

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

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EARL WARREN, Governor
C. H. PURCELL, Director of Public Works
EDWARD HYATT, State Engineer

SHACKLEFORD CREEK ADJUDICATION
—
REPORT ON
INVESTIGATION AND WATERMASTER SERVICE
ON
SHACKLEFORD CREEK AND TRIBUTARIES
SISKIYOU COUNTY, CALIFORNIA
1946 SEASON



NOVEMBER 1946

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Sacramento, California
November 6, 1946

Gordon Zander
Principal Hydraulic Engineer
Sacramento, California

Dear Sir:

Herewith is submitted the "Report on Investigation and Water-
master Service on Shackelford Creek and Tributaries, Siskiyou County,
California, 1946 Season".

This report covers the distribution of the waters of Shackle-
ford Creek and its tributaries during the period from about June 22 to
October 1, 1946, in accordance with "1946 Agreement for Trial Distribution",
dated May 22, 1946, entered into by the various claimants in the Shackle-
ford Creek Adjudication Proceeding.

Run-off records, measurements of ditch flows and other pertinent
data on water supply and use of water in the Shackelford Creek Area are
included in the report.

Respectfully submitted,

HARRISON SMITHERUM

Supervising Hydraulic Engineer

BEFORE THE DEPARTMENT OF PUBLIC WORKS
OF THE STATE OF CALIFORNIA
DIVISION OF WATER RESOURCES

STATE ENGINEER

IN THE MATTER OF THE DETERMINATION OF THE
RIGHTS OF THE VARIOUS CLAIMANTS TO THE
WATERS OF SHACKLEFORD CREEK AND ITS
TRIBUTARIES, IN SISKIYOU COUNTY, CALI-
FORNIA.

I, Gordon Zander, Principal Hydraulic Engineer, Division of Water Resources, Department of Public Works of the State of California, hereby approve the within contained report entitled "Report on Investigation and Watermaster Service on Shackleford Creek and Tributaries, Siskiyou County, California, 1946 Season".

Dated this 6th day of November, 1946.

GORDON ZANDER

Principal Hydraulic Engineer

I, Edward Hyatt, State Engineer and Chief of the Division of Water Resources, Department of Public Works, State of California, hereby approve and adopt the within contained report entitled "Report on Investigation and Watermaster Service on Shackleford Creek and Tributaries, Siskiyou County, California, 1946 Season", as a report of the Department in the above entitled proceeding.

WITNESS my hand and the seal of the Department of Public Works of the State of California, this 6th day of November, 1946.

DEPARTMENT OF PUBLIC WORKS

By EDWARD HYATT
State Engineer and Chief of the
Division of Water Resources.

(Seal)

ORGANIZATION

C. H. Purcell	Director of Public Works
Edward Hyatt	State Engineer
Gordon Zander	Principal Hydraulic Engineer

This report was prepared under the direction of

HARRISON SMITHERUM

Supervising Hydraulic Engineer

By

P. E. STEPHENSON

Associate Hydraulic Engineer

INTRODUCTION

The petition initiating the Shackleford Creek proceeding dated January 15, 1944, was filed with the Department on January 18, 1944. Following a preliminary investigation in the matter and finding that the facts and conditions warranted the determination requested by the petitioners, the Department granted the petition by order dated June 22, 1944, and thereafter on June 22, 1944, gave notice of said order and of the pendency of the proceeding. The order set September 1, 1944, as the time for commencing the examination of the stream system. Field work on such examination was completed on about November 1, 1944.

The results of the Department's examination of the stream system were compiled in a report entitled "Report on Water Supply and Use of Water on Shackleford Creek and Tributaries, Siskiyou County, California, January, 1945". This report was filed in the proceeding in the office of the Department on January 19, 1945. Copies of the report were also circulated among the various parties interested in the proceeding.

After filing its report in the matter, the Department by order dated January 23, 1945, fixed the time for filing proofs of claims of water rights in the proceeding to expire on May 15, 1945. However, three subsequent orders under date of May 8, June 13 and July 16, 1946, respectively, extended this time to August 15, 1945. During such extended period proofs were filed by all known claimants on the stream system excepting J. A. Cason. After the expiration of the time fixed for filing of said proofs the Department assembled and certified an abstract of all of said proofs which had been filed in a document entitled "Abstract of Proofs of Claims, January, 1946." This document was filed in the proceeding in the office of the Department on January 29, 1946, and copies were served on each of the claimants in the proceeding on January 31, 1946.

The Department on January 29, 1946, by notice fixed the time and place for inspection of evidence at the County Board of Supervisors Room in the County Hall of Records at Yreka for the period beginning on February 20, 1946, and ending on March 6, 1946.

There were forty-one contests of claims filed with the Department within fifteen days after said period for inspection of evidence. On March 28, 1946, the Department by notice fixed the time and place of hearing of said contests at 2:00 o'clock P.M., on May 22, 1946, in the County Board of Supervisors Room in the County Hall of Records at Yreka, Siskiyou County, California.

On May 22, 1946, at 10 o'clock A.M., a conference of the claimants in the proceeding and representatives of the Department was held at Yreka, California, to discuss the advisability of continuing the examination of the stream system under a plan of trial distribution during the 1946 season. This conference resulted in the adoption by the claimants of a "1946 Agreement For Trial Distribution". A copy of this Agreement bearing the names of the claimants signatory thereto is submitted as an appendix to this report.

The hearing of contests was opened by the Department at the time and place fixed in the aforesaid notice and appearances were taken. After discussion in the matter, the hearing was adjourned to 10:00 o'clock, A.M., November 19, 1946, pending trial distribution during the 1946 season and the Department's report thereon.

Investigation of the stream system and administration of the diversions therefrom under the 1946 agreement covered the period from May 22 to September 30, 1946. P. E. Stephenson, Associate Hydraulic Engineer, was designated by the Department as watermaster and served in that capacity in conjunction with his duties as watermaster in the Shasta River Watermaster Service Area in Shasta Valley.

WATER SUPPLY

Precipitation

Records of precipitation at Yreka and at Etna are presented in Table 1 of this report. A comparison of the precipitation at these two stations for the six-year period 1940-41 to 1945-46, indicates that the average seasonal precipitation at Etna is 138 per cent of that at Yreka. Applying this percentage to the 31-year mean seasonal precipitation of 16.30 inches at Yreka, it is deduced that the 31-year mean seasonal precipitation at Etna is about 22.5 inches. The 1945-46 precipitation at Etna was about 132 per cent of this deduced mean. At Yreka the precipitation for the same season was about 111 per cent of the 31-year mean for that station. A further comparison shows that the 1945-46 precipitation at Etna and Yreka was 159 and 120 per cent of the 1944-45 precipitation at the respective stations. Assuming that the precipitation at these two stations is indicative of run-off conditions on the Shackleford Creek watershed, it appears that the water supply for the Shackleford Creek Area during the 1946 season was about 60 per cent greater than for the 1945 season and about 30 per cent above normal expectancy.

Stream Flow

Stream flow measuring stations and water stage recorders were maintained for the period from about June 22 to September 30, 1946, on Shackleford Creek below Camp Ditch, above Freitas Ditch and below Burton West Side Ditch, and on Mill Creek above Eastlick (Mill Creek) Ditch.

Records of daily discharge at these stations are submitted at the end of this report in Tables 2 to 5, inclusive.

Supplemental to the measuring stations on these streams, and as an aid to distribution, water stage recorders were installed and maintained on the Ralph Eastlick, Shackleford, Howard-Jones, Camp and Freitas Ditches.

Records of daily discharge for these ditches are given in Tables 6 to 10, inclusive, submitted at the end of this report.

A tabulation showing the total water supply available in Upper Shackleford Creek above the Camp Ditch is shown in Table 11. A similar table for 1945 is presented in Table 13 of the Report on Investigation and Watermaster Service on Shackleford Creek and Tributaries, Siskiyou County, California, 1945 Season. A comparison of the records indicates that the flow for August and September, 1946 was about 135 per cent of that for the same period in 1945.

