

UNITED STATES
DEPARTMENT OF THE INTERIOR
Cecil D. Andrus, Secretary

BUREAU OF RECLAMATION
R. Keith Higginson, Commissioner

LOWER COLORADO REGION
Manuel Lopez., Jr., Regional Director

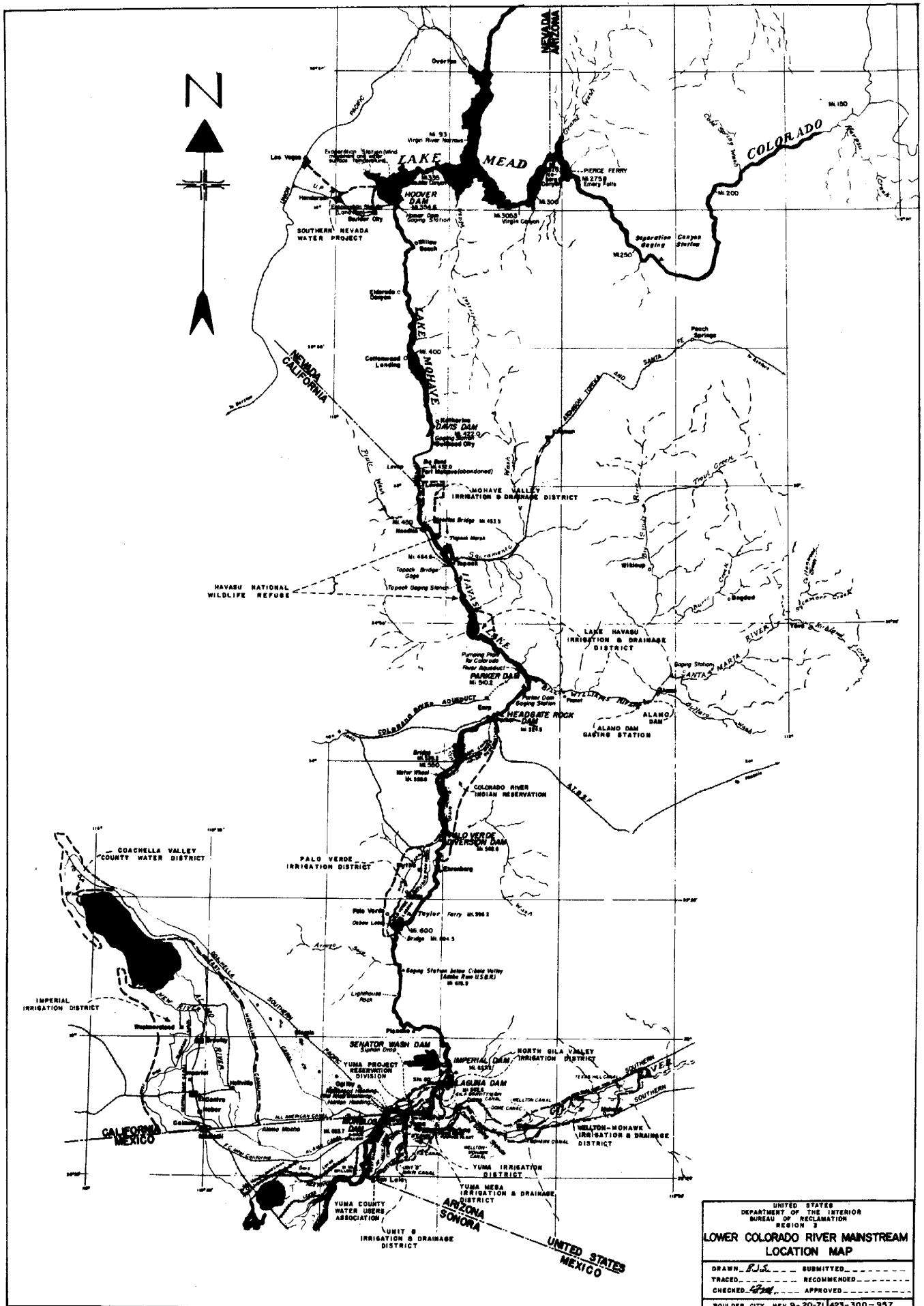
COMPILATION OF RECORDS IN
ACCORDANCE WITH ARTICLE V OF THE
DECREE OF THE SUPREME COURT OF
THE UNITED STATES IN
ARIZONA v. CALIFORNIA DATED MARCH 9, 1964
CALENDAR YEAR 1977

Division of Water and Land Operations
Boulder City, Nevada

October 15, 1978

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UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 REGION 3

**LOWER COLORADO RIVER MAINSTREAM
 LOCATION MAP**

DRAWN *R.S.* SUBMITTED
 TRACED *R.S.* RECOMMENDED
 CHECKED *R.S.* APPROVED

BOULDER CITY, NEV. 9-20-71 423-300-957

RECORDS OF RELEASES OF WATER THROUGH REGULATORY
STRUCTURES IN ACCORDANCE WITH ARTICLE V(A) OF THE
DECREE OF THE SUPREME COURT OF THE UNITED STATES
IN ARIZONA v. CALIFORNIA DATED MARCH 9, 1964

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CALENDAR YEAR 1977

The following tabulations for calendar year 1977 show final records of releases of water through regulatory structures controlled by the United States. At Hoover, Davis, Parker, Palo Verde, Imperial, and Laguna Dams, the records are furnished by the Geological Survey based on measurements at or below the structures.

The record of riverflow through Headgate Rock Dam was computed using the record of flow at the gaging station "Colorado River below Parker Dam, Arizona-California," and deducting from it the record of flow at the gaging station "Divisions for Colorado River Indian Reservation, near Parker, Arizona." The diversions are made at Headgate Rock Dam.

RELEASE OF WATER THROUGH REGULATORY STRUCTURES
CONTROLLED BY THE UNITED STATES

V(A)

CALENDAR YEAR 1977

WATER USER	(ACRE - FEET)												TOTALS
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Hoover Dam	250,400	608,300	854,100	988,000	760,600	720,100	892,500	875,900	469,300	428,400	462,600	562,800	7,873,000
Davis Dam	304,200	626,500	839,800	967,700	790,000	914,400	1,092,000	787,800	548,600	468,400	407,900	427,300	8,175,000
Parker Dam	257,600	498,500	583,000	811,600	651,900	760,300	956,200	687,600	460,300	347,800	288,100	308,500	6,711,000
Headgate Rock Dam 1/	250,900	451,200	624,600	754,400	593,000	683,600	872,500	613,100	406,500	315,500	263,000	287,700	6,116,000
Palo Verde Dam 2/	218,700	369,900	523,700	622,900	476,300	551,200	726,800	524,600	349,000	273,400	224,000	255,700	5,116,000
Imperial Dam 3/	38,640	23,660	19,750	22,690	44,920	25,440	24,230	57,430	50,640	16,890	19,340	21,590	365,200
Laguna Dam	41,140	24,960	20,970	23,440	45,560	27,840	23,510	57,080	49,920	17,630	20,260	21,790	374,100

1/ Colorado River below Parker Dam less diversions at Headgate Rock Dam.

2/ Measured through river gates at Palo Verde Dam.

3/ Includes diversion to Mittery Lake.

RECORDS OF DIVERSIONS, RETURN FLOWS, AND CONSUMPTIVE USE
IN ACCORDANCE WITH ARTICLE V(B) OF THE DECREE OF THE SUPREME
COURT OF THE UNITED STATES IN ARIZONA v. CALIFORNIA

DATED MARCH 9, 1964

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CALENDAR YEAR 1977

The following tabulations for calendar year 1977 show final records of diversions of water from the mainstream of the Colorado River, return flow of such water to the mainstream and consumptive use of such water by water user agencies which have contracts with the United States. The records were furnished by the Geological Survey, International Boundary and Water Commission, Bureau of Indian Affairs, Bureau of Reclamation, National Park Service, Fish and Wildlife Service, and water user agencies. Diversions to All-American Canal and Gila Gravity Main Canal at Imperial Dam were assigned to each user based on deliveries to each user at its turnout from the canal and a prorated amount of the conveyance loss from the canal. The loss proration was based on the quantity delivered to each user and the length of the canal through which it was carried.

