STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

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EARL WARREN, Governor

FRANK B. DURKEE, Director of Public Works

A. D. EDMONSTON, State Engineer

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# REPORT ON WATERMASTER SERVICE IN SURPRISE VALLEY WATERMASTER SERVICE AREA

Modoc County, California

1952 SEASON

Sacramento, California
March, 1953

SUBMISSION TO, AND ADOPTION BY
DEPARTMENT OF PUBLIC WORKS

I, L. C. Jopson, Supervising Hydraulic Engineer, Division of Water Resources, Department of Public Works of the State of California, submit this "Report on Watermaster Service in Surprise Valley Watermaster Service Area, Modoc County, California, 1952 Season".

/s/ L. C. JOPSON
Supervising Hydraulic Engineer

I, Harrison Smitherum, Supervising Hydraulic Engineer, Division of Water Resources, Department of Public Works of the State of California, approve this "Report on Watermaster Service in Surprise Valley Watermaster Service Area, Modoc County, California, 1952 Season."

/s/ HARRISON SMITHERUM
Supervising Hydraulic Engineer

I, A. D. Edmonston, State Engineer and Chief of the Division of Water Resources, Department of Public Works of the State of California, approve and adopt this "Report on Watermaster Service in Surprise Valley Watermaster Service Area, Modoc County, California, 1952 Season", as a report of the Department of Public Works.

WITNESS my hand and the seal of the Department of Public Works of the State of California, this 27th day of March, 1953.

DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

By /s/ A. D. EDMONSTON
A. D. Edmonston
State Engineer

(SEAL)

## ORGANIZATION

Frank B. Durkee . . . . . Director of Public Works

A. D. Edmonston . . . . . State Engineer

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This report was prepared under the direction of

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* Retired December 31, 1952

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## INTRODUCTION

This is the fourteenth annual report on watermaster service in the Surprise Valley Watermaster Service Area, and covers the period of water distribution in 1952 beginning on March 19 and terminating on September 30.

The service area was created by order of the Division of Water Resources on January 10, 1939, and was supplemented and revised by order of December 31, 1941, to include the water rights determined by decrees of the Superior Court, Modoc County, on various streams in Surprise Valley as follows:

| | | |
|---|---|---|
| Mill Creek | Warrens vs. Winer | 3024 |
| Soldier Creek | San Francisco Cattle Loan Co. vs. Cramton | 2405 |
| Pine Creek | Gaustad vs. McCulley | 3391 |
| Cedar Creek | Hill vs. Acty | 2343 |
| | Lighty vs. Cook | 1206 |
| Deep Creek | Tyeryar vs. Benner | 3101 |
| Owl Creek | Cummins vs. Allen | 2410 |
| Rader Creek | Powers vs. Woodruff | 3626 |
| Eagle Creek | Harris vs. Adams | 3284 |
| Emerson Creek | Murphy vs. Warren | 2840 |

Prior to January 10, 1939, service areas had been created on various streams as the water rights were determined on each. These smaller service areas were combined into a single administrative unit when the present Surprise Valley Watermaster Service Area was created.

Watermaster service has been provided during each irrigation season since the service area was created and annual reports prepared to show the work accomplished during each season.

The report is presented herein under five headings as follows:

Introduction, Water Supply, Distribution of Water, Water Right Applications before the Department of Public Works, and Changes in Ownership of Lands and Water Rights. Following the text are thirteen tables presenting precipitation data at Cedarville and water supply records at various locations within the area.

## WATER SUPPLY

### Precipitation

Data on precipitation, as compiled from observations made by the United States Weather Bureau at Cedarville, for the period October 1, 1951 to September 30, 1952, are shown in Table 1. The precipitation for the period was 21.07 inches which is equivalent to about 170 per cent of normal.

The water content of the snowpack on the Eagle Peak, Blue Lake Ranch, Cedar Pass and Adin Mountain snow courses in 1952, as published in the bulletin entitled "Water Conditions in California as of April 1, 1952", averaged 30.0 inches or 185 per cent of the computed normal for the four courses.

### Stream Flow

Stream flow measuring stations equipped with water stage recorders were maintained during the period of watermaster service at the following locations:

Mill Creek above diversions.

Soldier Creek above diversions.

Pine Creek at division between North and South channels.

Cedar Creek above diversions.

North Deep Creek above diversions.

South Deep Creek below Espil Ditch.

Owl Creek below Allen-Arreche Ditch.

Rader Creek at Cockrell Diversion.

Eagle Creek one-half mile below mouth of canyon.

Emerson Creek above diversions.

Records of discharge at the above stations are presented in Tables 2, 3, 4, 5, 6, 7, 9, 10, 11, and 12, respectively. The computed mean daily discharge of Deep Creek, comprising discharges of North Deep Creek and South Deep Creek, is shown in Table 8.

## DISTRIBUTION OF WATER

Distribution of water from the various creeks was in accordance with the rights to water set forth in the respective decrees. The percentage of allotments available for distribution on each stream was determined from the mean daily discharge at the respective measuring station.

### Mill Creek

Above normal run-off provided an abundance of water in Mill Creek during April, May, June, and the first part of July; however, due to the saturated condition of the soil, there was little demand for water during the early part of this period. After about the first of July, there was sufficient water to supply first, second, and a portion of third priority.

The distribution of water by months is shown in the following tabulation:

| | Percentage of Allotments Delivered | | | | | |
|---|---|---|---|---|---|---|
| Priority | April | May | June | July | August | September |
| 1st | 53 | 100 | 100 | 100 | 100 | 100 |
| 2nd | 20 | 100 | 100 | 100 | 100 | 100 |
| 3rd | 8 | 66 | 100 | 74 | 20 | 11 |
| 4th | 0 | 100 | 100 | 15 | 0 | 0 |

### Soldier Creek

The distribution of the water of Soldier Creek was commenced on March 19; however, by mutual consent of the water users, distribution was not placed on a rotation basis until about the first of June when increased

demands for water made it necessary to commence rotation among the lower users.

After about the first of June the flow diminished rapidly until about June 23, when there was a sharp increase due to heavy local rainfall. Thereafter there was a decrease in flow until about the last of July when a cloudburst resulted in a flash flood causing complete destruction of all upper diversion dams and headgates, and considerable property damage. Thereafter there was only enough flow for domestic and stockwater use.

A tabulation showing the percentages of allotments delivered to the various priorities is shown in Table 13.

Pine Creek

Distribution was not commenced on Pine Creek until about the 25th of March due to heavy snowdrifts blocking the access road. After a conference with the users, it was deemed unnecessary to place distribution on a rotation basis. This condition prevailed until about the end of May, when the flow had receded to less than 4.0 c.f.s. Thereafter the water was diverted into the North channel for use by the Harris and McCulley ranches until about the middle of June when the entire flow below the Royce ranch was diverted into the Cressler Ditch for use by the Hill ranches. Rainfall during the latter parts of June and July caused a sharp increase in the flow which resulted in a washout around the Parshall flume division structure. This rendered further regulation impossible at this point and the water was allowed to flow down both the North and South channels for the remainder of the season, during which time there was only enough water to supply domestic and stockwater needs.

