

JOHN A. LOVE
Governor



C. J. KUIPE
State Engine

DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES
RUDOLPH STYDUHAR P.E.
IRRIGATION DIVISION ENGINEER
1906 W. NORTHERN AVENUE
PUEBLO, COLORADO 81004
OFFICE: 542-3368 HOME: 738-2352

1906 West Northern Avenue
Pueblo, Colorado 81004
11 December, 1969

Mr. C.J. Kuiper, State Engineer
State of Colorado
101 Columbine Building
1845 Sherman
Denver, Colorado 80203

Dear Mr. Kuiper:

I submit herewith my annual report of activities in Irrigation Division No. 2 for the 1969 water year.

Respectfully submitted,

Rudy Styduhar
Division Engineer
Irrigation Division No. 2

RS:jp

I. DIVISION ENGINEERS OFFICE PERSONNEL

1. Associate Water Resources Engineer, Robert W. Jesse, was assigned to the Division No. 2 Office effective September, 1969.
2. Intermediate Clerk-typist, Mrs. Jeanne Perko, joined the Division No. 2 Office staff effective November, 1969.

The addition of both Mrs. Perko and Mr. Jesse completes the staffing of the Pueblo Division Office and their presence has already proven to be an asset to the operations of the Division Engineers Office.

II. GROUND WATER REGULATION AND ADMINISTRATION

1. The "well location" zone map, which would be the basis of any future ground water regulation and/or administration on Irrigation Division No. 2, has been distributed to the Water Commissioners of Water Districts 14, 17 and 67. Each of the Commissioners, in their respective districts, have been instructed to identify the owners of the wells indicated on the Zone Maps in the event of any future regulation and/or administration.

It is the considered opinion of the Division Engineer of Irrigation Division No. 2 that we, the State Engineers Office, should have no reason to expect a call by any of the surface users on any of the ground water diverters in Districts 14, 17 and 67 under normal or near normal conditions.

III. WATER SUPPLY AND MANAGEMENT STUDY PROGRAMS

1. Transit Time

The time of transit from reservoir to downstream canal is variable and is dependent upon the magnitude of stream flow. At the present time, this transit time factor is determined wholly on the basis of previous experience and this experience, based on various stages of river flow, is extremely limited. The transit time factor, at the present time, presents no alarming problem; however, with the on-coming activities of the South East Conservancy District with respect to sales of small quantities of water this transit time will be very important. Small quantity flow cannot be distinguished on our river gaging stations and it will be necessary for us to be able to advise a purchaser of Frying Pan water when to commence and when to cease river diversions of his purchased water. This transit time factor has been discussed at the previous two Division Engineers meetings and if we are unable to supply this information to purchasers of Frying Pan water in 1970 we are going to be rudely embarrassed.

It is recommended that such "transit time" studies, carried out at various stages of flow and during each month of the irrigation season, be instituted immediately. It is further recommended that the "radioactive tracer technique" be utilized since the use of dyes over such a distance is impossible. Results obtained at various monthly stages of river flow could be integrated by computer for all monthly stages of river flow. Furthermore, the study should be conducted by the Division of Water Resources.

2. Transit Losses

Presently, as ordered by the "Sunnyside Case" of the District Court in Salida, there is a transit loss of 0.07% per mile charged to all reservoir releases and trans-mountain waters. This charge, in the opinion of the Division Engineer, is considered valid thru Districts 11 and 12 and in District 14 to the Arkansas River at the South Side gaging station near Pueblo. Downstream from the Pueblo South Side gaging station this transit loss charge of 0.07% per mile, again in the opinion of the Division Engineer, is not sound. The Division Engineer in expressing his opinion has no facts, other than experience, to back up his statements. Never the less, with the advent of sales of Frying Pan water by the S.E. Conservancy District to various water users it will be necessary to apply a true "transit loss charge" to all such sales or we will be faced with the problems of illegal diversions of water by the purchasers of Frying Pan water. Furthermore, purchasers of Frying Pan water will have to absorb this loss and accurate, definite "loss charges" will without doubt influence intentions of potential purchasers.

It is recommended that such studies be instituted immediately and that portable radar mounted on a fixed, threaded bar constructed across the river be used to map the river bed to determine area and accurate flow meters used in conjunction with the radar to determine velocities. This "mapping and velocity determination" would be carried out monthly at pre-determined intervals along the river and results could be integrated by computer to determine transit losses under varying monthly conditions. It is further recommended that the Division of Water Resources perform the study.