The tables also show estimates of water use by water users other than those which have contracts with the United States. Records of quantities of water pumped by permittees under the Lower Colorado River Land Use Program and by others are incomplete or not available. Consequently, estimates of pumpage from the mainstream, from both the river and the underground, are shown for each State. Pumping from the underground was considered from only those wells located in the flood plain of the Colorado River between the toes of the slopes on either side of the valley. Supplemental sheets are enclosed which show the estimates of water pumped by each diverter between Davis Dam and the International Boundary.

The estimate of diversion by pumping during 1977 was made by two basic methods: (1) For most electric pumps, diversion was computed on a monthly basis from power records and a "kWh per acre-foot factor" that was determined by discharge measurements; (2) For pumps other than electric, a factor of 6 acre-feet per irrigated acre per year was used. Irrigated acres were determined by field inventory during the year made with the aid of aerial photographs which were taken during May - August 1976.

There are undetermined amounts of unmeasured return flow reaching the Colorado River by means of underground flow from aquifers underlying water use areas. A Task Force on Ground-Water Return Flows to the Lower Colorado River, consisting of State and Federal members, was organized during 1970 to provide advice and guidance to the Bureau of Reclamation and the Geological Survey which are jointly conducting a program to determine the location and amounts of such unmeasured return flows. When quantities are determined, it is anticipated that such amounts will be credited to the affected users and States in making the consumptive use computations.

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF ARIZONA

(VIB)

WATER USER	ACRE FEET												TOTALS
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Leke Mead National Recreation Area Diversion from Lake Mohave	8	11	12	19	16	28	40	35	31	24	16	11	251
													1
													1
Davis Dam and Government Camp Diversion at Davis Dam	14	16	15	16	18	23	26	27	19	14	12	11	211
													1
Mohave Valley Irrigation and Drainage District pumped from wells and inlet channel to Havasu National Wildlife Refuge	247	659	1,175	3,236	2,456	3,287	5,115	4,436	2,436	722	739	426	24,936
													1
Fort Mohave Indian Reservation Pumped from wells	0	0	0	4,273	1,374	2,357	1,126	1,957	1,983	1,211	1,877	1,291	17,449
													1
Havasu National Wildlife Refuge Inlet - NW 1/4, Sec. 33, T. 9 N., R. 22 E., G&SRM	0	0	7,557	978	2,055	5,068	4,122	5,284	5,441	4,516	1,142	2,100	38,283
													36
Less diversion from Inlet Channel pumped in SEPTEMBER, Sec. 24, T. 17 N., R. 22 W., G&SRM	0	0	112	330	246	329	522	449	243	65	68	36	2,400
													1
1 well - WENDELL, Sec. 15, T. 8 N., R. 23 E., G&SRM	0	0	12	2	3	8	7	8	9	7	2	3	61
	157	0	0	0	0	0	0	0	0	0	4,104	0	4,261
	-157	0	7,457	650	1,812	4,787	3,607	4,843	5,207	4,458	-3,028	2,067	31,683
Lake Havasu Irrigation and Drainage District pumped from wells	340	370	450	557	951	992	867	814	734	508	506	435	7,524
													1
Graham Water Utilities, Inc.	0	0	0	6	9	10	11	11	10	8	7	7	79
													1
Holiday Harbor Utilities Company	0	0	0	1	0	0	1	0	1	0	0	0	3
													1
Town of Parker 1 well - NW 1/4, Sec. 7, T. 9 N., R. 19 W., G&SRM	43	46	61	73	74	97	111	103	88	69	52	43	862
													1

(VIB)

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF ARIZONA

WATER USER	ACRE FEET Sheet 2 of 4												TOTALS
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Colorado River Indian Reservation Diversion at Headgate Rock Dam Pumped from 2 wells at Parker SW 1/4 Sec. 2, T. 9 N., R. 21 W., GASRM	6,748 2	47,249 3	58,212 4	57,230 5	58,930 5	76,702 6	83,704 7	74,465 7	53,781 6	36,280 3	25,064 4	20,800 2	595,165 54
4 Wells in Poston NW 1/4 Sec. 36, T. 8 N., R. 21 W., GASRM	3	4	4	5	6	7	8	8	7	6	4	3	65
3 pumps SW 1/4 Sec. 14, T. 5 N., R. 22 W., GASRM	217	3,129	864	706	1,673	1,760	2,528	1,564	936	672	41	683	14,713
3 pumps NE 1/4 Sec. 14, T. 4 N., R. 22 W., GASRM	250	388	689	684	824	541	336	431	634	674	682	449	6,782
1 well Hatch Center	14,867 -7,646	16,952 33,822	23,067 36,707	24,949 33,682	25,473 35,967	24,325 54,693	27,558 99,227	29,085 59,227	27,653 47,392	21,927 27,713	19,824 11,709	18,054 5,972	273,734 343,062
Cibola National Wildlife Refuge	146	818	806	1,117	1,031	1,302	1,289	1,588	691	1,145	875	570	11,376
Imperial National Wildlife Refuge 2 wells NW 1/4 Sec. 13, T. 5 S., R. 22 W., GASRM SW 1/4 Sec. 13, T. 5 S., R. 22 W., GASRM													155
Yuma Proving Ground Diversion at Imperial Dam	0	6	0	0	0	1	3	1	2	5	0	0	18
North Gila Valley Irrigation District Diversion at Imperial Dam	1,648 1,459	6,288 845	3,220 805	4,218 527	5,236 590	5,821 661	6,082 818	4,965 687	3,802 765	2,751 667	2,875 600	2,599 328	49,505 7,352
Karrer Ace Contractors Diversion at Imperial Dam	0	0	0	0	182	439	118	0	0	0	0	0	739
Kellor-Mohaw Irrigation and Drainage District Diversion at Imperial Dam	14,522 16,522 -4,000	34,090 16,713 17,377	38,873 10,584 28,289	48,454 17,544 30,910	43,055 16,868 26,187	52,563 17,604 34,959	59,681 18,076 41,605	46,484 17,818 28,666	39,446 17,377 22,069	26,001 18,302 7,699	24,056 16,713 7,343	17,211 18,107 -696	444,436 204,228 240,208

