UNITED STATES
DEPARTMENT OF THE INTERIOR
Douglas McKay, Secretary

BUREAU OF RECLAMATION
W. A. Dexheimer, Commissioner

REGION 3
E. G. Nielsen, Regional Director

MEMORANDUM SUPPLEMENT

TO

"REPORT

ON

WATER SUPPLY

OF THE

LOWER COLORADO RIVER BASIN

PROJECT PLANNING REPORT

NOVEMBER 1952"

NOVEMBER 1953

CONTENTS

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I. INTRODUCTION

This memorandum is submitted as a supplement to the Bureau of Reclamation's "Report on Water Supply of the Lower Colorado River Basin", dated November 1952. The report presented a comprehensive analysis of the water supply of the Lower Colorado River Basin based on average conditions for the 1914-1945 period. This supplement extends the analyses to include average conditions for the 1946-1951 period and also presents annual estimates of water uses, water salvages, and virgin flows for the entire 1914-1951 period at eight selected points on the Colorado River and its tributaries in the Lower Basin.

The same techniques as detailed in the report were applied in the analyses for the 1946-1951 period, and therefore to avoid repetition, descriptive data in this supplement are brief.

Tables included in this supplement are given the same numbers as those relating to the same subject in the report with the added prefix MS. Summary tables of annual estimates are designated by capital letters. Appendix tables are designated by the added prefix A.

II. BASIC DATA

The general description of the Lower Colorado River Basin as given in the report suffices for this memorandum.

Two base maps of the Lower Basin were included in the report and appendixes. No additional maps were prepared for this supplement. Although there has been an increase in the irrigated land in the Lower Basin, most of the expansion has been contiguous to the areas depicted on the map in Appendix B of the report.

A. Climatological Data

Normal consumptive use of water rates as listed in Appendix B of the report were applied in estimating the consumptive use of irrigation water by crops and areas incidental to irrigation, domestic and municipal uses, and uses by native vegetation for the 1946-1951 period. These rates were predicated on climatological data for the 1914-1945 period as representative of average conditions. Where necessary, the normal consumptive uses are adjusted to reflect the water supply available during the 1946-1951 period.

Evaporation records for the 1946-1951 period were compiled from published data of the Weather Bureau and the Bureau of Reclamation and used in estimating the evaporation from the large reservoirs during the period. Evaporation losses from small reservoirs and other water surfaces were estimated for the 1946-1951 period by application of the data presented in the report as average for the 1914-1945 period.

Records of precipitation for the 1946-1951 period were compiled for only those stations necessary in determining depletions by large reservoirs.

No temperature or frost records during the 1946-1951 period were required in the studies.

B. Historic Stream Flow at Key Gaging Stations

Records of stream flow at key gaging stations for the period 1914-1945 are shown in Appendix A, Table 6 of the report. Those records, to complete the study outlined in this Supplement Report, were extended to cover the period 1946-1951. In some cases records of new stations were utilized and in other cases a few of the stations previously used were dropped where records have not been maintained.

C. Drainage Areas Above Key Gaging Stations

The drainage areas upstream from gaging stations and other division points were discussed and summarized in the report. In the studies deriving estimates on the basis of drainage areas in stream sections other than those listed in Table 2 of the report, drainage area data as published in the Geological Survey water-supply papers for the additional gaging stations were used.

D. Depletions of Ground-Water Basins

Further depletions of the ground-water basins in the Gila River drainage area were determined for the 1946-1951 period for the same four areas described in the report. The same methods were employed in deriving the depletions for the 1946-1951 period as were used in determining the 1914-1945 estimates. Table MS 4 summarizes the depletions of ground-water basins in the Gila River drainage area during the 1946-1951 period.

Table MS 4
LOWER COLORADO RIVER BASIN
Depletions of Ground-Water Basins in the Gila River Drainage Area

Average annual depletion in acre-feet — October 1, 1945 - September 30, 1951

Ground-Water Basin	Area in Square Miles	Volume Dewatered in Acre-Feet	Average Decline of Water Table in Feet	Specific Yield in Percent	Total Depletion in Acre-Feet	Average Annual Depletion in Acro-Feet
Safford Valley	120	465,900	6.07	16	74,500	12,400
Upper Santa Cruz River	626	3,653,000	9.12	15	548,000	91,300
Pinal County and Maricopa County upstream from Gillespie Dam						
Florence-Coolidge area	239	5,764,500	37.69	15	864,700	144,100
Sacaton area	170	1,598,100	14.69	15	239,700	39,900
Eloy area	356	7,382,400	32.40	15	1,107,400	184,600
Casa Grande area	229	1,472,000	10.04	15	220,800	36,800
Maricopa area	160	2,584,300	25.24	15	387,600	64,600
St. John Mission area	168	410,900	3.82	15	61,600	10,300
Magma area	48	977,300	31.81	15	146,600	24,400
Queen Creek area	190	5,170,600	42.52	15	775,600	129,300
Salt River area	660	13,690,900	32.41	15	2,053,600	342,300
Agua Fria River area	227	4,931,200	33.94	15	739,700	123,300
Buckeye area	218	617,600	4.43	15	92,600	15,400
Total	2,665	44,599,800	26.15	15	6,689,900	1,115,000
Gillespie Dam to Dome	1,082	1,764,200	2.55	15	264,600	44,100

E. Water Using Areas Influenced by Man

The same procedures were followed in determining the water using areas influenced by man for water years 1946 through 1951 as described in the report for the 1914-1945 period.

1. Irrigated Areas

The average area irrigated for the 1946-1951 period and the area irrigated in 1951 in each state within the natural drainage area of the Colorado River downstream from Lee Ferry to the Arizona-Sonora Boundary and in Mexico within the drainage area of the Gila River were determined to be as follows:

Arizona	California	Nevada	New Mexico	Utah	Mexico	Total
1946-1951 Average Irrigated Acreages						
841,167	62,730	11,467	17,060	22,127	3,963	958,514
1951 Irrigated Acreage						
1,033,514	69,926	12,141	18,546	22,340	3,960	1,160,427

Acreages irrigated annually in individual areas and states are listed in Tables A-1 through A-5 of the appendix to this supplement.

2. Cropped Areas

Table MS 5 summarizes the average acreage of the various crops cultivated during the 1946-1951 period in each state within the natural drainage area of the Colorado River downstream from Lee Ferry to the Arizona-Sonora Boundary and in Mexico within the drainage area of the Gila River. Crop acreages for 1951 are listed in Table MS 6.

3. Water Consuming Noncropped Areas

Table MS 7 summarizes the average acreage of the water consuming noncropped areas within the natural drainage area of the Lower Colorado River Basin during the 1946-1951 period.

Table MS 5
LOWER COLORADO RIVER BASIN
Acreages of Crops Within the Natural Drainage Area of the Lower Colorado River Basin

Average area in acres — October 1, 1945 - September 30, 1951

Crops	Arizona	California 1/	Nevada	New Mexico	Utah	Mexico 2/	Total
Alfalfa	173,278	29,421	4,974	5,161	2,251	1,475	216,560
Alfalfa and grain	43,396				10,047		53,443
Beans	3,770	272		445		398	4,885
Carrots	5,711	248					5,959
Citrus	20,962	91					21,053
Corn	9,563	417	601	3,210	172	503	14,466
Cotton	304,709	5,131		653			310,493
Dates	426	111					537
Deciduous fruits	1,827	34		121	2,035	153	4,170
Flax	20,694	6,949					27,643
Grapes	835	39					874
Lettuce - fall	27,626	1,330					28,956
Lettuce - spring	12,409						12,409
Melons	24,931	7,363	121	63			32,478
Misc. hay and pasture	57,668	4,631	2,431	1,795	3,458		69,983
Miscellaneous truck	9,040	429	395	332	1,157	243	11,596
Nurseries and flowers	88	4					92
Nuts	855	3					858
Olives	71						71
Potatoes - sweet	473	12					485
Potatoes - white	3,733	160		178	90	652	4,813
Rice	112	116					228
Small grains	158,608	7,062	2,404	4,704	3,144	539	176,461
Soil building crops	4,323	801	376	42			5,542
Sorghums	73,788	5,273	395	1,871			81,327
Sugar beet seed	3,549	1	120		350		4,020
Tomatoes	331	1					332
Total	962,776	69,899	11,817	18,575	22,704	3,963	1,089,734

1/ Does not include Imperial and Coachella Valleys in the Salton Sea drainage area.
2/ Portion of Mexico in Gila River drainage area.

Average Acreage of Crops for 1946-1951 Period

Table MS 6
LOWER COLORADO RIVER BASIN
Acreage of Crops Within the Natural Drainage Area of the Lower Colorado River Basin in 1951

Crops	Arizona	California 1/	Nevada	New Mexico	Utah	Mexico 2/	Total
Alfalfa	181,970	28,142	5,590	6,052	1,980	1,481	225,215
Alfalfa and grain	39,155				10,410		49,565
Beans	7,807	1,485		580		398	10,270
Carrots	5,844	180					6,024
Citrus	21,179	82					21,261
Corn	9,936	88	685	3,505		495	14,709
Cotton	534,802	20,980		800			556,582
Dates	415	93					508
Deciduous fruits	1,854	34		61	2,035	153	4,137
Flax	3,588	823					4,411
Grapes	1,359	62					1,421
Lettuce - fall	26,913	1,257					28,170
Lettuce - spring	13,445						13,445
Melons	29,217	9,086	90	57			38,450
Misc. hay and pasture	63,466	6,009	2,597	1,700	3,841		77,613
Miscellaneous truck	8,094	82	255	240	1,157	242	10,070
Nurseries and flowers	162	3					165
Nuts	719						719
Olives	65						65
Potatoes - sweet	400						400
Potatoes - white	2,020	351		178	93	649	3,291
Rice		26					26
Small grains	125,031	3,798	2,485	5,753	3,262	542	140,871
Soil building crops	4,532	355	455				5,342
Sorghums	55,141	1,179	273	3,150			59,743
Sugar beet seed	660		61		152		873
Tomatoes	316						316
Total	1,138,090	74,115	12,491	22,076	22,930	3,960	1,273,662

1/ Does not include Imperial and Coachella Valleys in the Salton Sea drainage area.
2/ Portion of Mexico in Gila River drainage area.

Acreage of Crops in 1951

Table MS 7
LOWER COLORADO RIVER BASIN
Acreage of Water Consuming Noncropped Areas

Average area in acres

October 1, 1945-September 30, 1951

Location	Water consuming noncropped areas					
			Incidental areas			
	Cities and towns	Farmsteads	Water surfaces of canals, laterals, drains, and waste ditches	Areas of vegetation within rights-of-way for canals, laterals, drains, waste ditches, roads & railroads	Surfaces of roads and roadbeds of railroads	Total
Arizona	82,586	14,719	4,131	23,157	14,965	139,558
California 1/	2,662	1,098	307	1,736	1,116	6,919
Nevada	1,039	200	57	312	205	1,813
New Mexico	3,667	298	84	435	303	4,787
Utah	3,353	387	108	562	392	4,802
Mexico 2/	750	70	20	109	71	1,020
Total	94,057	16,772	4,707	26,311	17,052	158,899

1/ Includes only that portion of California within the natural drainage area of the Colorado River.

2/ Includes only that portion of Mexico within the drainage area of the Gila River.

4. Channel Areas

The basic data for channel areas, which were compiled for the 1914-1945 period and discussed in the report, were used as a basis for determining channel losses for the 1946-1951 period. The data were adjusted to conform with 1946-1951 conditions.

5. Reservoir Depletions

The methods used in determining reservoir depletions were discussed in detail in the report.

(a) Evaporation depletions - Average stream depletions resulting from changes in evaporation and transpiration within reservoir areas in the Lower Colorado River Basin during the 1946-1951 period are listed in Table MS 8.

(b) Change in storage in reservoirs - Records of storage were available for all the larger storage reservoirs in the Lower Colorado River Basin and changes in surface storage for the 1946-1951 period were readily determined. As discussed in the report, changes in storage in the smaller reservoirs had no appreciable effect on average stream flows and were not determined.

Bank storage in Lake Mead was determined as the differential in the hydrologic equation resulting from inflow-outflow studies on an annual basis for the stream section between Grand Canyon and Hoover Dam. The annual contributions of runoff from the ungaged drainage area upstream from Hoover Dam were derived by applying the ratios of virgin flows of tributaries near the ungaged area for each of the years 1946 through 1951 and the average for the

Table MS 8
LOWER COLORADO RIVER BASIN
Stream Depletions Resulting From Changes in Evaporation and Transpiration Within Reservoir Areas Following Development

Average Annual Depletion in 1,000 ac-ft — Oct. 1, 1945 - Sept. 30, 195

Stream Section or Reservoir	Location	Average Annual Depletion
LITTLE COLORADO RIVER		
Little Colorado River upstream from St. Johns, Ariz.	Arizona	6.6
St. Johns to gage above Zuni River near Hunt, Ariz.	Arizona	3.2
Zuni River upstream from Black Rock, New Mexico	New Mexico	8.1
Zuni River from Black Rock to N.Mex.-Ariz.State line	New Mexico	0.2
Silver Creek	Arizona	1.7
Woodruff gage to Grand Falls, Arizona	Arizona	6.8
VIRGIN RIVER		
Virgin River upstream from Littlefield, Arizona	Utah	3.1
MAIN STREAM OF COLORADO RIVER		
Small reservoirs in Hualpai Indian Reservation	Arizona	0.5
Lake Mead - Hoover Dam	Ariz.-Nevada	783.6
Mohave Lake - Davis Dam	Ariz.-Nevada	23.6
Havasu Lake - Parker Dam	Ariz.-Calif.	75.8
Headgate Rock Diversion Reservoir	Ariz.-Calif.	2.0
Small reservoirs in Colorado River Indian Reser.	Arizona	1.9
Imperial Diversion Reservoir	Ariz.-Calif.	19.1
Laguna Diversion Reservoir	Ariz.-Calif.	17.5
GILA RIVER		
San Francisco River upstream from Glenwood, N.Mex.	New Mexico	0.1
Small reservoirs from head of Safford Valley to Calva	Arizona	0.4
San Carlos Reservoir - Coolidge Dam	Arizona	9.2
Picacho Reservoir in Pinal County	Arizona	8.3
Salt River:		
Upper Salt River small reservoirs	Arizona	1.2
Roosevelt Lake - Roosevelt Dam	Arizona	9.3
Apache Lake - Horse Mesa Dam	Arizona	6.3
Canyon Lake - Mormon Flat Dam	Arizona	2.1
Sahuaro Lake - Stewart Mountain Dam	Arizona	2.0
Verde River:		
Upper Verde River small reservoirs	Arizona	1.8
Horseshoe Reservoir - Horseshoe Dam	Arizona	1.3
Bartlett Reservoir - Bartlett Dam	Arizona	1.2
Lake Pleasant on Agua Fria River	Arizona	2.2
TOTAL		999.1

1914-1945 period. The ratios were determined from averages of the combined virgin flows of the Little Colorado River at Grand Falls, the Paria River at Lees Ferry, Bright Angel Creek near Grand Canyon, the Virgin River at Littlefield, and the Bill Williams River at Planet.

Bank storage in Mohave Lake for water years 1950 and 1951 (the period of reservoir operation) was derived on the basis that bank storage in Mohave Lake would bear the same relationship to surface storage accretion as that determined in the report for Lake Mead for the 1914-1945 period or 12.5 percent.

Changes in bank storage in Havasu Lake were derived for water years 1946 through 1951 on the basis that changes in bank storage in Havasu Lake would bear the same relationship to changes in surface storage as that determined in the report for Lake Mead for the 1914-1945 period or 12.5 percent.

Changes in bank storage in the Salt River reservoir system and the Verde River reservoir system for the 1946-1951 period were derived on the basis that changes in bank storage would bear the same relationship to changes in surface storage in the respective reservoir systems for the 1946-1951 period as that determined in the report for the Salt River reservoir system for the 1914-1945 period or 14.6 percent.

Surface storage in San Carlos Reservoir on the Gila River was very small during the 1946-1951 period and the effect of changes in bank storage on the flow of the stream was considered negligible.

Inasmuch as bank storage in Lake Pleasant was not considered by the Geological Survey in computing the flow of the Agua Fria River at Lake Pleasant Dam, consideration was not given to changes in bank storage in Lake Pleasant.

Average annual changes in surface and bank storage in reservoirs in the Lower Colorado River Basin for the 1946-1951 period are listed in Table MS 11.

6. Transbasin Export Diversions

Export diversions of water from the Lower Colorado River system for use outside of the natural drainage area of the Lower Colorado River were continued by the same diversion systems discussed in the report for the 1914-1945 period, except the Alamo Canal. The Alamo Canal system has not been used for deliveries to California since February 1942.

It was estimated that average annual diversions of 1,500 acre-feet for the 1946-1951 period were made from the headwaters of the Virgin River system by the Newcastle Project in Utah. Records of annual export diversions by the Colorado River Aqueduct and the All-American Canal were obtained from Geological Survey water-supply papers. Transbasin exports are summarized in the following tabulation:

Diversion	Export Stream	State	1946-1951 Average Annual Export in Acre-Feet
Newcastle Project	Virgin	Utah	1,500
Colorado River Aqueduct	Colorado	California	150,200
All-American Canal	Colorado	California	3,137,800
Total			3,289,500

Table MS 11
LOWER COLORADO RIVER BASIN
Stream Depletion by Change in Storage in Reservoirs at Sites of Use

Depletion in 1,000 Acre-Feet

October 1, 1945 - September 30, 1951

Reservoir	Location		Change in Storage in Reservoirs			
			Surface Storage		Bank Storage	
	River	State	Total Accretion	Average Annual Accretion	Total Accretion	Average Annual Accretion
Lake Mead	Colorado	Arizona-Nevada	-1,663.0	-277.2	-173.1	-28.8
Mohave Lake	Colorado	Arizona-Nevada	≠1,382.5	≠230.4	≠172.8	≠28.8
Havasu Lake	Colorado	Arizona-California	- 44.3	- 7.4	- 5.5	- .9
San Carlos Reservoir	Gila	Arizona	- 26.5	- 4.4	Negligible	0
Salt River Reservoir System	Salt	Arizona	- 623.8	-104.0	- 91.2	- 15.2
Verde River Reservoir System	Verde	Arizona	≠ 31.2	≠ 5.2	≠ 4.6	≠ .8
Lake Pleasant	Agua Fria	Arizona	≠ 95.8	≠ 16.0	Negligible	0

III. ANALYSES

In general, the same procedures were applied in determining depletions for the 1946-1951 period as described in the report for the 1914-1945 period.

