

ANNUAL REPORT
DIVISION NO. 1
1979 IRRIGATION YEAR
NOV. 1, 1978 - OCT. 31, 1979

BY

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DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES

IRRIGATION DIVISION ENGINEER
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January 17, 1980


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

Dear Dr. Danielson:

Please find submitted herewith the annual report of Irrigation Division No. 1 for the 1979 water year. Due to the fact that some of the information presented is based upon preliminary tabulations and calculations, there may be some subsequent modification of such information upon finalizing the basic data. Such modifications are expected to be minor in nature.

The encouragement, guidance, and assistance that we have received from you and your staff as well as the outstanding efforts of my own staff have been greatly appreciated.

Very truly yours,


James R. Clark
Division Engineer

JRC/rvh

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1979 ANNUAL REPORT

INTRODUCTORY STATEMENT

Division I covers an area of some 28,068 square miles or approximately the northeast one-fourth of the State of Colorado. Of this, approximately 19,500 square miles is in the South Platte River Basin, 8,165 square miles in the Republican River Basin, and 403 square miles in the Laramie River Basin.

SOUTH PLATTE RIVER

The South Platte River starts at the Continental Divide, flows through South Park, down mountain canyons, out onto the plains in the Denver area, thence northeasterly and into Nebraska near the northeast corner of Colorado. The flow of the South Platte is augmented by a number of tributaries in the South Park area, the principal ones being the Middle and North Forks of the South Platte and Tarryall Creek. After leaving the mountains the South Platte is further augmented by several major tributaries arising at and east of the Continental Divide and flowing to the South Platte from the north and west. These major tributaries entering the South Platte in the Denver to Greeley area are Bear, Clear, Boulder and St. Vrain Creeks, and the Big Thompson and Cache la Poudre Rivers. Only normally minor and intermittent streams supplement the river flow from the South and East. However some of these, such as Plum, Cherry, Boxelder, Kiowa, Bijou, Badger, Beaver as well as Lone Tree, Coal, Wild Cat and Pawnee Creeks from the north and west are each capable of producing a major flood due to the extent and topography of their individual watersheds when subjected to intense precipitation.

In addition to the obvious tributary streams, the South Platte River is further supplemented very extensively, as are the tributaries themselves, by what is commonly referred to as return flow. This is water from springs, waste ditches, drains, seepage, etc., resulting generally from diversions for various uses, precipitation, and high water tables. Although the return flows resulting from the initial use of transmountain water have historically been considered a part of the natural stream subject to distribution under the priority system, the City of Denver continued the operation that they instituted in September 19 1976 at which time they invoked the provisions of 37-82-106, CRS 1973, relating to the right of reuse of imported water. Through a detailed accounting system they are able to identify that portion of the effluent from Metro Sewer which is attributable to their current importation of Blue River water through the Roberts Tunnel. Denver then diverts by exchange at their intake as much of this calculated Blue River water return flow as the river flow at intake will support without injury to intervening water rights in that section of the stream between intake and sewer discharge. Denver also continues to study the treatment of wastewater for reuse as portable water through the operation of a pilot treatment plant. Denver requested permission to initiate re-use of water through Moffat Tunnel beginning January 1, 1979

The City of Aurora also claimed the reuse of their Homestake imported water to the extent that it could be identified and exchanged back up to their intake. This exchange was quite limited due to the lack of available stream flows to support the exchange in addition to supplying intervening water rights and the

Denver exchange previously discussed. During those periods when Aurora could not make its own exchange they did realize some monetary benefits from the sale of their transmountain effluent to the Central Colorado Water Conservancy District to be used as augmentation water in support of the Central member wells.

The elevations in the South Platte Basin vary from 14,000 feet at points along the Continental Divide to 3,400 feet at the Colorado-Nebraska line. The western one-third of the basin is mountainous in character and provides the principal source of water as the result of precipitation.

Of the 12,481,000 acres in the South Platte Basin, 9,469,470 acres are in farms and ranches. The balance of the area is owned by federal and state governments, public agencies, or included within municipalities. Within the farm areas are 1,239,655 irrigated acres and 1,936,745 acres of dry land according to the 1977 Agricultural Census.

The principal use of water in the mountain valleys is for meadow irrigation. Large volumes of water are released on meadows adjacent to the streams and, of this volume, a major proportion returns to the stream for reuse at lower elevations. The largest area of mountain valley irrigation is in South Park at elevations up to 11,000 feet. Other uses in the mountain areas include those of small municipalities, domestic, stock, power, mining, commercial and recreation needs.

The greatest use of water, by far, in the South Platte Basin is for agricultural purposes in the plains area at elevations between 3,500 and 5,000 feet. The water here supports a well developed, diversified agricultural economy that ranks high nationally in productivity. Much of the demand for water in areas downstream some 40-50 miles from the mountains is supplied from wells and by return flow from uses further upstream.

Some 5256 wells operating under augmentation plans and as alternate points of diversion for surface rights withdrew an estimated 565550 acre feet of water for irrigation from underground sources. Wells operating in approved augmentation did so either by replacing water to the stream to at least partially offset the stream depletion they were causing or by operating under decreed priorities which were legally entitled to be used in that manner. The two major augmentation plans for irrigation wells were G.A.S.P. with a membership of 2870 wells and Central Colorado Conservancy District with a membership of 970 wells. Combined membership in these two plans accounts for some 73 percent of the protected wells. Additionally, in the Cache la Poudre Drainage 11 percent of the protected wells operate as alternate points of diversion and 9 percent have been decreed as nontributary.

The amount of replacement water required from plans covering wells diverting out of priority was based upon the anticipated pumping of those wells. The pumping was first distributed on a monthly basis over the irrigation season and a 5 percent replacement of that pumping diversion occurring during periods of senior demand was made on a concurrent basis. A total replacement 8959 Ac.Ft. was made to the river. Maximum replacement was at the rate of 119.8 cfs on August 10th.

Wells operating as alternate points of diversion are not regulated as long as the decree to which they are attached is entitled to receive water.

Although several thousand proposed small capacity domestic and in-house use wells have been included in decreed augmentation plans, the actual construction and use of such wells is, as yet, comparatively minimal.

As a result of the inability in the summer of 1976 to move replacement surface water down the South Platte River in the reach between Harmony No. 1 and the South Reservation Ditches, G.A.S.P. constructed three wells upstream from the South Reservation headgate near Ovid with a combined capability to pump 16 cfs. In 1978 pump sizes on these three wells was increased to 40 horsepower from 25. This increased production to 22 cfs. G.A.S.P. reserved the first use of these wells to supply the replacement water for which they were responsible in that area. Any remaining capacity was then made available to those water users in that general area who could make use of the water either directly or by exchange. The right to use the additional capacity was on the basis of priority of ditch rights with the user paying the prorated operation and ownership costs.

A problem which has developed in recent years and which appears to be accelerating in magnitude is that of expanded use. The principal tool for expanding the use of water is the sprinkler system. Due to the greater efficiency of sprinkler application as compared to flood or row irrigation, only some 50 percent to 70 percent as much water per unit area is required by the sprinkler to satisfy crop requirements. Consequently with a given amount of water a farmer can increase his crop average 50 percent to 100 percent by converting to sprinklers. Although the individual farmer making this expanded use benefits from increased total yield, the whole river system supply is reduced by the amount of the consumption on the increased acreage. Crop water requirements remain substantially constant regardless of means of application so sprinkler irrigation over increased acreage reduces the net return flows to the stream system thereby depriving downstream users of water upon which they have historically depended for their needs.

A case filed in 1978 against the Weldon Valley and some irrigators under that system was completed in 1979. This case essentially provides that any expansion accomplished before the date of the order would be allowed. Further expansion would not be allowed. Our next step is to get a letter out to all other ditch systems in Division I putting them on notice that further expansion will be strongly opposed.

The net effect of such expanded use is a reallocation of benefits without an appreciable overall increase in production but with increased production costs mainly due to the energy requirements for operating the sprinklers.

Two new power plant will soon be in operation in Division I. Public Service Company is constructing a plant south of Ft. Morgan. This plant is known as the Pawnee Power Plant. The planned supply of water for this plant is a well field on the bank of the South Platte River. Water is carried by pipeline to a reservoir near the plant site. Public Service Company is a member of G.A.S.P. for augmentation of these wells on a 100% basis as a temporary plan. A court filing is being prepared for a permanent augmentation plan.

Platte River Power Authority is planning to begin construction of a plant near Wellington sometime soon. There was a decree entered in Water Court on April 24, 1979 numbered W-9322 to cover water supply and augmentation.

The search for wells operating without benefit of the required augmentation plan resumed with new vigor during the summer of 1979. Our field crew tagged approximately 500 wells. Of that total 200 did not respond as requested in our tag notice and will be the first to be observed in 1980. Thirty three were found to be abandoned or unused and 245 joined one of the existing augmentation plans.

REPUBLICAN RIVER

The Republican River Basin in Eastern Colorado covers 5,226,000 acres. Of this area 4,350,770 acres are in farm and ranch land with 226,109 acres under irrigation and 4,124,661 acres of dry land as reported in the 1969 Agricultural Census.

This area is relatively dry and the surface streams, many of which are intermittent, provide only enough water for some lands adjacent thereto. The normal precipitation in this area is about 17.1 inches of which 13.6 inches or 80 percent falls during the April through September period.

Supplies from surface streams continue to decline. This decline is generally attributed to the operation of wells in the designated ground water basins where the regulatory guidelines provide for 40 percent depletion of available supplies in the Ogallala formation within a 25-year period. Studies indicate that the Ogallala has historically provided a substantial portion of the surface flows and consequently as those aquifer levels drop the normal outflow from them is diminished.

LARAMIE RIVER

The Laramie River Basin in North Central Colorado contains 258,000 acres of which 4,800 acres are irrigated and 15,000 acres are nonirrigated ranch land according to the 1964 Agricultural Census.

This basin is a mountain valley with the principal water use being for meadow irrigation and livestock purposes. There are no municipalities or villages in this basin so the domestic uses are minimal.

The Laramie River and its tributaries did not produce enough water during the 1977 irrigation season to satisfy the allotments in Colorado under the Laramie River Agreement and the 1957 Federal Court Order. The said court order provides that 19,875 acre feet of Laramie River water or its tributaries in Colorado may be annually diverted for use outside of the Laramie River Basin and that in addition 29,500 acre feet may be annually diverted for irrigation use within the Laramie River drainage with no more than 1,800 acre feet of such amount to be used after July 31 of each year. The Laramie River Agreement between the users of water in Colorado, being the meadowland users and the transmountain diverters, further provides for volumetric allotments to designated lands within the basin. This amounts to 6,0887 acre feet per acre for the season of which only 0.3715 acre feet may be diverted after July 31.

The 1979 meadowland diversions totaled 22,469 acre feet and transbasin diversions to Water District No. 3 totaled 15,464 acre feet from those sources subject to the Federal Court Order.

The continuing high cost of agricultural production and reduced income have forced the sale of some ranches in the Laramie River Valley.

The following tabulation reveals the percentage of the stream flows for 1979 as compared with the previous 10 years, both for the entire water year and for the April through September irrigation season at several of the principal stream gaging stations. Stream flows for 1979 are from preliminary records.

COMPARATIVE STREAM FLOWS

	WATER YEAR			APRIL THRU SEPT.		
	1967 THRU '76	1979	1979	'67 THRU '76	1979	1979
	AVERAGE	AC.FT.	% AVG.	AVG.AC.FT.	AC.FT.	% AVG.
	AC.FT.	AC.FT.		AC.FT.	AC.FT.	
SOUTH PLATTE @ DENVER	272,620	241,100	88	220,478	205,330	93
SOUTH PLATTE @ HENDERSON	388,350	343,600	88	284,090	267,000	94
SOUTH PLATTE @ FT. LUPTON	186,132	344,400	185	134,262	258,900	193
SOUTH PLATTE @ KERSEY	769,320	1,049,000	136	493,520	818,900	166
SOUTH PLATTE @ WELDONA	530,950			344,600		
SOUTH PLATTE @ BALZAC	418,750	499,800	119	301,060	452,600	150
SOUTH PLATTE @ JULESBURG	454,740	466,300	103	274,180	405,800	148
CLEAR CREEK @ GOLDEN	155,480	153,500	99	133,000	139,700	105
CLEAR CREEK @ DERBY	73,080	71,400	98	59,520	68,090	114
BOULDER CREEK @ ORODELL	58,000	60,950	105	47,860	49,580	104
ST.VRAIN CREEK @ LYONS	86,230	120,600	140	79,520	107,960	136
ST.VRAIN CREEK NR. PLATTEVILLE	176,840	228,300	129	121,100	181,100	150
BIG THOMPSON @ CANYON	59,820	62,490	104	48,880	56,270	115
BIG THOMPSON NR. LA SALLE	74,350	118,700	160	47,140	92,040	195
CACHE LA POUUDRE @ CANYON	229,320	274,200	120	215,880	264,000	122
CACHE LA POUUDRE NR. GREELEY	104,900	195,500	186	62,010	161,800	261

PERSONNEL

NAME	WATER DIST.	POSITION	CLASSIFICATION OCT. 31, 1979	DATE OF LAST STEP CHANGE	MONTHS WORKED	1978-1979 BUDGETED	MILEAGE PER. VEH.	STATE VEH.
Allison, W.E. *		WRE-A	55	8- 3-78	9	12		8,842
Anderson, Dale	7	Wtr. Comm. C	51	8- 1-79	12	12	17,284	
Applegren, P.S. *	Temporary	Eng. Aid-A	37	5-24-79	3	3		
Bentley, Morgan	6	Wtr. Comm. A	39	6- 1-79	8	8	8,610	
Bell, Ted		WRE-B	60	9- 1-75	12	12		12,839
Blank, E.W. *		Sen. WRE	70	2- 1-79	9	12		
Blewitt, Lloyd	4	Sen. Wtr. Comm.	55	12- 1-73	12	12	5,717	
Brazelton, Don		Eng. Tech. II	59	9- 1-79	12	12		7,427
Clark, Jim		Sup. WRE	76	7- 1-79	12	12		10,006
Clayton, Joe	8-80	Sen. Wtr. Comm.	55	11- 1-71	12	12		8,063
Coffer, Harold		Sen. WRE	70	7- 1-78	12	12		10,787
Cooper, Bob		WRE-C	65	1- 1-79	12	12		21,920
Covelli, Terry*	1	Wtr. Comm. A	39	6- 1-79	10	12	16,310	
Curry, Mark	23	Wtr. Comm. B	45	6- 1-79	12	12	13,602	
Dalby, Les*		Wtr. Comm. B	45	5-14-79	6	12		
Davison, Arlyn*	65-79	Sen. Wtr. Comm	55	2- 1-75	4	12	11,796	
Delventhal, Keith	2	Wtr. Comm. A	39	5- 1-79	6	8	9,210	
Durand, Carolyn	48	Wtr. Comm. A	39	6- 1-78	2	3	1,141	
Gabriel, Don	1	Wtr. Comm. A	39	6- 1-79	3	3	6,300	
Harman, Rachel		Typist B	30	11- 1-76	12	12		
Helvik, Carl		WRE-A	55	10-15-79	1	12		
Hodgson, Mel	5	Wtr. Comm. A	39	4- 1-79	7	8	8,446	
Howard, Jonathan	4	Wtr. Comm. A	39	6- 1-79	3	3		
Lee, Wayne		Wtr. Comm. A	39	10- 1-77	8	8	5,479	
Liesman, Ray*		Sen. WRE	69	7- 1-77	1	12		
Littler, Bob*	64	Sen. Wtr. Comm.	55	7- 1-70	9	12	6,670	
Mast, Gary		Eng. Tech. I	55	11- 1-79	2	12		15,305
McDanold, J.C.		WRE-C	65	7- 1-79	12	12	14,209	
Meehl, Paul	2	Sen. Wtr. Comm.	55	1- 1-74	12	12		14,875
Moore, Denise	23	Wtr. Comm. A	39	5-25-79	4	4	5,760	
Neutze, Jack	3	Prin. Wtr. Comm.	59	7- 1-79	12	12	1,049	
Palmer, Stix	5	Wtr. Comm. A	51	7- 1-74	12	12	12,833	
Rice, Don	3	Wtr. Comm. A	39	7- 1-79	12	12	7,554	
Robinson, David		WRE-A	55	9- 1-79	2	12		

PERSONNEL

NAME	WATER DIST.	POSITION	CLASSIFICATION		DATE OF LAST STEP CHANGE	MONTHS WORKED	1978-1979		MILEAGE
			OCT. 31, 1979 GRADE	STEP			BUDGETED	PER. VEH. STATE VEH.	
Salser, Ken	8-80	Wtr. Comm. A	39	5	5- 1-79	7	8	10,199	
Samples, Bob	1	Sen. Wtr. Comm.	55	7	4- 1-77	12	12	648	
Saunders, Ben*	65-79	Sen. Wtr. Comm.	54	1	8-14-78	3	12	2,314	
Sievers, George		Wtr. Comm. C	51	3	9- 1-79	12	12	2,676	
Smith, Bruce*	3	Wtr. Comm. C	51	1	6- 1-79	12	12		
Swedlund, Kent	64	Wtr. Comm. A	39	2	6- 1-78	3	4	9,292	
VanGorden, Ralph	9	Wtr. Comm. B	45	7	7- 1-70	12	12	2,613	
Vannorsdel, Carolyn	48	Wtr. Comm. B	45	4	6- 1-79	7	5	10,981	
Wagner, Mae	1	Wtr. Comm. A	39	1	8-23-79	3	12	4,658	
Ward, Ernie	6	Wtr. Comm. C	51	7	6- 1-76	12	12	4,679	
Watson, Elton	64	Sen. Wtr. Comm.	55	6	7- 1-75	7	12	13,746	
West, K.C.*	Temporary	Eng. Aide-A	37	1	6- 1-79	3	3	8,906	
Wittler, R.J.	Temporary	Eng. Aide-A	37	1	6- 1-79	3	3		
Wyscaver, Sue*		Sec. IB	40	4	6- 2-78	7	12		

- *Allison-Resigned 7-6-79
- *Applegren-Resigned 9-6-79
- *Blank-Transferred 2-1-79
- *Covelli-Resigned 8-10-79
- *Dalby-Started employment 5-14-79
- *Davison-Transferred 2-1-79, Time shared with Ground Water Section (1/3-2/3)
- *Liesman-Transferred to another State Agency 11-30-78
- *Littler-Retired 7-11-79
- *Saunders-Resigned 1-15-79
- *Smith-Transferred to Division Two 6-1-79
- *Watson-Transferred 5-18-79
- *West-Resigned 8-31-79
- *Wyscaver-Resigned 4-23-79

WATER SUPPLY

A. SNOW PACK

December and January snowfall in the higher mountains led forecasters to predict that the spring and summer runoff would be average to slightly above average. February snowfall was below normal but last March and early April snowfall produced a snowpack that was well above average at the beginning of May. Above average precipitation during May and June coupled with the above average snowpack allowed the filling of most area reservoirs and led to an excellent water supply forecast. Tabulations of water supply outlook and snow measurement summaries as of May 1979 follows:

WATER SUPPLY OUTLOOK*

STREAM	SPRING SEASON	LATE SEASON
Coal Creek	Excellent	Average
M. Fork S. Platte	Average	Fair
N. Fork Cache la Poudre	Excellent	Average
Ralston Creek	Excellent	Average
Rock Creek	Excellent	Average
South Platte - Greeley to Fort Morgan	Average	Average
South Platte - Fort Morgan to Sterling	Average	Average
South Platte below Sterling	Average	Average

*Expressed as POOR, FAIR, AVERAGE, EXCELLENT, with respect to Usual Supply

SUMMARY OF SNOW MEASUREMENTS

RIVER BASIN AND /OR SUB-WATERSHED	NO. OF COURSES AVERAGED	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		LAST YEAR	AVERAGE*
Big Thompson	5	121	122
Boulder	3	90	99
Cache la Poudre	9	122	118
Clear Creek	5	90	98
Saint Vrain	3	152	136
South Platte	7	142	126

*1963 - 1977 Period

III
 WATER SUPPLY
 B. PRECIPITATION

LOCATION	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		6 MO. % OF NORMAL
	PRECIP.	% OF NORMAL	PRECIP.	% OF NORMAL	PRECIP.	% OF NORMAL	PRECIP.	% OF NORMAL	PRECIP.	% OF NORMAL	PRECIP.	% OF NORMAL	
BOULDER									1.77	105			
CHEESMAN	1.87	95	3.33	174	2.42	178	2.75	107	1.90	81	0.66	61	117
CHEYENNE WELLS	0.52	40	4.86	181	2.71	115	3.02	106	2.45	97	0.06	4	103
DENVER AP WSPD	1.42	73	3.53	133	2.39	124	0.81	46	5.85	453	0.36	32	134
ESTES PARK	0.28	16	2.21	103	1.82	89	1.95	85	2.92	151	0.58	48	86
FORT COLLINS	1.38	76	5.08	175	3.13	146	0.95	65	3.13	202	1.03	107	136
FORT MORGAN	1.15	91	3.25	127	3.56	167	2.20	116	3.34	230	0.20	19	132
GREELEY	1.67	113	4.47	185	3.53	195	0.39	29	3.89	370	0.94	97	164
KASSLER	1.91	80	4.45	151	2.72	141	0.66	40	2.75	188	0.63	52	113
LAKESWOOD	1.59	81	3.84	152	3.64	199	0.03	2	4.20	344	0.43	39	134
LONGMONT	1.94	126	4.31	170	2.52	133	0.48	40	3.99	387	0.74	76	142
PARKER RED	1.91	123	3.77	167	2.14	116	1.65	85	1.94	109	0.52	57	116
FEATHER LAKE													
STERLING	1.01	77	3.18	111	3.85	137	3.27	132	5.50	340	0.67	61	144
WRAY	0.74	39	2.19	69	2.72	87	2.67	92	2.39	98	0.22	15	73

FLOODS

No severe flooding occurred in Division One during the 1979 Water year.

The following tabulation shows the annual flows in acre feet at the major control gaging stations in the Division and the highest instantaneous peak flow during the period.

Most figures are preliminary reports and subject to revision.

STATION	WATER YEAR (A.F.) Oct. 1, 1978 to Sept. 30, 1979	INSTANTANEOUS PEAK FLOWS	
		DATE	C.F.S.
South Platte below Cheesman	91,940	7- 6-79	855
North Fork at South Platte	192,200	6-14-79	1250
South Platte at South Platte	305,300	6-17-79	1830
Bear Creek at Morrison	44,050	6- 9-79	530
Bear Creek at Sheridan	44,470	6-11-79	773
South Platte at Denver	241,100	8-16-79	4260
Clear Creek Nr. Golden (Upper Station)	153,500	6-17-79	1530
Clear Creek at Derby	71,400	6- 8-79	1630
South Platte at Henderson	343,600	5-21-79	7600
Middle Boulder Creek at Orodell	60,950	7- 2-79	599
South Boulder Creek at Eldorado	42,690	7- 3-79	326
Coal Creek at Plainview	5,960	6- 9-79	96
St. Vrain Creek at Lyons	120,600	6-15-79	1060
St. Vrain at Platteville	228,300	6-10-79	3450
Big Thompson at Canyon (1)	62,490	6-15-79	1410
Big Thompson at LaSalle	118,700	6-16-79	1850
Cache la Poudre at Canyon	274,200	6-17-79	3330
Cache la Poudre at Greeley	195,500	6-18-79	3000
South Platte at Kersey	1,049,000	6-10-79	15400
South Platte at Balzac	499,800	6-12-79	10060
South Platte at Julesburg	466,300	6-15-79	7450

(1) Does not include 102,830 A.F. which was diverted via Foothills Canal and Dille Tunnel and returned to the river below station.

WATER SUPPLY

UNDERGROUND WATER

The activity of the Groundwater Section of the State Engineer's Office continues to hectic. The following tabulation is indicative of the magnitude of this activity:

	<u>APPLICATIONS RECEIVED</u>	<u>PERMITS ISSUED</u>	<u>DENIALS</u>	<u>TOTAL TRANSACTIONS</u>
EXEMPT	4,357	4,090		
NON-EXEMPT	419	218	68	9,152

These figures are for the period January 1, 1979 to November 30, 1979. Total transactions for 1979 were 91 percent of the 10,040 for the comparable eleven month period in 1978.

HYDROGRAPHIC REPORT
DIVISION ONE
1979

GENERAL

The 1979 Water Year could be considered normal, in that most of the Hydrographic activity was devoted to measurement and record processing rather than repair and replacement. No major flooding occurred, although runoff water volumes were high and sustained.

HYDROGRAPHIC ACTIVITY

The following measurements were made by Division One Hydrographers during the Irrigation Water Year (November 1, 1978 to October 31, 1979.)

<u>HYDROGRAPHER</u>	<u>NUMBER OF MONTHS</u>	<u>NUMBER OF MEASUREMENTS</u>
Allison, W.E.	9	161
Appelgren, P.S.	3	51
Bell, T.S.	12	197
Coffer, H.R.	12	146
Cooper, R.E.	12	188
McDanold, J.C.	12	229
Mast, G.N.	12	317
Robinson, D.L.	2	37
West, K.C.	3	0
Wittler, R.J.	3	0
	TOTAL	<u>1326</u>

Total mileage in hydrographic vehicles was 93,601. Significant contribution to the total hydrographic effort was made by the three summer employees who made some of the above measurements. Measurements or mileage by Glen Brees or Bud Walcher in Division One are not included above.

SUPPLEMENTAL HYDROGRAPHIC REPORTS

ANNUAL REPORT
COLORADO-BIG THOMPSON PROJECT
1979

The Colorado-Big Thompson Project is a cooperative effort between the U.S. Bureau of Reclamation, the Northern Colorado Water Conservancy District and the Division of Water Resources. Water is diverted from the Western Slope through Alva B. Adams Tunnel. Power is generated in a series of five power plants by the Bureau, then the water is distributed to East Slope users by the Conservancy District.

ACTIVE PROJECT STORAGE

<u>Western Slope</u>	<u>Nov. 1, 1978</u>	<u>Nov. 1, 1979</u>	<u>Diff.</u>
Green Mountain	103,880	112,540	+ 8,660
Willow Creek	8,170	7,620	- 550
Granby	199,920	315,660	+ 115,740
Shadow Mountain-			
Grand Lake	<u>1,210</u>	<u>980</u>	- 230
Total Acre Feet	313,180	436,800	+ 123,620
<u>Eastern Slope</u>			
Marys, Estes, Pinewood and Flatiron	4,570	4,690	+ 120
Carter	49,330	60,010	+ 10,680
Horsetooth	51,720	94,480	+ 42,760
Boulder	<u>2,160</u>	<u>350</u>	- 1,810
Total Acre Feet	107,780	159,530	+ 51,750

Total active storage (total reservoir storage less dead storage) was 596,330 acre feet on November 1, 1979. This compares with 420,960 acre feet on November 1, 1978 and with 897,631 acre feet total active project storage capacity.

DISTRIBUTION OF PROJECT WATER

<u>WATER DISTRICT</u>	<u>CARRIER</u>	<u>TOTAL ACRE FEET</u>
1	Hansen Feeder Canal via Big Thompson	3,580
3	Hansen Supply Canal via Cache la Poudre Direct Delivery	46,010 9,390
4	Hansen Feeder Canal via Big Thompson St. Vrain Supply via Little Thompson Direct Delivery	30,030 6,860 10,420
5	St. Vrain supply Canal via St. Vrain Direct Delivery	11,520 12,740
6	Boulder Cr. Supply Canal via Boulder Cr. Direct Delivery	7,820 <u>4,500</u>
	Total to all districts, including replacement	144,870
	Quota water declared available - 60% or 185,850 ac.ft. Replacement water - 5010 ac.ft.	

MATERIAL BALANCE - PROJECT WATER DISTRIBUTION

ESTES PARK AREA

<u>INFLOW</u>	<u>NOV. 1, 1978 - NOV. 1, 1979</u>	<u>TOTAL ACRE FEET</u>
<u>WESTERN SLOPE WATER</u>		
Alva B. Adams Tunnel	196,800	
<u>EASTERN SLOPE WATER</u>		
Wind River	1,730	
Big Thompson River	112,300	
Fish Creek	2,550	
Storage November 1, 1978	2,810	316,190

<u>OUTFLOW</u>	<u>NOV. 1, 1978 - NOV. 1, 1979</u>	<u>TOTAL ACRE FEET</u>
Estes Park Water District	280	
Town of Estes Park	360	
Estes-Foothills Canal	278,720	
Big Thompson River	38,130	
Storage Nov. 1, 1979	<u>2,850</u>	320,340

Apparent Gain 4150 acre feet

CARTER LAKE AREA

INFLOW

Estes-Foothills Canal	278,700	
Storage Pinewood, Flatiron Nov. 1, 1978	1,760	
Storage Carter Nov. 1, 1978	49,330	
Dille Tunnel	<u>21,750</u>	351,540

OUTFLOW

Hansen Feeder Canal	112,400	
Big Thompson River	111,400	
St. Vrain Supply Canal	45,480	
Direct Diversion	4,590	
Storage Carter Nov. 1, 1979	60,010	
Storage Pinewood, Flatiron Nov. 1, 1979	<u>1,840</u>	335,720

Apparent Loss 15,820 acre feet

HORSETOOTH AREA

INFLOW

Hansen Feeder Canal	107,140	
Storage Nov. 1, 1978	<u>51,720</u>	158,860

OUTFLOW

Hansen Supply Canal	46,300	
Direct Delivery	9,090	
Storage Nov. 1, 1979	<u>94,980</u>	149,870

Apparent Loss 8,990 acre feet

BOULDER AREA

<u>INFLOW</u>	<u>NOV. 1, 1978 - NOV. 1, 1979</u>	<u>TOTAL ACRE FEET</u>
Boulder Feeder Canal	13,700	
Storage No. 1, 1978	<u>2,160</u>	15,860

OUTFLOW

Boulder Creek Supply Canal	14,320	
Dry Creek Replacement	550	
Storage Nov. 1, 1979	<u>350</u>	15,170

Apparent 1955,690 acre feet

SUMMATIONS

Estes Park Area	+ 4,150	
Carter Lake Area	- 15,820	
Horsetooth Area	- 8,990	
Boulder Area	- 690	
	<hr/>	
Total Apparent Project Loss		- 21,350

OPERATION SKIM

In conjunction with the Colorado-Big Thompson Project, Operation Skim diverts Big Thompson River water for power generation purposes and returns it to the river. Upper Big Thompson River water is diverted through Estes Foothills Canal into Olympus Tunnel for power generation at Polehill and Flatiron Power Plants. Near the mouth of Big Thompson Canyon, river water is diverted through Dille Tunnel. River water from both diversions is then returned to the river through the Big Thompson Power Plant. Skim operations for the 1979 irrigation water year were as follows:

<u>MONTH</u>	<u>WATER DIVERTED ACRE-FEET</u>
November	680
December	530
January	570
February	490
March	300
April	980
May	21,540
June	34,210
July	19,550
August	15,080
September	6,060
October	<u>2,840</u>
	102,830

Harold R. Coffey
Water Resource Engineer

III. WATER SUPPLY

F.