Cedar Creek

The flow of Cedar Creek during the months of April and May was extremely high due to the above normal winter snowfall on the Cedar Creek

watershed. Thereafter many of the lower users were unable to divert water due to damage to their diversions. However, there was little demand for water by the lower users until the first of July, when there was sufficient water to satisfy the demand for first and second priorities. During July the flow decreased, except for a short period in the latter part of July when there was a sharp increase in the flow due to rainfall. On about the first of August, the entire flow was diverted into the McCulley Ditch for use by O. Cramton.

The diversion of water from Thoms Creek into the Thoms Creek Ditch was commenced about the last of May, however, due to a washout of the ditch bank, the ditch was closed for repairs and then reopened about the first of June. The water from Thoms Creek, after spilling into Cedar Creek, was rediverted to supplement the water supply from Cedar Creek on the Wallace, Warrens, and Larson ranches. After about the middle of July, there was no water available from Thoms Creek. The average discharge of the Thoms Creek Ditch was approximately 2.50 cubic feet per second.

The distribution of water by months is shown in the following tabulation:

| | Percentage of Allotments Delivered | | | | | |
|---|---|---|---|---|---|---|
| Priority | April | May | June | July | August | September |
| 1st | 14 | 58 | 82 | 100 | 96 | 82 |
| 2nd | 22 | 64 | 45 | 21 | 6 | 0 |
| 3rd | 32 | 77 | 7 | 0 | 0 | 0 |
| 4th | 2 | 78 | 8 | 0 | 0 | 0 |

Deep Creek

The only use of water from Deep Creek during the early part of the season was by the lower priority rights of the ranches above the Cedarville highway.

By the middle of June water was being diverted by the lower ranches in limited amounts, and full diversion was being made from South Deep Creek by the early priorities through the Sharp-Messier and Dotson Ditches for use on the Hussa, Bush, and upper Harris ranches. At this time the entire flow of North Deep Creek was being diverted into the Company ditch for first priority use. After about the middle of August there was no demand for water through the Sharp-Messier and Dotson Ditches and the entire flow of South Deep Creek was allowed to flow down the channel. Use of water during the remainder of the season was limited to domestic and stockwatering purposes.

The distribution of water by months is shown in the following tabulation:

| Priority | Percentage of Allotments Delivered | | | | | |
|---|---|---|---|---|---|---|
| | April | May | June | July | August | September |
| 1st | 0 | 55 | 100 | 66 | 16 | 21 |
| 2nd | 4 | 83 | 77 | 6 | 10 | 0 |
| 3rd | 0 | 37 | 40 | 0 | 0 | 0 |
| 4th | 0 | 12 | 27 | 0 | 0 | 0 |
| 5th | 28 | 80 | 27 | 0 | 0 | 0 |

Owl Creek

The heavy run-off of Owl Creek during April, May, June and most of July fulfilled all demands for water. During most of this period there was a surplus of water which was allowed to flow down the channel and into Middle Lake. After about the middle of August and for the remainder of the season, there was only enough water for domestic and stockwatering purposes, except for a short period during the first part of September when there was a sharp increase in the flow due to local rainfall.

The distribution of water by months is shown in the following tabulation:

| Priority | Percentage of Allotments Delivered | | | | | |
|---|---|---|---|---|---|---|
| | April | May | June | July | August | September |
| 1st | 100 | 100 | 100 | 100 | 100 | 100 |
| 2nd | 100 | 100 | 100 | 100 | 100 | 100 |
| 3rd | 100 | 100 | 100 | 100 | 100 | 100 |
| 4th | 100 | 100 | 100 | 100 | 100 | 100 |
| 5th | 100 | 100 | 100 | 100 | 100 | 40 |
| 6th | 100 | 100 | 100 | 100 | 100 | 0 |
| 7th | 100 | 100 | 100 | 100 | 100 | 0 |
| 8th | 17 | 100 | 100 | 100 | 57 | 0 |
| 9th | 0 | 100 | 100 | 100 | 0 | 0 |
| 10th | 0 | 100 | 100 | 100 | 0 | 0 |
| 11th | 0 | 100 | 100 | 100 | 0 | 0 |
| 12th | 0 | 100 | 100 | 100 | 0 | 0 |
| 13th | 0 | 100 | 100 | 100 | 0 | 0 |
| 14th | 0 | 100 | 100 | 100 | 0 | 0 |
| 15th | 0 | 47 | 61 | 100 | 0 | 0 |
| 16th | 0 | 0 | 0 | 25 | 0 | 0 |
| 17th | 0 | 0 | 0 | 0 | 0 | 0 |
| 18th | 0 | 0 | 0 | 0 | 0 | 0 |
| 19th | 0 | 0 | 0 | 0 | 0 | 0 |
| 20th | 0 | 0 | 0 | 0 | 0 | 0 |
| 21th | 0 | 0 | 0 | 0 | 0 | 0 |

Rader Creek

The discharge of Rader Creek was generally low during the month of April and until the latter part of May. However, there was little irrigation until about the first of June at which time the higher daily temperatures caused a considerable increase in the snow melt at the higher elevations resulting in heavy run-off. Throughout June and most of July, continued heavy flow in Rader Creek supplied an abundance of water for all demands. After about the first of August the flow diminished rapidly and shortly after the middle of August, insufficient water was available for the second priority garden rights. For the remainder of the season, the water was being used on the Dollarhide, Powers, and Minto ranches.

The distribution of water by months is shown in the following tabulation:

| | Percentage of Allotments Delivered | | | | | |
|---|---|---|---|---|---|---|
| Priority | April | May | June | July | August | September |
| 1st | 82 | 100 | 100 | 100 | 100 | 100 |
| 2nd | 0 | 62 | 100 | 100 | 40 | 10 |
| 3rd | 0 | 75 | 65 | 85 | 29 | 0 |
| 4th | 0 | 7 | 8 | 75 | 0 | 0 |
| 5th | 0 | 0 | 0 | 60 | 0 | 0 |
| 6th | 0 | 0 | 0 | 25 | 0 | 0 |
| 7th | 0 | 0 | 0 | 0 | 0 | 0 |

Eagle Creek

There was a surplus of water in Eagle Creek during April, May, June, July, and the first part of August. After about the first of August there was little demand for irrigation water due to late haying. For the

remainder of the season there was ample water to satisfy all domestic and some irrigation requirements on both the upper and lower ranches; the requirements for the Harris ranch were substantially augmented by the flow from the Eyster Slough.

The distribution of water by months is shown in the following tabulation:

| | Percentage of Allotments Delivered | | | | | |
|---|---|---|---|---|---|---|
| Priority | April | May | June | July | August | September |
| 1st | 75 | 100 | 89 | 100 | 100 | 100 |
| 2nd | 13 | 58 | 67 | 100 | 83 | 65 |
| 3rd | 30 | 57 | 43 | 100 | 9 | 2 |
| 4th | 7 | 68 | 62 | 100 | 0 | 0 |

Emerson Creek

Heavy winter snows, and a gradual run-off during the entire season resulted in an ample supply of water for all users throughout most of the season. There was only a moderate demand for water during the irrigation season due to favorable soil moisture conditions. There was no pumping of water on the Grove ranches, but some pumping was necessary on the Bloondoa ranch near the end of the season to augment the supply from Emerson Creek for irrigation of a new alfalfa planting.