DISTRIBUTION OF WATER

The "1946 Agreement for Trial Distribution" provided that distribution was to be based upon Schedules 1, 2, 3 and 4, respectively, which were attached to and made a part of the above mentioned Agreement. Also, there was provision for deviation from the above schedules if necessary or convenient to accomplish the purpose of the agreement; i.e., to afford a basis, acceptable to all of said claimants, for settlement of all water rights involved in the proceeding, together with settlement of all contests of claims heretofore filed in said proceeding without extended hearings of said contests.

Distribution and investigation by the watermaster commenced on June 22, 1946. Water stage recorders were installed at measuring stations at critical points on the stream system and at weirs on five of the major ditches. Weirs were installed in all ditches where practical to do so and intermittent measurements were made thereon. Considerable time was spent throughout the season urging claimants to put their diversion works and ditches in condition to divert the amounts of water shown in the various schedules and to install proper regulating devices and division boxes.

Upper Shackleford Creek

Cliff and Campbell Lakes and the Ralph Eastlick, Shackleford, Howard-Jones and Camp ditches lie within this area.

There was sufficient water available to meet all demands from Upper Shackleford Creek until about August 1. Subsequent to this date there was insufficient water to supply full demands for the fifth and sixth priority classes. The third priority class received approximately 100% of allotments during the entire season.

The critical period on this section of the stream system commenced about August 1. Subsequent thereto the ditches were regulated in accordance

with the amounts and priorities set forth in Schedule 1 of the 1946 Agreement.

Regulation of the several ditches in accordance with these amounts and priorities resulted in an orderly distribution of the available water supply, however, the inactive operation of the Shackelford Ditch somewhat hampered a conclusive demonstration of the allocations set forth in Schedule 1 in that less than the amount of water allocated to the ditch in said Schedule 1 was diverted during the entire 1946 season. This permitted delivery to the fourth priority class users for a longer period than otherwise would have been possible.

A statement of the conditions encountered and of the regulation of the various ditches follows:

Cliff and Campbell Lakes (Diversion 1 and 2) are storage reservoirs on the headwaters of Shackelford Creek, are owned by the Shackelford Ditch interests and are normally operated to supply supplemental water for that ditch. The outlet gates of these lakes were not opened during the 1946 season although some storage water was contributed to Shackelford Creek by reason of seepage through the Campbell Lake dam. The measured seepage on July 7, 1946, was 7.1 cubic feet per second. There was about 3 cubic feet per second passing through the spillway on this date. The natural flow tributary to Cliff and Campbell Lakes on that date was estimated to be about 10 cubic feet per second. The flow tributary to these lakes would naturally decrease after July 1 so that the outflow from storage was greater than the inflow subsequent to the date the aforesaid measurements were made. It is estimated that approximately 300 acre-feet remained in storage at the end of the season.

The Ralph Eastlick Ditch (Diversion 3) headgate was first regulated on August 20. Prior to that date the flow through this diversion was less

than the amount shown in Schedule 1. The flume at the head of the ditch was in bad condition and it was impossible to divert the allotted amount. Subsequent to August 20 the ditch was regulated as close as possible in accordance with the percentage of flow available for the fourth priority class. The record of discharge for the Ralph Eastlick Ditch is presented in Table 6.

The Shackleford Ditch (Diversion 4) interests made little effort during the 1946 season to divert the amount of water allocated to the ditch in the second priority class of Schedule 1. This ditch needs considerable maintenance work throughout the entire length. The crossing at Mill Creek washed out during the previous winter and very little water reached the ranch until late in the season. Other than to observe the amounts of water being diverted, no regulation was made on the ditch. The record of discharge is shown in Table 7.

The Howard-Jones Ditch (Diversion 5) was first regulated on August 13. Prior to that date the flow through the ditch was approximately equal to the amounts shown in Schedule 1 for the owners of the ditch. Subsequent thereto the diversion was regulated in accordance with the percentage of flow available for the fourth priority class as set forth in Schedule 1. The record of discharge for the Howard-Jones Ditch is presented in Table 8.

The Camp Ditch (Diversion 6) had available at its intake water in excess of the amount being diverted up to and including August 9. The mean measured flow in the ditch during July was 4.4 cubic feet per second and the mean flow passing said intake during July was 29.2 cubic feet per second.

On August 9th the Indian Service tightened their dam at the head of the Camp Ditch so as to divert the entire flow reaching this point. From August 13 to September 15 it was necessary to regulate the ditches receiving water under fourth priority class rights in order to provide 4.0 cubic feet

per second at the intake of the Camp Ditch to satisfy the first and third priority class rights of that ditch. During the aforesaid period an average flow of 3.9 cubic feet per second was maintained at the measuring weir on the Camp Ditch. After September 15 there was no water available for the fourth priority class rights and the average flow of the Camp ditch for the remainder of the season was 3.7 cubic feet per second. There was some leakage past the diversion dam at all times. The record of discharge for the Camp Ditch is shown in Table 9.

Whipple Ditch

The dam at the head of the Whipple Ditch (Diversion 7) had not been repaired and water was diverted for only a few days during the high stage of Shackleford Creek.

Hobart Ditch

During the 1946 season water was available for the Hobart Ditch (Diversion 9) until August 6. An average flow of about 4.6 cubic feet per second was diverted from July 1 to July 15. Subsequent to this period the flow decreased and on July 23rd and July 30, respectively, a total of 2.7 and 2.0 cubic feet per second was being diverted. Shackleford Creek had failed entirely at the head of this Ditch by August 6.

Dangel Shackleford Creek Ditch

This ditch was not opened during the 1946 season.

Lower Shackleford Creek

There are seven ditches diverting from this division of Shackleford Creek. In order downstream, they are the Freitas, Chester, Hammond-Crawford-Lewis, Burton-Meamber, Goodale, Burton West Side and Burton East Side ditches. Of the above, the Chester and Burton West Side ditches were operated in a nearly normal manner. Because of inactivity in the use of water by a majority of the water right owners on this section of the stream system regulation by the watermaster was unnecessary.

The Freitas Ditch (Diversion 17) did not divert the total water claimed at any time during the 1946 season. The ditch was rebuilt from the point of diversion to the fish screen and the remainder of the ditch was in good condition. The record of discharge for the Freitas Ditch is shown in Table 10.

The Chester Ditch (Diversion 18) diverted a continuous flow of about 1.3 cubic feet throughout the season. Of this amount very little actually reached the place of use three-fourths of a mile below the head of the ditch due to condition of wooden flumes along the ditch. The water lost returned directly to the creek. Other than to observe the amounts of water being diverted, no regulation was necessary.

The Hammond-Crawford-Lewis Ditch (Diversion 19) was used during the 1946 season only to the extent of conveying water about three-eighths of a mile for the irrigation of 6.9 acres and 11.9 acres on the Chester and Miller properties, respectively. The remaining two and one-half miles of ditch was inoperative due to partial destruction of the ditch by a logging operation in the fall of 1944. Rivallier and Camblin, whose claims to water through the ditch total 8.1 cubic feet per second, elected to forego the diversion of any water rather than repair the ditch. An average of about 0.40 cubic foot per second was diverted and used through the ditch during the 1946 season.

The Burton-Meamber Ditch (Diversion 20) was used entirely by F. L. Lathrop after about July 1 during the 1946 season. An average flow of approximately 4.0 cubic feet per second was diverted throughout the entire period. The upper section of the ditch above the division box was almost entirely rebuilt during the spring of 1946 because of damage from high water during the previous winter. The ditch below the division box was badly in need of cleaning. The division box is equipped with weirs for dividing and

measuring the water diverted, however, because of the condition of the ditch accurate measurement could not be made.

The Goodale Ditch (Diversion 21) was used to deliver water for the irrigation of 10.6 acres on the Miller property and for irrigation and stock-watering purposes on that portion of the Rivallier property north and west of the County Road. An average diversion of about 2.5 cubic feet per second was made throughout the period of watermaster service.

The Burton West Side Ditch (Diversion 22) was used for irrigation of 33.9 acres of the lands of Burnell Burton. An average flow of about 2.0 cubic feet per second was diverted through this ditch subsequent to about August 20th.

The Burton East Side Ditch (Diversion 23) was not opened during the 1946 season. The amount of water available for this ditch is shown in Table 4.

Upper Mill Creek

The Eastlick (Mill Creek) Ditch and the Couch Ditch are the only diversions from this section of the stream.

