4	
			Exchange			9	
			Other			0	
Other	36						
			Denial			3	
			Dismissal			5	
			Vacate			0	
			Injunction			0	
			Stipulation			5	
			Abandon			0	
			Complaint			1	
			Other			24	
TOTAL DECREES	392	**TOTAL NO. OF STRUCTURES**					1,045

ACTIVITY SUMMARY

ACTIVITY	TOTAL WATER YEAR	TOTAL TO DATE
Number of professional and technical staff		7
Number of clerical staff		2
Number of Water Commissioner FTE assigned (full and part-time)		17 Full Time 8 Part Time
Number of decreed surface rights		10,000
Number of surface rights administered		6,394
Number of wells		71,458
Number of plans for augmentation	21	336
Number of consultations with Referee	309	
Number of Water Court appearances	197	
Number of meetings with water users	529	
Number of meetings to resolve water related disputes	0	
Number of contacts to give public assistance on water matters	39,881	
Contact with other agencies	180	

RIVER CALL 1987-1988

Calling Priority

Date Call Initiated 1987-88	Date Call Released 1987-88	Structure Name	Appropriation Date	District	Person Placing Call	Districts Affected
11/01/87	11/16/87	Barr Lake Enlrg.	01/13/1909	02	Manuel Montoya	8,9,23,80
11/16/87	04/06/88	Denver Intake	12/06/1910	08	Jim McClure	9,23,80
04/06/88	04/18/88	Cheesman Reservoir	06/27/1889	08	Jim McClure	9,23,80
04/18/88	04/22/88	Denver Intake	12/06/1910	08	Jim McClure	9,23,80
04/22/88	04/28/88	Marston Reservoir	04/01/1911	08	Jim McClure	9,23,80
04/28/88	05/06/88	Denver Intake	12/06/1910	08	Jim McClure	7,9,23,80
05/06/88	05/16/88	Burlington Canal	11/20/1885	02	Manuel Montoya	8,9,23,80
05/16/88	05/18/88	Fulton	07/08/1876	02	Keith Delventhal	7,8,9,23,80
05/16/88	05/16/88	Harmony #1	04/28/1895	64	Elton Watson	1,2,3,4,5,6
05/16/88	05/19/88	Pawnee	06/22/1882	64	Elton Watson	1,2,3,4,5,6
05/19/88	06/08/88	Cheesman Reservoir	06/27/1889	80	Bill Bates	23,80
05/19/88	05/19/88	Harmony #1	04/28/1895	64	Elton Watson	1,2,3,4,5,6
06/07/88	06/08/88	Barr Lake Enlrg.	01/30/1909	02	Manuel Montoya	8,9,80
06/08/88	06/10/88	Burlington	11/20/1885	02	Keith Delventhal	7,8,9,23,80
06/10/88	06/13/88	Barr Lake Enlrg.	01/13/1909	02	Keith Delventhal	7,8,9,23,80
06/14/88	06/21/88	Cheesman Reservoir	06/27/1889	80	Mark Waage	23,80
06/15/88	06/21/88	Barr Lake Enlrg.	01/13/1909	02	Manuel Montoya	7,9,8,80
06/21/88	06/29/88	Burlington	11/20/1885	02	Manuel Montoya	7,8,9,23,80
06/22/88	07/05/88	Lower Platte & Beaver	04/15/1888	01	Mae Cunning	,2,3,4,5,6,7
07/05/88	07/11/88	Harmony #1	14/28/1895	64	Elton Watson	1,2,3,4,5,6,7,8,9,23,80
07/07/88	07/15/88	Burlington	11/20/1885	02	Keith Delventhal	8,80,9,7,23
07/11/88	07/13/88	Sringdale	07/19/1886	64	Elton Watson	1,2,3,4,5,6,7
07/13/88	07/19/88	Pawnee	06/22/1882	64	Elton Watson	1,2,3,4,5,6,7,8,9,23,80
07/13/88	07/14/88	Farmers Independent	11/20/1876	02	Keith Delventhal	7,8,9,23,80
07/14/88	07/16/88	Fulton	07/08/1876	02	Keith Delventhal	7,8,9,23,80

RIVER CALL (Continued)

Calling Priority

Date Call Initiated 1986-1987	Date Call Released 1986-1987	Structure Name	Appropriation Date	District	Person Placing Call	Districts Affected
07/16/88	07/28/88	Lupton Bottom	09/15/1873	02	Keith Delventhal	7,8,9,23,80
07/19/88	07/25/88	Springdale	07/19/1886	64	Elton Watson	1,2,3,4,5,6,7
07/25/88	07/26/88	Iliff	10/01/1883	64	Elton Watson	1,2,3,4,5,6,7
07/26/88	08/04/88	Lowline	10/14/1882	64	Elton Watson	1,2,3,4,5,6,7
07/28/88	08/04/88	Western	08/10/1871	02	Keith Delventhal	7,8,9,23,80
08/04/88	08/05/88	Burlington	11/20/1885	02	Keith Delventhal	7,8,9,23,80
08/04/88	08/05/88	Springdale	07/19/1886	64	Elton Watson	1,2,3,4,5,6,7,8,9,23,80
08/05/88	08/18/88	Harmony #1	04/28/1895	64	Elton Watson	1,2,3,4,5,6
08/08/88	08/15/88	Springdale	07/19/1886	64	Elton Watson	1,2,3,4,5,6,7,8,9,23,80
08/12/88	08/23/88	Independent	11/20/1876	02	Keith Delventhal	7,8,9,23,80
08/15/88	08/25/88	Lowline	10/14/1882	64	Elton Watson	1,2,3,4,5,6,7
08/25/88	09/07/88	Springdale	07/19/1886	64	Elton Watson	1,2,3,4,5,6,7,8,9,23,80
08/28/88	09/01/88	Farmers Independent	11/20/1876	02	Keith Delventhal	7,8,9,23,80
09/01/88	09/07/88	Evans #2	10/05/1871	02	Keith Delventhal	7,8,9,23,80
09/07/88	09/12/88	Fulton	07/08/1876	02	Keith Delventhal	7,8,9,23,80
09/12/88	11/01/88	Barr Lake Enlrg.	01/13/1909	02	Keith Delventhal	7,8,9,23,80
09/22/88	10/24/88	City Ditch	11/01/1873	08	Ken Salser	8,23,80

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, 1988, the mean daily flow dropped below 120 cfs on 80 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 1986 water year, the last year for which official figures are available, was an follows:

STREAM	ADJUSTED ALOCATIONS	CONSUMPTIVE USE SURFACE & GW	% OF ADJ. ALLOCATION
N. Fk. Republican River	10,000	4,720	47.2
S. Fk. Republican River	14,500	10,960	75.6
Arikaree River	9,530	4,060	42.6
Beaver Creek	3,930	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 1988, the transmountain diversions under the Laramie River Compact totaled 15,950 acre feet of the 19,875 acre feet compact allowance. The meadowland diversions totaled 17,981 acre feet or some 61% of the allotment. Total Colorado diversions were 33,931 acre feet or 69% of the total allotment of 49,375 acre feet.