The distribution of water by months is shown in the following tabulation:

| Priority | Percentage of Allotments Delivered | | | | | |
|---|---|---|---|---|---|---|
| | April | May | June | July | August | September |
| 1st | 72 | 75 | 89 | 100 | 100 | 100 |
| 2nd | 7 | 48 | 63 | 76 | 34 | 10 |
| 3rd | 18 | 52 | 20 | 7 | 0 | 0 |
| 4th | 8 | 50 | 73 | 0 | 0 | 0 |

## APPLICATIONS BEFORE THE DEPARTMENT OF PUBLIC WORKS

A decision has been reached in the matter of the hearing relative to Application 13761 filed by E. Clarence Stopp. On October 22, 1952 the Department issued an order which rejected and canceled this application.

## CHANGES IN OWNERSHIP OF LANDS AND WATER RIGHTS

The changes in ownership of lands and water rights, which have occurred subsequent to filing "Statement for Surprise Valley Watermaster Service Area, County of Modoc, State of California, for 1952", and which shall be included in the 1953 statement for the said service area, are as follows:

## CHANGES IN OWNERSHIP OF LANDS AND WATER RIGHTS

| Tract No. | Name of Water Right Owner Appearing in 1952 Statement | Name of Water Right Owner to Appear in 1953 Statement | Amount of Water c.f.s. |
|---|---|---|---|
| 8-4 | Geaney, John and Geaney, Margarette | Geaney, John | 1.55 |
| 8-8 | Jacobs, W. S. | Jacobs, Kenneth N. and Jacobs, Eva C. | 1.30 |
| 8-19 | Wimer, Vonetia | 8-19 - Wimer, Vonetia | 1.85 |
| 8-33 | | 8-33 - Phipps, Charles and Phipps, Vonetia | 0.33 |
| 8-49 | Gorzell, Clarence R. and Gorzell, Olive B. | O. H. Cattle Company | 0.55 |
| 8-50 | Gorzell, Henry C. and Gorzell, Amie A. | | |
| 8-56 | Daniels, F. E. and | Dolan, William J. and | |
| 8-57 | Daniels, Ruby | Dolan, Erlene | 2.10 |
| 8-62 | Gardner, M. H. and | Estate of George R. | |
| 8-63 | Gardner, Mary | McMullen | 1.64 |
| 8-74 | Ausman, W. D. and Ausman, Virginia | Gyger, Ira W. and Gyger, Florence M. | 0.12 |
| 8-75 | Sanders, Harry C. and Sanders, Cleva M. | Rosendahl, Floyd and Rosendahl, Betty | 0.08 |
| 8-87 | Larson, Stanley and | Nosler, Fritz | 2.35 |
| 8-88 | Larson Eunice | | |
| 8-96 | Crawford, Daisy O. Morrison | Galpin, George G. and Galpin, Marie H. | 2.08 |
| 8-107 | Sweet, Willard R. and Sweet, Pearl M. | Harris, Percy B. and Harris, Julia G. | 3.33 |
| 8-110 | Allen, Sylvester E. | Malitz, Harold R. | 1.26 |
| 8-138 | Nolan Charles A. and Nolan, Allie V. | Cook, Kenneth and Cook, Alleva | 0.18 |
| 8-153 | Elliott, Harold E. and | | |
| 8-154 | Elliott, Hazel | Addington, Bernice | 0.05 |
| 8-177 | | Bicondoa, Jose | |
| 8-180 | Bicondoa, Jose | and | |
| 8-181 | | Bicondoa, Juanita | 1.90 |

## TABLE I

PRECIPITATION FOR SEASONAL YEAR 1951-52
CEDARVILLE, MODOC COUNTY, CALIFORNIA

| Month | Normal Precipitation Inches | 1951-52 Precipitation - Inches |
|---|---|---|
| October | 1.03 | 2.49 |
| November | 1.50 | 1.24 |
| December | 1.54 | 2.88 |
| January | 1.77 | 3.25 |
| February | 1.58 | 2.58 |
| March | 1.44 | 1.99 |
| April | 0.97 | 0.68 |
| May | 0.99 | 0.96 |
| June | 0.71 | 2.15 |
| July | 0.25 | 1.24 |
| August | 0.16 | 0.07 |
| September | 0.50 | 1.54 |
| Total | 12.44 | 21.07 |

TABLE 2

Daily Discharge in Cubic Feet Per Second
MILL CREEK ABOVE DIVERSIONS
April 1 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | 30 | 55 | 51 | 32 | 12.0 | 5.8 |
| 2 | 31 | 53 | 50 | 30 | 11.1 | 5.8 |
| 3 | 32 | 52 | 51 | 28 | 11.1 | 5.8 |
| 4 | 38 | 52 | 51 | 26 | 10.2 | 5.8 |
| 5 | 46 | 52 | 51 | 26 | 9.8 | 5.8 |
| 6 | 48 | 52 | 53 | 25 | 9.4 | 6.1 |
| 7 | 31 | 57 | 52 | 25 | 9.4 | 6.1 |
| 8 | 30 | 58 | 51 | 24 | 8.9 | 6.5 |
| 9 | 28 | 55 | 51 | 24 | 8.5 | 6.5 |
| 10 | 28 | 55 | 52 | 24 | 8.0 | 10.6 |
| 11 | 29 | 57 | 48 | 23 | 7.7 | 7.7 |
| 12 | 29 | 56 | 45 | 24 | 7.7 | 6.5 |
| 13 | 28 | 56 | 40 | 23 | 7.2 | 6.1 |
| 14 | 28 | 56 | 37 | 22 | 6.9 | 5.5 |
| 15 | 28 | 57 | 34 | 21 | 6.9 | 5.5 |
| 16 | 28 | 58 | 31 | 21 | 6.9 | 5.1 |
| 17 | 31 | 58 | 31 | 20 | 6.5 | 5.1 |
| 18 | 34 | 59 | 31 | 18.6 | 6.5 | 5.1 |
| 19 | 36 | 60 | 30 | 18.6 | 6.5 | 5.5 |
| 20 | 39 | 60 | 30 | 18.0 | 6.5 | 5.5 |
| 21 | 42 | 56 | 31 | 17.4 | 6.5 | 5.5 |
| 22 | 45 | 53 | 30 | 16.8 | 6.5 | 5.8 |
| 23 | 43 | 54 | 40 | 16.2 | 6.5 | 5.8 |
| 24 | 47 | 54 | 38 | 14.6 | 6.5 | 5.8 |
| 25 | 58 | 57 | 40 | 13.5 | 6.9 | 5.8 |
| 26 | 61 | 60 | 42 | 13.0 | 6.5 | 6.1 |
| 27 | 61 | 58 | 35 | 13.0 | 6.1 | 6.1 |
| 28 | 63 | 57 | 35 | 13.0 | 6.1 | 6.1 |
| 29 | 60 | 55 | 34 | 12.5 | 6.1 | 6.5 |
| 30 | 56 | 52 | 33 | 12.0 | 5.8 | 6.5 |
| 31 | | 53 | | 12.0 | 5.8 | |
| Total Sec. Ft. Days | 1,188.0 | 1,727.0 | 1,228.0 | 629.2 | 237.0 | 182.4 |
| Mean Sec. Ft. | 39.6 | 55.7 | 40.9 | 20.3 | 7.6 | 6.1 |
| Total Ac. Ft. | 2,356 | 3,425 | 2,436 | 1,248 | 470 | 362 |

Total for period - 10,294 acre-feet.