The Eastlick (Mill Creek) Ditch (Diversion 11) diverted the entire flow of Mill Creek subsequent to about July 1. The proposed division box mentioned in the report for the 1945 season was not installed so that an accurate division of the water diverted by the ditch could not be made. The Couch interests used the ditch for domestic purposes only. A record of the flow available for the ditch is shown in Table 5.

The Couch Ditch (Diversion 12) was not opened during the 1946 season. There was water available for diversion at the head of this ditch during the entire season.

Lower Mill Creek

Springs and rising water in the stream channel form the main sources of water for the sustained summer flow of this section of Mill Creek. During

the early part of each season additional water is contributed by return flow from irrigation on the Albee, Douglas Eastlick and Davis Ranches.

Four ditches divert from this section of the stream system, namely, in order downstream, Mulloy Spring Ditch (Diversion 13), China Ditch (Diversion 14), Dangel Mill Creek Ditch (Diversion 15), and Denny Bar Ditch (Diversion 16). Due to the nearly constant flow of the stream, constant flows were maintained on these ditches during the irrigation season subsequent to July 1. As determined by intermittent measurements made during the 1946 season, the average flow of each ditch was as follows: Mulloy Spring Ditch, 1.0 cubic foot per second; China Ditch, 1.2 cubic feet per second; and Dangel Mill Creek Ditch, 0.50 cubic foot per second. The Denny Bar Ditch was not opened during the season. The above amounts were within reasonable limits of the amounts claimed and the acreage irrigated thereunder, therefore no regulation was necessary.

The Hobart West Spring Ditch (Diversion 26) and the Hobart East Spring Ditch (Diversion 27) divert from a spring channel tributary to this section of Mill Creek. These ditches normally divert the entire flow available at the heads of the respective ditches, therefore, no regulation was necessary.

USE OF WATER

The uses of water and methods of irrigation in the Shackleford Creek area are described on page 17 of the "Report on Water Supply and Use of Water on Shackleford Creek and Tributaries, Siskiyou County, California, January, 1945". In 1946 there was no material change from the practices therein reported. Subsequent to about August 6 there was no water available for the ditches diverting from Upper Shackleford Creek below the Camp Ditch, and very little water for the Eastlick (Mill Creek) Ditch and Couch Ditch from Upper Mill Creek. Otherwise about the same ditches remained inactive in 1946 as in 1944 and 1945.

A summary of the amounts of water diverted by the various ditches during the period of watermaster service in 1946 is submitted in Table 12.

SUMMARY

As deduced from precipitation records the run-off of Shackleford Creek and tributaries during the 1946 season was about 59 per cent greater than for the 1945 season and about 111 per cent of the normal expectancy. A comparison of stream flow records for Shackleford Creek above all diversions for the months of August and September, 1946, indicates the run-off for said period was about 135 per cent of that for the same period in 1945.

Considerable additional data on stream flow, amounts of water diverted and use of water were obtained during the investigation. As was the case during the 1944 and 1945 seasons, several of the ditches were not opened, and others were not operated so as to divert the amount of water claimed or set forth in the various schedules of the agreement. Consequently, records of the use of water under some of the larger ditches are still lacking. Data are particularly deficient as to transportation losses on the Hammond-Crawford-Lewis Ditch.

As to acreage irrigated, methods of irrigation and crops grown there was no material change from that set forth in the "Report on Water Supply and Use of Water on Shackleford Creek and its Tributaries, Siskiyou County, California, January, 1945."

Data on the use of water obtained in 1946 support the findings set forth in the above mentioned report of a net duty of 1.0 cubic foot per second to 50 acres as the requirement for irrigation in this area.

Distribution problems were encountered only on Upper Shackleford Creek. The remaining sections of the stream system were either out of water entirely or were adequately supplied. On Lower Shackleford Creek, however, the sufficiency of the water supply was principally due to the fact that several of the ditches were not in operation or were diverting less than the amount claimed. Otherwise it appears that distribution problems would have

been encountered in this section.

On Upper Shackleford Creek the critical period as to water supply was delayed to about August 13, because the Shackleford Ditch interests failed to exercise their second priority class entitlement. Subsequent to that date the available water supply was distributed in accordance with the allotments shown in Schedule 1 of the 1946 Trial Distribution Agreement.

RECOMMENDATIONS

Trial distribution during the 1946 season and a further study of the data and information previously collected, indicate that changes both as to priorities and amounts of water allocated to the various claimants in the "1946 Agreement for Trial Distribution" are desirable. As to the priority changes, it appears that with the changes hereinafter recommended the various diversions can be operated more nearly in conformity with the practices prevailing over the past ten years than the priorities set forth in the aforesaid agreement will permit. Recommended changes as to amounts of water conform to the water requirement for the lands irrigated from the stream system as determined by duty of water studies covering the irrigation seasons of 1944, 1945 and 1946.

Recommended changes in priorities from those set forth in the aforesaid agreement are as follows:

- (1) The right of Estate of Abbie C. Albee to impound water in Cliff and Campbell lakes should be included in the Upper Shackleford Creek group of rights, whereby said right will become independent of all other rights on the stream system, excepting the rights in said Upper Shackleford Creek group. As to its priority in said group the Albee right should be made subject and inferior to all other rights in the group.
- (2) It appears that for at least ten years last past Robert L. Couch and his predecessors have been permitted at all times to use a small amount of water from the Eastlick (Mill Creek) Ditch for domestic purposes. To conform to this practice, a small part of the water allotted to Robert L. Couch in Schedule 3 of said agreement should be placed ahead of the first priority class rights in said Schedule 3. The remainder of the Couch water would then appear in a third priority class and the first priority class rights as now shown in said Schedule 3 would become second priority class rights.

Provision should also be made for the equal division of the flow available for the first priority class rights in Schedule 3 of the agreement at all times when such available flow is equal to or less than 0.50 cubic foot per second. This division is provided for by agreement among the owners of said rights, which agreement is dated July 31, 1943, and recorded on June 14, 1945, in Book 171, Official Record, Siskiyou County, California.

- (3) The rights in the Lower Mill Creek group as shown in Schedule 4 of the agreement should be divided into two priority classes of which, the rights in priority class "1st" shall be for continuous usage without regard to season and the rights in priority class "2nd" shall be for usage during the irrigation season only.

Changes as to amounts of water are recommended in many instances.

The allotments set forth in the various schedules of the 1946 agreement were largely the amounts claimed in the proofs of claims of water right and show little or no uniformity in relation to the acreages to be supplied. Such allotments should be based upon a uniform "net duty" of one cubic foot per second to 50 acres of land to be supplied, plus reasonable amounts of water for ditch transportation losses.

The various changes hereinabove recommended have been incorporated in the following schedules. The changes made may be noted by comparison of these schedules with Schedules 1, 2 and 3, respectively, of the "1946 Agreement for Trial Distribution".

SCHEDULE 1

ADJUSTED PRIORITIES AND ALLOTMENTS TO CLAIMANTS FROM
UPPER SHACKLEFORD CREEK

Name of Claimant	Acreage to be Supplied	Diver- sion No. as per D.W.R. Map	Priority Class and Allotment in Cubic Feet per Second							Total	
			1st	2nd	3rd	4th	5th	6th	7th		
John H. and Lorene M. Heide	147.7	3				3.50					3.50
Estate of Abbie C. Albee	310.4	4		7.00				4.00			11.00
Robert A. English	20.6	5				0.60					0.60
Arthur L. and Mildred J. Soderquist	10.8	5				0.30					0.30
William A. and Ollie P. Hicks	3.0	5				0.30					0.30
Cornelius J. and L. Dennis Mulloy	169.7	5				4.00					4.00
United States of America	212.6	6	2.00		3.00						5.00
O. R. and O. D. Jordon	39.7	7						*1.20			1.20
L. Dennis Mulloy	Domes- tic	8	0.03								0.03
L. Dennis Mulloy	55.4	9							*1.30		1.30
Jacob Dangel	75.2	10							*1.70		1.70
Total	1045.1		2.03	7.00	3.00	8.70	4.00	1.20	3.00		28.93

* Water may be diverted under the rights in 6th and 7th priority classes from Upper Shackelford Creek at three times the average rate herein set forth whenever water is available therefor.