3. Return Flow

Again, with the advent of sales of Frying Pan water to water users along the Arkansas River from Leadville to the State Line, the occurrence of return flow, although not a problem at the present time, will within a short time become a serious problem due to the fact that the S.E. Conservancy District will claim ownership of all return flow of any purchased Frying Pan water for purposes of re-sale to users downstream from the original purchaser.

It is recommended that the Division of Water Resources enter into a co-operative agreement with other interested parties to conduct infra-red studies along the Arkansas River in an attempt to determine return flow characteristics.

4. Evaporation

With regards to our long standing and present methods of computing evaporation charges for Sugar Loaf, Twin Lakes and Clear Creek Reservoirs during the winter period when the reservoirs are covered with ice and snow; the Division Engineer is of the opinion that our present computation methods and accuracy are questionable. Furthermore, even though all interested parties are in basic agreement, we cannot arbitrarily decide that there shall be no evaporative loss charges to the reservoirs during periods of ice and snow cover without the basic facts and data to back-up such a decision. In addition, our present water laws specifically state that all on stream reservoirs are to be charged evaporative losses and we are not enforcing this law as directed by law.

It is recommended that the Division of Water Resources, through its Division Engineer Office, establish and operate its own precipitation recording equipment at all on-stream reservoir sites so that we do not have to rely on questionable procedures of various reservoir caretakers. Furthermore, it is recommended that our present methods of computation of evaporative losses from reservoirs be studied for possible revisions. Finally, it is recommended that we have a uniform policy regarding evaporative losses from reservoirs throughout the state; either all on stream reservoirs be charged evaporative losses or no on stream reservoir be charged any evaporative loss.

5. Arkansas River Gaging Stations

Following, is inserted, a report of a tentative river gaging program for the main Arkansas River, its mountain reservoir system and major tributaries from the Continental Divide near Leadville, Colorado, to the Colorado-Kansas line.

(I N S E R T R E P O R T)

It is recommended that the Division of Water Resources commence immediately with the installation of gaging stations at the following sites:

- (1) District 11
 - a. Pine Creek
 - b. Chalk Creek
 - c. Cottonwood Creek
 - d. South Arkansas

- (2) District 12
 - a. Texas Creek
 - b. Grape Creek
 - c. Four Mile Creek
 - d. Beaver Creek

- (3) District 14
 - a. Fountain River

and, it is further recommended that the Division of Water Resources initiate the installation of telemetry equipment at the following stations:

- (1) Arkansas River near Nepesta
- (2) Arkansas River at La Junta

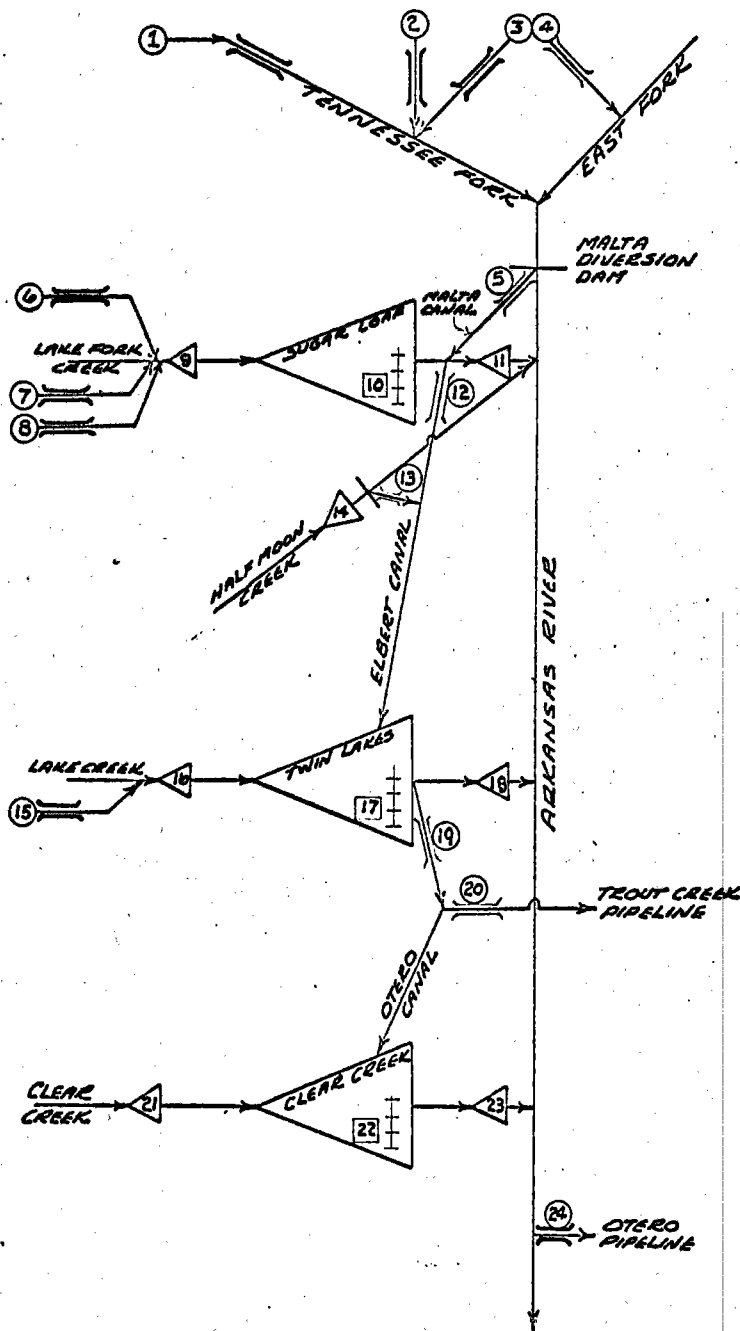
and, finally, it is recommended that the present Purgatoire at Nine Mile Dam gaging station be relocated at Higbee, Colorado and that telemetry be installed.

ARKANSAS RIVER AND TRIBUTARIES GAGING STATIONS

FOR CONVENIENCE, THIS REPORT ON THE REQUIRED GAGING STATIONS ON THE ARKANSAS RIVER AND ITS TRIBUTARIES FROM THE CONTINENTAL DIVIDE NEAR LEADVILLE TO THE COLORADO-KANSAS LINE, WILL BE DISCUSSED IN THE FOLLOWING THREE STAGES:

- I. UPPER MOUNTAIN RESERVOIRS AND TRANS-MOUNTAIN DIVERSION AREA.
- II. MAIN ARKANSAS RIVER FROM MALTA TO THE STATE LINE.
- III. MAJOR ARKANSAS RIVER TRIBUTARIES.

GAGING SITES ON THE UPPER MOUNTAIN RESERVOIRS AND TRANS-MOUNTAIN DIVERSION AREA



THE UPPER MOUNTAIN RESERVOIRS AND TRANS-MOUNTAIN DIVERSION AREA AS SHOWN ON THE FOLLOWING SKETCH WILL REQUIRE EITHER REGULAR RIVER GAGING STATIONS, STAFF GAGES AND/OR PARSHALL FLUMES WITH RECORDERS AT THE SITES INDICATED ON THE SKETCH.

<u>SITE NUMBER</u>	<u>NAME OF INSTALLATION</u>	<u>TYPE OF INSTALLATION</u>		
		<u>RIVER STATION</u>	<u>STAFF GAGE</u>	<u>PARSHALL FLUME</u>
1	WURTZ DITCH			X
2	EAGLE TUNNEL			X
3	EWING DITCH			X
4	COLUMBINE DITCH			X
5	MALTA CANAL			X
6	HOMESTAKE TUNNEL			X
7	DIVIDE TUNNEL			X
8	BUSK-IVANHOE TUNNEL			X
9	LAKE FORK CREEK ABOVE SUGAR LOAF RESERVOIR	X		
10	SUGAR LOAF RESERVOIR		X	
11	LAKE FORK CREEK BELOW SUGAR LOAF RESERVOIR	X		
12	ELBERT CANAL			X
13	HALF MOON CREEK DIVERSION TO ELBERT CANAL			X
14	HALF MOON CREEK ABOVE DIVERSION DAM	X		
15	INDEPENDENCE PASS TUNNEL			X
16	LAKE CREEK ABOVE TWIN LAKES RESERVOIR	X		
17	TWIN LAKES RESERVOIR		X	
18	LAKE CREEK BELOW TWIN LAKES RESERVOIR	X		
19	OTERO CANAL ABOVE TROUT CREEK PIPELINE			X
20	TROUT CREEK PIPELINE			X