TABLE 3

Daily Discharge in Cubic Feet Per Second
SOLDIER CREEK ABOVE DIVERSIONS
March 25 to September 30, 1952

| Day | March | April | May | June | July | August | September |
|---|---|---|---|---|---|---|---|
| 1 | | 24 | 36 | 29 | 9.6 | 3.5 | 2.8 |
| 2 | NO | 25 | 35 | 28 | 8.0 | 3.3 | 2.8 |
| 3 | | 27 | 29 | 27 | 7.7 | 3.2 | 2.8 |
| 4 | RECORD | 31 | 26 | 25 | 7.5 | 3.2 | 2.8 |
| 5 | | 45 | 27 | 24 | 7.0 | 3.2 | 2.8 |
| 6 | | 53 | 31 | 23 | 6.5 | 3.2 | 4.5 |
| 7 | | 47 | 33 | 21 | 6.3 | 3.2 | 3.1 |
| 8 | | 35 | 33 | 20 | 6.3 | 3.2 | 2.9 |
| 9 | | 28 | 29 | 20 | 5.7 | 3.2 | 2.8 |
| 10 | | 27 | 35 | 18.2 | 5.7 | 3.2 | 10.0 |
| 11 | | 29 | 42 | 13.2 | 5.9 | 3.2 | 5.0 |
| 12 | | 35 | 42 | 10.7 | 5.9 | 3.2 | 4.7 |
| 13 | | 31 | 45 | 9.2 | 5.3 | 3.2 | 4.5 |
| 14 | | 23 | 40 | 8.3 | 5.3 | 3.2 | 2.9 |
| 15 | | 23 | 40 | 8.0 | 5.2 | 3.2 | 2.2 |
| 16 | | 27 | 45 | 8.3 | 4.9 | 3.1 | 2.2 |
| 17 | | 40 | 47 | 8.6 | 4.5 | 3.1 | 2.2 |
| 18 | | 58 | 53 | 8.3 | 4.4 | 3.1 | 2.2 |
| 19 | | 40 | 53 | 8.3 | 4.4 | 3.1 | 2.2 |
| 20 | | 29 | 53 | 8.6 | 4.3 | 3.1 | 2.2 |
| 21 | | 30 | 45 | 8.0 | 4.1 | 2.9 | 2.0 |
| 22 | | 42 | 42 | 8.0 | 4.0 | 2.9 | 1.9 |
| 23 | | 49 | 47 | 29 | 3.8 | 2.9 | 1.9 |
| 24 | | 59 | 47 | 22 | 3.8 | 2.9 | 1.8 |
| 25 | 19.8 | 71 | 47 | 19.3 | 3.6 | 2.9 | 1.7 |
| 26 | 21 | 65 | 43 | 14.6 | 3.5 | 2.8 | 1.6 |
| 27 | 22 | 65 | 40 | 12.8 | 3.3 | 2.8 | 1.6 |
| 28 | 31 | 56 | 40 | 12.3 | 23 | 2.8 | 1.6 |
| 29 | 29 | 47 | 32 | 11.9 | 7.0 | 2.8 | 1.6 |
| 30 | 22 | 45 | 29 | 10.7 | 4.3 | 2.8 | 1.6 |
| 31 | 23 | | 29 | | 3.5 | 2.8 | |
| Total Sec. Ft. Days | *167.8 | 1,206.0 | 1,215.0 | 475.3 | 184.3 | 95.2 | 84.9 |
| Mean Sec. Ft. | *24.0 | 40.2 | 39.2 | 15.8 | 5.9 | 3.1 | 2.8 |
| Total Ac. Ft. | *333 | 2,392 | 2,410 | 943 | 366 | 189 | 168 |

Total for period - 6,800 acre-feet.
* 7-day period

TABLE 4

Daily Discharge in Cubic Feet Per Second
PINE CREEK AT DIVISION BETWEEN NORTH AND SOUTH CHANNELS
March 24 to September 30, 1952

| Day | March | April | May | June | July | August | September |
|---|---|---|---|---|---|---|---|
| 1 | | 16.8 | 25 | 2.9 | 1.7 | 6.0 | 0.4 |
| 2 | NO | 14.2 | 25 | 2.9 | 1.6 | 4.7 | .4 |
| 3 | | 15.0 | 21 | 3.4 | 1.6 | 3.8 | .4 |
| 4 | RECORD | 18.1 | 15.0 | 2.9 | 1.6 | 2.7 | .4 |
| 5 | | 19.3 | 14.2 | 2.5 | 1.4 | 2.2 | .5 |
| 6 | | 21 | 13.1 | 2.5 | 1.4 | 2.0 | 2.5 |
| 7 | | 17.3 | 13.1 | 2.2 | 1.2 | 1.8 | 1.7 |
| 8 | | 18.1 | 12.7 | 2.0 | 1.2 | 1.7 | 1.6 |
| 9 | | 15.0 | 12.4 | 1.8 | 1.1 | 1.6 | 1.2 |
| 10 | | 13.5 | 12.4 | 2.2 | 1.0 | 1.2 | 5.8 |
| 11 | | 14.2 | 12.4 | 1.7 | 1.6 | 1.1 | 5.0 |
| 12 | | 16.8 | 12.4 | 1.6 | 1.4 | 1.0 | 4.7 |
| 13 | | 17.3 | 14.2 | 1.2 | 1.2 | 1.0 | 3.6 |
| 14 | | 16.1 | 11.0 | 1.1 | 1.2 | 1.0 | 2.5 |
| 15 | | 16.1 | 10.0 | 1.0 | 1.1 | 1.0 | 2.2 |
| 16 | | 26 | 11.3 | 1.0 | 1.1 | 1.0 | 1.8 |
| 17 | | 29 | 10.6 | 1.1 | 1.0 | 1.0 | 1.4 |
| 18 | | 42 | 11.0 | 1.1 | 1.0 | 1.0 | 1.1 |
| 19 | | 35 | 11.0 | 1.2 | 1.0 | 1.0 | 1.0 |
| 20 | | 28 | 12.4 | 1.2 | 1.0 | 1.0 | 1.0 |
| 21 | | 27 | 10.0 | 1.2 | 1.0 | 1.0 | 0.7 |
| 22 | | 28 | 8.8 | 22 | 1.0 | 1.0 | .7 |
| 23 | | 31 | 8.4 | 14.2 | 1.0 | 0.7 | .7 |
| 24 | 16.1 | 35 | 9.0 | 7.5 | 1.0 | .7 | .7 |
| 25 | 21 | 49 | 7.5 | 4.8 | 1.0 | .6 | .4 |
| 26 | 26 | 46 | 7.2 | 4.2 | 1.0 | .6 | .4 |
| 27 | 21 | 58 | 7.2 | 3.6 | 0.8 | .4 | .4 |
| 28 | 30 | 70 | 6.3 | 2.5 | 40 | .4 | .4 |
| 29 | 31 | 37 | 4.5 | 1.7 | 22 | .4 | .4 |
| 30 | 22 | 26 | 4.0 | 1.7 | 12.4 | .4 | .4 |
| 31 | 18.1 | | 3.8 | | 7.5 | .4 | |
| Total Sec. Ft. Days | *185.2 | 815.8 | 356.9 | 100.9 | 114.1 | 44.4 | 44.1 |
| Mean Sec. Ft. | *23.2 | 27.2 | 11.5 | 3.4 | 3.7 | 1.4 | 1.4 |
| Total Ac. Ft. | *367 | 1,618 | 708 | 200 | 226 | 88 | 88 |

* 8-day period.