A. Stream Depletions at Sites of Use

Stream depletions at sites of use for crops and noncropped areas for the 1946-1951 period were determined by application of the unit rates of consumptive use of irrigation water listed in the report for the 1914-1945 period to the 1946-1951 average acreages of the various crops, cities and towns, and areas incidental to irrigation. Where necessary, the normal consumptive use of irrigation water by crops was adjusted to reflect the water supply available during the 1946-1951 period.

Runoff in the Lower Colorado River Basin was below normal for the 1946-1951 period and irrigated areas without sufficient surface storage or sufficient ground-water pumping capacity experienced shortages of irrigation water. Shortages were experienced by all irrigated areas except those receiving their water supply from the main stream of the Colorado River and the following areas in the Gila River Basin: the Virden Valley in New Mexico; and Duncan Valley, San Simon Creek, Safford Valley, Santa Cruz County, Pima County, Pinal County, and Maricopa County upstream from Gillespie Dam, all in Arizona. The shortages were reflected in a lower consumptive use of irrigation water by crops in the affected areas. The normal consumptive

use of irrigation water by crops in an area of shortage was adjusted by applying a factor which deviated from unity by one-half of the percentage deviation from the 1914-1945 normal of the flow of the stream supplying the irrigated area.

Reservoir depletions, transbasin export diversions, and depletions of ground-water basins were discussed in the section of this supplement on basic data.

B. Channel Losses

The same methods and procedures for determining channel losses discussed in the report for the 1914-1945 period were followed in estimating channel losses for the 1946-1951 period.

Average annual evaporation based on both historic and virgin flow conditions for the 1946-1951 period was determined for all stream sections of the Colorado River from Lee Ferry to the International Boundary and all tributaries in the Lower Colorado River Basin downstream from any man-made developments. The reductions in evaporation losses under historic conditions over those under virgin conditions were listed as salvages deductible from man-made depletions at sites of use.

The data on areas of native vegetation in the channels and flood plains of streams, which were compiled for the 1914-1945 period and discussed in the report, were adjusted to conform with 1946-1951 conditions. The rates listed in Appendix B of the report were applied to the areas for each type and density of native vegetation determined for the respective stream sections to derive the stream depletions by native vegetation during the 1946-1951 period.

Most of the consumptive uses by native vegetation were supplied by ground water. Although the ground-water table adjacent to the streams fluctuated with surface flow, it is believed that the ground-water supply along streams, which were perennial under virgin conditions, was sufficient to provide normal use by the native vegetation for average 1946-1951 virgin flow conditions. Also, flooded conditions in the channels and flood plains tend to either destroy native vegetation or retard its uses during periods of inundation so as to offset subsequent higher rates of use because of increases in the available ground-water supply.

Stream depletions by native vegetation for average 1946-1951 virgin conditions were considered to be the same as for average 1914-1945 virgin conditions for all stream sections except the reach between Nogales and Rillito on the Santa Cruz River.

According to the narratives of early explorers and settlers, the Santa Cruz River was not a perennial stream under virgin conditions and the flow was intermittent for much of its length. The greater portion of the surface inflow to the stream section between Nogales and Rillito percolated to the ground-water basin and was used by phreatophytes in the reach. Therefore, the reduced surface inflow to the stream section for 1946-1951 virgin conditions reduced the ground-water supply available to the native vegetation during the period. It was estimated that the stream depletion by native vegetation between Nogales and Rillito on the Santa Cruz River for average 1914-1945 virgin conditions was reduced for average 1946-1951 conditions directly

as the surface inflow to the river section was reduced.

Salvages by the replacement of native vegetation by crops and other beneficial uses for the 1946-1951 period were determined for the various stream sections as described in the report for the 1914-1945 period.

The decreased or increased channel losses caused by native growth changes in the river bottoms and flood plains were determined as the differences between the uses by native vegetation under historic and under virgin conditions with consideration for the replacement by beneficial uses.

C. Water Contributions by States

The average annual contributions to the flow of the Colorado River and its tributaries by the several states and Mexico in the Lower Basin were determined for the 1946-1951 period under historic and under virgin conditions.

The 1946-1951 average historic and virgin flows were routed downstream from points of man-made developments on the tributaries in the Lower Colorado River Basin to the International Boundary and the channel losses and salvages prorated in accordance with the same procedures described in the report for the 1914-1945 period. Thus, 1946-1951 average virgin flows and depletions by states and Mexico and by types of use were determined at selected gaging stations and division points in the Lower Colorado River Basin.

IV. ANNUAL ESTIMATES FOR 1914-1951 PERIOD

The report on the water supply of the Lower Colorado River Basin prepared in November 1952 by the Bureau of Reclamation presented data as averages for the 1914-1945 period and the foregoing sections of this supplement have reported analyses based on averages for the 1946-1951 period. This section of the supplement describes the derivation of annual estimates of virgin flows for water years 1914 through 1951 at eight selected points in the Lower Colorado River Basin; namely:

(1) Colorado River at Lee Ferry, Arizona;

(2) Little Colorado River at Grand Falls, Arizona;

(3) Virgin River at Littlefield, Arizona;

(4) Colorado River below Hoover Dam, Arizona-Nevada;

(5) Bill Williams River at Planet, Arizona;

(6) Gila River at Gillespie Dam, Arizona;

(7) Gila River near Dome, Arizona; and

(8) Colorado River at the International Boundary.

A. Annual Variations in Stream Depletions

It is believed that depletions vary with the available water supply. In years of abundant supply, there is a tendency to divert more water than the optimum for the use requirements of crops with consequent increased losses from evaporation and incidental areas and increased storage in ground-water reservoirs. Conversely, in years of short supply there are declines in water use which are often reflected in decreased crop yields and decreases in recharge to the ground-water basins.

In general, allowances were made for these conditions by assuming that annual depletions would vary from the average as one-half the deviation of the annual water supply from the average water supply for the period of study.

1. Upper Colorado River Basin Depletions

Annual Upper Basin depletions of the flow of the Colorado River at Lee Ferry were furnished by the regional office of Region 4 of the Bureau of Reclamation. The depletions had been varied annually as one-half the deviation of the annual virgin flow of the Colorado River at Lee Ferry from the average. Slight adjustments were made to conform with differences in rounding of the average estimates presented in the report of the water supply of the Lower Colorado River Basin.

2. Lower Colorado River Basin Depletions

Annual variations in water uses, channel salvages, and ground-water depletions were based on averages for the 1914-1945 period and the 1946-1951 period.

(a) Crops - The normal use of irrigation water by crops on each irrigated area was determined for each year by applying unit rates an acre computed from averages for the 1914-1945 period and for the 1946-1951 period to the cropped acreages for each year in the respective periods. The annual normal uses were adjusted by applying annual deviation factors to derive estimates of the actual annual consumptive use of irrigation water by crops in each irrigated area.

The annual deviation factors were based on the assumption that the uses in any one year would vary from the normal use by a percentage equal to one-half the percentage variation of the water supply in that year from the average water supply. The bases for

the derivation of the deviation factors for the different irrigated areas are summarized in the following tabulation:

Irrigated Areas	Method of Deviation
LITTLE COLORADO RIVER BASIN	
Upstream from Woodruff gage	½ deviation, 1914-1945 average flow near Woodruff
Woodruff gage to mouth	½ deviation, 1914-1945 flow at Grand Falls
VIRGIN RIVER BASIN AND KANAB CREEK BASIN	
All areas in both basins	½ deviation, 1914-1945 average flow of Virgin River at Littlefield
BILL WILLIAMS RIVER BASIN	
All areas in basin	½ deviation, 1914-1945 average flow at Planet
GILA RIVER BASIN	
Salt River above Granite Reef Dam and Upper Agua Fria River	½ deviation, 1914-1945 average flow of Salt River near Roosevelt
Remainder of Gila River Basin except the following areas:	½ deviation, 1914-1945 average flow of Gila River at head of Safford Valley
Virden Valley) 1946-1951 Duncan Valley)	½ deviation, combined diversions and pumpage
San Simon Creek, 1946-1951	No deviation
Safford Valley) Santa Cruz County) 1946-1951 Pima County)	½ deviation, combined diversions and pumpage
Pinal County, 1914-1934	½ deviation, 1914-1945 average flow Gila River at Kelvin
Pinal County, 1935-1945) 1946-1951) Maricopa County upstream from Gillespie Dam, 1914-1945) 1946-1951)	½ deviation, combined diversions and pumpage
Gillespie Dam to Dome, 1914-1945	No deviation
Gillespie Dam to Dome, 1946-1951	½ deviation, combined diversions and pumpage
MAIN STREAM OF THE COLORADO RIVER	
Areas along main stream	No deviation
Areas on small tributaries between Lee Ferry and Hoover Dam	½ deviation, 1914-1945 average flow of Virgin River at Littlefield

(b) Noncropped areas - The average 1914-1945 and average 1946-1951 consumptive uses by cities and towns were derived from studies on annual bases.

The annual consumptive uses by farmsteads and other noncropped areas were determined from the average 1914-1945 and 1946-1951 uses by applying annual deviation factors computed as the ratio of the annual use by crops to the average 1914-1945 and average 1946-1951 annual use by crops in each irrigated area.

(c) Transbasin export diversions - Annual transbasin export diversions were based on monthly records except export diversions from the headwaters of the Virgin River for the Newcastle Project in Utah. A few measurements formed the basis for estimating an average annual diversion of 1,500 acre-feet for the Newcastle Project since the start of diversions in 1921. Allowances were made for variations in the water supply available for diversion by assuming that annual exports would vary from the average of 1,500 acre-feet as one-half the deviation of the annual flow from the average flow of the Virgin River at Littlefield.

(d) Reservoir depletions - Reservoir evaporation depletions by the larger reservoirs were derived on an annual basis. Depletions by the small reservoirs were varied in accordance with the crop uses in the areas served by the reservoirs with consideration for the period of reservoir operation.

Annual changes in surface storage in the larger reservoirs were determined from records of the Geological Survey.

Changes in bank storage in Lake Mead were derived on an annual basis. In all other reservoirs with appreciable changes in bank storage, the annual changes in bank storage were determined as proportions of the annual changes in surface storage in the respective reservoirs. The percentages applied in estimating the changes in bank storage were the same as those derived or applied for average 1914-1945 and 1946-1951 conditions.

(e) Channel salvages - Annual channel salvages were prorated to the states and Mexico on the same bases described in detail in the report for average 1914-1945 conditions.

Annual salvages of channel evaporation in the various stream sections were determined as differences between the annual losses by evaporation from stream channels under virgin flow conditions and under historic flow conditions. Annual virgin and historic channel evaporation losses were assumed to vary from the averages for the 1914-1945 and 1946-1951 periods as one-half the deviation of the annual virgin and historic flows from the average flows for the respective periods in the various stream sections.

The annual salvages by the replacement of native vegetation by beneficial uses in the several irrigated areas were determined from the average 1914-1945 and 1946-1951 replacements by applying annual deviation factors computed as the ratio of the annual use by crops to the average 1914-1945 and 1946-1951 use by crops in each irrigated area.

Most of the annual increased or decreased channel losses from native growth changes were determined for the various stream sections

as the differences between the annual uses by native vegetation under historic and under virgin conditions with consideration for the annual replacement by beneficial uses. Annual uses by native vegetation in these stream sections under virgin conditions were assumed to vary from the averages for the 1914-1945 and 1946-1951 periods as one-half the deviation of the annual virgin flow from the average virgin flow for the respective periods. The uses by native vegetation under historic conditions in a few of these stream sections were computed on an annual basis. Annual historic uses by native vegetation in the other stream sections were varied from the averages for the 1914-1945 and 1946-1951 periods as one-half the deviation of the annual historic flow from the average for the respective periods.

The average 1914-1945 and 1946-1951 increased or decreased losses from native growth changes in a few stream sections were varied annually as one-half the deviation from average of the historic flows in the stream sections.

(f) Depletions of ground-water basins - The annual accretions to or withdrawals from the ground-water basins were determined as the differentials in the hydrologic equations resulting from inflow-outflow studies. The estimates of annual ungaged inflows to the stream sections were derived from the averages for the 1914-1945 and 1946-1951 periods by applying the ratios of annual to average virgin flows of streams near the river sections.

B. Annual Estimates of Virgin Flows

Tables A through H summarize the annual historic flows, depletions by types of use, and virgin flows at the eight selected points in the Lower Colorado River Basin.

Tables I through N summarize the annual historic flows, depletions by states and Mexico, and virgin flows at six of the eight selected points in the Lower Colorado River Basin. As Arizona is the only state depleting the Bill Williams River at Planet and depletions of the Colorado River at Lee Ferry are by the Upper Basin, tables listing depletions by states in the Lower Basin were not prepared for these two stations.

Table A

SUMMARY
Depletions by Types of Use and Virgin Flows

October 1, 1913-September 30, 1951 Unit: 1,000 Acre-Feet

COLORADO RIVER AT LEE FERRY, ARIZONA

Water Year	Historic Flow	Upper Basin Water Uses			Virgin Flow
		Irrigation Depletions	Transbasin Diversions	Total Depletions	
1914	19,334.8	1,763.6	124.0	1,887.6	21,222.4
1915	12,500.4	1,464.5	63.0	1,527.5	14,027.9
1916	17,324.8	1,771.6	105.0	1,876.6	19,201.4
1917	21,893.1	2,054.7	90.0	2,144.7	24.037.8
1918	13,649.6	1,651.5	63.0	1,714.5	15,364.1
1919	10,858.4	1,531.5	73.0	1,604.5	12,462.9
1920	19,738.7	2,093.7	119.0	2,212.7	21,951.4
1921	20,714.8	2,192.7	108.0	2,300.7	23,015.5
1922	16,302.4	1,904.6	99.0	2,003.6	18,306.0
1923	16,261.3	1,904.6	104.0	2,008.6	18,269.9
1924	12,481.1	1,671.6	49.0	1,720.6	14,201.7
1925	11,341.1	1,630.5	62.0	1,692.5	13,033.6
1926	14,008.5	1,767.6	77.0	1,844.6	15,853.1
1927	16,586.9	1,918.7	111.0	2,029.7	18,616.6
1928	15,323.3	1,850.6	106.0	1,956.6	17,279.9
1929	19,223.4	2,096.7	109.0	2,205.7	21,429.1
1930	13,070.1	1,739.6	76.0	1,815.6	14,885.7
1931	6,387.5	1,339.4	42.0	1,381.4	7,768.9
1932	15,286.3	1,863.6	94.0	1,957.6	17,243.9
1933	9,745.4	1,532.5	79.0	1,611.5	11,356.9
1934	4,396.4	1,214.4	30.0	1,244.4	5,640.8
1935	9,912.1	1,546.5	91.0	1,637.5	11,549.6
1936	11,970.3	1,670.6	160.0	1,830.6	13,800.9
1937	11,896.9	1,670.6	173.0	1,843.6	13,740.5
1938	15,440.0	1,891.7	214.0	2,105.7	17,545.7
1939	9,393.7	1,532.5	153.0	1,685.5	11,079.2
1940	7,081.6	1,380.5	139.0	1,519.5	8,601.1
1941	16,052.0	1,918.7	178.0	2,096.7	18,148.7
1942	17,029.4	1,973.7	123.0	2,096.7	19,126.1
1943	11,263.0	1,642.6	198.0	1,840.6	13,103.6
1944	13,221.4	1,766.6	167.0	1,933.6	15,155.0
1945	11,545.4	1,656.6	209.0	1,865.6	13,411.0
1946	8,744.7	1,490.0	191.0	1,681.0	10,425.7
1947	13,514.4	1,780.0	177.0	1,957.0	15,471.4
1948	13,687.2	1,781.0	145.0	1,926.0	15,613.2
1949	14,359.0	1,824.0	193.0	2,017.0	16,376.0
1950	11,057.2	1,626.0	211.0	1,837.0	12,894.2
1951	9,830.7	1,554.0	262.0	1,816.0	11,646.7
Means:					
1914-45	13,788.6	1,737.8	112.1	1,849.9	15,638.5
1931-40	10,151.0	1,564.2	117.5	1,681.7	11,832.7
1946-51	11,865.5	1,675.8	196.5	1,872.3	13,737.8
1914-51	13,484.9	1,728.0	125.5	1,853.5	15,338.4

Table B

Sheet 1 of 2

SUMMARY
Depletions by Types of Use and Virgin Flows

October 1, 1913 - September 30, 1951

Unit: 1,000 Acre-Feet

LITTLE COLORADO RIVER AT GRAND FALLS, ARIZONA

Water Year	Historic Flow	Lower Basin Water Uses				Channel Salvage			Net Depletion	Virgin Flow
		Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads	Reservoir Evaporation Losses	Evaporation	Replacement	Growth Change		
1914	190.2	28.5	2.7	6.7	11.3	0.1	4.4	-0.5	44.2	234.4
1915	338.8	35.5	3.4	7.1	13.6	.1	5.3	- .4	53.8	392.6
1916	859.4	35.2	3.3	7.2	13.7	.2	5.2	- .1	53.9	913.3
1917	303.9	30.1	2.9	7.6	11.8	.1	4.5	≠ .2	48.0	351.9
1918	103.7	21.7	2.0	7.8	9.3	.1	3.1	≠ .3	37.9	141.6
1919	261.5	35.7	3.3	8.2	14.2	.1	5.2	≠ .9	57.0	318.5
1920	461.0	36.4	3.5	8.3	14.7	.1	5.4	≠1.2	58.6	519.6
1921	170.6	29.6	2.8	8.3	13.1	.1	4.6	≠1.1	50.2	220.8
1922	308.9	35.0	3.4	8.4	13.8	.1	5.0	≠1.8	57.3	366.2
1923	271.6	35.5	3.3	8.6	15.1	.1	5.4	≠1.9	58.9	330.5
1924	221.8	30.5	2.9	8.7	13.5	.1	4.8	≠2.0	52.7	274.5
1925	150.4	26.4	2.5	8.8	10.9	.1	3.8	≠1.9	46.6	197.0
1926	181.5	27.4	2.7	8.9	11.1	.1	3.9	≠2.4	48.5	230.0
1927	393.8	38.5	3.7	9.0	15.0	.1	5.6	≠3.3	63.8	457.6
1928	87.6	23.0	2.2	9.0	10.5	.1	3.4	≠2.0	43.2	130.8
1929	510.8	38.6	3.7	9.1	14.4	.1	5.7	≠4.0	64.0	574.8
1930	189.3	27.5	2.9	9.1	10.4	.1	3.8	≠3.3	49.3	238.6
1931	165.0	33.4	3.3	9.2	13.0	.1	4.6	≠3.3	57.5	222.5
1932	465.9	39.0	3.8	9.4	15.2	.1	5.7	≠4.9	66.5	532.4
1933	129.2	32.4	3.1	9.4	14.7	.1	4.6	≠3.4	58.3	187.5
1934	71.0	24.6	2.6	9.4	11.5	0	3.1	≠3.0	48.0	119.0
1935	215.3	33.8	3.4	9.5	14.4	.1	4.5	≠4.5	61.2	276.5
1936	165.0	33.5	3.2	9.6	14.8	.1	4.7	≠4.4	60.7	225.7
1937	339.4	38.0	3.7	9.6	16.0	.1	5.4	≠6.4	68.2	407.6