<u>SITE NUMBER</u>	<u>NAME OF INSTALLATION</u>	<u>TYPE OF INSTALLATION</u>		
		<u>RIVER STATION</u>	<u>STAFF GAGE</u>	<u>PARSHALL FIUME</u>
21	CLEAR CREEK ABOVE CLEAR CREEK RESERVOIR	X		
22	CLEAR CREEK RESERVOIR		X	
23	CLEAR CREEK BELOW CLEAR CREEK RESERVOIR	X		
24	OTERO PIPELINE			X

Presently, with one exception, the main Arkansas River has adequate gaging station sites located from Malta, Colorado to the Colorado-Kansas State Line. Station sites are described below in downstream order.

<u>Gaging Station Number</u>	<u>NAME OF INSTALLATION</u>	<u>Operating Agency</u>	<u>Remarks</u>
7-0837	Arkansas River near Malta	USBR-GS	Records good; winter poor
7-0860	Arkansas River at Granite	State	Records good; winter poor
-----	Arkansas River above or below Clear Creek	State	Required new installation. Status of present Granite station (7-0860) to be determined after satisfactory operation of this station. Telemetry will be required.
7-0872	Arkansas River at Buena Vista	USBR-GS	Records good; winter fair
7-0912	Arkansas River near Nathrop	USBR-GS	Records good.
7-0915	Arkansas River at Salida	State	Records good
*7-0937	Arkansas River near Wellsville	USBR-GS	Records good. Telemetered. This station is preferred for administration because of telemetry and it includes S. Arkansas River flow. Station 7-0915 could therefore be abandoned.
7-0945	Arkansas River at Parkdale	USBR-GS	Records good.
*7-0960	Arkansas River at Canon City	State	Records good. Telemetered.

<u>Gaging Station Number</u>	<u>NAME OF INSTALLATION</u>	<u>Operating Agency</u>	<u>Remarks</u>
7-0992	Arkansas River near Portland	USBR-GS	Records fair. Inflow station for Pueblo Reservoir. Telemetry required.
7-0994	Arkansas River above Pueblo	USBR-GS	Records good. Outflow station for Pueblo Reservoir. Telemetry required.
*7-0995	Arkansas River near Pueblo	State	Records good.
7-1095	Arkansas River near Avondale	USBR-GS	Records fair.
7-1170	Arkansas River near Nepesta	State	Records fair. Telemetry required.
7-1197	Arkansas River at Catlin Dam	USBR-GS	Records fair.
7-1230	Arkansas River at La Junta	State	Records fair. Telemetry required.
7-1240	Arkansas River at Las Animas	Compact	Records good.
7-1305	Arkansas River below John Martin	Compact	Records excellent.
7-1330	Arkansas River at Lamar	Compact	Records good.
7-1375	Arkansas River near Coolidge	Compact	Records good.

* Telemetered Stations

Major tributaries to the main Arkansas River will be measured only at their junction with the main river; there being, at this time, no plans to measure tributary flow upstream from their junction with the main stream. Major tributaries under consideration for measurement at this time are as follows;

A. Water District 11

1. Pine Creek*
2. Chalk Creek
3. Cottonwood Creek
4. South Arkansas

B. Water District 12

1. Texas Creek
2. Grape Creek
3. Four Mile Creek
4. Beaver Creek*

C. Water District 14

1. Fountain
2. Salt Creek**
3. Pueblo Sewage Return**

* Tentative

** Measured at present time

Remaining major tributaries in Water Districts 14, 17 & 67 possibly should not be measured since any appreciable tributary flow in this area is beneficial only to those diversions in Water Districts 17 and/or 67.

6. Surface Diversion Accounting System

It is recommended that each Division, thru its Water Commissioners, and observers establish a weekly surface diversion report showing the total diversions (A.F.) of all ditches within the Division. This report, with its diversion data, is intended to accomplish the following:

- a. To provide the Division Engineer and the State Engineers Office with input computer data for the preparation of weekly, monthly and yearly surface diversion reports to be used in various water studies. When fully implemented, the State Engineers Office will prepare the annual report now being done by District Water Commissioners.
- b. To satisfy the Division Engineer that Water Commissioners are administering ditch diversions in accordance with current river calls and that ditch diversions do not exceed decreed amounts. It is possible, although improbable, that in order to maintain harmonious relations, in certain areas, the tendency towards disregarding undesirable aspects of river calls requiring ditches to cease or curtail river diversions is present. Furthermore, administration will be improved in that there will be no irregular diversions and all diversions will be within the river call.