Total for period 3,300 acre-feet.

TABLE 5

Daily Discharge in Cubic Feet Per Second
CEDAR CREEK ABOVE DIVERSIONS
April 1 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | 43 | 55 | 19.6 | 10.6 | 5.9 | 3.5 |
| 2 | 39 | 47 | 19.6 | 10.6 | 5.0 | 3.5 |
| 3 | 39 | 49 | 17.8 | 9.9 | 5.0 | 3.5 |
| 4 | 39 | 49 | 17.8 | 9.3 | 5.0 | 3.5 |
| 5 | 65 | 49 | 16.9 | 9.0 | 5.0 | 4.0 |
| 6 | 94 | 48 | 16.9 | 8.6 | 5.0 | 5.9 |
| 7 | 82 | 47 | 16.1 | 7.4 | 5.0 | 5.0 |
| 8 | 57 | 56 | 14.8 | 7.4 | 4.5 | 4.0 |
| 9 | 40 | 48 | 14.5 | 6.8 | 4.0 | 3.5 |
| 10 | 37 | 47 | 13.6 | 6.8 | 4.0 | 6.4 |
| 11 | 39 | 48 | 12.8 | 9.9 | 3.5 | 5.9 |
| 12 | 40 | 47 | 12.1 | 9.0 | 3.5 | 4.5 |
| 13 | 39 | 46 | 12.1 | 7.4 | 3.5 | 4.0 |
| 14 | 34 | 46 | 12.1 | 6.8 | 3.5 | 5.0 |
| 15 | 29 | 44 | 11.4 | 6.1 | 3.5 | 4.0 |
| 16 | 26 | 43 | 11.4 | 6.1 | 3.5 | 4.0 |
| 17 | 37 | 40 | 11.4 | 6.1 | 3.5 | 3.8 |
| 18 | 92 | 40 | 11.0 | 6.1 | 3.5 | 3.5 |
| 19 | 100 | 39 | 10.6 | 5.9 | 3.5 | 3.5 |
| 20 | 85 | 38 | 10.6 | 5.9 | 3.5 | 3.3 |
| 21 | 79 | 35 | 10.6 | 5.9 | 3.5 | 3.3 |
| 22 | 92 | 31 | 12.8 | 5.9 | 3.5 | 3.1 |
| 23 | 87 | 30 | 15.2 | 5.9 | 3.5 | 2.6 |
| 24 | 86 | 30 | 14.5 | 5.9 | 3.5 | 2.3 |
| 25 | 105 | 28 | 13.6 | 5.9 | 3.5 | 2.0 |
| 26 | 94 | 29 | 13.6 | 5.6 | 3.5 | 2.0 |
| 27 | 92 | 31 | 12.8 | 18.7 | 3.5 | 2.0 |
| 28 | 82 | 27 | 12.8 | 16.1 | 3.5 | 2.0 |
| 29 | 54 | 21 | 12.1 | 10.6 | 3.5 | 2.0 |
| 30 | 56 | 20 | 11.4 | 8.0 | 3.5 | 2.0 |
| 31 | | 20 | | 5.9 | 3.5 | |
| Total Sec. Ft. Days | 1,883.0 | 1,228.0 | 412.5 | 250.1 | 121.9 | 107.6 |
| Mean Sec. Ft. | 62.3 | 39.6 | 13.8 | 8.1 | 3.9 | 3.6 |
| Total Ac. Ft. | 3,735 | 2,436 | 818 | 496 | 242 | 213 |

Total for period - 7,940 acre-feet.

TABLE 6

Daily Discharge in Cubic Feet Per Second
NORTH DEEP CREEK ABOVE DIVERSIONS
April 21 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | | 24 | 16.0 | 6.2 | 2.5 | 2.1 |
| 2 | NO | 22 | 14.8 | 6.2 | 2.3 | 2.1 |
| 3 | | 19.0 | 13.5 | 5.8 | 2.3 | 2.1 |
| 4 | RECORD | 15.6 | 13.0 | 5.6 | 2.2 | 2.1 |
| 5 | | 17.5 | 13.0 | 5.6 | 2.1 | 2.2 |
| 6 | | 12.9 | 13.0 | 5.0 | 2.1 | 3.0 |
| 7 | | 14.2 | 12.4 | 5.2 | 2.1 | 2.8 |
| 8 | | 14.8 | 12.4 | 5.2 | 2.1 | 2.8 |
| 9 | | 11.8 | 11.2 | 5.2 | 2.1 | 2.5 |
| 10 | | 8.0 | 11.2 | 5.2 | 2.1 | 4.3 |
| 11 | | 15.6 | 10.7 | 5.0 | 2.2 | 4.1 |
| 12 | | 15.6 | 10.2 | 5.0 | 2.2 | 3.6 |
| 13 | | 20 | 8.8 | 4.8 | 2.2 | 2.8 |
| 14 | | 22 | 7.6 | 4.8 | 2.2 | 2.5 |
| 15 | | 24 | 6.4 | 5.0 | 2.1 | 2.3 |
| 16 | | 24 | 5.6 | 5.2 | 2.1 | 2.3 |
| 17 | | 25 | 3.7 | 4.5 | 2.1 | 2.2 |
| 18 | | 25 | 4.1 | 4.5 | 2.2 | 2.0 |
| 19 | | 24 | 4.5 | 4.3 | 2.2 | 2.0 |
| 20 | | 25 | 4.8 | 4.1 | 2.2 | 1.9 |
| 21 | 37 | 25 | 4.8 | 3.6 | 2.2 | 1.9 |
| 22 | 38 | 24 | 5.8 | 3.2 | 2.2 | 1.8 |
| 23 | 40 | 23 | 10.2 | 3.2 | 2.2 | 1.7 |
| 24 | 44 | 22 | 8.3 | 3.0 | 2.2 | 1.6 |
| 25 | 39 | 22 | 7.6 | 2.9 | 2.2 | 1.6 |
| 26 | 32 | 22 | 7.2 | 2.9 | 2.2 | 1.6 |
| 27 | 31 | 23 | 6.8 | 3.0 | 2.2 | 1.6 |
| 28 | 26 | 22 | 6.8 | 2.9 | 2.2 | 1.6 |
| 29 | 26 | 20 | 7.6 | 3.0 | 2.1 | 1.6 |
| 30 | 25 | 18.2 | 6.8 | 3.2 | 2.1 | 1.6 |
| 31 | | 16.8 | | 2.9 | 2.1 | |
| Total Sec. Ft. Days | *338.0 | 618.0 | 268.8 | 136.2 | 67.5 | 68.3 |
| Mean Sec. Ft. | *33.8 | 19.9 | 9.0 | 4.4 | 2.2 | 2.3 |
| Total Ac. Ft. | *670 | 1,226 | 533 | 270 | 134 | 135 |

* 10-day period.

Total for period - 2,970 acre-feet.