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF ARIZONA

WATER USER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Yuma Irrigation District	2,292	5,765	5,310	6,319	5,205	6,176	7,957	6,449	5,534	3,620	3,647	2,186	60,460
Diversions at Imperial Dam	712	1,095	1,111	1,323	1,427	1,405	1,774	1,808	2,649	918	820	705	15,707
Diversions from private wells													
Consumptive Use													
Yuma Mesa Irrigation and Drainage District	6,526	10,536	16,056	18,242	20,905	27,698	29,855	21,458	23,271	15,796	12,145	9,020	211,508
Diversions at Imperial Dam													
Consumptive Use													
Unit B Irrigation and Drainage District	1,092	1,828	3,003	3,160	3,653	4,788	4,855	3,503	3,744	2,891	2,547	1,662	36,726
Diversions at Imperial Dam													
Consumptive Use													
Returns from South Gila Valley	3,531	4,791	5,676	6,860	4,411	4,758	6,757	5,535	3,753	2,641	2,829	5,003	56,525
City of Yuma	686	845	1,005	1,233	1,273	1,573	1,722	1,457	1,295	1,113	927	769	13,898
Diversions at Imperial Dam	547	430	507	493	431	432	439	482	477	491	500	457	5,686
Consumptive Use	139	415	498	740	842	1,141	1,283	975	818	622	427	312	8,212
Yuma County Water Users' Association	13,008	24,209	26,121	27,750	25,142	36,011	41,022	21,707	19,883	17,667	11,526	9,928	273,974
Diversions at Imperial Dam	794	623	618	768	891	682	798	514	877	894	742	738	8,909
Pumped from wells	7,306	7,956	9,107	8,594	7,992	7,387	7,940	8,426	8,047	7,665	7,009	6,560	94,029
Consumptive Use	6,496	16,876	17,632	19,924	18,041	29,316	33,880	13,795	12,713	10,836	5,259	4,086	188,854
Cocopah Indian Reservation	5	0	209	96	113	84	181	93	151	29	0	10	971
Diversions at Imperial Dam	0	0	0	3	4	219	138	93	55	1	0	1	519
Pumped from wells													
Yuma Mesa Outlet Drain	4,366	3,818	4,140	3,846	3,650	3,878	3,658	2,539	2,834	2,836	2,897	2,430	40,892
Other Users Pumping from Colorado River and wells in Flood Plain	1,664	6,399	6,604	7,860	8,850	9,009	10,486	11,075	5,209	5,949	6,524	5,194	85,023
Davis Dam to International Boundary													1
Consumptive Use													

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977
STATE OF ARIZONA

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(ACRE - FEET) Sheet 4 of 4

WATER USER	1977												TOTALS	
	JANUARY	FEBRUARY	MARCH	APR. 1	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		
Arizona Totals	50,968	44,340	172,085	188,005	185,117	238,360	263,650	209,900	172,484	119,390	96,765	76,762	1,917,981	10/
Diversion	49,755	51,305	53,686	62,813	59,415	59,045	65,246	64,572	60,906	54,529	54,476	50,959	686,707	
Returns	1,213	93,035	118,399	125,192	125,702	179,315	198,404	145,328	111,578	64,861	42,289	25,803	1,231,274	10/
Consumptive Use														

NOTE: The term "Consumptive Use" in this tabulation means measured diversions including underground pumping, less measured return flow and less current estimated unmeasured return flow to the river.

1/ No surface returns.
 2/ Calculated from monthly power records.
 3/ Included in 208,622 acre-feet delivered to Mexico in excess of minimum treaty requirements pursuant to provisions of Minute No. 242.
 4/ Pumped from underground and unassigned to districts as returns include quantities of drainage from Yuma Mesa as well as from South Gila Valley.
 5/ Includes deliveries to the following water users who have contracts with the United States:

Contractor	Point of Delivery (acre-feet)
City of Yuma	14
Desert Lawn Memorial	130
Southern Pacific Company	12
Southern Pacific Company	16
Yuma Mesa Fruit Growers Association	10
County of Yuma, Arizona	12
Marine Corps Air Station, Department of the Navy	2,041
TOTAL	2,267

6/ Includes deliveries to the following users who have contracts with the United States:

University of Arizona	618
Casille Alec, Jr.	32

7/ Includes deliveries to the following water users who have contracts with the United States:

Yuma Union High School District	1,138
City of Yuma - Sauckler Park	109

8/ Returns include unknown quantities of drainage returns from Yuma Mesa Irrigation and Drainage District as well as from Yuma County Water Users' Association and Cocopah Indian Reservation.
 9/ Details on Arizona Supplemental Sheets 1-5.
 10/ The sum of the annual totals are 155 A.F. Greater than the sum of the monthly totals due to the nonavailability of the monthly diversions of Imperial National Wildlife Refuge.

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

V(B)

STATE OF ARIZONA

ACRE - FEET - Sheet 1 of 5

WATER USER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Clayton, Ralph													
2 pumps SW-SW ^{1/2} SE ^{1/4} , Sec. 34, T. 4 N., R. 22 W., GASRM	2	2	114	7	10	78	81	123	64	50	2	2	535 2
1 well SW-SW ^{1/2} SE ^{1/4} , Sec. 34, T. 4 N., R. 22 W., GASRM	0	0	1	1	2	19	1	4	2	2	1	1	34 2
Arkelian Farms													
2 pumps SE-SW ^{1/2} SE ^{1/4} , Sec. 16, T. 3 N., R. 22 W., GASRM	77	79	297	189	407	319	252	1,185	509	57	24	55	3,450 2
Sprall, A. Towery													
1 pump SE-SW ^{1/2} NE ^{1/4} , Sec. 21, T. 1 N., R. 23 W., GASRM													3,372
Cibola Valley Irrigation and Drainage District													
3 pumps SE-SE ^{1/2} SE ^{1/4} , Sec. 20, T. 1 N., R. 23 W., GASRM	301	1,690	1,668	2,310	2,131	2,694	2,665	3,284	1,431	2,369	1,809	1,178	23,530 2
Swan, Roz													1,623
Bishop, Louis													990
1 pump NW-SW ^{1/2} SE ^{1/4} , Sec. 31, T. 1 S., R. 23 W., GASRM													481
Martinez, Sam													78
2 pumps NW-NW ^{1/2} SE ^{1/4} , Sec. 1, T. 2 S., R. 24 W., GASRM													27,549
HLM Permittees													6,544
Davis Dam to Imperial													
Subtotals - Davis Dam to Imperial Dam	380	1,771	2,080	2,507	2,550	3,110	2,999	4,596	2,006	2,478	1,836	1,236	
	90	421	494	596	606	739	712	1,092	476	588	436	294	

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DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF ARIZONA

WATER USER	ACRE FEET												TOTALS
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Cameron Bros. 1 well SP1NE1SW1/4, Sec. 24, T. 6 S., R. 22 W., G&SRM	54	81	155	190	156	75	44	169	0	36	80	71	1,073 2/3
Vukosovich 2 wells SE1/4NE1/4, Sec. 24, T. 6 S., R. 22 W., G&SRM SW1/4SE1/4, Sec. 24, T. 6 S., R. 23 W., G&SRM	27	37	57	60	64	55	80	76	99	57	29	39	660 2/3
Stanford, Robert L. 1 well SW1/4SE1/4, Sec. 22, T. 6 S., R. 23 W., G&SRM	0	0	0	24	67	52	64	93	44	0	0	0	344 2/3
Bingham Cattle Company 1 well NE1/4SE1/4, Sec. 23, T. 6 S., R. 23 W., G&SRM	0	14	20	19	10	31	23	37	13	5	0	10	182 2/3
Comesal, Lee 1 well NE1/4NE1/4, Sec. 36, T. 9 S., R. 25 W., G&SRM	47	157	128	155	226	191	240	64	0	121	339	259	1,927 2/3
Brand, Wayne 1 well NE1/4NE1/4, Sec. 31, T. 9 S., R. 24 W., G&SRM	112	342	283	356	522	427	567	141	0	189	678	588	4,205 2/3
NE1/4NE1/4, Sec. 35, T. 9 S., R. 25 W., G&SRM													858
Sibley, Phil 1 well NE1/4NW1/4, Sec. 1, T. 10 S., R. 25 W., G&SRM	33	126	228	245	212	63	334	120	152	79	44	83	1,721 2/3
1 well NE1/4SE1/4, Sec. 2, T. 10 S., R. 25 W., G&SRM													1,086
1 well NW1/4SE1/4, Sec. 14, T. 10 S., R. 25 W., G&SRM	134	24	40	83	110	6	6	84	0	0	46	0	533 2/3
Daniel, A. T. 1 pump SW1/4NE1/4, Sec. 21, T. 10 S., R. 25 W., G&SRM													360
Cumzires, C. & J. 1 well NW1/4NE1/4, Sec. 26, T. 10 S., R. 25 W., G&SRM													960

