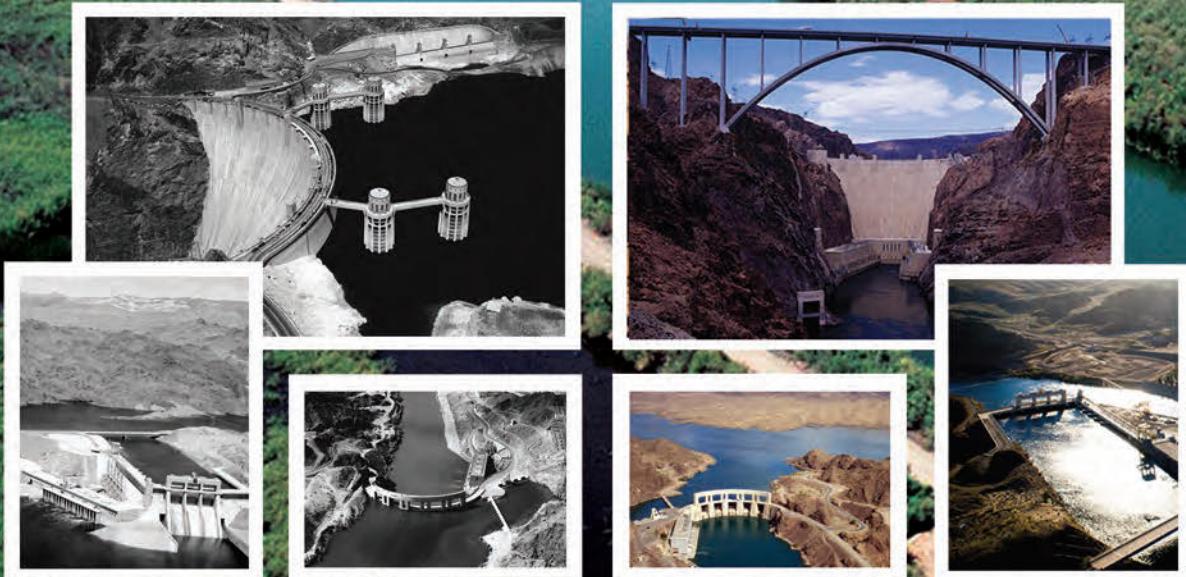


# RECLAMATION

*Managing Water in the West*

Calendar Year 2016

## Colorado River Accounting and Water Use Report: Arizona, California, and Nevada



U.S. Department of the Interior  
Bureau of Reclamation  
Lower Colorado Region  
Boulder Canyon Operations Office

May 2017

# **Colorado River Accounting and Water Use Report: Arizona, California, and Nevada**

**Calendar Year 2016**

Dedicated in loving memory of Lorraine Mary Coroneos  
July 31, 1962 – September 9, 2016  
Her spirit and her dedication to the Colorado River  
are etched in every page of the Water Accounting Report



**U.S. Department of the Interior  
Bureau of Reclamation  
Lower Colorado Region  
Boulder Canyon Operations Office**

**May 15, 2017**

# **Mission Statements**

## **Department of the Interior**

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

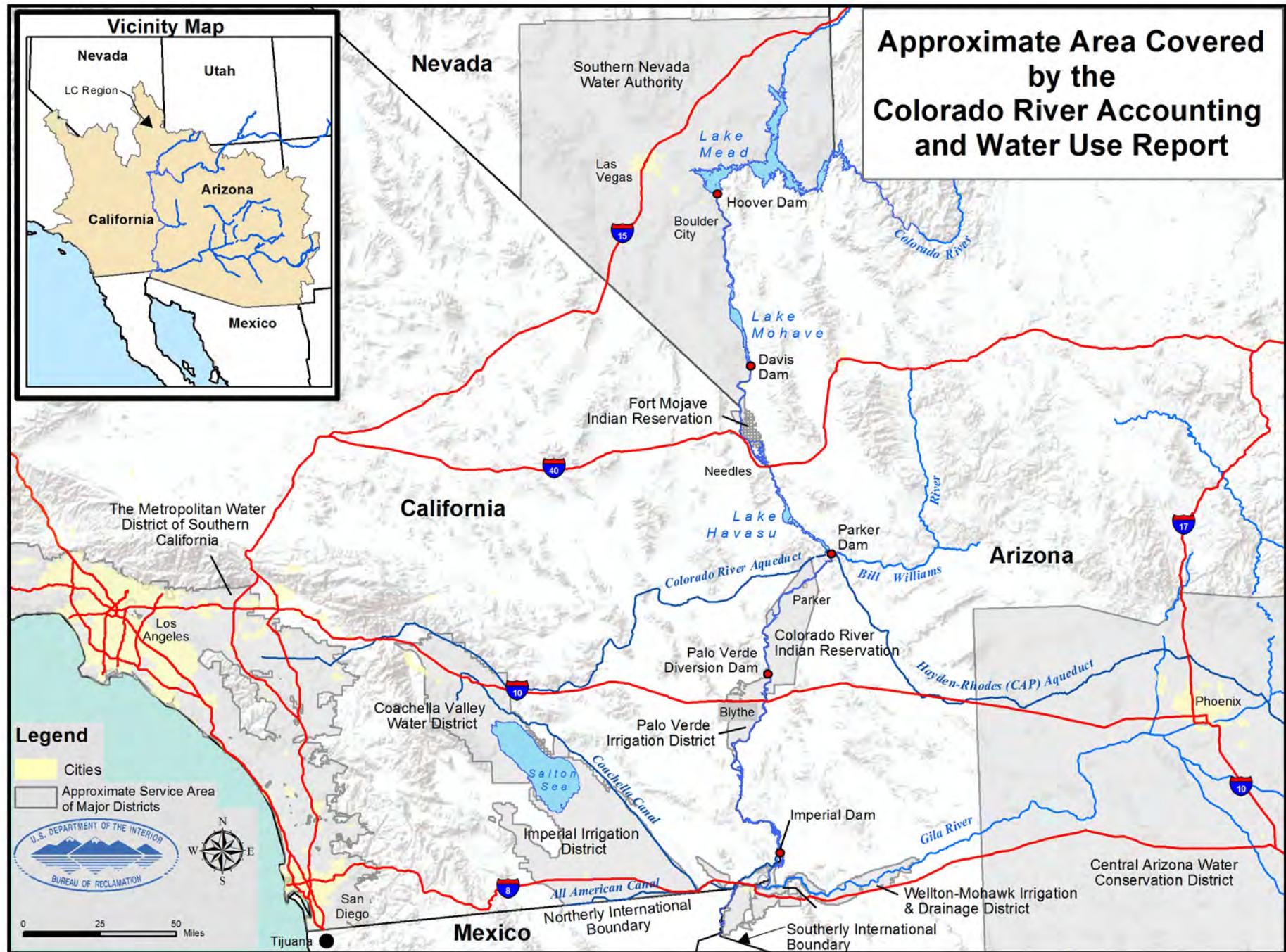
## **Bureau of Reclamation**

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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## Approximate Area Covered by the Colorado River Accounting and Water Use Report



## Acronyms and Abbreviated Terms

These acronyms and abbreviations are found in the text, footnotes, and headings within this document.

AAC	All-American Canal	ICUA	Intentionally Created Unused Apportionment
AACLP	All-American Canal Lining Project	I.D.D.	Irrigation and Drainage District
ADP	Arizona diesel pump	IBWC	International Boundary and Water Commission
ADW	Arizona diesel well	ICS	Intentionally Created Surplus
AEP	Arizona electric pump	IID	Imperial Irrigation District
AEW	Arizona electric well	IOPP	Inadvertent Overrun and Payback Policy
AF	acre-feet	ISG	Colorado River Interim Surplus Guidelines
AFY	acre-feet per year	IUS	Interstate Underground Storage credits
ALTSC	Accumulated Long Term Storage Credit	KAF	Thousand acre-feet
AOP	Annual Operating Plan	LCR	Lower Colorado River
ASLD	Arizona State Land Department	LCR MSCP	Lower Colorado River Multi-Species Conservation Program
Assn.	Association	LCWSP	Lower Colorado Water Supply Project
AWBA	Arizona Water Banking Authority	LHFO	Lake Havasu Field Office (BLM)
BLM	Bureau of Land Management	LTSC	Long Term Storage Credit
BOY	beginning-of-year	MAF	Million acre-feet
CAP	Central Arizona Project	MSCP	Multi-Species Conservation Program
CAWCD	Central Arizona Water Conservation District	MWD	The Metropolitan Water District of Southern California
CCLP	Coachella Canal Lining Project	MOD	Main Outlet Drain
CDP	California diesel pump	MODE	Main Outlet Drain Extension
CDW	California diesel well	M&I	Municipal and Industrial
CDEW	California diesel electric well	NWR	National Wildlife Refuge
CEP	California electric pump	NIB	Northerly International Boundary
CEW	California electric well	PSCP	Pilot System Conservation Program
CFR	Code of Federal Regulations	PPR	Present Perfected Right
CFS	Cubic Feet per Second	PVER	Palo Verde Ecological Reserve
CRBC	Colorado River Board of California	PVID	Palo Verde Irrigation District
CRCN	Colorado River Commission of Nevada	QSA	Quantification Settlement Agreement
CRIT	Colorado River Indian Tribes	SIB	Southerly International Boundary
CRWDA	Colorado River Water Delivery Agreement	SIRA	Storage and Interstate Release Agreement
CU	consumptive use	SDCWA	San Diego County Water Authority
CVWD	Coachella Valley Water District	SLRSP	San Luis Rey Settlement Parties
CY	calendar year	SNWA	Southern Nevada Water Authority
Diff.	difference	SCIA	System Conservation Implementation Agreement
Dist.	district	TCM	Thousand Cubic Meters
DPOC	drainage pump outlet channel	USGS	United States Geological Survey
DRA	Drought Response Agreement	YAO	Yuma Area Office (Reclamation)
ECICS	Extraordinary Conservation Intentionally Created Surplus	YDP	Yuma Desalting Plant
ET	evapotranspiration	YFO	Yuma Field Office (BLM)
EOY	end-of-year	YID	Yuma Irrigation District
FEIS	Final Environmental Impact Statement	YMIDD	Yuma Mesa Irrigation and Drainage District
FYIR	Fort Yuma Indian Reservation	YPRD	Yuma Project Reservation Division
GGMC	Gila Gravity Main Canal		

# Glossary

**Accumulated Long Term Storage Credits (ALTSC):** The cumulative amount of Long Term Storage Credits in a storing entity's long-term storage account.

**Bypass Drain:** The 53-mile-long, concrete-lined drain, which extends from the end of the Main Outlet Drain Extension near Morelos Dam to the Ciénega de Santa Clara (Ciénega) in Mexico. The Bypass Drain, constructed to assist the United States in meeting its obligations under Minute No. 242 of the International Boundary and Water Commission, conveys pumped drainage from the Wellton-Mohawk Irrigation and Drainage District and the Yuma area to the Ciénega.

**Colorado River Aquifer:** The aquifer underlying the Colorado River mainstream consisting of permeable, partly saturated sediments and sedimentary rocks that are hydraulically connected to the Colorado River so that water can move between the Colorado River and the aquifer in response to withdrawal of water from the aquifer or differences in water-level elevations between the Colorado River and the aquifer.

**Colorado River Basin:** All of the drainage area of the Colorado River System and all other territory within the United States of America to which the waters of the Colorado River System shall be beneficially applied.

**Colorado River System:** That portion of the Colorado River and its tributaries within the United States.

**Colorado River water:** Water in or withdrawn from the mainstream.

**Consuming State:** The Lower Division State in which Intentionally Created Unused Apportionment will be used.

**Consumptive use:** Diversions from the mainstream of the Colorado River less such Return Flow thereto as is available for consumptive use in the United States or in satisfaction of the Mexican Treaty Obligation. Consumptive use from the mainstream within a Lower Division state includes water drawn from the mainstream by underground pumping.

**Consolidated Decree:** The Consolidated Decree of the Supreme Court of the United States in *Arizona v. California et al.* 547 U.S. 150 (2006), or as it may be further modified.

**Domestic Use:** The use of water for household, stock, municipal, mining, milling, industrial, and other like purposes, but excluding the use of water for the generation of electric power.

**Drainage Pump Outlet Channel (DPOC):** The DPOC drainage system consists of 24 wells which provide groundwater drainage for the agricultural lands of the South Gila Valley. When this drainage water is returned to the Colorado River by DPOC Nos. 1, 2, 3, and 4, it is part of the water delivered to Mexico above Morelos Dam in accordance with the 1944 Mexican Water Treaty.

**Drought Response Program Actions:** The Bureau of Reclamation's Drought Response Program supports a proactive approach to drought. It provides assistance to water users for drought contingency planning, including consideration of climate change information and to take actions that will build long-term resiliency to drought.

**Entitlement:** An authorization to beneficially use Colorado River water pursuant to: (1) a right decreed by the Supreme Court, (2) a water delivery contract with the United States through the Secretary of the Interior, or (3) a Secretarial Reservation.

**Intentionally Created Unused Apportionment (ICUA):** Unused apportionment developed consistent with the laws of the Storing State which exists solely as a result of, and would not exist except for, implementing a Storage and Interstate Release Agreement.

**Inadvertent Overrun:** Colorado River water diverted, pumped or received by an entitlement holder within the Lower Division States that is in excess of the water user's entitlement or approved water order for that year.

**Lee Ferry:** The point in the mainstream of the Colorado River one mile below the mouth of the Paria River that divides the upper and lower basins.

**Live Storage:** That part of the total reservoir capacity from which water can be withdrawn by gravity. This capacity is equal to the total capacity less the dead pool capacity. Dead pool is the storage volume in a reservoir that cannot be drained by gravity through a dam's outlet works, spillway, or power plant intake structures and can only be pumped out.

**Lower Basin:** Those parts of the States of Arizona, California, Nevada, New Mexico, and Utah within and from which waters naturally drain into the Colorado River System below Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are beneficially served by water diverted from the Colorado River system below Lee Ferry.

**Lower Division States:** The States of Arizona, California, and Nevada.

**Long Term Storage Credits (LTSC):** Colorado River water that has been stored offstream pursuant to a Storage and Interstate Release Agreement and credited to a storers long-term storage account for use in future years.

**Main Outlet Drain (MOD):** A channel that conveys pumped groundwater drainage from the Wellton-Mohawk Valley to the Gila River near the confluence with the Colorado River.

**Main Outlet Drain Extension (MODE):** A 12-mile-long channel extending from the Main Outlet Drain that conveys drainage from the Wellton-Mohawk Irrigation and Drainage District and Yuma area to points above or below Morelos Dam. Under certain conditions it includes discharge from the DPOCs and YMC.

**Mainstream:** Mainstream means the main channel of the Colorado River downstream from Lee Ferry within the United States, including the reservoirs behind dams on the main channel, and Senator Wash Reservoir off the main channel.

**Mexican Treaty Obligation:** The United States obligation under the Treaty Between the United States of America and Mexico, "Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande" (1944 Mexican Water Treaty), signed February 3, 1944, including supplements to and obligations associated with Minutes of the International Boundary and Water Commission adopted pursuant to the 1944 Mexican Water Treaty.

**Offstream Storage:** Storage in a surface reservoir off of the mainstream or in a groundwater aquifer. Offstream storage includes indirect recharge when Colorado River water is exchanged for groundwater that otherwise would have been pumped and consumed.

**Pilot System Conservation Program:** A pilot program for funding the creation of Colorado River system water through voluntary water conservation and reductions in use.

**Protective and Regulatory Pumping Unit – 242 Wellfield:** A wellfield and delivery system located within a 5-mile-wide strip of land north of the United States/Mexico boundary in southwestern Arizona. The unit currently consists of 21 wells which intercept part of the groundwater underflow moving southward into Mexico from the Yuma Mesa in the United States. The groundwater recovered by the unit is collected in a conveyance system (the 242 Lateral) and is delivered to Mexico by the United States at the Southerly International Boundary as a portion of the Mexican Treaty Obligation.

**Regulatory Structures:** Hoover Dam, Davis Dam, Parker Dam, Headgate Rock Dam, Palo Verde Dam, Imperial Dam, Laguna Dam and all other dams and works on the mainstream controlled or operated by the United States regulating the flow of water in the mainstream or the diversion of water from the mainstream.

**Return Flow:** Mainstream water that has been diverted and which flows back to the Colorado River or the Colorado River Aquifer as measured or unmeasured flow, and is available for use in the United States or in satisfaction of the Mexican Treaty Obligation.

**Storage and Interstate Release Agreement (SIRA):** An agreement consistent with Title 43, CFR, Part 414 between the Secretary and authorized entities in two or more Lower Division States that addresses the details of: (1) Offstream storage of Colorado River water by a storing entity for future use within the Storing State; (2) Subsequent development of ICUA by the storing entity, consistent with the laws of the Storing State; (3) A request by the storing entity to the Secretary to release ICUA to the consuming entity; (4) Release of ICUA by the Secretary to the consuming entity; and (5) The inclusion of other entities that are determined by the Secretary and the storing entity and the consuming entity to be appropriate to the performance and enforcement of the agreement.

**Storing State:** A Lower Division State in which water is stored off the mainstream in accordance with a Storage and Interstate Release Agreement for future use in that State.

**Unused Apportionment:** Colorado River water within a Lower Division State's basic or surplus apportionment, or both, which is not otherwise put to beneficial consumptive use during that year within that State.

**Yuma Mesa Conduit:** A 14.6 mile long pipeline which collects water from multiple wellfields that are part of the overall groundwater recovery and river regulation program for the Yuma area. The groundwater recovered from these wellfields is collected into the conduit and discharged either to the Yuma Desalting Plant, the MODE, the Southerly International Boundary with Mexico via the Yuma Main Drain, or the Colorado River via the Yuma Mesa Conduit Outlet, a discharge point approximately 6 miles upstream of Morelos Dam.

## **DISCLAIMER:**

Terms contained within this Glossary are defined to provide general information and are not intended to change, modify, or interpret the laws, rules, decrees, and treaties from which they are originally derived.

**Table 1. Summary of Colorado River Water Accounting and Use Data, Calendar Year 2016. (All values are in acre-feet except as noted.)**

Lower Division States Consumptive Use					TOTAL
Arizona					2,612,833
California					4,381,101
Nevada					238,326
<b>Total Lower Division States Consumptive Use</b>					<b>7,232,260</b>
<b>Mexico</b>					
Total Deliveries to Mexico in Satisfaction of Treaty Requirements					1,500,000
Delivery of Water Deferred Pursuant to Section III.1 of IBWC Minute No. 319					0
To Mexico in Excess of Treaty Requirements					9,230
<b>Accountable Deliveries to Mexico</b>					<b>1,509,230</b>
<b>Total Consumptive Use - Lower Division States and Mexico<sup>1</sup></b>					<b>8,741,490</b>
<b>Water Bypassed Pursuant to IBWC Minute No. 242</b>					<b>150,191</b>
<b>Reservoir Contents - At Year's End (Thousands of Acre-Feet)</b>					
Live Storage in Lake Powell					11,797
Live Storage in Lake Mead					10,079
<b>Live Storage - Lake Powell plus Lake Mead</b>					<b>21,876</b>
Percentage of Live Storage - Lake Powell					48.5%
Percentage of Live Storage - Lake Mead					38.6%
<b>Percentage of Live Storage - Lake Powell plus Lake Mead</b>					<b>43.4%</b>
<b>Total System Storage<sup>2</sup></b>					<b>29,451</b>
<b>Percentage of Total System Storage</b>					<b>49.4%</b>
<b>Interstate Water Banking</b>			BOY Balance	Storage <sup>3</sup>	Recovered
Water Stored in Arizona by the AWBA for the Benefit of SNWA, NV			601,041	0	0
Water Stored in California by the MWD for the Benefit of SNWA, NV			330,225	0	0
<b>Total Water Stored for the Benefit of SNWA, NV</b>			<b>931,266</b>	<b>0</b>	<b>0</b>
<b>Lower Colorado Water Supply Project Use<sup>4</sup></b>			Non-Federal	Federal	Total
				6,907	265
					7,172
<b>Intentionally Created Surplus<sup>5</sup></b>			BOY Balance	Creation	Reductions
Arizona			103,050	0	0
California			97,791	18,733	1,458
Nevada			511,023	25,030	4,491
<b>Total - Lower Division States</b>			<b>711,864</b>	<b>43,763</b>	<b>5,949</b>
					<b>749,678</b>

**Footnotes:**

<sup>1</sup> The sum of Total Lower Division States Consumptive Use and Accountable Deliveries to Mexico.

<sup>2</sup> Total EOY live system storage. This includes the Upper Basin reservoirs Powell, Navajo, Crystal, Morrow Point, Blue Mesa, Flaming Gorge, Fontenelle, and Lower Basin reservoirs Mead, Mohave, and Havasu. Based on total live system storage capacity of 59,626,000 AF.

<sup>3</sup> The net volume of water stored by the storing entity during the reporting year and available for delivery to the storing entity in a future year.

<sup>4</sup> Pumpage of Lower Colorado Water Supply Project wellfield to offset certain Colorado River water uses in California.

<sup>5</sup> ICS creation amounts are provisional until verified by Reclamation. Reductions include system assessment, IOPP payback, delivery, and evaporation.