TABLE 7

Daily Discharge in Cubic Feet Per Second
SOUTH DEEP CREEK BELOW ESPIL DITCH
April 9 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | | 47 | 19.0 | 12.2 | 3.0 | 2.1 |
| 2 | NO | 38 | 25 | 10.8 | 3.0 | 2.1 |
| 3 | | 37 | 25 | 9.6 | 2.9 | 2.2 |
| 4 | RECORD | 36 | 24 | 8.5 | 2.9 | 2.2 |
| 5 | | 35 | 22 | 8.0 | 2.9 | 2.2 |
| 6 | | 35 | 22 | 7.5 | 2.9 | 2.2 |
| 7 | | 36 | 19.3 | 7.0 | 2.9 | 2.2 |
| 8 | | 34 | 17.8 | 7.3 | 2.9 | 2.2 |
| 9 | 76 | 35 | 15.0 | 6.5 | 2.9 | 2.2 |
| 10 | 75 | 37 | 12.0 | 6.1 | 2.9 | 4.6 |
| 11 | 73 | 40 | 10.8 | 6.3 | 2.7 | 3.7 |
| 12 | 76 | 47 | 10.8 | 6.5 | 2.7 | 2.7 |
| 13 | 81 | 49 | 9.9 | 6.3 | 2.6 | 2.4 |
| 14 | 82 | 52 | 8.8 | 5.8 | 2.6 | 2.3 |
| 15 | 84 | 44 | 8.2 | 5.7 | 2.4 | 2.2 |
| 16 | 84 | 38 | 7.5 | 5.3 | 2.3 | 2.1 |
| 17 | 89 | 39 | 6.1 | 5.0 | 2.3 | 2.0 |
| 18 | 94 | 40 | 5.1 | 4.8 | 2.2 | 1.9 |
| 19 | 81 | 42 | 5.0 | 4.6 | 2.2 | 1.9 |
| 20 | 86 | 40 | 3.2 | 4.3 | 2.2 | 1.8 |
| 21 | 89 | 38 | 4.0 | 4.2 | 2.2 | 1.8 |
| 22 | 86 | 36 | 2.4 | 4.2 | 2.2 | 1.8 |
| 23 | 76 | 33 | 4.2 | 4.0 | 2.4 | 1.6 |
| 24 | 62 | 32 | 8.2 | 3.9 | 2.4 | 1.6 |
| 25 | 47 | 31 | 15.6 | 3.7 | 2.4 | 1.6 |
| 26 | 35 | 31 | 14.6 | 3.4 | 2.4 | 1.6 |
| 27 | 31 | 31 | 14.0 | 3.9 | 2.4 | 1.6 |
| 28 | 58 | 31 | 14.6 | 3.6 | 2.3 | 1.6 |
| 29 | 64 | 30 | 16.4 | 3.6 | 2.2 | 1.6 |
| 30 | 54 | 29 | 13.2 | 3.6 | 2.2 | 1.6 |
| 31 | | 26 | | 3.6 | 2.1 | |
| Total Sec. Ft. Days | *1,583.0 | 1,149.0 | 383.7 | 179.8 | 78.6 | 63.6 |
| Mean Sec. Ft. | *72.0 | 37.1 | 12.8 | 5.8 | 2.5 | 2.1 |
| Total Ac. Ft. | *3,140 | 2,279 | 761 | 357 | 156 | 126 |

* 22-day period.
Total for period 6,820 acre-feet.

TABLE 8

Computed Daily Discharge in Cubic Feet Per Second
NORTH AND SOUTH DEEP CREEKS ABOVE DIVERSIONS
April 21 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | | 73 | 36 | 18.4 | 5.5 | 4.2 |
| 2 | NO | 62 | 41 | 17.0 | 5.3 | 4.2 |
| 3 | | 58 | 40 | 15.4 | 5.2 | 4.3 |
| 4 | RECORD | 54 | 38 | 14.1 | 5.1 | 4.3 |
| 5 | | 55 | 36 | 13.6 | 5.0 | 4.3 |
| 6 | | 50 | 35 | 12.5 | 5.0 | 5.2 |
| 7 | | 51 | 32 | 12.2 | 5.0 | 5.0 |
| 8 | | 52 | 30 | 12.5 | 5.0 | 5.0 |
| 9 | | 48 | 26 | 11.7 | 5.0 | 4.7 |
| 10 | | 46 | 23 | 11.3 | 5.0 | 8.9 |
| 11 | | 57 | 22 | 11.3 | 4.9 | 7.8 |
| 12 | | 64 | 21 | 11.5 | 4.9 | 6.3 |
| 13 | | 70 | 18.7 | 11.1 | 4.8 | 5.2 |
| 14 | | 76 | 16.4 | 10.6 | 4.8 | 4.8 |
| 15 | | 68 | 14.6 | 10.7 | 4.5 | 4.5 |
| 16 | | 64 | 13.1 | 10.5 | 4.4 | 4.4 |
| 17 | | 66 | 9.8 | 9.5 | 4.4 | 4.2 |
| 18 | | 67 | 9.2 | 9.3 | 4.4 | 3.9 |
| 19 | | 69 | 9.5 | 8.9 | 4.4 | 3.9 |
| 20 | | 67 | 8.0 | 8.4 | 4.4 | 3.7 |
| 21 | 129 | 65 | 8.8 | 7.8 | 4.4 | 3.7 |
| 22 | 127 | 62 | 8.2 | 7.4 | 4.4 | 3.7 |
| 23 | 118 | 57 | 14.4 | 7.2 | 4.6 | 3.3 |
| 24 | 108 | 55 | 16.5 | 6.9 | 4.6 | 3.2 |
| 25 | 88 | 54 | 23 | 6.6 | 4.6 | 3.2 |
| 26 | 69 | 54 | 22 | 6.3 | 4.6 | 3.2 |
| 27 | 64 | 55 | 21 | 6.9 | 4.6 | 3.2 |
| 28 | 86 | 54 | 21 | 6.5 | 4.5 | 3.2 |
| 29 | 92 | 51 | 24 | 6.6 | 4.3 | 3.2 |
| 30 | 81 | 48 | 20 | 6.8 | 4.3 | 3.2 |
| 31 | | 44 | | 6.5 | 4.2 | 3.2 |
| Total Sec. Ft. Days | *962.0 | 1,816.0 | 658.2 | 316.0 | 146.1 | 131.9 |
| Mean Sec. Ft. | *96.2 | 58.6 | 21.9 | 10.2 | 4.7 | 4.4 |
| Total Ac. Ft. | *1,908 | 3,602 | 1,306 | 627 | 290 | 262 |

Computed total for period - 8,000 acre-feet. **

* 10-day period.
** Includes 151 acre-feet from Espil Ditch May 1 through June 7.