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DIVERIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF ARIZONA

ACRE FEET Sheet 4 of 5

WATER USER	ACRE FEET												TOTALS	
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		
Barkley, J. 1 well NE1/4SW1/4, Sec. 35, T. 10 S., R. 25 W., G&SRW														360
Brown, Willis A. 1 well NE1/4NW1/4, Sec. 2, T. 11 S., R. 25 W., G&SRW	0	179	28	57	39	59	104	85	20	0	0	13	564 2/	
Hughes, Earl 1 well SW1/4SE1/4, Sec. 3 T. 11 S., R. 25 W., G&SRW	0	91	201	120	175	188	103	238	209	163	156	0	1,644 2/	
Nunnaley, Slade 1 well NE1/4SE1/4, Sec. 26, T. 16 S., R. 22 E., SEM	3	2	71	10	3	46	60	70	23	11	11	7	317 2/	
Curtis, Almon 1 pump SW1/4SE1/4, Sec. 29, T. 16 S., R. 22 E., SEM	0	0	0	10	0	0	4	15	4	4	0	0	37 2/	
Power, Bill 1 pump SW1/4NE1/4, Sec. 30, T. 16 S., R. 22 E., SEM													1,980	
Ribelin (F. Power) 1 well NW1/4NW1/4, Sec. 30, T. 16 S., R. 23 E., SEM													1,920	
Hall, Ansil 1 pump NW1/4NW1/4, Sec. 36, T. 16 S., R. 21 E., SEM													480	
Yucca Powerplant 2 wells NW1/4SW1/4, Sec. 36, T. 16 S., R. 21 E., SEM NE1/4NW1/4, Sec. 36, T. 16 S., R. 21 E., SEM													799	
Burrell 1 well NW1/4NW1/4, Sec. 33, T. 8 S., R. 24 W., G&SRW													192	

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DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977
STATE OF ARIZONA

ACRE FEET. Sheet 5 of 5

WATER USER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Ranch 220 Trust 284													
1 well	6	51	124	131	122	133	158	162	54	130	0	65	1,136 2/
SEASIDE, Sec. 19, T. 9 S., R. 24 W., G&SRM													
1 well	7	35	71	73	68	81	101	97	30	73	1	37	674 2/
NESE, Sec. 19, T. 9 S., R. 24 W., G&SRM													
1 well	6	32	63	62	59	71	84	86	25	62	0	31	581 2/
NWSE, Sec. 19, T. 9 S., R. 24 W., G&SRM													
Arizona Subtotals													
Imperial Dam to International Boundary	823	2,900	2,916	3,279	3,925	3,557	4,670	3,713	1,880	1,987	2,931	2,526	35,107
	371	1,307	1,314	1,478	1,769	1,603	2,105	1,674	847	896	1,321	1,138	15,823
Arizona Totals	1,664	6,399	6,804	7,860	8,850	9,009	10,486	11,075	5,209	5,949	6,524	5,194	85,023

1/ Calculated by assuming an annual diversion of 6 acre-feet per irrigated acre unless otherwise noted.

2/ Calculated from monthly power records and power-discharge measurements where available, and where power-discharge measurements were not available calculated from power-discharge rate.

3/ Total of items for which monthly distribution is shown.

4/ Total of items for which monthly distribution is not shown. Distributed according to monthly distribution of other users in immediate area.

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF CALIFORNIA

WATER USER	ACRE FEET												TOTALS
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Fort Mohave Indian Reservation Pumped from wells	0	0	0	3,066	992	1,702	813	1,413	1,432	874	1,356	932	12,600
City of Needles 4 wells	167	183	271	343	327	426	508	400	393	334	259	177	3,788
Wagon, Sec. 29, T. 9 N., R. 23 E., SEM	13	41	54	46	59	84	97	93	103	59	62	38	779
San Bernardino County 1 well	124	142	217	297	268	342	411	307	290	275	197	139	3,009
Metropolitan Water District of Southern California Diversion from Lake Havasu	1	1	1	1	1	2	2	2	1	1	1	1	15
Parker Dam and Government Camp Diversion at Parker Dam	57,895	97,844	114,763	110,509	116,597	113,018	118,001	113,969	89,786	117,528	113,706	116,982	1,280,598
Colorado River Indian Reservation 6/ 1 Well-Big River, Sec. 5, T. 1 S., R. 25 E., SEM	342	306	332	300	295	273	292	298	300	323	312	334	3,707
1 pump, SW 1/4 Sec. 12, T. 17 N., R. 22 W., SEM	57,553	97,538	114,431	110,209	116,302	112,745	117,709	113,671	89,486	117,205	113,394	116,648	1,276,891
1 pump, SW 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	11	12	16	18	19	25	28	26	22	18	13	11	219
1 pump, SW 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	1	1	1	1	2	2	2	2	2	1	1	1	17
1 pump, NE 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	10	11	15	17	17	23	26	24	20	17	12	10	202
1 pump, NE 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	0	1	1	1	1	1	1	2	1	1	0	0	10
1 pump, NE 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	14	50	76	156	80	237	244	204	166	56	67	48	1,398
1 pump, NE 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	28	81	59	54	110	135	140	111	136	83	92	44	1,073
1 pump, NE 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	0	107	25	146	162	179	180	82	215	113	142	134	1,485
1 pump, NE 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	71	83	80	169	181	189	230	113	370	198	196	167	2,047
1 pump, NE 1/4 Sec. 13, T. 3 S., R. 23 E., SEM	0	0	0	138	27	78	127	144	82	6	0	0	602

(VIB)

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF CALIFORNIA

-ACRE FEET. Sheet 2 of 3

WATER USER	1977												TOTALS
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
1 pump, SE ₁ SE ₁ SE ₁ , Sec. 11, T. 4 S., R. 23 E., SEM	0	71	57	0	0	102	132	61	53	0	0	0	476
1 pump, SE ₁ SE ₁ SE ₁ , Sec. 36, T. 4 S., R. 23 E., SEM	6	33	36	50	72	86	87	49	61	18	74	17	589
1 pump, NW ₁ SE ₁ NW ₁ , Sec. 6, T. 5 S., R. 24 E., SEM	0	0	0	127	9	112	94	104	54	0	0	0	500
1 pump, NW ₁ SE ₁ NW ₁ , Sec. 6, T. 5 S., R. 24 E., SEM	0	0	0	205	14	233	207	337	107	0	0	0	1,103
1 pump, NE ₁ SE ₁ SE ₁ , Sec. 7, T. 5 S., R. 24 E., SEM	0	0	208	164	20	465	520	389	107	0	0	0	1,873
1 pump, NE ₁ SE ₁ SE ₁ , Sec. 7, T. 5 S., R. 24 E., SEM	0	0	103	111	0	198	114	134	58	0	0	0	718
Palo Verde Irrigation District Diversion at Palo Verde Dam	40,376	59,412	77,317	96,021	96,120	110,838	127,162	97,725	70,486	51,123	50,444	45,270	922,294
City of Blythe 10 wells in Secs. 29, 32, & 33, T. 6 S., R. 23 E., SEM	35,973	30,721	37,343	40,192	46,107	43,824	45,381	51,175	45,005	38,177	35,614	37,720	487,232
	4,403	28,691	39,974	55,829	50,013	67,014	81,781	46,550	25,481	12,946	14,830	7,550	435,062
East Blythe County Water District Pumped for domestic use from 23 wells one in NE ₁ SW ₁ SE ₁ and other in NE ₁ SW ₁ SE ₁ of Sec. 33, T. 6 S., R. 23 E., SEM	134	139	159	256	230	377	532	348	342	223	148	126	3,016
Yuma Project Reservation Division Indian Unit Diversion at Imperial Dam	23	27	30	35	44	47	59	64	47	42	34	28	480
Yuma Project Reservation Division Bard Unit Diversion at Imperial Dam	1,190	3,389	2,746	2,832	3,531	4,777	6,043	3,908	2,259	1,265	1,260	951	34,151
Returns from Yuma Project Reservation Division Drains	1,020	3,684	3,248	3,692	3,979	6,645	6,911	4,978	3,535	2,311	2,056	1,795	43,854
>Returns 2	1,958	1,799	1,980	1,841	2,129	2,161	2,262	1,863	1,830	1,438	1,490	1,654	22,405