SCHEDULE 2
ADJUSTED PRIORITIES AND ALLOTMENTS TO CLAIMANTS FROM
LOWER SHACKLEFORD CREEK

Name of Claimant	Acreage to be Supplied	Diver- sion No. as per D.W.R. Map	Priority Class and Allotment in Cubic Feet per Second							Total
			1st	2nd	3rd	4th	5th	6th	7th	
O. R. and O. D. Jordon	2.3	17	0.10							0.10
United States of America	142.2	17						3.25		3.25
Edward Burton and Frances Vanarsdell	54.5	17						1.10		1.10
F. L. and Georgina C. Lathrop	21.9	17						0.50		0.50
Henry F. Chester	23.0	18	0.70							0.70
Henry F. Chester	6.9	19	0.20							0.20
Lillian B. Miller	11.9	19					0.30			0.30
Joseph Rivallier	125.1	19					1.30		2.00	3.30
C. B. and Jeanne Camblin	140.8	19					1.80		3.00	4.80
Edward Burton and Frances Vanarsdell	89.0	20			1.75					1.75
Burnell M. and Rose A. Burton	29.0	20			0.70					0.70
F. L. and Georgina C. Lathrop	129.1	20			3.50					3.50
Lillian B. Miller	10.6	21	0.40							0.40
Joseph Rivallier	87.9	21				2.00				2.00
Burnell M. and Rose A. Burton	59.4	22 & 23	1.20							1.20
Robert E. and Ina G. Macaulay	9.7		0.20							0.20
Total	943.3		1.50	1.30	5.95	2.00	3.40	4.85	5.00	24.00

SCHEDULE 3
ADJUSTED PRIORITIES AND ALLOTMENTS TO CLAIMANTS FROM
UPPER MILL CREEK

Name of Claimant	Acreage to be Supplied	Diver- sion No. as per D.W.R. Map	Priority Classes and Allotments			
			1st	2nd	3rd	Total
Robert L. Couch	22.0	11 & 12	0.01		0.61	0.62
Lena Butler Silva	49.6	11		1.00		1.00
Robert P. and Margaret W. Davis	200.4	11		4.50		4.50
G. Douglas and Elma J. Eastlick	172.4	11		4.50		4.50
Total	444.4		0.01	10.00	0.61	10.62

Whenever the flow available for the rights in priority class "2nd" shall be equal to or less than 0.50 cubic foot per second, then during such times the available flow shall be divided equally among the three owners of said rights in priority class "2nd".

SCHEDULE 4
ADJUSTED PRIORITIES AND ALLOTMENTS TO CLAIMANTS FROM
LOWER MILL CREEK

Name of Claimant	Acreage to be Supplied	Diver- sion No. as per D.W.R. Map	Priority Classes and Allotments		
			1st	2nd	Total
Cornelius J. and L. Dennis Mulloy	21.4	13	0.10	0.40	0.50
Julio Pereira	52.1	14	0.25	1.15	1.40
Jacob Dangel	15.8	15	0.25	0.25	0.50
Jacob Dangel	3.5	16		0.50	0.50
L. Dennis Mulloy	78.4	26		1.60	1.60
Total	171.2		0.60	3.90	4.50

TABLE 1

PRECIPITATION AT YREKA, SISKIYOU COUNTY - ELEVATION 2625 FEET

Monthly, Seasonal and Average Amounts in Inches

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Seasonal
1940-41	1.34	.98	4.13	2.85	2.99	1.51	2.07	1.66	.95	.70	.54	.81	20.53
1941-42	1.01	1.84	8.01	1.88	2.65	.33	1.60	3.96	.30	.00	.13	.47	22.18
1942-43	.34	6.26	5.01	4.22	1.41	1.21	1.07	.66	1.07	.09	.01	.00	21.35
1943-44	2.24	1.17	.85	1.25	1.43	1.44	1.0	.73	.68	.60	.25	.22	11.86
1944-45	.45	2.86	1.15	.96	2.87	1.53	.69	4.06	.07	.13	.05	T	14.82
1945-46	2.06	2.86	4.55	2.25	1.99	1.13	.57	.89	.89	.41	T	.23	17.83
31 Year Mean	1.14	2.46	2.98	2.27	2.39	1.39	1.02	.92	.65	.36	.16	.56	16.30
6 Year Mean	1.24	2.66	3.95	2.24	2.22	1.19	1.17	1.99	.66	.32	.16	.29	18.09

PRECIPITATION AT ETNA, SISKIYOU COUNTY - ELEVATION 2945 FEET

Monthly, Seasonal and Average Amounts in Inches

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Seasonal
1940-41	1.73	1.11	6.72	3.13	4.56	2.35	2.57	1.83	.92	1.38	.61	.51	27.42
1941-42	1.21	2.91	9.71	3.46	3.91	.32	1.21	2.81	.20	.00	.00	.13	25.87
1942-43	.52	10.30	7.33	8.17	1.35	1.91	1.61	.61	.59	.40	.00	.00	32.79
1943-44	3.24	1.03	1.03	2.69	1.42	2.50	.79	.62	.70	.89	.25	.22	15.38
1944-45	.53	5.65	.96	1.02	4.76	1.91	.68	2.68	.04	.12	.39	.00	18.74
1945-46	3.83	5.80	8.56	4.90	2.61	1.64	1.01	.36	.54	.27	.00	.28	29.80
6 Year Mean	1.84	4.47	5.71	3.90	3.10	1.77	1.31	1.48	.50	.51	.26	.19	25.00

TABLE 2

Daily Discharge in Cubic Feet Per Second
SHACKLEFORD CREEK BELOW CAMP DITCH
June 22 to September 30, 1946

Day	June	July	August	Sept.	
1		62.0	5.5	0.1	
2		58.0	5.0	0.1	
3		56.0	2.5	0.1	
4		50.5	2.5	0.1	
5		47.5	2.5	0.1	
6		45.5	2.5	0.1	
7		43.0	2.5	0.1	
8		41.5	2.0	0.1	
9		39.0	2.0	0.1	
10		39.0	0.2	0.1	
11		38.0	0.2	0.1	
12		36.5	0.2	0.1	
13		33.5	0.2	0.1	
14		30.0	0.2	0.1	
15		26.5	0.2	0.1	
16		24.0	0.1	0.1	
17		21.0	0.1	0.1	
18		18.0	0.1	0.1	
19		16.0	0.1	0.1	
20		18.0	0.1	0.1	
21		19.5	0.1	0.1	
22	89.5	17.5	0.1	0.1	
23	84.5	15.5	0.1	0.1	
24	75.0	11.5	0.1	0.1	
25	71.0	11.0	0.1	0.1	
26	67.5	25.0	0.1	0.1	
27	62.5	18.5	0.1	0.1	
28	61.5	14.0	0.1	0.1	
29	58.0	12.0	0.1	0.1	
30	62.5	11.0	0.1	0.1	
31		7.5	0.1		
Total					101
Sec. Ft.					Day
Days	632.0	906.5	29.8	3.0	Period
Mean					
Sec.Ft.	70.0	29.2	1.0	0.1	15.2
Max.					
Sec.Ft.	89.5	62.0	5.5	0.1	89.5
Min.					
Sec.Ft.	58.0	7.5	0.1	0.1	0.1
Total					
Ac. Ft.	1251	1795	59	6	3110

TABLE 3

Daily Discharge in Cubic Feet per Second
SHACKLEFORD CREEK BELOW JUNCTION WITH MILL CREEK
July 13 to September 30, 1946

Day	July	August	September
1		15.0	5.4
2	RECORD	13.4	5.4
3		12.6	5.4
4		11.8	5.4
5		11.8	5.4
6	RECORD	11.8	5.4
7		11.8	5.4
8		11.8	5.4
9	NO	11.8	5.4
10	RECORD	11.8	5.4
11		11.8	5.4
12		11.8	5.4
13	35.0	11.8	5.0
14	34.0	11.8	4.4
15	31.8	11.8	4.0
16	29.6	10.4	3.4
17	28.6	9.8	3.4
18	26.6	8.4	3.0
19	24.4	7.8	3.0
20	23.4	7.2	3.0
21	23.4	6.6	2.6
22	22.4	6.0	2.6
23	21.4	5.4	2.6
24	19.6	5.4	2.2
25	20.4	5.4	2.8
26	22.4	5.4	2.8
27	20.4	5.4	2.8
28	20.4	5.4	2.8
29	18.6	5.4	2.8
30	17.8	5.4	2.8
31	16.8	5.4	
Total			80
Sec.Ft.			Day
Days	457.0	287.4	120.8
Mean			Period
Sec.Ft.	24.0	9.3	4.0
Max.			10.8
Sec.Ft.	35.0	15.0	5.4
Min.			35.0
Sec.Ft.	16.8	5.4	2.2
Total			2.2
Ac.Ft.	905	569	239
			1710