TRANSMOUNTAIN DIVERSIONS

OCTOBER 1, 1978 - SEPTEMBER 30, 1979

DIVERTING STRUCTURE	SOURCE	SOURCE DISTRICT	RECEIVING DISTRICT	CONTROLLING OWNERSHIP	1ST. DAY WATER DIVERTED	LAST DAY WATER DIVERTED	NO. OF DAYS		AVG. AMT DIVERTED C.F.S.	TOTAL AMOUNT DIVERTED AC. FT.
							WATER	DIVERTED		
Wilson Supply Ditch	Sand & Deadman Creek	48	3	Divide Canal & Res. Co.	5/22/79	6/19/79	11	17.2	375	
*Deadman Ditch (Incl. in Wilson Supply)	Deadman Creek	48	3	Divide Canal & Res. Co.			0	0	0	
Bob Creek Ditch	Nunn Creek	48	3	City of Greeley			0	0	0	
Columbine Ditch	Deadman Creek	48	3	City of Greeley			0	0	0	
Laramie Poudre Tunnel	Laramie River	48	3	Water Supply & Storage	6/29/79	9/13/79	77	98.5	15,040	
Skyline Ditch	West Fork Laramie River	48	3	Water Supply & Storage	7/ 5/79	7/12/79	8	26.8	424	
Cameron Pass Ditch	Michigan River	47	3	Water Supply & Storage	6/13/79	8/ 1/79	50	2.36	234	
Michigan Ditch	Michigan River	47	3	North Poudre Irr. Co.	7/ 9/79	9/ 8/79	62	5.90	726	
Grand River Ditch	Colorado River	51	3	City of F. Collins	6/ 2/79	9/25/79	116	78.0	17,940	
Eureka	Colorado River	51	4	City of Loveland	7/13/79	9/21/79	71	0.43	60	
Alva B. Adams Tunnel	Colorado River	51	4	U.S.B.R. - N.C.C.D.	10/ 1/79	9/30/79	326	304	196,800	
Moffat Tunnel	Fraser River	51	6	City of Denver	10/ 1/79	9/30/79	364	77.1	55,670	
Jones Pass Tunnel	Williams Fork	51	6	City of Denver	11/ 9/79	9/26/79	215	12.9	5,500	
AKA August P. Gumlich or Williams Fork Tunnel	(Incl. in Moffat Tunnel)									
Berthoud Pass Ditch	Fraser River	51	7	Farmers Res. & Highline	7/ 9/79	9/ 8/79	62	3.08	379	
Vidler Tunnel	Montezuma Creek	36	7	Herbert Young						
Roberts Tunnel	Blue River	36	23-8	City of Denver	10/ 1/79	9/30/79	245	152	73,050	
Boreas Pass Ditch	Indian Creek	36	23	City of Aurora	6/13/79	8/20/79	69	1.12	154	
Hoosier Pass Tunnel	Blue River	36	23	City of Colo. Springs	4/27/79	9/30/79	157	31.7	9,870	
Aurora Homestake	Homestake Creek	37	23	City of Aurora	10/ 1/79	9/30/79	223	27.7	12,230	

* Included in Wilson Supply Ditch

RESERVOIR STORAGE DISTRICT NO. 1

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Empire	South Platte	5043	33858	8825
Riverside	South Platte	12692	57894	24781
Jackson	South Platte	11343	35195	19577
Bijou No.2	South Platte	0	4460	3220
North Sterling	South Platte	17360	70040	44177
Prewitt	South Platte	7460	28600	16264
Klug	Boxelder Creek	0	0	0
Bootleg	Boxelder Creek	0	0	0
Heart	Little Crow Creek	0	0	0
Giffin No. 1	Lone Tree Creek	0	8.8	0
Giffin No. 2	Lone Tree Creek	0	21	2
Adams & Bunker No.1	Little Crow Creek	25	197	0
Adams & Bunker No.2	Little Crow Creek	0	55	0
TOTAL		53923	230328.8	116846

RESERVOIR STORAGE DISTRICT NO. 2

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Barr	South Platte	2664	29388	10842
Horsecreek	South Platte	280	15540	5630
Prospect	South Platte	626	4390	3458
Lord	South Platte	0	136	0
Milton	South Platte	2314	19580	15486
Lower Latham	South Platte	4325	5976	5193
Standley	Clear Creek	24570	33867	33867
Behrns	South Platte	37	30	17
Beulah	South Platte	25	10	70
Bowles No. 1	South Platte	15	0	5
Bowles No. 2	South Platte	45	65	50
Brantner No. 2	Brantner Gulch	11	11	11
Carlin	South Platte	0	31	0
Church Lower Lake	Dry Creek	68	90	90
Coal Ridge	Little Dry Creek	369	118	474
Fulton Waste	South Platte	315	400	350
German No. 2	Big Dry Creek	80	80	60
German No. 3	Big Dry Creek	3	4	4
German No. 4	Beg Dry Creek	30	30	30
German No. 6	Big Dry Creek	16	20	10
German No. 8	Big Dry Creek	27	45	54
German No. 9	Big Dry Creek	9	15	18
German No. 12	Big Dry Creek	70	90	92
H.A. Smith	South Platte	40	50	20
Great Western	Clear Creek	1745	1419	2645
Henry	South Platte	0	1	3
J.B. Smith	Todd Creek	120	150	150
Irland No. 1	South Platte	3	118	25
Irland No. 5	South Platte	0	15	4
La Dore	Seepage	367	360	319
Loloff	South Platte	72	110	72
Marshall	Brantner Gulch	30	30	25
Maul	First Creek	20		20
Meek No. 1	South Platte	35	25	20
Meek No. 2	South Platte	8	0	3
Mose Davis No. 2	South Platte	72	80	125
North Star	Big Dry Creek	116	125	129
Olds	South Platte	0	0	0
Parson-Holms	Second Creek	0	0	0
Thompson	Big Dry Creek	200	225	180

RESERVOIR STORAGE DISTRICT NO. 2 (CONTINUED)

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Matson	Big Dry Creek	8	15	6
Karsh	Big Dry Creek	2	8	4
Hamilton	Seepage	1	1	1
Francis	Gulch	1	4	5
Brunner	Seepage	1	53	53
Burnett-Deisher	Seepage	<u>17</u>	<u>21</u>	<u>25</u>
	TOTAL	38757	112726	79645

RESERVOIR STORAGE DISTRICT NO. 3

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Fossil Creek	Cache La Poudre	1322	7571	2165
Halligan	N FK Cache La Poudre	465	2186	100
Clarks Lake	N FK Cache La Poudre	568	690	548
Indian Creek	N FK Cache La Poudre	1399	1339	1906
N Poudre No. 2	N FK Cache La Poudre	1898	2241	1480
N Poudre No. 3	N FK Cache La Poudre	0	0	0
N Poudre No. 4	N FK Cache La Poudre	573	995	955
N Poudre No. 5	Cache La Poudre	2828	2828	2828
N Poudre No. 6	Cache La Poudre	0	15	29
N Poudre No. 15	N FK Cache La Poudre	1284	52	4248
Park Creek	N FK Cache La Poudre	2051	5676	6169
N Poudre Minor	N FK Cache La Poudre			
Cobb	Cache La Poudre	3535	4745	19950
Douglas	Cache La Poudre	5337	8678	6300
Res. No. 8	Cache La Poudre	5597	6284	7764
Res. No. 8 Annex	Cache La Poudre	1837	1893	2735
Windsor Res.	Cache La Poudre	5516	16333	10077
Chambers	Wright, Trap & Fall	4579	2930	4351
Long Draw	Long Draw	7224	8083	7923
Black Hollow	Cache La Poudre	3409	4171	4459
Curtis	Cache La Poudre	629	524	874
Kluver	Cache La Poudre	751	687	802
Lindenmeier	Cache La Poudre	330	266	504
Long Pond	Cache La Poudre	2795	2989	2738
Richards	Cache La Poudre	219	38	670
Rocky Ridge	Cache La Poudre	2973	3323	3283
W S & S No. 3	Cache La Poudre	2256	2893	3840
W S & S No. 4	Cache La Poudre	739	690	835
Terry Lake	Cache La Poudre	4639	5635	2710
Worster Res.	Sheep Creek	93	647	12
Timnath Res.	Cache La Poudre	4482	9948	8642
Windsor Lake	Cache La Poudre	969	1005	1018
Barnes Meadow	Barnes Meadow	2084	1296	2469
Big Beaver	Big Beaver Creek	0	0	0
Comanche	Big Beaver Creek	0	0	0
Peterson	Unnamed Creek	0	0	0
Seaman	N FK Cache La Poudre	1046	1970	2052
Twin Lake	Trib. of Pennock	0	0	0
Claymore	Cache La Poudre	529	730	550
Dowdy	Pine Creek	595	630	907
Joe Wright	Joe Wright Creek	0	0	0
Eaton Law Res.	Cache La Poudre		84	228

RESERVOIR STORAGE DISTRICT NO. 3 (CONTINUED)

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Gray Lakes	Boxelder Creek		1101	661
Panhandle Creek	Panhandle Creek	841	841	841
Portner	Fossil Creek	284	578	405
Seeley	Cache La Poudre	740	1147	1101
Warren Lake	Cache La Poudre	277	290	606
Woods Lake	Cache La Poudre	1474	2064	1724
Horsetooth	Colo. Big Thompson		77442	103084
	TOTAL	78167	193528	224543

1

RESERVOIR STORAGE DISTRICT NO. 4

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Boulder & Larimer	Little Thompson	1586	4530	3732
Boyd Lake	Big Thompson	33498	38287	37236
Carter	Colo. Big Thompson	52509	106608	63240
Cemetary Lake	Big Thompson	359	359	340
Donath	Big Thompson	373	1115	341
Fairport	Big Thompson	185	192	227
Geo. Rist (Buckingham)	Big Thompson	269	231	196
Hertha Res.	Dry Creek	454	1386	712
Horseshoe Res.	Big Thompson	4008	4280	6686
Lake Loveland	Big Thompson	3214	8980	12736
Lawn Lake	Roaring Fork	817	817	817
Lon Hagler	Big thompson	2448	2504	4951
Lone Tree Res.	Big Thompson	1844	7621	8091
Loveland Lake	Big Thompson	648	791	781
Mariano	Big Thompson	1088	4917	4657
Oklahoma	Big Thompson	274	260	320
Rist Benson Res.	Big Thompson	341	305	0
Ryan Gulch Res.	Ryan Gulch	543	696	623
South Side Res.	Big Thompson	294	349	328
Welch	Big Thompson	<u>3514</u>	<u>3720</u>	<u>5879</u>
	TOTAL	108266	187948	151893

RESERVOIR STORAGE DISTRICT NO. 5

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Beaver Lake	Beaver Creek	679	1062	1167
Foothills	St. Vrain	960	3109	2308
Highland No. 1	St. Vrain	497	497	884
Highland No. 2	St. Vrain	2377	3074	2394
Highland No. 3	St. Vrain	503	507	1169
McIntosh	St. Vrain	482	2279	1981
Pleasant Valley	St. Vrain	2079	2843	2492
Oligarchy No. 1	St. Vrain	1358	1698	1640
Union	St. Vrain	10645	12715	12715
Left Hand Park	Left Hand	685	746	1548
Left Hand Valley	Left Hand	2422	3783	2959
Button Rock	N.St. Vrain	<u>12319</u>	<u>12413</u>	<u>14201</u>
	TOTAL	35006	44726	45458

RESERVOIR STORAGE DISTRICT NO. 6

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Marshall	South Boulder Creek	2636	8854	4623
Great Western	Clear & Coal Creeks	1746	1596	2635
Baseline	S. & M. Boulder Creek	2839	3807	3455
McKay	South Boulder Creek	211	717	633
Albion	Albion Creek	554	1111	1111
Barker	M. Boulder Creek	8762	197	9160
Boulder	Big Thompson Project	3461	6245	1650
Goose Lake	North Boulder Creek	1036	1036	1036
Gross	S. & M. Boulder Creek	23109	15101	29010
Hillcrest	S. & M. Boulder Creek	1701	1812	1939
Leggett	S. & M. Boulder Creek	1225	1306	1400
Valmont	S. & M. Boulder Creek	6253	6517	6813
Six Mile	Middle Boulder Creek	794	1089	1022
Silver	North Boulder Creek	3086	107	3627
Panama No.1	Middle Boulder Creek	<u>3765</u>	<u>3944</u>	<u>3693</u>
	TOTAL	61178	53439	71807

RESERVOIR STORAGE DISTRICT NO.7

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Maple Grove	South Clear Creek	489	528	664
Ralston	Moffat via Gross	7018	5483	7188
Tucker	Ralston	293	619	273
Long Lake	Ralston Creek	688	1274	1365
Standley	Clear Creek	<u>24309</u>	<u>33653</u>	<u>33544</u>
	TOTAL	32797	41557	43034

RESERVOIR STORAGE DISTRICT NO. 8

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Aurora Rampart	South Platte	114	1250	1118
Chatfield	South Platte	8803	9287	26097
Cherry Creek	Cherry Creek	11900	10801	10380
Marston	South Platte	13368	15651	12123
McLellen	South Platte	3058	3898	5210
Platte Canyon	South Platte	<u>917</u>	<u>921</u>	<u>919</u>
	TOTAL	38160	41808	55847

RESERVOIR STORAGE DISTRICT NO.9

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Soda No. 1 (West)	Bear Creek	0	244	72
Soda No. 2 (East)	Bear Creek	40	1481	1134
Kendrick	Bear Creek	50	275	275
Patrick	Bear Creek	495	694	1019
Deane	Turkey Creek	107	342	282
Bergen No. 1 (East)	Turkey Creek	240	479	415
Bergen No. 2 (West)	Turkey Creek	490	605	423
Ward	Bear Creek	455	700	710
Henry Lake	Bear Creek	87	87	134
Harriman	Bear Creek	245	560	620
Bowles	Bear Creek	750	1760	1910
Johnston	Bear Creek	222	222	621
Tule No.1 (Upper)	South Platte	84	84	84
Tule No.2 (Lower)	South Platte	90	90	90
Grant A (West)	Bear Creek	0	0	0
Grant B (South)	Bear Creek	105	105	237
Grant C (East)	Bear Creek	34	34	92
Kingfisher Lake	Turkey Creek	5	50	55
Willow Sp.No.1	Turkey Creek	10	50	45
	TOTAL	3509	7862	8218

RESERVOIR STORAGE DISTRICT NO. 23

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Antero	So.Fk.South Platte	13365	15720	15957
Eleven Mile	So.Fk.South Platte	89961	90981	97954
Jefferson	Jefferson Lake	0		617
Montgomery	Md.Fk.South Platte and Hoosier Tunnel	<u>3948</u>	<u>556</u>	<u>4433</u>
	TOTAL	107274	107257	118961

RESERVOIR STORAGE DISTRICT NO. 64

NAME	SOURCE	AMOUNT - A.F.		
		10-31-78	4-30-79	10-31-79
Julesburg Res.	South Platte	5198	23848	20078
North Sterling	South Platte	17360	70040	42903
Prewitt	South Platte	<u>7460</u>	<u>28600</u>	<u>16512</u>
	TOTAL	30018	122488	79493

WINTER WHEAT

1977 FINAL

COUNTY	PORTION OF COUNTY IN DIVISION I	ACRES PLANTED	IRRIGATED				NON IRRIGATED			
			ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHEL X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHEL X 1000		
ADAMS		201000	4300	42	180.6	190700	21	3981		
ARAPAHOE		64500	1200	36	43.2	58300	18	1044		
BOULDER		8500	300	35	10.5	7700	21	160.8		
CHEYENNE	39	66700	1100	35	38.5	52300	19.5	1019.9		
CLEAR CREEK										
DENVER										
DOUGLAS		6500	200	35	7	5800	15	87.3		
ELBERT	69	43500	700	33	23.1	38300	15	574.5		
GILPIN										
JEFFERSON		3500	200	37	7.4	2800	16	44.2		
KIT CARSON		255000	11000	42.5	468.6	222000	23.5	233		
LARIMER		18000	400	35.5	14.2	15600	15	234		
LINCOLN	26.5	33100	700	23.0	22.4	30100	21.5	647.2		
LOGAN		191000	500	37	18.5	146500	20	2960		
MORGAN		79000	6300	39	244.8	64200	20.5	1303		
PARK	87.4	1000	200	25	5	600	12	7.2		
PHILLIPS		127000	2500	40	100	122500	34.5	4246		
SEDGWICK		83000	2000	37.5	75	68500	29.5	2009		
TELLER	47.5									
WASHINGTON		289000	5000	39.5	197.6	271000	24	6506		
WELD		227000	2300	42.5	97.6	182700	16.5	3049		
YUMA		153000	5000	41	205	137000	25.5	3525		
TOTALS		1850300	43900	40.1	1759	1616600	19.6	31631.1		

WINTER WHEAT
1978 PRELIMINARY

COUNTY	PORTION OF COUNTY IN DIVISION I	IRRIGATED						NON IRRIGATED			
		ACRES PLANTED	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000
ADAMS		205000	3800	41	155.8	166200	23	3864			
ARAPAHOE		76000	1400	36	50.5	686000	18.5	1260			
BOULDER		8800	400	38	15.2	6600	18	118.5			
CHEYENNE	39	79500	1200	39	46.8	61200	20	1224			
CLEAR CREEK											
DENVER											
DOUGLAS		6500	200	34	6.8	5800	17	99.6			
ELBERT	69	42100	600	33	19.8	33900	17.5	593.3			
GILPIN											
JEFFERSON		3200	100	37	3.7	2900	16.5	48.2			
KIT CARSON		226000	12000	36.5	436	178000	20	3580			
LARIMER		17000	300	40	12	13700	19	262.3			
LINCOLN	26.5	40300	800	32	25.6	35000	19.5	682.5			
LOGAN		166000	700	39	27.3	149000	28.5	4229			
MORGAN		66000	4600	39.5	182.5	53400	22	1169			
PARK	87.4	900				700	15.5	10.9			
PHILLIPS		129000	2000	39	78	113000	32.5	3651			
SEDGWICK		75000	2500	41.5	103.3	60500	32.5	1961			
TELLER	47.5										
WASHINGTON		316000	5000	40	200	275000	24.5	6756			
WELD		204000	4400	46	202	160600	21	3387			
YUMA		158000	4100	39.5	162	130900	26.5	3469			
TOTALS		1819300	44100	39.2	1727.3	1515000	24	36365.3			

CORN FOR GRAIN

1977 FINAL

COUNTY	PORTION OF COUNTY IN DIVISION I	ACRES PLANTED	IRRIGATED				NON IRRIGATED			
			ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHEL X 1000	ACRES HARVESTED	YIELD bu/acre	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHEL X 1000
ADAMS		7600	3300	105	346.5					
ARAPAHOE		1000	200	105	21					
BOULDER		11500	6200	98	607.5					
CHEYENNE	39	4700	3700	95	351.5		100	15	1.5	
CLEAR CREEK										
DENVER										
DOUGLAS										
ELBERT	69	1700	100	95	9.5		100	20	2	
GILPIN										
JEFFERSON		500	300	95	28.5					
KIT CARSON		87000	70600	115	8119		400	15	6	
LARIMER		41000	14500	106	1537		300	20	6	
LINCOLN	26.5	600	200	80	16		100	15	1.5	
LOGAN		62000	43000	121	5210		1900	30	57	
MORGAN		76500	65500	119	7795		500	20	10	
PARK	87.4									
PHILLIPS		72000	63000	136.5	8606		6000	45	270	
SEDGWICK		34500	26500	130	3449		2300	40	92	
TELLER	47.5									
WASHINGTON		26900	24000	115	2760		700	20	14	
WELD		191500	97000	114	11058		2000	22.5	45	
YUMA		177000	165000	129	21285		500	26	13	
TOTALS		796000	583100	122.1	71199.5		14900	34.8	518	

CORN FOR GRAIN
1978 PRELIMINARY

COUNTY	PORTION OF COUNTY IN DIVISION I	IRRIGATED				NON IRRIGATED			
		ACRES PLANTED	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	
ADAMS		7700	3600	95	342				
ARAPAHOE		1000							
BOULDER		12000	7500	94	705	300	10	3	
CHEYENNE	39	6000	4100	97	397.7				
CLEAR CREEK									
DENVER									
DOUGLAS									
ELBERT	69	1500				300	15	4.5	
GILPIN									
JEFFERSON		500	500	90	45				
KIT CARSON		95000	79500	108	8586	300	15	4.5	
LARIMER		44000	18000	100	1800	300	10	3	
LINCOLN	26.5	600	100	88	8.8	100	15	1.5	
LOGAN		62500	46500	119	5533	900	13.5	12	
MORGAN		77000	65500	112	7336	800	10	8	
PARK	87.4								
PHILLIPS		85000	73000	122	8890	4400	21	92	
SEDGWICK		36000	26500	120	3180	3700	20	74	
TELLER	47.5								
WASHINGTON		30000	27000	109	2943	200	10	2	
WELD		178000	87500	110	9625	2000	10	20	
YUMA		196000	172000	120	20700	4500	25	112.5	
TOTALS		832800	611300	114.7	70091.5	17800	18.9	337	

BARLEY

1977 FINAL

COUNTY	PORTION OF COUNTY IN DIVISION I	ACRES PLANTED	IRRIGATED				NON IRRIGATED			
			ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000		
ADAMS		9000	2300	55	126.5	3700	20.5	75		
ARAPAHOE		3700	400	55	22	2600	19	48		
BOULDER		6400	4300	62	267	1100	19	20.8		
CHEYENNE	39	600	200	52.5	10.5	300	18.5	5.5		
CLEAR CREEK										
DENVER										
DOUGLAS		1600				1500	20	30		
ELBERT	69	1000				900	18.5	16.7		
GILPIN										
JEFFERSON		800	200	60	12	400	20.5	8.3		
KIT CARSON		9500	5200	65	338	2600	21.5	55.5		
LARIMER		8800	7000	55	385	500	15	7.5		
LINCOLN	26.5	400	100	57	5.7	400	17	6.8		
LOGAN		5700	1300	64	83	2700	20	54		
MORGAN		6900	4600	71.5	328	1400	20.5	29		
PARK	87.4									
PHILLIPS										
SEDGWICK		1900	200	65	13	1300	24	31.4		
TELLER	47.5									
WASHINGTON		7500	1200	66	79.2	5300	20	105		
WELD		44500	24400	65.5	1600	8600	19.5	169		
YUMA		2100	1100	65	71.5	400	24	9.6		
TOTALS		110400	52500	63.6	3341.4	33700	19.9	672.1		

BARLEY

1978 PRELIMINARY

COUNTY	PORTION OF COUNTY IN DIVISION I	IRRIGATED						NON IRRIGATED			
		ACRES PLANTED	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000
ADAMS		12000	4000	73	292	4200	39	164			
ARAPAHOE		3700	300	68.5	20.6	2900	36.5	106.5			
BOULDER		5900	4100	70	287	1100	32.5	35.6			
CHEYENNE	39	500	100	65	6.5	300	28	8.4			
CLEAR CREEK											
DENVER											
DOUGLAS		1400				1300	24	31.2			
ELBERT	69	1200				800	25	20			
GILPIN											
JEFFERSON		800	200	62.5	12.5	400	26.5	10.6			
KIT CARSON		10500	4900	63	308.7	2100	29	60.9			
LARIMER		8900	8000	60	480	300	25	7.5			
LINCOLN	26.5	400	100	65	6.5	300	23	6.9			
LOGAN		2900	1900	60	114	600	24.5	14.7			
MORGAN		8200	6300	63	395.7	700	28	19.6			
PARK	87.4										
PHILLIPS											
SEDGWICK		1800	600	63	37.8	800	30	24			
TELLER	47.5										
WASHINGTON		6700	3200	60	192	2500	20	50			
WELD		41500	27900	63	1760	8100	24.5	200			
YUMA		2300	700	57	39.9	900	24	21.6			
TOTALS		108700	62300	63.5	3953.2	27300	28.6	781.5			

SORGHAM FOR GRAIN

1977 FINAL

COUNTY	PORTION OF COUNTY IN DIVISION I	IRRIGATED					NON IRRIGATED				
		ACRES PLANTED	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	
ADAMS		2300	200	60	12	300	22			6.6	
ARAPAHOE											
BOULDER											
CHEYENNE	39	7400	200	62	12.4	2300	28			64.4	
CLEAR CREEK											
DENVER											
DOUGLAS											
ELBERT	69										
GILPIN											
JEFFERSON											
KIT CARSON		19500	3400	63	214.2	3100	26			80.6	
LARIMER											
LINCOLN	26.5	6500	100	61	6.1	1400	20			28	
LOGAN		3600	400	65	26	600	25			15	
MORGAN		4800	500	58	29	600	20			12	
PARK	87.4										
PHILLIPS		6600	600	60	36	2700	28			75.6	
SEDGWICK		2100				600	26			15.6	
TELLER	47.5										
WASHINGTON		13500	300	59	17.7	1700	26			44.2	
WELD		4900	600	65	39	200	22			4.4	
YUMA		28000	2500	62	155	14000	29			406	
TOTALS		99200	8800	62.2	547.4	27500	27.4			752.4	

SORGHAM FOR GRAIN

1978 PRELIMINARY

COUNTY	PORTION OF COUNTY IN DIVISION I	ACRES PLANTED	IRRIGATED				NON IRRIGATED					
			ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000				
ADAMS												
ARAPAHOE												
BOULDER												
CHEYENNE	39	6200	100	67	6.7	2800	21	58.8				
CLEAR CREEK												
DENVER												
DOUGLAS												
ELBERT	69	2600				300	19	5.7				
GILPIN												
JEFFERSON												
KIT CARSON		22500	4200	68	285.6	5100	19	96.9				
LARIMER												
LINCOLN	26.5	6100	200	65.5	13.1	1600	15	24				
LOGAN		3100	100	67	6.7	400	15	6				
MORGAN												
PARK	87.4											
PHILLIPS		6800	300	66	19.8	2700	17	45.9				
SEDGWICK		1800	100	67	6.7	400	15	6				
TELLER	47.5											
WASHINGTON		14000	200	62	12.4	1800	18	32.4				
WELD												
YUMA		26000	3000	64	192	11000	18	198				
TOTALS		89100	8200	66.2	543	26100	18.1	473.7				

DRY BEANS

1977 FINAL

COUNTY	PORTION OF COUNTY IN DIVISION I	ACRES PLANTED	IRRIGATED				NON IRRIGATED			
			ACRES HARVESTED	YIELD LBS/ACRE	PRODUCTION CWT	ACRES HARVESTED	YIELD LBS/ACRE	PRODUCTION CWT		
ADAMS		800	800	1250	10000					
ARAPAHOE										
BOULDER		1000	1000	1900	19000					
CHEYENNE	39	100	100	1200	1200					
CLEAR CREEK										
DENVER										
DOUGLAS		200	200	1200	2400					
ELBERT	69	300	100	1200	1200	300		120	360	
GILPIN										
JEFFERSON										
KIT CARSON		5200	5100	1310	67000					
LARIMER		3300	3300	2000	66000					
LINCOLN	26.5	100	100	1200	1200					
LOGAN		4200	4000	1600	64000					
MORGAN		8300	7900	1600	126500	300		200	600	
PARK	87.4									
PHILLIPS		8700	8400	1270	106500	100		200	200	
SEDGWICK		6700	6300	1500	94500	200		200	400	
TELLER	47.5									
WASHINGTON		5000	4500	1300	58500	200		150	300	
WELD		16500	15500	1780	276000	500		200	1000	
YUMA		3300	3000	1200	36000					
TOTALS		63700	60300	1542	930000	1600		179	2860	

DRY BEANS

1978 PRELIMINARY

COUNTY	PORTION OF COUNTY IN DIVISION I	ACRES PLANTED	IRRIGATED				NON IRRIGATED			
			ACRES HARVESTED	YIELD LBS/ACRE	PRODUCTION CWT	ACRES HARVESTED	YIELD LBS/ACRE	PRODUCTION CWT		
ADAMS		700	700	1300	9100					
ARAPAHOE										
BOULDER		900	900	1780	16000					
CHEYENNE	39	100	100	1300	1300					
CLEAR CREEK										
DENVER										
DOUGLAS		200	200	1300	2600					
ELBERT	69	300	100	1300	1300	200	200	200	400	400
GILPIN										
JEFFERSON										
KIT CARSON		7500	7000	1400	98000	200	200	200	400	400
LARIMER		4800	4600	1800	83000					
LINCOLN	26.5	100	100	1270	1270	100	100	250	250	250
LOGAN		4900	4600	1590	73000	200	200	300	300	600
MORGAN		8000	7600	1670	127000	400	400	300	300	1200
PARK	87.4									
PHILLIPS		12500	11500	1510	174000	500	500	280	280	1400
SEDGWICK		8900	8300	1400	116000	400	400	300	300	1200
TELLER	47.5									
WASHINGTON		8800	7700	1350	104000	200	200	200	200	400
WELD		18500	17000	1780	303000	1000	1000	300	300	3000
YUMA		5300	4700	1430	67000	300	300	230	230	700
TOTALS		81500	75100	1567	1176570	3500	3500	273	273	9550

SUGAR BEETS

1977 FINAL

1978 PRELIMINARY

COUNTY	PORTION OF COUNTY IN DIVISION I PERCENT	ACRES	YIELD TONS/ACRE	PRODUCTION X 1000	ACRES	YIELD TONS/ACRE	PRODUCTION X 1000
ADAMS		970	19.8	19.2	1110	18.7	20.8
ARAPAHOE							
BOULDER		940	19.1	18	1350	16.8	22.7
CHEYENNE	39	200	11.8	2.4	200	14.7	2.9
CLEAR CREEK							
DENVER							
DOUGLAS							
ELBERT	69						
GILPIN							
JEFFERSON							
KIT CARSON		6780	17.6	119	6870	15.7	107.6
LARIMER		4970	20.4	101.5	5660	16.8	94.9
LINCOLN	26.5						
LOGAN		5090	16.9	86	6150	18.4	113.4
MORGAN		7710	20.2	155.5	8910	19	168.9
PARK	87.4						
PHILLIPS		3680	19.5	71.8	5340	19.9	106
SEDGWICK		2020	17.8	36	2600	19.8	51.6
TELLER	47.5						
WASHINGTON		2520	20.4	51.4	2490	14.9	37.1
WELD		28570	21.1	603	33230	19.7	653.5
YUMA		5100	18.3	93.3	5440	16.5	89.9
TOTALS		68550	19.8	1357.1	79350	18.5	1469.3

OATS

1977 FINAL

COUNTY	PORTION OF COUNTY IN DIVISION I	ACRES PLANTED	IRRIGATED				NON IRRIGATED			
			ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000		
ADAMS		2800	200	62	12.4	300	24	7.2		
ARAPAHOE										
BOULDER		2200	400	50	20	100	26	2.6		
CHEYENNE	39	400	200	60	1.2	200	20	4		
CLEAR CREEK										
DENVER										
DOUGLAS		1300				200	24.5	4.9		
ELBERT	69	2100	200	70	1.4	700	23	16.1		
GILPIN										
JEFFERSON										
KIT CARSON										
LARIMER		2100	500	34	17	200	25	5		
LINCOLN	26.5									
LOGAN		7600	800	54	43.2	1700	36	61.2		
MORGAN		2600	400	60	24.0					
PARK	87.4									
PHILLIPS		1800	200	70	21	500	34	17		
SEDGWICK		1500	300	65	13	400	38	15.2		
TELLER	47.5									
WASHINGTON		1600	100	65	6.5	800	26	20.8		
WELD		14000	1700	44	74.8	1600	35	56		
YUMA		1000	500	65	32.5	300	27	8.1		
TOTALS		41000	5500	48.5	267	7000	31.2	218.1		

SPRING WHEAT

1977 FINAL

COUNTY	PORTION OF COUNTY IN DIVISION I	IRRIGATED				NON IRRIGATED			
		ACRES PLANTED	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	ACRES HARVESTED	YIELD bu/acre	PRODUCTION BUSHELS X 1000	
ADAMS		1300	100	30	3	1200	13	15.6	
ARAPAHOE		200				200	12	2.4	
BOULDER		400	300	50	15	100	12	1.2	
CHEYENNE	39								
CLEAR CREEK									
DENVER									
DOUGLAS		200	200	30	6				
ELBERT	69	200				100	12	1.2	
GILPIN									
JEFFERSON									
KIT CARSON		400	400	25	10				
LARIMER		500	400	50	20				
LINCOLN	26.5	100				100	12	1.2	
LOGAN		200				100	12	1.2	
MORGAN		300	200	56	11.2	100	12	1.2	
PARK	87.4								
PHILLIPS		100							
SEDGWICK		500				300	14	4.2	
TELLER	47.5								
WASHINGTON		1100	200	40	8	300	10	3	
WELD		1100	600	58	34.8	200	10	2	
YUMA		1000	100	30	3	900	11	9.9	
TOTALS		7600	2500	44.4	111	3800	11.9	45.3	

1977 FINAL

COUNTY	PORTION OF COUNTY IN DIVISION 1	POTATOES			CORN FOR SILAGE			HAY		
		ACRES	YIELD cwt/acre	PRODUCTION CWT X 1000	ACRES	YIELD TONS/ACRE	PRODUCTION TONS X 1000	ACRES	YIELD TONS/ACRE	PRODUCTION TONS X 1000
ADAMS					3900	16	62	17500	3.2	56.4
ARAPAHOE					800	16	12.8	6100	2.45	14.9
BOULDER					5200	15.5	80.7	16200	2.65	42.7
CHEYENNE	39				500	15	7.5	3900	1.6	6.2
CLEAR CREEK										
DENVER					300	17	5.1			
DOUGLAS								7500	1.45	10.9
ELBERT	69				1000	13	13			
GILPIN								14500	1.55	22.5
JEFFERSON					200	15	3	8400	1.40	11.8
KIT CARSON					15000	17.5	258.9	19700	2.65	52.2
LARIMER					26000	18	470.4	32000	2.15	68
LINCOLN	26.5				300	13	3.9	5000	1.95	9.8
LOGAN					14000	15.5	215.6	50000	2.45	123.4
MORGAN					9500	19.5	185.5	24500	3.60	88.3
PARK	87.4							14400	.70	10.1
PHILLIPS					2000	18.5	37	14400	2.8	40.2
SEDGWICK					5100	18.5	93.8	7900	2.7	21.2
TELLER	47.5							2400	1	2.4
WASHINGTON					1300	16	20.8	42500	1.35	57.7
WELD					89000	20	1782	113000	3.10	349.6
YUMA					9300	19	176.7	38500	2.95	113.8
TOTALS		6000	270	1620	183400	18.7	3428.7	438400	2.51	1102.1

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 diversions 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 197 day period from April 1 to October 15, 1979 the mean daily flow dropped below 120 cfs on 34 days. The daily flow for the 197 days averaged 1054 cfs.

The following tabulation summarized the monthly South Platte River flows at the Julesburg Gage:

PERIOD	TOTAL FLOW FOR PERIOD AC. FT.	DAILY MAX. FLOW CFS	DAILY MIN. FLOW CFS	AVERAGE DAILY FLOW CFS	DAYS LESS THAN 120 CFS
(1)	(2)	(3)	(4)	(5)	(6)
April	17710	407	188	298	0
May	47580	1520	122	774	0
June	259700	7420	1590	4364	0
July	18380	1560	48	306	18
August	42620	2320	34	693	10
September	19390	800	170	326	6
October 1-14 incl.	5990	238	163	216	0

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 ac.ft.
Arikaree River Drainage Basin	15,400 ac.ft.
South Fork of the Republican River Drainage Basin	25,400 ac.ft.
Beaver Creek Drainage Basin	3,300 ac.ft.

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 1978 water year, the last year for which official figures are available, was as follows:

<u>STREAM</u>	<u>CONSUMPTION</u>	<u>% OF ALLOCATION</u>
North Fork of Republican River	6130 Ac.Ft.	61.3%
South Fork of Republican River	11770	46.3
Arikaree River	4180	27.1
Beaver Creek	<u>0</u>	<u>0</u>
	22080	40.8%

LARAMIE RIVER COMPACT

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 1800 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 so 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 1979 the transmountain diversions under the Laramie River Compact totaled 15,464 acre feet or 77% of the 19,875 acre feet Compact allowance. The meadowland diversions totaled 22,469 acre feet or some 76 percent of the allotment. Total Colorado diversions were 37,933 acre feet or 76.8 percent of the total allotment of 49,375 acre feet.

COURT STIPULATIONS AND LITIGATION

The big case filed in 1978 was the State against the Weldon Valley Ditch Co. (W-9427) which attempted to address the question of expanded use of a surface diversion. A stipulation for entry of judgement was approved December 19, 1979 by Judge Behrman which stated that all expansion done before the complaint was filed on November 18, 1978 would be allowed, and all subsequent expansion along the Weldon Valley Ditch would not be allowed. The task now is to put all other ditch companies and water users on notice using the Weldon Valley Ditch stipulation as our guide.

A Memorandum and Decision of Order was issued by Judge Behrman October 3, 1979 in case W-7745, Buffalo Park Development Company. The question was whether or not well permits, that are valid at the time of filing an application for water rights in the court, expire if an extension is not requested. The Judge determined that these permits did not expire and the provisions of CRS 37-90-137 were fulfilled as required by CRS 37-92-305 in that the court had the benefit of reviewing the findings of the State Engineer.

A verbal policy statement was made by the Judge in December indicating that movement of a well over 200 feet from the decreed location or changing section quarter would require the filing of a change of water right.

DAMS

A. RESERVOIRS

L. PLANS AND SPECIFICATIONS

The following list includes the dams for which plans and specifications have been approved this year. The list is arranged by water district and in order of approval within districts.

PALNS AND SPECIFICATIONS APPROVED

<u>NAME</u>	<u>WD</u>	<u>OWNER</u>	<u>TYPE</u>	<u>DATE APPROVED</u>
Raw Water Reservoir Dam	1	Public Service Co. of Colo.	Spec. Changes	2/ 1/79
Wildcat Dam	1	Riverside Irrigation Co.	New	5/ 2/79
Pawnee Treated Water Dam	1	Public Service Co. of Colo.	Spec. Changes	9/ 4/79
Warren Lake Dam	3	Warren Lake Res. Co.	Spec. Changes	2/ 5/79
Floodwater Retarding Dam	3	Soil Conservations Serv.	New	9/25/79
Isabel Myron Res. Dam	5		Repair	7/ 2/79
Blumn Reservoir Dam	7	City of Arvada	Spec. Changes	2/26/79
Blumn Reservoir Dam	7	City of Arvada	Spec. Changes	5/ 7/79
Chicago Creek Res. Dam	7		Repair	9/21/79

DAMS

A. RESERVOIRS

2. INSPECTIONS

Several inspections were made this past year. The following partial list includes the final inspections for new construction and repair, inspections where problems were encountered, and routine inspections. In addition to state inspections several high-hazard dams were inspected by the Corps of Engineers and by private Engineering Consultants as a part of the National Dam Safety Program.

<u>NAME</u>	<u>DATE</u>
<u>DISTRICT NO. 1</u>	
Pawnee Treated Water Reservoir Dam	9/25/79
Pawnee Raw Water Reservoir Dam	9/25/79
<u>DISTRICT NO. 2</u>	
Milton Dam	4/19/79
<u>DISTRICT NO. 3</u>	
South Gray Reservoir Dam	2/22/79
Middle Lone Pine Dam	4/ 4/79
Warren Lake Reservoir Dam	7/ 3/79
<u>DISTRICT NO. 5</u>	
Myron Isabel Reservoir Dam	9/ 5/79
<u>DISTRICT NO. 6</u>	
Fredrick Reservoir Dam	5/21/79
<u>DISTRICT NO. 7</u>	
Maple Grove Reservoir Dam	4/19/79
<u>DISTRICT NO. 8</u>	
Holly Dam	7/31/79
<u>DISTRICT NO. 23</u>	
Buffalo Creek Dam	4/19/79
<u>DISTRICT NO. 64</u>	
Julesburg Reservoir Dam	3/23/79
North Sterling Reservoir Dam	3/23/79

LIVESTOCK WATER TANKS - EROSION CONTROL DAMS

The total number of livestock water tanks and erosion control dams approved between November 1, 1978 and October 31, 1979 are presented below in tabular form:

DISTRICT	NO. OF LIVESTOCK TANKS	TOTAL CAPACITY (AF)	NO. OF EROSION CONTROL DAMS	TOTAL CAPACITY (AF)
1	8	26.4	7	42.0
2				
3				
4	1	8.0		
5				
6				
7	1	10.0		
8			1	2.0
9				
23				
48				
64			2	6.0
65				
79				
80				
TOTAL	10	44.4	10	50.0

WATER RIGHTS

TABULATION AND ABANDONMENT

This office has received a number of inquiries and protests to the tabulation during the past year. Most of these inquiries and protests involved clerical type errors that were found by owners. These errors have been corrected as the information comes in and the computer file has been updated on a periodic basis.

The number of objections to the 1978 abandonment list has been much smaller than anticipated during 1979. However, we may see an increase in objections as the July 1, 1980 deadline approaches.