TABLE 9

Daily Discharge in Cubic Feet Per Second
OWL CREEK BELOW ALLEN-ARRECHE DITCH
April 5 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | NO | 31 | 72 | 43 | 13.2 | 3.4 |
| 2 | | 31 | 67 | 40 | 11.5 | 3.4 |
| 3 | RECORD | 29 | 72 | 43 | 10.4 | 3.2 |
| 4 | | 26 | 86 | 48 | 9.4 | 3.2 |
| 5 | 17.6 | 26 | 87 | 51 | 9.0 | 3.2 |
| 6 | 19.8 | 28 | 88 | 51 | 9.0 | 3.2 |
| 7 | 18.4 | 31 | 92 | 46 | 8.2 | 2.9 |
| 8 | 13.8 | 31 | 98 | 42 | 7.7 | 2.9 |
| 9 | 10.9 | 28 | 101 | 42 | 7.0 | 2.9 |
| 10 | 10.4 | 29 | 78 | 42 | 6.6 | 16.2 |
| 11 | 10.4 | 32 | 64 | 42 | 6.3 | 7.7 |
| 12 | 12.0 | 34 | 58 | 40 | 6.3 | 4.6 |
| 13 | 13.8 | 40 | 52 | 37 | 6.3 | 3.4 |
| 14 | 12.6 | 39 | 46 | 36 | 6.0 | 3.2 |
| 15 | 9.4 | 31 | 46 | 32 | 5.6 | 3.2 |
| 16 | 10.4 | 39 | 46 | 31 | 5.4 | 3.1 |
| 17 | 13.2 | 43 | 46 | 30 | 5.1 | 3.1 |
| 18 | 19.0 | 51 | 46 | 29 | 4.8 | 2.9 |
| 19 | 18.4 | 58 | 49 | 28 | 4.6 | 2.9 |
| 20 | 13.2 | 68 | 52 | 24 | 4.4 | 2.9 |
| 21 | 13.2 | 62 | 53 | 22 | 4.1 | 2.9 |
| 22 | 16.2 | 59 | 49 | 21 | 4.1 | 2.9 |
| 23 | 21 | 59 | 73 | 19.0 | 3.7 | 2.9 |
| 24 | 25 | 61 | 69 | 17.6 | 3.7 | 2.9 |
| 25 | 44 | 67 | 58 | 17.0 | 3.7 | 2.9 |
| 26 | 46 | 71 | 51 | 16.2 | 3.9 | 2.9 |
| 27 | 48 | 72 | 49 | 17.6 | 3.7 | 2.9 |
| 28 | 48 | 79 | 51 | 15.6 | 3.5 | 2.9 |
| 29 | 42 | 76 | 46 | 14.4 | 3.4 | 2.9 |
| 30 | 36 | 73 | 44 | 13.2 | 3.4 | 2.9 |
| 31 | | 74 | | 17.0 | 3.2 | |
| Total Sec. Ft. Days | *562.7 | 1,478.0 | 1,889.0 | 967.6 | 187.2 | 110.5 |
| Mean Sec. Ft. | *21.6 | 47.7 | 63.0 | 31.2 | 6.0 | 3.7 |
| Total Ac. Ft. | *1,116 | 2,932 | 3,747 | 1,919 | 371 | 219 |

* 26-day period.
Total for period - 10,300 acre-feet.

TABLE 10

Daily Discharge in Cubic Feet Per Second
RADER CREEK AT COCKRELL DIVERSION
April 7 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | NO | 12.4 | 48 | 30 | 10.0 | 5.0 |
| 2 | | 10.2 | 45 | 28 | 9.5 | 4.8 |
| 3 | RECORD | 9.8 | 38 | 25 | 9.5 | 4.5 |
| 4 | | 8.0 | 56 | 25 | 9.5 | 4.2 |
| 5 | | 6.8 | 70 | 24 | 9.0 | 4.2 |
| 6 | | 6.1 | 75 | 22 | 9.0 | 4.2 |
| 7 | 3.2 | 6.5 | 80 | 22 | 9.5 | 5.5 |
| 8 | 3.0 | 6.1 | 75 | 21 | 9.0 | 10.8 |
| 9 | 3.0 | 5.3 | 70 | 21 | 9.0 | 7.4 |
| 10 | 2.9 | 5.2 | 60 | 20 | 8.9 | 19.2 |
| 11 | 2.9 | 5.5 | 55 | 32 | 8.9 | 13.0 |
| 12 | 3.0 | 5.3 | 52 | 30 | 8.5 | 8.5 |
| 13 | 3.0 | 5.5 | 45 | 26 | 7.8 | 6.5 |
| 14 | 2.8 | 5.5 | 40 | 24 | 7.8 | 5.7 |
| 15 | 2.8 | 5.3 | 38 | 22 | 7.1 | 5.5 |
| 16 | 2.9 | 5.5 | 35 | 20 | 6.8 | 5.0 |
| 17 | 2.7 | 5.7 | 32 | 19.0 | 6.5 | 4.8 |
| 18 | 2.8 | 6.5 | 30 | 18.0 | 6.8 | 4.7 |
| 19 | 2.9 | 16.0 | 28 | 17.0 | 7.8 | 4.7 |
| 20 | 2.8 | 48 | 28 | 16.0 | 7.1 | 4.7 |
| 21 | 3.0 | 51 | 26 | 15.5 | 6.8 | 4.3 |
| 22 | 4.8 | 21 | 28 | 15.2 | 6.5 | 4.2 |
| 23 | 4.8 | 11.9 | 40 | 14.5 | 6.3 | 4.2 |
| 24 | 5.8 | 11.9 | 45 | 13.0 | 6.1 | 4.0 |
| 25 | 10.2 | 9.4 | 50 | 12.0 | 5.8 | 3.9 |
| 26 | 16.0 | 16.0 | 40 | 11.5 | 5.8 | 3.9 |
| 27 | 19.9 | 23 | 35 | 11.5 | 5.7 | 3.9 |
| 28 | 22 | 25 | 35 | 11.0 | 5.5 | 3.9 |
| 29 | 14.4 | 26 | 30 | 10.5 | 5.3 | 3.9 |
| 30 | 13.0 | 30 | 30 | 10.5 | 5.2 | 3.9 |
| 31 | | 40 | | 10.0 | 5.0 | |
| Total Sec. Ft. Days | *154.6 | 450.4 | 1,359 | 597.2 | 232.0 | 173.0 |
| Mean Sec. Ft. | *6.4 | 14.5 | 45.3 | 19.3 | 7.5 | 5.8 |
| Total Ac. Ft. | *307 | 893 | 2,696 | 1,185 | 460 | 343 |

* 24-day period.

Total for period 5,880 acre-feet.

Estimated Discharge - June 6 through August 10.

## TABLE 11

Daily Discharge in Cubic Feet Per Second
EAGLE CREEK ONE-HALF MILE BELOW MOUTH OF CANYON
April 7 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | NO | 36 | 60 | 32 | 25 | 5.0 |
| 2 | | 35 | 53 | 39 | 23 | 4.5 |
| 3 | RECORD | 32 | 52 | 44 | 21 | 4.2 |
| 4 | | 31 | 52 | 48 | 18.7 | 4.3 |
| 5 | | 30 | 54 | 50 | 16.6 | 4.3 |
| 6 | | 31 | 55 | 49 | 16.0 | 4.2 |
| 7 | 25 | 33 | 55 | 47 | 14.6 | 4.2 |
| 8 | 19.2 | 35 | 58 | 47 | 12.8 | 4.2 |
| 9 | 16.6 | 36 | 58 | 47 | 11.3 | 4.8 |
| 10 | 16.6 | 39 | 59 | 45 | 11.0 | 4.8 |
| 11 | 15.6 | 39 | 51 | 46 | 10.5 | 7.8 |
| 12 | 15.6 | 40 | 49 | 43 | 9.9 | 7.1 |
| 13 | 16.6 | 40 | 47 | 42 | 9.7 | 5.8 |
| 14 | 17.6 | 42 | 45 | 42 | 9.7 | 5.2 |
| 15 | 21 | 40 | 43 | 41 | 9.5 | 4.8 |
| 16 | 23 | 42 | 40 | 41 | 9.2 | 4.5 |
| 17 | 23 | 45 | 38 | 38 | 9.0 | 4.2 |
| 18 | 24 | 48 | 38 | 38 | 8.3 | 4.0 |
| 19 | 26 | 51 | 37 | 37 | 7.8 | 3.6 |
| 20 | 28 | 58 | 41 | 34 | 7.5 | 3.6 |
| 21 | 31 | 57 | 43 | 32 | 7.3 | 3.5 |
| 22 | 32 | 53 | 39 | 32 | 7.1 | 3.2 |
| 23 | 36 | 53 | 47 | 31 | 6.9 | 3.0 |
| 24 | 39 | 57 | 48 | 30 | 6.7 | 3.0 |
| 25 | 40 | 57 | 48 | 30 | 6.4 | 3.0 |
| 26 | 39 | 58 | 43 | 30 | 6.0 | 3.0 |
| 27 | 38 | 58 | 38 | 31 | 5.8 | 3.0 |
| 28 | 37 | 58 | 38 | 27 | 5.5 | 3.0 |
| 29 | 36 | 58 | 36 | 27 | 5.4 | 3.0 |
| 30 | 36 | 59 | 32 | 27 | 5.2 | 3.0 |
| 31 | | 60 | | 28 | 5.0 | |
| Total Sec. Ft. Days | *651.8 | 1,411.0 | 1399.0 | 1,175.0 | 328.4 | 125.8 |
| Mean Sec. Ft. | *27.2 | 45.5 | 46.6 | 37.9 | 10.6 | 4.2 |
| Total Ac. Ft. | *1,293 | 2,799 | 2,775 | 2,331 | 651 | 250 |

* 24-day period.

Total for period - 10,100 acre-feet.

TABLE 12

Daily Discharge in Cubic Feet Per Second
EMERSON CREEK ABOVE DIVERSIONS
April 7 to September 30, 1952

| Day | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1 | | 35 | 56 | 18.8 | 7.5 | 4.9 |
| 2 | NO | 35 | 54 | 17.4 | 7.2 | 4.9 |
| 3 | | 33 | 53 | 17.4 | 6.9 | 4.9 |
| 4 | RECORD | 30 | 52 | 14.8 | 6.9 | 4.9 |
| 5 | | 29 | 54 | 14.8 | 6.9 | 4.9 |
| 6 | | 29 | 53 | 16.0 | 7.2 | 4.9 |
| 7 | 30 | 31 | 50 | 16.0 | 7.5 | 4.9 |
| 8 | 27 | 25 | 51 | 15.4 | 7.2 | 4.9 |
| 9 | 23 | 24 | 52 | 14.8 | 6.9 | 4.9 |
| 10 | 21 | 25 | 51 | 14.0 | 6.7 | 6.4 |
| 11 | 21 | 29 | 48 | 14.0 | 6.4 | 6.4 |
| 12 | 22 | 31 | 44 | 13.4 | 6.2 | 5.5 |
| 13 | 24 | 33 | 38 | 13.4 | 6.2 | 5.1 |
| 14 | 23 | 33 | 34 | 12.8 | 6.2 | 4.9 |
| 15 | 23 | 32 | 29 | 11.8 | 5.9 | 4.9 |
| 16 | 23 | 37 | 26 | 11.2 | 5.9 | 4.9 |
| 17 | 27 | 37 | 23 | 10.3 | 5.7 | 4.9 |
| 18 | 34 | 38 | 23 | 10.3 | 5.5 | 4.9 |
| 19 | 28 | 39 | 23 | 10.3 | 5.7 | 4.7 |
| 20 | 27 | 39 | 23 | 10.3 | 5.7 | 4.7 |
| 21 | 23 | 40 | 22 | 9.9 | 5.5 | 4.7 |
| 22 | 21 | 40 | 22 | 9.5 | 5.5 | 4.7 |
| 23 | 23 | 45 | 31 | 9.1 | 5.5 | 4.7 |
| 24 | 23 | 53 | 31 | 8.7 | 5.3 | 4.7 |
| 25 | 23 | 55 | 29 | 8.4 | 5.3 | 4.7 |
| 26 | 24 | 54 | 24 | 8.1 | 5.3 | 4.7 |
| 27 | 28 | 56 | 23 | 9.9 | 5.3 | 4.7 |
| 28 | 31 | 54 | 23 | 9.5 | 5.1 | 4.7 |
| 29 | 35 | 51 | 22 | 11.2 | 4.9 | 4.7 |
| 30 | 35 | 51 | 20 | 10.8 | 4.9 | 4.7 |
| 31 | | 56 | | 8.1 | 4.9 | |
| Total Sec. Ft. Days | *619.0 | 1,199 | 1,084 | 380.4 | 187.8 | 148.6 |
| Mean Sec. Ft. | *25.8 | 38.7 | 36.1 | 12.3 | 6.1 | 5.0 |
| Total Ac. Ft. | *1,228 | 2,378 | 2,150 | 755 | 372 | 295 |

Total for period - 7,180 acre-feet.

* 24-day period.

TABLE 13

PERCENTAGE OF ALLOTMENTS DELIVERED FROM SOLDIER CREEK

March 19 to September 30, 1952

| Period | Group Entitled to Water | Percentage of Allotments Delivered | | | | | | | | Average Delivery to Surplus Rights c.f.s. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | First Priority | Second Priority | Third Priority | Fourth Priority | Fifth Priority | Sixth Priority | Seventh Priority | Eighth Priority | |
| March 19 - April 1 | Lower | 75 | 0 | 50 | 0 | 20 | 0 | 0 | — | 0 |
| April 1 - April 11 | Upper | 75 | 0 | 49 | 6 | 12 | 0 | 37 | 0 | 0 |
| April 11 - April 24 | Lower | 73 | 37 | 49 | 11 | 16 | 0 | 37 | — | 0.50 |
| April 24 - May 4 | Upper | 77 | 71 | 50 | 33 | 35 | 0 | 37 | 17 | 1.50 |
| May 4 - May 17 | Lower | 100 | 62 | 53 | 63 | 80 | 0 | 37 | — | 3.00 |
| May 17 - May 27 | Upper | 100 | 75 | 70 | 82 | 80 | 0 | 37 | 80 | 4.00 |
| May 27 - June 9 | Lower | 97 | 75 | 72 | 90 | 83 | 0 | 25 | — | 2.00 |
| June 9 - June 19 | Upper | 100 | 83 | 0 | 100 | 80 | 58 | 37 | 93 | 0.0 |
| June 19 - July 1 | Both | 100 | 75 | 0 | 100 | 80 | 36 | 64 | 93 | .0 |
| July | Both | 100 | 71 | 33 | 12 | 0 | 0 | 0 | 0 | .0 |
| August | Both | 61 | 65 | 0 | 10 | 40 | 0 | 0 | 100 | .0 |
| September | Both | 86 | 35 | 2 | 0 | 0 | 0 | 0 | 0 | .0 |