Table B (Continued)

SUMMARY

Depletions by Types of Use and Virgin Flows

October 1, 1913 - September 30, 1951 — Unit: 1,000 Acre-Feet

LITTLE COLORADO RIVER AT GRAND FALLS, ARIZONA

Water Year	Historic Flow	Lower Basin Water Uses				Channel Salvage			Net Depletion	Virgin Flow
		Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads	Reservoir Evaporation Losses	Evaporation	Replacement	Growth Change		
1938	170.2	28.4	2.8	9.6	12.8	.1	4.1	≠4.9	54.3	224.5
1939	83.2	23.8	2.3	9.8	11.6	.1	3.6	≠4.0	47.8	131.0
1940	132.2	35.1	3.4	10.0	15.1	.1	5.2	≠4.8	63.1	195.3
1941	586.9	47.7	4.7	11.0	18.4	.1	7.4	≠7.7	82.0	668.9
1942	149.0	28.6	2.8	10.9	12.5	.1	4.5	≠5.4	55.6	204.6
1943	103.0	29.0	2.8	11.0	12.9	.1	4.5	≠5.0	56.1	159.1
1944	129.1	27.6	2.7	10.9	12.3	.1	4.2	≠5.6	54.8	183.9
1945	159.5	34.0	3.4	11.0	14.0	.1	5.2	≠6.4	63.5	223.0
1946	116.4	37.9	4.3	12.9	26.5	.1	5.8	≠8.0	83.7	200.1
1947	127.0	34.4	3.9	13.1	27.6	.1	4.9	≠8.5	82.5	209.5
1948	182.3	36.1	4.1	13.1	29.6	.1	5.3	≠9.9	87.4	269.7
1949	268.4	46.1	5.1	13.1	37.0	.1	6.9	≠9.9	104.2	372.6
1950	41.1	24.2	2.8	13.3	19.1	.1	3.5	≠5.5	61.3	102.4
1951	48.8	29.8	3.2	13.2	19.8	.1	4.2	≠5.7	67.4	116.2
Means:										
1914-45	252.1	32.0	3.1	9.1	13.3	0.1	4.7	≠3.1	55.8	307.9
1931-40	193.6	32.2	3.2	9.5	13.9	.1	4.5	≠4.4	58.6	252.2
1942-51	132.5	32.8	3.5	12.2	21.1	.1	4.9	≠7.0	71.6	204.1
1946-51	130.7	34.8	3.9	13.1	26.6	.1	5.1	≠7.9	81.1	211.8
1914-51	233.0	32.4	3.2	9.7	15.4	.1	4.7	≠3.9	59.8	292.8

Table C

Sheet 1 of 2

SUMMARY
Depletions by Types of Use and Virgin Flows

October 1, 1913 - September 30, 1951

Unit: 1,000 Acre-Feet

VIRGIN RIVER AT LITTLEFIELD, ARIZONA

Water Year	Historic Flow	Lower Basin Water Uses: Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads	Transbasin Diversions	Reservoir Evaporation Losses	Channel Salvage Replacement	Net Depletion	Virgin Flow
1914	307.3	35.4	3.1	4.2	0	1.9	5.7	38.9	346.2
1915	258.9	32.3	2.8	4.2	0	1.8	5.1	36.0	294.9
1916	527.7	36.7	3.2	4.3	0	2.0	5.8	40.4	568.1
1917	277.8	33.7	3.0	4.4	0	1.8	5.4	37.5	315.3
1918	266.1	32.8	2.9	4.5	0	1.8	5.2	36.8	302.9
1919	187.1	31.0	2.8	4.4	0	1.7	4.9	35.0	222.1
1920	279.1	37.8	3.4	4.6	0	2.1	5.9	42.0	321.1
1921	261.4	36.6	3.2	4.6	1.7	2.0	5.7	42.4	303.8
1922	522.3	35.5	3.1	4.7	2.0	1.9	5.7	41.5	563.8
1923	286.6	33.2	2.9	4.7	1.8	1.8	5.3	39.1	325.7
1924	120.6	22.1	1.9	4.5	1.3	1.2	3.6	27.4	148.0
1925	150.0	24.2	2.2	4.6	1.3	1.3	3.9	29.7	179.7
1926	138.5	23.3	2.1	4.6	1.3	1.3	3.8	28.8	167.3
1927	254.0	31.0	2.7	4.7	1.7	1.7	5.0	36.8	290.8
1928	171.6	28.2	2.5	4.8	1.5	1.5	4.6	33.9	205.5
1929	226.5	27.3	2.4	4.8	1.6	1.5	4.4	33.2	259.7
1930	188.1	25.0	2.2	4.7	1.5	1.3	4.1	30.6	218.7
1931	119.3	20.7	1.9	4.8	1.2	1.1	3.4	26.3	145.6
1932	381.9	33.5	3.0	5.1	2.0	1.8	5.5	39.9	421.8
1933	127.5	21.8	1.9	5.0	1.3	1.2	3.6	27.6	155.1
1934	78.0	23.2	2.0	5.1	1.1	1.3	3.6	29.1	107.1
1935	164.9	28.5	2.5	5.3	1.4	1.6	4.5	34.8	199.7
1936	131.0	24.9	2.2	5.3	1.3	1.4	4.0	31.1	162.1
1937	240.3	30.8	2.7	5.5	1.7	1.7	5.0	37.4	277.7

Table C (Continued) Sheet 2 of 2

SUMMARY
Depletions by Types of Use and Virgin Flows

October 1, 1913 - September 30, 1951 Unit: 1,000 Acre-Feet

VIRGIN RIVER AT LITTLEFIELD, ARIZONA

Water Year	Historic Flow	Lower Basin Water Uses					Channel Salvage Replacement	Net Depletion	Virgin Flow
		Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads	Transbasin Diversions	Reservoir Evaporation Losses			
1938	278.6	32.5	2.9	5.7	1.8	1.8	5.3	39.4	318.0
1939	154.9	23.2	2.1	5.6	1.4	1.3	3.8	29.8	184.7
1940	173.7	23.3	2.1	5.7	1.5	1.3	3.8	30.1	203.8
1941	400.0	30.5	2.8	5.9	2.0	1.6	5.1	37.7	437.7
1942	214.9	24.9	2.2	5.8	1.6	1.3	4.0	31.8	246.7
1943	178.1	23.9	2.1	5.8	1.5	1.3	3.8	30.8	208.9
1944	182.7	36.7	3.3	6.1	1.5	2.0	5.6	44.0	226.7
1945	166.3	35.3	3.1	6.1	1.4	1.9	5.3	42.5	208.8
1946	121.3	34.8	3.0	5.9	1.4	2.9	4.4	43.6	164.9
1947	192.3	42.6	3.7	6.0	1.8	3.6	5.3	52.4	244.7
1948	116.4	34.7	3.0	6.0	1.4	2.9	4.2	43.8	160.2
1949	155.9	39.1	3.4	6.0	1.6	3.3	4.6	48.8	204.7
1950	127.0	36.5	3.2	6.0	1.5	3.1	4.4	45.9	172.9
1951	99.9	33.6	2.9	6.0	1.3	2.8	4.0	42.6	142.5
Means:									
1914-45	231.7	29.4	2.6	5.0	1.2	1.6	4.7	35.1	266.8
1931-40	185.0	26.2	2.3	5.3	1.5	1.5	4.2	32.6	217.6
1942-51	155.5	34.2	3.0	6.0	1.5	2.5	4.6	42.6	198.1
1946-51	135.5	36.9	3.2	6.0	1.5	3.1	4.5	46.2	181.7
1914-51	216.5	30.6	2.7	5.2	1.2	1.8	4.7	36.8	253.3

Table D

SUMMARY
Depletions by Types of Use and Virgin Flows

October 1, 1913-September 30, 1951

Unit: 1,000 Acre-feet

Water Year	Historic Flow	Upper Basin Depletions at Lee Ferry	COLORADO RIVER BELOW HOOVER DAM, ARIZONA-NEVADA										
			Lower Basin Water Uses						Channel Salvage				
			Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads	Transbasin Diversions	Reservoir Losses: Evaporation	Reservoir Losses: Storage Change	Evaporation	Replacement	Growth Change	Total Depletion	Virgin Flow
1914	21,507.3	1,887.6	103.8	8.7	14.7	0	13.3	0	3.2	28.2	+ 1.2	1,997.9	23,505.2
1915	15,179.4	1,527.5	104.5	8.9	15.1	0	15.5	0	2.6	27.0	+ 1.1	1,643.0	16,822.4
1916	18,895.2	1,876.6	113.2	9.5	15.2	0	15.8	0	3.2	29.7	+ 1.6	1,999.0	20,894.2
1917	21,828.7	2,144.7	102.0	8.6	15.7	0	13.7	0	3.4	27.2	+ 1.8	2,255.9	24,084.6
1918	14,114.4	1,714.5	91.9	7.5	15.9	0	11.2	0	2.7	25.4	+ 1.9	1,814.8	15,929.2
1919	11,656.1	1,604.5	98.7	8.5	16.3	0	16.0	0	2.5	24.7	+ 2.3	1,719.1	13,375.2
1920	22,220.9	2,212.7	118.2	10.0	16.6	0	16.9	0	3.2	32.6	+ 2.8	2,341.4	24,562.3
1921	20,418.8	2,300.7	108.9	9.1	16.6	1.7	15.2	0	3.3	30.9	+ 2.7	2,420.7	22,839.5
1922	18,737.9	2,003.6	118.4	10.0	17.0	2.0	15.9	0	2.9	33.9	+ 3.5	2,133.6	20,871.5
1923	18,098.2	2,008.6	113.6	9.4	17.2	1.8	17.1	0	2.9	32.3	+ 3.6	2,136.1	20,234.3
1924	14,230.3	1,720.6	83.9	7.2	17.0	1.3	14.9	0	2.6	23.3	+ 3.1	1,822.1	16,052.4
1925	12,046.4	1,692.5	83.8	7.1	17.2	1.3	12.4	0	2.5	23.7	+ 3.1	1,791.2	13,837.6
1926	14,640.7	1,844.6	82.9	7.1	17.5	1.3	12.6	0	2.7	23.2	+ 3.5	1,943.6	16,584.3
1927	17,424.2	2,029.7	113.0	9.4	17.7	1.7	16.9	0	3.0	31.4	+ 4.8	2,158.8	19,583.0
1928	15,778.6	1,956.6	86.5	7.3	17.8	1.5	12.2	0	2.8	25.1	+ 3.3	2,057.3	17,835.9
1929	19,360.1	2,205.7	106.9	9.0	18.0	1.6	16.1	0	3.1	29.7	+ 5.4	2,329.9	21,690.0
1930	13,635.6	1,815.6	89.1	7.8	18.0	1.5	11.9	0	2.6	25.2	+ 4.7	1,920.8	15,556.4
1931	7,018.7	1,381.4	85.4	7.4	18.9	1.2	14.3	0	2.1	23.0	+ 4.4	1,487.9	8,506.6
1932	16,504.1	1,957.6	120.6	10.3	19.5	2.0	17.2	0	2.8	33.8	+ 6.6	2,097.2	18,601.3
1933	10,360.2	1,611.5	83.2	7.1	19.4	1.3	16.1	0	2.3	21.9	+ 4.5	1,718.9	12,079.1
1934	5,057.8	1,244.4	71.9	6.4	19.7	1.1	13.0	0	1.7	18.0	+ 3.9	1,340.7	6,398.5
1935	5,556.1	1,637.5	94.0	8.1	20.0	1.4	106.5	+5,128.8	2.4	23.7	+ 5.9	6,976.1	12,532.2
1936	6,281.7	1,830.6	86.5	7.4	20.1	1.3	325.1	+6,138.6	2.5	21.7	+ 5.5	8,390.9	14,672.6
1937	5,826.4	1,843.6	104.6	8.8	20.3	1.7	542.7	+6,844.0	2.6	26.6	+ 7.9	9,344.4	15,170.8
1938	6,167.6	2,105.7	99.2	8.4	20.7	1.8	737.0	+9,383.1	2.8	26.6	+ 6.5	12,333.0	18,500.6
1939	8,473.3	1,685.5	75.9	6.5	20.7	1.4	847.3	+ 944.7	2.3	20.4	+ 5.2	3,564.5	12,037.8
1940	7,694.4	1,519.5	87.5	7.7	21.0	1.5	853.0	- 543.3	2.1	21.9	+ 6.1	1,929.0	9,623.4
1941	11,728.2	2,096.7	118.3	10.3	22.3	2.0	938.6	+5,360.0	2.9	30.3	+ 9.4	8,524.4	20,252.6
1942	17,876.4	2,096.7	87.5	7.5	23.3	1.6	944.4	-1,040.6	3.0	24.0	+ 6.8	2,100.2	19,976.6
1943	12,495.0	1,840.6	85.1	7.2	35.3	1.5	916.2	-1,490.2	2.5	23.3	+ 6.3	1,376.2	13,871.2
1944	14,451.0	1,933.6	99.0	8.5	35.6	1.5	879.1	-1,370.3	2.7	26.0	+ 6.9	1,565.2	16,016.2
1945	12,938.5	1,865.6	103.6	8.9	29.0	1.4	834.6	-1,414.0	2.5	26.9	+ 7.6	1,407.3	14,345.8
1946	11,290.0	1,681.0	105.2	10.2	28.4	1.4	829.4	-2,712.9	.8	28.5	+15.0	- 71.6	11,218.4
1947	10,665.0	1,957.0	117.1	11.2	30.0	1.8	794.5	+2,674.7	.9	33.0	+17.5	5,569.9	16,234.9
1948	12,753.0	1,926.0	104.0	10.1	29.0	1.4	859.7	+ 555.3	1.0	28.5	+16.8	3,472.8	16,225.8
1949	13,199.1	2,017.0	124.1	12.1	28.7	1.6	787.0	+ 813.5	1.0	34.1	+17.8	3,766.7	16,965.8
1950	12,937.3	1,837.0	96.2	9.1	29.7	1.5	825.9	-2,451.5	.9	28.7	+12.7	331.0	13,268.3
1951	9,981.4	1,816.0	96.1	9.1	30.7	1.3	786.6	- 715.2	.8	27.6	+12.1	2,008.3	11,989.7
Means:													
1914-45	13,693.8	1,849.9	97.5	8.3	19.7	1.2	257.3	+ 873.1	2.7	26.3	+ 4.5	3,082.5	16,776.3
1931-40	7,894.0	1,681.7	90.9	7.8	20.0	1.5	347.2	+2,789.6	2.4	23.7	+ 5.7	4,918.3	12,812.3
1946-51	11,804.3	1,872.3	107.1	10.3	29.4	1.5	813.9	- 306.0	.9	30.0	+15.3	2,512.9	14,317.2
1914-51	13,395.5	1,853.4	99.1	8.6	21.2	1.2	345.1	+ 687.0	2.4	26.9	+ 6.2	2,992.5	16,388.0

Table E

SUMMARY
Depletions by Types of Use and Virgin Flows

October 1, 1913 - September 30, 1951 Unit: 1,000 Acre-Feet

BILL WILLIAMS RIVER AT PLANET, ARIZONA

Water Year	Historic Flow	Lower Basin Water Uses			Channel Salvage Replacement	Net Depletion	Virgin Flow
		Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads			
1914	78.2	8.5	0.7	0.3	5.8	3.7	81.9
1915	115.8	10.3	.8	.3	7.0	4.4	120.2
1916	312.4	11.2	.9	.3	7.6	4.8	317.2
1917	120.8	10.9	.9	.3	7.4	4.7	125.5
1918	94.8	9.9	.8	.3	6.7	4.3	99.1
1919	202.2	11.9	.9	.3	8.0	5.1	207.3
1920	254.0	11.2	.9	.3	7.5	4.9	258.9
1921	83.0	8.3	.6	.3	5.5	3.7	86.7
1922	209.8	10.7	.8	.3	7.2	4.6	214.4
1923	164.2	10.7	.8	.3	7.1	4.7	168.9
1924	52.4	6.9	.5	.3	4.6	3.1	55.5
1925	115.2	9.8	.8	.3	6.6	4.3	119.5
1926	139.4	10.9	.8	.3	7.3	4.7	144.1
1927	432.4	10.7	.8	.3	7.2	4.6	437.0
1928	21.3	5.4	.5	.3	3.6	2.6	23.9
1929	31.2	5.8	.5	.3	3.9	2.7	33.9
1930	33.0	5.8	.5	.3	3.9	2.7	35.7
1931	108.9	9.4	.8	.3	6.3	4.2	113.1
1932	319.6	10.6	.8	.3	7.2	4.5	324.1
1933	13.3	4.9	.3	.3	3.3	2.2	15.5
1934	11.6	4.9	.3	.3	3.3	2.2	13.8
1935	110.2	9.5	.8	.3	6.4	4.2	114.4
1936	21.8	5.3	.5	.3	3.5	2.6	24.4
1937	253.0	10.4	.8	.3	7.0	4.5	257.5
1938	112.9	9.3	.7	.3	6.3	4.0	116.9
1939	231.5	10.1	.8	.3	6.8	4.4	235.9
1940	30.8	6.6	.6	.3	4.5	3.0	33.8
1941	436.8	11.5	1.0	.3	7.9	4.9	441.7
1942	26.8	6.0	.5	.3	4.1	2.7	29.5
1943	14.2	5.3	.5	.3	3.7	2.4	16.6
1944	114.4	9.8	.9	.3	6.7	4.3	118.7
1945	60.1	7.1	.6	.3	4.9	3.1	63.2
1946	12.3	5.8	.6	.8	5.5	1.7	14.0
1947	18.6	6.1	.7	.8	5.8	1.8	20.4
1948	7.3	7.0	.8	.8	6.6	2.0	9.3
1949	48.7	12.3	1.4	.8	11.7	2.8	51.5
1950	7.9	10.2	1.1	.9	9.8	2.4	10.3
1951	56.9	17.9	2.0	1.0	17.0	3.9	60.8
Means:							
1914-45	135.2	8.7	0.7	0.3	5.9	3.8	139.0
1942-51	36.7	8.8	.9	.6	7.6	2.7	39.4
1946-51	25.3	9.9	1.1	.8	9.4	2.4	27.7
1914-51	117.8	8.9	.8	.4	6.5	3.6	121.4