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF CALIFORNIA

(ACRE FEET) Sheet 3 of 3

WATER USER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Imperial Irrigation District Diversion at Imperial Dam	132,503	187,912	277,936	318,347	288,312	292,331	363,218	235,092	218,141	183,424	151,577	123,267	2,772,062 ^{1/}
Coachella Valley County Water District Diversion at Imperial Dam	26,337	31,971	38,533	48,936	53,906	55,739	61,827	52,388	47,147	36,519	30,026	25,306	508,635 ^{1/}
City of Winterhaven 1 well S.W. 1/4, Sec. 27, T. 16 S., R. 22 E., SEM													110 ^{3/}
Other users pumping from Colorado River and wells in flood plain Davis Dam to International Boundary ^{4/}	336	543	2,219	1,673	1,607	2,591	3,213	3,095	1,392	438	298	422	17,787 ^{1/}
California Totals	260,112 38,317 221,795	385,543 32,868 352,675	517,886 39,710 478,176	587,072 42,380 544,692	566,341 48,592 517,749	590,533 46,344 544,189	690,393 48,034 642,359	515,138 53,431 461,707	436,393 47,240 389,153	394,575 39,598 354,977	351,709 37,479 314,230	315,678 39,747 275,931	5,611,483 ^{5/} 514,140 5,097,343 ^{5/}

NOTE: The term "Consumptive Use" in this tabulation means measured diversions including underground pumping, less measured return flow and less current estimated unmeasured return flow to the river.

^{1/} No surface returns.
^{2/} Returns unassigned include unknown quantities of drainage from the Indian Unit and the Bard Unit in the Reservation Division but exclude seepage from the All-American Canal.
^{3/} Monthly distribution not available.
^{4/} Details on California Supplemental Sheets 1-3.
^{5/} The total is 110 acre-feet greater than the sum of monthly totals because of nonavailable monthly distribution of diversion by City of Winterhaven.
^{6/} Calculated from monthly power records and power-discharge measurement where available, and where power-discharge measurements were not available calculated from average power-discharge rate.
^{7/} Estimate based on measured regulatory reservoirs seepage returns less an estimated amount of phreatophyte use.

DIVERIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

(B)

STATE OF CALIFORNIA

WATER USER	ACRE FEET, Sheet 1 of 3												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Soto Brothers													840
1 well													
NW ¹ / ₄ SE ¹ / ₄ , Sec. 36, T. 11 N., R. 21 E., S ¹ / ₂ M													
Diversion													
Deason, Richard (Tri-State)													
1 well													1,200
NW ¹ / ₄ NE ¹ / ₄ , Sec. 31, T. 11 N., R. 22 E., S ¹ / ₂ M													
Diversion													
Lyle, R. C.													
1 well													66
SE ¹ / ₄ NE ¹ / ₄ , Sec. 16, T. 1 S., R. 24 E., S ¹ / ₂ M													
Diversion													
BIM Permitttees													107
Pumped for domestic use													
Subtotals - Davis Dam to Imperial Dam	31	142	167	201	205	250	241	369	161	200	147	99	2,213 ³ / ₄
Cole													636
1 well and 1 pump													
SW ¹ / ₄ SE ¹ / ₄ , Sec. 35, T. 15 S., R. 23 E., S ¹ / ₂ M													
Diversion													
Herryman, Harley													
1 well	3	0	87	118	69	89	159	246	121	43	0	0	937 ³ / ₄
Diversion													
Power, Pete													
2 wells													1,992
NE ¹ / ₄ NE ¹ / ₄ , Sec. 15, T. 16 S., R. 23 E., S ¹ / ₂ M													
Diversion													
NW ¹ / ₄ SW ¹ / ₄ , Sec. 14, T. 16 S., R. 23 E., S ¹ / ₂ M													
Diversion													
Mitchell, Hayder													
1 well	36	26	83	52	181	115	68	133	106	33	16	24	873 ³ / ₄
Diversion													
SE ¹ / ₄ SE ¹ / ₄ , Sec. 22, T. 16 S., R. 23 E., S ¹ / ₂ M													
Diversion													
Perez, F. (Slade)													
1 well	8	185	90	345	28	264	182	150	165	0	0	0	1,417 ³ / ₄
Diversion													
SE ¹ / ₄ NW ¹ / ₄ , Sec. 6, T. 6 S., R. 22 N., GAS ¹ / ₂ M													
Diversion													
Barrett (R. Hart)													
1 well	10	6	101	22	12	65	122	127	0	0	0	0	465 ³ / ₄
Diversion													
SE ¹ / ₄ NW ¹ / ₄ , Sec. 6, T. 6 S., R. 22 N., GAS ¹ / ₂ M													
Diversion													
Spencer, M. E.													
1 well													85E
SW ¹ / ₄ SE ¹ / ₄ , Sec. 9, T. 16 S., R. 23 E., S ¹ / ₂ M													
Diversion													

(VIB)

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF CALIFORNIA

ACRE FEET. Sheet 2 of 3

WATER USER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS 1/
Coley, Marvin I well SW4SE1/4, Sec. 18, T. 16 S., R. 23 E., S8M	70	0	102	63	187	68	161	103	0	0	0	0	774 3/4
Martin, Marvin I pump NE1/4NW1/4, Sec. 1, T. 8 S., R. 23 W., GASRM	0	0	0	0	0	6	5	6	7	0	0	0	24 3/4
I pump SW1/4NW1/4, Sec. 1, T. 8 S., R. 23 W., GASRM	0	0	105	94	0	68	143	136	64	0	0	4	614 3/4
Easterday, Anne I well SW1/4NW1/4, Sec. 1, T. 8 S., R. 23 W., GASRM	0	5	128	14	11	94	95	106	7	0	0	0	460 3/4
Harp, Robert I well SW1/4NW1/4, Sec. 2, T. 8 S., R. 23 W., GASRM	0	0	127	0	0	114	186	219	44	0	0	0	690 3/4
I well NE1/4SE1/4, Sec. 2, T. 8 S., R. 23 W., GASRM	13	48	85	76	100	151	214	162	101	0	0	0	950 3/4
I well NE1/4NW1/4, Sec. 12, T. 8 S., R. 23 W., GASRM	7	7	92	32	79	131	124	47	5	17	5	32	578 3/4
I well SE1/4NE1/4, Sec. 12, T. 8 S., R. 23 W., GASRM	0	0	56	1	0	51	39	71	39	2	0	0	259 3/4
Taylor Bros. I well NE1/4SE1/4, Sec. 2, T. 8 S., R. 23 W., GASRM	0	0	0	0	0	0	0	0	0	39	17	74	130 3/4
F. Smith I well NE1/4SE1/4, Sec. 11, T. 8 S., R. 23 W., GASRM													1,179
Dees, John F. I well SE1/4NE1/4, Sec. 12, T. 8 S., R. 23 W., GASRM	61	59	122	153	232	241	278	230	184	136	74	78	1,848 3/4
Easterday, Kenneth I well NW1/4SE1/4, Sec. 12, T. 8 S., R. 23 W., GASRM	0	0	101	37	47	101	126	116	11	1	47	49	638 3/4
Harp, Earl I well SW1/4SE1/4, Sec. 13, T. 8 S., R. 23 W., GASRM													1,458