The tabulations and abandonment list is covered by CRS 37-92-402.

WATER RIGHTS

WATER DIVISION NO. ONE - CASES FILED

<u>MONTH</u>	<u>NEW APPLICATIONS</u>	<u>NO. OF STRUCTURES</u>	<u>QUADRENNIALS</u>	<u>NO. OF STURCTURES</u>
January	17	30	4	5
February	27	60	4	54
March	33	46	6	19
April	45	60	6	14
May	40	69	6	7
June	21	893	0	0
July	24	36	3	3
August	28	126	10	22
September	18	33	9	20
October	28	114	6	6
November	23	39	6	9
December	<u>83</u>	<u>448</u>	<u>3</u>	<u>4</u>
Yearly Totals	387	1,994	63	163

WATER RIGHTS

WATER DIVISION NO. ONE - CASES DECREED

<u>MONTH</u>	<u>JUDGEMENTS</u>	<u>NO. OF STRUCTURES</u>	<u>DISMISSALS</u>	<u>NO. OF STRUCTURES</u>
January	1	1	0	0
February	2	20	6	6
March	15	25	13	18
April	20	104	0	0
May	24	119	4	15
June	2	23	0	0
July	30	95	2	4
August	25	87	7	7
September	12	18	8	18
October	66	113	1	1
November	24	890	0	0
Dencember	<u>13</u>	<u>34</u>	<u>3</u>	<u>3</u>
Yearly Totals	234	1,529	44	72

A. CONSERVANCY DISTRICTS

Central Colorado Water Conservancy District	Greg Lafet	Manager	315 Denver Avenue Ft. Lupton 80621 857-4352
Lower South Platte Water Conservancy District	Gary R. Freihauf	Secretary Treasurer	P.O. Box 1725 Sterling 80751 522-1378
Northern Colorado Water Conservancy District	Earl F. Phipps	Manager	P.O. Box 679 Loveland 80537 667-2437
St. Vrain & Left Hand Water Conservancy District	Verna Sigg	Secretary	1735 North Main Longmont 80501 772-4060
Upper South Platte Water Conservancy District	Albert Wahl	President	Jeferson 80456

B. GROUNDWATER MANAGEMENT DISTRICTS

GROUNDWATER MANagements DISTRICTS

NORTHERN HIGH PLAINS

Arikaree Groundwater Management District	Roger Brenner Thomas J. Callahan	Manager Attorney	Kirk 80812 Wray 80758 P.O. Box 191
Central Yuma Groundwater Management District	Ben Saunders Vranesh & Roisch	Mgr. Atty.	Wray 80758 P.O. Box 311 (332-4155)
East Cheyenne Groundwater Management District	Norman Arends	Manager & Atty.	Cheyenne Wells P.O. Box 606 (767-5318) 80810
Frenchman Groundwater Management District	Ben Saunders Vranesh & Roisch	Mgr. Atty.	Holyoke 80734 P.O. Box 113 (854-3484)
Plains Groundwater Management District	Clifford Hawthorne	Manager	Burlington 80807 1453 Martin Ave. (346-8487)
Sandhills Groundwater Management District	Ben Saunders Vranesh & Roisch	Mgr. Atty.	Wray 80758 P.O. Box 311
W-Y Groundwater Management District	Fred Wurtsmith	Manager	Yuma 80759 220 South Main (848-5333)
Lost Creek Goundwater Management District	George Bush	Secy.	Keensburg 80643 P.O. Box 131
North Kiowa-Groundwater Management District	Loyd Musgrave		Hoyt 80641
Marks Butte Groundwater Management District	Ben Saunders Vranesh & Roisch	Mgr. Atty.	Holyoke 80734 P.O. Box 113 (854-3484)

C. WATER USER ORGANIZATIONS

DISTRICT

1	Irrigationists	John Samples	Secy.	104 West Beaver Ft. Morgan 80701
2	Consolidated Ditches	W. W. Gaunt	Secy.	25 South 4th Avenue Brighton 80601
3	Cache La Poudre Water Users	Harlan Seaworth	Pres.	11801 N Co. Rd. 9 Wellington 80549
4	Big Thompson Water Users	Elmer Stroh	Secy.	23344 Weld County Road 21 3/4 Milliken 80453
6	District & Water Users	Milt Nelson	Pres.	2040 Longs Peak Longmont 80501
64	District 64 Protection	Alex Michels	Secy.	205 1/2 Main St. Sterling 80751

D. ORGANIZATIONS

WATER DISTRICT NO. 1

DITCH AND RESERVOIR COMPANIES

A.A. Smith Irrigating Canal Reservoir, Milling and Pipeline Company	Gene Peterson	Pres.	Snyder 80750
Associated Ditches	Jake Kosman	Chairman	Ft. Morgan 80701
Beaver Creek Ditch Company	John Higgins	Secy.	Brush 80723
Beaver Ditch Company	Charles Henry	Pres.	Brush 80723
Bijou Irrigation Company	John Samples	Secy.	104 West Beaver Ft. Morgan 80701
Bijou Irrigation District	John Samples	Secy.	104 West Beaver Ft. Morgan 80701
Corona Ditch Company	Jack Orr	Owner	Masters 80547
Duel and Snyder	E.L. Caneva	Pres.	Rt. 1 Ft. Morgan 80701
Fort Morgan Canal Company	Lindy Crumley	Sept.	111 East Railroad Ave Ft. Morgan 80701
Gill and Stevens Ditch Company	Harold Hansen	Pres.	Rt. 1 Brush 80723
Hillrose Irrigation District	Roy Boyles	Secy.	Hillrose 80733
Hoover Ditch Company	Mrs. Pat Peterson	Secy.	Kersey 80644
Illiff Irrigation District	Adam Koehler	Secy.	Sterling 80751
Illinois Ditch Company	Wm. Farr	Pres.	Kersey 80644
Jackson Lake Reservoir Company	Lindy Crumley	Supt.	111 East Railroad Ave Ft. Morgan 80701
Johnson & Edwards Ditch Company	William Tramp	Pres.	Hillrose 80733
Kiowa-Bijou Groundwater Basin	Donald F. McClary	Attorney	231 Main Street Ft. Morgan 80701
Lower Platte & Beaver Irrigation Company	Don Richardson	Pres.	Ft. Morgan 80701
Logan Irrigation District	Roy Boyles	Secy.	Hillrose 80733
Morgan, Prewitt Reservoir Co.	John Eisenach	Pres.	Sterling 80751
North Sterling Irrigation	John Samples	Secy.	104 West Beaver Ft. Morgan 80701
Putman Ditch Company	Alex Michel	Supt.	Foote Building Sterling 80751
Riverside Irrigation Company	Harlan Schneider	Pres.	Masters 80547
Riverside Irrigation District	Cecil Osborne	Supt.	Box 455 Ft. Morgan 80701
Snyder Ditch & Reservoir Co.	Cecil Osborne	Supt.	Box 455 Ft. Morgan 80701
Tetsel Ditch Company	Gene Peterson	Pres.	Snyder 80750
Tremont Ditch Company	Ron Taylor	Pres.	Merino 80741
Trowell Ditch Company	Leon Lake	Secy.	Snyder 80750
Upper Platte & Beaver Canal Co.	Willis Elson	Pres.	Hillrose 80733
Union Ditch Company	John Higgins	Secy.	Farmers State Bank Brush 80723
Weldon Valley Ditch Company	B.B. Peterson	Pres.	Snyder 80750
	Maurice Jones	Pres.	Weldona 80653

WATER DISTRICT NO. 2DITCH AND RESERVOIR COMPANIES

Big Dry Creek Ditch & Reservoir Decree	Mrs. G.R. Norden	Secy.	Rt. 1, Box 196 Ft. Lupton 80621
Burlington Ditch & Reservoir Land Company	Adolph Bohlender	Pres.	LaSalle 80645
Brighton Ditch Company	George Sieber	Pres.	Rt. 1, Box 104 Ft. Lupton 80621
Coal Ridge Ditch Company	Robert Doughty	Pres	Ft. Lupton 80621
Delta Ditch Company	Stanley Davis (352-3496)		712 10th Street Greeley 80631
Denver Water Board	James Oglivie	Manager	144 W. Colfax Denver
Farmers Independent Ditch Co.	John Briggs	Pres.	17787 Weld County Rd. 25 Platteville 80651
Farmers Reservoir & Irrigation Company	Adolph Bohlender Office (659-7373)	Pres. Home (284-5431)	LaSalle 80645
Fulton Ditch Company	W.W. Gaunt	Secy.	25 South 4th Avenue Brighton 80601
Gardeners Ditch Company	Sylvester DiGacomo	Pres.	6820 York Street Denver
German Ditch Company	Casper Sack	Pres.	Brighton 80601
Godfrey Ditch Company	Jerome Loeffler	Pres	LaSalle 80645
Henrylyn Irrigation District	Lawrence Gerkin	Manager	Box 141 Hudson 80642
Highland Ditch Company	Mrs. George Jurgens	Pres.	Rt. 4, Box 209-B Greeley 80631
Lower Latham Ditch Company	Victor R. Klein	Pres.	Kersey 80644
Lupton Bottom Ditch Company	Roy Miller	Pres.	Platteville 80651
McCanne Ditch & Reservoir Co.	Everett Kissler	Pres.	315 Denver Avenue Ft. Lupton 80621
Meadow Island No. 1 Irrigation Company	Wm. Meyer	Secy.	Rt. 2, Box 74 Platteville 80651
Meadow Island Irrigation Co.	Ruben Gustafson	Pres.	Rt. 2, Box 145 Ft. Lupton 80621
New Brantner Ditch Company	W.W. Gaunt	Secy.	25 South 4th Avenue Brighton 80601
North Star Reservoir Company	G.R. Norden	Pres.	Rt. 1 Ft. Lupton 80621
Platte Valley Irrigation Co.	Delbert Shable	Pres.	Platteville 80651
Platteville Irrigation & Milling Company	John Kunzman	Secy.	Rt. 2, Box 120 Ft. Lupton 80621
Slate Ditch Company	Robert Doughty	Pres.	Ft. Lupton 80621
Union Ditch Company	Mrs. Frances Hill	Sec.	LaSalle 80645
Walter & Roberts Ditch Co.	Roy Lunvall	Pres.	Greeley 80631
Western Mutual Ditch Co.	Ed. Fritzler	Pres.	LaSalle 80645
Wellington Reservoir Co.	Ron Heitman	Pres.	Brighton 80601
Yoxall Ditch Company	Louis Karsh	Pres.	Brighton 80601

WATER DISTRICT NO. 3DITCH AND RESERVOIR COMPANIES

Arthur Irrigation Company	Wm. Stover	Secy.	United Bank Building Ft. Collins 80521
B.H. Eaton Ditch Company	Wayne Miller Louise Kane	Pres Secy.	Kodak - P.O. Box 98 Windsor 80550
Boxelder Ditch Company	Wm. Stover	Secy.	United Bank Building Ft. Collins 80521
Boyd Irrigation Company	Rodger Houtchens	Secy.	1007 9th Avenue Greeley 80631
Cache La Poudre Irrigation Company	Greg Jesson	Secy.	Rt. 3 - Box 772 Ft. Collins 80521
Crystal Lakes	Don Weixelman		P.O. Box 2167 3200 E. Mulberry Ft. Collins 80521
Divide Canal & Reservoir Company	Don E. Engel	Secy.	106 Elm, Box 206 Eaton 80615
Dixon Canyon Ditch & Reservoir Company	Wm. Stover	Secy.	United Bank Building Ft. Collins 80521
Greeley, City of	Darryl D. Alleman		Greeley City Hall Greeley 80631
Greeley Irrigation Company	Edgar Bartels	Secy.	1301 9th Street Greeley 80631
Jackson Ditch Company	Vivienne Woodward	Secy.	P.O. Box 1584 2319 E. Mulberry Ft. Collins 80521
Kern Reservoir and Ditch Company	C.W. Kirby	Pres.	P.O. Box 220 Windsor 80550
Kitchell Reservoir Company	Alice Fisher	Secy.	Rt. 4 Ft. Collins 80521
Lake Canal Company	John Hartman	Secy.	United Bank Building Ft. Collins 80521
Lake Canal Reservoir Company	John Hartman	Secy.	United Bank Building Ft. Collins 80521
Larimer County Canal No. 2 Irrigation Company	Wm. Stover	Secy.	United Bank Building Ft. Collins 80521
Larimer & Weld Irrigation Company	Don E. Engel	Secy.	106 Elm, Box 206 Eaton 80615
Larimer & Weld Reservoir Company	Don E. Engel	Decy.	106 Elm, Box 206 Eaton 80515
Mail Creek Ditch Company	Wm. Stover	Secy.	United Bank Building Ft. Collins 80521
New Cache La Poudre Irrigation Company	Jim Muroya	Secy.	708 8th St., Box 31 Greeley 80631
New Mercer Ditch Company	Wm. Stover	Secy.	United Bank Building Ft. Collins 80521
North Poudre Irrigation Company	Ben Dumlér	Supt.	North Poudre Irr. Office, Box 4 Wellington 80549
No. 10 Ditch Company	Alden Hill	Secy.	160 W. Mountain Ave. Ft. Collins 80521

WATER DISTRICT NO. 3 (CONTINUED)

Oglivy Land & Irrigation Company	Shirley Waymen	Secy.	1007 9th Avenue Greeley 80631
Pleasant Valley & Lake Canal	Ward Fischer	Secy.	1st National Bank Bld Ft. Collins 80521
Taylor & Gill Canal Company	Wm. Seaworth	Pres.	2305 W. Taft Hill Rd. Ft. Collins 80521
Tunnel Water Company	Vivienne Woodward	Secy.	2319 E. Mulberry P.O. Box 1584 Ft. Collins 80521
Warren Lake Reservoir Company	Wm. Stover	SEcy.	United Bank Building Ft. Collins 80521
Water Supply & Storage Company	Vivienne Woodward	Secy.	2319 E. Mulberry P.O. Box 1584 Ft. Collins 80521
Whitney Irrigation Company	Robert Tigges	Pres.	Box 1146
Wm. Jones Irrigation Company	Carrol Camfield	Secy.	Windsor 80550
	Geo. Firestien	Pres.	Farmers Spur Greeley 80631
Windsor Reservoir & Canal	Don Engel	Secy.	106 Elm, Box 206 Eaton 80615

DISTRICT 3 SUPERINTENDENTS

Arthur Irrigation Company	John Meyers	482-3175
B.H. Eaton Ditch Company	Allen Lamb	686-2411
Boxelder Ditch Company	Wilbert Trippel	493-4256
Cache la Poudre Irrigation Company (Little Cache)	Greg Jesson	482-7635
Cache la Poudre Irrigation Company (New Cache)	John Lindenberg (Supt.)	352-0222 352-4025
	Dick Rayburn (Windsor Lake)	686-2807
	Phillip Smith (Tinnath Res.)	482-0732
Canal Number 3 Ditch Company	A.G. Brenkle	353-6014
Canon Canal	G.D. McGarvey	484-0541
Chaffee Ditch Company	John Meyers	482-3175
Coy Ditch Company	James Hoffman	482-4356
Fort Collins Filters	Ben Alexander (Supt.)	482-2231
	Vern Mobley (Operator)	
	Terry VanCleave (Operator)	
	Fred Jones (Operator)	
Gray Lakes	Darl Brunner	493-7337
Greeley Filters		482-2446
	Verlyn Richardson (Supt.)	484-1592
Jackson Ditch Company	Jeff Harbert	221-2661
Wm. Jones Irrigation Company	Reynold Herbst	352-2293
Lake Canal	Darl Brunner	493-7337

DISTRICT 3 SUPERINTENDENTS (CONTINUED)

Larimer County Number 2 Ditch Company	Shawn Hoff	484-5828
Larimer and Weld Irrigation Company	(Eaton)	454-3377
	John A. Johnson	482-7671
	(Supt.)	
	Clarence Hutchinson	482-7701
	(Hdgt.)	
	Dale Sampson	686-2952
	Lake Lee	
Larimer and Weld Reservoir Company	Greg Jesson	482-7635
New Mercer Ditch Company	Shawn Hoff	484-5828
North Poudre Irrigation Company		568-3612
	Ben Dumler	482-8398
	(Supt.)	
	Jim Greenacre	493-6108
	(Hdgt.)	
Ogilvy Ditch Company	Bill McMurry	352-4468
Pleasant Valley and Lake	Don Brewster	482-8645
	(Supt.)	
	Art Wendel	221-0335
	(Ditch Rider)	
Taylor and Gill Ditch Company	Greg Jesson	482-7635
Water Supply and Storage		482-3433
	Jim McFall	482-7083
	(Supt.)	
	Jimmy McFall	482-3699
	(Hdgt.)	
	George Yost	
	(Black Hollow Res.)	
Whitney Ditch Company	Allen Lamb	686-2441
Windsor Reservoir and Canal	(Eaton)	454-3377
	John A. Johnson	482-7671
	(Supt.)	
	Jim Johnson	482-3290
	(Hdgt.)	
	Victor Reynolds	686-2636
	(Windsor Res.)	

WATER DISTRICT NO. 4DITCH AND RESERVOIR COMPANIES

Arkins Water Association	Mrs. Joy Cross	Secy.	P.O. Box 6 Masonville 80541
Bald Mountain Water Association	Charles McAfee	Secy.	Rt. 2, Box 319N Loveland 80537
Beeline Ditch Company	Guy A. Shable	Secy.	Rt. 1, Box 65 Milliken 80543
Big Thompson Manufacturing Ditch Company	Robert Christensen	Secy.	P.O. Box 642 Loveland 80537
Big Thompson & Platte River Ditch Company	Guy A. Shable	Secy.	Rt. 1, Box 65 Milliken 80543
Blower Ditch Company	Henry Pope, Jr.	Supt.	Rt. 1, Box 138 Longmont 80501
Boulder & Larimer County Irrigation & Manufacturing Ditch Company (Ish)	L.V. French	Secy.	Rt. 2, Box 23 Berthoud 80513
Buckhorn Highline Ditch Company	Dale L. Lewis	Secy.	Star Route, Box 320 Loveland 80537
Buckhorn Water Users Association	Mrs. Orlene Smith	Secy.	P.O. Box 98 Masonville 80541
Central Weld County Water District	Dale D. Olhausen	Secy.	115 18th Street Greeley 80631
Consolidated Hillsborough Ditch Company	Don Davis	Secy.	1st National Bank Bldg. Johnstown 80534
Consolidated Home Supply Ditch and Reservoir Company	W.R. Keirnes	Secy.	Star Route, Box 450 Loveland 80537
Culver Irrigation Company	George Landers	Secy.	P.O. Box 209 Longmont 80501
Diagonal Water & Sanitation District	Jim Hudson	Secy.	1200 28th Street Boulder
Eagle Ditch Company	Mrs. Donald H. Lemmon	Secy.	Rt. 2, Box 120 Berthoud 80513
Eglin Ditch Company	Wayne Hicks	Secy.	RT. 2, Box 127 Berthoud 80513
Evans Ditch Company	Town Clerk of Evans	Secy.	Evans 80620
Fairport Reservoir Company	Nellie Verstraten	Secy.	Rt. 1 Ft. Collins 80521
Farmers Irrigation Ditch and Reservoir Company	F. Ray DeGood	Secy.	P.O. Box 657 Loveland 80537
Greeley-Loveland Irrigation Company	Ron Brinkman	Secy.	803 23rd Avenue Greeley 80631
George Rist Ditch Company	W.R. Keirnes	Secy.	Star Route, Box 450 Loveland 80537
Handy Ditch Company	Louis Bein	Secy.	Box 460 Berthoud 80513
Hill & Brush Ditch Company	Jim Nelson	Secy.	Rt. 1 Milliken 80543
Kershner Ditch Company	Dale L. Lewis	Secy.	Star Rt., Box 320 Loveland 80537
Little Thompson Valley Water District	Lovilo Fagan	Mgr.	307 Welch Avenue Berthoud 80513
Longs Peak Water Users Assn.	Mrs. Joanne Macy	Secy.	P.O. Box 714 Longmont 80501

WATER DISTRICT NO. 4 (CONTINUED)

Louden Irrigation Reservoir and Canal Company	Ralph Benson		925 West 29th Loveland 80537
Loveland & Greeley Reservoir Company	Ron Brinkman	Secy.	808 23rd Avenue Greeley 80631
Lykins Ditch	Mrs. Tessie DeBuse	Secy.	Rt. 3, Box 211A Longmont 80501
Mariana Water District	Lovilo Fagan	Secy.	307 Welch Avenue Berthoud 80513
Minor Longdon Ditch Company	Mrs. Elmer Rutt		Rt. 1, Box 3 Berthoud 80513
New Ish Ditch & Reservoir Co.	Horace G. McCarty	Secy.	P.O. Box 658 Longmont 80501
North Carter Lake Water District	Lovilo Fagan	Secy.	307 Welch Avenue Berthoud 80513
Osborn & Caywood Ditch Co.	Donald J. Befus	Secy.	716 S. County Rd. 1 Berthoud 80513
Perkins Ditch Company	Arnold Friend	Owner	Star Route Loveland 80537
Rist & Benson Reservoir Co.	Ralph Benson	Supt.	925 West 29th Loveland 80537
Rockwell Ditch Company	Max H. Schaal	Secy.	Rt. 1, Box 50 Berthoud 80513
Ryan Gulch Reservoir Co.	Lavilo Fagan	Secy.	307 Welch Avenue Berthoud 80513
Seven Lakes Reservoir Co.	Ron Brinkman	Secy.	808 23rd Avenue Greeley 80631
South Side Irrigation and Reservoir Company	Robert Ausenhus	Secy.	203 East 5th Street Loveland 80537
Union Ditch	Bill Smith	Secy.	P.O. Box 98 Masonville 80541
Victory Irrigating Canal Co.	Cal Carter	Secy.	Star Route Loveland 80537
Wind Cliff Water Association Inc.	Mrs. Vivien Wylene Buser	Secy.	62 Elmhurst Lane, Riverdale Bettendorf, Iowa

DITCH AND RESERVOIR COMPANIES

Allen Lake Reservoir Company	Jesse Parrish	Sept.	2515 Parish Rd Berthoud 80513 (772-7678)
Baker & Wesse	Western Paving Co.	Owner	Denver (772-7864)
Wesse Pvt.	Western Paving Co.	Owner	Denver (772-7864)
Beckwith	Dick Tanaka	Secy.	Rt. 2 Sugar Factory Rd. Longmont 80501 (776-8206)
Bonus Ditch Company	Sam Tanaka	Secy.	RT. 2 Longmont 80501 (776-3495)
Boulder & Left Hand Irrigation Company	Nels Jensen	Secy.	436 Coffman Street Longmont 80501
Chapman & McCaslin	Charles Ramey	Secy.	Rt. 3 Longmont 80501 (776-1945)
Clough Private	Friz Bartley	Owner	Rt. 3 Longmont 80501 (776-1437)
Clough & True Clover Basin Ditch & Reservoir	Public Service Co. Wayne Jurgens	Owner Secy.	Denver 512 4th Avenue Longmont 80501 (776-5122)
Cushman	Vernon Golden	Owner	12911 Hillcrest Drive Longmont 80501 (776-5880)
Davis & Downing	Gordon Kennedy	Secy.	Rt. 3 Longmont 80501 (776-1161)
Denio & Taylor	Pete Humphry	Secy.	Civic Center Longmont 80501 (776-6050)
Dickens Pvt.	Lloyd Dickens	Owner	136 S. Main Longmont 80501 (776-0325)
Dixon Mill	G.W. Sugar Company	Owner	Longmont 80501 (776-5070)
Goss Pvt. 1 & 2	Western Paving Co.	Owner	Denver (772-7864)
Hager Meadow	Russell Zweck	Owner	Longmont 80501 (776-5198)
Hayseed	Louis Rademacher	Owner	Longmont 80501 (535-4345)
Highland	George Landers	Secy.	First National Bank Longmont 80501 (776-5800)
Ide & starbird Reservoir Co.	L.A. Biddle	Secy.	Mead 80542
Independent Reservoir Co.	George Reynolds	Secy.	Longmont 80501
Island	Vernon Golden	Owner	12911 Hillcrest Drive Longmont 80501 (776-5880)

WATER DISTRICT NO. 5 (CONTINUED)

James Ditch Company	Clarence Johnson	Secy.	8090 Nelson Road Longmont 80501 (776-3273)
John Rice	Bob Seewald	Owner	Longmont 80501 (776-0744)
Last Chance Ditch Company	Harold Nelson	Secy.	Longmont 80501 (776-2336)
Left Hand Ditch Company	Frank Gould	Secy.	Foothills Highway Boulder (442-2546)
Lyons, Town of	Ralph Leum	Sept.	Lyons 80540 (823-6422)
Longmont, City of	Frank Humphry		Longmont 80501 (776-6050)
Longmont Supply Ditch Company	Dan Bernard	Secy.	First National Bank Longmont 80501 (776-5800)
Lower Baldwin Ditch Company	Dean Frieskorn	Secy.	Rt. 2 Longmont 80501 (776-2916)
Mason Meadow	Vernon Golden		12911 Hillcrest Drive Longmont 80501 (776-2135)
Mead, Town of	Harvey Potts	Sept.	Mead 80542 (535-4557)
Montgomery Pvt.	Public Service Co.	Owner	Denver (442-2776)
Nelson	Wayne McGill	Owner	10075 N. 75th Longmont 80501 (776-9327)
Niwot	Bob Seewald	Secy.	Rt. 2 Longmont 80501 (776-0744)
North Mutual Life Insurance Company	Robert Hazelbush		Longmont 80501 (776-2832)
Oligarchy	Dan Bernard	Secy.	1st National Bank Longmont 80501 (776-5800)
Palmerton Consolidated Ditch Company	James Goss	Pres.	Rt. 3 Longmont 80501 (776-4984)
Peck	George Wagner	Secy.	Longmont 80501 (776-5628)
Pella Ditch Company	Sidney Fredstrom	Secy.	Rt. 3 Longmont 80501 (776-3057)
Pleasant Valley Reservoir and Company	Russell Palmer	Secy.	1264 6th Avenue Longmont 80501 (776-5625)
Rice	Brian Rundle	Owner	Longmont 80501 (776-5098)
Rough and Ready	Russell Palmer	Secy.	1264 6th Avenue Longmont 80501 (776-5625)

WATER DISTRICT no. 5 (CONTINUED)

Runyon	Willis Marlatt	Owner	Longmont 80501 (776-0791)
Snead Ditch Company	Warren Bashor	Secy.	Rt. 3 Longmont 80501 (823-6474)
South Flat Ditch Company	David Wagner	Secy.	Longmont 80501 (776-0865)
South Ledge Ditch Company	Reinhold Loukonen	Secy.	Lyons 80540 (823-6268)
St. Vrain and Palmerton	William Schell	Supt.	802 Francis Longmont 80501 (776-3475)
Supply Ditch Company	Dan Bernard	Secy.	1st National Bank Longmont 80501
Swede	Charles Bliss	Pres.	Longmont 80501 (776-4865)
True and Webster	Edward Darby	Secy.	Longmont 80501 (776-2722)
Upper Baldwin	Dean Prieskorn	Secy.	Longmont 80501 (776-2916)
Union Ditch Company	Frances Hill	Secy.	LaSalle 80645
Union Reservoir Company	Frances Hill	Secy.	LaSalle 80645
Webster and McCaslin	Wallace Gage (Mrs)	Owner	Longmont 80501 (776-9301)
Weese Pvt.	Western Paving Company	Owner	Denver (772-7864)
Zweck and Turner Ditch Company	Russel Zweck	Secy.	Rt. 3 Longmont 80501 (776-5198)

WATER DISTRICT NO. 6DITCH AND RESERVOIR COMPANIES

Andrews & Farewell Ditch Co.	Wm. Trimmershausen	Secy.	8328 Valmont Dr. Boulder
Autrey Eggleston	Stanley Medsker		5050 South Emporia Denver
Baseline Land & Reservoir	Margaret Nelson	Secy.	Rt. 1, Box 218 Erie 80516
Boulder Ditch (Town of)	City of Boulder	Owner	City Hall Building Boulder
Boulder & left Hand Irrigation Company	Richard Frisk	Secy.	735 Bowen Longmont 80501
Boulder & Weld County Ditch Company	Ethel Ziegler	Secy.	831-17th Longmont 80501
Boulder & White Rock Ditch & Reservoir Company	Chas. Haley	Secy.	401 Main Street Longmont 80501
Butte Irrigation & Milling Company	Gene Sawhill	Secy.	6967 Valmont Drive Boulder
Carr & Tyler Ditch Company	Milton Nelson	Secy.	2040 West Longs Peak Longmont 80501
Church Ditch Company	Marcus Church	Pres.	Broomfield 80020
City Of Lafayette	City Manager		Lafayette 80026
City of Louisville	City Manager		Louisville 80027
Coal Ridge Ditch	Mildred Sarchet	Secy.	Rt. 2 Box 162 Ft. Lupton 80621
Community Ditch	M.L. Sarchet	Pres.	80-South 27th Ave Brighton 80601
Consolidated Lower Boulder Reservoir & ditch Company	Mrs. Ray Nelson	Secy.	Rt. 1, Box 218 Erie 80516
Davidson Ditch & Reservoir Company	Helen Domenico	Secy.	10315 Baseline Lafayette 80026
Dry Creek Davidson	Ralph Bixler	Pres.	9849 Isabelle Road Lafayette 80026
Dry Creek No. 2 Ditch Co.	C.D. Beitelshes	Secy.	3395 N. 95th Boulder
East Boulder Ditch Company	Public Service Company of Colo.		Denver
Eggleston No. 1	Van Valkenburg Stanley Medsker	Pres.	5050 South Emporia Denver
Eggleston No. 2	Stanley Medsker		5050 South Emporia Denver
Enterprise Irrigation Ditch Co.	Van Valkenburg	Pres	Denver
Errie Coal Creek Ditch and Reservoir Company	Dave Oscarson	Pres.	Rt. 1 Erie 80516
Farmers Ditch Company	Boyd Sheets	Secy.	3016 Kalmia Boulder

WATER DISTRICT NO. 6 (CONTINUED)

Goodhue Ditch & Reservoir Company	Lois J. Waneka	Secy.	11761 E. Pauline Lafayette 80026
Godding Daily & Plumb Ditch	Richard Frisk	Secy.	735 Bowen Longmont 80501
Godding Ditch Company Highland South Side	Richard Frisk	Secy.	735 Bowen Longmont 80501
Green Ditch Company	Roger Fell	Secy.	7861 Valmont Boulder
Harden	City of Boulder	Owner	Boulder
Harris	K. Warenburg	Owner	Louisville 80027
Houck No. 2 Ditch	Milton Nelson	Owner	2040 W. Longs Peak Longmont 80501
Howard Ditch Company	Bill Suittes	Secy.	65 Manhattan Drive Boulder
Jones & Donnelly Ditch Co.	Gene Sawhill	Secy.	6967 Valmont Boulder
Kerr No 1 & 2	Mrs. J.D. Meyhoffer	Owner	Louisville 80027
Kinnear Ditch & Reservoir	M.L. Sarchet	Pres.	80 South 27th Avenue Brighton 80601
Last Chance Ditch Company	City of Westminister	P. Owner	Westminister 80030
Leggett Ditch & Reservoir Company	Richard Frisk	Secy.	735 Bowen Longmont 80501
Lynner-Cottonwood Consolidated Ditch Company	Walter Wise	Secy.	11587 Jasper Road Canfield Erie 80516
Lower Boulder Ditch Company	Mrs. Carol Nelson	Secy.	Rt. 1, Box 218 Erie 80516
Martha M. Mathews	A.F. Bailey	P.Owner	11975 Konosha Road Erie 80516
Marshall Reservoir	M.L. Sarchet	Pres.	80 South 27th Avenue Brighton 80601
Marshallville Ditch Company	Ewalt Anderson	Secy.	Rt. 3, Box 325 Boulder
McGinn Ditch Company	Alice Clyncke	Secy.	7123 Baseline Road Boulder
McKay Reservoir	M.L. Sarchet	Pres.	80 South 27th Avenue Brighton 80601
N.K. Smith & Tyler Ditch	Max Serafina	Owner	Rt. 4 Longmont 80501
New Anderson Ditch Company	Wm. Light	Pres.	City Hall Boulder
North Boulder Farmers Ditch Company	John Reich	Secy.	P.O. Box 227 Boulder
Original Cottonwood No. 2 Ditch Company	Albert Kolb	Secy.	7715 Arapahoe Rd. Boulder
Rural Ditch Company	Richard Frisk	Secy.	735 Bowen Longmont 80501
Silver Lake Ditch Company	Everette Long	Secy.	3240 Broadway Boulder
Schearer Ditch Company	L.W. Van Fleet	Owner	Denver
Smith & Emmons Ditch Company	Ward Burrett	Secy.	Rt. 4, Box 54 Longmont 80501
Smith & Goss Ditch Company	City of Boulder	P.Owner	Boulder
South Boulder Canon Ditch	Joe Beauprez	Pres.	1042 North 95th Lafayette 80026

WATER DISTRICT NO. 6 (CONTINUED)

South Boulder & Bear Creek Ditch	City Clerk Lafayette	Secy.	201 East Simpson Lafayette 80026
South Boulder & Coal Creek Irrigating Ditch Company	Ruth Bowes	Secy.	9182 Dillon Road Louisville 80027
Tom Delehant Ditch	Milton Nelson	Pres.	2040 W. Longs Peak Longmont 80501
William C. Hake	Mrs. J.D. Mayhoffer	Owner	Louisville 80027

WATER DISTRICT NO. 7DITCH AND RESERVOIR COMPANIES

Bayou Association of Ditches	Robert Rock	Secy.	4360 Tabor Street Wheatridge
Boyle	A.T. DeBell		3951 W. 56 Way Denver
Church (Golden City & Ralston Creek)		Owner	Northglenn City Hall Northglenn, CO
Croke Canal	Barbara Fulton	Secy.	Farmers Reservoir Irrigation Company 80 South 27th Brighton
Colorado Agricultural	Louis Rullo	Secy.	11621 Riverdale Road Denver
Cort Graves and Hughes	Sam Spano		6640 West 52nd Ave. Arvada
Denver View Water Company	Wayne Harkness	Secy.	Rt. 1, Box 590 Golden
Farmers Highline	Mrs. Duran	Secy.	Farmers Highline Cana. and Reservoir Company 8889 Washington Ave. Denver
Fisher	Henry Johnson	Secy.	Box 840 Denver
Kershaw	Allan Jones		West 71 & Mariposa Denver
Lee Stewart & Eskins	Albert F. Ervin	Secy.	12703 W. 52nd Avenue Arvada 80002
Lower Clear Creek Company (Clear Creek and Platte River Ditch)	Jim Fukaye	Secy.	Rt. 1, Box 027 Denver
Manhart	George Ditolla		6030 Wolff Arvada
Ouelette	R.C. Lyon		4240 Garland Lakewood
Reno Juchem & Swadley Longan	Mrs. Ray Gieble	Secy.	Consolidated Juchem Ditch & Reservoir Company 7050 West 61st Avenue Arvada
Rocky Mountain, Miles & Eskins and South Side	Lyle Bush	Secy.	Adolph Coors Company Golden
United Water Company	Henry J. Johnson	Secy.	Box 840 Denver
Wannemaker	Lyle Bush	Secy.	Adolph Coors Company Golden
Welch and Agricultural	Dwight Neill	Manager	Agricultural Ditch & Reservoir Company 10080 West 27th Ave. Denver