Table F

SUMMARY

Depletions by Types of Use and Virgin Flows

October 1, 1913-September 30, 1951 — Unit: 1,000 Acre-feet

GILA RIVER AT GILLESPIE DAM, ARIZONA

Water Year	Historic Flow	Lower Basin Water Uses: Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads	Reservoir Losses: Evaporation	Storage Change	Channel Salvage: Evaporation	Replacement	Growth Change	Change in Ground-Water Storage	Net Depletion	Virgin Flow
1914	658.4	729.8	34.6	67.9	21.7	- 27.1	11.8	111.0	+ 53.0	- 102.4	654.7	1,313.1
1915	2,970.1	833.7	39.2	69.8	39.3	+1,148.7	17.0	126.5	- 44.9	+ 457.9	2,400.2	5,370.3
1916	4,365.9	1,004.7	45.7	72.8	45.8	- 40.1	5.8	141.7	- 27.5	+ 660.8	1,614.7	5,980.6
1917	1,304.2	890.0	41.6	72.4	45.8	- 118.5	8.2	135.6	- 29.5	+ 169.2	927.2	2,231.4
1918	470.8	885.9	38.3	72.9	37.7	- 743.9	9.0	105.3	+ 68.2	+ 123.5	368.3	839.1
1919	999.7	957.9	44.5	74.9	30.0	+ 284.5	13.7	143.7	- 14.3	- 81.5	1,138.6	2,138.3
1920	2,468.6	923.3	42.9	75.2	45.1	+ 446.9	6.0	144.3	- 21.2	+ 370.0	1,731.9	4,200.5
1921	702.0	880.0	40.0	75.3	39.3	- 351.2	10.0	129.4	+ 94.9	- 195.2	443.7	1,145.7
1922	953.1	866.0	37.5	76.3	39.3	- 129.2	9.1	106.9	+ 20.9	- 4.2	790.6	1,743.7
1923	593.9	1,051.8	46.9	80.0	33.9	- 153.3	14.9	140.3	+ 51.6	- 80.3	875.4	1,469.3
1924	869.4	1,154.4	50.7	82.2	38.1	- 36.6	12.4	158.3	+ 50.5	- 201.5	967.1	1,836.5
1925	322.8	936.0	40.9	80.4	24.8	- 336.3	10.5	123.9	+ 69.9	- 364.3	317.0	639.8
1926	664.0	960.1	43.5	82.1	27.9	+ 322.6	17.1	145.0	+ 32.4	- 189.5	1,117.0	1,781.0
1927	1,031.2	1,030.3	45.5	83.9	38.8	+ 457.6	15.7	139.1	- 16.4	- 126.7	1,358.2	2,389.4
1928	217.4	1,143.4	48.0	86.3	36.7	- 637.6	11.8	128.9	+ 46.3	- 229.1	353.3	570.7
1929	203.4	1,069.8	45.9	86.2	28.4	+ 66.7	17.7	129.1	- 12.5	- 385.4	752.3	955.7
1930	170.1	1,154.7	49.5	88.2	45.6	+ 33.8	18.7	157.2	+ 1.4	- 354.1	843.2	1,013.3
1931	325.5	1,120.8	48.9	88.5	53.3	+ 256.0	23.8	156.3	- 25.5	- 207.3	1,154.6	1,480.1
1932	557.8	1,048.6	46.8	86.4	89.3	+ 945.5	34.5	154.7	- 55.7	+ 338.3	2,312.0	2,869.8
1933	102.8	1,088.5	47.9	89.5	82.9	- 504.5	16.0	146.9	+ 8.1	- 18.8	630.7	733.5
1934	70.7	1,040.0	44.6	89.5	50.1	- 686.2	12.3	134.0	+ 39.5	- 188.2	243.0	313.7
1935	212.9	1,238.1	52.9	93.0	58.3	+ 422.6	25.8	168.4	- 61.0	- 131.6	1,478.1	1,691.0
1936	106.9	1,323.8	57.1	95.0	59.5	- 173.3	20.8	190.7	+ 5.7	- 185.6	970.7	1,077.6
1937	490.0	1,520.7	67.7	98.3	72.2	+ 347.6	28.3	230.2	+ .4	+ 36.7	1,885.1	2,375.1
1938	271.0	1,367.4	57.9	96.8	51.5	- 570.6	13.7	186.1	+ 88.7	- 359.8	532.1	803.1
1939	109.1	1,178.6	50.5	95.1	28.7	- 125.9	16.7	170.9	+ 41.8	- 519.7	561.5	670.6
1940	73.3	1,299.2	56.7	97.6	25.6	- 93.2	16.6	198.1	+ 58.0	- 638.0	591.2	664.5
1941	1,139.7	1,524.4	69.2	104.1	107.3	+2,490.4	46.2	246.4	+ 75.8	- 30.4	4,048.2	5,187.9
1942	103.1	1,855.8	81.4	111.7	137.6	- 438.1	20.9	284.7	+ 80.7	- 518.5	1,005.0	1,108.1
1943	85.5	1,704.9	72.7	112.7	106.1	- 426.3	19.1	258.7	+ 88.0	- 529.4	850.9	936.4
1944	94.3	1,755.6	74.1	116.8	89.9	- 467.6	17.3	254.3	+101.3	- 647.3	751.2	845.5
1945	89.5	1,831.9	77.9	120.9	71.9	- 190.3	19.4	268.8	+ 89.0	- 808.6	904.5	994.0
1946	110.2	1,541.8	70.5	153.4	47.7	- 450.7	11.1	165.2	+ 73.6	- 922.6	-337.4	447.6
1947	95.7	1,544.1	70.7	173.7	37.1	- 249.3	11.8	169.1	+ 85.5	-1,149.7	331.2	426.9
1948	55.4	1,744.0	79.0	186.6	33.2	- 52.9	19.4	189.2	+ 36.3	-1,322.4	495.2	550.6
1949	57.2	2,020.3	93.3	194.7	74.4	+ 608.0	52.8	239.5	- 46.2	- 957.5	1,694.7	1,751.9
1950	43.9	1,874.7	84.9	202.0	56.3	- 484.5	16.8	206.3	+ 78.9	-1,256.9	332.3	376.2
1951	143.3	1,929.0	87.9	217.1	23.6	+ 19.5	8.7	221.4	+ 23.4	-1,703.3	367.1	510.4
Means:												
1914-45	712.4	1,167.8	51.3	88.3	53.2	+ 30.4	16.9	166.1	+ 26.8	- 154.4	1,080.4	1,792.8
1931-40	232.0	1,222.6	53.1	93.2	57.1	- 18.2	20.9	173.6	+ 10.0	- 187.4	1,035.9	1,267.9
1942-51	87.8	1,780.2	79.2	159.0	67.8	- 213.2	19.7	225.7	+ 61.0	- 981.6	707.0	794.8
1946-51	84.3	1,775.7	81.0	187.9	45.4	- 101.7	20.1	198.4	+ 41.9	-1,218.7	593.0	677.3
1914-51	613.2	1,263.8	56.0	104.0	52.0	+ 9.5	17.4	171.2	+ 29.2	- 322.5	1,003.4	1,616.6

Table G

SUMMARY
Depletions by Types of Use and Virgin Flows

October 1, 1913-September 30, 1951 — Unit: 1,000 Acre-feet

GILA RIVER NEAR DOME, ARIZONA

Water Year	Historic Flow	Lower Basin Water Uses: Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads	Reservoir Losses: Evaporation	Reservoir Losses: Storage Change	Channel Salvage: Evaporation	Channel Salvage: Replacement	Growth Change	Change in Ground-Water Storage	Net Depletion	Virgin Flow
1914	179.8	740.0	35.0	68.5	21.7	- 27.1	22.0	113.8	- 24.6	+ 69.0	746.7	926.5
1915	2,324.5	843.9	39.6	70.5	39.3	+1,148.7	24.3	129.3	-221.6	+ 774.9	2,541.7	4,866.2
1916	4,361.1	1,014.9	46.1	73.5	45.8	- 40.1	5.8	144.5	-204.2	+ 429.5	1,215.2	5,576.3
1917	1,458.3	900.2	42.0	73.1	45.8	- 118.5	14.4	138.5	-206.0	- 271.5	312.2	1,770.5
1918	326.9	896.1	38.7	73.6	37.7	- 743.9	17.1	108.2	+ 30.3	- 26.6	180.6	507.5
1919	227.0	973.2	45.1	75.8	30.0	+ 284.5	26.8	148.0	-185.9	+ 368.8	1,416.7	1,643.7
1920	1,293.8	938.2	43.5	76.1	45.1	+ 446.9	9.7	148.5	-196.5	+1,274.7	2,469.8	3,763.6
1921	437.7	889.2	40.4	76.1	39.3	- 351.2	17.0	132.0	+ 35.5	- 240.7	339.6	777.3
1922	685.8	874.9	37.8	77.1	39.3	- 129.2	20.0	109.4	-108.4	+ 4.8	666.9	1,352.7
1923	329.1	1,081.2	48.0	81.2	33.9	- 153.3	31.0	148.5	- 43.3	- 119.5	748.7	1,077.8
1924	686.5	1,205.8	52.7	83.7	38.1	- 36.6	26.2	172.6	- 74.3	- 357.9	712.7	1,399.2
1925	64.9	986.2	42.9	81.9	24.8	- 336.3	22.1	137.9	+ 11.4	- 383.7	267.2	332.1
1926	270.1	1,012.3	45.5	83.6	27.9	+ 322.6	36.4	159.5	- 88.6	- 124.4	1,083.0	1,353.1
1927	763.9	1,083.6	47.6	85.5	38.8	+ 457.6	34.9	154.0	-181.0	- 160.5	1,182.7	1,946.6
1928	24.3	1,200.8	50.2	87.9	36.7	- 637.6	26.3	144.9	- 40.9	- 279.3	246.6	270.9
1929	3.0	1,109.9	47.5	87.6	28.4	+ 66.7	36.7	140.3	-139.6	- 424.1	599.4	602.4
1930	15.6	1,203.6	51.4	89.7	45.6	+ 33.8	39.1	170.8	-136.0	- 435.3	642.9	658.5
1931	102.7	1,174.7	51.0	90.1	53.3	+ 256.0	47.1	171.3	-183.0	- 246.8	976.9	1,079.6
1932	266.3	1,100.9	48.8	90.0	89.3	+ 945.5	71.3	169.3	-238.5	+ 302.7	2,098.1	2,364.4
1933	1.1	1,135.9	49.7	90.9	82.9	- 504.5	33.8	160.1	-107.8	- 138.9	414.3	415.4
1934	.2	1,088.5	46.5	90.9	50.1	- 686.2	24.9	147.5	- 36.5	- 338.9	42.0	42.2
1935	5.9	1,291.5	55.0	94.4	58.3	+ 422.6	54.4	183.3	-264.4	- 169.5	1,250.2	1,256.1
1936	0	1,384.9	59.5	96.5	59.5	- 173.3	43.7	207.7	-146.9	- 316.9	711.9	711.9
1937	153.7	1,586.1	70.2	99.8	72.2	+ 347.6	59.6	248.4	-189.9	+ 52.0	1,730.0	1,883.7
1938	45.9	1,434.7	60.5	98.3	51.5	- 570.6	28.2	204.8	+ 11.2	- 422.9	429.7	475.6
1939	3.5	1,248.3	53.2	96.6	28.7	- 125.9	33.7	190.3	- 62.0	- 662.5	352.4	355.9
1940	0	1,372.2	59.5	99.1	25.6	- 93.2	34.1	218.4	- 50.2	- 811.1	349.4	349.4
1941	589.7	1,601.5	72.2	105.6	107.3	+2,490.4	100.3	267.9	- 82.3	+ 162.3	4,088.8	4,678.5
1942	0	1,939.4	84.7	113.3	137.6	- 438.1	44.5	308.0	- 77.3	- 672.9	734.2	734.2
1943	0	1,784.5	75.8	114.3	106.1	- 426.3	40.2	280.9	- 49.1	- 697.2	587.0	587.0
1944	0	1,839.3	77.4	118.5	89.9	- 467.6	36.9	277.6	- 20.0	- 805.9	517.1	517.1
1945	0	1,915.3	81.1	122.6	71.9	- 190.3	41.5	292.0	- 54.4	- 972.0	640.7	640.7
1946	0	1,627.7	73.8	155.2	47.7	- 450.7	41.3	198.0	-156.7	- 969.4	88.3	88.3
1947	.4	1,635.4	74.1	175.5	37.1	- 249.3	41.9	203.8	-153.9	-1,199.9	73.3	73.7
1948	0	1,841.3	82.7	188.7	33.2	- 52.9	52.8	226.5	-262.4	-1,407.1	144.2	144.2
1949	0	2,119.2	97.0	196.8	74.4	+ 608.0	119.5	277.2	-381.2	-1,035.6	1,281.9	1,281.9
1950	0	1,978.6	88.8	204.3	56.3	- 484.5	45.3	245.8	-144.0	-1,363.2	45.2	45.2
1951	6.0	2,037.9	92.1	219.3	23.6	+ 19.5	37.6	263.2	-215.7	-1,601.8	274.1	280.1
Means:												
1914-45	456.9	1,214.1	53.1	89.6	53.2	+ 30.4	34.5	179.0	-103.9	- 176.3	946.7	1,403.6
1931-40	57.9	1,281.8	55.4	94.7	57.1	- 18.2	43.1	190.1	-126.8	- 275.3	835.5	893.4
1942-51	.6	1,871.9	82.8	160.8	67.8	- 213.2	50.2	257.3	-151.5	-1,072.5	438.6	439.2
1946-51	1.1	1,873.3	84.7	190.0	45.4	- 101.7	56.4	235.7	-219.0	-1,262.8	317.8	318.9
1914-51	384.9	1,318.2	58.1	105.4	52.0	+ 9.6	38.0	188.0	-122.1	- 347.8	847.4	1,232.3