The report should list all ditches within the administrative water district and should show daily ditch diversions based upon weekly recorder charts and in those cases where ditches are operating without recorders (most tributaries), instantaneous readings. (A sample, monthly report from Water District 17 is illustrated). It becomes rather obvious, that the satisfactory completion of such a report by computer will, ultimately, require the installation of recorders on all active diversions.

Furthermore, this report issued on a weekly basis could be used as a weekly supplement to the present Arkansas Valley Ditch Association daily report.

ARKANSAS RIVER

MONTH ~~September~~ YEAR 1969

TRIBUTARIES

IRRIGATION DIVISION NO. 2

WATER COMMISSIONER - Wm. Pattie

A.F. DIVERSION

WATER DISTRICT NO. 17

BOOK PAGE	IRRIGATION CANALS AND WELLS	TRIBUTARIES	MONTH ACRE FEET	SUB. TOTAL ACRE FEET	TOTAL ACRE FEET	PRIORITIES NUMBERS
ADOBE CREEK						
	Adobe Creek Ditch	*	0	0	1,800	162
	Adobe Valley Ditch	*	90	90	90	46
	Beer Ditch	*				63
	Blain Ditch	*				70
	Best Ditch	Mustang *				71
	Cline Ditch	Mustang *				123
	Choyenne Ditch	*	100	100	243	37- 55
	Foulk Ditch & Irrg. Pump	Sand *	NO Report.			209
	Sand Arroyo-Trippl Lakes	Arroya *				64
ARROYA ANDERSON						
	Prinster No. 1-2:	*				16 -20
APISHABA						
	Hardesty Ditch	*				78
	Lee Ditch	Sandy Arroya *				100
	Mustang Res. Canal	Mustang *				56- 75
	Omer Ditch Dist. No. 18	*				Year 1898
	Red Top Ditch	Mustang *				90
	Swink Supply Ditch	*				57
	Van Skike Ditch	Sanders Arroya *				81- 82
ARKANSAS						
	Aukland Ditch - Seep	King Center *	Noreport			161
	Baker, A.J. Ditch	*				21
	Baldwin - Stubbs Ditch	*				105
	Breeden Ditch - Seep	Otero Canal *	No report			169
	Catlin Canal	*	14,384	14,384	55,832	5 - 7
	Clute Springs	Tile Seep *				176
	Consolidated Extension	*				121
	Ft. Lyon Canal	*	23,102	23,102	161,186	4-6 -25
	Ft. Lyon & Feeder	Springs *				35
	Ft. Lyon Storage Canal	*	0	0	4,362	Horse Adobe Rosr.
	Grier Well	*				210
	Haight Ditch	Patterson Hallow *				99
	Hudnall, Lee Well	*				207
	Kicking Bird Canal	Ft. Lyon Carrier *	0	0	12,966	Great Plains Res.
	Las Animas Consolidated	*	5,328	5,328	22,790	2-3-8
	Otero Canal	*	284	284	6,104	13-62
	Potter Ditch	Lift Pump Seep Ditch *				11
	Rockyford Canal	*	5,764	5,764	26,662	1 -14
	Sakai, Elmo Wells	*				202- 211
	Spady, Alvin Wells	*				203 204 206
	Holbrook Canal		2,082	2,082	24,204	