CLEAR CREEK DITCHES AND SUPERINTENDENTS

Welch	Eugene Cress Office	922-2815 238-3606
Church	Art Young Supt. Harold Davis Ditch Rider	424-6636 278-0755
Agricultural	Eugene Cress	922-2815
Coors Industrial	Coors	279-8060
Farmers High Line	Bill Baker	422-4658
Wannemaker	Coors	279-8060
Lee Stewart Eskins	J.O. Greenfield	279-2974
Croke	Art Young Harold Davis	424-6636 278-0755
Rocky Mountain	Coors	279-8060
Reno Juchem	Robert Dextra	424-4563
Slough	Bob Rock	424-4563
South Side	Coors	279-8060
Ouelette	Robert Claxton	455-1231
Boyles	Vincent DeBell	429-0210
Kershaw	Allan Jones	429-1881
Fisher	Giudo Ursine Van Valkenburg P.S. Co.	429-4840 571-8203
Clear Creek & Platte	F. Wooley J. Fukaye	452-8238 452-8208
Colorado Agricultural	Roy McIntosh Louis Ruzzo	452-8275 452-8260 629-6958
*Manhart	George Ditolla	429-0139 429-1839
Standley Reservoir	Art Young	424-6636
Ralston Reservoir	Wally Wilcox	279-4222
Consolidated Reservoir		233-5945

DITCH RIDERS

Lyle Bush	Coors	986-5426
Ken Vaught	Coors	986-0516
Neil Jaquet	Coors	278-8507
Bob Adams	Farmers High Line	279-3747
Wade Isham	Rocky Mountain	422-7039
Joe Griggs	Rocky Mountain	278-3870
M/M Ray Leister	Reno Juchem	237-8581
*Ralston Creek		

DITCH AND RESERVOIR COMPANIES

City of Aurora	Tom Griswold 750-5000 Ext. 321		City of Aurora 1470 E. Havana Aurora
City and County of Denver	Gary Bishop 623-2500 Ext. 273		Board of Water Commissioners 144 W. Colfax Denver
City of Englewood	Vince Wertin 761-1140 Ext. 270		City of Englewood 3400 S. Elati Englewood
Last Chance Ditch Company No. 2	Paul Johnson 623-2500	Secy.	Board of Water Commissioners 144 W. Colfax Denver
Nevada Ditch Holding Company	Paul Johnson 623-2500	Secy.	Board of Water Commissioners 144 W. Colfax Denver
Northern Colorado Irrigation Company	Robert Rosendale 733-4292	Supt.	Board of Water Commissioners 144 W. Colfax Denver
Platte Water Company	Paul Johnson 623-2500	Secy.	Board of Water Commissioners 144 W. Colfax Denver
Tri City Trust	Paul Johnson 623-2500	Secy.	Board of Water Commissioners 144 W. Colfax Denver

WATER DISTRICT NO. 9DITCH AND RESERVOIR COMPANIES

Bergen Ditch & Reservoir Company	Wm. Grant	Owner	Western Federal Savings Building Denver
Bowles Ditch Company	Wm. Grant	Owner	Western Federal Savings Building Denver
Colorado Central Power Company Harriman Ditch Company (AKA Arnett Ditch)	Leonard Reichwein	Engr.	Evergreen Denver Water Board
Hodgson Ditch Operating Association	B. F. Lowell	Pres.	Mt. Morrison
Independent Highline Ditch Company	Stan Harwood	Owner	Mt. Morrison
Pioneer Union Ditch Company	Jack McCoy	Pres.	Mt. Morrison
Ward Ditch Company	Wm. V. Hodges, Jr.	Secy.	Denver Club Bldg. Denver
Warrior Ditch Company	Gordon Koon		Mt. Morrison

WATER DISTRICT NO. 23

Jefferson Lake Ditch Company Tunnel Water Company	Ralph Johnson Vivienne Woodward	Pres. Secy.	Jefferson 80456 P.O. Box 1584 2319 East Mulberry Ft. Collins
Water Supply & Storage Company	Vivienne Woodward	Secy.	P.O. Box 1584 2319 East Mulberry Ft. Collins

WATER DISTRICT NO. 48

Comet Ditch	McIntyre Crk. Ranch Inc. Ron Hunt	Mgr.	(435-9537) Glendevy Rt. Jelm, WY 82063
Hills Ditch	McIntyre Crk. Ranch Inc. Ron Hunt	Mgr.	Glendevy Rt. Jelm, WY 82063
Homestead	McIntyre Crk. Ranch Inc. Ron Hunt	Mgr.	Glendevy Rt. Jelm, WY 82063

WATER DISTRICT 49

Austin Ditch	Ernest MacArthur	Owner	Stratton 80836
Hale Ditch	Harold W. Hodsen	Admin.	Hale 80730
Newton Ditch	John Lingel	Owner	Burlington 80807
Ragan Ditch	Howard Hamm	Owner	Burlington 80807
Republican Ditch	Howard Hamm	Owner	Burlington 80807
Tuttle Ditch	Ernest MacArthur	Owner	Stratton 80836

DITCH AND RESERVOIR COMPANIES

Batton Ditch Company	Clifford Sherwin	Owner	P.O. Box 63 Sterling 80751
Bravo Ditch	Ivan Barden	Secy.	Iliff 80736
Carlson Ditch Company	Hulbert Reichelt	Secy.	Julesburg 80737
Chambers Ditch	Wm. Condon	Owner	916 Fairhurst Street Sterling 80751
Davis Brothers Ditch Company	Paris Accomasso	Secy.	Atwood 80722
Farmers Pawnee Ditch Company	Robert Roberts	Secy.	P.O. Box 70 Sterling 80751
Harmony Ditch Company No. 1	Mrs. Howard Hamilton	Secy.	P.O. Box 205 Crook 80726
Henderson & Smith Ditch Co.	Scalva Brothers	Owner	R.R. Sterling 80751
Iliff & Platte Valley Ditch Company	Allen R. Pyle	Secy.	228 S 3rd. Street Sterling 80751
J.B Ditch Company	Frank Manuello	Owner	Iliff 80736
Julesburg Irrigation District	Herbert Bonesteel	Secy.	Julesburg 89737 474-3737 474-2189
Liddle Ditch Company	Don Liddle	Pres.	Ovid 80744
Lone Tree Ditch Company	Allen R. Pyle	Secy	228 S 3rd. Street Sterling 80751
Long Island Ditch	State Game, Fish & Parks	Part Owner	Crook 80726
Low Line Ditch Company	Wm. Hoel	Secy.	22811 Co. Rd. 36 Sterling 80751
North Sterling Irrigation District	Alex Michel	Secy.	205 1/2 Main Street Sterling 80751
Peoples Ditch Company	Sam Karg	Secy.	Rt. 2 Sterling 80751
Peterson Canal & Reservoir Company	Jacob Sanger	Pres.	Ovid 80744
Powell & Blair Ditch	Allen R. Pyle	Secy.	228 S 3rd. Street Sterling 80751
Prewitt Reservoir Company	Alex Michel	Secy.	205 1/2 Main Street Sterling 80751
Protor Water	Allen R. Pyle	Secy	228 S 3rd. Street Sterling 80751
Ramsey Ditch Company	Don DeMers	Secy.	708 Elm Street Sterling 80751
Red Lion Ditch Company	Maynard Sonnenberg	Secy.	P.O. Box 1271 Sterling 80751
Schneider Ditch Company	James Williamson	Secy.	Atwood 80722
Settlers Ditch Company	Charles Atkinson		Crook 80726
South Platte Ditch Company	Charles Bartlett	Secy.	Merino 80741
South Reservation Ditch Co.	James Parker	Secy.	Ovid 80744
Springdale Ditch Company	Robert Roberts	Secy.	P.O. Box 70 Sterling 80751
Sterling Hereford Cattle Company Ditch	Cliff Sherwin	Owner	Sterling 80751

WATER DISTRICT NO. 64 (CONTINUED)

Sterling Irrigation Company	Lawrence Giacomini	Secy.	P.O. Box 1013 Sterling 80751
Sterling No. 2 Ditch Company	Maynard Sonnenberg	Secy.	P.O. Box 1271 Sterling 80751
Tamerack Ditch	State Game, Fish & Parks	Owner	Crook 80726
Upper Harmony Ditch Company	Garold Marick	Secy.	Crook 80726

DISTRICT NO. 64 OFFICIALS

BRAVO

Pres.	Victor Ramey	17340 Co. Rd. 370	Sterling	522-0477
Secy.	Ivan Barden	19679 Co. Rd. 55	Iliff	522-8002
Rider	John Held	17915 Co. Rd. 370	Sterling	522-2416

CARLSON

Owner	Hub Reichelt		Julesburg	474-4300
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DAVIS BROS. DITCH

Pres.	Harold Schott	4237 Co. Rd. 31	Atwood	522-6551
Secy.	Paris Accomasso	15465 Co. Rd. 12	Atwood	522-6429
Rider	Perry Accomasso	15465 Co. Rd. 12	Atwood	522-6429

FARMERS PAWNEE CANAL

Pres.	Herb Vandemoer	225 Country Club	Sterling	522-3372
Secy.	Robert Roberts	717 So. 7th Avenue	Sterling	522-4343
Rider	David Littler	13698 Corrine Rd.	Sterling	522-3101

HARMONY NO. 1

Pres.	James Roberts		Crook	886-3462
Secy.	Mrs. Howard Hamilton		Crook	886-2833
Rider	Lorin Lowery		Crook	886-3665

HARMONY NO. 2

Pres.	Alvin Brunkhardt		Crook	886-2682
Secy.	Garold Marick		Crook	886-3641

HENDERSON SMITH

Scalva Brothers		13407 Co. Rd. 370	Sterling	522-2539 522-4577
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ILIFF AND PLATTE VALLEY

Pres.	Allen Freeman	26774 Co. Rd. 385	Iliff	522-8038
Secy.	Allen Pyle	228 S 3rd.	Sterling	522-5762
Rider	William Huey	24081 Highway	Iliff	522-3802

JULESBURG IRRIGATION DISTRICT AND PETERSON DITCH

Julesburg Irrigation Office			Julesburg	474-3737
Pres.	Clarence Jenik		Ovid	463-5732
Supt.	Tom Frame		Sedgwick	563-5737
Coordinator	Bud Bonesteel		Julesburg	474-2189

LIDDLE

Pres.	Don Liddle		Ovid	474-2300
Secy.	Hub Reichelt		Ovid	474-3400

LONE TREE

Pres.	Maynard Sonnenberg	406 Highland Drive	Sterling	522-1390
Secy.	Maynard Sonnenberg	406 Highland Drive	Sterling	522-1390
Rider	Ralpy Freeman	101 East 1st Avenue	Iliff	522-8088

DISTRICT NO. 64 OFFICIALS (CONTINUED)

LOWLINE

Pres.	Hubert E. Fritzler	21575 Co. Rd. 74	Sterling	522-1376
Secy.	Wm. Hoel	Rt. 2	Sterling	522-7312
Rider	Albert Workman	13524 Co. Rd. 37	Sterling	522-7198

PEOPLES

Pres.	Tom DeSoto	24355 Co. Rd. 40	Sterling	522-2609
Secy.	Sam Karg	23690 Co. Rd. 40	Sterling	522-1469
Rider	Tom DeSoto	24355 Co. Rd. 40	Sterling	522-2609

POWELL

Pres.	Maynard Sonnenberg	406 Highland Dr.	Sterling	522-1890
Secy.	Allen Pyle	228 S 3rd	Sterling	522-5762
Rider	William Huey	24081 Highway 138	Iloff	522-8302

SCHNEIDER

Pres.	Elmer Rasmussen	8917 Co. Rd. 370	Sterling	522-2322
Secy.	James Williamson	17880 Co. Rd. 16	Atwood	522-1910
Rider	Perry Accomasso	15465 Co. Rd. 12	Atwood	522-6429

SOUTH PLATTE DITCH

Pres.	Keith Propst	2464 Co. Rd. 25	Merino	522-0090
Secy.	Charles Bartlett	13244 Co. Rd. 6	Merino	522-7586
Rider	Elmer Higgason	419 Park Street	Merino	522-3314

SOUTH RESERVATION

Pres.	Jim Parker III		Ovid	463-5382
Rider	Jim Parker III		Ovid	463-5382

SPRINGDALE

Pres.	Gilbert Schuman	Rt. 1	Sterling	522-1943
Secy.	Robert Roberts	717 South 7th Avenue	Sterling	522-4343
Rider	Alfred Leckler	13614 Co. Rd. 37	Sterling	522-1460

STERLING IRRIGATION COMPANY 1

Pres.	Richard Ramey	1005 Co. Rd. 39	Sterling	522-5705
Secy.	Lawrence Giacomini	131 Hamilton Street	Sterling	522-0751
Rider	Glen Mayerholz	13572 Rd. 37	Sterling	522-5719

WATER DISTRICT NO. 65DITCH AND RESERVOIR COMPANIES

Bar Eleven No. 2	Miller & Goodman	Owners	Wray 80758
Chief Creek Ditch	Wiltfang & Goodman	Owners	Wray 80758
Hays Creek Ditch	Frank Miller Est.	Owner	Wray 80758
Hays Creek Ditch #3	Lee Archer	Owner	Wray 80758
Laird Ditch	Richard Galvin	Secy.	Laird 80739
O'Donnell Ditch	Archie Miller	Owner	Wray 80758
Pioneer Ditch (Head)	Jim Jay	Secy.	Laird 80739
Pioneer Ditch (St. Line)	Jim Jay	Secy.	Laird 80739
Wray Ditch	Marion Barnett	Secy.	Wray 80758

WATER DISTRICT NO. 76

Sand Creek Ditch	Chimney Rock Grazing Association		S.W. of Laramie, WY
Spring Creek Ditch	Frank Lilley	Ranch Mgr.	745-9575
	Chimney Rock Grazing Association		S.W. of Laramie, WY
	Frank Lilley	Ranch Mgr.	745-9575

WATER DISTRICT NO. 79

Rosenklans Ditch	Robert Jones, Sr.	Owner	Wray 80758
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WATER DISTRICT NO. 80

Altura (Duck)	Ron Heitman	Pres.	838-5496 839-1406
Denver Water Board			
Cheesman Reservoir	Carl Kershmeier		647-2213
District Foreman	Hank Bode,		838-5314
Asst. District Foreman	Gene Bode		838-4185
Roberts Tunnel East Portal	Bob Woods		838-5921
Lining Reservoir	Kenosha Trout Club		838-5684
J. O. Hill Reservoir	West Creek W & S District		Rt. 2, Box 154 Sedalia 80135 687-9067
Wellington Reservoir	Ron Heitman	Pres.	838-5496 839-1406
Westcreek Reservoir	West Creek W & S District		Rt. 2, Box 154 Sedalia 80135 687-9067

WATER COMMISSIONER'S SUMMARY

WATER TABULATION FOR 1979 BY SOURCE AND USE

A. DIRECT FLOW DIVERSIONS

ALL FIGURES IN ACRE FEET

B. STORAGE REPORT

WATER DISTRICT	1 - 0	1 - 1	1 - 2	1 - 4	1 - 10	2 - 0	2 - 1	2 - 2	2 - 4	2 - 10	3 - 1	3 - 2	3 - 10	4 - 0	4 - 1
1	185980	121941		8080	4897		3776			6896					
2	53610	146052		7045*	229								250	453	
3	75606	33431	10601		94660	11322	2914	1169	212	216177	22678			7569	10083
4	41142	42619	2490			1307	9066			301				78	7217
5	13556	36147					4265			462					
6	18727	41619	6764	29*	8	340	6819	20340		16					
7	13686	50666	1329	16543	15677		1652	139		2082			1165*	10440	70
8	433	28393	46515	25564			7184			464	2263			300	
9	3288	4565	3394				902	370							
23	22	61992	8060	3389	498*		87	675							
48		12537													
49		2356													
64	13914	93518		168	3228		812			979	741	236*	898		
65		13055													
80	23784	7208					18			7904					
TOTAL	443748	696099	79153	53715	118699	12969	37495	22693	212	235281	25682	476	1148	18840	17370

SOURCE USE

- 1. River
- 2. Reservoir
- 3. GW
- 4. TB
- 5. NS
- 6. Collective
- 0. Storage
- 1. Irr.
- 2. Mun.
- 3. Comm.
- 4. Ind.
- 6. Fish
- 10. Other
- * 7045 in District 2 Use 3 (Commercial)
- * 29 in District 6 Use 5 (Recreation)
- * 1165 in District 7 Use 4 (Industrial)
- * 498 in District 23 Use 5 (Recreation)
- * 236 in District 64 Use 4 (Industrial)

4 - 2	4 - 4	4 - 10	5 - 0	5 - 1	5 - 3	5 - 4	5 - 5	5 - 10	6 - 0	6 - 1
937		15478		3691				77	122002	131950
440		790	934							
17518		1197						2011		
30879		128								
5745		56						536		
55519		29413								
		47062	934	3691				2624	122002	131950

ANNUAL SUMMARY - DIVISIONS
ACRE FEET (11-1-77 thru 10-31-78)

Divisions	Non-Exempt Wells #	Ditch Structures Reported #	IRRIGATION			CURRENT YEAR		TRANS-MOUNTAIN	
			Direct Diversions To Irrigation	Diversions To Storage	Storage To Irrigation	Acres Irrigated	Export	Div. to Div. Import	
1	7941	1318	696099	443748	37495	1239655	-	138791	
2									
3									
4									
5									
6									
7									
TOTAL									

Divisions	MUNICIPAL			INDUSTRIAL			RECREATION		ACTUAL STORAGE		# Decreed Applications	# Water Court Applications
	Direct Diversions	Diversions To Storage	Storage Releases	Direct Diversions	Diversions To Storage	Trans. Mtn. Hydro-power	Storage - Wildlife Parks	For Year All Reservoirs	598493	278		
1	79153	-	22693	53715	18840	18882	527	598493	278	450		
2												
3												
4												
5												
6												
7												
TOTAL												

1979 CALLS ON SOUTH PLATTE RIVER

DATE OF ISSUE	PRIORITY CALLING DISTRICT	NAME	APPROPRIATION DATE	DISTRICTS AFFECTED																	
				1	2	3	4	5	6	7	8	9	23								
1. 11-01-78	2	Barr Lake	11-20-1885																X	X	✓
2. 12-03-78	1	Prewitt Storage	05-25-1910																X		
3. 12-22-78	2	Horse Creek	03-17-1911	X	X	X	X	X	X	X											
4. 02-26-79	1	North Sterling	06-15-1908																		X
5. 03-18-79	1	Riverside	08-01-1907	X	X	X	X	X	X	X											
6. 04-09-79	8 (ab. Denver)	Cheesman	06-27-1889																		X
7. 04-18-79	1	Bijou #2	01-15-1909	X	X	X	X	X	X	X											
8. 04-22-79		No Demand																			
9. 04-24-79	2	Horse Creek	03-17-1911																		
10. 05-02-79		No Demand																			
11. 05-07-79	2	Olds	01-22-1918									X	X	X	X	X	X	X	X	X	X
12. 05-08-79	2	O'Brian	03-09-1908									X	X	X	X	X	X	X	X	X	X
13. 05-09-79		No Demand																			
14. 05-16-79	2	Olds	01-22-1918																		
15. 05-16-79	8 (ab. Denver)	Cheesman	06-27-1889																		
16. 05-18-79	2	O'Brian	03-09-1908																		
17. 05-31-79	8 CALL OFF	Cheesman	06-27-1889																		
18. 05-31-79	2 CALL OFF	O'Brian	03-09-1908																		
19. 06-05-79	2 Written	Big Bend Ditch	09-26-1873																		
20. 06-06-79	2	O'Brian	03-09-1908																		
21. 06-06-79	8 (ab. Denver)	Cheesman	06-27-1889																		
22. 06-07-79	2	O'Brian	03-09-1908																		
23. 06-07-79	8 CALL OFF	Cheesman	06-27-1889																		
24. 06-07-79	2 CALL OFF	O'Brian	03-09-1908																		
25. 06-12-79	64 Written	Outlet D. Storm Res.	01-12-1921																		
26. 07-03-79	2	Barr Lake Storage	01-03-1909																		
27. 07-05-79	1	Duel & Snyder	04-07-1884																		
28. 07-09-79	1	Duel & Snyder	11-01-1888	X	X	X	X	X	X	X											
29. 07-11-79	1	Fort Morgan	10-18-1882	X	X	X	X	X	X	X											
30. 07-28-79	2	Fulton	07-08-1876																		
31. 08-04-79	2	Brighton	11-01-1871																		
32. 08-10-79	2	Brighton Off	11-01-1871																		
33. 08-17-79	1 CALL OFF	Ft. Morgan	10-18-1882	X	X	X	X	X	X	X											

SUGGESTIONS AND RECOMMENDATIONS

PERSONNEL

OFFICE EXPENSES

The administrative field personnel, namely the water commissioners and their deputies, maintain some type of an office in their own homes since they are on call at all times due to the nature of their work. The size, equipment, and use of that office are, of course, not only related to their administrative responsibilities and functions but also to the availability and convenience of space. Nevertheless the need for office space in the home does exist and is provided by the individual at the expense of a reduction of space for the family. Further, most of those employees rely upon their telephones, a business necessity, for communication with the various water users and other staff members. Since these field people are out checking diversions, streamflow, and water use much of the time, their wives or other members of the family must take and relay calls as necessary. Secretarial help is additionally provided by family members, generally the wife, in the generation of diversion reports and other correspondence.

It is again proposed, as it has been in the past, that the budget include, and approval be granted for the payment of a minimum of \$50 per month in addition to the regular salary to each such person maintaining a field office in his own home. To provide some equity, the allowance suggested could be scaled according to the circumstances in each case with the maximum being \$100 per month.

Although such allowance would at least be token payment for a long unrecognized responsibility of field personnel, in most cases it would scarcely cover the capital cost to the individual for space and utilities nor even approximate scale wages for the secretarial help he receives.

WATER COURT

Since the recodification of Water Law in 1969, many thousands of water rights have been adjudicated through the division water court and many more are awaiting such determination whenever the court is able to get to them. There were no major bombshells dropped in 1979 but the reaction to the "John Huston Filings" in 1978 caused many small well owners to apply for adjudication of their wells in addition to the normal new cases. There were a total of 387 new applications filed covering 1,994 structures. There were also 63 applications for quadrennial findings of diligence covering 163 structures.

There was a relatively new water judge and an even newer referee in the Water court as 1979 began so the number of cases closed early in the year was smaller than anticipated. Summer leave schedules and a two month illness for the referee also contributed to a lower than anticipated case closing number. The yearly total for judgements was 234 cases covering 1,529 structures and 44 dismissals covering 72 structures. Judge Behrman has set a higher goal in 1980 in hopes of helping to alleviate a portion of the water case backlog.

The new case numbering system introduced in January, 1979 appeared to work quite well with a very few exceptions. Division One Water Court did not extend the new numbering system to quadrennial applications in 1979 due to some anticipated confusion with tying new numbers to old cases. However, a push for standardization within the numbering system encouraged a longer look at the system. As a result, all applications filed in water court beginning in January 1980 will carry the new system number with quadrennial applications also referencing the old case number for ease of identification. This system is designed to facilitate easier processing of water court statistical data.



DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES

IRRIGATION DIVISION ENGINEER
ROOM 208 8th AND 8th OFFICE BLDG.
GREELEY, COLORADO 80631
OFFICE: 352-8712


November 13, 1979

MEMORANDUM

TO: MARGARET MC COLLUM

FROM: JIM CLARK, DIVISION ENGINEER

SUBJECT: WATER NEWS - OCTOBER



October was near normal for temperatures and only slightly below average for precipitation in the Greeley area. The UNC weather station recorded 0.94 inches of precipitation which is 92% of average. Total precipitation for the Greeley area for the irrigation year was 20.80 inches which is 170% of average. Again, there was no call on the river for the entire month.

Reservoir storage on November 1st was 933,500 AF (including Horsetooth and Carter) which is 118% of average. The river has been holding up well so many of the reservoirs are filling at this time. Total flow at Kersey for October was 49,540 AF and at Julesburg was 16,900 AF.

We welcome Valerie Bollheimer to Division One Water Court. Mrs. Bollheimer is legal assistant to Judge Behrman and has been busy increasing her knowledge of water law.

Water Court has been busy sending letters to owners of Conditional water rights reminding them that diligence must be shown on a Quadrennial basis. Many are delinquent in showing due diligence and approximately 60 have not responded to the courts letter. These 60 or so owners are being notified that the Court has set a hearing February 7, 1980 at 1:30 P.M. These delinquent owners will then have the opportunity to show cause why their Conditional water rights should not be abandoned. Any questions should be directed to the Water Court.

We wish everyone a Merry Christmas and a prosperous New Year.



DIVISION OF WATER RESOURCES


DEPARTMENT OF NATURAL RESOURCES

IRRIGATION DIVISION ENGINEER
ROOM 208 8th AND 9th OFFICE BLDG.
GREELEY, COLORADO 80631
OFFICE: 352-8712

October 12, 1979

MEMORANDUM

TO: MARGARET MC COLLUM

FROM: JIM CLARK, DIVISION ENGINEER 

SUBJECT: WATER NEWS - SEPTEMBER

Early September was quite warm and dry making excellent weather for the harvesting of crops in the area. A cold air mass moved in about the 10th and interrupted the harvest for about 5 days with cold temperatures and rain. Temperatures were near normal for the remainder of the month. Total precipitation recorded for the month at UNC was 0.94 inches or 98% of average. There was no call on the river for the entire month.

Reservoir storage on October 1st was 921,599 AF, 128% of average (including Horsetooth and Carter). Total flow at Kersey during September was 32,680 AF and for the water year was 1,049,000 AF. Total flow at Julesburg during September was 19,390 AF and for the water year was 466,300 AF.

A recent decision from Division One Water Court ruled that as long as a well permit is valid at the time of filing for a conditional adjudication proceeding, the conditions of 37-92-302 are met. Proof of continuing validity of the permit need not be shown to sustain the jurisdiction of the Court.

Rulings on applications for making conditional water rights absolute have been delayed due to the lack of sufficient information. The Court is requiring that data sheets be submitted to verify increased flow rates and to describe the acres irrigated.



DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES

IRRIGATION DIVISION ENGINEER
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OFFICE: 352-8712

September 12, 1979

MEMORANDUM

TO: Margaret McCollum

FROM: Jim Clark, Division Engineer *JRC*

SUBJECT: Water News - August

The hot, dry weather continued until August 9th when the rain showers began. The UNC weather station recorded 3.89 inches of precipitation for the month (370% of average) with most of this precipitation falling between the 9th and the 22nd. With the showers came cooler weather and less demand for water. The call on the river at the start of the month was 7-8-1876, was changed to 11-1-1871 on August 4th but reverted back to 10-18-1882 on August 10th. All calls were removed on August 17th and there was no demand on the river for the remainder of the month.

The process of getting wells into augmentation plans this summer was reasonably effective. There were some well owners who wanted to test the system but relented after they had talked to their attorney. Taking the call off the river in mid-August hampered our efforts in some cases but there is always next year.

Reservoir storage on September 1st was 999,800 A.F. (including Horsetooth and Carter) which is 129% of average. Total flow at Kersey was 77,100 A.F. and at Julesburg was 20,000 A.F.

40,
The water court is concerned about some of the spring water right applications that have been filed. Many applicants do a lot of work improving the spring without regard to the implications of the statutes. Our interpretation of the statutes indicates that any digging to perfect a spring or increase its flow makes the structure a well and therefore requires that an application be made to the State Engineer for a well permit.



DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES

IRRIGATION DIVISION ENGINEER
ROOM 208 8th AND 9th OFFICE BLDG.
GREELEY, COLORADO 80631
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August 13, 1979

MEMORANDUM

TO: MARGARET MC COLLUM
FROM: JIM CLARK, DIVISION ENGINEER *JJC*
SUBJECT: WATER NEWS - JULY

The July weather was exciting! A large portion of Division One was subjected to hot, dry weather with some occasional violent thunder storms that contained high winds, spectacular lighting shows and hail but little precipitation. Several tornado's were reported but most missed the heavily populated areas except for the tornado that slipped across the state line to hit Cheyenne, Wyoming. Fort Collins was hit by hail the size of "grapefruit" causing several injuries, one death, and much damage. The Lower South Platte River Vally received significant precipitation and hail in localized areas while the UNC weather station recorded only 0.78 inches of precipitation which is 58% of average.

The rivers dropped reasonably rapid following the peaks in mid June and the 1-18-1909 call was placed on the river July 3rd. The call went to 4-7-1884 on July 5th and 10-18-1882 on July 11th. The wells also started pumping and office personnel have been busy tagging wells that were not in augmentation plans. We have been fairly sucessful in getting most people to join one of the augmentation plans available but there are a few who want to test the system. Several cease and desist orders have been sent out and the wells are being watched in preparation for the next step if they are not brought into compliance.

Reservoir storage on August 1st was 1,117,600 AF (including Horsetooth and Carter) which is 109% of average. The total flow at Kersey for July was 33,100 AF. Total flow at Julesburg was 18,800 AF.

Judge Behrman will hold Term day September 4th with approximately 120 cases up for setting. The Referee will not hold a Term day. Those applicants desiring a hearing before the Referee should contact the Water Clerk and request a setting. The Referee has recovered from his illness and is now back at work full time.

We also welcome Dale Anderson back to work after a short stay in the hospital. Harold Coffey had a short stay in the hospital, is now out and hoping to be back at work soon.

New faces around Division One include Peggy Criswell, who is now a member of the Water Clerk Staff and Don Rice, who is the new Deputy Water Commissioner in District 3. Congratulations to Ray and Wanda Liesman on the August first birth of Joel Samuel.



DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES

IRRIGATION DIVISION ENGINEER
ROOM 208 8th AND 8th OFFICE BLDG.
GREELEY, COLORADO 80639
OFFICE: 352-8712

July 13, 1979

MEMORANDUM

TO: MARGARET MC COLLUM

FROM: JIM CLARK, DIVISION ENGINEER *E.B. for.*

SUBJECT: WATER NEWS - JUNE

Temperatures fluctuated between very warm and cool during early June causing river flows to gradually increase. Then three days of rain (2.32 inches at UNC) pushed the rivers to their peaks as 15,310 CFS was recorded at Kersey on June 10 and 3,080 CFS was recorded at the mouth of the Poudre River on June 11. Peak flow recorded at Julesburg was 7,440 CFS on June 15. There was some flood damage reported in the lower areas of the Platte River valley but generally the damage only caused some inconveniences. Total precipitation recorded at UNC for June was 3.53 inches. Total flow at Kersey for June was 451,300 AF and at Julesburg was 259,700 AF.

Reservoir storage on July 1, was 1,328,500 AF (including Horse-tooth and Carter) which is 108% of average. Storage in Chatfield Reservoir got into the flood pool before releases were started and Cheesman Reservoir spilled for the first time in a few years. There seemed to be plenty of water available but no one needed it with all the precipitation. There was only one call placed on the river during June and almost before action could be completed on the call, more water appeared than could be handled and the call was removed. June was a very good month for Junior decrees.

We wish Bruce Smith the best of luck as he travels into the wilds of Division Two to assume the duty at Salida. Bruce was the deputy in District Three, and took advantage of the promotion opportunity.

New personnel in Division One included Denise Moore - part time deputy in District 23, Don Gabriel and Jonathan Howard - part time deputies in District 1, and Rodney Wittler - summer hydro helper. We welcome you to Division One.

Ray Liesman, Water Referee for Division One, has had to spend the better part of June in the hospital. We wish Ray a speedy recovery from his ills.



DIVISION OF WATER RESOURCES

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IRRIGATION DIVISION ENGINEER
ROOM 208 8th AND 8th OFFICE BLDG.
GREELEY, COLORADO 80631
OFFICE: 352-8712

June 11, 1979

MEMORANDUM

TO: Margaret McCollum

FROM: Jim Clark, Division Engineer

SUBJECT: Water News - June

The weather has been mostly wet with temperatures somewhat below normal. Measurable precipitation was recorded at the UNC reporting station on twenty-one days of the month with the greatest amount, 1.36 inches, being recorded on the 2nd. At least two of the storms brought snow to much of the area. Total precipitation for May was 4.47 inches which is 185% of normal for Greeley. Total for the water year (November through May) is 11.71 inches, which is 195% of normal for this period. April and May have been wet enough that the farmers have had to really work to get their crops in. Other than trying to keep the reservoirs topped off, there really wasn't much of a call on the river and there have been several days with no call at all. Of course there hasn't been much need for irrigation either.

River flows have increased and with the "limited call" situation there have not been many places to put the water, so much of it has gone down river. Preliminary figures from the Kersey Gaging Station indicated the flow was 47,108 AF for March, 43.910 AF for April and 175,500 AF for May. Reservoir storage on June 1, was 1,240,000 AF, including Horsetooth and Carter, which is 111% of average.

Division One extends a hearty welcome aboard to Elton and Lucille Watson. Elton has assumed the duties of Water Commissioner in District 64 and is busy meeting the people and learning where things are. Elton comes to Division One from District 40, in Division Four, where he worked the North Fork of the Gunnison River for a number of years. We are happy to have a man of his calibre fill the position in District 64. Our thanks go to Division Four.

There is also a new member on the Greeley staff, Les Dalby is working as a Water Commissioner out of the Greeley office. Les has been in the Greeley area for some time but is new with the Division of Water Resources. Welcome aboard Les.



DIVISION OF WATER RESOURCES

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GREELEY, COLORADO 80631
OFFICE: 352-8712

May 11, 1979

MEMORANDUM

TO: Margaret McCollum

FROM: Jim Clark, Division Engineer *JJC*

SUBJECT: Water News - April

The weather continued the trend set in March by being warmer and wetter than normal. The U.N.C. weather reporting station in Greeley recorded 2.66 inches of moisture for the month which is 180% of normal. Most of this moisture fell in storms on the first and the tenth days of the month. Temperatures were above normal the latter part of the month and gave people the impression that summer was here. However, the winter storm in early May brought people back to the realities of Spring. The snow surveys on the first of May ranged between 100% and 190% of average for the various courses.

River flows stabilized some but at a high enough level to allow the filling or near filling of the lower reservoirs. Over all storage for May 1st was 875,079 AF which is 98% of average (not including Horsetooth or Carter). With Horsetooth and Carter, storage is 1,059,129 AF which is 94% of average.

The Annual Spring Water Commissioners Meeting was held on April 2nd. In attendance from the Denver Office was Bill Mattern, Reiner Haubold, Clint Huntington, and Pat Tabatabai. The Water Referee, Mr. Ray Liesman also attended. There was a good exchange of information and the movie on the Teton Dam failure was especially interesting.

We in Division One say farewell to Bob Littler upon his retirement the end of April! Bob has been Water Commissioner in District 64 longer than he likes to admit and his shoes will be hard to fill. We wish you the best of luck, Bob.



DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES

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 GREELEY, COLORADO 80631
 OFFICE: 352-8712 HOME: 484-3917

APRIL 11, 1979

MEMORANDUM

TO: MARGARET MC COLLUM

FROM: JIM CLARK, DIVISION ENGINEER

SUBJECT: MARCH WATER NEWS

March temperatures were warmer than the average and the 2.90 inches of precipitation recorded by the UNC weather reporting station in Greeley was 387% of normal. Although most of the precipitation fell in the period of March 17-22 there has been sufficient precipitation through out the month to keep the farmers out of the field most of the month. There was also some heavy snow fall in some areas of the mountains. The april first snow surveys ranged between a low of 100% and a high of 160% of average for the various courses.

The increased precipitation and warmer temperature increased the river flows some and the reservoir storage picture has improved. Total storage for the Division is 799,311 AF which is 92% of average (not including Horsetooth and Carter).

Reiner Haubold and Bob Bosson were in the area in March to measure water levels in the wells in the Bijou Hill area. An attempt is being made to determine water table trends in this area because there is a great concern by the well owners that the water table is dropping excessively.

A belated welcome is extended to Arlyn Davison and wife Bonnie who have returned to the Division One field. Arlyn has resumed duties as water commissioner in districts 49,65, and 79 and now lives in Wray.

The paper work associated with the Huston filings continue to decend upon the Water Court. The stack now measures something in excess of three feet and grows daily. Numerous meetings of concerned citizens have been held and with the newspaper coverage, interest continues to grow.




DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES
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March 8, 1979

MEMORANDUM

TO: Margaret McCollum

FROM: James R. Clark, Division Engineer 

SUBJECT: Water News -February

Temperatures moderated some in February and allowed some of the ice to start clearing from the rivers. There was little precipitation for the month as the UNC weather reporting station in Greeley recorded 0.06 inches for the month.