Table H

SUMMARY

Depletions by Types of Use and Virgin Flows

October 1, 1913-September 30, 1951 — Unit: 1,000 Acre-feet

COLORADO RIVER AT INTERNATIONAL BOUNDARY

Water Year	Historic Flow	Upper Basin Depletions at Lee Ferry	Lower Basin Water Uses: Crops	Non-Cropped Areas	Cities, Towns, & Farmsteads	Transbasin Diversions	Reservoir Losses: Evaporation	Reservoir Losses: Storage Change	Channel Salvage: Evaporation	Channel Salvage: Replacement	Growth Change	Change in Ground-Water Storage	Total Depletion	Virgin Flow
1914	18,606.2	1,887.6	1,051.6	52.5	91.4	1,647.7	55.9	- 27.1	130.1	246.2	+ 8.9	+ 69.0	4,461.2	23,067.4
1915	14,275.5	1,527.5	1,169.9	57.8	94.0	1,729.9	75.7	+1,148.7	127.0	267.8	-183.6	+ 774.9	6,000.0	20,275.5
1916	19,672.8	1,876.6	1,349.4	64.9	97.4	2,006.8	82.5	- 40.1	112.2	287.5	-153.1	+ 429.5	5,314.2	24,987.0
1917	20,262.7	2,144.7	1,242.8	60.7	98.0	2,010.9	80.4	- 118.5	127.8	289.0	-156.0	- 271.5	4,674.7	24,937.4
1918	10,864.9	1,714.5	1,251.0	57.1	99.1	2,390.8	69.8	- 743.9	122.8	268.0	+ 73.1	- 26.6	4,494.1	15,359.0
1919	8,176.4	1,604.5	1,365.5	65.6	102.2	2,315.3	66.9	+ 284.5	125.2	323.0	-122.5	+ 368.8	5,602.6	13,779.0
1920	19,659.9	2,212.7	1,356.3	65.8	103.1	2,406.5	82.9	+ 446.9	127.4	334.5	-118.4	+1,274.7	7,368.6	27,028.5
1921	17,275.3	2,300.7	1,282.4	61.0	102.9	2,244.7	75.4	- 351.2	130.4	307.8	+ 99.7	- 240.7	5,136.7	22,412.0
1922	15,709.7	2,003.6	1,288.4	59.8	104.3	2,190.6	76.1	- 129.2	130.6	293.5	- 40.4	+ 4.8	5,133.9	20,843.6
1923	14,353.2	2,008.6	1,506.1	70.0	108.8	2,640.9	71.9	- 153.3	139.5	336.3	+ 30.5	- 119.5	5,688.2	20,041.4
1924	10,492.2	1,720.6	1,629.0	73.4	111.5	2,544.5	73.9	- 36.6	128.9	365.2	+ 11.5	- 357.9	5,275.8	15,768.0
1925	9,024.5	1,692.5	1,414.4	63.8	110.0	2,425.6	58.1	- 336.3	119.8	333.6	+ 99.3	- 383.7	4,690.3	13,714.8
1926	11,357.9	1,841.6	1,428.9	65.9	112.0	2,385.1	61.4	+ 322.6	145.8	350.0	- 15.2	- 124.4	5,585.1	16,943.0
1927	14,298.4	2,029.7	1,526.5	70.1	114.0	2,440.6	76.6	+ 457.6	141.8	350.5	- 94.1	- 160.5	5,968.2	20,266.6
1928	12,011.7	1,956.6	1,612.8	70.4	116.7	2,583.1	69.8	- 637.6	130.2	331.1	+ 38.7	- 279.3	5,069.9	17,081.6
1929	15,140.1	2,205.7	1,554.7	69.9	116.7	2,687.4	65.4	+ 66.7	151.4	337.0	- 58.7	- 424.1	5,795.3	20,935.4
1930	9,627.1	1,815.6	1,626.9	72.4	118.7	2,827.8	78.4	+ 33.8	139.5	360.2	- 53.4	- 435.3	5,585.2	15,212.3
1931	3,415.9	1,381.4	1,587.8	71.3	120.1	2,484.2	88.5	+ 256.0	135.6	355.9	-107.9	- 246.8	5,143.1	8,559.0
1932	12,871.0	1,957.6	1,510.7	70.5	120.2	2,452.7	127.4	+ 945.5	185.6	345.6	-188.9	+ 302.7	6,767.2	19,638.2
1933	6,799.3	1,611.5	1,516.8	68.3	121.4	2,257.8	119.9	- 504.5	130.3	327.6	- 48.8	- 138.9	4,545.6	11,344.9
1934	1,938.5	1,244.4	1,466.1	64.8	122.0	1,869.1	84.0	- 686.2	112.7	314.8	+ 20.8	- 338.9	3,118.6	5,357.1
1935	2,192.0	1,637.5	1,692.4	75.3	125.9	2,098.6	185.7	+5,551.4	231.0	357.5	-350.0	- 169.5	10,258.8	12,450.8
1936	2,089.4	1,830.6	1,801.0	79.8	128.7	2,679.6	405.5	+5,965.3	244.2	390.3	-259.0	- 316.9	11,680.1	13,769.5
1937	1,922.3	1,843.6	2,057.1	93.5	132.7	2,870.1	635.8	+7,191.6	274.9	455.1	-306.0	+ 52.0	13,840.4	15,762.7
1938	1,980.4	2,105.7	1,898.4	83.2	131.5	2,949.4	811.5	+8,872.7	289.8	408.7	-188.0	- 422.9	15,543.0	17,523.4
1939	4,114.7	1,685.5	1,680.0	73.6	129.9	2,839.0	941.9	+1,409.4	158.7	383.1	- 34.8	- 662.5	7,520.2	11,634.9
1940	3,660.6	1,519.5	1,840.5	82.1	133.2	2,745.6	970.8	- 716.5	134.5	423.7	+ 30.5	- 811.1	5,236.4	8,897.0
1941	8,390.0	2,096.7	2,121.6	100.7	141.6	2,753.6	1,121.6	+7,795.2	308.3	493.7	-145.9	+ 162.3	15,345.4	23,735.4
1942	13,985.5	2,096.7	2,422.5	109.9	150.6	2,505.9	1,152.2	-1,648.6	158.3	522.3	+ 17.1	- 672.9	5,452.8	19,438.3
1943	7,918.9	1,840.6	2,253.4	100.3	163.8	2,571.8	1,136.9	-1,507.6	131.8	486.1	+ 51.5	- 697.2	5,295.6	13,214.5
1944	10,283.9	1,933.6	2,354.3	104.7	168.8	2,575.8	1,079.1	-1,857.0	136.7	498.2	+ 83.6	- 805.9	5,002.1	15,286.0
1945	8,653.1	1,865.6	2,481.2	110.2	167.2	2,729.6	1,012.1	-1,584.6	139.6	517.2	+ 52.7	- 972.0	5,205.2	13,858.3
1946	6,700.6	1,681.0	2,261.8	106.4	202.9	3,013.7	993.9	-3,387.5	145.7	442.0	- 1.4	- 969.4	3,313.7	10,014.3
1947	6,259.2	1,957.0	2,317.2	108.7	226.0	2,988.8	950.0	+2,345.1	224.6	455.3	-172.9	-1,199.9	8,840.1	15,099.3
1948	8,160.2	1,926.0	2,588.2	119.0	239.0	3,185.2	1,008.4	+ 363.2	213.5	502.9	-281.7	-1,407.1	7,023.8	15,184.0
1949	8,697.2	2,017.0	2,851.0	134.7	246.8	3,200.3	975.5	+1,331.0	296.1	562.1	-459.6	-1,035.6	8,402.9	17,100.1
1950	7,604.3	1,837.0	2,723.3	124.7	255.8	3,483.9	1,044.6	-2,562.0	162.1	543.5	-116.8	-1,363.2	4,721.7	12,326.0
1951	3,502.0	1,816.0	2,856.2	131.0	273.0	3,865.1	1,022.6	+ 354.5	180.8	585.4	-179.5	-1,601.8	7,770.9	11,272.9
Means:														
1914-45	10,344.5	1,849.9	1,635.6	74.7	120.6	2,433.2	346.7	+ 927.1	156.3	364.4	- 62.7	- 176.3	6,628.1	16,972.6
1931-40	4,098.4	1,681.7	1,705.1	76.2	126.5	2,524.6	437.1	+2,828.5	189.7	376.2	-143.2	- 275.3	8,395.3	12,493.7
1946-51	6,820.6	1,872.3	2,599.6	120.7	240.6	3,289.5	999.2	- 259.3	203.8	515.2	-202.0	-1,262.8	6,678.8	13,499.4
1914-51	9,788.1	1,853.4	1,787.9	81.9	139.5	2,568.4	449.7	+ 739.8	163.8	388.2	- 84.7	- 347.8	6,636.1	16,424.2

Table I

SUMMARY
Depletions by States and Virgin Flows

October 1, 1913 - September 30, 1951 Unit: 1,000 Acre-Feet

LITTLE COLORADO RIVER AT GRAND FALLS, ARIZONA

Water Year	Historic Flow	Depletions			Virgin Flow
		Arizona	New Mexico	Total	
1914	190.2	37.3	6.9	44.2	234.4
1915	338.8	45.7	8.1	53.8	392.6
1916	859.4	45.8	8.1	53.9	913.3
1917	303.9	41.6	6.4	48.0	351.9
1918	103.7	31.5	6.4	37.9	141.6
1919	261.5	48.3	8.7	57.0	318.5
1920	461.0	49.9	8.7	58.6	519.6
1921	170.6	41.5	8.7	50.2	220.8
1922	308.9	50.4	6.9	57.3	366.2
1923	271.6	49.7	9.2	58.9	330.5
1924	221.8	44.5	8.2	52.7	274.5
1925	150.4	42.1	4.5	46.6	197.0
1926	181.5	44.0	4.5	48.5	230.0
1927	393.8	56.6	7.2	63.8	457.6
1928	87.6	37.2	6.0	43.2	130.8
1929	510.8	56.2	7.8	64.0	574.8
1930	189.3	45.9	3.4	49.3	238.6
1931	165.0	51.9	5.6	57.5	222.5
1932	465.9	60.2	6.3	66.5	532.4
1933	129.2	51.0	7.3	58.3	187.5
1934	71.0	43.9	4.1	48.0	119.0
1935	215.3	55.8	5.4	61.2	276.5
1936	165.0	54.3	6.4	60.7	225.7
1937	339.4	62.6	5.6	68.2	407.6
1938	170.2	49.7	4.6	54.3	224.5
1939	83.2	42.7	5.1	47.8	131.0
1940	132.2	55.4	7.7	63.1	195.3
1941	586.9	73.9	8.1	82.0	668.9
1942	149.0	50.3	5.3	55.6	204.6
1943	103.0	50.0	6.1	56.1	159.1
1944	129.1	49.9	4.9	54.8	183.9
1945	159.5	57.7	5.8	63.5	223.0
1946	116.4	72.6	11.1	83.7	200.1
1947	127.0	72.2	10.3	82.5	209.5
1948	182.3	76.8	10.6	87.4	269.7
1949	268.4	90.3	13.9	104.2	372.6
1950	41.1	51.7	9.6	61.3	102.4
1951	48.8	55.8	11.6	67.4	116.2
Means:					
1914-45	252.1	49.3	6.5	55.8	307.9
1931-40	193.6	52.8	5.8	58.6	252.2
1942-51	132.5	62.7	8.9	71.6	204.1
1946-51	130.7	69.9	11.2	81.1	211.8
1914-51	233.0	52.6	7.2	59.8	292.8

Table J

SUMMARY
Depletions by States and Virgin Flows

October 1, 1913 - September 30, 1951 Unit: 1,000 Acre-Feet

VIRGIN RIVER AT LITTLEFIELD, ARIZONA

Water Year	Historic Flow	Depletions			Virgin Flow
		Arizona	Utah	Total	
1914	307.3	0.6	38.3	38.9	346.2
1915	258.9	.7	35.3	36.0	294.9
1916	527.7	.7	39.7	40.4	568.1
1917	277.8	.6	36.9	37.5	315.3
1918	266.1	.6	36.2	36.8	302.9
1919	187.1	.5	34.5	35.0	222.1
1920	279.1	.6	41.4	42.0	321.1
1921	261.4	.6	41.8	42.4	303.8
1922	522.3	.7	40.8	41.5	563.8
1923	286.6	.7	38.4	39.1	325.7
1924	120.6	.4	27.0	27.4	148.0
1925	150.0	.6	29.1	29.7	179.7
1926	138.5	.5	28.3	28.8	167.3
1927	254.0	.7	36.1	36.8	290.8
1928	171.6	.5	33.4	33.9	205.5
1929	226.5	.7	32.5	33.2	259.7
1930	188.1	.6	30.0	30.6	218.7
1931	119.3	.6	25.7	26.3	145.6
1932	381.9	.8	39.1	39.9	421.8
1933	127.5	.5	27.1	27.6	155.1
1934	78.0	.5	28.6	29.1	107.1
1935	164.9	.6	34.2	34.8	199.7
1936	131.0	.5	30.6	31.1	162.1
1937	240.3	.6	36.8	37.4	277.7
1938	278.6	.6	38.8	39.4	318.0
1939	154.9	.5	29.3	29.8	184.7
1940	173.7	.6	29.5	30.1	203.8
1941	400.0	.8	36.9	37.7	437.7
1942	214.9	.6	31.2	31.8	246.7
1943	178.1	.6	30.2	30.8	208.9
1944	182.7	.5	43.5	44.0	226.7
1945	166.3	.6	41.9	42.5	208.8
1946	121.3	.3	43.3	43.6	164.9
1947	192.3	.2	52.2	52.4	244.7
1948	116.4	.3	43.5	43.8	160.2
1949	155.9	.4	48.4	48.8	204.7
1950	127.0	.3	45.6	45.9	172.9
1951	99.9	.3	42.3	42.6	142.5
Means:					
1914-45	231.7	0.6	34.5	35.1	266.8
1931-40	185.0	.6	32.0	32.6	217.6
1942-51	155.5	.4	42.2	42.6	198.1
1946-51	135.5	.3	45.9	46.2	181.7
1914-51	216.5	.5	36.3	36.8	253.3

Table K

SUMMARY
Depletions by States and Virgin Flows

October 1, 1913-September 30, 1951 Unit: 1,000 Acre-feet

COLORADO RIVER BELOW HOOVER DAM, ARIZONA - NEVADA

Water Year	Historic Flow	Depletions 1/						Virgin Flow
		Arizona	Nevada	New Mexico	Utah	Undistributed	Total	
1914	21,507.3	45.7	13.7	6.9	46.9	1,884.7	1,997.9	23,505.2
1915	15,179.4	53.8	12.7	8.1	43.2	1,525.2	1,643.0	16,822.4
1916	18,895.2	54.7	13.8	8.1	48.5	1,873.9	1,999.0	20,894.2
1917	21,828.7	49.8	13.0	6.4	45.1	2,141.6	2,255.9	24,084.6
1918	14,114.4	39.3	12.7	6.4	44.3	1,712.1	1,814.8	15,929.2
1919	11,656.1	55.3	11.4	8.7	41.4	1,602.3	1,719.1	13,375.2
1920	22,220.9	58.1	15.3	8.7	49.5	2,209.8	2,341.4	24,562.3
1921	20,418.8	49.5	14.9	8.7	49.9	2,297.7	2,420.7	22,839.5
1922	18,737.9	59.5	16.5	6.9	49.7	2,001.0	2,133.6	20,871.5
1923	18,098.2	58.3	15.7	9.2	46.9	2,006.0	2,136.1	20,234.3
1924	14,230.3	51.4	11.3	8.2	32.9	1,718.3	1,822.1	16,052.4
1925	12,046.4	48.9	12.1	4.5	35.4	1,690.3	1,791.2	13,837.6
1926	14,640.7	50.7	11.8	4.5	34.4	1,842.2	1,943.6	16,584.3
1927	17,424.2	65.4	15.2	7.2	44.0	2,027.0	2,158.8	19,583.0
1928	15,778.6	44.2	12.9	6.0	40.1	1,954.1	2,057.3	17,835.9
1929	19,360.1	64.6	14.6	7.8	40.0	2,202.9	2,329.9	21,690.0
1930	13,635.6	53.7	13.4	3.4	37.0	1,813.3	1,920.8	15,556.4
1931	7,018.7	58.8	12.3	5.6	31.6	1,379.6	1,487.9	8,506.6
1932	16,504.1	70.6	17.2	6.3	48.0	1,955.1	2,097.2	18,601.3
1933	10,360.2	57.7	11.3	7.3	33.1	1,609.5	1,718.9	12,079.1
1934	5,057.8	49.9	10.1	4.1	33.8	1,242.8	1,340.7	6,398.5
1935	5,556.1	63.3	12.2	5.4	40.7	6,854.5	6,976.1	12,532.2
1936	6,281.7	61.2	11.0	6.4	36.6	8,275.7	8,390.9	14,672.6
1937	5,826.4	71.3	12.8	5.6	44.6	9,210.1	9,344.4	15,170.8
1938	6,167.6	58.7	14.1	4.6	47.2	12,208.4	12,333.0	18,500.6
1939	8,473.3	50.0	11.3	5.1	35.8	3,462.3	3,564.5	12,037.8
1940	7,694.4	63.1	11.2	7.7	36.3	1,810.7	1,929.0	9,623.4
1941	11,728.2	83.8	14.2	8.1	45.9	8,372.4	8,524.4	20,252.6
1942	17,876.4	58.5	14.1	5.3	38.6	1,983.7	2,100.2	19,976.6
1943	12,495.0	57.7	25.4	6.1	37.1	1,249.9	1,376.2	13,871.2
1944	14,451.0	58.2	26.3	4.9	50.4	1,425.4	1,565.2	16,016.2
1945	12,938.5	65.3	20.0	5.8	48.4	1,267.8	1,407.3	14,345.8
1946	11,290.0	78.9	22.0	11.1	49.3	- 232.9	- 71.6	11,218.4
1947	10,665.0	79.3	27.0	10.3	59.4	5,393.9	5,569.9	16,234.9
1948	12,753.0	83.0	22.5	10.6	49.5	3,307.2	3,472.8	16,225.8
1949	13,199.1	97.6	24.5	13.9	54.9	3,575.8	3,766.7	16,965.8
1950	12,937.3	58.0	23.8	9.6	51.7	187.9	331.0	13,268.3
1951	9,981.4	61.6	23.7	11.6	47.7	1,863.7	2,008.3	11,989.7
Means:								
1914-45	13,693.8	57.2	14.2	6.5	41.8	2,962.8	3,082.5	16,776.3
1931-40	7,894.0	60.5	12.3	5.8	38.8	4,800.9	4,918.3	12,812.3
1946-51	11,804.3	76.4	23.9	11.2	52.1	2,349.3	2,512.9	14,317.2
1914-51	13,395.5	60.3	15.7	7.2	43.4	2,865.9	2,992.5	16,388.0

1/ Depletions are listed for the states in the Lower Colorado River Basin. Depletions listed as undistributed are depletions by the Upper Colorado River Basin combined with depletions by the reservoirs on the main stream of the Colorado River.

Table L

SUMMARY
Depletions by States and Virgin Flows

October 1, 1913 - September 30, 1951 Unit: 1,000 Acre-Feet

GILA RIVER AT GILLESPIE DAM, ARIZONA

Water Year	Historic Flow	Depletions				Virgin Flow
		Arizona	New Mexico	Mexico	Total	
1914	658.4	642.8	5.6	6.3	654.7	1,313.1
1915	2,970.1	2,388.5	6.1	5.6	2,400.2	5,370.3
1916	4,365.9	1,601.4	6.5	6.8	1,614.7	5,980.6
1917	1,304.2	914.0	6.3	6.9	927.2	2,231.4
1918	470.8	359.7	4.0	4.6	368.3	839.1
1919	999.7	1,125.8	6.0	6.8	1,138.6	2,138.3
1920	2,468.6	1,718.4	6.7	6.8	1,731.9	4,200.5
1921	702.0	432.5	5.7	5.5	443.7	1,145.7
1922	953.1	781.9	4.3	4.4	790.6	1,743.7
1923	593.9	865.2	4.4	5.8	875.4	1,469.3
1924	869.4	956.0	4.5	6.6	967.1	1,836.5
1925	322.8	307.7	4.3	5.0	317.0	639.8
1926	664.0	1,105.9	5.2	5.9	1,117.0	1,781.0
1927	1,031.2	1,347.2	5.2	5.8	1,358.2	2,389.4
1928	217.4	343.2	5.3	4.8	353.3	570.7
1929	203.4	742.2	5.3	4.8	752.3	955.7
1930	170.1	832.9	5.1	5.2	843.2	1,013.3
1931	325.5	1,143.9	5.4	5.3	1,154.6	1,480.1
1932	557.8	2,300.6	5.1	6.3	2,312.0	2,869.8
1933	102.8	619.9	5.4	5.4	630.7	733.5
1934	70.7	232.5	5.6	4.9	243.0	313.7
1935	212.9	1,469.1	4.3	4.7	1,478.1	1,691.0
1936	106.9	961.1	4.8	4.8	970.7	1,077.6
1937	490.0	1,872.5	6.1	6.5	1,885.1	2,375.1
1938	271.0	522.0	5.4	4.7	532.1	803.1
1939	109.1	552.9	4.2	4.4	561.5	670.6
1940	73.3	581.4	4.7	5.1	591.2	664.5
1941	1,139.7	4,037.6	4.1	6.5	4,048.2	5,187.9
1942	103.1	993.1	6.1	5.8	1,005.0	1,108.1
1943	85.5	841.8	4.6	4.5	850.9	936.4
1944	94.3	742.2	4.6	4.4	751.2	845.5
1945	89.5	894.6	4.8	5.1	904.5	994.0
1946	110.2	327.2	6.4	3.8	337.4	447.6
1947	95.7	321.1	6.2	3.9	331.2	426.9
1948	55.4	486.1	5.3	3.8	495.2	550.6
1949	57.2	1,681.6	7.8	5.3	1,694.7	1,751.9
1950	43.9	321.5	7.2	3.6	332.3	376.2
1951	143.3	355.6	7.7	3.8	367.1	510.4
Means:						
1914-45	712.4	1,069.7	5.2	5.5	1,080.4	1,792.8
1931-40	232.0	1,025.6	5.1	5.2	1,035.9	1,267.9
1942-51	87.8	696.5	6.1	4.4	707.0	794.8
1946-51	84.3	582.2	6.8	4.0	593.0	677.3
1914-51	613.2	992.7	5.4	5.3	1,003.4	1,616.6