MONTH **September** YEAR **1969**
 WATER COMMISSIONER- **Wm. Pattie**

ARKANSA RIVER
 TRIBUTARIES
 A.F. DIVERSIONS

IRRIGATION DIVISION NO. 2
 WATER DISTRICT NO. 17

BOOK PAGE	IRRIGATION CANALS AND WELLS	TRIBUTARIES	MONTH ACRE FEET	SUB. TOTAL ACRE FEET	TOTAL ACRE FEET	PRIORITIES NUMBERS
<u>CROOKED ARROYA</u>						
	Anderson, A.J. Ditch	*	352	352	1,362	15- 23
	Crooked arroya and	*				12
	Fairview Extension	*	503	503	2,297	92
<u>DOMESTIC WELLS</u>						
	Crowley County Water Assn.	*				61.5 gal.
<u>HORSE CREEK</u>						
	Alfalfa Ditch	*				186
	Barger, Wells	Steel Fork				182 184
	Big Horse Creek Ditch	*				183 205
	Bouldin	Steel Fork				33
	Box Springs	*	30	30	931	163
	Brett- Gray	Steel Fork				127 49
	Brooks, & Wells	Steel Fork				155-164
	Canady	*	12	12	134	171 190
	Collins Reservoir Ditch	Steel Fork				191
	Cow Buttes Ditch	Cow Buttes				18
	Cowdon No. 1-2 Ditch	Pond Creek				159
	Crook, Charles, Wells	Bob Creek				133
	Cutler Ditch & Reservoir	S. Fork *				110- 111
	Dead Horse Creek Ditch	Same *				135 142
	Dead Man Gulch Ditch	Same *				141 147
	Denning No. 1-2 Ditch	S. Fork *				29
	Endrude Springs	Bob Creek				94
	Epler Underflow Well	Blk. Draw *				34
	Forder, No 1-2-3 Ditch	*				153 -154
	Gammon Ditch	*				177
	Great Northern Ditch	*				97
	Green Ditch	*				156 158
	Hixson Pumps & Irrg.	*				151
	Horse Creek Ditch	*				95
	Horse Creek-Blk.Draw	Same *				56
	Houston Underflow	*				166 181 187 194
	Horse Creek Supply	*				180 185 188 200
	Klinkerman, Herman	*	225	225	514	9
	Kuester Irrg. Wells	Little Horse				73
	Lewis Supply Ditch	Bob Creek				140
	Mallet No, 1-2 Ditch	Bob Creek				37
	Miller, T.J. E.W. Branch	*				26
	Osborne Ditch	*				165 174
	Owens Ditch	Duck Crk. *				187 175 189
	Russell Wells 1-2-3-4	Steel Fork				115 136
	Sides Ditch	Little Horse				116 138
	S. Side Columbus	*				30
	Square Bluffs Ditch	*				168 170 172
						27
						102
						103
						178 192
						179 193
						208
						38
						180

ARKANSA RIVER

MONTH YEAR

TRIBUTARIES

IRRIGATION DIVISION NO.2

WATER COMMISSIONER*

A.F. DIVERSION

WATER DISTRICT NO. 17

BOOK PAGE	IRRIGATION CANALS AND WELLS	TRIBUTARIES	MONTH ACRE FEET	SUB. TOTAL ACRE FEET	TOTAL ACRE FEET	PRIORITIES NUMBERS
		<u>HORSE CREEK</u>				
	Sutlift, A.C. Wells	*				201
	Thurlow Land & Water	Steel Fork				152-160
	Two Springs Ditch	*				61
	Viaduct No. 2 & Reservoir	*				28
	West Pond Creek	Same *				143
	Windmill Lake & Supply	W. Pond Crk. *				85
	Wineinger Irrg.	*				173
		<u>King Arroya</u>				
	Lanckton Ditch	*				19-22
		<u>Purgatoire</u>				
	Butte Canal	Smith Crk.*				213
	Consolidated Extension	*				149
	Highland	*	1,682	1,862	8,428	(Dis 19) 120
	Nine Mile	*	810	810	4,942	(D 19 54) 214

7. Photographic Ditch Inventory

It is the intention of the Division II Engineers Office to prepare a photographic ditch inventory for Irrigation Division No. 2. Our intention is to prepare for each ditch within the Division a form which will include the following information:

- a. Name of Ditch
- b. Source of Decree
- c. Decreed Rights
- d. Owner
- e. Caretaker
- f. Size and type of measuring flume
- g. Location and types of headgate
- h. Pertinent remarks regarding flume condition and headgate condition.
- i. Flume Rating Information
 1. Date of rating
 2. Gage Height
 3. Discharge
 4. Shift
 5. Rater
 6. Remarks
- j. Location Road Log
- k. Flume Photograph

The form that is intended for this project is illustrated.

**STATE OF COLORADO
DIVISION 2**

DITCH NORTH SIDE WATER WORKS
FROM ARKANSAS RIVER NEAR PUEBLO, COLORADO
DEGREE SPRING - 1870 - 1.666 CFS 1-1871 - 0.80 CFS
 SPRING - 1872 - 3.067 CFS 4-1-1874 - 20.00 CFS

OWNER CITY OF PUEBLO, COLORADO
CARETAKER CITY OF PUEBLO (TERRY PIKE, 319 West Fourth)
SIZE AND TYPE 4' PARSHALL FLUME IN CONCRETE DITCH
MEASURING DEVICE 500' U.S. FROM FLUME - SCREW TYPE APPROX. 4' SQUARE
LOCATION AND TYPE HEADGATE
REMARKS



DATE	G. H.	Q	SHIFT	BY	REMARKS
9-30-69	1.59	31.7	0	D.C.L.	+4.7%

LOCATION Sec 33 TWP 20S R. 65W W. D. 14
ROAD LOG From corner 5th St. and Main, go North to 6th, then West to Greenwood, then North to 17th. North one block to 18th, then West on 18th, over viaduct to Lambert Street. Then South to 11th, then West to Colo. State Prison Honor Farm. Turn South at Gate around Office Bldg. to left until road crosses ditch. Gage is 400' U.S.

REMARKS

8. Aerial Photo Line Diagram

It is suggested and depending on cost that the State Engineers Office secure for each Division a strip aerial photograph of all streams and, in turn, the various Division Engineers Offices could locate and actually construct a line diagram on the aerial photos.

9. To brief all Supreme Court decisions regarding water, and furthermore, to brief all of those cases which have had a major influence in the development of water case law. Division Engineers certainly are not expected to perform as attorneys, however, they should be familiar with all major court decisions.

10. To re-design the Water Commissioners Field Books, the annual Ditch Report form and the Annual Reservoir Report form.

11. Prepare an outline illustrating an ideal and uniform Division Engineers Annual Report.

IV. COMMENTS REGARDING SENATE BILL 81

1. A uniform chart, adaptable to computer operations, for the tabulation of Division Water Rights should be made available to all Division Engineers not later than 1 January, 1970.
2. A uniform chart once designed and adaptable to computer operations and prepared by Division Engineers on a District basis could be programmed and the Division Priority Tabulation as required by Senate Bill 81 could be prepared by computer.
3. It is suggested that consideration be given to the preparation of a visual chart (similar to S.E.C.W.C.D. Brochure No. 6) that would more vividly illustrate the Division Priorities and at the same time the required priority tabulation would be produced.
4. It is also suggested that we do not ask for an extension of time from the Legislature as I am sure the priority tabulation can be completed as scheduled by Senate Bill 81. However, if a time extension is requested, no more than an additional six months is required.
5. Selling price of the tabulated priorities is much too low.

V. DITCH RECORDER INSTALLATIONS

1. The project of ditch recorder installations instituted in Water District No. 16 in 1968 has now been completed. Fifty recorders have been installed and are operating on both the Cucharas and Huerfano Rivers. The project was completed in spite of the opposition of the local Water Commissioner. The Water Commissioner now refuses to work up the charts claiming ignorance of the method employed and the amount of time involved.
2. Generally speaking, nearly all of the main stream diversions in all Districts, excepting Water District No. 18, are adequately flumed and recorded. Water users in Water District No. 18 will receive orders within the next month to commence with the installation of recorders and adequate flumes, headgates and wastegates.
3. If the State Engineer intends to implement an adequate "Surface Diversion Accounting System" it will be necessary for the Division Engineer to issue orders for installation of flumes and recorders on all tributary streams.

VI. INCOMPATIBLE ACTIVITIES AND INTERESTS OF WATER COMMISSIONERS

1. Activities and interests of Water Commissioners in fields other than water administration should under no circumstances be allowed when such activities and/or interests reflect upon the character of the State Engineers Office and also require more time than the Commissioner will devote to his job of water administration. Such activities if allowed to continue, has and will within a short time create an unnecessary and unwanted scandal.
2. Consequently, it is being brought to the attention of the State Engineers Office that Joe Faris, Water Commissioner of Water District No. 16, has and is devoting the majority of his time to the operation of the Marlboro Inn Motel. His devotion to the motel operation has resulted in the following:
 - (1) 1969 Water Commissioner Field Books, Ditch Report and Reservoir Report has not been received by the Division Engineers Office in time to be included in this report.
 - (2) Recorder charts of 50 recorders on the Huerfano and Cucharas have not been worked up and have not been received in the Division Engineers Office.

Marlboro realty, estates stock changes hands

According to a news release, Mrs. Louise Ridenour of Colorado Springs, one of the original stockholders in Faris Marlboro Country Estates Co., has purchased all the stock owned by Joe Faris, one of the organizers and president of the company and Marlboro Realty Co.

Now the largest shareholder in the companies, Mrs. Ridenour has been elected the new president, replacing Faris.

Although Faris has sold his interest in the development and realty companies, he is still controlling stockholder of the Marlboro Inn Motel complex, a separate and unassociated entity not connected with the other Marlboro Companies.

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	1964	1965	1966	1967	1968	1969
WATER DISTRICT #10	48,661	51,815	55,684	63,435	64,140	63,549
WATER DISTRICT #11	123,796	153,210	139,321	133,985	139,974	181,449
WATER DISTRICT #12	361,811	370,722	391,135	389,406	383,300	271,463
WATER DISTRICT #13	30,341	71,503	69,739	28,811	38,157	90,056
WATER DISTRICT #14	207,778	414,548	259,003	262,571	297,121	338,751
WATER DISTRICT #15	21,793	28,932	16,727	20,286	40,153	38,714
WATER DISTRICT #16	38,392	71,041	58,628	47,384	84,410	74,772 97,000*
WATER DISTRICT #17	300,778	426,592	378,712	433,275	474,509	701,486
WATER DISTRICT #18	5,656	9,575	7,210	8,744	16,142	12,366
WATER DISTRICT #19	55,372	92,673	72,696	56,945	105,452	85,866
WATER DISTRICT #66	1,958	2,870	988	2,660	2,004	535
WATER DISTRICT #67	69,430	148,185	229,478	215,538	164,896	132,451
TOTAL	<u>1,265,766</u>	<u>1,841,666</u>	<u>1,679,321</u>	<u>1,663,040</u>	<u>1,810,258</u>	<u>2,013,686*</u> 1,994,458

* - Est. - no report

	Nov. 1968	Dec. 1968	Jan. 1969	Feb. 1969	Mar. 1969	Apr. 1969	May 1969	June 1969	July 1969	Aug. 1969	Sept. 1969	Oct. 1969
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LEADVILLE 1.45 1.03 2.32 .38 .51 .84 2.78 2.48 2.10 1.65 1.48 3.20

BUENA VISTA .24 .30 .55 .14 .27 .55 2.50 2.12 1.67 2.27 1.44

CANON CITY 1.21 .43 .06 .19 .55 .67 1.72 1.97 1.84 .76 3.29

PUEBLO .43 .36 .04 .05 .82 .54 .87 1.74 1.73 1.58 1.28 2.05

LA JUNTA .20 .34 .01 .18 .68 1.67 1.90 1.28 2.77 2.75 .67 1.64

LAMAR .14 .36 T .14 1.39 3.33 2.38 2.23 3.08 1.60 2.75 1.79

IRRIGATION DIVISION NO. 2

TRANS-MOUNTAIN DIVERSIONS
OCTOBER 1, 1968 TO SEPTEMBER 30, 1969

TRANS-MOUNTAIN DIVERSION	TOTAL DIVERSION (ACRE FEET)	TRANSMISSION LOSSES (ACRE FEET)	TOTAL ALLOWABLE STORAGE (ACRE FEET)	NUMBER OF DAYS OF DIVERSION	AVERAGE DAILY DIVERSION (ACRE FEET)
COLUMBINE DITCH	1,955.98	40.88	1,915.10	119	16.44
EWING DITCH	1,244.62	23.91	1,220.71	131	9.50
WURTZ DITCH	2,458.50	40.30	2,418.20	126	19.51
LARKSPUR DITCH	587.30	8.19	579.11	143	41.07
BUSK-IVANHOE TUNNEL	6,879.00	43.36	6,835.64	187	36.79
HOMESTAKE TUNNEL	32,171.56	86.68	32,084.88	352	91.40
TWIN LAKES TUNNEL	50,808.66	442.01	50,366.65	365	13.92
TOTAL	96,105.62	685.33	95,420.29		

Note: C.F.S. x 2.00=Acres Feet