(VIB)

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

STATE OF CALIFORNIA

ACRE FEET Sheet 3 of 3

WATER USER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Musgrave, (Barkley Co.)													660
1 well													
NE ¹ / ₄ SE ¹ / ₄ SW ¹ / ₄ , Sec. 19, T. 16 S., R. 23 E., S1M													
Hutchenson, John													12
1 pump													
SW ¹ / ₄ SE ¹ / ₄ SW ¹ / ₄ , Sec. 27, T. 16 S., R. 23 E., S1M													
Slade, William													
1 pump													
SW ¹ / ₄ NE ¹ / ₄ SW ¹ / ₄ , Sec. 29, T. 16 S., R. 23 E., S1M													
Hudson, C. A.													
1 pump													
NE ¹ / ₄ SW ¹ / ₄ SW ¹ / ₄ , Sec. 29, T. 16 S., R. 22 E., S1M													
G. & L. Farms (Cloud)													
1 well													
NE ¹ / ₄ SW ¹ / ₄ SW ¹ / ₄ , Sec. 29, T. 16 S., R. 22 E., S1M													
Subtotals - Imperial Dam to Boundary	208	336	1,373	1,035	994	1,603	1,988	1,915	861	271	159	261	11,004
	128	207	846	638	613	988	1,225	1,180	531	167	99	161	6,783
Total California	336	543	2,219	1,673	1,607	2,591	3,213	30,95	1,392	438	258	422	17,787

1/ Calculated by assuming an annual diversion of 6 acre-feet per irrigated acre unless otherwise noted.

2/ Record furnished by diverter.

3/ Calculated from monthly power records and power-discharge measurements where available, and where power-discharge measurements were not available calculated from average power-discharge rate.

4/ Total of items for which monthly distribution is shown.

5/ Total of items for which monthly distribution is not shown. Distributed according to monthly distribution of other users in immediate area.

(VIB)

DIVERSIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977
STATE OF NEVADA

WATER USER	ACRE FEET Sheet 1 of 2												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Boulder City Diversion at Hoover Dam	72	96	126	142	156	202	116	120	96	70	76	76	1,356
Diversion at Saddle Island, Lake Mead	68	105	92	163	158	288	449	373	311	271	162	105	2,545
Consumptive Use													
Lake Mead Recreation Area Diversion from Lake Mead	37	45	44	56	68	90	109	115	92	65	59	55	837
Diversion at Saddle Island, Lake Mead	2	2	3	5	3	7	10	9	4	5	3	2	55
Consumptive Use													
Basic Management, Inc. Diversion at Saddle Island, Lake Mead	528	481	468	483	554	702	809	889	784	662	471	502	7,353
Consumptive Use													
City of Henderson Diversion at Saddle Island, Lake Mead	9	11	15	18	260	382	441	387	306	262	77	9	2,195
Diversion at Saddle Island, Lake Mead	305	355	427	595	363	485	590	529	498	479	391	337	5,214
Consumptive Use													
Las Vegas Valley Water District Diversion at Saddle Island, Lake Mead	3,283	3,509	4,676	5,160	5,300	6,599	7,716	7,046	5,611	5,552	4,407	2,714	61,573
Consumptive Use													
Nevada State Department of Fish and Game Diversion at Saddle Island, Lake Mead	355	321	417	354	344	331	342	348	346	376	350	360	4,244
Return	0	0	416	354	343	330	341	347	346	376	350	360	4,239
Consumptive Use													
Johns-Marville Sales Corporation Diversion at Saddle Island, Lake Mead	39	34	33	35	37	31	34	38	44	43	43	47	458
Return													
Consumptive Use													
City of North Las Vegas Diversion at Saddle Island, Lake Mead	271	412	545	712	606	770	880	720	606	465	344	133	6,498
Return													
Consumptive Use													
Nellis Air Force Base Diversion at Saddle Island, Lake Mead	121	50	111	258	109	302	372	471	314	242	150	113	2,714
Return													
Consumptive Use													

DIVERIONS FROM MAINSTREAM — AVAILABLE RETURN FLOW
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 1977

(VIB)

STATE OF NEVADA

ACRE FEET Sheet 2 of 2

WATER USER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Ramelli, William O. Lot No. 3, Sec. 13, T. 22 S., R. 66 E., MDBM													2 1/2
Southern California Edison Company Diversion at Pumping Plant in Sec. 24, T. 32 S., R. 66 E., MDBM	1,376	757	841	1,254	1,375	1,436	1,440	1,529	1,457	1,110	1,129	611	14,327
Wibke, Armin T. All except W. 500' and E. 630' of Lot No. 1, Sec. 33, T. 32 S., R. 66 E., MDBM													1 1/2
Portonier, Warren, E. E2, Lot No. 2, Sec. 33, T. 32 S., R. 66 E., MDBM													42 1/2
Welles, John C. 1 Pump E2, Lot No. 2, Sec. 33, T. 32 S., R. 66 E., MDBM													8 1/2
Cavanagh, Milton E. 1 Pump W2, Lot No. 2, Sec. 33, T. 32 S., R. 66 E., MDBM													8 1/2
RETURN FLOWS LAS VEGAS WASH RETURN	3,142	2,722	3,108	2,351	2,550	2,268	2,224	2,229	2,754	2,600	2,820	3,253	36,021
Nevada Totals	6,466	6,240	7,818	9,231	9,419	11,627	13,308	12,574	10,434	9,522	7,664	5,066	109,434
	3,497	3,043	3,524	2,705	2,893	2,298	2,265	2,576	3,100	2,976	3,170	3,613	36,260
	2,969	3,197	4,294	6,526	6,526	9,029	10,743	9,998	7,334	6,546	4,494	1,453	73,174

NOTE: The term "Consumptive Use" in this tabulation means measured diversions including underground pumps, less measured return flow and less current estimated unmeasured return flow to the river.

- 1/ Delivered through the facilities of the Southern Nevada Water Project.
- 2/ No surface return.
- 3/ Delivered through the facilities of Basic Management, Inc.
- 4/ Reports annually.
- 5/ The monthly totals do not add to the sum of the annual total because of nonavailability of items footnoted 1.
- 6 Estimate based on percentage of Colorado River water used in Las Vegas Valley.

RECORDS OF RELEASES OF MAINSTREAM WATER PURSUANT TO ORDERS
BUT NOT DIVERTED BY PARTY ORDERING SAME AND QUANTITY OF SUCH
WATER DELIVERED TO MEXICO IN SATISFACTION OF MEXICAN TREATY
OR DIVERTED BY OTHERS IN ACCORDANCE WITH ARTICLE V(C) OF THE
DECREE OF THE SUPREME COURT OF THE UNITED STATES IN
ARIZONA v. CALIFORNIA DATED MARCH 9, 1964

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CALENDAR YEAR 1977

The following tabulations for calendar year 1977 show records of releases of mainstream water pursuant to orders therefore but not diverted by the party ordering the same, and the quantity of such water delivered to Mexico in satisfaction of the Mexican Treaty or diverted by others in satisfaction of decreed rights. Also shown are quantities of such rejected water delivered to Mexico in excess of Treaty requirements and quantities delivered to storage. The quantities delivered to storage were available to release for future use.

Water ordered but not diverted was analyzed daily for each diverter as the positive difference between the finally approved daily order and the mean daily delivery requested on the day the diversion was made. The monthly quantities shown on the tabulations are the sum of the daily positive quantities. Final approval of daily orders was given in advance of the delivery date by the amount of traveltime involved in conveying the water from the storage point to the diversion point on the mainstream. To the extent possible "water ordered but not diverted" was delivered to others in satisfaction of their rights. The quantities of such deliveries are shown on the tabulation.