Table M

SUMMARY
Depletions by States and Virgin Flows

October 1, 1913 - September 30, 1951 Unit: 1,000 Acre-Feet

GILA RIVER NEAR DOME, ARIZONA

Water Year	Historic Flow	Depletions				Virgin Flow
		Arizona	New Mexico	Mexico	Total	
1914	179.8	735.6	4.9	6.2	746.7	926.5
1915	2,324.5	2,530.6	5.6	5.5	2,541.7	4,866.2
1916	4,361.1	1,201.9	6.5	6.8	1,215.2	5,576.3
1917	1,458.3	299.5	5.9	6.8	312.2	1,770.5
1918	326.9	172.7	3.4	4.5	180.6	507.5
1919	227.0	1,404.9	5.1	6.7	1,416.7	1,643.7
1920	1,293.8	2,456.6	6.4	6.8	2,469.8	3,763.6
1921	437.7	329.0	5.2	5.4	339.6	777.3
1922	685.8	659.0	3.6	4.3	666.9	1,352.7
1923	329.1	739.8	3.3	5.6	748.7	1,077.8
1924	686.5	702.7	3.6	6.4	712.7	1,399.2
1925	64.9	258.8	3.5	4.9	267.2	332.1
1926	270.1	1,073.4	3.9	5.7	1,083.0	1,353.1
1927	763.9	1,173.2	3.9	5.6	1,182.7	1,946.6
1928	24.3	237.7	4.3	4.6	246.6	270.9
1929	3.0	590.8	4.0	4.6	599.4	602.4
1930	15.6	634.2	3.7	5.0	642.9	658.5
1931	102.7	968.1	3.8	5.0	976.9	1,079.6
1932	266.3	2,089.6	2.6	5.9	2,098.1	2,364.4
1933	1.1	404.9	4.2	5.2	414.3	415.4
1934	.2	32.5	4.7	4.8	42.0	42.2
1935	5.9	1,243.4	2.4	4.4	1,250.2	1,256.1
1936	0	704.2	3.2	4.5	711.9	711.9
1937	153.7	1,719.9	4.0	6.1	1,730.0	1,883.7
1938	45.9	420.8	4.4	4.5	429.7	475.6
1939	3.5	345.2	3.0	4.2	352.4	355.9
1940	0	341.0	3.5	4.9	349.4	349.4
1941	589.7	4,082.5	.4	5.9	4,088.8	4,678.5
1942	0	724.2	4.5	5.5	734.2	734.2
1943	0	579.5	3.2	4.3	587.0	587.0
1944	0	509.6	3.3	4.2	517.1	517.1
1945	0	632.6	3.3	4.8	640.7	640.7
1946	0	79.3	5.5	3.5	88.3	88.3
1947	.4	64.3	5.3	3.7	73.3	73.7
1948	0	136.4	4.3	3.5	144.2	144.2
1949	0	1,271.4	5.8	4.7	1,281.9	1,281.9
1950	0	35.5	6.3	3.4	45.2	45.2
1951	6.0	263.7	6.8	3.6	274.1	280.1
Means:						
1914-45	456.9	937.4	4.0	5.3	946.7	1,403.6
1931-40	57.9	827.0	3.6	4.9	835.5	893.4
1942-51	.6	429.7	4.8	4.1	438.6	439.2
1946-51	1.1	308.4	5.7	3.7	317.8	318.9
1914-51	384.9	838.1	4.2	5.1	847.4	1,232.3

Table N

Sheet 1 of 2

SUMMARY
Depletions by States and Virgin Flows

October 1, 1913-September 30, 1951

Unit: 1,000 Acre-feet

COLORADO RIVER AT INTERNATIONAL BOUNDARY

Water Year	Historic Flow	Depletions 1/								Virgin Flow
		Arizona	California	Nevada	New Mexico	Utah	Mexico	Undistributed	Total	
1914	18,606.2	840.2	1,729.0	16.0	11.3	45.5	6.2	1,813.0	4,461.2	23,067.4
1915	14,275.5	2,649.3	1,815.8	14.3	13.0	41.9	5.5	1,460.2	6,000.0	20,275.5
1916	19,672.8	1,327.4	2,098.7	15.8	14.1	47.1	6.8	1,804.3	5,314.2	24,987.0
1917	20,262.7	428.7	2,104.0	15.2	11.9	43.6	6.8	2,064.5	4,674.7	24,937.4
1918	10,864.9	297.9	2,484.3	13.9	9.3	42.9	4.5	1,641.3	4,494.1	15,359.0
1919	8,176.4	1,568.4	2,421.8	12.6	13.3	40.1	6.7	1,539.7	5,602.6	13,779.0
1920	19,659.9	2,630.7	2,519.5	17.6	14.3	48.0	6.8	2,131.7	7,368.6	27,028.5
1921	17,275.3	488.2	2,343.6	16.9	13.4	48.4	5.4	2,220.8	5,136.7	22,412.0
1922	15,709.7	832.9	2,293.5	18.3	9.9	48.3	4.3	1,926.7	5,133.9	20,843.6
1923	14,353.2	926.3	2,747.7	17.6	11.9	45.5	5.6	1,933.6	5,688.2	20,041.4
1924	10,492.2	898.6	2,664.5	12.5	11.2	31.6	6.4	1,651.0	5,275.8	15,768.0
1925	9,024.5	454.7	2,549.1	13.1	7.6	34.1	4.9	1,626.8	4,690.3	13,714.8
1926	11,357.9	1,262.5	2,493.8	13.0	7.8	32.9	5.7	1,769.4	5,585.1	16,943.0
1927	14,298.4	1,383.7	2,552.1	17.0	10.5	42.6	5.6	1,956.7	5,968.2	20,266.6
1928	12,011.7	423.6	2,693.5	14.5	9.8	38.7	4.6	1,885.2	5,069.9	17,081.6
1929	15,140.1	798.5	2,801.2	16.3	11.2	38.5	4.6	2,125.0	5,795.3	20,935.4
1930	9,627.1	844.4	2,930.9	14.8	6.5	35.7	5.0	1,747.9	5,585.2	15,212.3
1931	3,415.9	1,178.7	2,582.1	13.1	8.9	30.5	5.0	1,324.8	5,143.1	8,559.0
1932	12,871.0	2,283.7	2,524.9	18.5	8.2	46.6	5.9	1,879.4	6,767.2	19,638.2
1933	6,799.3	602.4	2,335.9	12.2	11.0	31.8	5.2	1,547.1	4,545.6	11,344.9
1934	1,938.5	226.6	1,948.7	10.4	8.4	32.7	4.8	1,187.0	3,418.6	5,357.1
1935	2,192.0	1,364.1	2,114.6	10.0	7.0	38.4	4.4	6,720.3	10,258.8	12,450.8
1936	2,089.4	816.1	2,689.6	8.0	8.7	33.9	4.5	8,119.3	11,680.1	13,769.5
1937	1,922.3	1,850.3	2,882.7	9.4	8.5	41.7	6.1	9,041.7	13,840.4	15,762.7
1938	1,980.4	502.1	2,917.0	9.1	8.0	43.7	4.5	12,058.6	15,543.0	17,523.4
1939	4,114.7	533.2	2,920.7	11.1	7.6	34.1	4.2	4,009.3	7,520.2	11,634.9

Table N (Continued)

SUMMARY
Depletions by States and Virgin Flows

October 1, 1913-September 30, 1951

COLORADO RIVER AT INTERNATIONAL BOUNDARY

Unit: 1,000 Acre-feet

Water Year	Historic Flow	Depletions 1/								Virgin Flow
		Arizona	California	Nevada	New Mexico	Utah	Mexico	Undistributed	Total	
1940	3,660.6	571.7	2,866.9	11.5	10.8	34.9	4.9	1,735.7	5,236.4	8,897.0
1941	8,390.0	4,257.2	2,805.9	12.0	7.3	43.2	5.9	8,213.9	15,345.4	23,735.4
1942	13,985.5	958.0	2,641.3	15.6	9.2	37.1	5.5	1,786.1	5,452.8	19,438.3
1943	7,918.9	822.8	2,702.1	26.9	8.9	35.9	4.3	1,694.7	5,295.6	13,214.5
1944	10,283.9	766.7	2,716.1	27.9	7.7	49.1	4.2	1,430.4	5,002.1	15,286.0
1945	8,653.1	939.8	2,874.9	21.3	8.7	47.1	4.8	1,308.6	5,205.2	13,858.3
1946	6,700.6	451.1	3,201.8	27.0	16.3	48.2	3.5	- 434.2	3,313.7	10,014.3
1947	6,259.2	369.3	3,102.6	27.5	15.1	57.5	3.7	5,264.4	8,840.1	15,099.3
1948	8,160.2	476.8	3,322.3	21.8	14.5	47.8	3.5	3,137.1	7,023.8	15,184.0
1949	8,697.2	1,558.1	3,303.5	22.4	19.2	53.2	4.7	3,441.8	8,402.9	17,100.1
1950	7,604.3	378.1	3,636.1	23.6	15.6	50.5	3.4	614.4	4,721.7	12,326.0
1951	3,502.0	657.6	4,028.7	23.6	18.0	46.2	3.6	2,993.2	7,770.9	11,272.9
Means:										
1914-45	10,344.5	1,116.5	2,524.0	14.9	9.9	40.2	5.3	2,917.3	6,628.1	16,972.6
1931-40	4,098.4	992.9	2,578.3	11.3	8.7	36.8	5.0	4,762.3	8,395.3	12,493.7
1946-51	6,820.6	648.5	3,432.5	24.3	16.4	50.6	3.7	2,502.8	6,678.8	13,499.4
1914-51	9,788.1	1,042.6	2,667.4	16.4	10.9	41.8	5.1	2,851.9	6,636.1	16,424.2

1/ Depletions are listed for the states in the Lower Colorado River Basin and the portion of Mexico in the Gila River drainage area. Undistributed depletions are the depletions by the Upper Colorado River Basin combined with depletions by the reservoirs on the main stream of the Colorado River.

APPENDIX

TABLES

OF

IRRIGATED ACREAGES

Table A-1

LOWER COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Lower Colorado River Basin 1/

	Agricultural area and number	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
A-1-LC	Springerville	5,402	5,402	5,402	5,425	5,425	5,425	5,425	5,425	5,425	5,425	5,402	5,402	5,402	5,402	5,402	5,402
A-2-LC	St. Johns	3,055	3,055	2,900	2,890	2,770	2,780	2,700	2,835	3,107	3,400	3,410	3,455	3,525	3,615	3,730	3,860
A-3-LC	Concho & Hay Hollow since 1947	212	212	212	212	212	312	312	312	312	312	312	312	312	312	312	162
A-4-LC	Silver Creek	5,477	5,197	5,177	5,177	5,177	5,477	5,477	5,577	5,427	5,427	5,427	5,427	5,377	5,377	5,327	5,327
A-5-LC	Woodruff	300	300	300	425	425	425	425	425	425	425	425	425	425	425	425	425
A-6-LC	Black Creek	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
A-7-LC	Holbrook	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,851	1,763	1,853	1,913	1,913
A-8-LC	Hopi, Ganado, and Leupp	145	145	145	145	289	289	390	390	382	388	378	730	984	1,438	1,114	886
A-9-LC	Moenkopi	380	418	428	428	428	428	428	428	428	428	1,143	732	824	943	793	793
A-1-C	Kanab Creek	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,089	2,119
A-2-C	Havasu Creek	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156
A-3-C	Hualpai Reservation & Meriwitica	115	115	110	110	110	110	110	110	110	110	110	110	110	110	110	110
A-4-C	Grand Wash	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
A-1-V	Short Creek	43	43	43	43	43	43	43	43	43	43	43	85	85	85	85	85
A-2-V	Littlefield	763	763	763	763	763	763	763	763	763	763	763	812	812	812	812	812
A-5-C	Davis Dam to Topock	2,386	2,386	856	856	856	1,017	870	860	860	850	734	634	634	634	239	239
A-1-BW	Big Sandy	2,348	2,348	2,348	2,473	2,598	2,598	2,598	2,573	2,593	2,593	2,593	2,593	2,593	2,618	2,618	2,568
A-2-BW	Santa Maria	1,605	1,605	1,605	1,605	1,605	1,605	1,355	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155
A-6-C	Colorado River Indian Reservation	458	590	723	2,354	1,762	2,710	4,032	2,717	3,037	3,910	4,635	5,283	5,731	5,406	5,348	5,501
A-6a-C	Ranegras Plain & Cibola Valley	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
A-7-C	North & South Gila Valleys	395	395	395	395	667	1,000	1,084	1,251	1,800	2,419	3,002	3,628	4,228	4,837	5,438	6,520
A-8-C	Yuma Valley	19,838	21,930	23,173	28,710	35,989	42,054	42,879	41,305	42,265	41,855	41,119	43,562	47,560	41,840	42,805	43,440
A-9-C	Yuma Mesa	0	0	0	0	0	0	0	0	0	0	0	674	924	1,066	1,248	1,370
A-1-G	Duncan Valley	4,080	4,056	4,056	4,056	4,056	3,960	4,032	3,936	3,936	3,739	885	1,882	4,224	4,406	4,507	4,646
A-2-G	Alpine	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
A-3-G	San Francisco River	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
A-4-G	Eagle Creek	516	516	516	516	516	516	516	516	516	516	516	516	516	516	516	516
A-5-G	Portal	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
A-6-G	San Simon Creek	498	996	1,992	2,492	1,694	1,200	1,200	1,200	1,106	1,106	796	600	600	600	600	395
A-7-G	Safford Valley	25,649	25,637	25,623	25,331	25,332	24,913	24,890	24,851	25,817	26,643	25,493	25,895	26,328	26,670	23,619	26,313
A-8-G	San Carlos Indian Reservation	1,870	1,323	1,036	1,010	2,000	1,990	2,036	2,075	1,236	1,764	1,335	1,003	1,028	100	248	248
A-9-G	Hereford Valley	313	338	338	338	338	338	338	338	338	754	754	754	754	754	150	150
A-10-G	Middle San Pedro River	5,186	5,304	5,304	5,354	5,304	5,295	5,295	5,294	4,121	3,691	3,691	3,691	3,691	3,691	2,267	2,267
A-11-G	Lower San Pedro River	1,880	1,880	1,880	1,880	1,880	1,880	1,880	1,880	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030
A-12-G	Coolidge Dam to Kelvin	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405
A-13-G	San Rafael Ranch	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
A-14-G	Santa Cruz County	1,676	1,774	1,872	2,009	2,132	2,248	2,499	3,067	3,165	3,979	4,772	3,959	3,126	2,087	1,411	1,158
A-15-G	Pima County	13,900	14,600	15,400	16,200	17,100	18,100	20,900	23,000	20,300	23,600	29,300	29,600	29,300	22,000	20,500	19,900
A-16-G	Pinal County	18,742	20,069	24,601	25,899	26,058	26,076	26,106	26,066	26,057	25,974	25,996	26,058	26,112	25,974	27,616	30,879
A-17-G	Black River	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
A-18-G	Fort Apache Indian Reservation	1,741	2,200	1,805	2,288	2,352	2,000	2,325	2,325	2,325	2,325	2,315	2,215	2,215	2,215	2,215	1,455
A-19-G	Cherry Creek	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157
A-20-G	Salt River Canyon to Roosevelt	75	75	75	75	75	75	75	75	75	75	75	75	75	75	22	17
A-21-G	Tonto Creek	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213
A-22-G	Verde River upstream from Camp Verde	6,139	5,903	6,470	6,422	6,186	5,647	5,747	5,423	6,483	6,471	7,047	7,314	7,586	7,853	7,816	8,209

Table A-1

LOWER COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Lower Colorado River Basin 1/

	Agricultural area and number	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
A-23-G	Middle Verde River	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
A-24-G	Fort McDowell Indian Reservation	102	50	94	136	136	136	136	136	136	136	136	136	136	136	136	136
A-25-G	Upper Agua Fria River	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310
A-26-G	Maricopa County upstream from Gillespie Dam	181,196	187,573	208,262	211,517	229,967	228,942	229,610	240,286	242,358	235,220	259,881	257,439	261,040	288,530	314,330	292,145
A-27-G	Gillespie Dam to Dome	3,024	3,024	3,024	3,024	3,024	4,524	4,424	2,724	2,384	8,724	15,224	14,854	15,454	15,794	16,994	10,681
	ARIZONA Total	317,205	327,918	354,624	368,254	394,965	402,572	408,596	417,057	417,211	422,946	457,593	459,736	471,504	486,204	508,696	486,588
C-1-C	Palo Verde District	30,700	30,700	30,700	30,700	30,700	30,750	30,718	27,376	29,134	30,024	30,957	33,604	30,208	30,208	30,208	32,333
C-1a-C	Misc. Areas, Davis Dam to Yuma Valley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C-2-C	Yuma Valley	5,369	5,927	6,310	7,773	9,681	11,230	11,671	11,085	11,705	11,415	12,081	12,341	11,652	10,026	10,895	11,096
	CALIFORNIA Total	36,069	36,627	37,010	38,473	40,381	41,980	42,389	38,461	40,839	41,439	43,038	45,945	41,860	40,234	41,103	43,429
N-1-V	Virgin River	1,799	1,799	1,799	1,799	1,799	1,799	1,799	1,799	1,799	1,799	1,799	1,844	1,844	1,844	1,844	1,844
N-2-V	Meadow Valley Wash	2,097	2,097	2,097	2,097	2,097	2,097	4,494	4,494	4,494	4,494	4,494	4,494	4,494	4,494	4,494	4,494
N-3-V	Muddy River	3,458	3,458	3,458	3,458	3,553	3,648	3,648	3,696	3,686	3,653	3,653	3,586	3,586	3,753	3,757	3,757
N-2-C	Hoover Dam to Davis Dam	115	115	115	115	115	115	115	115	115	115	45	45	45	45	45	45
	NEVADA Total	7,469	7,469	7,469	7,469	7,564	7,659	10,056	10,104	10,094	10,061	9,991	9,969	9,969	10,136	10,140	10,140
NM-2-LC	Zuni River	4,565	4,565	4,565	4,565	4,560	4,380	4,565	4,822	3,897	4,835	4,835	2,708	2,708	3,611	3,612	3,626
NM-3-LC	Puerco River	120	120	120	120	120	320	320	320	320	320	320	320	320	320	513	546
NM-1-G	Gila River upstream from Virden	3,770	3,770	3,770	3,770	3,770	4,450	4,150	4,150	4,050	4,050	4,550	5,100	5,900	5,900	5,900	5,900
NM-2-G	Virden Valley	1,963	1,916	1,902	1,904	1,905	1,905	1,905	1,905	1,911	960	519	960	1,911	2,391	2,861	2,861
NM-3-G	San Francisco River	3,105	3,105	3,105	3,105	3,105	3,105	2,972	2,972	2,972	2,972	2,972	2,972	2,972	2,972	2,972	2,972
	NEW MEXICO Total	13,523	13,476	13,462	13,464	13,460	14,160	13,912	14,169	13,150	13,137	13,196	12,060	13,811	15,194	15,858	15,905
U-1-C	Kanab Creek	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550
U-1-V	Virgin River	15,118	15,118	15,118	15,118	15,118	17,068	17,068	17,068	14,598	14,598	14,598	14,598	14,598	14,598	16,006	13,562
	UTAH Total	18,668	18,668	18,668	18,668	18,668	20,618	20,618	20,618	18,148	18,148	18,148	18,148	18,148	18,148	19,556	17,112
M-1-G	San Pedro River	616	622	618	615	611	607	604	600	596	593	589	585	582	578	574	571
M-2-G	Santa Cruz River	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405
	MEXICO Total	4,021	4,027	4,023	4,020	4,016	4,012	4,009	4,005	4,001	3,998	3,994	3,990	3,987	3,983	3,979	3,976
	LOWER BASIN TOTAL	396,955	408,185	435,256	450,348	479,054	491,001	499,580	504,414	503,443	509,729	545,960	549,848	559,279	573,899	599,332	577,150

1/ These acreages do not include farmsteads and other areas incidental to irrigation.
2/ Does not include the Imperial and Coachella Valleys in the Salton Sea drainage area.

