

Box 551
Durango, Colorado
November 28, 1965

Mr. A. Ralph Owens,
Acting State Engineer
Denver, Colorado

Dear Mr. Owens:

The following is my annual report of Division Seven for the irrigation year April 1 to October 31, 1965. There is also attached a resumé of Division 7 Water Commissioners reports.

GENERAL

This year will go down in history as one of the best irrigation years in modern history of the Southwestern part of Colorado, we had above average snowpack, a cool spring and summer, and a very slow runoff. The temperatures were below normal during the first part of the growing season, but normal or above during the later part. Above normal rain was also experienced during the later part of the summer.

SNOWPACK

Reports of snowfall and snowpack were watched with much interest. Many persons were interested due mainly the the past below normal runoff of the Colorado River and its impact on the Upper and Lower Colorado Basins. The snowpack and runoff exceeded expectations in this part of Colorado.

The following is the runoff forecast and the actual runoff for the main waters in this Division in 1,000 Acre Feet for the period April 1 to September 30th.

<u>Stream</u>	<u>April 1</u>	<u>1943- 1957 Average</u>	<u>Actual Runoff</u>	<u>Percentage of Normal</u>
San Juan (1)	950	597		
Dolores (2)	385	260	384	147.5%
La Plata (3)	37	27	44	163.0%
Animas (4)	580	456	723	158.5%
Piedra (5)				
Florida (6)				

(1) Station at Rosa, N. M. (2) Dolores, Colorado (3) Hesperus, Colorado
(4) Durango, Colorado, (5) Piedra, Colorado.

TEMPERATURES

<u>Station</u>	<u>1964</u>		<u>Dec</u>		<u>1965</u>		<u>Jan</u>		<u>Feb</u>		<u>March</u>		<u>April</u>	
	<u>Nov.</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>Jan</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	
Durango	36.1	0	27.1	-.8	29.5	+4.2	29.5	+.2	35.1	-1.6	44.8	-.3		
Cortez	35.4	-1.8	28.4	-1.1	29.3	+1.8	30.5	-1.4	35.6	-2.9	46.6	-.8		
Ft. Lewis	31.8	-1.4	22.4	-3.5	24.5	+1.5	23.6	-2.6	27.8	-3.9	39.8	-1.4		
Silverton	27.1	+.5	15.9	-3.4	19.8	+3.1	16.9	-2.1	21.1	-2.7	34.7	+1.5		
			<u>May</u>	<u>D</u>	<u>June</u>	<u>D</u>	<u>July</u>	<u>D</u>	<u>August</u>	<u>D</u>	<u>Sept</u>	<u>D</u>	<u>August</u>	<u>D</u>
Durango			51.6	-.9	58.7	-1.9	68.7	+1.7	65.1	-.9	55.1	-3.2	49.1	-2.1
Cortez			52.8	-3.1	60.6	-4.1	70.6	-0.7	67.7	-1.9	58.0	-2.7	51.0	00
Ft. Lewis			46.8	-2.2	54.6	-2.6	64.2	+1.0	61.2	-0.7	52.2	-2.8	48.4	-.4
Silverton			41.5	-.4	48.4	-1.3	69.4	-1.6	53.3	-0.8	45.4	-6.7	42.0	-2.4

D Departure from normal

PRECIPITATION

<u>Station</u>	<u>1964</u>		<u>Dec</u>		<u>1965</u>		<u>Jan</u>		<u>Feb</u>		<u>March</u>		<u>April</u>	
	<u>Nov.</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>Jan</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	<u>D.</u>	
Durango	1.52	+.54	3.18	+1.47	2.03	+.42	1.64	+.34	1.73	+.24	3.35	+2.06		
Cortez	1.96	+1.21	1.37	+.25	1.29	+.23	.74	-.36	1.89	+.80	2.14	+1.05		
Ft. Lewis	.98	-.01	1.80	+.20	1.85	+.21	1.52	-.19	1.18	-.37	2.11	+.63		
Silverton	3.18	+2.02	3.62	+2.12	1.49	+.03	1.07	-.60	2.32	+.24	2.95	+1.19		
			<u>May</u>	<u>D</u>	<u>June</u>	<u>D</u>	<u>July</u>	<u>D</u>	<u>August</u>	<u>D</u>	<u>Sept.</u>	<u>D</u>	<u>Oct.</u>	<u>D</u>
Durango			1.67	+.54	1.26	+.41	1.98	+.17	2.13	+.23	1.85	+.12	1.07	-0.68
Cortez			2.19	+1.33	1.36	+.82	1.26	+.05	1.79	+.28	1.53	+.07	2.82	+1.38
Ft. Lewis			2.36	+1.17	1.48	+.58	2.11	+.80	2.30	+.16	1.84	-.19	1.45	-.58
Silverton			1.79	+0.40	1.23	-.18	2.03	+1.05	3.80	+.98	5.23	+2.95	1.61	-.65

This year crops were above normal. Very good tonnage was obtained on improved hay lands, although some difficulty was experienced in harvesting due to extended rains. In some localities a good second cutting of hay was harvested. Although a good crop of beans were anticipated on the "dry side" it did not materialize due to a cool and wet September. Below average yields were obtained from orchard due to late and early frost and lateness of the season.

INSPECTION OF RESERVOIRS

All reservoirs in this Division were inspected this year. The following Reservoirs were drained and orders issued not to re-fill until satisfactory repairs are made.

<u>Dam</u>	<u>District</u>	<u>Owner</u>
Buck Pasture	69	Mervin Adams
Dunham	69	do
Havilland	30	Colorado Fish & Game

Final inspection was made on the Hatcher Dam in District 29.

Final inspection is to be made on three additional dams that are nearing completion.

A large number of Stock Tank locations were inspected in the field. These tanks were small stock tanks on dry drainages. Drainage pipes were recommended on only two where adjudicated water rights down stream were involved.

COMPACTS

LA PLATA

Harmony and goodwill prevailed between Colorado and New Mexico on the administration of the La Plata Compact-- reason -- ample water and washed out ditch heading in New Mexico. Only one request was made by New Mexico for additional water. This request was recinded four days later due to heavy rains the last part of June. On four occasions the State Engineers Office call from Santa Fe stating for us to picked up additional water because they could not use their allotted $\frac{1}{2}$ Hesperus flow.

STRUCTURES

Due to high water it was next to impossible for individuals to install headgates in the streams in this Division. Three headgates and flumes were installed in District 29 where the need is the greatest. Two new flumes were installed in District 32. Two flumes and one headgate were installed in District 30.

CONSTRUCTION

The San Juan Chama Project is on schedule. The Azatea Tunnel, between the Chama River drainage and the Navajo River is progressing satisfactorily. The contractor had to abandon the proposed hydraulic carrier for the excavated cuttings, They are using mine cars with an electric engine. To date they have not been successful in using a laser beam to keep the "mole" on line. To date 4 miles of tunnel has been completed in New Mexico. This is roughly 28% of their contract. The bids for the tunnel between the Navajo and Little Navajo Rivers is scheduled to be opened on January 11, 1966.

Work on the Blanco-Little Navajo River tunnel is progressing satisfactory, the contractor is experiencing considerable difficulty in the excavation work on the Blanco River end. About 800' of tunnel has been completed, this part of the tunnel is thru a glacial deposit, this deposit combined with large land slides necessitated the lining of the tunnel with steel plate. A total distance of 3500' of this material was found on the Blanco River end of the tunnel. To date 800' of tunnel has been completed on the Blanco River end. The contractor has on order a "mole" which is scheduled for April delivery this will start on the Little Navajo end of the tunnel and work toward the Blanco River.

All construction on the San Juan Chama Project is to be completed by 1970.

One dam was build in District 34 for Recreational Usage. One was built, was industrial use. One was built for irrigation in District 32. One dam was built in District 29 for irrigation.

ADJUDICATIONS

A first and new Adjudication of waters was mad for District 46. Nearly 100% of the water in this District is return flow from the Pine River irrigation systems. It is planned to administer the water for this District from District 34.

All evidence for new adjudications for Districts 30 and 33 have been taken. New decrees for these Districts should be forthcoming.

In a meeting with the Southwestern Water Conservancy Board I proposed the Board sponsor a new adjudication for District 29. The proposal was approved by the Board. Mr. Maynes, attorney for the board, is to work up the details sponsorship.

MEETINGS

During the year I attended most of the Southwestern Conservancy District Board Meetings. The main topic of discussion was the proposed Colorado River Projects. At the request of the Board I prepared a proposed construction and operational plan for the La Plata River under the Animas La Plata Project. I met with several of the Ditch Companies relative to different Problems.

PROBLEMS

Very few this year due to ample supplies of water. Not sufficient time to properly take care of assigned jobs. The additional assignment of keeping account of evaporation in reservoirs, inspection of stock tanks, dams and the separation of storage and stream flows take more time than time allows. The hiring of a student to assist during the summer peaks would be of great help.

District 29 with its 300 ditches still presents an administrative problem. Hiring of additional Deputy Water Commissioners might be the solution.

Very truly yours,

Division Engineer

RESERVOIR STORAGE

ACRE FEET

<u>Name of Reservoir</u>	<u>May 1</u>	<u>November 1</u>	<u>Capacity</u>
Groundhog	9,623	18,127	21,710
Jackson	7,399	7,712	10,000
Vallecitos	59,197	71,936	126,200
Bauer #1	350	120	350
Bauer #2	1,400	400	1,532
Webber	150	90	265
Naraguinepp	13,500	11,665	19,050
Summit	4,000	1,640	4,785
Fuett	1,375	890	2,257
Durango #2	215	134	231
Big Pine	260	50	260
Belmeas	466	381	466
Cascade	5,805	19,485	22,005
Wommer	206	88	186
Red Mesa	1,200	650	1,200
Lemon	11,641	32,848	40,300
IA	72	45	72
Florida Canal	440	230	560
Shauli	50	100	100
Emerald Lake	1770	1770	1770
Garner	30	20	60
Total	<u>119,169</u>	<u>168,341</u>	<u>253,486</u>

SUMMARY OF WATER COMMISSIONERS ANNUAL DITCH REPORTS

<u>District Number</u>	<u>Amount Appr. C.F.S.</u>	<u>Capacity Ditch C.F.S.</u>	<u>First Day Water used</u>	<u>Last Day Water used</u>	<u>Number of days water used</u>	<u>Average Daily use cfs.</u>	<u>No. Acre feet used</u>	<u>Number acres irrig.</u>
29	553	770	5/1	10/31	184	402.0	148,710	60,000
30	538 705	832	4/1	10/31	214	261.0	111,820	29,440
31	705	962	5/25	10/25	177	533.6	164,936	49,055
32	196	234	5/1	10/13	166	98.7	32,757	5,373
33	257	470	3/26	11/15	235	81.4	38,151	15,191
34 103	915	1329	4/5	10/18	211	225.0	88,459	41,595
69	<u>103</u>	<u>86</u>	<u>4/20</u>	<u>10/11</u>	<u>144</u>	<u>16.9</u>	<u>4,412</u>	<u>1,607</u>

589,245 202,261

TOTALS

SUMMARY OF WATER COMMISSIONERS ANNUAL RESERVOIR REPORT

<u>District Number</u>	<u>First Day Water used</u>	<u>Last day water was used</u>	<u>None of days water used</u>	<u>Number Acre Feet used</u>	<u>Number of Acres irrigated</u>
29	none used				
30	August 4th	October 31	46	6,708	21,000
31	June 15th	October 27	124	41,190	36,444
32	None used				
33	July 6th	September 18th	57	772	380
34	May 15th	October 31st.	173	16,995	51,440
69	<u>June 25</u>	<u>October 8th</u>	<u>37</u>	<u>4,242</u>	<u>108</u>
TOTAL	May 15th	October 31st	173	69,907	109,373

<u>District Number</u>	<u>Number of Reservoirs Reported</u>	<u>Acreage of- to high water line</u>	<u>Capacity in Acre feet</u>	<u>Amount of Storage May 1 AF</u>	<u>Amount of Storage November 1.</u>
29	none except Williams Creek Recreation Area				
30	5	1,543	63,196	18,151	52,797
31	3	3,093	128,234	61,173	73,794
32	none				
33	1	50	1,200	1,200	650

34	10	1499	38,581	28,506	22,612
69	<u>4</u>	<u>718</u>	<u>22,273</u>	<u>10,139</u>	<u>18,538</u>
Total	23	7,575	253,486	119,169	168,391