The snow survey results for March 1st showed a small increase in moisture content over the February 1st snow survey. However, with the below average precipitation for February, the cumulative percent of average dropped to 120% for March 1st.

Reservoir storage in general continues to be below average. The cooler temperatures have kept runoff to a minimum and consequently minimal water has been stored. The Prewitt Reservoir dam sustained some damage in Feb. and storage was halted so that repairs could be made. Ice had built up under a section of concrete facing and high winds caused the ice to shift forcing the concrete slab out of place and exposing a section of the dam face to wind and water erosion. Prewitt Reservoir is at 113% of average capacity with 22410 A. F. stored.

Preliminary figures for the total February flow along the South Platte River show 31910 A.F. by Kersey which is 79% of average. The total reservoir storage for the Division is 680275 A.F. or 82% of the 10 year average (this does not include Horsetooth and Carter).

A meeting of the ditch companies from Districts 1 and 64 was attended by the Water Referee-Ray Liesman, Ed Blank, Bob Samples, and Bob Littler. Ray explained the legal process involved in trying to get wells as alternate points and other matters. The meeting was well attended and a lot of information was shared.

slw



DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES
JAMES R. CLARK
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ROOM 208 8th AND 8th OFFICE BLDG.
GREELEY, COLORADO 80631
OFFICE: 352-8712

February 7, 1979

MEMORANDUM

TO: C. J. Kuiper
FROM: Jim Clark *JRC*
SUBJECT: January Water News

The word for January has been COLD, COLD and more COLD! Reports indicate the frost is as deep as 60 inches in some locations. There have been numerous occasions of frozen water pipes and all the other discomforts associated with cold weather. The Hydro's have had plenty of ice to contend with at nearly all gaging stations.

With the cold came some snow to improve the mountain snowpack. The latest snow survey on the Boulder Creek drainage indicates the snowpack is 157% of average. The Division One Reservoir Report for February 1st shows storage is 81% of average and we hope this improves as the season progresses.

Preliminary figures for total flow for January along the South Platte River show 32,450 A.F. at Kersey, which is 68.3% of average.

Due to the large number of filings, the December Resume filled 70 pages. The Water Judge will hold term day March 6th to set court dates for all matters that have been re-referred or protested. People wishing to set dates for new filings should contact Judge Behrman's clerk, Shirley Stow at 356-4000 ext. 554. Anyone wishing to set dates before the Water Referee should call ext. 550. The new telephone number for Water Court is 356-4000. We welcome Debbie Lynn who is new in the Water Court.

Effective the first of February, the new Assistant Division Engineer is Ed Blank - formerly the Hydro in Division Seven. Welcome aboard Ed.

JRC/EWB/slw

Richard D. Lamm
Governor



C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES
JAMES R. CLARK
IRRIGATION DIVISION ENGINEER
ROOM 208 8th AND 8th OFFICE BLDG.
GREELEY, COLORADO 80631
OFFICE: 352-8712

January 9, 1979

MEMORANDUM

TO: Lana Cook
FROM: Jim Clark *JRC*
SUBJECT: December Water News

The first week of December found the State Engineer and several members of his staff in the Greeley Water Court. The case being heard was the City of Northglen application (W-8445) for Laramie-Fox Hills and Arapahoe aquifer wells. We expect this case to give us some guidance for bedrock aquifer wells, also known as SB 213 wells.

The Legislative Council Committee on Water and Coal Slurry has submitted three bills (Bills 10, 11 & 12) to be considered during this session. These bills also deal with the water in bedrock aquifers.

On December 29, 1978 Case No. W-9537-78 was filed as an application for conditional water rights. The application includes 2333 wells and proposed wells in six counties taking water from the bedrock aquifers.

According to one report we just went through the coldest December since 1917. The cold brought with it some good snow for mountains and plains.

We congratulate Don Brazelton and George Sievers on their recent promotions in the Greeley office.

The Annual Division I dinner was again a success, in spite of the snow and slick roads that plagued the country. A good turn out and slide show by Bob Samples made it a very enjoyable evening.

The total flow of the South Platte at the Kersey Gage for the month of December was approximately 55,000 AF.

We had continuous calls on the South Platte through December, with the Prewitt Reservoir call of 5/25/1910 in effect most of the month.




DIVISION OF WATER RESOURCES

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OFFICE: 352-8712

December 7, 1978

MEMORANDUM

TO: Lana Cook

FROM: James R. Clark, Division Engineer 

SUBJECT: November Water News

Congratulations are in order to Ray Liesman and Marcy Spelts whose appointments as Water Court Referee and Water Court Clerk, respectively, are effective December 1, 1978. Nancy McCreery and Mary Crispin round out the Water Court staff. We're looking forward to working with this new staff along with Robert Behrman, whose appointment as Water Judge was reported earlier.

Ray Liesman and Reiner Haubold attended a meeting of Young Ranchers and Farmers in Grover on November 16th. Ray gave a general talk on water rights and decrees. Reiner gave a run-down on geology and hydrology of the Upper Crow Creek Area. There was quite a bit of interest in the drilling of test holes in the area for future solution mining. Also, there was some fear of communication between those holes and wells in the area.

We are anticipating a good turnout for our Annual Division I dinner on Saturday, December 2nd.

Merry Christmas and Happy New Year!

slw

Rancher wants to block uranium mining

11-14-1978

By JOHN SEELMEYER

Greeley Tribune Staff Writer

A rancher from northeastern Weld County said Monday residents of her area have begun organizing opposition to plans for uranium mining near Keota, a tiny town 45 miles northeast of Greeley.

Doris Williams, who ranches in the area, said opponents of the plans by Wyoming Mineral Corp. have begun to gather support from environmental and anti-nuclear groups.

Mrs. Williams made her comments at a meeting of the Colorado Public Interest Research Group chapter at UNC. CoPIRG members indicated they'll throw their support behind efforts to halt the plans.

"We're going to protect ourselves and we're going to protect our water," said Mrs. Williams of the residents' opposition.

Those holes became a threat to cattle, which became trapped or suffered broken legs she said.

Mrs. Williams claimed, too, Wyoming Mineral hasn't been able to sufficiently clean the water it used at a four-acre test site four miles southwest of Grover.

"The sad part is that they have come back to the state and county and asked for extensions. They have not been able to totally restore the aquifer on their test site," she said.

And she said ranchers are concerned by remarks by Wyoming Mineral officials which indicate the process could depend on wells which flow at 30 to 800 gallons per minute.

"I don't think any of us are enthused about that kind of water usage," she said.

Mrs. Williams said the state health department is understaffed and can't determine the effects of solution mining

Plans by Denver-based Wyoming Mineral call for use of "solution mining" to remove uranium deposits which underlie approximately 1,400 acres at the north edge of Keota.

In the process, the company will pump chemicals underground into uranium-bearing deposits. The chemicals free the deposits from surrounding rock and the uranium and chemicals are then pumped back to the surface for processing.

When Wyoming Mineral last month filed applications with the Colorado Health Department, it said solution mining is environmentally superior to either strip mining or underground mining.

Mrs. Williams said residents of the area first became upset when exploration teams earlier in this decade entered property without permission and didn't refill exploratory holes.

on underground water supplies.

"We're at the mercy of the corporations when it comes to testing our water supplies," she said.

State water law says industrial use will have third priority behind domestic and agricultural use, but Mrs. Williams said Wyoming Mineral's proposal apparently doesn't comply.

"It seems like things are being turned around," she said. "It seems industry is taking a number one priority."

She also voiced concern that mining at the Keota site, which is at the edge of the Pawnee National Grassland, might open pressures to begin mining within the grasslands boundaries.

Wyoming Mineral officials have said they hope to start construction of their proposed plant next year, with mining to begin in mid-1980.

Settlement of federal water claims urged

By CHARLES ROOS

News Washington Bureau

WASHINGTON — The General Accounting Office said in a November report to Congress that there is an "urgent need" to settle the federal government's special claims on water in the West.

Drought and mounting demands on scarce water supplies are aggravating an old, long-litigated problem of the government's undetermined claims, the GAO said.

In the report Comptroller General Elmer Staats endorsed President Carter's 1978 water policy initiatives and recommended that Congress work with the executive department in implementing them.

But Staats suggested that congressional action still may be necessary to resolve the issues within a reasonable time.

In Denver Felix L. Sparks, director of the state Water Conservation Board, said Colorado has intervened in a multitude of law suits in every part of the state over the federal claims to protect the rights of the state's citizens.

IN SPARK'S OPINION the cases could be resolved in the courts, if the Department of Justice would "stop dragging its feet." Nothing is being settled, Sparks said, as "one government attor-

ney after another fools around with a case for a year or two and then resigns to go into private practice."

from the public domain for a specific purpose — a national forest, wildlife refuge or Indian reservation — the government "by implication" reserves water to the extent necessary to carry out that purpose.

Critics of this doctrine point out that it conflicts with Western water law: It creates rights even though there is no diversion or "beneficial use" of water. Rights are not lost by failure to use the water. Rights seem to date from the time of withdrawal of the land. The measure of rights is vague and open-ended.

Sparks, who has held Colorado's top water office for 20 years, is concerned about the open-ended nature of the federal doctrine.

"They say they want water, but they don't say how much," Sparks said. "We never quite know if they're talking about a million acre-feet a year or a few hundred acre-feet."

THE GAO REPORT says the government's demands for existing uses on federal lands appear to be very small, though the timing and nature of water diversions might have serious local effects.

The GAO says some Indian demands will be large. Historically, most Indian tribes of the West have been settled on arid lands where water supplies are most limited.

As part of his broad water policy initiatives,

ney after another fools around with a case for a year or two and then resigns to go into private practice."

The bundle of issues which make up the dispute over "reserved" water rights is not debated as emotionally and openly as the quarrel over Western water projects, but these issues have kept Western officials uneasy and off-balance for many years.

Some of the central issues are:

—How much water, if any, is the government entitled to put to use to carry out the purposes for which it has retained ("reserved") certain Western lands?

—How much additional water, if any, are Indian tribes entitled to have? Do Indian rights date back to the time a reservation was established, or are they ancestral rights predating all other rights?

—If water is taken from present users, does the government or the Indians have to pay the users?

THE LEGAL CONCEPT of special "reserved" rights dates to landmark court decisions in 1899 and 1908, but federal activity to prove and "quantify" claims has been concentrated in the last 10 to 15 years.

The Supreme Court in 1976 reaffirmed that when the federal government withdraws land

the president has called on federal authorities to inventory and quantify the reserved rights and to work toward resolving the controversies.

The GAO report refers to several specific court cases including the "Northwest Colorado case," which has been litigated for more than 10 years at a cost of \$550,000 to the federal government and additional expense to the city of Denver, state of Colorado and other parties.

GAO says the government's claims for "consumptive" water use in Colorado appear to be "insignificant," but possible "non-consumptive" uses, such as recreation and demands for minimum stream flows and minimum lake levels, might be significant. According to GAO, other specific issues are:

—Whether federal reserved rights exist in Colorado, considering the terms of the Colorado Constitution.

—Whether national forest reserved rights take precedence over rights granted by the state for domestic, mining and irrigation purposes.

—Whether reserved rights belong to those holding permits in national forests for ski lodges, concessions and grazing.

—Whether national forest rights date back to the time the forests were reserved, near the turn of the century, or from some later federal statute.

By Bureau of Reclamation

12-15-78 Narrows Dam office
Greeley Tribune

at Fort Morgan closed

FORT MORGAN, Colo. (AP) — The U.S. Bureau of Reclamation has announced plans to close down a project office here for the proposed Narrows dam and pursue alternatives to the project that would not require new construction.

Directors of the Lower South Platte Conservancy District, which would be the major customer for Narrows water, have indicated, however, that they will seek future funding for the project.

They said they still consider the dam to be the best way to meet water needs along the river.

The project, which had been left out of the federal budget for two consecutive years, has undergone staff cutbacks since the funding problems began and the office currently operates on a skeleton staff of two persons.

Before the regular meeting of the district board on Thursday, Joe D. Hall, regional director of the bureau, told the directors

that the office would be closed sometime during the first three months of 1979. He said the two remaining staff members would be offered other jobs in the bureau.

The reclamation bureau is

the construction agency for the Narrows dam.

Hall added that the bureau plans to pursue non-structural alternatives for water storage along the South Platte River, par-

ticularly underground storage and increased use of existing reservoirs off the river channel.

The bureau also will continue to maintain about 2,300 acres of land pur-

chased for the project until funding is restored or until Congress ends authorization for the project, Hall said.

That land is leased to and farmed by previous owners and other farmers.

Foothills project gets permit

GREELEY TRIBUNE

12-18-1978

DENVER (UPI) — The U.S. Army Corps of Engineers has agreed to issue a construction permit for the long-proposed Foothills water project, with some stipulations on water conservation.

Alan Merson, regional administrator of the Environmental Protection Agency, immediately followed the Corps' announcement Saturday with one of his own, saying his agency would not oppose the issuance of the permit, apparently because of the conservation program included in the Corps' conditions for the permit.

Merson, a long-time opponent of the water project, said he would drop his opposition because of an agreement reached with the Denver Water Board during a meeting, arranged by Rep. Tim Wirth, D-Colo., that began Friday

night and ended at 5 a.m. Saturday.

Merson said his agency "had to be part of the way we do business" in the Denver area.

The Denver Water Board, as a result of the meeting, agreed to prepare a water conservation program by March 15, 1979, and to do what it can to minimize the environmental damage to Waterton Canyon, the site of the proposed dam and reservoir.

The Water Board agreed to work out a water conservation program that will have an initial goal of reducing average water consumption by 3 percent by Jan. 1, 1982, and by 5 percent by Jan. 1, 1984. The Corps of Engineers will be allowed to determine a future reduction, in the range of 3 to 5 percent, after the initial five-year period.

At the end of 10 years, the

Corps will evaluate progress and determine a reduction for the next 10-year period. The goal then is expected to be between 5 and 10 percent reduction.

The project will consist of a water treatment complex that initially could handle 125 million gallons of water a day, and a 243-foot concrete dam and reservoir at Strontia

Springs in Waterton Canyon, 10 miles southwest of Denver.

The EPA and other environmental groups have opposed the project, saying a dam could be built at the mouth of the canyon that would damage the canyon less and still meet water needs. The water board designated a site about seven miles upstream from the mouth of the dam.

State ag unit eyes well request

01-08-1979

GREELEY TRIBUNE

DENVER (UPI) — The attention of the Senate Agriculture Committee has been called to a geologist who has filed applications asking for authority to drill 3,196 wells in southern Colorado's Arkansas Valley.

John Huston of Denver and

his associates also have asked for control of nearly 500,000 acre-feet of underground Western Slope water.

Huston faces grand jury indictments in Pueblo for his 1978 well-water permit activities.

An emergency meeting of the

Senate Agriculture Committee was scheduled for Monday by Sen. Harold McCormick, R-Canon City, after state officials learned Friday of Huston's applications.

"The fact that these applications have been filed is of grave concern to me and the water users of the state of Colorado," said McCormick. "Colorado used to be called the great American desert, and I'm anxious that that not happen again."

In applications filed in several divisions of the Colora-

do Water Court, Huston and his attorney, Michael White, asked for permission to drill the 3,196 wells on state and private land in the Arkansas Valley. The applications list many, vague possible uses for the water including "irrigation, recreation and slurry pipelines."

After learning about the requests Friday, state engineer Clarence Kuiper said he believes some of the wells are the same as the 1,014 for which Huston sought permits last year.

Official pledges battle against bids for water

By GARY DELSOHN
News Staff

The state's chief water engineer said Monday that he will fight more than 3,000 applications for deep-water wells which he feels are an all-out effort to monopolize Colorado's precious underground water resources.

Clarence C. Kuiper made the pledge during a 90-minute emergency meeting called by the Legislature's two agriculture committees.

Sen. Harold McCormick, R-Canon City, said last week's applications by a Denver geologist

'If the permits were granted they would about monopolize underground water'

and his associates created "one of the worst emergencies I've ever come across."

Although the matter eventually will be decided by the state's water courts, McCormick called the meeting to brief legislators on the situation. The meeting will reconvene at 1:30 p.m. Tuesday.

McCormick pledged committee support for legislation or whatever else is necessary to help Kuiper fight the applications.

Kuiper said he will file court objections to every permit requested, but he also told committee members his office needs additional experts to help fight the applications.

"When it gets to court, you're up against the

best," he said. "I don't know if we could handle it now."

Kuiper said he was notified last week that Denver geologist John Huston, who faces criminal indictments in Pueblo in connection with similar filings made last year, made the current requests in six separate water courts in southeastern Colorado and on the Western Slope.

Huston and his associates asked for 1,014 well permits last year, a request that eventually was dropped.

As a result of the filings, Huston was indicted by a Pueblo County grand jury on 26 counts of fraud and perjury for allegedly including false information on the applications.

Kuiper said the current Huston applications could be invalid because a 1975 state law says only the owner of a land which covers the wells can make claims to the water. Kuiper said the Huston group doesn't appear to meet this requirement.

Kuiper speculated that Huston and his group may be seeking a court test on the constitutionality of the law.

"I don't know," Kuiper said, "but it's hard to see what else they could be trying to do. I know one thing for sure — if the permits were granted they would just about monopolize the state's underground water."

Kuiper said the Huston applications are even more difficult to understand in light of the astronomical cost involved with not only tapping the deep water aquifers but in pumping the water to the surface. Some of the wells would be more than 7,000 feet deep, he said.

Kuiper told committee members that Huston and his group used a "shotgun approach" in their filings, listing a score of anticipated uses for the yet-untapped water.

"They're trying to gain control of all the underground water in the state," he said. "I don't think they can do it, but we're going to have to put up a scrap."

Harvey Curtis, a Denver attorney representing Huston's group in the filings, refused to comment on the purpose of the unusual action.

In addition to the well requests, most of which were in the Arkansas Valley, Kuiper said the Huston group filed several applications for ground-water storage rights.

McCormick was particularly incensed at the filings because they were made under a host of presumably corporate names the senator claimed were designed to hide Huston's identity.

"These requests were off-color and made surreptitiously," he said. "It's up to us to see that you (Kuiper) have the legal means to fight them."



NEWS PHOTO BY FRANK MURRAY

State water engineer Clarence Kuiper:

SUBPOENA SUGGESTED

Huston Water

Plan Questioned

By CINDY PARMENTER
Denver Post Staff Writer

The possible subpoenaing of controversial Denver geologist and lawyer John Huston to testify before a Colorado legislative committee was suggested Tuesday as the state's water experts expressed amazement over Huston's activities.

The discussion of possible state responses to Huston's widespread efforts to gain control over deep, underground water took place after state officials learned Huston's efforts have extended into the Denver metropolitan area.

In 19 cases filed in late December in the state Water Court in Greeley, Huston and his associates asked for permits involving 3,479 water structures, court Referee Raymond S. Leisman said.

THE APPLICATIONS include one request for permits to drill 62 deep wells to take the return flow from 2,333 existing wells in Denver, Adams, Jefferson, Arapahoe, Larimer, Weld and Boulder counties.

Another application asks for permits to drill eight new wells and to construct two surface water-diversion projects involving

return-flow water from 514 existing wells. Believed involved in this application is the return-flow water from Denver wastewater treatment plants.

State Engineer Clarence J. Kuiper told the Senate Agriculture Committee at a Tuesday afternoon meeting that he believes Huston's plan to obtain the return-flow water from the 2,333 existing wells is "unworkable."

KUIPER SAID the return flow stays at a higher level than that at which Huston proposes to drill the 63 wells.

Huston's late December filing in the Greeley court makes his effort to corral huge amounts of scarce Colorado water even more massive.

In the court's Pueblo division, Huston also asked for authority in late December to drill 3,196 wells in the Arkansas Valley.

In simultaneous applications filed in the court's Western Slope divisions, Huston asked for control of nearly 500,000 acre-feet of Western Slope water.

State Sen. Harold McCormick, the Canon City Republican who heads the Senate Agriculture Committee, and Kuiper have responded by indicating they plan an all-out state effort against Huston's requests.

Robert Welborn, a Denver water lawyer first told the committee Tuesday he believes that Huston can't obtain title to the deep underground water because he doesn't own the land under which it is located.

BUT, THEN NOTING that Huston spent \$16,000 just to file the requests in the Pueblo court, Welborn said. "It boggles my mind," he said, making him wonder what he had missed in his review of Colorado water law.

According to Liesman, the filing fee in the Greeley court was \$17,794.

The discussion of the state response will continue at the Senate Agriculture Committee's Thursday meeting.

Filings for well permits bewildering state officials

1-10-1979

By JOHN SEELMEYER

GREELEY Tribune Staff Writer

State officials said Wednesday they're bewildered about the possible aims of groups which have made massive filing for well permits along Colorado's Front Range.

Sen. Harold McCormick, R-Canon City, said he fears the applications are an attempt to monopolize the state's water.

In the water court in Greeley, a group known as Central Metropolitan Water Users has filed 19 cases for a total of 3,454 water structures, many of them wells. The total request involves 324,000 acre feet of water.

None of the requested wells are in Weld County.

The group's filing involves water in Adams, Arapahoe, Denver, Douglas, Elbert and Jefferson counties and includes an estimated 2,300 wells which have already been issued permits.

Ray Liesman, water referee in Greeley, said the group's applications were signed by Alan Leaffer of Denver and John H. Huston, a Denver lawyer and geologist.

Leaffer, Huston and the group's attorney, Michael White of Denver, weren't available for comment Wednesday.

Huston last year filed permits for 1,014

wells in southern Colorado, but later withdrew the permits after he was indicted by a Pueblo County grand jury.

The indictments, which are still pending, alleged Huston falsely claimed his permits had the approval of the State Board of Land Commissioners, according to Clint Smith, chief deputy district attorney in Pueblo County.

Liesman said the most recent filings make no mention of the state land board.

Jim Clark, water engineer for the State Division of Water Resources in Greeley, said the applications involve numerous permits for deep wells into aquifers which engineers believe aren't

replenished by surface sources.

Those aquifers include the Denver, Laramie-Fox Hills, Arapahoe and Dawson-Arkose formations, Clark said.

State law forbids withdrawal of more than 1 percent of the water from those aquifers each year.

State Water Engineer Clarence Kuiper said the Greeley filing doesn't appear to be "engineeringly sound."

"As near as I can tell, none of the 2,333 wells are owned by the applicant, but he is filling on the return flow," Kuiper said Tuesday. "On the face of it, it's unworkable. It doesn't make sense."

In other areas of the state, Huston and

his associates have filed requests for 3,196 well permits in the Arkansas Valley, 20 natural groundwater storage facilities along the Eagle River, 16 groundwater storage facilities along the Yampa River and six underground aquifers in the Las Animas River basin.

Other persons have filed a total of 170 deep well permits on the Western Slope.

McCormick chairman of the Senate Agriculture Committee, said he's drafted legislation to allow approximately \$80,000 to Kuiper's office to investigate the permits.

Continued on page 14

1-10-79 Well permits

"It's an insurance policy and I'm anxious to get the premium paid," he said Wednesday.

McCormick said he fears water from the deep wells would be used for a coal slurry pipeline.

And, he said, if deep water supplies are depleted the result might be either depletion of surface water supplies or collapse of land which overlies the aquifers.

Greeley attorney David Miller testified before the senate agriculture committee Tuesday and questioned

whether bedrock water such as that sought by Huston's group is subject to the state's prior appropriation law.

Miller said he personally doesn't believe any law forbids speculation in water, but said the current situation is "something that could be dangerous."

Water bid scope found greater than presumed

ROCKY
MTN. NEWS By GARY DELSOHN 6/1-10-1979
News Staff

State legislators were chagrined Tuesday to learn that an unprecedented bid by a Denver geologist laying claim to enormous quantities of Colorado's underground water supplies is more massive than originally presumed.

Moments after the revelation, which left legislators scratching their heads in confusion, Harold McCormick, R-Canon City, chairman of the Senate Agriculture Committee, reaffirmed his pledge to help organize a coordinated state attack on the water bids.

In the second day of "emergency" meetings on the controversial filings for deep-water well permits, McCormick said he's drafted legislation which would give the state water engineer about \$80,000 to hire a lawyer and engineer to fight the filings.

COMMITTEE MEMBERS WERE TOLD Tuesday that a rash of Dec. 29 permit filings in various water courts by Denver geologist John Huston also included 68 permits to tap the unused water in 2,333 deep wells already operating in a six-county area around Denver.

But Clarence C. Kuiper, the state's chief water engineer, told the committee that the applications for permits in the Denver area are unsound from an engineering standpoint.

"I don't quite understand how he's going to make this thing work," Kuiper said of Huston and two associates who have asked for permission to drill more than 3,250 new and costly wells.

Kuiper has labeled the mass filings as a full-scale effort to monopolize Colorado's precious, untapped underground water supplies.

Huston and his associates warned state officials last year of the latest water-grab effort after the developers dropped their hotly contested plans to ask for 1,014 wells in southeastern Colorado.

In connection with the original filings, Huston was indicted by the Pueblo grand jury on 26 counts of perjury and fraud.

Kuiper said Tuesday that the use of any tapped water isn't nearly as important as controlling it.

Saying Huston was gambling on making a profit from such control, Kuiper declared: "When the time comes, he would sell the water."

Kuiper has also told committee members he needs assistance in fighting other well permit applications filed Dec. 29 by two groups trying to tap underground sources on the Western Slope.

Because such an issue is new in that area, Kuiper said, his office hasn't done the geological surveys to gather data to present a credible case when the matter comes to court.

MCCORMICK SAID HE WILL ask the Colorado Supreme Court for permission to consolidate the state's legal objections to the thousands of filings. A lawyer with the attorney general's office said the state can also get legal assistance there.

And, while McCormick seemed interested in a committee member's suggestion that the Senate subpoena Huston and his associates, he backed off from the idea in a later interview, saying he wanted to see what the courts did before testing the Legislature's little-used authority.

Kuiper, McCormick and others agreed that the mass filings represent a grave threat to Colorado's future water sources, and said "tens of thousands dollars" already have been spent by developers preparing the complicated and lengthy paperwork associated with the filings.

Water engineer planning court battle

DENVER (UPI) — Colorado water engineer Clarence Kuiper said he will take a number of well-financed private developers who want to tap Colorado's underground water resources to court to protect local interests.

The developers have refused to reveal the purpose in seeking the water, but three separate groups have filed for drilling permits to obtain the underground water, unrecoverable until recent technological advances were made.

Kuiper said the efforts are apparently backed by wealthy Eastern interests who stand to make huge profits by selling the water to energy development firms and other businesses.

"If they get it, there will be buyers lined up for miles," he said. Kuiper and the Colorado Legislature are preparing a strategy to block the permits and he has promised to take the case to the state supreme court if necessary.

John Huston, an attorney and geologist, has filed for permis-

sion in every water division in the state to tap the Denver Basin, which lies between Greeley and Colorado Springs and from the foothills to Nebraska.

Kuiper said the water lies deep underground and Huston's group will pay \$25,000 to drill each of the 6,500 wells he has proposed. Huston was indicted last year in Pueblo for fraud and perjury for similar water filings.

Huston listed more than a dozen possible uses on the filing permits and has declined to be specific about the intended use, Kuiper said. Huston withdrew his earlier applications after the indictments.

Kuiper said a second group, Nedlog Technology Group, has requested permission to tap 20 million acre-feet of water in an underground formation beneath Eagle, Garfield, Routt and Summit counties on the Western Slope.

Kenneth Burke, an attorney representing the Arvada-based Nedlog firm, said the firm

plans to use the water for agriculture, mining, power generation and manufacturing.

A third group, composed of two Colorado-based mineral firms, wants to sink 150 wells in La Plata and Montezuma counties for coal development in southwest Colorado.

The only legal recourse currently available to the state

is a 1973 law which requires landowners above the water to consent to the use, Kuiper said, but added the developers plan to challenge the statute's constitutionality.

"State law allows for finite sources to be depleted," Burke said. "That may not be good, but anything else would not allow for the water to be used."

Well water claims

now total

20.7 million acre feet

DENVER (UPI) — John Huston, a Denver attorney and geologist, along with other businessmen hoping to tap deep underground water aquifers in Colorado, have filed claims now on water equivalent to what could be contained in nearly 80 dams the size of Dillon Reservoir, state officials said.

State Water Engineer Clarence J. Kuiper held a joint news conference with Sen. Harold McCormick, R-Canon City, to provide an update on

the status of claims which have been filed on underground water supplies in seven courts.

Kuiper said Huston and the others interested in the water speculation effort now have asked for court approval to drill 7,426 wells throughout the state. The total amount of water involved is 20.7 million acre-feet. An acre-foot is the amount of water needed to cover one acre with one foot of water.

The water being sought is

equivalent to nearly 80 dams the size of the Dillon Reservoir, or 218 dams the size of Cherry Creek Reservoir, which is located south of Denver.

McCormick released a four-page statement outlining the situation and calling the court action, begun last December, "the ground water rush of 1978." The target for the speculation is water that was stored in aquifers millions of years ago when geologic formations were created.

"Colorado has reached a turning point in history," McCormick said. "Developers have 'discovered' these confined ground waters..."

McCormick has been the chief legislative spokesman in the fight to keep the water speculators from gaining court approval of the water. He has introduced legislation which would increase Kuiper's staff to help him in the upcoming legal battle — which is expected to be lengthy and expensive.

McCormick said Kuiper, at the urging of the state Legislature and the attorney general's office, also has asked the Colorado Supreme Court to consolidate the legal action into a single case before one water referee (judge).

The LOP lawmaker said water is valued at about \$100 per acre-foot in Colorado. Considering the fact that 20.7 million acre-feet of water are being sought, McCormick said the financial figure involved

was staggering.

"You are talking about a tremendous amount of money as well as water," McCormick said.

Kuiper said the cost of drilling the wells — if they ever are drilled — probably would be about \$40 a foot. He noted the proposed depth of the wells goes as deep as 9,000 feet. A well that deep would cost \$360,000. Although those proposals to drill the wells have given a variety of needs for the

water, officials feel some would be destined for coal slurry pipelines to carry slurry — a mixture of coal and water — out of the state.

In his statement, McCormick said, "Some political decisions, based on the best technology available, must be made with the realization that future generations of Coloradans will be profoundly affected."

Legislation already enacted allows for withdrawal of water from the aquifers over a 100-

year period. Because of the extremely slow rate at which water seeps back into the aquifers, they would be unable to provide water after that point.

Kuiper said underground aquifers throughout Colorado contain an estimated 3.1 billion acre-feet of water. He said if 50 percent of that is recoverable, that amounts to 1.5 billion acre-feet or about 200 times the amount of surface storage in the state.

Spring water prospects said good

2-13-1979

By BILL JACKSON

Greeley Tribune Staff Writer

Despite popular opinion, this winter's zero weather and thawless snow has been good. Especially if one listens to Jim Clark, Water Resources Division I engineer in Greeley.

"I like the outlook for spring runoff from the snowpack; it's much, much better than last year," Clark said Tuesday morning.

And last year's runoff was considered excellent, following a drought period which gripped eastern Colorado the previous four to five years or more.

"The soil this year is wetter than it was last year at this time. Last year it was dry and the wind blew. This year we've had good snow cover most of the winter and very little wind; we've had the best of both worlds," Clark said.

And, according to Bob Smith, superintendent of operations and maintenance at the Northern Colorado Water Conservancy District at Loveland,

He added, however, that average precipitation during the coming months will be needed to fulfill these optimistic early predictions.

Feb. 1 snowpack comparisons with average were given by Smith as being: Blue River above Green Mountain Reservoir, 110 percent; Colorado River above Granby Reservoir, 141 percent; Willow Creek, 144 percent; Granby Reservoir, 141 percent; Poudre River, 123 percent; Big Thompson River, 152 percent, and St. Vrain River, 162 percent.

"The only thing of concern right now is that the snowpack doesn't melt too fast. That could cause some flooding problems. Some of the melting we've had in the past few days is already getting into downstream rivers," Clark said.

Meanwhile, the U.S. Department of Agriculture's Soil Conservation Service said in its Feb. 1 water supply outlook that spring and summer runoff should be 10 to 30 percent above normal in the

"the snowpack in the Colorado-Big Thompson Project watersheds on the Western Slope is currently ranging from approximately 110 to 144 percent of average with the Feb. 1 streamflow forecasts showing promise of an excellent water supply year."

"The only report we have to date is that Boulder Creek is 157 percent of average," Clark said. Boulder Creek flows through Boulder, into the St. Vrain River and on into the South Platte River. He said snowpack in the mountains south of the Colorado-Big Thompson Project in northern Colorado "should range between 130 to 150 percent of average.

Clark said, "I haven't got any figures on that; it's just a 'gut' feeling."

Smith said the Feb. 1 streamflow forecasts, "coupled with the carry-over of project storage water this winter, should provide an adequate supplemental water supply and assurance of good carry-over storage when the water year ends in October."

South Platte River Watershed.

That watershed includes parts of Park, Gilpin, Boulder, Larimer, Teller, El Paso, Elbert, Washington and Yuma counties and all of Douglas, Jefferson, Denver, Arapahoe, Adams, Weld, Morgan, Logan, Phillips and Sedgwick counties.

The USDA-SCS said soil moisture in the area is rated at fair and reservoir storage is 90 percent of normal for this time of year.

The Bureau of Reclamation, in its Feb. 1 report for the Western Division System of the Pick-Sloan Missouri Basic Program, which includes north-central and northeastern Colorado as well as parts of Nebraska, Wyoming and Montana, also issued a good report.

According to that report, above normal precipitation has blanketed the area and the above-normal runoff in 1978 has resulted in improved total storage throughout the system.

Report shows new projects to help water supply

LOVELAND — Two modification projects completed in 1978 will result in long-term benefits for users of Colorado-Big Thompson Project water, according to the annual report of the Northern Colorado Water Conservancy District released recently.

The 41st annual report of the NCWCD highlights the two major projects — replacement of the Willow Creek inlet chute into Granby Reservoir and the enlargement of the Soldier Canyon Dam outlet works at Horsetooth Reservoir.

University.

That modification began in November of 1977 and is scheduled for completion by the end of the 1979 irrigation season, according to the NCWCD annual report.

Other activities of the NCWCD included the extension of the weather modification program into the 1978-79 winter season.

The report said, in part:

"A significant contributor to above-average snowpack and streamflow runoff into the CBT collection system and the

According to the report, "the low reservoir elevation last spring worked to great advantage in completing the replacement of the structure (at Willow Creek) at a substantial savings to the district and the Bureau of Reclamation."

Had the reservoir not been lowered, the report said, "the construction would most likely have been scheduled in stages over a period of years, adding significantly to the overall cost of the project."

The chute replacement began

in February 1978 and was completed in September.

"Testing of the new facility was completed in November and the new chute with its improved and tested design is not expected to require major maintenance or replacement in the foreseeable future," the report said.

The modification of the Soldier Canyon Dam outlet works at Horsetooth was made to provide improved water service to three rural domestic water associations, the City of Fort Collins and Colorado State

district service area in 1978 was the Colorado Emergency Weather Modification Program (cloud seeding) which took place during the snow accumulation period in late 1977 and early 1978.

"Financial support for the program was provided through appropriations by the Colorado Legislature and federal funding from the Federal Drought Emergency Program administered by the Bureau of Reclamation..."

The crop production summary is another success story

for the CBT and NCWCD water distribution and management, the report said.

"As a result of the record dry year in 1977, soil moisture conditions at the beginning of 1978 were very poor. Wet spring weather helped relieve this situation temporarily, but also resulted in late planting of most crops. Hot, dry weather prevailed during the remaining summer months and into early fall requiring heavy irrigation," the report said.

"Ample water supplies were

available due to above average streamflows and the supplemental supplies provided by the CBT. Although crop yields were generally comparable with 1977, total crop valuation was down. Major factors responsible for this decrease were a slight reduction in harvested acres and reduced farm prices for some crops," the report stated.

3

3-8-79

Official fears publicity harms water filing case

By JOHN SEELMEYER

GREELEY Tribune Staff Writer

A state water official said Wednesday he fears a massive water filing by a Denver lawyer and geologist may be tried in the press before it reaches the courts.