Table A-1

LOWER COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Lower Colorado River Basin 1/

Agricultural area and number		1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
				ARIZONA														
A-1-LC	Springerville	5,402	5,402	5,597	5,492	5,492	5,492	5,492	5,492	5,502	5,492	5,457	5,457	5,417	5,417	5,325	5,325	5,335
A-2-LC	St. Johns	4,005	4,305	4,665	4,910	4,955	5,120	5,855	6,375	6,510	5,630	6,200	6,970	6,970	6,970	6,970	6,970	6,711
A-3-LC	Concho & Hay Hollow since 1947	162	177	212	312	312	312	312	312	312	262	142	132	50	38	36	34	32
A-4-LC	Silver Creek	5,452	5,237	5,522	5,437	5,382	5,846	5,817	5,922	5,642	5,897	5,762	5,797	5,847	5,897	5,902	6,232	6,479
A-5-LC	Woodruff	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425
A-6-LC	Black Creek	600	600	600	300	300	246	202	515	419	613	514	994	790	769	742	733	622
A-7-LC	Holbrook	1,788	1,788	1,788	1,788	1,788	2,291	2,230	2,161	2,228	2,153	2,013	2,023	2,023	1,964	1,964	1,964	1,914
A-8-LC	Hopi, Ganado, and Leupp	761	463	549	648	733	831	944	1,122	1,873	1,008	1,419	1,629	1,852	1,560	1,640	1,592	1,746
A-9-LC	Moenkopi	1,063	1,063	1,063	982	1,012	985	999	915	1,111	1,084	1,069	920	1,049	1,030	1,663	1,149	1,128
A-1-C	Kanab Creek	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131
A-2-C	Havasu Creek	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	169
A-3-C	Hualpai Reservation & Meriwitica	110	110	110	110	110	110	110	110	15	15	15	15	15	15	15	15	15
A-4-C	Grand Wash	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
A-1-V	Short Creek	85	85	85	85	85	85	85	85	95	95	95	105	105	105	105	105	105
A-2-V	Littlefield	812	812	812	812	812	812	812	812	795	795	795	795	705	705	715	725	690
A-5-C	Davis Dam to Topock	259	259	194	194	249	189	189	189	191	191	179	163	163	218	218	218	100
A-1-BW	Big Sandy	2,493	2,493	2,518	2,518	2,519	2,519	2,469	2,419	2,332	2,307	2,297	2,142	2,042	1,967	1,892	1,764	1,784
A-2-BW	Santa Maria	1,185	1,237	1,232	1,212	1,212	1,212	1,262	1,232	1,232	1,232	1,947	1,927	1,927	1,927	1,927	1,927	2,377
A-6-C	Colorado River Indian Reservation	6,253	6,278	2,951	3,782	3,734	3,872	4,142	5,421	3,755	4,224	4,230	3,971	4,900	5,296	5,370	6,893	7,137
A-6a-C	Ranegras Plain & Cibola Valley	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	109
A-7-C	North & South Gila Valleys	5,438	5,434	5,434	5,429	5,429	5,425	5,450	5,474	7,506	7,790	8,098	8,432	8,949	9,116	9,274	7,071	13,246
A-8-C	Yuma Valley	43,573	42,957	38,603	41,019	4,652	44,670	43,818	43,676	43,964	44,389	44,180	46,128	45,766	46,110	45,373	45,359	45,887
A-9-C	Yuma Mesa	1,405	1,427	1,447	1,411	1,378	1,375	1,376	1,409	1,412	1,494	1,468	1,484	1,480	1,636	1,546	1,619	5,344
A-1-G	Duncan Valley	4,694	4,877	4,978	5,165	5,352	5,515	5,472	5,472	5,256	2,818	2,515	5,472	5,472	5,472	5,165	4,694	3,742
A-2-G	Alpine	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
A-3-G	San Francisco River	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
A-4-G	Eagle Creek	516	516	516	516	516	516	516	516	516	516	516	516	516	516	516	516	516
A-5-G	Portal	65	0	0	0	0	0	0	0	0	0	0	0	0	24	44	44	44
A-6-G	San Simon Creek	300	300	300	300	300	300	300	450	350	370	510	535	510	605	690	865	1,000
A-7-G	Safford Valley	23,009	21,389	18,816	25,834	18,845	19,718	24,730	31,507	24,029	26,102	28,798	34,049	34,330	30,922	28,781	29,476	31,887
A-8-G	San Carlos Indian Reservation	218	218	310	301	354	328	288	456	506	565	553	1,114	2,004	351	398	1,090	832
A-9-G	Hereford Valley	150	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	750
A-10-G	Middle San Pedro River	2,282	2,539	1,935	1,886	2,027	2,061	2,457	2,655	3,163	3,257	3,455	3,312	3,376	3,440	3,391	3,386	3,445
A-11-G	Lower San Pedro River	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	990	925	965	1,055	1,055	1,105	1,105
A-12-G	Coolidge Dam to Kelvin	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524
A-13-G	San Rafael Ranch	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
A-14-G	Santa Cruz County	1,509	1,735	2,097	2,538	2,843	3,126	3,175	3,332	3,602	4,243	5,482	4,606	4,361	4,214	4,118	4,582	3,249
A-15-G	Pima County	20,100	16,200	11,700	12,100	13,000	14,400	20,600	20,700	20,750	20,750	20,950	21,550	22,150	22,650	23,042	23,108	16,680
A-16-G	Pinal County	66,415	59,450	54,285	62,617	58,042	82,678	93,936	120,337	96,916	101,196	127,191	173,216	185,697	172,096	163,756	147,044	130,128
A-17-G	Black River	150	150	150	150	150	150	150	150	150	130	130	130	130	130	130	130	130
A-18-G	Fort Apache Indian Reservation	1,455	2,488	2,033	1,973	2,278	2,278	2,333	1,080	1,256	1,426	1,306	1,853	1,556	1,976	1,943	795	1,226
A-19-G	Cherry Creek	157	157	157	157	157	157	157	157	157	151	151	151	151	151	151	151	151
A-20-G	Salt River Canyon to Roosevelt	17	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
A-21-G	Tonto Creek	1,213	1,213	1,213	1,213	1,208	478	478	478	478	478	478	1,113	1,113	1,113	1,113	1,113	1,113
A-22-G	Verde River upstream from Camp Verde	8,881	8,516	8,689	7,694	7,001	7,793	7,506	7,288	6,699	5,641	7,627	6,810	6,884	7,478	7,567	8,138	8,803

Table A-1

LOWER COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Lower Colorado River Basin 1/

Agricultural area and number		1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
		ARIZONA (Continued)																
A-23-G	Middle Verde River	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
A-24-G	Fort McDowell Indian Reservation	136	136	228	136	156	166	186	196	140	112	160	243	241	272	299	281	270
A-25-G	Upper Agua Fria River	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	1,375
A-26-G	Maricopa County upstream from Gillespie D	295,221	296,052	291,740	341,145	315,655	336,105	344,212	384,719	345,903	312,924	334,656	372,403	377,655	353,679	373,486	347,635	333,448
A-27-G	Gillespie Dam to Dome	14,478	15,948	15,478	14,038	14,377	15,824	17,947	19,173	19,734	20,440	21,394	22,371	24,024	22,643	23,060	22,240	23,018
	ARIZONA Total	527,288	517,702	493,718	559,895	525,106	578,676	611,698	687,998	620,190	591,481	647,403	744,114	765,846	724,183	734,343	690,749	667,827
		CALIFORNIA 2/																
C-1-C	Palo Verde District	26,038	26,194	21,701	21,117	21,543	24,964	28,781	29,075	27,305	30,209	34,351	36,342	40,706	37,977	39,555	41,666	44,804
C-1a-C	Misc. Areas, Davis Dam to Yuma Valley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	152
C-2-C	Yuma Valley	10,310	8,671	7,178	7,317	7,232	8,028	7,486	8,466	7,182	6,789	7,312	7,169	7,903	6,512	8,038	8,148	8,222
	CALIFORNIA Total	36,348	34,865	28,879	28,434	28,775	32,992	36,267	37,541	34,487	36,998	41,663	43,511	48,609	44,489	47,593	49,814	53,178
		NEVADA																
N-1-V	Virgin River	1,844	1,844	1,844	1,844	1,844	1,844	2,227	2,227	1,970	1,970	1,970	1,970	2,190	2,190	2,190	2,219	2,195
N-2-V	Meadow Valley Wash	3,945	3,945	3,945	3,945	3,945	3,945	2,356	1,694	1,633	2,108	1,505	1,700	2,000	2,500	3,000	3,790	4,760
N-3-V	Muddy River	3,710	3,710	3,710	2,641	2,598	2,788	3,026	3,216	3,358	3,079	3,050	2,965	3,157	3,252	3,347	3,350	3,714
N-2-C	Hoover Dam to Davis Dam	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	0
	NEVADA Total	9,544	9,544	9,544	8,475	8,432	8,622	7,654	6,982	7,006	7,202	6,570	6,680	7,392	7,987	8,582	9,404	10,669
		NEW MEXICO																
NM-2-LC	Zuni River	1,951	2,328	3,056	3,259	2,093	2,881	3,242	3,517	3,536	3,611	3,638	3,753	3,884	3,668	3,237	3,069	3,076
NM-3-LC	Puerco River	546	439	439	439	439	439	499	512	589	605	448	514	430	401	429	429	416
NM-1-G	Gila River upstream from Virden	5,900	5,900	5,900	5,900	6,145	7,566	7,416	7,441	7,411	7,411	7,411	7,451	7,451	7,451	7,451	7,501	7,325
NM-2-G	Virden Valley	2,861	2,861	2,861	2,861	2,861	2,861	2,765	2,765	2,568	1,426	1,215	2,765	2,765	2,765	2,660	2,472	2,280
NM-3-G	San Francisco River	2,972	2,942	2,942	2,942	2,942	2,942	2,942	2,932	2,932	2,997	2,932	2,857	2,857	2,842	2,842	2,842	2,991
	NEW MEXICO Total	14,230	14,470	15,198	15,401	14,480	16,689	16,864	17,167	17,036	16,050	15,644	17,340	17,387	17,127	16,619	16,313	16,088
		UTAH																
U-1-C	Kanab Creek	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,541
U-1-V	Virgin River	13,562	13,562	13,726	13,920	16,893	16,505	15,709	14,957	14,545	13,866	13,214	12,435	12,775	13,497	20,467	20,467	18,275
	UTAH Total	17,112	17,112	17,276	17,470	20,443	20,055	19,259	18,507	18,095	17,416	16,764	15,985	16,325	17,047	24,017	24,017	21,816
		MEXICO																
M-1-G	San Pedro River	567	600	598	581	589	586	533	578	550	571	587	540	513	576	572	569	565
M-2-G	Santa Cruz River	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405
	MEXICO Total	3,972	4,005	4,003	3,986	3,994	3,991	3,938	3,983	3,955	3,976	3,992	3,945	3,918	3,981	3,977	3,974	3,970
	LOWER BASIN TOTAL	608,494	597,698	568,618	633,661	601,230	661,025	695,680	772,178	700,769	673,123	732,036	831,575	859,477	814,819	835,131	794,271	773,548

1/ These acreages do not include farmsteads and other areas incidental to irrigation.
2/ Does not include the Imperial and Coachella Valleys in the Salton Sea drainage area.

Table A-1

LOWER COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Lower Colorado River Basin 1/

Agricultural area and number		1947	1948	1949	1950	1951	1914-45 Mean	1946-51 Mean	1914-51 Mean
A-1-LC	Springerville	5,295	5,250	5,200	5,150	5,100	5,433	5,222	5,399
A-2-LC	St. Johns	6,810	7,050	7,340	7,630	7,920	4,515	7,244	4,946
A-3-LC	Concho & Hay Hollow since 1947	1,712	1,674	1,639	1,619	1,604	233	1,380	414
A-4-LC	Silver Creek	6,585	6,310	6,315	6,335	6,385	5,545	6,401	5,680
A-5-LC	Woodruff	425	425	420	415	415	413	421	414
A-6-LC	Black Creek	469	445	507	374	254	579	445	558
A-7-LC	Holbrook	1,965	1,941	1,836	1,751	1,686	1,925	1,849	1,913
A-8-LC	Hopi, Ganado, and Leupp	1,473	1,718	1,512	871	192	839	1,252	905
A-9-LC	Moenkopi	1,220	893	1,086	1,095	1,235	831	1,109	875
A-1-C	Kanab Creek	2,131	2,090	2,060	2,030	1,979	2,111	2,070	2,105
A-2-C	Havasu Creek	160	150	194	238	208	156	187	161
A-3-C	Hualpai Reservation & Meriwitica	15	15	15	15	15	87	15	75
A-4-C	Grand Wash	55	55	55	55	55	55	55	55
A-1-V	Short Creek	105	105	105	105	105	75	105	79
A-2-V	Littlefield	655	545	520	515	490	781	569	747
A-5-C	Davis Dam to Topock	70	110	165	200	300	568	157	503
A-1-BW	Big Sandy	1,786	2,253	2,785	3,295	3,790	2,417	2,616	2,448
A-2-BW	Santa Maria	2,377	3,077	3,792	4,495	5,200	1,413	3,553	1,751
A-6-C	Colorado River Indian Reservation	8,194	9,346	10,771	22,069	27,368	4,040	14,148	5,636
A-6a-C	Ranegras Plain & Cibola Valley	109	109	499	699	1,289	10	469	83
A-7-C	North & South Gila Valleys	12,654	14,782	15,084	15,330	16,345	4,600	14,574	6,175
A-8-C	Yuma Valley	45,597	46,526	46,711	47,367	45,728	40,674	46,303	41,563
A-9-C	Yuma Mesa	6,618	8,547	8,394	9,229	10,321	895	8,076	2,029
A-1-G	Duncan Valley	4,296	4,243	5,059	4,243	5,011	4,339	4,432	4,354
A-2-G	Alpine	25	25	25	25	25	25	25	25
A-3-G	San Francisco River	292	292	292	292	292	292	292	292
A-4-G	Eagle Creek	516	516	516	516	516	516	516	516
A-5-G	Portal	44	44	35	20	9	38	33	37
A-6-G	San Simon Creek	1,030	1,959	2,396	2,045	2,435	752	1,811	919
A-7-G	Safford Valley	29,562	32,438	34,790	32,726	33,389	25,917	32,465	26,951
A-8-G	San Carlos Indian Reservation	245	739	433	512	458	917	536	857
A-9-G	Hereford Valley	800	810	880	880	885	320	834	401
A-10-G	Middle San Pedro River	3,287	2,831	2,871	2,658	2,658	3,565	2,958	3,469
A-11-G	Lower San Pedro River	1,105	1,230	1,625	2,050	2,610	1,240	1,621	1,300
A-12-G	Coolidge Dam to Kelvin	524	524	524	485	485	465	511	472
A-13-G	San Rafael Ranch	400	400	400	400	400	300	400	316
A-14-G	Santa Cruz County	3,461	3,734	4,273	3,214	6,821	3,025	4,130	3,200
A-15-G	Pima County	19,294	23,480	27,760	24,104	43,203	19,920	25,753	20,841
A-16-G	Pinal County	169,470	187,435	230,739	201,508	250,723	67,911	195,000	87,978
A-17-G	Black River	130	130	130	130	130	146	130	143
A-18-G	Fort Apache Indian Reservation	985	850	472	505	779	1,948	803	1,767
A-19-G	Cherry Creek	151	141	141	111	101	156	133	152
A-20-G	Salt River Canyon to Roosevelt	56	75	106	106	106	42	77	47
A-21-G	Tonto Creek	1,113	991	1,146	1,126	1,130	1,059	1,103	1,066
A-22-G	Verde River upstream from Camp Verde	9,408	11,988	15,626	19,136	24,451	7,091	14,902	8,325

Table A-1

LOWER COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Lower Colorado River Basin 1/

	Agricultural area and number	1947	1948	1949	1950	1951	1914-45 Mean	1946-51 Mean	1914-51 Mean
A-23-G	Middle Verde River	118	118	118	118	118	118	118	118
A-24-G	Fort McDowell Indian Reservation	244	261	152	375	453	159	293	181
A-25-G	Upper Agua Fria River	1,760	2,150	2,530	2,915	3,300	310	2,338	630
A-26-G	Maricopa County upstream from Gillespie Dam	373,937	410,514	422,575	397,270	486,136	290,359	403,980	308,299
A-27-G	Gillespie Dam to Dome	23,804	28,193	29,252	33,344	28,906	13,440	27,753	15,700
	ARIZONA Total	752,537	829,527	901,871	861,726	1,033,514	522,565	841,167	572,870
C-1-C	Palo Verde District	50,975	55,418	56,209	55,053	59,897	30,517	53,726	34,182
C-1a-C	Misc. Areas, Davis Dam to Yuma Valley	192	322	382	638	724	-	402	63
C-2-C	Yuma Valley	7,848	7,936	9,470	8,831	9,305	8,875	8,602	8,832
	CALIFORNIA Total	59,015	63,676	66,061	64,522	69,926	39,392	62,730	43,077
N-1-V	Virgin River	2,390	2,516	2,800	2,775	2,806	1,912	2,580	2,018
N-2-V	Meadow Valley Wash	4,870	4,980	5,090	5,200	5,310	3,227	5,035	3,513
N-3-V	Muddy River	3,675	3,825	3,985	3,890	4,025	3,399	3,852	3,471
N-2-C	Hoover Dam to Davis Dam	0	0	0	0	0	67	0	56
	NEVADA Total	10,935	11,321	11,875	11,865	12,141	8,605	11,467	9,058
NM-2-LC	Zuni River	3,499	3,867	3,884	3,871	3,836	3,661	3,672	3,662
NM-3-LC	Puerco River	466	465	465	465	465	379	457	392
NM-1-G	Gila River upstream from Virden	7,325	6,620	7,500	8,500	9,000	5,771	7,712	6,077
NM-2-G	Virden Valley	2,077	2,136	2,208	2,352	2,400	2,219	2,242	2,223
NM-3-G	San Francisco River	2,986	2,972	2,995	3,070	2,845	2,969	2,977	2,970
	NEW MEXICO Total	16,353	16,060	17,052	18,258	18,546	14,999	17,060	15,324
U-1-C	Kanab Creek	3,540	3,550	3,560	3,470	3,380	3,550	3,507	3,543
U-1-V	Virgin River	18,410	18,550	18,700	18,825	18,960	15,127	18,620	15,678
	UTAH Total	21,950	22,100	22,260	22,295	22,340	18,677	22,127	19,221
M-1-G	San Pedro River	564	557	551	555	555	583	558	579
M-2-G	Santa Cruz River	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405
	MEXICO Total	3,969	3,962	3,956	3,960	3,960	3,988	3,963	3,984
	LOWER BASIN TOTAL	864,759	946,646	1,023,075	982,626	1,160,427	608,226	958,514	663,534

1/ These acreages do not include farmsteads and other areas incidental to irrigation.
2/ Does not include the Imperial and Coachella Valleys in the Salton Sea drainage area.