**Table 2. Monthly Storage Contents of the Colorado River System Reservoirs, Calendar Year 2016. (Values in thousand acre-feet except as noted.)**

	2015 EOY Balance	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	CHANGE
<b>End of Month Live Storage<sup>1</sup></b>														
Lake Powell	11,827	11,427	11,224	11,019	11,014	12,123	13,764	13,576	13,091	12,824	12,678	12,313	11,797	-30
Percentage of Lake Powell Live Storage <sup>2</sup>	48.6%	47.0%	46.1%	45.3%	45.3%	49.8%	56.6%	55.8%	53.8%	52.7%	52.1%	50.6%	48.5%	0%
Lake Mead	10,087	10,318	10,360	10,048	9,693	9,504	9,330	9,419	9,615	9,620	9,710	9,727	10,079	-8
Percentage of Lake Mead Live Storage <sup>3</sup>	38.6%	39.5%	39.7%	38.5%	37.1%	36.4%	35.7%	36.1%	36.8%	36.8%	37.2%	37.2%	38.6%	0%
<b>Total Live Storage - Lake Powell and Lake Mead</b>	<b>21,914</b>	<b>21,745</b>	<b>21,584</b>	<b>21,067</b>	<b>20,707</b>	<b>21,627</b>	<b>23,094</b>	<b>22,995</b>	<b>22,706</b>	<b>22,444</b>	<b>22,388</b>	<b>22,040</b>	<b>21,876</b>	<b>-38</b>
<b>Total Percent of Live Storage - Lake Powell and Lake Mead</b>	<b>43.4%</b>	<b>43.1%</b>	<b>42.8%</b>	<b>41.8%</b>	<b>41.1%</b>	<b>42.9%</b>	<b>45.8%</b>	<b>45.6%</b>	<b>45.0%</b>	<b>44.5%</b>	<b>44.4%</b>	<b>43.7%</b>	<b>43.4%</b>	<b>0%</b>
Lake Mohave	1,585	1,651	1,645	1,703	1,746	1,701	1,741	1,719	1,671	1,627	1,482	1,620	1,653	68
Lake Havasu	560	554	552	569	597	581	596	600	590	579	559	549	573	13
<b>Reservoir Storage in the Lower Basin<sup>4</sup></b>	<b>12,232</b>	<b>12,523</b>	<b>12,557</b>	<b>12,320</b>	<b>12,036</b>	<b>11,786</b>	<b>11,667</b>	<b>11,738</b>	<b>11,876</b>	<b>11,826</b>	<b>11,751</b>	<b>11,896</b>	<b>12,305</b>	<b>73</b>
<b>Percentage of Live Storage in the Lower Basin<sup>5</sup></b>	<b>42.8%</b>	<b>43.9%</b>	<b>44.0%</b>	<b>43.2%</b>	<b>42.2%</b>	<b>41.3%</b>	<b>40.9%</b>	<b>41.1%</b>	<b>41.6%</b>	<b>41.4%</b>	<b>41.2%</b>	<b>41.7%</b>	<b>43.1%</b>	<b>0%</b>
<b>Lower Basin Storage plus Lake Powell<sup>6</sup></b>	<b>24,059</b>	<b>23,950</b>	<b>23,781</b>	<b>23,339</b>	<b>23,050</b>	<b>23,909</b>	<b>25,431</b>	<b>25,314</b>	<b>24,967</b>	<b>24,650</b>	<b>24,429</b>	<b>24,209</b>	<b>24,102</b>	<b>43</b>
<b>Percentage of Live Storage, Lower Basin plus Lake Powell<sup>7</sup></b>	<b>45.5%</b>	<b>45.3%</b>	<b>45.0%</b>	<b>44.1%</b>	<b>43.6%</b>	<b>45.2%</b>	<b>48.1%</b>	<b>47.9%</b>	<b>47.2%</b>	<b>46.6%</b>	<b>46.2%</b>	<b>45.8%</b>	<b>45.6%</b>	<b>0%</b>
<b>Total System Storage<sup>8</sup></b>	<b>29,630</b>	<b>29,394</b>	<b>29,146</b>	<b>28,775</b>	<b>28,626</b>	<b>29,825</b>	<b>31,446</b>	<b>31,183</b>	<b>30,669</b>	<b>30,186</b>	<b>29,873</b>	<b>29,635</b>	<b>29,451</b>	<b>-179</b>
<b>Percentage of Total System Storage<sup>9</sup></b>	<b>49.7%</b>	<b>49.3%</b>	<b>48.9%</b>	<b>48.3%</b>	<b>48.0%</b>	<b>50.0%</b>	<b>52.7%</b>	<b>52.3%</b>	<b>51.4%</b>	<b>50.6%</b>	<b>50.1%</b>	<b>49.7%</b>	<b>49.4%</b>	<b>0%</b>

**Footnotes:**

<sup>1</sup> Actual values may differ from the displayed values due to rounding and being displayed to the nearest thousand acre-feet.

<sup>2</sup> Percentage of total live storage capacity available in Lake Powell. Based on total live storage capacity of 24,322,000 AF.

<sup>3</sup> Percentage of total live storage capacity available in Lake Mead. Based on total live storage capacity of 26,120,000 AF.

<sup>4</sup> The sum of end-of-month storage in reservoirs Mead, Mohave, and Havasu.

<sup>5</sup> The percentage of available live storage capacity held in the Lower Basin (Lakes Mead, Mohave and Havasu). Based on total live storage capacity of 28,549,000 AF.

<sup>6</sup> The sum of end-of-month storage in Lake Powell (Upper Basin) and Lakes Mead, Mohave and Havasu (Lower Basin).

<sup>7</sup> The percentage of available total live storage capacity held in Lake Powell (Upper Basin) and Lakes Mead, Mohave, and Havasu (Lower Basin). Based on total live storage capacity of 52,871,000 AF.

<sup>8</sup> Total end-of-month system storage; includes Reclamation reservoirs in the Upper and Lower Basins of the Colorado River system.

<sup>9</sup> The percentage of total end-of-month system storage. This includes the Upper Basin Lakes Powell, Navajo, Crystal, Morrow Point, Blue Mesa, Flaming Gorge, Fontenelle, and Lower Basin Lakes Mead, Mohave, and Havasu. Based on total live system storage capacity of 59,626,000 AF.

## **COMPILATION OF RECORDS IN ACCORDANCE WITH ARTICLE V OF THE CONSOLIDATED DECREE OF THE UNITED STATES SUPREME COURT IN ARIZONA v. CALIFORNIA, 547 U.S. 150 (2006)**

In accordance with Article V of the Consolidated Decree of the United States Supreme Court in *Arizona v. California*, 547 U.S. 150 (2006) (Consolidated Decree):

“The United States shall prepare and maintain, or provide for the preparation and maintenance of, and shall make available, annually and at such shorter intervals as the Secretary of the Interior shall deem necessary or advisable, for inspection by interested persons at all reasonable times and at a reasonable place or places, complete, detailed and accurate records of:

- (A) Releases of water through regulatory structures controlled by the United States;
- (B) Diversions of water from the mainstream, return flow of such water to the stream as is available for consumptive use in the United States or in satisfaction of the Mexican Treaty obligation, and consumptive use of such water. These quantities shall be stated separately as to each diverter from the mainstream, each point of diversion, and each of the States of Arizona, California and Nevada;

(C) Releases of mainstream water pursuant to orders therefor 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 rights decreed herein. These quantities shall be stated separately as to each diverter from the mainstream, each point of diversion, and each of the States of Arizona, California and Nevada;

(D) Deliveries to Mexico of water in satisfaction of the obligations of Part III of the Treaty of February 3, 1944, and, separately stated, water passing to Mexico in excess of treaty requirements;

(E) 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.”

This *Calendar Year 2016 Colorado River Accounting and Water Use Report, Arizona, California, and Nevada* presents the records compiled pursuant to the Consolidated Decree for Calendar Year 2016. Copies of this and previous years’ reports may be found on the Bureau of Reclamation’s (Reclamation) website at:  
[www.usbr.gov/lc/region/g4000/wtracct.html](http://www.usbr.gov/lc/region/g4000/wtracct.html).

## **ARTICLE V(A): RECORDS OF RELEASES OF WATER THROUGH REGULATORY STRUCTURES CONTROLLED BY THE UNITED STATES**

In accordance with Article V(A) of the Consolidated Decree, Table 3 documents records of releases of Colorado River water through Glen Canyon, Hoover, Davis, Parker, Palo Verde, Imperial and Laguna Dams. Records of releases through Glen Canyon and Hoover Dams are provided by Reclamation. Records of releases through Davis, Parker, Palo Verde, Imperial and Laguna Dams are provided by the United States Geological Survey (USGS) and are based upon measurements at or downstream of the dams.

The record of river flow through Headgate Rock Dam is computed using the record of flow at USGS gaging station 09247520

"Colorado River below Parker Dam, Arizona-California," and deducting from it the record of flow at the USGS gaging station 09428500 "Diversions for Colorado River Indian Reservation Main Canal near Parker, Arizona" measured at Headgate Rock Dam.

The record of flow through Imperial Dam is computed as the sum of releases through the Dam, plus water delivered to Mittry Lake and the Laguna Division Conservation Area. Flow through the Dam does not include diversions into the All-American Canal (AAC) and the Gila Gravity Main Canal (GGMC).

**Table 3. Releases of Water Through Regulatory Structures Controlled by the United States, Calendar Year 2016. (Values are in acre-feet.)**

STRUCTURE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Glen Canyon Dam	857,357	700,168	693,899	665,222	700,244	799,927	950,233	899,572	698,892	600,526	750,415	898,336	9,214,791
Hoover Dam	661,581	699,173	1,007,590	1,055,443	886,661	919,940	831,067	700,785	702,468	517,573	751,467	542,250	9,275,998
Davis Dam	602,600	710,900	957,400	1,013,000	939,000	883,300	868,600	760,600	765,400	689,000	608,000	510,400	9,308,200
Parker Dam	319,200	536,600	698,000	694,600	663,100	643,500	609,700	574,400	498,700	468,600	385,300	303,100	6,394,800
Headgate Rock Dam	304,990	495,590	642,080	638,470	597,940	577,910	541,350	516,270	451,650	432,390	357,130	274,190	5,829,960
Palo Verde Diversion Dam	318,700	453,900	586,500	588,900	456,400	459,600	440,100	416,900	378,300	384,500	334,100	267,400	5,085,300
Imperial Dam	19,410	14,960	18,620	22,320	17,900	18,600	20,170	32,970	18,340	14,670	18,150	38,700	254,810
GGMC Diversion for Mittry Lake	566	648	863	781	758	738	720	742	712	729	639	588	8,484
GGMC Diversion for Laguna Division Conservation Area	6,540	6,118	6,540	6,329	6,540	6,329	6,540	6,540	6,117	2,740	6,329	6,540	73,202
Sum of Imperial Dam, Mittry, and Laguna	26,516	21,726	26,023	29,430	25,198	25,667	27,430	40,252	25,169	18,139	25,118	45,828	336,496
Laguna Dam	26,690	22,750	25,700	27,520	25,290	22,900	24,050	31,390	22,540	15,080	20,230	39,760	303,900

## **ARTICLE V(B): RECORDS OF DIVERSIONS, RETURN FLOWS AND CONSUMPTIVE USE**

In accordance with Article V(B) of the Consolidated Decree, Tables 4 through 6 document the final records of diversions of water from the mainstream of the Colorado River, return flow to the mainstream, and the consumptive use of such water within the Lower Division States of Arizona, California, and Nevada.

The tabulations, based upon records furnished by Reclamation, the United States Geological Survey (USGS), the International Boundary and Water Commission, water users, or other agencies, document quantities of water drawn by surface diversion from the mainstream of the Colorado River, pumped directly from the mainstream, or pumped from wells in the Colorado River aquifer.

There are a number of smaller entities for which diversions are reported annually by either the USGS or by the water user. For those diversions reported by the USGS, the USGS verifies the crops being grown and uses evapotranspiration methodologies to estimate the crop consumptive use; the USGS then applies irrigation efficiency coefficients to derive the estimated diversions.

For each water user, this tabulation reports the user's total diversion, measured return flow, estimated unmeasured return flow, and consumptive use. Unmeasured returns are computed by multiplying a water user's diversion by an unmeasured return flow factor. Reclamation continues to refine estimates of unmeasured returns.

No person or entity is entitled to divert or use Colorado River water without an entitlement. An entitlement is an authorization to beneficially use Colorado River water pursuant to: (1) a right

decreed by the Supreme Court, (2) a contract with the United States through the Secretary of the Interior, or (3) a Secretarial reservation of water. The listing of a use in this report should not be interpreted as an entitlement or an indication that the use is authorized.

For those water users whose diversions are made from the Topock Marsh Inlet Canal, All-American Canal, or the Gila Gravity Main Canal, diversions include each user's proportionate share of the total canal losses, which are added to the delivery taken by each user at its turnout from the canal. The portion of the canal loss which returns to the mainstream is provided to each water user as a measured return flow credit.

For the areas downstream of the Northerly International Boundary (NIB), Reclamation does not consider pumping of wells from the flood plain or the underlying aquifer to be a diversion of Colorado River water. This position<sup>1</sup> is based on the following: the groundwater can reasonably be assumed to be flowing towards Mexico and therefore, not to be flowing toward the Colorado River upstream of Mexico's point of diversion near NIB. As such, this water does not return to the river to be made available for consumptive use in the United States or in satisfaction of the Mexican Treaty Obligation. In accordance with this position, Reclamation discontinued reporting these wells beginning in 2004. If hydrologic conditions change, Reclamation will address the need to report these wells.

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<sup>1</sup> *Summary Description of Accounting for Water Use in the Yuma Area Beginning with Calendar Year 2003*. Available on Reclamation's website at <http://www.usbr.gov/lc/region/g4000/4200Rpts/YumaWtrAcct.pdf>

**Table 4. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Marble Canyon Company</b>														
Pumped from Well	Diversion	1	1	1	1	1	1	2	2	2	2	1	1	16
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	1	1	1	1	1	1	0	0	6
	Consumptive Use	1	1	1	1	0	0	1	1	1	1	1	1	10
<b>Lake Mead National Recreation Area</b>														
<b>National Park Service</b>														
Lake Mead Diversions at Temple Bar	Diversion	5	5	6	9	10	11	11	16	14	15	11	3	116
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	5	5	6	9	10	11	11	16	14	15	11	3	116
<b>Lake Mead National Recreation Area</b>														
<b>National Park Service</b>														
Lake Mohave Diversions at Katherine Landing and Willow Beach	Diversion	9	9	10	12	12	20	19	19	19	18	15	12	174
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	9	9	10	12	12	20	19	19	19	18	15	12	174
<b>McAlister Family Trust</b>														
Pumped from river and well	Diversion	0	0	1	1	1	1	1	1	1	1	1	1	10
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	1	1	1	1	0	0	0	4
	Consumptive Use	0	0	1	1	1	0	0	0	0	1	1	1	6
<b>Bureau of Reclamation</b>														
Davis Dam Diversion	Diversion	1	2	2	1	2	3	1	0	0	1	0	1	14
	Measured Returns	1	1	1	1	2	3	1	0	0	1	0	1	12
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	1	1	0	0	0	0	0	0	0	0	0	2
<b>Bullhead City</b>														
Pumped from wells	Diversion	608	774	548	763	804	976	996	1,000	907	823	750	676	9,625
Mohave County Parks, Lake Mohave diversion	Diversion	0	1	1	1	1	1	1	1	1	1	1	0	10
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	201	256	181	252	266	322	329	330	300	272	248	223	3,180
	Consumptive Use	407	519	368	512	539	655	668	671	608	552	503	453	6,455
<b>Mohave Water Conservation District</b>														
Pumped from wells	Diversion	62	57	67	77	78	89	105	96	89	88	73	73	954
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	20	19	22	25	26	29	35	32	30	29	24	24	315
	Consumptive Use	42	38	45	52	52	60	70	64	59	59	49	49	639
<b>EPCOR Water Arizona, Inc.</b>														
Pumped from wells	Diversion	51	53	57	52	54	58	66	62	51	63	49	47	663
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	18	19	20	18	19	20	23	22	18	22	17	16	232
	Consumptive Use	33	34	37	34	35	38	43	40	33	41	32	31	431
<b>Mohave Valley I.D.D.</b>														
Pumped from wells and Topock Marsh Inlet Canal	Diversion	1,288	2,082	3,616	2,457	3,885	4,873	4,303	4,087	4,079	2,626	2,181	1,399	36,876
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	592	1,011	1,882	1,137	1,765	2,220	1,886	1,886	2,175	1,304	1,096	644	17,598
	Consumptive Use	696	1,071	1,734	1,320	2,120	2,653	2,417	2,201	1,904	1,322	1,085	755	19,278

**Table 4. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Fort Mojave Indian Reservation</b>														
Pumped from river for agriculture use	Diversion	1,725	5,797	5,439	5,260	6,712	8,553	8,667	8,036	4,168	3,566	2,454	1,564	61,941
Pumped from wells for domestic use	Diversion	90	22	32	24	33	34	43	59	56	43	21	29	486
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	965	2,778	2,690	2,438	3,055	3,911	3,895	3,725	1,943	1,660	1,139	733	28,932
	Consumptive Use	850	3,041	2,781	2,846	3,690	4,676	4,815	4,370	2,281	1,949	1,336	860	33,495
<b>Golden Shores Water Conservation District</b>														
Pumped from wells	Diversion	25	25	26	35	29	50	43	41	39	31	28	31	403
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	8	8	9	12	10	17	14	14	13	10	9	10	134
	Consumptive Use	17	17	17	23	19	33	29	27	26	21	19	21	269
<b>Havasu National Wildlife Refuge</b>														
Firebreak Inlet Canal	Diversion	215	1,120	4,390	5,560	3,880	3,570	3,060	1,930	2,130	1,320	541	88	27,804
Farm Ditch	Diversion <sup>1</sup>	32	273	1,096	1,483	886	790	640	354	445	271	53	-1	6,322
Pumped from well	Diversion	10	11	15	17	20	25	27	26	20	17	12	12	212
	Measured Returns <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	226	1,235	4,841	6,213	4,212	3,858	3,280	2,033	2,284	1,415	534	88	30,219
	Consumptive Use	31	169	660	847	574	527	447	277	311	193	72	11	4,119
<b>Crystal Beach Water Conservation District</b>														
Pumped from wells	Diversion	7	7	8	9	10	11	11	11	10	10	9	8	111
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	2	2	3	3	4	3	4	4	4	4	3	3	39
	Consumptive Use	5	5	5	6	6	8	7	7	6	6	6	5	72
<b>Lake Havasu City</b>														
Pumped from wells	Diversion	741	794	1,013	965	1,093	1,298	1,340	1,220	1,101	1,049	904	814	12,332
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	282	302	385	367	415	493	509	464	418	398	344	309	4,686
	Consumptive Use	459	492	628	598	678	805	831	756	683	651	560	505	7,646
<b>Arizona State Parks (Windsor Beach)</b>														
Pumped from wells	Diversion	0	1	2	2	2	2	4	3	2	1	1	0	20
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	1	1	1	1	1	1	1	0	0	0	7
	Consumptive Use	0	1	1	1	1	1	3	2	1	1	1	0	13
<b>Central Arizona Project</b>														
Pumped from Lake Havasu	Diversion	155,980	116,971	122,518	168,623	176,141	88,596	74,494	64,682	133,630	133,167	140,485	117,864	1,493,151
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	155,980	116,971	122,518	168,623	176,141	88,596	74,494	64,682	133,630	133,167	140,485	117,864	1,493,151
<b>Hillcrest Water Company</b>														
Pumped from wells	Diversion	2	2	2	2	1	2	2	2	2	2	2	2	23
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	1	1	1	1	1	0	1	0	0	1	1	0	8
	Consumptive Use	1	1	1	1	0	2	1	2	2	1	1	2	15
<b>Springs Del Sol Domestic Water Improvement District</b>														
Pumped from wells	Diversion	0	0	0	0	0	0	1	1	0	1	0	1	4
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	1	0	0	0	0	0	1
	Consumptive Use	0	0	0	0	0	0	0	1	0	1	0	1	3
<b>Brooke Water, LLC</b>														
Pumped from river and wells	Diversion	32	32	39	35	37	44	46	44	45	38	37	36	465
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	11	11	13	12	12	15	15	15	15	13	12	12	156
	Consumptive Use	21	21	26	23	25	29	31	29	30	25	25	24	309