TABLE 4

Daily Discharge in Cubic Feet per Second
SHACKLEFORD CREEK BELOW BURTON WEST SIDE DITCH
June 29 to September 30, 1946

Day	June	July	Aug.	Sept.	
1		32.8	6.4	0.8	
2		32.8	6.0	0.8	
3		32.8	5.6	0.8	
4		31.6	5.0	0.8	
5		27.2	5.0	0.8	
6		25.2	5.0	0.8	
7		24.0	5.0	0.8	
8		22.2	5.0	0.8	
9		20.4	5.0	0.8	
10		18.6	4.8	0.8	
11		18.6	4.8	0.8	
12		18.6	4.8	0.8	
13		17.8	4.4	0.8	
14		17.8	4.2	0.8	
15	R	16.8	4.0	0.8	
16	C	14.4	4.0	0.8	
17	C	12.4	3.8	0.8	
18	E	8.2	3.4	0.8	
19	R	8.2	3.2	0.8	
20		8.2	2.8	0.8	
21	N	8.2	2.4	0.8	
22	O	8.2	0.8	0.8	
23		8.2	0.8	0.8	
24		8.2	0.8	0.8	
25		7.8	0.8	0.8	
26		8.2	0.8	0.8	
27		8.2	0.8	0.8	
28		7.4	0.8	0.8	
29	32.8	7.0	0.8	0.8	
30	32.8	6.4	0.8	0.8	
31		6.4	0.8		
Total					94
Sec. Ft.					Day
Days	65.6	492.8	102.6	24.0	Period
Mean					
Sec. Ft.	32.8	15.9	3.3	0.8	7.3
Max.					
Sec. Ft.	32.8	32.8	6.4	0.8	32.8
Min.					
Sec. Ft.	32.8	6.4	0.8	0.8	0.8
Total					
Ac. Ft.	130	976	203	48	1360

TABLE 5

Daily Discharge in Cubic Feet Per Second
MILL CREEK ABOVE EASTLICK(MILL CREEK) DITCH
June 22 to September 30, 1946

Day	June	July	Aug.	Sept.	
1		12.4	4.0	1.2	
2		12.4	3.8	1.2	
3		12.4	2.9	1.2	
4		12.4	2.4	1.2	
5		11.4	2.0	1.2	
6		11.0	1.7	1.2	
7		11.0	1.7	1.2	
8		10.2	1.5	1.2	
9		9.6	1.5	1.2	
10		9.4	1.5	1.2	
11		9.0	1.4	1.2	
12		8.6	1.4	1.2	
13		8.4	1.4	1.2	
14		8.4	1.4	1.2	
15		8.4	1.3	1.2	
16		8.4	1.3	1.2	
17		8.0	1.3	1.2	
18		7.6	1.3	1.2	
19		7.2	1.3	1.2	
20		6.8	1.2	1.2	
21		6.4	1.2	1.2	
22	22.0	6.0	1.2	1.2	
23	19.4	5.8	1.2	1.2	
24	19.0	5.8	1.2	1.2	
25	18.4	5.4	1.2	1.2	
26	18.0	5.4	1.2	1.2	
27	17.0	5.2	1.2	1.2	
28	16.4	4.8	1.2	1.2	
29	15.0	4.4	1.2	1.2	
30	12.4	4.4	1.2	1.2	
31	12.4	4.4	1.2		
Total					102
Sec. Ft.					Day
Days	170.0	251.0	49.5	36.0	Period
Mean Sec.					
Ft.	17.0	8.1	1.6	1.2	5.0
Maximum					
Sec. Ft.	22.0	12.4	4.0	1.2	22.0
Minimum					
Sec. Ft.	12.4	4.4	1.2	1.2	1.2
Total					
Acre Ft.	337	497	98	71	1000

TABLE 6

Daily Discharge in Cubic Feet per Second
RALPH EASTLICK DITCH
June 22 to September 17, 1946

Day	June	July	Aug.	Sept.	
1		2.3	1.6	0.5	
2		2.3	1.8	0.5	
3		2.3	1.9	0.4	
4		2.5	2.2	0.4	
5		2.9	2.4	0.4	
6		2.6	2.5	0.3	
7		2.4	2.5	0.3	
8		2.2	2.5	0.3	
9		2.2	2.5	0.2	
10	RECORDED	2.1	2.5	0.2	
11		2.2	2.4	0.2	
12		2.1	2.4	0.1	
13		2.0	2.2	0.1	
14		2.1	2.1	0.1	
15		2.1	2.0	0.1	
16		2.1	2.1		
17	NO	2.1	2.0		
18	RECORDED	2.4	2.0		
19		2.4	2.0		
20		2.6	2.0		
21		2.4	2.0		
22	1.2	2.4	2.0		
23	1.1	2.3	2.0		
24	0.9	2.3	2.0		
25	0.8	2.3	2.0		
26	0.8	2.4	2.0		
27	1.1	1.7	1.9		
28	1.5	1.5	1.3		
29	2.3	1.5	0.8		
30	2.3	1.5	0.6		
31		1.6	0.6		
Total					86
Sec.Ft.					Day
Days	12.0	67.8	60.8	4.1	Period
Mean					
Sec.Ft.	1.3	2.2	2.0	0.3	1.6
Maximum					
Sec.Ft.	2.3	2.9	2.5	0.5	2.9
Minimum					
Sec.Ft.	0.8	1.5	0.6	0.1	0.1
Total					
Acre Ft.	24	134	120	8	286

TABLE 7

Daily Discharge in Cubic Feet per Second
SHACKLEFORD DITCH
June 29 to September 30, 1946

Day	June	July	Aug.	Sept.	
1		3.2	4.1	5.4	
2		3.2	3.9	5.5	
3		3.2	3.7	5.4	
4		3.1	3.4	5.4	
5		3.1	3.2	5.2	
6		3.1	3.2	5.0	
7		3.0	3.4	5.0	
8		3.0	3.2	4.9	
9		2.9	3.2	4.7	
10		2.8	3.1	4.6	
11		2.8	3.0	4.7	
12		2.7	3.5	4.6	
13		2.7	4.9	4.6	
14		2.8	4.9	4.4	
15	RECORD	2.7	4.7	5.0	
16		2.7	4.6	5.2	
17		3.9	4.2	4.9	
18		5.2	4.1	4.9	
19		5.2	4.1	4.9	
20		4.9	4.1	4.7	
21		4.7	3.9	4.1	
22	NO	4.7	3.8	4.6	
23		4.7	3.7	4.4	
24		4.6	3.7	4.2	
25		5.5	3.5	3.4	
26		5.7	3.5	3.4	
27		5.4	3.8	3.3	
28		4.7	4.1	3.3	
29	4.9	4.4	4.1	3.2	
30	4.9	4.2	4.2	3.2	
31		4.2	5.0		
Total					94
Sec. Ft.					Day
Days	9.8	119.0	119.8	136.1	Period
Mean					
Sec. Ft.	4.9	3.8	3.9	4.5	4.1
Maximum					
Sec. Ft.	4.9	5.7	5.0	5.5	5.7
Minimum					
Sec. Ft.	4.9	2.7	3.0	3.2	2.7
Total					
Acre Ft.	19	236	237	269	761

TABLE 8

Daily Discharge in Cubic Feet per Second
 HOWARD-JONES DITCH
 July 30 to September 15, 1946