Jim Clark, engineer for the Greeley-based water division one, made his comments at the annual meeting of the Weld County Underground Water Users Association.

Clark said extensive press attention to the water filing by business groups led by lawyer John Huston may hamper the state engineer's work.

Huston has made filings on massive amounts of underground water throughout the state, including water located in aquifers thousands of feet below the surface.

He has also filed on water which seeps into sewer lines, waters trapped behind subsurface mountain moraines and water from deep wells which isn't used by present well owners.

The state engineer acts as an adviser to the water court on the claims.

Clark said the press attention puts his office "in a vulnerable position" as it prepares to advise the courts.

He noted, however, the state engineer

needs more help to analyze the massive filings and may not receive additional funding without legislative attention.

And, he said, the way to get legislators' attention may be through the press.

The handful of water users who attended Wednesday's session devoted most of their attention to the Huston filings.

Clark said state officials still aren't sure what Huston's groups plan with the filings, but said one possibility is a challenge of a 1973 state law designed to protect deep aquifers.

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Officials fear

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That law specifies that persons drawing water from the deep aquifers must own the land on the surface above the wells. And, the law limits production to one percent of the total aquifer annually.

Clark said his office doesn't believe Huston's business groups own the surface rights.

He noted, too, the limitation of one percent of the aquifer annually may

place some severe costs on Huston's plans.

The state engineer's office believes the applicant — in this case, Huston — must undertake tests to determine the total amount of water available in the aquifer.

Another major cost involves pumping of water from the wells proposed by Huston, some of which would reach more than a mile into the earth.

"The economics of removing that amount of water is just mind-bobbling," the engineer said.

Grab for water shocked state officials

GREELEY TRIBUNE

Editor's Note: Controversy has surrounded the filing by three separate groups for control of vast amounts of Colorado's underground water. A task force of reporters from Associated Press member newspapers in Colorado and The AP has probed the water situation and the persons involved in it. This is the first of a five-part series on their findings — an overview of the controversy.

DENVER (AP) — On the final filing day of 1978, three private groups flooded the state's seven district water courts with stacks of applications seeking conditional rights to more than 1.5 million acre feet per year of underground water in Colorado.

The extent of the filings was staggering, the implications immense. Gov. Richard Lamm spoke of a time bomb ticking away, and some people say it has exploded.

In total, the groundwater applications of the three groups seek about three times the total surface storage capacity of the Denver Water Board, which serves 40 percent of Colorado's population.

Using the State Engineer's Office yardstick of \$100 an acre foot, the water applied for would be worth more than \$150 million a year, when — and if

— it is brought to the surface.

The applications seek rights to groundwater beneath private, state and federal lands. A costly court battle has been joined, and water experts say it could last up to five years. The outcome could influence the future of ranching, farming, industry, energy development, municipal expansion and everyday life in Colorado.

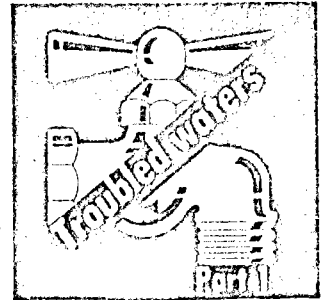
One group alone has filed for rights to more than 1.3 million acre feet of water a year — better than 85 percent of the water in question. At the center of that group is John H. Huston.

Huston is 27, a Denver resident, geologist, attorney and the son of a four-generation Western Slope mining and ranching family. His partners are Wallace Yaffee, a Boston real-estate and business entrepreneur, and Alan W. Leaffer, a former associate of Yaffee in Boston who moved to Denver 11 months ago.

Many of the applications filed by Huston's group seek rights to deeprock or non-tributary waters and were filed without the knowledge or consent of landowners, an apparent challenge to state statute.

State officials reacted with angry accusations of water

grab, speculation and monopoly as the filings made their way into publication through the district water courts.



None of the filings appear to overlap, raising in some minds the question of collusion, an allegation heatedly denied by the applicants — Huston's group, Nedlog Technology Group of Arvada, and the Colorado Springs-based Colorado Pacific Energy-Colorado Pacific Aztec.

The groups also deny speculation. They say they are applying exploration and engineering techniques long used in mineral development to reclaim groundwaters the state has turned its back on.

"These applications are illegal and we are going to fight them," said Lamm. Other state officials, water users groups and water lawyers fear a loophole may exist in the State Constitution concerning certain

types of groundwater administration.

Yet, the state had a year's warning.

Huston's group attempted to reach a royalty agreement with the State Board of Land Commissioners in 1977 to tap deep groundwaters under state lands in southeastern Colorado with 1,014 wells.

Under fire from water groups and the Attorney General's office, the board and Huston's group withdrew the applications. The Pueblo District Attorney's office argued that two board members who signed the applications did not do so during a formal meeting, and that therefore it was not a valid

Huston later was indicted by a Pueblo County grand jury on 13 counts of perjury and 13 counts of filing a false instrument in connection with those applications. The case has not come to trial.

But even as Huston's group withdrew the applications under fire, they vowed they would be back. And they are.

A major fear of many observers is that once the water rights are won, the groundwaters could be used for coal slurry pipelines to out-of-state points under the right of emi-

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ment domain in interstate commerce granted railroads and powerlines.

Huston and Colorado Pacific Energy-Colorado Pacific Aztec deny they want the water for coal slurry pipelines out of state. Nedlog says it may use some of its sought-after water for out-of-state use. (4)

What do the private groups plan to do with this vast amount of groundwater? A six-week task force study by The Associated Press and reporters from AP member newspapers in Colorado unveiled ambitious plans, including:

—Possible large-scale real-estate development for which water supply would be guaranteed.

—Tapping natural underground water reservoirs high in the Rockies for transmountain diversions to eastern Colorado. That water might also be used on the Western Slope to augment late-summer stream flows and irrigation needs.

—The possibility of salt water fish farms on the Colorado plains.

—Application of oil-field drilling technology to recover water as deep as 9,000 feet below Colorado's land surface.

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Here is what the three major groups want:

—Huston's group, under the partnership name Bluepond Associates and scores of other partnership names, filed for more than 1.3 million acre feet annually of groundwaters in almost every area of the state.

—Nedlog Technology Group of Arvada filed for 20 million acre feet believed available in the Leadville limestone formation, a water aquifer in west-central Colorado. Nedlog wants to mine 220,000 acre feet of the

groundwater annually for transmountain diversions and other uses.

—Colorado Pacific Energy-Colorado Pacific Aztec filed for 20,000 acre feet annually to be taken from groundwaters in La Plata and Montezuma counties in southwestern Colorado. The water would be produced as a by-product of coal mining and drilling for the water itself.

Sen. Harold McCormick, R-Canon City, warned that control of the amounts of water being sought in the applications would strip county commission-

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ers of land-use planning and control.

"Having both physical and financial ability to apply water to previously dry or arid areas could allow tremendous speculation in land," McCormick said.

Many of Huston's applications apparently challenge a state law passed in 1973 and most frequently referred to by its legislative designation — Senate Bill 213. The law, sponsored by McCormick, calls for land ownership as a prerequisite to tap so-called non-tributary or bedrock ground-

waters. Huston bridges at the land ownership argument and says the federal government would own most of Colorado's groundwater if that were the case.

Nedlog says it has leases to some of the lands over the groundwaters it seeks and is negotiating for leases on the rest.

Colorado Pacific Energy-Colorado Pacific Aztec says it has leases on all the lands it has filed on for groundwater rights.

Meanwhile, Wyoming has voiced fears some of the present water applications

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would result in violations of North Platte River flow agreements. Other water experts fear the same impact on requirements stipulated under the Colorado River Compact.

Federal attorneys say they will fight the applications for waters under national forests and in the Rocky Mountain National Park.

Protests numbering into the thousands against the applications have been filed in the district water courts by individual landowners, corporations and water-user groups who fear their water rights are being

threatened.

Water conservancy districts and the State Engineers Office have filed motions — now pending before the State Supreme Court — for consolidation of the challenges before a single judge, rather than choke the water courts with hundreds of individual cases.

Meanwhile, the Legislature is grinding out a package of bills to shore up what they fear is a loophole in Colorado water law governing groundwaters.

Next: The State — what was done, what was not done, and why.

Huston claims group only interested in the untapped water

DENVER (AP) — Scattered throughout eastern Colorado are landowners big and small who fear well-drilling rigs — someone else's well-drilling rigs — are going to spring up on their back yards and corporate properties or that water from their existing wells is going to be confiscated.

Denver geologist-lawyer John H. Huston, heading a group whose applications for conditional-decree water rights total more than 1.3 million acre feet a year of underground water in Colorado, says the fears are unfounded.

Huston said in an interview he only wants now-untapped groundwaters or the unconsumed portions of waters already being pumped, has no interest in the real estate overlying them and will in no way interfere with the rights of people already drawing water.

But the filings caused concern among landowners ranging from homeowners in Trinidad to the CF&I Steel Corp. and the United State government.

There were, among the legion of applications, some unusual proposed well sites, if coordinates in the applications match those on the maps of division

irrigation engineers of the State Engineer's Office.

Like the one calling for a well in the middle of U.S. 50 near the main entrance to the Pueblo West development in Pueblo County or the one that apparently would be located in the middle off U.S. 24-285 about 1.5 miles southwest of Trout Creek Pass in Chaffee County.

One application seeks permission to drill for water on Garfield Street in Trinidad, the middle of the city's residential James addition, according to City Engineer Bill Hawthorne.

Off the beaten track, one proposal would sink a well in the middle of a gravel road about three miles south of U.S. 24 just east of Colorado Springs. Decidedly in the beaten track, 30 applications are for sites within the U.S. Department of Transportation Test Center northeast of Pueblo.

On a more somber note, Lee Stanfield, 68, and his wife, Gladys, make their retirement income from their Sylmar Manor Mobile Home Park near Brighton.

Stanfield called Huston's application for groundwater under his trailer park a "rotten deal," although he admits he is not sure what the application means.

"Holy Smokes, we went to all this work to get well permits to furnish water to our property and here comes somebody trying to take it away from us," Stanfield growled. "I sure don't

want anyone coming in to drill a well on my property."

On the sunny side, Jim Sileo of Denver is tickled about Huston's water reclamation plans. He said he sold 2½ lots in central Denver to Huston about six months ago — for twice the market value. He would not say how much.

"I'd heard rumors of an artesian well on this property," Sileo said. "I knew this guy had to have some gimmick to pay that much for the land.

"The way he kept after me for it, I figured another King Tut was buried there or something," he chuckled.

Sileo said he still owns lots on either side of those he sold.

"If there is water next door, I'm wondering now if I can file for it too?" he wondered.

Among the larger landowners affected by the water applications is CF&I of Pueblo, and CF&I water lawyer Robert Welborn is not laughing.

Welborn said Huston has made applications for water beneath the company's coal property in Huerfano County, applications that total 160,000 acre feet and propose to reclaim that water with more than 1,000 wells.

"We feel strongly that the owner of the property is the only one who can obtain a right to use that type of water," Welborn said, adding that CF&I had filed a protest to the applications.

Hank Meshorer, senior U.S.

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trial attorney in Denver, said Huston's applications on federal forest and park lands will certainly require compliance with a number of federal statutes.

"I'm not going to court with a water pistol in my hand,"

said Meshorer. "This is getting to be a little Monopoly game with about eight people playing."

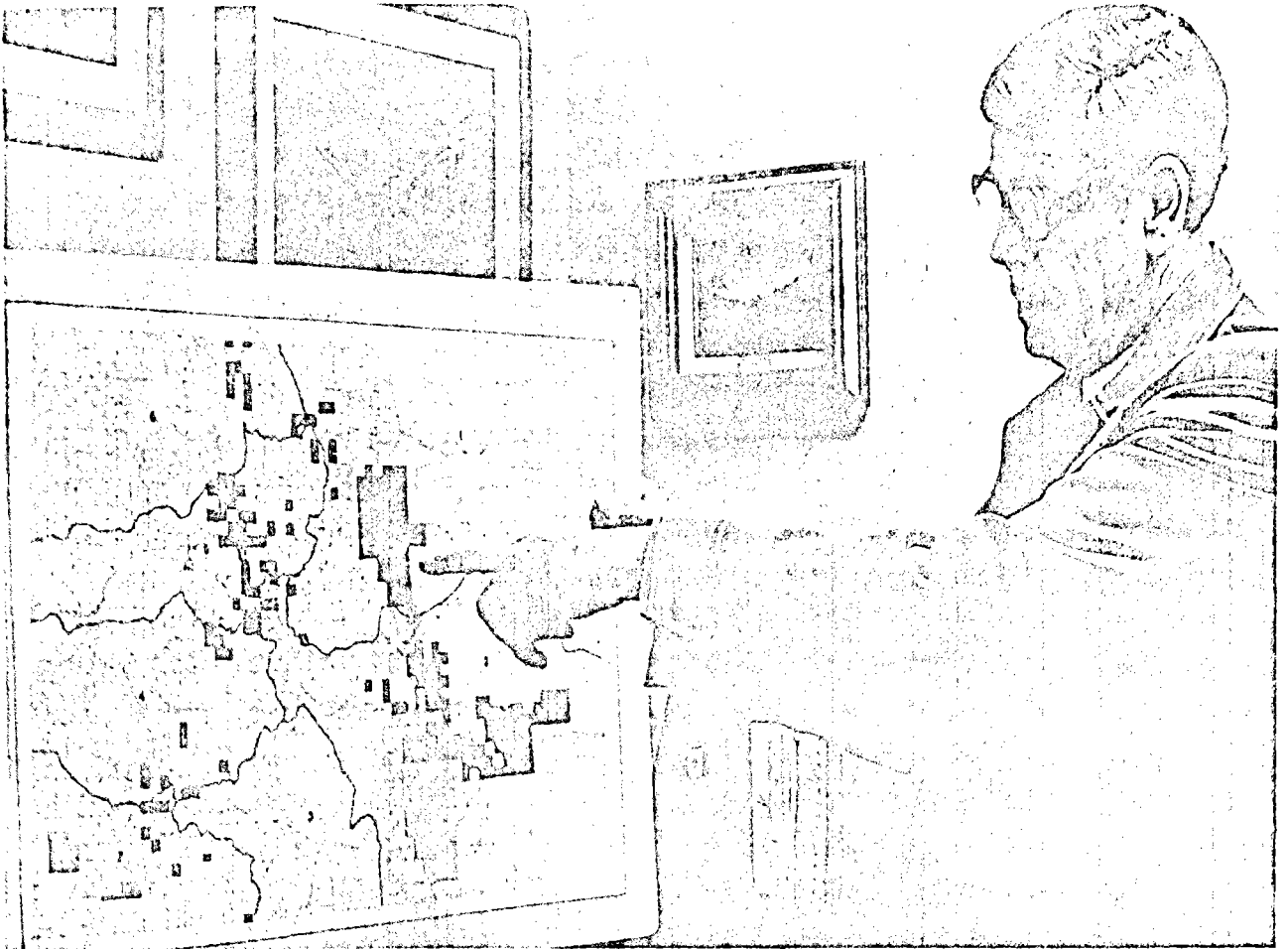
Huston has also filed for return flow, or unconsumed water, pumped from some of the

wells of the Consolidated Mutual Water Co., which supplies water to about 75,000 Jefferson County residents.

"I don't think he (Huston) has any specific way of putting that water to beneficial use —

especially in those quantities and on that many locations," said Virgil Hill, president of Consolidated Mutual.

"It must be a speculative deal, just by the mere mass of applications," Hill added.



Kuiper's concern

State Engineer Clarence Kuiper with map detailing the water rights applications he called "A raid on groundwater by what appears to be speculators." Kuiper said some of the

applications, if granted, could affect senior rights and violate interstate water compacts. (AP Laserphoto)

Huston: State has ignored important water source

Editor's Note: At the center of the controversy surrounding filings for massive amounts of Colorado's underground water reserves is John H. Huston and his partners in a series of joint ventures. For the third part of a five-part series Deep Water, Deep Trouble, members of an Associated Press task force talked to Huston and his partners — what they have done and what they plan.

By DENIS SEARLES
Associated Press Writer

DENVER (AP) — John H. Huston, a Stanford University Phi Beta Kappa geology graduate and University of Colorado law graduate, knocked state officials into the ropes early this year when his applications surfaced for rights to underground water in areas extending over 75 percent of Colorado.

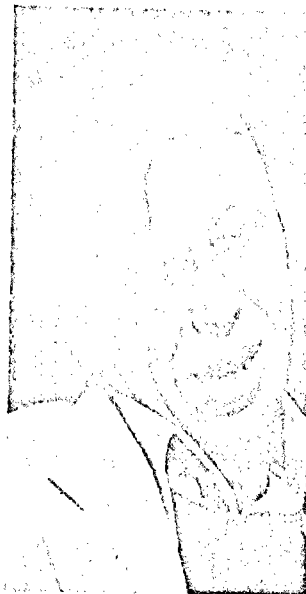
State officials have branded the filings by Huston's group for 1.3 million acre-feet of water annually and the applications of two other group as a water raid and an attempt at monopoly on Colorado's underground water.

Huston told an Associated Press task force that the state has turned its back on this water resource.

He scoffed at allegations his applications were filed at the 11th hour as a surprise move on the final filing day of 1978.

"Everybody has known for one entire year," he said in a recent interview.

Huston said his group stated publicly that it would file again for water rights following an early 1978 debacle with the State Land Commission that ended with Huston's group and the commission withdrawing applications for deep water in southeastern Colorado.



Alan W. Leafer

Huston's lawyers still are fighting Pueblo County grand jury indictments charging the geologist-lawyer with perjury and filing false instruments in that first effort. The case has not come to trial.

"One whole year's notice," Huston reminded. "The cat was out of the bag and nobody managed to wake up. This last-hour stuff...When you give someone a year's notice that is not exactly operating at the last moment."

Opponents argue that Huston does not own the land over the groundwaters on which he had filed for rights.

Huston calmly said state water law does not require land ownership for water rights. If it did, he said, the big landowners would have all the water "and you and I in the towns couldn't get a drink."

Objecting water attorneys say Huston has not taken the "first step" in water appropriation — going out on the land, surveying and making a physi-

cal effort at reclaiming the waters.

Huston countered by saying his group has spent "about \$100,000 in surveying. But that does not include geology or hydrology. That is probably another \$100,000 or close to it. The legal (attorney expenses) has been about \$200,000. A lot of people are involved and a lot of expense."

The issues will be settled in the courts, a battle that attorneys from both sides say could last up to five years.

The usually calm, drawing, 6-foot-4 Huston angrily denied rumors of collusion between his group and two others that filed for extensive water rights on Dec. 29, 1978, the last filing day of the year.

There were no apparent overlaps despite the large-scale filings by Huston and Nedlog Technology Group of Arvada and Colorado Pacific Energy-Colorado Pacific Aztec of Colorado Springs.

"It's a lie and absolutely not true. I don't know anyone in Nedlog or Aztec or whatever that is," said Huston.

"I have casual knowledge of one of the lawyers involved (Wayne Schroeder of Colorado Pacific Energy-Colorado Pacific Aztec). We had no knowledge they would file. I have not had any conversation with any of the principles," Huston said.

Property owners, from large corporations to individual homeowners, learning that Huston had filed for groundwater rights under their lands and on the return flows of existing wells, panicked in fear that water-drilling rigs would be set up in their back yards or places of business.

"Would I just arrive with a

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two pages

drill rig and say, 'Hi. Get your wash out of the way!' No. I think that went out with the dark ages," the bespectacled, 27-year-old Huston said regarding his filings for return flow on some 2,000 existing deep-aquifer wells in the Denver Basin.

As to his so-called overfilings on 3,327 existing wells in the Denver Basin, Huston gave what best could be called a Yes-But answer. "And that's a very big 'but,'" he added.

"We don't plan to disturb present consumptive use. It (the sought-after water) doesn't give us rights to real estate, pump or pipe," Huston said.

The excess capacity of those wells is what Huston seeks. "We won't disturb the present uses," he said.

Huston said he thinks 60 percent of water now being pumped from the Denver Basin deep aquifers is not consumed by the users, is returned to groundwater supplies near the

surface and eventually is carried out of state by the South Platte River.

He said he hopes to recover those excess waters through a network of 385 offsite wells.

Huston can be viewed as a creative pioneer in retrieving these groundwaters for arid Colorado. With his combined education in geology and law, he said he is trying to break new ground — but not the law — in reclaiming unused waters for use in Colorado.

He said he hopes to modify oil-field utilization techniques to maximize water retrieval from the underground water aquifers.

In addition to deep groundwater in southeastern Colorado and the unused water he says is returned by existing wells in the Denver Basin, Huston has filed for rights to what he says is untapped water from natural reservoirs high in the Rockies.

Huston, now a Denver resident, hails from a four-generation Western Slope mining and ranching family. He is backed in his venture by Boston-area developer Wallace Yaffee and a former Yaffee business administrator, Alan W. Leaffer, who now lives in Denver.

Huston indicated the group is interested not only in water rights, but has plans also for land acquisition to establish new water-related industries such as fish farms and real-estate developments to make use of the water it has claimed.

Huston played his cards close to the vest in discussing such plans and financial matters related to his group. He did say there is "absolutely no" Arab money involved.

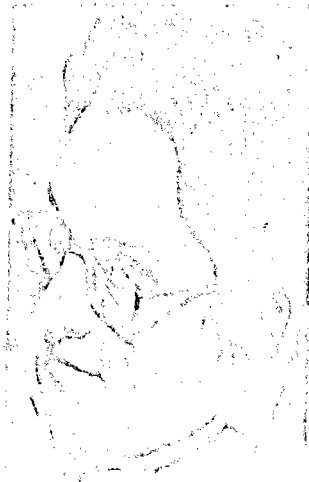
"We are not going to use the water for coal-slurry pipelines.



Wallace Yaffee

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John Huston

③ That would seem a prohibitive use (under state law) for beneficial use in the state of Colorado," Huston said.

"I'm a native Coloradan. I did not get into this to take water out of Colorado. The applications say where we are going to use it," Huston said as he was interviewed — flanked by two attorneys — in the offices of Yegge Hall & Evans, a Denver law firm retained by Huston and his partners.

"As far as I'm concerned there is no shortage of water in Colorado," said Huston, a big man at 205 pounds, wearing cowboy boots and showing faint streaks of grey in the straight, black hair that spilled over his ears.

"We're talking basic resource discovery and development. That is something that has not come to water in Colorado before," he said.

Huston appeared unruffled by the claims of state officials that he cannot qualify for the water rights he seeks because he does

not own the land above the water. He declined, however, to discuss specific statutes his lawyers might use in support of his bid. "That's strategy," he said.

He did say he does not believe any statute has been challenged in the group's controversial bid for water rights.

"We tried to stay with the statutes," Huston said, later adding that he got the idea for his water filings while attending a water-law class at the University of Colorado School of Law.

"The State Constitution says the water belongs to the people...water ownership per se has never belonged to land owners...Rights of use is what we are talking about," Huston said.

Asked whether he planned in the future to contact landowners above the groundwaters he has applied for, Huston indicated he would not.

"There are probably a good many landowners along the South Platte who are oblivious to appropriations to the river. The fact that you are over, next to or by the river makes no difference, let alone what is obscured a thousand feet down," Huston said.

"One thing interesting about this 'water grab' idea is that most of these water rights are the most junior that exist...We won't get any water until every other existing authorization is satisfied," he said.

"No one with existing water rights should worry. (Our priority is) very nearly the last. We are only ahead of those who made applications in January and February," Huston said.

Next: The other water groups.

Need making prices on water rights rise

By JOHN SEELMEYER

The Greeley Tribune
GREELEY, Colo. (AP) — Water, key to agriculture, industry and urban development in Colorado, has become a lucrative business.

The value of some water has increased more than a thousand-fold over the past 20 years; other water has tripled in price in less than two years.

One northern Colorado water speculator says she views water as a better investment than either real estate or common stocks. "The persons with water stock are going to be the nouveau riche of the next generation," said the woman, who asked not be identified.

Take, for example, shares of Big T water, so named because the water was brought to north-eastern Colorado by the Colorado-Big Thompson project which diverts water from the Western Slope.

When the project was completed in the late 1950's, water users were offered units of Big T water if they could show a need and would pay \$1.50 annually for each unit. Each unit gives the holder rights to slightly less than one-third of 1 percent of the Big T water available in a given year.

Some farmers contracted for Big T water, then tried to give it back. Even in the early 1960's, the water sold for \$30 a unit.

Today, those same units sell for \$1,700 each.

Big T water is especially attractive because its 310,000 units can be transferred anywhere in the 1.5 million acre area included in the Northern Colorado Water Conservancy District. Rapid increases in water prices have not been limited to the northeast corner of the state.

In Rocky Ford, along the Arkansas River in southeastern Colorado, real estate man Harold Hancock said prices for easily transferred water have reached as high as \$3,000 an acre-foot.

Hancock blamed much of the increase on industrial requirements for water, and said major corporations are willing to pay more than farmers can afford.

In one case, Hancock said, a corporate purchase stripped the water rights from some 50,000 acres of irrigated farmland in southeast Colorado.

On the Western Slope, Grand Junction-area farmer Bill Dufford

said prices of water rights have increased gradually over the past several months. An acre-foot of irrigation water from a medium-sized ditch now sells for between \$200 and \$300.

In the drought of the mid 70s, he added, water prices skyrocketed to \$450 to \$500 an acre foot. Those prices retreated to present levels when the drought ended, Dufford said.

Water from the Greeley-Loveland Irrigation Co., a medium-sized company, has risen from \$350 a share two years ago to approximately \$900 a share today.

Water brokers cited increased demand from cities for the sharp price increases and said farmers are not able to pay the prices to irrigate their land.

"There just isn't any more water available," said Greeley water broker Dave Bernhardt. "The cities can afford to pay for the water. The farmers can't."

Water prices are high enough, in fact, to change the economics of farming in northern Colorado.

Glenn Billings, a former Weld County Commissioner and now a real estate developer, said some developers buy an irrigated farm and sell off the water to cover their costs. The property then is sold as a less productive dryland farm.

Billings said, too, that some farmers are selling excess water to pay off loans on their farmland.

While the Northern Colorado Water Conservancy District took steps several years ago to prevent speculation in its Big T water — primarily by limiting ownership to persons who need the water for farm or municipal uses — speculators have been involved in the shares of other water companies.

The woman water speculator who asked not to be identified told of buying shares in an irrigation company for \$100,000 in late 1978. Ten days later, she said, she was offered \$110,000 for the same water — a potential profit of \$1,000 a day.

"There's quite a little of that going on," said water broker Bernhardt.

Demand for water has increased with growth along the northern Front Range where most cities now require developers to provide about three acre-feet of water a year for each acre of land annexed to a city.

Underground water claims seen as constitutional time bomb

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GREELEY TRIBUNE 04-03-1979

Editor's Note: Pending before the Colorado Supreme Court now are motions concerning applications for rights to a staggering amount of Colorado groundwater. It is the first battle in what promised to be a long legal war. What are the applicable laws? What are the points in debate? A task force of reporters from Associated Press member newspapers in Colorado and The AP spent six weeks looking into the water situation. This is the second part of a five-part series on their findings — The state, what was done, what was not done, and why.

By BILL GAGNON

Pueblo Star Journal-Chieftain
DENVER (AP) — "We've had a time bomb in our Constitution that has been ticking away," said Richard Lamm, governor of Colorado.

That time bomb is in the

"The constitutional issues concern whether or not these are waters of the state subject to appropriation as surface waters — first in time, first in rights — or if they are designated underground basin aquifers belonging to the party that sits above them," said Sen. Harold McCormick, R-Canon City.

It was McCormick who sponsored the 1973 law that for the first time placed non-tributary bedrock waters like those in dispute in southeastern Colorado under even limited state control.

The law — still called by its legislative designation, SB213 — limited extraction of such waters to 1 percent a year and apparently vested title to bedrock water in the owner of the land above the formation.

McCormick said he believes a

process of going off in what water experts say will be a years-long court battle centering on provisions of the Colorado Constitution and a state water law enacted in 1973.

On one side are three private groups seeking more than 1.5 million acre-feet annually of Colorado underground water. On the other are state officials, water-user groups and others who says granting of the water-rights applications would be illegal.

In a recent interview, Lamm said he is confident the state will prevail. At the same time, however, he spoke of a possible constitutional amendment to shore up any weaknesses in the state's ability to defend its precious water resources.

And while the State Department of Natural Resources has undertaken a complete review of Colorado's water laws,

recent Colorado Supreme Court decision in the case of Stonewall Estates vs. CF&I Steel Corp. may be the key to blocking the Huston claims in southeastern Colorado.

"Stonewall says very clearly and reaffirms, in fact, that bedrock aquifers are not ... subject to appropriation," said McCormick.

"Since bedrock aquifers are not subject to appropriations, the picture shifts to the riparian concept of land ownership regarding water rights," he said. "It implies that the person who controls the surface controls that which is under the surface. I believe that would exclude the Huston approach."

Under McCormick's interpretation, Huston's group must, therefore, prove the waters they are seeking are non-tributary and, after that, presum-

Lamm said the department will not be ready to propose changes until next January.

Three groups are involved in the water filings, but attention has centered on the applications filed by the group headed by John H. Huston, a Denver attorney and geologist.

Huston is seeking rights to more than 1.3 million acre-feet of water annually. There have been protests to Huston's proposals to tap what he says are natural underground reservoirs high in the mountains and lay claim to unused waters from existing wells.

But it is Huston's claim to 600,000 acre-feet annually of bedrock water in southeastern Colorado that has stirred the greatest controversy. He proposed to extract that water through a network of 3,196 wells ranging in depth from 500 feet to more than 6,000 feet.

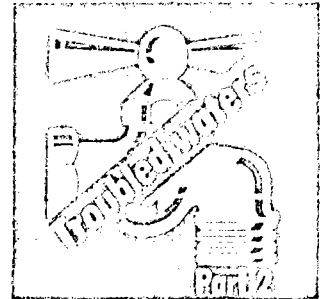
ably would have to deal with the land-ownership provisions of SB213.

Huston makes no pretense of owning the land over the bedrock waters he seeks, although Huston said he now is engaged in acquiring leases or title to properties in the areas involved.

Those properties include private, state and federal lands, and most of those who own or control that land have expressed a decided disinterest in Huston's plan.

Scores of protests to the Huston filings and those of the two other groups flooded the state's district water courts early this year. A motion to combine those protests now is pending before the Colorado Supreme Court.

The other groups whose applications are being challenged



"It well may be that these waters are subject to appropriation," Lamm said. "But when you touch water in the West, you touch everything."

The Colorado Constitution established a method of allocating all surface water in the state, and by extension all water that affects surface flows. It is called the doctrine of prior appropriation — the first person to claim water, and put it to beneficial use, has rights to that amount of water in perpetuity.

are Nedlog Technology of Arvada and Colorado Pacific Aztec-Colorado Pacific Energy of Colorado Springs.

Nedlog is seeking rights to 220,000 acre-feet annually from the Leadville limestone formations in western Colorado. Colorado Pacific Aztec-Colorado Pacific Energy is seeking 20,000 acre-feet annually in connection with coal mining in La Plata and Montezuma counties.

While Lamm conceded the State Constitution may not directly address the issues raised by the water rights applications, he insisted the state is well armed for the upcoming legal battle that could last up to five years.

"We are not giving away ... any of our arguments on the Huston filings because we are

Continued on page 24

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Continued from page 1
also dealing with Senate Bill
213," Lamm said.

"I want to make clear that my entire objection to the Huston filings is not that there is a big problem in our Constitution," he said. "We are saying that even in our constitutional provisions these (applications) are illegal and we are going to fight them."

Late in 1977, Huston attempted to set up a royalty agreement with the State Land Board that would have given him rights to tap the deep groundwaters of southeastern Colorado with 1,014 wells.

His applications were with-

drawn and Huston still faces charges in Pueblo District Court in connection with those applications.

Huston, however, said publicly he would refile those applications. If there were any doubts about loopholes in the state's water law, the governor and the General Assembly had an opportunity last year to do something about it. No action was taken.

Lamm said state officials did not recognize the issues in Huston's first filings. "We did not realize the extent" of Huston's claims, he said.

"The idea that they would file all of these applications un-

der private lands, we were not on notice," Lamm said.

Asked why he failed to include appropriate legislation to cope with the groundwater problem in his 1978 legislative call, Lamm said Huston's initial bid surfaced after the 10-day period he had to place additional proposals on the General Assembly agenda had expired.

"We would have had to have had a special session," the governor noted.

The governor did call two special sessions last year, one to deal with a criminal-sentencing law and the other to appropriate funds to fight a gras-

shopper infestation in eastern Colorado.

"We recognize that there are certain changes that probably have to take place in Colorado's constitutional water laws," Lamm said. "A lot of people claim that it should be changed — but nobody can agree on what it should be changed to."

"We're not looking at a constitutional amendment this year because, of course, we can't vote on it until 1980 (general election) anyway," Lamm said.

McCormick said he feels present state laws — particularly SB213 — will be sufficient to rebuff the Huston applications. As for any weaknesses,

McCormick said the remedy was available to the General Assembly last year after Huston's first filings.

"But no remedy was suggested and no statutory remedy was available because they were not on the governor's call," said McCormick. "I think there was confidence in SB213 and only time will tell."

In even-numbered years, the Legislature can consider only those items put before it on the governor's call.

As for the groundwater itself, the subject of the dispute, there was no hesitation as Lamm spoke about its importance to the state.

"Sometime down the road the state may have to depend on it," he said. "I don't see how else you can look at those intersecting curves of supply and the demand increase from growth and energy."

The governor said that since additional surface water sources in Colorado are practically gone, "We've got to look at some alternatives and certainly, one of the first places to look is underground, such as deep well aquifers."

John Huston and others are ahead of the state on that count.

Next: John H. Huston, Partners and Plans

Water reclaim technique would be pioneering

GREELEY TRIBUNE

04-04-1979

By DENIS SEARLES

Associated Press Writer

DENVER (AP) — John H. Huston's massive applications for water rights to Colorado groundwaters are not only controversial but show a pioneering approach to reclaiming these waters.

Huston breaks his water reclamation plans down into three major groups:

Southeastern Colorado — Applications for water rights to deep, bedrock water totalling 619,770 acre-feet annually, according to figures from the State Engineer's Office.

Denver Basin and north-eastern Colorado — Applications for rights to reclaim unconsumed water from 3,327 existing bedrock wells. Huston estimated 60 percent of these bedrock waters being pumped are returned to the South Platte River drainage system through leech fields, septic tanks, leaky sewers and ditches. He would recover these waters with a system of 385 new wells.

Central and western Colorado — Applications for rights to 702,000 acre-feet annually from what Huston said are naturally

existing underground reservoirs above 8,000 feet in the Colorado Rockies. Huston said these reservoirs exist in connection with terminal glacial moraines and that water from them could be tapped for late summer and autumn release.

"What we are talking about is a number of small projects with distinct goals and purposes that involve very different kinds of water," Huston said. "There are different business arrangements that relate to each one."

Southeastern Colorado

Huston seeks water rights to so-called bedrock water aquifers lying from 500 feet to 9,000 feet under the Arkansas River drainage system.

He called it non-tributary water, saying it lies beneath a layer of nearly impermeable bedrock and therefore has "little or no communication with the surface."

"It is basically lost to mankind without development and heretofore has not been developed" except for a few deep stock wells, Huston said.

Many hydrologists believe water at those depths was laid

down by ancient salty seas and therefore would be very saline. Huston said his research indicated much of the water is soft and potable.

"A lot of it could be used for power-plant cooling (even if salty). There are a lot of fish that love salt water," Huston added, noting that fish-farm industries could be brought in.

It is in connection with these deep-water applications in southeastern Colorado that Huston said he has laid out water fields for "maximization" of beneficial use. He said he hoped to modify the oil industry's "unitization" method in recovering these deep waters.

"These fields are laid out in an engineering manner," Huston said. "I cannot allow somebody to go down (deeper in the aquifer) from me and remove my pressure head and increase my pumping costs on 1,000-and 2,000-foot deep wells."