**Table 4. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Town of Parker</b>														
Pumped from wells	Diversion	48	46	58	60	73	92	95	86	80	80	59	57	834
	Measured Returns	17	21	18	17	17	17	17	15	16	17	18	17	207
	Unmeasured Returns	14	13	17	17	21	26	27	25	23	23	17	16	239
	Consumptive Use	17	12	23	26	35	49	51	46	41	40	24	24	388
<b>Colorado River Indian Reservation</b>														
Diversion at Headgate Rock Dam	Diversion	14,210	41,010	55,920	56,130	65,160	65,590	68,350	58,130	47,050	36,210	28,170	28,910	564,840
Pumped from river and wells	Diversion	403	473	634	678	829	1,013	1,093	1,045	853	741	535	519	8,816
	Measured Returns	18,038	16,808	20,082	21,869	20,818	18,678	19,832	20,082	19,303	17,969	18,282	22,205	233,966
	Unmeasured Returns	804	2,282	3,110	3,124	3,629	3,663	3,819	3,255	2,635	2,032	1,579	1,619	31,551
	Consumptive Use	-4,229	22,393	33,362	31,815	41,542	44,262	45,792	35,838	25,965	16,950	8,844	5,605	308,139
<b>Rayner Ranches</b>														
Pumped from river (AEP-9) and well (AEW-35)	Diversion	0	533	161	426	696	778	638	638	375	174	0	0	4,419
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	187	56	149	244	273	223	223	131	61	0	0	1,547
	Consumptive Use	0	346	105	277	452	505	415	415	244	113	0	0	2,872
<b>Ehrenburg Improvement Association</b>														
Pumped from river	Diversion	27	26	27	29	30	33	34	35	28	25	20	18	332
	Measured Returns	4	2	3	5	5	3	4	3	3	3	1	3	39
	Unmeasured Returns	8	7	8	8	9	9	10	10	8	7	6	5	95
	Consumptive Use	15	17	16	16	16	21	20	22	17	15	13	10	198
<b>North Baja Pipeline</b>														
Pumped from wells	Diversion	10	18	34	26	21	35	43	29	22	18	15	12	283
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	4	7	12	9	7	12	15	10	8	6	5	4	99
	Consumptive Use	6	11	22	17	14	23	28	19	14	12	10	8	184
<b>Cibola Valley I.D.D.</b>														
Pumped from river and well	Diversion	300	308	623	2,233	945	1,310	1,156	544	964	751	453	761	10,348
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	86	88	178	636	269	373	329	155	275	214	129	217	2,949
	Consumptive Use	214	220	445	1,597	676	937	827	389	689	537	324	544	7,399
<b>Mohave County Water Authority</b>														
Pumped from river	Diversion	189	189	189	135	198	179	189	186	216	185	53	0	1,908
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	54	54	54	38	56	51	54	53	62	53	15	0	544
	Consumptive Use	135	135	135	97	142	128	135	133	154	132	38	0	1,364
<b>Hopi Tribe</b>														
Pumped from river	Diversion	33	481	270	285	573	751	631	451	632	233	316	244	4,900
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	9	137	77	81	163	214	180	129	180	66	90	70	1,396
	Consumptive Use	24	344	193	204	410	537	451	322	452	167	226	174	3,504
<b>GSC Farm, LLC</b>														
Pumped from river	Diversion	201	275	215	101	248	368	457	179	297	194	183	193	2,911
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	57	78	61	29	71	105	130	51	85	55	52	55	829
	Consumptive Use	144	197	154	72	177	263	327	128	212	139	131	138	2,082
<b>Arizona Game and Fish Commission</b>														
Pumped from river	Diversion	98	25	497	419	371	417	302	147	38	225	414	0	2,953
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	28	7	142	119	106	119	86	42	11	64	118	0	842
	Consumptive Use	70	18	355	300	265	298	216	105	27	161	296	0	2,111

**Table 4. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Cibola National Wildlife Refuge</b>														
Pumped from river	Diversion	396	1,025	1,586	1,055	1,297	1,698	1,978	1,622	2,429	2,137	1,025	384	16,632
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	150	390	603	401	493	645	752	616	923	812	390	146	6,321
	Consumptive Use	246	635	983	654	804	1,053	1,226	1,006	1,506	1,325	635	238	10,311
<b>Imperial National Wildlife Refuge</b>														
Pumped from river	Diversion	53	115	260	260	271	290	342	375	229	54	54	57	2,360
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	20	44	99	99	103	110	130	143	87	21	21	22	899
	Consumptive Use	33	71	161	161	168	180	212	232	142	33	33	35	1,461
<b>Bureau of Land Management</b>														
Pumped from river and wells (Permittees, LHFO and YFO)	Diversion	32	50	73	82	105	156	75	99	59	94	72	43	940
Pumped from river (ADW-01) (leased by L. Pratt)	Diversion <sup>3</sup>	18	22	30	32	39	48	52	50	39	33	23	23	409
Pumped from river (ADP-1) and well (AEW-14) (leased by M. Lee)	Diversion <sup>3</sup>	10	13	17	19	23	27	30	29	23	19	13	13	236
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	21	29	41	46	59	82	54	61	43	52	38	29	555
	Consumptive Use	39	56	79	87	108	149	103	117	78	94	70	50	1,030
<b>Fisher's Landing Water and Sewer, LLC</b>														
Pumped from well	Diversion	1	2	1	1	2	2	2	1	1	1	2	1	17
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	1	0	1	1	1	1	0	0	0	1	0	6
	Consumptive Use	1	1	1	0	1	1	1	1	1	1	1	1	11
<b>Shepard Water Company</b>														
Pumped from well	Diversion	2	2	2	2	3	3	2	3	2	2	2	2	27
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	1	1	1	1	1	1	0	1	1	0	1	1	10
	Consumptive Use	1	1	1	1	2	2	2	2	1	2	1	1	17
<b>U.S. Army Yuma Proving Grounds</b>														
Diversion at Imperial Dam	Diversion	0	2	1	1	1	3	0	2	2	2	0	2	16
Pumped from wells	Diversion	14	14	24	39	53	50	58	62	50	25	25	18	432
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	14	16	25	40	54	53	58	64	52	27	25	20	448
<b>JRJ Partners, LLC</b>														
Pumped from river (AEP-1) and well (AEW-3)	Diversion	50	29	93	120	110	68	118	108	29	99	113	109	1,046
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	17	10	33	42	38	24	41	38	10	35	40	38	366
	Consumptive Use	33	19	60	78	72	44	77	70	19	64	73	71	680
<b>Cha Cha, LLC</b>														
Pumped from river (AEP-2/3) and wells (AEW-4/5, ADW-3)	Diversion	43	90	120	207	236	220	114	264	242	84	129	62	1,811
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	15	32	42	72	83	77	40	92	85	29	45	22	634
	Consumptive Use	28	58	78	135	153	143	74	172	157	55	84	40	1,177
<b>Beattie Farms Southwest (Russell Youmans)</b>														
Pumped from well (ADW-2)	Diversion	83	23	38	88	46	0	0	72	10	149	130	69	708
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	29	8	13	31	16	0	0	25	4	52	46	24	248
	Consumptive Use	54	15	25	57	30	0	0	47	6	97	84	45	460
<b>Gila Monster Farms</b>														
Diversion at Imperial Dam	Diversion	377	648	996	546	293	586	572	320	437	755	658	398	6,586
	Measured Returns	21	27	78	38	15	24	22	14	20	30	18	22	329
	Unmeasured Returns	143	246	378	207	111	223	217	122	166	287	250	151	2,501
	Consumptive Use	213	375	540	301	167	339	333	184	251	438	390	225	3,756

**Table 4. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Wellton-Mohawk I.D.D.</b>														
Diversion at Imperial Dam	Diversion	14,423	27,893	39,880	40,794	38,912	37,553	36,101	33,844	38,380	36,813	23,049	17,061	384,703
	GGMC Return	904	1,307	3,468	3,147	2,260	1,716	1,568	1,699	1,966	1,656	714	1,057	21,462
	Dome Return	441	649	417	504	455	437	447	315	588	558	678	570	6,059
	MOD Return <sup>4</sup>	2,770	8,780	8,440	8,570	9,220	8,080	8,470	8,350	9,220	9,820	7,900	9,510	99,130
	Total Returns	4,115	10,736	12,325	12,221	11,935	10,233	10,485	10,364	11,774	12,034	9,292	11,137	126,651
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	10,308	17,157	27,555	28,573	26,977	27,320	25,616	23,480	26,606	24,779	13,757	5,924	258,052
<b>City of Yuma</b>														
Diversion at Imperial Dam via AAC	Diversion	1,077	1,147	1,281	1,232	1,482	1,734	1,866	1,854	1,423	1,280	1,157	1,172	16,705
Diversion at Imperial Dam via GGMC	Diversion	902	888	1,090	886	803	411	444	514	449	435	1,038	876	8,736
Pumped from river for Yuma East Wetlands	Diversion	31	33	28	32	55	60	64	61	66	34	37	26	527
	Measured Returns	894	854	926	788	799	812	1,111	835	813	803	805	915	10,355
	Unmeasured Returns	1	1	1	1	0	1	1	1	1	1	1	1	11
	Consumptive Use	1,115	1,213	1,472	1,361	1,541	1,392	1,262	1,593	1,124	945	1,426	1,158	15,602
<b>U.S. Marine Corps Air Station Yuma</b>														
Diversion at Imperial Dam	Diversion	128	71	127	69	110	116	162	165	140	130	98	66	1,382
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	128	71	127	69	110	116	162	165	140	130	98	66	1,382
<b>Union Pacific Railroad</b>														
Diversion at Imperial Dam	Diversion	4	4	4	4	4	4	4	4	4	4	4	4	48
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	2	2	2	2	2	2	2	2	2	2	2	2	24
	Consumptive Use	2	2	2	2	2	2	2	2	2	2	2	2	24
<b>University of Arizona</b>														
Diversion at Imperial Dam	Diversion	53	61	58	78	107	121	81	84	85	99	49	37	913
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	53	61	58	78	107	121	81	84	85	99	49	37	913
<b>Yuma Union High School District</b>														
Delivery at East Main Canal	Diversion	5	13	8	15	31	26	25	21	12	13	13	7	189
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	1	3	2	4	8	7	6	5	3	3	3	2	47
	Consumptive Use	4	10	6	11	23	19	19	16	9	10	10	5	142
<b>Desert Lawn Memorial Park</b>														
Delivered by the City of Yuma	Diversion	0	1	0	1	2	3	2	4	4	3	1	1	22
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	1	1	1	1	1	1	0	0	6
	Consumptive Use	0	1	0	1	1	2	1	3	3	2	1	1	16
<b>North Gila Valley Irrigation District</b>														
Diversion at Imperial Dam	Diversion	1,405	2,596	4,061	4,151	4,814	5,073	4,443	2,410	3,381	4,092	3,626	2,081	42,133
Pumped from river	Diversion <sup>3</sup>	13	17	23	25	30	37	40	38	30	25	18	18	314
	Measured Returns	1,193	1,536	2,252	2,182	2,422	2,655	2,462	1,773	1,965	2,656	2,334	1,539	24,969
	Unmeasured Returns	197	362	564	578	671	708	623	343	473	570	503	291	5,883
	Consumptive Use	28	715	1,268	1,416	1,751	1,747	1,398	332	973	891	807	269	11,595
<b>Yuma Irrigation District</b>														
Diversion at Imperial Dam	Diversion <sup>5</sup>	2,681	4,811	8,094	9,346	8,760	6,033	6,791	4,285	5,028	6,000	4,058	3,127	69,014
Pumped from wells	Diversion	30	77	169	229	136	89	153	121	149	156	95	57	1,461
	Measured Returns	745	1,107	2,274	2,424	2,070	1,432	1,560	1,159	1,307	1,472	984	899	17,433
	Unmeasured Returns	577	1,041	1,760	2,039	1,895	1,304	1,479	938	1,103	1,311	885	678	15,010
	Consumptive Use	1,389	2,740	4,229	5,112	4,931	3,386	3,905	2,309	2,767	3,373	2,284	1,607	38,032

**Table 4. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Yuma Mesa I.D.D.</b>														
Diversion at Imperial Dam	Diversion	7,443	11,001	16,297	16,814	19,703	23,381	22,805	24,300	17,740	14,306	11,279	7,481	192,550
	Measured Returns <sup>6</sup>	4,192	3,951	5,296	4,647	3,642	4,981	4,663	4,729	3,754	1,069	1,548	1,652	44,124
	Unmeasured Returns	1,191	1,760	2,608	2,690	3,152	3,741	3,649	3,888	2,838	2,289	1,805	1,197	30,808
	Consumptive Use	2,060	5,290	8,393	9,477	12,909	14,659	14,493	15,683	11,148	10,948	7,926	4,632	117,618
<b>Unit "B" I.D.D.</b>														
Diversion at Imperial Dam	Diversion	926	1,712	2,021	2,231	2,928	3,395	3,400	3,622	3,092	2,240	1,649	981	28,197
	Measured Returns <sup>6</sup>	707	683	835	744	600	834	786	789	660	171	259	263	7,331
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	219	1,029	1,186	1,487	2,328	2,561	2,614	2,833	2,432	2,069	1,390	718	20,866
<b>Arizona State Land Department</b>														
Pumped from river and wells for agriculture use	Diversion	420	741	1,054	1,102	962	1,239	1,359	1,175	926	868	790	536	11,172
Pumped from river and wells for domestic use	Diversion	4	4	3	4	4	5	5	4	4	5	5	3	50
	Measured Returns	7	9	26	13	5	8	7	5	7	10	6	7	110
	Unmeasured Returns	148	261	370	387	338	435	477	413	326	306	278	189	3,928
	Consumptive Use	269	475	661	706	623	801	880	761	597	557	511	343	7,184
<b>George Ogram</b>														
Delivered via GGMC	Diversion	23	13	25	35	42	89	52	26	71	39	49	0	464
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	8	4	9	12	15	31	18	9	25	14	17	0	162
	Consumptive Use	15	9	16	23	27	58	34	17	46	25	32	0	302
<b>Ogram Boys' Enterprises</b>														
Delivered via GGMC	Diversion	46	70	95	47	143	131	87	63	69	66	47	45	909
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	16	24	33	17	50	46	31	22	24	23	16	16	318
	Consumptive Use	30	46	62	30	93	85	56	41	45	43	31	29	591
<b>Fort Yuma Indian Reservation</b>														
Pumped from river for Yuma East Wetlands	Diversion	84	56	85	117	111	161	140	159	157	107	56	17	1,250
Pumped from river for agriculture use (Cha Cha Farms)	Diversion	1	6	2	6	3	4	10	4	5	5	5	4	55
Surface delivery to Ranch "5"	Diversion	21	57	81	69	0	0	0	48	7	78	27	12	400
Pumped from wells for domestic use	Diversion <sup>7</sup>	3	2	2	3	3	3	4	2	2	2	2	2	30
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	38	43	60	68	41	58	54	75	60	67	32	12	608
	Consumptive Use	71	78	110	127	76	110	100	138	111	125	58	23	1,127
<b>Armon Curtis</b>														
Pumped from river (AEP-4)	Diversion <sup>3</sup>	9	11	15	16	20	24	26	25	20	16	12	11	205
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	3	4	5	6	7	8	9	9	7	6	4	4	72
	Consumptive Use	6	7	10	10	13	16	17	16	13	10	8	7	133
<b>Yuma County Water Users' Association</b>														
Diversion at Imperial Dam	Diversion	15,402	24,242	36,136	43,243	36,188	29,140	31,981	21,879	26,777	37,125	29,388	16,930	348,431
Pumped from wells	Diversion	169	50	62	109	247	50	67	146	6	52	169	255	1,382
	Measured Returns	9,244	9,306	8,797	8,998	10,402	8,963	8,784	8,292	10,062	11,854	12,881	11,850	119,433
	Unmeasured Returns	327	510	760	910	765	613	673	463	562	781	621	361	7,346
	Consumptive Use	6,000	14,476	26,641	33,444	25,268	19,614	22,591	13,270	16,159	24,542	16,055	4,974	223,034
<b>R. Griffin</b>														
Pumped from river (ADP-3,4)	Diversion <sup>3</sup>	3	3	5	6	7	8	9	9	7	6	4	4	71
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	1	1	2	2	3	3	3	3	3	2	1	1	25
	Consumptive Use	2	2	3	4	4	5	6	6	4	4	3	3	46

**Table 4. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Power</b>														
Pumped from river (ADP-3,4)	Diversion <sup>3</sup>	9	11	15	16	20	24	26	25	20	17	12	11	206
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	3	4	5	6	7	8	9	9	7	6	4	4	72
	Consumptive Use	6	7	10	10	13	16	17	16	13	11	8	7	134
<b>Griffin Ranches</b>														
Pumped from river (ADP-3,4)	Diversion <sup>3</sup>	10	12	16	17	21	26	28	28	21	18	13	12	222
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	4	4	6	6	7	9	10	10	7	6	5	4	78
	Consumptive Use	6	8	10	11	14	17	18	18	14	12	8	8	144
<b>Milton Phillips</b>														
Pumped from river (ADP-3,4)	Diversion <sup>3</sup>	5	6	9	9	11	14	15	14	11	9	7	7	117
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	2	2	3	3	4	5	5	5	4	3	2	3	41
	Consumptive Use	3	4	6	6	7	9	10	9	7	6	5	4	76
<b>Victor Power</b>														
Pumped from river (ADP-3,4) <sup>3</sup>	Diversion <sup>3</sup>	2	2	3	3	4	5	6	5	4	3	3	3	43
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	1	1	1	1	1	2	2	2	1	1	1	1	15
	Consumptive Use	1	1	2	2	3	3	4	3	3	2	2	2	28
<b>Cocopah Indian Reservation</b>														
Diversion at Imperial Dam	Diversion	0	49	86	78	0	0	0	0	71	0	54	0	338
Pumped from river and wells	Diversion <sup>3,8</sup>	101	126	172	186	227	275	300	289	227	190	135	133	2,361
	Measured Returns	0	1	1	1	0	0	0	0	2	0	2	0	7
	Unmeasured Returns	34	59	88	90	77	94	102	98	101	65	64	45	917
	Consumptive Use	67	115	169	173	150	181	198	191	195	125	123	88	1,775
<b>Bureau of Reclamation's Yuma Area Office</b>														
Pumped from well	Diversion	0	0	0	24	0	0	0	0	0	0	0	0	24
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	0	0	24	0	0	0	0	0	0	0	0	24
<b>Arizona Public Service Company</b>														
Pumped from well	Diversion	0	0	0	4	29	0	0	0	3	11	8	2	57
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	2	12	0	0	0	1	5	4	1	25
	Consumptive Use	0	0	0	2	17	0	0	0	2	6	4	1	32
<b>Gary Pasquinelli</b>														
Pumped from river (ADP-5)	Diversion	18	36	26	19	24	6	0	16	53	36	11	11	256
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	6	13	9	6	8	2	0	6	19	13	4	4	90
	Consumptive Use	12	23	17	13	16	4	0	10	34	23	7	7	166
<b>Pumped from the South Gila Wells (DPOCs)</b>	Measured Returns <sup>9</sup>	1,073	351	3,467	2,890	2,598	2,661	2,600	4,232	2,886	1	2,181	4,034	28,975
	Unmeasured Returns	-1,073	-351	-3,467	-2,890	-2,598	-2,661	-2,600	-4,232	-2,886	-1	-2,181	-4,034	-28,975
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Arizona Totals</b>	Diversion	222,933	249,280	311,791	369,383	381,258	291,965	280,710	241,414	299,362	289,727	257,061	205,549	3,400,433
	Measured Returns	40,251	45,393	56,381	56,838	55,330	51,304	52,334	52,292	52,572	48,090	48,611	54,544	613,941
	Unmeasured Returns	5,273	13,011	17,794	19,529	19,733	21,316	20,657	15,649	14,622	14,472	8,341	3,263	173,659
	Consumptive Use	177,409	190,876	237,616	293,016	306,195	219,345	207,719	173,473	232,168	227,165	200,109	147,742	2,612,833

**Table 4. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Footnotes:</b>													
<sup>1</sup> Diversion values are normally positive. Should negative diversion values occur, water is flowing from the canal to the river.													
<sup>2</sup> The South Dike is the point of measured return flow for the Refuge and meter readings will normally indicate a positive flow of water from the Refuge into the river. If the flow reverses and water flows into the Refuge instead, a negative value will be recorded; when this occurs, this is considered a diversion.													
<sup>3</sup> Calculated by the USGS using field crop verification and ET methodologies. A description of this methodology is included in the Significant Documents.													
<sup>4</sup> MOD return flow credit is the measured flow at Station 0+00. When comparing this return value to the "Water Bypassed Pursuant to IBWC Minute No. 242", differences can result due to a combination of transmission loss, DPOC and Yuma Mesa Conduit discharge into the MODE, MODE water that has been desalinated, and MODE water discharged to the river. During periods of sustained flow in the Gila River this measurement may include both Colorado River and Gila River water. At such times Reclamation will determine how best to differentiate return flows from the two sources.													
<sup>5</sup> Diversion does not include water delivered to users (George Ogram, Ogram Boys' Enterprises, and some ASLD lands) located outside of District boundaries.													
<sup>6</sup> YMID receives 85 percent of the return flows from the Yuma Mesa Conduit Outlet and the Protective and Regulatory Pumping Unit; Unit B receives the remaining 15 percent. Yuma Mesa Conduit Outlet Flows = 482 AF Protective and Regulatory Pumping Unit = 34,829 AF													
<sup>7</sup> Diversion is an estimate of the amount of domestic water required by FYIR, AZ.													
<sup>8</sup> Diversion amounts include pumpage from wells ADP-3, 4, AEW-15, 16, and the Cocopah Bend R.V. Park. The reported diversion includes deliveries to the Cocopah Tribe's Trust lands and 592 AF to the Tribe's Fee lands located within PPR No. 7.													
<sup>9</sup> Until comprehensive modeling of the Yuma area to determine how unmeasured returns are affected by pumping of the DPOC wellfield is complete, this pumpage is added to Arizona's measured returns and subtracted from Arizona's unmeasured returns.													