Day	July	Aug.	Sept.	
1		6.3	0.8	
2		6.2	0.8	
3		5.8	0.8	
4		5.4	1.3	
5		5.5	1.6	
6		6.3	1.5	
7		6.4	1.5	
8		6.3	1.5	
9		6.3	1.5	
10		6.3	1.3	
11		6.3	0.3	
12		6.1	0.2	
13		5.0	0.2	
14		3.6	0.2	
15		3.6	0.1	
16	R	3.6		
17	E	3.5		
18	C	3.5		
19	O	3.2	N	
20	R	3.0	O	
21		2.7	H	
22		2.7	S	
23	N	2.7	R	
24	O	2.7	E	
25		2.7	V	
26		2.5	H	
27		2.4	D	
28		0.9		
29		0.9		
30	6.4	0.9	O	
31	6.4	0.9	N	
Total				48
Sec.Ft.				Day
Days	12.8	124.2	13.6	Period
Mean				
Sec.Ft.	6.4	4.0	0.9	3.0
Maximum				
Sec.Ft.	6.4	6.4	1.6	6.4
Minimum				
Sec.Ft.	6.4	0.9	0.1	0.1
Total				
Acre Ft.	25	246	27	298

TABLE 9

Daily Discharge in Cubic Feet per Second
 CAMP DITCH
 June 22 to September 30, 1946

Day	June	July	Aug.	Sept.	
1		5.7	4.2	4.3	
2		5.8	3.7	4.2	
3		5.8	3.2	4.7	
4		5.8	3.0	5.0	
5		5.0	2.5	3.8	
6		4.9	2.4	3.6	
7		4.7	2.4	3.6	
8		4.5	2.2	3.4	
9		4.4	3.4	3.3	
10		4.2	3.7	3.0	
11		4.5	3.4	3.0	
12		1.8	2.9	2.9	
13		3.7	3.6	2.7	
14		3.8	4.5	2.5	
15		3.7	4.4	4.3	
16		3.7	4.1	3.9	
17		3.6	4.1	3.9	
18		3.5	3.9	3.8	
19		3.5	3.7	3.7	
20		3.5	4.0	3.6	
21		3.3	4.2	3.6	
22	5.5	3.1	4.1	3.6	
23	5.5	3.1	4.0	3.7	
24	5.4	5.2	3.9	3.7	
25	5.2	9.2	3.8	3.8	
26	5.5	7.8	3.8	3.8	
27	5.8	4.0	3.1	3.8	
28	5.8	3.8	3.7	3.8	
29	5.6	3.7	4.7	3.8	
30	5.6	3.5	4.9	3.8	
31		4.1	4.7		
Total					101
Sec. Ft.					day
Days	49.9	136.9	114.2	110.6	period
Mean					
Sec. Ft.	5.6	4.4	3.7	3.7	4.1
Maximum					
Sec. Ft.	5.3	9.2	4.9	5.0	9.2
Minimum					
Sec. Ft.	5.2	1.8	2.2	2.5	1.8
Total					
Acre Ft.	99	271	226	219	820

TABLE 10

Daily Discharge in Cubic Feet per Second
 FREITAS DITCH
 July 23 to September 30, 1946

Day	July	Aug.	Sept.
1		3.2	0.9
2		2.9	0.9
3		2.8	0.9
4		2.7	0.5
5		2.6	0.3
6		2.4	0.4
7		2.5	0.4
8		2.2	0.4
9		2.0	0.3
10		1.9	0.3
11		2.0	0.3
12		2.1	0.3
13		1.9	0.3
14		2.0	0.3
15		1.9	0.3
16		1.7	0.3
17		1.5	0.2
18		1.5	0.2
19		1.4	0.3
20		1.0	0.3
21		0.8	0.3
22		0.8	0.2
23	4.1	0.8	0.2
24	4.1	0.7	0.2
25	4.4	0.9	0.2
26	5.0	0.5	0.2
27	4.6	0.4	0.2
28	4.2	0.5	0.2
29	3.9	0.9	0.2
30	3.5	0.9	0.2
31	3.4	0.9	
Total			70
Sec. Ft.			day
Days	37.2	50.3	10.2
Mean			period
Sec. Ft.	4.1	1.6	0.3
Maximum			1.4
Sec. Ft.	5.0	3.2	0.9
Minimum			5.0
Sec. Ft.	3.4	0.4	0.2
Total			0.2
Acre Ft.	74	100	20
			194

TABLE 11

Daily Discharge in Cubic Feet per Second
UPPER SHACKLEFORD CREEK ABOVE DIVERSIONS
July 30 to September 30, 1946

Day	July	Aug.	Sept.	
1		21.7	11.1	
2		20.6	11.1	
3		17.1	11.4	
4		16.5	12.2	
5		16.1	11.1	
6		16.9	10.5	
7		17.2	10.5	
8		16.2	10.2	
9		17.4	9.8	
10		15.8	9.2	
11		15.3	8.3	
12		15.1	7.9	
13		15.9	7.7	
14		15.3	7.3	
15		14.9	9.6	
16		14.5	9.3	
17		13.9	9.0	
18		13.6	8.8	
19		13.1	8.7	
20		13.2	8.4	
21		12.9	7.8	
22		12.7	8.3	
23		12.5	8.2	
24		12.4	8.0	
25		12.1	7.3	
26		11.9	7.3	
27		11.3	7.2	
28		10.1	7.2	
29		10.6	7.1	
30	26.6	10.7	7.1	
31	23.8	11.3		
Total				63
Sec. Ft.				day
Days	50.4	448.8	267.6	period
Mean				
Sec. Ft.	25.2	14.5	8.9	12.2
Maximum				
Sec. Ft.	26.6	21.7	12.2	26.6
Minimum				
Sec. Ft.	23.6	10.1	7.1	7.1
Total				
Acre Ft.	998	889	530	2420

TABLE 12

SUMMARY OF AMOUNTS OF WATER DIVERTED
FROM SHACKLEFORD CREEK AND TRIBUTARIES
1946 SEASON

Name of Ditch	Diversion Number	Period of Record	Amount of Water Acre-Feet
Cliff Lake	1)		
Campbell Lake	2)	July 15 to Sept. 15	0*
Ralph Eastlick	3	June 22 to Sept. 30	286
Shackleford	4	June 29 to Sept. 30	761
Howard-Jones	5	July 30 to Sept. 30	298
Camp	6	June 22 to Sept. 30	820
Whipple	7	July 1 to Sept. 30	0
Hobart Domestic	8	July 1 to Sept. 30	No Record
Hobart	9	July 1 to Sept. 30	223
Dangel Shackleford	10	July 1 to Sept. 30	0
Eastlick (Mill Creek)	11	July 1 to Sept. 30	660
Couch	12	July 17 to Sept. 18	0
Mulloy Spring	13	July 1 to Sept. 30	182
China	14	July 1 to Sept. 30	218
Dangel Mill Creek	15	July 1 to Sept. 30	91
Denny Bar	16	July 1 to Sept. 30	0
Freitas	17	July 23 to Sept. 30	194
Chester	18	July 1 to Sept. 30	238
Hammond-Crawford-Lewis	19	July 1 to Sept. 30	73
Burton-Meamber	20	July 1 to Sept. 30	730
Goodale	21	July 1 to Sept. 30	456
Burton West Side	22	Aug. 20 to Sept. 30	167
Burton East Side	23	July 1 to Sept. 30	0

* Water released from storage

TABLE 13

DUTY OF WATER ON AREAS IRRIGATED
FROM SHACKLEFORD CREEK AND TRIBUTARIES
1946 SEASON

Name of Ditch	Diver- sion Number	Period	Area Irri- gated Acres	Gross Diver- sion Acres Feet	Gross Duty Ac.Ft. per acre	Gross Duty Acres per c.f.s.	Estimated Trans- portation Loss %	Net Duty Acres per c.f.s.
Ralph Eastlick	3	June 22 to Aug. 22	148	272	1.84	67	12	76
Shackleford	4	June 29 to Sept. 30	245	761	3.10	79	45	143
Howard-Jones	5	June 30 to July 15	204	170	.84	41	13	47
Camp	6	June 22 to Sept. 30	212.6	820	3.9	52	11	58
Mulloy Spring	13	July 1 to Sept. 30	21	182	8.7	21	11	24
China	14	July 1 to Sept. 30	52	218	4.2	43	26	58
Dangel Mill Creek	15	July 1 to Sept. 30	21	91	4.3	42	35	65
Chester	18	July 1 to Sept. 30	23	238	10.4	18	60	45
Hammond- Crawford- Lewis	19	July 1 to Sept. 30	19	75	4.0	48	15	56
Burton- Meamber	20	July 1 to Sept. 30	129	378	2.9	32	18	39