Table A-2

LOWER COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Lower Colorado River Basin
Tabulated at Selected Points

Water Year	LEE FERRY TO HOOVER DAM															
	Little Colorado River Basin					Virgin River Basin 1/							Kanab Creek Basin and Miscellaneous Areas			Total Lee Ferry to Hoover Dam	Bill Williams River Basin
	Upstream From Grand Falls			Grand Falls to Mouth	Total	Upstream From Littlefield			Littlefield to Mouth 1/			Total					
	Arizona	New Mexico	Total	Arizona		Arizona	Utah	Total	Arizona	Nevada	Total		Arizona	Utah	Total		Arizona
1914	17,042	4,685	21,727	380	22,107	425	15,118	15,543	381	7,354	7,735	23,278	2,415	3,550	5,965	51,350	3,953
1915	16,762	4,685	21,447	418	21,865	425	15,118	15,543	381	7,354	7,735	23,278	2,415	3,550	5,965	51,108	3,953
1916	16,587	4,685	21,272	428	21,700	425	15,118	15,543	381	7,354	7,735	23,278	2,410	3,550	5,960	50,938	4,078
1917	16,725	4,685	21,410	428	21,838	425	15,118	15,543	381	7,354	7,735	23,278	2,410	3,550	5,960	51,076	4,078
1918	16,749	4,680	21,429	428	21,857	425	15,118	15,543	381	7,449	7,830	23,373	2,410	3,550	5,960	51,190	4,203
1919	17,159	4,700	21,859	428	22,287	425	17,068	17,493	381	7,544	7,925	25,418	2,410	3,550	5,960	53,665	4,203
1920	17,180	4,885	22,065	428	22,493	425	17,068	17,493	381	9,941	10,322	27,815	2,410	3,550	5,960	56,268	3,953
1921	17,415	5,142	22,557	428	22,985	425	17,068	17,493	381	9,989	10,370	27,863	2,410	3,550	5,960	56,808	3,728
1922	17,529	4,217	21,746	428	22,174	425	14,598	15,023	381	9,979	10,360	25,383	2,410	3,550	5,960	53,517	3,748
1923	17,828	5,155	22,983	428	23,411	425	14,598	15,023	381	9,946	10,327	25,350	2,410	3,550	5,960	54,721	3,748
1924	17,805	5,155	22,960	1,143	24,103	425	14,598	15,023	381	9,946	10,327	25,350	2,410	3,550	5,960	55,413	3,748
1925	18,202	3,028	21,230	732	21,962	491	14,598	15,089	406	9,924	10,330	25,419	2,410	3,550	5,960	53,341	3,748
1926	18,388	3,028	21,416	824	22,240	491	14,598	15,089	406	9,924	10,330	25,419	2,410	3,550	5,960	53,619	3,748
1927	19,022	3,931	22,953	943	23,896	491	14,598	15,089	406	10,091	10,497	25,586	2,410	3,550	5,960	55,442	3,773
1928	18,823	4,125	22,948	793	23,741	491	16,006	16,497	406	10,095	10,501	26,998	2,410	3,550	5,960	56,699	3,773
1929	18,575	4,172	22,747	793	23,540	491	13,562	14,053	406	10,095	10,501	24,554	2,440	3,550	5,990	54,084	3,723
1930	18,595	2,497	21,092	1,063	22,155	491	13,562	14,053	406	9,499	9,905	23,958	2,452	3,550	6,002	52,115	3,678
1931	18,397	2,767	21,164	1,063	22,227	491	13,562	14,053	406	9,499	9,905	23,958	2,452	3,550	6,002	52,187	3,730
1932	19,358	3,495	22,853	1,063	23,916	491	13,726	14,217	406	9,499	9,905	24,122	2,452	3,550	6,002	54,040	3,750
1933	19,312	3,698	23,010	982	23,992	491	13,920	14,411	406	8,430	8,836	23,247	2,452	3,550	6,002	53,241	3,730
1934	19,387	2,532	21,919	1,012	22,931	491	16,893	17,384	406	8,387	8,793	26,177	2,452	3,550	6,002	55,110	3,731
1935	20,563	3,320	23,883	985	24,868	491	16,505	16,996	406	8,577	8,983	25,979	2,452	3,550	6,002	56,849	3,731
1936	21,277	3,741	25,018	999	26,017	491	15,709	16,200	406	7,609	8,015	24,215	2,452	3,550	6,002	56,234	3,731
1937	22,324	4,029	26,353	915	27,268	491	14,957	15,448	406	6,937	7,343	22,791	2,452	3,550	6,002	56,061	3,651
1938	22,911	4,125	27,036	1,111	28,147	492	14,545	15,037	398	6,961	7,359	22,396	2,357	3,550	5,907	56,450	3,564
1939	21,480	4,216	25,696	1,084	26,780	492	13,866	14,358	398	7,157	7,555	21,913	2,357	3,550	5,907	54,600	3,539
1940	21,932	4,086	26,018	1,069	27,087	492	13,214	13,706	398	6,525	6,923	20,629	2,357	3,550	5,907	53,623	4,244
1941	23,427	4,267	27,694	920	28,614	502	12,435	12,937	398	6,635	7,033	19,970	2,357	3,550	5,907	54,491	4,069
1942	23,374	4,314	27,688	1,049	28,737	457	12,775	13,232	353	7,347	7,700	20,932	2,357	3,550	5,907	55,576	3,969
1943	23,040	4,069	27,109	1,030	28,139	457	13,497	13,954	353	7,942	8,295	22,249	2,357	3,550	5,907	56,295	3,894
1944	23,004	3,666	26,670	1,663	28,333	462	20,467	20,929	358	8,537	8,895	29,824	2,357	3,550	5,907	64,064	3,819
1945	23,275	3,498	26,773	1,149	27,922	467	20,467	20,934	363	9,359	9,722	30,656	2,357	3,550	5,907	64,485	3,691
1946	23,264	3,492	26,756	1,128	27,884	450	18,275	18,725	345	10,669	11,014	29,739	2,370	3,541	5,911	63,534	4,161
1947	24,734	3,965	28,699	1,220	29,919	433	18,410	18,843	327	10,935	11,262	30,105	2,361	3,540	5,901	65,925	4,163
1948	24,813	4,332	29,145	893	30,038	378	18,550	18,928	272	11,321	11,593	30,521	2,310	3,550	5,860	66,419	5,330
1949	24,769	4,349	29,118	1,086	30,204	365	18,700	19,065	260	11,875	12,135	31,200	2,324	3,560	5,884	67,288	6,577
1950	24,145	4,336	28,481	1,095	29,576	362	18,825	19,187	258	11,865	12,123	31,310	2,338	3,470	5,808	66,694	7,790
1951	23,556	4,301	27,857	1,235	29,092	350	18,960	19,310	245	12,141	12,386	31,696	2,257	3,380	5,637	66,425	8,990
Means:																	
1914-45	19,482	4,040	23,522	831	24,353	465	15,127	15,592	391	8,538	8,929	24,521	2,409	3,550	5,959	54,833	3,830
1946-51	24,214	4,129	28,343	1,109	29,452	390	18,620	19,010	284	11,467	11,751	30,761	2,327	3,507	5,834	66,047	6,169
1914-51	20,229	4,054	24,283	875	25,158	453	15,678	16,131	373	9,002	9,375	25,506	2,396	3,543	5,939	56,603	4,199

1/ Includes Muddy River and Meadow Valley Wash Basins.
2/ Does not include Imperial and Coachella Valleys in the Salton Sea drainage area.

Table A-2 – Con't

LOWER COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Lower Colorado River Basin Tabulated at Selected Points

Water Year	HOOVER DAM TO INTERNATIONAL BOUNDARY											TOTAL IN LOWER BASIN
	Gila River Basin						Areas Adjacent to Colorado River Between Hoover Dam and International Boundary 2/				Total Hoover Dam to International Boundary	
	Upstream From Gillespie Dam				Gillespie Dam to Dome	Total						
	Arizona	New Mexico	Mexico	Total	Arizona		Arizona	California 2/	Nevada	Total		
1914	266,498	8,838	4,021	279,357	3,024	282,381	23,087	36,069	115	59,271	345,605	396,955
1915	275,229	8,791	4,027	288,047	3,024	291,071	25,311	36,627	115	62,053	357,077	408,185
1916	302,259	8,777	4,023	315,059	3,024	318,083	25,157	37,010	115	62,282	384,318	435,256
1917	308,458	8,779	4,020	321,257	3,024	324,281	32,325	38,473	115	70,913	399,272	450,348
1918	328,061	8,780	4,016	340,857	3,024	343,881	39,284	40,381	115	79,780	427,864	479,054
1919	326,251	9,460	4,012	339,723	4,524	344,247	46,791	41,980	115	88,886	437,336	491,001
1920	330,520	9,027	4,009	343,556	4,424	347,980	48,875	42,389	115	91,379	443,312	499,580
1921	343,403	9,027	4,005	356,435	2,724	359,159	46,143	38,461	115	84,719	447,606	504,414
1922	341,934	8,933	4,001	354,868	2,384	357,252	47,972	40,839	115	88,926	449,926	503,443
1923	339,958	7,982	3,998	351,938	8,724	360,662	49,044	41,439	115	90,598	455,008	509,729
1924	366,957	8,041	3,994	378,992	15,224	394,216	49,500	43,038	45	92,583	490,547	545,960
1925	365,102	9,032	3,990	378,124	14,854	392,978	53,791	45,945	45	99,781	496,507	549,848
1926	370,696	10,783	3,987	385,466	15,454	400,920	59,087	41,860	45	100,992	505,660	559,279
1927	389,572	11,263	3,983	404,818	15,794	420,612	53,793	40,234	45	94,072	518,457	573,899
1928	409,918	11,733	3,979	425,630	16,994	442,624	55,088	41,103	45	96,236	542,633	599,332
1929	392,399	11,733	3,976	408,108	10,681	418,789	57,080	43,429	45	100,554	523,066	577,150
1930	429,187	11,733	3,972	444,892	14,478	459,370	56,938	36,348	45	93,331	556,379	608,494
1931	418,850	11,703	4,005	434,558	15,948	450,506	56,365	34,865	45	91,275	545,511	597,698
1932	402,061	11,703	4,003	417,767	15,498	433,265	48,639	28,879	45	77,563	514,578	568,618
1933	466,639	11,703	3,986	482,328	14,038	496,366	51,845	28,434	45	80,324	580,420	633,661
1934	430,798	11,948	3,994	446,740	14,377	461,117	52,452	28,775	45	81,272	546,120	601,230
1935	478,683	13,369	3,991	496,043	15,824	511,867	55,541	32,992	45	88,578	604,176	661,025
1936	509,410	13,123	3,938	526,471	17,947	544,418	54,985	36,267	45	91,297	639,446	695,680
1937	582,407	13,138	3,983	599,528	19,173	618,701	56,179	37,541	45	93,765	716,117	772,178
1938	512,785	12,911	3,955	529,651	19,734	549,385	56,838	34,487	45	91,370	644,319	700,769
1939	483,593	11,834	3,976	499,403	20,440	519,843	58,098	36,998	45	95,141	618,523	673,123
1940	537,352	11,558	3,992	552,902	21,394	574,296	58,165	41,663	45	99,873	678,413	732,036
1941	629,882	13,073	3,945	646,900	22,371	669,271	60,188	43,511	45	103,744	777,084	831,575
1942	648,995	13,073	3,918	665,986	24,024	690,010	61,268	48,609	45	109,922	803,901	859,477
1943	608,028	13,058	3,981	625,067	22,643	647,710	62,386	44,489	45	106,920	758,524	814,819
1944	617,829	12,953	3,977	634,759	23,060	657,819	61,791	47,593	45	109,429	771,067	835,131
1945	576,037	12,815	3,974	592,826	22,240	615,066	61,170	49,814	45	111,029	729,786	794,271
1946	541,268	12,596	3,970	557,834	23,018	580,852	71,823	53,178	0	125,001	710,014	773,548
1947	622,253	12,388	3,969	638,610	23,804	662,414	73,242	59,015	0	132,257	798,834	864,759
1948	687,918	11,728	3,962	703,608	28,193	731,801	79,420	63,676	0	143,096	880,227	946,646
1949	755,614	12,703	3,956	772,273	29,252	801,525	81,624	66,061	0	147,685	955,787	1,023,075
1950	697,500	13,922	3,960	715,382	33,344	748,726	94,894	64,522	0	159,416	915,932	982,626
1951	866,624	14,245	3,960	884,829	28,906	913,735	101,351	69,926	0	171,277	1,094,002	1,160,427
Means:												
1914-45	430,930	10,959	3,988	445,877	13,440	459,317	50,787	39,392	67	90,246	553,393	608,226
1946-51	695,194	12,931	3,963	712,088	27,753	739,841	83,727	62,730	0	146,457	892,467	958,514
1914-51	472,656	11,270	3,984	487,910	15,700	503,610	55,989	43,077	56	99,122	606,931	663,534

1/ Includes Muddy River and Meadow Valley Wash Basins.
2/ Does not include Imperial and Coachella Valleys in the Salton Sea drainage area.

Table A-3

COLORADO RIVER BASIN

Acreages Irrigated Within the Natural Drainage Area of the Colorado River Basin 1/

Unit: 1,000 Acres

Water Year	Upper Basin	Lower Basin	Total Colorado River Basin
1914	1,160	397	1,557
1915	1,200	408	1,608
1916	1,230	435	1,665
1917	1,260	450	1,710
1918	1,290	479	1,769
1919	1,320	491	1,811
1920	1,350	500	1,850
1921	1,370	504	1,874
1922	1,370	503	1,873
1923	1,370	510	1,880
1924	1,370	546	1,916
1925	1,370	550	1,920
1926	1,370	559	1,929
1927	1,370	574	1,944
1928	1,370	599	1,969
1929	1,370	577	1,947
1930	1,380	608	1,988
1931	1,380	598	1,978
1932	1,380	569	1,949
1933	1,380	634	2,014
1934	1,380	601	1,981
1935	1,380	661	2,041
1936	1,380	696	2,076
1937	1,380	772	2,152
1938	1,380	701	2,081
1939	1,380	673	2,053
1940	1,380	732	2,112
1941	1,380	832	2,212
1942	1,380	859	2,239
1943	1,380	815	2,195
1944	1,380	835	2,215
1945	1,380	794	2,174
1946	1,385	774	2,159
1947	1,385	865	2,250
1948	1,385	947	2,332
1949	1,385	1,023	2,408
1950	1,385	983	2,368
1951	1,385	1,160	2,545
Means:			
1914-45	1,351	608	1,959
1946-51	1,385	959	2,344
1914-51	1,356	664	2,020

1/ Includes that portion of Mexico in the Gila River drainage area only. Does not include acreages irrigated by transbasin exports such as the Imperial and Coachella Valleys in the Salton Sea drainage area in California.

Table A-4

IMPERIAL IRRIGATION DISTRICT,
CALIFORNIA

Year	Acreage Irrigated
1925	359,316
1926	369,633
1927	389,048
1928	406,943
1929	424,145
1930	439,260
1931	436,450
1932	399,053
1933	397,394
1934	396,535
1935	403,700
1936	424,202
1937	430,717
1938	416,180
1939	419,826
1940	416,709
1941	410,137
1942	384,616
1943	384,899
1944	385,335
1945	393,786
1946	410,716
1947	414,355
1948	427,850
1949	430,500
1950	429,863
1951	435,161
Means:	
1925-45	404,185
1946-51	424,741
1925-51	408,753

Table A-5

COACHELLA IRRIGATION DISTRICT,
CALIFORNIA

Year	Acreage Irrigated 1/
1950	11,100
1951	21,758

1/ Irrigated acreage receiving a full supply of water from the Coachella Canal. Some of the project lands received all or a supplemental supply from the canal from 1947 to 1950.