**Table 5. State of California - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Fort Mojave Indian Reservation</b>														
Pumped from river for agriculture use	Diversion	13	464	1,433	1,046	1,444	1,633	889	1,791	1,694	713	295	85	11,500
Pumped from wells for domestic use	Diversion	5	2	3	4	4	5	5	4	5	5	2	2	46
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	8	215	663	485	669	757	413	829	785	332	137	40	5,333
	Consumptive Use	10	251	773	565	779	881	481	966	914	386	160	47	6,213
<b>City of Needles</b>														
Pumped from wells	Diversion	99	112	137	135	172	202	201	192	152	183	137	114	1,836
	Measured Returns	32	29	31	30	32	32	35	35	32	31	30	30	379
	Unmeasured Returns	27	13	19	36	25	34	30	22	17	42	37	27	329
	Consumptive Use <sup>1</sup>	40	70	87	69	115	136	136	135	103	110	70	57	1,128
<b>Southern California Gas</b>														
Pumped from wells	Diversion	0	0	0	0	0	0	1	1	0	0	0	0	2
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use <sup>2</sup>	0	0	0	0	0	0	1	1	0	0	0	0	2
<b>Pacific Gas and Electric Company</b>														
Pumped from wells	Diversion	9	11	15	16	20	24	26	26	20	17	12	12	208
	Measured Returns	9	11	15	16	20	24	26	25	20	17	12	12	207
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use <sup>2</sup>	0	0	0	0	0	0	0	1	0	0	0	0	1
<b>Havasu Water Company</b>														
Pumped from wells	Diversion	1	2	2	2	3	4	4	4	3	2	2	2	31
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	1	1	1	1	2	2	1	1	1	1	1	13
	Consumptive Use <sup>2</sup>	1	1	1	1	2	2	2	3	2	1	1	1	18
<b>Vista Del Lago</b>														
Pumped from wells	Diversion	1	1	1	2	2	2	2	2	2	2	1	1	19
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	1	0	0	1	1	1	1	1	1	1	0	0	8
	Consumptive Use <sup>2</sup>	0	1	1	1	1	1	1	1	1	1	1	1	11
<b>Non-Federal Subcontractors to the LCWSP</b>														
Pumped from wells	Diversion	13	16	22	23	28	35	37	36	28	24	17	17	296
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	5	6	9	9	11	14	15	14	11	10	7	7	118
	Consumptive Use <sup>2</sup>	8	10	13	14	17	21	22	22	17	14	10	10	178
<b>Wetmore, Kenneth C.</b>														
Pumped from wells	Diversion	0	0	0	0	1	1	1	1	1	0	0	0	5
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	1	0	0	0	1	0	0	0	2
	Consumptive Use	0	0	0	0	0	1	1	1	0	0	0	0	3
<b>Williams, Jerry O. and Deloris P.</b>														
Pumped from well	Diversion	0	0	0	0	0	0	1	0	0	0	0	0	1
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	1	0	0	0	0	0	1
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 5. State of California - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	
<b>Carney, Jerome D.</b>	Pumped from wells	Diversion	0	0	0	0	0	0	0	0	0	0	0	0	
		Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	
		Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	
		Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Wetmore, Mark M.</b>	Pumped from well	Diversion	0	0	1	1	1	1	1	1	1	1	0	9	
		Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	
		Unmeasured Returns	0	0	0	0	0	1	1	1	1	0	0	4	
		Consumptive Use	0	0	1	1	1	0	0	0	0	1	1	5	
<b>Chemehuevi Indian Reservation</b>	Pumped from river and wells	Diversion	14	12	14	15	26	30	18	30	28	25	13	19	244
		Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
		Unmeasured Returns	6	6	6	7	12	14	8	13	13	12	6	9	112
		Consumptive Use	8	6	8	8	14	16	10	17	15	13	7	10	132
<b>Metropolitan Water District of Southern California</b>	Pumped from Lake Havasu	Diversion	96,884	13,000	88,401	92,503	97,213	94,779	99,653	85,106	88,504	79,594	78,314	85,868	999,819
		Measured Returns	242	221	233	212	224	201	195	236	230	256	258	288	2,796
		Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
		Consumptive Use	96,642	12,779	88,168	92,291	96,989	94,578	99,458	84,870	88,274	79,338	78,056	85,580	997,023
<b>Bureau of Reclamation and Government Camp</b>	Diversion at Parker Dam	Diversion <sup>2</sup>	0	0	0	0	0	1	0	0	0	0	0	0	1
		Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
		Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
		Consumptive Use	0	0	0	0	0	1	0	0	0	0	0	0	1
<b>Colorado River Indian Reservation</b>	Pumped from river and wells (agriculture)	Diversion	199	248	339	366	447	542	592	570	448	375	266	262	4,654
	Pumped from wells for Big River Development	Diversion	32	32	47	46	58	67	72	63	57	52	43	33	602
		Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
		Unmeasured Returns	96	117	161	172	210	254	277	264	210	178	129	123	2,191
		Consumptive Use	135	163	225	240	295	355	387	369	295	249	180	172	3,065
<b>Palo Verde Irrigation District</b>	Diversion at Palo Verde Dam	Diversion	25,610	45,260	62,710	67,820	85,960	91,900	96,870	94,810	72,010	58,870	42,330	31,070	775,220
		Measured Returns	27,258	27,944	29,315	28,611	33,520	34,328	37,836	37,610	36,488	34,841	30,320	33,328	391,399
		Unmeasured Returns <sup>3</sup>	2,121	2,861	4,135	4,762	6,207	6,185	7,079	6,965	5,648	4,336	2,998	2,409	55,706
		Consumptive Use	-3,769	14,455	29,260	34,447	46,233	51,387	51,955	50,235	29,874	19,693	9,012	-4,667	328,115
<b>Lake Enterprises</b>	Pumped from river	Diversion	2	3	0	0	2	0	0	1	0	0	0	0	8
		Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
		Unmeasured Returns	1	2	0	0	1	0	0	0	0	0	0	0	4
		Consumptive Use	1	1	0	0	1	0	0	1	0	0	0	0	4
<b>Bureau of Land Management</b>	Pumped from wells (Permittees, LHFO and YFO)	Diversion	22	23	27	35	28	31	47	37	30	29	17	30	356
		Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
		Unmeasured Returns	5	6	7	8	7	7	14	11	7	8	5	7	92
		Consumptive Use	17	17	20	27	21	24	33	26	23	21	12	23	264

**Table 5. State of California - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Yuma Project Reservation Division</b>														
<b>Indian Unit</b>														
Diversion at Imperial Dam	Diversion	1,302	3,098	5,848	7,289	5,532	3,542	3,266	3,261	1,762	4,096	3,653	2,132	44,781
Pumped from wells for domestic use	Diversion <sup>4</sup>	34	42	58	63	76	93	101	97	77	64	45	45	795
	Measured Returns	13	76	67	68	130	138	131	118	44	17	93	139	1,034
	Unmeasured Returns	223	524	986	1,228	937	607	562	561	307	695	618	364	7,612
<b>Bard Unit</b>														
Diversion at Imperial Dam	Diversion	1,706	3,124	5,041	4,927	4,856	4,673	6,280	2,397	4,136	4,341	3,979	2,249	47,709
	Measured Returns	9	45	32	25	62	100	140	58	54	10	54	80	669
	Unmeasured Returns	285	522	842	823	811	780	1,049	400	691	725	664	376	7,968
Unassigned Yuma Project Reservation Division	Measured Returns <sup>5</sup>	1,710	1,612	2,183	2,860	3,112	2,467	2,784	2,194	2,430	2,062	2,709	2,284	28,407
<b>Total Yuma Project Reservation Division Consumptive Use <sup>6</sup></b>														
		802	3,485	6,837	7,275	5,412	4,216	4,981	2,424	2,449	4,992	3,539	1,183	47,595
<b>Fort Yuma Indian Reservation</b>														
<b>Ranch 1</b>														
Pumped from well and river (CEW-2; CDP-3)	Diversion <sup>7</sup>	29	36	49	52	64	77	84	81	64	53	38	37	664
<b>Ranch 2 Parcel 3</b>														
Pumped from well and river (CEW-2; CDP-4)	Diversion <sup>7</sup>	22	27	38	40	49	60	66	63	50	42	29	29	515
<b>Ranch 3</b>														
Pumped from well and river (CEW-2; CDP-5)	Diversion <sup>7</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Ranch 4</b>														
Pumped from well and river (CEW-1,15; CDP-1,2)	Diversion <sup>7</sup>	58	72	98	106	130	157	172	165	130	109	77	76	1,350
<b>Ranch 5</b>														
Diverted from the AAC	Diversion	47	127	181	154	0	0	0	108	14	172	62	26	891
<b>Ranch 7</b>														
Pumped from well and river (CEW-1,15; CDP-1,2)	Diversion <sup>7</sup>	22	27	37	40	49	59	65	62	49	41	29	29	509
<b>Ranch 15</b>														
Pumped from well (CEW-14)	Diversion <sup>7</sup>	23	28	39	42	51	62	67	65	51	43	30	30	531
<b>Ranch 17</b>														
Pumped from river (CDP-6,7)	Diversion <sup>7</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sum of Diversions for the FYIR Ranches in California</b>														
	Diversion	201	317	442	434	343	415	454	544	358	460	265	227	4,460
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	90	141	197	194	154	185	202	243	160	206	120	102	1,994
	Consumptive Use	111	176	245	240	189	230	252	301	198	254	145	125	2,466
<b>Yuma Island California</b>														
Arizona State Land Department Trust Lands														
	Diversion <sup>7</sup>	258	328	445	490	598	720	771	756	597	488	354	342	6,147
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	114	147	199	218	267	323	347	337	268	217	158	151	2,746
	Consumptive Use	144	181	246	272	331	397	424	419	329	271	196	191	3,401
<b>City of Winterhaven</b>														
Pumped from well														
	Diversion	8	8	9	9	8	9	8	9	8	8	7	7	98
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	3	3	3	3	3	3	3	3	3	3	2	2	34
	Consumptive Use	5	5	6	6	5	6	5	6	5	5	5	5	64

**Table 5. State of California - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Imperial Irrigation District</b>														
Diversion at Imperial Dam	Diversion	84,186	168,966	241,342	242,006	275,253	280,128	254,111	235,997	198,192	203,110	156,965	121,306	2,461,562
	Measured Returns	1,302	6,675	4,367	3,618	10,515	17,121	15,585	14,325	7,483	1,368	6,282	12,271	100,912
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
Delivery from Warren H. Brock Reservoir	Consumptive Use <sup>8</sup>	11,397	18,804	13,531	14,745	16,651	10,679	12,409	9,731	8,759	9,941	11,012	5,949	143,608
Total IID Consumptive Use	Total Consumptive Use	94,281	181,095	250,506	253,133	281,389	273,686	250,935	231,403	199,468	211,683	161,695	114,984	2,504,258
Water Transferred to SDCWA for Mitigation	Diversion <sup>9</sup>	21,688	12,977	15,651	8,261	9,849	7,425	2,634	2,633	6,912	15,548	16,537	15,704	135,819
	Measured Returns	335	513	283	123	376	454	162	160	261	105	662	1,589	5,023
	Consumptive Use	21,353	12,464	15,368	8,138	9,473	6,971	2,472	2,473	6,651	15,443	15,875	14,115	130,796
<b>Coachella Valley Water District</b>														
Diversion at Imperial Dam	Diversion	14,340	24,326	30,283	31,913	36,109	41,725	40,829	42,276	32,408	27,546	28,205	22,411	372,371
	Measured Returns	222	961	548	477	1,379	2,550	2,504	2,566	1,224	186	1,129	2,267	16,013
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	14,118	23,365	29,735	31,436	34,730	39,175	38,325	39,710	31,184	27,360	27,076	20,144	356,358
<b>California Totals</b>														
	Diversion	246,627	272,372	452,271	457,406	518,033	527,987	506,874	470,645	407,433	395,553	331,460	281,938	4,868,599
	Measured Returns	31,132	38,087	37,074	36,040	49,370	57,415	59,398	57,327	48,266	38,893	41,549	52,288	546,839
	Unmeasured Returns	2,985	4,564	7,228	7,947	9,317	9,167	10,004	9,665	8,124	6,766	4,882	3,618	84,267
	Consumptive Use	223,907	248,525	421,500	428,164	475,997	472,084	449,881	413,384	359,802	359,835	296,041	231,981	4,381,101

**Footnotes:**

<sup>1</sup> In 2016, the City of Needles (Needles) conserved 145 AF under the Pilot System Conservation Program. In accordance with System Conservation Implementation Agreement No. 15-XX-30-W0596, Needles' Colorado River consumptive use in excess of 1,078 AF (its 1,223 AF PPR entitlement adjusted for the 145 AF of conservation) is offset by pumping from the LCWSP. For additional details, see Table 16.

<sup>2</sup> Tabulated consumptive use is offset by pumping from the LCWSP. For additional details, see Table 16.

<sup>3</sup> In 2016, the methodology used to calculate unmeasured returns from PVID was updated to reflect irrigation practices on the Lower Colorado River Multi-Species Conservation Program Palo Verde Ecological Reserve (PVER) habitat restoration area. A summary of the methodology used to calculate the PVER unmeasured returns has been included in the Significant Documents.

<sup>4</sup> Diversion is an estimate of the amount of domestic water required by the YPRD Indian Unit.

<sup>5</sup> Unassigned measured returns include drainage from the Indian Unit and the Bard Unit in the Reservation Division, but excludes seepage from the AAC.

<sup>6</sup> Calculated as the sum of diversions (93,285 AF) minus the sum of: measured returns (1,703 AF), unmeasured returns (15,580 AF) and unassigned measured returns (28,407 AF).

<sup>7</sup> Calculated by the USGS using field crop verification and ET methodologies. A description of this methodology is included in the Significant Documents. Points of diversion for the Yuma Island in CA are AEP-02, AEP-03, AEW-04, AEW-05, ADW-03, CEP-01, CEP-02, CDW-02, CDW-05, CDW-07, CDW-08, CEW-07, CEW-09, CEW-12, CEW-13. See the USGS maps in the Significant Documents section.

<sup>8</sup> Colorado River water captured in the Warren H. Brock Reservoir and delivered to IID as consumptive use. Flow measurement is made at the Brock Reservoir outlet channel, Station 21+36.

<sup>9</sup> As referenced in Column 7, Exhibit B, of the CRWDA and the IID/SDCWA Water Transfer Agreement, as amended, IID conserves water for transfer to SDCWA for delivery, by exchange from non-Colorado River sources, to the Salton Sea for mitigation purposes. For additional details, see Table 19.

**Table 6. State of Nevada - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Bureau of Reclamation</b>														
Hoover Dam Diversion	Diversion	3	3	5	5	5	6	7	6	6	5	5	5	61
	Measured Returns	1	1	2	2	2	2	2	2	2	2	2	2	22
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	2	2	3	3	3	4	5	4	4	3	3	3	39
<b>Robert B. Griffith Water Project</b>														
Pumped from Lake Mead	Diversion	26,034	26,311	34,090	33,995	38,079	42,175	46,500	45,224	37,607	39,922	32,339	26,774	429,050
<b>Lake Mead National Recreation Area</b>														
<b>National Park Service</b>														
Pumped from Lake Mead	Diversion	21	23	24	26	31	39	43	39	34	29	20	19	348
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	21	23	24	26	31	39	43	39	34	29	20	19	348
<b>Basic Water Company</b>														
Pumped from Lake Mead	Diversion	313	364	372	383	383	513	625	484	483	355	343	364	4,982
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	313	364	372	383	383	513	625	484	483	355	343	364	4,982
<b>City of Henderson</b>														
Pumped from Lake Mead	Diversion	925	918	1,091	1,151	956	1,135	782	1,131	1,058	990	1,288	987	12,412
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	925	918	1,091	1,151	956	1,135	782	1,131	1,058	990	1,288	987	12,412
<b>Nevada Department of Wildlife</b>														
Pumped from Lake Mead	Diversion	50	48	47	47	51	51	56	55	55	53	55	54	622
	Measured Returns	49	47	46	47	50	51	55	54	55	52	54	53	613
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	1	1	1	0	1	0	1	1	0	1	1	1	9
<b>Pacific Coast Building Products</b>														
Pumped from Lake Mead	Diversion	78	73	81	76	77	64	73	87	84	71	70	80	914
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	78	73	81	76	77	64	73	87	84	71	70	80	914
<b>Las Vegas Wash Return Flow</b>	Returns <sup>1</sup>	19,132	17,627	17,990	17,613	17,982	16,154	17,908	18,507	17,177	17,916	17,665	19,056	214,727
<b>Lake Mead National Recreation Area</b>														
<b>National Park Service</b>														
Pumped from Lake Mohave - Cottonwood Cove	Diversion	12	12	12	11	12	15	18	16	15	14	13	13	163
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	12	12	12	11	12	15	18	16	15	14	13	13	163
<b>Big Bend Water District</b>														
Pumped from river	Diversion	227	239	285	314	321	359	425	417	359	373	292	273	3,884
	Measured Returns	145	155	172	169	175	182	231	218	183	177	151	139	2,097
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	82	84	113	145	146	177	194	199	176	196	141	134	1,787
<b>SNWA - Big Bend Conservation Area</b>														
Pumped from wells	Diversion	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 6. State of Nevada - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Fort Mojave Indian Reservation</b>														
Pumped from river and wells	Diversion	175	217	565	331	589	629	637	628	417	430	221	159	4,998
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	58	72	186	109	194	208	210	207	138	142	73	52	1,649
	Consumptive Use	117	145	379	222	395	421	427	421	279	288	148	107	3,349
<b>Nevada Totals</b>														
	Diversion	27,838	28,208	36,572	36,339	40,504	44,986	49,166	48,087	40,118	42,242	34,646	28,728	457,434
	Measured Returns	19,327	17,830	18,210	17,831	18,209	16,389	18,196	18,781	17,417	18,147	17,872	19,250	217,459
	Unmeasured Returns	58	72	186	109	194	208	210	207	138	142	73	52	1,649
	Consumptive Use	8,453	10,306	18,176	18,399	22,101	28,389	30,760	29,099	22,563	23,953	16,701	9,426	238,326

Nevada Colorado River Storage in Local Aquifer <sup>2</sup>		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Las Vegas Valley Water District</b>	BOY Balance													348,228
	Injected	0	0	0	0	0	0	0	0	0	0	0	0	0
	Withdrawn	0	0	0	0	0	0	0	0	62	180	133	69	444
	EOY Balance													347,784
<b>City of North Las Vegas</b>	BOY Balance													11,843
	Injected	0	0	0	0	0	0	0	0	0	0	0	0	0
	Withdrawn	0	0	0	0	0	0	0	0	0	0	0	0	0
	EOY Balance													11,843
<b>Total</b>	BOY Cumulative Injected Storage													360,071
	Total Current Year Injection													0
	Total Current Year Withdrawals													444
	EOY Cumulative Injected Storage													359,627

**Footnotes:**

<sup>1</sup> Estimated return based on historic use method adopted by the Task Force on Unmeasured Return Flows on August 28, 1984, and revised as noted in the Reclamation letter to SNWA and CRCN dated December 5, 2007 (included in the Significant Documents).

<sup>2</sup> Colorado River water injected into groundwater storage is accounted for as a consumptive use in the year in which it is diverted from the Colorado River. It will not be accounted for as a consumptive use in the year in which it is withdrawn from storage, but because it originated as Colorado River water it will be accounted for as a return flow credit in the year in which it returns to the Colorado River.

## **ARTICLE V(C): RECORDS FOR THE DISPOSITION OF WATER ORDERED BUT NOT DIVERTED**

In accordance with Article V(C) of the Consolidated Decree, Tables 7 and 8 document records of releases of mainstream water pursuant to orders therefor but not diverted by the party ordering the same, and the quantity of such water delivered to Mexico in satisfaction of the 1944 Mexican Water Treaty or diverted by others in satisfaction of decreed rights.

In addition to the requirements of the Decree, the tabulations provided herewith also document quantities of such water passing to Mexico in excess of treaty requirements and quantities captured in storage.

Water ordered but not diverted is the difference between the approved daily order and the mean daily delivery on the day the diversion was made. Daily orders are provided to Reclamation in advance of the delivery date by the amount of time required for water to travel between the storage location and the user's point of diversion from the mainstream.

To the extent possible, water ordered but not diverted was delivered to other diverters in satisfaction of their water rights. Any remaining water ordered but not diverted was distributed between delivery to storage, delivery to Mexico in satisfaction of treaty requirements, and to Mexico in excess of treaty requirements.

The water users listed in this tabulation are major water users from whom Reclamation receives a daily water order and, with the exception of CAP and MWD, are those that divert their water downstream of Parker Dam. Currently, no daily orders are received from water users in Nevada, therefore Reclamation has not created a tabulation for Nevada water users. In addition, the storage capacity of Lake Mead is large enough relative to Nevada's daily diversions from the reservoir that any water ordered but not diverted would be retained for future use and would not pass to Mexico in excess of treaty requirements.