This explained his massive filing in southeastern Colorado, Huston said. The extensive filing, he said, was designed so that he could control pumping from the aquifer and insure

maximum water retrieval.

"I may take water out of one well and inject it into another well to increase production out of a third well," he said.

Huston said that anyone who pumps from these aquifers today without the theory of unitization or aquifer management "is guilty of waste."

Denver Basin and Northeastern Colorado

Huston said there are 2,000 wells in the Denver Basin now drawing water from bedrock sources but using only 40 percent of the water they pump.

He seeks the right to reclaim 60 percent of that water, on ground it is now returning to groundwaters and the Denver sewage system after the senior water rights have been used.

These filings raised a hue and cry from landowners. Assistant State Engineer Bill Matern said he has no way of estimating the annual volume on the return flows. He thinks meters will have to be attached to the existing wells, if the Huston applications are approved, to determine what Huston would be entitled to.

Huston maintained: "We are limiting ourselves to what is left over after (existing) well owner's use." He said he would reclaim these waters "now going to waste" with a series of diversion or offset wells placed in undeveloped areas such as washes, arroyos and low-lying places where groundwater naturally collects.

He said his time now is consumed buying those diversion-well locations sites. "We have a few. We have a long way to go," he said.

Central-Western Colorado

Huston said he believes his plans would solve a shortage of reservoirs on the Western Slope by utilizing what he says is now-unused tributary water

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flowing out of the state from naturally occurring underground reservoirs.

His filings seek a total 702,000 acre-feet annually, according to state figures, from these underground reservoirs, to be released in late summer and early autumn.

"The big complaint has been we do not have reservoirs and lack the money to build them. Surface reservoirs are out. Too costly," Huston said.

"We found an alternative, without dams and little or no impact on existing Colorado environment," the master's-degree geologist said.

The alternative, Huston said, is to be found in glacial mo-

raines that exist high in the mountains at points where the advance of glaciers halted. Deposits of sand and gravel in the moraines act as subsurface dams to trap groundwaters in layers of silt filled in behind the moraines since the ice age, he said.

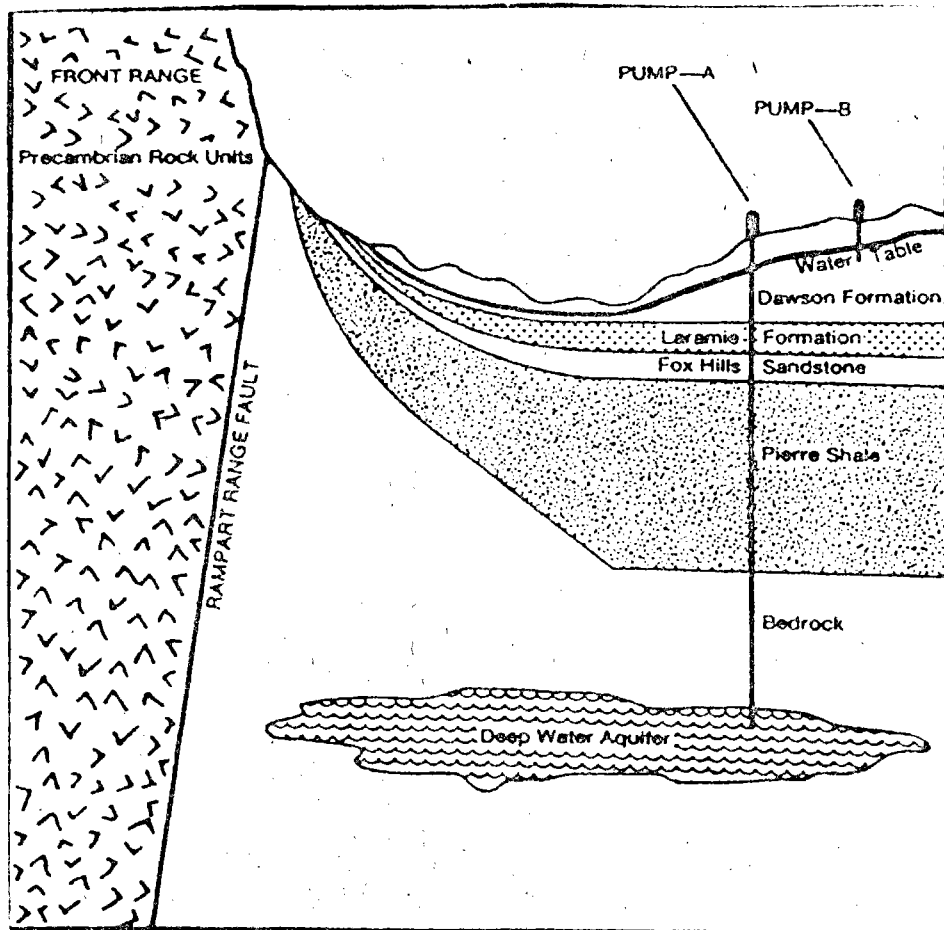
The moraines he is interested in all are located in the Rockies at 8,000 feet altitude or higher, Huston said.

"We can engineer these structures so we can divert water from them during stress in late summer and autumn, and refill them by natural process (snowmelt and runoff) in late winter and early spring," Huston said.

He said these moraine waters are tributary. "In the past the water ran downstream and out of state as runoff...It (refilling the moraine reservoirs) will effect downstream flow during winter months when (those streams) are delivering more

water out of state than required," Huston said.

"I'm the last in line. After everyone else has been satisfied...then we can fill these reservoirs," he said. "If everyone else gets theirs, then maybe Huston will get his."



GENERALIZED BLOCK DIAGRAM OF NORTHERN EL PASO COUNTY

Tapping bedrock waters

This is an artist's drawing of how the John Huston group proposes to tap bedrock waters in southeastern Colorado. Pump A illustrates a well Huston says could tap water trapped deep

beneath the surface. Pump B is a standard well reclaiming water from the upper water table. (AP Laserphoto)

The writers

The AP Task Force report Deep Water, Deep Trouble is based on reporting by George Orbanek of the Grand Junction Sentinel, John Seelmeyer of The Greeley Tribune, Bill Gagnon of the Pueblo Star Journal-Chieftain, Denis Searles of The Associated Press and Marjie Lundstrom of the Fort Collins Coloradoan. Other members of the staffs of those newspapers and other AP member newspapers in Colorado contributed to the series.

Deep water claims boil

04-06-1979

GREELEY TRIBUNE

down to classic struggle

Editor's Note: The controversy about applications for rights to more than 1.5 million acre-feet annually of Colorado's underground water reserves will be debated in the courts of public opinion and law for several years. The final part of the five-part Associated Press Task Force report Deep Water, Deep Trouble looks at the arguments and issues involved in the dispute.

By DENNIS SEARLES
Associated Press Writer

DENVER (AP) — Despite the sea-size quantities of water involved, the controversy over massive filings by three groups for rights to Colorado groundwater boils down to a classic struggle between private enterprise and government.

State officials and water-users groups have branded the applications pure speculation and illegal.

But those same state officials admit Colorado has made no effort to reclaim the groundwaters, especially the deep, non-rechargeable bedrock waters, with some type of state water project. The excuse: those deep waters would be too expensive to reclaim.

The applicants disagree. They say those waters — both in bedrock aquifers and in what they say are natural underground reservoirs in the Rocky Mountains — can be economically reclaimed at today's water prices.

The applicants — the Denver-based John H. Huston group, Nedlog Technology Group of Arvada and Colorado Pacific Aztec-Colorado Pacific Energy of Colorado Springs — seek rights to more than 1.5 million acre-feet a year of those

groundwaters. Huston seeks the lion's share — more than 1.3 million acre-feet annually.

The Legislature and the Colorado Department of Natural Resources are developing bills to shore up Colorado's last undeveloped water source against such massive applications.

That effort has at least one water attorney worried.

George Vranish of Boulder said he fears reactionary legislation that would "curtail legitimate water appropriations that are filed to obtain a specific quantity of water for a specific use. It will make it just that much harder to appropriate water for legitimate purposes."

Vranish hired Huston as a law clerk several years ago, but said he has no connection with Huston's present water-rights applications.

Hundreds of protests have been filed against the water applications of the three groups. The Colorado Supreme Court now is considering a motion to consolidate those cases. Whatever the high court ruling, the contest in the courts is expected to drag on for years.

That main legal weapons expected to be used in the court battle include a state law known informally as Senate Bill 213 and the Colorado Water Rights Act of 1969.

Some water attorneys fighting the applications fear the Water Rights Act may have been a mistake in that it said all waters originating in the state, surface or underground, are subject to appropriation.

The state and water-users groups are relying on SB213 as their legal weapon to defeat Huston's applications for 620,000 acre-feet annually of deep

bedrock waters in southeastern Colorado.

SB213, passed in 1973, requires landowner consent before a well can be drilled to pump bedrock or non-tributary groundwaters.

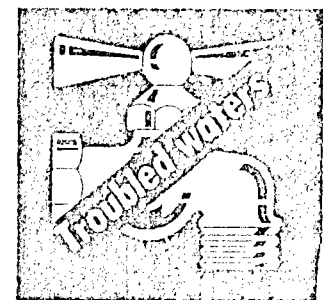
Huston, although he has not yet filed for well permits, proposes to drill 3,196 wells to reclaim deep groundwaters in southeastern Colorado. He makes no claim to land ownership or owner permission for his widespread bedrock applications, but did say his group is acquiring real estate and leases for his bedrock projects.

Huston argued that if surface ownership is required to pump bedrock waters, then the federal government owns 40 percent of Colorado's deep groundwaters.

Colorado Pacific Aztec-Colorado Pacific Energy said it has leases for all lands overlying the groundwaters it seeks. Nedlog said it has some leases and is seeking leases with other landowners overlying the reservoir it wants to tap.

Huston's expert water attorney, Michael "Sandy" White of Denver, argued that there is a state constitutional provision of condemnation to reach water.

White said that right of condemnation is like the old state mining law which said that if a landowner did not develop his



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resources, "then it's available for anyone in the public."

Sen. Harold McCormick, R-Canon City, sponsor of SB213, disagreed.

The constitutional right of access could, in fact, supercede the trespass law if bedrock waters are considered minerals by the courts, McCormick said. "I don't think that this pertains to water, which is not a mineral," he added.

White also is expected to argue that the Water Act of 1969 supercedes SB213. The contention, he explained, is that the act declared all waters originating in the state, surface or underground, subject to appropriation by the public.

Water lawyer Ward Fischer, chairman of the Fort Collins Water Board and attorney for the Cache La Poudre Water Users Association in protesting the applications, said he believes the Water Rights Act of 1969 was a legislative mistake.

"I don't think the Legislature realized that (the act) broadened what used to be law as stated in the Constitution," Fischer said.

The Colorado Constitution established the doctrine of prior appropriation — the first person to claim water and put it to beneficial use had rights to that water in perpetuity. That provision, however, was interpreted as applying only to appropriations from surface streams.

Despite the problems he sees with the Water Rights Act, Fischer said he believes the state can still stop the applications with existing law.

Opposing water lawyers also claim Huston and the other applicants have not taken the so-called "first step" in appro-

priating water — a requirement that some money and work be expended.

"He hasn't done any work," Fischer said. "All he has done is file claims in court. So I don't think you would be interfering with his rights because he has made no appropriation."

Vranish added that the first step "is more than shuffling papers."

Huston, however, said his group has spent more than \$200,000 on surveying and geology-hydrology studies. Nedlog said its project began more than 11 years ago. Colorado Pacific Aztec-Colorado Pacific Energy has made its applications in conjunction with coal-mining activities following hydrogeological studies.

One opposition consensus is that the applications for underground reservoir waters in the mountains and in western Colorado can be fought on the basis that the waters are tributary to surface streams and would, if granted, damage senior water rights.

State officials claimed the water-rights applications of the three groups, all filed on the final business day of 1978, were a sneak attack to catch state agencies off guard.

Water lawyers discounted that and said the final-day filing is typical water-rights strategy allowing the applicant, if successful, to maintain that year's priority right.

Another fear concerned the origin of money supporting the huge groundwater projects.

A task force of reporters from The Associated Press and AP member newspapers in Colorado found no evidence of shady or foreign money involved in any of the three groups. With one exception, all the known principals of the three groups were interviewed extensively.

The exception was Nedlog's partner Revned, now a Delaware corporation. No reply has been received to written requests for information concerning the officers and directors of Revned. (Revned is Denver spelled backwards; Nedlog is Golden spelled backwards.)

The groups were put together as partnerships or joint ventures with papers filed at the

county level rather than with the Colorado Secretary of State.

The partnerships do allow participants, other than the stated partners, to remain anonymous.

There is a legion of other questions about the massive water applications.

A major one concerns the cost of drilling the deep bedrock wells, an expense some drilling experts said could reach \$1,000 a foot. Another question is how the developers could afford to pump waters from depths ranging up to 9,000 feet.

"You would need another Cherokee power plant to power those pumps," Assistant State Engineer Bill Mattern said of the Huston applications in the Arkansas River Basin.

Some observers are certain that Huston is looking beyond electricity, perhaps to wind or solar-powered pumps, to raise the deep waters to the surface.

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Water quality is another point that puzzles hydrologists.

"The deeper you go the more likely the water will be salty," said James F. Blakey, district chief of the U.S. Geological Survey.

"But if you are willing to pay the price of the hole, you may be willing to pay the price of desalinization treatment to make it suitable for any use," said Blakey, who noted that the town of Buckeye, Ariz., for years has had a desalinization plant to supply its municipal water.

State Engineer Clarence Kuiper, among the foremost adversaries of the water-rights applicants, maintained the filings have "all the appearances of speculation."

And Kuiper again and again emphasized that the bedrock waters are non-rechargeable in our time and once mined will be gone.

Gov. Richard Lamm said

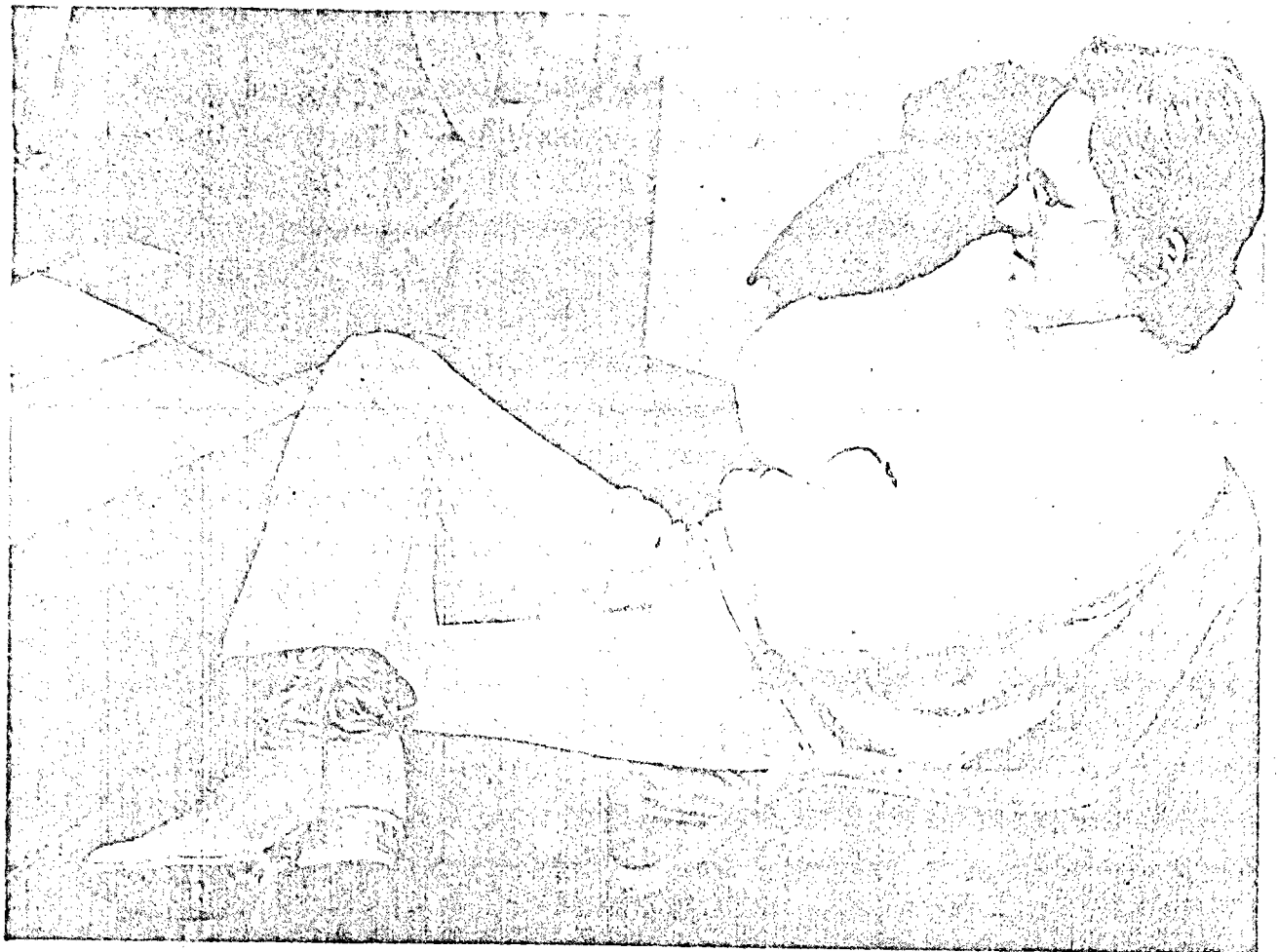
these bedrock waters are Colorado's last source of unappropriated water. In view of the state's continued growth, he said, they will become critical for state needs in the years ahead.

The value of Colorado's groundwater has been estimated at anywhere from \$160 million to \$60 billion since the massive applications surfaced.

If all the applied-for waters could be sold for \$1,000 an acre-foot, that would be a one-shot, \$1.5 billion sale for annual deliveries in perpetuity.

However, the groundwaters under question are a long way and a long time from being pumped to the surface.

Many observers predict a court battle lasting five years in the state and possibly federal courts. The only people making money on the water-rights controversy for the time being will be water lawyers. Their going rate is \$85 an hour.



Huston at ease

John H. Huston, head of the Denver-based group that has filed for more than 1.3 million acre-feet a year of Colorado

groundwater, is shown here in his typical garb — boots, jeans and sweater. (AP Laserphoto)

Drilling expensive project

By JOHN SEELMEYER

04 - 06 - 19 77 The Greeley Tribune

GREELEY, Colo. (AP) — When representatives of three groups making massive water-rights applications paid thousands of filing fees in Colorado Water Courts, their expenses were just beginning.

For the deepest proposed wells — 3,196 of them averaging more than 1,000 feet in southeastern Colorado — Greeley well contractor Sam Rank said drilling costs could reach \$1,000 a foot.

For a 5,000-foot well, that means drilling expenses of about \$5 million. Some applications call for wells 9,000 feet deep.

Ed Lesh, chairman of the State Board of Examiners of Water Well and Pump Installation Contractors, said wells of less than 1,000 feet could cost \$40 a foot compared with \$11 a foot for a typical shallow farm well.

Beyond the costs of drilling, government and industry spokesmen said pumping on the deep wells might be as high as \$45 an acre-foot, after purchase and installation of pumps.

But neither Rank nor Lesh expect any bonanza for Colorado well drillers should the massive water-rights applications be granted.

Lesh estimated that only 5 percent of Colorado's 300 well drillers have equipment capable of drilling 1,000-foot wells, much less ones going down to 9,000 feet. He added that he believes the demand would be spread over several years.

Rank said oil well drillers may have to be called in for the deep-well jobs, and oil rigs have been in tight supply in the Rocky Mountain area since the energy boom began.

Once the wells are completed, pumping costs would be another major expense in the ventures.

Bill Johnson, Denver representative for Peerless Pump, said ordinary water pumps are not built for depths of more than 1,500 feet.

Even at that depth, relatively shallow in regard to many of the recent filings, a pump capable of delivering 500 gallons a minute would cost about \$20,000, Johnson said.

For deeper wells, Johnson said developers may be forced to use oil-field pumps to deliver the water.

Laramie-Poudre tunnel a record-setting feat



This photo was taken in the spring or summer of 1911 at the east portal and shows not only the work force, but some of the small mining cars used to remove rock. To the right is the tunnel entrance. (Photo courtesy of the Fort Collins Public Library)

4-25-1979

By Kenneth Jessen
For the Review

TRIANGLE REVIEW

There is a large mine dump on the right hand side of the Poudre Canyon road about 14 miles beyond Rustic.

During the spring and summer, the creek bed next to this dump is filled with an unusual amount of water. The water comes from the Laramie River on the other side of Green Mountain and is transported to the Poudre by a remarkable tunnel a little over two miles long.

The Laramie-Poudre tunnel is part of an irrigation project conceived during the summer of 1902.

As originally planned, the project merely contemplated the digging of diversion ditches to direct the water over to the Cache la Poudre River. Owing to the inadequacy of this original plan to supply the needs of the Greeley-Poudre irrigation district, it was decided to extend the scope of the project to include a tunnel.

The original company was known as the Links Lake Co., and in 1907 was combined with the Mitchell Lakes Reservoir Co. and subsequently became known as the Laramie-Poudre Reservoirs Co.

It was known that the Laramie River was about 500 feet higher than the Cache la Poudre at opposite sides of Green Mountain. This elevation was more than enough to capture every bit of the Laramie River which would otherwise flow north into Wyoming.

Work began surveying for

the tunnel in September 1909, and on Thanksgiving Day, ground was broken for temporary camp at the east portal. Contractor J. J. McIlwhee of Cripple Creek started the tunnel on Christmas Day.

By March of 1910, a permanent operating camp had been established at the east portal along the Poudre. The buildings were constructed of milled lumber and consisted of a power house, bunk houses, boarding house, commissary, office buildings, a blacksmith shop and storage sheds. A similar, but less elaborate, camp was constructed from logs at the west portal along the Laramie River.

The transportation of equipment was quite difficult due to the remoteness of the site.

This was many years before a road up Poudre Canyon and everything had to be hauled via Livermore, the west. Every bit of heavy equipment had to be taken down Pingree Hill to Rustic then up to the east portal. It took the better part of two days just to travel to the tunnel from Fort Collins.

Severe cold was also a handicap. It was necessary to cut timber for fires which were kept burning along a line of water lines to prevent freezing.

To visit the east portal today, it is hard to imagine just how extensive these operations were during 1910-11.

For example, a ten-foot high, rock-filled log dam was built across the Poudre about two miles above the east po

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tal. From the dam, a 22-inch wooden pipe was brought downstream for 8,500 feet to a 40 x 45-foot power plant.

The water pressure operated three Pelton water wheels. One wheel developed 130 horsepower and drove a large air compressor to operate the hardrock drills in the tunnel.

The second water wheel operated a blower used to suck gas out of the tunnel after each round of explosives was fired. This required a 15-inch ventilating pipe from the power house to the tunnel. The third water wheel operated an electric dynamo for lighting purposes.

The cook house and dining room measured 28 x 30 feet and the dining area could seat 75 people. The bunk house was a two-story structure with 22 bedrooms. Two men were assigned to each room giving greater privacy than the typical bunk house at a mining camp. For workers with families, seven house tents were provided.

The commissary and hospital building contained a store room, medicine room, doctor's bedroom, patient's ward and bathroom.

The only structure situated at the east portal was a 24 x 24-foot blacksmith shop.

The rock encountered was extremely hard, close grain granite. Lots of drill holes were required combined with the strongest explosives available. Each explosive charge typically consisted of 100 sticks of 100 percent, 150 sticks of 60 percent and 250 sticks of 50 percent. For those that understand dynamite,

this was a lot of explosives. Each round fractured only 10 to 12 feet of rock, and once the heading was cleared, drilling began again.

Prior to firing each round, steel plates were laid from the heading back 25 feet. After the explosion, the loose rock would fall on the plates were it could be easily be removed.

To keep the tunnel economical to drive, it had to be kept as small as possible. A single mining track had to handle both the empty cars going in as well as the loaded cars coming out. The empties were run into the tunnel by mule power as far as possible then simply tipped off the track. A string of loaded cars could then pass. The empties were rerailed ready to be loaded.

The problems at the west portal were quite different. Since the tunnel sloped from west to east and the west portal had to be below the level of the Laramie River, something had to be done to prevent premature flooding.

An incline was constructed into the solid rock well above the river's level down to the level of the tunnel. All of the loaded mining cars had to be hauled out via a cable-and-winch system up the incline.

Even with these precautions, water was a constant problem at the heading and a

large pump was kept operating full-time. These difficulties prevented work at the west portal from going as rapidly at the work at the east portal.

The wedding of the Laramie River and the Cache la Poudre River was celebrated at the tunnel on July 27, 1911. Contractor J. A. Mellwee and his civil engineer, Burges Coy, broke the world's record for tunnel boring in hard rock and won a premium of \$43,000 for finishing the work ahead of schedule.

All kinds of state officials, including Gov. Schafroth, were invited to attend the celebration. Some 60 people left Fort Collins in eight automobiles at seven in the morning to attend the open-

ing. The roads into the area had been greatly improved and it took only five hours to reach Zimmerman's Hotel just in time for a fine lunch.

The party arrived at the east portal that afternoon and were treated to a ride in the mining cars through the 11,294-foot bore. That evening, the contractor had a grand fish fry for his guests consisting of 300 trout caught in both the Laramie and Poudre rivers.

So exact was the surveying work done by Burges Coy that when the bore from the west met the bore from the east, they were off only a fraction of an inch.

Still in use, the Laramie-Poudre tunnel stands as a monument to the men who built it.

Underground water case returns to court

The debate over rights to Colorado's underground water will resume Wednesday in Littleton District Court.

A 12-member committee of lawyers, appointed by Special Water Judge Marcus O. Shivers, has completed a report defining crucial issues in the case.

Four groups are seeking rights to thousands of wells, hoping to tap some 1.5 million acre-feet of water that is locked beneath the Rocky Mountains and high plains. Nearly 1.3 million acre-feet of it is being sought by Denver lawyer and geologist John Huston and his associates.

Other groups seeking the rights are the Nedlog Technological Group of Arvada, Colorado Pacific Energy-Colorado Pacific Aztec of Colorado Springs and Bob Johnston Jr., a Pueblo rancher.

The four applications were combined in April by the state Supreme Court. A special water court was established to hear the combined cases with Shivers, chief judge of the 19th Judicial District, presiding.

Ward Fischer, a Fort Collins attorney and a committee member, said Tuesday that key issues defined by the panel include these questions:

- Can an applicant claim water under land he does not own?
- Can he claim water that is captured by sewage pipes and discharged into streams?
- Can he appropriate the unused portion of another developer's underground water?

Fischer said the committee report was signed by 11 of the attorneys on the panel, with only the lawyer for the Huston group dissenting on what the central questions are. Fischer said he doubts that Shivers will be breaking new legal ground in his decisions.

"I think there are clear answers based on existing water law," Fischer said.

8-23-79 GREELEY TRIBUNE

Slow process expected in water trial

LITTLETON, Colo. (AP) — It will be a slow process, the deciding a complex case involving applications for rights to immense and almost invaluable quantities of Colorado's underground water.

"I'm not as young as you are and I don't expect to live to see all the applications adjudicated," Judge Marcus O. Shivers told one of the lawyers in the case during a hearing Wednesday.

Shivers, sitting as a special water judge, decided Wednesday that he would go back to the Colorado Supreme Court for further guidance in approaching the constitutional issues raised by the case.

At issue are applications for rights to more than 1.5 million acre-feet annually of now untapped water, the vast bulk of it sought by a Denver group headed by lawyer-geologist John Huston.

Shivers said he would shortly submit to the Supreme Court an expanded and modified list of constitutional issues raised by the applications.

By doing so, Shivers apparently is attempting to make certain that rulings he might subsequently issue will meet the Supreme Court's requirements.

The Huston group, two other enterprises and a Pueblo area rancher filed applications on the last filing day of 1978 for rights to water. The State Engineer's office said could be worth at least \$1.5 million a year, if brought to the surface.

The Supreme Court in January ordered the applications and objections to them consolidated. In April, the high court appointed Shivers a special water judge in the case. He is not to rule on individual applications, but to determine constitutional issues that might subsequently be applied to specific applications.

The basic constitutional issue is whether underground water that does not flow into streams, lakes and rivers can be appropriated under Colorado water law, and, if so, by whom.

At a hearing in June, Shivers selected 12 of the more than 100 attorneys involved in the case and instructed them to classify the applications and define the constitutional issues they present.

The trial committee reported Wednesday that the applications could be grouped in eight categories. In addition to the five questions posed by the Supreme Court, the trial committee defined 11 specific constitutional issues if felt should be addressed by Shivers.

The attorney representing the Huston group, Michael White of Denver, was a member of the trial com-

mittee, but did not sign the committee's report.

White asserted in court Wednesday that the trial committee was dominated by attorneys representing interests opposed to the applications — an assertion that was not challenged — and objected to the committee's framing of the constitutional issues.

Shivers, who serves at the chief judge of the state's 18th Judicial District, said he wanted to adhere closely to the mandate of the Supreme Court.

He said he would frame his own expanded and modified list of constitutional issues, would submit it to the Supreme Court and expected the high court to respond quickly.

The hearings Wednesday lasted two hours and five minutes. There were few rhetorical flashes, and more subtle humor than clashing argument. Having established the trial committee to streamline handling of the case, Shivers moved through the agenda Wednesday like a farmer with 40 acres to plow before noon.

Shivers declined requests made by White and an attorney for Nedlog Technological Group of

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Arvada that certain matters of fact concerning the applications be decided before the constitutional issues are addressed.

"You are asking that the court adjudicate the claims and not answer the questions of law," Shivers told Kenneth Burke, the Nedlog attorney.

At another point, Shivers told White, "I'm not as young as you are and I don't expect to live to see all the applications adjudicated."

In addition to the Huston group and Nedlog, the applications in the consolidated case were filed by Colorado Pacific Energy-Colorado Pacific Aztec of Colorado Springs and Bob Johnston Jr., a Pueblo County rancher seeking to drill 53 wells on his land to tap an underground aquifer.

Johnson has sought to have his application severed from the consolidated case. Although it is his own land, Johnston is seeking to tap the same aquifer in southeastern Colorado that Huston seeks to tap through some of his applications. The trial committee recommended that Johnston's application not be severed.

When the question was raised Wednesday by Johnston's attorney, Shivers read

from Johnston's application — that the water may be used for "agricultural, residential, commercial, industrial uses on and off the land."

There was no further discussion of the issue.

Shivers ordered attorneys for both sides to prepare consolidated briefs on the constitutional issues in the case. He said they would be due about 115 days after the Supreme Court responds to his request for redefinition of those issues, probably sometime late in December.

Shivers also said that he would schedule oral arguments in the case, although that is unlikely to take place until sometime early next year, at the earliest.

Shivers appointed one additional member to the trial committee, attorney D.J. Dufford of Grand Junction. Dufford will serve as a representative of the state's Fourth Water Division, which is based in Montrose.

The Fourth Division previously had been represented on the trial committee only by Charles Elliott, a Denver attorney. Shivers indicated he felt additional Western Slope representation was appropriate for the Fourth Division.

Windy Gap projects said not a dead issue

9-19-1977

By RON TOLLEFSON
Greeley Tribune Staff Writer

A Colorado Supreme Court ruling against a Western Slope water diversion project that would benefit Greeley and five other north-state government units will not kill the so-called Windy Gap Project.

But the high court ruling issued Monday might delay the \$35 million trans-mountain diversion project, at an estimated delay cost of \$2.5- to \$3-million a year, according to officials in Greeley and Loveland.

The Supreme Court rules that the local units backing the Windy Gap Project in proposals for a conditional water rights decree, approved earlier by the Glenwood Springs-based state water court, had failed to meet a state law requirement that they demonstrate

diversion proposal currently is facing draft environmental impact statement reviews by the Bureau of Reclamation and the Department of the Interior.

And they indicated that if the questions of state law can be dealt with expeditiously, action on the water decree will be complete before, or at the same time as, action on the federally required EIS.

"The worst this can do is delay us some," said Phipps.

However, Phipps indicated, if there are delays the added project costs may begin mounting at upwards of \$3 million a year beyond the project's \$35 million cited cost.

And Phipps added that Western Slope water users are demanding the NCWCD and subdistrict build a \$30 million

the project "shall be designed, constructed and operated in such a manner that the present appropriations of water, and ... prospective uses of water ... within the natural basin of the Colorado river ... will not be impaired nor increased in cost."

Reacting Tuesday to the court decision were W.D. Farr of Greeley, board chairman of the project's direct parent organization, the Municipal Subdistrict of the Northern Colorado Water Conservancy District; NCWCD Secretary-Manager Earl Phipps, and Greeley City Manager Pete Morrell.

Earlier news reports on the court ruling pointed out the high court never before had ruled on this point of state water law, and Farr agreed with that conclusion. He said the effect of the decision likely would be to make all

future attempts to obtain conditional water decrees far more difficult.

Farr said the Supreme Court, which received the case last February, was acting on an appeal from the Glenwood Springs court filed by the Colorado River Water Conservation District, also based in Glenwood Springs.

However, added Farr, Windy Gap still may meet plans for a start to construction in 1980, with completion in 1981.

And Morrell, after conferring with Phipps on the ruling, said NCWCD attorneys are studying the ruling and its new demands of work toward obtaining a conditional decree.

"But it certainly doesn't kill Windy Gap," added Morrell, "and it may not even slow it down."

The three spokesmen pointed out the

reservoir on "their side of the mountains."

Said Phipps, "They call it compensatory pay for Windy Gap. But I call it an extra burden for Eastern Slope water users, not required by state law. And I think we can prove that in district water court."

Backed through the subdistrict apparatus by Greeley, Loveland, Longmont, Estes Park, Boulder and the Fort Collins-based Platte River Power Authority, Windy Gap calls for a coffer dam on the Colorado River near Granby, with water diverted through a pumping system to Granby Reservoir and then through the Adams tunnel of NCWCD's Colorado-Big Thompson Project to the Front Range.

Phipps said the dry-year versus wet-year range of water diversion could be from about 25,000 acre feet to about

80,000 acre feet, with the average diverted some 54,000 acre feet and the average delivered to the cities and authority about 48,600 acre feet annually.

An acre foot is a measure of water volume one acre in surface size and one foot deep. Roughly, the water demands of a family of four require one acre foot annually.

Thus far, Phipps said, Greeley and the other five units backing Windy Gap have funded its early work, since 1970, at a total of \$3.03 million. The cost thus far to the city of Greeley has been slightly more than \$500,000.

Phipps earlier speculated that, given the current political mood on such projects, Windy Gap may well be the last major diversion of Western Slope water.

McDonald named to head water board

DENVER — Greeley native J. William McDonald, a 33-year-old lawyer, Wednesday was named executive director of the Colorado Water Conservation Board — the state's top water policy making agency.

McDonald, formerly an attorney in the Department of Natural Resources, succeeds Felix Sparks, who retired after holding the post more than 21 years.

He is a 1964 graduate of Greeley High School (now Greeley Central) and the son of Mr. and Mrs. Glenn McDonald of Greeley.

The announcement of the selection came from Harris Sherman, executive director of the Department of Natural Resources, and Ben Stapleton, chairman of the Water Conservation Board.

Sherman said McDonald was chosen from among 14 persons, nine of them from Colorado, who had expressed interest in the job. Salary for the post will be between \$32,000 and \$38,000 annually, Sherman said.

At a news conference, McDonald said the major issues with which he must deal are "competing demands for a finite supply of water, the need to strike a balance between those demands

without unreasonably interfering with the exercise of vested water rights, the need to examine the opportunities and costs of increasing our water supplies, and improving the efficiency with which we utilize our existing resources."

He added, "I have no misconceptions about the wide range of interest and divergent views which we Coloradans have about our water resources. I remain convinced, nonetheless, that we can find a balance of issues."

McDonald stressed, too, "protection of Colorado's interests in its compact-entitled "waters" is an important issue.

He said he hoped to use the next few weeks to meet with legislators, congressional leaders and other officials to discuss state water policies.