Deliveries of water to Mexico in satisfaction of the Mexican Treaty were scheduled based on Mexico's daily orders. Releases from storage were scheduled in sufficient quantities which, when added to return flows, would meet Mexico's daily orders. Deliveries of water to Mexico in

satisfaction of the Treaty, therefore, were considered to have been made entirely from releases from storage and from return flows scheduled for that purpose and not from water ordered but not diverted by other Colorado River water users. Therefore, the tabulations show no "water ordered but not diverted" as being delivered to Mexico in satisfaction of the Treaty.

To date, no orders are received for diversions from the Colorado River in Nevada so no sheet is included for Nevada. The storage capacity of Lake Mead is so large in relation to the present daily diversions from the reservoir by Nevada that any "water ordered but not diverted" would be retained for future use and would have no significant effect on scheduling of daily operations of the reservoir.

RELEASES OF MAINSTREAM WATER PURSUANT TO ORDERS
BUT NOT DIVERTED BY PARTY ORDERING SAME
(VIC)

QUANTITY OF SUCH WATER DELIVERED TO MEXICO IN SATISFACTION OF MEXICAN TREATY OR DIVERTED BY OTHERS
AND
CALENDAR YEAR 1977
STATE OF ARIZONA

WATER USER	(ACRE - FEET)												TOTALS
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Colorado River Indian Reservation Division at Headgate Rock Dam	1,579	940	1,859	1,985	2,124	1,275	1,426	2,325	4,643	1,569	601	558	21,194
Ordered But Not Diverted Delivered to Mexico in Satisfaction of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted by Others	169	31	207	490	674	549	153	538	117	157	149	133	3,374
Delivered to Storage 2/ Delivered to Mexico in Excess of Treaty	1,410	909	1,652	1,495	1,450	726	1,273	1,166	4,526	1,412	452	498	16,962
Yuma Proving Ground U.S. Army Division at Imperial Dam 1/	0	0	0	0	0	0	0	821	0	0	0	37	858
Ordered But Not Diverted Delivered to Mexico in Satisfaction of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted by Others	0	0	0	0	0	0	0	0	0	0	0	0	0
Delivered to Storage 2/ Delivered to Mexico in Excess of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
North Gila Valley Irrigation District Division at Imperial Dam	885	579	926	994	1,842	809	887	1,785	468	880	998	908	11,961
Ordered But Not Diverted Delivered to Mexico in Satisfaction of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted by Others	64	65	190	115	339	87	734	789	79	365	484	117	3,428
Delivered to Storage 2/ Delivered to Mexico in Excess of Treaty	821	514	736	879	1,503	722	153	522	369	515	514	731	7,999
Harrer Act Contractors Gila Project Districts Division at Imperial Dam	0	0	0	0	0	0	0	474	0	0	0	50	534
Ordered But Not Diverted Delivered to Mexico in Satisfaction of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted by Others	0	0	0	0	0	0	0	0	0	0	0	0	0
Delivered to Storage 2/ Delivered to Mexico in Excess of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
Mellon-Nohaw: I. and D.D. Division at Imperial Dam	5,300	1,976	3,695	186	3,289	464	1,359	9,324	5,466	3,602	3,422	8,559	46,612
Ordered But Not Diverted Delivered to Mexico in Satisfaction of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted by Others	323	554	520	18	595	151	272	111	865	742	496	718	5,365
Delivered to Storage 2/ Delivered to Mexico in Excess of Treaty	4,977	1,422	3,175	168	2,694	313	1,087	1,198	4,601	2,860	2,926	7,432	32,823
Yuma Irrigation District	0	0	0	0	0	0	0	8,015	0	0	0	109	8,424
Ordered But Not Diverted Delivered to Mexico in Satisfaction of Treaty	813	754	948	405	1,031	866	425	1,115	819	1,372	1,081	1,287	10,916
Diverted by Others	36	125	238	0	204	49	399	359	365	599	512	81	2,967
Delivered to Storage 2/ Delivered to Mexico in Excess of Treaty	777	629	710	405	827	817	26	119	454	773	569	1,158	7,264
	0	0	0	0	0	0	0	537	0	0	0	46	685

V(C)

RELEASES OF MAINSTREAM WATER PURSUANT TO ORDERS
 BUT NOT DIVERTED BY PARTY ORDERING SAME
 AND
 QUANTITY OF SUCH WATER DELIVERED TO MEXICO IN SATISFACTION OF MEXICAN TREATY OR DIVERTED BY OTHERS
 CALENDAR YEAR 1977
 STATE OF ARIZONA

WATER USER	(ACRE - FEET)												TOTALS	
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		
Yuma Mesa I. and D.D. Diversion at Imperial Dam	1,813	1,033	1,725	1,736	1,476	607	690	4,119	2,880	1,134	1,299	2,588	2,588	21,460
Ordered But Not Diverted Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Satisfaction of Treaty	42	258	462	445	290	153	411	405	399	357	212	405	65	3,499
Diverted by Others	1,771	775	1,263	1,291	1,186	454	279	700	2,221	1,077	1,087	2,235	2,235	14,339
Delivered to Storage 2/ Delivered to Mexico in	0	0	0	0	0	0	0	3,334	0	0	0	0	0	3,622
Excess of Treaty	178	101	129	172	222	184	175	896	278	172	145	591	591	3,243
Ordered But Not Diverted Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Satisfaction of Treaty	0	28	0	101	30	28	66	97	60	49	44	91	44	594
Diverted by Others	178	73	129	71	192	156	109	121	218	123	101	409	409	1,860
Delivered to Storage 2/ Delivered to Mexico in	0	0	0	0	0	0	0	678	0	0	0	0	0	769
Excess of Treaty	69	0	0	0	90	0	0	83	166	0	0	89	89	497
Ordered But Not Diverted Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Satisfaction of Treaty	19	0	0	0	42	0	0	18	83	0	0	22	22	184
Diverted by Others	90	0	0	0	48	0	0	17	83	0	0	61	61	259
Delivered to Storage 2/ Delivered to Mexico in	0	0	0	0	0	0	0	48	0	0	0	0	0	54
Excess of Treaty	2,628	1,025	2,151	3,268	5,161	2,182	1,482	6,351	1,911	2,555	3,528	1,752	1,752	33,994
Ordered But Not Diverted Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Satisfaction of Treaty	715	751	1,097	2,542	2,434	1,659	1,202	1,369	953	1,573	1,777	435	435	16,507
Diverted by Others	1,913	274	1,024	726	2,727	523	280	1,368	958	982	1,751	1,204	1,204	13,716
Delivered to Storage 2/ Delivered to Mexico in	0	0	0	0	0	0	0	3,657	0	0	0	0	0	3,769
Excess of Treaty	1	0	15	9	19	4	5	21	12	4	4	2	2	92
Ordered But Not Diverted Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Satisfaction of Treaty	0	0	8	7	9	3	4	5	6	2	0	1	1	45
Diverted by Others	1	0	7	2	10	1	1	4	6	2	0	1	1	35
Delivered to Storage 2/ Delivered to Mexico in	0	0	0	0	0	0	0	12	0	0	0	0	0	12
Excess of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0	0

RELEASES OF MAINSTREAM WATER PURSUANT TO ORDERS
 BUT NOT DIVERTED BY PARTY ORDERING SAME

(VIC)

AND
 QUANTITY OF SUCH WATER DELIVERED TO MEXICO IN SATISFACTION OF MEXICAN TREATY OR DIVERTED BY OTHERS
 CALENDAR YEAR 1977
 STATE OF ARIZONA

WATER USER	(ACRE - FEET)												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Ordered But Not Diverted	13,266	6,408	11,448	8,755	15,294	6,391	6,419	26,539	16,383	11,588	11,074	16,444	149,989
Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
Satisfaction of Treaty	1,368	1,819	2,722	3,718	4,617	2,679	3,241	3,691	2,927	3,844	3,674	1,663	35,963
Delivered to Others	11,898	4,589	8,726	5,037	10,637	3,712	3,178	5,173	13,456	7,744	7,400	13,729	95,279
Delivered to Storage 2/	0	0	0	0	0	0	0	1,676	0	0	0	0	1,676
Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
Excess of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0

1/ No orders received.

2/ Available for future use.

RELEASES OF MAINSTREAM WATER PURSUANT TO ORDERS
BUT NOT DIVERTED BY PARTY ORDERING SAME

(VIC)

QUANTITY OF SUCH WATER DELIVERED TO MEXICO IN SATISFACTION OF MEXICAN TREATY OR DIVERTED BY OTHERS
AND
CALENDAR YEAR 1977
STATE OF CALIFORNIA

WATER USER	(ACRE - FEET)												TOTALS	
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		
Metropolitan Water District Division at Lake Havasu	0	156	2,927	3,491	1,203	982	0	3,631	0	272	294	0	0	13,156
	Ordered But Not Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Satisfaction of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
	Diverted by Others	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Storage $\frac{1}{2}$	0	156	2,927	3,491	1,203	982	0	0	272	294	0	0	13,156
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Excess of Treaty	0	0	0	0	0	0	0	0	0	0	0	0	0
Palo Verde Irrigation District Division at Palo Verde Diversion Dam	1,156	2,693	1,767	1,426	863	442	1,394	3,582	3,382	2,602	3,318	786	0	23,423
	Ordered But Not Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Satisfaction of Treaty	135	847	4,7	290	149	224	347	54	256	377	282	0	3,463
	Diverted by Others	1,033	1,846	1,360	1,136	293	1,170	996	3,328	2,346	2,941	450	0	17,667
	Delivered to Storage $\frac{1}{2}$	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Excess of Treaty	0	0	0	0	0	0	2,239	0	0	0	0	0	2,293
Yuma Project Reservation Division Bard Unit Division at Imperial Dam	989	325	692	437	597	149	379	1,144	519	381	497	713	0	6,522
	Ordered But Not Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Satisfaction of Treaty	617	221	585	346	309	302	236	215	185	264	312	0	3,644
	Diverted by Others	372	104	107	91	288	77	331	304	196	233	359	0	2,559
	Delivered to Storage $\frac{1}{2}$	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Excess of Treaty	0	0	0	0	0	0	577	0	0	0	0	0	619
Yuma Project Reservation Division Indian Unit Division at Imperial Dam	1,167	304	573	324	526	113	333	947	338	220	328	401	0	5,574
	Ordered But Not Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Satisfaction of Treaty	728	206	484	277	272	265	195	140	107	174	176	0	3,043
	Diverted by Others	439	96	89	67	254	68	274	198	113	154	202	0	2,030
	Delivered to Storage $\frac{1}{2}$	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Excess of Treaty	0	0	0	0	0	0	478	0	0	0	0	0	501
Imperial Irrigation District Division at Imperial Dam	2,567	579	2,171	682	1,555	2,132	0	35,340	6,510	3,126	0	6,833	0	61,895
	Ordered But Not Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Satisfaction of Treaty	302	250	557	216	0	0	480	2,382	0	0	0	0	4,221
	Diverted by Others	2,265	329	2,014	466	1,555	0	5,833	4,128	3,126	0	6,315	0	28,133
	Delivered to Storage $\frac{1}{2}$	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Excess of Treaty	0	0	0	0	0	0	29,027	0	0	0	0	0	29,511
Coachella Valley County Water District Division at Imperial Dam	416	972	972	0	972	0	0	5,472	1,805	972	139	1,110	0	12,830
	Ordered But Not Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Satisfaction of Treaty	0	436	179	0	321	0	2,166	577	246	113	79	0	4,117
	Diverted by Others	416	536	793	0	651	0	248	1,228	726	26	857	0	5,481
	Delivered to Storage $\frac{1}{2}$	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delivered to Mexico in	0	0	0	0	0	0	0	0	0	0	0	0	0
	Excess of Treaty	0	0	0	0	0	0	3,056	0	0	0	174	0	3,232

RELEASES OF MAINSTREAM WATER PURSUANT TO ORDERS
BUT NOT DIVERTED BY PARTY ORDERING SAME

(VIC)

QUANTITY OF SUCH WATER DELIVERED TO MEXICO IN SATISFACTION OF MEXICAN TREATY OR DIVERTED BY OTHERS
AND
CALENDAR YEAR 1977
STATE OF CALIFORNIA

WATER USER	(ACRE - FEET)												TOTALS
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Ordered But Not Diverted Delivered to Mexico in Satisfaction of Treaty	6,307	5,029	9,502	6,360	5,716	3,118	2,106	50,316	12,554	7,573	4,576	9,843	123,700
Diverted by Others	1,782	1,960	2,212	1,109	0	0	791	3,424	3,368	704	928	853	18,466
Delivered to Storage ^{1/}	4,525	3,069	7,290	5,251	4,719	3,548	1,315	11,513	9,186	6,779	3,648	8,183	69,086
Delivered to Mexico in Excess of Treaty	0	0	0	0	0	0	0	35,379	0	0	0	807	36,186

^{1/} Available for future use.

RECORDS OF DELIVERIES TO MEXICO OF WATER
IN SATISFACTION OF THE TREATY OF FEBRUARY 3, 1944,
AND WATER PASSING TO MEXICO IN EXCESS OF TREATY
REQUIREMENTS IN ACCORDANCE WITH ARTICLE V(D) OF THE
DECREE OF THE SUPREME COURT OF THE UNITED STATES
IN ARIZONA v. CALIFORNIA DATED MARCH 9, 1964

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CALENDAR YEAR 1977

DELIVERIES TO MEXICO IN SATISFACTION OF PART III OF 1944 TREATY
AND
WATER PASSING TO MEXICO IN EXCESS OF TREATY REQUIREMENTS
CALENDAR YEAR 1977
V(D)

WATER USER	ACRE FEET												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Deliveries to Mexico in Satisfaction of Treaty	90,800	107,013	179,977	227,809	148,960	116,742	169,436	161,331	90,799	57,560	56,371	137,200	1,500,000
Passing to Mexico in Excess of Treaty requirements	18,610	16,800	10,994	18,271	16,954	17,933	18,400	84,197	19,987	18,732	17,359	20,667	278,904 1/

1/ Includes 206,822 acre-feet delivered pursuant to Minute 242.

RECORDS OF DIVERSIONS OF WATER
FROM THE MAINSTREAM OF THE GILA AND SAN FRANCISCO RIVERS
AND THE CONSUMPTIVE USE OF SUCH WATER, FOR THE BENEFIT
OF THE GILA NATIONAL FOREST IN ACCORDANCE WITH ARTICLE V(E)
OF THE DECREE OF THE SUPREME COURT OF THE UNITED STATES
IN ARIZONA v. CALIFORNIA DATED MARCH 9, 1964

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CALENDAR YEAR 1977

DIVERIONS OF WATER FROM MAINSTREAM OF GILA AND SAN FRANCISCO RIVERS
 AND
 CONSUMPTIVE USE OF SUCH WATER FOR BENEFIT OF THE GILA NATIONAL FOREST
 CALENDAR YEAR 1977

(VIE)

WATER USER	(ACRE - FEET)												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
Gila River													0
													0
San Francisco River													0
													0