A P P E N D I X

1946 AGREEMENT

FOR

TRIAL DISTRIBUTION

BEFORE THE DEPARTMENT OF PUBLIC WORKS
OF THE STATE OF CALIFORNIA
DIVISION OF WATER RESOURCES
STATE ENGINEER

IN THE MATTER OF THE DETERMINATION OF THE)
RIGHTS OF THE VARIOUS CLAIMANTS TO THE)
WATERS OF SHACKLEFORD CREEK AND ITS TRIBU-) 1946 AGREEMENT
TARIES IN SISKIYOU COUNTY, CALIFORNIA) FOR TRIAL DISTRIBUTION

WHEREAS, the above entitled proceeding is pending before the Department of Public Works of the State of California, Division of Water Resources, State Engineer, in which the rights in and to the waters, and in and to the use thereof, from Shackleford Creek and its tributaries, of all the claimants hereunto subscribed are involved; and

WHEREAS, said Department has completed the investigation of said stream system; all proofs of claims of water rights have been filed; and abstract of said proofs of claims has been prepared and served on all claimants; contests of a large number of said proofs of claims have been filed by various claimants in the proceeding; and said contests have been set for hearing on May 22, 1946, all in accordance with the provisions of the Water Code, and

WHEREAS, said Department has completed and filed its report on trial distribution for the 1945 season and has circulated copies of said report among the various claimants in the proceeding, and

WHEREAS, it appears from the data and information now before the Department in said proceeding that it may be possible to work out an allocation of the waters of said stream system among the various claimants thereto that will afford a basis, acceptable to all of said claimants, for settlement of all water rights involved in said proceeding, together with settlement of all contests of claims heretofore filed in said proceeding without extended hearings on said contests, and

WHEREAS, the claimants hereunto subscribed desire that diversions from said stream system be administered by said Department during the 1946 season in order to afford said Department an opportunity to attempt to develop by trial an allocation of the waters of said stream system among the claimants in the proceeding that may be acceptable to said claimants as a basis for settlement of the water rights involved therein.

NOW THEREFORE IT IS HEREBY AGREED by and between each and every claimant hereunto subscribed and among all of said claimants, that said Department may undertake to distribute the waters of said Shackleford Creek and its tributaries among the various claimants hereunto subscribed as hereinafter set forth, it being understood and agreed that the following plan of distribution and apportionment of water shall be for the period extending from the date hereof to October 1, 1946, only, and subject to such provisions as are hereinafter contained, to wit:

1. Estate of Abbie C. Albee shall be entitled to impound the waters of the South Fork of Shackleford Creek in Cliff and Campbell Lakes (designated on Division of Water Resources Map as Diversions 1 and 2, respectively), as follows:

150 acre-feet per annum in Cliff Lake

350 acre-feet per annum in Campbell Lake,

or as much thereof as it applies to beneficial use for stock-watering purposes and for the irrigation of 310.4 acres of its lands involved in said proceeding as shown on said map. Said water shall be collected in said lakes during the period from about November 1 of each year to July 1 of the succeeding year and thereafter withdrawn from storage during the period from April 1 to October 30, both dates inclusive, of each year and applied to beneficial use for the aforesaid purposes.

2. Subject to the foregoing rights, the rights in and to the waters, and in and to the use thereof, from each of the following

divisions of Shackleford Creek and its tributaries, namely, Upper Shackleford Creek (that portion of Shackleford Creek above the junction of Shackleford and Mill Creeks), Lower Shackleford Creek (that portion of Shackleford Creek below the junction of Shackleford and Mill Creeks), Upper Mill Creek (that portion of Mill Creek above the Shackleford Ditch Crossing) and Lower Mill Creek (that portion of Mill Creek between Shackleford Ditch Crossing and the junction of Shackleford and Mill creeks) shall be separate groups. All rights in each of said groups in and to the waters, and in and to the use thereof, shall be independent of the rights in any other of said groups.

3. Subject to the foregoing rights and provisions, the various claimants enumerated in Schedules 1, 2, 3 and 4, hereunto annexed and made a part hereof shall be entitled to rights in and to the use of the natural flows of Shackleford Creek and Mill Creek during the period from the date hereof to September 30, both dates inclusive, in 1946, for domestic, stock-watering and irrigation purposes upon their respective lands involved in said proceeding as shown on the Division of Water Resources Map, in accordance with the acreages to be supplied, priorities and quantities of water allotted, and through the diversions from the sources named as set forth in said Schedules 1, 2, 3 and 4.

4. All allotments set forth in said Schedules 1, 2, 3 and 4 which are within the same priority class and within the same group are equal in priority and correlative in right and at all times when the water supply available for rights within a priority class is inadequate to supply all rights and allotments within said class, then during the continuance of such shortage, the owners of such allotments shall prorate the available water supply, if any, in excess of the quantity required for prior rights, or rotate in the use thereof, in accordance with their

respective allotments in that class.

5. All rights set forth in Schedules 1, 2, 3 and 4 hereof shall be for continuous usage during the period from the date hereof to September 30, 1946; provided, however, that nothing herein contained shall, or shall be construed to, prevent any of the claimants hereunto subscribed, who have a joint diversion, where there is a continuous flow allotment to said diversion, from employing by agreement of such joint users of said diversion a system of rotation in use as among themselves, or from preventing any claimant hereunto subscribed, who has allotments to two or more diversions, from using all or any portion of his allotments through each or any number of his diversions on all or any portion of his lands, so long as the maximum quantity of water diverted shall not exceed the aggregate of all allotments to all of his diversions.

6. Subject to the foregoing rights and provisions; Jesse Arnold Cason shall be entitled to divert from Shackleford Creek at a point within the SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 9, T. 43 N., R. 10 W., M.D.B.&M., as described in Application 10350 filed December 31, 1941,

1.00 cubic foot per second

or as much thereof as is applied to beneficial use during the period from March 15 to July 1 of each year for domestic purposes and for the irrigation of 36.0 acres of land described as follows:

5.0 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 10, T. 43 N., R. 10 W., M.D.B.&M.
12.0 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 10, T. 43 N., R. 10 W., M.D.B.&M.
6.0 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 10, T. 43 N., R. 10 W., M.D.B.&M.
13.0 acres in SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 10, T. 43 N., R. 10 W., M.D.B.&M.
36.0 acres -- Total

Such diversion and use shall be expressly subject to the terms and conditions of Permit 6113 issued by the Department on February 25, 1943, in approval of

Application 10350.

7. The points of measurement of all allotments of water hereinbefore provided shall be at or near the respective points of diversion from Shackleford Creek and its tributaries.

8. Said Department shall have the power and authority to deviate from the plan of distribution herein provided, if in its opinion any changes are necessary or convenient in order to expedite accomplishment of the purpose of this agreement.

9. Nothing herein contained shall be, or shall be construed as, an admission by any claimant that his legal rights or the rights of any other claimant are as herein provided; and the distribution of water in accordance with this agreement shall not in any manner prejudice the rights which are now claimed or may hereafter be asserted by any of the claimants hereunto subscribed.

10. Said Department may appoint a watermaster to distribute the waters of Shackleford Creek and its tributaries, as herein provided for, during the 1946 season, and said watermaster shall have power and authority to inspect and regulate the diversions of all the claimants hereunto subscribed in accordance with this agreement, and in the exercise of such authority may enter upon the lands of said claimants for the purpose of such inspection and regulation, and may establish and maintain such gaging stations and measuring devices in said stream system and diversion conduits as may be necessary or convenient. The several ditch owners shall furnish the necessary labor and material for the construction and installation of diversion works, headgates and measuring devices for their respective ditches.

11. It is finally agreed that in order to meet the costs of such distribution by the watermaster during the 1946 season, the claimants hereunto subscribed will pay to the Division of Water Resources on or before

July 1, 1946, the amount of \$270.00, which amount shall be apportioned among the said claimants in accordance with the assessments set forth in Schedule 5 hereunto annexed and made a part hereof.