McDonald holds an undergraduate degree in chemistry from Colorado College, a law degree from the University of Chicago, and a master's degree in natural resource management from the University of Michigan.

He was admitted to the Colorado bar in 1971 and has worked in Sherman's office since mid-1976. In 1971-73, he was a policy analyst in the civil works directorate in the Office of the Chief of Engineers, U.S. Army Corps of Engineers.

He then joined the staff of

the Great Lakes Basin Commission, where he was study manager for the first phase of a water policy for the Michigan Department of Natural Resources.

Sherman said McDonald was appointed to the position because of his experience with water problems, and said McDonald's work has included the most comprehensive study of water resources ever made in Colorado.

McDonald, in turn, praised Sparks for his 21-year service.

"Felix has charted an excellent course for the state," he said. "He's a unique personality who has done wonders for the state of Colorado."

McDonald said he hopes to encourage the state to continue with a newly developed policy of taking a larger role in water projects with less dependence upon federal dollars.



J. William McDonald

9-21-1979

Delegates pour base for water

By BILL JACKSON
Greeley Tribune Staff Writer

DENVER — "We will pour no concrete today, but we will move to establish a foundation for the pouring of that concrete."

With that initial statement by former Gov. John Vanderhoof, the 1979 Colorado Water Convention — the first of its kind in the state — convened Saturday at the Denver Hilton. And while some cracks developed in that foundation throughout the day long session, some 700 individuals representing 45 delegations hammered out nine resolutions aimed at providing a tool of unified water policy in the state for its elected state and federal officials.

The convention was organized by Club 20, a Western Slope promotional organization. Vanderhoof is president of Club 20 and was elected as chairman

of the convention as it opened Saturday morning.

The cracks of Vanderhoof's foundation began before the convention convened when several groups complained that the convention leaned toward "big business" and was a "pork barrel pow-wow" for developers and industry.

But during the morning session, former U.S. Rep. Wayne Aspinall, in an attempt at pacifying environmental representatives, suggested two persons be added as a separate at-large delegation to represent such groups, with a full complement of 15 votes.

They were Dr. Beatrice Willard of the Colorado School of Mines, and Sandy Cooper of Boulder, a land-use expert who is a part-time member of the faculty at the Golden school.

As it turned out, their representation was only token.

Willard attempted to amend the first resolution brought before the convention and Cooper tried the same with the second — both amendments placing environmental wording in the resolutions.

Both were defeated as Vanderhoof, Aspinall and others pointed out that federal environmental laws already covered the topics.

During a lunch break, however, the resolution committee, headed by Dave Hamil of Sterling, former Administrator of the Rural Electrification Administration in Washington, D.C. and former Speaker of the Colorado House of Representatives, drafted a "preamble" to the resolutions which passed by a unanimous vote.

That preamble said a sound concept for water resources development must recognize environmental concerns and

economic growth, and that the two must be in harmony.

That did not satisfy Cooper, who said she felt it was shocking that there was no participation by the Colorado Open Space Council or the League of Women Voters, and that she was protesting the "back slapping" that was going on among the delegations.

Vanderhoof responded by saying that the convention was the largest meeting ever in Colorado at which water was the sole topic and noted that there were many "diverse interests" represented.

"There are people who are not here," Vanderhoof said in opening remarks. "The people who are here are movers, producers that provide you a place to live. I wish the others would join the 40 plus other associations who are here."

The keynote speech of the convention was delivered by Felix Sparks, former director of the Colorado Water Con-

servation Board. Sparks emphasized three points — to conserve water resources to make the same amount of water now available to fit the needs of a doubled population in the next few years; to put some common sense in federal water laws which point out the economical feasibility of such laws; and that the state is capable of taking care of its own water program.

"It's up to business and industry to let the people know that federal laws are responsible for at least 30 percent of the rising costs of goods," Sparks said.

Aspinall said that he had "waited for this day for a long time; the demise of the snail darter combined with something being done about Colorado water."

The fiery former U.S. Representative slipped in the comment about the snail darter in reference to a recent decision

to allow a dam to be built in Tennessee despite the fact it may destroy the habitat of the small fish.

Each of the resolutions was introduced by various experts from around the state, including W.D. "Bill" Farr of Greeley, who introduced the resolution concerning agricultural water.

"I think agriculture made out pretty good," Elton Miller of Fort Lupton said. Art Andersen Jr. of Ault expressed the same feelings, as did other delegates from Weld.

The one amendment which came under the most scrutiny was one which would have abolished the Colorado Water Quality Control Commission.

But behind the urging of Rep. Walt Younglund, R-New Raymer, that resolution was amended to put strong controls on the commission.

10-01-1979

Injunctions Sought Against GW Water Use

A lawsuit was filed in District Court on behalf of the Fort Morgan Reservoir and Irrigation Co. seeking to enjoin the Great Western Sugar Co. from diverting water from its system for use at any plant other than Great Western's Fort Morgan Factory.

The lawsuit also asks \$10,000 in compensatory damages and asks for a preliminary injunction to enjoin Great Western from using the 83 shares of capital stock it owns in Fort Morgan Reservoir as a means for legal maneuvering to transfer water to other Great Western plants.

The suit asks that when final judgment is reached in the case the

court order a similar permanent injunction against Great Western.

The suit states that because of various legal actions by Great Western, it "has sought and in some cases has obtained a claimed right to divert water or water rights ... to be used in other factories or localities" other than the Fort Morgan factory.

In asking for the permanent injunction, the suit also asks that the court declare foreclosed and null and void the 83 shares of capital stock Great Western owns in Fort Morgan Reservoir and Irrigation Co.

The suit has been assigned to District Judge Francis Shallenberger.

Letters To The Editor



Dear Editor:

The Riverside Irrigation and Land Company has no title to our land, has no water storage rights over or under our land. It has no well drilling rights on our lands.

We possess our land legally; we pay taxes and water conservation taxes.

There is no Lamont Ranch water rights for sale in Colo., also no well rights for sale in Colorado.

These irrigationists of the Riverside Irrigation district have oppressed and persecuted us long enough. We have been very patient with Riverside and the state of Colo. and they have had very ample time to take care of this matter. This oppression and persecution of innocent people just cannot

go on unchecked under our constitutional form of government. This has been costly to us and continues to be costly monetarily and anguish.

We have hired engineers to prove that there is ample water.

The court said there was water that was adjudicated. We have proved that we would injure the rights of no one.

We are entitled and endowed with the right to use our land for the purpose it was meant to be used.

We need no paper rights from Riverside or the water commissioner to use water. No public servant should be allowed to put a curse on an innocent person and his land.

The state issues Riverside permits to dig wells and sell water and denies us one permit on our land.

Riverside Irrigation and Land Co., a quasi, tax-free corporation, has thousands of acres of land in the district, it sells water rights and well rights, it gets low interest and grant money from the government. It pays no taxes.

Those that purchase Riverside rights and well rights should get their water rights and well permits on Riverside land from the Riverside Irrigation and Land Company.

The state has no right to issue well permits on our land for Riverside and deny us one permit.

Why the discrimination?

Agnes Lamont
Orchard, Colo. 80649

Our land is in Weld County. Riverside Lands are in Morgan County.

An Act

RECEIVED
JUL 29 1977
DIVISION ENGINEERING
PUEBLO, COLORADO

SENATE BILL NO. 70. BY SENATORS Anderson, Hatcher, Wham, and McCormick; also REPRESENTATIVES Hinman, Shoemaker, Theos, and Winkler.

CONCERNING CRITERIA USED IN PREPARING WATER RIGHT TABULATIONS ACCORDING TO SENIORITY.

Be it enacted by the General Assembly of the State of Colorado:


SECTION 1. 37-92-401 (1) (b) (VI), Colorado Revised Statutes 1973, is amended to read:

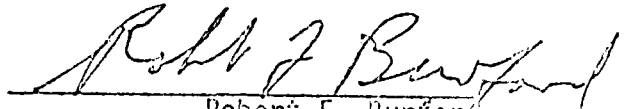
37-92-401. Lists of priorities. (1) (b) (VI) If, IN THE PREPARATION OF THE TABULATIONS PROVIDED FOR IN THIS SECTION, THE APPLICATION OF the preceding principles would cause in any particular case a substantial change in the priority of a particular water right to the extent theretofore lawfully enjoyed for a period of not less than eighteen years, then the division engineer shall designate the priority for that water right in accordance with historic practice. IN NO EVENT SHALL THE PROVISIONS OF THIS SUBPARAGRAPH (VI) ENTITLE A WATER RIGHT TO A PRIORITY SENIOR TO ITS ACTUAL DATE OF INITIAL APPROPRIATION OR TO FREEDOM FROM REGULATION AND ADMINISTRATION IN THE PRIORITY SYSTEM.


SECTION 2. Safety clause. The general assembly hereby


Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

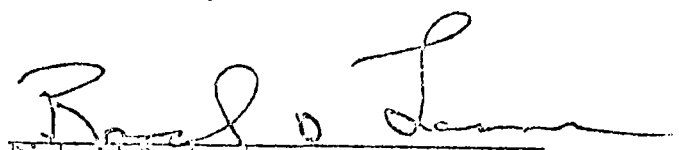

Fred E. Anderson
PRESIDENT OF
THE SENATE


Robert F. Burford
SPEAKER OF THE HOUSE
OF REPRESENTATIVES


Margjorie L. Rutenbeck
SECRETARY OF
THE SENATE


Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED June 19, 1979 3 46 pm


Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

An Act

SENATE BILL NO. 112. BY SENATORS Barnhill, Groff, D. Sandoval, and Soash; also REPRESENTATIVES Johnson, Kirscht, and Lucero.

CONCERNING THE CELEBRATION OF LEGAL HOLIDAYS BY EMPLOYEES IN THE STATE PERSONNEL SYSTEM.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. 24-11-101, Colorado Revised Statutes 1973, as amended, is amended BY THE ADDITION OF A NEW SUBSECTION to read:

24-11-101. Legal holidays - effect. (3) The provisions of this section shall not operate to prohibit agencies in the executive branch of state government from doing business on any of the legal holidays named in this article. Employees under the jurisdiction of the state personnel system who are required to work on any of the legal holidays named in this article shall be granted an alternate day off in the same fiscal year or be paid in accordance with the state personnel system or state fiscal rules in effect on April 30, 1979.

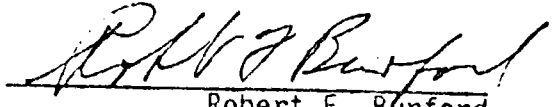
SECTION 2. Safety clause. The general assembly hereby

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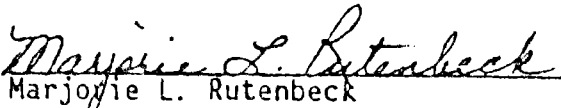
finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.



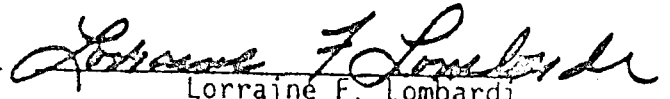
Fred E. Anderson
PRESIDENT OF
THE SENATE



Robert F. Burford
SPEAKER OF THE HOUSE
OF REPRESENTATIVES



Marjorie L. Rutenbeck
SECRETARY OF
THE SENATE

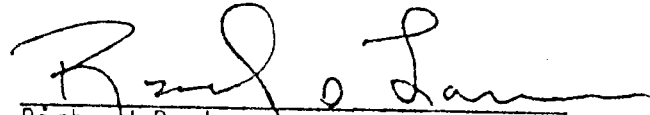


Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED

May 24, 1979

9:47 am



Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

An Act

SENATE BILL NO. 115. BY SENATORS Hatcher, Anderson, Soash, and Zakhem; also REPRESENTATIVES Lillpop and Theos.

CONCERNING EXTENSION OF PERMITS TO CONSTRUCT WELLS OUTSIDE DESIGNATED AREAS.

Be it enacted by the General Assembly of the State of Colorado:

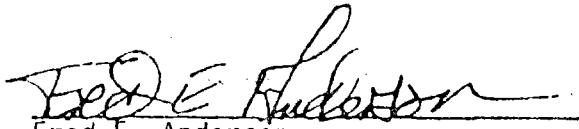
SECTION 1. 37-90-137 (3) (a), Colorado Revised Statutes 1973, is amended to read:

37-90-137. Permits to construct wells outside designated areas - fees - ~~permit no ground water right - evidence - time limitation.~~ (3) (a) Any permit to construct a well, issued on or after April 21, 1967, shall expire one year after the issuance thereof, unless the applicant to whom such permit was issued shall furnish to the state engineer, prior to such expiration, evidence that the water from such well has been put to beneficial use, or unless prior to such expiration the state engineer, upon APPLICATION, WITH good cause shown, AS TO WHY THE WELL HAS NOT BEEN COMPLETED AND AN ESTIMATE OF THE TIME NECESSARY TO COMPLETE THE WELL, extends such permit for an ONLY ONE additional period certain, not to exceed one year, BUT THE LIMITATION ON THE EXTENSION OF WELL PERMITS PROVIDED FOR IN THIS PARAGRAPH (a) SHALL NOT APPLY TO WELL PERMITS FOR FEDERALLY AUTHORIZED WATER PROJECTS CONTAINED IN PARAGRAPH (d) OF THIS SUBSECTION (3). THE STATE ENGINEER SHALL CHARGE A REASONABLE FEE FOR SUCH EXTENSION.

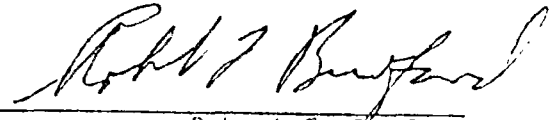
SECTION 2. Safety clause. The general assembly hereby

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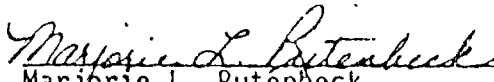
finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.



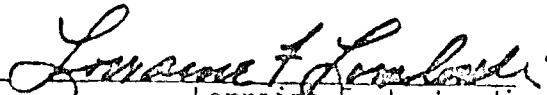
Fred E. Anderson
PRESIDENT OF
THE SENATE



Robert F. Burford
SPEAKER OF THE HOUSE
OF REPRESENTATIVES



Marjorie L. Ruttenbeck
SECRETARY OF
THE SENATE



Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED

May 18, 1979

2 14 pm



Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

An Act

SENATE BILL NO. 116. BY SENATORS Wham, Hatcher, and McCormick;
also REPRESENTATIVES Lillpop, Johnson, Theos, and Winkler.

RELATING TO THE EVIDENTIARY VALUE OF TABULATIONS OF WATER RIGHTS.

Be it enacted by the General Assembly of the State of Colorado:


SECTION 1. 37-92-402 (1) (b), Colorado Revised Statutes 1973, as amended, is amended to read:


37-92-402. Tabulations - abandonment. (1) (b) The tabulation provided for in this section, when concluded by judgment and decree, shall be ~~conclusive--as--to~~ PRIMA FACIE EVIDENCE OF the date of adjudication, the date of appropriation, and the volume or amount of the water rights listed and CONCLUSIVE as to water rights determined to have been abandoned. The listing of the water rights in the tabulation shall not create any presumption against abandonment, and the relative listing of water rights in the tabulation shall not create any presumption of seniority. The tabulation shall not be construed to modify special provisions of court decrees adjudicating, changing, or otherwise affecting such water rights or to modify contractual arrangements governing the interrelationship of such water rights. For the purpose of identification and description only, the tabulation may include additional information regarding the water rights listed, but this shall not be conclusive even though incorporated in the judgment and decree.

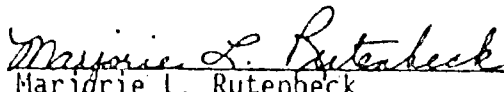
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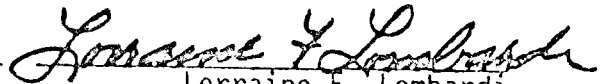
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finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

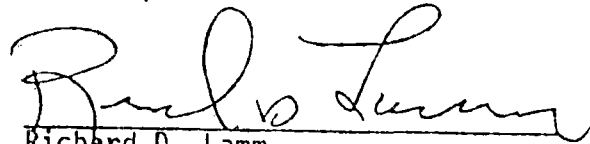

Fred E. Anderson
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Robert F. Burford
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OF REPRESENTATIVES


Marjorie L. Rutenbeck
SECRETARY OF
THE SENATE


Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED May 18, 1979 11672


Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

An Act

SENATE BILL NO. 342. BY SENATORS Noble, Anderson, Bishop, McCormick, Phelps, Soash, Strickland, Yost, and Zakhem; also REPRESENTATIVES Hamlin, DeNier, and Hastings.

CONCERNING RESERVOIRS SUBJECT TO APPROVAL BY THE STATE ENGINEER.

Be it enacted by the General Assembly of the State of Colorado:


SECTION 1. 37-87-105, Colorado Revised Statutes 1973, as amended, is amended to read:


37-87-105. Approval of plans for reservoir. No reservoir of a capacity of more than one thousand acre-feet, or having a dam or embankment in excess of ten feet in vertical height, FROM THE BOTTOM OF THE CHANNEL TO THE BOTTOM OF THE SPILLWAY, or having a surface area at high waterline in excess of twenty acres shall be constructed in this state unless the plans and specifications for the same have first been approved by the state engineer and filed in his office. In making his determination, the state engineer shall be guided by criteria related to the probability that precipitation will be exceeded once in five hundred years. The state engineer shall act as consulting engineer during the construction thereof and shall have authority to require the material used and the work of construction to be done to his satisfaction. No work shall be deemed complete until the state engineer furnishes to the owners of such structures a written statement of the work of construction and the full completion thereof, together with his acceptance of the same, which statement shall specify the dimensions of such dam and capacity of such reservoir.


SECTION 2. Safety clause. The general assembly hereby

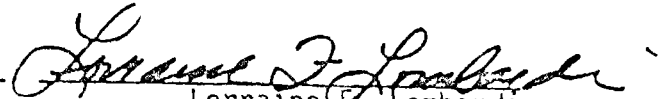
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finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.


Fred E. Anderson
PRESIDENT OF
THE SENATE

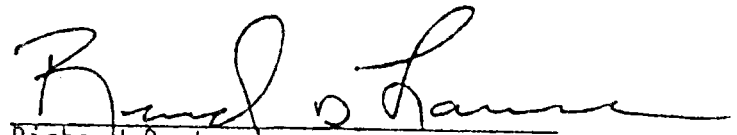

Robert F. Burford
SPEAKER OF THE HOUSE
OF REPRESENTATIVES


Marjorie L. Rutenbeck
SECRETARY OF
THE SENATE


Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

951A

APPROVED May 24, 1979


Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

An Act

SENATE BILL NO. 481. BY SENATORS Anderson, Allshouse, Clark, H. Fowler, Hatcher, McCormick, Phelps, Powers, Soash, Strickland, Wham, Yost, and Zakhem; also REPRESENTATIVES Burford, Davoren, Hamlin, Lillpop, Reeves, Shoemaker, Showalter, and Theos.

CONCERNING WATER SUBJECT TO APPROPRIATION.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. 37-82-101, Colorado Revised Statutes 1973, is REPEALED AND REENACTED, WITH AMENDMENTS, to read:

37-82-101. Waters of natural surface streams subject to appropriation. (1) The water of every natural stream, as referred to in sections 5 and 6 of article XVI of the state constitution, includes all the water occurring within the state of Colorado which is in or tributary to a natural surface stream. The waters of natural streams of Colorado do not include underground waters not in or tributary to natural surface streams nor underground waters which, when withdrawn, do not impair the flow of natural surface streams. All waters not in or tributary to a natural stream, as described in this subsection (1), shall be subject to such administration and use as the general assembly may provide by law. Such nontributary waters, when released from the dominion of the user, become a part of the natural surface stream where released, subject to water rights on such stream in the order of their priority.

(2) A stream system which arises as a natural surface stream and, as a natural or man-induced phenomenon, terminates within the state of Colorado through naturally occurring evaporation and transpiration of its waters, together with its underflow and tributary waters, is a natural surface stream

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subject to appropriation as provided in subsection (1) of this section.

SECTION 2. 37-82-106, Colorado Revised Statutes 1973, is amended to read:

37-82-106. Right to reuse of imported water. (1) Whenever an appropriator has lawfully introduced foreign water into a stream system from an unconnected stream system, such appropriator may make a succession of uses of such water by exchange or otherwise to the extent that its volume can be distinguished from the volume of the streams into which it is introduced. Nothing in this section shall be construed to impair or diminish any water right which has become vested.

(2) TO THE EXTENT THAT THERE EXISTS A RIGHT TO MAKE A SUCCESSION OF USES OF FOREIGN, NONTRIBUTARY, OR OTHER DEVELOPED WATER, SUCH RIGHT IS PERSONAL TO THE DEVELOPER OR HIS SUCCESSORS, LESSEES, CONTRACTEES, OR ASSIGNS. SUCH WATER, WHEN RELEASED FROM THE DOMINION OF THE USER, BECOMES A PART OF THE NATURAL SURFACE STREAM WHERE RELEASED, SUBJECT TO WATER RIGHTS ON SUCH STREAM IN THE ORDER OF THEIR PRIORITY, BUT NOTHING IN THIS SUBSECTION (2) SHALL AFFECT THE RIGHTS OF THE DEVELOPER OR HIS SUCCESSORS OR ASSIGNS WITH RESPECT TO SUCH FOREIGN, NONTRIBUTARY, OR DEVELOPED WATER, NOR SHALL DOMINION OVER SUCH WATER BE LOST TO THE OWNER OR USER THEREOF BY REASON OF USE OF A NATURAL WATER COURSE IN THE PROCESS OF CARRYING SUCH WATER TO THE PLACE OF ITS USE OR SUCCESSIVE USE.

SECTION 3. 37-87-101, Colorado Revised Statutes 1973, is amended to read:

37-87-101. Right to store waters. (1) Persons desirous DESIRING to construct and maintain reservoirs for the purpose of storing water have the right to store therein any of the unappropriated waters of the state not thereafter needed for immediate use for domestic or irrigating purposes, and to construct and maintain ditches for carrying such water to and from such reservoirs, and to condemn lands required for the construction and maintenance of such reservoirs and ditches in the same manner as now provided by law; except that after April 18, 1935, the appropriation of water for any reservoirs hereafter constructed when decreed, shall be superior to an appropriation of water for direct application claiming a date of priority subsequent in time to that of such reservoirs.

(2) UNDERGROUND AQUIFERS ARE NOT RESERVOIRS WITHIN THE MEANING OF THIS SECTION EXCEPT TO THE EXTENT SUCH AQUIFERS ARE FILLED BY OTHER THAN NATURAL MEANS WITH WATER TO WHICH THE PERSON FILLING SUCH AQUIFER HAS A CONDITIONAL OR DECREED RIGHT.

SECTION 4. 37-92-102 (1), Colorado Revised Statutes 1973, is amended to read:

37-92-102. Legislative declaration. (1) (a) It is hereby declared to be the policy of the state of Colorado that all waters WATER IN OR TRIBUTARY TO NATURAL SURFACE STREAMS originating in or flowing into this state whether-found-on-the surface-or-underground; have always been and are hereby declared to be the property of the public, dedicated to the use of the people of the state, subject to appropriation and use in accordance with law SECTIONS 5 AND 6 OF ARTICLE XVI OF THE STATE CONSTITUTION AND THIS ARTICLE. As incident thereto, it is the policy of this state to integrate the appropriation, use, and administration of underground water tributary to a stream with the use of surface water in such a way as to maximize the beneficial use of all of the waters of this state.

(b) A STREAM SYSTEM WHICH ARISES AS A NATURAL SURFACE STREAM AND, AS A NATURAL OR MAN-INDUCED PHENOMENON, TERMINATES WITHIN THE STATE OF COLORADO THROUGH NATURALLY OCCURRING EVAPORATION AND TRANSPIRATION OF ITS WATERS, TOGETHER WITH ITS UNDERFLOW AND TRIBUTARY WATERS, IS A NATURAL SURFACE STREAM SUBJECT TO APPROPRIATION AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1).

SECTION 5. 37-92-103 (3), Colorado Revised Statutes 1973, is amended, and the said 37-92-103, as amended, is further amended BY THE ADDITION OF A NEW SUBSECTION, to read:

37-92-103. Definitions. (3) (a) "Appropriation" means the application of a certain SPECIFIED portion of the waters of the state to a beneficial use PURSUANT TO THE PROCEDURES PRESCRIBED BY LAW; BUT NO APPROPRIATION OF WATER, EITHER ABSOLUTE OR CONDITIONAL, SHALL BE HELD TO OCCUR WHEN THE PROPOSED APPROPRIATION IS BASED UPON THE SPECULATIVE SALE OR TRANSFER OF THE APPROPRIATIVE RIGHTS TO PERSONS NOT PARTIES TO THE PROPOSED APPROPRIATION, AS EVIDENCED BY EITHER OF THE FOLLOWING:

(I) THE PURPORTED APPROPRIATOR OF RECORD DOES NOT HAVE EITHER A LEGALLY VESTED INTEREST OR A REASONABLE EXPECTATION OF PROCURING SUCH INTEREST IN THE LANDS OR FACILITIES TO BE SERVED BY SUCH APPROPRIATION, UNLESS SUCH APPROPRIATOR IS A GOVERNMENTAL AGENCY OR AN AGENT IN FACT FOR THE PERSONS PROPOSED TO BE BENEFITED BY SUCH APPROPRIATION;

(II) THE PURPORTED APPROPRIATOR OF RECORD DOES NOT HAVE A SPECIFIC PLAN AND INTENT TO DIVERT, STORE, OR OTHERWISE CAPTURE, POSSESS, AND CONTROL A SPECIFIC QUANTITY OF WATER FOR SPECIFIC BENEFICIAL USES.

(b) NOTHING IN THIS SUBSECTION (3) SHALL AFFECT APPROPRIATIONS BY THE STATE OF COLORADO FOR MINIMUM STREAM FLOWS AS DESCRIBED IN SUBSECTION (4) OF THIS SECTION.

(10.5) "Storage" or "store" means the impoundment, possession, and control of water by means of a dam. Waters in

underground aquifers are not in storage or stored except to the extent waters in such aquifers are placed there by other than natural means with water to which the person placing such water in the underground aquifer has a conditional or decreed right.

SECTION 6. 37-92-305, Colorado Revised Statutes 1973, as amended, is amended BY THE ADDITION OF A NEW SUBSECTION to read:


37-92-305. Standards with respect to rulings of the referee and decisions of the water judge. (9) (a) No claim for a water right may be recognized or a decree therefor granted except to the extent that the waters have been diverted, stored, or otherwise captured, possessed, and controlled and have been applied to a beneficial use, but nothing in this section shall affect appropriations by the state of Colorado for minimum stream flows as described in section 37-92-103 (4).


(b) No claim for a conditional water right may be recognized or a decree therefor granted except to the extent that it is established that the waters can be and will be diverted, stored, or otherwise captured, possessed, and controlled and will be beneficially used and that the project can and will be completed with diligence and within a reasonable time.

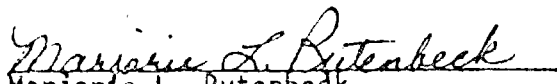
(c) No water right or conditional water right for the storage of water in underground aquifers shall be recognized or decreed except to the extent water in such an aquifer has been placed there by other than natural means by a person having a conditional or decreed right to such water.

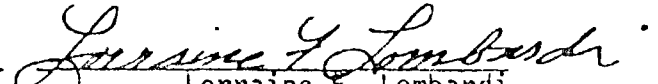
SECTION 7. Safety clause. The general assembly hereby

finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

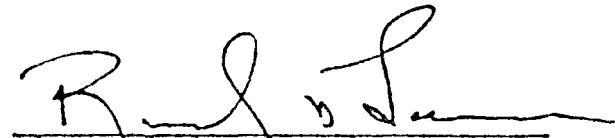

Fred E. Anderson
PRESIDENT OF
THE SENATE


Robert F. Burford
SPEAKER OF THE HOUSE
OF REPRESENTATIVES


Marjorie L. Rutenbeck
SECRETARY OF
THE SENATE


Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED June 22, 1979 1.37 m


Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

An Act

HOUSE BILL NO. 1409. BY REPRESENTATIVES Younglund, Hinman, Lillpop, Theos, Witherspoon, Burns, DeNier, Hudson, Jones, and Winkler; also SENATORS Woodard, McCormick, Schaefer, Soash, Yost, and Zakhem.

CONCERNING THE AUTHORITY OF THE GENERAL ASSEMBLY TO DIVERT THE WATERS OF THE STATE FOR USE IN ADJOINING STATES.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. 37-81-101, Colorado Revised Statutes 1973, is amended to read:

37-81-101. Unlawful to divert water for application outside of state. (1) ~~THE GENERAL ASSEMBLY HEREBY FINDS AND DECLARES THAT THE LOCATION AND AVAILABILITY OF WATER IN THIS STATE VARIES GREATLY FROM PLACE TO PLACE AND THAT SUCH VARIATION PRECLUDES THE REASONABLE APPLICATION OF GENERAL LAW TO SITUATIONS AND REGIONS OF SUCH DIVERSITY.~~ ACCORDINGLY, THE GENERAL ASSEMBLY HEREBY DETERMINES THAT, for the purpose of aiding and preserving unto the state of Colorado and all its citizens the use of all the waters of the springs, lakes, ponds, creeks, rivers, streams, and watercourses of this state, which waters do not increase with the growth of population and which are necessary for the health and prosperity of all the citizens of the state of Colorado, and for the growth, maintenance, and general welfare of the state, it is unlawful for any person, corporation, or association to divert, carry, or transport by ditches, canals, pipes, conduits, natural streams, or watercourses the waters of any spring, reservoir, lake, pond, creek, river, stream, or watercourse of this state into any other state for use therein. WHERE THE SAME OWNER OF AGRICULTURAL LAND IN COLORADO OWNS AGRICULTURAL LAND IN THE ADJACENT STATE THAT IS CONTIGUOUS WITH THE AGRICULTURAL LAND IN COLORADO, SPECIFIC AUTHORIZATION OF THE GENERAL ASSEMBLY, ON THE ADVICE OF THE STATE ENGINEER, IS REQUIRED TO ENABLE THE WATER TO BE USED IN THE ADJACENT STATE FOR AGRICULTURAL PURPOSES ONLY. IN DECIDING WHETHER OR NOT TO AUTHORIZE THE DIVERSION OF WATER FROM

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

COLORADO INTO ANOTHER STATE, THE GENERAL ASSEMBLY SHALL CONSIDER THE WILLINGNESS OF SAID STATE TO ALLOW DIVERSIONS OF ITS WATER FOR USE IN COLORADO.


(2) THIS SECTION SHALL NOT APPLY TO SECTION 37-81-103.


SECTION 2. 37-81-102, Colorado Revised Statutes 1973, is amended to read:

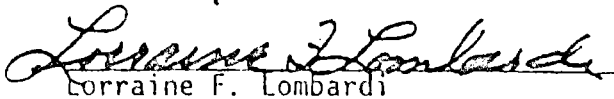
37-81-102. Officials charged with enforcement. It is the duty of the state engineer, the division engineers, and the water commissioners of this state to see that the waters of the state are preserved for the use and benefit of the citizens and inhabitants of the state for its growth, prosperity, and general welfare, and IT IS THE FURTHER DUTY OF SAID OFFICIALS to prevent the waters thereof from being diverted, carried, conveyed, or transported by ditches, canals, pipes, conduits, natural streams, or watercourses into other states for use therein UNLESS THERE IS SPECIFIC AUTHORIZATION OF THE GENERAL ASSEMBLY, AS PROVIDED IN SECTION 37-81-101. Upon its being brought to the knowledge of the state engineer of Colorado that any person, corporation, or association is carrying or transporting any of such waters into any other state for use therein, or is intending so to do, it is his duty to immediately call the matter to the attention of the attorney general, in behalf of and in the name of the state, who shall apply to any district court or to the supreme court of the state of Colorado for such restraining orders or injunctions, both preliminary and final, as may be necessary to enforce the provisions of this section and section 37-81-101, and jurisdiction is conferred upon said courts for such purposes.

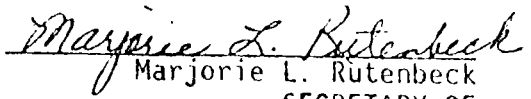
SECTION 3. Safety clause. The general assembly hereby

finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

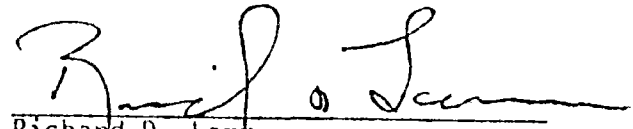

Robert F. Burford
SPEAKER OF THE HOUSE
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Lorraine F. Lombardi
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OF REPRESENTATIVES


Marjorie L. Rutenbeck
SECRETARY OF
THE SENATE

APPROVED May 31, 1979 4 23 pm


Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

An Act

HOUSE BILL NO. 1506. BY REPRESENTATIVES Boley, Burns, DeNier, Hastings, Johnson, Shoemaker, Showalter, Theos, and Winkler; also SENATORS Anderson, McCormick, Soash, Strickland, Wham, and Zakhem.

CONCERNING APPLICATIONS RELATING TO WATER RIGHT DETERMINATIONS BY AMENDING 37-92-302 (1) (b), COLORADO REVISED STATUTES 1973.

Be it enacted by the General Assembly of the State of Colorado:

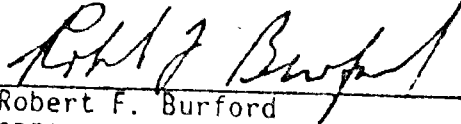
SECTION 1. 37-92-302 (1) (b), Colorado Revised Statutes 1973, is amended to read:

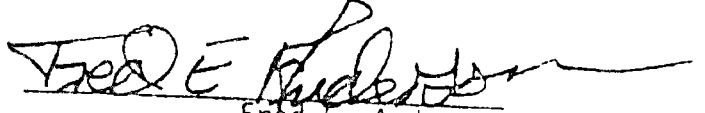
37-92-302. Applications for water rights or changes of such rights - plans for augmentation. (1) (b) Any person who wishes to oppose the application may file with the water clerk in quadruplicate a verified statement of opposition setting forth facts as to why the application should not be granted or why it should be granted only in part or on certain conditions. SUCH STATEMENT OF OPPOSITION MAY BE FILED ON BEHALF OF ALL OWNERS OF WATER RIGHTS WHO BY AFFIXING THEIR SIGNATURES TO SUCH STATEMENT OF OPPOSITION, IN PERSON OR BY ATTORNEY, CONSENT TO BEING INCLUDED IN SUCH STATEMENT AND WHO MAY BE DETRIMENTALLY AFFECTED BY GRANTING OF THE APPLICATION. The water clerk shall mail a copy of such statement of opposition to the state engineer and the division engineer.

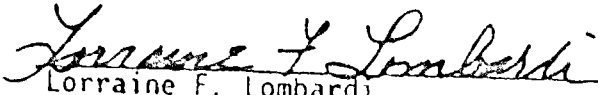
SECTION 2. Safety clause. The general assembly hereby

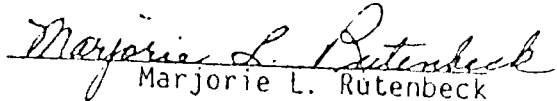
Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.


Robert F. Burford
SPEAKER OF THE HOUSE
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Fred E. Anderson
PRESIDENT OF
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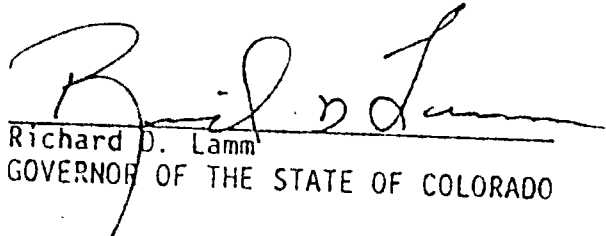

Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES


Marjorie L. Rutenbeck
SECRETARY OF
THE SENATE

APPROVED

May 31, 1979

4.261-


Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO