

IRRIGATION DIVISION THREE  
ANNUAL REPORT FOR  
1967  
BY WAYNE M. CROSBY  
DIVISION ENGINEER

Alamosa, Colorado  
November 20, 1967

Mr. A. Ralph Owens, State Engineer  
101 Columbine Building  
Denver, Colorado 80203

Dear Mr. Owens:

Herewith is submitted my annual report covering activities in Irrigation Division Three for the irrigation season of 1967.

This report includes the tabulated and summarized records of ditches, canals, reservoirs and trans-mountain diversions.

Early reports indicated the prospects for irrigation were above normal. But, again this year the last two thirds of snow season failed to produce sufficient moisture and the forecasts were revised to indicate about 68% of normal run-off. The lack of low and medium snow together with dry-soil moisture contributed largely to this figure. Carry-over storage in the major reservoirs in the basin contained 74% of normal storage.

Above average temperatures in March started the snow melt and demands by senior direct flow users made it necessary to stop storage in the reservoirs. Most of the smaller reservoirs filled to about 50% capacity, while the larger ones were considerable less. With a prospect of a dry year, lands under canal systems or with the better water rights, and those with good wells were the only ones planted.

An unexpected relief to the moisture outlook commenced in May and continued through September, with a record rainfall year. Most areas

received twice their normal yearly rainfall in this five month period. A tabulation of precipitation April through October is inserted below:

PRECIPITATION IN INCHES OF WATER

<u>Reporting Station</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Total</u>
Alamosa	0.58	1.22	0.84	1.78	3.28	0.53	0.42	8.65
Manassa	0.25	0.90	0.95	2.38	2.94	0.83	0.56	8.81
Moffat	1.60	2.15	1.30	4.10	3.44	0.55	0.10	13.24
Monte Vista	0.15	0.75	0.79	2.24	1.89	0.97	0.26	7.05
Platoro Res. Rio Grande Reservoir	0.50(Est)	0.66	2.83	6.14	4.42	1.78	0.61	16.94
	0.60	1.30	2.20	2.40	2.70	0.80	0.85	10.85
Saguache Santa Maria Reservoir	0.10(Est)	1.33	1.30	2.43	3.30	0.50	0.19	9.15
	0.85	0.85	1.55	2.40	3.85	1.00	0.35	10.85
TOTAL	4.63	9.16	11.76	23.87	25.82	6.96	3.34	85.54
AVERAGE	0.58	1.14	1.47	2.98	3.23	0.87	0.42	10.69

The average rainfall for the San Luis Valley for this period was 10.69 inches.

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Pasture grasses were in abundance and with the exception of small calves, livestock gained above average weight on excellent forage. The weather was too cold in the mountains for small calves to do well on summer pasture. The lower pastures were excellent and grass normally dormant in dry years grew in abundance.

There were no severe storms this year. The La Garita area experienced a rainfall of 2.5 inches in three hours, but no damage was in evidence.

The stream flow forecast for the Rio Grande River at the Del Norte station was 255,000 acre feet for the period May through September. This is

fifty-seven percent of the 15 year average (1948-1962). The forecast for the Conejos River at the Mogote station was 130,000 acre feet. This is 74% of the 15 year average. Below is the monthly discharge for these two streams.

Month	Rio Grande River Near Del Norte	Conejos River Near Mogote
May	96,000	57,100
June	109,800	59,500
July	37,500	22,400
August	40,100	24,500
September	25,800	10,800
TOTAL	309,200	174,300

The discharge for the Rio Grande River was 121% of the forecast and 69% of the 15-year average. The Conejos River was 134% of the forecast and 99.6% of the 15-year average.

Table No. 5 in this summary shows that the 1967 discharge of the Rio Grande River near Del Norte was about 71% of the 1966 discharge and about 79% of the past 10-year average. Table No. 7 shows that 1967 discharge of the Conejos River near Mogote to be about 103% of the 1966 flow and 114% of the 10-year average.

The total reservoir capacity in Division 3 of 370,148 acre feet was filled to only 18% or 66,555 acre feet. There were 35,145 acre feet of reservoir water delivered to ditches in 1967. (See Table No. 2).

The trans-mountain diversion records show in Table No. 3 a total of 2,125 acre feet imported from other divisions and of the imported water, 1,610 acre feet was delivered to ditches, canals, and reservoirs in Division 3. This does not include the Madanaw Trans-mountain Diversion

from the Arkansas River Basin, which by decree, runs into Division No. 3 from July 15th through the winter.

There were 912,112 acre feet of water diverted to ditches in this Division during 1967, compared to 1,132,155 acre feet diverted in 1966. This is 81% of the past 10-year average. There were 505,020 acres irrigated in 1967 or 93% of 1966 and 98% of the 10-year average. The number of acre feet used per acre was 87% of last year or 1.81 acre feet. This is 89% of the past 10-year average.

There was a total of 516 ditches receiving water in 1967 compared to 953 in 1966. Of these many ran for only a few days. Water was used generally from March 1st to October 31st, a total of 245 days. This was largely due to an order from the State Engineer stopping direct right diversion on November 1, 1966. This stop order was issued to help meet Rio Grande Compact commitments.

Most crops in the San Luis Valley were above average again this year largely due to the record rainfall. Early reports on Red McClure potatoes indicated they would be plentiful but small. This proved to be false, however, with potatoes sizes average and above. The Russet potatoes were small but plentiful due to the excess moisture. The price of potatoes was low after the harvest, which I believe is the case most every year; but with the storage facilities what they are in the Valley, the potatoes will be held until prices again are up.

Some lettuce was plowed under in the Blanca area. This could be due to rain, ripening too fast or overloading the market or perhaps all three. The price of lettuce was not too good this year. However, a lot of the lettuce is sold before picking and consequently this is pretty good insurance against failing prices.

The summary of Ditch Diversion percentage comparisons in Table No. 14 shows that all districts range in the upper percentile (over 50%) for 1967 as compared with 1966; with a low in District No. 20 of 69%, to a high of 145% in District No. 25. The same holds true comparing 1967 with past 10-year average with a range of 59% to 113%. The record precipitation during the summer months contributed to the ditches that were diverting water and no water was needed for unseeded ground. Hence the "acre feet used per acre" ranged from 86% to 219% as compared to 1966 and the comparison with the 10-year average range was 97% to 170%. The native hay crop was exceptional, however, there was great difficulty experienced putting up the hay. Fields were too wet to cut or downed hay was too wet to bale. Some of the hay lay in the fields from early July to mid September.

Pumping for supplemental water was at a minimum during mid season as can be determined by the above average stream flow late in the season also contributing was the high soil moisture content attributed to the rainfall.

Areas south of Monte Vista, La Jara, and near Center received hail this year. Although scattered, damage ranged from 50 to 100% of the crop.

The Moravian barley was good, but threshing was delayed due to inclement weather. The color of the barley is an important factor due to its use in beer manufacture. If the barley is not thrashed on time, it becomes dark and colors the beer. Also, a new type of fertilizer was tried and early reports were that the barley would not be acceptable to Coors. However, the latest information is that tests were made, the results were favorable, and the barley would be used.

The main concern of the irrigators in the Valley is the pending law suit over the Rio Grande River Compact. A brief was presented by Colorado to the United States Justice Department this year. The brief contained Colorado's

reasons for not being able to meet Compact requirements together with remedies to be undertaken to enable Colorado to comply. The main solution thus far was the termination of irrigation in the Valley November 1, 1966, continuing through the winter months. This move by the State Engineer met with favorable response by both New Mexico and Texas. Colorado won a stay of leave to file a complaint, by New Mexico and Texas until October 16, 1967. At this time a delegation from Colorado representing the Attorney General's office, the State Engineer's office, the Water Conservation Board, and the newly formed Rio Grande River Conservancy District went to Washington for a hearing with the U. S. Justice Department.

The outcome of the meeting was not too favorable. Colorado was asked to accept a debt limit not to exceed 100,000 acre feet, with the already incurred indebtedness canceled. The threat of legal action against Colorado in the U. S. Supreme Court is still pending. At this time, however, the case is still within the U. S. Justice Department's jurisdiction.

At the end of the 1966 calendar year, Colorado met its annual commitment with an annual balance slightly on the credit side. This was partly due to storage of 17,300 acre feet held over in Platoro Reservoir from 1965. At the end of the 1966 calendar year Colorado's total indebtedness was 927,300 acre feet.

Irrigation by direct right users was again terminated on November 1, 1967. The Rio Grande Canal ran nine hours after the shut-off order November 1, 1966, but this year voluntarily shut down at 6:00 p.m., October 31, 1967.

Colorado is estimated to fall short of its commitment this year by some 25,000 to 30,000 acre feet. Twelve hundred acre feet was stored in Platoro Reservoir in April, May, and June and released at 6:00 p.m., November 1, 1967, with very good results in getting it across the state line. This was attributed

to an 8 to 10' inch snow over the Conejos drainage the last week in October. There was snow on the ground at the time of the release. Most of the headgates were tight and plugged with straw to prevent excessive leakage. The release was at 600 cfs for 24 hours. A lower rate of release was suggested to Mr. Leon Hill, Regional Director for the Bureau of Reclamation in Amarillo, Texas. This request was met with resistance and as a result fences were destroyed and some areas were flooded, the water returning slowly to the River.

An exerted effort was made for improvement of irrigation systems this year with excellent results as seen below:

<u>IRRIGATION DITCH STRUCTURES INSTALLED OR REPAIRED</u>				
<u>Water District</u>	<u>Flumes</u>	<u>Headgates</u>	<u>Diversion Dams</u>	<u>Total</u>
20	24	25	4	53
21	1	2	0	3
22	5	5	0	10
24	15	3	0	18
25	0	0	0	0
26	1	9	0	10
27	7	7	0	14
35	0	0	0	0
<b>TOTAL</b>	<b>53</b>	<b>51</b>	<b>4</b>	<b>108</b>

Channelization on the lower end of the San Antonio River at the T-Bone Ranch was completed and all illegal diversion dams were removed prior to the November 1, 1967, shut off.

The Monte Vista Canal completed their new diversion structure this year.



The outlet tunnel of the Santa Maria Reservoir was extended to enable more water to be used from the lake, but more important to prevent any more blockages of the tunnel by material from an old slip on the face of the dam.

New recorder shelters and Parshall flumes were installed below Big Meadows and Beaver Park Reservoirs. Both of these reservoirs are owned by the Colorado Fish, Game and Parks Department. Beaver Park Reservoir is regulated for exchange purposes and supplies water for evaporation losses from all other Fish, Game and Park Reservoirs in District No. 20. The rating flume and recorder here will be of great help in administration.

Also, new installations were made at Wolf Creek Pass (Treasure Pass), Piedra Pass, and Squaw Pass Trans-mountain Diversions.

The outlet tunnel of Beaver Park Reservoir was again inspected this year. All the construction repair work done in the tunnel last year was destroyed. The steel lining was not anchored in the rock and consequently came out under pressure. Also, a large hole downstream of the downstream gate of two gates was cavitated. This hole was filled with cement last year. The failure of the cement was believed due to dropping the mixture from the top of the dam some 80 to 90 feet. The contractor is back on the job at this writing and will make repairs from the downstream end of the outlet tunnel to prevent any loss of storage from draining the Reservoir.

Big Meadows Reservoir was completed this year by the Fish, Game, and Parks Department. A 36 inch outlet tube was found to be too small for the inflow and water was backed up in the Reservoir. The gates were never closed during this period or until the Reservoir was again empty. Since this is a Reservoir for recreation use, upon filling to capacity the administration problems will be solved. There is at present 612 acre feet stored in the Reservoir that was exchanged from Beaver Park supply.

There has been some controversy over the spillway between the Fish, Game, and Parks Department and the U. S. Forrest Service. It seems an agreement was signed between the two agencies stating that approval of the Dam must be gotten from the U. S. Forrest Service before water was stored. The State Engineer's office has found the Dam safe and acceptable to store water.

The problem of inflow from springs in the Sanchez Reservoir was met with an administrative solution this year with the solution acceptable by both the Reservoir Company and the water users. Inflow was balanced with outflow and evaporation then any gain in the Reservoir over legal storage is released to the water users. A new gaging station and flume was installed here on Ventero Creek above the Reservoir. A cement control was constructed on the canal to the Stabilization Reservoir at the site of their gaging station installation.

We have continued the computations of reservoir evaporation losses with releases made to senior rights. There has been increased interest in installing evaporation gages at the major reservoirs which will be of great help in future computations.

The Water Commissioners and their Deputies have done an excellent job this year as I am sure they have in the past. I would like to take this opportunity to express my heartfelt thanks to them and their wives, to Mr. Glen Brees for his assistance with administrative problems and in coordinating irrigation and hydrographic figures, to the Denver office, and last of all to my wife, Frances, for all the extra hours spent checking, correcting, and typing this report.

Respectfully submitted,



Wayne M. Crosby  
Division Engineer  
Irrigation Division No. 3

Table No. 1

RESERVOIR STORAGE IN ACRE FEET

Date	Rio Grande	Santa Maria	Continental	Beaver Park	Terrace
Dec. 1, 1966	4,845	1,699	2,919	0	4,372
Jan. 1, 1967	6,518	2,267	3,615	808	4,747
Feb. 1, 1967	7,811	2,710	4,171	1,473	5,104
Mar. 1, 1967	8,939	3,080	4,681	1,953	5,379
Apr. 1, 1967	10,222	3,624	5,159	2,405	6,083
May 1, 1967	10,222	3,624	5,159	2,405	6,000
June 1, 1967	10,222	3,092	5,159	2,405	5,903
July 1, 1967	2,161	606	3,274	1,542	5,952
Aug. 1, 1967	2,161	457	2,001	1,526	6,539
Sept. 1, 1967	2,161	456	1,980	1,529	7,658
Oct. 1, 1967	2,161	454	1,939	1,107	7,329
Nov. 1, 1967	2,161	704	1,689	895	6,890

Date	Platoro	Cove Lake	Sanchez	Mountain Home	Smith
Dec. 1, 1966	3,000	260	8,127	1,069	1,295
Jan. 1, 1967	3,000	69	8,769	1,318	1,352
Feb. 1, 1967	3,000	62	9,178	1,519	1,558
Mar. 1, 1967	3,000	55	9,537	1,720	1,764
Apr. 1, 1967	3,000	460	9,916	1,920	1,971
May 1, 1967	3,700	884	9,418	1,987	1,590
June 1, 1967	4,000	3,287	8,209	1,743	1,542
July 1, 1967	4,200	2,780	6,205	1,440	1,352
Aug. 1, 1967	4,200	1,568	4,587	1,284	1,400
Sept. 1, 1967	4,200	1,568	8,046	1,361	1,495
Oct. 1, 1967	4,200	972	10,840	1,588	1,590
Nov. 1, 1967	4,200	611	11,470	1,616	1,646

Table No. 2

RESERVOIRS

Name	Capacity in A.F.	Quantity of Water 1967 Max. in A. F.	Quantity of Water Nov. 1 in A.F.	Quantity of Water Delivered to Ditches in A.F.
Alberta Park	598	598	598	0
Beaver Park	4,434	2,527	895	1,505
Big Meadows	2,313	612	612	0
Big Ruby	94	31	31	0
Bristol Head No. 1	121	0	0	0
Bristol Head No. 2	804	0	0	0
Continental	22,679	5,159	1,689	3,112
Cove Lake	6,380	3,610	611	5,372
Downing	30	0	0	0
Eastdale No. 1	3,519	1,000	0	538
Eastdale No. 2	3,041	0	0	0
Fuchs	238	187	21	116
Goose Lake	232	153	0	130
Hay Press Park	200	200	200	0
Hermit No. 1	385	221	221	0
Hermit No. 2	407	393	393	0
Hermit No. 3	192	192	192	0
Humphreys	842	842	842	0
Hunters Lake	19	19	19	0
Jumper Creek	38	38	38	0
La Jara	14,052	3,685	3,613	0
Loch Laven	24	0	0	0
Lost Lake (Lower)	966	280	0	225
Lost Lake (Upper)	68	68	68	0
Love Lake	24	24	24	0
Meadow Lake (McCrone)	174	174	26	103
Meadow Lake (Wright)	115	115	115	0
Metroz (Lower Basin)	396	297	297	0
Metroz (Upper Basin)	84	84	84	0
Mill Creek	43	34	34	0
Mountain Home	18,595	2,032	1,616	1,319
Platoro	60,000	4,200	4,200	0
Poage	261	167	80	87
Regan's Lake	823	No report	No report	0
Rio Grande	51,113	10,222	2,161	8,060
Rito Hondo	561	561	561	0

Table No. 2

RESERVOIRS CONTINUED

Name	Capacity in A.F.	Quantity of Water 1967 Max. in A.F.	Quantity of Water Nov. 1 in A.F.	Quantity of Water Delivered to Ditches in A.F.
Road Canyon No. 1	1,367	733	733	0
Road Canyon No. 2	84	66	66	0
Salazar No. 1	234	234	175	78
Salazar No. 2	35	35	10	0
Sanchez	103,155	11,542	11,470	5,584
Santa Maria	45,070	3,624	704	2920
Shaw Lake	681	308	42	266
S. Lazy U Dude Ranch	106	106	106	0
S. Lazy U No. 2	42	42	42	0
Smith	5,651	2,071	1,646	986
Sowards No. 1-A	8	8	8	0
Sowards No. 2	35	35	35	0
Sowards No. 3	19	19	19	0
Sowards No. 4	45	45	45	0
Spring Creek	97	No report	No report	0
Spruce Lake No. 1	98	76	76	92
Spruce Lake No. 2	105	98	6	0
Squaw Lake	162	0	0	0
Stabilization (Head)	260	260	No report	---
Streams Lake	41	41	41	0
Terrace	17,233	8,001	6,890	7,280
Trout Lake	198	59	59	0
Troutvale No. 1	201	201	201	0
Troutvale No. 2	257	257	257	0
Trujillo Meadows	913	913	913	0
Wee Ruby	186	56	56	0
<b>TOTALS</b>	<b>370,148</b>	<b>66,555</b>	<b>42,841</b>	<b>37,773</b> <b>35,145</b>

Table No. 3

TRANS-MOUNTAIN DIVERSIONS

Name of Diversion	Acre Feet Imported	Acre Feet Delivered to Ditches	Acre Feet Delivered to Reservoirs	Evap. and/or Transportation Loss (Ac.Ft.) Delivered to Senior Decees	Total Acre Feet Del.
Fuchs Ditch @ Weminuche Pass	303	257	0	46	257
Piedra Pass Ditch (East) @ Piedra Pass	54	43	0	9	43
Piedra Pass Ditch (West) @ Piedra Pass	0	0	0	0	0
Raber-Lohr Ditch @ Weminuche Pass	795	574	114	107	688
Squaw Pass Ditch @ Squaw Pass	42	14	0	28	14
Tabor Ditch @ Spring Creek Pass	401	0	140	261	140
Tarbell Ditch Near Cochetopa Pass	275	250	0	25	250
Treasure Pass Ditch @ Wolf Creek Pass	255	218	0	37	218
<b>TOTAL</b>	<b>2,125</b>	<b>1,356</b>	<b>254</b>	<b>513</b>	<b>1,610</b>

Table No. 4

DIVERSIONS TO CANALS AND DITCHES DISTRICT NO. 20

Diverted From	Direct A.F.	Trans-Mt. Diversions A.F.	Reservoir A.F.	Total A.F.	Acres Irrigated	A. F. Per Acre
Rio Grande	385,587	1,100	14,408	401,095	303,278	1.32
Pinos, Frisco, & Schrader	13,021	0	116	13,137	5,109	2.57
Rock & Spring *	6,261	0	0	6,261	3,505	1.78
Other Streams *	12,496	0	0	12,496	4,864	2.57
*Lower Rock Creek deleted from "Rock and Spring", included with "Other Streams"						
<b>Total</b>	<b>417,365</b>	<b>1,100</b>	<b>14,524</b>	<b>432,989</b>	<b>316,756</b>	<b>1.37</b>

Table No. 5

COMPARISON OF RIVER DISCHARGE, DITCH DIVERSIONS,  
AND ACRES IRRIGATED IN DISTRICT NO. 20

Year	Total Acre Feet Discharge of Rio Grande River Near Del Norte Yr. Ending Sept. 30	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	750,700	632,543	324,248	1.95
1959	347,500	387,147	278,485	1.39
1960	624,200	637,986	326,884	1.95
1961	478,200	558,410	318,591	1.75
1962	771,600	761,901	341,205	2.23
1963	341,400	364,825	281,629	1.30
1964	372,200	425,723	293,293	1.45
1965	880,000	903,847	333,185	2.71
1966	625,700	628,473	334,336	1.88
1967	444,300	432,989	316,756	2.57
<b>Total</b>	<b>5,635,800</b>	<b>5,733,844</b>	<b>3,148,612</b>	
<b>Mean</b>	<b>563,600</b>	<b>573,380</b>	<b>314,861</b>	<b>1.92</b>

Table No. 6

COMPARISON OF DITCH DIVERSIONS  
AND ACRES IRRIGATED IN DISTRICT NO. 21

Year	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	81,710	46,001	1.78
1959	47,595	30,426	1.56
1960	86,736	45,248	1.92
1961	72,908	45,417	1.61
1962	116,178	47,109	2.47
1963	39,486	24,587	1.61
1964	56,390	35,755	1.58
1965	136,454	51,806	2.63
1966	105,076	43,163	2.43
1967	84,827	40,472	2.10
<b>Total</b>	<b>827,360</b>	<b>409,984</b>	
<b>Mean</b>	<b>82,736</b>	<b>40,998</b>	<b>1.97</b>

Table No. 7

COMPARISON OF RIVER DISCHARGE, DITCH DIVERSIONS,  
AND ACRES IRRIGATED IN DISTRICT NO. 22

Year	Total Acre Feet Discharge of Conejos River Near Mogote Yr. Ending Sept. 30	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	251,100	231,797	98,342	2.36
1959	150,600	170,793	85,306	2.00
1960	208,300	222,302	89,094	2.50
1961	201,600	248,348	94,781	2.62
1962	255,300	271,729	93,823	2.90
1963	132,600	135,835	76,228	1.78
1964	155,500	181,686	86,966	2.09
1965	305,500	308,980	100,412	3.08
1966	236,900	231,226	101,004	2.29
1967	243,200	244,148	100,349	2.43
<b>Total</b>	<b>2,140,600</b>	<b>2,246,844</b>	<b>926,305</b>	
<b>Mean</b>	<b>214,100</b>	<b>224,684</b>	<b>92,630</b>	<b>2.40</b>



Table No. 8

COMPARISON OF DITCH DIVERSIONS  
AND ACRES IRRIGATED IN DISTRICT NO. 24

Year	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	61,528	23,376	2.63
1959	57,959	20,074	2.89
1960	57,993	22,720	2.55
1961	58,882	22,205	2.65
1962	54,973	21,654	2.54
1963	31,426	16,885	1.86
1964	39,226	16,735	2.34
1965	66,173	19,562	3.38
1966	60,864	20,303	2.98
1967	45,891	14,091	3.26
Total	534,915	197,605	
Mean	53,492	20,838	2.71

Table No. 9

COMPARISON OF DITCH DIVERSIONS  
AND ACRES IRRIGATED IN DISTRICT NO. 25

Year	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	42,543	17,910	2.38
1959	27,395	11,366	2.41
1960	44,530	12,467	3.57
1961	43,633	12,755	3.42
1962	38,655	10,102	3.83
1963	11,795	2,099	5.62
1964	33,961	8,021	4.23
1965	73,552	16,299	4.51
1966	30,320	13,632	2.22
1967	44,084	12,825	3.44
Total	390,468	117,476	
Mean	39,047	11,748	3.56

Table No. 10

COMPARISON OF DITCH DIVERSIONS  
AND ACRES IRRIGATED IN DISTRICT NO. 26

Year	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	62,505	33,420	1.87
1959	25,295	10,076	2.51
1960	40,036	15,535	2.58
1961	24,624	10,034	2.45
1962	45,624	17,490	2.61
1963	12,718	5,513	2.31
1964	30,063	9,189	3.27
1965	78,474	26,939	2.91
1966	33,542	13,921	2.41
1967	22,074	8,821	2.50
Total	374,955	150,938	
Mean	37,496	15,094	2.54

Table No. 11

COMPARISON OF DITCH DIVERSIONS  
AND ACRES IRRIGATED IN DISTRICT NO. 27

Year	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	11,085	6,692	1.66
1959	7,368	3,057	2.41
1960	7,341	4,420	1.66
1961	7,047	2,555	2.76
1962	6,785	3,088	2.20
1963	2,710	785	3.45
1964	7,509	1,100	6.83
1965	13,139	1,885	6.97
1966	9,619	3,325	2.89
1967	8,217	1,301	6.32
Total	80,820	28,208	
Mean	8,082	2,821	3.72

Table No. 12

COMPARISON OF DITCH DIVERSIONS  
AND ACRES IRRIGATED IN DISTRICT NO. 35

Year	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	57,644	22,190	2.60
1959	35,694	15,654	2.28
1960	56,324	18,227	3.09
1961	47,511	17,225	2.76
1962	56,882	18,215	3.12
1963	21,069	11,912	1.77
1964	20,805	9,580	2.17
1965	52,611	18,345	2.87
1966	33,035	14,535	2.27
1967	29,882	10,405	2.87
Total	411,457	156,288	
Mean	41,146	15,629	2.58

Table No. 13

COMPARISON OF DITCH DIVERSIONS  
AND ACRES IRRIGATED IN DIVISION NO. 3

Year	Total Acre Feet Diverted From All Streams	Total No. of Acres Irrigated	Acre Feet Per Acre
1958	1,181,355	572,179	2.06
1959	759,246	454,444	1.67
1960	1,153,248	534,595	2.16
1961	1,061,317	523,553	2.03
1962	1,352,711	553,111	2.45
1963	619,864	419,638	1.48
1964	795,363	460,639	1.73
1965	1,633,230	568,433	2.87
1966	1,132,155	544,219	2.08
1967	912,112	505,020	1.81
Total	10,600,601	5,135,831	
Mean	1,060,060	513,583	2.04

Table No. 14

PERCENTAGE COMPARISONS

District	Ditch Diversions in 1967 Compared to 1966	Ditch Diversions in 1967 Compared to Past 10 Years	Acres Irrigated in 1967 Compared to 1966	Acres Irrigated in 1967 Compared to Past 10 Years	No. of A.F. Used Per Acre in 1967 Compared to 1966	No. of A.F. Used Per Acre in 1967 Compared to Past 10 Years
20	69%	76%	95%	101%	137%	134%
21	81	103	94	99	86	107
22	83	94	106	108	106	101
24	75	82	69	68	109	120
25	145	113	94	109	155	97
26	66	59	63	58	104	98
27	85	102	39	48	219	170
35	90	73	72	67	126	111
DIVISION No. 3	81%	86%	93%	98%	87%	89%

Table No. 15

WATER COMMISSIONER'S DITCH REPORTS  
IRRIGATION DIVISION No. 3

Water District	Number of Ditches Using Water	First Day Water Was Used	Last Day Water Was Used	No. of Days Water Was Carried	No. of Acre Feet Used	No. of Acres Irrigated
20	168	Rio Grande Canal Nov. 1, 1966 Nine hours	Oct. 31, 1967	243	432,989	316,756
21	62	Nov. 1, 1966	Oct. 31, 1967	243	55,567	28,270
22	93	Mar. 11, 1967	Oct. 31, 1967	235	244,148	100,349
24	57	Nov. 1, 1966	Oct. 31, 1967	365	45,891	14,091
25	50	Nov. 1, 1966	Oct. 31, 1967	265	44,084	12,825
26	36	Apr. 1, 1967	Oct. 31, 1967	224	22,074	8,821
27	16	Mar. 1, 1967	Oct. 31, 1967	244	8,217	1,301
35	34	Apr. 1, 1967	Oct. 31, 1967	214	29,882	10,405
DIVISION No. 3	516	Nov. 1, 1966	Oct. 31, 1967	365	882,852	492,818

SUPPLEMENT TO ANNUAL REPORT  
DIVISION NUMBER THREE 1967

Wayne M. Crosby  
Irrigation Division Engineer

Contents: Cost of operation

Table No. 1 - Division Engineer's Expense

Table No. 2 - District's Expense

Table No. 3 - Division + District's Expense

Table No. 1

## Division Engineer's Expense

Salary	Per Diem	*Miscellaneous Cost	Mileage	Mileage Cost
\$ 2,784 (est)	\$ 100.00 (est)	\$ 100.00 (est)	10,500 (est)	\$ 840.00 (Brees)
7,602	473.60	869.52	29,016	2,321.28 (Crosby)
\$10,386	\$ 573.60	\$ 969.52	39,516	\$3,161.28

Total Administrative Cost - Division Office \$ 15,090.40

Acre Feet diverted in Division No. 3 912,112

Cost per Acre Foot - Division Office \$ 0.02

## \*Miscellaneous Expense Includes:

1. Office Rental (\$35 per month - heat furnished)
2. Telephone (Average - \$30 per month)
3. Electricity (\$1.15 per month)
4. Office supplies and equipment rentals

Table No. 2

## District's Expense

District No.	Salaries	*Annual Leave	Mileage	Mileage Cost
20	\$ 13,879.76	\$ 690.00	50,498	\$ 4,039.84
Total Administrative Cost - District.....				\$ 18,609.60
Total Acre Feet diverted in District No. 20.....				432,989
Cost per Acre Foot - District No. 20.....				\$ 0.04
21	\$ 5,479.09	\$ 391.00	11,847	\$ 947.76
Total Administrative Cost - District.....				\$ 6,817.85
Total Acre Feet diverted in District No. 21.....				84,827
Cost per Acre Foot - District No. 21.....				\$ 0.08

Table No. 2  
(cont.)

District No.	Salaries	*Annual Leave	Mileage	Mileage Cost
22	\$ 8,868.74	\$ 506.00	17,406	\$ 1,392.48
Total Administrative Cost - District.....\$ 10,767.22				
Total Acre Feet diverted in District No. 22....244,148				
Cost per Acre Foot - District No. 22.....\$ 0.04				
24	\$ 4,469.15	\$ 300.00	10,996	\$ 879.68
Total Administrative Cost - District.....\$ 5,648.83				
Total Acre Feet diverted in District No. 24....45,891				
Cost per Acre Foot - District No. 24.....\$ 0.12				
25	\$ 3,554.78	\$ 275.00	11,431	\$ 914.48
Total Administrative Cost - District.....\$ 4,744.26				
Total Acre Feet diverted in District No. 25....44,084				
Cost per Acre Foot - District No. 25.....\$ 0.11				
26	\$ 4,583.99	\$ 275.00	15,720	\$ 1,257.60
Total Administrative Cost - District.....\$ 6,166.19				
Total Acre Feet diverted in District No. 26....22,074				
Cost per Acre Foot - District No. 26.....\$ 0.28				
27	\$ 2,718.90	\$ 184.00	3,502	\$ 280.16
Total Administrative Cost - District.....\$ 3,174.06				
Total Acre Feet diverted in District No. 27.....8,217				
Cost per Acre Foot - District No. 27.....\$ 0.39				
35	\$ 3,770.78	\$ 275.00	6,277	\$ 502.16
Total Administrative Cost - District.....\$ 4,547.94				
Total Acre Feet diverted in District No. 35....29,882				
Cost per Acre Foot - District No. 35.....\$ 0.14				

\*Annual Leave - Estimated - no record of Annual Leave paid received from Denver Office - Salaries are Division record - no corrections or payroll figures received from Denver Office

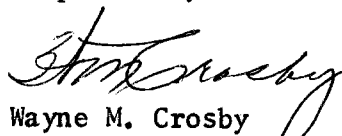
Table No. 3

Division Plus District Costs

District No.	Per. of Div. Cost	Amount of Division Cost	Total District Cost	Total	Acre Feet Delivered	Total Cost per Acre Feet
20	40%	\$ 6,036.16	\$18,609.60	\$24,645.76	432,989	\$0.06
21	7	1,056.33	6,817.85	7,874.18	84,827	0.09
22	15	2,263.56	10,767.22	13,030.78	244,148	0.05
24	15	2,263.56	5,648.83	7,912.39	45,891	0.17
25	5	754.52	4,744.26	5,498.78	44,084	0.12
26	5	754.52	6,116.19	6,870.71	22,074	0.31
27	8	1,207.23	3,174.06	4,381.29	8,217	0.53
35	5	754.52	4,547.94	5,302.46	29,882	0.18
Totals	100%	\$15,090.40	\$60,425.95	\$75,516.35	912,112 A.F.	
Average Cost per Acre Foot diverted - Division						\$0.08

Comments: It will be necessary to have monthly payroll tabulations from the Denver Office to insure accuracy in the future years cost reports.

Respectfully submitted,



Wayne M. Crosby  
Irrigation Division Engineer  
Division No. 3