The “Passing to Mexico in Excess of Treaty” values displayed in this section of the report reflect the sum of the daily amounts of water passing to Mexico in excess of the daily treaty amount, according to IBWC’s schedule, resulting from water that had been ordered but not diverted. The “To Mexico in Excess of Treaty” values displayed in the Article V(D) section reflect all water under/over delivered to Mexico according to IBWC’s schedule. The information provided in Article V(C) is unrelated to information provided in Article V(D) and comparisons between the tabulations should not be made.

**Table 7. State of Arizona - Disposition of Water Ordered but not Diverted, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Central Arizona Project - Diversion at Lake Havasu</b>													
Ordered but not Diverted <sup>1</sup>	250	949	2,433	1,925	51	4,780	1,306	3,310	4,011	399	458	455	20,327
Delivered to Mexico in Satisfaction of Treaty													
Diverted by Others													
Delivered to Storage <sup>2</sup>	250	949	2,433	1,925	51	4,780	1,306	3,310	4,011	399	458	455	20,327
Passing to Mexico in Excess of Treaty													
<b>Colorado River Indian Reservation - Diversion at Headgate Rock Dam</b>													
Ordered but not Diverted <sup>1</sup>	2,487	3,187	3,870	4,312	5,038	4,419	7,418	6,482	4,987	5,139	2,882	1,847	52,068
Delivered to Mexico in Satisfaction of Treaty	613	904	1,637	1,977	2,475	1,008	3,051	2,312	2,461	1,191	1,248	507	19,384
Diverted by Others	1,033	1,620	1,556	1,224	1,653	3,002	3,338	3,111	1,373	3,584	1,288	555	23,337
Delivered to Storage <sup>3</sup>	826	654	649	1,057	735	358	966	879	1,085	323	274	743	8,549
Passing to Mexico in Excess of Treaty	15	10	28	53	175	52	64	179	68	41	72	42	799
<b>North Gila Valley Irrigation District - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	1,225	465	507	428	407	1,029	708	318	275	240	249	405	6,256
Delivered to Mexico in Satisfaction of Treaty	801	222	160	310	163	233	220	111	90	64	120	67	2,561
Diverted by Others	149	176	212	80	155	670	420	163	130	162	84	138	2,539
Delivered to Storage <sup>3</sup>	260	63	130	37	83	111	63	20	52	11	39	171	1,040
Passing to Mexico in Excess of Treaty	15	3	5	1	6	14	5	24	2	3	6	28	112
<b>Gila Monster Farms - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	395	330	221	642	572	256	148	313	457	197	204	343	4,078
Delivered to Mexico in Satisfaction of Treaty	209	133	82	321	345	68	66	114	223	55	78	106	1,800
Diverted by Others	74	120	74	158	127	155	52	141	135	134	105	123	1,398
Delivered to Storage <sup>3</sup>	104	75	62	153	82	29	29	44	93	8	16	76	770
Passing to Mexico in Excess of Treaty	7	2	2	9	17	3	1	15	6	1	5	38	106
<b>Wellton-Mohawk I.D.D. - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	3,305	738	3,201	5,495	1,756	754	1,018	871	4,706	6,981	6,640	4,383	39,848
Delivered to Mexico in Satisfaction of Treaty	2,299	68	1,365	3,039	497	250	270	192	2,141	1,860	1,630	993	14,604
Diverted by Others	393	283	1,549	647	839	361	471	472	1,283	4,522	4,009	1,496	16,325
Delivered to Storage <sup>3</sup>	544	386	267	1,607	392	127	271	195	1,219	575	851	1,439	7,874
Passing to Mexico in Excess of Treaty	69	0	21	201	28	16	6	12	62	24	150	455	1,044
<b>Yuma Irrigation District - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	498	161	45	75	251	484	228	352	178	745	601	840	4,458
Delivered to Mexico in Satisfaction of Treaty	355	84	37	15	68	66	116	60	80	234	226	196	1,537
Diverted by Others	22	37	0	2	103	296	91	191	36	480	328	201	1,787
Delivered to Storage <sup>3</sup>	111	39	8	59	81	120	20	99	59	25	25	321	967
Passing to Mexico in Excess of Treaty	10	1	0	0	0	2	1	2	3	6	21	122	168
<b>Yuma Mesa I.D.D. - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	2,683	1,457	561	1,019	1,006	1,063	1,282	1,745	3,251	2,621	2,475	2,513	21,676
Delivered to Mexico in Satisfaction of Treaty	1,925	511	202	460	686	291	733	526	1,216	870	970	446	8,836
Diverted by Others	219	639	122	222	258	635	354	812	1,208	1,452	1,145	753	7,819
Delivered to Storage <sup>3</sup>	449	302	230	330	47	133	181	323	786	290	323	1,034	4,428
Passing to Mexico in Excess of Treaty	89	4	7	7	15	4	15	84	40	9	38	280	592

**Table 7. State of Arizona - Disposition of Water Ordered but not Diverted, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Unit "B" I.D.D. - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	589	579	544	470	592	363	260	394	489	1,021	689	587	6,577
Delivered to Mexico in Satisfaction of Treaty	344	318	322	341	304	78	152	89	202	224	123	204	2,701
Diverted by Others	107	180	143	60	171	216	53	234	210	693	506	163	2,736
Delivered to Storage <sup>3</sup>	129	74	74	60	106	68	54	57	72	98	53	89	933
Passing to Mexico in Excess of Treaty	10	7	4	8	11	2	1	13	6	6	7	130	205
<b>Yuma County Water Users' Association - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	3,863	923	3,006	2,995	2,856	728	1,663	5,145	1,290	1,087	1,804	3,448	28,808
Delivered to Mexico in Satisfaction of Treaty	2,538	467	939	1,397	564	156	647	1,841	753	378	428	918	11,026
Diverted by Others	425	328	1,324	158	1,337	399	895	2,740	173	545	1,226	878	10,428
Delivered to Storage <sup>3</sup>	824	116	710	1,144	903	172	96	406	347	151	127	1,221	6,216
Passing to Mexico in Excess of Treaty	76	13	33	296	52	1	26	159	16	14	22	431	1,139
<b>Arizona Totals</b>													
Ordered but not Diverted <sup>1</sup>	15,295	8,789	14,388	17,361	12,529	13,876	14,031	18,930	19,644	18,430	16,002	14,821	184,096
Delivered to Mexico in Satisfaction of Treaty	9,084	2,707	4,744	7,860	5,102	2,150	5,255	5,245	7,166	4,876	4,823	3,437	62,449
Diverted by Others	2,422	3,383	4,980	2,551	4,643	5,734	5,674	7,864	4,548	11,572	8,691	4,307	66,369
Delivered to Storage <sup>2,3</sup>	3,499	2,659	4,564	6,372	2,479	5,898	2,985	5,333	7,725	1,878	2,166	5,548	51,105
Passing to Mexico in Excess of Treaty	291	40	100	575	304	94	119	488	203	104	321	1,526	4,165

<sup>1</sup> Due to converting daily cfs values to monthly AF totals and rounding to the nearest whole number, the sum of the disposition of water volumes may not equal the Ordered but not Diverted volume.

<sup>2</sup> Water not diverted by the Central Arizona Project remains in Lake Havasu.

<sup>3</sup> Delivered to temporary storage in Senator Wash and Brock Reservoirs.

**Table 8. State of California - Disposition of Water Ordered but not Diverted, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>The Metropolitan Water District of Southern California -</b>													
Diversion at Lake Havasu													
Ordered but not Diverted <sup>1</sup>	4,727	1,276	6,735	1,113	3,691	6,010	1,843	3,256	4,208	2,735	3,621	4,082	43,297
Delivered to Mexico in Satisfaction of Treaty													
Diverted by Others													
Delivered to Storage <sup>2</sup>	4,727	1,276	6,735	1,113	3,691	6,010	1,843	3,256	4,208	2,735	3,621	4,082	43,297
Passing to Mexico in Excess of Treaty													
<b>Palo Verde Irrigation District - Diversion at Palo Verde Dam</b>													
Ordered but not Diverted <sup>1</sup>	575	1,375	1,761	1,686	1,488	1,379	1,369	2,103	311	662	468	532	13,709
Delivered to Mexico in Satisfaction of Treaty	456	607	966	866	757	383	858	735	137	120	111	165	6,161
Diverted by Others	88	525	448	374	471	710	350	849	117	495	323	188	4,938
Delivered to Storage <sup>3</sup>	11	226	337	418	205	282	152	448	55	47	23	149	2,353
Passing to Mexico in Excess of Treaty	20	16	11	27	54	5	8	70	2	1	12	30	256
<b>Yuma Project Reservation Division - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	4,311	1,666	905	2,445	2,895	1,485	1,999	2,267	2,807	3,362	6,914	8,057	39,113
Delivered to Mexico in Satisfaction of Treaty	2,617	801	377	1,472	1,489	323	1,191	850	1,269	973	2,360	2,554	16,276
Diverted by Others	676	549	317	266	828	908	493	1,000	706	2,055	3,842	2,701	14,341
Delivered to Storage <sup>3</sup>	946	296	208	585	484	238	272	336	793	305	562	1,969	6,996
Passing to Mexico in Excess of Treaty	71	20	3	122	94	15	42	80	39	28	151	834	1,499
<b>Imperial Irrigation District - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	28,385	35,499	37,660	47,956	33,976	18,849	28,481	16,120	20,879	9,613	10,151	15,379	302,948
Delivered to Mexico in Satisfaction of Treaty	18,844	21,128	23,442	31,062	24,085	6,054	20,583	10,041	12,487	6,246	6,598	7,394	187,964
Diverted by Others	3,971	10,180	10,014	8,601	7,159	10,502	5,654	4,276	3,591	3,016	2,673	4,142	73,779
Delivered to Storage <sup>3</sup>	4,894	3,736	3,806	7,046	1,390	2,039	1,762	1,220	4,653	238	571	2,136	33,491
Passing to Mexico in Excess of Treaty	676	456	398	1,247	1,342	253	481	583	149	113	308	1,708	7,714
<b>Coachella Valley Water District - Diversion at Imperial Dam</b>													
Ordered but not Diverted <sup>1</sup>	5,296	621	2,777	1,998	1,361	1,390	1,138	523	4,474	867	382	2,526	23,353
Delivered to Mexico in Satisfaction of Treaty	3,898	446	1,351	1,017	840	363	391	112	1,639	152	13	543	10,765
Diverted by Others	338	116	932	184	335	610	667	329	1,263	691	289	602	6,356
Delivered to Storage <sup>3</sup>	964	40	469	749	153	394	71	73	1,537	22	73	1,016	5,562
Passing to Mexico in Excess of Treaty	95	19	25	47	33	22	9	9	35	2	7	365	668
<b>California Totals</b>													
Ordered but not Diverted <sup>1</sup>	43,293	40,437	49,838	55,197	43,411	29,112	34,828	24,267	32,680	17,238	21,538	30,577	422,420
Delivered to Mexico in Satisfaction of Treaty	25,815	22,982	26,136	34,417	27,171	7,123	23,023	11,738	15,532	7,491	9,082	10,656	221,166
Diverted by Others	5,073	11,370	11,711	9,425	8,793	12,730	7,164	6,454	5,677	6,257	7,127	7,633	99,414
Delivered to Storage <sup>2,3</sup>	11,543	5,574	11,554	9,912	5,924	8,964	4,101	5,333	11,246	3,346	4,851	9,351	91,699
Passing to Mexico in Excess of Treaty	862	511	437	1,443	1,523	295	540	742	225	144	478	2,937	10,137

<sup>1</sup> Due to converting daily cfs values to monthly AF totals and rounding to the nearest whole number, the sum of the disposition of water volumes may not equal the Ordered but not Diverted volume.

<sup>2</sup> Water not diverted by The Metropolitan Water District of Southern California remains in Lake Havasu.

<sup>3</sup> Delivered to temporary storage in Senator Wash and Brock Reservoirs.

## **ARTICLE V(D): RECORDS OF DELIVERIES TO MEXICO IN SATISFACTION OF 1944 TREATY REQUIREMENTS AND WATER PASSING TO MEXICO IN EXCESS OF TREATY REQUIREMENTS**

In accordance with Article V(D) of the Consolidated Decree, Table 9 documents the records of deliveries to Mexico of water in satisfaction of the obligations of Part III of the “Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande” (1944 Mexican Water Treaty), signed February 3, 1944 and water passing to Mexico in excess of treaty requirements. The tabulations, based upon records furnished by the U.S. Section of the IBWC, show the quantities of water delivered to Mexico at the Northerly International Boundary, the Southerly International Boundary, the Limitrophe and emergency deliveries to Tijuana (as applicable), pursuant to Articles 10 and 15 of the 1944 Mexican Water Treaty and related Minutes of the IBWC; and the quantities of water passing to Mexico in excess of treaty requirements.

Minutes incorporated into the tabulations include:

- 1) Minute No. 242 – Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River, signed August 30, 1973.
- 2) Minute No. 318 – Adjustment of Delivery Schedules for Water Allotted to Mexico for the Years 2010 through 2013 as a Result of Infrastructure Damage in Irrigation District 014, Rio Colorado, Caused by the April 2010 Earthquake in the Mexicali Valley, Baja California, signed December 17, 2010.
- 3) Minute No. 319 – Interim International Cooperative Measures in the Colorado River Basin Through 2017 and Extension of Minute 318 Cooperative Measures to Address the Continued Effects of the April 2010 Earthquake in the Mexicali Valley, Baja California, signed November 20, 2012.

**Table 9. Deliveries to Mexico in Satisfaction of Part III of the 1944 Mexican Water Treaty, and Water Passing to Mexico in Excess of Treaty Requirements, Calendar Year 2016 (Values are in acre-feet.)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Colorado River at the Northerly International Boundary<sup>1</sup></b>	141,099	167,639	208,385	190,047	85,574	79,796	91,010	88,124	79,305	48,906	84,110	100,606	1,364,600
<b>Deliveries to Mexico in Satisfaction of Treaty Requirements</b>													
Delivery at the Limitrophe <sup>2</sup>	160	149	170	106	91	117	104	182	308	707	478	494	3,065
Delivery at Southerly International Boundary	13,067	12,291	12,165	11,853	11,770	11,437	11,146	10,768	11,982	11,176	12,300	11,302	141,257
Diversion Channel Discharge <sup>3</sup>	0	0	1	11	270	12	0	15					309
<b>Delivery to Mexico at the Northerly International Boundary<sup>4</sup></b>	<b>140,942</b>	<b>167,332</b>	<b>208,098</b>	<b>189,771</b>	<b>84,755</b>	<b>79,585</b>	<b>90,794</b>	<b>87,849</b>	<b>79,105</b>	<b>48,652</b>	<b>83,885</b>	<b>94,603</b>	<b>1,355,370</b>
Total Deliveries to Mexico in Satisfaction of Treaty Requirements	154,170	179,771	220,432	201,730	96,627	91,409	102,056	98,799	91,409	60,536	96,662	106,399	1,500,000
Mexico's Deferred Delivery <sup>5</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
Total to Mexico in Satisfaction of Treaty Requirements	154,170	179,771	220,432	201,730	96,627	91,409	102,056	98,799	91,409	60,536	96,662	106,399	1,500,000
<b>Delivery of Water Deferred Pursuant to Section III.1 of IBWC Minute No. 319</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>To Mexico in Excess of Treaty<sup>6</sup></b>	<b>157</b>	<b>308</b>	<b>286</b>	<b>276</b>	<b>819</b>	<b>211</b>	<b>216</b>	<b>275</b>	<b>200</b>	<b>253</b>	<b>225</b>	<b>6,003</b>	<b>9,230</b>
<b>Accountable Deliveries to Mexico<sup>7</sup></b>	<b>154,326</b>	<b>180,079</b>	<b>220,719</b>	<b>202,006</b>	<b>97,446</b>	<b>91,620</b>	<b>102,272</b>	<b>99,074</b>	<b>91,609</b>	<b>60,789</b>	<b>96,888</b>	<b>112,402</b>	<b>1,509,230</b>
<b>Water Bypassed Pursuant to IBWC Minute No. 242</b>	<b>8,850</b>	<b>15,456</b>	<b>10,638</b>	<b>12,981</b>	<b>13,895</b>	<b>11,036</b>	<b>13,283</b>	<b>11,815</b>	<b>13,612</b>	<b>18,677</b>	<b>9,517</b>	<b>10,432</b>	<b>150,191</b>
<b>Water Deferred Pursuant to Section III.1 of IBWC Minute No. 319 (Deferred Delivery)<sup>5</sup></b>													
EOY 2015 Cumulative Deferred Delivery Balance													230,528
Current Year Deferred Delivery													0
Delivery of Water Deferred Pursuant to Section III.1 of IBWC Minute No. 319													0
Evaporation <sup>8</sup>													6,916
EOY 2016 Cumulative Deferred Delivery Balance Available for Future Delivery <sup>9</sup>													223,612

Note: Annual totals may differ from the sum of the displayed monthly values due to rounding and conversion from TCM to AF.

**Footnotes:**

<sup>1</sup> Flow in the river at the NIB as reported by IBWC as delivery to Mexico.

<sup>2</sup> Wasteway deliveries to the river limitrophe via the Cooper, 11 mile, and 21 mile lateral wasteways in satisfaction of the 1944 Treaty requirements.

<sup>3</sup> The Diversion Channel delivers water from the SIB confluence structure to the river or to the Bypass Drain. Consistent with a 2001 Memorandum of Understanding between Reclamation and the U.S. Section of the IBWC, during the months of October through January water is discharged to the Bypass Drain. During the months of February through September water is discharged to the Colorado River and is charged to the Treaty.

<sup>4</sup> That portion of the flows at NIB necessary to meet the 1.5 MAF Treaty obligation.

<sup>5</sup> Water deferred pursuant to Section III.1 of IBWC Minute No. 319.

<sup>6</sup> Water passing to Mexico in excess of Mexico's daily schedule. Calculated as the sum of daily differences between actual flows to Mexico and Mexico's total schedule.

<sup>7</sup> Mexico's total water delivery. This value includes deliveries made in satisfaction of Treaty requirements in accordance with Mexico's scheduled diversions (including delivery of water deferred pursuant to Section III.1 of IBWC Minute No. 319 when such deliveries occur) and water passing to Mexico in excess of Mexico's daily schedule. It does not include water bypassed pursuant to IBWC Minute No. 242.

<sup>8</sup> In accordance with IBWC Minute No. 319, a 3 percent reduction for evaporation shall be applied annually on December 31 to water deferred by Mexico pursuant to Section III.1 or any portion thereof has not been delivered, beginning in the year of creation.

<sup>9</sup> The cumulative volume of Mexico's Deferred Delivery includes water deferred during the reporting year and the prior year EOY balance of Deferred Delivery, less deliveries made during the reporting year and the annual evaporation assessment.

**ARTICLE V(E): RECORDS OF DIVERSIONS AND CONSUMPTIVE USE OF WATER FROM THE MAINSTREAM OF THE GILA AND SAN FRANCISCO RIVERS FOR THE BENEFIT OF THE GILA NATIONAL FOREST**

**Table 10. Diversions and Consumptive Use for the Benefit of the Gila National Forest, Calendar Year 2016.<sup>1</sup> (Values are in acre-feet.)**

WATER SOURCE		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>Gila River</b>	Diversion	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>San Francisco River</b>	Diversion	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Totals</b>	Total Diversion	<b>0</b>												
	Total Consumptive Use	<b>0</b>												

<sup>1</sup>These data are provided annually by the New Mexico Interstate Stream Commission.

## **INFORMATION PROVIDED IN ADDITION TO THE REPORTING REQUIREMENTS OF THE CONSOLIDATED DECREE**

The information contained in the following sections of this report is supplemental to the records required by Article V of the Consolidated Decree of the United States Supreme Court in *Arizona v. California*, 547 U.S. 150 (2006). This information provides a more extensive record of activities relating to federal management of the Colorado River. In concise tabulations specific to various agreements, policies, rules, or Records of Decision, this information is intended to help the reader correlate the records found in the Article V portion of this report with the various conservation, transfer, and exchange agreements. The final section contains a list of documents significant to the actions taken by Reclamation, the Lower Division States, and the water user agencies for the calendar year documented in this report.

## **SUMMARY OF WATER AVAILABILITY AND USE BY STATE**

The Secretary of the Interior (Secretary) makes Colorado River water available to the Lower Division States in accordance with Article II of the Consolidated Decree.

Under Article II, the Secretary apportions water to the states under shortage, normal, or surplus conditions, and, in accordance with Article II(B)(6), may release to a state water which was apportioned to but unused by another state.

The amount of Colorado River water available for use in a state is impacted by various agreements and policies. Examples of these agreements and policies include storage and interstate release agreements, the Colorado River Water Delivery Agreement (CRWDA), the Inadvertent Overrun and Payback Policy (IOPP), and the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (2007 Interim Guidelines), specifically, Intentionally Created Surplus (ICS).