IN WITNESS WHEREOF, the parties hereto have affixed their hands and seals this 22nd day of May, 1946.

<u>Estate of Abbie C. Albee, Ralph Albee, Executor</u>	<u>Weed, Calif.</u>
<u>Lena Butler Silva</u>	<u>520 Lane St., Yreka, Calif.</u>
<u>Lorene M. Heide J.H.</u>	<u>Fort Jones</u>
<u>John H. Heide</u>	<u>Fort Jones</u>
<u>Frances Vanarsdell by Ed Burton</u>	<u>Fort Jones</u>
<u>Edward Burton</u>	<u>Fort Jones</u>
<u>Burnell M. Burton</u>	<u>Fort Jones</u>
<u>Rose A. Burton by B.M.B.</u>	<u>Fort Jones</u>
<u>Lillian B. Miller</u>	<u></u>
<u>Robert A. English</u>	<u>Fort Jones</u>
<u>W. A. Hicks</u>	<u>Ft. Jones</u>
<u>C. J. Mulloy</u>	<u>Ft. Jones</u>
<u>L. D. Mulloy</u>	<u>Fort Jones</u>
<u>Georgina C. Lathrop</u>	<u>Fort Jones</u>
<u>Morris L. Prather</u>	<u>Montague, Cal.</u>
<u>For Robert P. Davis</u>	<u>Fort Jones</u>
<u>G. Douglas Eastlick</u>	<u>Fort Jones</u>
<u>Jacob Dangel</u>	<u></u>
<u>Julio Pereira</u>	<u>Fort Jones</u>
<u>Jack E. Schulz</u>	<u>Fort Jones</u>
<u>Richard R. Schulz</u>	<u>Fort Jones</u>
<u>J. B. Rivallier</u>	<u>Fort Jones</u>

SCHEDULE 1

PRIORITIES AND ALLOTMENTS TO CLAIMANTS FROM
UPPER SHACKLEFORD CREEK

Name of Claimant	Acreage	Diver- sion No. as to be per- plied	Priority Class and Allotment in Cubic Feet per Second							Total	
			Sup- D.W.R. Map	1st	2nd	3rd	4th	5th	6th		7th
John H. and Lorene M. Heide	147.7	3				3.50					3.50
Estate of Abbie C. Albee	310.4	4		7.00				5.00			12.00
Robert A. English	20.6	5				0.75					0.75
Arthur L. and Mildred J. Soderquist	10.8	5				0.375					0.375
William A. and Ollie P. Hicks	3.0	5				0.375					0.375
Cornelius J. and L. Dennis Mulloy	169.7	5				5.00					5.00
United States of America	151.8	6	2.00		2.00			4.00			8.00
O. R. and O.D. Jordon	39.7	7						*1.20			1.20
L. Dennis Mulloy	Domes- tic	8	0.03								0.03
L. Dennis Mulloy	55.4	9							*1.30		1.30
Jacob Dangel	75.2	10							*1.70		1.70
Total	984.3		2.03	7.00	2.00	10.00	9.00	1.20	3.00		34.23

* Water may be diverted under the rights in 6th and 7th priority classes from Upper Shackleford Creek at three times the average rate herein set forth whenever water is available therefor.

SCHEDULE 2
 PRIORITIES AND ALLOTMENTS TO CLAIMANTS FROM
 LOWER SHACKLEFORD CREEK

Name of Claimant	Acreage to be Supplied	Diver- sion No. as per D.W.R. Map	Priority Class and Allotment in Cubic Feet per Second							Total	
			1st	2nd	3rd	4th	5th	6th	7th		
O. R. and O. D. Jordan	2.3	17	0.10								0.10
United States of America	203.0	17						3.25			3.25
Edward Burton and Frances Vanarsdell	54.5	17						1.08			1.08
F. L. and Georgina C. Lathrop	21.9	17						2.17			2.17
Henry F. Chester	23.0	18		1.50							1.50
Henry F. Chester	6.9	19		0.20							0.20
Lillian B. Miller	11.9	19						0.40			0.40
Joseph Rivallier	125.1	19						1.30	2.00		3.30
C. B. and Jeanne Camblin	140.8	19						1.80	3.00		4.80
Edward Burton and Frances Vanarsdell	89.0	20			1.75						1.75
Burnell M. and Rose A. Burton	29.0	20			1.75						1.75
F. L. and Georgina C. Lathrop	129.1	20			3.50						3.50
Lillian B. Miller	10.6	21		0.40							0.40
Joseph Rivallier	87.9	21				3.60					3.60
Burnell M. and Rose A. Burton	59.4	22	1.20								1.20
Robert E. and Ina G. Macaulay	9.7		0.20								0.20
Total	1004.1		1.50	2.10	7.00	3.60	3.50	6.50	5.00		29.20

SCHEDULE 3
PRIORITIES AND ALLOTMENTS TO CLAIMANTS FROM
UPPER MILL CREEK

Name of Claimant	Acreage to be Supplied	Diver- sion No. as per D.W.R. Map	Priority Classes and Allotments		
			1st	2nd	Total
Robert L. Couch	4.0	11		0.08	0.08
Lena Butler Silva	49.6	11	1.00		1.00
Robert P. and Margaret W. Davis	200.4	11	4.50		4.50
G. Douglas and Elma J. Eastlick	172.4	11	4.50		4.50
Robert L. Couch	18.0	12		0.54	0.54
Total	444.4		10.00	0.62	10.62

SCHEDULE 4
PRIORITIES AND ALLOTMENTS TO CLAIMANTS FROM
LOWER MILL CREEK

Name of Claimant	Acreage to be Supplied	Diver- sion No. as per D.W.R. Map	Priority Classes and Allotments		
			1st	2nd	Total
Cornelius J. and L. Dennis Mulloy	21.4	13	0.50		0.50
Julio Pereira	52.1	14	2.00		2.00
Jacob Dangel	15.8	15	1.00		1.00
Jacob Dangel	3.5	16	0.60		0.60
L. Dennis Mulloy	78.4	26	1.57		1.57
Total	171.2		5.67		5.67

SCHEDULE 5
 APPORTIONMENT OF COST OF TRIAL DISTRIBUTION ON
 SHACKLEFORD CREEK AND TRIBUTARIES DURING THE 1946 SEASON

Name of Claimant	Continuous Flow: Equivalent Cu. Ft. per Sec.:	Portion of Expense
Albee, Estate of Abbie C.	13.43	\$ 40.90
Burton, Burnell M. and Burton, Rose A.	2.95	9.86
Burton, Edward and Vanarsdell Frances	2.83	9.51
Camblin, C. B. and Camblin, Jeanne	4.80	15.34
Cason, Jesse Arnold	1.00	4.09
Chester, Henry F.	1.70	6.16
Couch, Robert L.	0.62	2.96
Dangel, Jacob	3.30	10.90
Davis, Robert P. and Davis, Margaret W.	4.50	14.45
Eastlick, G. Douglas and Eastlick, Elma J.	4.50	14.45
English, Robert A.	0.75	3.34
Heide, John H. and Heide, Lorene M.	3.50	11.49
Hicks, William A. and Hicks, Ollie P.	0.375	2.24
Jordon, O. R. and Jordon, O.D.	1.20	4.68
Lathrop, F. L. and Lathrop, Georgina C.	5.67	17.92
Macaulay, Robert E. and Macaulay, Ina G.	0.20	1.72
Miller, Lillian B.	0.80	3.49
Mulloy, Cornelius J. and Mulloy, L. Dennis	5.50	17.41
Mulloy, L. Dennis	2.90	9.71

SCHEDULE 5 (Cont'd.)

Name of Claimant	:Continuous Flow : : Equivalent : :Cu. Ft. per Sec.:	: Portion : : of : : Expense :
Pereira, Julio	: 2.00 :	: \$ 7.05 :
Rivallier, Joseph	: 6.90 :	: 21.56 :
Silva, Lena Butler	: 1.00 :	: 4.09 :
Soderquist, Arthur L. and Soderquist, Mildred J.	: 0.375 :	: 2.24 :
United States of America	: 11.25 :	: 34.44 :
Total	: 82.05 :	: \$ 270.00 :