Table 11 documents the amount of Colorado River water made available to each Lower Division State under Article II of the Consolidated Decree, water released pursuant to Article II(B)(6) of the Consolidated Decree, paybacks made by users within the state in accordance with IOPP, creation or delivery of ICS, and the total consumptive use within a state. In those years when a given program shows activity a line will be included within the table denoting the activity and the volume of water involved. Otherwise, the line is omitted.

The table demonstrates whether the consumptive use results in an underrun or overrun of the amount of Colorado River water available to each Lower Division State for the calendar year covered by this report.

**Table 11. Apportionments, Article II(B)(6) Releases, Paybacks, and Total Consumptive Use by State, Calendar Year 2016.  
(Values are in acre-feet.)**

STATE	ADJUSTMENTS	ACTUAL USE
<b>Arizona</b>	Basic Apportionment <sup>1</sup>	2,800,000
	CAWCD/YMIDD Pilot Fallowing Program Conservation <sup>2</sup>	(7,509)
	System Conservation Water - Pilot System Conservation Program <sup>3</sup>	(46,219)
	System Conservation Water - Drought Response Agreement <sup>4</sup>	(13,933)
	<hr/>	<hr/>
	Total Available Colorado River Water <sup>5</sup>	2,732,339
	<hr/>	<hr/>
	Total Consumptive Use <sup>6</sup>	2,612,833
	<hr/>	<hr/>
	State Underrun or (Overrun)	119,506
	Unused AZ Apportionment Left in Lake Mead <sup>7</sup>	(119,506)
	<hr/>	<hr/>
	Net State Underrun or (Overrun)	0
<b>California</b>	Basic Apportionment <sup>1</sup>	4,400,000
	ICS Creation (MWD)	(4,888)
	ICS Creation (IID)	(13,845)
	System Conservation Water - Pilot System Conservation Program <sup>3</sup>	(166)
	<hr/>	<hr/>
	Total Available Colorado River Water <sup>5</sup>	4,381,101
	<hr/>	<hr/>
	Total Consumptive Use <sup>6</sup>	4,381,101
	<hr/>	<hr/>
	Net State Underrun or (Overrun)	0
<b>Nevada</b>	Basic Apportionment <sup>1</sup>	300,000
	<hr/>	<hr/>
	Total Available Colorado River Water <sup>5</sup>	300,000
	<hr/>	<hr/>
	Total Consumptive Use <sup>6</sup>	238,326
	<hr/>	<hr/>
	State Underrun or (Overrun)	61,674
	Unused NV Apportionment Left in Lake Mead	(61,674)
	<hr/>	<hr/>
	Net State Underrun or (Overrun)	0

**Footnotes:**

<sup>1</sup> The state basic apportionment as described in Article II(B)(1) of the Consolidated Decree.

<sup>2</sup> In 2013, CAWCD and YMIDD entered into a Pilot Fallowing and Forbearance Program Agreement in which CAWCD agreed to provide funding to YMIDD to fallow a portion of its land. In 2016, 7,509 AF of Colorado River water conserved by the CAWCD/YMIDD fallowing program was intentionally not diverted by CAWCD and left in Lake Mead to benefit system storage.

<sup>3</sup> The aggregate amount of water conserved in each state, in 2016, pursuant to individual System Conservation Implementation Agreements (SCIA) between Reclamation and water users participating in the Pilot System Conservation Program. In accordance with the SCIAs, this System Conservation Water remained in Lake Mead to benefit system storage. For additional details, see Tables 18, 19, and 20.

<sup>4</sup> In 2015, Reclamation and the Fort McDowell Yavapai Nation (Nation) entered into Drought Response Agreement (DRA) No. 15-XX-30-W0598 in which the Nation agreed to forego delivery of 13,933 AF of its CAP water entitlement in 2016. In accordance with the DRA and Letter Agreement No. 15-XX-30-W0599 between Reclamation and CAWCD, this water remained in Lake Mead to benefit system storage.

<sup>5</sup> The total amount of Colorado River water available for use by the state during the reporting year.

<sup>6</sup> The total consumptive use of Colorado River water within the state as tabulated in the Article V(B) section of this report.

<sup>7</sup> Colorado River water apportioned to Arizona, but not diverted in 2016. As it did in 2015, CAWCD notified Reclamation, by letters dated May 10, 2016 and July 21, 2016, that it anticipated creating ICS in 2016. Additionally, CAWCD provided Reclamation with information to support the creation of 98,922 AF of Extraordinary Conservation ICS in 2016. In accordance with Section XI.D.1 of the 2007 Interim Guidelines, creation of ICS is predicated upon the execution of a Forbearance Agreement and Delivery Agreement. As of the date of this report, the execution of these agreements has not been completed; any ICS creation by CAWCD, as verified by Reclamation, will be reflected in a future Colorado River Accounting and Water Use Report.

## **INTERSTATE WATER BANKING WITHIN THE STATES OF ARIZONA, CALIFORNIA, AND NEVADA**

On November 1, 1999, the Secretary of the Interior adopted Federal regulations, codified at 43 CFR Part 414, establishing a procedural framework for carrying out an interstate water banking program. The rule provided for authorized parties to enter into agreements whereby Colorado River water may be stored off-stream in one state for future benefit of consuming entities in another state.

The primary mechanism through which these transactions may occur is a Storage and Interstate Release Agreement (SIRA), which permits authorized entities in the Lower Division States to store Colorado River water off-stream, develop intentionally created unused apportionment (ICUA) in a future year, and make the ICUA available to the Secretary for release for use in another Lower Division State. These SIRAs provide structure and guidance, in accordance with Article II(B)(6) of the Consolidated Decree, for the actions the Secretary will take in releasing Colorado River water to a specific entity in order to implement the interstate contractual distribution of water under the interstate water banking program.

Two SIRAs have been implemented under 43 CFR Part 414. The first SIRA was entered into on December 18, 2002, among Reclamation, on behalf of the Secretary, the Arizona Water Banking Authority (AWBA), the Southern Nevada Water Authority (SNWA), and the Colorado River Commission of Nevada (CRCN). This SIRA provides for the storage, by AWBA, of either the State of Arizona's basic or surplus apportionment or the State of Nevada's unused basic or surplus apportionment for the benefit of SNWA.

In 2001, AWBA, SNWA, and CRCN executed an Agreement for Interstate Water Banking, amended January 1, 2005, April 1, 2009, and May 20, 2013, specifying the interstate banking relationship among those parties. This agreement establishes the terms and conditions for the off-stream storage of Colorado River water in Arizona and the establishment of Long-Term Storage Credits (LTSC) for the benefit of SNWA.

Under the AWBA/SNWA/CRCN interstate banking agreement, Colorado River water diverted and banked in Arizona is accounted as consumptively used by Arizona in the year it is diverted and, as a result, LTSC's are created for SNWA. When LTSC's are recovered, SNWA will divert Colorado River water in exchange for the Central Arizona Water Conservation District's (CAWCD) use of the LTSC's pursuant to the SIRA. The Secretary will release ICUA created by AWBA, via CAWCD's forbearance to SNWA, in that same year pursuant to Article II(B)(6) of the Consolidated Decree. ICUA used by SNWA is in addition to Nevada's basic apportionment and is accounted as consumptive use of Colorado River water in Nevada for that year.

The second SIRA was entered into on October 27, 2004, among Reclamation, on behalf of the Secretary, the Metropolitan Water District of Southern California (MWD), SNWA, and CRCN. This SIRA provides for the storage, by MWD, of the State of Nevada's unused basic or surplus apportionment for the benefit of SNWA.

In 2004, MWD, SNWA, and CRCN, executed an Operational Agreement, amended August 2009, October 2012, and October 2015, specifying the interstate banking relationship among those parties, and providing the terms and conditions under which MWD will store Nevada unused basic apportionment for the benefit of SNWA. When SNWA requests delivery of this water, MWD will develop ICUA by reducing its diversion of Colorado River water. The ICUA developed by MWD through its reduced diversion of Colorado River water will be released by the Secretary for use by SNWA.

Table 12 documents the Accumulated Long Term Storage Credits (ALTSC) verified by AWBA and MWD, provisional LTSC accrued during the past year, LTSC's recovered during the past year, and ALTSC held for an entity with a SIRA.

**Table 12. Colorado River Water Stored in one State Under 43 CFR Part 414 for the Benefit of Specific Entities in Another State (Interstate Water Banking), Calendar Year 2016. (Values are in acre-feet.)**

	BOY Balance	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
<b>NEVADA</b>														
<b>Water diverted and stored in AZ by AWBA for the benefit of SNWA</b>														
Verified 2015 EOY ALTSC <sup>1</sup>	601,041													
Accrued LTSC in 2016 <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Verified LTSC in 2016	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ICUA Developed in 2016 <sup>3</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total ALTSC <sup>4</sup>	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041
<b>Water diverted and stored in CA by MWD for the benefit of SNWA</b>														
Verified 2015 EOY ALTSC <sup>1,5</sup>	330,225													
Diverted in 2016 <sup>5</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Verified LTSC in 2016 <sup>5</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ICUA Developed in 2016 <sup>3,5</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total ALTSC <sup>5</sup>	330,225	330,225	330,225	330,225	330,225	330,225	330,225	330,225	330,225	330,225	330,225	330,225	330,225	330,225
<b>TOTAL</b>														
Water stored for the benefit of SNWA during the calendar year	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Balance of Water Stored for SNWA within AZ and CA <sup>6</sup>	931,266	931,266	931,266	931,266	931,266	931,266	931,266	931,266	931,266	931,266	931,266	931,266	931,266	931,266

**Footnotes:**

<sup>1</sup> ALTSCs are LTSCs verified by the banking entity before the beginning of the reporting year and available for recovery by a specific entity with a valid SIRA. The amount of ICUA developed cannot exceed verified LTSCs.

<sup>2</sup> Provisional LTSCs accrued during the reporting year for the benefit of a specific consuming entity in Nevada with a valid SIRA. Provisional LTSCs represent the amount of water diverted from the river and transported to the storage facility. Provisional LTSCs that have not been verified by AWBA or MWD are not eligible for certification and recovery. Accruals of LTSCs in Arizona for the benefit of consuming entities in Nevada and California are limited to 200,000 AF annually.

<sup>3</sup> ICUA developed by AWBA or MWD during the reporting year. AWBA or MWD have certified this amount to be available and the Secretary has released it to a specific entity with a valid SIRA. The ALTSCs are certified by AWBA or MWD when ICUA is requested, and prior to its release by the Secretary. Total recovery of ALTSCs from AWBA cannot exceed 100,000 AF annually, due to a limitation defined under Arizona state law. When water is released from storage, Arizona or MWD will be required to reduce its consumptive use through the development of ICUA in an amount equal to Nevada's requested release. Nevada will be allowed to utilize the unused apportionment in an amount equal to the ICUA made available.

<sup>4</sup> ALTSCs are the cumulative monthly sum of verified or estimated LTSCs.

<sup>5</sup> In 2004, MWD, SNWA, and the Secretary entered into a SIRA to allow MWD to divert and store water for the benefit of SNWA. When storage occurs, it must be Nevada unused apportionment, which will require Nevada to reduce its consumptive use by an amount equal to the total storage. When water is released from storage, MWD will be required to reduce its consumptive use through the development of ICUA in an amount equal to Nevada's requested release and Nevada will be allowed to utilize the unused apportionment in an amount equal to the ICUA made available by MWD.

<sup>6</sup> This cumulative balance includes both the BOY ALTSC balance as verified by AWBA and MWD and the verified LTSCs placed into storage during the reporting year.

## **INADVERTENT OVERRUNS AND PAYBACKS WITHIN THE STATES OF ARIZONA, CALIFORNIA, AND NEVADA**

On October 10, 2003, the Secretary of the Interior executed the Colorado River Water Delivery Agreement authorizing the Inadvertent Overrun and Payback Policy (IOPP). The policy is set forth in the *Record of Decision, Colorado River Water Delivery Agreement, Implementation Agreement, Inadvertent Overrun and Payback Policy, and Related Federal Actions, Final Environmental Impact Statement*, published in the *Federal Register* at 69 Fed. Reg. 12202 (March 15, 2004). Effective January 1, 2004, the IOPP, which applies only to Colorado River water users in the Lower Division States, defines inadvertent overruns, establishes procedures to account for inadvertent overruns, and sets forth the requirements for payback of inadvertent overruns to the Colorado River system.

For various reasons, a user may inadvertently divert, pump or receive Colorado River water in an amount that exceeds that to which the user is entitled for that year pursuant to the user's water delivery contract, decreed water right, or Secretarial reservation (inadvertent overrun).

In accordance with the IOPP, paybacks are required to commence in the calendar year that immediately follows the release date of the final Water Accounting Report that reports the overrun. Section 2.6 of the IOPP sets forth the number of years within which an overrun must be paid back and the minimum payback required for each year. Overruns are not allowed in a year for which the Secretary has declared a Shortage condition.

The tabulations in Tables 13 through 15 document information associated with inadvertent overruns and paybacks, as applicable, for each individual water user, including:

- 1) The beginning-of-year overrun account balance.
- 2) The amount of overrun incurred in the reporting year.
- 3) The amount of validated paybacks made to the Colorado River system in the reporting year.
- 4) The end-of-year overrun balance.

**Table 13. State of Arizona - Overruns, Paybacks, and Overrun Account Balances, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER	DETAILS	DIVERSION	ANNUAL TOTALS CONSUMPTIVE USE	APPROVAL	ENTITLEMENT
No overruns or paybacks occurred within the State of Arizona in the reporting year.					

**Table 14. State of California - Overruns, Paybacks, and Overrun Account Balances, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER	DETAILS	DIVERSION	ANNUAL TOTALS CONSUMPTIVE USE	APPROVAL	ENTITLEMENT
No overruns or paybacks occurred within the State of California in the reporting year.					

**Table 15. State of Nevada - Overruns, Paybacks, and Overrun Account Balances, Calendar Year 2016. (Values are in acre-feet.)**

WATER USER	DETAILS	DIVERSION	ANNUAL TOTALS CONSUMPTIVE USE	APPROVAL	ENTITLEMENT
No overruns or paybacks occurred within the State of Nevada in the reporting year.					

## LOWER COLORADO WATER SUPPLY PROJECT

The Lower Colorado Water Supply Act (Act), Public Law 99-655, Nov. 14, 1986, authorized the Secretary of the Interior (Secretary) to construct, operate, and maintain the Lower Colorado Water Supply Project (LCWSP). Pursuant to the Act, the Secretary is authorized to enter into exchange contracts and take such actions as the Secretary deems appropriate to facilitate a water exchange between non-Federal interests for the care, operation, and maintenance of all or any part of the project works, subject to such rules and regulations as the Secretary may prescribe.

Any contracts executed by the Secretary to fulfill the requirements of subsections (a)(2) and (a)(3) of the Act must be with persons, or Federal or non-Federal governmental entities whose lands or interests in lands are located adjacent to the Colorado River in the State of California who do not hold rights to Colorado River water or whose rights are insufficient to meet their present or anticipated future needs, as determined by the Secretary. Such entities shall include domestic, municipal, industrial, and recreational water users along the Colorado River in the State of California. Water for agricultural use is not authorized under the Act.

The Act authorizes construction of wells with a total annual capacity of 10,000 acre-feet. Stage I of the LCWSP has been completed and consists of two wells located south of the All-American Canal (AAC) in Imperial County having a total design capacity of 5,000 acre-feet. The wells, which became operational as of August 1, 2003, pump groundwater and discharge it into the AAC for use by the Imperial Irrigation District (IID). IID then forbears the use of an equal amount of Colorado River water.

In September 1992, Reclamation entered into a contract to supply LCWSP water to the City of Needles (Needles) in annual amounts

up to 3,500 acre-feet of the initial 5,000 acre-feet available. The contract with Needles establishes a framework for Needles to enter into sub-contracts for delivery of LCWSP water to non-Federal water users in San Bernardino, Riverside, and Imperial Counties. The Colorado River Board of California (CRBC) recommends whether a non-Federal applicant should be offered a subcontract for a LCWSP water supply and notifies Reclamation. Reclamation reviews the information submitted by CRBC and refers the approved applicants to the City which then offers subcontracts.

In September 1998, the Bureau of Land Management (BLM) was allocated 1,150 acre feet of Stage I capacity for consumptive use on BLM administered lands in California located adjacent to the Colorado River. In December 2004, a Reclamation determination reserved an additional 350 acre-feet of Stage I capacity of the LCWSP for use by Reclamation facilities in California on land adjacent to the Colorado River. With the determination, the estimated 5,000 acre-feet per year of Stage I capacity was completely allocated.

The Act, as amended in 2005, authorizes the Secretary to contract for the use of LCWSP water under terms that the Secretary determines will benefit the interest of LCWSP users along the Colorado River. On March 26, 2007, Reclamation entered into a contract with the Needles and the Metropolitan Water District of Southern California (MWD), allowing Stage I of the LCWSP to be pumped at capacity, allowing MWD to receive as much unused water as available without jeopardizing the LCWSP. MWD is depositing certain monies in a Water Quality Maintenance Trust Fund to provide for the long-term viability of the LCWSP or its replacement.

**Table 16. Summary of Uses Offset by Pumpage from the LCWSP, Calendar Year 2016. (Values are in acre-feet.)**

	TOTALS
<b>LCWSP Wellfield Pumpage<sup>1</sup></b>	7,172
<b>Federal LCWSP Contractors<sup>2</sup></b>	
BLM	Consumptive Use
Reclamation - Parker Dam and Government Camp	1
	<b>Total Federal Contractors' Consumptive Use</b>
	265
<b>Non-Federal LCWSP Contractors<sup>3</sup></b>	
City of Needles	Consumptive Use
<b>Needles' Subcontractors</b>	
Southern California Gas Company	Consumptive Use
Pacific Gas & Electric Company	1
Havasu Water Company of California	Consumptive Use
Vista del Lago Resort	18
Needles' Other Subcontractors	Consumptive Use
	11
	<b>Needles' and Subcontractors' Consumptive Use</b>
	178
<b>LCWSP Water Available to MWD<sup>4</sup></b>	260
	<b>Total Non-Federal Contractors' Consumptive Use</b>
	6,907

**Footnotes:**

<sup>1</sup> Non-Colorado River water pumped from the LCWSP wellfield and delivered to IID for its use via the AAC. IID forbears the consumptive use of this amount from the Colorado River to make water available for exchange to the LCWSP beneficiaries.

<sup>2</sup> Total LCWSP Federal contractors' consumptive use. Colorado River water used was exchanged for LCWSP water.

<sup>3</sup> Total LCWSP Non-Federal consumptive use by the City of Needles and its subcontractors. Colorado River water used was exchanged for LCWSP water.

<sup>4</sup> Total amount of water pumped from the wellfield less consumptive use of LCWSP water by Federal and Non-Federal LCWSP contractors.

## **CONSERVATION, TRANSFERS, AND EXCHANGES**

Colorado River water apportioned to the Lower Division States has been further apportioned among the states of Arizona, California, and Nevada and is generally committed to specific persons or entities on a permanent basis. Increasing water demands within the Lower Division States must be met through a combination of conservation, transfers, exchanges, or new water sources which augment the limited supply of Colorado River water.

On October 10, 2003, the Secretary of the Interior entered into the Colorado River Water Delivery Agreement (CRWDA) with Imperial Irrigation District, Coachella Valley Water District, the Metropolitan Water District of Southern California, and the San Diego County Water Authority to resolve longstanding disputes regarding the priority, use, and transfer of Colorado River water within California. The CRWDA recognizes a variety of water transfers, exchanges, and conservation programs which alter the delivery of certain Colorado River water for up to 75 years.

Concurrent with the CRWDA, the California agencies entered into the Quantification Settlement Agreement, including a series of supplemental agreements, which collectively implement many provisions of the CRWDA through water transfers, water exchanges, and water conservation measures. Data as a result of the implementation of these agreements are documented in this section.

Table 17 entitled “Comparison of Net California Agricultural Use, Calendar Year 2016” demonstrates the impact of conservation and transfers on agricultural water use in California in the reporting year and compares the California agricultural use to the applicable Benchmark or Annual Target.

Tables 18 through 20 entitled “State of (State) Transfers, Exchanges and Water Made Available by Extraordinary Conservation,

Calendar Year 2016” tabulate these transactions reported within Arizona, California, and Nevada.

For California, the tabulation documents, by agreement, conservation outside of the CRWDA or in amounts that differ from those displayed in Exhibit B of the CRWDA.

For Arizona, California, and Nevada the tabulation includes System Conservation Water created in 2016 under the Pilot System Conservation Program (PSCP). Under the PSCP, System Conservation Water, conserved through the voluntary implementation of extraordinary conservation pilot projects, remained in Lake Mead to benefit system storage.

Table 21 entitled “Bureau of Reclamation – Water Made Available by Conservation, Calendar Year 2016” documents water made available by Reclamation through conservation efforts. This includes:

- 1) Groundwater introduced to the system by pumping certain wells in the Yuma area that discharges to the Colorado River via the Yuma Mesa Conduit.
- 2) Water stored in Warren H. Brock Reservoir.
- 3) Water discharged to the Colorado River as a result of the operation of the Yuma Desalting Plant.
- 4) Water conserved by the Fort McDowell Yavapai Nation pursuant to DRA No. 15-XX-30-W0599.

Table 22 entitled “Exhibit B to the Colorado River Water Delivery Agreement” is reproduced from the CRWDA for convenient reference.

**Table 17. Comparison of Net California Agricultural Use, Calendar Year 2016<sup>1</sup>. (Values are in acre-feet.)**

California Agricultural Entity	Consumptive Uses
Palo Verde Irrigation District	328,115
Yuma Project Reservation Division	47,595
Yuma Island Pumpers <sup>2</sup>	3,401
Priorities 1, 2, 3b	379,111
CVWD	356,358
IID	2,504,258
<b>Total California Agricultural Use</b>	<b>3,239,727</b>
MWD Reduction for Priority 1, 2, and 3b use <sup>3</sup>	0
Overruns (by ag. entities)	0
Paybacks (by ag. entities)	0
MWD-CVWD Exchange	0
ICS Creation (by ag. entities)	13,845
ICS Delivery (by ag. entities)	0
IID and CVWD reductions for PPRs <sup>4</sup>	13,175
<b>Use by California Agriculture+MWD Reduction+ICS Creation+IID/CVWD covered PPRs</b>	<b>3,266,747</b>
<b>Annual Agricultural Benchmark or Target Comparison</b>	
2016 Annual Target <sup>5</sup>	3,440,000
Use by California Agriculture+MWD Reduction+ICS Creation+IID/CVWD covered PPRs	3,266,747
<b>Total Target Overrun or (Underrun)</b>	<b>(173,253)</b>
<b>Priority 1, 2, and 3b use below/above 420,000 AF</b>	
Palo Verde Irrigation District	328,115
Yuma Project Reservation Division	47,595
Yuma Island Pumpers <sup>2</sup>	3,401
<b>Total Priority 1, 2, 3b Use</b>	<b>379,111</b>
MWD Reduction for Priority 1, 2, and 3b water use <sup>6</sup>	0
Priority 1, 2, and 3b water delivered to MWD <sup>7</sup>	40,889

<sup>1</sup> Sections XI.A., B., E., F., and G., of the 2007 Record of Decision, Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead contain the adopted Interim Guidelines. Section XI.G.5 of the Interim Guidelines contains benchmarks for aggregate California agricultural water use during each third year from 2003 through 2012. Exhibit B to the CRWDA, Column 22 references these Interim Guidelines benchmarks, and Column 23 references annual targets for aggregate agricultural water use for the years between the benchmarks and through 2016. Footnotes 2 and 12 of Exhibit B define annual targets and benchmark year aggregate agricultural use totals as consumptive use of Priorities 1 through 3 plus 14,500 AF of PPR use, minus any MWD adjustment for Priority 1 through 3 use above 420,000 AF.

<sup>2</sup> Incorporation of Yuma Island Pumpers' use within Priority 2 does not represent either a final approval of this use by Reclamation or a final determination of the appropriate Consolidated Decree accounting for this use; nor is it an admission by any Colorado River contractor as to the legality of this use or diversion of Colorado River water.

<sup>3</sup> MWD's reductions for Priorities 1, 2, and 3b count toward meeting the ISG annual target.

<sup>4</sup> Volume shown includes 145 AF of System Conservation Water created by the City of Needles in 2016 under the PSCP, which IID and CVWD agreed to not divert.

<sup>5</sup> See Exhibit B of the CRWDA (Column 23).

<sup>6</sup> Per Section 4.d of the CRWDA, MWD use is reduced by the sum of Priority 1, 2, and 3b use greater than 420,000 AF.

<sup>7</sup> Per Section 4.d of the CRWDA, the sum of Priority 1, 2, and 3b use that is less than 420,000 AF is delivered to MWD.

**Table 18. State of Arizona - Transfers, Exchanges, and Water Made Available by Extraordinary Conservation, Calendar Year 2016. (Values are in acre-feet.)**

PROGRAM OR PARTICIPATING AGENCIES	TOTAL
CAWCD/YMIDD Pilot Fallowing Program <sup>1</sup>	7,509
<b>Pilot System Conservation Program (PSCP) <sup>2</sup></b>	
CAWCD <sup>3</sup>	25,265
Colorado River Indian Tribes <sup>4</sup>	1,137
Gila River Indian Community <sup>5</sup>	10,000
Tohono O'odham Nation <sup>6</sup>	9,817

**Footnotes:**

<sup>1</sup> In 2013, CAWCD and YMIDD entered into a Pilot Fallowing and Forbearance Program Agreement in which CAWCD agreed to provide funding to YMIDD to fallow a portion of its land. In 2016, 7,509 AF of Colorado River water conserved by the CAWCD/YMIDD fallowing program was intentionally not diverted by CAWCD and left in Lake Mead to benefit system storage.

<sup>2</sup> Water conserved from projects implemented pursuant to System Conservation Implementation Agreements (SCIA), executed in accordance with the July 30, 2014, *Agreement Among The United States of America, Through The Department of the Interior, Bureau of Reclamation, The Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and The Southern Nevada Water Authority, For A Pilot Program for Funding the Creation of Colorado River System Water through Voluntary Water Conservation and Reductions in Use*, as amended August 12, 2015 and March 8, 2016. Water conserved from projects implemented under the PSCP is for the sole purpose of increasing storage levels in Lake Mead and Lake Powell and will not accrue to the benefit or use of any individual water user.

<sup>3</sup> In 2016, Reclamation and CAWCD entered into SCIA No. 15-XX-30-W0602 under the PSCP in which CAWCD agreed to reduce delivery of CAP excess Agricultural Pool water in 2016 to create System Conservation Water. In accordance with the SCIA, this System Conservation Water remained in Lake Mead to benefit system storage.

<sup>4</sup> In 2016, Reclamation and the Colorado River Indian Tribes (Tribes) entered into SCIA No. 16-XX-30-W0606 under the PSCP in which the Tribes agreed to fallow 1,591 acres of farmland from October 1, 2016 through September 30, 2017 to create System Conservation Water. In accordance with the SCIA and Letter Agreement No. 16-XX-30-W0608 between Reclamation and CAWCD, the portion of water conserved in 2016 remained in Lake Mead to benefit system storage.

<sup>5</sup> In 2016, Reclamation and the Gila River Indian Community (Community) entered into SCIA No. 16-XX-30-W0614 under the PSCP in which the Community agreed to reduce delivery of its CAP water entitlement in 2016 to create System Conservation Water. In accordance with the SCIA and Letter Agreement No. 16-XX-30-W0616 between Reclamation and CAWCD, this System Conservation Water remained in Lake Mead to benefit system storage.

<sup>6</sup> In 2016, Reclamation and the Tohono O'odham Nation (Nation) entered into SCIA No. 16-XX-30-W0609 under the PSCP in which the Nation agreed to reduce delivery of its CAP water entitlement in 2016 to create System Conservation Water. In accordance with the SCIA and Letter Agreement No. 16-XX-30-W0611 between Reclamation and CAWCD, this System Conservation Water remained in Lake Mead to benefit system storage.

**Table 19. State of California - Transfers, Exchanges, and Water Made Available by Extraordinary Conservation, Calendar Year 2016. (Values are in acre-feet.)**

PROGRAM OR PARTICIPATING AGENCIES	TOTAL
<b>IID Conservation</b>	
1988 IID/MWD Conservation Agreement <sup>1</sup>	105,000
MWD Reduction for CVWD use <sup>2</sup>	14,626
Transfer to SDCWA <sup>3</sup>	100,000
SDCWA Mitigation Transfer <sup>4</sup>	130,796
IID Intra-Priority 3 Transfer to CVWD <sup>5</sup>	41,000
Extraordinary Conservation Delivered to MWD <sup>6</sup>	56,232
<b>MWD/PVID Forbearance and Fallowing Program <sup>7</sup></b>	125,432
<b>MWD/Bard Water District Pilot Seasonal Fallowing Program <sup>8</sup></b>	951
<b>All-American Canal Lining Project <sup>9</sup></b>	
SDCWA Exchange with MWD	56,200
Supplemental to MWD	11,500
Total Conservation	67,700
<b>Coachella Canal Lining Project <sup>10</sup></b>	
SDCWA Exchange With MWD	22,078
Supplemental to MWD	4,500
Mitigation	4,272
Total Conservation	30,850
<b>Total MWD Exchange with SDCWA <sup>11</sup></b>	178,278
<b>Pilot System Conservation Program (PSCP) <sup>12</sup></b>	
City of Needles <sup>13</sup>	145
CVWD <sup>14</sup>	21

Note: Additional transfers and water exchange obligations may be found in Table 22, Exhibit B to the CRWDA.

**Footnotes:**

<sup>1</sup> 1988 IID/MWD Water Conservation Program conserved water, determined in accordance with the amended 1988 Program Agreement and the amended 1989 Approval Agreement, made available by IID for diversion in the reporting year by MWD, reported as an annual total.

<sup>2</sup> In accordance with the amended 1989 Approval Agreement, CVWD may request up to 20,000 AF of the water conserved by IID for MWD under the 1988 IID/MWD Water Conservation Agreement. MWD reduces its use by up to 20,000 AF of water conserved for use by CVWD, which is reflected in the displayed value above.

<sup>3</sup> As referenced in Column 5, Exhibit B, of the CRWDA, IID conserves water for transfer to SDCWA.

<sup>4</sup> As referenced in Column 7, Exhibit B, of the CRWDA and the IID/SDCWA Water Transfer Agreement, as amended, IID conserves water for transfer to SDCWA for delivery, by exchange from non-Colorado River sources, to the Salton Sea for mitigation purposes. As reported above, in 2016 IID delivered 130,796 AF of conserved water, created through fallowing, to the Salton Sea for mitigation purposes. Of this amount, 86,107 AF were delivered to meet the balance of IID's 2016 Salton Sea mitigation requirement, which was adjusted for a 43,893 AF over-delivery of conserved water made in 2015 ( $130,000 - 43,893 = 86,107$  AF). The remaining 44,689 AF ( $130,796 - 86,107 = 44,689$  AF) were delivered by IID to serve as pre-delivery toward IID's 2017 Salton Sea mitigation requirement, as noted in its letter dated September 6, 2016. The appropriate accounting for the final disposition of the 44,689 AF delivered to the Salton Sea is under review by Reclamation. Also, as first reported in the 2010 Water Accounting Report (and subsequent reports), in 2010 IID delivered 46,546 AF of Colorado River water to the Salton Sea with a stated intention to store the water for use for Salton Sea mitigation requirements in 2011 and half of 2012. IID did not conserve an equivalent amount of water in 2011 and 2012 for delivery to the Salton Sea resulting in a Colorado River system storage depletion of 46,546 AF. This matter is the subject of a series of letters between Reclamation and IID, including Reclamation's letter dated May 3, 2013; IID's letter dated June 28, 2013; and Reclamation's letter dated July 2, 2013, and currently remains under discussion between Reclamation and IID.

<sup>5</sup> IID conserves water under an acquisition agreement with CVWD to meet the IID/CVWD Intra-priority 3 Transfer obligation as referenced in Column 8, Exhibit B of the CRWDA.

<sup>6</sup> For informational purposes: Water conserved by IID through extraordinary conservation and delivered to MWD pursuant to the California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus, as amended. This amount does not include 13,845 AF of Extraordinary Conservation ICS created by IID in 2016, which was stored in Lake Mead.

<sup>7</sup> PVID's annual reduction in consumptive use of Colorado River water through land fallowing, as reported in Table 8 of the CY 2016 Fallowed Land Verification Report, PVID/MWD Forbearance and Fallowing Program, dated May 11, 2017. This value represents the estimated reduction in PVID's consumptive use as a result of fallowing 25,947 acres from January through December in the reporting year.

Continued on next page.

**Footnotes: Continued from previous page.**

<sup>8</sup> Bard Water District's seasonal reduction in consumptive use of Colorado River water through land fallowing. This value represents the preliminary estimate of the reduction in Bard Water District's consumptive use as a result of fallowing 509.12 acres from April 1 through July 31 in the reporting year.

<sup>9</sup> The Secretarial Determination of water conserved by lining certain reaches of the AAC was issued in December 2009 (see Significant Documents). As a result, conserved water was distributed in accordance with the Allocation Agreement among the United States, MWD, CVWD, IID, SDCWA, and the SLRSP, dated October 10, 2003 and Public Law 100-675, as amended.

<sup>10</sup> The Secretarial Determination of water conserved by the CCLP was issued in January 2008. As a result, conserved water was distributed in accordance with the Allocation Agreement among the United States, MWD, CVWD, IID, SDCWA, and the SLRSP, dated October 10, 2003, Public Law 100-675, as amended, and Exhibit B to the Settlement Agreement between CVWD and SDCWA, dated October 30, 2007.

<sup>11</sup> The amount shown represents water exchanged between MWD and SDCWA in the reporting year. This is the sum of: IID Conservation - Transfer to SDCWA (100,000 AF), All-American Canal Lining Project - SDCWA Exchange with MWD (56,200 AF), and the Coachella Canal Lining Project - SDCWA Exchange with MWD (22,078 AF).

<sup>12</sup> Water conserved from projects implemented pursuant to System Conservation Implementation Agreements (SCIA), executed in accordance with the July 30, 2014, *Agreement Among The United States of America, Through The Department of the Interior, Bureau of Reclamation, The Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and The Southern Nevada Water Authority, For A Pilot Program for Funding the Creation of Colorado River System Water through Voluntary Water Conservation and Reductions in Use*, as amended August 12, 2015 and March 8, 2016. Water conserved from projects implemented under the PSCP is for the sole purpose of increasing storage levels in Lake Mead and Lake Powell and will not accrue to the benefit or use of any individual water user.

<sup>13</sup> In 2016, Reclamation and the City of Needles (Needles) entered into SCIA No. 15-XX-30-W0596 under the PSCP in which Needles agreed to implement water conservation measures on the River Edge Golf Course to create System Conservation Water. In accordance with the SCIA, this System Conservation Water remained in Lake Mead to benefit system storage.

<sup>14</sup> In 2016, Reclamation and CVWD entered into SCIA No. 15-XX-30-W0593 under the PSCP in which CVWD agreed to establish a Furrow/Flood to Drip Conversion Rebate Program to create System Conservation Water. In accordance with the SCIA, this System Conservation Water remained in Lake Mead to benefit system storage.

**Table 20. State of Nevada - Transfers, Exchanges, and Water Made Available by Extraordinary Conservation, Calendar Year 2016. (Values are in acre-feet.)**

PROGRAM OR PARTICIPATING AGENCIES	TOTAL
Pilot System Conservation Program (PSCP) <sup>1</sup> SNWA <sup>2</sup>	7,688

**Footnotes:**

<sup>1</sup> Water conserved from projects implemented pursuant to System Conservation Implementation Agreements (SCIA), executed in accordance with the July 30, 2014, *Agreement Among The United States of America, Through The Department of the Interior, Bureau of Reclamation, The Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and The Southern Nevada Water Authority, For A Pilot Program for Funding the Creation of Colorado River System Water through Voluntary Water Conservation and Reductions in Use*, as amended August 12, 2015 and March 8, 2016. Water conserved from projects implemented under the PSCP is for the sole purpose of increasing storage levels in Lake Mead and Lake Powell and will not accrue to the benefit or use of any individual water user.

<sup>2</sup> In 2015, the Bureau of Reclamation and SNWA entered into SCIA No. 15-XX-30-W0576 under Phase I of the PSCP in which SNWA agreed to conserve 7,500 AF from its Muddy and Virgin River Tributary Conservation projects to create System Conservation Water in 2015 and 2016. Additionally, in 2016, Reclamation and SNWA entered into SCIA No. 16-XX-30-W0612 under Phase II of the PSCP in which SNWA agreed to conserve up to 860 AF per year, from October 1, 2016 through September 30, 2019, of post-1929 Virgin River surface water rights to create System Conservation Water. The amount conserved in 2016 under the Phase II SCIA was 188 AF. In accordance with the SCIA, this water remained in Lake Mead to benefit system storage. (Volumes noted are provisional until verified by Reclamation.)

**Table 21. Bureau of Reclamation - Water Made Available by Conservation, Calendar Year 2016. (Values are in acre-feet.)**

CONSERVATION PROGRAM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Arizona Groundwater Permit <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
Warren H. Brock Reservoir Storage <sup>2</sup>	10,653	16,925	16,394	16,259	12,318	10,677	13,654	11,225	10,677	11,417	9,828	9,578	149,605
Yuma Desalting Plant Discharge to the Colorado River <sup>3</sup>	4	16	8	0	15	13	18	17	17	17	10	17	152
Drought Response Agreement Conservation - Fort McDowell Yavapai Nation <sup>4</sup>													13,933
Pilot System Conservation Program <sup>5</sup>													54,073

**Footnotes:**

<sup>1</sup> In 2007, the Bureau of Reclamation was granted a permit to withdraw Arizona groundwater for return flow credits to offset bypass flows to Mexico. The values shown represent the return flow credits earned in accordance with the permit in the year covered by this report.

<sup>2</sup> Colorado River water stored in Warren H. Brock Reservoir. This total does not necessarily represent all new conservation or system efficiency gains by the reservoir. The difference between the value shown here and the amount shown in the California Article V(B) section, IID tabulation, "Delivery From Warren H. Brock Reservoir", consists of changes in reservoir storage and losses from the reservoir.

<sup>3</sup> Water created by operation of the Yuma Desalting Plant and discharged to the Colorado River.

<sup>4</sup> In 2015, Reclamation and the Fort McDowell Yavapai Nation (Nation) entered into Drought Response Agreement (DRA) No. 15-XX-30-W0598 in which the Nation agreed to forego delivery of 13,933 AF of its CAP water entitlement in 2016. In accordance with the DRA and Letter Agreement No. 15-XX-30-W0599 between Reclamation and CAWCD, this water remained in Lake Mead to benefit system storage.

<sup>5</sup> Water conserved from projects implemented pursuant to System Conservation Implementation Agreements (SCIA), executed in accordance with the July 30, 2014, *Agreement Among The United States of America, Through The Department of the Interior, Bureau of Reclamation, The Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and The Southern Nevada Water Authority, For A Pilot Program for Funding the Creation of Colorado River System Water through Voluntary Water Conservation and Reductions in Use*, as amended August 12, 2015 and March 8, 2016.

Water conserved from projects implemented under the PSCP is for the sole purpose of increasing storage levels in Lake Mead and Lake Powell and will not accrue to the benefit or use of any individual water user. (Volume shown is the total amount of System Conservation Water conserved in 2016 from projects implemented in Arizona, California, and Nevada. See Tables 18, 19, and 20 for additional details.)

**Table 22. Exhibit B to the Colorado River Water Delivery Agreement.**

		EXHIBIT B QUANTIFICATION AND TRANSFERS <sup>1</sup> <i>In Thousands of Acre-feet</i>																						
Column:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Calendar Year	<sup>2</sup> Priority 1, 2 and 3b	IID Priority 3a													CVWD Priority 3a							Total Priority 1-3 Use Plus PPR Consumptive Use (sum of columns 2+13+20 plus 11+16)	<sup>12</sup> ISG Benchmarks	<sup>12</sup> Annual Targets
		IID Priority 3a Quantified Amount	<sup>3</sup> IID Reduction: MWD 1988 Agreement Transfer	IID Reduction: SDCWA Transfer	<sup>4</sup> IID Reduction: AAC Lining IID, SDCWA & SLR	<sup>5,6</sup> IID Reduction: SDCWA Mitigation Transfer	<sup>7</sup> Intra-Priority 3 Transfer IID/CVWD	<sup>6</sup> IID Reduction: MWD Transfer with Salton Sea Restoration	<sup>8</sup> IID Reduction: Conditional ISG Backfill	<sup>9</sup> IID Reduction: Misc. PPRs	IID Reductions: Total Amount (sum of columns 4 through 11)	<sup>10</sup> IID Net Consumptive Use Amount (difference between column 3 and column 12)	CVWD Priority 3a Quantified Amount	<sup>4</sup> CVWD Reduction: CC Lining, SDCWA & SLR	<sup>9</sup> CVWD Reduction: Misc. PPRs	<sup>11</sup> CVWD Reductions : Total Amount (sum of columns 15 + 16)	<sup>7</sup> Intra-Priority 3 Transfer IID/CVWD	<sup>3</sup> Intra-Priority 3 Transfer MWD/CVWD	CVWD Net Consumptive Use Amount (columns 14 - 17 plus columns 18 + 19)					
1	2003	420												330	0	3	3	0	20	347	3,745.0	3,740	3,740	
2	2004	420												330	0	3	3	0	20	347	3,730.0	3,707	3,707	
3	2005	420												330	0	3	3	0	20	347	3,715.0	3,674	3,674	
4	2006	420												330	26	3	29	0	20	321	3,665.0	3,640	3,640	
5	2007	420												330	26	3	29	0	20	321	3,659.0	3,603	3,603	
6	2008	420												330	26	3	29	4	20	325	3,571.3	3,566	3,566	
7	2009	420												330	26	3	29	8	20	329	3,536.3	3,530	3,530	
8	2010	420												330	26	3	29	12	20	333	3,501.3	3,510	3,510	
9	2011	420												330	26	3	29	16	20	337	3,466.3	3,490	3,490	
10	2012	420												330	26	3	29	21	20	342	3,431.3	3,470	3,470	
11	2013	420												330	26	3	29	26	20	347	3,396.3	3,462	3,462	
12	2014	420												330	26	3	29	31	20	352	3,376.3	3,455	3,455	
13	2015	420												330	26	3	29	36	20	357	3,356.3	3,448	3,448	
14	2016	420												330	26	3	29	41	20	362	3,336.3	3,440	3,440	
15	2017	420												330	26	3	29	45	20	366	3,325.3			
16	2018	420												330	26	3	29	63	20	384	3,536.3			
17	2019	420												330	26	3	29	68	20	389	3,506.3			
18	2020	420												330	26	3	29	73	20	394	3,473.8			
19	2021	420												330	26	3	29	78	20	399	3,461.3			
20	2022	420												330	26	3	29	83	20	404	3,463.8			
21	2023	420												330	26	3	29	88	20	409	3,466.3			
22	2024	420												330	26	3	29	93	20	414	3,466.3			
23	2025	420												330	26	3	29	98	20	419	3,466.3			
24	2026	420												330	26	3	29	103	20	424	3,466.3			
25	2027	420												330	26	3	29	103	20	424	3,466.3			
26	2028	420												330	26	3	29	103	20	424	3,466.3			
	2029-2037	420												330	26	3	29	103	20	424	3,466.3			
	2038-2047 <sup>13</sup>	420												330	26	3	29	103	20	424	3,466.3			
	2048-2077 <sup>14</sup>	420												330	26	3	29	100	20	421	3,466.3			

1 Exhibit B is independent of increases and reductions as allowed under the Inadvertent Overrun and Payback Policy.

2 Any higher use covered by MWD, any lesser use will produce water for MWD and help satisfy ISG Benchmarks and Annual Targets.

3 IID/MWD 1988 Conservation Program conserves up to 110,000 AFY and the amount is based upon periodic verification. Of amount conserved, up to 20,000 AFY to CVWD (column 19), which does not count toward ISG Benchmarks and Annual Targets, and remainder to MWD.

4 Ramp-up amounts may vary based upon construction progress, and final amounts will be determined by the Secretary pursuant to the Allocation Agreement.

5 Any amount identified in Exhibit B for mitigation purposes will only be from non-Colorado River sources and these amounts may be provided by exchange for Colorado River water.

6 Water would be transferred to MWD subject to satisfaction of certain conditions and to appropriate federal approvals. For informational purposes only, these transfers may also be subject to state approvals. Schedules are subject to adjustments with mutual consent. After 2006, these quantities will count toward the ISG Benchmarks (column 22) and Annual Targets (column 23) only if and to the extent that water is transferred into the Colorado River Aqueduct for use by MWD and/or SDCWA.

7 MWD can acquire if CVWD declines the water. Any water obtained by MWD will be counted as additional agricultural reduction to help satisfy the ISG Benchmarks and Annual Targets. MWD will provide CVWD 50,000 AFY of the 100,000 AFY starting in year 46.

8 IID has agreed to provide transfer amounts to meet the minimum ISG benchmarks, not to exceed a cumulative total of 145,000 AF. Maximum transfer amounts are 25,000 AF in 2006, 50,000 AF plus the unused amount from 2006 in 2009, and 70,000 AF plus the unused amounts from 2006 and 2009 in 2012. In addition to the maximum transfer amounts IID has also committed that no more than 72,500 AF of reduced inflow to the Salton Sea would result from these additional transfers.

9 Up to the amount shown, as agreed upon reduction to IID or CVWD to cover collectively the sum of individual Miscellaneous PPRs, federal reserved rights and decreed rights. This is a reduction that counts towards ISG Benchmarks and Annual Targets.

10 For purposes of Subparagraph 8(b)(2)(i) and (ii) and 8(c)(1) and (4) the Secretary will take into account: (i) the satisfaction of necessary conditions to certain transfers (columns 7 and 9) not within IID's control; (ii) the amounts of conserved water as determined, where such amounts may vary (columns 4, 6, 9 and 10); and (iii) with respect to column 7, reductions by IID will be considered in determining IID's compliance regardless of whether the conserved water is diverted into the Colorado River Aqueduct.

11 For purposes of Subparagraph 8(c)(1) and (4) the Secretary will take into account: (i) the satisfaction of necessary conditions to certain transfers (columns 15 and 16) not within CVWD's control; and (ii) the amounts of conserved water as determined, where such amounts may vary (column 15).

12 All-consumptive use of priorities 1 through 3 plus 14,500 AF of PPRs must be within 25,000 AF of the amount stated.

13 Assumes SDCWA does not elect termination in year 35.

14 Assumes SDCWA and IID mutually consent to renewal term of 30 years.

**Notes:**

Substitute transfers can be made provided the total volume of water to be transferred remains equal or greater than amounts shown consistent with applicable federal approvals.

The shaded columns represent amounts of water that may vary.

## INTENTIONALLY CREATED SURPLUS

In 2006, Reclamation entered into letter agreements with the Imperial Irrigation District and the Metropolitan Water District of Southern California to implement a demonstration program for the development of Intentionally Created Surplus (ICS). In this program, ICS refers to a quantity of surplus water the Secretary may make available for release under Article II(B)(2) of the Consolidated Decree. The demonstration program covered calendars years 2006 – 2007 and required that ICS be created through extraordinary conservation measures.

On December 13, 2007, the Secretary of the Interior signed the *Record of Decision, Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (2007 Interim Guidelines). Beginning in 2008, the creation of ICS is governed by the 2007 Interim Guidelines. Section 3, pages 38-43 of the 2007 Interim Guidelines contains the policies and guidelines concerning the categories of creation, delivery, and accounting for Intentionally Created Surplus.

Under the 2007 Interim Guidelines, ICS may be created by an approved water user using a variety of approved measures within the four established ICS categories: Extraordinary Conservation ICS, Tributary Conservation ICS, System Efficiency ICS, and Imported ICS. Also stipulated in the 2007 Interim Guidelines are the limitations as to the maximum quantities of ICS that may be created during each year, delivered in a year, and accumulated in a water user's ICS account.

The following conditions apply to ICS:

- 1) During the year of creation, and with the exception of System Efficiency ICS, there is a one-time deduction of 5 percent from the amount of ICS created which is dedicated to system storage to provide a collective storage benefit for Colorado River water users.

- 2) Beginning in the year after its creation, and with the exception of System Efficiency ICS, an annual evaporation loss of 3 percent is applied to the quantity of ICS remaining in an ICS account at the end of each year. This assessment is not applied during a shortage year.
- 3) If the Secretary releases Flood Control Surplus water, Extraordinary Conservation ICS accumulated in ICS accounts is reduced by the amount of the Flood Control Surplus on an acre-foot for acre-foot basis until no Extraordinary Conservation ICS remains.
- 4) If a water user has an overrun payback obligation, the water user must repay the obligation in full before it can request or receive delivery of ICS.

The Secretary is responsible for approving plans for the creation of ICS, modifications to those plans, and developing procedures to account for and verify ICS creation and delivery.

Table 23 documents information associated with ICS, as applicable, for each individual water user, including.

- 1) The beginning of year ICS account balance.
- 2) The amount of ICS created in the reporting year.
- 3) The amount of ICS delivered in the reporting year.
- 4) The end of year ICS account balance, after applying reductions for system assessment, IOPP payback, and evaporation, as appropriate.

**Table 23. Intentionally Created Surplus by State, User, and ICS Type, Calendar Year 2016. (Values are in acre-feet.)**

State	Water User	ICS Type	BOY Balance	System Creation <sup>1</sup>	System Assessment <sup>2</sup>	IOPP Payback <sup>3</sup>	Delivery	Evaporation Loss <sup>4</sup>	EOY Balance <sup>5</sup>
<b>Arizona</b>									
	CAWCD	System Efficiency - Warren H. Brock	100,000	0	N/A	0	0	N/A	100,000
	CAWCD	System Efficiency - YDP Pilot Run	3,050	0	N/A	0	0	N/A	3,050
<b>Total Arizona:</b>									<b>103,050</b>
<b>California</b>									
	MWD	Extraordinary Conservation	0	4,888	244	0	0	0	4,644
	MWD	System Efficiency - Warren H. Brock	56,008	0	N/A	0	0	N/A	56,008
	MWD	System Efficiency - YDP Pilot Run	24,397	0	N/A	0	0	N/A	24,397
	IID	Extraordinary Conservation	17,386	13,845	692	0	0	522	30,017
<b>Total California:</b>									<b>115,066</b>
<b>Nevada</b>									
	SNWA	Extraordinary Conservation converted from Tributary Conservation / Imported <sup>6</sup>	107,973	0	0	0	0	3,239	104,734
	SNWA	Tributary Conservation <sup>7</sup>	N/A	25,030	1,252	0	0	N/A	23,778
	SNWA	Imported - Coyote Spring Valley	N/A	0	0	0	0	N/A	0
	SNWA	System Efficiency - Warren H. Brock	400,000	0	N/A	0	0	N/A	400,000
	SNWA	System Efficiency - YDP Pilot Run	3,050	0	N/A	0	0	N/A	3,050
<b>Total Nevada:</b>									<b>531,562</b>
<b>Total ICS stored in Lake Mead: EOY 2016</b>									<b>749,678</b>

**Footnotes:**

<sup>1</sup> The amount of ICS created by the water user during the reporting year. Unless otherwise noted, all current year values displayed in this column are provisional until verified by Reclamation.

<sup>2</sup> In accordance with Section 3.B.2. of the 2007 Interim Guidelines, there shall be a one-time deduction of 5 percent from the amount of ICS in the year of creation. This system assessment shall result in additional system water in storage in Lake Mead.

<sup>3</sup> In accordance with Section 3.C.7 of the 2007 Interim Guidelines, if a contractor has an overrun payback obligation, the contractor must repay the overrun payback obligation in full before requesting or receiving delivery of ICS. If a contractor requests to use its ICS credits to pay back an overrun, the contractor's ICS account(s) shall be reduced by the amount of the payback prior to calculating the evaporation loss and the remaining ICS credits available to the contractor.

<sup>4</sup> In accordance with Section 3.B.7 of the 2007 Interim Guidelines, a 3 percent evaporation loss shall be applied annually to the EOY balance of Extraordinary Conservation ICS beginning in the year after the ICS is created and continuing until no Extraordinary Conservation ICS remains in Lake Mead.

<sup>5</sup> The EOY balance of ICS including creation, reductions, and delivery taking place in the reporting year.

<sup>6</sup> The verified amount of Tributary Conservation ICS created by SNWA in 2015 is 25,147 AF. After applying the 5 percent reduction for system assessment, the 2015 EOY Tributary Conservation ICS balance is 23,890 AF. In accordance with Section 3.A.2 of the Interim Guidelines, this amount was converted to Extraordinary Conservation ICS at the beginning of 2016.

<sup>7</sup> In 2016, SNWA conserved 32,718 AF of water from its Muddy and Virgin River Tributary Conservation projects. Of this amount, 7,688 AF was conveyed to Lake Mead as System Conservation Water in satisfaction of SNWA's commitments under the Pilot System Conservation Program. The balance of 25,030 AF was conveyed to Lake Mead as Tributary Conservation ICS. (Volumes noted are provisional until verified by Reclamation.)

## **DOCUMENTS AND LETTERS SIGNIFICANT TO THE DELIVERY OF AND ACCOUNTING FOR THE USE OF COLORADO RIVER WATER IN CALENDAR YEAR 2016**

The table below includes agreements, letters, regulations and operating plans that impacted Reclamation's delivery of Colorado River water during calendar year 2016. These documents may be retrieved by clicking on the item in the electronic version of the report which are available at Reclamation's website at: [www.usbr.gov/lc/region/g4000/wtracct.html](http://www.usbr.gov/lc/region/g4000/wtracct.html). These documents are best accessed using Microsoft's Internet Explorer. Acronyms used below are defined on the page of this report entitled, "Acronyms and Abbreviated Terms."

<b>RECORDS OF DECISION</b>	
1.	The Record of Decision for Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead dated December 13, 2007. This document provides the framework used by the Secretary of the Interior for shortage, coordinated operation of Lake Powell and Lake Mead, and to encourage conservation, plan for shortages, implement closer coordination of operations of Lake Powell and Lake Mead, and preserve flexibility to deal with further challenges.
2.	The Record of Decision for the Colorado River Water Delivery Agreement: Implementation Agreement, Inadvertent Overrun and Payback Policy, and Related Federal Actions Final Environmental Impact Statement. The Water Delivery Agreement provides certainty regarding water entitlements that are necessary for continued effective implementation of the Secretary's responsibilities as Water Master on the lower Colorado River.
<b>REPORTS</b>	
3.	2016 Annual Operating Plan Executive Summary that outlines the criteria under which the Colorado River was operated during Calendar Year 2016 considering current and anticipated hydrologic conditions.
<b>INTERIM DETERMINATIONS</b>	
4.	The Secretary's Interim Determination for the amount of water conserved and the amount of water made available for allocation as a result of the Coachella Canal Lining Project, dated January 31, 2008.
5.	The Secretary's Interim Determination for the amount of water conserved and the amount of water made available for allocation as a result of the All-American Canal Lining Project, dated December 4, 2009.
<b>PILOT SYSTEM CONSERVATION PROGRAM</b>	
6.	Agreement (No. 14-XX-30-W0574) Among The United States of America, Through The Department of the Interior, Bureau of Reclamation, The Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and The Southern Nevada Water Authority, For A Pilot Program for Funding the Creation of Colorado River System Water through Voluntary Water Conservation and Reductions in Use, dated July 30, 2014, including Amendment Nos. 1 and 2.
7.	System Conservation Implementation Agreement No. 15-XX-30-W0602 Between Reclamation and the Central Arizona Water Conservation District to Implement a Pilot System Conservation Program, dated March 17, 2016.

**DOCUMENTS AND LETTERS SIGNIFICANT TO THE DELIVERY OF  
AND ACCOUNTING FOR THE USE OF COLORADO RIVER WATER IN CALENDAR YEAR 2016**

<b>PILOT SYSTEM CONSERVATION PROGRAM</b>	
8.	System Conservation Implementation Agreement No. 16-XX-30-W0606 Between Reclamation and the Colorado River Indian Tribes to Implement a Pilot System Conservation Program, dated September 14, 2016.
9.	System Conservation Implementation Agreement No. 16-XX-30-W0614 Between Reclamation and the Gila River Indian Community to Implement a Pilot System Conservation Program, dated October 17, 2016.
10.	System Conservation Implementation Agreement No. 16-XX-30-W0609 Between Reclamation and the Tohono O'odham Nation to Implement a Pilot System Conservation Program, dated September 14, 2016.
11.	System Conservation Implementation Agreement No. 15-XX-30-W0596 Between Reclamation and the City of Needles to Implement a Pilot System Conservation Program, dated April 15, 2016.
12.	System Conservation Implementation Agreement No. 15-XX-30-W0593 Between Reclamation and the Coachella Valley Water District to Implement a Pilot System Conservation Program, dated January 11, 2016.
13.	System Conservation Implementation Agreement No. 15-XX-30-W0576 Between Reclamation and the Southern Nevada Water Authority to Implement a Pilot System Conservation Program, dated June 4, 2015.
14.	System Conservation Implementation Agreement No. 16-XX-30-W0612 Between Reclamation and the Southern Nevada Water Authority to Implement a Pilot System Conservation Program, dated October 17, 2016.

<b>DROUGHT RESPONSE</b>	
15.	Drought Response Agreement No. 15-XX-30-W0598 Between Reclamation and the Fort McDowell Yavapai Nation, dated October 6, 2015.

<b>INTENTIONALLY CREATED SURPLUS</b>	
16.	Documents related to the creation, delivery and accounting of IID's ICS, calendar year 2016.
17.	Documents related to the creation, delivery and accounting of MWD's ICS, calendar year 2016.
18.	Documents related to the creation, delivery and accounting of SNWA's ICS, calendar year 2016.

**DOCUMENTS AND LETTERS SIGNIFICANT TO THE DELIVERY OF  
AND ACCOUNTING FOR THE USE OF COLORADO RIVER WATER IN CALENDAR YEAR 2016**

<b>INTERSTATE WATER BANKING</b>	
19.	43 CFR Part 414: Offstream Storage of Colorado River Water: Development and Release of Intentionally Created Unused Apportionment in the Lower Division States; Final Rule.
20.	Documents related to Colorado River water diverted and stored in Arizona by AWBA for the benefit of SNWA.
21.	Documents related to Colorado River water diverted and stored in California by MWD for the benefit of SNWA.
<b>INADVERTENT OVERRUN AND PAYBACK POLICY</b>	
22.	Inadvertent Overrun and Payback Policy, October 10, 2003.
<b>COLORADO RIVER WATER DELIVERY AGREEMENT</b>	
23.	Reclamation's letter to IID dated May 3, 2013, discussing transfer and payback issues due to the direct delivery of Colorado River water to the Salton Sea in 2010.
24.	IID's letter to Reclamation dated June 28, 2013, discussing its set of actions due to the direct delivery of Colorado River water to the Salton Sea in 2010.
25.	Reclamation's letter to IID dated July 2, 2013, discussing the transfer and payback issues due to the direct delivery of Colorado River water to the Salton Sea in 2010.
26.	IID's letter to Reclamation dated September 6, 2016, notifying Reclamation of its pre-delivery of excess fallowing conservation to the Salton Sea to meet a portion of its 2017 Salton Sea mitigation obligation.
27.	CVWD's letter to Reclamation dated April 20, 2017, providing a final accounting for the amount of environmental mitigation water used in Calendar Year 2016 for the Coachella Canal Lining Project and the remaining water available for transfer to the SDCWA.

**DOCUMENTS AND LETTERS SIGNIFICANT TO THE DELIVERY OF  
AND ACCOUNTING FOR THE USE OF COLORADO RIVER WATER IN CALENDAR YEAR 2016**

WATER ACCOUNTING	
28.	A description on how irrigation water is calculated by the USGS for areas where estimates of diversion are required.
29.	Maps showing the locations of the wells and river pumps reported by the USGS.
30.	Map showing the locations of the Ranches within the Fort Yuma Indian Reservation, CA.
31.	Central Arizona Groundwater Replenishment District's letter to Reclamation dated February 14, 2017, quantifying the amount of conserved water from its Pilot Fallowing Program with the Yuma Mesa Irrigation and Drainage District for Calendar Year 2016.
32.	CAWCD's letters to Reclamation dated May 10, 2016 and July 21, 2016, regarding its revised estimates of Colorado River water diversion for calendar year 2016, in which CAWCD notified Reclamation that it anticipated creating ICS in 2016.
33.	IID's letter to MWD dated October 27, 2016, requesting to store up to 50,000 AF of IID's 2016 excess extraordinary conservation water in MWD's system.
34.	MWD's letter to IID dated December 19, 2016, in which MWD agreed to store up to 50,000 AF of IID's excess extraordinary conservation water in calendar year 2016.
35.	IID's letter to MWD dated May 8, 2017, requesting to store 56,232 AF of IID's 2016 excess extraordinary conservation water in MWD's system.
36.	MWD's letter to IID dated May 12, 2016, in which MWD agreed to store 56,232 AF of IID's excess extraordinary conservation water in calendar year 2016.
37.	2007 California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus (California ICS Agreement).
38.	2015 Amendment No. 1 to the 2007 California ICS Agreement.

**DOCUMENTS AND LETTERS SIGNIFICANT TO THE DELIVERY OF  
AND ACCOUNTING FOR THE USE OF COLORADO RIVER WATER IN CALENDAR YEAR 2016**

WATER ACCOUNTING	
39.	Procedure for Determining Return Flow Credits to Nevada from Las Vegas Wash, adopted by the Task Force on Unmeasured Return Flows on August 28, 1984.
40.	Reclamation letter to SNWA and CRCN dated December 5, 2007 regarding Las Vegas Valley Return Flow Credit Methodology.
41.	Summary of Method for Calculation of Consumptive Use and Unmeasured Return Flow from the Lower Colorado River Multi-Species Conservation Program Palo Verde Ecological Reserve and Computation of 2016 Use and Return Flow.

UNITED STATES-MEXICO 1944 WATER TREATY	
42.	Minute No. 242 – Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River.
43.	Minute No. 318 – Adjustment of Delivery Schedules for Water Allotted to Mexico for the Years 2010 Through 2013 as a Result of Infrastructure Damage in Irrigation District 014, Rio Colorado, Caused by the April 2010 Earthquake in the Mexicali Valley, Baja California.
44.	Minute No. 319 – Interim International Cooperative Measures in the Colorado River Basin Through 2017 and Extension of Minute 318 Cooperative Measures to Address the Continued Effects of the April 2010 Earthquake in the Mexicali Valley, Baja California.
45.	2001 Memorandum of Understanding between Reclamation and the U.S. Section of the IBWC regarding deliveries at SIB.
46.	IBWC's letter to Reclamation dated April 28, 2017, advising Reclamation on the accounting of volumes of Colorado River water deferred in Calendar Years 2011 through 2016 in accordance with the provisions of Minutes No. 318 and 319.
47.	Reclamation's letter to IBWC dated May 10, 2017, stating its concurrence with the volumes of Colorado River water deferred in Calendar Years 2011 through 2016.